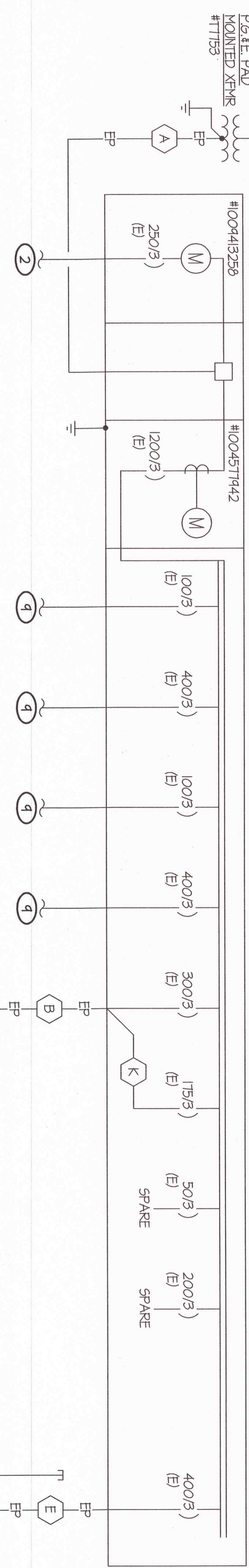
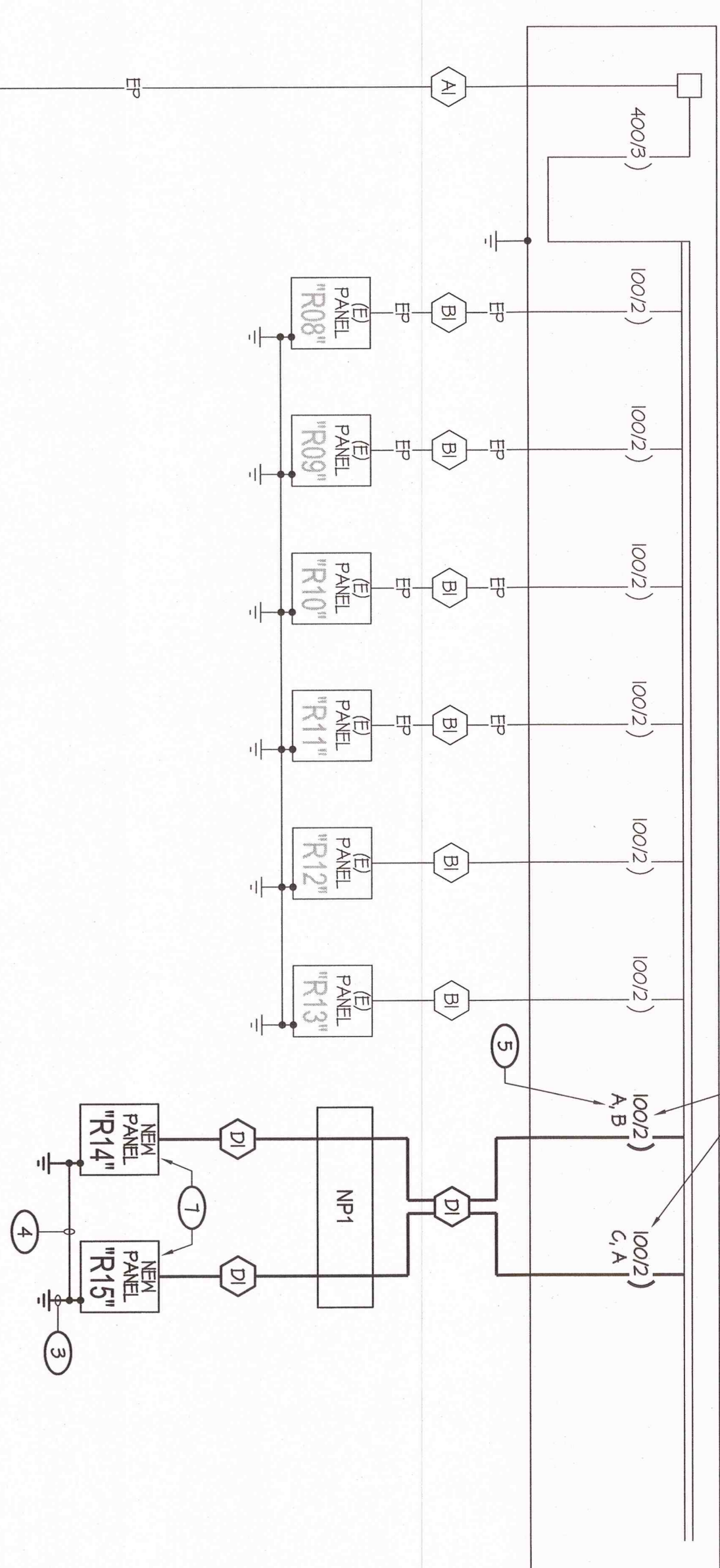


