

1.	COMPLY WITH THE REQUIREMENTS OF THE INSTRUCTION TO BIDDERS, THE GENERAL CONDITIONS OF THE CONTRACT AND THE SUPPLEMENTARY GENERAL CONDITIONS INCLUDED IN THE TENDER DOCUMENTS.
2.	ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND BY-LAWS AND BE INSTALLED BY WORKMEN SKILLED IN THAT PARTICULAR PORTION OF THE CONTRACT.
3.	ANY CONFLICT OR QUESTIONS THAT ARISE IN RELATION TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DESIGN DURING TENDER PERIOD SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. IF THIS PROCEDURE IS NOT FOLLOWED, REWORKING AND MODIFICATION AS REQUIRED TO COMPLETE THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4.	GIVE ALL NOTICES, OBTAIN ALL NECESSARY PERMITS AND PAY ALL APPLICABLE FEES AND INSPECTOR COSTS AND DELIVER TO ENGINEER ALL NECESSARY FINAL CERTIFICATES OF INSPECTION AND APPROVAL WHICH MAY BE REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER WORK, AS EVIDENCE THAT WORK OF ALL GOVERNING AUTHORITIES, BEFORE FINAL CERTIFICATE OF PAYMENT MAY BE CONSIDERED DUE. FURNISH COPIES OF ALL DRAWINGS AS MAY BE REQUIRED TO COMPLETE WITH ABOVE. NOTIFY INSPECTOR AUTHORITY IN SUFFICIENT TIME FOR THEM TO INSPECT WORK.
5.	EXAMINE SITE AND LOCAL CONDITIONS AFFECTING WORK UNDER THIS DIVISION TO ENSURE THAT WORK CARRIED OUT WITHOUT CHANGES TO DRAWINGS, NO ALLOWANCE WILL BE MADE LATER FOR ANY EXPENSE INCURRED THROUGH FAILURE TO MAKE THIS EXAMINATION. START OF WORK WILL BE DEEMED EVIDENCE OF ACCEPTANCE OF, AND SATISFACTION WITH, EXISTING CONDITIONS.
6.	GUARANTEE ALL WORK FOR 12 MONTHS FROM DATE OF ACCEPTANCE.
7.	PROTECTION: ENSURE THAT ALL PRECAUTIONS ARE TAKEN TO PROTECT ALL PERSONNEL FROM HAZARDS DURING THE WORK. PROTECT ALL EQUIPMENT FROM DAMAGE FROM ANY CAUSE INCLUDING WEATHER.
8.	MATERIALS: USE ONLY NEW MATERIALS, FULLY CSA APPROVED FOR USE AS INSTALLED AND TO MEET THIS SPECIFICATION IN ALL RESPECTS.
9.	CUTTING AND DRILLING: HOLES SHALL NOT BE CUT IN STRUCTURAL MEMBERS WITHOUT THE APPROVAL OF THE ENGINEER. CUTTING TORCHES SHALL NOT BE USED FOR MAKING HOLES. PATCH ALL HOLES THROUGH SLABS AND FIRE SEPARATIONS WITH FIRE STOP CAULKING.
10.	GROUNDING: GROUND ALL EQUIPMENT WITH APPROVED FITTINGS AND GROUND CONDUCTORS OF AMPLE CAPACITY AS REQUIRED BY THE CSA ELECTRICAL CODE. ALL GROUND CONDUCTORS SHALL HAVE PERMANENTLY ATTACHED GREEN TAPE 3/4" WIDE AT EACH END. ALL GROUND WIRING SHALL BE INSULATED, IN CONDUITS, PROVIDE GROUND CONDUCTOR IN ALL CONDUITS.
11.	CLEAN UP: DURING THE COURSE OF CONSTRUCTION AND UPON COMPLETION, REMOVE ALL RUBBISH AND WASTE RESULTING FROM THIS WORK, TO THE SATISFACTION OF THE ENGINEER. CHECK, CLEAN AND REPAIR WHERE NECESSARY. ALL ELECTRICAL EQUIPMENT AND LEAVE IN A FIRST CLASS CONDITION.
12.	THE WORK AS COVERED BY THESE SPECIFICATIONS AND PLANS IS INTENDED TO COMPLY EXACTLY WITH THE LATEST RULES AND REGULATIONS OF THE INSPECTION AUTHORITIES, AND THESE RULES ARE TO BE CONSIDERED AN INTEGRAL PART OF THESE SPECIFICATIONS. IN CASE OF CONFLICT, ANY RULING BY THE INSPECTION AUTHORITY SHALL BE FINAL. ALL CHANGES AND ALTERATIONS TO THE CONTRACTOR'S WORK REQUIRED BY AN AUTHORIZED INSPECTOR OR ANY AUTHORITY HAVING JURISDICTION SHALL BE CARRIED OUT AND NOT AT THE EXPENSE OF THE OWNER.
13.	MANUFACTURERS' INSTRUCTIONS REGARDING THE HANDLING, INSTALLING AND TESTING OF EQUIPMENT SPECIFIED HEREIN SHALL BE CONSIDERED PART OF THIS SPECIFICATION.
14.	CUTTING AND PATCHING: IT SHALL BE THE RESPONSIBILITY OF THIS DIVISION TO CARRY OUT ALL REQUIRED CUTTING AND PATCHING FOR COMPLETION OF THIS PORTION OF THE CONTRACT. PATCHED SURFACES ARE TO BE PRIME FINISHED READY FOR FINAL COVERING BY OTHERS.
15.	WIRING AND RACEWAYS: - ALL WIRING SHALL BE COPPER RW90 #12 CONDUCTOR MINIMUM. - ALL NEW RACEWAYS SHALL BE EMT CONDUIT, 3/4", CONCEALED UNLESS OTHERWISE INDICATED.
16.	DEVICES, SWITCHES AND RECEPTACLES TO BE COMMERCIAL GRADE WITH COVER PLATES TO CONFORM WITH ARCHITECTURAL DRAWINGS UNLESS SPECIFIED OTHERWISE.
17.	LIGHTING FIXTURES: PROVIDE NEW LIGHTING FIXTURES, COMPLETE WITH LAMPS AS INDICATED IN LIGHT FIXTURE LIST, WHERE INDICATED.
18.	FIXTURE INSTALLATION: DO NOT MOUNT FIXTURES ABOVE PIPES, DUCTS OR EQUIPMENT. CHECK LAYOUTS OF WORK BY OTHER TRADES.

