

NEW PANEL		100AMP 120/240V 1Ø 3W				RECESS MTD		
WATTS FOR	P	AMP	CCT	AMP	P	FOR	WATTS	
200 EMERGENCY BATTERY UNIT EBT	1	15	1	2	35	2	OUTDOOR UNIT OUT	6500
600 LIGHTING	1	15	3	4				
600 REC DISPATCH RM (3)	1	15	5	6	20	2	HOT WATER TANK	3000
800 REC DISPATCH RM (4)	1	15	7	8				
1000 BASEBOARD HEATER (SPAN) RM (4)	1	15	9	10	20	1	WATER PUMP	1200
600 REC MANAGER'S OFFICE (3)	1	15	11	12	15	1	ERV REC	400
600 REC MANAGER'S OFFICE (3)	1	15	13	14	15	1	REC. WASHROOM	400
500 BASEBOARD HEATER MANAGER OFFICE	1	15	15	16	15	1	BASEBOARD HEATER WC	500
400 OUTDOOR REC (2)	1	15	17	18	18	1	KITCHENETTE REC M/W	1000
400 REC AT OUTDOOR UNIT	1	20	19	20	20	1	KITCHENETTE REC	200
1000 BASEBOARD HEATER CONFERENCE RM	1	15	21	22	15	1	KITCHENETTE REC FRIDGE	200
1000 BASEBOARD HEATER CONFERENCE RM	1	15	23	24	20	1	KITCHENETTE REC (2)	400
600 REC. HOUSEKEEPING (3)	1	15	25	26	15	1	CONF RM REC. (2)	400
500 EXTERIOR FLOOD LIGHTS	1	15	27	28	15	1	CONF RM REC. (2)	400
200 WC EMERGENCY CALL SYSTEM	1	15	29	30	20	1	SPARE	*
* SPARE	1	15	33	34	20	1	SPARE	*
* SPARE	1	15	35	36	15	1	SPARE	*
* SPARE	1	15	37	38	15	1	SPARE	*
* SPARE	1	15	39	40	15	1	SPARE	*
* SPARE	1	15	41	42	15	1	SPARE	*

FIXTURE SCHEDULE			
NOTES:			
1. CONTRACTOR AND FIXTURE SUPPLIER ARE RESPONSIBLE TO PROVIDE ALL PLASTER AND FINISHING FRAMES, MOUNTING HARDWARE, AND ACCESSORIES TO SUIT ARCHITECTURAL CEILING SCHEDULE.			
2. CONTRACTOR AND SUPPLIER ARE RESPONSIBLE TO VERIFY NUMBER OF DRIVERS REQUIRED FOR MULTIPLE SWITCHING OF FIXTURES. REFER TO FLOOR PLANS FOR CONFIGURATION OF SWITCHING.			
3. MANUFACTURER TO NOTE ON SHOP DRAWINGS THAT DRIVERS, DIMMING SWITCHES AND PHOTOCONTROLLERS ARE ALL COMPATIBLE.			
TYPE	DESCRIPTION	LAMPS	MTG HT
A	LED EXTERIOR AREA LIGHT, ALUMINUM HOUSING, 120V DRIVER, MOUNTING ARM TO SUIT EXISTING POLE, PHOTO SENSOR, COLOUR TO BE SELECTED BY ARCHITECT. CURRENT EVOLVE MODEL EACL-01-1-Dx-AW-7-30 OR EQUIVALENT.	8800 LUMEN 3000K LED	POLE MOUNTED
B	LED WALL PACK, ALUMINUM HOUSING, 120V DRIVER, PHOTO SENSOR, COLOUR TO BE SELECTED BY ARCHITECT. CURRENT BEACON MODEL RWL1-4BL-35-3K7-4W-120 OR EQUIVALENT	4500 LUMEN 3000K LED	WALL MOUNTED

- ### GENERAL NOTES
- DO NOT SCALE DRAWINGS FOR INSTALLATION PURPOSES. OBTAIN ALL DIMENSIONS FROM ARCHITECTURAL PLANS, MANUFACTURER'S SHOP DRAWINGS, AND ON SITE INSPECTIONS.
 - PRIOR TO INSTALLATION OF BOXES IN WALLS, VERIFY THAT NO INTERFERENCES EXIST. CHECK ARCHITECTURAL PLANS AND ELEVATIONS.
 - MECHANICAL AND ELECTRICAL TRADES SHALL WORK IN CONJUNCTION WITH ONE ANOTHER SO AS TO AVOID INTERFERENCES BETWEEN PIPING, DUCTWORK, CONDUIT, LIGHTING FIXTURES, ETC.
 - ELECTRICAL EQUIPMENT BEING REMOVED AND NOT BEING REUSED WILL BE STORED ON SITE AND REMAIN THE PROPERTY OF THE OWNER. ANY SUCH EQUIPMENT THE OWNER DOES NOT WISH TO RETAIN WILL BE REMOVED FROM SITE AND DISPOSED OF BY THIS TRADE.
 - REVIEW MECHANICAL AND ARCHITECTURAL DRAWINGS AND PROVIDE ON SITE INSPECTIONS TO DETERMINE FULL EXTENT OF PROJECT PRIOR TO SUBMITTING BID.
 - IN EVERY WIRING INSTALLATION, EACH CONDUCTOR SHALL BE IDENTIFIED WITH A LABEL WHEREVER IT IS TERMINATED.
 - ALL ELECTRICAL PANELS, DISCONNECT SWITCHES, TRANSFORMERS, ETC. SHALL HAVE LAMACOID LABELING.
 - LAMACOID LABELING SHALL CONTAIN THE FOLLOWING:
 - FIRST LINE: BUILDING DESIGNATION, TYPE, FLOOR LEVEL, PANEL NUMBER
 - SECOND LINE: FED FROM (NAME UPSTREAM DISTRIBUTION POINT)
 - THIRD LINE: VOLTAGE
 - FOURTH LINE: AMPERAGE
 - FIFTH LINE: NUMBER PHASES/WIRES.
 - ALL RECEPTACLES, SWITCHES, AND JUNCTION BOXES SHALL BE LABELED TO INDICATE WHAT PANEL IT IS FED FROM AND WHAT IS THE CIRCUIT NUMBER (EX. EB05 CIR 2,4,6).
 - ALL INSTALLED EQUIPMENT SHALL BE FULLY ACCESSIBLE FOR MAINTENANCE PURPOSES AND SHALL HAVE A MINIMUM OF 1 M WORKING SPACE IN FRONT OF ANY REQUIRED ACCESS DOORS OR PANELS.

