



ADDENDUM 2

**Request for Tender
for
NEMT Facility Construction**

Reference Number: 214872

Issue Date: *October 4, 2024*

This Addendum is issued in accordance with RFT Section 3.9 and amends the RFT Documents as set out below.

Such revisions shall become part of the RFT Documents, and shall change the original RFT Documents only in the manner and extent stated.

- Electrical & Mechanical Specifications & Drawings issued as follows

GENERAL PROVISIONS - ELECTRICAL SPECIFICATIONS - SECTION 26A

- 1. REQUIREMENTS SPECIFIED IN DIVISION 1, INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS, ALONG WITH DIVISION 26 AND ALL IT'S SECTIONS, COMPRISE THE CONTRACT DOCUMENTS FOR THE ELECTRICAL CONTRACT. PROVIDE NECESSARY ITEMS FOR A COMPLETE INSTALLATION OF ALL ELECTRICALLY OPERATED EQUIPMENT LISTED IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS.
2. PROVIDE ALL MATERIAL, EQUIPMENT, INCIDENTALS, AND SERVICES REQUIRED TO COMPLETE THE INSTALLATION AND THE PROJECT. SHOULD ANY DISCREPANCY APPEAR ANYWHERE IN THE CONTRACT DOCUMENTS THAT MAY BE CONSTRUED AS AMBIGUOUS, OR MAY CAUSE DOUBT TO THE TRUE INTENT, CLARIFICATION SHALL BE OBTAINED FROM THE CONSULTANT. IF THIS IS NOT DONE, THE MORE EXPENSIVE ALTERNATIVE WILL BE INCLUDED IN THE PROJECT. ANY DIRECTION OR INTERPRETATION FROM THE CONSULTANT SHALL BE CONSIDERED FINAL AND WILL NOT BE CONTESTED.
3. THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND EQUIPMENT DRAWINGS AND SPECIFICATIONS ARE INCORPORATED INTO, AND BECOME A PART OF THIS DIVISION. THIS CONTRACTOR SHALL EXAMINE ALL SUCH DRAWINGS AND SPECIFICATIONS AND BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS CONTAINED THEREIN. THE SUBMISSION OF THE BID SHALL INDICATE SUCH KNOWLEDGE.
4. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. THEY ARE INTENDED TO SHOW THE APPROXIMATE LOCATIONS OF EQUIPMENT AND CONDUIT. DIMENSIONS GIVEN ON THE PLANS, IN FIGURES, SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND SHALL BE VERIFIED IN THE FIELD. THE ELECTRICAL CONTRACTOR SHALL LAYOUT ALL EQUIPMENT ROOMS TO MAKE SURE THE EQUIPMENT AS SUPPLIED FITS IN THE ROOM OR SPACE SHOWN AND HAS ALL CLEARANCES REQUIRED. EXACT LOCATION OF ALL EQUIPMENT SHALL BE VERIFIED IN THE FIELD AND ROUTING OF CONDUITS SHALL SUIT FIELD CONDITIONS.
5. UNTIL TIME OF INSTALLATION, THE CONSULTANT RESERVES THE RIGHT TO MAKE MINOR CHANGES IN THE LOCATION OF CONDUIT AND EQUIPMENT WITHOUT ADDITIONAL COST TO THE CONTRACT. ADDITIONALLY, THE OWNER SHALL HAVE TEMPORARY USE OF THE INSTALLATION PRIOR TO COMPLETION.
6. THE ELECTRICAL DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER. MATERIAL AND LABOR NECESSARY TO THE PROJECT SHALL BE FURNISHED AND INSTALLED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. LABOR AND/OR MATERIALS NEITHER SHOWN NOR SPECIFIED, BUT OBVIOUSLY NECESSARY FOR THE COMPLETION AND PROPER FUNCTIONING OF THE SYSTEM, SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
7. EXAMINE THE WORK OF OTHER TRADES INSOFAR AS THEIR WORK COMES IN CONTACT WITH OR IS COVERED BY THIS WORK. IN NO CASE ATTACH TO, OR FINISH AGAINST ANY DEFECTIVE WORK OR INSTALL WORK IN A MANNER WHICH WILL PREVENT PROPER INSTALLATION OF THE WORK OF OTHER TRADES.
8. COORDINATE ALL WORK WITH OTHER TRADES. RELOCATE OR REPLACE ANY MATERIALS OR EQUIPMENT WHICH INTERFERES WITH OTHER DIVISIONS WHICH RESULTS FROM A LACK OF COMMUNICATION AND COORDINATION.
9. IT SHALL BE THE DUTY OF THIS CONTRACTOR TO REPORT ANY INTERFERENCES BETWEEN THIS CONTRACTORS WORK AND THAT OF ANY OF THE OTHER CONTRACTORS AS SOON AS THEY ARE DISCOVERED. THE CONSULTANT SHALL DETERMINE WHICH EQUIPMENT WILL BE RELOCATED, REGARDLESS OF WHICH WAS INSTALLED FIRST. THE DECISION WILL BE FINAL.
10. ELECTRICAL CONTRACTOR SHALL VERIFY WITH OTHER TRADES ALL ELECTRICAL CONNECTIONS OR REQUIREMENTS AND INCLUDE SAME IN THE CONTRACT COST. DURING CONSTRUCTION CONTRACTOR SHALL VERIFY VOLTAGE, PHASE AND HORSEPOWER AND SHALL NOTIFY ENGINEER OF DISCREPANCIES PRIOR TO START OF WORK. CONTRACTOR SHALL PROVIDE DISCONNECTING MEANS AND OVERLOAD PROTECTION FOR ALL EQUIPMENT UNLESS FURNISHED INTEGRAL WITH EQUIPMENT PACKAGE.
11. IF IT IS THE INTENT OF THESE DRAWINGS THAT THIS BE A COMPLETE ELECTRICAL JOB, ANY ERRORS OR OMISSIONS, REGARDLESS OF DIVISION, SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE WORK IS STARTED. THE OMISSION OR INCORRECT MENTION OF WORK DOES NOT RELIEVE THE CONTRACTOR FROM PROVIDING SUCH WORK.
12. THIS CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THIS CONTRACTORS WORK. THE SUBMISSION OF THE PROPOSAL SHALL INDICATE SUCH KNOWLEDGE. NO ADDITIONAL PAYMENT SHALL BE MADE ON CLAIMS THAT ARISE FROM A LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.
13. INSTALLATION SHALL BE IN FULL ACCORDANCE WITH ALL APPLICABLE CODES, RULES AND REGULATIONS. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND CSA APPROVED. COMPLY WITH ANY SPECIFICATION REQUIREMENTS THAT ARE IN EXCESS TO CODE REQUIREMENTS.
14. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS, PLAN REVIEWS, AND CERTIFICATES OF INSPECTION. ON COMPLETION OF WORK, PRESENT COMPLETE CERTIFICATES OF APPROVAL.
15. PROVIDE A SET OF PDF SHOP DRAWINGS AND DELIVERY DATES FOR REVIEW BY THE CONSULTANTS. WHERE ALTERNATE EQUIPMENT HAS BEEN PERMITTED BY THE CONSULTANT, THE CONTRACTOR SHALL BEAR ALL COSTS FOR THE REVISED DESIGN AND CONSTRUCTION INCLUDING THE COST OF ALL OTHER TRADES AFFECTED.
16. SECURE AN EXTRA SET OF ELECTRICAL DRAWINGS TO BE KEPT ON SITE AND MARK, DAILY, THE DRAWINGS IN RED AS THE PROJECT PROGRESSES IN ORDER TO KEEP AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK SHOWN ON THE DRAWINGS AND THE WORK WHICH IS ACTUALLY INSTALLED. ALL BURIED OR CONCEALED ELEMENTS SHALL BE DIMENSIONED FROM FIXED REFERENCE POINTS. DELIVER THE AS-BUILT DRAWINGS BEFORE FINAL CERTIFICATION OF COMPLETION IS ISSUED.
17. PROVIDE TWO COMPLETE SETS OF CLOSE-OUT, OPERATING AND MAINTENANCE MANUALS COMPILED FROM INDIVIDUAL SUPPLIERS AND MANUFACTURERS. MANUALS SHALL INCLUDE SHOP DRAWINGS, AS-BUILT DRAWINGS, SUPPLIER CONTACT INFORMATION, CERTIFICATES, WARRANTY LETTERS, AND ANY OTHER DOCUMENTS REQUIRED. MAKE ANY CHANGES TO THE MANUALS AS DIRECTED BY THE CONSULTANT.
18. BEFORE THE INSTALLATION OF ANY ITEM BEGINS, THE ELECTRICAL CONTRACTOR SHALL CAREFULLY ASCERTAIN THAT IT DOES NOT INTERFERE WITH CLEARANCES OF ANY WORK BY OTHER TRADES. IF ANY WORK IS INSTALLED AND THE ARCHITECTURAL DESIGN CANNOT BE FOLLOWED, THIS CONTRACTOR SHALL, AT THEIR OWN EXPENSE, MAKE CHANGES IN THE WORK AS DIRECTED BY THE ARCHITECT TO PERMIT THE COMPLETION OF THE ARCHITECTURAL WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS.
19. ALL PRODUCTS SHALL BE NEW AND OF THE TYPE AND QUALITY SPECIFIED. WHERE MATERIAL, EQUIPMENT, APPARATUS OR OTHER PRODUCTS ARE SPECIFIED BY MANUFACTURER, BRAND NAME, TYPE OF CATALOG NUMBER, SUCH DESIGNATION SHALL ESTABLISH THE STANDARDS OF THE DESIRED QUALITY AND STYLE. IT IS THE INTENT OF THESE SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY OF MATERIALS AND EQUIPMENT INSTALLED.
20. SUPPLY AND INSTALL ALL LAMACOID NAMEPLATES ON ALL EQUIPMENT CONNECTED BY THIS CONTRACTOR, WHETHER SUPPLIED BY THEM OR NOT.
21. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND LABOUR REQUIRED TO INSTALL, MOUNT AND SUPPORT ANY ELECTRICAL EQUIPMENT OR DEVICE CALLED FOR ON THE PLANS.
22. ALL SURFACE-MOUNTED EQUIPMENT ON BLOCK WALLS SHALL BE MOUNTED ON 3/4" PLYWOOD BACKBOARD. ALL FLOOR MOUNTED EQUIPMENT SHALL BE INSTALLED ON A 3.5" HIGH CONCRETE HOUSEKEEPING PAD.
23. PROVIDE OWN TEMPORARY OFFICE, STORAGE, AND/OR WORKSHOP AS REQUIRED TO COMPLETE THE WORK. ANY LOSS OR DAMAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
24. ALL CUTTING, PATCHING, EXCAVATING, BACKFILLING AND CONCRETE WORK RELATED TO THIS CONTRACT WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. THIS CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF PROVIDING THE SLEEVES, CHASSES AND OPENINGS NECESSARY FOR THE ELECTRICAL INSTALLATION AND FOR THEIR REPAIR IN AN ACCEPTABLE MANNER, AS DETERMINED BY THE ARCHITECT. ALL HOLES SHALL BE CORE DRILLED, PROVIDE FIRE STOP IN ALL OPENINGS CREATED THROUGH FIRE-RATED WALLS, FLOORS OR CEILINGS.
25. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED ACCESS PANELS NECESSARY FOR THIS WORK. COORDINATE WITH ARCHITECT PRIOR TO INSTALLATION.
26. ALL WORK SHALL BE INSTALLED IN A PRACTICAL AND PROFESSIONAL MANNER, BY SKILLED TRADESPEOPLE TO THE SATISFACTION OF THE CONSULTANT. WORK NOT MEETING THE QUALITY EXPECTATIONS OF THE CONSULTANT SHALL BE REMEDIATED IN A TIMELY FASHION AT NO COST.
27. ALL CABLES AND/OR CONDUCTORS SHALL BE RUN IN CONDUIT (OR CABLE TRAY AS PERMITTED) REGARDLESS OF VOLTAGE OR APPLICATION. IN ALL INSTANCES, WIRE CONNECTIONS/JUNCTIONS SHALL BE MADE IN JUNCTION BOXES, REGARDLESS OF VOLTAGE OR APPLICATION.
28. DAILY, THIS CONTRACTOR SHALL REMOVE ALL DEBRIS AND EXCESS MATERIALS CAUSED BY THIS WORK AND LEAVE THE AREA OF OPERATION BROOM CLEAN.
29. THIS CONTRACTOR SHALL GUARANTEE IN WRITING THE QUALITY OF WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL PERFORMANCE AND LEAVE THE WORK IN PERFECT ORDER AT THE COMPLETION. SHOULD DEFECTS DEVELOP WITHIN THE GUARANTEE PERIOD, THE CONTRACTOR SHALL REMEDY THE DEFECTS AND HAVE ALL DAMAGES TO OTHER WORK OR FURNISHINGS CAUSED BY THE REPAIRS CORRECTED AT THIS CONTRACTORS EXPENSE.
30. THIS CONTRACTOR SHALL COMPLETE ALL LINE VOLTAGE WIRING FOR MECHANICAL EQUIPMENT. LINE VOLTAGE WIRING IS UNDERSTOOD TO BE GREATER THAN 99 VOLTS.

