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**PUBLIC WORKS & GOVERNMENT SERVICES CANADA**

**EDMONTON MAXIMUM SECURITY INSTITUTION**

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PUBLIC WORKS & GOVERNMENT SERVICES CANADA

Drawing title/Titre du dessin  
**SYMBOLS AND LEGEND**

TERMINALS - TYPE AND LOCATION  
ASSIGNMENT DESIGNATED BY PROJECT  
DESIGN

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**SINGLE LINE DIAGRAM / SCHEMATIC SYMBOLS**

	EQUIPMENT BUS		RESISTANCE TEMPERATURE DETECTOR		CLOSING COIL
	BUS EXTENSION / CONNECTION		FVNR MAGNETIC STARTER c/w SIZE		HOLDING COIL
	POWER CIRCUIT BREAKER		FVR (REVERSING) STARTER c/w SIZE		INDICATING PILOT LIGHT c/w LENS COLOR R=RED, G=GREEN, A=AMBER, Y=YELLOW, W=WHITE
	DRAWOUT POWER CIRCUIT BREAKER		TWO SPEED STARTER c/w SIZE		ELAPSED TIME METER
	AMMETER SWITCH		THERMAL OVERLOAD RELAY		MOTOR OVERLOAD CONTACT
	VOLTMETER		ELECTRONIC OVERLOAD c/w RATIO & QUANTITY		TEST SUPPLY PLUG
	TRANSDUCER		VARIABLE SPEED DRIVE		FUSE c/w FUSE No. or AMP RATING
	CURRENT TRANSFORMER c/w RATIO & QUANTITY		SOFT START REDUCED VOLTAGE		DUMMY FUSE
	ZERO SEQUENCING CURRENT TRANSFORMER c/w RATIO & QUANTITY		GENERATOR		ELECTRIC HEATER c/w KILOWATT RATING
	BUSHING TYPE CURRENT TRANSFORMER c/w RATIO & QUANTITY		SQUIRREL CAGE MOTOR		MOTOR SPACE HEATER c/w KILOWATT RATING
	POTENTIAL TRANSFORMER c/w VOLTAGE RATING & QUANTITY		MOTORIZED VALVE		RESISTOR c/w RESISTANCE RATING
	KEY OPERATED INTERLOCK		LIGHTING OR POWER PANEL		SERIES COIL OR SOLENOID VALVE
	MOTOR OPERATED SWITCH		VALVE TRAVEL LIMIT SWITCH-NORMALLY OPEN		TEMPERATURE CONTROLLER
	DIGITAL METERING SYSTEM		VALVE TRAVEL LIMIT SWITCH-NORMALLY CLOSED		SURGE SUPPRESSOR
	UTILITY POWER METER		SOLID STATE SURGE ARRESTER		MOTOR SURGE SUPPRESSOR
	LIGHTNING ARRESTER w/ GROUNDED GAP		TRANSIENT VOLTAGE SURGE SUPPRESSION		FUSE ASSEMBLY w/ INDICATING LIGHT c/w FUSE NUMBER AND CURRENT RATING
	LIGHTNING ARRESTER w/ GROUNDED GAP AND SURGE CAPACITOR		CURRENT TRANSFORMER SHORTING BLOCK		INDICATING LIGHT PUSH TO TEST c/w COLOR TYPE
	DRAWOUT FUSED CURRENT TRANSFORMER		PT-CT TEST BLOCK		SEMICONDUCTOR DIODE
	DELTA-DELTA TRANSFORMER		TEST BLOCK		MECHANICAL CONNECTION
	DELTA-WYE GROUND TRANSFORMER		GROUND TO EARTH		WIRES CROSSOVER
	DELTA-WYE RESISTOR GROUND TRANSFORMER		BATTERY		WIRES CONNECTED
	OPEN DELTA		PROTECTIVE RELAY c/w QUANTITY (1 LINE)		FIELD CONNECTION
