

MECHANICAL/ELECTRICAL SCHEDULE

ITEM	H.P.	FLA	MCA(W)	MOOP	VOLTAGE	DISCONNECT
AH1	-	25.0	25	200V-1Ø	3ØF25-2"	
AH2	-	25.0	25	200V-1Ø	3ØF25-2"	
AH3/4	-	25.0	25	200V-1Ø	3ØF25-2"	
AH5	-	25.0	25	200V-1Ø	3ØF25-2"	
AH6/7	-	30.0	30	200V-1Ø	3ØF30-2"	
HP1	17.0	25	200V-1Ø	3ØF25-2" 3R		
HP2	19.0	30	200V-1Ø	3ØF30-2" 3R		
HP3/4	17.0	25	200V-1Ø	3ØF25-2" 3R		
HP5	19.0	30	200V-1Ø	3ØF30-2" 3R		
HP6/7	28.0	45	200V-1Ø	6ØF45-2" 3R		
MS.1	1.0	15	200V-1Ø	3ØF15-2"		
MC.1	21.0	25	200V-1Ø	3ØF25-2" 3R		
PTACA	4.0	15	200V-1Ø	TWIST LOC PER MAN		
EF-1	-	(15.9W)	-	120V-1Ø	S ₁	
EF-2	-	(22.5W)	-	120V-1Ø	S ₁	
EF-3	-	(18.4W)	-	120V-1Ø	S ₁	
EF-4	-	(54.4W)	-	120V-1Ø	S ₁	
EF-5	-	(22.5W)	-	120V-1Ø	S ₁	
EF-6	-	(22.5W)	-	120V-1Ø	S ₁	
EF-7	-	(58.1W)	-	120V-1Ø	S ₁	
EF-8	-	(35.0W)	-	120V-1Ø	S ₁	
EF-9	-	(22.5W)	-	120V-1Ø	S ₁	
EF-10	-	(13.9W)	-	120V-1Ø	S ₁	
DWH1	-	-	GAS	120V-1Ø	S ₁	
DGAS.1	-	71.0	90	200V-3Ø	100" F10 3Ø-3R	
DGAS.2	-	85.0	110	200V-3Ø	200" F10 3Ø-3R	
EUH.1	-	(1000W)	-	200V-1Ø	3ØNF-2"	
EUH.2	-	(2000W)	-	200V-1Ø	3ØNF-2"	

NOTE:
EG TO COORDINATE WITH MC AND PROVIDE ELECTRICAL CONNECTIONS AS REQUIRED FOR PERMANENTLY STAMPED DATA PLATES FOR A COMPLETE AND OPERATIONAL MECHANICAL/ELECTRICAL SYSTEM.
PROVIDE RIB RELAY AS REQUIRED FOR INTERFACE OF FAN WITH CONTROL PER M SHEETS.

CU FEEDER SCHEDULE

STD. FUSE OR CB TRIP SIZE	# OF SETS	BUILDING WIRE QUANTITY & SIZE TYPE THHN - DRY TYPE THHN - WET	MINIMUM CONDUIT SIZE	# OF SETS	BUILDING WIRE QUANTITY & SIZE TYPE THHN - DRY TYPE THHN - WET	MINIMUM CONDUIT SIZE
(60)	1	4 #8, #10 G	1"			
(70)	1	4 #4, #8 G	1 1/4"			
(80)	1	4 #3, #8 G	1 1/4"			
(90)	1	4 #2, #8 G	1 1/4"			
(100)	1	4 #3, #8 G	1 1/4"			
(110)	1	4 #1, #8 G	1 1/2"	1	4 #10, #4 G	2"
(125)	1	4 #1, #8 G	1 1/2"	1	4 #20, #4 G	2"
(150)	1	4 #10, #8 G	2"	1	4 #30, #4 G	2"
(175)	1	4 #20, #8 G	2"	1	4 #40, #4 G	2 1/2"
(200)	1	4 #30, #8 G	2"	1	4-250KCMIL, #4 G	3"
(225)	1	4 #40, #4 G	2 1/2"	1	4-300KCMIL, #2 G	3"
(300)	1	4-350MCM, #4 G	3"	1	4-500KCMIL, #2 G	1 1/2"
(400)	2	4-#30, #3 G	2 1/2"	2	4-250KCMIL, #2 G	3"
(500)	2	4-250MCM, #2 G	2 1/2"	2	4-350KCMIL, #2 G	3"
(600)	2	4-350MCM, #1 G	3"	2	4-500KCMIL, #20 G	3 1/2"
(700)	2	4-500MCM, #10 G	3"	2	4-700KCMIL, #10 G	4"
(800)	3	4-300MCM, #10 G	3"	3	4-400KCMIL, #10 G	3 1/2"
(1000)	3	4-400MCM, #20 G	3"	3	600KCMIL, #40 G	4"
(1200)	4	4-350MCM, #30 G	3"	4	500KCMIL, 250KCMIL G	3 1/2"
(3000)	8	4500 3 1/2"	3 1/2"	8	705KCMIL	5"

