

LOAD SUMMARY-DOUBLE PORTABLE	
DESCRIPTION (SAMPLE) WITH EVAP COOLER.	
DOUBLE PORTABLE ESTIMATED DEMAND PER NEC 220	
MECHANICAL UNITS (2.3 KVA CONN) (EVAP. COOLER) 1 HP	2.3 KVA
RECEPTACLES (2.8 KVA CONN) FIRST 10 KVA AT 100% REMAINING AT 50%	2.8 KVA
LIGHTING (2.2 KVA CONN) AT 100%	2.2 KVA
EQUIPMENT (0.5 KVA CONN) AT 100%	0.5 KVA
TOTAL ESTIMATED LOAD:	7.8 KVA
32.5 AMPERES AT 120/240V-1Ø-3W	
MINIMUM SERVICE CAPACITY = 125% x TOTAL ESTIMATED LOAD	9.7 KVA
40.4 AMPERES AT 120/240V-1Ø-3W	
∴ MINIMUM RECOMMENDED SERVICE SIZE =	60 AMPS

LOAD SUMMARY-DOUBLE PORTABLE	
DESCRIPTION (SAMPLE) WITH REFRIGERATED AIR	
DOUBLE PORTABLE ESTIMATED DEMAND PER NEC 220	
MECHANICAL UNITS (6.9 KVA CONN) (REFRIGERATED AIR)	6.9 KVA
RECEPTACLES (2.8 KVA CONN) FIRST 10 KVA AT 100% REMAINING AT 50%	2.8 KVA
LIGHTING (2.2 KVA CONN) AT 100%	2.2 KVA
EQUIPMENT (0.5 KVA CONN) AT 100%	0.5 KVA
TOTAL ESTIMATED LOAD:	12.4 KVA
51.6 AMPERES AT 120/240V-1Ø-3W	
MINIMUM SERVICE CAPACITY = 125% x TOTAL ESTIMATED LOAD	15.5 KVA
64.5 AMPERES AT 120/240V-1Ø-3W	
∴ MINIMUM RECOMMENDED SERVICE SIZE =	100 AMPS

LOAD SUMMARY-SINGLE PORTABLE	
DESCRIPTION (SAMPLE) WITH EVAP COOLER	
SINGLE PORTABLE ESTIMATED DEMAND PER NEC 220	
MECHANICAL UNITS (1.1 KVA CONN) (EVAP. COOLER) 1/2 HP	1.1 KVA
RECEPTACLES (1.4 KVA CONN) FIRST 10 KVA AT 100% REMAINING AT 50%	1.4 KVA
LIGHTING (1.2 KVA CONN) AT 100%	1.2 KVA
EQUIPMENT (0.5 KVA CONN) AT 100%	0.5 KVA
TOTAL ESTIMATED LOAD:	4.2 KVA
17.5 AMPERES AT 120/240V-1Ø-3W	
MINIMUM SERVICE CAPACITY = 125% x TOTAL ESTIMATED LOAD	5.3 KVA
22.0 AMPERES AT 120/240V-1Ø-3W	
∴ MINIMUM RECOMMENDED SERVICE SIZE =	30 AMPS

LOAD SUMMARY-SINGLE PORTABLE	
DESCRIPTION (SAMPLE) WITH REFRIGERATED AIR.	
SINGLE PORTABLE ESTIMATED DEMAND PER NEC 220	
MECHANICAL UNITS (3.3 KVA CONN) (REFRIGERATED AIR)	3.3 KVA
RECEPTACLES (1.4 KVA CONN) FIRST 10 KVA AT 100% REMAINING AT 50%	1.4 KVA
LIGHTING (2.2 KVA CONN) AT 100%	1.2 KVA
EQUIPMENT (0.5 KVA CONN) AT 100%	0.5 KVA
TOTAL ESTIMATED LOAD:	6.4 KVA
26.6 AMPERES AT 120/240V-1Ø-3W	
MINIMUM SERVICE CAPACITY = 125% x TOTAL ESTIMATED LOAD	8.0 KVA
33.0 AMPERES AT 120/240V-1Ø-3W	
∴ MINIMUM RECOMMENDED SERVICE SIZE =	60 AMPS