LIGHTING SYSTEMS - SECTION 26B

- 1. THE LIGHTING SYSTEM SHALL BE FULLY FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS TO PROVIDE A COMPLETE AND OPERATIONAL LIGHTING SYSTEM.
2. FIXTURES BY ACUTY, COOPER, HUBBELL, DECO, AND SIGNIFY ARE CONSIDERED EQUAL FOR ANY EQUALS OR ALTERNATES. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY THE CONSULTANT A MINIMUM OF 6 BUSINESS DAYS BEFORE TENDER CLOSE.
3. LIGHTING CONTROLS SHALL MATCH THE COLOR AND COVER PLATE TYPE OF THE RECEPTACLES LOCATED IN THE SAME ROOM. EACH ZONE OF CONTROL SHALL OCCUPY ONE DEVICE BOX.
4. LIGHTING CONTROL DEVICES SHALL BE MOUNTED IN DEVICE BOXES AND SHALL HAVE CONDUIT TO THE ACCESSIBLE CEILING SPACE. FISHING CABLES OR FLOATING DEVICES ARE NOT PERMITTED.
5. LUMINAIRES SHALL BE PROVIDED WITH A CONSISTENT COLOR TEMPERATURE THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL REPLACE AT NO CHARGE ANY FIXTURES WHICH DO NOT MATCH THE COLOUR TEMPERATURE OF THE OF THE OTHER FIXTURES ON THE PROJECT; REGARDLESS OF THE LUMINAIRE FIXTURE SCHEDULE NOMENCLATURE OR DESCRIPTION.
6. ALL LUMINAIRES SHALL BE FIRMLY SUPPORTED FROM BEAMS, JOISTS, OR OTHER STRUCTURAL ELEMENTS.
7. ANY EXPOSED CABLING IN SUSPENDED FIXTURES SHALL INCLUDE THE CONTROL CABLING INTEGRAL TO THE LINE VOLTAGE CABLING TO AVOID UNSIGHTLY AND LOOSE CONTROL CABLING.
8. THE INSTALLATION OF ALL LUMINAIRES SHALL BE COORDINATED WITH ALL TRADES TO PROVIDE THE INTENDED SPACING
9. FIXTURES SHALL NOT BE DAMAGED OR DIRTIED DURING THE PROJECT. ANY FIXTURES SHOWING DAMAGE OR DIRT SHALL BE CLEANED AND REPLACED.
10. THE ELECTRICAL CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE TO ENSURE THAT ALL FIXTURES AND CONTROLS WORK TOGETHER SEAMLESSLY AND AS INTENDED BY THE CONSULTANT. THE CONTRACTOR SHALL REMEDIATE AT NO COST ANY LIGHTING SYSTEMS WHICH ARE DEEMED UNSATISFACTORY BY THE CONSULTANT.

FIRE ALARM SYSTEM - SECTION 26H

- 1. COMPLETE INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE CAN/ULC S524 (LATEST EDITION) STANDARD FOR THE INSTALLATION OF FIRE ALARM SYSTEMS, WHERE THE REQUIREMENTS OF THIS SECTION EXCEED THE MINIMUM REQUIREMENTS OF THE ULC STANDARD, THESE SPECIFICATIONS SHALL GOVERN.
2. PERFORM ALTERATIONS TO THE SYSTEM AS SHOWN ON THE DRAWINGS. WHERE BOTH CONVENTIONAL AND ADDRESSABLE DEVICES ARE FOUND ON SITE, THE CONTRACTOR SHALL ALLOW TO PROVIDE AND INSTALL ADDRESSABLE DEVICES ONLY.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE EXISTING EQUIPMENT MANUFACTURER AND SERVICE PROVIDER AND TO PROVIDE EQUIPMENT/DEVICES/SERVICE MATCHING EXISTING.
4. ON COMPLETION OF THE INSPECTION AND WHEN ALL OF THE ABOVE CONDITIONS ABOVE BEEN COMPLIED WITH, AND DEFICIENCIES INDICATED IN PRELIMINARY REPORT HAVE BEEN CORRECTED, THE MANUFACTURER SHALL ISSUE TO THE CONSULTANT:
4.1. A COPY OF THE INSPECTOR/TECHNICIAN'S REPORT SHOWING LOCATION OF EACH DEVICE AND CERTIFYING THE TEST RESULTS OF EACH DEVICE.
4.2. A CERTIFICATE OF VERIFICATION CONFIRMING THAT THE INSPECTION HAS BEEN COMPLETED IN CONFORMANCE WITH CAN/ULC S524 AND SHOWING THE CONDITIONS UPON WHICH SUCH INSPECTION AND CERTIFICATION HAVE BEEN RENDERED.
4.3. PROOF OF LIABILITY INSURANCE FOR THE INSPECTION.
4.4. AN ELECTRONIC COPY OF THE EDWARDS SITE SPECIFIC PROGRAM (SDU FILE) OR EQUIVALENT.
5. ALL COSTS INVOLVED IN THIS INSPECTION SHALL BE INCLUDED IN THE TENDER PRICE.
6. THE CONTRACTOR MUST MAINTAIN THE FIRE ALARM SYSTEM FULLY OPERATIONAL DURING DEMOLITION AND CONSTRUCTION IN ORDER TO PROTECT THE BUILDING OCCUPANTS. DURING CHANGES TO THE EXISTING FIRE ALARM SYSTEM ONLY ONE ZONE SHALL BE INTERRUPTED AT ANY ONE TIME. TIME AND DURATION OF INTERRUPTION SHALL BE APPROVED BY THE OWNER'S ENGINEER. AT NO TIME SHALL THE FIRE ALARM SYSTEM OR ANY ONE ZONE BE LEFT INOPERATIVE OVERNIGHT. PROVIDE ALL REQUIRED BYPASS WIRING AND TEMPORARY WIRING AS MAY BE REQUIRED TO MAINTAIN ALL PARTS OF THE FIRE ALARM SYSTEM OPERATIVE DURING CONSTRUCTION AND ALTERATIONS. PROVIDE TEMPORARY MOUNTING OF EXISTING DEVICES WITHIN THE AREA OF CONSTRUCTION. NEW DEVICES SHALL BE INSTALLED AND VERIFIED PRIOR TO THE REMOVAL OF EXISTING DEVICES. ALLOW IN THE TENDER PRICE FOR ADDITIONAL SITE VISITS BY THE FIRE ALARM TECHNICIAN TO PERFORM PARTIAL VERIFICATIONS TO MEET THE REQUIREMENTS OF THE CONSTRUCTION PHASING.

EXISTING CONDITIONS - SECTION 26E

- 1. THE DRAWINGS ARE PERFORMANCE DRAWINGS AND INDICATE THE GENERAL ARRANGEMENT OF WORK. THEY ARE DIAGRAMMATIC AND DO NOT SHOW ALL THE EXISTING DETAILS AND DEVICES. THE CONTRACTOR SHOULD VERIFY ON SITE ALL EXISTING CONDITIONS RELATED TO MEASUREMENTS, CLEARANCES, SIZES, STRUCTURAL ELEMENTS, FINISHES, AND AVAILABLE SPACE. NO ADDITIONAL COSTS WILL BE ENTERTAINED FOR ANY REQUIRED CHANGES OR MODIFICATIONS TO THE PROJECT WHICH MAY BE NEEDED IN ORDER TO CARRY OUT THE DESIGN INTENT.
2. INCLUDE REASONABLE TIME AND MATERIAL IN THE TENDER PRICE TO MODIFY AND MAKE ALTERNATIONS TO THE EXISTING BUILDING SYSTEMS. EXPECT THAT EQUIPMENT, DEVICES AND RACEWAYS WILL REQUIRE RELOCATION, RE-FEEDING, AND/OR RE-ROUTING. ALLOW FOR THE RELOCATION OF CONDUITS AND CABLES WITHIN WALLS WHERE NEW OPENINGS ARE SHOWN. OBTAIN CONFIRMATION FROM THE OWNER BEFORE CARRYING OUT ANY WORK ON EXISTING BUILDING SYSTEMS.
3. CONTRACTOR SHALL FAMILIARIZE THEMSELVES AND CHECK WITH OWNER'S REPRESENTATIVE REGARDING EXISTING BUILDING SYSTEMS, METHODS OPERATIONS AND EQUIPMENT INSTALLED. ANY NECESSARY WORK, DEVICES, OR EQUIPMENT REQUIRED TO INTERFACE WITH THE EXISTING BUILDING COMPONENTS SHALL BE INCLUDED IN THE TENDER PRICE.
4. WHERE DEVICES ARE SHOWN IN EXISTING WALLS, THE DEVICE BOXES SHALL BE CUT INTO THE WALL. FISH A CABLE INTO THE WALL CAVITY. CUTTING ACCESS POINTS AS REQUIRED TO OVERCOME OBSTACLES WITHIN THE WALL. WALLS MADE OF CONCRETE BLOCK SHALL BE FISHED WITH THE DEVICE BOX GROUTED INTO PLACE.
5. INCLUDE IN THE TENDER PRICE ANY PREMIUM WORK AND FEES WHICH MAY RESULT FROM AFTER HOURS WORK, WEEKEND WORK, OR LIVE WORK, ETC. WHICH MAY BE REQUIRED TO EITHER INTERFACE OR TIE-IN TO EXISTING BUILDING SYSTEMS.
6. CIRCUIT NUMBERS SHOWN ON DRAWINGS ARE INTENDED FOR GROUPING PURPOSES ONLY. WHERE EXISTING PANELS ARE TO BE REUSED, CHECK EXISTING CIRCUIT LOADING, USE SPARE BREAKERS AS AVAILABLE, AND PROVIDE ANY AND ALL ADDITIONAL BREAKERS REQUIRED. PROVIDE NEW TYPEDWRITTEN PANEL SCHEDULES IN ALL PANELS WHICH HAVE BEEN MODIFIED.
7. CLEAN AND MAKE GOOD ALL EXISTING LIGHTING FIXTURES AND EQUIPMENT TO BE REUSED, WHERE DEVICE LOCATIONS ARE SHOWN AS EXISTING/REUSED, NEW DEVICES AND COVER PLATES SHALL BE PROVIDED TO MATCH THE NEW DEVICES THROUGHOUT THE PROJECT.
8. RELOCATE, REROUTE AND ADJUST WIRING AND CONDUITS TO MAINTAIN ACCESSIBILITY OF BOXES WHERE SUCH EXISTING ARE AFFECTED BY NEW WORK SUCH AS NEW PARTITIONS, MECHANICAL DUCTWORK, PIPING, EQUIPMENT AND NEW DRYWALL CEILINGS.
9. PROVIDE FIRESTOP SYSTEMS THAT MEET OBC REQUIREMENTS. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE FIRE SEPARATION PLAN. IN EXISTING PARTIONS, SEEK A RULING FROM THE CONSULTANT IF NO RATING IS SHOWN ON THE DRAWINGS. PROVIDE SHOP DRAWINGS FOR EACH FIRESTOP SYSTEM WHICH SHOW THE CONSTRUCTION CONDITIONS, RELATIONSHIPS TO ADJOINING CONSTRUCTION, DIMENSIONS, DESCRIPTION OF MATERIALS AND FINISHES, COMPONENT CONNECTIONS, ANCHORAGE METHODS, HARDWARE AND INSTALLATION PROCEDURES. PROVIDE PRODUCT CERTIFICATES AND TEST REPORTS.
10. MAINTAIN A SET OF SHOP DRAWING/LITERATURE ON EACH ULC ASSEMBLY ON SITE FOR REFERENCE BY TRADES, INSPECTORS, OR CONSULTANTS AT ANY TIME DURING CONSTRUCTION
9. PROVIDE FISH WIRES IN ALL EMPTY CONDUITS.
10. IF OBJECTIONABLE NOISE EXISTS, MAKE CORRECTIONS AND CHANGES AS REQUIRED.
11. SCHEDULE AND CO-ORDINATE ALL WORK WITH OTHER TRADES.
12. UNLESS OTHERWISE SHOWN OR NOTED, HEIGHTS ABOVE FLOOR TO CENTRE LINE OF DEVICE SHALL MATCH EXISTING.
13. WHERE DEVICES OR EQUIPMENT ARE SHOWN AS BEING REMOVED, THEIR ASSOCIATED BOXES, CONDUITORS, CONDUITS AND ASSOCIATED WORKS SHALL ALSO BE REMOVED BACK TO THE PANEL OR SOURCE. WHERE THE REMOVED ITEMS SHARE RACEWAYS OR CONDUIT, THE WORKS SHALL BE REMOVED TO THE NEAREST JUNCTION. CABLES AND CONDUCTORS SHALL BE REMOVED TO SOURCE IN ALL CASES.