- ### DEMOLITION NOTES
- ELECTRICAL SYSTEMS SHOWN ON DEMOLITION PLANS ARE BASED ON INFORMATION OBTAINED FROM ORIGINAL CONSTRUCTION CONTRACT/TENDER DOCUMENTS. THESE DRAWINGS ARE NOT BASED ON "AS-BUILT RECORDS" OR ON EXHAUSTIVE FIELD MEASUREMENT AND ARE PROVIDED TO ASSIST THE CONTRACTOR IN DETERMINING THE EXTENT OF WORK REQUIRED. THE CONTRACTOR SHALL MAKE ALLOWANCE IN THEIR TENDER PRICE FOR THE REMOVAL OF ADDITIONAL 10% ABANDONED SERVICES AND THE PROTECTION OF EXISTING SERVICES THAT MUST REMAIN. RECORD THE LOCATION OF ALL EXISTING SERVICES THAT REMAIN ON AS-BUILT RECORD DRAWINGS.
 - ELECTRICAL DRAWINGS DO NOT IDENTIFY EVERY ELECTRICAL EQUIPMENT SUCH AS LIGHTING, RECEPTACLES, SWITCHES, SYSTEMS DEVICES ETC. IN EXISTING AREAS OF DEMOLITION AND WHERE RENOVATIONS WILL TAKE PLACE. CONTRACTOR PERFORMING THE WORK SHALL VISIT SITE PRIOR TO SUBMITTING BIDS AND CONFIRM ALL ELECTRICAL EQUIPMENT IN THESE AREAS AND INCLUDE FOR DISCONNECTION AND REMOVAL OF ALL EQUIPMENT IN AREA OF RENOVATION, UNLESS NOTED OTHERWISE.
 - EXISTING ACTIVE SERVICES THAT ARE ROUTED THROUGH AREA OF CONSTRUCTION TO SERVICE OTHER AREAS ARE TO BE IDENTIFIED AND MAINTAINED OPERATIONAL.
 - REFER TO MECHANICAL DRAWINGS FOR DEMOLITION ASSOCIATED WITH MECHANICAL EQUIPMENT. DISCONNECT AND REMOVE ASSOCIATED POWER WIRING AND CONDUIT IN IT'S ENTIRETY.
 - CONTRACTOR SHALL DISCONNECT, REMOVE AND REINSTALL LIGHTING AND ELECTRICAL DEVICES AS REQUIRED FOR MECHANICAL RENOVATIONS. RELOCATE AND RE-ROUTE ELECTRICAL SERVICES AS REQUIRED.

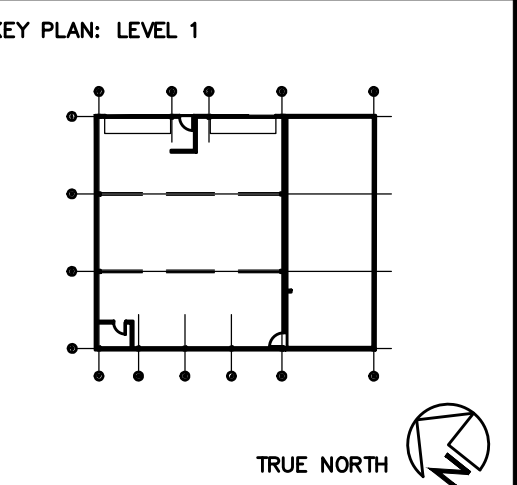
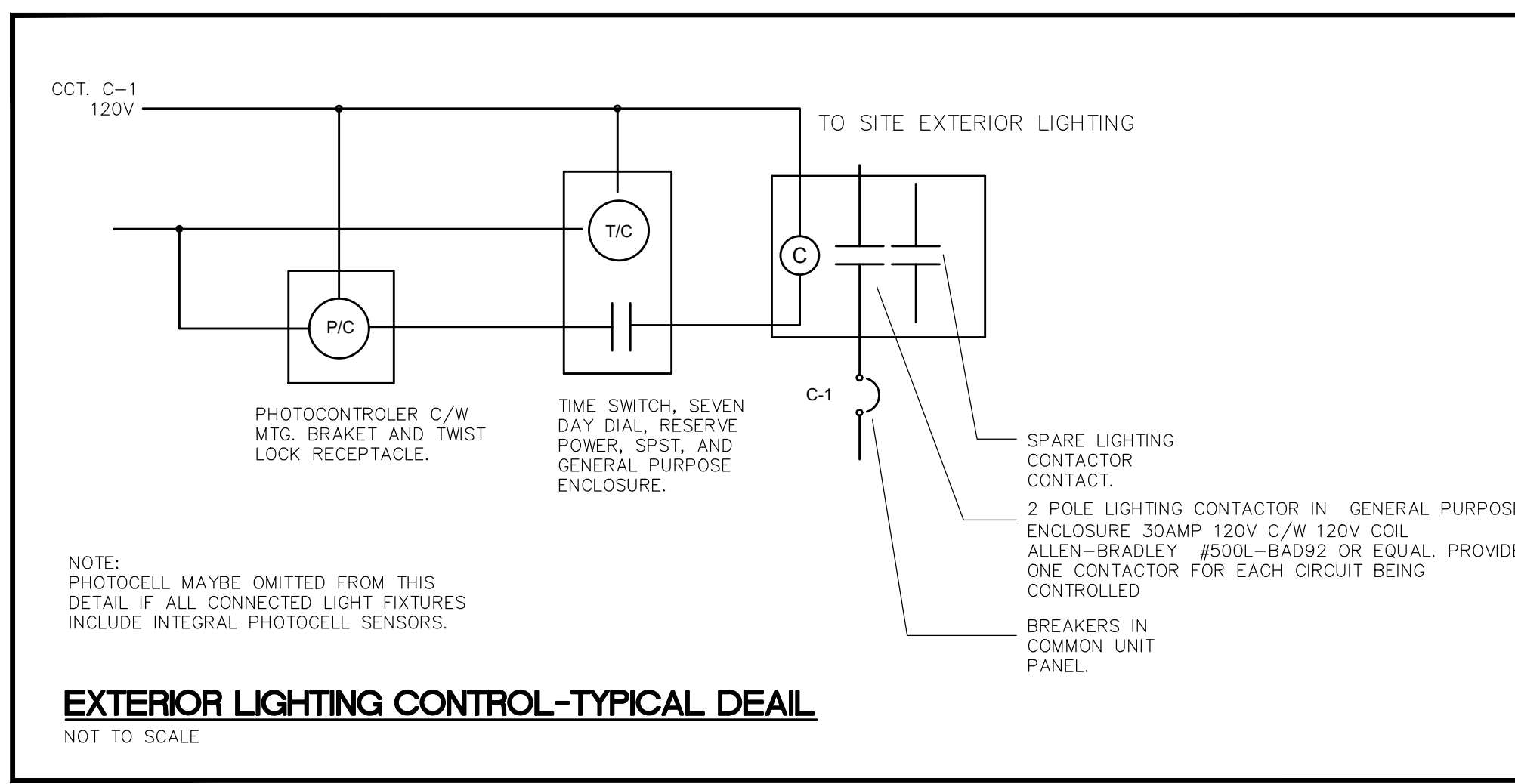
ELECTRICAL DRAWING LIST

E000	ELECTRICAL DRAWING LIST, LEGEND, SCHEDULES AND NOTE
E001	ELECTRICAL SPECIFICATIONS
E002	DEMOLITION AND NEW SITE PLANS