GENERAL NOTES

- A. ALL SERVICE CONDUITS AND SERVICE ENTRANCES SHALL CONTAIN 90° LARGE SWEEPS AND SHALL BE WRAPPED OR DIPPED FOR CORROSION PROTECTION.
- KEYED NOTES**
1. GALVANIZED UNISTRUT RACK, 1 5/8" (DOUBLE), RACK SITE LOCATION AS DESIGNATED BY APS.
 2. 3" MINIMUM CONCRETE BASE.
 3. 90° ELBOWS (IMC), ELBOW TO BE LARGE SWEEPS.
 4. 30 AMP. SINGLE PHASE DISCONNECT SWITCH FOR SPECIAL SYSTEMS CABINET, MAKE REQUIRED CONNECTIONS. COORDINATE WITH SOUND AND SIGNAL.
 5. DISTRIBUTION PANEL. REFER TO PANEL SCHEDULE THIS SHEET.
 6. 3 #12 IN A 1/2" CONDUIT.
 7. METER ENCLOSURE PER PNM REQUIREMENTS AND APS, M&O DEPARTMENT APPROVED FOR ALTERNATE POWER SOURCE.
 8. PVC CONDUIT WITH RIGID ELBOWS AND RISER. SIZE OF CONDUIT AND CONDUCTORS BASED ON PANELBOARD AMPERAGE.
 9. CONDUIT AND WEATHERHEAD ASSEMBLY AND STAND-OFF BRACKETS PER PNM REQUIREMENTS.
 10. AMPERAGE BASED ON TOTAL LOAD OF PORTABLES SERVED.
 11. GROUNDING PER NEC. REFER TO GROUNDING DIAGRAM.
 12. SERVICE CONDUIT AND CONDUCTORS UNDERGROUND TO PORTABLE BUILDINGS FROM DISTRIBUTION PANEL.
 13. MAIN SERVICE CONDUIT AND CONDUCTORS.
 14. MAIN SERVICE DISCONNECT SWITCH, FURNISHED WITH PORTABLE BUILDING.
 15. AERIAL SERVICE CONDUIT AND ASSOCIATED WEATHERHEAD.
 16. AERIAL SERVICE CONDUCTORS SERVING PORTABLE BUILDING RACK USUALLY #2 QUAD-PLEX CONDUCTORS.
 17. BRANCH CIRCUIT BREAKER SERVING PORTABLE FROM MAIN DISTRIBUTION PANEL IN MAIN SCHOOL BUILDING.
 18. 30 FEET LENGTH (MIN) WITH 5 FEET BURY DEPTH. (BROWN CREOSOTE)
 19. LOADS SHALL BE BALANCED ON ALL "PHASES" AS MUCH AS POSSIBLE.
 20. NUMBER OF SPACES AS REQUIRED TO SERVE QUANTITY OF PORTABLES AT SITE LOCATION.
 21. OVERHEAD SERVICE CONDUCTOR CLEARANCES SHALL COMPLY WITH NEC, SECTION 230.24.
 22. SEPARATE METER IF REQUESTED AND/OR REQUIRED BY A.P.S. M&O DEPARTMENT.
 23. QUAD-PLEX CONDUCTORS TO PORTABLES SHALL BE TWO (2) INSULATED PHASE CONDUCTORS AND ONE (1) INSULATE. CONDUCTOR SHALL BE THE NEUTRAL AND IDENTIFIED PER NEC ARTICLE 200.6 WITH STEEL MESSENGER/SUPPORT CABLE BEING A GROUNDING CONDUCTOR. GROUNDING SHALL BE PER NEC ARTICLE 250.