ELECTRICAL DISTRIBUTION - SECTION 26D

- 1. PANELBOARDS SHALL BE 30 CIRCUIT MINIMUM, ENCLOSED DEAD FRONT SAFETY TYPE WITH FEATURES AND RATINGS AS SCHEDULED ON DRAWINGS. MANUFACTURERS SHALL BE EATON (POWERLINE) AND SCHNEIDER (NO) ALL BUS BARS SHALL BE RECTANGULAR SOLID COPPER. A SEPARATE TUB AND CHASSIS SHALL BE PROVIDED. LOADCENTERS ARE NOT PERMITTED.
1.1. BREAKERS SHALL BE BOLT-ON TYPE WITH SUFFICIENT INTERRUPTING CAPACITY FOR THE AVAILABLE FAULT CURRENT. MAIN BREAKERS SHALL BE SEPARATE, CHASSIS MOUNTED MOLDED CASE DEVICES. TWO AND THREE POLE BREAKERS SHALL HAVE COMMON TRIPS. 'DUPLEX', 'TWIN', 'MINI', OR SIMILAR SPACE SAVING BREAKERS ARE NOT PERMITTED.
1.2. PROVIDE LOCKING DEVICES FOR BREAKERS SUPPLYING FIRE ALARM SYSTEMS, EMERGENCY LIGHTING SYSTEMS, TIME CLOCKS, PUMP PUMPS, AND MECHANICAL CONTROLS.
1.3. A TYPEDWRITTEN PANEL DIRECTORY SHALL BE INCLUDED WITH EACH PANELBOARD, MOUNTED IN A TRANSPARENT PLASTIC SLEEVE. HAND WRITING IS NOT PERMITTED. ALL LOADS SHALL BE BALANCED ACROSS ALL PHASES.
2. SAFETY SWITCHES SHALL BE THE ENCLOSED HEAVY-DUTY TYPE (TYPE HD) WITH EXTERNAL PAD LOCKABLE OPERATING HANDLE. FUSIBLE SWITCHES SHALL BE PROVIDED WITH CLASS J, TIME DELAY, CURRENT LIMITING FUSES AND SHALL PROVIDE IEC TYPE 2 PROTECTION TO CONDUCTORS. MANUFACTURER SHALL BE EATON, SCHNEIDER, OR SIEMENS.
3. DRY TYPE TRANSFORMERS SHALL BE INDOOR AIR COOLED (ANN) TYPE, OF KVA RATING AND VOLTAGE AS SHOWN ON THE DRAWINGS. THE TRANSFORMER SHALL HAVE 5 PRIMARY TAPS TO PERMIT VOLTAGE ADJUSTMENT, AND SHALL BE DESIGNED WITH A CLASS H INSULATION SYSTEM. THE REQUIREMENTS OF CAN/CSA C802.2 (0.REG 404/12) SHALL BE MET USING A COMBINATION OF DELTA/WYE WINDINGS. WHERE FLOOR MOUNTED, RUBBER VIBRATION ISOLATORS WILL BE PROVIDED.
4. GROUND/BOND ALL EQUIPMENT PER THE OESC AND ANY ADDITIONAL REQUIREMENTS OF THE LOCAL UTILITY. ADDITIONALLY, PERFORM THE FOLLOWING:
4.1. ALL CONDUITS SHALL CONTAIN AN INSULATED CODE SIZED GROUND WIRE SIZE PER OESC IN ADDITION TO THE CONDUCTORS SHOWN ON THE PLANS.
4.2. GROUND/BOND CONNECTIONS SHALL BE HYDRAULIC CRIMP COMPRESSION TYPE.
4.3. GROUND/BOND ALL TRANSFORMER NEUTRALS WITH A DEDICATED GROUND CONDUCTOR. IN NO CASE SHALL THE CONDUIT SYSTEM BE USED AS A GROUND/BOND FOR TRANSFORMERS.

RACEWAYS, DEVICES, AND CONTROLS - SECTION 26F

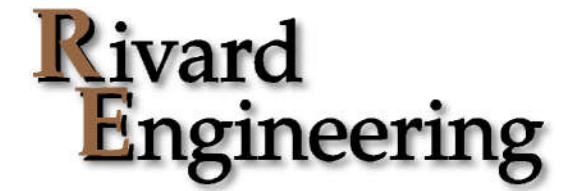
- 1. PROVIDE A FULLY COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS AND DESCRIBED HEREIN.
1.1. ELECTRICAL SWITCHES AND RECEPTACLES SHALL BE HEAVY DUTY, SPECIFICATION GRADE, DECORATOR TYPE AND SHALL BE WHITE.
1.2. COVER PLATES SHALL BE STAINLESS STEEL.
1.3. CIRCUIT NUMBERS SHALL BE PROVIDED BY WAY OF LABEL MAKER WITH CLEAR RIBBON AND BLACK TYPE ON THE COVER PLATE.
1.4. DEVICES SHALL BE AS MANUFACTURED BY HUBBELL BELOW; WITH APPROVED EQUALS FROM LEVITON, EATON, OR PASS & SEYMOUR.
15A 347V THREE WAY SWITCH DR20X HBL210334447W
15/20A 120V DUPLEX RECEPTACLE GZ20W
15/20A 125V GFCI DUPLEX RECEPTACLE GFZ0WLLA
2. WHERE DEVICES ARE LOCATED NEAR MILLWORK, REFER TO THE MILLWORK ELEVATIONS PRIOR TO ROUGH-IN. NO EXTRA WILL BE CONSIDERED FOR LACK OF COORDINATION. OTHERWISE, MOUNT DEVICES AT THE FOLLOWING HEIGHTS:
2.1. LIGHT SWITCHES/CONTROLS AND DOOR OPERATOR PUSH BUTTONS AT 42" AFF.
2.2. RECEPTACLES, VOICE/DATA, ETC. AT 18" AFF OR TOP OF 2ND COURSE OF MASONRY BLOCK. COUNTER MOUNTED DEVICES SHALL BE EITHER MOUNTED 6" ABOVE COUNTER OR 42" AFF IF NO COUNTER IS PRESENT.
2.3. FIRE ALARM PULL STATIONS AT 47" AFF.
2.4. FIRE ALARM NOTIFICATION APPLIANCES AT 2530MM OR 150MM BELOW CEILING WHERE CEILING HEIGHT IS LESS THAN 2350MM.
3. ALL CABLING/WIRE SHALL BE RUN IN RIGID, THREADED, GALVANIZED METAL CONDUIT OR GALVANIZED ELECTRICAL METALLIC TUBING (EMT) UNLESS OTHERWISE SPECIFICALLY STATED HEREIN.
4. EXPOSED CONDUIT FINISHED AREAS WILL NOT BE PERMITTED. EXPOSED CONDUIT WILL BE PERMITTED IN UNFINISHED AREAS WITH THE SPECIFIC APPROVAL OF THE CONSULTANTS.
5. CONDUIT IN EXTERIOR WALLS, ON WALL SURFACES/EXPOSED, BELOW FLOOR SLAB, OR UNDERGROUND SHALL BE RIGID, THREADED, GALVANIZED METAL CONDUIT.
6. CARLON SCH 40 HEAVY WALL PVC CONDUIT WITH GROUND WIRE MAY BE USED BELOW FLOOR SLAB OR UNDERGROUND IN LIEU OF RIGID, THREADED, GALVANIZED METAL CONDUIT. ALL UNDERGROUND CONDUIT SHALL BE PLACED A MINIMUM OF 6" BELOW FLOOR SLABS. CONDUIT SHALL NOT BE LOCATED WITHIN THE FLOOR SLAB.
7. CONDUIT RUN IN WET OR DAMP LOCATIONS, OR OUTSIDE, SHALL BE RIGID, THREADED, GALVANIZED METAL CONDUIT.
8. ALL CONDUIT SHALL BE CONCEALED IN WALLS, CEILINGS, AND BELOW FLOORS WHEREVER POSSIBLE. EXPOSED CONDUIT FINISHED AREAS WILL NOT BE PERMITTED. EXPOSED CONDUIT WILL BE PERMITTED IN UNFINISHED AREAS WITH THE SPECIFIC APPROVAL OF THE CONSULTANTS.
9. ALL CONDUIT RUN OVERHEAD SHALL BE RUN AT THE BOTTOM OF THE FLOOR, ROOF STRUCTURE, OR LOWEST CHORD OF JOIST SPACE (AS APPLICABLE) ABOVE IN ORDER TO AVOID CONFLICTS WITH OTHER TRADES.
10. USE AC90 OR FLEXIBLE CONDUIT FOR THE FINAL CONNECTION TO RECEPTACLES AND LIGHTING FIXTURES (12' LENGTH MAXIMUM). USE LIQUID TIGHT CONDUIT FOR ALL CONNECTIONS TO MOTORS AND OTHER EQUIPMENT SUBJECT TO VIBRATION AND IN AREAS SUBJECT TO MOISTURE.
11. INSTALL CONDUIT PERPENDICULAR TO THE WALLS AND STRUCTURAL MEMBERS. PROVIDE RIGHT ANGLE TURNS USING FITTINGS OR SYMMETRICAL BENDS. SUPPORT CONDUITS WITHIN 1' OF ALL CHANGES INDIRECTION.
12. CONDUIT SHALL BE PROPERLY SUPPORTED AND SECURELY FASTENED IN PLACE. IF A CONDUIT IS SUSPENDED, IT SHALL BE SUPPORTED ON TRAPEZE HANGERS WHICH USE "ALL-THREAD" RODS FROM THE STRUCTURAL STEEL. THE USE OF CEILING SUPPORT WIRE OR SIMILAR MATERIAL WILL NOT BE ACCEPTED.
13. INSTALL EMPTY CONDUIT FOR FUTURE USE AS INDICATED ON THE DRAWINGS. CONDUIT SHALL BE COMPLETE WITH JETLINE/PULL ROPE, JUNCTION/OUTLET BOXES, TILE RINGS AND APPROPRIATE COVER PLATES.
14. ALL CONDUIT TERMINATIONS WILL INCLUDE A PLASTIC BUSHING. IF EMT IS PERMITTED, COUPLINGS AND FITTINGS FOR EMT SHALL BE OF THE SET SCREW TYPE WITH NYLON INSULATED THROATS.
15. INSTALL PULL AND JUNCTION BOXES WHERE SHOWN ON THE DRAWINGS, AND WHERE REQUIRED FOR CHANGES IN DIRECTION, AT JUNCTION POINTS AND TO FACILITATE WIRE PULLING. FURNISH BOX SIZES IN ACCORDANCE WITH OESC UNLESS LARGER BOXES ARE INDICATED ON THE DRAWINGS.
16. PROVIDE STEEL BOXES AND REMOVABLE COVERS OF CODE GAUGE, HOT ROLLED SHEET STEEL, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE. FOR ABOVE GROUND WORK, FURNISH WEATHERPROOF BOXES WHEN INSTALLED ABOVE GROUND OUTSIDE.
17. RECESSED DEVICES BOXES SHALL BE MADE OF CODE GAUGE STEEL AND SHALL BE SINGLE OR MULTI GANG BOXES AS SHOWN ON PLAN. WHERE SHOWN BACK TO BACK ON A PARTITION, BOXES SHALL BE OFFSET IN STUD CAVITIES TO MINIMIZE SOUND TRANSMISSION AND FIRE SPREAD. FINISHED COVER PLATES OF ADJACENT DEVICES SHALL HAVE A MINIMUM OF 1" SPACE WHEN MOUNTED SIDE BY SIDE OR ABOVE EACH OTHER.
18. SURFACE MOUNT DEVICES, WHERE PERMITTED, SHALL BE OF CAST METAL CONSTRUCTION WITH NO KNOCK-OUTS. STAMPED 'HANDI-BOXES' WILL NOT BE ACCEPTED.
19. CONDUCTORS #10 AND SMALLER SHALL HAVE CONTINUOUS INSULATION COLOR, AS LISTED ABOVE. CONDUCTORS #8 AND LARGER WHICH DO NOT HAVE CONTINUOUS INSULATION COLOR SHALL HAVE AT LEAST FOUR LAPS OF COLORED TAPE ON EACH CONDUCTOR AT ALL POINTS OF ACCESS INCLUDING JUNCTION BOXES.
20. ALL CONDUCTORS SHALL BE RATED FOR 600 VOLTS. BRANCH CIRCUITS SHALL BE T90. FEEDERS SHALL BE RW90 IN DAMP/WET LOCATIONS AND RW90 OTHERWISE. ALUMINUM CONDUCTORS ARE NOT ALLOWED ON THIS PROJECT. MINIMUM SIZE OF CONDUCTORS SHALL BE #12 UNLESS OTHERWISE NOTED.
21. CONNECT #10 AND SMALLER WIRES WITH CONSTANT PRESSURE EXPANDABLE SPRING TYPE CONNECTORS, 'MARRETTE' BY T&B. ALL WIRE CONNECTIONS, REGARDLESS OF USE OR VOLTAGE SHALL BE MADE IN JUNCTION BOXES OUR HOUSINGS. ALL WIRE CONNECTORS SHALL BE RATED 600V MINIMUM.
22. CONNECT #8 AND LARGER WIRES WITH HYDRAULIC CRIMP COMPRESSION CONNECTORS AS MANUFACTURED BY BURNDY OR T&B.
23. CLEANOUT EACH CONDUIT SYSTEM BEFORE PULLING WIRE AND PULL CONDUCTORS USING RECOGNIZED METHODS AND EQUIPMENT LEAVING AT LEAST 6" WIRE AT ALL JUNCTION BOXES FOR CONNECTIONS.
24. FORM AND TIE ALL WIRING IN PANELBOARDS. ADDITIONALLY, THERE SHALL BE NO WIREJUNT JOINTS OR SPLICES MADE INSIDE SWITCHBOARDS/PANELBOARDS.
25. CONDUCTOR SIZES (AND CONDUITS) SHALL BE INCREASED FROM THOSE INDICATED ON THE PLANS TO PREVENT EXCESSIVE VOLTAGE DROP. FEEDERS AND BRANCH CIRCUITS SHALL BE EACH BE INSTALLED WITH WIRES OF SUFFICIENT SIZE TO LIMIT THEIR VOLTAGE DROP TO 2%.

