

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-98	2000	CO.104	116

REVISED ORDINANCES OF HONOLULU
CHAPTER 32
BUILDING ENERGY EFFICIENCY STANDARDS

THE BUILDING ENERGY EFFICIENCY STANDARDS HAVE BEEN REVIEWED AND TO THE BEST OF MY KNOWLEDGE THIS DESIGN SUBSTANTIALLY CONFORMS TO ELECTRICAL AND LIGHTING REQUIREMENTS OF SECTIONS 5.3 AND 6.3.

Signature
Jason Yogi, P.E.
Name (Print)

Principal
Title

LICENSED PROFESSIONAL ENGINEER
No. 9062-E
HAWAII, U.S.A.

BUILDING ENERGY EFFICIENCY STANDARDS CALCULATIONS

BUILDING TYPE	AREA	BUILDING
K WAREHOUSE/STORAGE	34272 sq ft	DATE 4/01/00
F SERVICE ESTABLISHMENT	16320 sq ft	YEAR 1993
NA	0 sq ft	
	50592 Gross sq ft	
BUILDING DESIGN		
Interior Lighting Power	23736 W	0.469 W/Gross sq ft
Exterior Lighting Power	1785 W	
***** PASSES *****		

PREScriptive CRITERIA		
Unit Lighting Power Allowance	0.714 W/Gross sq ft	
Interior Lighting Power Allowance	31600 W	
SYSTEM PERFORMANCE CRITERIA		
Unit Power Density	NA W/Gross sq ft	
Interior Lighting Power Allowance	NA W	
EXTERIOR LIGHTING CRITERIA		
Exterior Lighting Power Allowance	4050 W	
***** PASSES *****		

BUILDING ENERGY EFFICIENCY STANDARDS

EXTERIOR LIGHTING POWER ALLOWANCE	4050	INSTALLED	1785
INTERIOR LIGHTING POWER ALLOWANCE	36100	INSTALLED	23736
METHOD USED:	PREScriptive	SYSTEM PERFORMANCE	
(CHECK ONE)	<input checked="" type="checkbox"/>		
CALCULATIONS:	SEPARATE	ON DRAWINGS	<input checked="" type="checkbox"/>
(CHECK ONE)		6-7-00	