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	MTG HT
⌚	15A, 125V SINGLE POLE SWITCH, ⌚ ₂ (TWO POLE), ⌚ ₃ (3-WAY), ⌚ ₄ (4-WAY), ⌚ _x (KEY OPERATED), ⌚ _d (DIMMER), ⌚ _{c/w} (C/W PILOT LIGHT), ⌚ _v (LOW VOLTAGE), ⌚ _t (TIMER), ⌚ _s (OCCUPANCY SENSOR SWITCH), ⌚ (SINGLE GANG), ⌚ (DOUBLE GANG), ⌚ (TRIPLE GANG), ⌚ (FOUR GANG), ⌚ (FIVE GANG), ⌚ (SIX GANG)	1100 (43")
□	LED FIXTURE	
□	WALL MOUNTED LED FIXTURE	AS NOTED
○	LED PENDANT OR DOWNLIGHT FIXTURE	AS NOTED
○	DIRECTIONAL/AIMED LED FIXTURE	AS NOTED
□	WALL MOUNTED LED FIXTURE	AS NOTED
□	POLE MOUNTED FIXTURE	
▨	CROSS-HATCHED OR SHADED FIXTURE INDICATES CONNECTED TO EMERGENCY (ESSENTIAL) POWER	
□	DISCONNECT SWITCH	1270 (50")
□	COMBINATION STARTER AND DISCONNECT	1170 (46")
□	MAGNETIC MOTOR STARTER	(46")
□	MANUAL MOTOR STARTER	1270 (50")
○	MOTOR CONNECTION (SINGLE OR THREE PHASE)	
○	MOTOR/DISCONNECT CONNECTION (SINGLE OR THREE PHASE)	
□	ELECTRICAL PANEL	
○	OCCUPANCY SENSOR	CEILING
○	15AMP(20AMP WHERE NOTED) 125VOLT U-GROUND DUPLEX REC.	457 (18")
□	SINGLE PUSH-BUTTON STATION	1100 (43")
○	SPECIAL RECEPTACLE	AS NOTED
•	DIRECT CONNECTION	AS NOTED
▽	VOICE/DATA OUTLET C/W CONDUIT TO ACCESSIBLE CEILING SPACE	457 (18")
▽	DATA OUTLET C/W CONDUIT TO ACCESSIBLE CEILING SPACE	(18")
▽	TELEPHONE OUTLET C/W CONDUIT TO ACCESSIBLE CEILING SPACE	AS NOTED
HDMI	HDMI OUTLET	AS NOTED
GF	GROUND FAULT INTERRUPTING	
OC	OVER COUNTER	
FR	FRIDGE	
DW	DISH WASHER	
CL	CEILING MOUNTED	
MW	MICROWAVE	
PC	PHOTO SENSOR	
TC	TIME CLOCK	
LV	LOW VOLTAGE	
M	ELECTRICAL METER	
J	JUNCTION BOX	
T	THERMOSTAT	
EXIT	EXIT SIGN	
EXIT	SINGLE SIDED EXIT SIGN	
→	EXIT LIGHT - DIRECTIONAL ARROW	
EB...	EMERGENCY LIGHTING BATTERY UNIT	
☞	SINGLE HEAD REMOTE EMERGENCY LIGHT	
☞☞	DOUBLE HEAD REMOTE EMERGENCY LIGHT	
☞	CCTV CAMERA C/W CONDUIT TO RECEIVER	
☞	HEAT DETECTOR	CEILING
KP	KEY PAD	1168 (46")
MD	MOTION DETECTOR	

NOTE: ALL NEW DEVICES SHOWN IN BOLD



CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
DO NOT SCALE DRAWINGS.

REVISIONS

NO.	DESCRIPTION	DATE
1	SITE PLAN APPROVAL	2022-10-19

LICENSED PROFESSIONAL ENGINEER
S. L. BARR
Oct 19 2022
PROVINCE OF ONTARIO

NOT TO BE USED FOR CONSTRUCTION PURPOSES UNTIL SIGNED BY THE ARCHITECT.

DATE

PROJECT NORTH

DRAWN: AF
CHECKED: SB
DATE PRINTED: 2021-06-25

CARDEVCO WAREHOUSE
ADDRESS: 140 CARDEVCO ROAD, GAPP, ON, K2K 3B8
DRAWING TITLE

ELECTRICAL DRAWING LIST, LEGEND, SCHEDULES AND NOTES

ELECTRICAL SPECIFICATIONS

GENERAL CONDITIONS

- A. OBTAIN AND PAY FOR PERMITS REQUIRED BY ELECTRICAL SAFETY AUTHORITY AND LOCAL INSPECTION AUTHORITIES FOR THIS WORK. PRESENT FINAL CERTIFICATES TO CONSULTANT AND/OR OWNER.
- B. CARRY OUT ALL WORK IN ACCORDANCE WITH OESC (ONTARIO ELECTRICAL SAFETY CODE) REGULATIONS AND ESA REQUIREMENTS.
- C. ALL EQUIPMENT SHALL BE NEW AND CSA APPROVED UNLESS OTHERWISE NOTED.

SCOPE OF WORK

- A. COMPLY WITH ALL CONDITIONS OF TENDER DOCUMENTS ISSUED FOR THIS PROJECT.
- B. THE REMOVAL OR RELOCATION OF EXISTING, AND THE SUPPLY AND INSTALLATION OF NEW EQUIPMENT AS SHOWN ON THE DRAWINGS AND AS NOTED. THE MATERIALS REMOVED AND NOT REUSED, SHALL BECOME OWNER'S PROPERTY AND SHALL BE REMOVED FROM THE SITE PRIOR TO COMPLETION OF WORK AS DIRECTED BY OWNER.
- C. GENERAL

COMPLY WITH GENERAL CONDITIONS.

