

PRELIMINARY
NOT FOR
CONSTRUCTION

Date: 11-06-2020
Proj No: 10105
Drawn By: DMT
Chkd By: RLC
DSGN By: DMT
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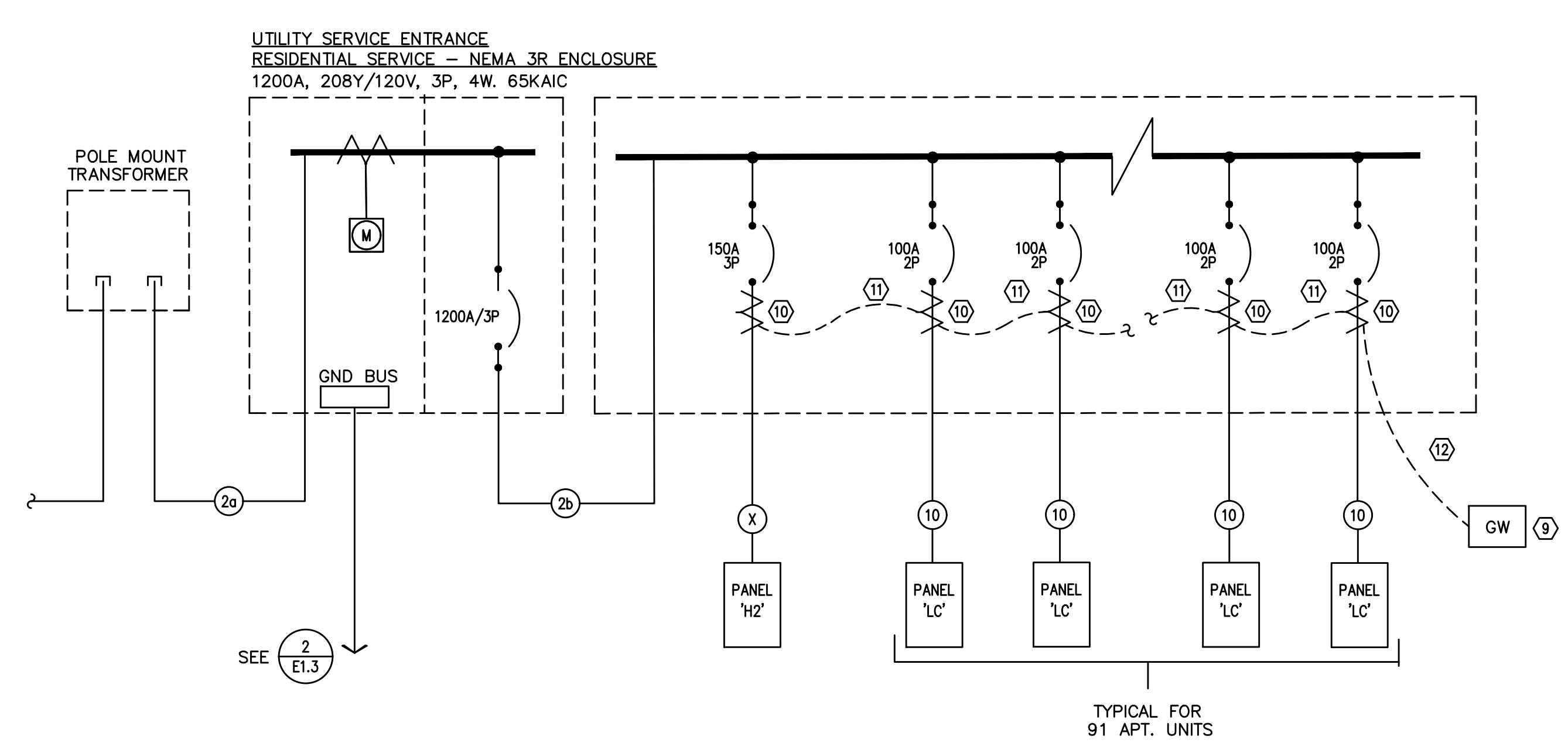
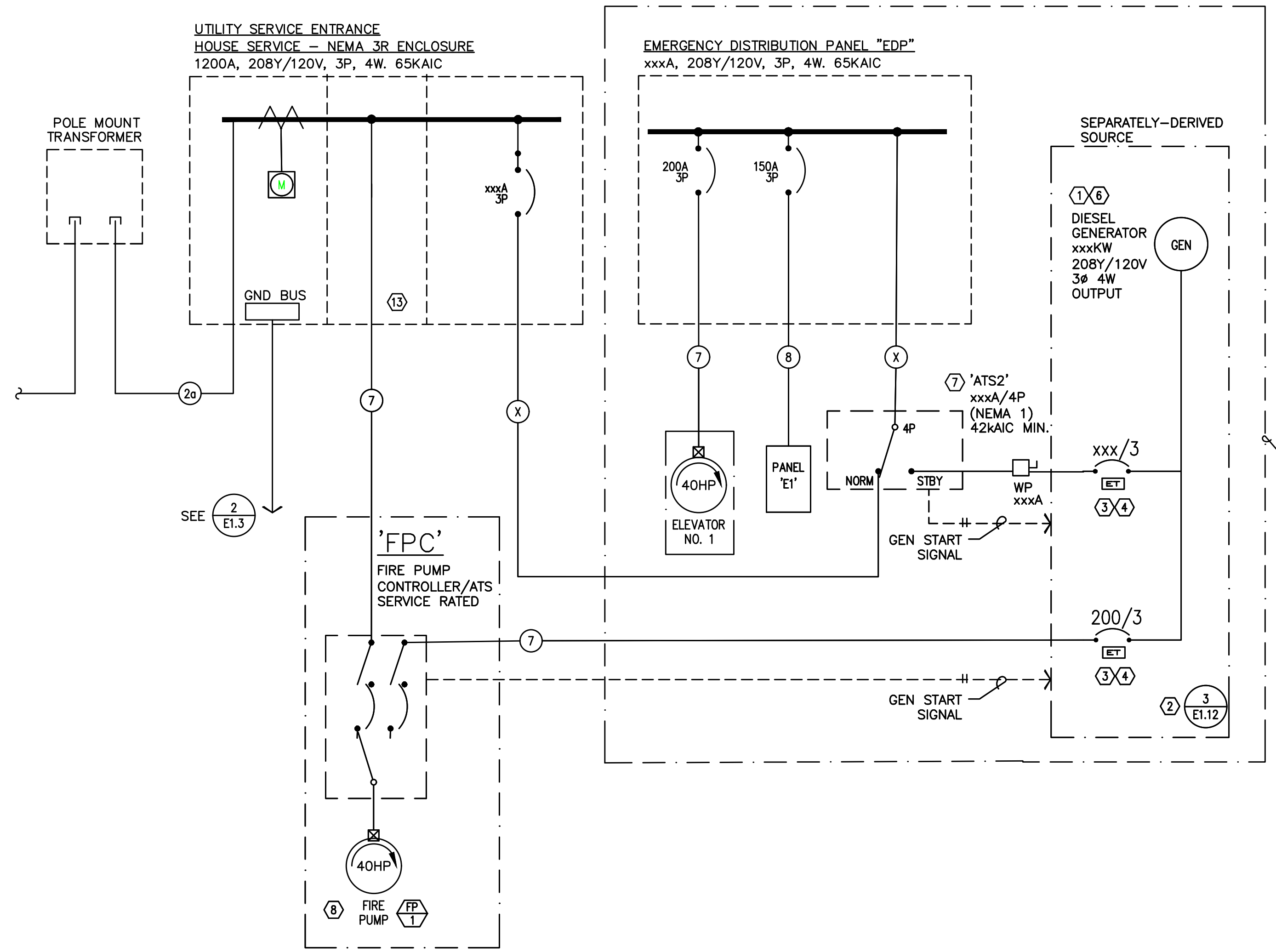
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ELECTRICAL ONE-LINE DIAGRAM



