GENERAL NOTES

- ALL DRAWINGS ARE FOR DIAGRAMMATIC PURPOSES ONLY AND SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS FOR LOCATION OF ALL LUMINAIRES, LIGHTING CONTROL DEVICES, OUTLETS, SYSTEM DEVICES, DIMENSIONS, MOUNTING HEIGHTS, AND CONSTRUCTION
- 2. ALL OPENINGS THROUGH RATED WALLS OR FLOORS (APPLIES TO ALL INSTANCES) SHALL BE SEALED WITH APPROVED FIRE STOPPING MATERIAL. ANY FIREPROOFING MATERIAL REMOVED WILL BE REPLACED WITH A SUITABLE AND APPROVED FIREPROOFING MATERIAL AND SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS TO APPLICABLE BUILDING AND FIRE CODES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIR OF DAMAGED BUILDING AREAS AND FINISHES AFFECTED BY THE WORK AS OUTLINED UNDER SCOPE OF WORK OF THIS PROJECT.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND DISTRIBUTION OF TEMPORARY POWER AND LIGHTING WITHIN THE PREMISES DURING THE CONSTRUCTION PERIOD.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL THE WORK WITH ALL OTHER TRADES, CONSULTANTS, AND THE OWNER.
- 6. ALL NEW DEVICES INSTALLED WHERE NEW FINISHES OCCUR SHALL BE FLUSH MOUNTED, UNLESS OTHERWISE
- ALL CONDUIT RUNS SHOWN ON PLANS ARE FOR INFORMATION AND DIAGRAMMATIC PURPOSES ONLY. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ROUTING OF ALL RUNS ON SITE PRIOR TO BEGINNING
- 8. PROVIDE SEISMIC RESTRAINTS WHERE REQUIRED BY LOCAL CODE REQUIREMENTS. OBTAIN THE SERVICES OF A SEISMIC RESTRAINT ENGINEER AND COMPLY WITH ALL REQUIREMENTS IN THEIR REPORT. SUBMIT A COPY OF THE REPORT TO MECHANICAL AND ELECTRICAL CONSULTANTS AND INCLUDE IN MAINTENANCE MANUAL.
- 9. PROVIDE SUPPORT CHAINS FOR ALL LUMINAIRES. SUPPORT ALL LUMINAIRES DIRECTLY TO CEILING SLAB STRUCTURE, NOT TO CEILING HANGERS, T-BAR, DUCTWORK, PIPING, CABLE TRAYS, ROOF DECK, ETC.
- 10. NEW ELECTRICAL WIRING AND CABLES EXPOSED WITHIN THE CEILING SPACES SHALL CONFORM TO THE

PLENUM REQUIREMENTS OF THE LOCAL BUILDING CODE.

- 11. PROPERLY LABEL ALL ELECTRICAL PANELS. CLEARLY INDICATING ALL INFORMATION INCLUDING CIRCUIT NUMBERS. CIRCUITING SHOWN ON DRAWING IS DIAGRAMMATIC TO SHOW GENERAL CIRCUIT ARRANGEMENT AND PANEL DESIGNATION.
- 12. PROVIDE 2#12AWG + G IN 21MMC FOR ALL 15A AND 20A CIRCUITS WITH A NOMINAL VOLTAGE OF 120V UNLESS OTHERWISE NOTED. CONDUCTORS SHALL BE OVERSIZED TO SUIT VOLTAGE DROP AS PER SPECIFICATIONS FOR CIRCUIT LENGTH EXCEEDING 90 FEET.
- 13. PROVIDE A SEPARATE NEUTRAL AND GROUNDING TO ALL CIRCUITS SERVING A RECEPTACLE FOR A COPIER/PRINTER. COORDINATE RECEPTACLES CONFIGURATION WITH THE COPIER SUPPLIER AND TENANT

COMMUNICATIONS

- 14. ALL COMMUNICATIONS SCOPE OF WORK TO FOLLOW CITY OF BRAMPTON IT PERFORMANCE SPECIFICATION. REFER TO SPECIFICATION SECTION 27 00 00 FOR MORE INFORMATION INCLUDING MOUNTING HEIGHTS OF DEVICES, CABLING INSTALLATIONS, ETC. PRIOR TO INSTALLATION.
- 15. VOICE & DATA EMPTY CONDUIT AND BACK BOXES FOR COMMUNICATION CABLE AND DATA OUTLET SHALL BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. DATA FACE PLATE AND COMMUNICATION CABLE BY COMMUNICATION CONTRACTOR.
- 16. CABLES FOR VOICE AND DATA SYSTEMS ARE TO BE SUPPLIED, INSTALLED AND TERMINATED BY COMMUNICATIONS CONTRACTOR.
- 17. ELECTRICAL CONTRACTOR TO COORDINATE THE INSTALLATION OF ALL DATA WALL AND FLOOR OUTLET BOXES AND ASSOCIATED DATA CONDUIT SIZES WITH ELECTRICAL DRAWINGS AND COMMUNICATIONS CONTRACTORS.
- 18. COMMUNICATIONS CONTRACTOR MUST BE COMMSCOPE SYSTIMAX CERTIFIED.
- 19. COMMUNICATIONS CONTRACTOR WILL BE RESPONSIBLE TO INSTALL WIRELESS ACCESS POINTS THAT WILL BE PROVIDED BY THE CITY OF BRAMPTON.
- 20. COMMUNICATIONS SYSTEM IS TO BE AN END TO END COMMSCOPE SYSTEMAX CERTIFIED SOLUTION. ALL PATCH CABLES MUST BE PROVIDED TO ACCOMMODATE ALL DROPS INSTALLED. CABLES TO BE ORDERED AS PER CITY OF BRAMPTON IT PERFORMANCE SPECIFICATION V1.6 (SECTION 27 00 00).

- 21. CONNECT ALL EMERGENCY REMOTE HEADS TO THE INDICATED BATTERY UNIT WITH #10 AWG COPPER WIRE MINIMUM. PROVIDE LARGER WIRE SIZE AS REQUIRED OR AS RECOMMENDED BY MANUFACTURER. PROVIDE MEASUREMENT OF LIGHT LEVELS TO OBTAIN LOCAL INSPECTION APPROVALS AND PERMITS. AN AUTHORIZED TECHNICIAN OF THE MANUFACTURER SHALL PREPARE AND PROVIDE A SIGNED TEST REPORT VERIFYING THAT THE SYSTEM IS PROPERLY WORKING AND THAT LIGHT LEVELS MEET LOCAL CODE REQUIREMENTS. INCLUDE REQUIRED TEST MEASUREMENTS IN REPORT AND SUBMIT TO CONSULTANT FOR REVIEW. ALL COST FOR TESTING/VERIFICATION SHALL BE INCLUDED IN THE TENDER BID.
- 22. SUBMIT FIRE ALARM VERIFICATION REPORT CONFORMING TO CAN/ULC-S537 TO CONSULTANT FOR REVIEW. AUDIBILITY REPORT SHALL HAVE 15 SEPARATE READINGS IN VARIOUS LOCATIONS THROUGHOUT FLOOR AREA INDICATING SOUND PRESSURE PRODUCED BY FIRE ALARM SIGNALING DEVICES.

ELECTRICAL DRAWING LIST					
DRAWING #	DRAWING NAME				
E001	ELECTRICAL LEGEND AND GENERAL NOTES				
E101	ELECTRICAL SITE PLAN				
E102	ELECTRICAL SITE LIGHTING PLAN				
E103	ELECTRICAL SITE PLAN DETAILS				
E104	ELECTRICAL SITE PLAN - ALECTRA DETAILS				
E201	LEVEL 1 PLAN - LIGHTING				
E301	LEVEL 1 PLAN - POWER & SYSTEMS				
E302	ROOF PLAN - POWER & SYSTEMS				
E401	FIRE ALARM KEY PLAN				
E501	ELECTRICAL DETAILS (1)				
E502	ELECTRICAL DETAILS (2)				
E503	ELECTRICAL DETAILS (3)				
E504	ELECTRICAL DETAILS (4)				
E601	ELECTRICAL SCHEDULES (1)				
E602	ELECTRICAL SCHEDULES (2)				
E603	ELECTRICAL SCHEDULES (3)				

SYMBOL	DESCRIPTION
	LINETYPES NEW WORK
	WORK TO BE DEMOLISHED, OR REMOVED
	EXISTING MATERIAL/EQUIPMENT/SERVICES TO REMAIN
	FUTURE WORK (NOT IN SCOPE) EXTENTS OF FIRE ALARM ZONE, WET LOCATION, OR
	OTHER AREA AS NOTED ON PLANS ABBREVIATIONS
E	EXISTING TO REMAIN
R ER	EXISTING TO BE DEMOLISHED/REMOVED EXISTING IN RELOCATED POSITION
RR	REMOVE AND RELOCATE
С	CEILING MOUNTED CONNECTION
W F	WALL MOUNTED CONNECTION FLOOR MOUNTED CONNECTION
AFF	ABOVE FINISHED FLOOR
AFG O/C	ABOVE FINISHED GRADE OVER COUNTER
U/C	UNDER CABINET
ССТ	CIRCUIT
GFCI TL	GROUND FAULT CIRCUIT INTERRUPTER TWIST LOCK
BDO	BAY DOOR OPERATOR
WG	WIRE GUARD
WP R/I	WEATHER PROOF ROUGH-IN ONLY
NIC	NOT IN CONTRACT
SIM. TYP.	SIMILAR TO TYPICAL
	ABBREVIATIONS - CODES AND STANDARDS
OBC	ONTARIO BUILDING CODE
OESC OFC	ONTARIO ELECTRICAL SAFETY CODE ONTARIO FIRE CODE
	ABBREVIATIONS - CEILING TYPES
ACT	ACOUSTIC CEILING TILE (T-BAR)
GB	EXPOSED CEILING GYPSUM BOARD CEILING
OWSJ	OPEN WEB STEEL JOISTS
WD	WOOD CEILING ANNOTATIONS
CL	CLOSET
WR	WASHROOM PLUMBING
PTP	ELECTRONIC TRAP PRIMER
PSC	PLUMBING SENSOR CONTROL (TOUCHLESS FAUCETS)
<u> </u>	HVAC THERMOSTAT OR TEMPERATURE SENSOR
Ī	TIMER CONTROL
BBH FFH	ELECTRIC BASEBOARD HEATER (BBH) FORCED FLOW HEATER
ERV	FORCED FLOW HEATER ENERGY RECOVERY VENTILATOR
HRU	HEAT RECOVERY UNIT
MUA	MAKE-UP AIR UNIT CONDUIT AND BOXES
	CONDUIT WITH END BUSHING
<u> </u>	CONDUIT UP
<u></u> >	CONDUIT DOWN CONDUIT CONTINUES
JB	JUNCTION BOX
РВ	PULL BOX
HH	HAND HOLE
	CONNECTIONS TO EQUIPMENT
DW	DISHWASHER
FR MW	FRIDGE MICROWAVE
HD	HAND DRYER. ALLOW UP TO 208V-1PH-20A
<u> </u>	1-PHASE DIRECT CONNECTION OUTLET AS NOTED. 3-PHASE DIRECT CONNECTION OUTLET AS NOTED.
<u> </u>	CONNECTION TO SINGLE PHASE MOTOR, HP (KW) AS
	NOTED. PROVIDE LOCAL DISCONNECT. THREE PHASE MOTOR, HP (KW) AS NOTED. PROVIDE
« »	LOCAL DISCONNECT.
\$	LIGHTING CONTROLS
<u>'</u>	LIGHTING CONTROLS ECIFICATIONS AND RESPECTIVE SCHEDULES FOR EXACT REQUIREMENTS
<u>'</u>	ECIFICATIONS AND RESPECTIVE SCHEDULES FOR EXACT
REFER TO SPE	ECIFICATIONS AND RESPECTIVE SCHEDULES FOR EXACT REQUIREMENTS SWITCH OR OTHER USER INTERFACE DEVICE AS
REFER TO SPE	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH.
REFER TO SPE	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH
REFER TO SPE	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER
REFER TO SPE	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL
REFER TO SPE	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH ADJACENT TO SWITCH, DENOTES DOOR SWITCH DUAL TECHNOLOGY SENSOR
REFER TO SPE	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH ADJACENT TO SWITCH, DENOTES DOOR SWITCH DUAL TECHNOLOGY SENSOR ADJACENT TO SWITCH, DENOTES MASTER CONTROL FOR ALL LUMINAIRES IN A ROOM OR SPACE, OR AS
REFER TO SPE	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH ADJACENT TO SWITCH, DENOTES DOOR SWITCH DUAL TECHNOLOGY SENSOR ADJACENT TO SWITCH, DENOTES MASTER CONTROL FOR ALL LUMINAIRES IN A ROOM OR SPACE, OR AS NOTED. WALL MOUNTED SWITCH/OCCUPANCY SENSOR. PIR
REFER TO SPE	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH ADJACENT TO SWITCH, DENOTES DOOR SWITCH DUAL TECHNOLOGY SENSOR ADJACENT TO SWITCH, DENOTES MASTER CONTROL FOR ALL LUMINAIRES IN A ROOM OR SPACE, OR AS NOTED. WALL MOUNTED SWITCH/OCCUPANCY SENSOR. PIR DENOTES 'PASSIVE INFRARED', DT DENOTES 'DUAL PASSIVE INFRARED', LINE VOLTAGE TO
REFER TO SPE	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH ADJACENT TO SWITCH, DENOTES DOOR SWITCH DUAL TECHNOLOGY SENSOR ADJACENT TO SWITCH, DENOTES MASTER CONTROL FOR ALL LUMINAIRES IN A ROOM OR SPACE, OR AS NOTED. WALL MOUNTED SWITCH/OCCUPANCY SENSOR. PIR DENOTES 'PASSIVE INFRARED', DT DENOTES 'DUAL PASSIVE INFRARED/ULTRASONIC'. LINE VOLTAGE TO SUIT CONTROLLED CIRCUIT, OR AS NOTED.
REFER TO SPE	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH ADJACENT TO SWITCH, DENOTES DOOR SWITCH DUAL TECHNOLOGY SENSOR ADJACENT TO SWITCH, DENOTES MASTER CONTROL FOR ALL LUMINAIRES IN A ROOM OR SPACE, OR AS NOTED. WALL MOUNTED SWITCH/OCCUPANCY SENSOR. PIR DENOTES 'PASSIVE INFRARED', DT DENOTES 'DUAL PASSIVE INFRARED', LINE VOLTAGE TO
REFER TO SPE H-3W DIM T AT DS DT M H-2X PP	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH ADJACENT TO SWITCH, DENOTES DOOR SWITCH DUAL TECHNOLOGY SENSOR ADJACENT TO SWITCH, DENOTES MASTER CONTROL FOR ALL LUMINAIRES IN A ROOM OR SPACE, OR AS NOTED. WALL MOUNTED SWITCH/OCCUPANCY SENSOR. PIR DENOTES 'PASSIVE INFRARED', DT DENOTES 'DUAL PASSIVE INFRARED', LINE VOLTAGE TO SUIT CONTROLLED CIRCUIT, OR AS NOTED.
REFER TO SPE HS 3W DIM T AT DS DT M PP SC	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH ADJACENT TO SWITCH, DENOTES DOOR SWITCH DUAL TECHNOLOGY SENSOR ADJACENT TO SWITCH, DENOTES MASTER CONTROL FOR ALL LUMINAIRES IN A ROOM OR SPACE, OR AS NOTED. WALL MOUNTED SWITCH/OCCUPANCY SENSOR. PIR DENOTES 'PASSIVE INFRARED', DT DENOTES 'DUAL PASSIVE INFRARED'ULTRASONIC'. LINE VOLTAGE TO SUIT CONTROLLED CIRCUIT, OR AS NOTED. POWER PACK SCENE CONTROLLER.
REFER TO SPE HS 3W DIM T AT DS DT M PP SC	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH ADJACENT TO SWITCH, DENOTES DOOR SWITCH DUAL TECHNOLOGY SENSOR ADJACENT TO SWITCH, DENOTES MASTER CONTROL FOR ALL LUMINAIRES IN A ROOM OR SPACE, OR AS NOTED. WALL MOUNTED SWITCH/OCCUPANCY SENSOR. PIR DENOTES 'PASSIVE INFRARED', DT DENOTES 'DUAL PASSIVE INFRARED/ULTRASONIC'. LINE VOLTAGE TO SUIT CONTROLLED CIRCUIT, OR AS NOTED. POWER PACK SCENE CONTROLLER. PHOTOCELL SENSOR. CEILING MOUNTED OCCUPANCY SENSOR. PIR
REFER TO SPE HS 3W DIM T AT DS DT M PP SC P	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH ADJACENT TO SWITCH, DENOTES DOOR SWITCH DUAL TECHNOLOGY SENSOR ADJACENT TO SWITCH, DENOTES MASTER CONTROL FOR ALL LUMINAIRES IN A ROOM OR SPACE, OR AS NOTED. WALL MOUNTED SWITCH/OCCUPANCY SENSOR. PIR DENOTES 'PASSIVE INFRARED', DT DENOTES 'DUAL PASSIVE INFRARED/ULTRASONIC'. LINE VOLTAGE TO SUIT CONTROLLED CIRCUIT, OR AS NOTED. POWER PACK SCENE CONTROLLER. PHOTOCELL SENSOR. CEILING MOUNTED OCCUPANCY SENSOR. PIR DENOTES 'PASSIVE INFRARED', UT DENOTES 'ULTRASONIC' (OR MICROPHONIC), DT DENOTES 'DUAL TECHNOLOGY'. 'OS' DENOTES UNKNOWN TECHNOLOGY'.
REFER TO SPE HSW DIM T AT DS DT M HSC PP	ECIFICATIONS AND RESPECTIVE SCHEDULES FOR EXACT REQUIREMENTS SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH ADJACENT TO SWITCH, DENOTES DOOR SWITCH DUAL TECHNOLOGY SENSOR ADJACENT TO SWITCH, DENOTES MASTER CONTROL FOR ALL LUMINAIRES IN A ROOM OR SPACE, OR AS NOTED. WALL MOUNTED SWITCH/OCCUPANCY SENSOR. PIR DENOTES 'PASSIVE INFRARED', DT DENOTES 'DUAL PASSIVE INFRARED/LITRASONIC'. LINE VOLTAGE TO SUIT CONTROLLED CIRCUIT, OR AS NOTED. POWER PACK SCENE CONTROLLER. PHOTOCELL SENSOR. CEILING MOUNTED OCCUPANCY SENSOR. PIR DENOTES 'PASSIVE INFRARED', UT DENOTES 'ULTRASONIC' (OR MICROPHONIC), DT DENOTES 'ULTRASONIC' (OR MICROPHONIC), DT DENOTES 'DUAL TECHNOLOGY'. 'OS' DENOTES UNKNOWN TECHNOLOGY'. 'OS' DENOTES UNKNOWN TECHNOLOGY. WALL MOUNTED OCCUPANCY SENSOR.
REFER TO SPE HS 3W DIM T AT DS DT M PP SC P	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE. 3-WAY SWITCH ADJACENT TO SWITCH, DENOTES DIMMING SWITCH. ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH ADJACENT TO SWITCH, DENOTES DOOR SWITCH DUAL TECHNOLOGY SENSOR ADJACENT TO SWITCH, DENOTES MASTER CONTROL FOR ALL LUMINAIRES IN A ROOM OR SPACE, OR AS NOTED. WALL MOUNTED SWITCH/OCCUPANCY SENSOR. PIR DENOTES 'PASSIVE INFRARED', DT DENOTES 'DUAL PASSIVE INFRARED/ULTRASONIC'. LINE VOLTAGE TO SUIT CONTROLLED CIRCUIT, OR AS NOTED. POWER PACK SCENE CONTROLLER. PHOTOCELL SENSOR. CEILING MOUNTED OCCUPANCY SENSOR. PIR DENOTES 'PASSIVE INFRARED', UT DENOTES 'ULTRASONIC' (OR MICROPHONIC), DT DENOTES 'DUAL TECHNOLOGY'. 'OS' DENOTES UNKNOWN TECHNOLOGY'.