(E) MAIN SWITCHBOARD '1N5' (CALL ENGINEER)
 480/277V, 3PH, 4W, 1200 AMPS
 42 KVA, ALC

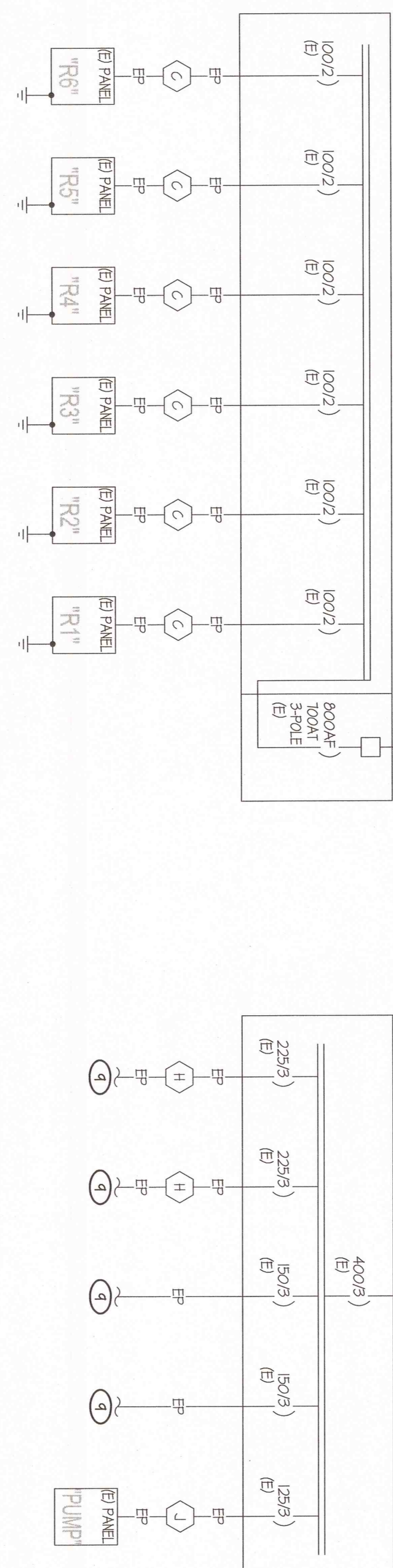


EXISTING PANEL '1N1'
 120/208V, 3PH, 4W, 400 AMPS
 5000VA, 175A, 120/208V, 1PH, 30, 0CT.