19.	SHOP DRAWINGS: PROVIDE SIX (6) COPIES OF SHOP DRAWINGS FOR THE FOLLOWING EQUIPMENT: - LIGHT FIXTURES - PANELBOARDS - TRANSFORMERS - SAFETY/DISCONNECT SWITCHES - HEATERS - TELEPHONE ACCESS PANEL AND DEVICES 20. RECORD DRAWINGS: PROVIDE A SET OF MARK-UP "AS-BUILT" PRINTS FOR RECORD PURPOSES, INDICATING WIRING DIAGRAMS, WIRING ROUTES, CIRCUITS ETC. 21. PROVIDE BROTHER P-TOUCH LABELS, INDICATING CIRCUIT AND PANEL AT ALL EQUIPMENT AND JUNCTION BOXES. 22. REMOVE ALL REDUNDANT MATERIALS, CONDUITS AND WIRING TO SOURCE OF SUPPLY OF MATERIALS UNLESS OTHERWISE INDICATED. 23. CONFIRM FAULT LEVEL AT FACILITY BEFORE ORDERING EQUIPMENT AND ADJUST SHORT CIRCUIT RATING AS REQUIRED. 24. ALL SURFACE ELECTRICAL PANELS, SPLITTERS ETC. TO BE INSTALLED ON PLYWOOD BACKBOARDS//WITH DRYPALL COVER. 25. CONFIRM LOADS OF ALL EQUIPMENT SUPPLIED BY OTHERS BY REVIEWING APPROVED SHOP DRAWINGS OR OTHERWISE BEFORE PROCEEDING.
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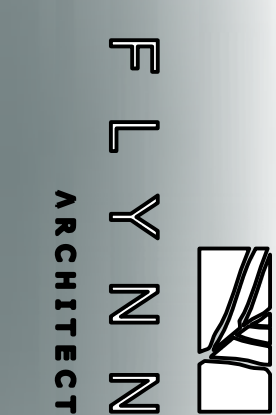
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1.	MECHANICALLY HELD CONTROL COIL TO MATCH EXISTING SYSTEMS, VOLTAGE AS INDICATED. CSA 1 ENCLOSURE, SIZE AS INDICATED
2.	TESTING AND COMMISSIONING
3.	1 CONFIRM INSULATION RESISTANCE AND CONTINUITY OF ALL WIRING 2 PROGRAM TIME CLOCK TO ENGINEERS REQUIREMENTS
4.	RECEPTACLE COLOUR CODE: DEVICE: COVERPLATE: NORMAL RECEPTACLE WHITE STAINLESS STEEL WALL LIGHT SWITCH CODE: DEVICE: COVERPLATE: WHITE STAINLESS STEEL
5.	CLOUR COODING COLOUR CODE CONDUITS AND BOXES. COPPER BUS UNLESS SPECIFIED OTHERWISE. 8 TRIM WITH CONCEALED FRONT BOLTS AND HINGES. 14 GAUGE UP TO TO 24 CIRCUIT, 12 GAUGE FOR LARGER PANELS. 9 DISTRIBUTION PANELS SHALL BE MINIMUM 12 GAUGE CONSTRUCTION. 10 PROVIDE CONDUITS FOR ALL PANELBOARD FEEDERS AND CONDUIT FOR BRANCH CIRCUIT WIRING FROM PANELBOARD UP TO CEILING LEVEL UNLESS SPECIFIED OTHERWISE. TERMINATE CONDUITS LOCATED IN CEILING LEVEL IN JUNCTION BOX.
6.	MOULDED CASE CIRCUIT BREAKERS: 1. BOLT-ON MOULDED CASE CIRCUIT BREAKER. AUTOMATIC OPERATION WITH MANUAL AND COMPENSATION FOR 40°C AMBIENT 2. COMMON-TRIP BREAKERS, WITH SINGLE HANDLE FOR MULTI-POLE APPLICATIONS.

