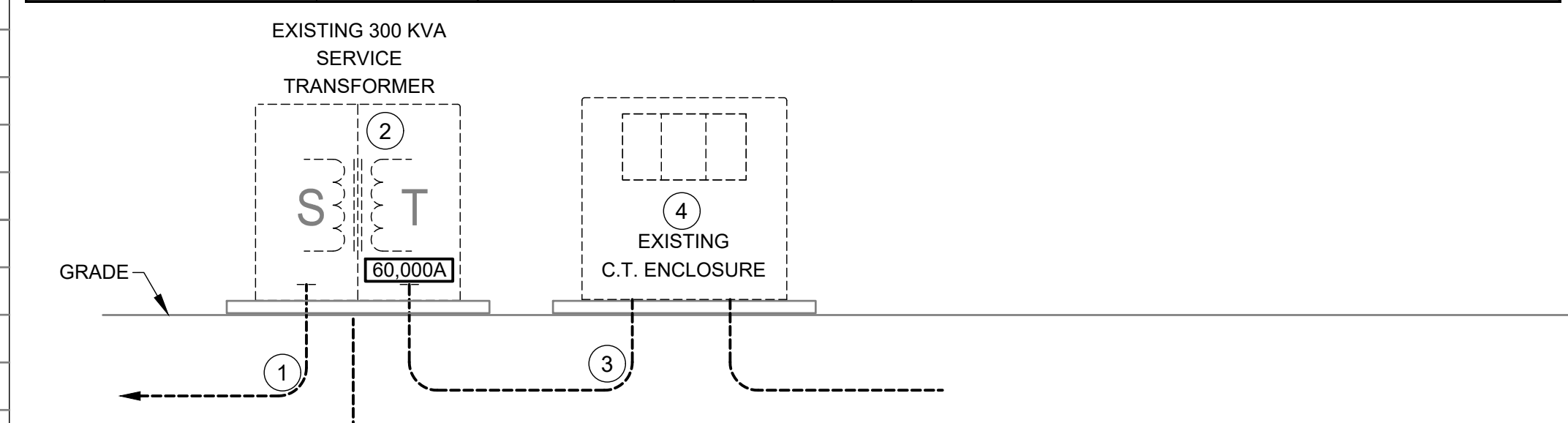


ELECTRICAL SYMBOL LEGEND (ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS)	
SYMBOL	DESCRIPTION
	2'X4' LAY-IN LIGHTING FIXTURE (TROFFER), TYPE INDICATED BY LETTER.
	"EM" INDICATES LIGHTING FIXTURE SUPPLIED WITH EMERGENCY BATTERY PACK.
	1'X4' SURFACE MOUNTED LIGHTING FIXTURE.
	1'X4' RECESSED (FLANGED) MOUNTED LIGHTING FIXTURE.
	2'X2' LAY-IN LIGHTING FIXTURE (TROFFER).
	UTILITY STRIP LIGHTING FIXTURE.
	LINEAR PENDANT MOUNTED LIGHTING FIXTURE, LENGTH AS INDICATED.
	WALL BRACKET / WALL MOUNTED TYPE LIGHTING FIXTURE.
	RECESSED DOWNLIGHT FIXTURE.
	INTERIOR WALL SCONCE LIGHTING FIXTURE.
	EXTERIOR WALL SCONCE LIGHTING FIXTURE.
	EXTERIOR WALLPACK LIGHTING FIXTURE.
	TWIN-EYE EMERGENCY LIGHTING UNIT WITH BATTERY BACK-UP. TYPE "EM", REFER TO LUMINAIRE SCHEDULE.
	EXIT SIGN, DOUBLE-FACED, DIRECTIONAL ARROWS INDICATED.
	COMBO EXIT SIGN/EMERGENCY TWIN-EYE UNIT.
	CONDUIT WITH CIRCUIT CONDUCTORS AS INDICATED BY INDIVIDUAL TICK MARKS.
	CONDUCTOR TICK MARKS: NEUTRAL, PHASE (HOT), SWITCHED, AND EQUIPMENT GROUND (E.G.R.) RESPECTIVELY.
	HOME-RUN CONDUIT OR CIRCUIT.
	CEILING AND WALL JUNCTION BOXES, RESPECTIVELY.
	DUPLEX RECEPTACLE, 18" AFF TO CENTER OR AS NOTED. CONTEMPRA WHITE.
	GFCI PROTECTED DUPLEX RECEPTACLE. RECEPTACLES WITH TRIP RESET SHALL BE IN READILY ACCESSIBLE LOCATION.
	SLAVE GFCI-PROTECTED RECEPTACLE (NEC 422.52) FOR ELECTRIC DRINKING FOUNTAIN (EDF) CONCEALED WITHIN CASE.
	20A, 125V, PASS & SEYMOUR HOSPITAL GRADE QUADPLEX (FOR WORKSTATIONS ONLY).
	QUADPLEX RECEPTACLE, 18" AFF TO CENTER OR AS NOTED.
	GROUND FAULT CIRCUIT INTERRUPTER (GFCI) DUPLEX RECEPTACLE WITH WEATHER-RESISTANT COVER.
	SPECIAL RECEPTACLE, TYPE AS NOTED.
