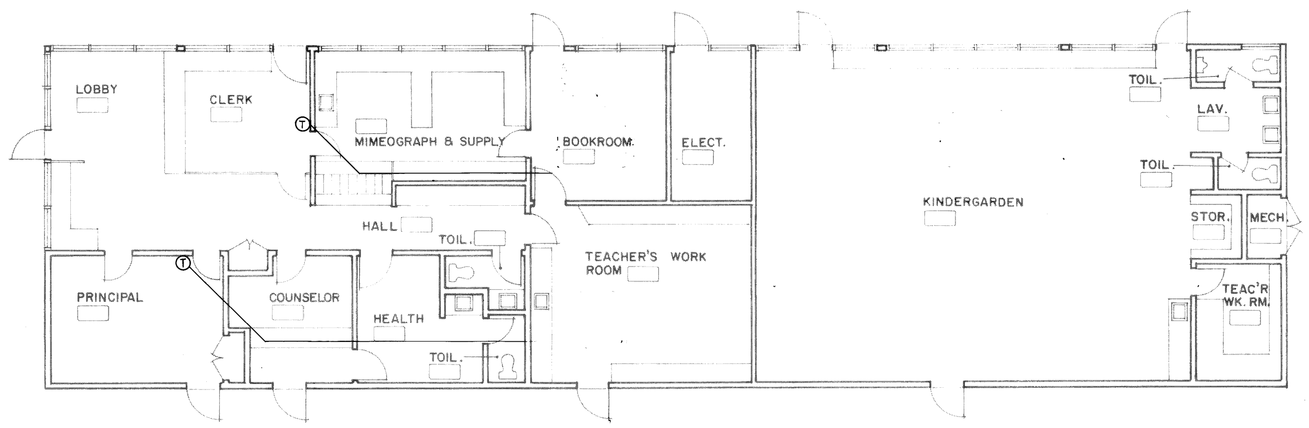
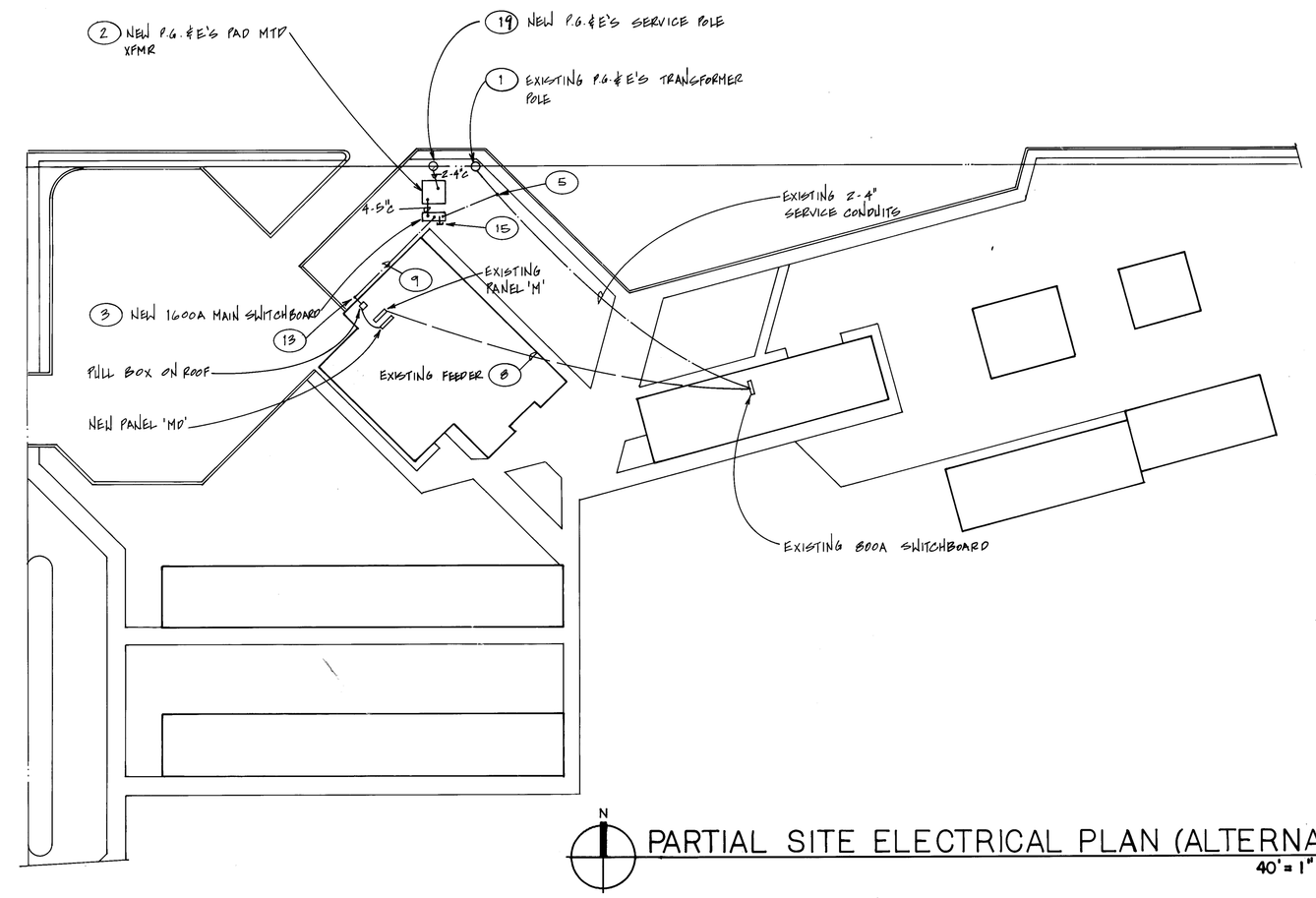


