

Infrastructure Ontario



ELECTRICAL UPGRADES

465 DAVIS DRIVE SUITE 301, NEWMARKET, ON L3Y 7T9 MAY 27, 2025 ELECTRICAL

ISSUED FOR TENDER

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ABBREVIATIONS

AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CURRENT
AMP	AMPERE
ASV	AIR SOLENOID VALVE
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BBO	BACKBOARD OPERATOR
BI	BLEACHERS
	DLEAGHERS
BLDG	BUILDING
	CONDUIT
CAB	CABINET
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISON
CCT	CIRCUIT
CL	CEILING
CM	COFFEE MAKER
CMU	CONCRETE MASONRY UNIT
CO	CONDUIT ONLY
COMM	COMMUNICATION
СТ	CURRENT TRANSFORMER
CU	COPPER
DIA	DIAMETER
DISC	DISCONNECT
DSPI	DISPOSAL
	DOWN
DPST	DOUDLE FOLE SINGLE IMRUW
DWG	
EH	ELECTRIC HEATER
ELEC	ELECTRIC
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EPO	EMERGENCY POWEROFF
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FD	FIRE DAMPER
FU	FUSE
FVNR	FULL VOLTAGE NON-REVERSING
G	GROUND
GALV	GALVANIZED
GEN	GENERATOR
GECI	
	HORSE POWER
HPF	HIGH POWER FACTOR
J	
KV	
kVA	KILOVOLT AMPERE
KW	KILOWATT
kWh	KILOWATT HOUR
LV	LOW VOLTAGE
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
PH	DULAS
	PHASE
PNL	PANEL
PNL PWR	PHASE PANEL POWER
PNL PWR QTY	PHASE PANEL POWER QUANTITY
PNL PWR QTY RECPT	PHASE PANEL POWER QUANTITY RECEPTACLE
PNL PWR QTY RECPT REQD	PHASE PANEL POWER QUANTITY RECEPTACLE REQUIRED
PNL PWR QTY RECPT REQD SW	PHASE PANEL POWER QUANTITY RECEPTACLE REQUIRED SWITCH
PNL PWR QTY RECPT REQD SW SWBD	PHASE PANEL POWER QUANTITY RECEPTACLE REQUIRED SWITCH SWITCH BOARD
PNL PWR QTY RECPT REQD SW SWBD TEI	PHASE PANEL POWER QUANTITY RECEPTACLE REQUIRED SWITCH SWITCH BOARD TELEPHONE
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594x841mm

OCCUPIED BUILDING REQUIREMENTS:

- WORKING HOURS TO BE COORDINATED WITH LANDLORD AND TENANT. ANY INTERRUPTION OF ELECTRICAL SERVICES TO ANY PART OF THE BUILDING SHALL COME AT A TIME AGREEABLE TO THE LANDLORD. MAKE ALL NECESSARY ARRANGEMENTS WITH THOSE CONCERNED AND INCLUDE ANY OVERTIME REQUIRED TO ENSURE THERE IS NO INTERRUPTION OF SERVICES. ALL OVERTIME WORK SHALL BE CARRIED OUT WITHOUT ADDITIONAL COST TO THE LANDLORD.
- 2. CONTRACTOR TO PROVIDE SUITABLE HOARDING FOR SAFETY, DUST AND PROTECTION CONTROL.
- 3. CONTRACTOR SHALL CLEAN THE PROJECT SITE AT THE END OF EACH WORKING DAY.
- 4. CONTRACTOR SHALL NOTIFY BUILDING OWNER PRIOR TO DISPOSAL OF ALL DEMOLISHED MATERIALS TO ALLOW THE OWNER TO SALVAGE ANY USABLE MATERIALS. AFTER INSPECTING FROM THE OWNER'S REPRESENTATIVE ALL UNUSED MATERIALS SHALL BE REMOVED FROM THE JOB SITE WITH DISPOSAL IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS AND REGULATIONS.
- 5. CONTRACTOR TO ARRANGE FOR SUITABLE WASTE DISPOSAL FOR WASTES.

LIGHTING GENERAL NOTES:

- ELECTRICAL CONTRACTOR SHALL MEET WITH THE CEILING AND MECHANICAL CONTRACTORS TO COORDINATE LOCATIONS, CLEARANCES, CEILING-TYPES AND ROUGH-IN REQUIREMENTS OF ALL LIGHTING FIXTURES PRIOR TO DUCT AND PIPING INSTALLATIONS AS REQUIRED.
- PROVIDE TEMPORARY POWER AND LIGHTING FOR CONSTRUCTION. ONE LAMP SOCKET AND 150W LAMP PER EVERY 400 SQUARE FEET AND ONE POWER OUTLET FOR EVERY 1500 SQUARE FEET OF AREA.
- 3. ALL LUMINAIRES SHALL BE CHAIN HUNG AND INDIVIDUALLY SUPPORTED FROM THE STRUCTURE ABOVE. LUMINAIRES ARE NOT TO BE SUSPENDED FROM MECHANICAL PIPES, DUCTWORK, OR OTHER BUILDINGS SERVICES.
- 4. THE ELECTRICAL CONTRACTOR SHALL INSTALL FIXTURES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, LOCAL CODES, LOCAL INSPECTION REQUIREMENTS, ELECTRICAL DIVISION DRAWINGS AND SPECIFICATIONS. CLEAN ALL NEW LUMINAIRES INSIDE AND OUT AT TIME OF SUBSTANTIAL COMPLETION. REPLACE ALL SCRATCHED
- OR DAMAGED NEW LUMINAIRES, LENSES, LOUVERS AND DIFFUSERS AT NO COST TO THE OWNER. 6. LIGHT SWITCHES INSTALLED ADJACENT TO EACH OTHER, SHALL BE GANGED TOGETHER WITH ONE PIECE
- COVERPLATE. 7. SUPPLY ALL LIGHTING FIXTURES, LAMPS AND EMERGENCY LIGHTING SYSTEM AND BATTERIES AS REQUIRED BY SCOPE OF WORK.
- 8. ALL LIGHTING SWITCHES TO BE CENTERED AT 1000mm AFF.

POWER, CONDUIT & DATA GENERAL NOTES:

- 3.

SHALL BE FOLLOWED.

- INSPECTION FEES.

11. EXISTING INSTALLATION

- SEALED BEFORE REINSTALLATION.
- THEY SHALL BE REMOVED.

POSITION.

- COMPONENTS.

- MATERIAL.
- 19. ALL CABLING SHALL BE INSTALLED IN CEILING SPACE OR CONDUIT AS INDICATED.

- CIRCUIT NUMBER FROM WHICH THEY ARE FED.
- REPRESENTATIVE.
- ON PLAN OR NOT.
- DIFFERENT PHASE.

THIS JOB IS A RENOVATION AND/OR ADDITION OF AN EXISTING FACILITY. BEFORE SUBMITTING THEIR BID THE CONTRACTOR SHALL VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING CONDITIONS. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS, OMISSIONS OR ERRORS HE MAKES AS A RESULT OF HIS FAILURE TO BECOME FULLY FAMILIAR WITH EXISTING CONDITIONS.

THE ELECTRICAL CONTRACTOR SHALL REVIEW AND COORDINATE WITH ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, PLUMBING AND OTHER DRAWINGS PRIOR TO BID. THE CONTRACTOR SHALL VISIT THE SITE, READ ALL DRAWINGS AND MAKE DETAILED NOTES OF ALL NECESSARY OFFSETS REQUIRED WITH THE INSTALLATION OF HIS WORK. NO EXTRA PAYMENT WILL BE ALLOWED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE AND PROJECT CONDITIONS.

THE ELECTRICAL PLANS ARE DIAGRAMMATIC ONLY. COORDINATE ELECTRICAL EQUIPMENT LOCATION AND INSTALLATION WITH EQUIPMENT BEING SERVED. PROVIDE ALL POWER AND TELECOMMUNICATION FINAL CONNECTIONS TO THE SYSTEM FURNITURE AS REQUIRED

THESE DOCUMENTS MAKE NO REPRESENTATION AS TO THE EXISTENCE OR LOCATION OF EXISTING HAZARDOUS MATERIAL (INCLUDING ASBESTOS CONTAINING MATERIAL) AT THE SITE, REMOVAL OR ABATEMENT OF HAZARDOUS MATERIALS IS NOT INCLUDED IN THE SCOPE OF THIS PROJECT. SHOULD CONTRACTOR DISCOVER SUSPECTED HAZARDOUS MATERIALS AT THE SITE HE SHALL IMMEDIATELY BRING IT TO THE ATTENTION OF THE OWNER AND THE CONSULTANT PRIOR TO STARTING OR CONTINUING WORK INVOLVING THOSE MATERIALS.

THE ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE MOST RECENT VERSION OF THE NATIONAL AND OR LOCAL ELECTRICAL CODE REGARDING CLEARANCES REQUIRED AROUND ELECTRICAL DISTRIBUTION EQUIPMENT.

ALL WORK SHALL COMPLY STRICTLY TO THE REQUIREMENTS OF THE LATEST EDITIONS OF THE CANADIAN ELECTRICAL "CSA" CODE AS ADOPTED AND AMENDED BY PROVINCIAL REGULATIONS AND THE BUILDING CODE. THESE CODES AND ADDITIONAL REQUIREMENTS OF THE POWER UTILITY SHALL FORM AN INTEGRAL PART OF THIS SPECIFICATION. ALL EQUIPMENT SHALL BE CSA APPROVED. WHERE DRAWING CALLS FOR EQUIPMENT, WIRING OR OTHER REQUIREMENTS EXCEEDING THE MINIMUM REQUIREMENTS OF THE CODE, THE DRAWING

THE CONTRACTOR SHALL INCLUDE IN THE WORK, WITHOUT EXTRA COST, ANY LABOR, MATERIALS, SERVICES, APPARATUS, AND DRAWINGS IN ADDITION TO CONTRACT DOCUMENTS, IN ORDER TO COMPLY WITH ALL APPLICABLE LAWS, INDICATED AND/OR SPECIFIED. PROVIDE ALL ELECTRICAL EQUIPMENT WITH ALL NECESSARY ASSOCIATED ACCESSORIES AND CONDUIT INFRASTRUCTURE AS REQUIRED TO ENSURE A COMPLETE AND OPERATIONAL SYSTEM AT NO ADDITIONAL COST TO OWNER.

PAY ALL FEES FOR EXAMINATION OF DRAWING AND OBTAIN ALL PERMITS REQUIRED AND PAY ALL PERMIT AND

ARRANGE FOR INSPECTION OF ALL WORK BY THE POWER AUTHORITY AND INSPECTION DEPARTMENT. UPON COMPLETION OF THE WORK, PRESENT TO THE OWNER THE FINAL UNCONDITIONAL CERTIFICATE OF APPROVAL.

10. IF MATERIAL OR EQUIPMENT IS INSTALLED BEFORE IT IS APPROVED, THE CONTRACTOR SHALL BE LIABLE FOR ITS REMOVAL AND REPLACEMENT AT NO ADDITIONAL CHARGE OR IF IN THE OPINION OF THE ARCHITECT OR ENGINEER, THE MATERIAL OR EQUIPMENT DOES NOT MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.

11.1. SUPPLY, INSTALL AND MAINTAIN ALL REQUIRED TEMPORARY WIRING TO OCCUPIED AREAS AT ALL TIMES. PROVIDE ADEQUATE PROTECTION TO EXISTING WIRING AND EQUIPMENT SERVING THE EXISTING AND NEW AREAS AND PARTICULARLY WHERE WIRING AND ELECTRICAL EQUIPMENT HAVE BECOME EXPOSED TO MECHANICAL INJURY OR MOISTURE IN THE COURSE OF ALTERATION OR CONSTRUCTION.

11.2. EXISTING ELECTRICAL EQUIPMENT REMOVED AND INDICATED FOR REUSED SHALL BE IN GOOD CONDITION AND SHALL BE CLEANED BEFORE INSTALLATION. ALL UNUSED CONDUIT ENTRANCE OPENINGS SHALL BE

11.3. OBSOLETE CONDUITS AND CABLES SHALL BE DISCONNECTED FROM THEIR SOURCE TO SUPPLY, CUT BACK TO A SUITABLE POINT AND LEFT IN PLACE, UNLESS THEY INTERFERE WITH THE NEW WORK, IN WHICH CASE

11.4. ALL UNUSED FUSED SWITCHES AND CIRCUIT BREAKERS SHALL BE BECOME SPARE AND TURNED TO 'OFF'

11.5. CERTAIN ITEMS ARE IDENTIFIED ON THE DRAWINGS AS "EXISTING TO BE RELOCATED". DISCONNECT SAID EQUIPMENT FROM PRESENT SOURCE AND AFTER RELOCATION, RECONNECT AND REINSTALL ALL ELECTRICAL

11.6. ALL EXISTING EQUIPMENT AND MATERIAL NOT REQUIRED IN THE FINAL INSTALLATION SHALL BE CAREFULLY REMOVED AT THE APPROPRIATE TIME AND SHALL BE DISPOSED OF.