1.	INTEGRAL THERMOSTAT FOR WALL MOUNT, REMOVE FOR CEILING MOUNT
2.	WESTCON FA SERIES OR EQUAL
3.	PROVIDE ADAPTER KIT WHERE RECESSED SHOWN BUT WALL TOO SHALLOW TO ALLOW FULL RECESS
4.	COMMUNICATIONS
5.	1 PROVIDE OUTLET BOXES AND OUTLET PLATES FOR ALL TELEPHONE, DATA AND MAJOR SWITCHING COMPONENTS TO HAVE CONTINUOUS CURRENT RATING TO MATCH MAJOR SWITCHING COMPONENTS. BUSBARS AND MAIN CONNECTIONS: 99.50% CONDUCTIVITY COPPER. PROVISION FOR EXTENSION OF BUS ON BOTH SIDES OF UNIT WITHOUT NEED FOR FURTHER DRILLING 4. GROUNDING 4.1 GROUNDING IN FIELD. 4.2 GROUNDING GROUND TERMINALS) WIRED BACK TO THE MAIN WIDTH OF CUBICLE AND SITUATED AT BOTTOM.
6.	MISCELLANEOUS SYSTEMS AND EQUIPMENT: CONTACTOR 1 MECHANICALLY HELD CONTROL COIL TO MATCH EXISTING SYSTEMS, VOLTAGE AS INDICATED. CSA 1 ENCLOSURE, SIZE AS INDICATED TESTING AND COMMISSIONING 1 CONFIRM INSULATION RESISTANCE AND CONTINUITY OF ALL WIRING 2 PROGRAM TIME CLOCK TO ENGINEERS REQUIREMENTS RECEPTACLE COLOUR CODE: DEVICE: COVERPLATE: NORMAL RECEPTACLE WHITE STAINLESS STEEL WALL LIGHT SWITCH CODE: DEVICE: COVERPLATE: WHITE STAINLESS STEEL COLOUR COODING COLOUR CODE CONDUITS AND BOXES. COPPER BUS UNLESS SPECIFIED OTHERWISE. ENTER WALLS, CEILING, OR FLOOR, AND AT 15m INTERVALS. COLOURS="1" WIDE PRIME COLOUR AND 3/4" WIDE AUXILIARY COLOUR. SERVICE UP TO 250V YELLOW GREEN COMMUNICATION SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS A. SEISMIC RESTRAINTS ARE TO BE PROVIDED FOR ALL NEW ELECTRICAL COMPONENTS AFFECTED UNDER THIS CONTRACT. B. PROVIDE SEISMIC RESTRAINTS IN ACCORDANCE WITH CURRENT NATIONAL BUILDING CODE AND ONTARIO BUILDING CODE. C. THIS CONTRACTOR SHALL UTILIZE THE SUPPLIER FAMILIAR WITH THE DESIGN OF SEISMIC SYSTEMS TO PROVIDE A COMPREHENSIVE PACKAGE OF ISOLATION AND SEISMIC RESTRAINT FOR THE PROJECT. D. PROVIDE DETAILED SHOP DRAWINGS SHOWING THE PROPOSED RESTRAINT SYSTEM FOR ALL REQUIRED COMPONENTS ON THE PROJECT. THE SHOP DRAWINGS SHALL INCLUDE CALCULATIONS CERTIFIED BY THE SEISMIC ENGINEER.
7.	GENERAL NOTES: 1. PROVIDE CUTTING, PATCHING & CORING OF ALL WALLS, CEILINGS AND OTHER SURFACES REQUIRED TO FIT THE ELECTRICAL EQUIPMENT. CHECK WITH BUILDING MANAGEMENT PRIOR TO CORE DRILLING & CUTTING OF FLOOR SLAB, REGARDING BUILDING REQUIREMENTS & POLICIES. PRIOR TO SLAB CUTTING OR CORING FIRST RADIO SCAN THE SLAB & COORDINATE DRILLING TO MINIMIZE CUTTING OF THE REINFORCING STEEL. FIRE STOP ALL NEW FIRE RATED PENETRATIONS. THE CONTRACTOR IS TO INCLUDE IN TENDER PRICE ALL WORK ASSOCIATED WITH CORE DRILLING AFTER NORMAL WORKING HOURS, OBTAIN WRITTEN VERIFICATION OF THE LOCATIONS FROM THE ARCHITECT PRIOR TO DRILLING.
8.	CUTTING & CORE DRILLING: 1. PROVIDE CUTTING, PATCHING & CORING OF ALL WALLS, CEILINGS AND OTHER SURFACES REQUIRED TO FIT THE ELECTRICAL EQUIPMENT. CHECK WITH BUILDING MANAGEMENT PRIOR TO CORE DRILLING & CUTTING OF FLOOR SLAB, REGARDING BUILDING REQUIREMENTS & POLICIES. PRIOR TO SLAB CUTTING OR CORING FIRST RADIO SCAN THE SLAB & COORDINATE DRILLING TO MINIMIZE CUTTING OF THE REINFORCING STEEL. FIRE STOP ALL NEW FIRE RATED PENETRATIONS. THE CONTRACTOR IS TO INCLUDE IN TENDER PRICE ALL WORK ASSOCIATED WITH CORE DRILLING AFTER NORMAL WORKING HOURS, OBTAIN WRITTEN VERIFICATION OF THE LOCATIONS FROM THE ARCHITECT PRIOR TO DRILLING.
9.	CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING FOR OWNER DURING CONSTRUCTION PERIOD FOR EACH FLOOR
10.	PROVIDE DEDICATED NEUTRALS FOR ALL RECEPTACLE CIRCUITS. FOR EXACT LOCATION OF DEVICES, COORDINATE WITH ARCHITECTURAL DRAWINGS AND/OR DETERMINE ON SITE
11.	CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING FOR OWNER DURING CONSTRUCTION PERIOD FOR EACH FLOOR
12.	AT COMPLETION OF WORK, WITH ALL LOADS IN OPERATION, INCLUDING LOADS ON RECEPTACLE CIRCUITS, MEASURE VOLTAGE AND NEUTRAL IN FEEDER TO EACH OF THE PANELS. ENSURE LOADS ARE PROPERLY BALANCED & SUBMIT REPORT IN LETTER FORM TO ENGINEER.
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**GENERAL NOTES**