BUILDING A ELECTRICAL PLAN

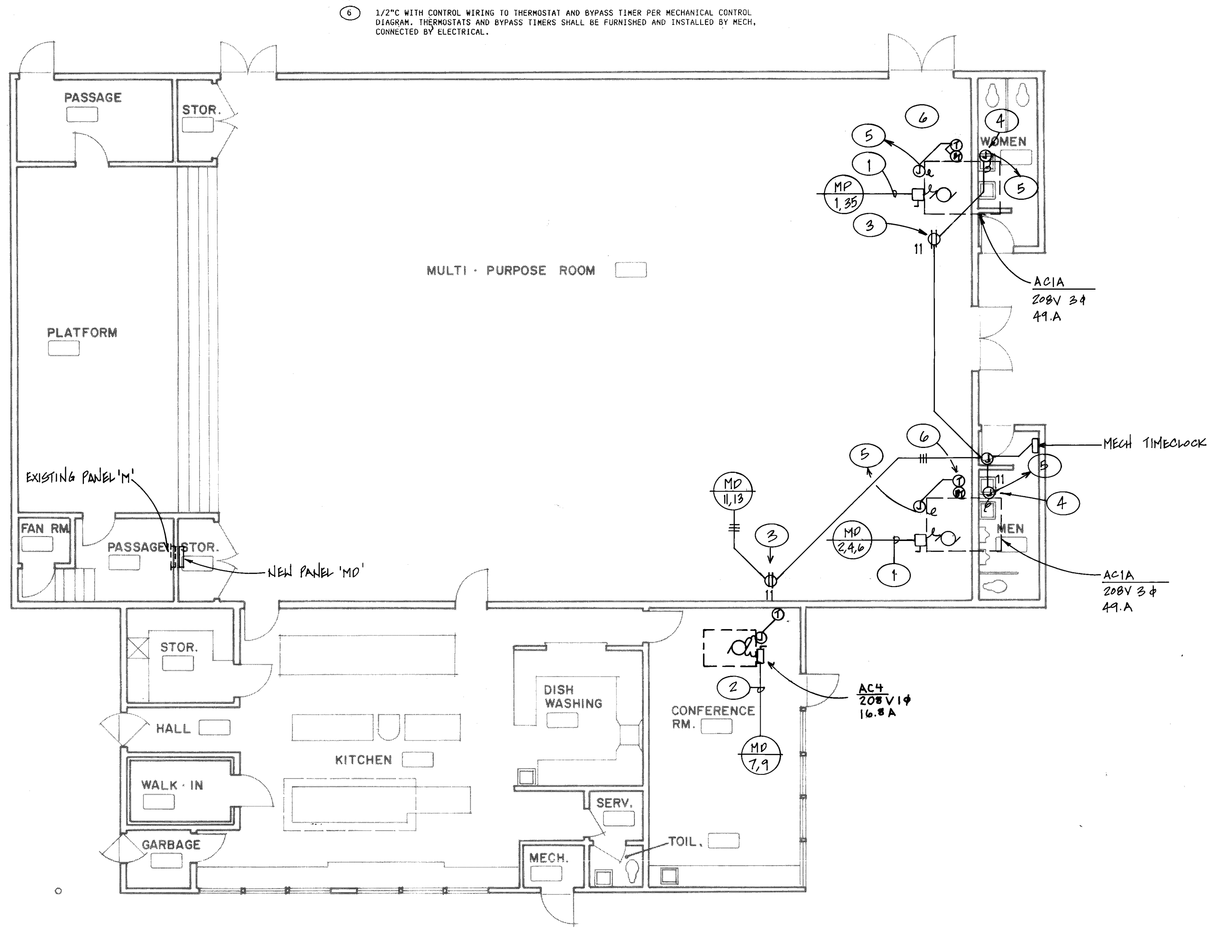


PARTIAL SITE ELECTRICAL PLAN (ALTERNATE)