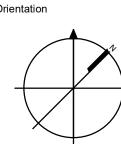
SYMBOL	ELECTRICAL LEGEND					
	SURFACE MOUNTED LIGHTING AND RECEPTACLE PANELBOARD					
	RECESSED RECEPTACLE AND LIGHTING PANELBOARD					
	DISTRIBUTION PANELBOARD DISCONNECT SWITCH					
	FUSED DISCONNECT SWITCH					
С	CONTACTOR					
	LOOSE STARTER. COORDINATE STARTING CHARACTERISTIC WITH EQUIPMENT REQUIREMENTS.					
₹1	COMBINATION STARTER.					
/FD	ADJACENT TO STARTER, DENOTES VARIABLE FREQUENCY DRIVE					
	POWER RECEPTACLES AND BOXES					
<u></u> →	120V U-GROUND DUPLEX RECEPTACLE. 120V U-GROUND DUPLEX RECEPTACLE MOUNTED					
≠) =	ABOVE COUNTER TOP OR AS INSTRUCTED ON SITE. 120V U-GROUND 20A DUPLEX RECEPTACLE.					
)	120V U-GROUND DUPLEX RECEPTACLE MOUNTED					
	ABOVE COUNTER TOP OR AS INSTRUCTED ON SITE. 120V U-GROUND DUPLEX RECEPTACLE -					
\	AUTOMATICALLY CONTROLLED (ASHRAE 90.1-2013, 8.4.2). 120V U-GROUND 20A DUPLEX RECEPTACLE -					
}	AUTOMATICALLY CONTROLLED (ASHRAE 90.1-2013, 8.4.2).					
\$	120V U-GROUND DUPLEX RECEPTACLE - HALF OF RECEPTACLE AUTOMATICALLY CONTROLLED (ASHRAE 90.1-2013, 8.4.2).					
<u> </u>	SPLIT RECEPTACLE. IF MANUALLY CONTROLLED, SHOWN CONNECTED TO SWITCH.					
<u> </u>	SPLIT RECEPTACLE MOUNTED ABOVE COUNTER TOP					
<u></u>	OR AS INSTRUCTED ON SITE. 120V U-GROUND QUAD RECEPTACLE.					
HT	INDICATES DUPLEX RECEPTACLE COMPLETE WITH					
>	ONE TYPE A AND ONE TYPE C USB CHARGING PORTS. TOP RECEPTACLE TO BE CONTROLLED BY					
	SINGLE-POLE SWITCH AS INDICATED ON DRAWINGS 14-30R RECEPTACLE FOR LAUNDRY DRYER, OR					
=	OTHER RECEPTACLE AS NOTED.					
=	14-50R RECEPTACLE FOR ELECTRIC RANGE, OR OTHER RECEPTACLE AS NOTED. PROVIDE 40A/2P BREAKER TO SUIT.					
	SPECIAL RECEPTACLE. VERIFY OUTLET					
	REQUIREMENTS PRIOR TO ROUGH-IN. SPECIAL RECEPTACLE. VERIFY OUTLET					
)	REQUIREMENTS PRIOR TO ROUGH-IN.					
€	FLOOR RECEPTACLE OR RECEPTACLE IN FLOOR BOX (POWER ONLY)					
	SERVICE POLE. PROVIDE POWER TO JUNCTION BOX IN CEILING SPACE ABOVE. DEVICES ON POLE AS NOTED					
	ON PLANS.					
B1	ADJACENT TO FLOOR RECEPTACLE, DENOTES FLOOR BOX TYPE					
SA	DENOTES FIRE STATION ALERTING DEVICE					
SYMBOLS IN AC	LIGHTING FIXTURES CCORDANCE WITH IES DG-3-00 AND IES HB-10-11 WHERE					
	NOT DETAILED OTHERWISE HERE. HTING FIXTURE SCHEDULE FOR FURTHER DETAILS AND					
	EXACT FIXTURE REQUIREMENTS. LINEAR LUMINAIRE, SURFACE MOUNTED TO CEILING					
	LINEAR LUMINAIRE, SURFACE MOUNTED TO CEILING LINEAR LUMINAIRE, RECESSED IN CEILING					
_ 	LINEAR LUMINAIRE, SUSPENDED: PENDANT, CHAIN,					
•	STEM, OR AIRCRAFT CABLE HUNG TO SUIT APPLICATION, OR AS NOTED IN SCHEDULE. "X", WHEN USED DENOTES POWER FEED LOCATION.					
	LINEAR LUMINAIRE, WALL MOUNTED					
 2	ROUND OR SQUARE DOWNLIGHT, RECESSED					
9	ROUND SUSPENDED LUMINAIRE					
□ЮЮ	WALL SCONCE OR OTHER WALL MOUNTED LUMINAIRES.					
:M	CONNECTED TO EMERGENCY NIGHT LIGHT CIRCUIT (24 HOUR)					
	LUMINAIRE CONNECTED TO NON-EMERGENCY NIGHT					
IL ., B, Z1, Z2,	LIGHT CIRCUIT (24 HOUR) DENOTES ZONING/CIRCUTING ASSIGNMENTS FOR					
TC.	LUMINAIRES AND CONTROLS IN THE SAME SPACE.					
REFER TO EN	EMERGENCY LIGHTING MERGENCY LIGHTING FIXTURE SCHEDULE FOR EXACT					
	FIXTURE REQUIREMENTS. CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN.					
	SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON					
Š H ⊘						
X H X	PLANS.					
	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE.					
	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN.					
X H X	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON					
	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED					
	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED					
	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS.					
	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED					
	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD.					
	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX					
	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL					
 X HX A Y A Y A Y M CT 	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING					
EM CCT	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. POST TOP LUMINAIRE ON POLE. DIRECTIONAL					
M CCT	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. POST TOP LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION.					
M CCT RI	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. POST TOP LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY					
	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. POST TOP LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. LIGHTING BOLLARD. DIRECTIONAL ARROW, WHERE					
© HIN CCT CRI	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. POST TOP LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. LIGHTING BOLLARD. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. GROUND MOUNTED FLOOD LIGHT TELECOMMUNICATIONS					
EM CCT CRI	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. POST TOP LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. LIGHTING BOLLARD. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. GROUND MOUNTED FLOOD LIGHT TELECOMMUNICATIONS WALL MOUNTED DATA (D) OR VOICE (V) OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE.					
EM CCT CRI	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. POST TOP LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. LIGHTING BOLLARD. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. GROUND MOUNTED FLOOD LIGHT TELECOMMUNICATIONS WALL MOUNTED DATA (D) OR VOICE (V) OUTLET.					
EM CCT CRI	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. POST TOP LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. LIGHTING BOLLARD. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. GROUND MOUNTED FLOOD LIGHT TELECOMMUNICATIONS WALL MOUNTED DATA (D) OR VOICE (V) OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS					
EM CCT CRI	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. POST TOP LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. LIGHTING BOLLARD. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. GROUND MOUNTED FLOOD LIGHT TELECOMMUNICATIONS WALL MOUNTED DATA (D) OR VOICE (V) OUTLET. PROVIDE 1V UNLESS NOTED OTHERWISE.					
	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. POST TOP LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. LIGHTING BOLLARD. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. GROUND MOUNTED FLOOD LIGHT TELECOMMUNICATIONS WALL MOUNTED DATA (D) OR VOICE (V) OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED TELEVISION OUTLET.					
EM CCT CRI	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. POST TOP LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. LIGHTING BOLLARD. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. GROUND MOUNTED FLOOD LIGHT TELECOMMUNICATIONS WALL MOUNTED DATA (D) OR VOICE (V) OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED TELEVISION OUTLET. VOICE, DATA, OR TV OUTLET AS DESCRIBED ABOVE, MOUNTED ABOVE COUNTER TOP OR AS INSTRUCTED ON SITE.					
EM CCT CRI	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. POST TOP LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. LIGHTING BOLLARD. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. GROUND MOUNTED FLOOD LIGHT TELECOMMUNICATIONS WALL MOUNTED DATA (D) OR VOICE (V) OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED TELEVISION OUTLET.					
	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. POST TOP LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. LIGHTING BOLLARD. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. GROUND MOUNTED FLOOD LIGHT TELECOMMUNICATIONS WALL MOUNTED DATA (D) OR VOICE (V) OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED TELEVISION OUTLET. VOICE, DATA, OR TV OUTLET AS DESCRIBED ABOVE, MOUNTED ABOVE COUNTER TOP OR AS INSTRUCTED ON SITE. ADJACENT TO COMMUNICATIONS OUTLET, INDICATES BLANK-OFF PLATE.					
M CCT FRI III III III III III III III III III	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADED AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS. ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS. RECESSED EMERGENCY REMOTE HEAD. DENOTES "EMERGENCY" CORRELATED COLOUR TEMPERATURE COLOUR RENDERING INDEX EXTERIOR LIGHTING ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. POST TOP LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. LIGHTING BOLLARD. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION. GROUND MOUNTED FLOOD LIGHT TELECOMMUNICATIONS WALL MOUNTED DATA (D) OR VOICE (V) OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED DATA OUTLET. PROVIDE 2D UNLESS NOTED OTHERWISE. WALL MOUNTED TELEVISION OUTLET. VOICE, DATA, OR TV OUTLET AS DESCRIBED ABOVE, MOUNTED ABOVE COUNTER TOP OR AS INSTRUCTED ON SITE. ADJACENT TO COMMUNICATIONS OUTLET, INDICATES BLANK-OFF PLATE.					

SYMBOL	DESCRIPTION
	WIRELESS ACCESS POINT (WIFI), PROVIDE 2D UNLESS
WAP	OTHERWISE NOTED. PUBLIC ADDRESS SYSTEM SPEAKER, CEILING
<u>(s)</u>	MOUNTED.
<u>-(v)</u> - <u>v </u>	PUBLIC ADDRESS SYSTEM SPEAKER, WALL MOUNTED. PUBLIC ADDRESS HORN SPEAKER WALL MOUNTED.
HS	PUBLIC ADDRESS SYSTEM HANDSET
ACC	PUBLIC ADDRESS SYSTEM ADMIN CONTROL CONSOLE
₩VOL	PUBLIC ADDRESS SPEAKER VOLUME CONTROL SWITCH.
√IDS	VIDEO INTERCOM SYSTEM DOOR CALL STATION
IMS	VIDEO INTERCOM SYSTEM BOOK CALL STATION VIDEO INTERCOM SYSTEM MASTER STATION
9	CLOCK.
MTX	GPS CLOCK SYSTEM MASTER TRANSMITTER
ŔX	GPS CLOCK SYSTEM GPS RECEIVER
RTX	GPS CLOCK SYSTEM SATELLITE TRANSMITTER (REPEATER)
SRX	GPS CLOCK SYSTEM RECEIVER SWITCH
CR	ACCESS CONTROL AND DOOR HARDWARE CARD READER
DA	DOOR ALARM SOUNDER
DC	DOOR CONTACT
KS KS	ELECTRIC STRIKE KEY SWITCH
ML	ELECTROMAGNETIC LOCK
REX	REQUEST TO EXIT SENSOR
•	MUSHROOM HEAD PUSH BUTTON FOR 'REQUEST TO EXIT' MAGLOCK RELEASE, OR OTHER PUSH BUTTON
	AS INDICATED DOOR RELEASE ADJACENT TO THE ABOVE,
DR	PUSHBUTTON INTEGRATED WITH ELECTRIFIED DOOR HARDWARE DEVICE.
•	BARRIER FREE DOOR OPERATOR PUSH BUTTON
WS	TOUCHLESS "WAVE SWITCH" FOR DOOR OPERATOR CONTROL
	DOOR BELL C/W SOUNDER AND STROBE
	DOOR BELL (SOUNDER ONLY) INTRUSION DETECTION
	GLASS BREAK (GB)
MD	MOTION DETECTOR (MD)
KP	VIDEO SURVEILLANCE
	CCTV CAMERA
C/P	CCTV CAMERA, CEILING OR POLE MOUNTED
	CCTV CAMERA, WALL MOUNTED
PTZ	PAN-TILT-ZOOM DURESS SYSTEM
● DB	DURESS BUTTON (MOUNTED ON UNDERSIDE OF
	TABLETOP) WALL MOUNTED DURESS BUTTON WITH
● DB-W	POLYCARBONATE ANTI-TAMPER COVER
DB) _	DURESS SYSTEM STROBE LIGHT FIRE DETECTION AND ALARM - GENERAL
FACP	FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNICIATOR PANEL
FAPG FAMP	FIRE ALARM PASSIVE GRAPHIC FIRE ALARM ULC MONITORING PANEL
FAZ	FIRE ALARM ZONE
FSZ	FIRE ALARM SUPERVISORY ZONE
	FIRE ALARM PANEL (FACP, FAAP, FAMP) AS DENOTED ON PLANS.
<u> </u>	FIRE DETECTION - INITIATION DEVICES MANUAL PULL STATION (MPS)
	WHERE NOTED ADJACENT TO MANUAL PULL
LX	STATIONS, DENOTES PULL STATION C/W POLYCARBONATE (LEXAN) COVER.
WG	WHERE NOTED ADJACENT TO MANUAL PULL STATIONS, DENOTES PULL STATION C/W WIRE GUARD
Λ	WHERE NOTED ADJACENT TO MANUAL PULL
Α	STATIONS OR DETECTOR, DENOTES DEVICE C/W AUXILIARY CONTACT.
ð	PHOTOELECTRIC SMOKE DETECTOR
<u>◆</u> - ◆□	SAME AS ABOVE, WALL MOUNTED DUCT MOUNTED SMOKE DETECTOR
CO	CARBON MONOXIDE DETECTOR
7	HEAT DETECTOR - 58 DEGREES C (135 DEGREES F) FIXED TEMPERATURE AND RATE OF RISE,
	RESTORABLE
· · · · · · · · · · · · · · · · · · ·	SAME AS ABOVE, WALL MOUNTED ADJACENT TO HEAT DETECTOR, DENOTES "HIGH
HT	TEMPERATURE", 94 DEGREES C (200 DEGREES F) OR AS NOTED ON PLANS.
	HEAT DETECTOR - 58 DEGREES C (135 DEGREES F)
т	FIXED TEMPERATURE, NON-RESTORABLE
	HEAT DETECTOR - 94 DEGREES C (200 DEGREES F) FIXED TEMPERATURE, NON-RESTORABLE
>	
<u> </u>	FLOW SWITCH
FS	FLOW SWITCH DETECTION AND ALARM - SUPERVISORY DEVICES
FS FIRE	DETECTION AND ALARM - SUPERVISORY DEVICES LOW TANK LEVEL
FS FIRE	DETECTION AND ALARM - SUPERVISORY DEVICES
FS FIRE	DETECTION AND ALARM - SUPERVISORY DEVICES LOW TANK LEVEL LOSS OF POWER
FS FIRE	DETECTION AND ALARM - SUPERVISORY DEVICES LOW TANK LEVEL LOSS OF POWER LOW TEMPERATURE PRESSURE SWITCH SUPERVISED VALVE
FIRE LL LP LT PS SV	DETECTION AND ALARM - SUPERVISORY DEVICES LOW TANK LEVEL LOSS OF POWER LOW TEMPERATURE PRESSURE SWITCH
FIRE LL LP LT PS SV WON FIRE	DETECTION AND ALARM - SUPERVISORY DEVICES LOW TANK LEVEL LOSS OF POWER LOW TEMPERATURE PRESSURE SWITCH SUPERVISED VALVE FIRE ALARM MONITORING POINT, REFER TO FLOOR PLANS FOR DETAILS. EDETECTION AND ALARM - SIGNALLING DEVICES
FIRE LL LP LT PS SV MON FIRE	DETECTION AND ALARM - SUPERVISORY DEVICES LOW TANK LEVEL LOSS OF POWER LOW TEMPERATURE PRESSURE SWITCH SUPERVISED VALVE FIRE ALARM MONITORING POINT, REFER TO FLOOR PLANS FOR DETAILS. E DETECTION AND ALARM - SIGNALLING DEVICES FIRE ALARM BELL, WALL MOUNTED.
FS FIRE LL LP LT PS SV MON FIRE	DETECTION AND ALARM - SUPERVISORY DEVICES LOW TANK LEVEL LOSS OF POWER LOW TEMPERATURE PRESSURE SWITCH SUPERVISED VALVE FIRE ALARM MONITORING POINT, REFER TO FLOOR PLANS FOR DETAILS. EDETECTION AND ALARM - SIGNALLING DEVICES FIRE ALARM BELL, WALL MOUNTED. ADJACENT TO BELL OR HORN, DENOTES CEILING MOUNTED.
FIRE LL LP LT PS SV MON FIRE	DETECTION AND ALARM - SUPERVISORY DEVICES LOW TANK LEVEL LOSS OF POWER LOW TEMPERATURE PRESSURE SWITCH SUPERVISED VALVE FIRE ALARM MONITORING POINT, REFER TO FLOOR PLANS FOR DETAILS. E DETECTION AND ALARM - SIGNALLING DEVICES FIRE ALARM BELL, WALL MOUNTED. ADJACENT TO BELL OR HORN, DENOTES CEILING MOUNTED. FIRE ALARM HORN
FIRE LL LP LT PS SV MON FIRE	DETECTION AND ALARM - SUPERVISORY DEVICES LOW TANK LEVEL LOSS OF POWER LOW TEMPERATURE PRESSURE SWITCH SUPERVISED VALVE FIRE ALARM MONITORING POINT, REFER TO FLOOR PLANS FOR DETAILS. EDETECTION AND ALARM - SIGNALLING DEVICES FIRE ALARM BELL, WALL MOUNTED. ADJACENT TO BELL OR HORN, DENOTES CEILING MOUNTED.
FIRE LIL LIP LIT PS SV MON FIRE ZO CC ZK M	DETECTION AND ALARM - SUPERVISORY DEVICES LOW TANK LEVEL LOSS OF POWER LOW TEMPERATURE PRESSURE SWITCH SUPERVISED VALVE FIRE ALARM MONITORING POINT, REFER TO FLOOR PLANS FOR DETAILS. E DETECTION AND ALARM - SIGNALLING DEVICES FIRE ALARM BELL, WALL MOUNTED. ADJACENT TO BELL OR HORN, DENOTES CEILING MOUNTED. FIRE ALARM HORN ADJACENT TO FIRE ALARM HORN, DENOTES 'MINI' HORN FIRE ALARM HORN/STROBE, WALL MOUNTED.
LL LP LT PS SV MON FIRE AO C MM MS SS	DETECTION AND ALARM - SUPERVISORY DEVICES LOW TANK LEVEL LOSS OF POWER LOW TEMPERATURE PRESSURE SWITCH SUPERVISED VALVE FIRE ALARM MONITORING POINT, REFER TO FLOOR PLANS FOR DETAILS. EDETECTION AND ALARM - SIGNALLING DEVICES FIRE ALARM BELL, WALL MOUNTED. ADJACENT TO BELL OR HORN, DENOTES CEILING MOUNTED. FIRE ALARM HORN ADJACENT TO FIRE ALARM HORN, DENOTES 'MINI' HORN FIRE ALARM HORN/STROBE, WALL MOUNTED. SILENCE SWITCH
FS FIRE LL LP LT PS SV WON FIRE A C A M SS D -	DETECTION AND ALARM - SUPERVISORY DEVICES LOW TANK LEVEL LOSS OF POWER LOW TEMPERATURE PRESSURE SWITCH SUPERVISED VALVE FIRE ALARM MONITORING POINT, REFER TO FLOOR PLANS FOR DETAILS. E DETECTION AND ALARM - SIGNALLING DEVICES FIRE ALARM BELL, WALL MOUNTED. ADJACENT TO BELL OR HORN, DENOTES CEILING MOUNTED. FIRE ALARM HORN ADJACENT TO FIRE ALARM HORN, DENOTES 'MINI' HORN FIRE ALARM HORN/STROBE, WALL MOUNTED.

SYMBOL	DESCRIPTION			
	1			
WG	WIRE GUARD			
DNE	"DO NOT ENTER" SIGN			
СМ	CONTROL MODULE			
MM	MONITOR MODULE			
НО	MAGNETIC DOOR HOLDER AND RELEASING DEVICE ("HOLD OPEN")			
$\boxtimes \mathcal{H}$	FIRE SUPPRESSION ABORT STATION			
	SINGLE LINE DIAGRAM			
< ⟨ ••••>>	AIR CIRCUIT BREAKER			
$\overline{}$	MOLDED CASE CIRCUIT BREAKER			
· ·	DISCONNECT (UNFUSED)			
	DISCONNECT (FUSED)			
	FUSE			
?;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	METERING CABINET			
3118	TDANISEODMED			
3115	TRANSFORMER			
(<u>G</u>)	GENERATOR			
◎ \ ◎	AUTOMATIC TRANSFER SWITCH			
Ъ				
	AUTOMATIC TRANSFER SWITCH C/W SINGLE SIDED BYPASS ISOLATION			
© © ©	AUTOMATIC TRANSFER SWITCH C/W DOUBLE SIDED BYPASS ISOLATION			
ATS	AUTOMATIC TRANSFER SWITCH			
C	CONTACTOR			
DP	DISTRIBUTION PANELBOARD			
LP	LIGHTING PANELBOARD			
RP	RECEPTACLE PANELBOARD			
SPD	SURGE PROTECTIVE DEVICE			
TX	TRANSFORMER			
UPS	UNINTERRUPTIBLE POWER SUPPLY			
	DETAIL REFERENCES			
<u></u>	SHEET KEYNOTE			
1	REFER TO DETAIL. EXAMPLE SHOWN INDICATES REFERENCE TO DETAIL 1 ON DRAWING E101			
€101 ⁄				
<u>/1\</u>	REVISION NUMBER			
	GENERIC. ALL SYMBOLS LISTED MAY NOT BE R THIS PROJECT. REFER TO FLOOR PLANS TO DETERM			

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE EMAIL: CM-20-063@QUASARCG.COM

- 1	ISSUED FOR TENDER	2021-08-12
Н	ISSUED FOR BUILDING PERMIT	2021-07-27
G	90% CD	2021-05-03
F	SITE PLAN RESUBMISSION	2021-04-23
Е	SPA	2021-02-12
D	50% CD	2021-02-05
С	BUILDING PERMIT	2021-02-05
В	PERMIT/SPA COORDINATION	2021-02-02
Α	100% DESIGN DEVELOPMENT	2021-01-19
No.	Revision	Date





The specifications are to be considered as an integral part of these drawings and neither the drawings nor the specifications shall be used alone. Refer to architectural drawings for dimensions. Do not

© Copyright Reserved: These drawings and all that is represented herein are the exclusive property of Quasar Consulting Group.

They may not be used or reproduced without written permission from



250 ROWNTREE DAIRY RD, WOODBRIDGE, ON TEL: 905-507-0800

Project Information BFES Station 201 (SPA-2021-0032)

WEB: WWW.QUASARCG.COM

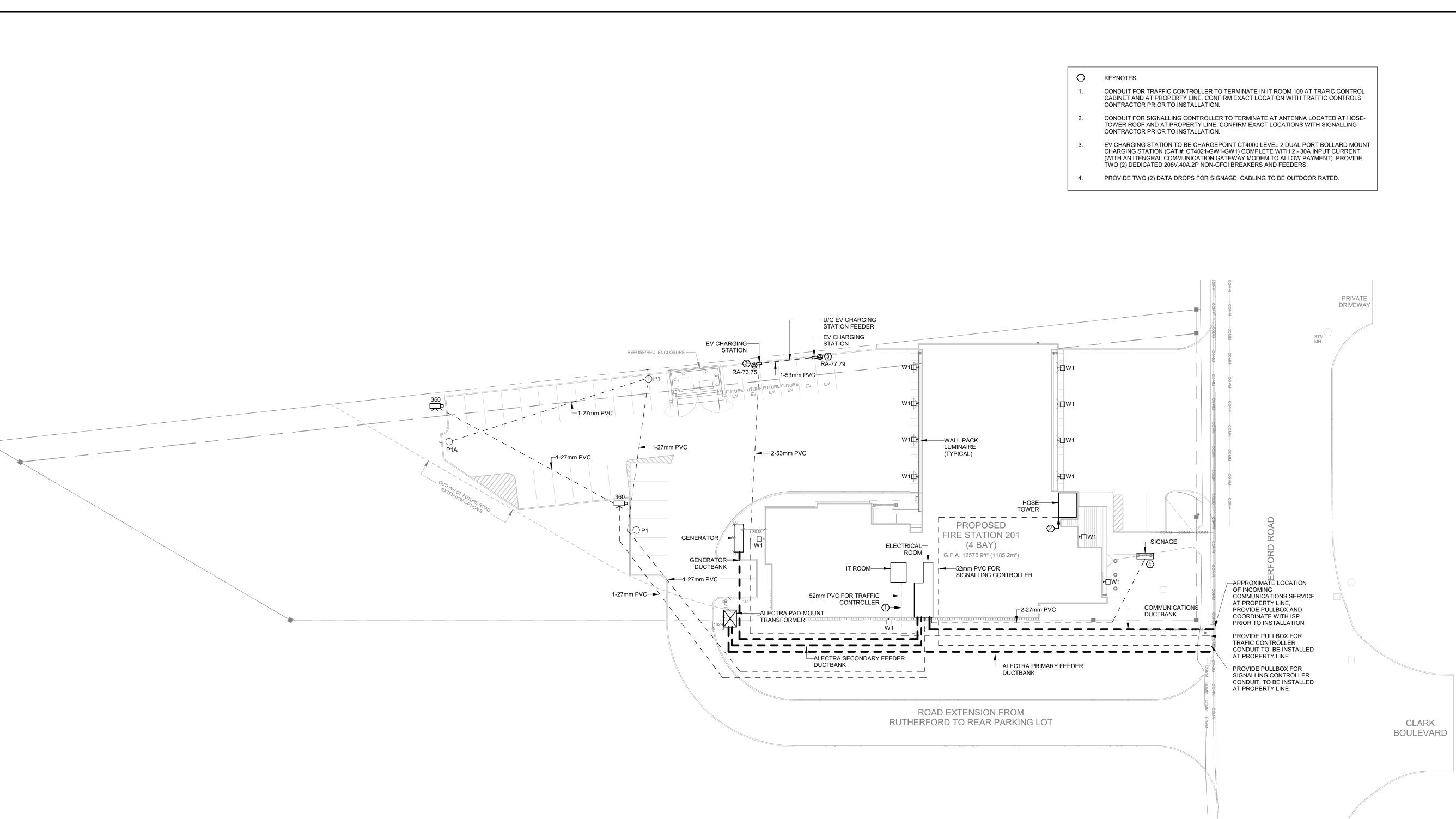
27 Rutherford Rd. S., Brampton, ON, L6W 3J3

City of Brampton Fire & Emergency Services

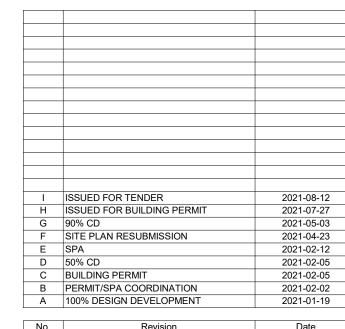
Drawing Title

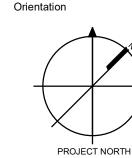
ELECTRICAL LEGEND AND GENERAL NOTES

2021-08-12 Drawn by DTH Scale 1:1



FOR QUESTIONS REGARDING THIS PROJECT, PLEASE EMAIL: CM-20-063@QUASARCG.COM







The specifications are to be considered as an integral part of these drawings and neither the drawings nor the specifications shall be used alone. Refer to architectural drawings for dimensions. Do not scale.