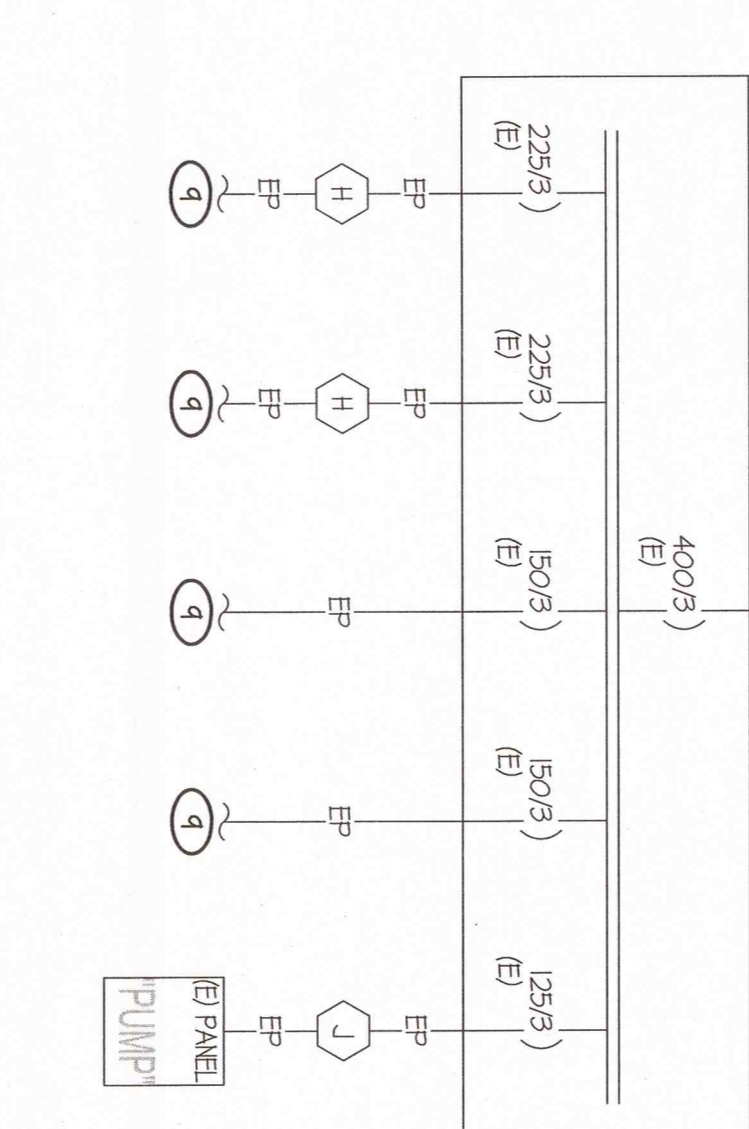


- ONE LINE DIAGRAM NOTES:**
- PROVIDE MAIN CIRCUIT BREAKER, 1750A EXISTING ALC.
 - FEEDER TO EXISTING BUREAU CHILLER, NO WORK REQUIRED.
 - BOND AND GROUND FEED DETAIL W/FEET, TYPICAL OF 2.
 - 1 #4 BAR ON BEHIND ADJACENT GROUND ROOF.
 - LETTERS DENOTE THE RESPECTIVE PHASES WHICH THE 2-PHASE CIRCUIT BREAKER SHALL BE CONNECTED ONTO.
 - DO NEW WORK AS NOTED.
 - CONNECT PANEL PROVIDED WITH RELOCATABLE BUILDING.
 - TO REMAIN IN USE, NO WORK REQUIRED.
 - VARIOUS FEEDERS AND CIRCUIT BREAKERS TO REMAIN, NO WORK REQUIRED.

(E) PANEL '1D' (CUTLER-HAMMER)
 120/208V, 3PH, 4W, 800 AMP RATED, 700 AMP MAIN
 10,000 ALC



EXISTING DISTRIBUTION SWITCHBOARD 'DS-3'
 120/208V, 3PH, 4W



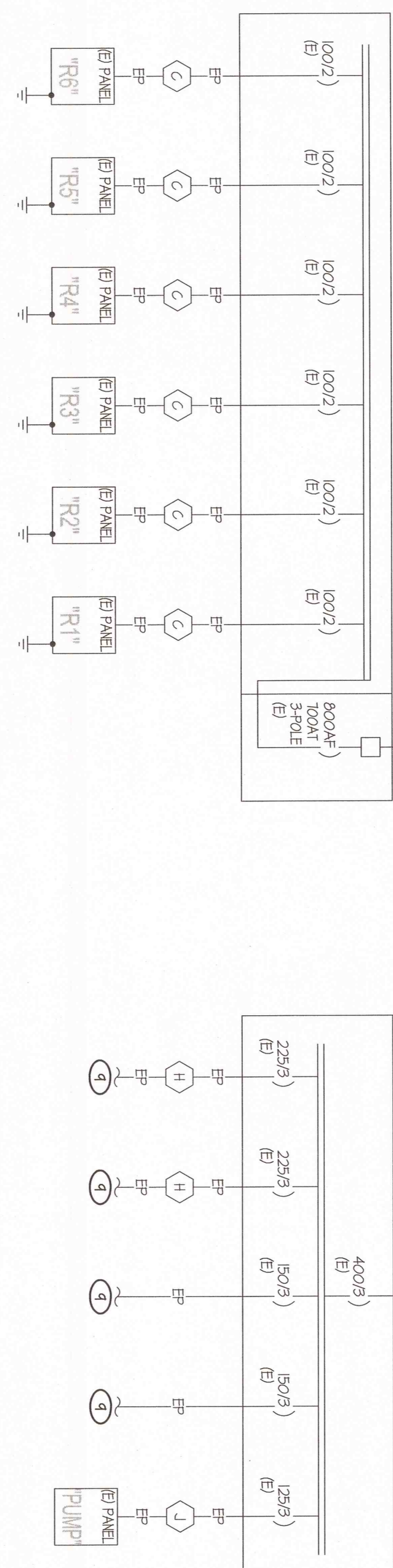
LOAD CALCULATIONS:

EXISTING MAIN SWBD '1N5':	320 KVA
MAX DEMAND FEEDER (480/277V):	320 KVA
FEEDER (120/208V):	400 KVA
MAXIMUM DEMAND X 125% (PER CAL. ARTICLE 220.87):	608 KVA
EXISTING LOAD (BY RELOCATABLE BLDGS):	145 KVA
NEW LOAD (TWO RELOCATABLE BLDGS):	145 KVA
TOTAL:	505 KVA
AT 480/277V, 3PH, 4W:	608 AMPS
THEREFORE THE 1200 AMP MAIN SWITCHBOARD HAS CAPACITY.	
EXISTING PANEL '1N1':	40.5 KVA
SIX EXISTING RELOCATABLE BLDGS:	145 KVA
TWO NEW RELOCATABLE BLDGS:	145 KVA
TOTAL:	291 KVA
AT 120/208V, 3PH, 4W:	291 AMPS
THEREFORE THE 400 AMP PANEL HAS CAPACITY.	