40' = 1"

BLDG "B" ELECTRICAL PLAN NOTES:

1. 1"C - 3#4 + 1#8 GROUND.
2. 3/4"C - 2#10 + 1#10 GROUND.
3. WEATHERPROOF RECEPTACLE ON ROOF.
4. CONNECT 120V POWER TO DUCT SMOKE DETECTOR AT AIR PLENUM. DETECTOR SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR, CONNECTED BY ELECTRICAL.
5. 1/2"C WITH CONTROL WIRING TO MECHANICAL TIMECLOCK PER MECHANICAL CONTROL DIAGRAM.
6. 1/2"C WITH CONTROL WIRING TO THERMOSTAT AND BYPASS TIMER PER MECHANICAL CONTROL DIAGRAM. THERMOSTATS AND BYPASS TIMERS SHALL BE FURNISHED AND INSTALLED BY MECH. CONNECTED BY ELECTRICAL.



BUILDING B ELECTRICAL PLAN (ALTERNATE)

PANEL MD

208/120 VOLTS 3 φ 4 WIRE
400 A. BUSSING 400 A. MAIN BREAKER
42 CIRCUIT
SURFACE MOUNTING
400 A. BREAKER A.I.C.
NAV. ENCL. DEPTH

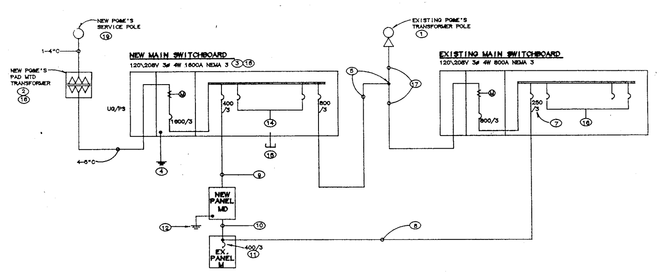
CIR NO.	BKR	LOAD (VA) #A	#B	#C	DESCRIPTION	DESCRIPTION	LOAD (VA) #C	#B	#A	BKR	CIR NO.
1	60/3	6880			ACIA. 49.A	ACIA. 49.A.			6880	60/3	2
3			6880		–	–		6880			4
5				6880	–	–	6880				6
7	20/1	1800			NA. 16.8A.						8
9			1750		–						10
11	20/1			400	45 FT. RIGHT OF EXP. SHELF DET.						12
13		500			MECHANICAL TIMECLOCK						14
15					SPACE						16
17											18
19											20
21											22
23											24
25											26
27											28
29											30
31											32
33											34
35											36
37	20/1	1800			PANEL 'M'						38
39			1800		–						40
41				1800	–						42

#A = 22880 VA. #B = 18510 VA. #C = 17710 VA.
TOTAL CONNECTED (19660 VA) + 25% LGE. LOAD (500 VA) = 19660 VA. (54.6 AMP)

* ELEVATOR: PVC CONDUIT FROM PANEL TO SCHEDULE.

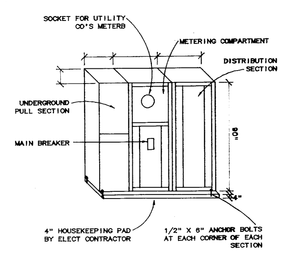
SERVICE LOAD CALCULATION:

EXISTING MAXIMUM DEMAND PER PG&E:		112.00 KW
NEW 3-PHASE HVAC LOADS:	181.76 KW	
3 ACI @ 20.7A	62.1A	
12 AC2 @ 23.5A	282.2A	
2 AC3 @ 30.8A	61.6A	
2 AC1A @ 49.0A	98.0A	
	504.9A	
NEW 1-PHASE HVAC LOADS:	8.32 KW	
1 AC4 @ 16.8A	16.8A	
1 AC5 2 14.2A	14.2A	
1 EC1 @ 9.0A	9.0A	
	40.0A	
TOTAL NEW HVAC LOADS		190.08KW
SUBTOTAL		302.08KW
LESS EVAP COOLERS REMOVED		16.0 KW
SUBTOTAL		286.08KW
PLUS 25% OF EST. 72KW LTG LOADS		18.0 KW
NET TOTAL LOAD		304.08KW
@120/208V 3-PHASE 4-WIRE		845.0 A
NEW SERVICE =		1600.A



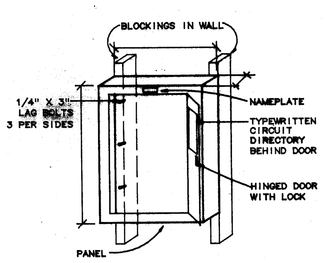
ALTERNATE LINE DIAGRAM

NTS



MAIN SWITCHBOARD DETAIL

NTS



SURFACE PANEL MTG

NTS

PARTIAL SITE ELECTRICAL PLAN / LINE DIAGRAM NOTES:

1. VERIFY EXACT LOCATION ON SITE.
2. TRANSFORMER PAD AND BARRIER POSTS SHALL BE PROVIDED BY CONTRACTOR PER PG&E'S REQUIREMENT.
3. ALL BREAKERS IN NEW MAIN SWITCHBOARD SHALL HAVE SHORT CIRCUIT CURRENT INTERRUPTING RATING EXCEEDING MAXIMUM FAULT AVAILABLE AT SWITCHBOARD. CONTRACTOR SHALL VERIFY WITH PG&E. MINIMUM RATING SHALL BE 35KAIC.
4. 3/4"C - 1#3/0 GROUND TO 5/8" X 10' COPPER GROUND ROD.
5. NEW TWO 4"C TO INTERCEPT EXISTING. RUN NEW 4#600MCM + 1#1/0 GROUND (THWN-CU) IN EACH CONDUIT IN PARALLEL TO CONNECT EXISTING SWITCHBOARD TO NEW SERVICE.
6. REMOVE CURRENT TRANSFORMER. CONTACT PG&E TO REMOVE METER. BLANK OFF EXISTING METER SOCKET. PROVIDE NEW 400A BUSSING TO RECONNECT BUSS BARS OF DISTRIBUTION SECTION. REMOVE EXISTING NEUTRAL LINK. EXISTING GROUNDING ELECTRODE CONNECTION TO EXISTING GROUND BUSS SHALL REMAIN.
7. DISCONNECT EXISTING FEEDER TO THE 250/3 BREAKER. LABEL BREAKER AS SPARE.
8. REMOVE EXISTING FEEDER CONDUCTORS. LEAVE EXISTING CONDUIT IN PLACE.
9. 3-1/2"C - 4#500MCM + 1#2 GROUND.
10. 3"C - 4#350MCM + 1#4 GROUND.
11. REMOVE EXISTING 400/3 MAIN BREAKER. CONNECT NEW FEEDER DIRECTLY TO BUSSES.
12. 3/4"C - 1#1/0 TO 5/8" X 10' COPPER GROUND ROD, METAL WATER PIPING AND BUILDING STEEL. CONTRACTOR SHALL DRILL EXISTING SLAB FOR NEW GROUND ROD. CONTRACTOR SHALL REMOVE ANY EXISTING GROUNDING ELECTRODE CONNECTION AT EXISTING PANEL "M".
13. CONVERT UNDERGROUND PVC CONDUIT TO RIGID STEEL ELBOW PRIOR TO STUBBING ABOVE GROUND. RISE UP ON EXTERIOR WALL TO ROOF. PAINT ALL EXPOSED CONDUITS AND FITTINGS AS DIRECTED BY ARCHITECT.
14. DISTRIBUTION SECTION SHALL BE FULL HEIGHT SECTION WITH FULL VERTICAL BUSSES. SECTION SHALL HAVE MINIMUM FOUR (4) 225A/3P AND TWO (2) 400A/3P SPACES.
15. EIGHT (8) 3"C STUBOUTS 5'-0" FROM EDGE OF PAD.
16. ALL EXISTING BREAKERS AND FEEDERS TO REMAIN.
17. EXISTING TWO 4"C WITH PG&E'S SERVICE CONDUCTORS. CONTRACTOR SHALL REMOVE EXISTING CONDUCTORS AND INSTALL NEW FEEDERS PER NOTE #5.
18. EXACT LOCATION OF NEW TRANSFORMER AND SWITCHBOARD SHALL BE DETERMINED BY ARCHITECT AND THE SCHOOL DISTRICT. CONTRACTOR SHALL INSTALL AS DIRECTED.
19. VERIFY EXACT LOCATION WITH PG&E.

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Office of the State Architect
APR 20 1990
Structural Safety Section
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APPROVED
FIRE AND PANIC ONLY
STATE FIRE MARSHAL
SOUTHERN REGION

Peter Kwon Engineering
320 W. Bedford, #108
Fresno, CA 93711
(Peter Kwon, EE - 10411)

FLOOR PLAN

1/8"

CONTRACTOR TO VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE AND AS SHOWN ON THE DRAWINGS. REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH ANY WORK.

LEONARD J. SCHROEDER AND ASSOCIATE · ARCHITECT · A.I.A.

DATE	REVISIONS

LEONARD J. SCHROEDER ARCHITECT A.I.A.
221 SOUTH MONTCLAIR BAKERSFIELD CA 93309
(805) 832-0734
A PROFESSIONAL CORPORATION
C 3680

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