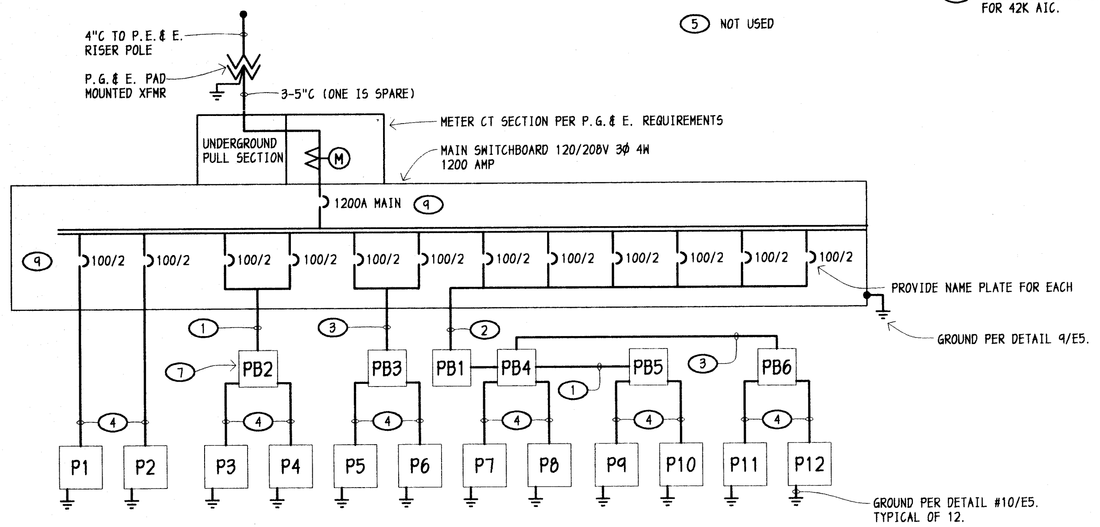
ONE LINE DIAGRAM #1 NOTES:
(ALL CONDUCTORS SHALL BE THWN-CU #1)

1. 2"C - 6 #2 + 1 #8 GND
2. 3 - 2"C WITH 6 #2 + 1 #8 GND IN EACH + THREE 2"C SPARES
3. 2"C - 6 #2 + 1 #8 GND + 2"C SPARE
4. 1 1/4"C - 3 #2 + 1 #8 GND
5. NOT USED
6. NOT USED
7. PULL BOXES PER DETAIL 8/E5. NO SPLICING IN BOX EXCEPT TO GROUND CONDUCTOR - TYPICAL
8. NOT USED
9. MAIN & SUB BKRS SERIES RATED FOR 42K AIC.



LOAD SUMMARY:

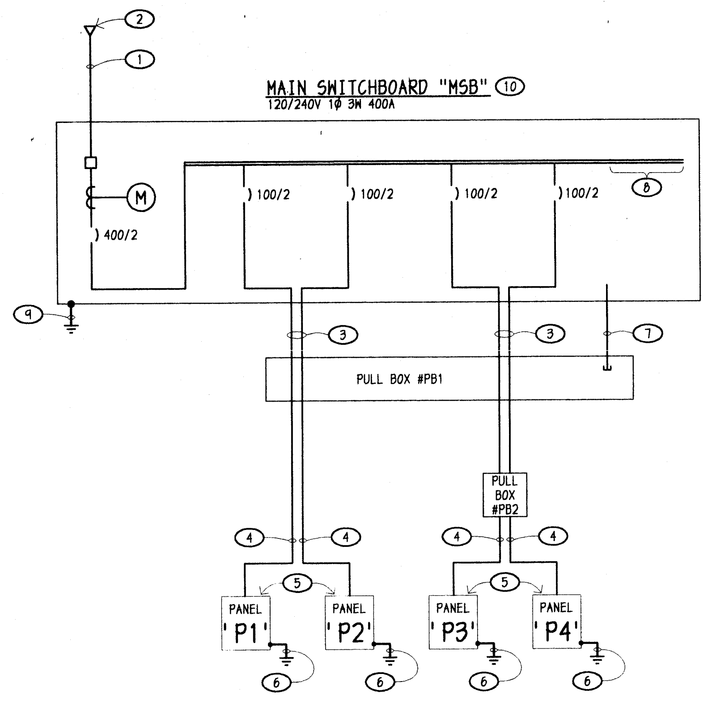
12 BUILDINGS AT 10 KVA EACH ..... = 120 KVA