E-1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**ELECTRICAL SYMBOLS, DEMOLITION
NOTES, SINGLE LINE DIAGRAM**

OAHU DISTRICT WAREHOUSE BUILDING

Project No. HWY-0-05-98
Scale: AS SHOWN Date: APRIL, 2000

SHEET No. E1 OF 116 SHEETS

CO.104

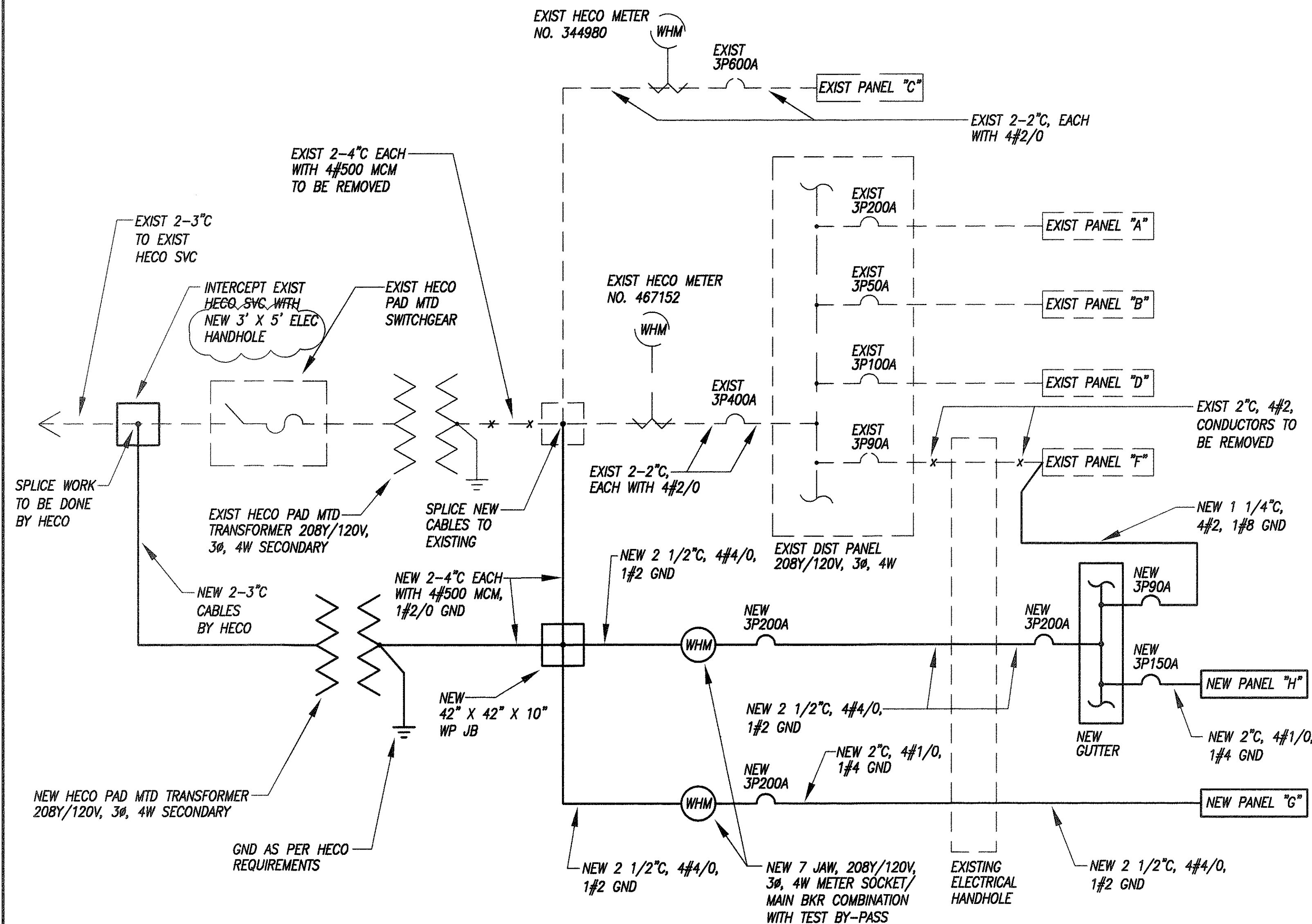
ELECTRICAL SYMBOLS

- FLOOD LIGHTS
- CEILING LUMINAIRE
- WALL LUMINAIRE, NIGHT LIGHT
- EXISTING CEILING FLUORESCENT LUMINAIRE TO BE REMOVED
- CEILING FLUORESCENT LUMINAIRE
- WALL FLUORESCENT LUMINAIRE
- EMERGENCY LIGHT
- CEILING FLUORESCENT STRIP LUMINAIRE
- EXIT LIGHT, WALL, BLACKENED SEGMENT INDICATES ILLUMINATED SIDE AND ARROW INDICATES DIRECTION
- EXISTING SWITCH TO BE REMOVED
- SWITCH, 1P20A, +4'-0"
- SWITCH, 2P20A, +4'-0"
- SWITCH, 3W20A, +4'-0"
- EXISTING DUPLEX CONVENIENCE OUTLET TO BE REMOVED
- DUPLEX CONVENIENCE OUTLET, 3W20A, GROUNDING TYPE, +16" UNLESS OTHERWISE NOTED
- DUPLEX CONVENIENCE OUTLET, 3W20A, GROUND FAULT INTERRUPTER TYPE, +16" UNLESS OTHERWISE NOTED
- JUNCTION BOX, WALL, 4-11/16" SQUARE MINIMUM
- JUNCTION BOX, CEILING, 4-11/16" SQUARE MINIMUM
- JUNCTION BOX, LARGE
- PANELBOARD
- WATER HEATER CONNECTION
- TELEPHONE OUTLET, +16"
- TELEPHONE CABINET
- EXISTING TRANSFORMER
- NEW TRANSFORMER
- FIRE ALARM MANUAL STATION, +48"
- FIRE ALARM AUTOMATIC SMOKE DETECTOR
- FIRE ALARM HORN/SIGNAL WITH FLASHING LIGHT, +80" OR 6" BELOW THE CEILING WHICHEVER IS LOWER
- FIRE ALARM FLASHING LIGHT, +80" OR 6" BELOW THE CEILING WHICHEVER IS LOWER
- FIRE ALARM PANEL
- MOTOR OUTLET
- MOTOR CONTROLLER
- SAFETY SWITCH
- WEATHERPROOF
- EXPLOSION PROOF

A-2/48 LUMINAIRE DESIGNATION, TYPE A-2/48 INDICATED

- WIRING IN EXISTING RACEWAY
- WIRING IN EXPOSED RACEWAY
- WIRING IN RACEWAY CONCEALED IN FLOOR OR BELOW GRADE
- WIRING IN RACEWAY CONCEALED IN WALL OR CEILING
- EXISTING OVERHEAD ELECTRICAL LINES TO BE REMOVED
- WIRING IN EXPLOSION PROOF RACEWAY