	ISOLATED GROUND (I.G.R.) DUPLEX RECEPTACLE, PROVIDE #12 I.G.R. ALONG WITH #12 E.G.R.
	CEILING MOUNTED DUPLEX RECEPTACLE.
	FLUSH AND SURFACE MOUNTED PANELBOARDS RESPECTIVELY, REFER TO ASSOCIATED PANEL SCHEDULE.
	PHOTOCELL.
	SINGLE-POLE WALL SWITCH. SUBSCRIPT, IF USED, DESIGNATES CONTROL OF PARTICULAR LIGHTING FIXTURES.
	THREE-WAY AND FOUR-WAY SWITCHES, RESPECTIVELY.
	WEATHER-RESISTANT SWITCH.
	DIMMER SWITCH, 1200W MINIMUM WATTAGE.
	THERMAL SWITCH.
	OCCUPANCY SENSOR SWITCH, WATT-STOPPER #DW-100 OR AS NOTED.
	THERMOSTAT
	COMBINATION VOICE/DATA OUTLET, UP 18" OR AS NOTED. EXTEND 3/4" CONDUIT W/ PULL STRING TO ACCESSIBLE CEILING. FLUSH CEILING VOICE/DATA OUTLET. EXTEND 3/4". WITH PULL STRING TO CEILING OR TTB AS NOTED.
	FLUSH FLOOR VOICE/DATA OUTLET. EXTEND 3/4". WITH PULL STRING TO CEILING OR TTB AS NOTED.
	TV OUTLET, CABLE, CATV, OR SATELLITE.
	SURVEILLANCE CAMERA, PTZ = PAN, TILT, ZOOM, WEATHER-RESISTANT AT EXTERIOR; STA = STATIONARY.
	NON-FUSED AND FUSED DISCONNECT SWITCH RESPECTIVELY, NEMA 3R IF OUTSIDE. AMPS / POLES / FUSE SIZE INDICATED.
	MOTOR, HP SIZE INDICATED, "F" = FRACTIONAL HORSEPOWER.
	TRANSFORMER.
	UTILITY-OWNED SERVICE TRANSFORMER.
	MECHANICAL UNIT TAG (EXAMPLE: BOILER B-2 INDICATED), SEE MECHANICAL EQUIPMENT SCHEDULE.
	ABOVE COUNTER.
	ABOVE FINISH FLOOR.
	AUTHORITY HAVING JURISDICTION.
	BARE SOFT-DRAWN.
	COMMUNITY ANTENNA TELEVISION.
	CLOSE OF BUSINESS.
	COPPER.
	ELECTRICAL CONTRACTOR.
	EQUIPMENT GROUND.
	OVERHEAD PRIMARY ELECTRICAL LINE.
	PRIMARY ELECTRICAL UNDERGROUND FEEDER.
	GROUND FAULT CIRCUIT INTERRUPTER.
	OWNER FURNISHED, CONTRACTOR INSTALLED.
	TO BE DETERMINED.
	TELEPHONE TERMINAL BOARD.
	WEATHER-RESISTANT.

