

ELECTRICAL SPECIFICATIONS:

1. GENERAL
- ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE ONTARIO ELECTRICAL CODE AND SHALL COMPLY WITH ALL APPLICABLE CODES AND BY-LAWS AND BE INSTALLED BY WORKERS LICENSED IN THAT PARTICULAR PORTION OF THE CONTRACT. CONTRACTOR SHALL CONFIRM AND REQUEST ESA INSPECTION TO BE PERFORMED AND PROVIDE INTERIM AND FINAL INSPECTIONS TO CONSULTANT FOR REVIEW.
2. SITE EXAMINATION
- EXAMINE SITE AND LOCAL CONDITIONS AFFECTING WORK UNDER THIS DIVISION TO ENSURE THAT WORK UNDER THIS DIVISION CAN BE SATISFACTORILY CARRIED OUT WITHOUT CHANGES TO DRAWINGS. NO ALLOWANCES WILL BE MADE LATER FOR ANY EXPENSES INCURRED THROUGH FAILURE TO MAKE THIS EXAMINATION. START OF WORK WILL BE DEEMED EVIDENCE OF ACCEPTANCE OF, AND SATISFACTION WITH, EXISTING CONDITIONS.
3. GUARANTEE
- GUARANTEE ALL WORK FOR TWELVE (12) MONTHS FROM DATE OF ACCEPTANCE.
4. PROTECTION
- ENSURE THAT ALL PRECAUTIONS ARE TAKEN TO PROTECT ALL PERSONNEL FROM HAZARDS DURING WORK. PROTECT ALL EQUIPMENT FROM DAMAGE FROM ANY CAUSE.
5. SCOPE OF WORK
- PERFORM ALL WORK AS SHOWN ON DRAWINGS. CONTRACTOR SHALL FOLLOW MANUFACTURERS INSTRUCTIONS REGARDING HANDLING, INSTALLING AND TESTING OF EQUIPMENT SPECIFIED HEREIN.
6. MATERIALS
- USE ONLY NEW MATERIALS, FULLY CERTIFIED (CSA AND ULC APPROVED) FOR USE AS INSTALLED, AND TO MEET THIS SPECIFICATION IN ALL RESPECTS.
7. 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 REPAINT WHERE NECESSARY, ALL ELECTRICAL EQUIPMENT, AND LEAVE IT IN THE FIRST CLASS CONDITION.
8. GROUNDING
- PROVIDE GROUNDING AND BONDING OF ALL EQUIPMENT WITH APPROVED FITTINGS AND CONDUCTORS OF AMPLE CAPACITY IN ACCORDANCE WITH THE ONTARIO ELECTRICAL SAFETY CODE. ALL CONDUCTORS SHALL HAVE GREEN INSULATION OR BE COLOUR CODED WITH PERMANENTLY ATTACHED GREEN TAPE 21MM [3/4"] WIDE AT EACH END. PROVIDE INSULATED GROUND/ BONDING CONDUCTOR IN EACH CONDUIT. GROUNDING SHALL BE COMPLETED AS PER SECTION 10 OF THE ONTARIO ELECTRICAL CODE
9. WIRING AND RACEWAYS
- INSTALL ALL WIRING IN EMT (MINUMIM 21MM) CONDUIT WITH THE FOLLOWING EXCEPTIONS:
- USE RIGID PVC CONDUIT FOR OUTDOOR WIRING EXPOSED TO WEATHER AND UNDERGROUND WIRING
 - USE RIGID PVC CONDUIT OR ELECTRICAL NONMETALLIC TUBING (COR-LINE) FOR WIRING EMBEDDED IN CONCRETE.
 - CONCEAL ALL CONDUITS EXCEPT IN SERVICE ROOMS AND UNFINISHED AREAS.
 - TECK90 CAN BE APPLIED IN ALL CASES.
10. WIRING
- WIRING TO BE COPPER CONDUCTORS AS INDICATED, CROSS-LINKED POLYETHYLENE INSULATION RW90 EXCEPT AS FOLLOWS:
- TYPE RWU 90 FOR UNDERGROUND WIRING.
11. IDENTIFICATION
- PROVIDE LAMICOID NAMEPLATES, BLACK LETTERS ON A WHITE BACKGROUND, SCREW MOUNTED ON ALL PANELBOARDS, DISCONNECTS, STARTERS AND EQUIPMENT. ALL DUPLEX RECEPTACLE AND LIGHTING TOGGLE SWITCHES SHALL HAVE PANEL AND CIRCUIT NUMBER IDENTIFIED WITH P-TOUCH LABELS.
12. SHOP DRAWINGS
- PROVIDE ONE COPIES OF SHOP DRAWINGS FOR THE EQUIPMENT.