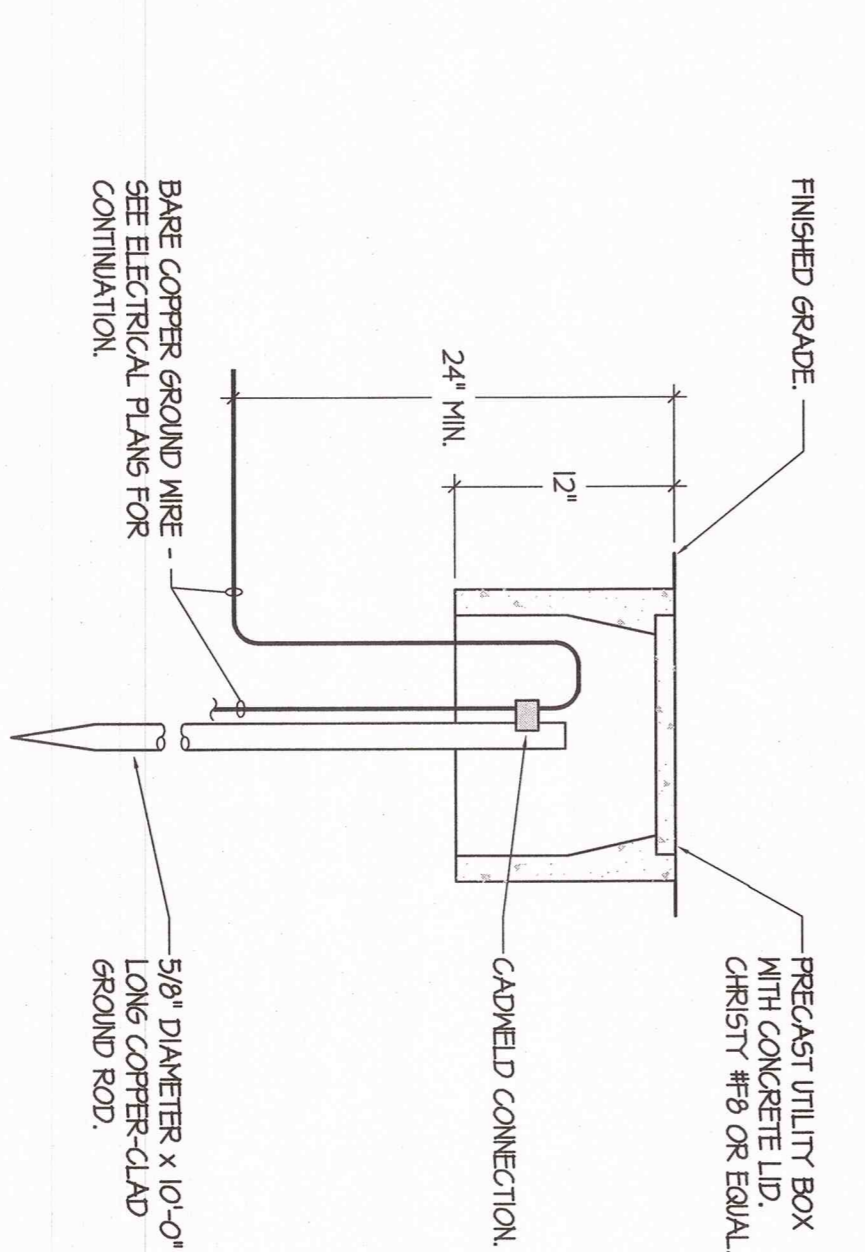
FEEDER SCHEDULE:

- ALL CONDUCTORS IN ROOM OR 480/277V UNDERGROUND FEEDERS SHALL BE GUARANTEE DISTRIBUTION TYPE. ALL CONDUCTORS IN ROOM OR 480/277V UNDERGROUND FEEDERS SHALL BE GUARANTEE DISTRIBUTION TYPE. ALL CONDUCTORS IN ROOM OR 480/277V UNDERGROUND FEEDERS SHALL BE GUARANTEE DISTRIBUTION TYPE.
- EXISTING FEEDER (CONDUCTOR) TO REMAIN
 - 4" C - 3 #300 ICLM + 6 #40 - 1 #4 GND
 - 11/2" C - 3 #2 + 1 #6 GND
 - 11/2" C - 4 #300 ICLM + 1 #10 GND IN EACH
 - 3 1/2" C - 4 #500 NCH OL
 - 2" C - 3 #10 AWG OL
 - 3 1/2" C - 4 #500 NCH OL
 - 3" C - 3 #40 AWG OL
 - 11/2" C (NIPPLE) - 4 #1 + 1 #6 GND
 - 3 #20 + 1 #4 GND (CUT-HAM-2)
 - 2" C - 3 #20 + 1 #4 GND (CUT-HAM-2)
 - 11/2" C - 3 #2 + 1 #6 GND
 - 2" C - 6 #1 + 2 #6 GND