<b>PANEL: "MDT"</b> 1, 2, 2)		<b>VOLTAGE: 208/120V</b>		<b>MAINS: 400A MCB</b>		<b>WIRING: 3 PHASE, 4-W</b>								
LOCATION: ELECTRICAL ROOM		MOUNTING: SURFACE		DEVICE FAMILY: BOLT-ON		ENCLOSURE: NEMA 1								
FED FROM: SERVICE TRANSFORMER		FEED: BOTTOM		O.C. DEVICE: CIRCUIT BREAKER		AIC: 22,000								
BKR SIZE	NOTES	DESCRIPTION	CODE	LOAD (VA)	CKT NO.	PHASE A	PHASE B	PHASE C	CKT NO.	LOAD (VA)	CODE	DESCRIPTION	NOTES	BKR SIZE
PROV.		SPACE			1				2			SPACE		PROV.
60A-2P	SECURITY	CODE BLUE POLES	LS	2000	3			6180	4	4180	HVAC	RTU-1	ROOFTOP HVAC UNIT	60A-2P
60A-2P	WATER HEATER	WH-1	MEC	3000	5		7180		6	4180	MEC	RTU-2	ROOFTOP HVAC UNIT	60A-2P
60A-2P	MISC LOAD	MISC LOAD	HVAC	3000	7	7180		7180	8	4180	MEC	RTU-3	ROOFTOP HVAC UNIT	60A-2P
100A-2P	CONDENSER UNITS	CU-1 / CU-2	HVAC	6864	9	8464		8464	10	1600	MEC	RTU-2	ROOFTOP HVAC UNIT	60A-2P
PROV.		SPACE			11				12			SPACE		PROV.
PROV.		SPACE			13				14			SPACE		PROV.
PROV.		SPACE			15				16			SPACE		PROV.
PROV.		SPACE			17				18			SPACE		PROV.
200A-3P	SUBFEED	PANEL "MB-1L"	SUB	6930	19	13860		13860	20	6930	SUB	PANEL "MB-1R"	SUBFEED	200A-3P
				PHASE TOTALS:		VA		AMPS					11-12-2020	
				PHASE A:		35684		297.4			1) MAIN DISTRIBUTION PANEL.			
				PHASE B:		28220		235.2			2) NEUTRAL BAR, GROUND BAR.			
				PHASE C:		35684		297.4						
<b>TOTAL</b>	<b>KVA</b>	<b>AMPS</b>												
	<b>99.6</b>	<b>276.6</b>												

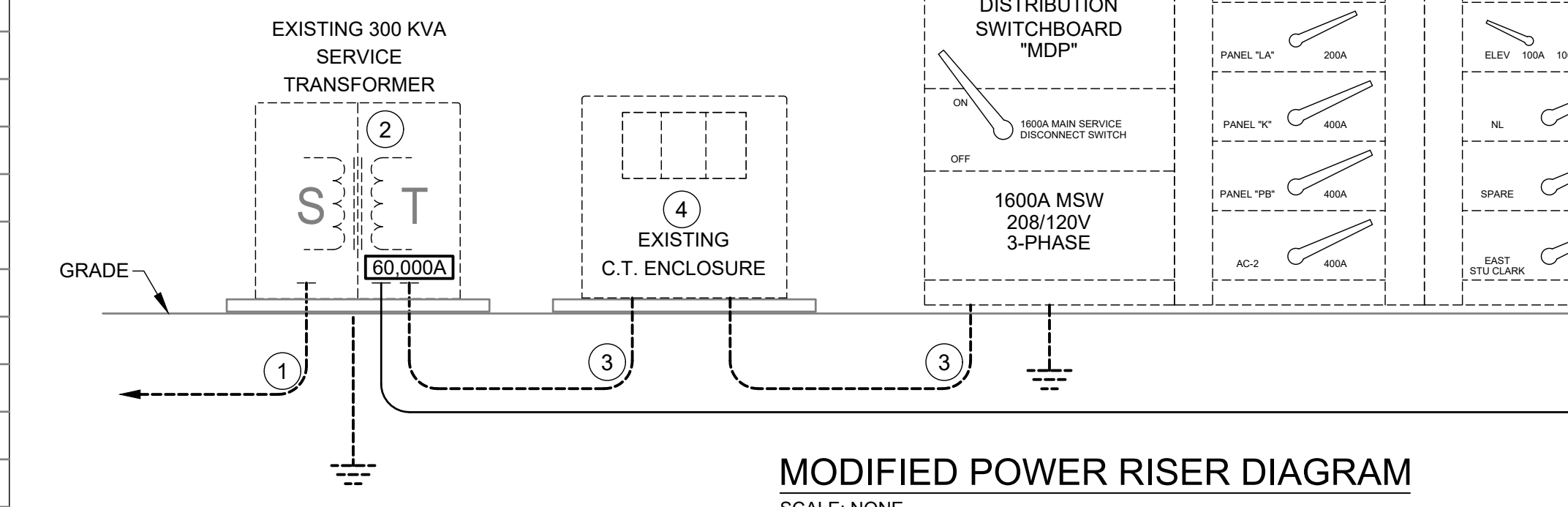
<b>PANELS: "MB-1L" &amp; "MB-1R"</b>		<b>VOLTAGE: 208/120V</b>		<b>MAINS: 200A MLO</b>		<b>WIRING: 3 PHASE, 4-W</b>								
LOCATION: MECH RM		MOUNTING: RECESSED		DEVICE FAMILY: BOLT-ON		ENCLOSURE: NEMA 1								
FED FROM: PANEL "MCB" VIA BREAKER		FEED: BOTTOM		O.C. DEVICE: CIRCUIT BREAKER		AIC: 10,000								