NOTES:
1. ALL FEEDER SIZES LISTED MAY NOT BE USED IN PROJECT FIELD DIAGRAM.
2. ELECTRICAL CONTRACTOR TO VERIFY CONDUIT SIZE REQUIRED IF WIRE TYPES OTHER THAN THOSE LISTED ABOVE ARE USED.
3. REFER TO LATEST EDITION OF NEC FOR CONDUIT TYPES REQUIRED BY THEIR LOCATION. IF CONDUIT OTHER THAN 'EMT' IS REQUIRED USE SIZE PER MAXIMUM ALLOWED.
4. FEEDER SIZES SHOWN IN PROJECT FIELD DIAGRAM WITH A DELTA SYMBOL 'D' ARE 3Ø, 3 WIRE FEEDERS. A NEUTRAL WIRE IS REQUIRED.
5. FEEDER SIZES SHOWN IN PROJECT FIELD WITH A DELTA SYMBOL 'F' ARE 1Ø, 3 WIRE FEEDERS.

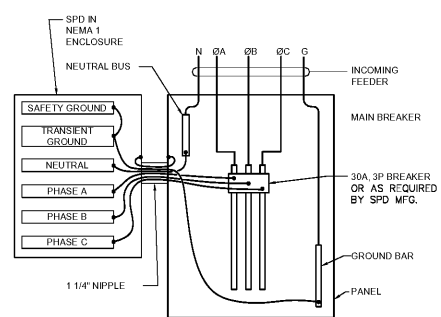
VOLTAGE DROP SCHEDULE

BRANCH CIRCUITS UP TO 8 AMPS	WIRE SIZE AWG
1' - 120'	#12
121' - 150'	#10
151' - 300'	#8
301' - 470'	#6

120 VOLT BRANCH CIRCUITS 9 AMPS TO 14 AMPS	WIRE SIZE AWG
1' - 65'	#12
66' - 110'	#10
111' - 170'	#8
171' - 270'	#6

277 VOLT BRANCH CIRCUITS UP TO 14 AMPS	WIRE SIZE AWG
1' - 160'	#12
161' - 250'	#10
251' - 390'	#8
391' - 620'	#6

WIRE SIZES INDICATED IN PANEL SCHEDULES ARE MINIMUM WIRE SIZES. CONTRACTOR SHALL UPSIZE WIRES BASED ON LOAD AND LENGTH OF RUN AS INDICATED IN SCHEDULE ABOVE.

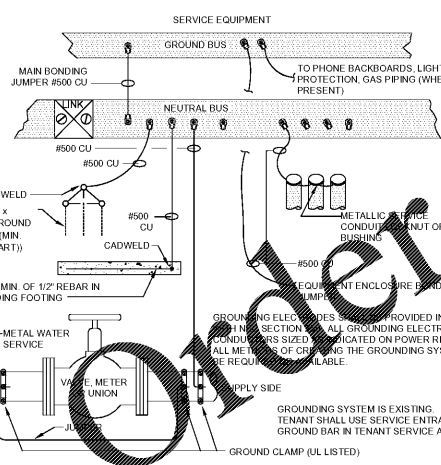


NOTES
1. ALL WIRING SHALL BE #8 AWG.
2. AVOID SHARP BENDS IN WIRES. ALL WIRE LENGTHS SHALL NOT EXCEED 18" (WHERE POSSIBLE).
3. SEE SPD SPECIFICATION FOR EXACT TYPE (H1, H2, L1, L2) FOR LOCATION AS INDICATED ON THE POWER RISER DIAGRAM.