- a. SUBMIT ELECTRONIC COPIES OF SHOP DRAWINGS FOR LIGHTING FIXTURES, EXIT LIGHTS, EMERGENCY LIGHTS, AND BATTERY UNITS; DISCONNECT SWITCHES, STARTERS, NEW PANELS, ETC TO CONSULTANT FOR REVIEW. THIS PROJECT ALLOWS FOR 1 REVISION. ANY SUBMISSIONS AFTER REVISION 1 CONTRACTOR SHALL BE CHARGED A CONSULTANTS FEE.
- b. SUBMIT MAINTENANCE AND INSTRUCTION MANUALS. THIS PROJECT ALLOWS FOR 2 REVISIONS: PRELIMINARY SET AND THEN A FINAL SET. ANY SUBMISSIONS AFTER REVISION TWO (2) CONTRACTOR SHALL BE CHARGED A CONSULTANTS FEE. SEE SPECIFICATIONS FOR DETAILS.
- c. ON COMPLETION OF PROJECT AND BEFORE FINAL PAYMENT, SUBMIT TWO (2) AUTOCAD, PDF'S AND HARD COPY OF AS-BUILT DRAWINGS WITH ALL CHANGES AND BURIED SERVICES EXACT LOCATIONS NOTED THEREON. THIS PROJECT ALLOWS FOR 1 REVISION. ANY SUBMISSIONS AFTER REVISION ONE (1) CONTRACTOR SHALL BE CHARGED A CONSULTANTS FEE.
- d. GUARANTEE ALL MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER/CONSULTANT. PROVIDE WRITTEN GUARANTEE.
- e. PROVIDE LAMACOID LABELS (3-PLY) WHITE LETTERED ON BLACK BACKGROUND-- 1/4" HIGH LETTERING ON ALL ELECTRICAL EQUIPMENT SUPPLIED, MOUNTED AND/OR CONNECTED BY THIS CONTRACT.
- f. THOROUGHLY CLEAN ALL ELECTRICAL EQUIPMENT DURING CONSTRUCTION AND ON COMPLETION OF CONTRACT.
- g. CONFER WITH ALL TRADES AND ARRANGE EQUIPMENT IN PROPER RELATION WITH OTHERS AND WITH BUILDING CONSTRUCTION AND ARCHITECTURAL FINISHES.
- h. REFER TO ARCHITECTURAL SPECIFICATIONS AND DRAWINGS WHICH ARE PART OF THIS WORK.
- i. OWNER RESERVES RIGHT TO TRIAL AND/OR TEMPORARY USAGE PRIOR TO ACCEPTING INSTALLATION.
- j. PROVIDE ALL MATERIALS, EQUIPMENT, ACCESSORIES, CONSUMABLES, LABOR, SUPERVISION, TOOLS, SERVICES, ETC. AS REQUIRED FOR COMPLETE AND FULLY FUNCTIONAL SYSTEMS AS DESCRIBED IN THE CONTRACT DOCUMENTS.
- k. PRIOR TO TENDERING, EXAMINE THE SITE, ALL DRAWINGS AND SPECIFICATIONS AND REPORT ALL ANY CONFLICTS, DISCREPANCIES TO THE CONSULTANT FOR CLARIFICATION AND/OR CORRECTION.

I. COORDINATE AND SCHEDULE WORK WITH OWNER AND OTHER TRADES TO MINIMIZE CONFLICTS, DELAYS, AND DISRUPTION OF EXISTING SERVICES AND OPERATIONS.

D. DEFINITIONS: FOLLOWING ARE DEFINITIONS OF WORDS FOUND IN THIS SPECIFICATION AND ON ASSOCIATED DRAWINGS.

- a. "CONCEALED" -- HIDDEN FROM NORMAL SIGHT IN FURRED -- SPACES, SHAFTS, CEILING SPACES, WALLS, UNDERFLOOR, AND PARTITIONS.
- b. "EXPOSED" -- ALL ELECTRICAL WORK VISIBLE TO BUILDING OCCUPANTS.
- c. "PROVIDE" -- (AND ALL TENSES OF "PROVIDE") SUPPLY AND INSTALL, WIRE AND CONNECT COMPLETE.
- d. "INSTALL" -- (AND ALL TENSES OF "INSTALL")--INSTALL, WIRE AND CONNECT COMPLETE, PRODUCTS AND SERVICES SPECIFIED.
- e. "SUPPLY" -- SUPPLY ONLY.
- f. "OR APPROVED EQUAL" -- MATERIAL OR EQUIPMENT PROPOSED BY CONTRACTOR, IN LIEU OF THAT SPECIFIED, AS APPROVED BY CONSULTANT.
- g. "AS INDICATED" -- AS SHOWN ON DRAWINGS AND/OR NOTED IN SPECIFICATIONS.
- h. "OWNER" -- BUILDING OWNER AS DEFINED IN THE CONTRACT OR THE OWNER'S DESIGNED REPRESENTATIVE.
- i. "SOFT COPY" -- PDF FORMAT
- j. "AUTOCAD" -- DWG FORMAT

LIABILITY

- A. THIS CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR LAYING OUT HIS/HER WORK AND ANY DAMAGE OR EXTRA COSTS CAUSED TO THE OWNER OR OTHER CONTRACTORS BY IMPROPER LOCATION OR CARRYING OUT HIS WORK. CARRY ALL NECESSARY INSURANCE COVERAGE.

CERTIFICATES, FEES, ETC.

- A. GIVE ALL NOTICES, OBTAIN ALL PERMITS AND PAY ALL FEES SO THAT THE WORK SPECIFIED HEREIN MAY BE CARRIED OUT. AT THE ENGINEER'S REQUEST, FURNISH ANY CERTIFICATES AS EVIDENCE THAT THE WORK INSTALLED CONFORMS TO THE LAWS AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION.

CEILING TILE REMOVAL / REPLACEMENT

- A. EACH RESPECTIVE SUB--TRADE OR PRIME ELECTRICAL CONTRACTOR AS THE CASE MAY BE SHALL BE RESPONSIBLE FOR THE REMOVAL AND REINSTALLATION OF ANY CEILING TILES TO SUIT WORK WITHIN THE CEILING SPACE. ANY DAMAGED TILES SHALL BE REPLACED AT THE COST TO THE RESPECTIVE SUB--TRADE OR PRIME ELECTRICAL CONTRACTOR AND SHALL BE HELD BACK ON THE PROGRESS DRAW.

HOURS OF WORK

- A. ANY AUDIBLE TESTING, CORE DRILLING OR ANY OTHER NOISY WORK MUST BE PERFORMED "AFTER HOURS". MAKE ARRANGEMENTS WITH BUILDING PERSONNEL TO CONFIRM TIMES FOR SUCH WORK.

PHASING AND SCHEDULING

- A. REFER TO GENERAL CONDITIONS, ARCHITECTURAL SPECIFICATIONS, AND MECHANICAL PHASING PLANS FOR PHASING AND SCHEDULING OF WORK.
- B. COORDINATE ALL WORK WITH OTHER TRADES AND ASSIST IN THE IMPLEMENTATION OF THE PHASING STRATEGY.

ELECTRICAL SPECIFICATIONS (CONTD)

SERVICE PENETRATIONS

- A. FIRE STOP AND SMOKE SEALS: MATERIALS SHALL BE ULC LISTED COMPONENTS SUITABLE FOR FIRE RESISTANCE RATINGS.
- B. ALL OPENINGS IN FIRE SEPARATIONS FOR SERVICE PENETRATIONS SHALL BE PROTECTED WITH ULC LISTED "SERVICE PENETRATIONS FIRESTOP SYSTEMS"

ACCESS DOORS

- A. MINIMUM 12 GA. PRIME COAT PAINTED, HEAVY DUTY FULLY CONCEALED FRAME AND HINGES, POSITIVE LOCKING DEVICE.
- B. ACCESS DOORS SHALL BE AS RECOMMENDED BY MANUFACTURER FOR PARTICULAR INSTALLATION.
- C. SUPPLY ACCESS DOORS FOR ACCESS TO EQUIPMENT REQUIRING SERVICE, OR INSPECTION. JUNCTION BOXES SHALL BE WITHIN VIEW AND REACH OF ACCESS DOORS.
- D. TURN OVER ACCESS DOORS TO THE APPROPRIATE GENERAL TRADE FOR INSTALLATION.
- E. INCLUDE COST FOR GENERAL TRADES TO SUPPLY AND INSTALL ACCESS PANELS IN GYPSUM CEILINGS OR WALLS.