BKR SIZE	NOTES	DESCRIPTION	CODE	LOAD (VA)	CKT NO.	PHASE A	PHASE B	PHASE C	CKT NO.	LOAD (VA)	CODE	DESCRIPTION	NOTES	BKR SIZE
20A-1P	CONTRACTOR	TO FILL IN	-	495	1	990			2	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	3		990		4	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	5			990	6	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	7	990			8	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	9		990		10	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	11			990	12	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	13	990			14	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	15		990		16	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	17			990	18	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	19	990			20	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	21		990		22	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	23			990	24	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	25	990			26	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	27		990		28	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	29			990	30	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	31	990			32	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	33		990		34	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	35			990	36	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	37	990			38	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	39		990		40	495	-	CONTRACTOR	TO FILL IN	20A-1P
20A-1P	CONTRACTOR	TO FILL IN	-	495	41			990	42	495	-	CONTRACTOR	TO FILL IN	20A-1P
				PHASE TOTALS:		VA		AMPS						
				PHASE A:		6930		57.8			1) PROVIDE GROUND BAR, NEUTRAL BAR, DOOR-IN-DOOR TRIM.			
				PHASE B:		6930		57.8			2) 42 TOTAL POLES.			
				PHASE C:		6930		57.8						
<b>TOTAL</b>	<b>KVA</b>	<b>AMPS</b>												
	<b>20.8</b>	<b>57.8</b>												