ELECTRICAL LEGEND

Table with 2 columns: Symbol and Description. Includes symbols for electrical panel, ceiling mounted LED luminaire, combination exit sign, 120V single pole toggle switch, timeswitch, wall mounted NEMA receptacle, receptacles, ceiling mounted NEMA receptacle, unfused disconnect switch, breaker, UFD or starter, junction box, transformer, unit heater, electric heater, fire alarm system manual pull station, fire alarm system speaker, fire alarm system heat detector, panel 'A', ground fault interrupter, and motorized damper.

ARCHITECTURE49
1427 RIVERSIDE DRIVE, SUITE 1100, ONTARIO, CANADA P4R 1A8
Phone: 705-267-6438 | 1mmins@archtecture49.com | architecture49.com

CONSULTANT



CONSULTANT

North Engineering Inc.
1040 Lorne St. Unit 6
Sudbury, Ontario
P3C 4R9
705-885-1806

CLIENT



COPYRIGHT NOTICE

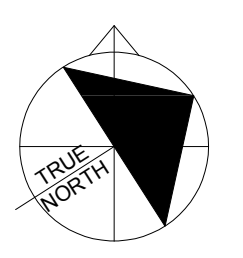
THIS DRAWING AND DESIGN IS COPYRIGHT PROTECTED. DO NOT REPRODUCE OR REVISE WITHOUT WRITTEN PERMISSION BY ARCHITECTURE49 INC.

SEAL:



THIS BAR IS 25mm LONG WHEN PLOTTED AT CORRECT SCALE. DO NOT SCALE DRAWINGS. 25mm

NORTH ARROW:



DIGITAL REFERENCE:

PROJECT NO.: 24078 CONTRACT NO.

DRAWN BY: KAF CHECKED BY: BB APPROVED BY: SC

KEYPLAN:

0 2024/10/04 ISSUED FOR TENDER
NO. DATE ISSUED

PROJECT

DRAWING TITLE

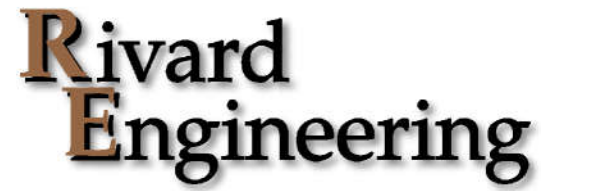
ELECTRICAL SPECIFICATIONS AND LEGEND

DRAWING NO.

ME-100

PRINT DATE:

CONSULTANT



CONSULTANT



CLIENT



COPYRIGHT NOTICE

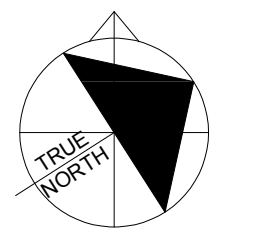
THIS DRAWING AND DESIGN IS COPYRIGHT PROTECTED. DO NOT REPRODUCE OR REVISE WITHOUT WRITTEN PERMISSION BY ARCHITECTURE49 INC.

SEAL:



THIS BAR IS 25mm LONG WHEN PLOTTED AT CORRECT SCALE. DO NOT SCALE DRAWINGS. 25mm

NORTH ARROW:



DIGITAL REFERENCE:

PROJECT NO.: 24078 CONTRACT NO.

DRAWN BY: KAF CHECKED BY: BB APPROVED BY: SC
KEYPLAN:

0 2024/10/04 ISSUED FOR TENDER
NO. DATE ISSUED
PROJECT

BRIGHTSHORES - NEMT

DRAWING TITLE

MECHANICAL SPECIFICATIONS AND LEGEND

DRAWING NO.

ME-101

PRINT DATE: -

MECHANICAL LEGEND	
SYMBOL	DESCRIPTION
	DRY CONTACT/SWITCH
	MOTORIZED DAMPER NO (NORMALLY OPEN) OR NC (NORMALLY CLOSED)
	MOTOR STARTER
	VARIABLE FREQUENCY DRIVE
	CURRENT TRANSFORMER
	DENOTES HARDWIRE INTERLOCK
	RELAY
	MOTORIZED DAMPER
	ROOF FAN (DOME)
	FIRE EXTINGUISHER

DIVISION 25 - INTEGRATED AUTOMATION

- WORK UNDER THIS SECTION SHALL BE CARRIED OUT BY THE INSTALLING MECHANICAL CONTRACTOR.
- SUPPLY ALL CONTROL TRANSFORMERS, RELAYS, OR CONTACTORS NECESSARY TO EXECUTE SEQUENCES OF OPERATIONS SPECIFIED ON THE DRAWINGS. TURN OVER TO DIVISION 26 FOR INSTALLATION AND LINE VOLTAGE WIRING. LOW-VOLTAGE WIRING SHALL BE INSTALLED BY THE MECHANICAL CONTRACTOR. SIZE CONTROL TRANSFORMERS TO SUIT THE MAXIMUM EXPECTED FULL LOAD AMPERAGE OF ALL DEVICES CONNECTED TO THE LOAD SIDE OF THE TRANSFORMER.
- MOTORIZED DAMPER ACTUATORS SHALL BE NORMALLY CLOSED, SPRING RETURN, ON-OFF, 24V. MANUFACTURER SHALL SELECT SPECIFIC ACTUATOR MODEL TO SUIT MOTORIZED DAMPER SIZE. STANDARD OF ACCEPTANCE BELMO.

DIVISION 21 - FIRE SUPPRESSION

- PROVIDE COMPLETE FIRE SUPPRESSION SYSTEMS FOR ENTIRE BUILDING.
- PROVIDE ALL FIRE EXTINGUISHERS AS SHOWN ON THE DRAWINGS. FIRE EXTINGUISHER CABINETS SHALL BE FULLY RECESSED. COORDINATE INSTALLATION WITH DRYWALL CONTRACTOR. PROVIDE SIGNS ABOVE ALL EXTINGUISHERS. ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 10, THE ONTARIO FIRE CODE, AND THE LOCAL FIRE DEPARTMENT REQUIREMENTS.
- FIRE EXTINGUISHERS SHALL BE STORED PRESSURE RECHARGEABLE TYPE WITH HOSE AND SHUT-OFF NOZZLE, ULC LISTED FOR A, B, AND C CLASS PROTECTION, ANODIZED ALUMINUM OR PLATED BRASS VALVE, RED ENAMEL FINISH. SIZE TO BE 3A:10B:C (5 LB) OR AS INDICATED ON DRAWINGS. IN KITCHENS PROVIDE SIZE 2A:K 6 LITER AS INDICATED ON DRAWINGS. STANDARD OF ACCEPTANCE WILSON & COUSINS, NATIONAL FIRE EQUIPMENT LTD.

DIVISION 23 - HEATING, VENTILATION, AND AIR-CONDITIONING

- PROVIDE ALL VENTILATION AND EQUIPMENT AS SHOWN ON DRAWINGS.
- ARRANGE ALL PIPING, DUCTWORK, SYSTEMS AND EQUIPMENT TO ALLOW FOR EXPANSION AND CONTRACTION DUE TO HEATING AND COOLING. INSTALL FLEXIBLE CONNECTIONS WHERE NECESSARY AND INCLUDE FOR PIPE LOOPS, ANCHORS, GUIDES, AND HANGERS.
- EXECUTE SYSTEM TESTING ADJUSTING AND BALANCING OF ALL AIR SYSTEMS, EQUIPMENT AND LIQUID SYSTEMS IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING TESTING, ADJUSTING AND BALANCING SPECIFICATIONS. INCLUDE FOR NECESSARY SPARE BELTS AND PULLEYS FOR FIELD ADJUSTMENT.
- THE PRINCIPAL ITEMS OF WORK ARE PERFORMANCE TESTING AND BALANCING OF ALL EQUIPMENT, SURVEY THE INSTALLED AUTOMATIC CONTROLS AND VERIFY THEIR FUNCTIONAL PERFORMANCE.
- REVIEW ALL MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS, SHOP DRAWINGS, INTERFERENCE DRAWINGS AND OTHER DOCUMENTATION TO BECOME FULLY FAMILIAR WITH THE SYSTEMS AND THE SPECIFIED PERFORMANCE REQUIREMENTS.
- REPORT ANY OBJECTIONABLE NOISE OR VIBRATION TO THE MECHANICAL CONTRACTOR AND ENGINEER IMMEDIATELY.
- OPERATE, TEST AND BALANCE ALL EQUIPMENT OVER THEIR ENTIRE DESIGN RANGE OF OPERATION INCLUDING MIN. AND MAX. FRESH AIR, RETURN AIR AND SUPPLY AIR. FULLY SIMULATE BOT HEATING AND COOLING CONDITIONS. RECORD SUFFICIENT DATA TO VERIFY COMPLIANCE WITH DESIGN REQUIREMENTS.
- SUBMIT THE FOLLOWING DATA FOR EQUIPMENT:
 - MOTORS
 - MANUFACTURER
 - MODEL AND SERIAL NUMBER
 - RATED AMPERAGE AND VOLTAGE
 - RATED HORSEPOWER
 - RATED RPM
 - CORRECTED FULL LOAD AMPERAGE
 - MEASURED AMPERAGE AND VOLTAGE
 - CALCULATED BHP
 - MEASURED RPM
 - SHEAVE SIZE, TYPE AND MANUFACTURER
 - FANS
 - MANUFACTURER
 - MODEL AND SERIAL NUMBER
 - RATED CFM
 - RATED RPM
 - RATED PRESSURES (SUCTION AND DISCHARGE)
 - MEASURED CFM
 - MEASURED RPM
 - MEASURED PRESSURES (SUCTION AND DISCHARGE)
 - PULLEY SIZE, TYPE AND MANUFACTURER
 - BELT SIZE AND QUANTITY

- ON COMPLETION OF THE TESTING, ADJUSTING AND BALANCING OF ALL EQUIPMENT, SUBMIT AN ELECTRONIC (PDF) COPY OF A FULL REPORT ON ALL TESTS, ADJUSTMENTS, AND BALANCING PERFORMED TO THE ENGINEER, INCLUDING THE FOLLOWING:
 - SUMMARY OF AIR SYSTEMS
 - TESTING METHODS AND INSTRUMENTATION
 - AIR SYSTEMS TESTING AND BALANCING DATA
 - DIAGRAMS SHOWING ALL PILOT TRAVERSE POINTS
 - ATTACHMENTS INCLUDING SYSTEMS SCHEMATICS WITH NUMBERED TERMINALS FOR REFERRING TO DATA ABOVE

- REPORT ANY DEFICIENCIES IN THE EQUIPMENT PERFORMANCE RESULTING IN DESIGN REQUIREMENTS BEING UNOBTAINABLE IMMEDIATELY TO THE ENGINEER PRIOR TO LEAVING SITE.

- INCLUDE FOR STARTUP, BALANCING AND COMMISSIONING OF ALL EQUIPMENT INSTALLED UNDER THIS SECTION.

- PROVIDE DUCTWORK AS INDICATED ON DRAWING. DUCTWORK SHALL BE FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH LATEST SMACNA STANDARDS AND SHALL BE MANUFACTURED OF GALVANIZED STEEL UNLESS SPECIFICALLY NOTED OTHERWISE. ALL DUCTWORK SHALL BE SEALED IN ACCORDANCE WITH SMACNA CLASS "A" REQUIREMENTS.