GROUNDING

- A. INSTALL COMPLETE PERMANENT, CONTINUOUS, BONDING SYSTEM AND CIRCUIT GROUNDING SYSTEM CONFORMING TO REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION AND OESC.

WIRES AND CABLES

- A. ALL WIRING SHALL BE IDENTIFIED WITH BRADY OR EQUIVALENT SELF-STICKING PERMACODE WIRE MARKERS. ALL JUNCTION BOXES IN CONCEALED CEILING SPACES SHALL BE LABELED WITH PEN MARKER AS TO CIRCUITS CONTAINED THEREIN.
- B. ALL SURFACE MOUNTED OR SUSPENDED CABLES TO BE SECURELY SUPPORTED BY STAPLES, STRAPS, HANGERS OR APPROVED DEVICES ATTACHED TO BUILDING STRUCTURE AT INTERVALS NOT EXCEEDING OESC REQUIREMENTS.
- C. GENERAL WIRING INSIDE BUILDING: CSA APPROVED, SOFT COPPER, 600VOLT, TWH (75°C) OR T90 (90°C) FOR #10 AWG AND SMALLER; 600VOLT R90XL (90°C) OR T90 (90°C) FOR #8 AWG AND LARGER. RACEWAY SIZE SHALL BE BASED ON USE OF TWH/RW90XL INSULATION.
- D. MINIMUM GAUGE: #12 AWG, UNLESS SPECIFICALLY NOTED OTHERWISE. CONDUCTORS #10 AWG AND SMALLER TO BE SOLID AND/OR STRANDED CONDUCTORS #8 AWG AND LARGER TO BE STRANDED. WHERE DISTANCE FROM PANEL TO FIRST OUTLET ON 15AMP RATED CIRCUIT EXCEEDS 70 FEET (21 METERS) USE #10 AWG TO FEED FIRST OUTLET.
- E. ALL WIRING AND CABLES TO BE COLOUR CODED FOR PHASE AND NEUTRAL IDENTIFICATION AND IN ACCORDANCE WITH OESC.
- F. SUPPLY, INSTALL, WIRE AND CONNECT ALL EQUIPMENT SHOWN, SPECIFIED OR MENTIONED.
- G. WIRE AND CONNECT MOTORS, SUPPLIED BY OTHERS, AS INDICATED.
- H. CONTRACTOR TO CONFIRM CABLE AND CORD LENGTHS.
- I. EMT SHALL BE USED FOR WIRING AND CONCEALED WHEREVER POSSIBLE. EMT COUPLINGS AND CONNECTORS SHALL BE STEEL SETSCREW CONCRETE TIGHT OR STEEL COMPRESSION RAIN TIGHT.
- J. ALL CONDUCTORS: COPPER WITH TWH OR R-90 INSULATION, MINIMUM #12AWG, UNLESS OTHERWISE NOTED.
- K. WIRING SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS UNLESS OTHERWISE APPROVED.

WIRING DEVICES

- A. RECEPTACLES OF ONE MANUFACTURER THROUGHOUT PROJECT.
- B. RECEPTACLES: PUSH-IN CONNECTIONS ARE NOT ACCEPTABLE, SCREW TERMINALS SHALL BE USED, CSA APPROVED, WHITE SPECIFICATION GRADE, 125VOLT AC, 3--WIRE, GROUNDING, STRAIGHT BLADE, DUPLEX AS FOLLOWS:
 - 1.15 Amp, 125 Volt Duplex Receptacle: 3--wire receptacles, NEMA configuration 5--15R
 - 2.15 Amp, 250 Volt Duplex Receptacle: 3--wire receptacles, NEMA configuration 6--15R
 - 3.20 Amp, 125 Volt Duplex Receptacle: 3--wire receptacles, NEMA configuration 5--20R
- C. RECEPTACLES FED FROM STANDBY POWER SHALL HAVE RED COLOURED FACE.
- D. SWITCHES: PUSH-IN CONNECTIONS ARE NOT ACCEPTABLE, SCREW TERMINALS SHALL BE USED, CSA APPROVED, WHITE SPECIFICATION GRADE, 120V/347V/LOW VOLTAGE TO MATCH EXISTING.
- E. OCCUPANCY SENSORS AND SENSOR SWITCHES: DUAL TECHNOLOGY 120V/347V/LOW VOLTAGE TO MATCH EXISTING. BASIS OF DESIGN IS DW--100 BY WATTSTOPPER.
- F. ALL COVERPLATES OR WIRING DEVICES AND ALL OTHER ITEMS ARE TO BE MOUNTED STRAIGHT (I.E. WITH EDGES VERTICAL AND HORIZONTAL).
- G. COVERPLATES: STAINLESS STEEL.
- H. MOUNT ALL DEVICES AT HEIGHTS SHOWN ON DRAWINGS. COMPLY WITH OBC--3.6, BARRIER FREE DESIGN.
- I. PROVIDE EMERGENCY LIGHTING AND EXIT LIGHTING SHOWN. PROVIDE WIREGUARDS AS INDICATED.
- J. IF ASBESTOS MATERIAL IS ENCOUNTERED, STOP WORK IN THE AFFECTED AREA IMMEDIATELY AND NOTIFY THE CONSULTANT.
- K. PROVIDE ALL CUTTING AND PATCHING REQUIRED TO CARRY OUT WORK UNDER THIS CONTRACT.

JUNCTION BOXES & PULL BOXES

- A. JUNCTION AND PULL BOXES: SHEET METAL ENCLOSURE, WELDED CORNERS AND FORMED HINGED COVER SUITABLE FOR LOCKING IN CLOSED POSITION.
- B. COVERS WITH 1" (25mm) MINIMUM EXTENSION ALL AROUND, FOR FLUSH-MOUNTED PULL AND JUNCTION BOXES.
- C. FIXTURE BOXES: ELECTRO--GALVANIZED STEEL 100mm (4") OCTAGON COMPLETE WITH 10mm (3/8") FIXTURE STUD WHERE NECESSARY.
- D. WHERE OUTLET BOXES ARE INSTALLED IN EXTERIOR WALLS AND/OR INSULATED CEILING HAVING ASSOCIATED VAPOUR BARRIERS ON THE WARM SIDE OF THE INSULATION AND WHERE OUTLET BOXES PERFORATE THE

ELECTRICAL SPECIFICATIONS (CONTD)

VAPOUR BARRIER. PROVIDE ELECTRICAL BOX VAPOUR BARRIERS BEHIND AND AROUND OUTLET BOXES.

- E. SWITCHES AND RECEPTACLE BOXES SHALL BE 1104 TYPE FOR RECESSED MOUNTING.
- F. BOXES FOR OUTDOOR USE: GALVANIZED CAST FERALLOY COMPLETE WITH NEOPRENE GASKET.
- BOXES FOR INDOOR USE: CODE GAUGE ELECTRO--GALVANIZED STEEL FOR CONCEAL MOUNTING AND GALVANIZED CAST FERALLOY OR CAST BRUSHED ALUMINUM FOR EXPOSED USE, UNLESS OTHERWISE NOTED.