EXISTING POWER RISER DIAGRAM

**SERVICE SIZING CALCULATIONS - LOAD RECAP**  
 SERVICE CHARACTERISTICS: 208/120V, 3-PHASE, 4-WIRE  
 CALCS:  
 TOTAL RAW CONNECTED LOAD : 99.6 KVA  
 TOTAL DESIGN LOAD: 99.6 KVA (276A).  
 THE NEW 400A SERVICE TO THE CHAMP TYRONE BUILDING IS ADEQUATE.

EXISTING 300 KVA SERVICE TRANSFORMER IS ADEQUATE FOR BOTH THE STU CLARK AND CHAMP TYRONE BUILDINGS.



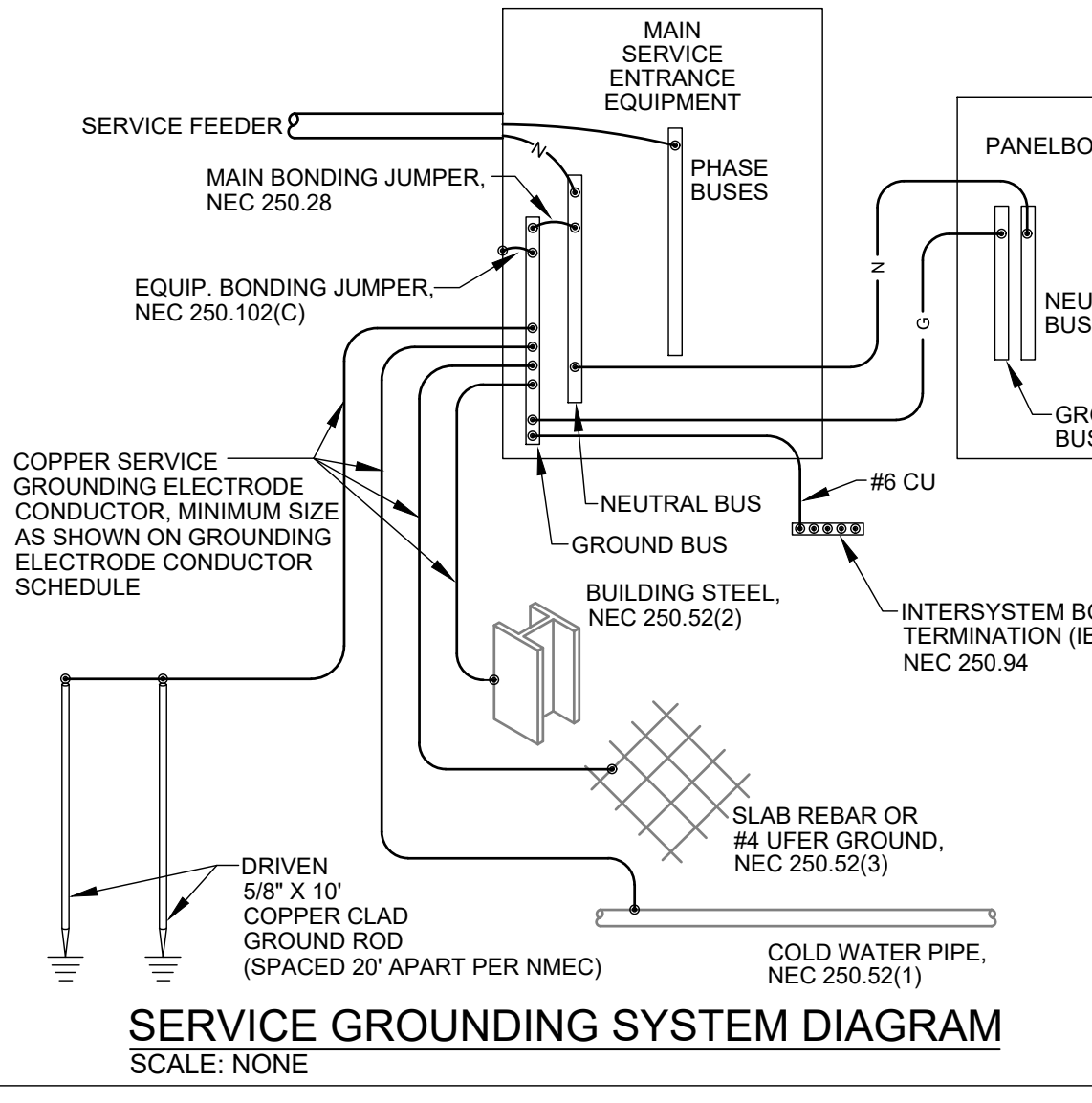
MODIFIED POWER RISER DIAGRAM  
SCALE: NONE

**SHORT-CIRCUIT CALCULATIONS**  
 EXISTING PNM-PROVIDED SERVICE TRANSFORMER SIZE = 300 KVA  
 STANDARD TRANSFORMER IMPEDANCE (%Z) = 1.12%  
 MAXIMUM FAULT CURRENT AT TRANSFORMER SECONDARY = 60,000A PER PNM.  
 MAXIMUM FAULT CURRENT AT PANEL "MDT" = 12,653A.  
 PANEL "MDT" SHALL HAVE AN A.I.C. AS SCHEDULED.