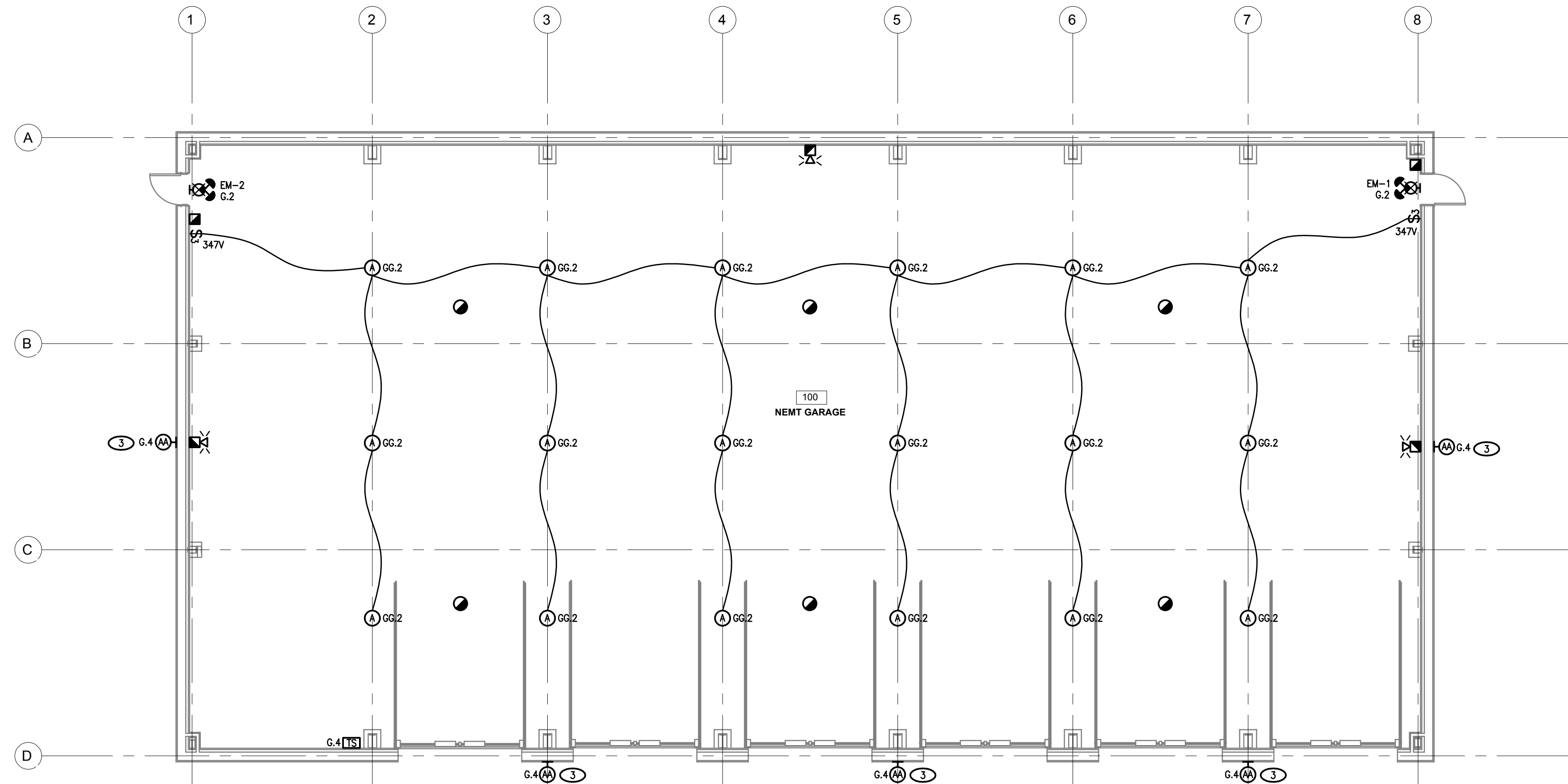
- PROVIDE ALL MOTORIZED DAMPERS. AT EXTERIOR WALLS OR ROOFS, DAMPERS SHALL BE PARALLEL BLADE, INSULATED BLADE, THERMALLY BROKEN FRAME, WITH LOW TEMPERATURE SILICONE BLADE AND FRAME SEALS, AMCA CLASS 1A LEAKAGE RATING. STANDARD OF ACCEPTANCE TAMCO SERIES 9000 BF. UNLESS NOTED OTHERWISE, ALL OTHER MOTORIZED DAMPERS SHALL BE OPPOSED BLADE, AIRFOIL BLADE, EPDM BLADE SEALS, SILICONE FRAME SEALS, AMCAL 3.00 CFM/SQ. FT. AMCA CERTIFIED AIR LEAKAGE. STANDARD OF ACCEPTANCE TAMCO SERIES 1000, RUSKIN, NAILOR.

- PROVIDE BACKDRAFT DAMPERS, EXTRUDED ALUMINUM CONSTRUCTION, SILICONE BLADE AND FRAME SEALS, 4.32 CFM/SQ. FT. AT 1" STATIC DIFFERENTIAL AMCA CERTIFIED AIR LEAKAGE. STANDARD OF ACCEPTANCE TAMCO SERIES 7000, NAILOR, RUSKIN.

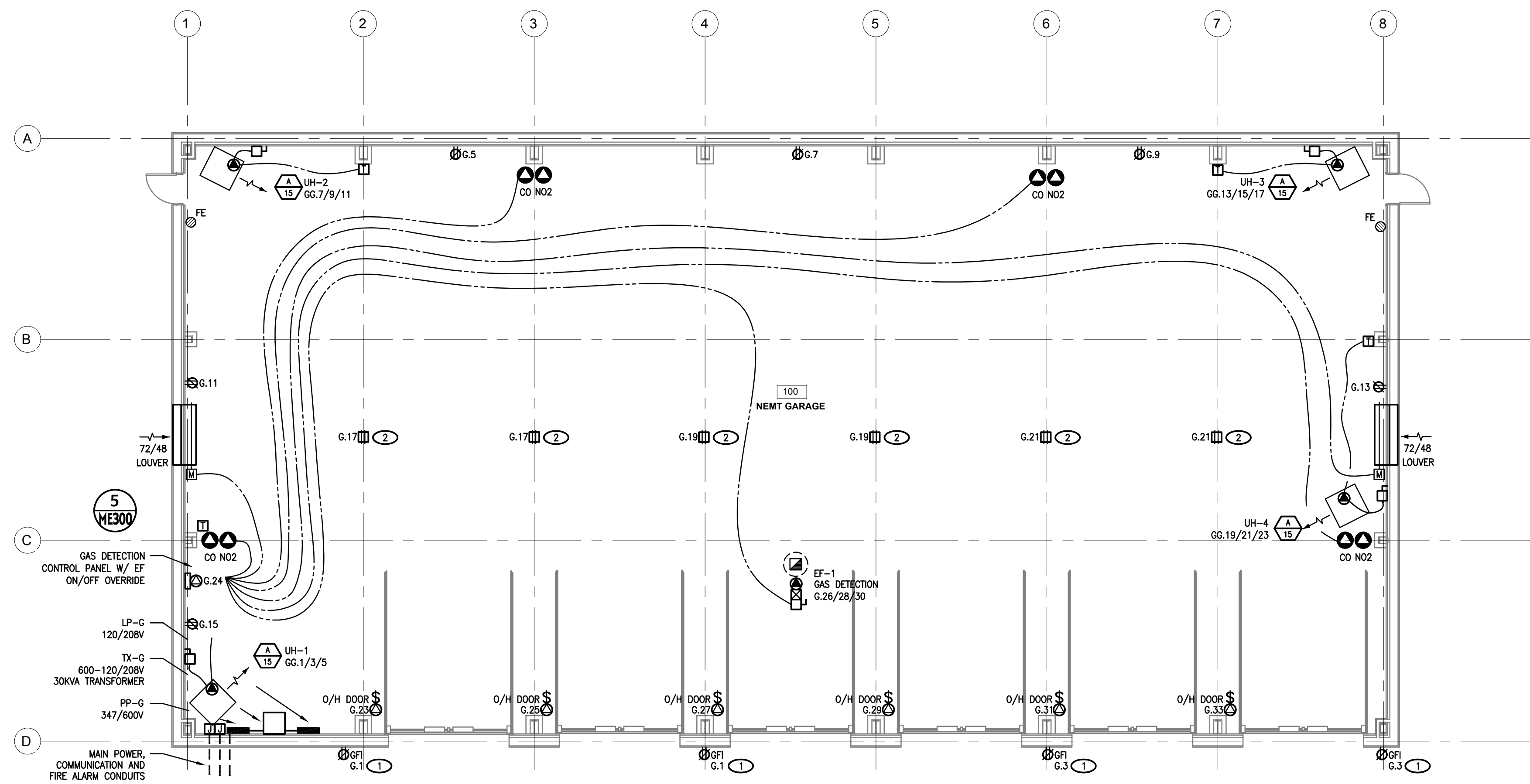
- PROVIDE ALUMINUM LOUVERS WHERE SHOWN. 4" STORM-PROOF BLADE C/W FLANGE FRAME AND BIRDSCREEN. STANDARD OF ACCEPTANCE VENTEX MODEL 2425, EH PRICE, NAILOR. LOUVER COLOUR SHALL BE APPROVED BY ARCHITECT. BLANK OFF LOUVERS WHERE SHOWN. FASTEN 16 GAUGE GALVANIZED SHEET METAL TO UNUSED LOUVERS AND UNUSED PORTIONS OF LOUVERS AND SEAL ALL AROUND TO PREVENT ENTRY OF AIR. EXTERNALLY INSULATE WITH 2 LAYERS OF 2", 3.0 LB/CU. FT. RIGID INSULATION. INNER INSULATION LAYER SHALL BE PLAIN FACED; OUTER LAYER SHALL BE FACED WITH FSK. (TOTAL INSULATION VALUE R=17.4). ALL INSULATION SHALL BE SUPPLIED AND INSTALLED ACCORDING TO THE THERMAL INSULATION ASSOCIATION OF CANADA STANDARDS. IN EQUIPMENT ROOMS AND OTHER EXPOSED AREAS, FINISH WITH CANVAS AND LAGGING CEMENT. SEAL EDGES OF INSULATION TO ENSURE NO INSULATING MATERIAL IS UNPROTECTED BY THE VAPOUR BARRIER.