	CLOSED DELTA		PROTECTIVE RELAY c/w QUANTITY (2 LINE)		NORMALLY CLOSED MUSHROOM HEAD PUSHBUTTON - MOMENTARY
	THREE PHASE WYE		TEST BLOCK		NORMALLY OPEN PUSHBUTTON - MOMENTARY
	THREE PHASE WYE TO GROUND		GROUND TO EARTH		NORMALLY CLOSED PUSHBUTTON - MOMENTARY
	THREE PHASE ZIGZAG TO GROUND		BATTERY		THREE POLE CIRCUIT BREAKER (CONTROL SCHEMATIC ONLY)
	THREE PHASE WYE w/ RESISTOR TO GROUND		RELAY COIL (1 LINE)		THREE POLE DISCONNECT SWITCH (CONTROL SCHEMATIC ONLY)
	MALE & FEMALE DISCONNECT DEVICE		RELAY COIL (2 LINE)		SINGLE POLE SINGLE THROW DISCONNECT SWITCH
	CIRCUIT BREAKER		RELAY COIL (3 LINE)		SINGLE POLE DOUBLE THROW DISCONNECT SWITCH
	DRAWOUT CIRCUIT BREAKER		RELAY COIL (4 LINE)		TWO (2) POSITION SELECTOR SWITCH (ON-OFF SWITCH SHOWN IN ON POSITION)
	NON-FUSED DISCONNECT SWITCH		RELAY COIL (5 LINE)		FLOW SWITCH NORMALLY OPEN OR CLOSED
	FUSED DISCONNECT SWITCH		RELAY COIL (6 LINE)		LEVEL SWITCH NORMALLY OPEN OR CLOSED
	FUSED HRC DISCONNECT SWITCH		LIGHTING CONTACTOR COIL		LIMIT SWITCH NORMALLY OPEN OR CLOSED
	LOAD BREAK DISCONNECT SWITCH		MOTOR STARTER COIL		PRESSURE SWITCH NORMALLY OPEN OR CLOSED
	FUSED LOAD BREAK DISCONNECT SWITCH		CONTROL RELAY		TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED
	HORN GAP SWITCH		AUXILIARY RELAY		TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED
	INTERRUPTER SWITCH		POWER FAILURE RELAY		TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED
	FUSED INTERRUPTER SWITCH		OVERLOAD TRIP RELAY		TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED
	GROUND SWITCH		INTERLOCK		TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED
	MAGNETIC ELEMENT				TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED
	CAPACITOR FOR PF CORRECTION c/w KVAR RATING				TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED
	NORMALLY OPEN CONTACT				TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED
	NORMALLY CLOSED CONTACT				TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED
	PROGRAMMABLE LOGIC CONTROLLER				TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED
	REACTOR				TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED
	HARMONIC FILTER				TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED
	TRANSFER SWITCH				TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED
	FLEX CONNECTOR				TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED
	JUNCTION BOX MOUNTED NEAR MOTOR				TEMPERATURE SWITCH NORMALLY OPEN OR CLOSED