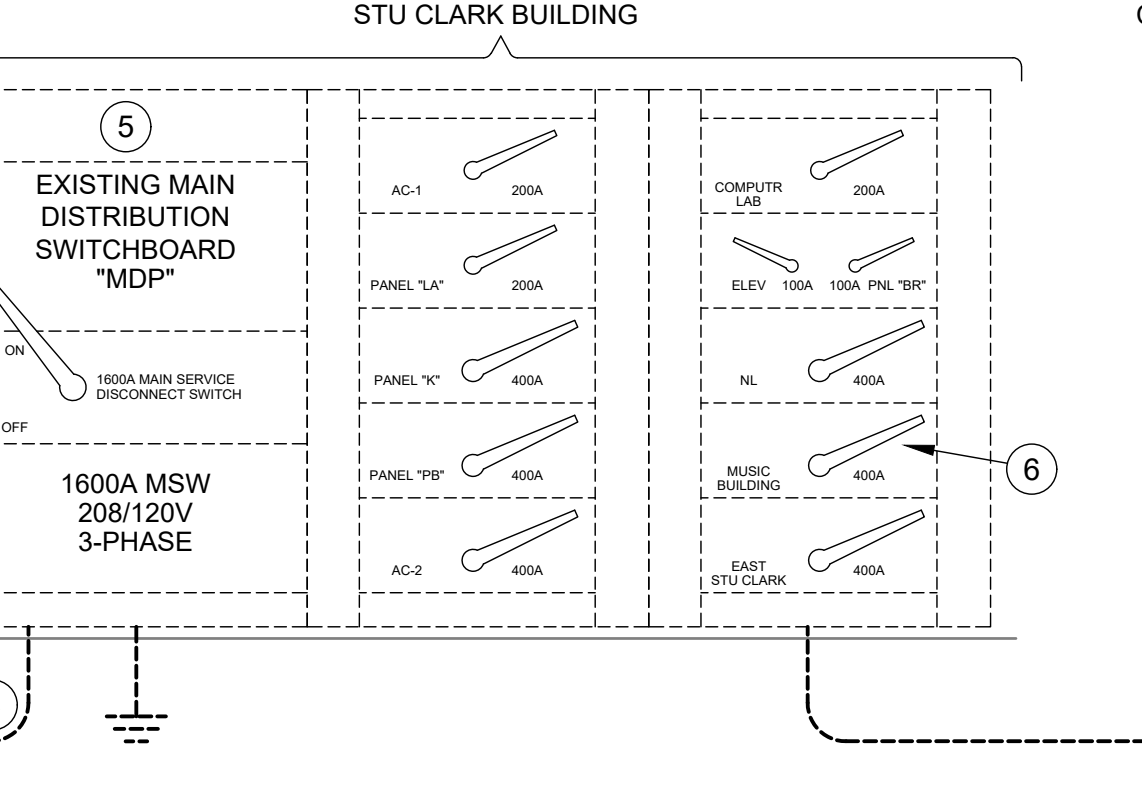
**SERVICE GROUNDING SYSTEM GENERAL NOTES**

- ALL CONDUCTORS USED FOR THE GROUNDING SYSTEM SHALL BE COPPER.
- CONNECT THE GROUNDING SYSTEM TO THE FOUR FOLLOWING COMPONENTS:
  - BUILDING STEEL.
  - METAL U.G. COLD WATER PIPE.
  - CONCRETE ENCASED REBAR OR #4 COPPER UFER.
  - 10' GROUND RODS.
- ANY SPLICING SHALL BE VIA CAD-WELD TYPE PROCESS.
- THE GROUNDING SYSTEM SHALL COMPLY WITH ALL REQUIREMENTS OF ARTICLE 250 OF THE 2017 NEC, AND SHALL PROVIDE 5 OHMS OR LESS RESISTANCE TO GROUND. PROVIDE TEST REPORT VERIFYING RESISTANCE LEVEL IS IN COMPLIANCE WITH 5 OHM MAXIMUM.