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SHEET
E1.11
OF ****



1 ELECTRICAL ONE-LINE DIAGRAM
E1.11 208/120v, 3ph, 4w

FEEDER SCHEDULE (COPPER)

NO.	AMPS	CONDUIT	CONDUCTOR		
1		PRIMARY	BY UTILITY CO.	&	GND
2a		*(12) 5"	BY UTILITY CO.	&	GND
2b	2500A	*(6) 4"	ea w/ (4) #600Kcm	& (1) #350Kcm	GND
3	1200A	*(3) 4"	ea w/ (4) #600Kcm	& (1) #3/0	GND
4	800A	*(2) 4"	ea w/ (4) #600Kcm	& (1) #1/0	GND
4a	600A	*(2) 3"	ea w/ (4) #350Kcm	& (1) #1	GND
5	400A	3 1/2"	(4) #500Kcm	& (1) #3	GND
6	250A	2 1/2"	(4) #250Kcm	& (1) #4	GND
7	200A	2"	(4) #3/0	& (1) #6	GND
8	150A	2"	(4) #1/0	& (1) #6	GND
9	100A	1 1/2"	(4) #1	& (1) #8	GND
10	100A	1 1/2"	(3) #1	& (1) #8	GND

* PARALLEL FEEDER

ONE-LINE GENERAL NOTES:

- COORDINATE ALL WORK ASSOCIATED WITH ELECTRIC SERVICE WITH LOCAL UTILITY PROVIDER. PROVIDE ALL CONDUIT, GROUNDING, TRANSFORMER VAULT/PAD, ETC., IN ACCORDANCE WITH SERVING UTILITY REQUIREMENTS.
- COORDINATE METERING REQUIREMENTS WITH UTILITY.
- FOR LOAD CENTER FEEDER LENGTHS GREATER THAN 145'-0" FROM METER CENTER, INCREASE WIRE SIZE ONE SIZE UP FOR VOLTAGE DROP.
- PER NEC 240.87, THE ELECTRICAL CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR ARC ENERGY REDUCTION DEVICE(S) FOR CIRCUIT BREAKERS 1200A OR GREATER. CONTRACTOR SHALL PROVIDE AN ENERGY-REDUCING ACTIVE FLASH MITIGATION SYSTEM OR OTHER METHOD APPROVED BY THE NEC.
- USE OF ALUMINUM CONDUCTORS, AS ALLOWED BY CODE, MAY BE SUBSTITUTED FOR COPPER. CONTRACTOR SHALL PROVIDE WRITTEN SUBSTITUTION REQUEST DEMONSTRATING THAT THE PROPOSED PRODUCT IS EQUIVALENT TO COPPER IN ALL ASPECTS.
- ACCEPTABLE POWER MONITORING SYSTEM MANUFACTURERS ARE:
SIEMENS SEM3
E-MON D-MON
SQUARE D POWERLOGIC
OR AS APPROVED BY SUBMITTAL PROCESS.

ONE-LINE NOTES:

- ESTIMATED GENERATOR STARTING LOAD IS BASED ON THE ELEVATOR & FIRE PUMP MOTORS BEING PROVIDED WITH REDUCED STARTING.
- PROVIDE GROUND FOR SEPARATELY DERIVED SYSTEM PER NEC.
- PROVIDE ELECTRONIC TRIP CIRCUIT BREAKER. EXACT BREAKER TYPE, SETTINGS, ETC. TO BE VERIFIED AND AS DETERMINED BY SELECTIVE COORDINATION STUDY AS PERFORMED BY THE ELECTRICAL DISTRIBUTION EQUIPMENT MANUFACTURER.
- COORDINATE INSTALLATION OF OUTPUT BREAKERS WITH GENERATOR MANUFACTURER TO SELECTIVELY COORDINATE WITH POWER STUDY RECOMMENDATIONS.
- 'LIFE SAFETY' BRANCH TO MEET ALL REQUIREMENTS OF NEC 700. CONTRACTOR SHALL BE AWARE THAT MFIA HAS ATTEMPTED TO INDICATE EQUIPMENT AND SIZES THAT WILL SELECTIVELY COORDINATE, BUT WILL NOT BE KNOWN UNTIL ELECTRICAL EQUIPMENT MANUFACTURER PERFORMS THE REQUIRED POWER STUDIES AS SPECIFIED IN 26 05 73. CHANGES MAY BE NECESSARY AFTER THE BID.
- GENERATOR IS SIZED TO OPERATE ONLY ONE ELEVATOR AT A TIME. COORDINATE WITH ELEVATOR & GENERATOR PROVIDERS FOR AUTOMATIC SEQUENTIAL OPERATION AS REQUIRED UNDER ASME A17.1, SECTION 2.27.2.1 THROUGH 2.27.2.5.
- THE AUTOMATIC TRANSFER SWITCH FOR THE EMERGENCY PANEL "EDP" SHALL OPERATE SUCH THAT THE EGRESS LOADS ARE SWITCHED TO GENERATOR POWER WITHIN 10 SECONDS AND THE ELEVATOR(S) SWITCHED WITHIN 60 SECONDS OF A POWER FAILURE.
- CONSULT MECHANICAL, PLUMBING AND/OR FIRE ALARM PLANS AND VERIFY EXACT POWER REQUIREMENTS FOR THE FIRE PUMP.
- CONSULT ELEVATOR PROVIDER FOR INSTALLATION AND POWER REQUIREMENTS PRIOR TO ROUGH IN.
- PROVIDE CIRCUIT BREAKER WITH INTEGRAL LOAD MONITORING MODULE COMPATIBLE WITH POWER MONITORING SYSTEM. SEE MANUFACTURER SPECIFICATIONS FOR WEB BASED POWER MONITORING SYSTEM REQUIREMENTS.
- SERIAL COMMUNICATIONS CABLE, 18 AWG MINIMUM. BELDEN 9463 OR APPROVED.
- PROVIDE LOAD MONITORING NETWORK GATEWAY COMPATIBLE WITH POWER MONITORING SYSTEM.
- PROVIDE SEPARATE CABINET FOR FIRE PUMP TAP PER NEC 695.

PRELIMINARY