SAMPLE

PANEL: NEMA 3R		VOLTAGE: 120/208V-3Ø-4W		MAINS: 400A		AIC: 10,000	
SOURCE: . (19)		SKIRTS: N/A		FEED: BOTTOM		MAIN BREAKER: 400A/3P	
MOUNTING: SURFACE							

DESCRIPTION	BREAKER	LOAD (VA)	CCT NO.	LOAD (VA) #A	LOAD (VA) #B	CCT NO.	LOAD (VA) #C	BREAKER	DESCRIPTION
PORTABLES	100A 2P	8748	1	15948		2	7200	100A 2P	PORTABLES
PORTABLES	100A 2P	8748	3	15948		4	7200	100A 2P	PORTABLES
PORTABLES	100A 2P	8496	5		16992	6	8496	100A 2P	PORTABLES
PORTABLES	100A 2P	8496	7		16992	8	8496	100A 2P	PORTABLES
SPECIAL SYSTEMS	20A/1P		9			10		1P	SPACE ONLY
SPACE ONLY	1P		11			12		1P	SPACE ONLY
SPACE ONLY	1P		13			14		1P	SPACE ONLY
SPACE ONLY	1P		15			16		1P	SPACE ONLY
SPACE ONLY	1P		17			18		1P	SPACE ONLY

TOTAL LOAD (VA) [32940 | 15948 | 16992]

TOTAL CONNECTED (KVA): 65.9 ESTIMATED DEMAND (KVA): .

DOOR-IN-DOOR GROUND BUS

SAMPLE

PANEL: (NEMA 3R)		VOLTAGE: 120/240V-1Ø-3W		MAINS: 400A		AIC: 10,000	
SOURCE: . (19)		SKIRTS: N/A		FEED: BOTTOM		MAIN BREAKER: 400A/2P	
MOUNTING: SURFACE							