- NOTES:
- ANY CIRCUIT WITH NO FURTHER DESIGNATION INDICATES A TWO WIRE CIRCUIT. CIRCUITS WITH ADDITIONAL WIRES ARE INDICATED AS FOLLOWS: 3 WIRES: ---, 4 WIRES, ETC.
 - GROUND WIRE PER NATIONAL ELECTRICAL CODE INDICATED AS FOLLOWS: ---.
 - ALL EXPOSED CONDUIT AND BOXES SHALL BE PAINTED TO MATCH ADJACENT WALL OR CEILING SURROUNDING.



SINGLE LINE DIAGRAM

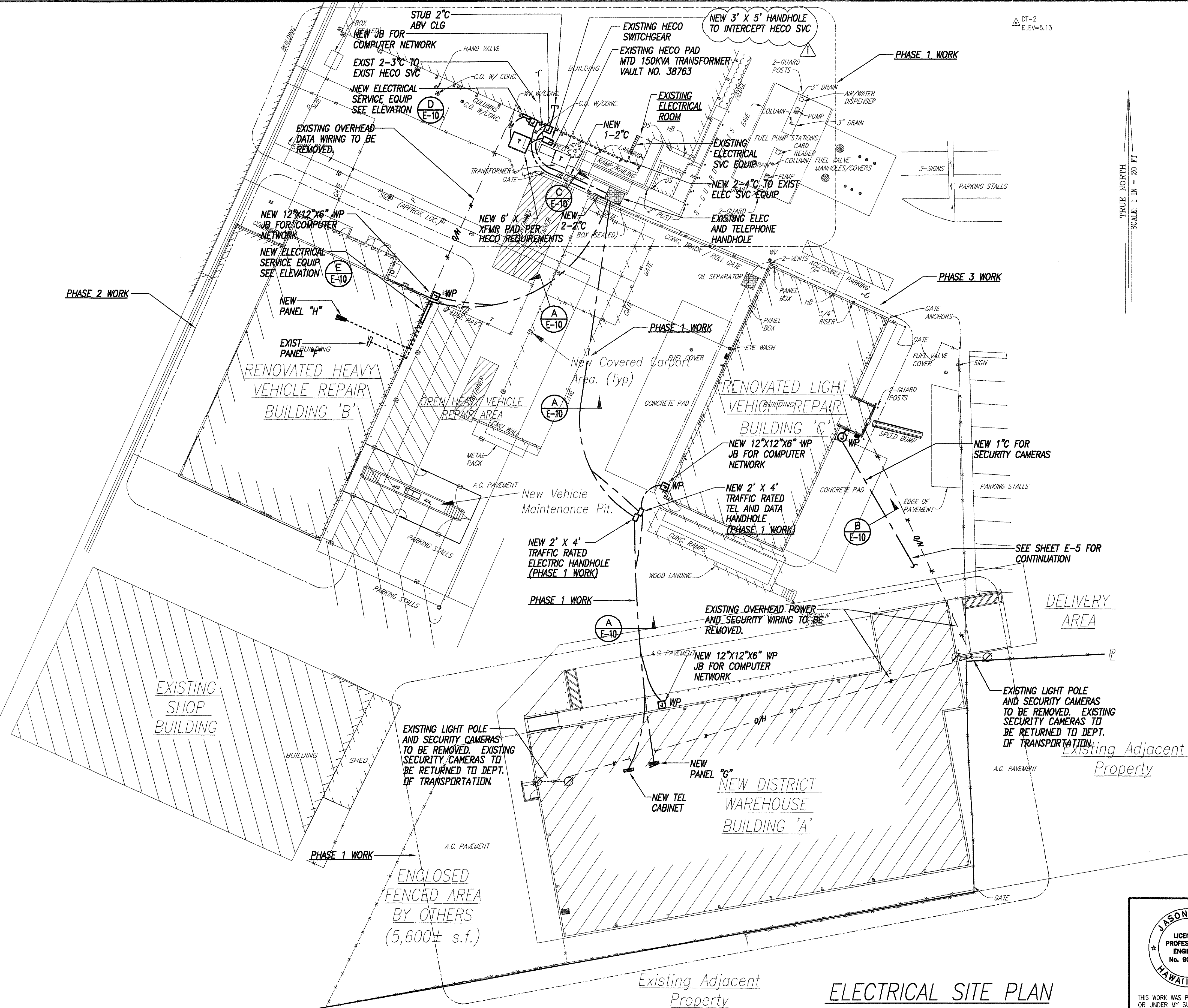
DEMOLITION NOTES

- EXISTING PLANS DO NOT INDICATE COMPLETE EXISTING WIRING CONDITIONS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.
- BEFORE ANY WIRING IS CUT, CONTRACTOR SHALL VERIFY USAGE OF WIRING TO BE CUT TO ASSURE THAT SERVICES REQUIRED ARE NOT DISCONTINUED. PROVIDE ADDITIONAL WIRING DEVICES AND OTHER ACCESSORIES TO ENSURE CONTINUITY OF SERVICE TO OTHER PARTS OF INSTALLATION TO REMAIN.
- REMOVE ALL EXISTING WIRING NOT TO REMAIN IN SERVICE.
- REMOVE ALL CONDUITS NO LONGER REQUIRED.
- PHASE WORK TO ASSURE CONTINUITY OF ELECTRICAL, TELEPHONE AND SIGNAL SERVICES TO PARTS OF FACILITIES THAT WILL REMAIN IN USE.
- REMOVE ALL EXISTING LIGHTING FIXTURES, RECEPTACLES AND SWITCHES INDICATED TO BE REMOVED OR NO LONGER REQUIRED. BLANK OUTLETS AND PLUG ALL HOLES IN BOXES AND CABINETS.
- DELIVER ALL SALVAGEABLE MATERIAL AS DETERMINED BY ENGINEER AT NO ADDITIONAL COST TO OWNER. PACK MATERIAL IN BOXES. COIL ALL CABLES AND TIE.
- ABANDON CONDUITS BELOW GRADE NO LONGER REQUIRED. PULL OUT ALL WIRES IN ABANDONED CONDUITS.