© Copyright Reserved: These drawings and all that is represented herein are the exclusive property of Quasar Consulting Group.
They may not be used or reproduced without written permission from Quasar Consulting Group.



250 ROWNTREE DAIRY RD, WOODBRIDGE, ON TEL: 905-507-0800 WEB: WWW.QUASARCG.COM

Project Information

EXT'G HYDRANT

BFES Station 201 (SPA-2021-0032)

27 Rutherford Rd. S., Brampton, ON, L6W 3J3

City of Brampton Fire & Emergency Services

Drawing Title

ELECTRICAL SITE PLAN

Project No Drawing No 2021-08-12 Drawn by DTH CM-20-063 **E101**

Scale 1:300

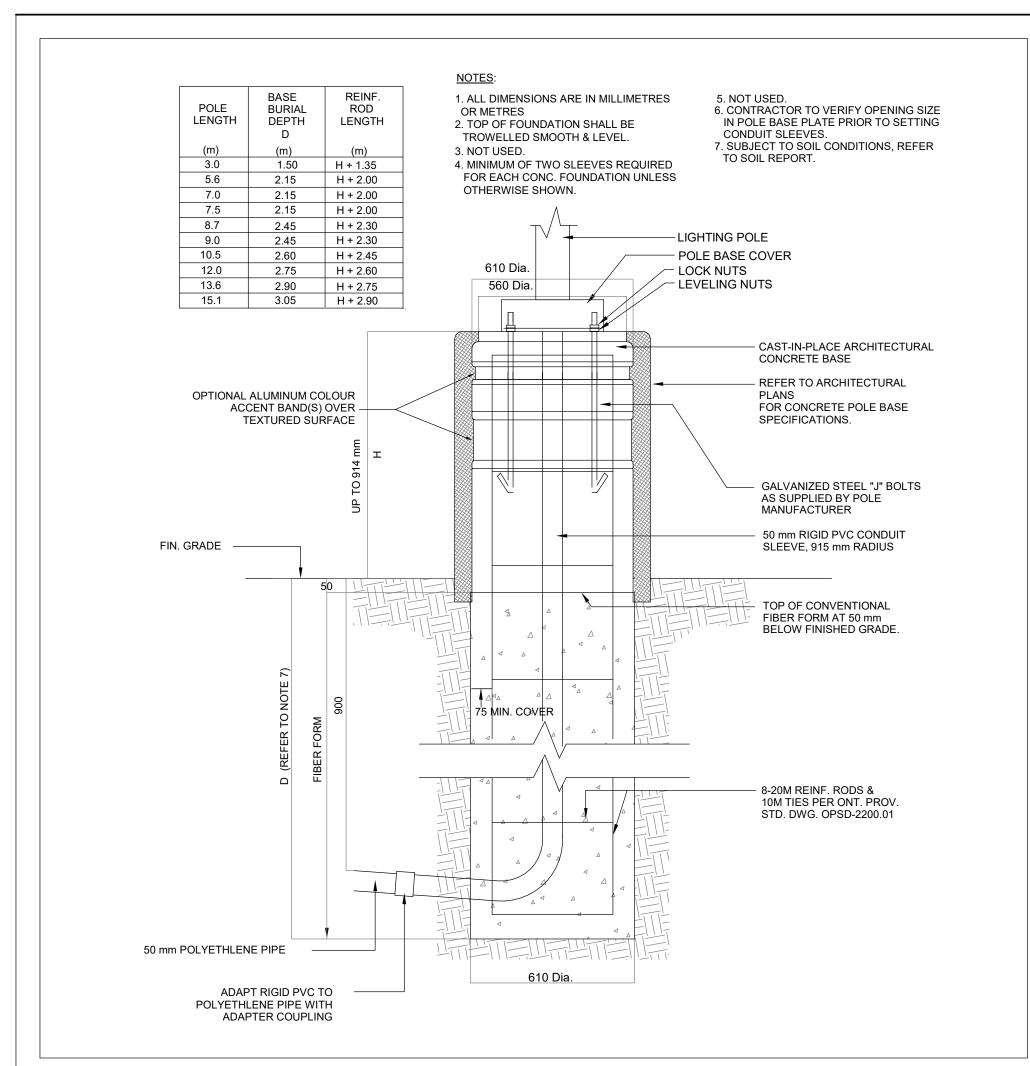
Scale

1:300

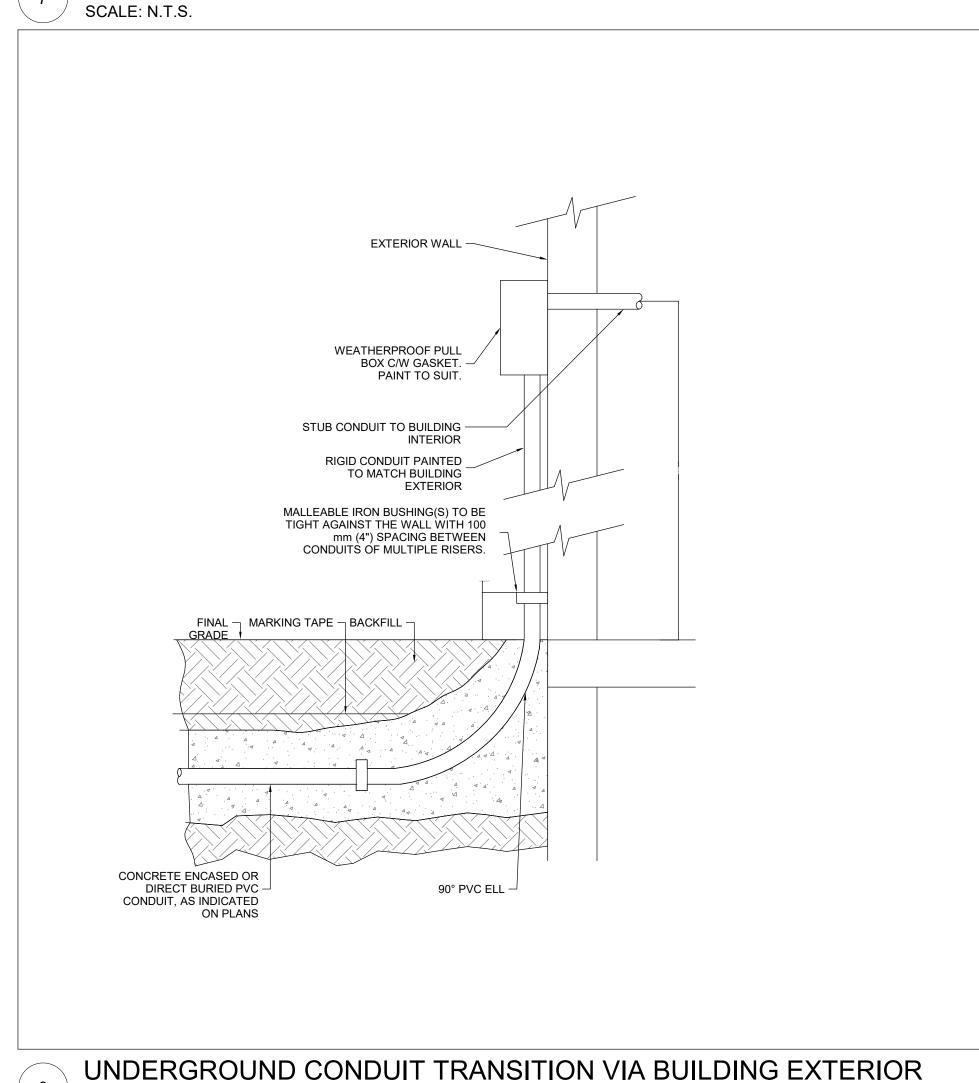
BIM 360://20019 - BFES Station 201/CM-20-063 - QCG ME Model R20.r

SITE LIGHTING PLAN

SCALE:1:300

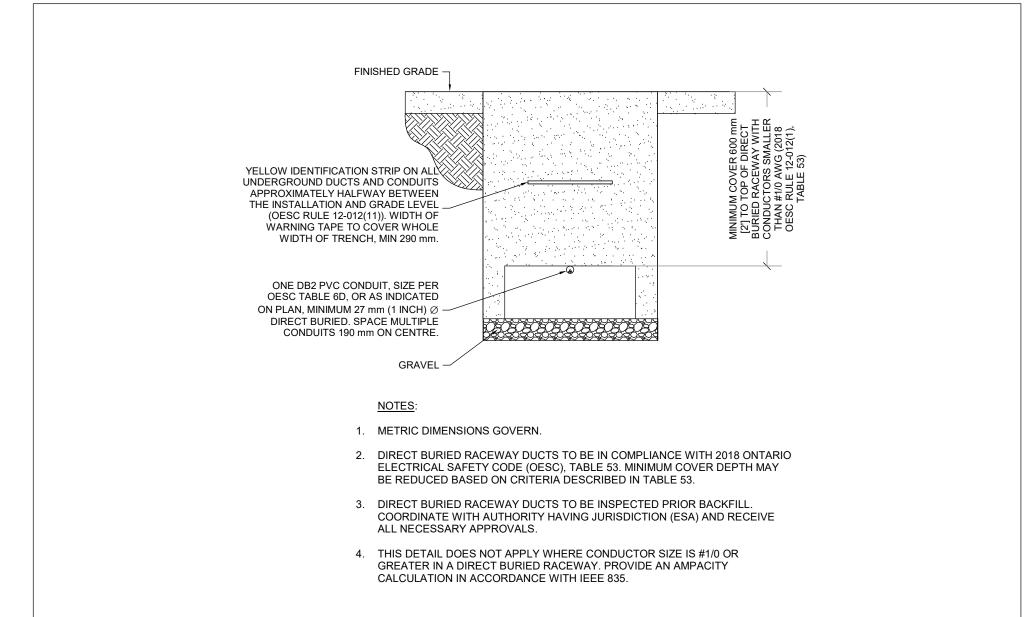


LIGHTING STANDARD ARCHITECTURAL BASE

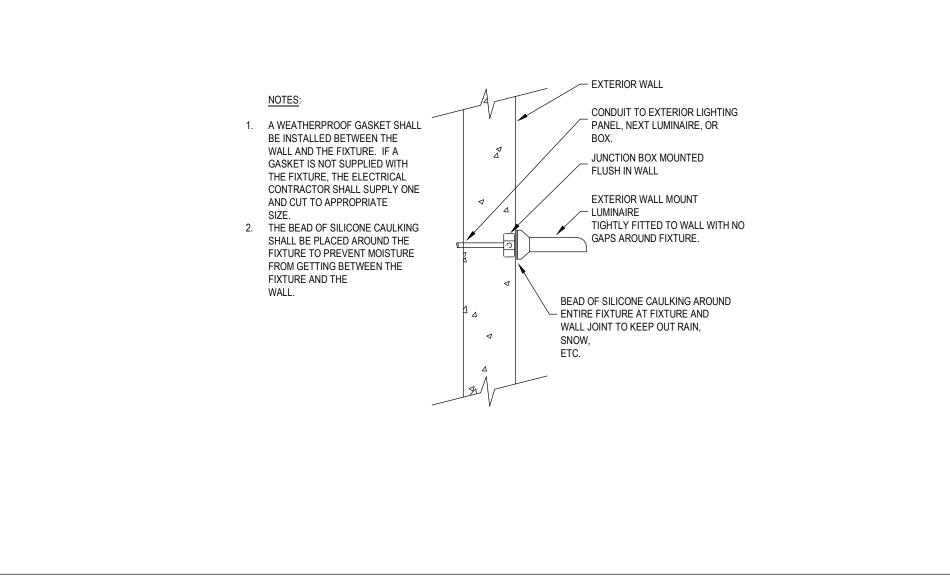


FINISHED GRADE -YELLOW IDENTIFICATION STRIP ON ALL UNDERGROUND DUCTS AND CONDUITS APPROXIMATELY HALFWAY BETWEEN THE INSTALLATION AND GRADE LEVEL (OESC RULE 12-012(11)), WIDTH OF WARNING TAPE 450 mm TO COVER WHOLE WIDTH OF INSTALLATION MOLDED PLASTIC INTERLOCKING DUCT SPACERS AT 1525 mm INTERVALS ALONG ENTIRE LENGTH OF DUCT BANK. SIX x 103 mm (4")Ø RIGID PVC TYPE 2, **CONDUITS ENCASED IN 30** MPa CONCRETE. REINFORCING STEEL RODS, -TYPICAL GRAVEL — 450 mm [1'-6"] — **DETAIL NOTES**: DUCT BANK TO BE INSPECTED PRIOR TO POURING OF CONCRETE AND PRIOR TO BACKFILL. COORDINATE WITH AUTHORITY HAVING JURISDICTION AND RECEIVE ALL NECESSARY APPROVALS. 3x2 ALTERNATE DUCT BANK CONFIGURATION MAY ALSO BE USED.

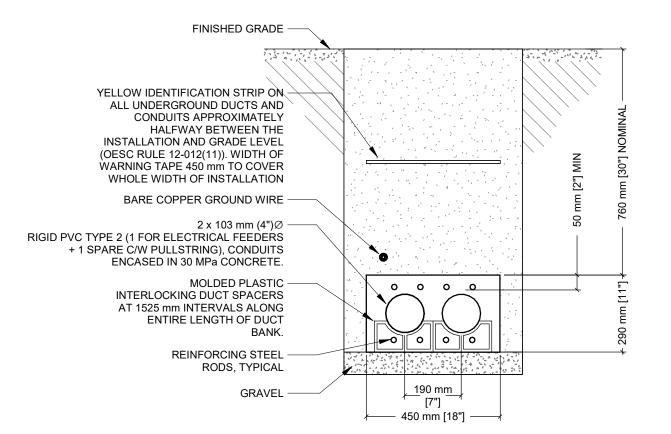
6-WAY COMMUNICATIONS DUCT BANK DETAIL SCALE: N.T.S.



SINGLE DIRECT BURIED RACEWAY SCALE: N.T.S.



SEALING OF WALL MOUNTED EXTERIOR LUMINAIRES SCALE: N.T.S.



- 1. DUCT BANK TO BE IN COMPLIANCE WITH 2018 ONTARIO ELECTRICAL SAFETY CODE (OESC), DIAGRAM D11, OR LATEST EDITION. WHERE ANY CONTRADICTION EXISTS BETWEEN THIS DETAIL AND THE OESC, THE OESC DIMENSIONS GOVERN.
- 2. DUCT BANK TO BE INSPECTED PRIOR TO POURING OF CONCRETE AND PRIOR TO BACKFILL. COORDINATE WITH AUTHORITY HAVING JURISDICTION AND RECEIVE ALL NECESSARY APPROVALS.
- AMPACITY OF COPPER FEEDER BASED ON 2018 OESC TABLES LISTED BELOW, LOWER OF THE TWO VALUES. REQUIRED: 200 A CAPACITY (NOT INCLUDING VOLTAGE DROP) FEEDER: ONE (1) CONDUCTOR PER PHASE (3 PHASE), PLUS GROUND. 3.1 TABLE D11A - "1/PHASE", SIZE 2/0 MCM = 233 A 3.2 TABLE 2 - SIZE 4/0 MCM = 230 A
- 4. ALTERNATE DUCT BANK CONFIGURATION MAY ONLY BE CONSIDERED BY THE CONSULTANT IF THE SAME FEEDER METHODOLOGY ABOVE IS CONSIDERED, OR AN AMPACITY CALCULATION IS PROVIDED IN ACCORDANCE WITH IEEE 835.
- GREATER DEPTH THAN THE NOTED DIMENSION WILL RESULT IN A DECREASE IN THE DUCT BANK AMPACITY. REDUCTION IN THE DEPTH REQUIRES COORDINATION WITH OESC TABLE 53.

190 mm

- 450 mm [18"] -

1. DUCT BANK TO BE IN COMPLIANCE WITH 2018 ONTARIO ELECTRICAL

SAFETY CODE (OESC), DIAGRAM D11, OR LATEST EDITION. WHERE

2. DUCT BANK TO BE INSPECTED PRIOR TO POURING OF CONCRETE AND

REQUIRED: 200 A CAPACITY (NOT INCLUDING VOLTAGE DROP)

ANY CONTRADICTION EXISTS BETWEEN THIS DETAIL AND THE OESC, THE

PRIOR TO BACKFILL. COORDINATE WITH AUTHORITY HAVING JURISDICTION

3. AMPACITY OF COPPER FEEDER BASED ON 2018 OESC TABLES LISTED BELOW,

FEEDER: ONE (1) CONDUCTOR PER PHASE (3 PHASE), PLUS GROUND

4. UPPER TWO DUCTS (120 VOLT ACCESSORIES, AND MONITORING/CONTROL)

5. ALTERNATE DUCT BANK CONFIGURATION MAY ONLY BE CONSIDERED BY THE CONSULTANT IF THE SAME FEEDER METHODOLOGY ABOVE IS CONSIDERED, OR AN AMPACITY CALCULATION IS PROVIDED IN

6. GREATER DEPTH THAN THE NOTED DIMENSION WILL RESULT IN A DECREASE IN THE DUCT BANK AMPACITY. REDUCTION IN THE DEPTH

- 6. CONDUIT FILL IN ACCORDANCE WITH 2018 OESC TABLE 6D.
- 7. PROVIDE PULLSTRING IN SPARE CONDUIT.

2-WAY LOW VOLTAGE DUCT BANK SECTION

FINISHED GRADE

YELLOW IDENTIFICATION STRIP ON ALL UNDERGROUND DUCTS AND

COVER WHOLE WIDTH OF INSTALLATION

MOLDED PLASTIC INTERLOCKING DUCT -SPACERS AT 1525 mm INTERVALS ALONG ENTIRE LENGTH OF DUCT BANK.

CONDUIT PROVISIONS AS FOLLOWS:

1x53 mm (2 INCH)Ø (CONTROL & MONITORING) 1x53 mm (2 INCH)Ø (120V ACCESSORIES)

RIGID PVC TYPE 2, CONDÚITS ENCASED IN 30 MPa

1x103 mm (4 INCH)Ø (120/208 V)

1x103 mm (4 INCH)Ø (120/208 V)

REINFORCING STEEL -

RODS, TYPICAL

GRAVEL

OESC DIMENSIONS GOVERN.

LOWER OF THE TWO VALUES:

ACCORDANCE WITH IEEE 835.

3.2 TABLE 2 - SIZE 4/0 MCM = 230 A

AND RECEIVE ALL NECESSARY APPROVALS.

INSTALLATION PER OESC RULE 12-012(3)(d).

REQUIRES COORDINATION WITH OESC TABLE 53.

7. CONDUIT FILL IN ACCORDANCE WITH 2018 OESC TABLE 6D

3.1 TABLE D11À - "1/PHASE", SIZE 2/0 MCM = 233 A

GENSET BARE COPPER -**GROUND WIRE**

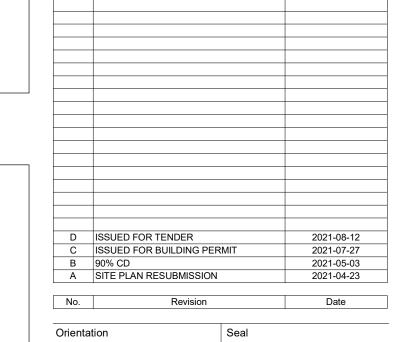
CONDUITS APPROXIMATELY HALFWAY BETWEEN

12-012(11)). WIDTH OF WARNING TAPE 450 mm TO

THE INSTALLATION AND GRADE LEVEL (OESC RULE

SCALE: N.T.S.

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE EMAIL: CM-20-063@QUASARCG.COM





The specifications are to be considered as an integral part of these drawings and neither the drawings nor the specifications shall be used alone. Refer to architectural drawings for dimensions. Do not

© Copyright Reserved: These drawings and all that is represented herein are the exclusive property of Quasar Consulting Group. They may not be used or reproduced without written permission fron



250 ROWNTREE DAIRY RD, WOODBRIDGE, ON TEL: 905-507-0800

Scale

Project Information **BFES Station 201** (SPA-2021-0032)

WEB: WWW.QUASARCG.COM

27 Rutherford Rd. S., Brampton, ON, L6W 3J3

City of Brampton Fire & Emergency Services

Drawing Title

ELECTRICAL SITE PLAN DETAILS

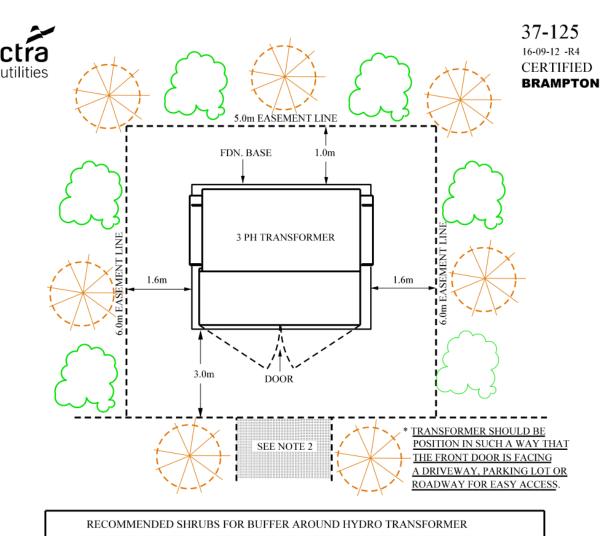
Project No Drawing No 2021-08-12

As indicated

GENERATOR DUCT BANK SECTION

SCALE: N.T.S.