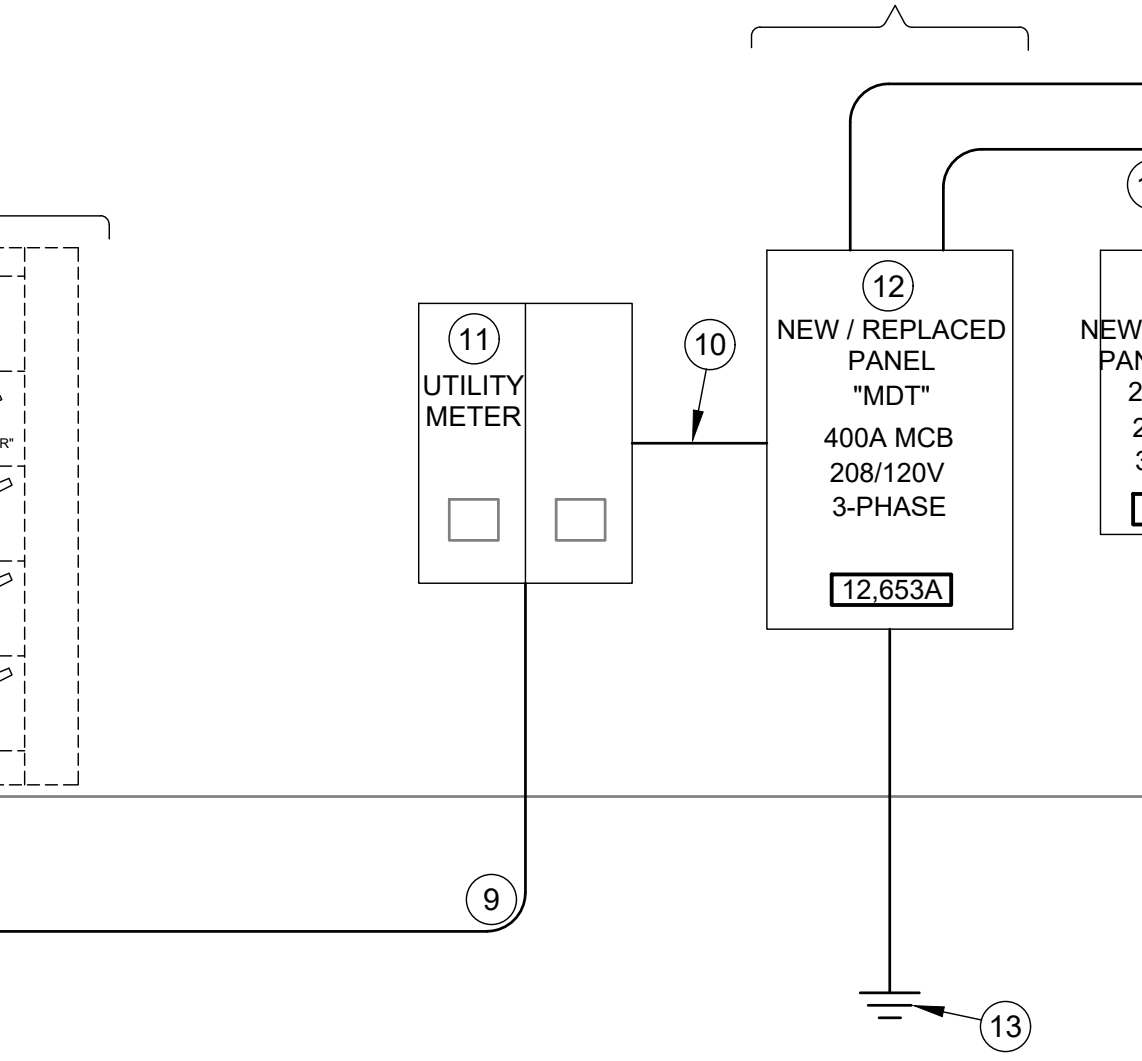
SERVICE AMPACITY	EQUIV. CU WIRE SIZE	MAIN BONDING JUMPER	EQUIPMENT BONDING JUMPER	METALLIC PIPE CONDUCTOR	BUILDING STEEL CONDUCTOR	REBAR OR UFER CONDUCTOR	GROUND ROD CONDUCTOR
100A	#2	#8	#8	#8	#8	#8	#8
150A	#1/0	#6	#6	#6	#6	#6	#6
200A	#3/0	#4	#4	#4	#4	#4	#4
225A	#4/0	#2	#2	#2	#2	#2	#2
400A	500	#1/0	#1/0	#1/0	#1/0	#1/0	#1/0



SERVICE GROUNDING SYSTEM DIAGRAM  
SCALE: NONE



EXISTING MAIN DISTRIBUTION SWITCHBOARD "MDP"



NEW / REPLACED PANEL "MDT"

**ELECTRICAL SPECIFICATIONS**

- SUMMARY:**
- Provide electrical systems for the following:
    - Power.
  - Electrical Service:
    - Provide a new service for the Champ Tyrone music building as indicated.
- PRODUCTS:**
- Provide new materials suitable for service intended. Provide accessories such as controls, coverplates, and connections to equipment.
- INSTALLATION:**
- Comply with the 2017 National Electrical Code (NEC) and regulations of state and local authorities having jurisdiction.
  - All wiring shall be in EMT conduit or in MC cable. MC cable may be used in locations where it meets all applicable NEC requirements.
  - Color code all wiring as follows: For 208/120V, Phase A-Black, Phase B-Red, Phase C-Blue, Neutral-White, Ground-Green.
  - Maintain indicated fire ratings of walls, partitions, ceilings, and floors at penetrations. Seal with firestopping to maintain fire rating.
  - Test all systems for proper operation.