RACEWAYS

- A. WIRING SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS UNLESS OTHERWISE APPROVED. EMT SHALL BE USED FOR WIRING AND CONCEALED WHEREVER POSSIBLE. EMT COUPLINGS AND CONNECTORS SHALL BE STEEL SETSCREW CONCRETE TIGHT OR STEEL COMPRESSION RAIN TIGHT.
- B. ELECTRICAL METALLIC TUBING (EMT): GALVANIZED ELECTRICAL METALLIC TUBING TO CSA C22.2 No. 83. COMPLETE WITH AN INTERIOR COATING. FACTORY MADE BENDS, WHERE SITE BENDING IS NOT POSSIBLE, AND JOINTS AND TERMINATIONS MADE WITH STEEL COUPLERS AND SET SCREW TYPE CONNECTORS WITH INSULATED THROATS, CONCRETE TIGHT WHERE REQUIRED.
- C. RIGID NON--METALLIC (PVC) CONDUIT: RIGID PVC CONUIT TO CSA C22.2, RT--4 RATED RIGID PVC (UNPLASTICISED) CONDUIT, COMPLETE WITH HEAT GUN BENDS IN CONDUIT TO 2"(50mm) DIAMETERS. SOLVENT WELD JOINTS, FACTORY MADE EXPANSION JOINTS WHERE REQUIRED, AND TERMINATIONS MADE WITH PROPER AND SUITABLE CONNECTORS AND ADAPTERS.
- D. FLEXIBLE STEEL OR ALUMINUM CONDUIT AND LIQUID--TIGHT FLEXIBLE METAL CONDUIT.
- E. FISHCORD: POLYPROPYLENE.
- F. RUN CONDUITS PARALLEL OR PERPENDICULAR TO BUILDING LINES. DO NOT PASS CONDUITS THROUGH STRUCTURAL MEMBERS EXCEPT AS INDICATED. RUN CONDUITS IN FLANGED PORTION OF STRUCTURAL STEEL.

OUTLET BOXES

- A. BOXES FOR OUTDOOR USE: GALVANIZED CAST FERALLOY COMPLETE WITH NEOPRENE GASKET.
- B. BOXES FOR INDOOR USE: CODE GAUGE ELECTRO--GALVANIZED STEEL FOR CONCEAL MOUNTING AND GALVANIZED CAST FERALLOY OR CAST BRUSHED ALUMINUM FOR EXPOSED USE, UNLESS OTHERWISE NOTED.
- C. FIXTURE BOXES: ELECTRO--GALVANIZED STEEL 100mm (4") OCTAGON COMPLETE WITH 10mm (3/8") FIXTURE STUD WHERE NECESSARY.
- D. WHERE OUTLET BOXES ARE INSTALLED IN EXTERIOR WALLS AND/OR INSULATED CEILING HAVING ASSOCIATED VAPOUR BARRIERS ON THE WARM SIDE OF THE INSULATION AND WHERE OUTLET BOXES PERFORATE THE VAPOUR BARRIER, PROVIDE ELECTRICAL BOX VAPOUR BARRIERS BEHIND AND AROUND OUTLET BOXES.

DISCONNECT SWITCHES:

- A. FUSED AND NON--FUSED, HEAVY DUTY, QUICK--MAKE, QUICK--BREAK MECHANISM, LOAD BREAK TYPE WITH DOOR, HANDLE AND SWITCHING MECHANISM INTERLOCK, ARC EXTINGUISHERS, SILVER PLATED WIRE ACTION CONTACTS, AND SPRING REINFORCED FUSE CLIPS, OF SIZES INDICATED, CSA CERTIFIED. PROVIDE DISCONNECT SWITCHES AHEAD OF EACH PIECE OF EQUIPMENT WHERE NECESSARY TO MEET CODE REQUIREMENTS.

BRANCH CIRCUIT PANELBOARD

- A. MANUFACTURERS: SQUARE D, SIEMENS, CUTLER--HAMMER.
- B. CSA C22.2 NO.29 CIRCUIT BREAKER TYPE, LIGHTING AND APPLIANCE BRANCH CIRCUIT PANELBOARD.
- C. PANELBOARD BUS: COPPER. PROVIDE COPPER GROUND BUS AS WELL AS PHASE AND GROUND BUSES IN EACH PANELBOARD.
- D. MINIMUM INTEGRATED SYMMETRICAL SHORT CIRCUIT RATING 22,000 A--RMS
- E. BOLT ON MOULDED CASE CIRCUIT BREAKERS: NEMA AB I TYPE THERMAL MAGNETIC TRIP CIRCUIT BREAKERS WITH COMMON TRIP HANDLE FOR ALL POLES, LISTED AS TYPE SWD FOR LIGHTING CIRCUITS. TYPE HACR FOR MOTORIZED EQUIPMENT CIRCUITS, CLASS A GROUND FAULT INTERRUPTER CIRCUIT BREAKERS WHERE SCHEDULED. DO NOT USE TANDEM CIRCUIT BREAKERS.
- F. ENCLOSURE NEMA 2 (PB 1).
- G. CABINET BOX: 153MM (6") DEEP, 508MM (20") WIDE FOR 240 VOLTS AND LESS PANELBOARDS.
- H. FINISH IN MANUFACTURER'S STANDARD GREY.
- I. TWO KEYS FOR EACH PANELBOARD.
- J. ALL PANELBOARDS TO HAVE LOCKING HINGED DOOR C/W TYPED PLASTIC DIRECTORY INSIDE DOOR IN PLASTIC SLEEVE.
- K. MAINS SUITABLE FOR BOLT ON BREAKERS.
- L. COPPER BUS WITH NEUTRAL OF DOUBLE AMPERE RATING AS MAINS.
- M. MAIN BREAKER: SEPARATELY MOUNTED ON TOP OR BOTTOM OF PANEL TO SUIT CABLE ENTRY.

MOTOR STARTERS

- A. GENERAL REQUIREMENTS:
 - a. STARTERS SHALL BE BASED ON CSA--C22.2--14.
 - b. STARTERS SHALL HAVE THERMAL MAGNETIC OVERLOADS WITH EXTERNAL MANUAL RESET, SIZED IN ACCORDANCE WITH VOLTAGE AND FULL LOAD CURRENT AS CERTIFIED BY MOTOR MANUFACTURER
 - c. STARTERS SHALL HAVE OVERLOAD RELAYS IN EACH UNGROUNDED PHASE, CLASS 20: CLASS 20 (STANDARD TRIP) MELTING ALLOY.
 - d. ALL 3 PHASE STARTERS SHALL HAVE SINGLE PHASING PROTECTION.
 - e. ENSURE CORRECT FUSES AND OVERLOAD DEVICES ELEMENTS ARE INSTALLED.
 - f. PERFORM TESTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - g. OPERATE SWITCHES AND CONTACTORS TO VERIFY CORRECT FUNCTIONING.
 - h. PERFORM STARTING AND STOPPING SEQUENCES OF CONTACTORS AND RELAYS.