11.7. THE CONTINUITY OF ALL EXISTING CIRCUITS TO REMAIN SHALL BE MAINTAINED.

12. VERIFY EXACT LOCATIONS OF ALL EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF MECHANICAL EQUIPMENT.

13. CONTRACTOR SHALL VERIFY ACTUAL ELECTRICAL LOADS FROM NAMEPLATE RATINGS OF EACH EQUIPMENT REQUIRING POWER. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE PROJECT ENGINEER.

14. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE AS PER MANUFACTURERS WRITTEN INSTRUCTIONS AND APPROVED WIRING DIAGRAMS AND DETAILS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT SUPPLIED

15. ENSURE RECEPTACLES ARE MOUNTED SUCH THAT THE PLUGS WILL NOT INTERFERE WITH EACH OTHER WHEN THE EQUIPMENT IS CONNECTED. ALL RECEPTACLES ARE TO BE INSTALLED TO MINIMIZE STRAIN ON THE CABLES OF THE EQUIPMENT. ORIENTATION OF THE RECEPTACLE SHOULD BE SUCH THAT WHEN THE CABLE IS IN NORMAL POSITION, THERE IS NO STRAIN INDUCED ONTO THE CABLE.

16. CABLING CONTRACTOR SHALL SUPPLY AND INSTALL FT8 (PLENUM RATED) CATEGORY 6, 4-PAIR CMP DATA CABLES IN QUANTITIES FOR EACH LOCATION AS SHOWN. AT CABINET END, TERMINATE CABLES ON DUAL GANG PLATE WITH MODULAR CATEGORY 6 JACKS IN FLUSH MOUNTED ELECTRICAL BOX. AT DEVICE END, CABLING CONTRACTOR SHALL PROVIDE FACEPLATE FOR MOUNTING OF OUTLETS. INCLUDING BLANKS AND THOSE REQUIRED FOR DATA CABLES. ELECTRICAL CONTRACTOR TO COORDINATE MOUNTING LOCATION OF BOX WITH THE CABLING CONTRACTOR.

17. ALL BACK BOXES INSTALLED ON OPPOSITE SIDES OF THE SAME PARTITION SHALL BE STAGGERED. DO NOT MOUNT THE BACK BOXES BACK TO BACK.

18. SEAL AROUND ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND CEILING WITH FIRE RATED

20. EXACT MOUNTING HEIGHTS FOR RECEPTACLES SHALL BE DETERMINED ON-SITE IN CONJUNCTION WITH THE VARIOUS VENDORS. EVERY ATTEMPT IS TO BE MADE TO CONCEAL CABLES FROM VIEW.

21. NO WIRING SHALL RUN IN DUCTWORK. 22. ALL EQUIPMENT SUCH AS RELAYS, SWITCHES, PANELS, AND OTHER APPURTENANCES SHALL HAVE IDENTIFICATION PLATES OF BLACK LAMINATED PLASTIC WITH 1/2" WHITE LETTERS. ALL JUNCTION BOXES IN CEILING CAN BE MARKED WITH BLACK PERMANENT MARKER ON COVER PLATES AS PANEL DESIGNATION AND

23. ALL CONDUCTORS SHALL BE IDENTIFIED. ALL WIRING DEVICES SHALL BE USED WITH TYPED LABEL ON THE COVER PLATE IDENTIFYING THE PANEL DESIGNATION AND CIRCUIT NUMBER FROM WHICH THEY ARE FED.

24. ALL CONDUITS AND JUNCTION BOXES SHALL BE CONCEALED IN FINISHED AREAS. PRIOR TO CONCEALMENT OF NEW CONSTRUCTION, ALL WORK BEHIND FINISHED SURFACES SHALL BE INSPECTED BY THE OWNER'S

25. CONTROL WIRING SHALL BE TAGGED AT EACH END AND TERMINATED WHERE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH EQUIPMENT MANUFACTURES SPECIFICATIONS.

26. NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL CIRCUITS, ONLY THOSE WHERE CLARIFICATION IS NECESSARY. PROVIDE ALL WIRE NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER INDICATED

27. GANG ALL SWITCHES SHOWN TO BE INSTALLED AT SAME LOCATION UNDER A SINGLE COVER PLATE. PROVIDE BARRIERS SWITCH BOX AS REQUIRED TO SEPARATE 120V CIRCUITS FROM 277V CIRCUITS AND 277V CIRCUITS OF

28. PROVIDE PLASTER RING WITH PULL STRING TO SPACE ABOVE SUSPENDED CEILING FOR ALL TELEPHONE, DATA, FAX, MODEM, CATV, CARD READER, ETC. OUTLETS INSTALLED IN HOLLOW PARTITIONS. PROVIDE MINIMUM 3/4" EMPTY CONDUIT AND PULL STRING TO SPACE ABOVE SUSPENDED CEILING FOR THESE OUTLETS INSTALLED IN AN INSULATED PARTITION. PROVIDE 1" E.C. WITH 2 STRINGS FOR COMBINATION DATA/TEL OUTLET.

LEGEND

	LIGHTING AND LIGHTING CONTROL SYSTEMS
×	RECESSED TROFFER LIGHT FIXTURE, 'xx' DENOTES FIXTURE TYPE
EM	RECESSED TROFFER EMERGENCY LIGHT FIXTURE, 'xx' DENOTES FIXTURE TYPE
××+	INDUSTRIAL STRIP LIGHT FIXTURE, 'xx' DENOTES FIXTURE TYPE
-\$ ^{xx} -\$ ^{xx}	RECESSED DOWNLIGHT FIXTURE, 'xx' DENOTES FIXTURE TYPE
-@ ^{_xx}	PENDANT LIGHT FIXTURE, 'xx' DENOTES FIXTURE TYPE
-Ò- _{xx}	WALL SCONCE FIXTURE, 'xx' DENOTES FIXTURE TYPE
\$9 1	SINGLE POLE LINE VOLTAGE LIGHT SWITCH (DECORA STYLE)
\$ 3 \$ 4	3-WAY / 4-WAY LINE VOLTAGE LIGHT SWITCH (DECORA STYLE)
Φ	DIMMER SWITCH
OS	WALL MOUNTED OCCUPANCY SENSOR SWITCH
OS	CEILING MOUNTED OCCUPANCY SENSOR SWITCH
DL	DAY LIGHT PHOTO SENSOR
îî	SINGLE EMERGENCY REMOTE HEAD
مۍ م <u>ۍ</u>	DOUBLE EMERGENCY REMOTE HEAD
B Ø	EMERGENCY LIGHT BATTERY UNIT
	EMERGENCY LIGHT/EXIT SIGN COMBO BATTERY UNIT
∞ ₩	PICTOGRAM EXIT SIGN
NOTE: LEGEND SYN QUANTITY AND INS	IBOLS ARE STANDARD AND MAY NOT ALL BE APPLICABLE TO THIS PROJECT. REFER TO FLOOR PLANS FOR EXACT TALLATION DETAIL.

FIRE ALARM SYSTEM		
	FIRE ALARM MANUAL PULL STATION	
* *	FIRE ALARM STROBE (CEILING MOUNTED / WALL MOUNTED)	
SS	FIRE ALARM SPEAKER (CEILING MOUNTED / WALL MOUNTED)	
₹S}=₹S }=	FIRE ALARM SPEAKER AND STROBE COMBINATION (CEILING MOUNTED / WALL MOUNTED)	
	FIRE ALARM HORN	
×	FIRE ALARM HORN AND STROBE COMBINATION	
	FIRE ALARM BELL	
• •	FIRE ALARM SMOKE DETECTOR / DUCT SMOKE DETECTOR	
	FIRE ALARM HEAT DETECTOR	
HS	FIRE FIGHTER'S HANDSET	
	FIRE ALARM CONTROL PANEL (FACP)	
-~~~	FIRE ALARM END OF LINE RESISTOR	
NOTE: LEGEND SYMBOLS ARE STANDARD AND MAY NOT ALL BE APPLICABLE TO THIS PROJECT. REFER TO FLOOR PLANS FOR EXACT QUANTITY AND INSTALLATION DETAIL.		

	SECURITY AND DOOR HARDWARE SYSTEM
CR	SECURITY CARD READER ROUGH-IN
DC	DOOR CONTACT ROUGH-IN
ES	ELECTRIC STRIKE ROUGH-IN
EL	ELECTRIFIED LOCK ROUGH-IN
ML	MAGNETIC LOCK ROUGH-IN C/W FIRE ALARM SYSTEM TIE-IN
REX	REQUEST FOR EXIT SENSOR ROUGH-IN
KP	SECURITY KEYPAD
IC	SECURITY INTERCOM
ADO	AUTOMATIC DOOR OPERATOR WITH POWER CONNECTION
•	PUSH BUTTON, TYPE AS NOTED
Ĭ	ALARM SOUNDER / STROBE
(BG)	BREAK GLASS SENSOR ROUGH-IN
	SECURITY CAMERA ROUGH-IN
NOTE: LEGEND SYMB	OLS ARE STANDARD AND MAY NOT ALL BE APPLICABLE TO THIS PROJECT. REFER TO FLOOR PLANS FOR EXACT LIATION DETAIL.

	POWER AND SYSTEMS
φ	WALL MOUNTED DUPLEX RECEPTACLE 120V, 15A, CSA 5-15R OR AS NOTED
Ø	WALL MOUNTED ABOVE COUNTER DUPLEX RECEPTACLE 120V, 15A, CSA 5-15R OR AS NOTED
+	WALL MOUNTED DUPLEX RECEPTACLE 120V, 20A, CSA 5-20R
Ø	WALL MOUNTED ABOVE COUNTER DUPLEX RECEPTACLE 120V, 20A, CSA 5-20R
$\mathbf{\Phi}$	WALL MOUNTED GFCI DUPLEX RECEPTACLE 120V, 15A, CSA 5-15R, DEDICATED CIRCUIT
Ħ	WALL MOUNTED ABOVE COUNTER GFCI DUPLEX RECEPTACLE 120V, 15A, CSA 5-15R, DEDICATED CIRCUIT
₽	WALL MOUNTED GFCI DUPLEX RECEPTACLE 120V, 20A, CSA 5-20R, DEDICATED CIRCUIT
Ŧ	WALL MOUNTED ABOVE COUNTER GFCI DUPLEX RECEPTACLE 120V, 20A, CSA 5-20R, DEDICATED CIRCUIT
Φ	CEILING MOUNTED DUPLEX RECEPTACLE 120V, 15A, CSA 5-15R
#	WALL MOUNTED 2 DUPLEX RECEPTACLES (QUADRUPLEX) 120V, 15A, CSA 5-15R OR AS NOTED
φ	WALL MOUNTED SPECIALTY RECEPTACLE, TYPE AS INDICATED ON PLAN
V	WALL MOUNTED ONE-GANG COMMUNICATIONS BACKBOX ROUGH-IN C/W ONE MINIMUM 1" CONDUIT STUBBED INTO ACCESSIBLE CEILING SPACE OR AS SPECIFIED ON DETAILS . PROVIDE CONNECTORS WITH NYLON BUSHINGS AND PULL STRINGS FOR USE BY COMMUNICATIONS CONTRACTOR.
X	ABOVE COUNTER INSTALLATION OF ONE-GANG COMMUNICATIONS BACKBOX ROUGH-IN C/W ONE MINIMUM 1" CONDUIT STUBBED INTO ACCESSIBLE CEILING SPACE OR AS SPECIFIED ON DETAILS . PROVIDE CONNECTORS WITH NYLON BUSHINGS AND PULL STRINGS FOR USE BY COMMUNICATIONS CONTRACTOR.
¥	WALL MOUNTED ONE-GANG AUDIO/VISUAL BACKBOX ROUGH-IN C/W ONE MINIMUM 1-1/2" CONDUIT STUBBED INTO ACCESSIBLE CEILING SPACE OR AS SPECIFIED ON DETAILS . PROVIDE CONNECTORS WITH NYLON BUSHINGS AND PULL STRINGS FOR USE BY AUDIO/VISUAL CONTRACTOR.
$\stackrel{\pm}{\bigtriangledown}$	WALL MOUNTED COAXIAL CABLE ROUGH-IN
$\Box \mathbf{V}$	FLOOR BOX C/W CSA 5-15R AND OPENING FOR COMMUNICATION CONTRACTOR'S USE
	FLOOR BOX C/W 2 CSA 5-15R AND OPENING FOR COMMUNICATION CONTRACTOR'S USE
TM	TIMER SWITCH
$\Phi \Lambda$	WALL/FLOOR MOUNTED WIREMOLD RACEWAY C/W TYPE AND QUANTITY OF DEVICES AS INDICATED
€x	CONNECTION TO ELECTRIFIED FURNITURE, 'X' DENOTES FEED LOCATION: W = WALL E = ELOOR WM = WIREMOLD P = PAC POLE
۲	DIRECT CONNECTION TO EQUIPMENT AS NOTED
	ELECTRICAL DISCONNECT SWITCH
	MOTOR STARTER
×	COMBINATION DISCONNECT/MOTOR STARTER
1	ELECTRICAL PANEL - SURFACE MOUNT
	ELECTRICAL PANEL - FLUSH MOUNT
	TRANSFORMER
	GROUNDING BUS BAR
М	METER
NOTE: LEGEND SY	I 'MBOLS ARE STANDARD AND MAY NOT ALL BE APPLICABLE TO THIS PROJECT. REFER TO FLOOR PLANS FOR EXACT STALLATION DETAIL.