TWO "FUTURE" BUILDINGS AT 10 KVA EACH ..... = 20 KVA

SUB-TOTAL = 140 KVA

AT 120/208V 3Ø 4W 1200 AMP SERVICE ..... = 388A

1 ONE LINE DIAGRAM #1
MT VERNON SCHOOL — NTS



ONE LINE DIAGRAM #2 NOTES:
(ALL CONDUCTORS SHALL BE THWN-CU)

1. 3"C (PVC SCH. 80) - 3 #500 MCM.
2. SERVICE ENTRANCE CAP. HEIGHT AND BRACING OF SERVICE RISER PER P.G. & E. REQUIREMENTS.
3. 2 1/2"C - 6 #2 + 1 #8 GND.
4. 1 1/4"C - 3 #2 + 1 #8 GND. CONTRACTOR SHALL SPLICE ONLY THE EQUIPMENT GROUNDING CONDUCTOR IN THE PULL BOX.
5. CONNECT SUB-PANEL SUPPLIED WITH RELOCATABLE CLASSROOM BUILDING.
6. BOND AND GROUND SUB-PANEL PER DETAIL 10/E5.
7. 2 1/2"C (WITH NYLON PULL STRING INSIDE EACH). CAP AND TAG INSIDE PULL BOX.
8. SPACE AND MOUNTING HARDWARE FOR TWO 100/2 CIRCUIT BREAKERS.
9. 1 #1/0 TO GROUNDING ELECTRODES PER DETAIL #7/E5.
10. CONTRACTOR SHALL OBTAIN THE AVAILABLE FAULT CURRENT FROM P.G. & E. AND EXCEED THAT VALUE FOR THE CIRCUIT BREAKERS. MAIN SWITCHBOARD BUSSING SHALL BE BRACED TO MITHSTAND A MINIMUM FAULT CURRENT OF 50,000A SYMMETRICAL.

LOAD SUMMARY:

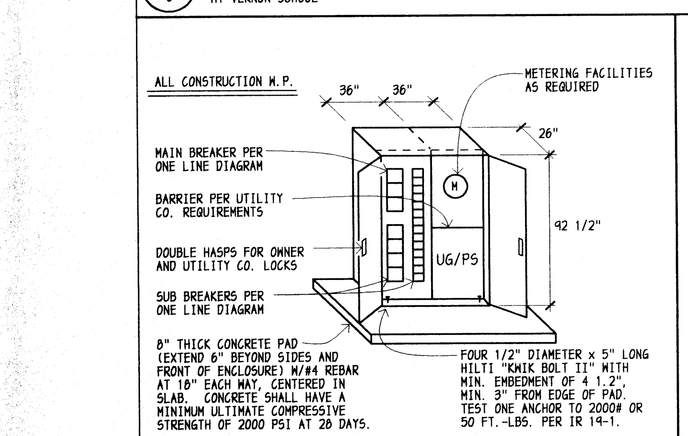
FOUR BUILDINGS AT 10 KVA EACH ..... = 40 KVA