DIVISION 01 - MECHANICAL GENERAL REQUIREMENTS

- PROVIDE ALL LABOUR, MATERIALS AND EQUIPMENT NECESSARY TO EXECUTE THE WORK SHOWN AND DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS. USE OF ANY FORM OF THE WORD "PROVIDE" REQUIRES FURNISHING OF LABOUR, MATERIALS AND SERVICES TO PROVIDE THE REFERENCED ITEM.
- THESE MECHANICAL GENERAL REQUIREMENTS SHALL BE READ IN CONJUNCTION WITH THE ALL OTHER DIVISION 01 SPECIFICATIONS ISSUED AS PART OF THIS CONTRACT.
- THIS SECTION SHALL APPLY TO DIVISIONS 21, 22, 23, AND 25.
- SHOULD ANY DISCREPANCY APPEAR BETWEEN THESE SPECIFICATIONS AND THE DRAWINGS, OR BETWEEN ONE PART OF THE SPECIFICATIONS AND ANOTHER, OR BETWEEN ONE LOCATION ON THE DRAWINGS AND ANOTHER, TO CAUSE DOUBT AS TO THE TRUE MEANING AND INTENT OF THE DRAWINGS AND SPECIFICATIONS, A RULING SHALL BE OBTAINED FROM THE CONSULTANT BEFORE SUBMITTING THE TENDER. IF THIS IS NOT DONE, IT WILL BE ASSUMED THAT THE MORE EXPENSIVE ALTERNATIVE HAS BEEN INCLUDED IN THE CONTRACT.
- ANY ERROR OR INCONSISTENCY IN THE DRAWINGS OR SPECIFICATIONS DISCOVERED AFTER AWARD OF CONTRACT MUST BE REPORTED TO THE CONSULTANT BEFORE COMMENCING WORK ON THE ITEM INVOLVED. THE OMISSION OR INCORRECT MENTION OF ANY WORK THAT IS ABSOLUTELY NECESSARY TO DELIVER COMPLETE, SAFE, AND OPERATIONAL SYSTEMS AT THE COMPLETION OF THE PROJECT DOES NOT RELIEVE THIS CONTRACTOR OF PROVIDING SUCH WORK. ADDITIONAL COSTS RESULTING FROM COMMENCEMENT OF WORK WITHOUT PRIOR RESOLUTION OF ERRORS OR OMISSIONS WILL NOT BE ACCEPTED.
- SUBMIT DIGITAL (PDF) COPY OF SHOP DRAWINGS FOR REVIEW COVERING MANUFACTURED ITEMS, I.E. FANS, STARTERS, CONTROLS, DAMPERS, PROJECT-SPECIFIC FIRESTOPPING SYSTEMS, ACCESS DOORS, ETC.
- PRIOR TO COMMENCING WORK, SUBMIT NAMES OF ALL TESTING, ADJUSTING, AND BALANCING SUBCONTRACTORS. SUBMIT ALSO PROOF OF FORMAL CERTIFICATION BY THE CERTIFYING BODIES LISTED IN OTHER SPECIFICATION DIVISIONS.
- WHERE ITEMS ARE SUBMITTED BY THE CONTRACTOR AND APPROVED AS EQUAL BY THE CONSULTANT, THE CONTRACTOR SHALL ENSURE THAT ALL MATERIALS, METHODS, TRADES, DIMENSIONS, CLEARANCES, AND WORK AFFECTED BY THE CHANGE IS COORDINATED AND ALTERED TO SUIT NEW ITEMS. APPROVED EQUALS SHALL NOT INCREASE COSTS OR SCHEDULE. APPROVED EQUAL CHANGES MUST BE FULLY COORDINATED WITH OTHER TRADES AND MATERIALS, AND REVIEWED BY THE CONSULTANT BEFORE COMMENCING WORK. REVISED WORK SHALL BE INTEGRATED INTO THE AS-BUILT DRAWINGS. THIS CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ANY FAILURE OF THE ALTERNATE/EQUAL TO MEET THE REQUIREMENTS OF THE SPECIFICATIONS. THE REVIEW AND ACCEPTANCE OF AN ALTERNATE/EQUAL BY THE CONSULTANT DOES NOT REMOVE OR CHANGE SUCH RESPONSIBILITY.
- MAINTAIN LIABILITY INSURANCE TO PROTECT OWNER AND THE CONTRACTOR FROM ANY AND ALL CLAIMS UNDER THE WORKER'S COMPENSATION ACT. SUBMIT WSIB CLEARANCE CERTIFICATE BEFORE COMMENCING WORK.
- ARRANGE FOR AND PAY ALL FEES FOR PERMITS, TESTS, CERTIFICATES OF INSPECTIONS, AND UTILITY CONNECTIONS. SUBMIT APPLICATIONS REQUIRING OWNER'S SIGNATURE BEFORE COMMENCING WORK.
- ALL EXISTING SERVICES MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. THIS CONTRACTOR TO PROVIDE ALL NECESSARY TEMPORARY LINES, ETC. SO AS TO CARRY OUT THE ABOVE SYSTEMS SHUT-DOWN REQUIRED TO EXECUTE THE WORK SHALL BE SCHEDULED AND APPROVED BY THE OWNER PRIOR TO COMMENCING.
- PROVIDE TEMPORARY BUILDINGS FOR MATERIAL STORAGE, SITE OFFICES, ETC. AS REQUIRED. COORDINATE AND PAY ALL COSTS FOR TEMPORARY POWER, SECURITY, OTHER SERVICES, AND INSURANCE. COVERAGE FOR DAMAGE OR THEY IS THE RESPONSIBILITY OF THIS CONTRACTOR.
- IDENTICAL EQUIPMENT AND MATERIALS SHALL BE OF SAME MANUFACTURER (VALVES, FIRE DAMPERS, ACCESS DOORS, ETC.) UNLESS PRIOR APPROVAL IS RECEIVED FROM THE ENGINEER.
- EXAMINE SITE, EXISTING SERVICES AND ALL DRAWINGS PRIOR TO SUBMITTING TENDERS. ADDITIONAL COSTS WILL NOT BE ALLOWED FOR FAILURE TO DO SO.
- THE DRAWINGS SHALL BE CONSIDERED DIAGRAMMATIC ONLY AND DO NOT SHOW EVERY STRUCTURAL AND ARCHITECTURAL DETAIL. TAKE ALL INFORMATION INVOLVING ACCURATE MEASUREMENTS FROM THE BUILDING SITE. IF DIMENSIONED ARCHITECTURAL DRAWINGS ARE AVAILABLE THEY MAY BE USED TO VERIFY SITE MEASUREMENTS.
- BE RESPONSIBLE FOR THE DETAILED LAYOUT OF WORK WITH RESPECT TO THE BUILDING STRUCTURE, CEILINGS AND ARCHITECTURAL FEATURES, AND TO OTHER PIPING, DUCTS, CONDUIT, ETC. IF REQUIRED IN CERTAIN SECTIONS, PRODUCE FIELD DRAWINGS TO SHOW THE RELATIVE POSITIONS OF VARIOUS SERVICES AND HAVE THESE APPROVED BEFORE PROCEEDING WITH THE WORK. MAKE GOOD ANY DAMAGE TO OWNER'S PROPERTY OR OTHER TRADES WORK CAUSED BY IMPROPERLY LOCATING OR CARRYING OUT OF WORK.
- LOCATION OF LOUVERS, EXHAUST FANS, AND OTHER SIMILAR ITEMS MAY BE ALTERED PROVIDED INFORMATION IS GIVEN PRIOR TO ROUGHING IN. NO EXTRA COSTS WILL BE APPROVED FOR EXTRA LABOUR AND MATERIALS FOR RELOCATING DRAINS, FIXTURES, AND EQUIPMENT UP TO 3 METERS (10 FEET) FROM THE ORIGINAL LOCATION, NOR WILL CREDITS BE ANTICIPATED WHERE THIS RELOCATION REDUCES MATERIAL AND LABOUR. OTHER CASES WILL BE CONSIDERED ON THEIR INDIVIDUAL MERITS.
- ALL CUTTING AND PATCHING FOR MECHANICAL WORK WILL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
- FIRESTOPPING AROUND ALL PENETRATIONS THROUGH RATED WALL OR FLOOR ASSEMBLIES (INCLUDING SMOKE-SEALING OF A NON-RATED WALL) SHALL ALSO BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. HIRE SPECIALIZED TRADES TO DO THIS WORK. PROVIDE ULC LISTED INFORMATION ON ALL FIRESTOPPING METHODS BEING USED AND MAINTAIN A SET OF LITERATURE ON EACH ULC ASSEMBLY ON SITE FOR REFERENCE BY TRADES. WHEN ARCHITECTURAL DRAWINGS ARE AVAILABLE USE THESE TO DETERMINE LOCATIONS AND RATINGS OF FIRE SEPARATIONS. IF NO ARCHITECTURAL DRAWINGS ARE AVAILABLE, OBTAIN INFORMATION DIRECTLY FROM THE ENGINEER IF NOT SPECIFICALLY NOTED ON DRAWINGS.
- SUPPLY, LOCATE, AND INSTALL ALL BASES, PADS, SUPPORTS, SLEEVES, CURBS, ETC. REQUIRED FOR THIS WORK.
- FLASHING OF ROOF PENETRATIONS SHALL BE BY ROOF TRADES. COUNTER-FLASHING BY THIS CONTRACTOR UNLESS OTHERWISE NOTED. HIRE CERTIFIED ROOF TRADES TO PERFORM ALL ROOFING WORK.
- CONTROL AND INTERLOCK WIRING FOR MECHANICAL SYSTEMS BY MECHANICAL CONTRACTOR (REGARDLESS OF VOLTAGE). CONTROL WIRING SHALL BE INSTALLED IN CONDUIT OR CABLE TRAY IN ACCORDANCE WITH THE WIRING METHODS SPECIFIED IN DIVISION 26. WIRING EXPOSED IN RETURN AIR PLENUMS (E.G. IN CABLE TRAY OR AT CONTROLLERS/VALVES/ACTUATORS) SHALL BE FT-4. HIRE CERTIFIED ELECTRICAL TRADESMEN TO PERFORM LINE VOLTAGE WORK.
- EQUIPMENT OR PIPING SHALL NOT BE SUPPORTED DIRECTLY FROM ROOF DECK WITHOUT PERMISSION FROM ENGINEER. PROVIDE NECESSARY STEEL TO TRANSFER LOAD TO STRUCTURAL MEMBERS. SUBMIT STEEL SHOP DRAWINGS WHERE REQUIRED OR REQUESTED BY THE ENGINEER. PROTECT STEEL FROM CORROSION WHERE EXPOSED TO WET OR HUMID CONDITIONS BY USING GALVANIZED MATERIAL, OR BY PAINTING WITH EPOXY-TYPE PAINT (COLOUR TO BE APPROVED BY ENGINEER).
- ACCURATE AND UP-TO-DATE "AS-BUILT" DRAWINGS SHALL BE KEPT ON-SITE AT ALL TIMES DURING CONSTRUCTION. SUBMIT FINAL COPIES BEFORE CERTIFICATE OF SUBSTANTIAL COMPLETION. ANY NEWLY INSTALLED BURIED SERVICES MUST BE DIMENSIONED FROM GRID-LINES OR COLUMNS.
- ALL SURFACES MUST BE LEFT CLEAN AND SMOOTH, READY FOR PAINTING BY GENERAL TRADES.
- IDENTIFY ALL PIPING, VALVES, AND DUCTWORK. USE STENCILS OR COLOUR CODED LABELS WITH SYSTEM DESCRIPTION AND DIRECTIONAL ARROWS. FOR VALVES, USE STAMPED - NUMBERED BRASS VALVE TAGS WITH BEADED CHAIN. VERIFY OWNER'S SERVICE IDENTIFICATION SYSTEM BEFORE COMMENCING WORK. NEW IDENTIFICATION SHALL FOLLOW EXISTING SYSTEMS, UNLESS ADVISED OTHERWISE BY OWNER OR ENGINEER.
- IDENTIFY ALL AIR HANDLERS, BOILERS, FANS, PUMPS, STARTERS, REMOTE CONTROL AND ALL OTHER EQUIPMENT BY AN ENGRAVED BLACK PLASTIC LAMACOD NAMEPLATE WITH WHITE CORE, FIRMLY AFFIXED WITH SCREWS TO EACH UNIT. NAMING CONVENTION/EQUIPMENT IDENTIFICATION TO FOLLOW DESIGN DRAWINGS, UNLESS ADVISED OTHERWISE BY OWNER OR ENGINEER.
- REMOVE FROM THE PREMISES ALL TOOLS, GARBAGE, SURPLUS AND WASTE MATERIALS RESULTING FROM MECHANICAL WORK. CLEAN ALL EQUIPMENT AND AREAS AROUND MECHANICAL EQUIPMENT, AND LEAVE ALL ITEMS IN PERFECT ORDER READY FOR OPERATION.
- BEFORE FINAL PAYMENT IS MADE, THE MECHANICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP SUPPLIED BY HIM AND HIS SUBCONTRACTORS IN THE PERFORMANCE OF THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE AND SHALL, WHEN CALLED UPON, MAKE GOOD WITHOUT FURTHER COST TO THE OWNER ANY AND ALL DEFECTS AS MAY APPEAR WITHIN THIS PERIOD.
- INSTRUCT OWNER'S REPRESENTATIVE IN SYSTEM AND EQUIPMENT OPERATION AND MAINTENANCE AND PROVIDE ELECTRONIC (PDF) VERSIONS OF OPERATING AND MAINTENANCE MANUALS, STANDARDS AND EXTENDED WARRANTY DOCUMENTS, INSPECTION AND TEST CERTIFICATES, COPIES OF SHOP DRAWINGS OF INSTALLED EQUIPMENT AND AS-BUILT DRAWINGS.
- INCLUDE WITH OPERATION AND MAINTENANCE MANUALS ALL SYSTEM AND EQUIPMENT TESTING CERTIFICATES, BALANCING REPORTS, EQUIPMENT START-UP SHEETS, AND EQUIPMENT MANUFACTURER'S COMPLETED COMMISSIONING DOCUMENTATION.



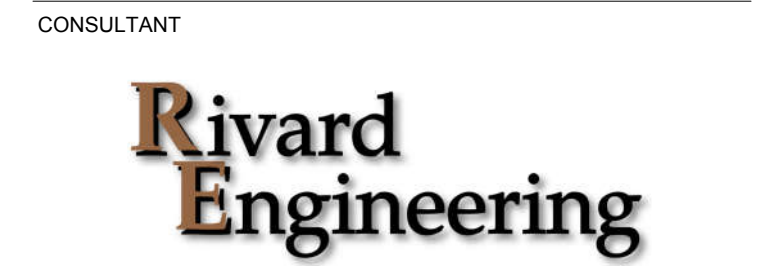
1 LIGHTING AND FIRE ALARM PLAN
ME200 1/100



2 POWER/COMMUNICATIONS/MECHANICAL PLAN
ME200 1/100

- CONSTRUCTION NOTES:**
- 1 PROVIDE 120V, 20A GFI RECEPTACLE IN WEATHERPROOF BOX. PROVIDE RAINTIGHT EXTRA DUTY WHILE IN USE COVER C/W LOCKABLE COVER. LEVITON CAT# IUM1V-GY
 - 2 PROVIDE AND INSTALL RECEPTACLE ON CEILING FOR CABLE REEL CONNECTION AND INSTALL/CONNECT TO NEW 20A 1P BREAKER IN LP-G. PROVIDE AND INSTALL NEW CABLE REEL IN THIS LOCATION. CABLE REEL SHALL BE HUBBELL CAT. #HBL135123C20Y OR APPROVED EQUAL.
 - 3 EXTERIOR LIGHTING TO BE CONTROLLED BY TIMECLOCK. SEE DETAIL ON ME300.

ARCHITECTURE49
1427 RIVERSIDE DRIVE, SUITE 2 | TRIMMIS, ON, CANADA P4R 1M8
Phone: 705-267-6438 | trimmis@architecture49.com | architecture49.com



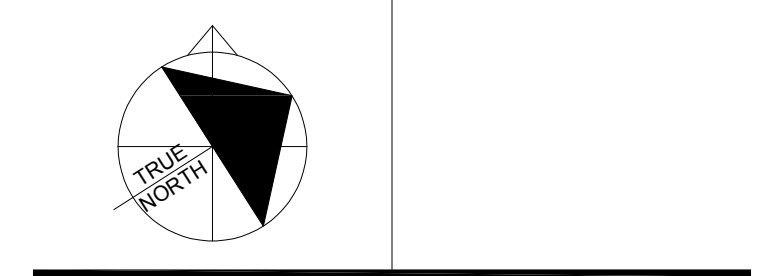
CONSULTANT
NORTH ENGINEERING North Engineering Inc.
1040 Lorne St. Unit 6
Sudbury, Ontario
P3C 4R9
705-885-1806



COPYRIGHT NOTICE
THIS DRAWING AND DESIGN IS COPYRIGHT PROTECTED.
DO NOT REPRODUCE OR REVISE WITHOUT WRITTEN PERMISSION BY ARCHITECTURE49 INC.



THIS BAR IS 25mm LONG WHEN PLOTTED AT CORRECT SCALE. DO NOT SCALE DRAWINGS. 25mm



PROJECT NO.: 24078 CONTRACT NO.
DRAWN BY: KAF CHECKED BY: BB APPROVED BY: SC
KEYPLAN:

0 2024/10/04 ISSUED FOR TENDER
NO. DATE ISSUED
PROJECT

BRIGHTSHORES - NEMT

DRAWING NO.

**MECHANICAL/
ELECTRICAL
PLANS**

DRAWING NO. **ME-200**

LIGHTING FIXTURE SCHEDULE			
TYPE	DESCRIPTION	MANUFACTURER/CAT.#	
AA	RECTANGULAR EXTERIOR WALL MOUNT FIXTURE WITH BLACK FINISH, BUILT IN SURGE PROTECTOR, FORWARD THROW DISTRIBUTION, WET LOCATION AND IP66 LISTED. MOUNT AT 12FT AFF.	LITHONIA CAT. # WPX2-LED-P2-40K-MVOLT-DBLXD SERIES OR APPROVED EQUAL	
A	ROUND HIGH BAY SUSPENDED FIXTURE WITH CAST HOUSING AND POLYCARBONATE LENS. PROVIDED WITH 6FT FACTORY CORD, BLACK FIXTURE FINISH, BUILT IN SURGE SUPPRESSION. SUSPENDED AT 13FT AFF.	LITHONIA CAT. # CPRB-AL014L-UVOLT-SMW9-80CRI-DBL OR APPROVED EQUAL	
SUBMIT SHOP DRAWINGS FOR EACH LIGHTING FIXTURE TYPE. SUBMIT SHOP DRAWINGS FOR OTHER ALTERNATES TO THE CONSULTANT A MINIMUM OF 5 BUSINESS DAYS BEFORE TENDER CLOSE FOR REVIEW.			