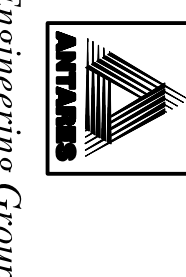
1. DO NOT SCALE DRAWINGS. FIGURED DIMENSIONS ONLY TO BE USED.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT
3. ALL WORK DESCRIBED UNDER THIS CONTRACT TO COMPLY WITH THE MOST CURRENT EDITION OF THE ONTARIO BUILDING CODE AND/OR NATIONAL BUILDING CODE AND OTHER CODES AND BY-LAWS IN EFFECT



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**ISSUE RECORD**

No	DATE	REVISION
1	14-02-2020	ISSUED FOR CONSTRUCTION
2	8-11-2019	ISSUED FOR TENDER
3	27-06-2019	ISSUED FOR BUILDING PERMIT
4	28-09-2018	ISSUED FOR REVIEW
5	13-06-2018	ISSUED FOR CLIENT REVIEW



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**PROJECT TITLE:**  
228 HUNTWAR DRIVE  
HUNTWAR/PALLADIUM DR. ENTERPRISE

**DRAWING TITLE:**  
ELECTRICAL SPECIFICATIONS

**DRAWN BY:** S.J.S.  
**CHECKED BY:** J.C.L.  
**SCALE:** 15-610  
**AS NOTED:**

**JOB NO.:** E-4  
**DRAWING NO.:**

**ELECTRICAL**