TWO "FUTURE" BUILDINGS AT 10 KVA EACH ..... = 20 KVA

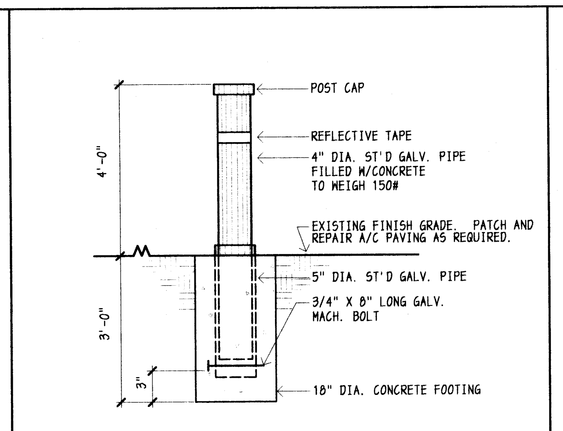
SUB-TOTAL = 60 KVA

AT 120/240V 1ph 3W. 400 AMP SERVICE ..... = 250A

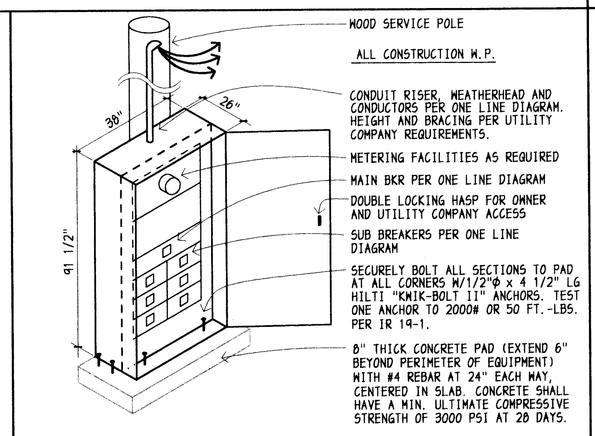
2 ONE LINE DIAGRAM #2
FREMONT SCHOOL — NTS



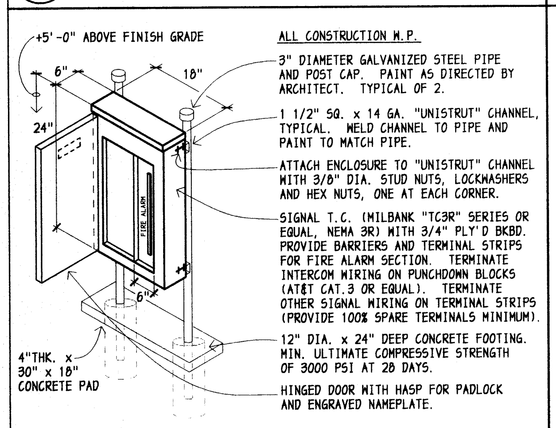
3 MAIN SWITCHBOARD 'MSB'
MT VERNON SCHOOL — NTS



4 GUARDPOST DETAIL
MT VERNON SCHOOL — NTS



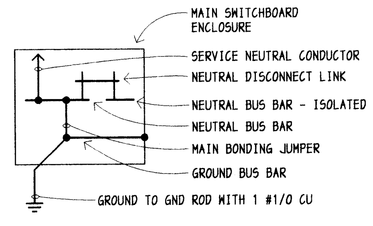
5 MAIN SWITCHBOARD 'MSB'
FREMONT SCHOOL — NTS



ALL CONSTRUCTION M.P.