EMERGENCY LIGHT BATTERY UNIT SCHEDULE				
UNIT	LOCATION	# HEADS (6 WATTS)	# SIGNS (2 WATTS)	CAPACITY (W)
EM-1	GARAGE 100	2	1	14
EM-2	GARAGE 100	2	1	14

EMERGENCY AND EXIT LIGHT SCHEDULE

EXIT SIGN COMBOS
COMBINATION UNITS SHALL BE FOR 30 MINUTE OPERATION. THE UNIT SHALL OPERATE ON 120 VOLT SINGLE PHASE WITH TWO BUILT-IN 12V, 6W LED TYPE W/ M16 LIGHTING HEADS. THE UNIT SHALL BE MAINTENANCE FREE FOR 10 YEARS. THE CHARGER SHALL BE COMPLETELY AUTOMATIC, SOLID STATE TYPE WITH BROWN OUT FEATURE, CAPABLE OF FULLY RECHARGING BATTERIES IN 24 HOURS. TRANSFER DEVICE SHALL AUTOMATICALLY SWITCH LOAD ON AT POWER FAILURE AND OFF UPON RETURN OF NORMAL POWER. UNIT SHALL HAVE LOW VOLTAGE DISCONNECT FEATURE. THE LED SIGN SHALL HAVE INDIRECT ILLUMINATION WITH RUNNING MAN SYMBOL, SINGLE OR DOUBLE FACE AND DIRECTIONAL ARROWS AS SHOWN ON DRAWINGS.

STANPRO CAT# PRMXXL SERIES OR APPROVED EQUAL.

EQUIPMENT OF EQUIVALENT SPECIFICATIONS MANUFACTURED BY AMLITE, LUMACELL, EMERLITE OR BEHELLI SHALL BE CONSIDERED APPROVED EQUAL.

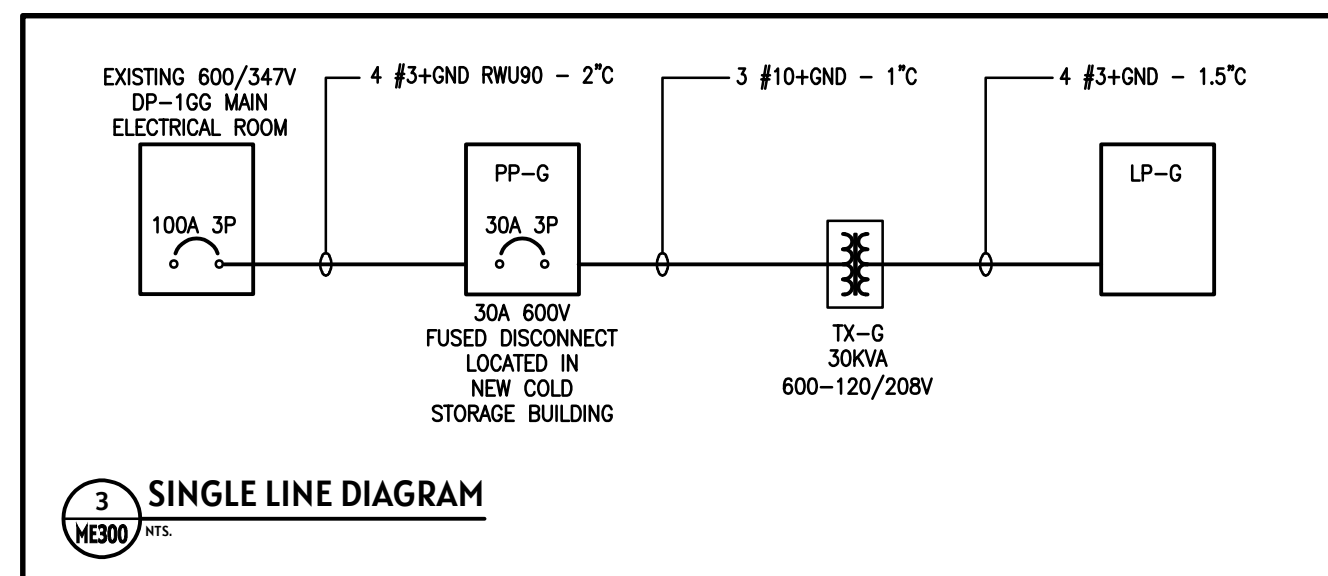
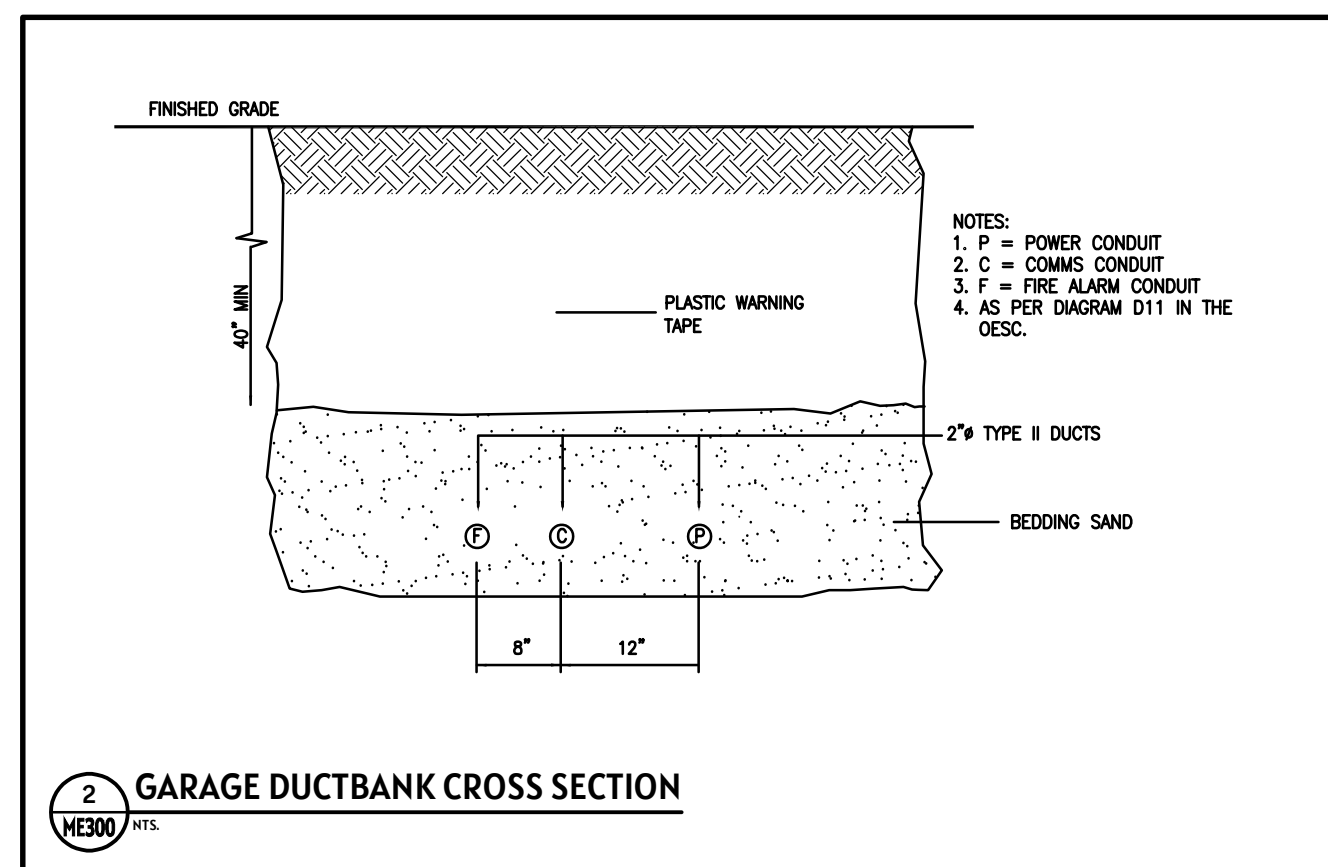
NOTE:

1. WIRING FOR EMERGENCY LIGHTING SHALL CONFORM TO SECTION 46 OF THE O.E.S.C.
2. WIRING SIZE SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS BUT IN ANY CASE SHALL NOT BE LESS THAN #10 AWG FOR LOW VOLTAGE WIRING.

EXTERIOR LIGHTING TIME CLOCK

NOTES:

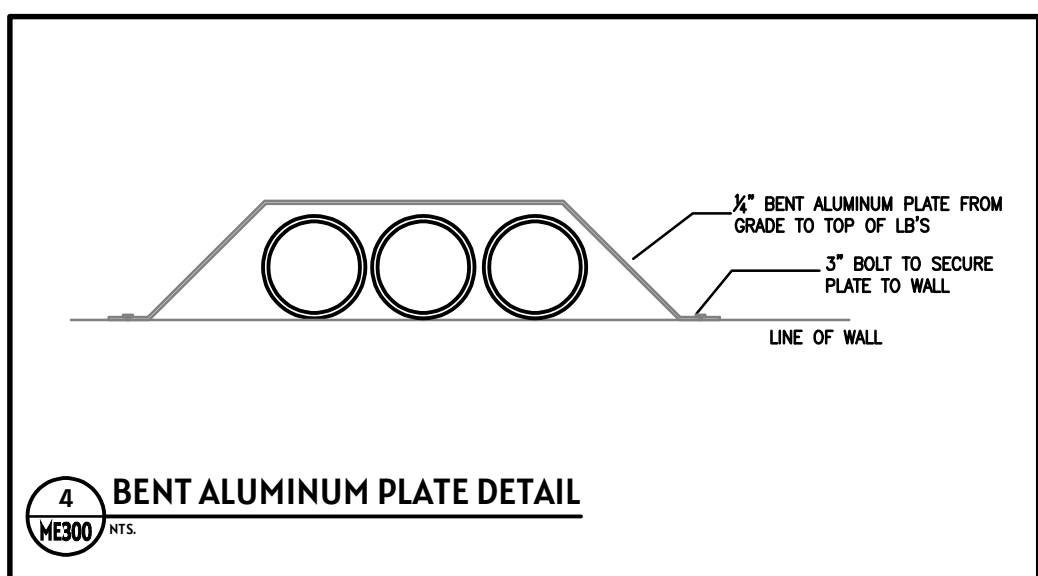
1. TIME CLOCK SHALL BE A PROGRAMMABLE ASTRONOMICAL TYPE
2. TIME CLOCK SHALL FIT IN A RECESSED WALLBOX
3. PROVIDE LARGE CAPACITY WALL BOX
4. PROVIDE ENGRAVED STAINLESS STEEL COVER PLATE WHICH READS "EXTERIOR LIGHTING TIME CLOCK"
5. TIME CLOCK SHALL BE SET TO TURN ON FIXTURES FROM SUN-SET TO SUN-RISE
6. TIME CLOCK SHALL AUTOMATICALLY COMPENSATE FOR DAYLIGHT SAVINGS TIME
7. TIME CLOCK SHALL HAVE BATTERY TO SAVE PROGRAMMING IN CASE OF POWER FAILURE.
8. SWITCH SHALL BE WHITE.
9. TIME CLOCK BASED ON WATTSTOPPER CAT# RT-200-W



PP-GG		TYPE: PRL2		LOCATION: NEMT GARAGE		
347/600V, 3ø, 4W		MANS: 100 AMPS SURFACE				
LOAD	DESCRIPTION	BREAKER	100A 3P MAIN BREAKER	BREAKER	DESCRIPTION	LOAD
15,000	UNIT HEATER - 1	20A	1	2	15A	2628
15,000	UNIT HEATER - 2	20A	3	4	15A	SPARE
15,000	UNIT HEATER - 3	20A	5	6	15A	SPARE
15,000	UNIT HEATER - 4	20A	7	8	15A	SPARE
-	SPARE	20A	9	10	15A	SPARE
-	SPARE	20A	11	12	15A	SPARE
-	SPARE	20A	13	14	15A	SPARE
-	SPARE	20A	15	16	15A	SPARE
-	SPARE	20A	17	18	15A	SPARE
-	SPARE	20A	19	20	15A	SPARE
-	SPARE	20A	21	22	15A	SPARE
-	SPARE	20A	23	24	15A	SPARE
-	SPARE	20A	25	26	15A	SPARE
-	SPARE	20A	27	28	15A	SPARE
-	SPARE	20A	29	30	15A	SPARE
TOTAL CONNECTED LOAD: - KVA						30,000