DESIGNATION INDICATOR	
SYMBOL	DESIGNATION
	NEW
	EXISTING
	DEMOLITION
A B	DETAIL INDICATOR: A = DETAIL DESIGNATION N B = DETAIL DRAWING NUMB
A B	SECTION INDICATOR: A = SECTION DESIGNATION B = SECTION DRAWING NUM
(A-(#))	EQUIPMENT TAG: A = EQUIPMENT DESIGNATI # = DENOTES EQUIPMENT N 'EX' PREFIX TO DESIGNATIO DENOTES EXISTING FOUR
'N' - NEW 'ER' - EXISTING TO BE RELOC	ATED 'E' - EXISTING 'RE' - REMOVE

'R' - REMOVED 'RP' - RELOCATED POSITION 'RR' - REMOVE AND REPLACE

UMBER BER

NUMBER **MBER**

ION TAG NUMBER MENT

E REINSTALL SAME LOCATION

3	ISSUED FOR TENDER	20250527
2	ISSUED FOR 99% REVIEW	20250414
1	ISSUED FOR 66% REVIEW	20250312
No	Revisions	Date
Orientation	Seal	

The Contractor shall check and verify all dimensions and report all errors and omissions to the IO-Owner's/MBS Designee (as applicable) for his/her written direction before proceeding with the Work.

A Detail No B Sheet No where detailed





Ministry PSIF Number

Project	
ELECIRICAL	UPGRADES

465 DAVIS DR. SUITE 301, EWMARKET, ON L3Y 7T9 Site No Building No B25590 40256

INFRASTRUCTURE ONTARIO (IO)

GENERAL NOTES, LEGENDS ABBREVIATIONS AND SYMBOLS

Scale N.T.S.	Project Start Date 20241122
Drawn by YG	Substantial Performance Date 20251030
Designed by YG	Drawing No
Approved by Floor No YG F03	of 08
	CADD File NAME

1. GENERAL REQUIREMENTS FOR ELECTRICAL WORK

1.1. SCOPE OF WORK

- 1.1.1. CONFORM TO THE APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS OF THE CONTRACT.
- THE GENERAL ELECTRICAL SPECIFICATION SHALL APPLY TO AND BE PART OF EACH OF THE SECTIONS 1.1.2. COVERING THE OTHER TRADES WORK.
- 1.1.3. COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF THE LOCAL BUILDING CODE., ALL OTHER APPLICABLE CODES, REGULATIONS, BY-LAWS AND OFFICIAL STANDARDS ACCORDING TO THE REQUIREMENTS AND INTERPRETATIONS OF THE AUTHORITIES HAVING JURISDICTION. THESE CODES & STANDARDS CONSTITUTE AN INTEGRAL PART OF THESE SPECIFICATIONS.
- 1.1.4. IN CASE OF CONFLICT, THE CODES TAKE PRECEDENCE OVER THE CONTRACT DOCUMENTS.
- 1.2. EXAMINATION OF SITE AND INFORMATION
- EACH CONTRACTOR, BEFORE TENDERING, SHALL EXAMINE THE SITE, THE ARCHITECTURAL, STRUCTURAL 1.2.1. MECHANICAL, ELECTRICAL, KITCHEN AND INTERIOR DRAWINGS, CONFIRM EXACT LOCATION AND SIZES OF ALL EXISTING MECHANICAL SERVICES AND THEY SHALL FAMILIARIZE THEMSELVES WITH THE BUILDING CONSTRUCTION AND FINISH IN ORDER THAT THEIR TENDER SHALL INCLUDE EVERYTHING NECESSARY FOR THE PROPER COMPLETION OF THE WORK.
- 1.2.2. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY THAT MATERIAL AND EQUIPMENT BE BROUGHT INTO THE BUILDING IN SUCH ASSEMBLIES AND SIZES AS TO ENTER INTO THE SPACES WHERE THEY ARE TO BE LOCATED AND TO BE SMALL ENOUGH TO BE HOISTED INTO THE BUILDING WITHOUT DIFFICULTY. ANY CUTTING, PATCHING, ETC., INVOLVED IN GETTING LARGE ASSEMBLIES INTO PLACE, SHALL BE THE RESPONSIBILITY OF THIS SUBCONTRACTOR.

1.3. RELATIONSHIP TO OTHER TRADES

- THIS SUBCONTRACTOR SHALL CONFER WITH ALL OTHER WORK, FOUNDATIONS, ETC., WHICH MAY AFFECT THEIR CONTRACTORS INSTALLING EQUIPMENT, PLANT PIPING, OTHER WORK, FOUNDATIONS, ETC., WHICH MAY AFFECT THEIR INSTALLATION, AND THEY SHALL ARRANGE THEIR EQUIPMENT, PIPING, ETC., IN PROPER RELATION WITH OTHER APPARATUS, AND WITH THE BUILDING CONSTRUCTION. THEY SHALL ALSO CONFIRM THE ELECTRICAL CHARACTERISTICS OF THE PROJECT AND ORDER EQUIPMENT ACCORDINGLY.
- 1.3.2. SPECIAL CARE SHALL BE TAKEN IN THE INSTALLATION OF ALL WORK, TO SEE THAT THEY ALL COME WITHIN THE LIMITS ESTABLISHED BY THE FINISH LINES OF ALL WALLS, FLOORS, CEILINGS, ETC.
- THIS SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR AND OTHER SUBCONTRACTORS WHO ARE 1.3.3. CONCERNED OF ALL OPENINGS FOUNDATION WORK HANGERS INSERTS ANCHORS OR OTHER PROVISIONS NECESSARY IN THEIR WORK FOR THE INSTALLATION OF THEIR WORK, AND THEY SHALL FURNISH ALL INFORMATION AND NECESSARY MATERIALS IN AMPLE TIME SO THAT PROPER PROVISIONS CAN BE MADE FOR SAME, AND SHALL SUPPLY AND CORRECTLY AND ACCURATELY PLACE ALL INSERTS, SLEEVES, ANCHORS, ETC.
- FAILURE TO COMPLY WITH THESE REQUIREMENTS ON THE PART OF THIS SUBCONTRACTOR WILL RENDER THEM RESPONSIBLE FOR THE COST OF CUTTING OPENINGS, INSTALLING HANGERS AND OTHER PROVISIONS AT A LATER DATE, AND THE SUBSEQUENT PATCHING, FABRICATED MATERIALS, ETC. THEREBY REQUIRED
- NO CUTTING SHALL BE DONE WITHOUT PERMISSION. ALL SUCH WORK SHALL BE DONE BY TRADESMEN 1.3.5. SKILLED IN AND CERTIFIED FOR THIS PARTICULAR TRADE.

1.4. SHOP DRAWINGS

- EACH CONTRACTOR SHALL SUBMIT THREE (3) COPIES OF THE SHOP DRAWINGS TO THE ENGINEER FOR REVIEW OF MATERIAL, EQUIPMENT, AND APPARATUS BEING PROVIDED BY THEM. THESE SHALL SHOW IN DETAIL THE DESIGN AND CONSTRUCTION AND PERFORMANCE OF ALL APPARATUS, ETC.
- THE ENGINEER'S REVIEW OF SHOP DRAWINGS AND MANUFACTURER'S SPECIFICATIONS OF ANY 1.4.2. EQUIPMENT IS GENERAL AND IS NOT INTENDED TO SERVE AS FINAL CHECK AND IT SHALL NOT RELIEVE THE SUBCONTRACTOR OF THE RESPONSIBILITY FOR ERRORS OR OF THE NECESSITY OF CHECKING THE DRAWING THEMSELVES, OR OF FURNISHING ANY OF THE MATERIALS AND PERFORMING THE WORK REQUIRED BY THE DRAWINGS AND SPECIFICATIONS TO THE FULL INTENT OF THIS SPECIFICATION.
- BEFORE SUBMISSION, THIS SUBCONTRACTOR SHALL CHECK ALL SHOP DRAWINGS FOR ACCURACY OF 1.4.3. DETAILS, DIMENSIONS, ETC. AND SHALL BE SATISFIED THAT THE DRAWINGS ARE CORRECT AND THAT THE QUIPMENT WILL FIT PROPERLY IN THE ALLOTTED SPACE. THE SHOP DRAWINGS SHALL BE STAMPED BY THIS SUBCONTRACTOR WITH THE WORD 'REVIEWED', THE DATE OF APPROVAL, AND THE FIRM'S NAME PRIOR TO SUBMISSION.

1.5. REQUIREMENTS OF INSPECTION DEPARTMENTS

- ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL CODES AND REGULATIONS & ALL AUTHORITIES 1.5.1. HAVING JURISDICTION IN EACH CASE, PARTICULARLY ALL AFFECTED DEPARTMENTS OF THE MUNICIPALITY AND PROVINCE. ELECTRICAL EQUIPMENT SUPPLIED MUST CONFORM TO THE REGULATIONS OF CSA, UL(C) AND THE LOCAL UTILITY ANYTHING NECESSARY TO MAKE THE WORK COMPLY WITH THESE REQUIREMENTS SHALL BE PROVIDED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNERS IF IT REASONABLY COULD HAVE BEEN FORESEEN WHEN TENDERING.
- 1.5.2 EACH SUBCONTRACTOR SHALL PREPARE DRAWINGS IN ADDITION TO ENGINEER'S DRAWINGS AS MAY BE REQUIRED BY VARIOUS INSPECTION DEPARTMENTS HAVING JURISDICTION. AND OBTAIN THEIR APPROVAL REFORE PROCEEDING WITH THE WORK
- IN THE EVENT THAT THE INSPECTION DEPARTMENT'S REQUEST DEVIATES FROM THE ENGINEER'S LAYOUT. 1.5.3. SUBCONTRACTOR SHALL CONSULT THE ENGINEER BEFORE PROCEEDING WITH SAME. IT SHALL BE NOTED THAT ENGINEER'S DRAWINGS ARE GENERALLY ACCEPTABLE TO INSPECTION DEPARTMENTS AND MINOR SUPPLEMENTS NEED ONLY BE MADE BY SUBCONTRACTORS.
- 154 CO-ORDINATE WITH LOCAL LITH ITIES AND PROVIDE REQUIRED NOTICES AND SYSTEM DETAILS. INCLUDE ALLOWANCES FOR THE CONNECTION TO THE LOCAL UTILITY SERVICES. UPON THE FAILURE TO DO SO, OWNER WILL NOT PAY ANY EXTRA COST

1.6. CERTIFICATES, PERMITS, FEES

1.6.1. CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL REQUIRED PERMITS AND PAY ALL FEES INCLUDING PAYMENT FOR STREET CONNECTIONS IN ORDER THAT THE WORK HEREIN SPECIFIED MAY BE CARRIED OUT AND THEY SHALL FURNISH ANY CERTIFICATES NEEDED AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH THE LAWS AND REGULATIONS OF THE MUNICIPALITY AND PROVINCE.

1.6.2. ALL SUPPLIED AND INSTALLED EQUIPMENT SHALL HAVE APPLICABLE CGAM CSA AND ULC LABELS.

1.7. GUARANTEE

- 1.7.1. THIS SUBCONTRACTOR SHALL GUARANTEE ALL MATERIAL AND WORKMANSHIP USED IN THE WORK TO BE IN STRICT ACCORDANCE WITH THE SPECIFICATIONS, OF BEST QUALITY AND TYPE OBTAINABLE TO GIVE FIRST-CLASS CONSTRUCTION AND PROPER AND EFFICIENT OPERATION. AND FREE FROM ANY DEFECTS ANY SUCH DEFECTS WHICH MAY APPEAR IN ANY OF THE WORK WITHIN ONE YEAR AFTER WRITTEN ACCEPTANCE OF THEIR WORK, SHALL BE REPAIRED AND REPLACED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER. WHERE SUCH DEFECTS OCCUR, THIS SUBCONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL COSTS INCURRED IN MAKING THE DEFECTIVE WORK GOOD. THIS SHALL NOT OBSOLETE ANY LONGER WARRANTIES ON SPECIFIC ITEMS OF EQUIPMENT. ALL INJURIES TO ADJACENT WORK, PARTICULARLY PLASTER, WOOD FINISHES OR OTHER MATERIALS, OR 172
- DAMAGE TO OTHER EQUIPMENT, CAUSED BY SUCH DEFECTS OF THIS SUBCONTRACTOR'S WORK OR BY SUBSEQUENT REPLACEMENTS AND REPAIRS, SHALL BE MADE GOOD AT THE EXPENSE OF THIS SUBCONTRACTOR. ALL REPAIR WORK SHALL BE DONE BY TRADES RESPONSIBLE FOR THE ORIGINAL WORK.