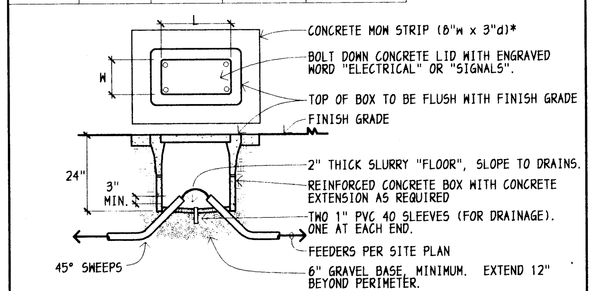
- 3" DIAMETER GALVANIZED STEEL PIPE AND POST CAP. PAINT AS DIRECTED BY ARCHITECT. TYPICAL OF 2.
- 1 1/2" SQ. x 14 GA. "UNISTRUT" CHANNEL, TYPICAL. WELD CHANNEL TO PIPE AND PAINT TO MATCH PIPE.
- ATTACH ENCLOSURE TO "UNISTRUT" CHANNEL WITH 3/8" DIA. STUD NUTS, LOCKWASHERS AND HEX NUTS, ONE AT EACH CORNER.
- SIGNAL T.C. (MILBANK "TC3R" SERIES OR EQUAL, NEMA 3R) WITH 3/4" PLY'D BKBD. PROVIDE BARRIERS AND TERMINAL STRIPS FOR FIRE ALARM SECTION. TERMINATE INTERCOM WIRING ON PUNCHDOWN BLOCKS (AT&T CAT.3 OR EQUAL). TERMINATE OTHER SIGNAL WIRING ON TERMINAL STRIPS (PROVIDE 100% SPARE TERMINALS MINIMUM).
- 12" DIA. x 24" DEEP CONCRETE FOOTING. MIN. ULTIMATE COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
- HINGED DOOR WITH HASP FOR PADLOCK AND ENGRAVED NAMEPLATE.

6 EXTERIOR SIGNAL T.C.
TC #1, TC #2 — NTS



7 GROUNDING ELECTRODE SYSTEM FOR REMOTE BUILDING SUB PANELS
NTS

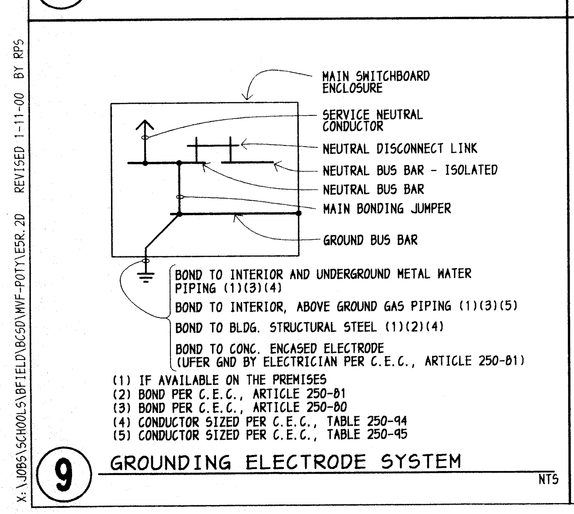
PULL BOX	PB-1	PB-4	PB-2 PB-5	PB-3 PB-6	SB-1	SB-2	PB1	PB2
W	24 1/2"		17 1/4"		24 1/2"		24 1/2"	
L	36 3/8"		30"		36 3/8"		36 3/8"	



* NOTE: WHERE PULL BOX IS ADJACENT TO CONCRETE WALK, EXTEND MOWSTRIP TO CONNECT WITH WALK. FOAM SEAL ALL CONDUITS IN YARD BOXES.

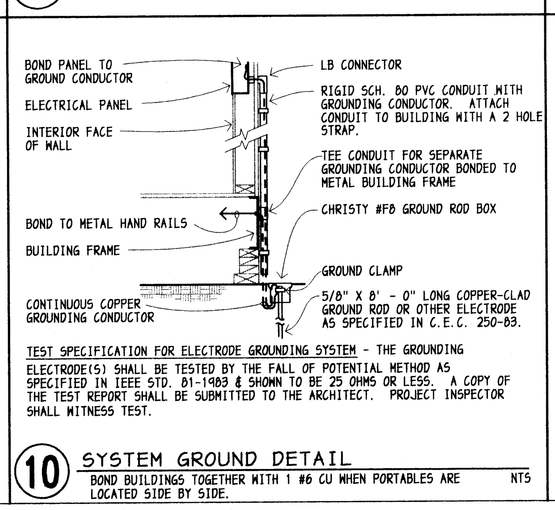
** NOTE: INTERIOR DIMENSIONS MEASURED AT "BASE" OF PULL BOX.