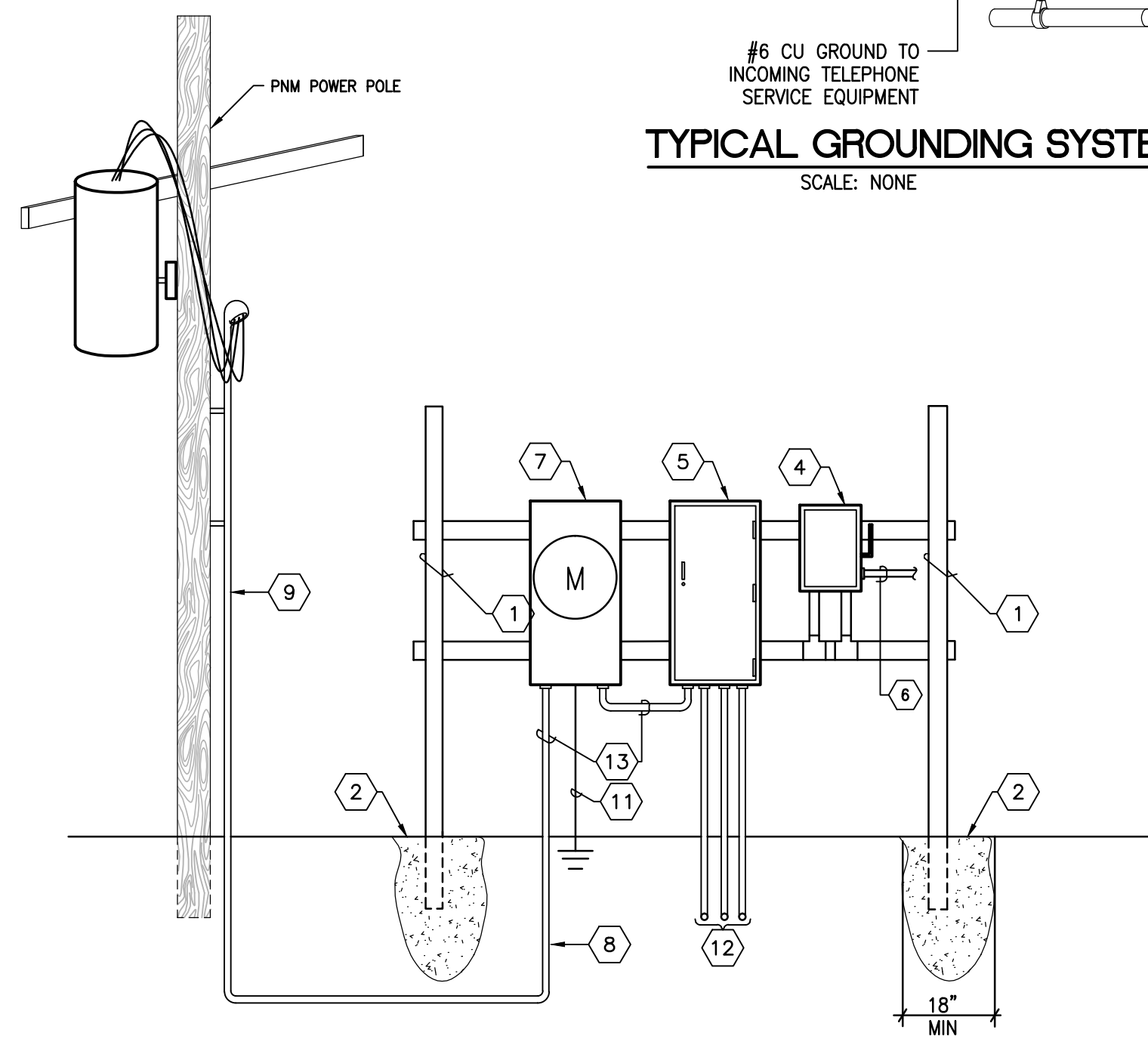
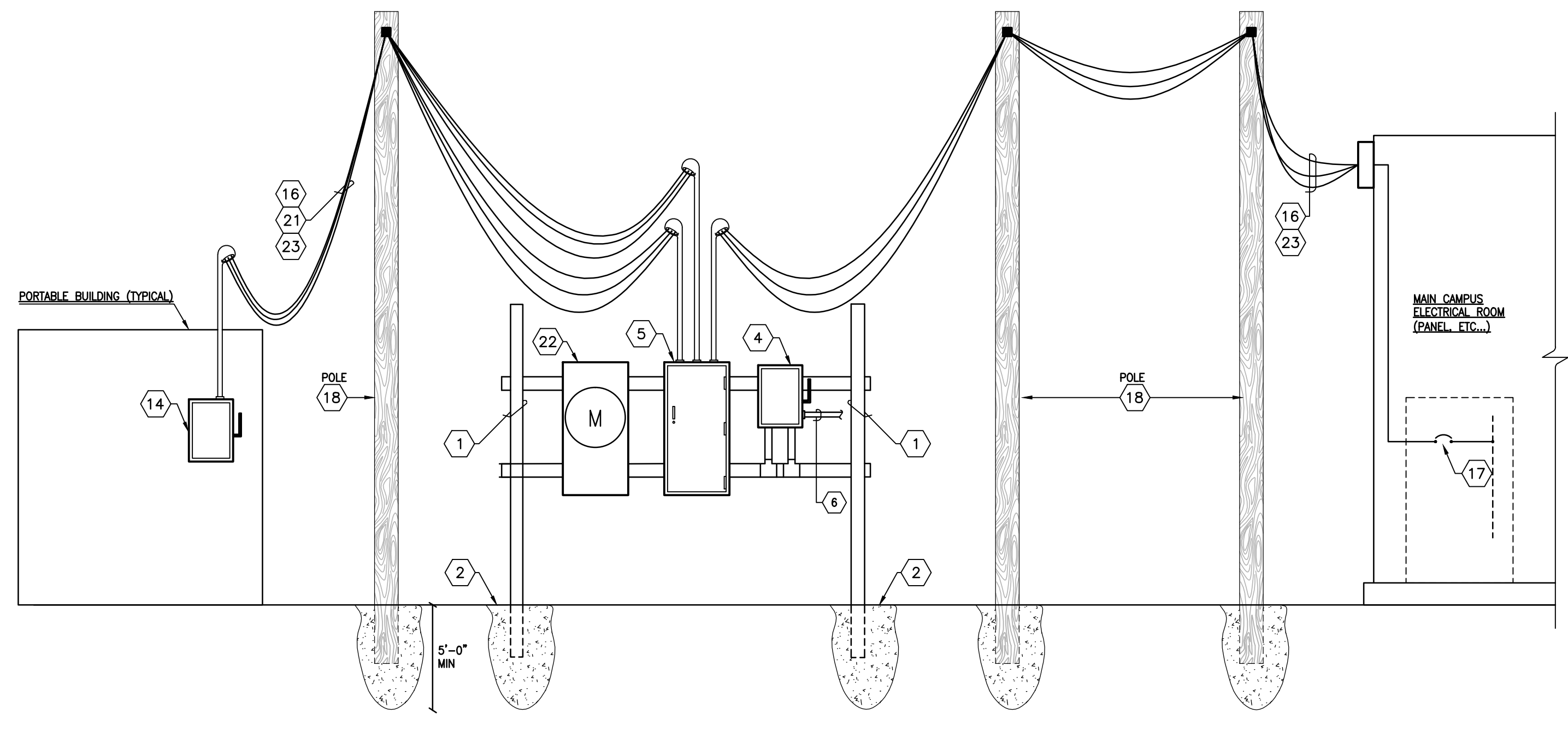
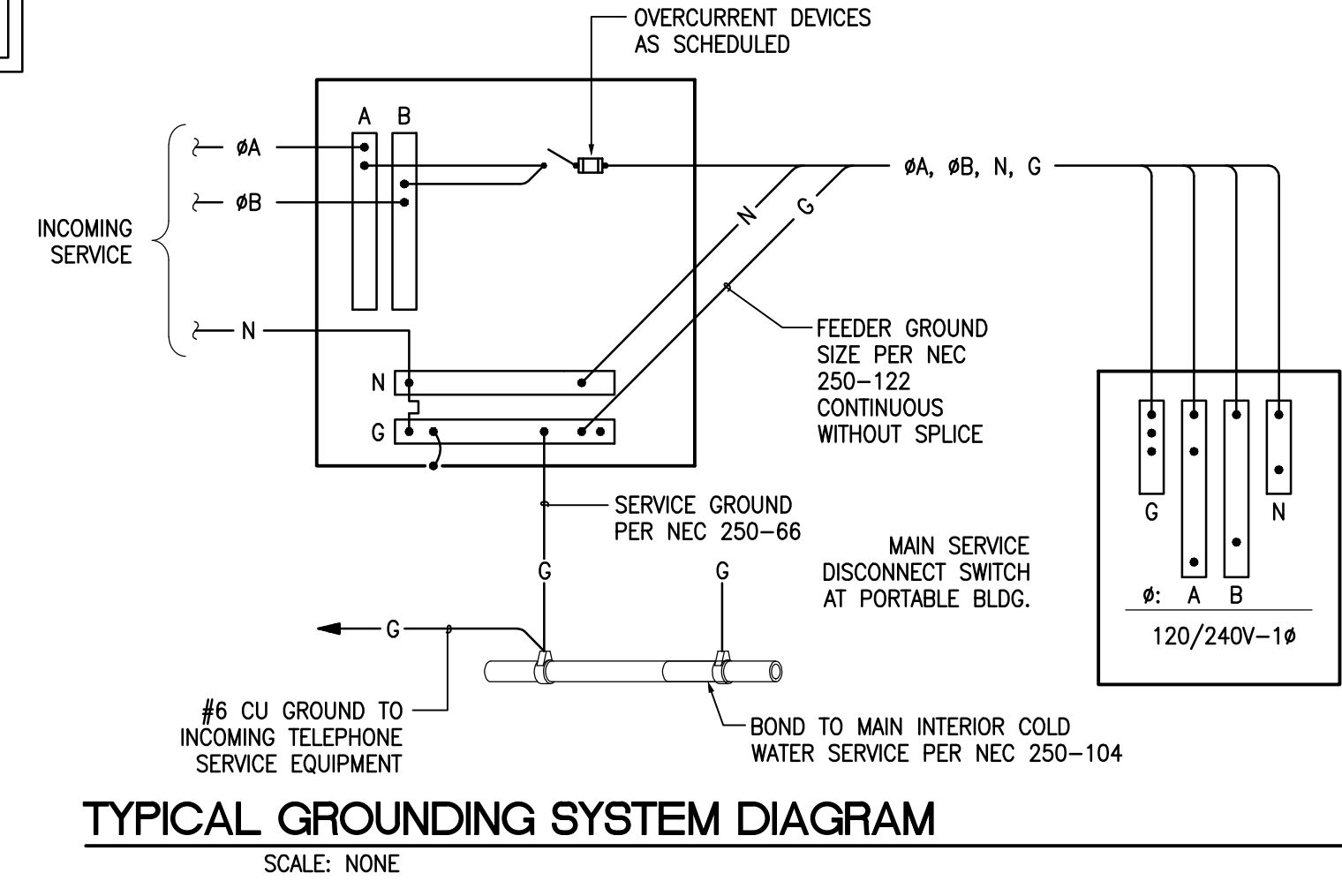
DESCRIPTION	BREAKER	LOAD (VA)	CCT NO.	LOAD (VA) #A	LOAD (VA) #B	CCT NO.	LOAD (VA) #C	BREAKER	DESCRIPTION
PORTABLES	100A 2P	8748	1	15948		2	7200	100A 2P	PORTABLES
PORTABLES	100A 2P	8748	3	15948		4	7200	100A 2P	PORTABLES
PORTABLES	100A 2P	8496	5		8496	6		20A/1P	SPECIAL SYSTEMS