1.8. DRAWINGS

- THE DRAWINGS SHOW THE APPROXIMATE LOCATION FOR THE SPECIAL EQUIPMENT AND THE MATERIALS 1.8.1. THROUGHOUT THE BUILDING. THE ARRANGEMENT SHOWN ON THE DRAWINGS IS MORE OR LESS DIAGRAMMATIC AND AS SUCH APPROXIMATE ONLY, AND MAY BE ALTERED, AS APPROVED BY THE ENGINEER, TO MEET THE REQUIREMENTS OF THE APPARATUS, ETC., AND OF THE BUILDING. EACH SUBCONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL MEASUREMENTS FOR THEIR WORK THROUGHOUT, AND THEY SHALL ARRANGE THEIR PIPING, WIRING AND APPARATUS TO CONFORM TO THE ARCHITECTURAL AND STRUCTURAL DETAILS IN A SATISFACTORY MANNER AND SHALL CO-OPERATE WITH OTHER CONTRACTORS TO ENSURE THAT WORK SHALL MEET ALL REQUIREMENTS OF DIVERSE CONTRACTS.
- THE SUBCONTRACTOR IS PARTICULARLY CAUTIONED THAT SMALL SCALE ENGINEER'S PLANS MUST BE 1.8.2. SUPPLEMENTED BY THEIR OWN DETAIL DRAWINGS WHERE NECESSARY FOR PROPER CO-ORDINATION OF THE WORK.
- 1.8.3. ITEMS SHOWN ON THE DRAWINGS BUT NOT SPECIFIED OR SPECIFIED BUT NOT SHOWN SHALL BE INCLUDED.
- ITEMS OBVIOUSLY REQUIRED TO PROVIDE A COMPLETE WORKING SYSTEM BUT NOT SPECIFIED NOR 184 SHOWN SHALL BE INCLUDED.
- 1.8.5. PROVIDE MANUFACTURER RECOMMENDED SPACE FOR SERVICING. DISASSEMBLY AND REMOVAL OF EQUIPMENT AND COMPONENTS. PIPE EQUIPMENT DRAINS TO NEAREST DRAIN

1.9. CONTRACTOR'S SHOP

EACH SUBCONTRACTOR SHALL PROVIDE THEIR OWN OFFICE, WORKSHOP, TOOLS AND MATERIALS STORAGE AND BE RESPONSIBLE FOR ANY LOSS OR DAMAGE THERETO. BUILDING SHALL BE ERECTED UNDER THE SUPERVISION OF THE CONTRACTOR.

1.10. RESPONSIBILITY AND LIABILITY

- 1.10.1. SUPPLY AND INSTALL ALL ITEMS, ARTICLES, MATERIALS, LABOUR, EQUIPMENT AND TOOLS NECESSARY TO COMPLETE ALL THE ELECTRICAL SYSTEMS SHOWN ON ELECTRICAL DRAWINGS AND HAND-OVER TO OWNER A COMPLETE AND OPERATING INSTALLATION.
- 1.10.2. EACH SUB-CONTRACTOR SHALL SUPERVISE THE LAYING OUT OF THEIR WORK AND SHALL ARRANGE IT IN CO-OPERATION WITH OTHERS WHO MAY BE WORKING ON THE PREMISES WHILE THE WORK OF THIS CONTRACT IS IN PROGRESS. THEY SHALL PROTECT FINISHED AND UNFINISHED WORK OF THIS CONTRACT AND/OR WORK OF OTHERS ON THE PREMISES UNTIL THE COMPLETED WORK HAS BEEN ACCEPTED OF ANY DISCREPANCIES OR INCONSISTENCIES FOUND IN THE DRAWINGS OR SPECIFICATIONS BEFORE SUBMITTING THEIR TENDER. THEY SHALL ABIDE BY THE DECISION GIVEN THEM IN WRITING WITH REGARD TO SAME. EACH SUB-CONTRACTOR IS CAUTIONED THAT THE WORK AS SHOWN IS INTENDED TO BE COMPLETE IN ALL RESPECTS AND THAT FAILURE ON THEIR PART TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES WILL NOT RELIEVE THEM OF THE RESPONSIBILITY OF COMPLETING THE WORK AS INTENDED AT THE CONTRACT PRICE.

1.11. CLEAN-UP

- 1.11.1. DURING THE COURSE OF CONSTRUCTION, EACH SUB-CONTRACTOR SHALL KEEP THEIR WORK TIDY AND NOT ALLOW AN ACCUMULATION OF DEBRIS RESULTING FROM THEIR WORK.
- 1.11.2. UPON COMPLETION OF THEIR WORK THEY SHALL LEAVE THE PREMISES IN A BROOM-CLEAN CONDITION.

1.12. PROTECTION

1.12.1. PROTECT YOUR WORK FROM CONSTRUCTION DIRT OR DAMAGE FROM ANY CAUSE. SECURELY PLUG AND CAP ALL OPENINGS IN PIPE, EQUIPMENT AND FIXTURES TO PREVENT OBSTRUCTIONS.

1.13. TEMPORARY DUST CONTROL

1 13 1 GENERA

1.15.1.	GENERAL
1.13.1.1.	THE CONTAINMENT AND CLEAN-UP OF DUST AND DEBRIS SHALL PERSONS TRAINED AND KNOWLEDGEABLE.
1.13.1.2.	ANY SCAFFOLDS AND/OR PLATFORMS USED TO ACCESS AND/OF COMPLETELY CONTAIN AND CLEAN-UP DUST AND DEBRIS MATERIA ALUMINUM SCAFFOLDING.
1.13.1.3.	ASSUME TOTAL RESPONSIBILITY FOR THE ERECTION, MAINTENANCE, TIGHT ENCLOSURES, BARRIERS AND HEPA-FITTED HAND/POWER TOOLS
1.13.1.4.	PROVIDE ALL NECESSARY LABOUR, MATERIALS, INSURANCE, PERMITS CARRY OUT THE WORK IN ACCORDANCE WITH ALL APPLICABLE REGULA
1.13.1.5.	PROVIDE ALL NECESSARY LABOUR TO SECURE THE REQUIRED UTILIT AND DEBRIS DURING THE WORK.
1.13.1.6.	ALL HEPA FILTER VACUUMS, TOOLS AND NEGATIVE AIR UNITS TO BE U D.O.P. TESTED AT THE BEGINNING OF THE WORK, AND AT THE DISCRE THAT POINT FORWARD.
1.13.2.	CONDITIONS OF WORK
1.13.2.1.	PRESSURE DIFFERENTIAL OF MINIMUM MINUS 0.02 INCHES OF WATER (ALL TIMES BETWEEN THE CONTRACTOR'S NEGATIVE PRESSURE C ADJACENT AREAS.
1.13.2.2.	SOME ELECTRICAL SYSTEMS WILL REMAIN LIVE THROUGHOUT THE V DAMP CLEANED, TAGGED LIVE BY THE ELECTRICAL CONTRACTOR AND I
1.13.2.3.	THE FIRE PROTECTION SYSTEMS SHALL BE PROTECTED AND MAINTA SYSTEMS SHALL BE TAKEN OUT OF SERVICE AT BEGINNING OF SHIF SERVICE AT END OF SHIFT BY THE PROJECT SUPERVISOR AND FIRE AL/ SHALL BE SUPPORTED AND PROTECTED AS REQUIRED DURING THE WC ALL TIMES TO WATCH FOR FIRE OR OTHER DETECTABLE HAZARDS W ALARM SYSTEM ARE TAKEN OUT OF SERVICE. DETECTORS AND UNCOVERED AT THE END OF EACH WORK DAY. PROVIDE PERS PROTECTION SYSTEM EACH DAY. DO NOT LEAVE THE SITE UNTIL TO OPERATING NORMALLY.
1.13.3.	GENERAL CONTAINMENT AND CLEAN UP PROCEDURES
1.13.3.1.	CONSTRUCT AIR TIGHT DUST CONTAINMENT BARRIERS AND ISOLATE AREAS OF THE BUILDING DURING DUST PRODUCING ACTIVITIES.
1.13.3.2.	CONCRETE DEBRIS SHALL BE WETTED TO SUPRESS DUST, AND EFI REMOVAL FROM CONTAINMENT AREA.
1.13.3.3.	CONTAINERS SHALL BE COVERED FOR TRANSPORT WHEN FULL.
1.13.3.4.	REMOVE WASTE CONTAINERS ON A REGULAR BASIS. IN THE CASE OF THE SECOND SHIFT WILL BE USED FOR WASTE REMOVAL.
1.13.3.5.	AFTER COMPLETION OF ALL DEMOLITION WORK, SURFACES SHALL BE CLEANED BY SOME EQUIVALENT METHOD TO REMOVE ALL VISIBLE RES
1.13.3.6.	CLEAN-UP SHALL PROCEED IN ACCORDANCE WITH THE SPECIFICATION
1.13.3.7.	WORK AREA TO BE CLEAN OF VISUAL DUST AND DEBRIS.
1.13.4.	EQUIPMENT
1.13.4.1.	A SUFFICIENT SUPPLY OF SCAFFOLDS, LADDERS, LIFTS AND HAND CUTTERS, BRUSHES, UTILITY KNIVES, WIRE SAWS, ETC.) SHALL BE PRO
1.13.4.2.	SPRAYERS WITH PUMPS CAPABLE OF PROVIDING NO MORE THAN 500 AT THE NOZZLE TIP AT A FLOW RATE OF 2 GALLONS PER MINUTE FOR ACCEPTABLE.
1.13.4.3.	RUBBER DUSTPANS AND RUBBER SQUEEGEES SHALL BE PROVIDED FO
1.13.4.4.	BRUSHES UTILIZED FOR REMOVING LOOSE ASBESTOS CONTAINING M FIBER BRISTLES, NOT METAL.
1.13.4.5.	A SUFFICIENT SUPPLY OF HEPA FILTERED VACUUM SYSTEMS SHALL BE
1.13.4.6.	ALL TOOLS CONTAMINATED WITH ASBESTOS MUST REMAIN WITHIN THE THEY ARE COMPLETELY DECONTAMINATED.
1.13.4.7.	HAND TOOLS EQUIPPED WITH HEPA FILTERED LOCAL EXHAUST VENTIL DUST-PRODUCING ACTIVITIES.
1.13.5.	DEFINITIONS
1.13.5.1.	HEPA FILTER - A HIGH EFFICIENCY PARTICULATE AIR FILTER CAPABL MICRON IN DIAMETER WITH 99.97% EFFICIENCY.
1.14. IDEN	TIFICATION OF EQUIPMENT
1.14.1.	IDENTIFY ALL PANELS, SWITCHES, FANS, PUMPS, MOTOR STARTERS AND MECHANICAL EQUIPMENT AS TO SERVICE, BY A ENGRAVED PLASTIC LAM/ AFFIXED BY ADHESIVE AND SCREWS TO EACH UNIT. NOTE THAT BOTH UP SHALL BE TAGGED.
1.15. OPEI	RATING INSTRUCTIONS AND RECORD DRAWINGS
1.15.1.	FOR EACH ITEM OF SPECIAL APPARATUS, OPERATING AND MAINTENANCE PROVIDED IN 3 COPIES FOR OWNER'S USE. THESE SHALL INCLUDE:
1.15.1.1.	GENERAL ARRANGEMENT SHOP DRAWINGS.
1 15 1 2	COMPLETE EXPLANATION OF OPERATING PRINCIPLES AND SEQUENCE

- 1.15.1.3. COMPLETE PART LISTS WITH NUMBERS.
- 1.15.1.4. RECOMMENDED MAINTENANCE PRACTICES AND PRECAUTIONS.
- 1.15.1.5. COMPLETE WIRING AND CONNECTION DIAGRAMS.
- 1.15.2. OBTAIN TWO SETS OF ELECTRICAL DRAWING WHITE PRINTS FROM THE CONTRACTOR AND KEEP A RECORD IN RED PENCIL OF ANY DEVIATION FROM THE DRAWN LOCATION OF PIPES, DUCTS, ETC. ONE SET SHALL BE TURNED OVER TO THE OWNER WITH THE OPERATING INSTRUCTIONS AND THE OTHER SET SHALL BE HANDED TO THE ENGINEER. ALL BURIED PIPING SHALL BE ADEQUATELY DIMENSIONED FOR FUTURE LOCATION AND DEPTH SHALL BE SHOWN AT MAIN REFERENCE POINTS.