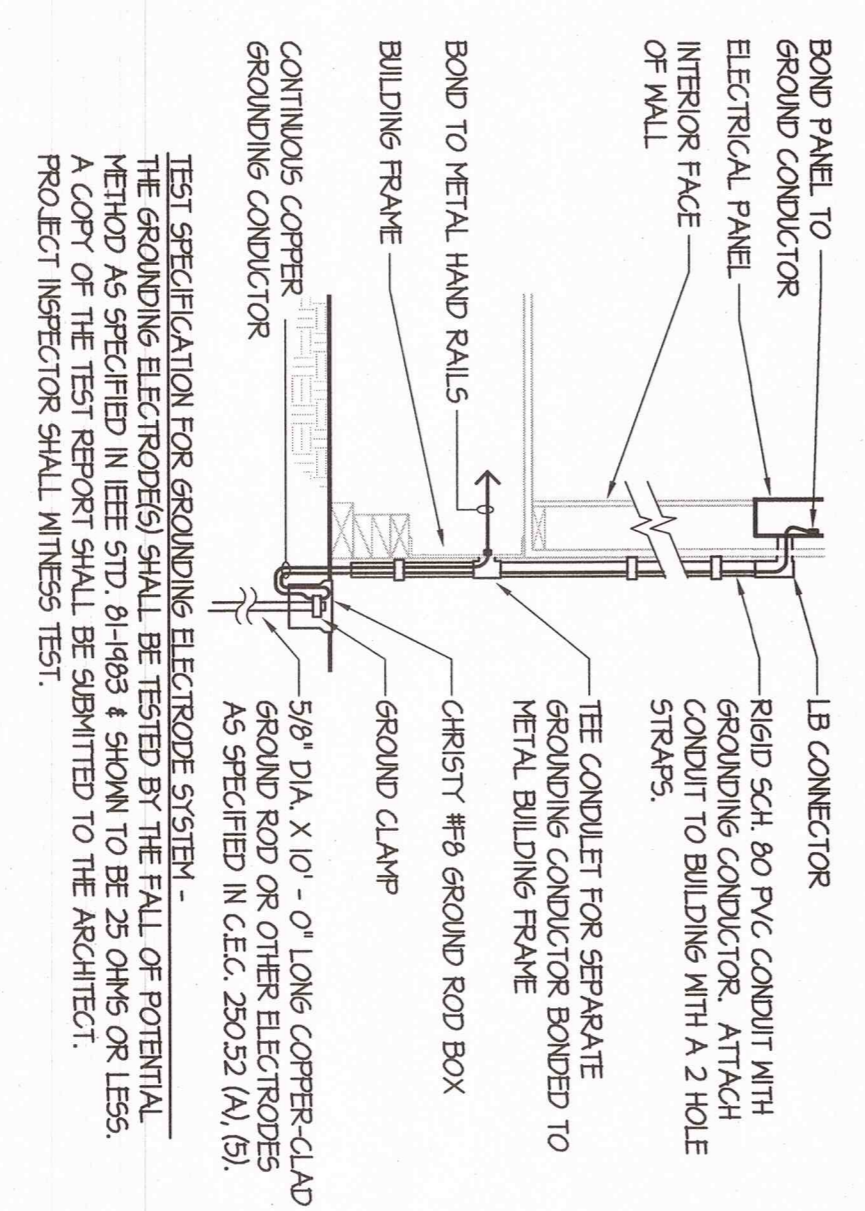
ONE LINE DIAGRAM



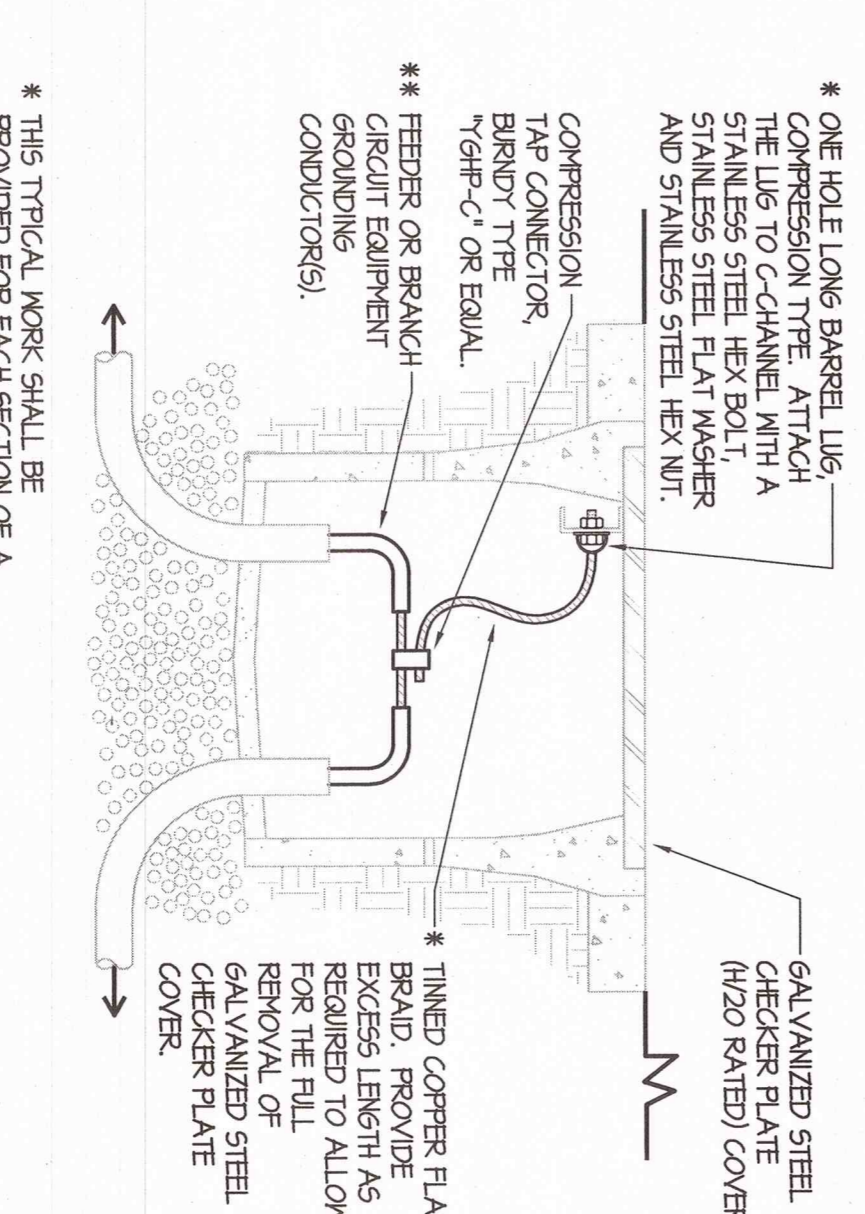
NOTE:
 ALL VOLTAGE DROP CALCULATIONS ARE DONE USING 80% OF THE AMP RATING OF THE EQUIPMENT BEING SUPPLIED.