8 POWER OR SIGNALS PULL BOX
NTS



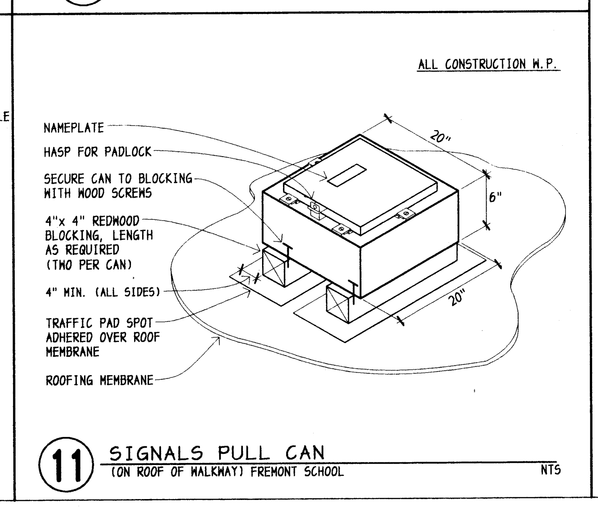
(1) IF AVAILABLE ON THE PREMISES
(2) BOND PER C.E.C., ARTICLE 250-81
(3) BOND PER C.E.C., ARTICLE 250-80
(4) CONDUCTOR SIZED PER C.E.C., TABLE 250-94
(5) CONDUCTOR SIZED PER C.E.C., TABLE 250-95

9 GROUNDING ELECTRODE SYSTEM
NTS



TEST SPECIFICATION FOR ELECTRODE GROUNDING SYSTEM - THE GROUNDING ELECTRODE(S) SHALL BE TESTED BY THE FALL OF POTENTIAL METHOD AS SPECIFIED IN IEEE STD. 81-1983 & SHOWN TO BE 25 OHMS OR LESS. A COPY OF THE TEST REPORT SHALL BE SUBMITTED TO THE ARCHITECT. PROJECT INSPECTOR SHALL WITNESS TEST.

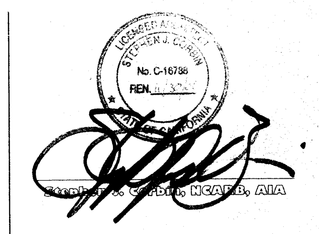
10 SYSTEM GROUND DETAIL
BOND BUILDINGS TOGETHER WITH 1 #6 CU WHEN PORTABLES ARE LOCATED SIDE BY SIDE. — NTS



11 SIGNALS PULL CAN
(ON ROOF OF WALKWAY) FREMONT SCHOOL — NTS

X:\JOBS\SCHOOLS\BFIELD\BCS01MVF-PDT11ESR.20 REVISED 1-11-00 BY RPS

SCArchitect,Inc.
1801 L Street
Bakersfield, CA 93301
(661) 327-1681



CORNELIUS CONSULTING GROUP, INC.
Consulting Electrical Engineers
131 S. Dunworth - Ph.733-2671
Visalia, California 93292-6705

REGISTERED PROFESSIONAL ENGINEER — RICHARD CORNELIUS — No. 7198 — Exp.6/30/02 — ELECTRICAL — STATE OF CALIFORNIA

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OFFICE OF REGULATION SERVICES
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AC FLS. E V SS AC
DATE

RESTROOM BUILDINGS AND RELOCATABLE CLASSROOMS FOR FREMONT AND MT. VERNON ELEMENTARY SCHOOLS

FOR

BAKERSFIELD CITY SCHOOL DISTRICT

BAKERSFIELD, KERN COUNTY, CALIFORNIA

ONE LINE DIAGRAM, DETAILS AND CODES

CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH THE WORK. REPORT DISCREPANCIES TO THE ARCHITECT. ALL CONSTRUCTION SHALL CONFORM TO THE C.B.C.

MARK	DATE	REVISIONS
1		
2		
3		
4		
5		

JOB NO. 972
DRAWN EMS-RPS
CHECKED RPS
DATE 01-12-2000

E

5 OF 6 SHEETS