2. GENERAL REQUIREMENTS FOR ELECTRICAL SYSTEMS

2.0.1. TRACING EXISTING ELECTRICAL CIRCUITS

BE COMPLETED BY COMPETENT

R SUPPORT WORKERS AND TO ALS WILL BE CONSTRUCTED. NO

SIGNS AND INTEGRITY OF ALL AIR S RELATED TO THE WORK. AND EQUIPMENT NECESSARY TO ATIONS.

ITIES FOR THE CONTROL OF DUST ISED ON THE PROJECT ARE TO BE

ETION OF THE CONSULTANT FROM

COLUMN SHALL BE MAINTAINED AT ONTAINMENT WORK AREAS AND

WORK. THESE SYSTEMS SHALL BE PROTECTED DURING THE WORK.

AINED DURING THE WORK. THESE FT EACH DAY AND RESTORED TO ARM SURVEILLANCE. ALL SYSTEMS ORK. KEEP PERSONNEL ON SITE AT VHENEVER PORTIONS OF THE FIRE D SPRINKLER HEADS SHALL BE ONNEL TO RESTORE THE FIRE HE SYSTEMS ARE SHOWN TO BE

E THE WORK AREA FROM OTHER

FECTIVELY CONTAINED PRIOR TO

TWO SHIFTS, THE LAST HOUR OF WET BRUSHED AND SPONGED OR SIDUES.

TOOLS (E.G., SCRAPERS, WIRE VIDED AS NEEDED. POUNDS PER SQUARE INCH (PSI) R SPRAYING AMENDED WATER ARE

OR CLEANUP. MATERIAL SHALL HAVE NYLON OR

AVAILABLE DURING CLEANUP. WORK AREA UNTIL SUCH TIME AS

LATION SHALL BE UTILIZED DURING

BLE OF REMOVING PARTICLES >0.3

OTHER ELECTRICAL / ACOID NAMEPLATE, FIRMLY JNIT AND ITS REMOTE STARTER

INSTRUCTIONS SHALL BE

2.0.1.1. TRACE ALL CIRCUITS IN THE AREA OF WORK LISTED AS EXISTING, AND VERIFY EXISTING CONDITIONS PRIOR TO ANY MODIFICATIONS AS INDICATED. WHERE DRAWINGS INDICATE "CONNECT TO EXISTING CIRCUIT". USE A SPARE BREAKER, WHERE 2.0.1.2. AVAILABLE. OTHERWISE, VERIFY EXISTING LOAD WITH A METER AND ADVISE THE CONSULTANT IF THE

ADDITIONAL LOAD WILL CAUSE A CIRCUIT TO TRIP 2.0.1.3. WHERE PROVIDED PANELBOARD SCHEDULES INDICATE "EXISTING CIRCUIT" OR SIMILAR, PROVIDE THE CORRECT DESCRIPTION FOR THE CIRCUIT. EXISTING CIRCUIT WILL NOT BE ACCEPTABLE IN THE FINAL PANELBOARD SCHEDULES SUBMITTED AS PART OF CLOSEOUT SUBMITTALS.

2.0.2. EXISTING CABLING IN RETURN AIR PLENUMS

2.0.2.1. IN CEILINGS BEING USED AS A RETURN AIR-PLENUM, CONTRACTOR TO REVIEW EXISTING LOW-VOLTAGE CABLING UNCOVERED AS PART OF THE WORK. 2.0.2.2. IMMEDIATELY NOTIFY THE CONSULTANT IF ANY CABLES IDENTIFIED ARE NOT PLENUM RATED (I.E. CMP, OR FT-6 RATED)

2.1. THERMOGRAPHIC INVESTIGATION

CHECK AND INSPECT EXISTING DISTRIBUTION EQUIPMENT TO BE RE-USED (I.E., PANELS, PANEL BREAKERS DISCONNECT SWITCHES, ETC.) FOR ANY EVIDENCE OF ABNORMAL OVERHEATING CONDITIONS, REPORT TO CONSULTANT AND RECTIFY ANY ISSUES ENCOUNTERED. PERFORM THERMOGRAPHIC SCAN UNDER ACTUAL TENANT LOAD IN OPERATIONS AND SUBMIT SCAN RESULTS INDICATING PROBLEMS HAVE BEEN CORRECTED TO PROPERTY MANAGEMENT FOR REVIEW AND INCLUDE SAME IN MAINTENANCE MANUALS.

2.2. COMMON WORK RESULTS FOR ELECTRICAL

2.2.1. REFERENCES

- 2.2.1.1. CANADIAN STANDARDS ASSOCIATION (CSA)
- 2.2.1.1.1. CSA-C22.1-24, CANADIAN ELECTRICAL CODE, PART 1 (26TH EDITION), SAFETY STANDARD FOR ELECTRICAL INSTALLATIONS.
- 2.2.1.1.2. ONTARIO ELECTRICAL SAFETY CODE, 29TH EDITION / 2024 (OESC). 2.2.1.1.3. CSA C22.2.
- CAN/CSA-C22.3 NO. 1-06, OVERHEAD SYSTEMS. 2.2.1.1.4.
- 2.2.1.1.5. CAN3-C235-83(R2006), PREFERRED VOLTAGE LEVELS FOR AC SYSTEMS, 0 TO 50 000 \ 2.2.1.1.6. DO UNDERGROUND SYSTEMS IN ACCORDANCE WITH CSA C22.3 NO.7-06, UNDERGROUND SYSTEMS, EXCEPT WHERE SPECIFIED OTHERWISE.

2.3. SELECTIVE DEMOLITION FOR ELECTRICAL

REMOVE ALL ELECTRICAL EQUIPMENT AND DEVICES ON REDUNDANT STRUCTURES. MAKE SAFE ALL 2.3.1.

- CIRCUITS. 2.3.2. MAINTAIN CONTINUITY OF REMAINING DEVICES AND CIRCUITS.
- TO MAKE SAFE: WITHDRAW REDUNDANT WIRING AND REMOVE UNWANTED CONDUIT/WIRING AND 2.3.3.
- ACCESSORIES. POSITION BREAKERS TO OFF POSITION AND UPDATE PANEL SCHEDULES.
- MAKE SAFE ANY REDUNDANT DEVICES AS SHOWN ON OTHER DRAWINGS 2.3.4. 2.3.5. WHEN RELOCATING OR REMOVING EQUIPMENT. SHOULD ANY CIRCUITS BE ABANDONED. THE CONDUCTORS TO THESE CIRCUITS MUST BE REMOVED BACK TO SOURCE OR PROPERLY TERMINATED.
- 2.3.6. LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES
- 2.3.6.1. CONDUCTORS: MINIMUM #12 AWG SOLID, AND STRANDED FOR #8 AWG AND LARGER. COPPER CONDUCTORS SIZED AS INDICATED WITH RW90, 600 V INSULATION OF CHEMICALLY CROSS-LINKED THERMOSETTING CSA C22.2 NO. 38-M1986.
- 2.3.6.2. AC90 (COMMONLY REFERRED TO AS BX) CABLE MAXIMUM WIRE SIZE TO BE #12 AWG UNLESS OTHERWISE NOTED. AC90 TO BE USED ONLY AS DROP TO LIGHTING FIXTURES AND AS DROP TO WIRING DEVICES IN PARTITIONS FROM CEILING JUNCTION BOX/CONDUIT COMBINATION. MAXIMUM RUN OF AC90 TO BE 3 M (10 FOOT) WHERE EXPOSED IN LAY-IN SUSPENDED CEILING SPACE ONLY. DO NOT INSTALL EXPOSED AC90. DO NOT DAISY CHAIN (LEAP FROG) AC90 BETWEEN LUMINAIRES. 2.3.6.3. ALL CONDUCTORS USED OUTDOOR OR IN WET LOCATIONS: RWU90 COPPER.

2.3.7. WIRE AND BOX CONNECTORS:

- 2.3.7.1. WIRE CONNECTORS: PVC INSULATION, STEEL SHALL BE SPRING PRESSURE TYPE, CURRENT CARRYING PARTS COPPER OR COPPER ALLOY SIZED TO SUIT COPPER CONDUCTORS AS INDICATED TO CSA C22.2 NO.64-1980
- 2.3.7.2. SPLICING CONNECTORS: FIXTURE TYPE CURRENT CARRYING PARTS COPPER OR COPPER ALLOY SIZED TO FIT COPPER CONDUCTORS #12 AWG WITH INSULATING MATERIALS OF THERMOPLASTIC MATERIAL TO CSA C22.2 NO.75M-83.
- 2.3.7.3. CLAMPS TO CONNECTORS: TO CSA C22.2 NO.18-M1987 FOR FLEXIBLE CIRCUIT. 2.3.7.4. LUGS, TERMINALS, OR SCREWS USED FOR TERMINATION OF WIRING TO BE SUITABLE FOR COPPER CONDUCTORS. ALL LUGS SHALL BE CRIMPED.

2.4. PANELBOARDS

- 2.4.0.1. MAINS, NUMBER OF CIRCUITS, AND NUMBER AND SIZE OF BRANCH CIRCUIT BREAKERS AS INDICATED. 2.4.0.2. MAINS: SUITABLE FOR BOLT-ON BREAKERS UNLESS NOTED OTHERWISE.
- 2.4.0.3. PROVIDE AN ADDITIONAL 20% OF SPACE WITHIN EACH PANELBOARD IN ADDITION TO WHAT IS SHOWN ON THE DRAWINGS WHEN A SEPARATE PANEL SCHEDULE IS NOT PROVIDED FOR A SPECIFIC PANELBOARD. 2.4.0.4. PANELBOARDS TO HAVE THE FOLLOWING MINIMUM RATINGS FOR INTERRUPTING CAPACITY OR AS INDICATED ON THE DRAWINGS OR PANEL SCHEDULES:
 - 1) 120/208V PANELBOARDS 10KA. 2) 347/600V PANELBOARDS - 22KA
- 2.4.0.5. PANELBOARDS TO BE COPPER BUS UNLESS IDENTIFIED OTHERWISE.
- 2.4.0.6. TRIM WITH CONCEALED FRONT BOLTS AND HINGES. TRIM AND DOOR FINISH: BAKED GREY ENAMEL. 2.4.0.7. ENCLOSURE TO BE CSA TYPE 2 SPRINKLER PROOF UNLESS NOTED OTHERWISE.

2.5. TRANSFORMERS

- 2.5.0.1. USE TRANSFORMERS OF ONE MANUFACTURER THROUGHOUT PROJECT. 2.5.0.2. TYPE: ANN. ALL TRANSFORMERS TO BE DELTA-WYE CONFIGURATION UNLESS OTHERWISE NOTED ONE THE DRAWINGS. SCOTT T CONSTRUCTED TRANSFORMERS WILL NOT BE ACCEPTED. 2.5.0.3. 3 PHASE, KVA AND VOLTAGES AS INDICATED ON THE PLANS, 60 HZ.
- 2.5.0.4. PROVIDE VOLTAGE TAPS OF 2 ± 2.5% FCAN (FULL CAPACITY ABOVE NORMAL) & FCBN (FULL CAPACITY BELOW NORMAL).
- 2.5.0.5. INSULATION: CLASS 220 DEG. C. (FORMER DESIGNATION: CLASS H), 150 DEG. C. OR LESS TEMPERATURE RISE. 2.5.0.6. ALL WINDINGS ARE TO BE COPPER UNLESS STATED OTHERWISE ON THE CONTRACT DOCUMENTS.
- BASIC IMPULSE LEVEL (BIL): STANDARD. 2.5.0.7. AVERAGE SOUND LEVEL TO COMPLY WITH THE LATEST EDITION OF CSA C9 FOR THE APPROPRIATE
- VOLTAGE CLASS. 2.5.0.8. IMPEDANCE AT 60 HZ: 3.0% TO 5.0% (UP TO 75 KVA), 4.0% TO 6.0% (112.5 KVA AND ABOVE).
- 2.5.0.9. PROVIDE MINIMUM K-4, K-RATED TRANSFORMERS UNLESS OTHERWISE INDICATED ON THE DRAWINGS. 2.5.0.10. ENCLOSURE: TYPE 2 SPRINKLER PROOF UNLESS NOTED OTHERWISE ON THE DRAWINGS, REMOVABLE METAL FRONT PANEL
- 2.5.0.11. MOUNTING: FLOOR OR WALL AS INDICATED.
- 2.5.0.12. TRANSFORMER TO MEET ENERGY EFFICIENCY REQUIREMENTS OF U.S. DOE AND CSA C802.2, WHICHEVER IS MORE STRINGENT, AT 35% OF RATED LOAD UNLESS SHOWN OTHERWISE ON DRAWINGS. 2.5.0.13. GROUNDING TERMINAL: INSIDE ENCLOSURE.