GROUND ROD DETAIL



GROUNDING ELECTRODE SYSTEM

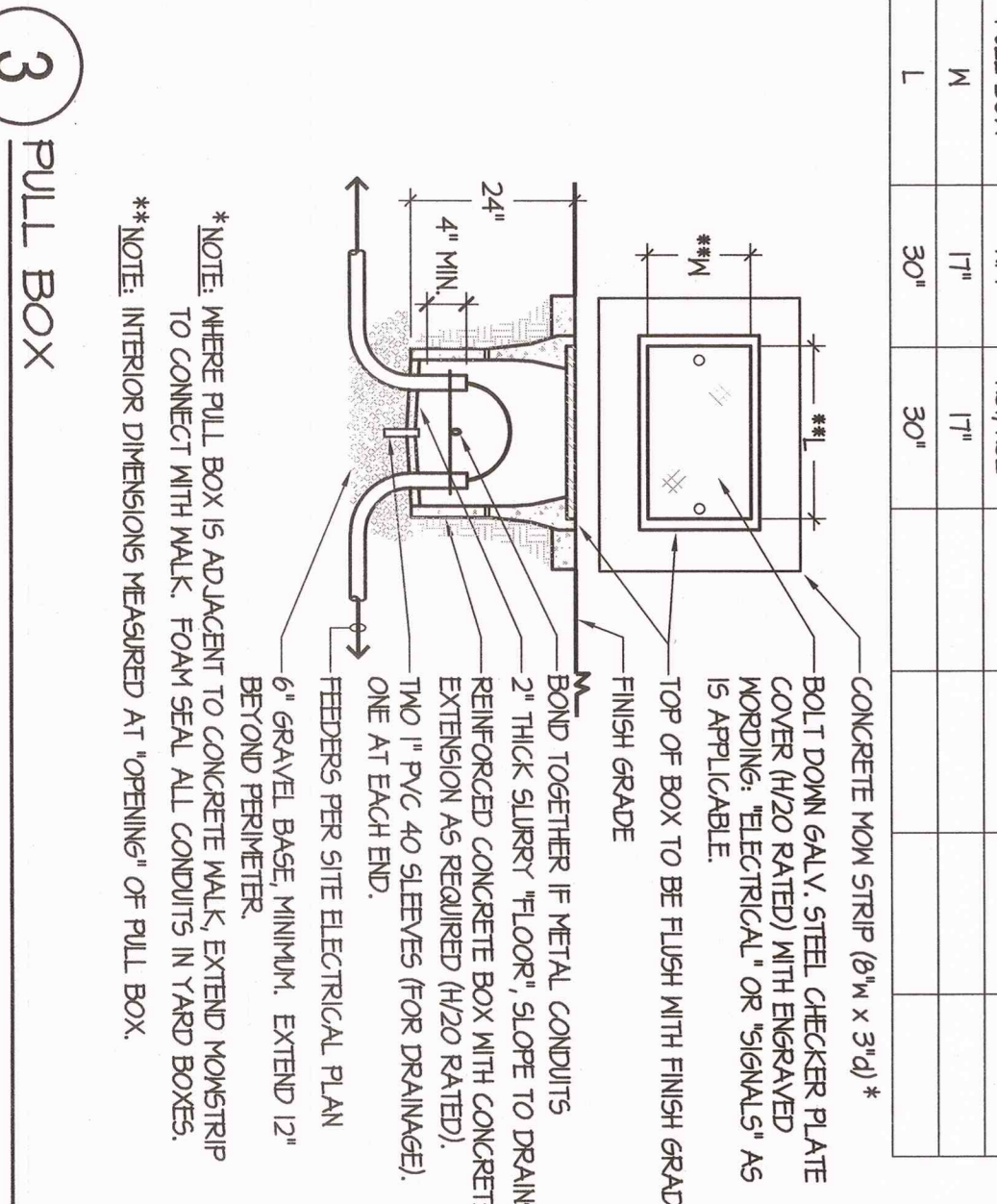


BONDING OF STEEL CHECKER PLATE COVERS

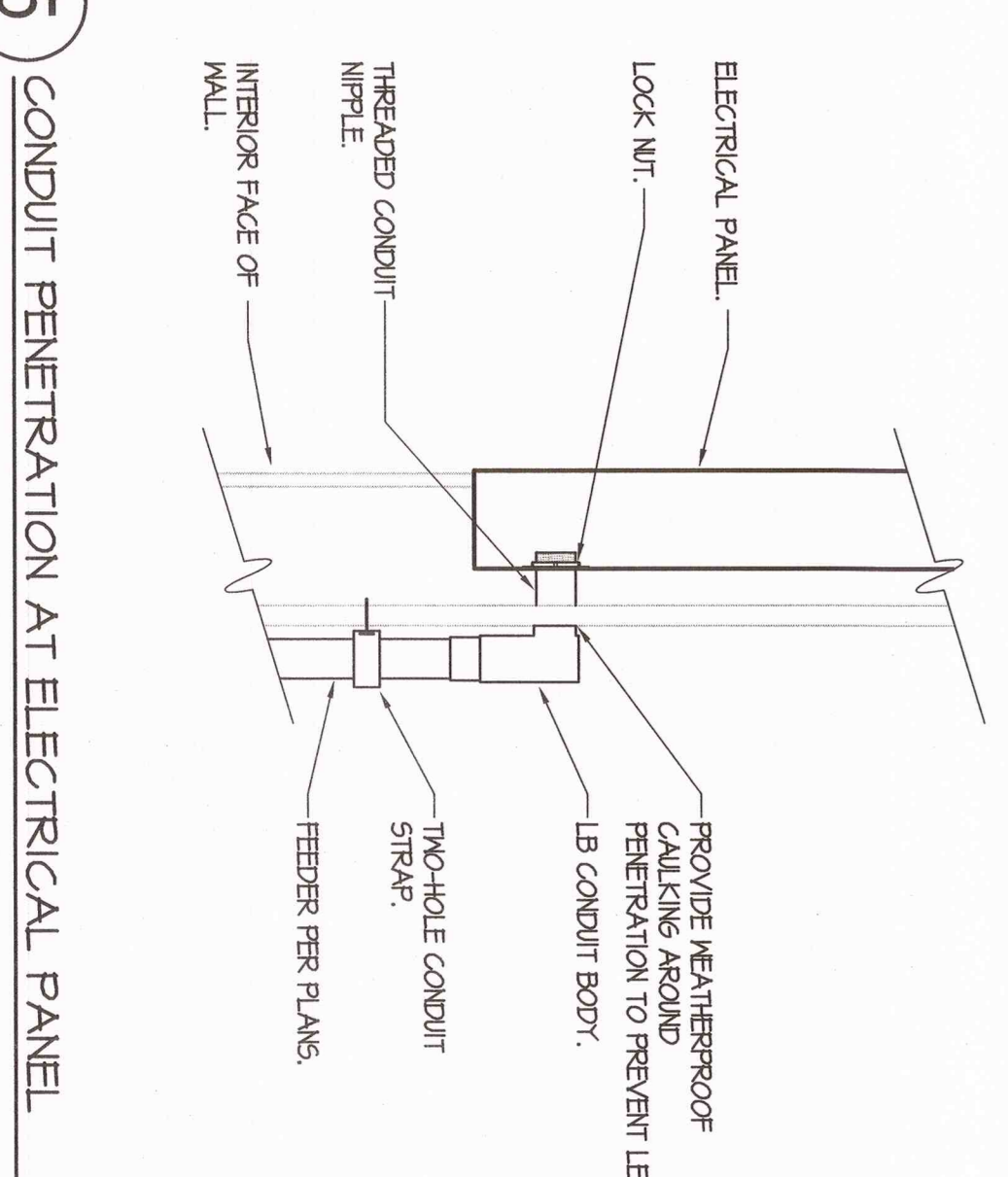
MATRIX FOR TINED COPPER FLAT BRAID

SIZE OF EQUIPMENT CONDUCTOR (d)	ALPHA WIRE PART #	OMEGA WIRE PART #
40	1253	700
46	1255	710
41	1291	710
42 THRU 410	1240	719
42/0 THRU 44/0	1241	714