**LAYOUT SYMBOLS**

	CONDUIT RUN ON SURFACE (WALL OR CEILING)		FIXTURE TYPE "A"		TELEPHONE TERMINAL BOARD
	CONDUIT RUN IN SLAB (OR BELOW GRADE)		SURFACE MOUNTED OR SUSPENDED FLUORESCENT FIXTURE		TELEPHONE OUTLET - WALL MOUNTED
	CONDUIT CAPPED		RECESSED FLUORESCENT FIXTURE		TELEPHONE OUTLET - FLOOR MOUNTED
	CONDUIT GOING UP		SURFACE MOUNTED OR SUSPENDED 610 x 610 FLUORESCENT FIXTURE		INTERCOM HANDSET OUTLET - WALL MOUNTED
	CONDUIT GOING DOWN		RECESSED 610 x 610 FLUORESCENT FIXTURE		ITS LAN DATA OUTLET
	FLEXIBLE CONDUIT		FLUORESCENT STRIP FIXTURE		COMBINATION DATA/TELEPHONE OUTLET
	CONDUIT HOME RUN c/w NUMBER OF WIRES		WALL MOUNTED FLUORESCENT FIXTURE		WIFI CONNECTION POINT
	CONDUIT SEAL WP-WEATHERPROOF, EP-EXPLOSION PROOF		SURFACE MOUNTED OR SUSPENDED UNSWITCHED FLUORESCENT FIXTURE		SPEAKER - CEILING MOUNTED
	CONDUIT UNION		RECESSED UNSWITCHED FLUORESCENT FIXTURE		SPEAKER - WALL MOUNTED
	CONDUIT EXPANSION JOINT		AREA LIGHTING FIXTURE		GROUND BUS
	CONDUIT BEND		SURFACE MOUNTED OR SUSPENDED LUMINAIRE		GROUND COMPRESSION CONNECTION
	BARE GROUND WIRE		LUMINAIRE ON EMERGENCY POWER		EQUIPMENT GROUND CONNECTION
	OVERHEAD POWER SERVICE ENTRANCE		RECESSED LUMINAIRE		THERMIT WELD GROUND CONNECTION
	OVERHEAD TELEPHONE SERVICE ENTRANCE		RECESSED LUMINAIRE ON EMERGENCY POWER		GROUND ROD
	JUNCTION BOX - CEILING SPACE		WALL MOUNTED LUMINAIRE		GROUND WELL & ROD
	JUNCTION BOX - FLUSH MOUNTED		CEILING MOUNTED EXIT SIGN c/w DIRECTION ARROW		GROUND GRID w/ WELLS & RODS
	JUNCTION BOX - WALL MOUNTED		WALL MOUNTED EXIT SIGN c/w DIRECTION ARROW		CONTROL
	JUNCTION BOX - MOTOR / EQUIPMENT		TENON MOUNTED LUMINAIRE		SINGLE POLE SWITCH (SWITCH "a") PANEL "A" CIRCUIT "x"
	MULTI-CABLE TRANSIT (MCT)		EMERGENCY LIGHTING UNIT c/w BATTERY PACK, CHARGER AND TWO HEADS		2 SWITCHES IN 2 GANG BOX
	SPARE WIRE LOOP		WALL MOUNTED SINGLE EMERGENCY LIGHTING HEAD c/w JUNCTION BOX		3 SWITCHES IN 3 GANG BOX
	CABLE OR CONDUIT DESIGNATION PC-POWER TC-TELEPHONE CC-CONTROL IC-INSTRUMENTATION HC-HEATING		WALL MOUNTED DOUBLE EMERGENCY LIGHTING HEAD c/w JUNCTION BOX		4 SWITCHES IN 4 GANG BOX
	A10-b PANEL "A", CIRCUIT "10", SWITCH "b"		1 LAMP BALLAST (REMOTE MOUNTED)		TWO POLE SWITCH
	POWER TRANSFORMER		2 LAMP BALLAST (REMOTE MOUNTED)		THREE WAY SWITCH
	MAIN DISTRIBUTION PANEL "A"		FIRE ALARM PANEL AND/OR ANNUNCIATOR		FOUR WAY SWITCH
	LIGHTING OR BRANCH PANEL "A"		BREAK GLASS STATION		SWITCH c/w PILOT LIGHT
	SPLITTER		FIRE ALARM BELL		MANUAL MOTOR SWITCH