2.6. VOLTAGE DROP:

2.6.1. FEEDER CONDUCTORS: MAXIMUM VOLTAGE DROP OF 2%.

2.6.2. BRANCH CIRCUIT CONDUCTORS: MAXIMUM VOLTAGE DROP OF 3%.

- 2.7. CONDUIT FOR ELECTRICAL SYSTEMS
- 2.7.1. RIGID METAL CONDUIT: TO CSA C22.2 NO. 45-M1981.
- 2.7.2. ELECTRICAL METALLIC TUBING (EMT): WITH COUPLINGS TO CSA C22.2 NO. 83-M1985. 2.7.3. RIGID PVC CONDUIT: TO CSA C22.2 NO. 136-1966.

2.8. CONDUIT FASTENINGS:

- 2.8.1. ONE HOLE STEEL STRAP TO SECURE SURFACE CONDUITS 50 MM (2 INCH) AND SMALLER. USE TWO HOLE STEEL STRAPS FOR CONDUITS LARGER THAN 50 MM (2 INCH). BEAM CLAMPS TO SECURE CONDUITS TO EXPOSED STEEL WORK. 2.8.2.
- 2.8.3. CHANNEL TYPE SUPPORTS FOR TWO OR MORE CONDUITS AT 1.5 M (5 FOOT) ON CENTRE.
- 2.9. CONDUIT FITTINGS:
- 2.9.1. FITTINGS FOR RACEWAYS TO CSA C22.2 NO.18-M1987. FITTINGS MANUFACTURED FOR USE WITH CONDUIT SPECIFIED. FACTORY "ELLS" WHERE 90% BENDS ARE REQUIRED FOR 50 MM (2 INCH) AND LARGER

CONDUITS 2.9.2. CAST FITTINGS ARE NOT PERMITTED TO BE USED.

2.10. BRANCH CIRCUITS, CONTROL WIRING, ETC.

- 2.10.1. CONCEAL CONDUIT WORK IN FINISHED AREAS UNLESS OTHERWISE NOTED. 2.10.2. RUN CONDUIT EXPOSED IN UNFINISHED AREAS SUCH AS SERVICE ROOMS, ROOMS WITH NO SUSPENDED
- CEILINGS, SERVICE TUNNELS, AND PENTHOUSES. INSTALL PARALLEL TO BUILDING LINES. 2.10.3. USE ELECTRICAL METALLIC TUBING (EMT) FOR BRANCH CIRCUITS UNLESS NOTED OTHERWISE
- 2.10.4. USE PVC CONDUIT FOR UNDERGROUND INSTALLATION UNLESS NOTED OTHERWISE. 2.10.5. USE LIQUID TIGHT FLEXIBLE CONDUIT FOR FINAL CONNECTION TO MOTORS.
- 2.10.6. USE FLEXIBLE METAL CONDUIT FOR CONNECTION TO RECESSED INCANDESCENT FIXTURES WITHOUT A PRE-WIRED OUTLET BOX, CONNECTION TO SURFACE FIXTURES, WORK IN MOVABLE METAL PARTITIONS, OR
- 2.10.7. FLEXIBLE METAL CONDUIT FOR FIXTURES IN FINISHED AREAS ONLY WHERE CHAIN HANGING IS SPECIFIED. TIE WRAP THE FLEXIBLE CONDUIT TO THE CHAIN.
- 2.10.8. INSTALL CONDUIT AND SLEEVES PRIOR TO POURING OF CONCRETE. SLEEVES THROUGH CONCRETE:
- SCHEDULE 40 STEEL PIPE SIZED FOR FREE PASSAGE OF CONDUIT, AND PROTRUDING 50.8 MM (2 INCH). 2.10.9. IF PLASTIC SLEEVES ARE USED IN FIRE RATED WALLS OR FLOORS, REMOVE BEFORE CONDUIT
- INSTALLATION. 2.10.10. INSTALL CABLES, CONDUITS AND FITTINGS TO BE EMBEDDED OR PLASTERED OVER, NEATLY AND CLOSE TO BUILDING STRUCTURE SO FURRING CAN BE KEPT TO MINIMUM.

2.11. BOXES FOR ELECTRICAL SYSTEMS

- 2.11.1. JUNCTION AND PULL BOXES:
- 2.11.1.1. JUNCTION AND PULL BOXES: TO CSA C22.2 NO. 40-M1988 WELDED STEEL CONSTRUCTION, WITH SCREW-ON FLAT COVERS FOR SURFACE MOUNTING.
- NOT TO EXCEED 30 M (100 FOOT) OF CONDUIT RUN BETWEEN PULL BOXES.

2.11.1.3. OUTLET BOXES, CONDUIT BOXES TO CSA C22.2 NO.18-M1987.

- 2.11.2. SHEET STEEL OUTLET BOXES:
- 2.11.2.1. HOT DIPPED GALVANIZED STEEL SINGLE AND MULTI-GANG FLUSH DEVICE BOXES FOR FLUSH INSTALLATION, MINIMUM SIZE 75 MM X 50 MM X 32 MM (3 INCH X 2 INCH X 1-1/4 INCH). 100 MM (4 INCH) SQUARE OUTLET BOXES WHEN MORE THAN ONE CONDUIT ENTERS ONE SIDE WITH EXTENSION.
- 2.11.2.2. HOT DIPPED GALVANIZED STEEL UTILITY BOXES FOR OUTLETS CONNECTED TO SURFACE-MOUNTED EMT CONDUIT, MINIMUM SIZE 100 MM X 50 MM X 50 MM (4 INCH X 2 INCH X 2 INCH).
- 2.11.3. CAST BOXES FOR SURFACE WORK IN FINISHED AREAS.

2.12. GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

2.12.0.3. PROVIDE A GROUND WIRE IN EVERY CONDUIT

2.13. HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

2.13.1. SUPPORT CHANNELS:

HANGERS

OTHERWISE.

2.16. VIBRATION CONTROLS FOR ELECTRICAL SYSTEMS

2.17. IDENTIFICATION FOR ELECTRICAL SYSTEMS

2.15. FLOOR SUPPORTS:

2.17.1. NAMEPLATES

INSTALLED.

2.17.2. WIRING IDENTIFICATION

WIRING

2.17.2.3. COLOUR CODING: TO CSA-C22.1.

2.17.3. IDENTIFICATION OF EQUIPMENT

2.17.2.4. CONDUITS TO BE LABELLED BOTH ENDS.

2.17.4.1. 347/600 VOLT: TO MATCH EXISTING (BLUE)

2.17.4.2. 120/208 VOLT: TO MATCH EXISTING (BLACK) 2.17.4.3. EMERGENCY: TO MATCH EXISTING (YELLOW)

2.17.4.4. UPS POWER: TO MATCH EXISTING (ORANGE)

2.14. SUPPORTS

- 2.11.3.1. SIZE BOXES IN ACCORDANCE WITH CSA C22.1, SECTION 12-3042. 100 MM (4 INCH) SQUARE OR LARGER OUTLET BOXES AS REQUIRED FOR SPECIAL DEVICES.
- 2.11.3.2. GANG BOXES WHERE WIRING DEVICES ARE GROUPED.
- 2.11.3.3. BLANK COVER PLATES FOR BOXES WITHOUT WIRING DEVICES. 2.11.3.4. COMBINATION BOXES WITH BARRIERS WHERE OUTLETS FOR MORE THAN ONE SYSTEM ARE GROUPED.
- 2.11.4. LOCATION OF OUTLETS
- 2.11.4.1. DO NOT INSTALL OUTLETS BACK-TO-BACK IN WALL; ALLOW MINIMUM 150 MM (6 INCH) HORIZONTAL CLEARANCE BETWEEN BOXES.

ON DRAWINGS OR CALLED FOR IN THIS SPECIFICATION

CURRENT WILL FLOW IN ANY GROUNDING CONDUCTOR.

2.14.5. SUPPORT ALL LUMINAIRES INDEPENDENTLY OF THE CEILING STRUCTURE.

PAD TYPE ISOLATORS AND LOOP FLEXIBLE CONDUITS).

AND LEGIBLE AFTER EQUIPMENT IS INSTALLED.

HEALTH AND SAFETY, AND THE CONSULTANT.

2.17.2.2. MAINTAIN PHASE SEQUENCE AND COLOUR CODING THROUGHOUT.

INCH) HIGH WHITE BLOCK LETTERS, SECURELY FASTENED WITH RIVETS.

2.11.1.2. COVERS WITH 25.4 MM (1 INCH) MINIMUM EXTENSION ALL AROUND, FOR FLUSH MOUNTED PULL AND JUNCTION BOXES. ONLY MAIN JUNCTION AND PULL BOXES ARE INDICATED. PROVIDE ALL BOXES SO AS

2.11.4.2. CHANGE LOCATION OF OUTLETS AT NO EXTRA COST OR CREDIT, PROVIDING DISTANCE DOES NOT EXCEED 3000 MM (118 INCH), AND INFORMATION IS GIVEN BEFORE INSTALLATION.

2.12.0.1. PROVIDE ALL EQUIPMENT GROUNDING AS REQUIRED, REGARDLESS OF WHETHER IT HAS BEEN SHOWN 2.12.0.2. ARRANGE GROUNDS SO THAT UNDER NORMAL OPERATING CONDITIONS, NO INJURIOUS AMOUNT OF

2.13.1.1. SUPPORT CHANNELS: LENGTH AS INDICATED, U-SHAPE, SIZE 44 MM X 44 MM X 3 MM (1-3/4 INCH X 1-1/3 INCH X 1/8 INCH) THICK, SURFACE MOUNTED OR SUSPENDED AS REQUIRED

2.13.1.2. ALL SUPPORTING DEVICES, STRUT CHANNEL, THREADED ROD, ANCHORS, ETC. OF THE "HOT DIPPED" GALVANIZED TYPE. ELECTROGALVANIZED COMPONENTS WILL NOT BE ACCEPTED.

2.14.1. ALL CONDUITS, PANELS, ETC. TO BE SECURELY AND ADEQUATELY SUPPORTED. 2.14.2. WHERE MORE THAN THREE CONDUITS RUN TOGETHER, CONDUIT RACKS TO BE USED. 2.14.3. SINGLE RUNS OF CONDUIT TO BE SUPPORTED BY GALVANIZED CONDUIT STRAPS OR RING BOLT TYPE 2.14.4. TIE WIRE OR PERFORATED METAL STRAP HANGERS WILL NOT BE ACCEPTED.

2.15.1. PROVIDE A 100 MM (4 INCH) HIGH CONCRETE HOUSEKEEPING PAD FOR FLOOR MOUNTED ELECTRICAL DISTRIBUTION FOURPMENT SUCH AS TRANSFORMERS, SWITCHBOARDS, DISTRIBUTION PANEL BOARDS ENGINE GENERATORS, UNINTERRUPTIBLE POWER SUPPLIES AND BATTERIES, AND TRANSFER SWITCHES. 2.15.2. EXTEND PAD A MINIMUM OF 100 MM (4 INCH) BEYOND FOOTPRINT OF EQUIPMENT, UNLESS NOTED

2.16.1. ENSURE THAT ALL ELECTRICAL EQUIPMENT OPERATES WITHOUT OBJECTIONABLE NOISE OR VIBRATION. PROVIDE ISOLATION DEVICES TO PREVENT NOISE AND VIBRATION TRANSMISSION (I.E., SPRING TYPE AND 2.16.2. PROVIDE FLEXIBLE CONDUITS FOR FINAL CONNECTIONS OF CONDUITS TO ANY VIBRATING EQUIPMENT.

2.17.1.1. ENSURE MANUFACTURER'S NAMEPLATES, CSA LABELS AND IDENTIFICATION NAMEPLATES ARE VISIBLE 2.17.1.2. MANUFACTURERS' NAMEPLATES AND CSA LABELS ARE TO BE VISIBLE AND LEGIBLE AFTER EQUIPMENT IS 2.17.1.3. PROVIDE WARNING SIGNS, AS SPECIFIED, OR TO MEET REQUIREMENTS OF INSPECTION DEPARTMENT,

2.17.2.1. IDENTIFY WIRING WITH PERMANENT INDELIBLE IDENTIFYING MARKINGS, EITHER NUMBERED OR COLOURED PLASTIC TAPES, ON BOTH ENDS OF PHASE CONDUCTORS OF FEEDERS AND BRANCH CIRCUIT

2.17.3.1. IDENTIFY ALL ELECTRICAL EQUIPMENT WITH ENGRAVED PHENOLIC NAMEPLATES, ENGRAVED 10 MM (3/8 2.17.3.2. IDENTIFY ALL ELECTRICAL SPLITTERS, JUNCTION BOXES, CONDUITS CROSSING WALLS AND PULL BOXES OF DIFFERENT SYSTEMS WITH A DIFFERENT COLOUR CONSISTENT THROUGHOUT THE PROJECT. 2.17.4. WHERE AN IDENTIFICATION SYSTEM DOES NOT EXIST, COLOURS AS FOLLOWS:

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INFRASTRUCTURE ONTARIO (IO)

SPFCIFICATIONS 1 OF 2

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- 2.17.4.5.COMMUNICATIONS: GREEN2.17.4.6.FIRE ALARM: RED
- 2.17.5. LABEL ALL RECEPTACLES AND DEVICES INDICATING PANEL AND CIRCUIT NUMBERS. USE ELECTRONIC LABELLER WITH ADHESIVE LABEL. INSTALL LABEL ON THE FACEPLATE OF THE DEVICE.
- 2.17.6. ENSURE THAT ALL PANEL DIRECTORIES ARE TYPEWRITTEN AND INDICATE THE LATEST RENOVATIONS. DO NOT PROVIDE THE WORDS 'EXISTING' FOR ANY CIRCUITS REMAINING AS IS. ALL CIRCUITS SHALL BE IDENTIFIED IN PANELS USED BY THIS TENANT. SHOULD AN EXISTING PANEL NOT BE LABELED, THE CONTRACTOR SHALL PROVIDE SUCH, INDICATING THE PANEL NAME, VOLTAGE, PHASE, CURRENT RATING AND 'FED FROM' INFORMATION.