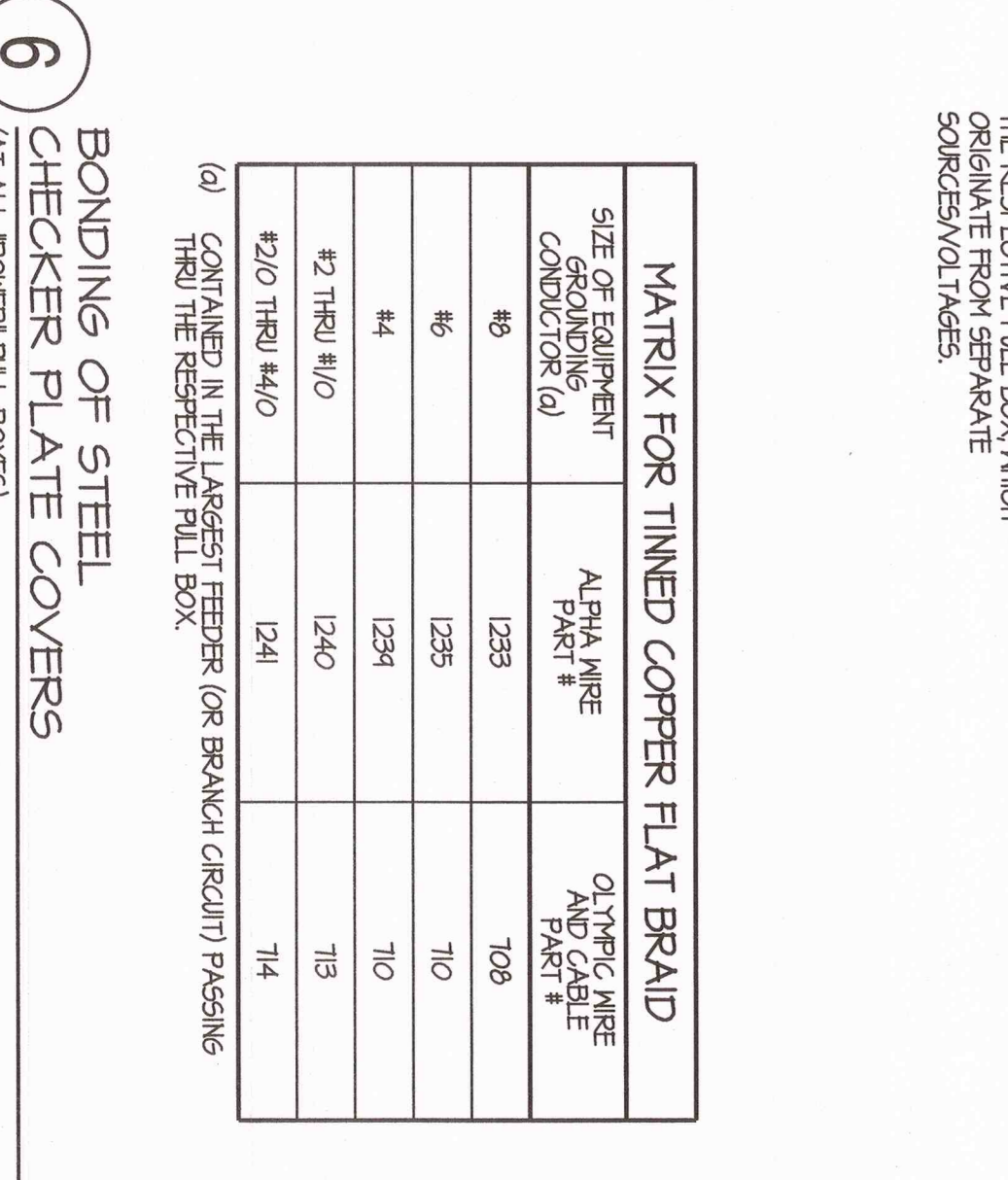
PULL BOX



CONDUIT PENETRATION AT ELECTRICAL PANEL



BONDING OF STEEL CHECKER PLATE COVERS



MARK DATE REVISIONS

CHECK AND VERIFY ALL DIMENSIONS FROM THE ARCHITECT'S DRAWINGS TO THE ARCHITECT. ALL CONSTRUCTION SHALL CONFORM TO THE C.B.C.

ARCHITECT
 1601 NEW SINE ROAD, SUITE 280
 BAKERSFIELD, CA 93309
 PH: (661) 397-4377
 FAX: (661) 397-4378
 WWW.SCARCHECT.COM

REGISTERED STATE ENGINEER
 OFFICE OF REGULATION SERVICES
 APR 02 11 24 12
 15-4
 SEP 15 2017
 PH: (552) 21-285

SITE IMPROVEMENTS FOR (2)-24'x40' MODULAR CLASSROOMS AT HORACE MANN ELEMENTARY SCHOOL
 2710 NILES ST, BAKERSFIELD, CA 93306
 FOR BAKERSFIELD CITY SCHOOL DISTRICT
 BAKERSFIELD, KERN COUNTY, CALIFORNIA

Rose Sing and Associates, Inc.
 131 S. Duane Street, Suite 100
 Bakersfield, CA 93307
 Phone: (805) 832-2222
 Fax: (805) 832-2222

ONE LINE DIAGRAM, DETAILS AND PANEL SCHEDULES

JOB NO. 124
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DATE: 09/01/17

41 OF SHEETS