	MOTOR AND/OR EQUIPMENT TAG c/w NAME, PLANT AREA & NUMBER		FIRE ALARM HORN AND STROBE c/w CANDELA LEVEL		MANUAL MOTOR SWITCH c/w PILOT LIGHT
	MOTOR		FIRE ALARM PHONE		KEY OPERATED SWITCH
	MOTORIZED DAMPER		FIRE ALARM SPEAKER		EXPLOSION PROOF SWITCH
	MOTOR OPERATED VALVE		SMOKE DETECTOR		WEATHERPROOF SWITCH
	SOLENOID OPERATED VALVE		SMOKE DETECTOR - DUCT MOUNTED 'A' = ADDRESSABLE		LOW VOLTAGE SWITCH (CIRCUIT "a")
	ELECTRIC HEATER		COMBINATION HEAT DETECTOR		LOW VOLTAGE SWITCH (K-KEY OPERATED, P-PILOT LIGHT)
	SINGLE RECEPTACLE		HEAT DETECTOR - FIXED TEMPERATURE		DIMMER SWITCH
	DUPLEX RECEPTACLE		HEAT DETECTOR - RATE-OF-RISE		SPECIAL LOW VOLTAGE SWITCH UNIT (SEE SPECIFICATIONS)
	SPLIT DUPLEX RECEPTACLE		FIRE ALARM STROBE LIGHT c/w CANDELA LEVEL		LOW VOLTAGE SWITCHING RELAY CABINET
	ISOLATED GROUND RECEPTACLE		END-OF-LINE RESISTOR		MOTION SENSOR SWITCH
	GROUND FAULT (GFCI) RECEPTACLE		FLOW SWITCH		PHOTOELECTRIC CELL
	ABOVE COUNTER DUPLEX RECEPTACLE		PRESSURE SWITCH		DISCONNECT SWITCH - FUSED
	ABOVE COUNTER SPLIT DUPLEX RECEPTACLE		TAMPER SWITCH		DISCONNECT SWITCH - UNFUSED
	ABOVE COUNTER GROUND FAULT (GFCI) RECEPTACLE		GAS DETECTOR		MANUAL MOTOR STARTER
	FLOOR MOUNTED SINGLE RECEPTACLE		INFRARED DETECTOR		MAGNETIC MOTOR STARTER
	FLOOR MOUNTED DUPLEX RECEPTACLE		ULTRAVIOLET DETECTOR		COMBINATION MAGNETIC STARTER
	SPECIAL SINGLE PHASE RECEPTACLE		MAGNETIC DOOR RELEASE		LOW VOLTAGE THERMOSTAT
	SPECIAL THREE PHASE RECEPTACLE		ELECTRIC DOOR LOCK		LINE VOLTAGE THERMOSTAT
	OVERHEAD REEL DUPLEX RECEPTACLE		PRE-SIGNAL BUZZER		HUMIDSTAT
	SINGLE PHASE POWER CONNECTION		ISOLATOR BASE MODULE		ON-OFF CONTROL STATION
	THREE PHASE POWER CONNECTION		ADDRESSABLE ALARM RELAY MODULE		HAND-OFF-AUTO SELECTOR SWITCH
	WELDING RECEPTACLE				LOCKOUT STOP CONTROL STATION
					LOCAL-OFF-REMOTE CONTROL STATION
					SELECTOR SWITCH (HOA, LOR, LO or OA)
					START-STOP PUSHBUTTON AND SELECTOR SWITCH (HOA, LOR, LO or OA)
					LOCKOUT STOP PUSHBUTTON
					START-STOP PUSHBUTTON
					START-STOP PUSHBUTTON c/w PILOT LIGHT & LOCKOUT STOP
					START-JOG-STOP PUSHBUTTON
					EMERGENCY SHUTDOWN PUSHBUTTON
					THERMISTOR CONTROL TRIPPING UNIT
					TIME SWITCH
					LOW VOLTAGE TRANSFORMER (XX=TRANSFORMER NUMBER)

**ABBREVIATIONS**

BD	- BUS DUCT
CB	- CIRCUIT BREAKER
DB	- DUCT BANK
DS	- DISCONNECT SWITCH
MCC	- MOTOR CONTROL CENTRE
PDP	- POWER DISTRIBUTION PANEL
PNL	- BRANCH PANEL BOARD
SWB	- SWITCHBOARD
T	- TRANSFORMER
UPS	- UNINTERRUPTIBLE POWER SUPPLY

**NOTES:**  
1. THIS DRAWING IS GENERAL IN NATURE. NOT ALL SYMBOLS, ABBREVIATIONS ARE USED IN THESE CONTRACT DRAWINGS.