ELECTRICAL SPECIFICATIONS (CONTD)

- I. CHECK THAT SEQUENCE CONTROLS INTERLOCKING WITH OTHER SEPARATE RELATED STARTERS, EQUIPMENT AND CONTROL DEVICES, OPERATE AS INDICATED.

B. MOTOR STARTERS DETAILS

- a. COMBINATION STARTERS (CIRCUIT BREAKERS): CSA CERTIFIED, EEMAC RATED, SIZED AS INDICATED COMPLETE WITH EEMAC ENCLOSURE SUITABLE FOR ENVIRONMENT IN WHICH INSTALLED.
- b. FULL VOLTAGE NON--REVERSING WITH APPROPRIATE SHORT CIRCUIT PROTECTION.
- c. MAGNETIC STARTERS: COMPLETE WITH 100VA OR LARGER 120V INDIVIDUAL CONTROL TRANSFORMERS PROTECTED BY CONTROL FUSES.
- d. CONTROL VOLTAGE: 24VAC.
- e. UNLESS NOTED OTHERWISE, ALL ELECTRICALLY HELD MAGNETIC STARTERS SHALL INCLUDE HAND--OFF--AUTO 3 POSITION, MAINTAINED CONTACT ON--OFF SELECTOR SWITCHES SO THAT MOTORS AND OTHER EQUIPMENT AUTOMATICALLY RE--ENERGIZE AFTER POWER INTERRUPTION.
- f. THREE PHASE MAGNETIC STARTERS: MINIMUM EEMAC SIZE 1.
- g. EACH MAGNETIC STARTER TO HAVE 2--NC AND 2--NO AUXILIARY CONTACTS.

EXIT LIGHT

EXIT LIGHT SHALL BE SUITABLE FOR SURFACE, WALL OR CEILING MOUNTING, GREEN PICTOGRAM ON BRUSHED ALUMINUM BACKGROUND, FORMED ALUMINUM STENCIL FACE, L.E.D. ILLUMINATED, DISSIPATING NO MORE THAN 5 WATTS PER SINGLE OR DOUBLE FACED SIGN. 25 YEARS MINIMUM LIFE EXPECTANCY.

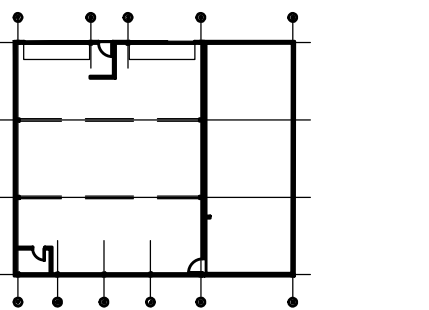
LUMACELL, OR EMERGI--LITE ACCEPTABLE.

LABELING

ENSURE ALL NEW EQUIPMENT IS LABELLED APPROPRIATELY AS PER THE SPECIFICATIONS BELOW. WORK THAT DOES NOT INCLUDE PROPER LABELLING WILL BE CONSIDERED INCOMPLETE AND WILL BE MARKED AS DEFICIENT UNTIL LABELLING IS IMPLEMENTED AS PER SPECIFICATIONS BELOW.

- A. NORMAL LABEL SPECIFICATIONS:
 - a. ALL EQUIPMENT MUST BE LABELLED.
 - b. OBTAIN WRITTEN APPROVAL OF IDENTIFICATION SYSTEM FROM DEPARTMENTAL REPRESENTATIVE BEFORE STARTING MANUFACTURE OF LABELS. CONTRACTOR MUST NOT LABEL ITEMS BY NAME AND NUMBER ON THE CONSTRUCTION PLAN UNLESS ADVISED TO DO SO BY THE DEPARTMENTAL REPRESENTATIVE.

KEY PLAN: LEVEL 1



CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.

DO NOT SCALE DRAWINGS.

REVISIONS

NO.	DESCRIPTION	DATE
1	SITE PLAN APPROVAL	2022-10-19

NOT BE USED FOR CONSTRUCTION PURPOSES UNTIL SIGNED BY THE ARCHITECT.