SCALE: N.T.S.



RECOMMENDED SHRUBS FOR BUFFE	R AROUND HYDRO TRANSFORMER
ANTHONY WATERER SPIREA	WINTER BEAUTY KOREAN BOXWOOD
SPIREA JAPONICA 'ANTHONY WATERER'	BUXUS MICROPHYLLA KOREANA 'WINTER BEAUTY
GOLDFLAME SPIREA	LITTLE GIANT GLOBE CEDAR
SPIREA JAPONICA 'GOLDFLAME'	THUJA OCCIDENTALIS 'LITTLE GIANTS'
CORAL BEAUTY COTONEASTER	SARCOXIE EUONYMUS
COTONEASTER DAMMERI 'CORAL BEAUTY'	EUONYMUS FORTUNEI 'SARCOXIE'
DWARF JAPANESE YEW	DWARF BURNING BUSH
TAXUS CUSPIDATA 'NANA'	EUONYMUS ALATUS COMPACTA
GREEN VELVET BOXWOOD BUXUS MIC. VAR. INSULARIS 'GREEN VELVET'	

- 1. FINAL GRADE WITHIN THE RESTRICTED LANDSCAPE ZONE MUST NOT BE ALTERED.
- 2. PROVIDE 3.0m CLEARANCE FOR ACCESS.
- 3. REFER TO STDS. 37-217, 37-380 AND 41-25 FOR GUARD POST INSTALLATION AND GROUNDING WHEN REQUIRED.

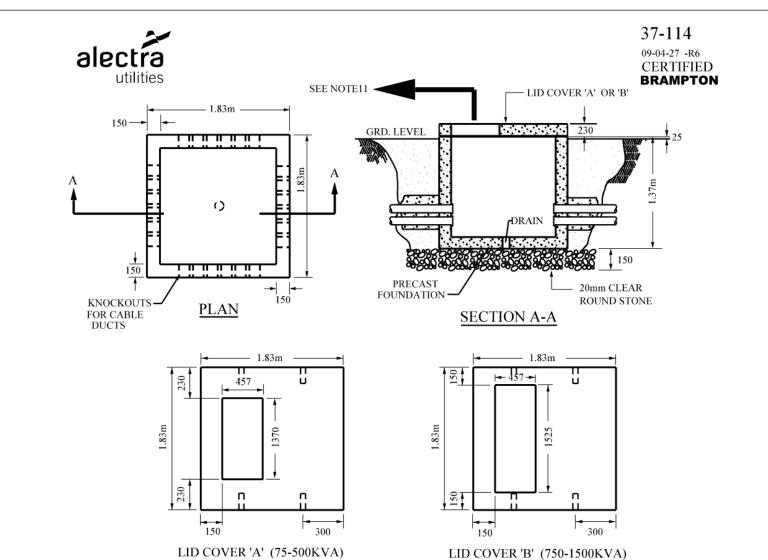
APPROVED IN ACCORDANCE WITH REGULATION 22/04 REVISION - CHGD FRONT CLEARANCE FROM 2.4m 16-09-12 TO 3.0m AS PER CSA C22.3 NO.7-10

ORIGINAL ISSUE: AUGUST 06, 2002

3 PH PADMOUNT TRANSFORMER

CLEARANCES FROM VEGETATION

HOB STD. 37-125 - 3PH PAD-MOUNT TRASFORMER CLEARANCES SCALE: N.T.S.



1. ALL DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.

- 2. FOUNDATION TO BE PRECAST CONCRETE PAD. MANUFACTURER WILL DELIVER THE UNIT TO THE SITE.
- 3. COMPLETE THE EXCAVATION AND PROVIDE BEDDING CONSISTING OF MINIMUM 150mm LAYER OF 20mm CLEAR ROUND STONE. 4. PLACE BACKFILL CONSISTING OF CLEAN EARTH, SAND, OR PEA GRAVEL IN THOROUGHLY COMPACTED
- 5. PAD LOCATION TO BE KEPT CLEAR OF OBSTRUCTIONS FOR ACCESS BY ALECTRA UTILITIES 6. TIE CABLE DUCTS INTO WALL OF FOUNDATION AT KNOCKOUTS AS SPECIFIED BY ALECTRA UTILITIES
- PERSONNEL. INSTALL BELL ENDS ON PVC DUCTS. 7. REMOVE KNOCKOUT IN FLOOR TO ALLOW FOR DRAINAGE.
- 8. INSTALL 4-20mm X 3.0m GROUND RODS AND MIN. #2/0 STRANDED COPPER GROUND WIRE. 9. REFER TO STD. 41-11 FOR GROUNDING DETAIL.
- 10. CONTRACTOR WILL BE RESPONSIBLE FOR SEALING DUCT ENDS.
- 11. POSITION LID OPENING SO THAT TRANSFORMER DOOR IS FACING BUILDING OR PARKING LOT. MAKE SURE DOOR IS NOT FACING ANY WALL STRUCTURE.
- 12. REFER TO STD. 37-217, STD. 37-380 AND STD. 41-25 FOR GROUND POST INSTALLATION.

09-04-27 SHOWED 25mm OF FOUNDATION BASE ABOVE FIN. GRD. LINE INSTALLATION OF PRECAST FOUNDATION FOR 3PH PADMOUNT

REVISION

TRANSFORMER (75-1500 KVA) ORIGINAL ISSUE: OCTOBER 6, 1989

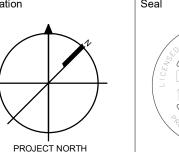
610mm TO FIN. GRD. CONNECTOR (C116) OR AMP WRENCH-LOK WIRE - SEE DETAIL 'A' FOR NOTE: 1. GROUNDING SHALL COMPLY WITH ONTARIO ELECTRICAL SAFETY CODE - LATEST REVISION . 2. LEAVE 2.4 METRES OF GROUND CONDUCTOR WIRE COILED IN TRANSFORMER BASE. 3. GROUND GRID RESISTANCE MUST NOT EXCEED 10 OHMS. 2/0 CU. STRANDED BARE, GROUND GRID (610mm BELOW GRADE). PRECAST CONCRETE FOUNDATION FOR 3 PHASE PADMOUNT TRANSFORMER AS PER ALECTRA UTILITIES STD. 37-114. TYPICAL WALL OPENING FOR DUCT/CABLE INSTALLATION. OUTLINE OF PROPOSED TRANSFORMER. TRANSFORMER H0 / X0 GROUNDING. CONNECTION TO GROUNDING BAR IN TRANSFORMER GROUND ROD 20mm(3/4") x 3.0m (10 ') LONG (610 mm BELOW GRADE) . SUITABLE GROUNDING CONNECTORS FOR 2/0 STR. CU TO 3/4" ROD: AMPACT WEDGE CONNECTOR AMP WRENCH-LOK CONCENTRIC NEUTRAL TO TX NEUTRAL GROUNDING SCHEMATIC MOVED GRD. GRID CONNECTION TO THE RIGHT SIDE OF GROUNDING BAR 3 PHASE PADMOUNT TRANSFORMER GROUNDING DETAIL ORIGINAL ISSUE: OCTOBER 6, 1989

HOB STD. 41-11 3 PHASE PADMOUNT TRANSFORMER GROUNDING DETAIL SCALE: N.T.S.

ALECTRA BRAMPTON 37-114 - 75 TO 1500 kVA PAD MOUNT FOUNDATION SCALE: N.T.S.

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE EMAIL: CM-20-063@QUASARCG.COM

В	ISSUED FOR TENDER	2021-08-12
Α	ISSUED FOR BUILDING PERMIT	2021-07-27
	_	
No.	Revision	Date



The specifications are to be considered as an integral part of these drawings and neither the drawings nor the specifications shall be used alone. Refer to architectural drawings for dimensions. Do not

© Copyright Reserved: These drawings and all that is represented herein are the exclusive property of Quasar Consulting Group.

They may not be used or reproduced without written permission fro



250 ROWNTREE DAIRY RD, WOODBRIDGE, ON TEL: 905-507-0800 WEB: WWW.QUASARCG.COM

Project Information

BFES Station 201 (SPA-2021-0032)

27 Rutherford Rd. S., Brampton, ON, L6W 3J3

City of Brampton Fire & Emergency Services

Drawing Title

ELECTRICAL SITE PLAN -ALECTRA DETAILS

2021-08-12

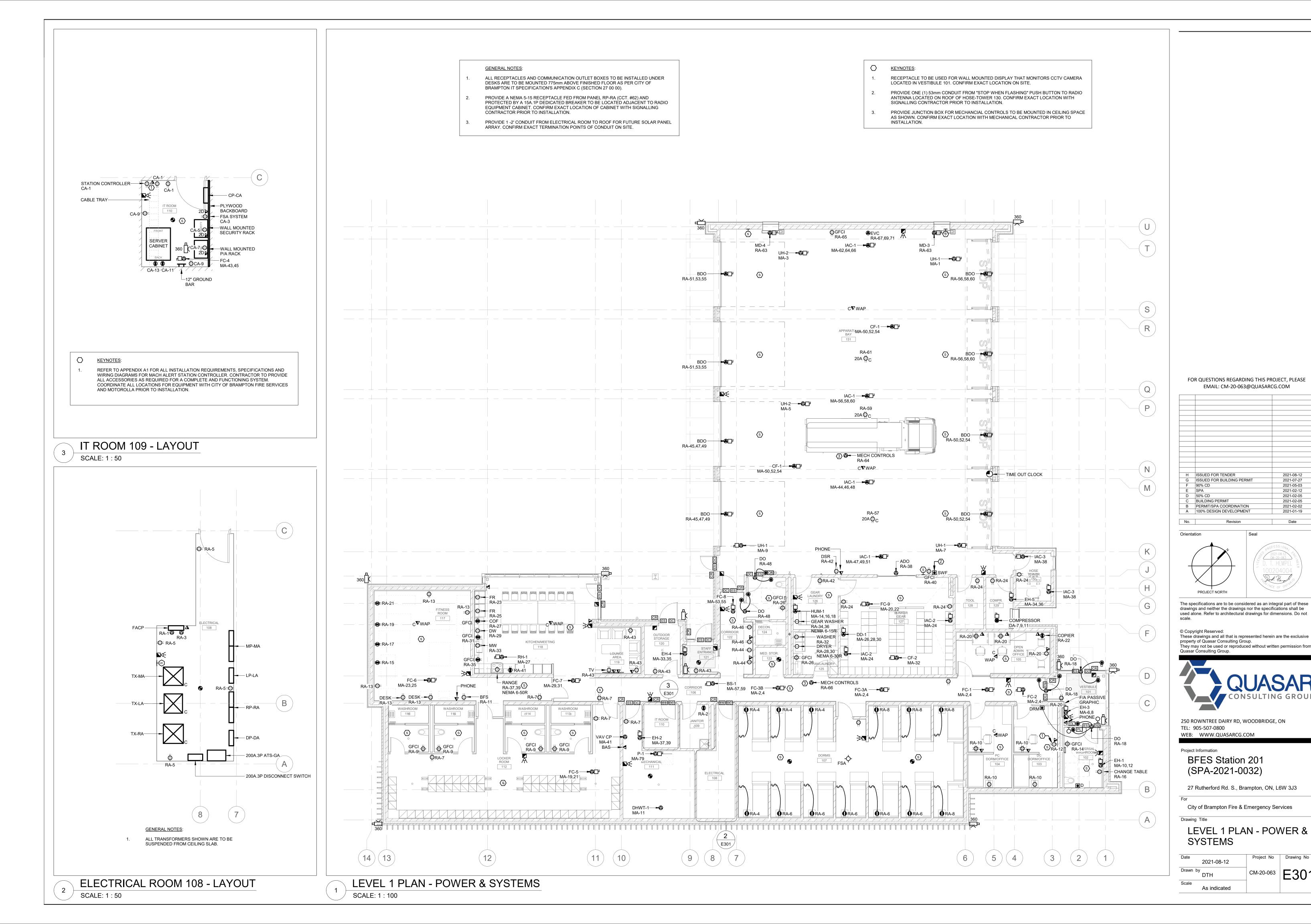
LEVEL 1 - LIGHTING PLAN SCALE: 1:100

CM-20-063 **E201** DTH

Scale

1:100





2021-02-12 2021-02-05

2021-02-05

2021-02-02

2021-01-19

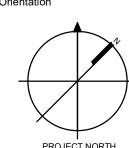
Date

Project No Drawing No

CM-20-063 **E301**

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE EMAIL: CM-20-063@QUASARCG.COM

G	ISSUED FOR TENDER	2021-08-12
F	ISSUED FOR BUILDING PERMIT	2021-07-27
Е	90% CD	2021-05-03
D	SPA	2021-02-12
С	50% CD	2021-02-05
В	BUILDING PERMIT	2021-02-05
Α	PERMIT/SPA COORDINATION	2021-02-02
Na	Povision	Data



The specifications are to be considered as an integral part of these drawings and neither the drawings nor the specifications shall be used alone. Refer to architectural drawings for dimensions. Do not scale.

© Copyright Reserved:
These drawings and all that is represented herein are the exclusive property of Quasar Consulting Group.
They may not be used or reproduced without written permission from Quasar Consulting Group.



250 ROWNTREE DAIRY RD, WOODBRIDGE, ON TEL: 905-507-0800 WEB: WWW.QUASARCG.COM

Project Information

BFES Station 201 (SPA-2021-0032)

27 Rutherford Rd. S., Brampton, ON, L6W 3J3

City of Brampton Fire & Emergency Services

Drawing Title

ROOF PLAN - POWER & SYSTEMS

Project No Drawing No 2021-08-12

Author Scale

CM-20-063 **E302** 1:100

SCALE: 1:100

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE

	EMAIL: CM-20-063@QUASAR	CG.COM
G	ISSUED FOR TENDER	2021-08-12
F	ISSUED FOR BUILDING PERMIT	2021-07-27
E	90% CD	2021-05-03
D	SPA	2021-02-12
С	50% CD	2021-02-05
В	BUILDING PERMIT	2021-02-05
Α	PERMIT/SPA COORDINATION	2021-02-02
No.	Revision	Date



The specifications are to be considered as an integral part of these drawings and neither the drawings nor the specifications shall be used alone. Refer to architectural drawings for dimensions. Do not scale.

© Copyright Reserved:
These drawings and all that is represented herein are the exclusive property of Quasar Consulting Group.
They may not be used or reproduced without written permission from Quasar Consulting Group.



250 ROWNTREE DAIRY RD, WOODBRIDGE, ON TEL: 905-507-0800 WEB: WWW.QUASARCG.COM

Project Information

BFES Station 201 (SPA-2021-0032)

27 Rutherford Rd. S., Brampton, ON, L6W 3J3

City of Brampton Fire & Emergency Services

1:100

FIRE ALARM KEY PLAN

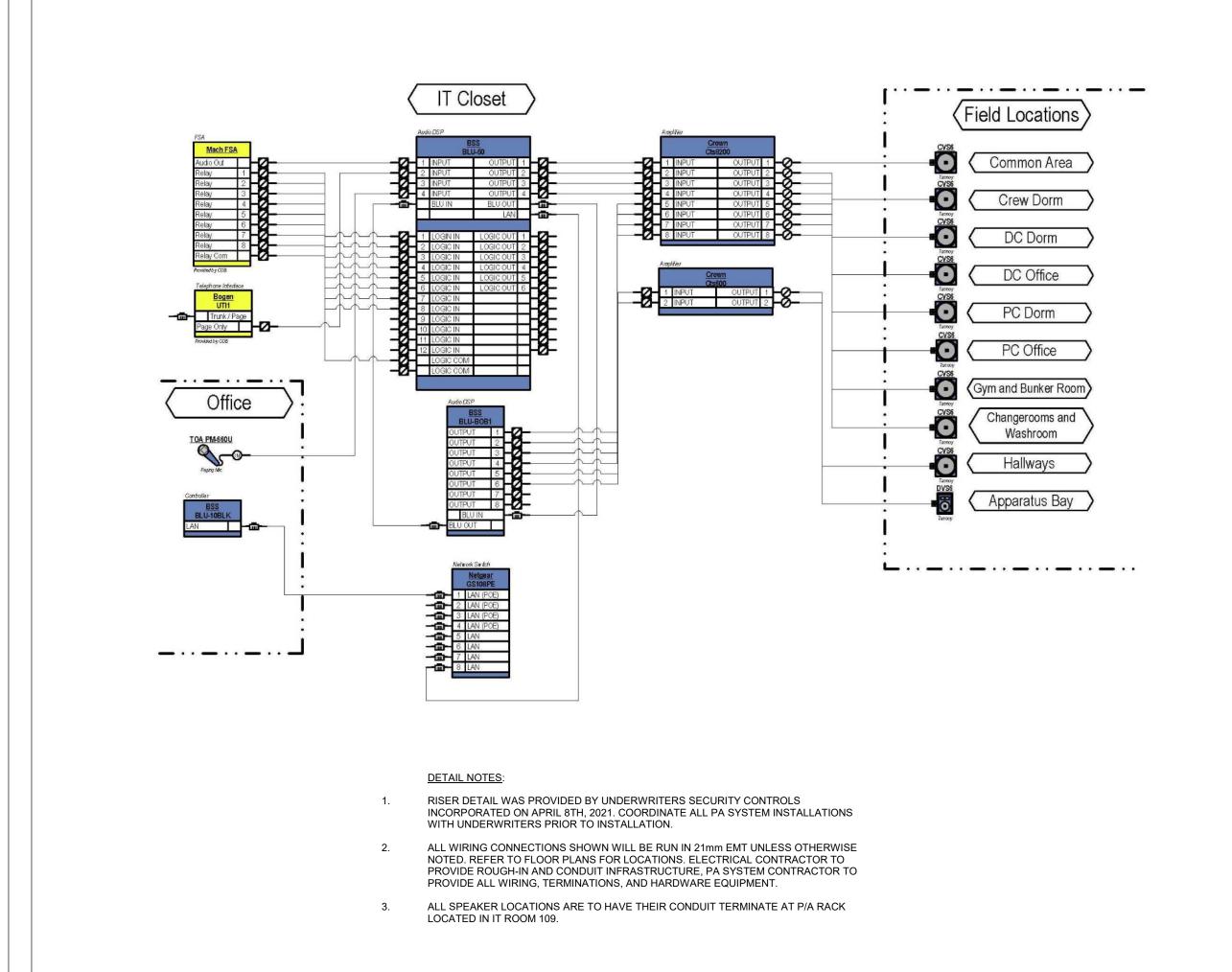
Project No Drawing No 2021-08-12 CM-20-063 **E401** Scale

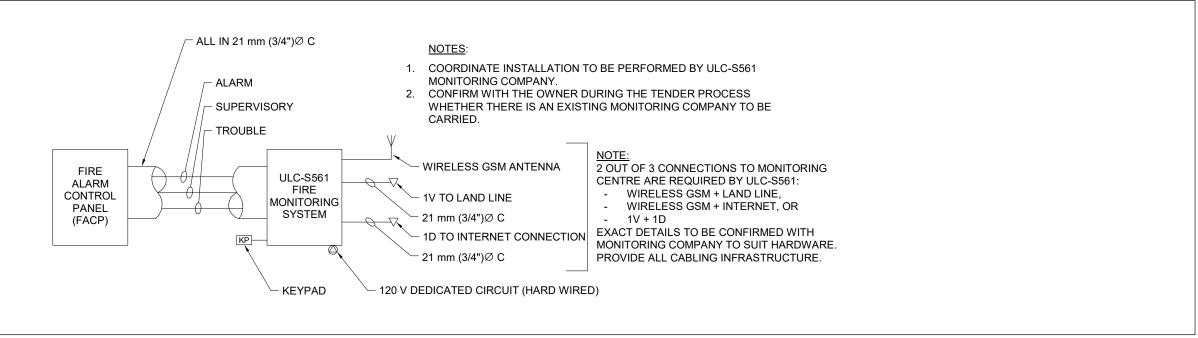
LEVEL 1 PLAN - FIRE ALARM KEY PLAN SCALE: 1:100

	FIRE ALARM ZON	E AND S	UPERVISORY ZON	E SCH	IEDUL	.E					1
	SD - SMOKE DETECTOR DSD - DUCT SMOKE DETECTOR HD - HEAT DETECTOR	STATION FS - FLOV	ANUAL PULL V SWITCH RVISED VALVE	PS - P SWIT	PRESSU CH	RE					FAZ - ALARM FSZ-SUPERVISORY FAR - RELAY
ZONE (2012 OBC 3.2.4.9)	DESCRIPTION	ALARM	ANNUNCIATOR A - ALARM S - SUPERVISORY R - RELAY OUTPUT	SD	DSD	F <i>F</i> HD	A DEVIC	CES FS	SV	PS	REMARKS
	POWER ON		GREEN								
	COMMON TROUBLE		YELLOW								
FAZ-1	SECTION 01		A	Х			Х				
FAZ-2	SECTION 02		A				Х				
FAZ-3	FS-1 - SECTION 1 FLOW SWITCH		А					Х			
FAZ- 4 TO X	SPARE ALARM ZONES										
FSZ-1	SV-1 - SPRINKLER DOUBLE CHECK ISOLATION		S						Х		
FSZ-2	SV-2 - SPRINKLER DOUBLE CHECK ISOLATION		S						Х		
FSZ-3	SV-3 - EXCESS PRESSURE PUMP CONTROL VALVE		S						Х		
FSZ-4	SV-4 - CHECK ISOLATION		S						Х		
FSZ-5	SV-5 - EXCESS PRESSURE PUMP CONTROL VALVE		S						Х		
FSZ-6	SV-6 - CHECK ISOLATION		S						Х		
FSZ-7	SV-7 - GROUND CONTROL VALVE (WET ZONE 1)		S						Х		
FSZ-8 TO X	SPARE SUPERVISORY ZONES										
FAR-1	MAKEUP AIR UNIT MAU-1, SHUTDOWN ON SPRINKLER FLOW		R								
FAR-2	DEDICATED OUTSIDE AIR SYSTEM DOAS-1, SHUTDOWN ON SPRINKLER FLOW		R								
FAR-3 TO X	SPARE OUTPUT RELAY ZONES										

FIRE ALARM SCHEDULE

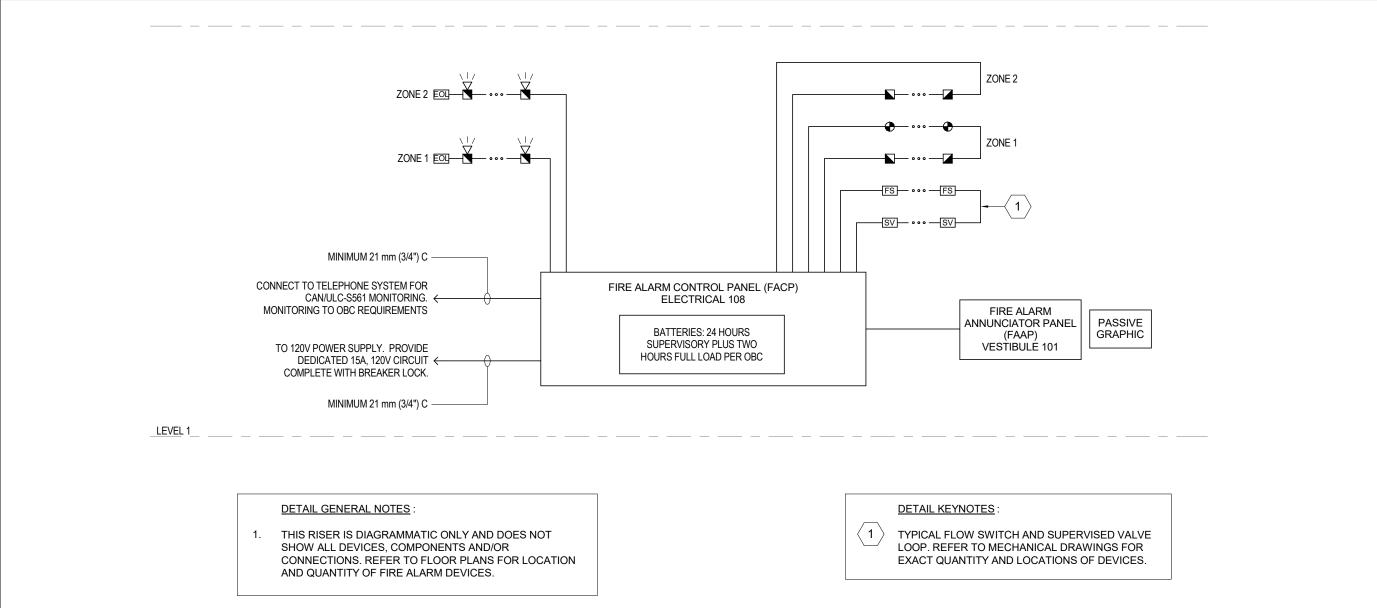
SCALE: N.T.S.