2.18. OVERCURRENT PROTECTIVE DEVICE COORDINATION

- 2.18.1. ENSURE CIRCUIT PROTECTIVE DEVICES SUCH AS OVERCURRENT TRIPS, RELAYS AND FUSES ARE
- INSTALLED TO REQUIRED VALUES AND SETTINGS. 2.18.2. OVERCURRENT PROTECTIVE DEVICES SHALL HAVE A MINIMUM SHORT-CIRCUIT WITHSTAND RATING OF 10kAIC.

2.19. COVER PLATES

- 2.19.1. COVER PLATES FOR WIRING DEVICES TO SUIT THE WIRING DEVICE.
- 2.19.2. COVER PLATES FROM ONE MANUFACTURER THROUGHOUT PROJECT.2.19.3. SHEET STEEL UTILITY BOX COVER FOR WIRING DEVICES INSTALLED IN SURFACE MOUNTED UTILITY BOXES
- IN SERVICE AREAS. 2.19.4. NON-METALLIC WHITE COVER PLATES FOR ALL FLUSH MOUNT BOXES IN FINISHED OFFICE AREAS,
- STAINLESS STEEL COVER PLATES IN ALL SERVICE AREAS, UNLESS NOTED OTHERWISE.
- 2.19.5. NON-METALLIC WHITE COVER PLATES FOR ALL SURFACE MOUNT CAST BOXES IN FINISHED OFFICE AREAS, STAINLESS STEEL COVER PLATES IN ALL SERVICE AREAS, UNLESS NOTED OTHERWISE.
- 2.19.6. WHERE EXPOSED TO THE WEATHER, COVER PLATES SHALL BE WEATHERPROOF WITH GASKETS AND SUITABLE FOR WHILE-IN-USE APPLICATIONS.

2.20. LUMINARIES

- 2.20.1. LUMINAIRE CLEANING
- 2.20.1.1. CLEAN EXISTING LUMINAIRES TO BE RE-USED AND EXISTING LUMINAIRES TO REMAIN.
- 2.20.2. LUMINAIRE RELAMPING
- 2.20.2.1. PROVIDE NEW LAMPS FOR EXISTING LUMINAIRES. DISPOSE OF EXISTING LAMPS IN ACCORDANCE WITH RECYCLING COUNCIL OF ONTARIO'S "TAKE BACK THE LIGHT" PROGRAM.
- 2.20.3. LUMINAIRE REPLACEMENT

2.20.3.1. PROVIDE NEW FIXTURE CHAIN HANGERS TO INDEPENDENTLY SUPPORT NEW LUMINAIRES FROM THE BUILDING STRUCTURE, SUPPORTED AT OPPOSITE ENDS.

- 3. COMMISSIONING OF ELECTRICAL SYSTEMS
- 3.1. STARTUP

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- 3.1.1. STARTUP EQUIPMENT TO NETA ATS STANDARDS.
- 3.1.1.1. CONDUCT FOLLOWING TESTS:3.1.1.2. INSULATION RESISTANCE TESTING:
- 3.1.1.2.1. MEGGER CIRCUITS, FEEDERS AND EQUIPMENT UP TO 350 V WITH A 500 V INSTRUMENT.
- 3.1.1.2.2. MEGGER 350-600 V CIRCUITS, FEEDERS AND EQUIPMENT WITH A 1000 V INSTRUMENT.3.1.1.2.3. CHECK RESISTANCE TO GROUND BEFORE ENERGIZING.
- 3.2. LOAD BALANCING:
- 3.2.1. MEASURE PHASE CURRENT TO PANELBOARDS WITH NORMAL LOADS (LIGHTING) OPERATING AT TIME OF ACCEPTANCE; ADJUST BRANCH CIRCUIT CONNECTIONS AS REQUIRED TO OBTAIN BEST BALANCE OF CURRENT BETWEEN PHASES AND RECORD CHANGES. BALANCE THE LOADING ON FEEDERS SO THAT UNBALANCED LOAD IS LESS THAN 10 PER CENT.
- 3.2.2. MEASURE PHASE VOLTAGES AT LOADS AND ADJUST TRANSFORMER TAPS TO WITHIN 2% OF RATED VOLTAGE OF EQUIPMENT.
- 3.2.3. PROVIDE UPON COMPLETION OF WORK, LOAD BALANCE REPORT: PHASE AND NEUTRAL CURRENTS ON PANELBOARDS, DRY-TYPE TRANSFORMERS AND MOTOR CONTROL CENTRES, OPERATING UNDER NORMAL LOAD, AS WELL AS HOUR AND DATE ON WHICH EACH LOAD WAS MEASURED, AND VOLTAGE AT TIME OF TEST.



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Project ELECTRICAL UPGRADES		
Location 465 DAVIS DR. SUITE 301, NEWMARKET, ON L3Y 7T9 ^{IO Project No} 240256 — Building No B25590		
Client		
INFRASTRUCTURE ONTARIO (IO)		
Drawing Title SPECIFICATIONS 2 OF 2		
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N.T.S.	20241122	
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YG		

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GENERAL NOTES

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ELECTRICAL	UPGRADES

465 DAVIS DR. SUITE 301, NEWMARKET, ON L3Y 7T9 ^{10 Project No} Site No 240256 — Build Building No B25590

INFRASTRUCTURE ONTARIO (IO)

POWER AND COMMS LAYOUT: DEMOLITION PLAN

Scale 1 : 50		Project Start Date 20241122
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YG		
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GENERAL NOTES

- CONSTRUCTION DETAILS, COLORS AND FINISHES.
- GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION BETWEEN ALL SUB-CONTRACTORS.
- ELECTRICAL METALLIC TUBING (EMT) CONDUIT WITH MINIMUM SIZE OF 21mmØ (3/4") SHALL BE USED UNLESS OTHERWISE NOTED. USE GALVANIZED RIGID STEEL CONDUIT IS SUBJECT TO MECHANICAL INJURY. FLEX METAL CONDUIT (BX) CABLE IS ONLY ACCEPTABLE FOR FINAL CONNECTIONS TO LIGHTING FIXTURES OR EQUIPMENT WITH A MAXIMUM HORIZONTAL SPAN OF 10 FOOT / 3 METERS.
- ALL ELECTRICAL CONDUCTORS SHALL BE COPPER WITH MINIMUM CONDUCTOR SIZE OF #12AWG UNLESS OTHERWISE NOTED.
- ROUTE ALL CONDUIT SYSTEMS AROUND DUCT WORK, PIPING AND BEAMS AS REQUIRED TO ACCOMMODATE THE LAYOUT SHOWN.
- THE CIRCUITING SHOWN ON PLAN IS DIAGRAMMATIC INTENDED FOR
- PROVIDE LABELS AT ALL OUTLET FACE PLATES AND SYSTEM FURNITURE
- FEEDS INDICATING CIRCUIT NUMBERS OR DATA DROP PORTS. PROVIDE UPDATED PANEL SCHEDULE AND AFFIX TO THE CORRESPONDING
- VERIFY EXACT POWER CONNECTION AND RECEPTACLE TYPES FOR SPECIAL EQUIPMENT WITH MANUFACTURER OR EQUIPMENT MANUALS PRIOR TO INSTALLATION. PROVIDE HARDWIRE CONNECTIONS FOR DISHWASHERS, EXHAUST FAN, BATTERY UNITS, ETC. IN LIEU OR RECEPTACLES OR VICE
- CONTRACTOR TO ENSURE ALL EXISTING ELECTRICAL DEVICES, EQUIPMENT DEEMED NOT WITH SCOPE TO REMAIN OPERATIONAL AND PROTECTED FROM DAMAGE DURING CONSTRUCTION.

VERSA, AS REQUIRED.

- EXISTING RECEPTACLES NOTED AS EXISTING SHALL REMAIN ENERGIZED AT CONSTRUCTION COMPLETION. INCLUDE ALL COST TO RECONNECT AS REQUIRED AND IDENTIFY ON ASOBUILT DRAWING.
- 12. ELECTRICAL CONTRACTOR TO PROVIDE TEMPORARY POWER AS REQUIRED TO ACCOMMODATE CONSTRUCTION.
- ACCEPTABLE. PROVIDED ALL WIRES ARE IN GOOD CONDITION, AND IN CONFORMITY WITH CODE REQUIREMENTS AND DESIGN SPECIFICATIONS.
- EQUIPMENT WIRING. LOW VOLTAGE CONTROLS FOR MECHANICAL EQUIPMENT SHALL BE COMPLETED BY MECHANICAL CONTROLS CONTRACTOR.
- 15. CONFIRM ELECTRICAL REQUIREMENTS AND EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION OF ELECTRICAL SERVICES.
- AND PENETRATIONS IN FIRE RATED SEPARATIONS TO COMPLY WITH CURRENT LOCAL APPLICABLE CODES.
- RACEWAYS.
- 18. "(#) D" BY DATA OUTLETS ARE INDICATIVE OF NUMBER OF DATA DROPS. PROVIDE BACK BOX ROUGH-IN AND A 27mmØ (1") EMPTY CONDUIT UP TO THE PROVIDE PULL STRING IN EACH EMPTY CONDUIT.
- 19. STRUCTURED CABLING SYSTEM SHALL BE SINGLE MANUFACTURER END TO END SOLUTION. COPPER PRODUCTS SHALL BE CAT6 FOR DATA AND VOICE.

PROPOSED NOTES EXISTING 15A GFI ABOVE COUNTER RECEPTACLE AND COVER PLATE TO BE REPLACED WITH NEW. RECONNECT TO THE EXISTING CIRCUIT. EXISTING 15A ABOVE COUNTER RECEPTACLE AND COVER PLATE TO BE REPLACED WITH NEW 20A GFI RECEPTACLE. PROVIDE DEDICATE 20A/1P CIRCUIT FROM THE SOURCE PANEL, REUSE THE EXISTING BRANCH WIRING IF POSSIBLE. EXISTING CONDUIT TO BE ENCLOSED IN THE NEW DRYWALL FUR-OUT. THE ELECTRICAL CONTRACTOR SHALL REVIEW THE SITE CONDITIONS AND COORDINATE WITH DRYWALL CONTRACTOR TO PREVENT ANY SERVICE INTERRUPTION TO THE CABLING WITHIN THIS CONDUIT.

- angle provide a 5-button minute timer switch W/ off override to CONTROL THE NEW EXHAUST FAN EF-1. LABEL THE TIMER SWITCH TO INDICATE THAT IT SERVES THE EXHAUST FAN.
- > PROVIDE A 15A/1P GFCI BREAKER TO PROTECT THE AUTOMATIC FAUCET 'AF' & SOAP DISPENSER 'SD' BRANCH CIRCUIT. INSTALL A 2-GANG BOX WITH HARDWIRING TO THE AUTOMATIC FAUCET AND A 15A DUPLEX RECEPTACLE FOR SOAP DISPENSER PLUG-IN UNDERNEATH THE SINK. FINAL EQUIPMENT
- CONTRACTOR.
- 7> PROVIDE ONE (1) DATA DROP PER SYSTEM FURNITURE WORKSTATION.
- 8> PROVIDE SEPARATE PRICE FOR THE FOLLOWING (TYP.): - NEW ELECTRICAL CONNECTION TO ERV-1. - ALL ELECTRICAL WORK WITHIN THE ALL GENDER W/R.

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH INTERIOR DESIGNER'S DRAWING FOR DIMENSIONS, MOUNTING HEIGHTS,

GENERAL CIRCUIT ARRANGEMENT AND PANEL DESIGNATION ONLY.

ELECTRICAL PANEL TO REFLECT AS-BUILT CONDITIONS.

AND LIGHTING WITHIN BASE BUILDING ROOMS, STAIRWELLS AND AREAS

13. REUSING BRANCH CIRCUITS OBTAINED THROUGH DEMOLITION IS

14. ELECTRICAL CONTRACTOR RESPONSIBLE FOR ALL 120V AND ABOVE

MAKE GOOD AND PROVIDE FIRE-STOPPING ASSEMBLIES TO ALL CORE HOLES

17. ALL WIRING FOR POWER, DATA AND AUDIO/VISUAL SHALL BE IN SEPARATE

ACCESSIBLE CEILING SPACE FOR EACH COMMUNICATION BACK BOX.