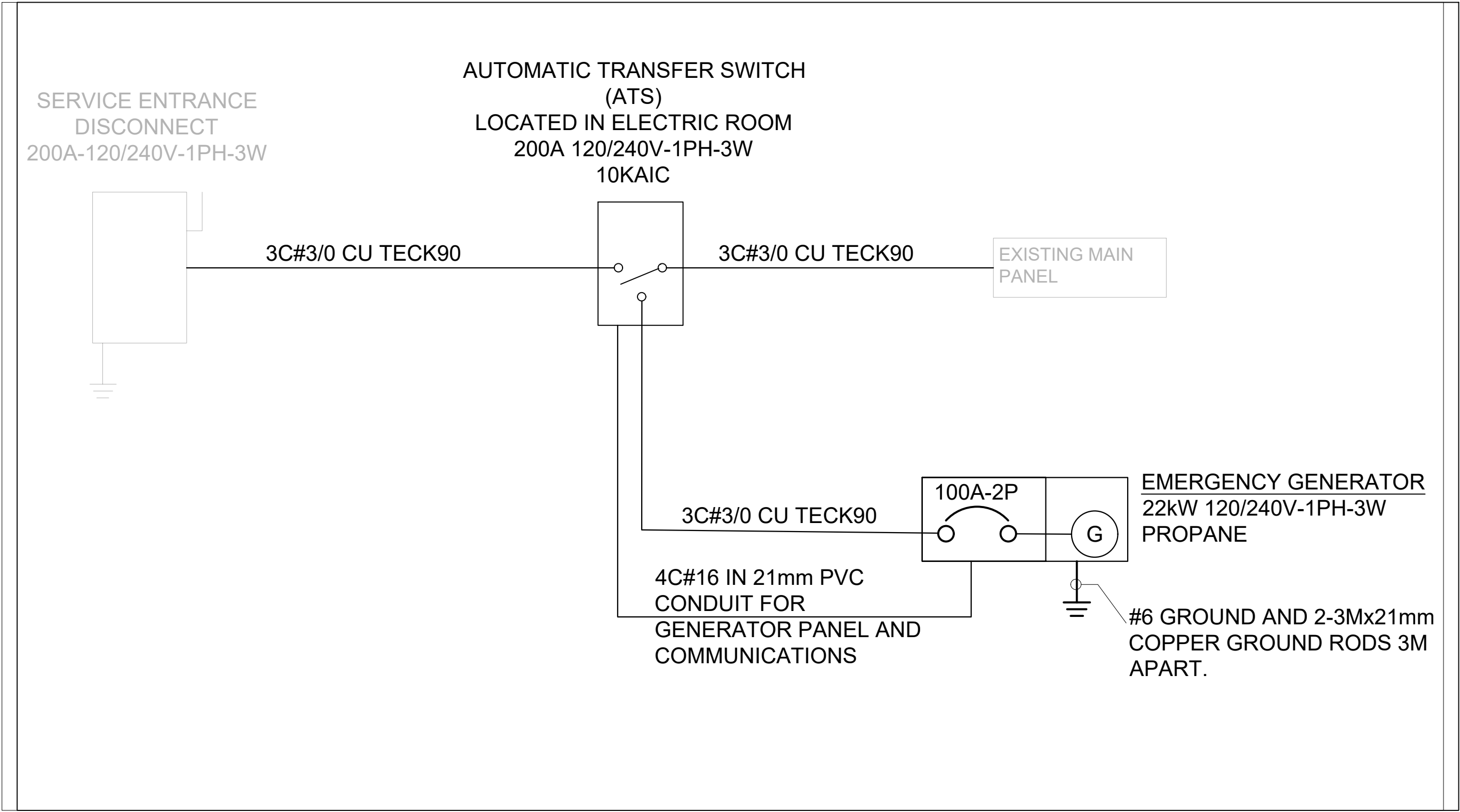
EMERGENCY GENERATOR -
22kW 120/240V-1Ø-3W
THE UNIT SHALL BE A 22 KWE PROPANE-POWERED STANDBY GENERATOR, RATED FOR 120/240V, SINGLE-PHASE OUTPUT, AND HOUSED IN A DURABLE ALUMINUM ENCLOSURE FOR ENHANCED CORROSION RESISTANCE AND WEATHER PROTECTION. IT SHALL BE EQUIPPED WITH A VANGUARD COMMERCIAL-GRADE ENGINE, ENGINEERED FOR RELIABILITY AND LONG OPERATIONAL LIFE UNDER CONTINUOUS OR STANDBY CONDITIONS. THE GENERATOR SHALL INCLUDE POWER PROTECT FEATURES FOR OPTIMIZED PERFORMANCE AND LOAD MANAGEMENT, ENSURING SAFE AND EFFICIENT OPERATION DURING OUTAGES. A COMPREHENSIVE 7-YEAR WARRANTY SHALL BE PROVIDED BY THE MANUFACTURER TO COVER PARTS, LABOR, AND TRAVEL, SUPPORTING LONG-TERM PEACE OF MIND. THE UNIT SHALL MEET ALL APPLICABLE CSA AND ANSI STANDARDS. ACCEPTABLE MODEL: BRIGGS & STRATTON 040786 OR APPROVED EQUAL.