PORTABLES	100A 2P	8496	7		8496	8		1P	SPACE ONLY
SPACE ONLY	1P		9			10		1P	SPACE ONLY
SPACE ONLY	1P		11			12		1P	SPACE ONLY
SPACE ONLY	1P		13			14		1P	SPACE ONLY
SPACE ONLY	1P		15			16		1P	SPACE ONLY
SPACE ONLY	1P		17			18		1P	SPACE ONLY

TOTAL LOAD (VA) [24,444 | 24,444]

TOTAL CONNECTED (KVA): 48.9 ESTIMATED DEMAND (KVA): .

DOOR-IN-DOOR GROUND BUS

NOTE: ENGINEER WILL BE RESPONSIBLE FOR PROVIDING VOLTAGE DROP CALCULATIONS AS REQUIRED BY AUTHORITY HAVING JURISDICTION.



THE RESPONSE GROUP, INC.
An Electrical/Mechanical Engineering Corporation
13100
13100

CONSULTANTS

ALBUQUERQUE PUBLIC SCHOOLS PORTABLE BUILDING STANDARD DRAWING

PROJECT NAME

DATE	
DESCRIPTION	
MARK	

PROJECT NO: _____
DESIGNED BY: RP
DRAWN BY: JKD
CHECKED BY: DDR
DATE: MAY 30, 2013

SHEET TITLE
POWER RISER DIAGRAMS, PANEL SCHEDULE & LOAD SUMMARIES

SHEET NO:
E-202
of .