**PROJECT GENERAL ELECTRICAL NOTES:**

- SCOPE OF WORK: PROVIDE A NEW 400A, 208/120V, 3-PHASE SERVICE FEEDER AND NEW MAIN POWER PANEL FOR THE CHAMP TYRONE MUSIC BUILDING TO ALLEVIATE AN OVERLOAD CONDITION ON THE EXISTING SYSTEM.
- GENERAL CONTRACTOR TO SAW-CUT, REMOVE, AND PATCH EXISTING ROADWAYS, WALKWAYS, AND ARCHITECTURAL SURFACES AS REQUIRED TO PROVIDE THE NEW ELECTRIC SERVICE AS INDICATED ON THE ELECTRICAL SITE PLAN.
- ALL ELECTRICAL WORK SHALL COMPLY WITH THE 2017 EDITIONS OF THE NATIONAL ELECTRICAL CODE (NEC) AND THE NEW MEXICO ELECTRICAL CODE (NMEC), AND REGULATIONS OF STATE AND LOCAL AUTHORITIES HAVING JURISDICTION (AHJ).

**ELECTRICAL KEYED NOTES:**

- EXISTING PRIMARY 3-PHASE FEEDER TO REMAIN.
- EXISTING 300 KVA SERVICE TRANSFORMER (ST) TO REMAIN. THIS TRANSFORMER CURRENTLY SERVES THE STU CLARK BUILDING ALONG WITH THE CHAMP TYRONE MUSIC BUILDING (VIA THE MAIN DISTRIBUTION "MDP" IN THE STU CLARK BUILDING).
- EXISTING 1600A SERVICE FEEDER TO REMAIN.
- EXISTING CT/METER ENCLOSURE TO REMAIN.
- EXISTING MAIN DISTRIBUTION PANEL LOCATED IN THE STU CLARK BUILDING TO REMAIN.
- THE 400A FEEDER SERVING THE MUSIC BUILDING TO BE REMOVED AND THE ASSOCIATED 400A, 2-POLE FUSIBLE SWITCH TO BECOME A SPARE. REFER TO MODIFIED POWER RISER DIAGRAM.
- REMOVE EXISTING 400A FEEDER COMPLETELY.
- REMOVE AND REPLACE PANEL "MDT", REFER TO MODIFIED POWER RISER DIAGRAM.
- 400A SERVICE FEEDER. 4 #500KCMIL CU IN 4" CONDUIT.
- 400A FEEDER. 4 #500KCMIL CU AND 1 #3 CU GROUND IN 4" CONDUIT.
- PROVIDE METERING EQUIPMENT PER PNM STANDARDS.
- RECONNECT ALL EXISTING FEEDERS PREVIOUSLY SERVED BY THE REPLACED PANEL TO NEW PANEL "MDT" FOR OPERATION AS BEFORE. INTERCEPT AND EXTEND EXISTING FEEDERS AS NECESSARY. REFER TO PANEL "MDT" PANEL SCHEDULE.
- ONE #1/0 BSD COPPER SERVICE GROUND IN 3/4" CONDUIT. REFER TO SERVICE GROUNDING SYSTEM DETAIL.
- 200A FEEDER: 4 #2 CU AND 1 #8 CU GROUND IN 1.5" CONDUIT. CONTRACTOR TO VERIFY IF EXISTING CONDUIT CAN BE REUSED.

SERVICE TRANSFORMER TYPE	VOLTAGE(S)	MAXIMUM AVAILABLE FAULT CURRENT AMPERES SYMMETRICAL
POLEMOUNTED 10, 25, AND 50 KVA	120/240 240 THREE-PHASE 277/480	10,000 AT CUSTOMER SERVICE ENTRANCE
POLEMOUNTED 75 KVA	120/240	22,000 AT CUSTOMER SERVICE ENTRANCE
POLEMOUNTED	120/208	22,000 AT CUSTOMER SERVICE ENTRANCE
PADMOUNTED (RESIDENTIAL ONLY) (UNDER 100 KVA)	120/240	10,000 AT CUSTOMER SERVICE ENTRANCE
PADMOUNTED (LARGE RESIDENTIAL) (100 OR 167 KVA)	120/240	22,000 AT CUSTOMER SERVICE ENTRANCE
PADMOUNTED (COMMERCIAL)	120/240	22,000 AT PNM TRANSFORMER
PADMOUNTED	120/208, 277/480	60,000 AT PNM TRANSFORMER
ALBUQUERQUE DOWNT		