LP-G		TYPE: PRL1		LOCATION: NEMT GARAGE		
120/208V, 3ø, 4W		MANS: 225 AMPS SURFACE				
LOAD	DESCRIPTION	BREAKER	MLO	BREAKER	DESCRIPTION	LOAD
500	EXTERIOR RECEPTACLES	20A	1	2	15A	144
500	EXTERIOR RECEPTACLES	20A	3	4	15A	235
500	INTERIOR RECEPTACLE - BAY #1&2	20A	5	6	15A	SPARE
500	INTERIOR RECEPTACLE - BAY #3&4	20A	7	8	15A	SPARE
500	INTERIOR RECEPTACLE - BAY #5&6	20A	9	10	15A	SPARE
500	INTERIOR RECEPTACLE - CONV.	20A	11	12	15A	SPARE
500	INTERIOR RECEPTACLE - CONV.	20A	13	14	15A	SPARE
500	INTERIOR RECEPTACLE - CONV.	20A	15	16	15A	SPARE
500	INTERIOR RECEPTACLE - CORD #1	20A	17	18	20A	SPARE
500	INTERIOR RECEPTACLE - CORD #2	20A	19	20	20A	SPARE
500	INTERIOR RECEPTACLE - CORD #3	20A	21	22	20A	SPARE
1000	OVERHEAD DOOR OPERATOR	20A	23	24	15A	GAS DETECTION CONTROL PANEL
1000	OVERHEAD DOOR OPERATOR	20A	25	26	15A	SPARE
1000	OVERHEAD DOOR OPERATOR	20A	27	28	35A	EF-1 - GAS DETECTION
1000	OVERHEAD DOOR OPERATOR	20A	29	30	15A	SPARE
1000	OVERHEAD DOOR OPERATOR	20A	31	32	20A	SPARE
1000	OVERHEAD DOOR OPERATOR	20A	33	34	20A	SPARE
-	OVERHEAD DOOR OPERATOR	20A	35	36	20A	SPARE
-	OVERHEAD DOOR OPERATOR	20A	37	38	15A	SPARE
-	OVERHEAD DOOR OPERATOR	20A	39	40	15A	SPARE
-	OVERHEAD DOOR OPERATOR	20A	41	42	15A	SPARE
TOTAL CONNECTED LOAD: - KVA						6,300

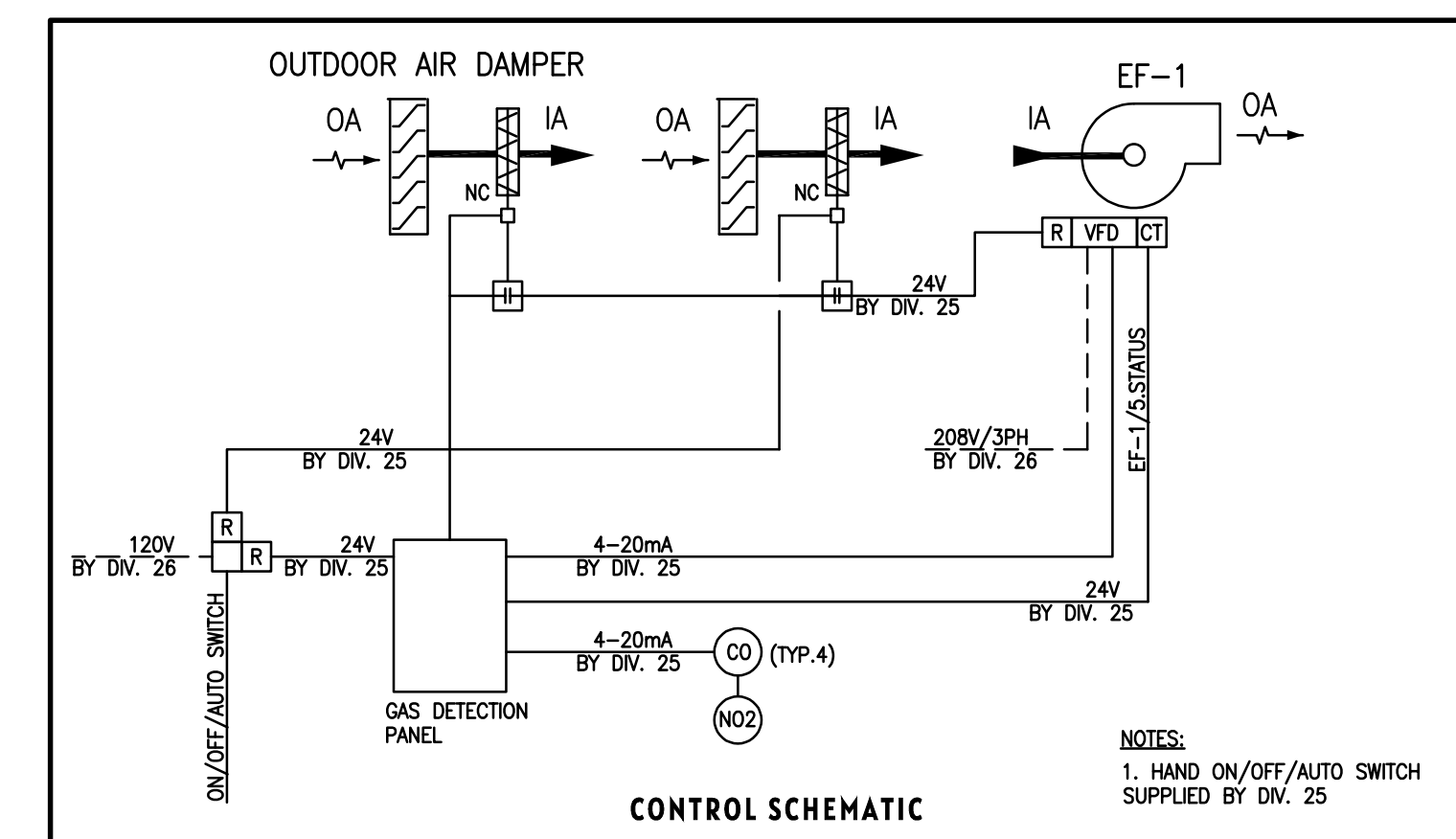
ELECTRIC HEATER SCHEDULE			
TYPE	VOLTAGE	DESCRIPTION	MANUFACTURER/CAT.#
A	600V 3PH	STEEL SUSPENDED UNIT HEATER, ALMOND IN COLOUR AND CONTROLLED VIA LOW VOLTAGE THERMOSTAT. PROVIDE AND INSTALL THERMOSTAT AND MOUNTING BRACKET FOR MOUNTING ON PRE FAB BUILDING STRUCTURE AT 12' AFF. MAINTAIN ALL REQUIRED CLEARANCES.	BASED ON OUELLET CAT. # OAS-RT SERIES OR APPROVED EQUAL



FAN SCHEDULE									
TAG	MAKE-MODEL	LOCATION	CFM	SP	POWER	VOLTAGE	RPM	WEIGHT (LBS)	REMARKS
EF-1	GREENHECK G-300-C-38-VFD OR APPROVED EQUAL BY EH PRICE	ROOF MOUNTED	11,704	0.25"	5 HP	208/3/60	860	320	ROOF MOUNTED DOWNBLAST DIRECT DRIVE FAN, GRAVITY BACK DRAFT DAMPER, AND VARI-GREEN DRIVE VFD MOTOR C/W 4-20mA SPEED INPUT AND 18" SLOPED ROOF CURB (CHECK ROOF CONSTRUCTION). CONTROL VIA GAS DETECTION SYSTEM. INTERLOCKED THROUGH OUTDOOR AIR DAMPER END SWITCH.

PLUMBING FIXTURE SCHEDULE			
(REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS)			
TAG	TYPE	MAKE MODEL	DESCRIPTION
FE	FIRE EXTINGUISHER	FIXTURE: WILSON AND COUSINS ABC-050E	5LB MULTI PURPOSE TYPE FIRE EXTINGUISHER COMPLETE WITH WALL HANGER BRACKET

GAS DETECTION SYSTEM SCHEDULE		
TYPE	MAKE MODEL	DESCRIPTION
CONTROLLER	QEL M-CONTROLLER	MULTI CHANNEL CONTROLLER AND ALARM UNIT, C/W 32 REMOTE DIGITAL QEL TRANSMITTERS/SENSOR, 8 ANALOG TRANSMITTERS/SENSORS, THREE STANDARD DOT RELAYS, RELAY CONFIGURATIONS INCLUDE VOTING, AVERAGING, DELAY, NORMALLY/NOT-NORMALLY ENERGIZING AND LATCHING, AUDIBLE ALARM C/W THREE BUZZER SETTINGS, CONTINUOUS, INTERMITTENT AND DOUBLE-TAP. DIGITAL DISPLAY READOUT FOR PARAMETER VALUES C/W KEYPAD, LED STATUS FOR RELAYS, HUSH MODE, & FAULT.
SENSORS	QEL QTS-6000 TOXIC TRANSMITTER/SENSOR	ELECTROMECHANICAL GAS TRANSMITTER/SENSOR, 24V POWER, 4-20mA OUTPUT, SUITABLE FOR DETECTION CO & NO2. REFER TO PLAN DRAWINGS FOR LOCATIONS, QUANTITY AND TYPE.



CONTROL SEQUENCE

ON/OFF/AUTO
PROVIDE AN ON/OFF/AUTO SWITCH.
ON - THE OUTDOOR AIR DAMPERS SHALL OPEN, THE SYSTEM SHALL ENERGIZE THE EF-1 VFD TO 100%. EF-1 VFD POWER RELAY INTERLOCKED THROUGH OUTDOOR AIR DAMPER END SWITCH.
OFF - THE SYSTEM SHALL CLOSE BOTH OUTDOOR AIR DAMPERS. EF-1 VFD'S ARE OFF.
AUTO - THE SYSTEM SHALL FOLLOW THE SEQUENCE 'STANDARD VENTILATION, CO DETECTION, NO2 DETECTION, & ALARMS'

STANDARD VENTILATION
DURING NORMAL OPERATION, THE QEL M-CONTROLLER SHALL SIGNAL THE MOTORIZED OUTDOOR AIR DAMPERS TO OPEN & THE EXHAUST FAN EF-1 VFD SHALL BE ENERGIZED TO 50%. EF-1 VFD POWER INTERLOCKED THROUGH OUTDOOR AIR DAMPER END SWITCH.

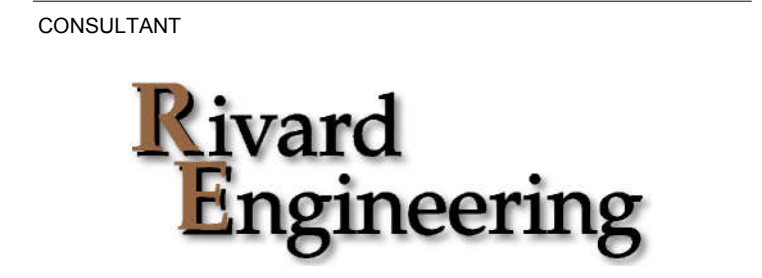
CO DETECTION
THE QEL M-CONTROLLER SHALL MONITOR THE CO PPM AT EACH SENSOR. WHEN THE CO PPM EXCEEDS 5 PPM, THE M-CONTROLLER SHALL ENERGIZE THE EF-1 VFD TO 100%.

NO2 DETECTION
THE QEL M-CONTROLLER SHALL MONITOR THE NO2 PPM AT EACH SENSOR. WHEN THE NO2 PPM EXCEEDS 1 PPM, THE M-CONTROLLER SHALL ENERGIZE THE EF-1 VFD TO 100%.

ALARMS
AN AUDIBLE ALARM SHALL BE GENERATED IF THE CO PPM EXCEEDS 10 PPM FOR A PERIOD OF 5 MIN.
AN AUDIBLE ALARM SHALL BE GENERATED IF THE NO2 PPM EXCEEDS 3 PPM FOR A PERIOD OF 5 MIN.
AN AUDIBLE ALARM SHALL BE GENERATED IF THE M-CONTROLLER SIGNALS TO ENERGIZE EF-1 VFD AND DOES NOT RECEIVE A STATUS NOTIFICATION.

5 GAS DETECTION SYSTEM

ARCHITECTURE49
1427 RIVERSIDE DRIVE, SUITE 211 TRIMMIS, ON, CANADA P4R 1A8
Phone: 705-267-6438 | trimmis@architecture49.com | architecture49.com



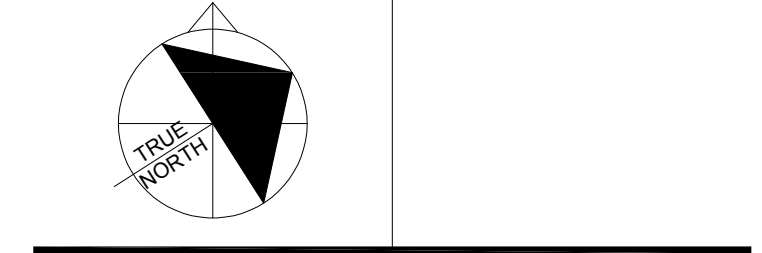
CONSULTANT
North Engineering Inc.
1040 Lorne St. Unit 6
Sudbury, Ontario
P3C 4R9
705-885-1806



COPYRIGHT NOTICE
THIS DRAWING AND DESIGN IS COPYRIGHT PROTECTED. DO NOT REPRODUCE OR REVISE WITHOUT WRITTEN PERMISSION BY ARCHITECTURE49 INC.



THIS BAR IS 25mm LONG WHEN PLOTTED AT CORRECT SCALE. DO NOT SCALE DRAWINGS.
NORTH ARROW. DIGITAL REFERENCE.



PROJECT NO.: 24078 CONTRACT NO.
DRAWN BY: KAF CHECKED BY: BB APPROVED BY: SC
KEYPLAN:

0 2024/10/04 ISSUED FOR TENDER
NO. DATE ISSUED
PROJECT

BRIGHTSHORES - NEMT

DRAWING TITLE

MECHANICAL/ELECTRICAL DETAILS

DRAWING NO. **ME-300**