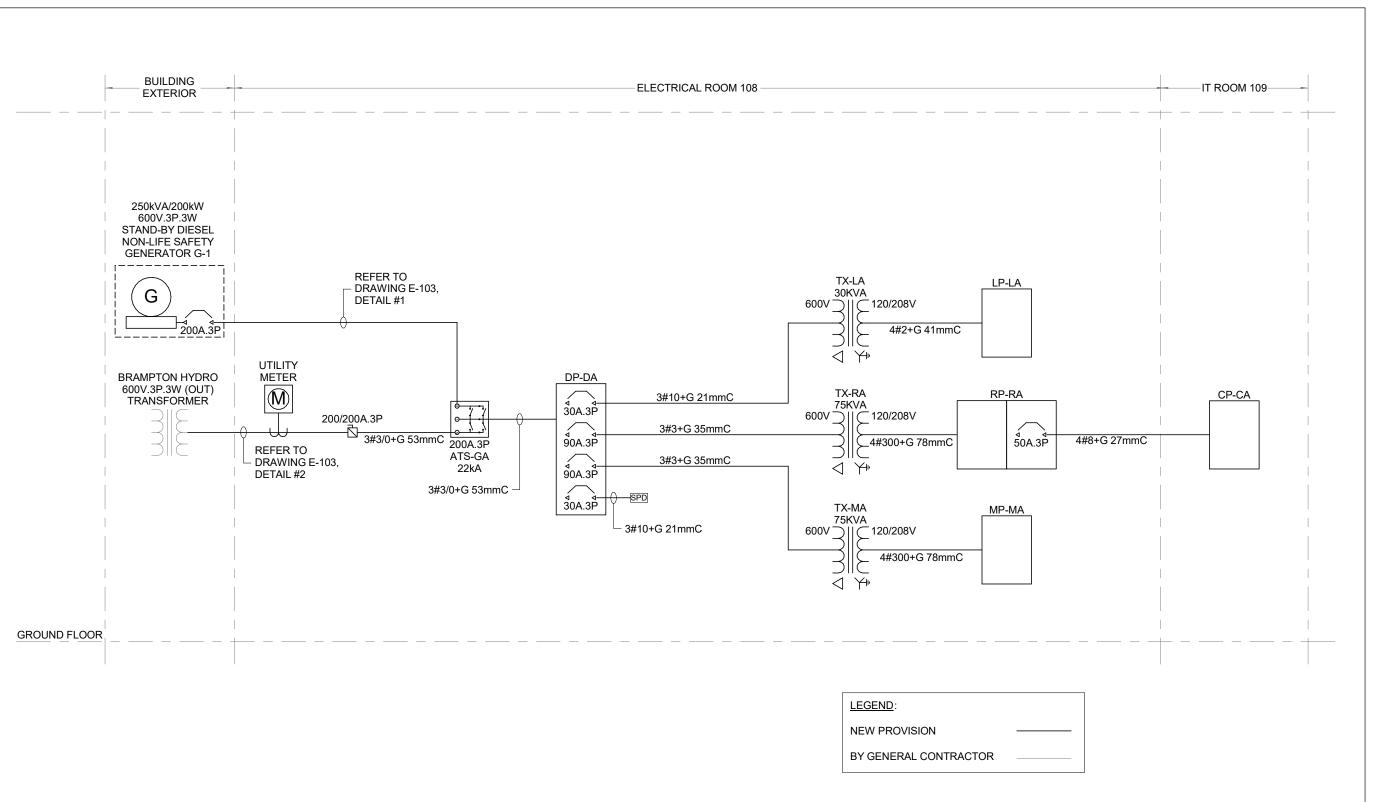
FIRE ALARM INTERFACE TO ULC-S561 MONITORING

SCALE: N.T.S.



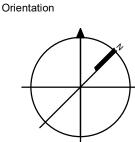
FIRE ALARM RISER DIAGRAM

SCALE: N.T.S.



FOR OUESTIONS REGARDING THIS PROJECT, PLEASE

G	ISSUED FOR TENDER	2021-08-1
F	ISSUED FOR BUILDING PERMIT	2021-07-2
E	90% CD	2021-05-0
D	SPA	2021-02-1
С	50% CD	2021-02-0
В	BUILDING PERMIT	2021-02-0
Α	PERMIT/SPA COORDINATION	2021-02-0



The specifications are to be considered as an integral part of these drawings and neither the drawings nor the specifications shall be used alone. Refer to architectural drawings for dimensions. Do not

© Copyright Reserved: These drawings and all that is represented herein are the exclusive property of Quasar Consulting Group.

They may not be used or reproduced without written permission from



250 ROWNTREE DAIRY RD, WOODBRIDGE, ON TEL: 905-507-0800

Project Information

BFES Station 201 (SPA-2021-0032)

WEB: WWW.QUASARCG.COM

27 Rutherford Rd. S., Brampton, ON, L6W 3J3

City of Brampton Fire & Emergency Services

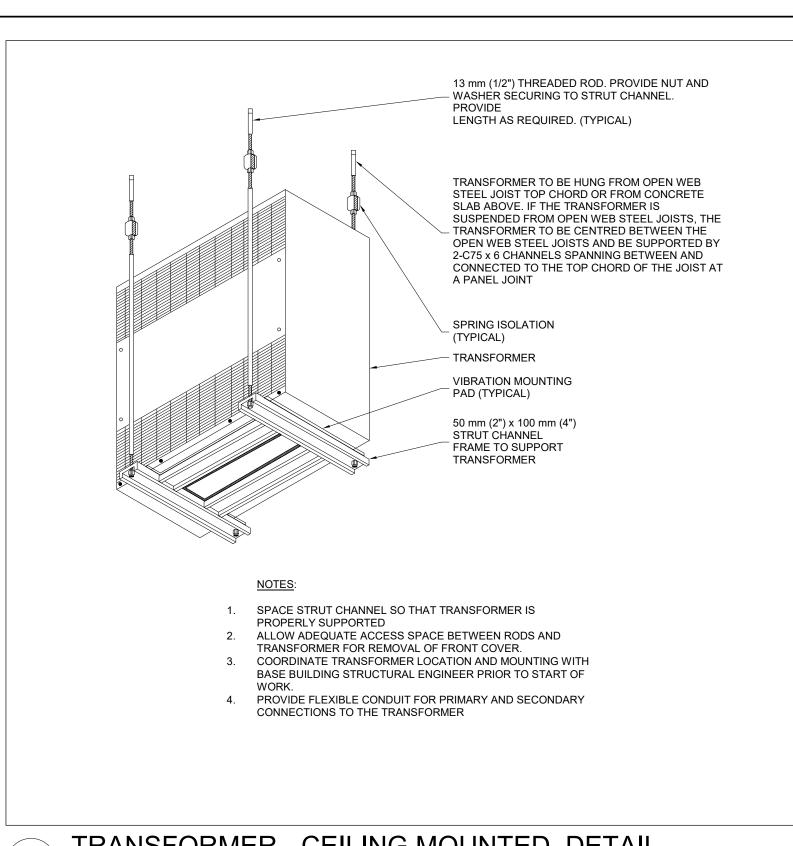
Drawing Title

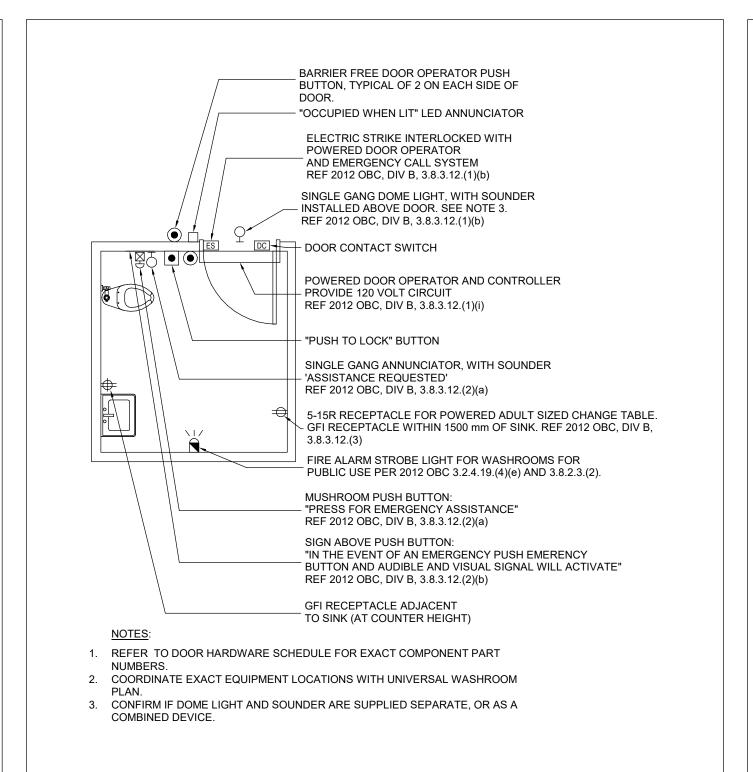
ELECTRICAL DETAILS (1)

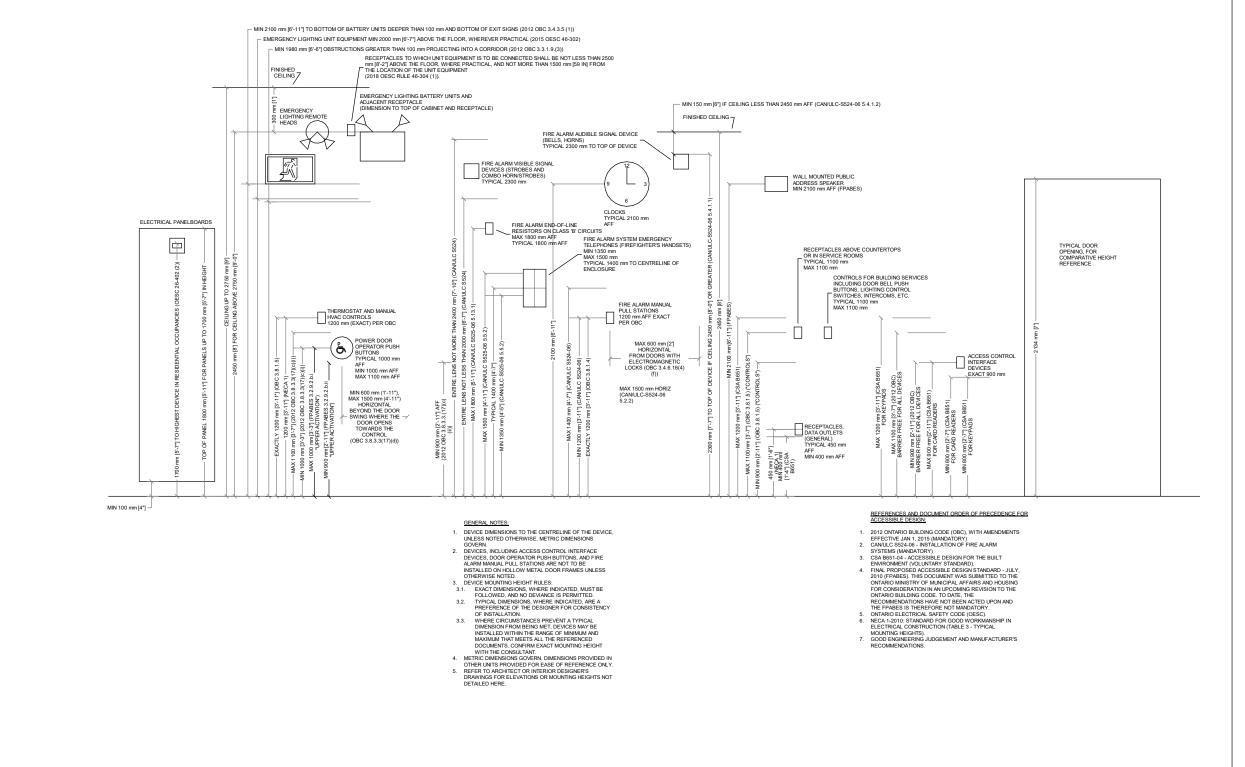
2021-08-12 As indicated

SINGLE LINE DISTRIBUTION DIAGRAM SCALE: N.T.S.

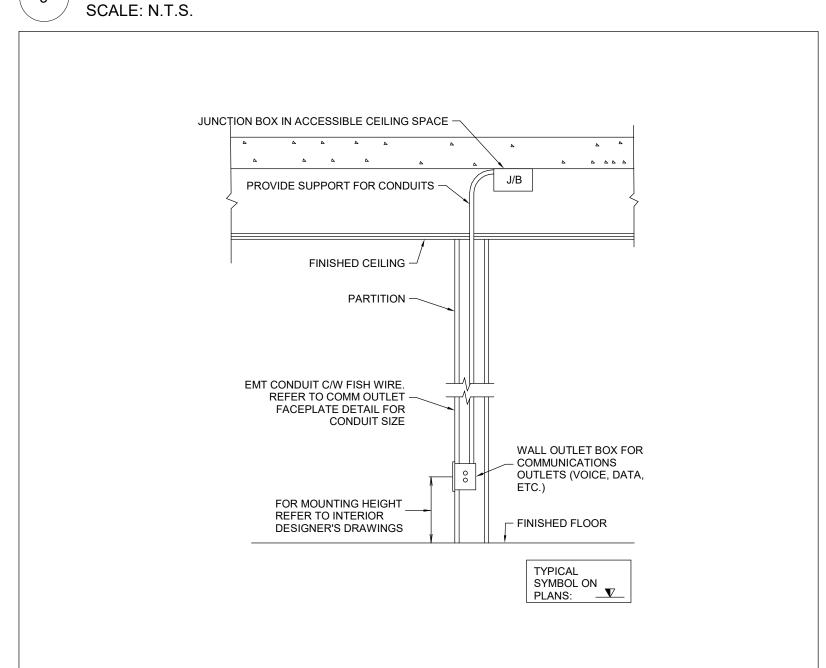








TRANSFORMER - CEILING MOUNTED, DETAIL



COMMUNICATIONS WALL OUTLET BOX TYPICAL DETAIL

EM. LTG BATTERY

- FEEDS

NORMAL

LIGHTING

TO CSA C22.2 NO. 141

PROVIDE RECEPTACLE AT BATTERY BATTERY UNITS CONNECTED TO 120

CIRCUITS, TYPICAL. PROVIDE

CONNECTION TO 347 VOLT UNITS

TYPICAL NORMAL

LIGHTING PANELBOARD

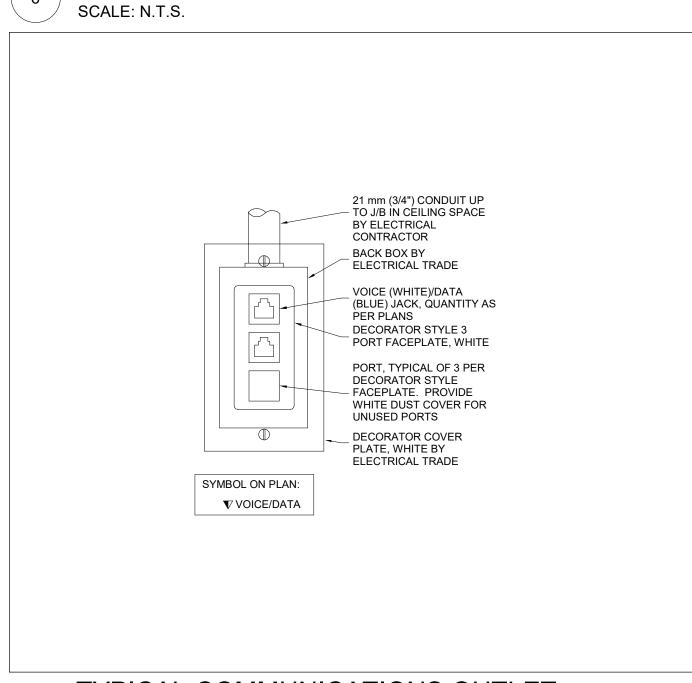
HARDWIRED

SCALE: N.T.S.

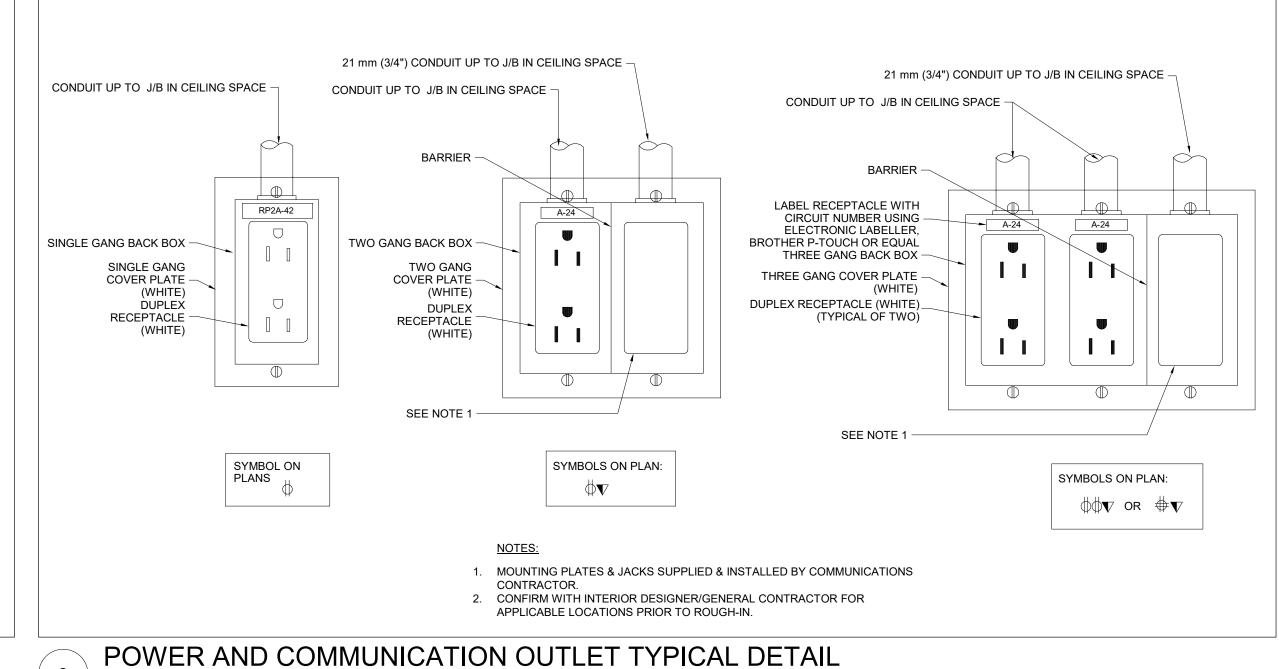
FED FROM UTILITY -NORMAL

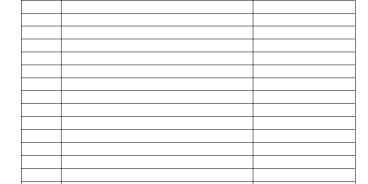
SCALE: N.T.S.





TYPICAL DEVICE MOUNTING HEIGHTS SCALE: N.T.S.





FOR QUESTIONS REGARDING THIS PROJECT, PLEASE EMAIL: CM-20-063@QUASARCG.COM

B ISSUED FOR BUILDING PERMIT
A 90% CD

Orientation

2021-08-12

The specifications are to be considered as an integral part of these drawings and neither the drawings nor the specifications shall be used alone. Refer to architectural drawings for dimensions. Do not

© Copyright Reserved: These drawings and all that is represented herein are the exclusive property of Quasar Consulting Group. They may not be used or reproduced without written permission fron



250 ROWNTREE DAIRY RD, WOODBRIDGE, ON TEL: 905-507-0800

MINIMUM 2 x CABLE DIAMETER ON CENTRE

SPACING OF SINGLE

CONDUCTOR CABLES

- FOR AIR RATED

ELECTRICAL — CONDUIT OR

THOMAS & BETTS SUPER STRUT METAL FRAMING

CHANNEL SERIES A1200

CORFLEX CABLE

WEB: WWW.QUASARCG.COM

Project Information **BFES Station 201**

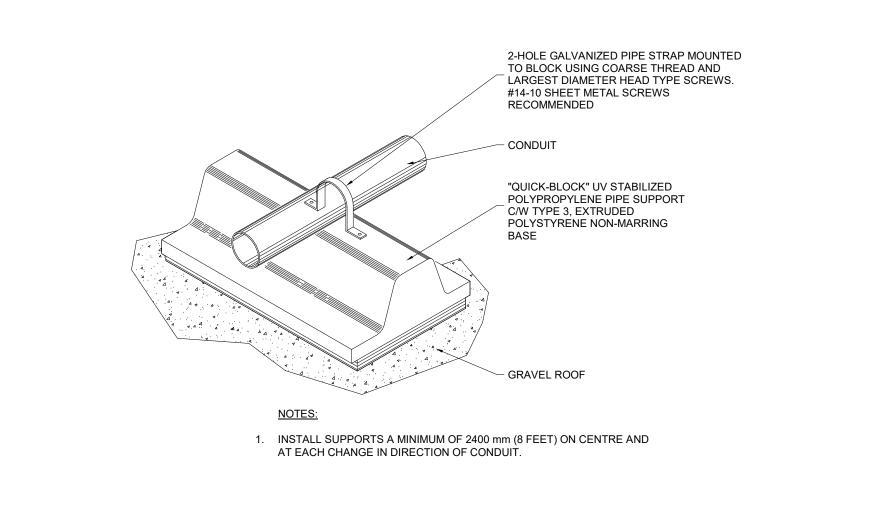
(SPA-2021-0032) 27 Rutherford Rd. S., Brampton, ON, L6W 3J3

City of Brampton Fire & Emergency Services

Drawing Title ELECTRICAL DETAILS (2)

2021-08-12 CM-20-063 DTH Scale As indicated

TYPICAL COMMUNICATIONS OUTLET SCALE: N.T.S.