AUTOMATIC TRANSFER SWITCH

THE AUTOMATIC TRANSFER SWITCH SHALL BE SERVICE ENTRANCE RATED MODEL, RATED FOR 200 AMPS, 240V AC, 2-POLE, SINGLE-PHASE, AND DESIGNED FOR USE WITH RESIDENTIAL STANDBY GENERATORS. THE SWITCH SHALL BE NEMA 3R RATED FOR OUTDOOR INSTALLATION AND CONSTRUCTED FOR SERVICE ENTRANCE APPLICATIONS, INCORPORATING A UTILITY DISCONNECT BREAKER TO MEET ELECTRICAL CODE REQUIREMENTS. IT SHALL FEATURE AUTOMATIC OPERATION WITH SEAMLESS POWER TRANSFER BETWEEN UTILITY AND GENERATOR POWER SOURCES. THE SWITCH SHALL BE COMPATIBLE WITH AMPLIFY-ENABLED SYSTEMS, ALLOWING FOR ADVANCED LOAD MANAGEMENT, MOBILE MONITORING, AND SYSTEM DIAGNOSTICS. DESIGNED FOR RELIABLE OPERATION IN HARSH ENVIRONMENTS, IT SHALL COMPLY WITH UL 1008 STANDARDS AND BE SUITABLE FOR INSTALLATION IN CANADIAN AND U.S. MARKETS. ACCEPTABLE MODEL: BRIGGS & STRATTON AMPLIFY 200A 240V 2P NEMA 3R ATS OR APPROVED EQUAL.

CONTROL PANEL

THE GENERATOR CONTROL PANEL SHALL BE DIGITAL CONTROLLER, DESIGNED FOR AUTOMATIC OPERATION OF THE STANDBY POWER SYSTEM. IT SHALL FEATURE A USER-FRIENDLY LED DISPLAY WITH REAL-TIME FAULT CODE INDICATIONS, PROVIDING DIAGNOSTICS AND OPERATIONAL STATUS AT A GLANCE. THE CONTROLLER SHALL INCLUDE A REAL-TIME CLOCK, ENGINE HOUR COUNTER, AND A PROGRAMMABLE EXERCISE SCHEDULER WITH FLEXIBLE RUN TIME SETTINGS FROM 16 SECONDS TO 20 MINUTES. IT SHALL SUPPORT BOTH AMF (AUTOMATIC MAINS FAILURE) AND 2-WIRE START MODES, ENSURING COMPATIBILITY WITH AUTOMATIC TRANSFER SWITCH FUNCTIONS. THE CONTROL PANEL SHALL ALSO BE COMPATIBLE WITH REMOTE MONITORING, ALLOWING COMMUNICATION AND PERFORMANCE TRACKING THROUGH WEB OR MOBILE INTERFACES. THE CONTROL SYSTEM SHALL PROVIDE LOW OIL PRESSURE SHUTDOWN, HIGH TEMPERATURE SHUTDOWN, AND INTEGRATED SAFETY PROTECTIONS TO ENSURE SAFE OPERATION. THE PANEL SHALL BE UL-COMPLIANT AND PRE-INSTALLED WITHIN THE GENERATOR ENCLOSURE. ACCEPTABLE CONTROL PANEL: GC-1032 OR APPROVED EQUAL.



REVISION					
DATE (MM/DD/YY)	REV No.	REASON FOR REVISION	BY	APPD BY	

2	B	11/03/25	ISSUED FOR TENDER	QA	SP
1	A	06/13/25	ISSUED FOR REVIEW	MH	SP
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CONSULTANT					
			HSP Inc. 5715 Warner Drive Long Sault, ON Canada K0C 1P0 T: 613-932-3289 F: 613-937-0125 www.hsp.ca		
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DRAWING SHOULD NOT BE SCALED. DIMENSIONS SHOWN MUST NOT BE USED FOR CONSTRUCTION UNTIL VERIFIED IN THE FIELD. ALL DISCREPANCIES MUST BE REPORTED TO THE OFFICE BEFORE COMMENCING WORK.					
STAMP			NORTH ARROW		
CLIENT:					
MOHAWK COUNCIL OF AKWESASNE 101 TEVESATENI RD AKWESASNE, QC K6H 0G5					
PROJECT:					
GENERATOR INSTALLATION AKWESASNE CHILDCARE ELECTRICAL S.L.D AND SPECIFICATION					
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SCALE:			DRAWING No.		
N.T.S			E1.0		
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