REQUIREMENT TO BE COORDINATED ON SITE WITH PLUMBING

(6) EXISTING RECEPTACLES TO BE RE-CIRCUITED AS NOTED.

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Project ELECTRICAL UPGRADES

465 DAVIS DR. SUITE 301, NEWMARKET, ON L3Y 7T9 240256Building No B25590 ____ Client

INFRASTRUCTURE ONTARIO (IO)

Drawing Title POWER AND COMMS LAYOUT: PROPOSED PLAN

Scale 1 : 50	Project Start Date 20241122
Drawn by YG	Substantial Performance Date 20251030
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465 DAVIS DR. SUITE 301, NEWMARKET, ON L3Y 7T9 ^{10 Project No} Site No 240256 — Build Building No B25590

INFRASTRUCTURE ONTARIO (IO)

Drawing Title LIGHTING AND FIRE ALARM LAYOUT: DEMOLITION PLAN

Scale 1 : 50		Project Start Date 20241122
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5/E500 FOR DETAILS. PROVIDE **SEPARATE PRICE** FOR THE FOLLOWING (TYP.): - SUPPLY AND INSTALL OF NEW LED LIGHTING FIXTURES, TYPE 'L1', 'L2', 'D1' - SUPPLY AND INSTALL OF NEW LIGHTING CONTROL DEVICES

GENERAL NOTES

SPECIFIED IN THE LIGHTING CONTROL SCHEDULE. REFER TO THE WIRING DIAGRAM IN DETAIL

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465 DAVIS DR. SUITE 301, NEWMARKET, ON L3Y 7T9 240256Building_No B25590

INFRASTRUCTURE ONTARIO (IO)

Drawing Title LIGHTING AND FIRE ALARM LAYOUT: PROPOSED PLAN

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6 ELECTRICAL PANEL SCHEDULE SCALE N.T.S.

70 2880 2016 2P 39 B 40 ↓ 2016 2880 70 EX. HEAT PUMP WASHROOM EF-1.01 70 200 140 15 41 C 42 3P 2016 2880 70 EX. HEAT PUMP WASHROOM EF-1.01 70 200 140 15 41 C 42 3P 2016 2880 70 EX. HEAT PUMP LOAD PHASE A [KW]: 9.30 CURRENT PHASE A [A]: 77.5 5.5 NOTES: 1. PROVIDE UP LATED PANEL SCHI LOAD PHASE C [KW]: 9.04 CURRENT PHASE C [A]: 75.3 5.5 1. PROVIDE UP LATED PANEL SCHI TOTAL [KW]: 28.95 28.95 5.5 5.5 5.5 5.5 5.5 5.5 5.5	EX. HEAT PUIVIP		10	2000	2016	30	57	A	30	30	2016	2000	10	
WASHROOM EF-1.01 70 200 140 15 41 C 42 3P 2016 2880 70 LOAD PHASE A [KW]: 9.30 URRENT PHASE A [A]: 77.5 NOTES: NOTES: 1. PROVIDE UP DATED PANEL SCHI LOAD PHASE B [KW]: 10.61 URRENT PHASE B [A]: 88.4 1. PROVIDE UP DATED PANEL SCHI LOAD PHASE C [KW]: 9.04 URRENT PHASE C [A]: 75.3 1. PROVIDE UP DATED PANEL SCHI TOTAL [KW]: 28.95 28.95 28.95 1. PROVIDE UP DATED PANEL SCHI			70	2880	2016	2P	39	В	40	↓	2016	2880	70	EX. HEAT PUMP
LOAD PHASE A [KW]:9.30CURRENT PHASE A [A]:77.5NOTES:LOAD PHASE B [KW]:10.61CURRENT PHASE B [A]:88.41. PROVIDE UPDATED PANEL SCHILOAD PHASE C [KW]:9.04CURRENT PHASE C [A]:75.31. PROVIDE UPDATED PANEL SCHITOTAL [KW]:28.9528.951. PROVIDE UPDATED PANEL SCHI1. PROVIDE UPDATED PANEL SCHI	WASHROOM EF-1.01		70	200	140	15	<mark>41</mark>	С	42	3P	2016	2880	70	
LOAD PHASE A [KW]:9.30CURRENT PHASE A [A]:77.5NOTES:LOAD PHASE B [KW]:10.61CURRENT PHASE B [A]:88.41. PROVIDE UPDATED PANEL SCHILOAD PHASE C [KW]:9.04CURRENT PHASE C [A]:75.375.3TOTAL [KW]:28.9528.95CURRENT PHASE C [A]:75.3														
LOAD PHASE B [KW]:10.61CURRENT PHASE B [A]:88.41. PROVIDE UPDATED PANEL SCHILOAD PHASE C [KW]:9.04CURRENT PHASE C [A]:75.3TOTAL [KW]:28.9528.95CURRENT PHASE C [A]:75.3	LOAD PHASE A [KW]:	9.30			CURRENT P	HASE A [4]:	77.5	5			NOTES:		
LOAD PHASE C [KW]: 9.04 CURRENT PHASE C [A]: 75.3 TOTAL [KW]: 28.95 28.95	LOAD PHASE B [KW]:	10.61			CURRENT P	HASE B [A] :	88.4	1			1. PROVIDE		DATED PANEL SCHE
TOTAL [KW]: 28.95	LOAD PHASE C [KW]:	9.04			CURRENT P	HASE C [4]:	75.3	3					
	TOTAL [KW]:	28.95												

			MOUNTING:		SURF	ACE						
DESCRIPTION	D.F	CONN.	DEMAND	BKR	ССТ	θ	ССТ	BKR	DEMAND	CONN.	D.F	DESCRIPTION
	[%]	LOAD [W]	LOAD [W]	SIZE [A]				SIZE [A]	LOAD [W]	LOAD [W]	[%]	
LIGHTING	100	185	185	15	1	Α	2	15	560	800	70	MEETING ROOM RECEP
LIGHTING	100	290	290	15	3	В	4	15	560	800	70	MEETING ROOM CONNECTRAC
LIGHTING	100	459	459	15	5	С	6	15	320	400	80	OPEN OFFICE WORKSTATION
KITCHENETTE ABOVE COUNTER GFI RECEP	70	1000	700	20	7	Α	8	15	320	400	80	OPEN OFFICE WORKSTATION
KITCHENETTE ABOVE COUNTER GFI RECEP	70	1000	700	20	9	в	10	15	480	600	80	OPEN OFFICE WORKSTATION
KITCHENETTE ABOVE COUNTER GFI RECEP	70	1000	700	20	11	С	12	15	480	600	80	OPEN OFFICE WORKSTATION
KITCHENETTE AUTO FACUET & SOAP DISP.	80	100	80	15	13	Α	14	15	480	600	80	OPEN OFFICE WORKSTATION
	70	1920	1344	20	15	в	16	15	480	600	80	OPEN OFFICE WORKSTATION
EX. HEAT PUMP	70	1920	1344	Ļ	17	С	18	15	480	600	80	OPEN OFFICE WORKSTATION
	70	1920	1344	3P	19	Α	20	15	480	600	80	OPEN OFFICE WORKSTATION
60-MINUTE ROOM RECEP	70	600	420	15	21	в	22	15	1008	1440	70	EX. AC UNIT
EX. IT SERVER RECEP	100	1200	1200	15	23	С	24	2P	1008	1440	70	
WASHROOM ABOVE COUNTER GFI RECEP	60	800	480	15	25	Α	26	20	480	600	80	EX. KITCHENETTE HOTWATER TANK
WASHROOM AUTO FACUET & SOAP DISP.	80	100	80	15	27	в	28	20	480	600	80	EX. KITECHENETTE FRIDGE RECEP
					29	С	30	15	160	200	80	OPEN COLLAB AREA RECEP
					31	Α	32	15	160	200	80	RECEPTION DESK RECEP
ERV-1	80	540	432	15	33	в	34	15	300	500	60	CONVENIENCE RECEP
	80	540	432	2P	35	С	36	15	300	500	60	CONVENIENCE & STORAGE ROOM RECEP
EX. HEAT PUMP	70	2880	2016	30	37	Α	38	30	2016	2880	70	
	70	2880	2016	2P	39	В	40	Ļ	2016	2880	70	EX. HEAT PUMP
WASHROOM EF-1.01	70	200	140	15	41	С	42	3P	2016	2880	70	

3 E500 SCALE N.T.S.

EX. PANEL '3C1'

NOTES:

TYPE

OS

OSD	WALLBOX DUAL TECH OCCUPANCY SENSOR WITH 0-10V DIMMER	WATTSTOPPER CAT#: DW-311-W
OSLV	CEILING MOUNTED DUAL TECHNOLOGY LOW VOLTAGE OCCUPANCY SENSOR	WATTSTOPPER CAT#: DT-305 C/W POWER PACK #BZ-250 AS REQUIRED
₽lv	WALL MOUNTED LOW VOLTAGE 0-10V DIMMER	WATTSTOPPER CAT#: DCLV2-W C/W POWER PACK #BZ-250 AS REQUIRED
\$lv	WALL MOUNTED LOW VOLTAGE ON/OFF SWITCH (WITH ON/OFF WIRING)	WATTSTOPPER CAT#: DCLV2-W C/W POWER PACK #BZ-250 AS REQUIRED
\$	LINE VOLTAGE DECORA STYLE ON/OFF SWITCH	LEGRAND RADIANT SERIES

120/208V

304W

200A

1. CONFIRM LIGHTING FIXTURE FINISHES AND MOUNTING HEIGHTS WITH INTERIOR DESIGNER PRIOR TO ORDERING.

DESCRIPTION

4. CONFIRM FINISHING COLOURS WITH INTERIOR DESIGNER DURING SUBMITTAL REVIEW.

VOLTAGE [V]:

PHASE/WIRE:

MAIN BREAKER [A]: 200A

MAINS [A]:

WALLBOX DUAL TECH OCCUPANCY SENSOR SWITCH WITH MANUAL ON/OFF OVERRIDE WATTSTOPPER CAT#: DSW-301-W

Fixture A

<u>о</u>

Fixture B

LUMINAIRE SCHEDULE										
TYPE	DESCRIPTION	MANU. / MODEL	VOLTAGE	WATTAGE	COLOUR TEMPERATURE					
L1	2' x 4' LED RECESSED TROFFER FIXTURE, 0-10V DIMMING	SIGNIFY CAT#: 2FGXG38L835-4-RS-UNV-DIM *FACTORY PROGRAMMED TO 3000 LUMEN MAX OUTPUT	120V	27W	3500K					
L2	2' x 2' LED RECESSED TROFFER FIXTURE, 0-10V DIMMING	SIGNIFY CAT#: 2FGXG38L835-2-RS-UNV-DIM *FACTORY PROGRAMMED TO 3000 LUMEN MAX OUTPUT	120V	32W	3500K					
D1	6" LED DOWNLIGHT FIXTURE, 0-10V DIMMING	SIGNIFY CAT#: 6RN-P6RDL20935WCL-Z10U	120V	15W	3500K					
\mathbf{X}	PICTOGRAM 'RUNNING MAN' EXIT SIGN, EDGE-LIT LED TECHNOLOGY, SELF-POWERED FOR 120 MIN. REFER TO DRAWINGS FOR MOUNTING AND FACE TYPES	LUMACELL CAT#: LDE-xx-W-C-SP C/W ALL MOUNTING ACCESSORIES	120/347V	3.5W						

LIGHTING CONTROL DEVICE SCHEDULE

MANUFACTURER / MODEL / PRODUCT LINE

LOCATION: SERVER ROOM

-					
	3	ISSUED FOR	TENDER		20250527
-	2	ISSUED FOR	99% RE	VIEW	20250414
	1 No	ISSUED FOR Revisions	66% RE	VIEW	20250312
=	Orientation			Coal	
	The Costs			المراجع والمراجع	
	all errors applicable) the Work.	actor shall c and omissior for his/her A Detai B Shee	Neck and written No No when	e IO-Owner's/I direction befor e detailed	MBS Designee (as e proceeding with
		B	G	IS	

E HOTWATER TANK
TE FRIDGE RECEP
REA RECEP
K RECEP
ECEP
STORAGE ROOM RECEP



Ministry PSIF Number

Project ELECTRICAL UPGRADES	
Location 465 DAVIS DR. SUITE 301 NEWMARKET, ON L3Y 7T9	, Buildi
240256 —	Bź

Building No B25590

INFRASTRUCTURE ONTARIO (IO)

Floor No

F03

Drawing Title DETAILS

Client

scale N.T.S.
Drawn by YG
Designed by YG
Approved by

Project Start Date 20241122
Substantial Performance Date
20251030
Drawing No
-500 of 08

CADD File NAME