ROOF SUPPORT FOR CONDUIT SCALE: N.T.S.

EMERGENCY AND EXIT LIGHTING DETAIL

TYPICAL DC POWERED

EMERGENCY REMOTE

TYPICAL

INTERNALLY

ILLUMINATE

EXIT SIGNS

DETAIL NOTES:

- AC NORMAL FEED

1. DIAGRAM IS SCHEMATIC ONLY.

REFER TO FACILITY SINGLE LINE DIAGRAM FOR SPECIFICS

OF ELECTRICAL DISTRIBUTION,

INCLUDING CIRCUIT BREAKER

TRANSFORMERS. DIAGRAM IS

SPECIFIC TO LIGHTING AND

ELECTRICAL DISTRIBUTION

NOR RELATED TO SAME.

DOES NOT INDICATE

AND FEEDER SIZES, AND

DC EMERGENCY FEED

TYPICAL CABLE CLAMP

CH118-SUPERSTRUT

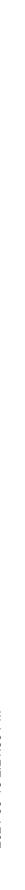
THOMAS & BETTS SUPER

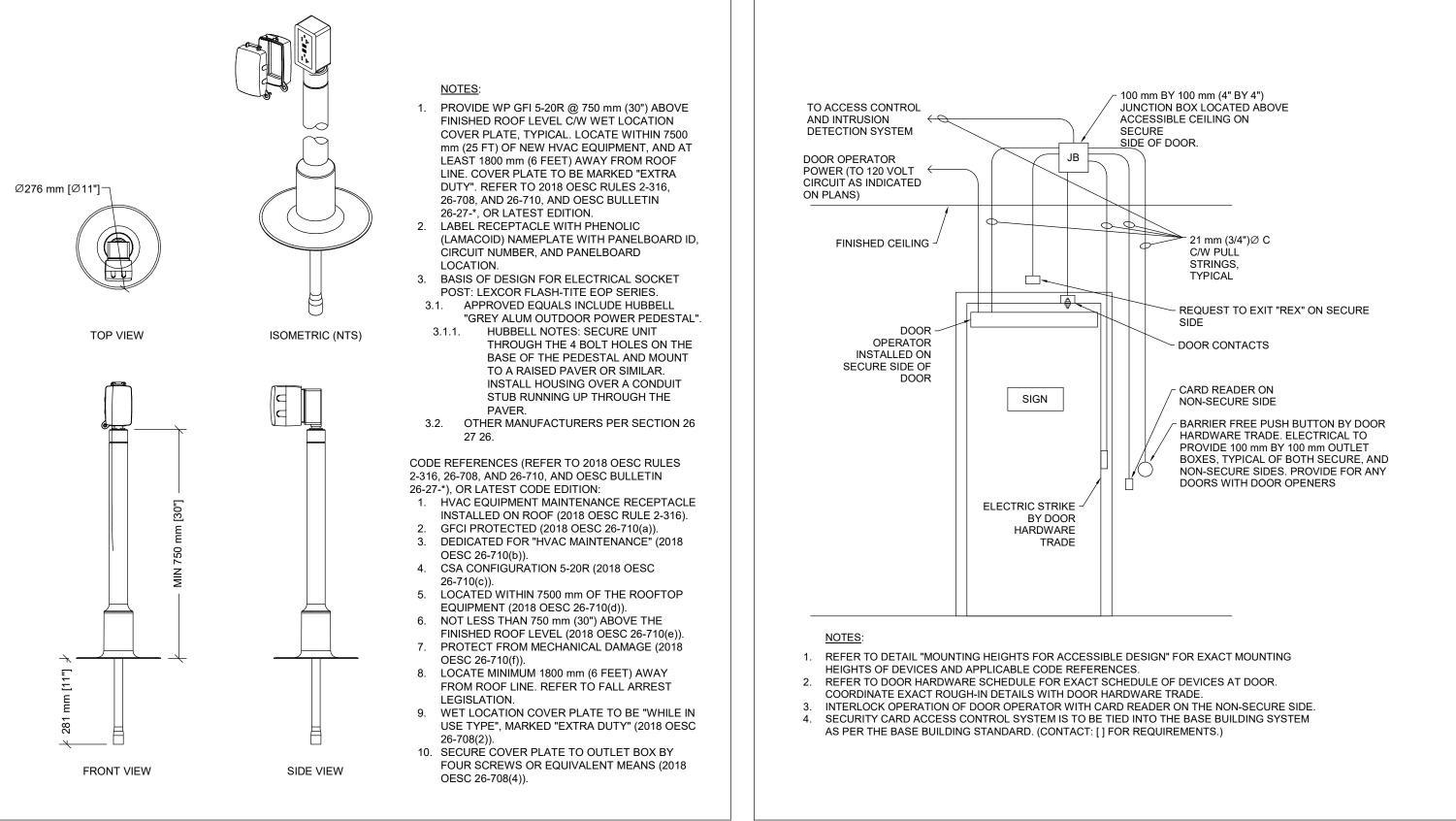
STRUT END CAP, TYPE -

A804EG

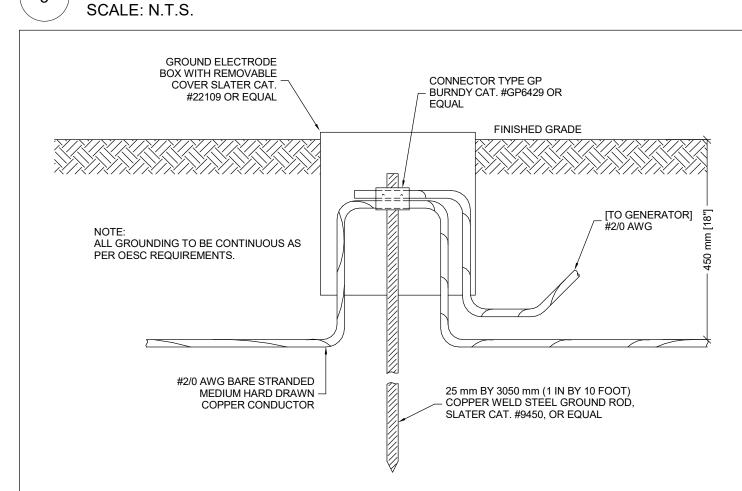
THOMAS & BETTS SERIES

ALUMINUM OR EQUIVALENT





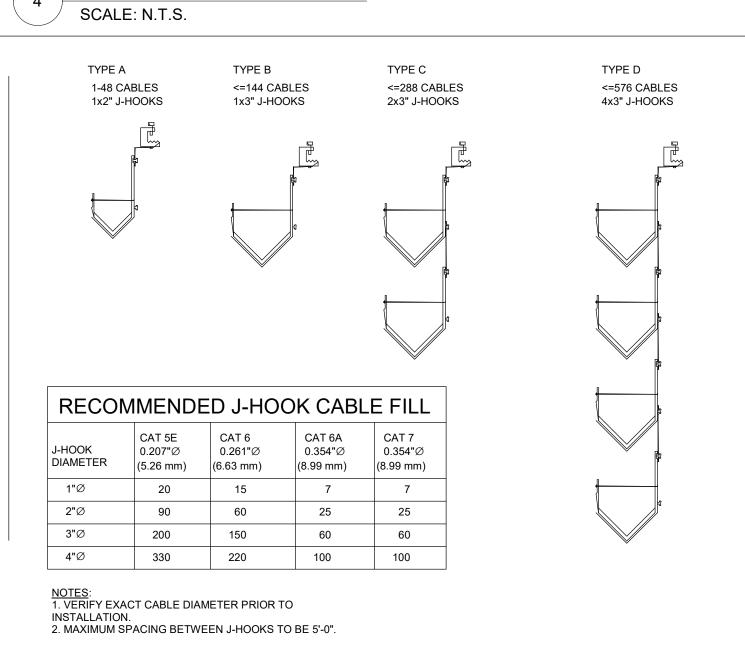
RECEPTACLE FOR ROOF HVAC EQUIPMENT DETAIL SCALE: N.T.S.

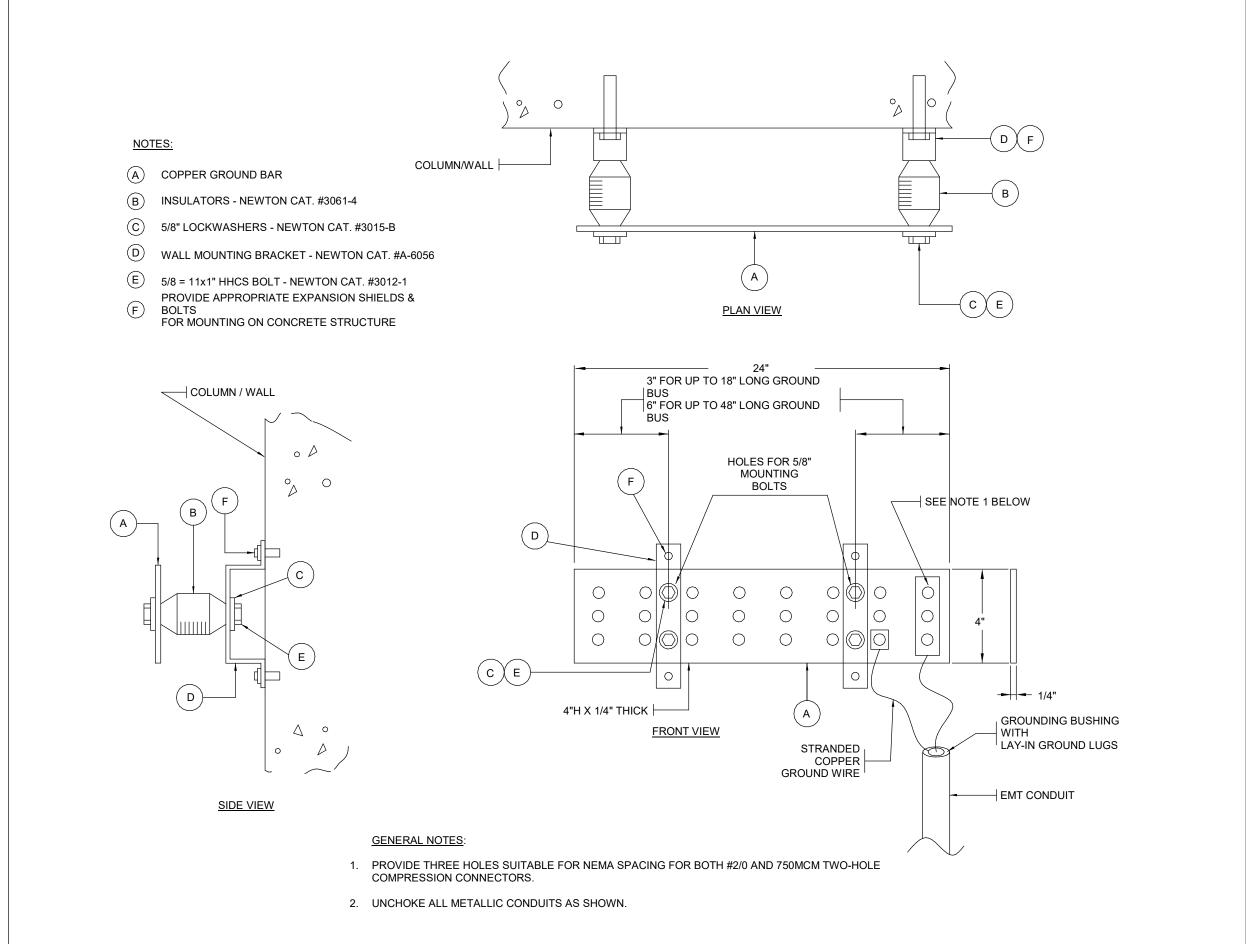


ELECTRIC STRIKE - SINGLE DOOR, TYPICAL DETAIL

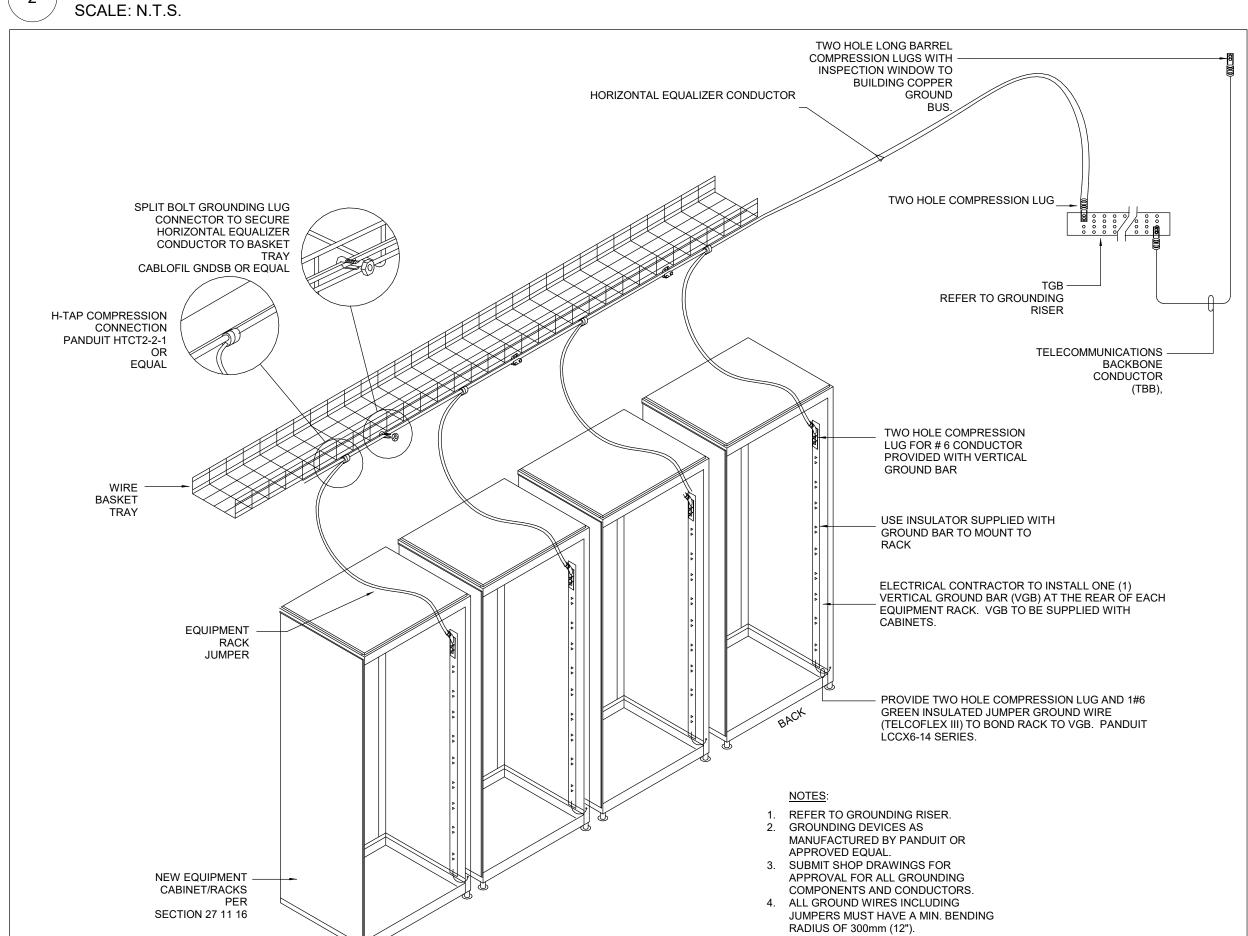
GROUND ROD DETAIL

SET SCREW ON SLOPED SIDE -CADDY CAT32HP C/W RETAINER OR B-LINE **EQUIVALENT** BUNDLE CABLES AT SECURE THREADED ROD - MAXIMUM 12 CABLES PER BUNDLE STRUCTURE WITH CADDY BCISN375 OR EQUIVALENT "HOOK AND LOOP" CABLE TIES, TYPICAL CADDY CATHPA6 **1** ≠ 50 mm [2"]Ø BRACKET OR B-LINE **EQUIVALENT** CADDY CAT48HP C/W CABLE RETAINER OR B-LINE **EQUIVALENT** / ____75 mm [3"]Ø───/

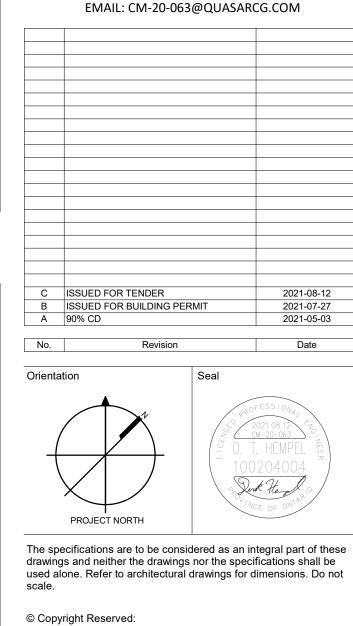




GROUNDING BAR DETAIL



CABINET AND CABLE TRAY GROUNDING DETAIL SCALE: N.T.S.



FOR QUESTIONS REGARDING THIS PROJECT, PLEASE

These drawings and all that is represented herein are the exclusive property of Quasar Consulting Group. They may not be used or reproduced without written permission from Quasar Consulting Group.



250 ROWNTREE DAIRY RD, WOODBRIDGE, ON TEL: 905-507-0800 WEB: WWW.QUASARCG.COM

Project Information

Scale

As indicated

BFES Station 201 (SPA-2021-0032)

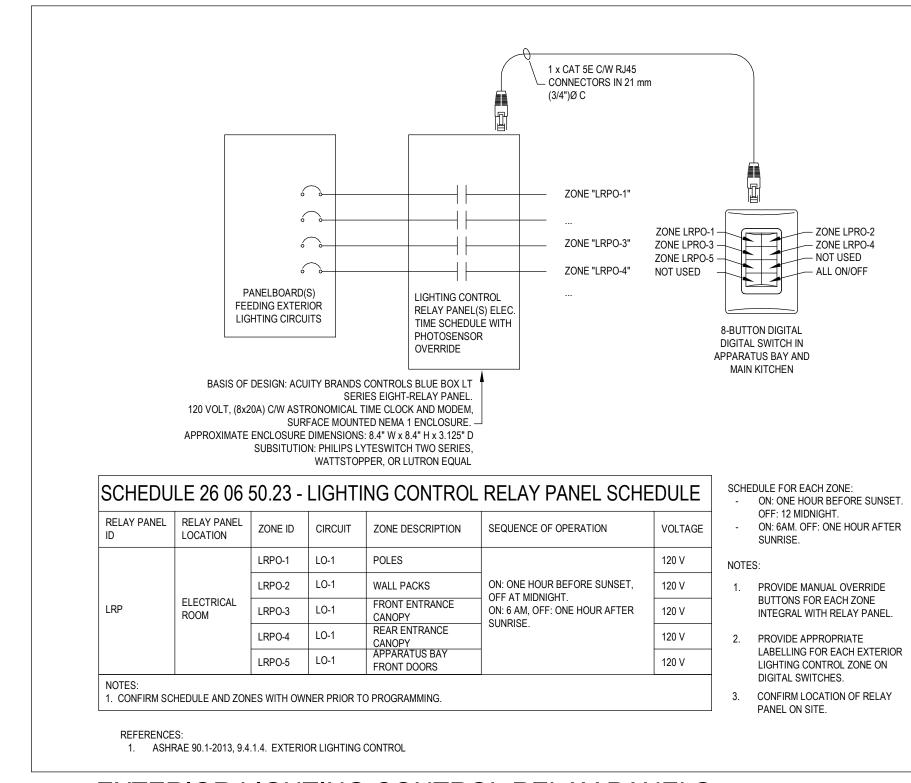
27 Rutherford Rd. S., Brampton, ON, L6W 3J3

City of Brampton Fire & Emergency Services Drawing Title

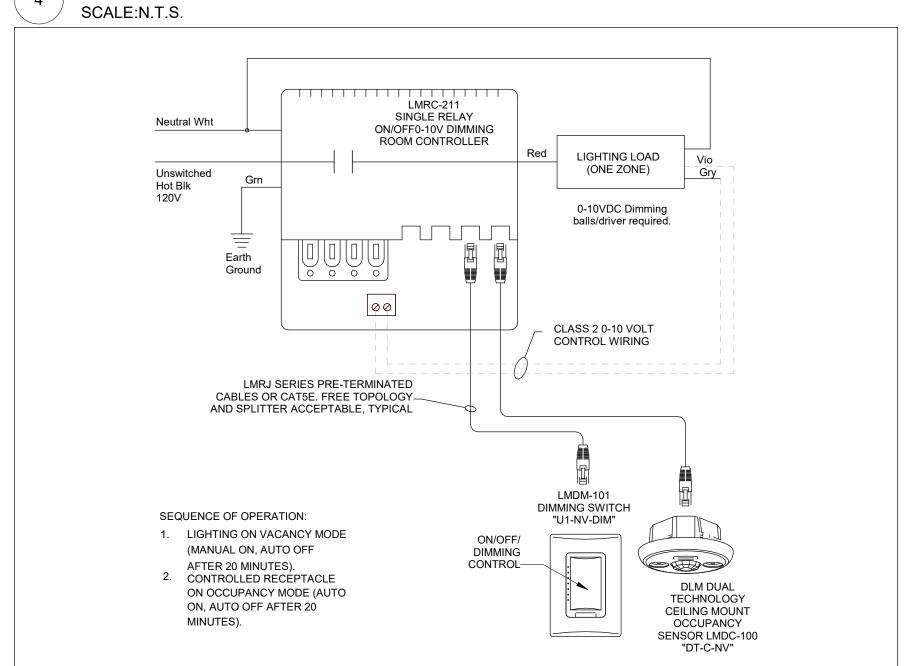
ELECTRICAL DETAILS (3)

Project No Drawing No 2021-08-12

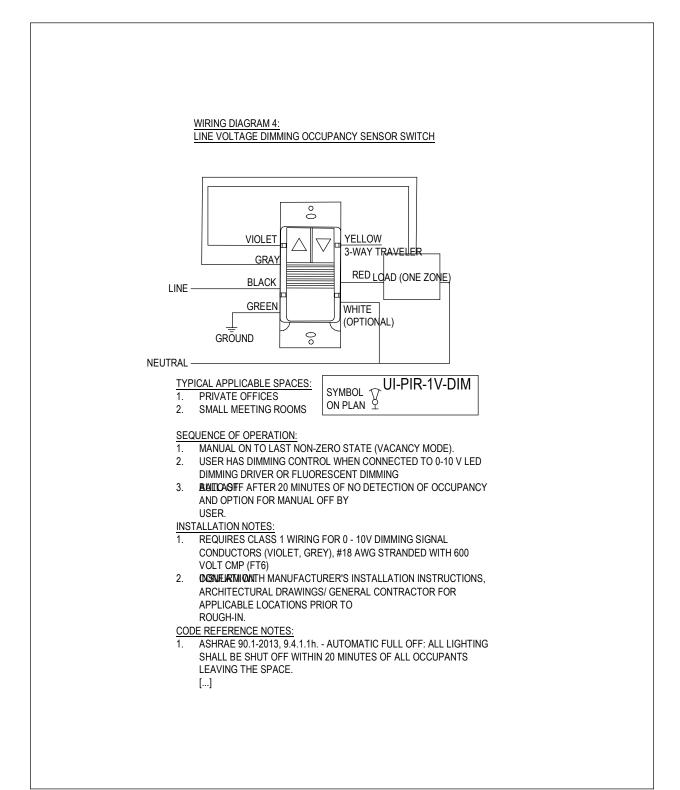
J-HOOK HORIZONTAL CABLING SUPPORT DETAIL



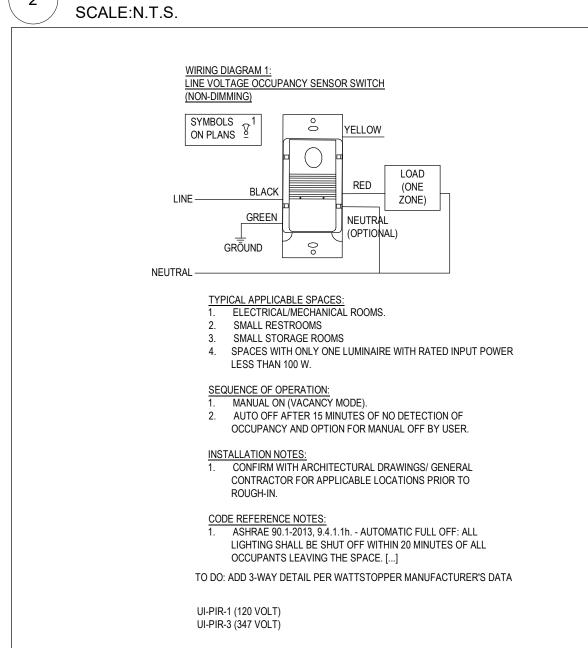
EXTERIOR LIGHTING CONTROL RELAY PANELS



1 ZONE ROOM CONTROLLER SCALE:N.T.S.



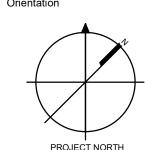
WALL MOUNTED 0-10V DIMMING SENSOR



WALL MOUNTED SENSOR SWITCH WIRING SCALE:N.T.S.