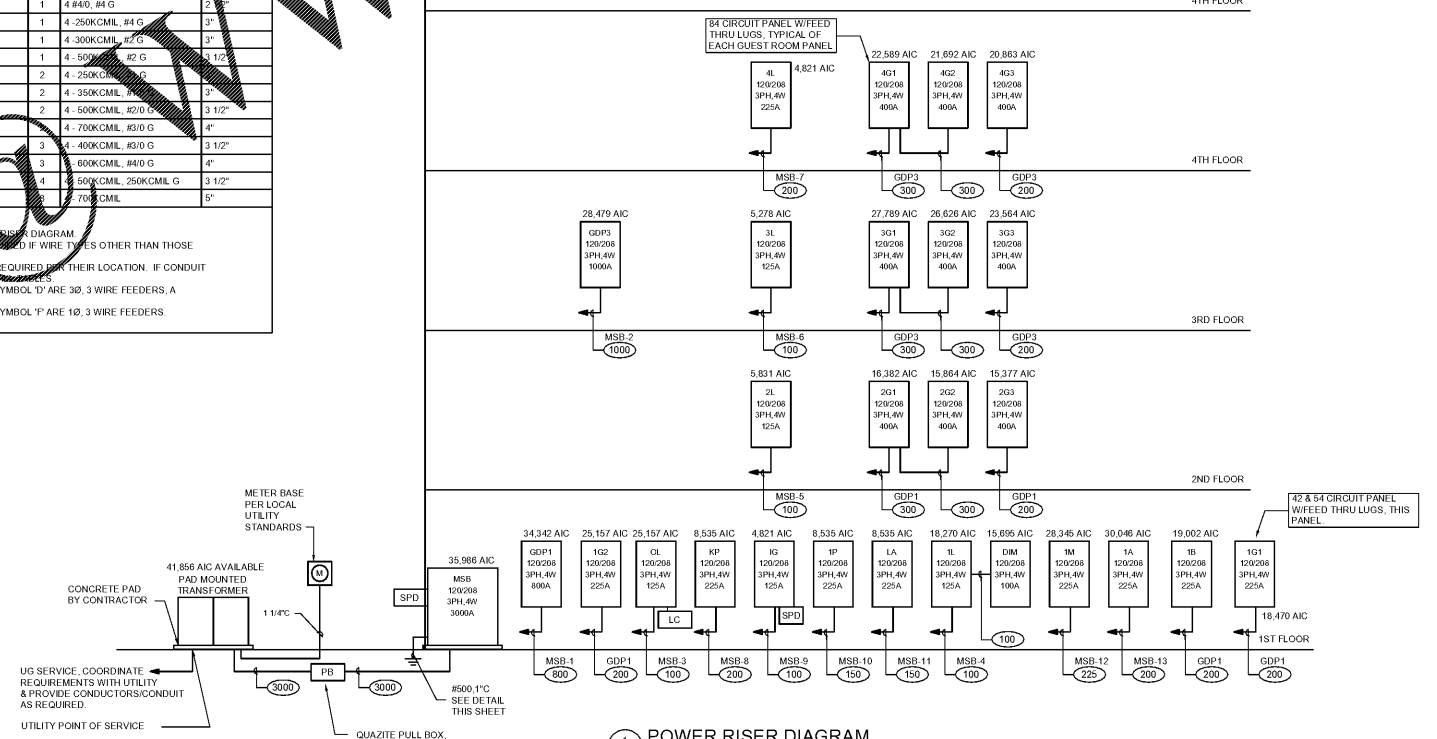
3 SPD CONNECTION DETAIL
E.401 NO SCALE

SURGE PROTECTION DEVICE SPECIFICATION

- A. SPD SHALL COMPLY WITH THE FOLLOWING STANDARDS:
1. UNDERWRITERS LABORATORIES, INC. STANDARD NO. 1449, SECOND EDITION
2. IEEE STANDARD C82.11-1987, C82.33-1982, C82.41-1991, AND C82.45-1987
3. NATIONAL ELECTRICAL CODE ARTICLE 240-21 (EQUIPMENT COMPLYING WITH TAP CONDUCTOR RULES) AND ARTICLE 110-9 (INTERRUPTING CAPACITY).
4. NEMA LS-1, 1992
5. TYPE L1 (120/208V, 3Ø, 4 WIRE SERVICE PANEL DEVICE) (40KA PER PHASE 200KA MIN PER MODE):
A. CURRENT TECHNOLOGY #TGP 200 120/208 3ØY L1
B. EFT #TSE 622-4M
C. CUTLER HAMMER #CPS-53-208Y SD RSX CX
D. LIEBERT #LM 200-120V-ANSE
E. INTERMATIC #IFG5001
6. TYPE L1 (120/208V, 3Ø, 4 WIRE BRANCH PANEL DEVICE) (100KA PER PHASE, 80KA MIN PER MODE):
A. CURRENT TECHNOLOGY #TGP 100 120/208 3ØY
B. EFT #TSE 621
C. CUTLER HAMMER #CPS-53-208Y SD RSX CX
D. LIEBERT #LM 100-120V-ANSE
E. INTERMATIC #IFG3500



2 GROUNDING DETAIL
E.401 DIAGRAMMATIC ONLY



1 POWER RISER DIAGRAM
E.401 NO SCALE

NOTES:
1. CONTRACTOR SHALL COORDINATE PAD REQUIREMENTS WITH UTILITY COMPANY AND PROVIDE AS REQUIRED.
2. CONTRACTOR SHALL PROVIDE STRUT FOR MOUNTING METERBASE ADJACENT TO UTILITY TRANSFORMER OR AS DIRECTED BY ARCHITECT/OWNER. COORDINATE WITH OWNER/ARCHITECT FIRST.
3. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR FIELD CONFIRMED TRANSFORMER FAULT CURRENT. PHENOLIC LABELS INDICATING RESPECTIVE FAULT CURRENT SHALL BE MECHANICALLY ATTACHED TO PANEL.
4. CONTRACTOR SHALL PROVIDE TAP BOX AS REQUIRED BY UTILITY COMPANY.
5. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS WITH LOCAL UTILITY COMPANY PRIOR TO ANY PRICING, ORDERING, AND/OR ORDERING. ELECTRICAL CONTRACTOR SHALL PROVIDE FEEDERS AS DIRECTED BY THE UTILITY COMPANY. IF OIL FILLED TRANSFORMERS ARE USED BY THE UTILITY COMPANY, 2MR RATED PROTECTION SHALL BE ERECTED BY THE ELECTRICAL CONTRACTOR ON THREE SIDES OF EQUIPMENT. COORDINATE AND PRICE ALL MATERIALS AS REQUIRED BY LOCAL CODE.
6. CONTRACTOR SHALL PROVIDE ALL FINAL CONNECTIONS, MATERIALS AND LABOR FOR A COMPLETE AND OPERATIONAL SYSTEM.
7. IN GENERAL, ALL MINIMUM FEEDERS MAY BE SUBSTITUTED AT THE OWNER'S DISCRETION FOR NON-ROTATIONAL LOADS FOR FEEDERS OVER 100 AMPERES.
8. PROVIDE ARC ENERGY REDUCTION COMPLYING WITH NEC 240.87.
9. ALL EQUIPMENT/GEAR SHALL BE FIELD MARKED WITH A PERMANENT LABEL THAT INDICATES AVAILABLE FAULT CURRENT PER NEC 110.24.
10. PROVIDE ARC FLASH WARNING LABELS THAT COMPLY WITH NEC 110.16 ON ELECTRICAL EQUIPMENT.
11. VERIFY THAT PANEL BOARD SUPPLY BY A FEEDER WILL BE MARKED IN THE FIELD TO INDICATE THE DEVICE OR EQUIPMENT WHERE THE POWER SUPPLY ORIGINATES. NEC 408.4(B).