DATE _____

PROJECT NORTH

DRAWN: AF

CHECKED: SB

DATE PRINTED: 2021-06-25

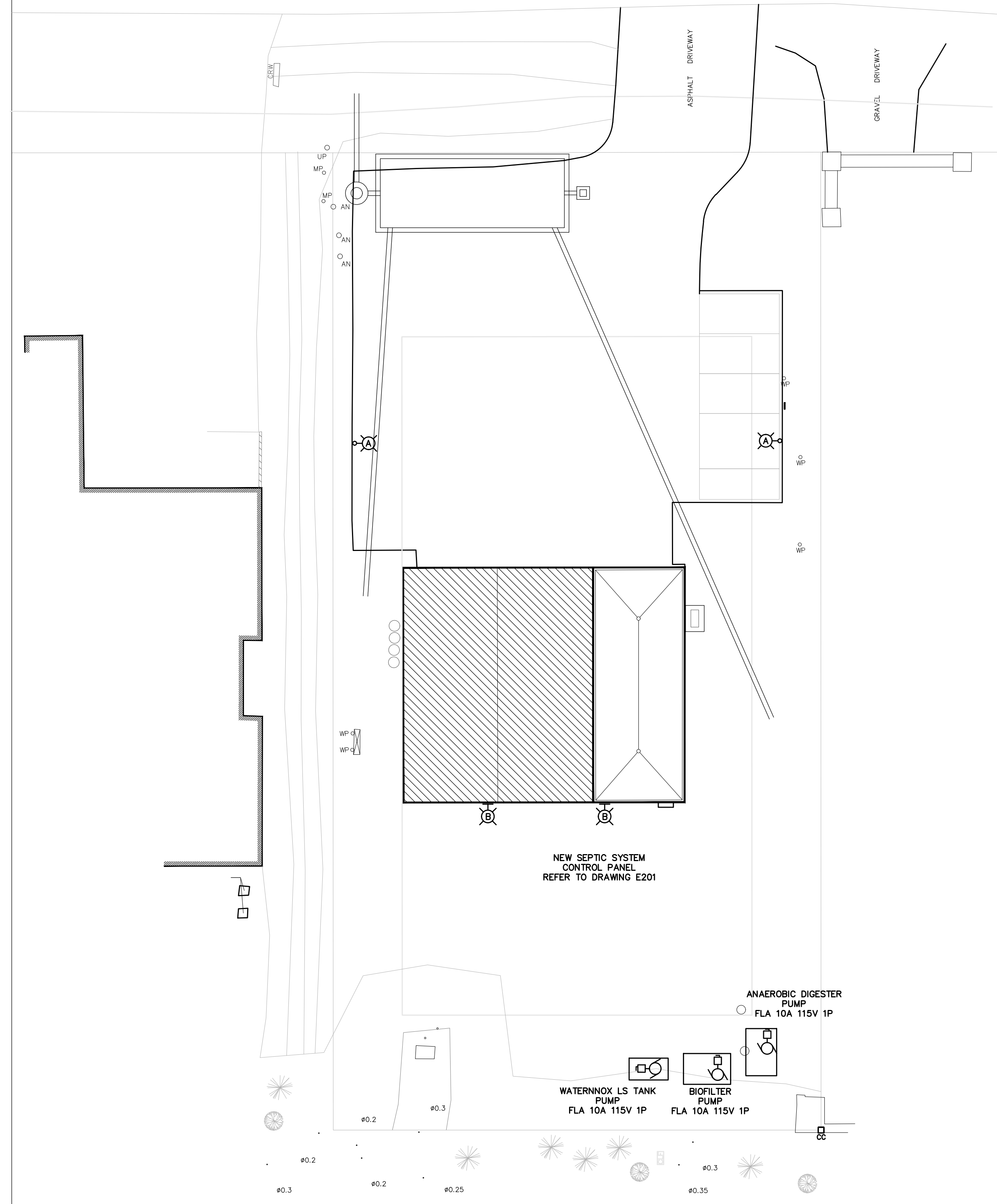
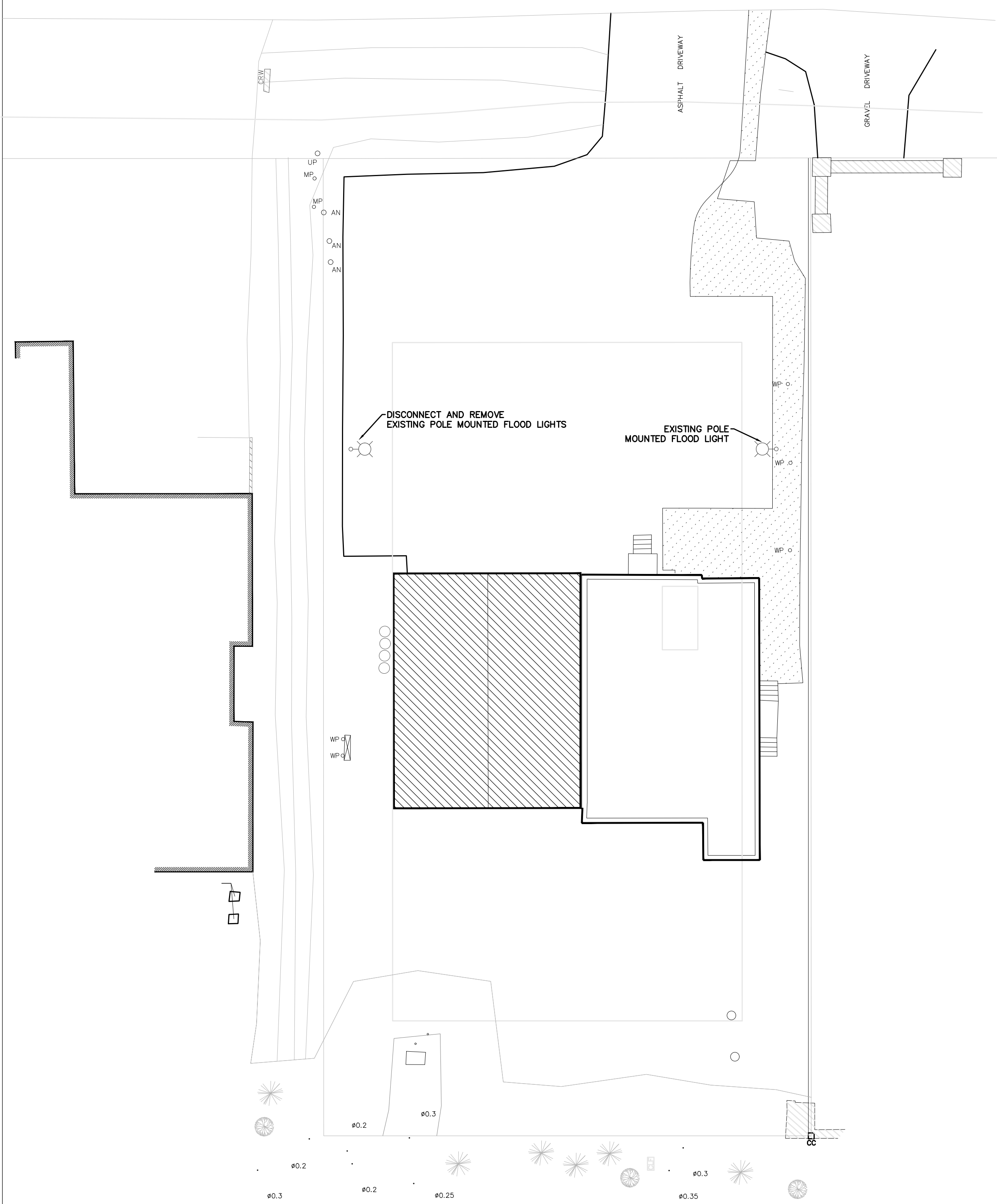
CARDEVCO WAREHOUSE

ADDRESS: 146 CARDEVCO ROAD, GAPP OIL K2K 3B8

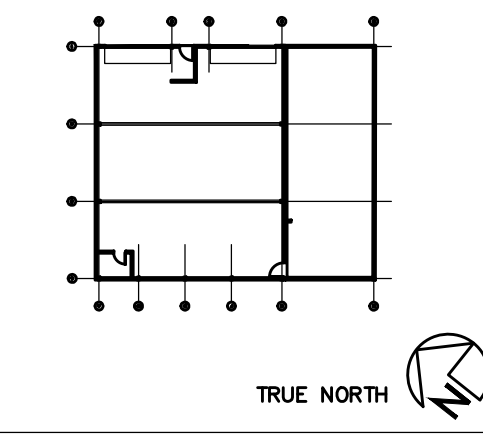
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ELECTRICAL SPECIFICATIONS

- NOTES:**
1. PROVIDE NEW LIGHTING AS INDICATED IN BOLD.
 2. CONNECT NEW EQUIPMENT AS INDICATED IN BOLD.



KEY PLAN: LEVEL 1



CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES OR DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
DO NOT SCALE DRAWINGS.

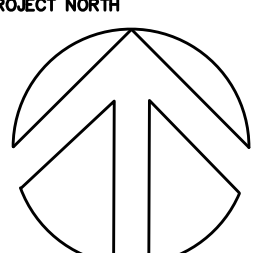
REVISIONS

NO.	DESCRIPTION	DATE
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DATE: _____

PROJECT NORTH:



DRAWN: AF
CHECKED: SB
DATE PRINTED: 2021-06-25

CARDEVCO WAREHOUSE

ADDRESS: 140 CARDEVCO ROAD, GANF OIL, K2K 3B8
DRAWING TITLE

KEY PLANS

1 ELECTRICAL DEMOLITION SITE PLAN
E002 1/16"=1'-0"

2 ELECTRICAL NEW SITE PLAN
E002 1/16"=1'-0"