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE FMAIL: CM-20-063@QUASARCG COM

Α	ISSUED FOR TENDER	2021-08-1
No.	Revision	Date





The specifications are to be considered as an integral part of these drawings and neither the drawings nor the specifications shall be used alone. Refer to architectural drawings for dimensions. Do not

© Copyright Reserved: These drawings and all that is represented herein are the exclusive property of Quasar Consulting Group.
They may not be used or reproduced without written permission from



250 ROWNTREE DAIRY RD, WOODBRIDGE, ON TEL: 905-507-0800

Project Information BFES Station 201 (SPA-2021-0032)

WEB: WWW.QUASARCG.COM

27 Rutherford Rd. S., Brampton, ON, L6W 3J3

City of Brampton Fire & Emergency Services

Drawing Title ELECTRICAL DETAILS (4)

Project No Drawing No

2021-08-12 Drawn by CM-20-063 **E504** DTH Scale N.T.S.

		<u>LUMINAIRE SCHEDULE</u>								
FIXTURE TAG	DESCRIPTION	BASIS OF DESIGN MANUFACTURER AND CAT. NO.	VOLTAGE (V)	LAMP	WATTS (W)	COLOUR TEMPERATURE	LUMENS	CRI	DRIVER	MOUNTING
D1	4" ROUND SHOWER RATED DOWNLIGHT LUMINAIRE COMPLETE WITH STEEL HOUSING, NON-CONDUCTIVE SHOWER TRIM, WHITE FINISHED TRIM AND FLANGE	PRESCOLITE - LITEISTRY 4" ROUND NON-CONDUCTIVE SHOWER DOWNLIGHT - LTR-4RD (SH) LTR-4RD-H-SL15L-DM1-LTR-4RD-SHSL35K8-WTACL	120	LED	18	3500K	1500	> 80	0-10V DIMMABLE	RECESSED - CEILING
D2	4" ROUND DOWNLIGHT LUMINAIRE COMPLETE WITH STEEL HOUSING, MEDIUM LIGHT DISTRIBUTION, AND SPECULAR FINISHED TRIM, ACRYLIC CLEAR LENS	PRESCOLITE - LITEISTRY 4" ROUND DOWNLIGHT LTR-4RD LT4-4RD-H-SL10L-DM1-LTR-4RD-T-SL35K8MD-S	120	LED	12	3500K	1000	> 80	0-10V DIMMABLE	RECESSED - CEILING
D3	6" ROUND DOWNLIGHT LUMINAIRE COMPLETE WITH WET LOCATION RATED NEW CONSTRUCTION HOUSING AND TRIM, SPECULAR REFLECTOR, AND MEDIUM BEAM DISTRIBUTION.	PRESCOLITE - LITEISTRY 6" ROUND DOWNLIGHT LTR-6RD-H-ML20L-DM1-LTR-6RD-ML40K8MD-S	120	LED	23	4000K	2000	> 80	0-10V DIMMABLE	RECESSED - CANOPY, OUTDOOR
L1	4'(L) x 5"(W) x 2.5"(H) DIRECT PENDANT LUMINAIRE COMPLETE WITH SNAP-IN FROSTED ACRYLIC LENS, STEEL HOUSING THAT IS SUITABLE FOR DAMP LOCATIONS, WHITE FINISH, AND AIRCRAFT CABLE SUSPENSION SYSTEM. LUMINAIRE TO BE MOUNTED AT 5200mm AFF.	PEERLES ELECTRIC - EVALUX SERIES, WRE WRE-4-40W-40K-MV3	120	LED	40	4000K	5,000	> 80	0-10V DIMMABLE	SUSPENDED
L2	4'(L) x 3.74"(W) x 3.15"(H) LINEAR DIRECT LED LUMINAIRE COMPLETE WITH ALUMINUM HOUSING, SNAP-IN FROSTED ACRYLIC LENS AND WHITE FINISH.	PEERLESS ELECTRIC - ARCLUX SERIES, LDXR LDXR-95-4-TD-100-35K-FA-MV	120	LED	33	3500K	1000/FT	> 80	0-10V DIMMABLE	RECESSED - TRIM, DRYWALL
L3	4'(L) x 2'(W) x 3"(H) TROFFER INDIRECT/DIRECT LUMINAIRE COMPLETE WITH FROSTED ACRYLIC LENS, STEEL HOUSING, AND WHITE FINISH.	PEERLESS ELECTRIC - PEERLUX SERIES, SLD-3x-1ACF SDL-3-1ACF-24G-48-35K-MV	120	LED	37	3500K	4800	> 80	0-10V DIMMABLE	RECESSED - T-BAR
L4	UNDERCABINET LINEAR DIRECT LUMINAIRE COMPLETE WITH ALUMINUM LOW PROFILE HOUSING, WHITE FINISH, AND POLYCARBONATE LENS. EXACT LENGTH OF FIXTURE TO BE CONTINUOUS WITH NO BREAKS ACROSS MILLWORK AS SHOWN ON DRAWINGS.	COLUMBIA LIGHTING - CUC UNDERCABINET CUC4-CS-ED120	120	LED	24	3500K	1666	> 80	0-10V DIMMABLE	SURFACE - UNDERCABINET
L5	4'(L) x 2.8"(W) x 3.75"(H) LINEAR NARROW STRIP LUMINAIRE COMPLETE WITH ROUNDED FROSTED ACRYLIC LENS, STEEL HOUSING, AND WHITE FINISH.	PEERLESS ELECTRIC - PEERLUX SERIES, NSL-RA NSL-RA-4-46-35K-W-A4-MV	120	LED	33	3500K	4600	> 80	0-10V DIMMABLE	SURFACE - CEILING
P1	OUTLDOOR POLE LUMINAIRE COMPLETE WITH CORROSION RESISTANT ALUMINUM HOUSING, TYPE 4W LIGHT DISTRIBUTION WITH ZERO UPLIGHT, ACRYLIC LENS, BLACK MATTE FINISH, AND 7-PIN RECEPTACLE WITH PHOTO CONTROL. FIXTURE HEAD TO BE MOUNTED AT 6m.	HUBBELL OUTDOOR LIGHTING - AIRO MICRO STRIKE ASL1-160L-115-4K7-4W-UNV-ASQU-7PR-TL-BLT REFER TO SPECIFICATION 26 56 13.00 FOR POLE	120	LED	109	4000K	15,000	> 70	0-10V DIMMABLE	POLE - ARM SQUARE, UNIVERSAL MOUNT
P1A	OUTLDOOR POLE LUMINAIRE COMPLETE WITH CORROSION RESISTANT ALUMINUM HOUSING, TYPE 4W LIGHT DISTRIBUTION WITH ZERO UPLIGHT, ACRYLIC LENS, BLACK MATTE FINISH, AND 7-PIN RECEPTACLE WITH PHOTO CONTROL. FIXTURE HEAD TO BE MOUNTED AT 6m.	HUBBELL OUTDOOR LIGHTING - AIRO MICRO STRIKE ASL1-80L-25-4K7-4W-UNV-ASQU-7PR-TL-BLT (FIXTURE) REFER TO SPECIFICATION 26 56 13.00 FOR POLE	120	LED	25	4000K	3,000	> 70	0-10V DIMMABLE	POLE - ARM SQUARE, UNIVERSAL MOUNT
W1	WALL PACK DOWNLIGHT DIRECT LUMINAIRE COMPLETE WITH ALUMINUM TRAPEZOID-SHAPED WET LOCATION RATED HOUSING, TYPE IV LIGHT DISTRIBUTION, BLACK MATTE FINISH, AND PHOTOCONTROLLER. FIXTURE TO BE MOUNTED AT 4.5m.	HUBBELL OUTDOOR LIGHTING - GEOPAK SERIES 1 TRP1-12L-30-4K7-4-UNV-BLT-PC	120	LED	30	4000K	2789	> 70	0-10V DIMMABLE	SURFACE - WALL

		EMERGENCY LIGHTING SCHEDU	<u>LE</u>							
FIXTURE TAG	DESCRIPTION	BASIS OF DESIGN MANUFACTURER AND CAT. NO.	VOLTAGE (V)	LAMP	WATTS (W)	COLOUR TEMPERATURE	LUMENS	CRI	DRIVER	MOUNTING
X1	GREEN RUNNING-MAN EXIT SIGN	REFER TO SPECIFICATIONS SECTION 26 52 13.16	120	LED	3	N/A	N/A	N/A	N/A	RECESSED - CEILING
X2	GREEN RUNNING-MAN EXIT SIGN	REFER TO SPECIFICATIONS SECTION 26 52 13.16	120	LED	3	N/A	N/A	N/A	N/A	SURFACE - WALL
Х3	DOUBLE-HEAD EMERGENCY REMOTE LUMINAIRE	REFER TO SPECIFICATIONS SECTION 26 52 13.13	120	LED	12	N/A	N/A	N/A	N/A	SURFACE - WALL
X4	SINGLE-HEAD EMERGENCY REMOTE LUMINAIRE	REFER TO SPECIFICATIONS SECTION 26 52 13.13	120	LED	6	N/A	N/A	N/A	N/A	SURFACE - WALL
ХВ	DOUBLE-HEAD EMERGENCY REMOTE LUMINAIRE COMPLETE WITH BATTERY PACK	REFER TO SPECIFICATIONS SECTION 26 52 13.13	120	LED	12	N/A	N/A	N/A	N/A	SURFACE - WALL

			LIGHTIN	IG CONTROL [DEVICE SCHEDU	JLE												
SYMBOL	DESCRIPTION	BASIS OF DESIGN MANUFACTURERS AND PRODUCT SERIES	CONTROL WIRING	VOLTAGE OUTPUT	MOUNTING	FITNESS KITCHEN/ MEETING	OUTDOOR STORAGE CORRIDOR/ STORAGE VEST./ STAF ENTRANCE	FDECON	MD STOR.	APPRATUS BAY	LUANDRY	WAHSROOM ROOM	R SERVICE ROOMS	IT ROOM	JANITUR	TOOL/ COMPR./ HOSE TOWER	OFFICES DORMS	BUNKER GEAR
Å	WALL SWITCH OCCUPANCY SENSOR, SINGLE ZONE CONTROL (ON/OFF), 120 VOLT, DUAL TECHNOLOGY SENSOR	ACUITY BRANDS CONTROLS/SENSOR SWITCH WSX-SERIES LEGRAND/WATTSTOPPER PW-301 SERIES LUTRON MAESTRO SERIES MS-OPS2 LEVITON EQUAL		120 V	WALL	х	х	х				Х		х	х			
§ 8B	EIGHT BUTTON WALL STATION.	ACUITY BRANDS CONTROLS/nLIGHT, nPODM SERIES LEGRAND/WATTSTOPPER LMSW-108 SERIES LEVITON LUTRON EQUAL	DIGITAL	120 V	WALL					x								
₹ DIM	DIMMING OCCUPANCY WALL SWITCH, 0-10 VOLT DIMMING CONTROL, 120 VOLT, PASSIVE INFRARED SENSOR	ACUITY BRANDS CONTROLS/SENSOR SWITCH WSX-D-SA SERIES LEGRAND/WATTSTOPPER PW-311 SERIES LEVITON OSD10-I0 SERIES LUTRON MAESTRO SERIES MS-Z101	0-10 V DIMMING	G 120 V	WALL						х						Х	
\$	ONE BUTTON WALL STATION, ONE BUTTON ON-OFF TOGGLE.	ACUITY BRANDS CONTROLS/SENSOR SWITCH WSX-PDT SERIES LEGRAND/WATTSTOPPER DSW-301 SERIES LUTRON MAESTRO SERIES MS-A102 LEVITON EQUAL		120 V	WALL				×				x			х		
§ ^{DIM}	DIMMING WALL STATION FOR ONE ZONE CONTROL, MULTI-BUTTON WALL INTERFACE CONTROL C/W ENGRAVED BUTTONS.	ACUITY BRANDS CONTROLS PODM-1SB SERIES LEGRAND/WATTSTOPPER LMSW-101 LUTRON EQUAL LEVITON EQUAL	DIGITAL	120 V	WALL	X X												X
(DT)	CEILING MOUNTED OCCUPANCY SENSOR, NETWORKED, DUAL TECHNOLOGY SENSOR, 12 FOOT, 360 DEGREE COVERAGE PATTERN	ACUITY BRANDS CONTROLS NPODM SERIES LEGRAND/WATTSTOPPER EQUAL LUTRON EQUAL LEVITON EQUAL	DIGITAL	120 V	WALL	Х	X					x					х	×
HÔT	WALL MOUNT DUAL TECHNOLOGY SENSOR, NETWORKED	ACUITY BRANDS CONTROLS/nLIGHT, nPODM SERIES LEGRAND/WATTSTOPPER LMSW-108 SERIES LEVITON LUTRON EQUAL	DIGITAL	120 V	WALL					х								
⊢⊕ LR	WALL MOUNT DUAL TECHNOLOGY SENSOR, NETWORKED, COMPLETE WITH LONG RANGE LENS	ACUITY BRANDS CONTROLS CM-PDT-9-RJB SERIES LEGRAND/WATTSTOPPER EQUAL LUTRON EQUAL LEVITON EQUAL	DIGITAL	120 V	CEILING					х								
ў 3	WALL SWITCH OCCUPANCY SENSOR, SINGLE ZONE CONTROL (ON/OFF), SWITCH 3-WAY, 120 VOLT, PASSIVE INFRARED SENSOR	LEGRAND/WATTSTOPPER LMDX-100 SERIES ACUITY EQUAL LUTRON EQUAL LEVITON EQUAL	DIGITAL	120 V	WALL						x	x					x	

LIGHTING CONTROLS SCHEDULE NOTES:

1. LIGHTING CONTROLS OF ONE MANUFACTURER THROUGH PROJECT TO ENSURE PRODUCT COMPATIBILITY.

2. DUAL TECHNOLOGY SENSORS: PASSIVE INFRARED/ULTRASONIC, OR PASSIVE INFRARED/MICROPHONIC, DEPENDING ON MANUFACTURER. MICROPHONIC SENSORS ACCEPTABLE IN LIEU OF ULTRASONIC.

3. POSITION CEILING MOUNTED OCCUPANCY SENSORS A MINIMUM 1200 mm (4'-0") FROM NEAREST AIR DIFFUSER, HVAC OUTLETS, HEATING BLOWERS, ETC.

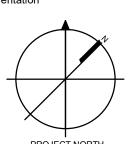
4. CONFIRM INSTALLATION REQUIREMENTS, WIRING DIAGRAMS, ETC. WITH MANUFACTURER'S DETAILS.

5. SUBMIT SHOP DRAWINGS FOR CONSULTANT'S REVIEW PRIOR TO PLACING ANY ORDER.

6. CONFIRM FINISH COLOUR WITH CONSULTANT DURING SUBMITTAL REVIEW.

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE EMAIL: CM-20-063@QUASARCG.COM

_				
		С	ISSUED FOR TENDER	2021-08-12
		В	ISSUED FOR BUILDING PERMIT	2021-07-27
		Α	90% CD	2021-05-03
				_
		No.	Revision	Date





The specifications are to be considered as an integral part of these drawings and neither the drawings nor the specifications shall be used alone. Refer to architectural drawings for dimensions. Do not scale.

© Copyright Reserved:
These drawings and all that is represented herein are the exclusive property of Quasar Consulting Group.
They may not be used or reproduced without written permission from Quasar Consulting Group.



250 ROWNTREE DAIRY RD, WOODBRIDGE, ON TEL: 905-507-0800 WEB: WWW.QUASARCG.COM

Project Information BFES Station 201 (SPA-2021-0032)

27 Rutherford Rd. S., Brampton, ON, L6W 3J3

City of Brampton Fire & Emergency Services

Drawing Title

1:1

ELECTRICAL SCHEDULES

2021-08-12 Drawn by DTH Scale

lotes: 0 CIRCUIT SIN	Location: IT ROOM 110 Supply From: RP-RA Mounting: SURFACE Enclosure: SPRINKLERF													
	NGLE-TUB PANEL.					Volts: Phases: Wires:		Vye				A.I.C. Rating: 10 kA Mains Type: Cu Mains Rating: 100 A MCB Rating: 1 A		
CKT	Circuit Decembel on	Tuin	Dalaa	A	В	С	A	В	С	Doloo	Tuin	Circuit De		CVT
CKT STATI	Circuit Description TION CONTROLLER RECEPTACLES	Trip 15 A	Poles	900 VA			0 VA			Poles 1	Trip 15 A	Circuit De	escription	CKT CA-2
	SYSTEM	15 A	<u>'</u> 1	900 VA	500 VA		UVA	0 VA		1	15 A	SPARE		CA-2
	JRITY RACK	15 A	<u>·</u> 1		000 171	1000 VA		0 171	0 VA	1		SPARE		CA-6
CA-7 P/A R		15 A	1	500 VA			0 VA					SPACE		CA-8
CA-9 RECE	PTACLES	15 A	1		400 VA			0 VA				SPACE		CA-1
CA-11 NEMA	A 5-20R - IT RACK	15 A	1			1400 VA			0 VA			SPACE		CA-1:
	A 5-20R - IT RACK	15 A	1	1400 VA			0 VA					SPACE		CA-1
CA-15 SPAR		15 A	1		0 VA			0 VA				SPACE		CA-1
CA-17 SPAR		15 A	1			0 VA			0 VA			SPACE		CA-1
CA-19 SPAC				0 VA	0.144		0 VA	0.14				SPACE		CA-2
CA-21 SPAC					0 VA	0.1/4		0 VA	0.1/4			SPACE		CA-2
CA-23 SPAC CA-25 SPAC				0 VA		0 VA	0 VA		0 VA			SPACE SPACE		CA-2 CA-2
CA-23 SPAC CA-27 SPAC				UVA	0 VA		UVA	0 VA				SPACE		CA-2
CA-29 SPAC			<u></u>		OVA	0 VA		O VA	0 VA		<u></u>	SPACE		CA-3
<u> </u>	·-	To	tal Load:	2800) VA	900	VA	2400) VA			017102		0,10
		Tota	al Amps:	25	5 A	8	Α	22	? A	_				

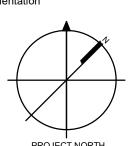
						MECHANICAL E	QUIPMENT	CHEDULE				
EQUIPMENT	EQUIPMENT TAG	QUANTITY	VOLTAGE (V)	AMPERAGE (A)	PHASE	CONNECTED LOAD (kVA)	DIVERSITY	DEMAND LOAD (kVA)	BREAKER	CONDUCTOR (Cu, AWG)	CONDUIT (mm)	NOTES
VARIABLE REFRIGERANT FLOW AIR-COOLED CONDENSING UNIT	CU-1	1	575	24.8	3	24.70	100%	24.70	40A.3P	3#8+G	27	40A.3P MOCP AS PER MECHANICAL
	FC-1	1	208	0.8	1	0.17	80%	0.13	15A.2P	2#12+G	21	15A.2P MOCP AS PER MECHANICAL
	FC-2	1	208	0.8	1	0.17	80%	0.13	15A.2P	2#12+G	21	15A.2P MOCP AS PER MECHANICAL
	FC-3A	1	208	0.8	1	0.17	80%	0.13	15A.2P	2#12+G	21	15A.2P MOCP AS PER MECHANICAL
	FC-3B	1	208	0.8	1	0.17	80%	0.13	15A.2P	2#12+G	21	15A.2P MOCP AS PER MECHANICAL
VARIABLE REFRIGERANT FLOW CASSETTE	FC-5	1	208	1.6	1	0.33	80%	0.27	15A.2P	2#12+G	21	15A.2P MOCP AS PER MECHANICAL
	FC-6	1	208	1.8	1	0.37	80%	0.30	15A.2P	2#12+G	21	15A.2P MOCP AS PER MECHANICAL
	FC-7	1	208	2.5	1	0.52	80%	0.42	15A.2P	2#12+G	21	15A.2P MOCP AS PER MECHANICAL
	FC-8	1	208	0.8	1	0.17	80%	0.13	15A.2P	2#12+G	21	15A.2P MOCP AS PER MECHANICAL
	FC-9	1	208	1.4	1	0.29	80%	0.23	15A.2P	2#12+G	21	15A.2P MOCP AS PER MECHANICAL
DEDICATED OUTSIDE AIR SYSTEM	DOAS-1	1	575	8	3	7.97	100%	7.97	15A.3P	3#12+G	21	15A.3P MOCP AS PER MECHANICAL
GAS FIRED MAKEUP AIR UNIT	MAU-1A	1	115	15.2	1	1.75	100%	1.75	30A.1P	2#10+G	21	30A.1P MOCP AS PER MECHANICAL
GAS FIRED WAREOF AIR ONT	MAU-1B	1	208	11.2	1	2.33	100%	2.33	20A.2P	2#12+G	21	20A.2P MOCP AS PER MECHANICAL
AIR-COOLED CONDENSING UNIT	CU-2	1	208	10.4	1	2.16	100%	2.16	15A.2P	2#12+G	21	15A.2P MOCP AS PER MECHANICAL
FAN COIL CASSETTE	FC-4	1	208	13.6	1	2.83	80%	2.26	20A.2P	2#12+G	21	20A.2P MOCP AS PER MECHANICAL
	EF-1	1	115	1.7	1	0.20	80%	0.16	15A.1P	2#12+G	21	0.19kW UNIT
EVITATICE FAN	EF-2	1	115	1.7	1	0.20	80%	0.16	15A.1P	2#12+G	21	0.19kW UNIT
EXHAUST FAN	EF-3	1	115	3.2	1	0.37	80%	0.29	15A.1P	2#12+G	21	0.37kW UNIT
	EF-4	1	208	11.4	3	4.11	80%	3.29	20A.3P	3#12+G	21	4.10kW UNIT
	EF-5	1	115	4.9	1	0.56	80%	0.45	15A.1P	2#12+G	21	0.56kW UNIT
GAS FIRED HOT WATER TANK HEATER	DHWT-1	1	120	3	1	0.36	100%	0.36	15A.1P	2#12+G	21	
KITCHEN RANGE HOOD	RH-1	1	120	4.5	1	0.54	100%	0.54	15A.1P	2#12+G	21	
VARIABLE REFRIGERANT FLOW HEAT RECOVERY BRANCH SELECTOR	BS-1	1	208	0.4	1	0.08	100%	0.08	15A.2P	2#12+G	21	15A.2P MOCP AS PER MECHANICAL
DECEDATIFICATION FAM	CF-1	2	208	2.1	3	1.51	80%	1.21	15A.3P	3#12+G	21	0.75kW UNIT
DESTRATIFICATION FAN	CF-2	1	115	1.6	1	0.18	80%	0.15	15A.1P	2#12+G	21	0.18kW UNIT
	EH-1	1	208	4.8	1	1.00	50%	0.50	15A.2P	2#12+G	21	1kW UNIT
	EH-2	1	208	4.8	1	1.00	50%	0.50	15A.2P	2#12+G	21	1kW UNIT
ELECTRIC HEATER	EH-3	1	208	9.6	1	2.00	50%	1.00	15A.2P	2#12+G	21	2kW UNIT
	EH-4	1	208	9.6	1	2.00	50%	1.00	15A.2P	2#12+G	21	2kW UNIT
	EH-5	1	208	9.6	1	2.00	50%	1.00	15A.2P	2#12+G	21	2kW UNIT
PUMP	P-1	1	115	0.6	1	0.07	50%	0.03	15A.1P	2#12+G	21	75W UNIT
CAC FIDES UNIT VESTES	UH-1	4	115	4.4	1	2.02	50%	1.01	15A.1P	2#12+G	21	
GAS-FIRED UNIT HEATER	UH-2	2	115	4.4	1	1.01	50%	0.51	15A.1P	2#12+G	21	
ELECTRIC HUMIDIFIER	HUM-1	1	208	33.3	3	12.00	80%	9.60	60A.3P	3#6+G	27	
DESICCANT DEHUMIDFIER	DD-1	1	208	33.1	3	11.92	80%	9.54	60A.3P	3#6+G	27	
	IAC-1	1	208	7.5	3	2.70	75%	2.03	15A.3P	3#12+G	21	
INDUSTRIAL AIR CLEANERS	IAC-2	2	120	2.4	1	0.58	75%	0.43	15A.1P	2#12+G	21	
	IAC-3	2	120	2.4	1	0.58	75%	0.43	15A.1P	2#12+G	21	
COMPRESSOR		1	600	22	3	22.86	50%	11.43	40A.3P	3#8+G	27	

	Branch Panel: DP-DA					M. 14	0001					ALC Better 2014	
	Location: ELECTRICAL Supply From: Mounting: SURFACE Enclosure: SPRINKLERI					Volts: Phases: Wires:	3					A.I.C. Rating: 22kA Mains Type: Cu Mains Rating: 225 A MCB Rating: 1 A	
otes: 2 CIRCI	JIT SINGLE-TUB PANEL.												
СКТ	Circuit Description	Trip	Poles	Α	В	С	Α	В	С	Poles	Trip	Circuit Description	скт
DA-1				5822 VA			31487				•		DA-2
DA-3	TX-LA	30 A	3		3903 VA			27067		3	90 A	TX-RA	DA-4
DA-5						3188 VA			27997				DA-6
DA-7				7621 VA			21612						DA-8
	COMPRESSOR	40 A	3		7621 VA			22762		3	90 A	TX-MA	DA-1
DA-11						7621 VA			23810				DA-1
DA-13				8233 VA			0 VA						DA-1
OA-15	CU-1	40 A	3		8233 VA			0 VA		3	30 A	SPD	DA-1
A-17				005714		8233 VA	0.14		0 VA			00405	DA-1
A-19	D0404	45.4	0	2657 VA			0 VA	0.1/4				SPACE	DA-2
	DOAS-1	15 A	3		2657 VA	2657 VA		0 VA	0.1/4			SPACE	DA-2
)A-23)A-25	SPACE			0 VA		2007 VA	0 VA		0 VA			SPACE SPACE	DA-2
	SPACE			UVA	0 VA		UVA	0 VA				SPACE	DA-2
	SPACE				OVA	0 VA		UVA	0 VA			SPACE	DA-3
	SPACE			0 VA		0 171	0 VA		0 171			SPACE	DA-3
	SPACE				0 VA		-	0 VA				SPACE	DA-3
DA-35	SPACE					0 VA			0 VA			SPACE	DA-3
DA-37	SPACE			0 VA			0 VA					SPACE	DA-3
DA-39	SPACE				0 VA			0 VA				SPACE	DA-4
)A-41	SPACE					0 VA			0 VA			SPACE	DA-4
		To	tal Load:	7726	6 VA	7216	2 VA	7342	1 VA				·
		Tota	al Amps:	22	4 A	208	8 A	21	3 A				
egend:												Panel Totals	
												Total Conn. Load: 222847 VA	
												Total Est. Demand: 209303 VA	
												Total Conn.: 214 A	
												Total Est. Demand: 201 A	
otes:		,			•			•			•	,	

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE EMAIL: CM-20-063@QUASARCG.COM

Α	ISSUED FOR TENDER	2021-08-12
No.	Revision	Date

า



PROJECT NORTH

The specifications are to be considered as an integral part of these drawings and neither the drawings per the specifications shall be

drawings and neither the drawings nor the specifications shall be used alone. Refer to architectural drawings for dimensions. Do not scale.

© Copyright Reserved:
These drawings and all that is represented herein are the exclusive property of Quasar Consulting Group.
They may not be used or reproduced without written permission from Quasar Consulting Group.



250 ROWNTREE DAIRY RD, WOODBRIDGE, ON TEL: 905-507-0800
WEB: WWW.QUASARCG.COM

Project Information

BFES Station 201 (SPA-2021-0032)

27 Rutherford Rd. S., Brampton, ON, L6W 3J3

City of Brampton Fire & Emergency Services

Drawing Title

ELECTRICAL SCHEDULES (2)

Date 2021-08-12	Projec
Drawn by DTH	CM-20

1:1

Branch Panel: MP-MA

Location: ELECTRICAL 108 Supply From: TX-MA Mounting: SURFACE
Enclosure: SPRINKLERPROOF

Volts: 120/208 Wye Phases: 3 Wires: 4

A.I.C. Rating: 10kA Mains Type: Cu
Mains Rating: 225 A
MCB Rating: 1 A

Total Est. Demand: 68184 VA

Total Conn.: 189 A Total Est. Demand: 189 A

60 CIRCUIT DOUBLE-TUB PANEL (TOTAL 120 CIRCUITS).

СКТ	Circuit Description	Trip	Poles	A	В	С	A	В	С	Poles	Trip	Circuit Description	СКТ
MA-1	UH-1	15 A	1	510 VA			300 VA			2	15 A	FC-1, FC-2, FC-3A, FC-3B	MA-2
MA-3 MA-5	UH-2 UH-2	15 A 15 A	1		510 VA	510 VA		300 VA	1000 VA				MA-4 MA-6
MA-7	UH-1	15 A	1	510 VA			1000 VA		1000 171	2	15 A	EH-3	MA-8
MA-9	UH-1	15 A	1		510 VA			500 VA		2	15 A	EH-1	MA-10
MA-11 MA-13	DHWT-1	15 A	1	1165 VA		360 VA	4000 VA		500 VA	_			MA-12 MA-14
MA-15	MAU-1B (CONDENSER UNIT)	20 A	2	1103 VA	1165 VA		4000 VA	4000 VA		3	60 A	HUM-1	MA-16
	MAU-1A	30 A	1			2330 VA			4000 VA				MA-18
MA-19	FC-5	15 A	2	167 VA	4071/4		145 VA	4.45.140		2	15 A	FC-9	MA-20
MA-21 MA-23					167 VA	185 VA		145 VA	1160 VA	1	15 A	IAC-2 (2)	MA-22 MA-24
MA-25	FC-6	15 A	2	185 VA		100 77	3973 VA		1100 771	<u> </u>	1071	11.02 (2)	MA-26
MA-27	RH-1	15 A	1		540 VA			3973 VA		3	60 A	DD-1	MA-28
MA-29	FC-7	15 A	2	000) (4		260 VA	400.1/4		3973 VA		45.0	05.0	MA-30
MA-31 MA-33				260 VA	1000 VA		180 VA	1000 VA		1	15 A	CF-2	MA-32 MA-34
MA-35	EH-4	15 A	2		1000 171	1000 VA		1000 171	1000 VA	2	15 A	EH-5	MA-36
MA-37	EH-2	15 A	2	500 VA			580 VA			1	15 A	IAC-3 (2)	MA-38
MA-39					500 VA	050.1/4		400 VA	500.1/4	1	20 A	NEMA 5-20 MAINTENANCE RECEPTACLE	MA-40
MA-41 MA-43	VAV CONTROL PANEL	15 A	1	1415 VA		250 VA	900 VA		560 VA	1	15 A	EF-5	MA-42 MA-44
MA-45	FC-4	20 A	2	1110 171	1415 VA		000 771	900 VA		3	15 A	IAC-1	MA-46
MA-47						900 VA			900 VA				MA-48
MA-49	IAC-1	15 A	3	900 VA	0001/4		507 VA	507.\A			45.0	05.4 (0)	MA-50
MA-51 MA-53					900 VA	85 VA		507 VA	507 VA	3	15 A	CF-1 (2)	MA-52 MA-54
MA-55	FC-8	15 A	2	85 VA		00 171	900 VA		001 V/C				MA-56
MA-57	-BS-1	15 A	2		40 VA			900 VA		3	15 A	IAC-1	MA-58
MA-57 MA-59	55.0			070 \ / 4		40 VA	000) (4		900 VA				MA-60
MA-61 MA-63		15 A 15 A	1	370 VA	400 VA		900 VA	900 VA		3	15 A	IAC-1	MA-62 MA-64
	NEMA 5-20 MAINTENANCE RECEPTACLE	20 A	1		400 77	400 VA		300 77	900 VA		1071		MA-66
MA-67				720 VA			0 VA			1	15 A	SPARE	MA-68
MA-69	CU-2	15 A	3		720 VA	700 \ / 4		0 VA	0.1/4	1	15 A	SPARE	MA-70
MA-71 MA-73				1370 VA		720 VA	0 VA		0 VA	1	15 A	SPARE SPACE	MA-72 MA-74
MA-75	EF-4	20 A	3	1070 VA	1370 VA		OVA	0 VA				SPACE	MA-76
MA-77						1370 VA			0 VA			SPACE	MA-78
MA-79		15 A	1	70 VA	0.)/4		0 VA	0.)/4				SPACE	MA-80
	SPARE SPARE	15 A 15 A	1		0 VA	0 VA		0 VA	0 VA			SPACE SPACE	MA-82 MA-84
	SPACE			0 VA		0 17 1	0 VA					SPACE	MA-86
	SPACE				0 VA			0 VA				SPACE	MA-88
	SPACE SPACE			0 VA		0 VA	0 VA		0 VA			SPACE SPACE	MA-90 MA-92
	SPACE			UVA	0 VA		OVA	0 VA				SPACE	MA-94
	SPACE					0 VA			0 VA			SPACE	MA-96
	SPACE			0 VA			0 VA					SPACE	MA-98
-	SPACE SPACE				0 VA	0 VA		0 VA	0 VA			SPACE SPACE	MA-100 MA-102
	SPACE			0 VA		UVA	0 VA		UVA			SPACE	MA-104
	SPACE				0 VA		0 171	0 VA				SPACE	MA-106
MA-107						0 VA			0 VA			SPACE	MA-108
	SPACE SPACE			0 VA	0 VA		0 VA	0 VA				SPACE SPACE	MA-110 MA-112
	SPACE				UVA	0 VA		UVA	0 VA			SPACE	MA-114
	SPACE			0 VA			0 VA					SPACE	MA-116
	SPACE				0 VA			0 VA				SPACE	MA-118
MA-119	SPACE	 To	tal Load:	2161	 2 VA	0 VA 2276	62 VA	2381	0 VA 0 VA			SPACE	MA-120
Lamand		Tot	al Amps:	18	0 A	19	1 A	20	0 A				
Legend:													
												B	
												Panel Totals	
												Total Conn. Load: 68184 VA	
1		1			1			1			1	Total Fet Demand: 68184 \/A	

Branch Panel: RP-RA

Location: ELECTRICAL 108 Supply From: TX-RA Mounting: SURFACE
Enclosure: SPRINKLERPROOF

Volts: 120/208 Wye Phases: 3 Wires: 4

A.I.C. Rating: 10kA Mains Type: Cu
Mains Rating: 225 A
MCB Rating: 1 A

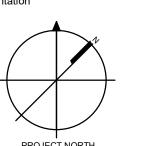
60 CIRCUIT DOUBLE-TUB PANEL (TOTAL 120 CIRCUITS).

CKT	Circuit Description	Trip	Poles	A	В	С	A	В	С	Poles	Trip	Circuit Description	СКТ
RA-1	FIRE ALARM PANEL	20 A	1	500 VA			400 VA			1	20 A	RECEPTACLE - NEMA 5-20	RA-2
RA-3	FIRE ALARM PANEL	20 A	1		500 VA			720 VA		1	15 A	RECEPTACLES	RA-4
RA-5	RECEPTACLES	15 A	1			800 VA			900 VA	1	15 A	RECEPTACLES	RA-6
RA-7	RECEPTACLES	15 A	1	1000 VA			720 VA			1	15 A	RECEPTACLES	RA-8
RA-9	GFCI RECEPTACLES	15 A	1		800 VA			1200 VA		1	15 A	RECEPTACLES	RA-10
	BFS RECEPTACLE	15 A	1			400 VA			350 VA	1	15 A	SECURITY MONITOR RECEPTACLE	RA-12
	RECEPTACLES	15 A	1	1000 VA			200 VA			1	15 A	GFCI RECEPTACLE	RA-14
	RECEPTACLE - NEMA 5-20	20 A	1		500 VA			500 VA		1	15 A	CHANGE TABLE RECEPTACLE	RA-16
	RECEPTACLE - NEMA 5-20	20 A	1			500 VA			1200 VA	1		DOOR OPERATORS (3)	RA-18
	RECEPTACLE - NEMA 5-20	20 A	1	500 VA			1200 VA			1		RECEPTACLES	RA-20
	RECEPTACLE - NEMA 5-20	20 A	1		500 VA			1200 VA		1	20 A	COPIER RECEPTACLE, NEMA 5-20	RA-22
RA-23	FRIDGE	15 A	1			1000 VA			1000 VA	1		RECEPTACLES	RA-24
RA-25	FRIDGE	15 A	1	1000 VA			400 VA			1	15 A	GFCI RECEPTACLES	RA-26
	COFFEE	20 A	1		1000 VA			1000 VA		2	15 A	DRYER - NEMA 6-30R	RA-28
	DISHWASHER	15 A	1			1000 VA			1000 VA				RA-30
	RECEPTACLE - NEMA 5-20	20 A	1	200 VA			1000 VA			1	15 A	WASHER	RA-32
	MICROWAVE	15 A	1		1000 VA			1000 VA		2	15 A	GEAR WASHER - NEMA 6-15R	RA-34
	RECEPTACLE - NEMA 5-20	20 A	1			200 VA			1000 VA				RA-36
RA-37	RANGE (NEMA 6-50R, 2#8+G)	50 A	2	1000 VA			500 VA			1		DOOR OPERATOR	RA-38
RA-39	, ,		_		1000 VA			200 VA		1	15 A	GFCI RECEPTACLE	RA-40
	RECEPTACLE - NEMA 5-20R	20 A	1			200 VA			400 VA	1		RECEPTACLES, DSR	RA-42
RA-43	TV, RECEPTACLES	15 A	1	1200 VA			400 VA			1	15 A	RECEPTACLES	RA-44
RA-45					373 VA			400 VA		1	15 A	RECEPTACLES	RA-46
	BAY DOOR OPERATOR (2)	15 A	3			373 VA			1000 VA	1	15 A	DOOR OPERATORS (2)	RA-48
RA-49				373 VA			373 VA						RA-50
RA-51					373 VA			373 VA		3	15 A	BAY DOOR OPERATOR (2)	RA-52
	BAY DOOR OPERATOR (2)	15 A	3			373 VA			373 VA				RA-54
RA-55				373 VA			373 VA						RA-56
	NEMA 5-20R, CEILING MOUNTED	20 A	1		1000 VA			373 VA		3	15 A	BAY DOOR OPERATOR (2)	RA-58
	NEMA 5-20R, CEILING MOUNTED	20 A	1			1000 VA			373 VA				RA-60
	NEMA 5-20R, CEILING MOUNTED	20 A	1	1000 VA			400 VA			1	15 A	RADIO EQUIPMENT CABINET	RA-62
	MOTORIZED DAMPER, MD-3, MD-4	15 A	1		200 VA			500 VA		1	15 A	MECHANICAL CONTROLS	RA-64
RA-65	GFCI RECEPTACLE	15 A	1	2222111		200 VA			500 VA	1	15 A	MECHANICAL CONTROLS	RA-66
RA-67				8333 VA			0 VA	2.11				SPACE	RA-68
	EV CHARGING STATION (3#3+G, 35mmC)	90 A	3		8333 VA			0 VA	- > / -			SPACE	RA-70
RA-71				0.400.144		8333 VA			0 VA			SPACE	RA-72
RA-73	EXTERIOR EV CHARGING STATION (2#8+G)	40 A	2	3120 VA	0400 \ / 4		0 VA	0.1/4				SPACE	RA-74
RA-75	, ,				3120 VA	04003/4		0 VA	0.1/4			SPACE	RA-76
RA-77	EXTERIOR EV CHARGING STATION (2#8+G)	40 A	2	0.400.1/4		3120 VA	0.1/4		0 VA			SPACE	RA-78
RA-79	ODADE	45.0	4	3120 VA	0.1/4		0 VA	0.1/4				SPACE	RA-80
	SPARE	15 A	1		0 VA	0.1/4		0 VA	0.)/4			SPACE	RA-82
	SPARE	15 A	1	0.1/4		0 VA	0.1/4		0 VA			SPACE	RA-84
	SPACE			0 VA	0.1/4		0 VA	0.1/4				SPACE	RA-86
	SPACE				0 VA	0.1/4		0 VA	0.1/4			SPACE	RA-88
	SPACE			0.1/4		0 VA	0.1/4		0 VA			SPACE	RA-90
	SPACE			0 VA	0.1/4		0 VA	0.1/4				SPACE	RA-92
	SPACE				0 VA	0 VA		0 VA	0.)/4			SPACE	RA-94
	SPACE SPACE			0.1/4		UVA	0.1/4		0 VA			SPACE SPACE	RA-96
	SPACE			0 VA	0.1/4		0 VA	0.1/4					RA-98 RA-100
	SPACE				0 VA	0 VA		0 VA	0 VA			SPACE SPACE	
	SPACE			0.1/4		UVA	0 VA		UVA			SPACE	RA-102
				0 VA	0.1/4		UVA	0.1/4					RA-104
	SPACE SPACE				0 VA	0 VA		0 VA	0 VA			SPACE SPACE	RA-106 RA-108
	SPACE			0 VA		UVA	0 VA		UVA			SPACE	RA-108 RA-110
				UVA	0.1/4		UVA	0.1/4					RA-110 RA-112
	SPACE				0 VA	0.1/4		0 VA	0.1/4			SPACE	
RA-113				0.174		0 VA	2000 1/4		0 VA			SPACE	RA-114
	SPACE			0 VA	0.1/4		2800 VA			0	F0.4	OD CA	RA-116
	SPACE				0 VA	0.1/4		900 VA	2400 \ / 4	3	50 A	CP-CA	RA-118
KA-119	SPACE					0 VA			2400 VA				RA-120
		_	tal Load:	3148	7 1 / 4	2706	\ 7 \/^	2799	7 \ / ^				

Panel To	Totals
Total Conn. Load: 8	86550 VA
Total Est. Demand: 73	73405 VA
Total Conn.: 2	
Total Est. Demand: 2	204 A

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE EMAIL: CM-20-063@QUASARCG.COM

Α	ISSUED FOR TENDER	2021-08-12





The specifications are to be considered as an integral part of these drawings and neither the drawings nor the specifications shall be used alone. Refer to architectural drawings for dimensions. Do not scale.

© Copyright Reserved:
These drawings and all that is represented herein are the exclusive property of Quasar Consulting Group.
They may not be used or reproduced without written permission from Quasar Consulting Group.



250 ROWNTREE DAIRY RD, WOODBRIDGE, ON TEL: 905-507-0800 WEB: WWW.QUASARCG.COM

Project Information

BFES Station 201 (SPA-2021-0032)

27 Rutherford Rd. S., Brampton, ON, L6W 3J3

City of Brampton Fire & Emergency Services

Drawing Title

ELECTRICAL SCHEDULES (3)

E603

Date 2021-08-12	Project No	Drawing No
Drawn by	CM-20-063	⊏ 603