- RETURN ALL REMOVED LIGHT FIXTURES TO OWNER. DELIVER ITEMS AND STACK IN LOCATION AS DETERMINED BY ENGINEER.

6-7-00	REVISED BKRS AND WIRE SIZES ON SINGLE LINE DIAGRAM
7-18-00	REVISED NOTES TO ELECTRICAL SYMBOLS, REVISED SINGLE LINE DIAGRAM
DATE	REVISION

ORIGINAL SURVEY PLOTTED BY	DATE
DRAWN BY	3/2/00
TRACED BY	SI
DESIGNED BY	SI
QUANTITIES BY	3/3/00
CHECKED BY	SI
3/3/00	

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-98	2000	CO.105	116

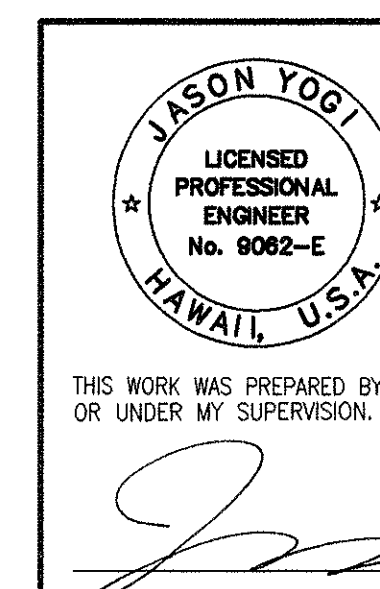


DATE	REVISION
6-7-00	REVISED SECURITY CAMERA NOTES.
7-20-00	REVISED HECO HANDHOLE SIZE TO 3' X 5'.

NOTES:

- CONTRACTOR SHALL SAWCUT AND PATCH ALL EXISTING A/C PAVEMENT AND SIDEWALKS AS REQUIRED FOR INSTALLATION OF CONDUITS
- DURING OFFICE HOURS, THERE SHALL BE NO POWER OUTAGE ALLOWED TO THE EXISTING BUILDINGS.
- CONTRACTOR SHALL TONE EXISTING AREAS PRIOR TO EXCAVATION. CONTRACTOR SHALL NOT CUT ANY EXISTING UTILITIES. IF ANY EXISTING UTILITIES ARE CUT THE CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE THE UTILITY TO ITS ORIGINAL CONDITION.
- CONTRACTOR SHALL PROVIDE ALL PENETRATIONS OF EXISTING HANDHOLES FOR INSTALLATION OF ALL NEW CONDUITS.
- CONTRACTOR SHALL COORDINATE PHASING WITH GENERAL

E-2



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ELECTRICAL SITE PLAN

OAHU DISTRICT WAREHOUSE BUILDING

Project No. HWY-0-05-98

Scale: AS SHOWN Date: APRIL, 2000

SHEET No. E-2 OF 116 SHEETS

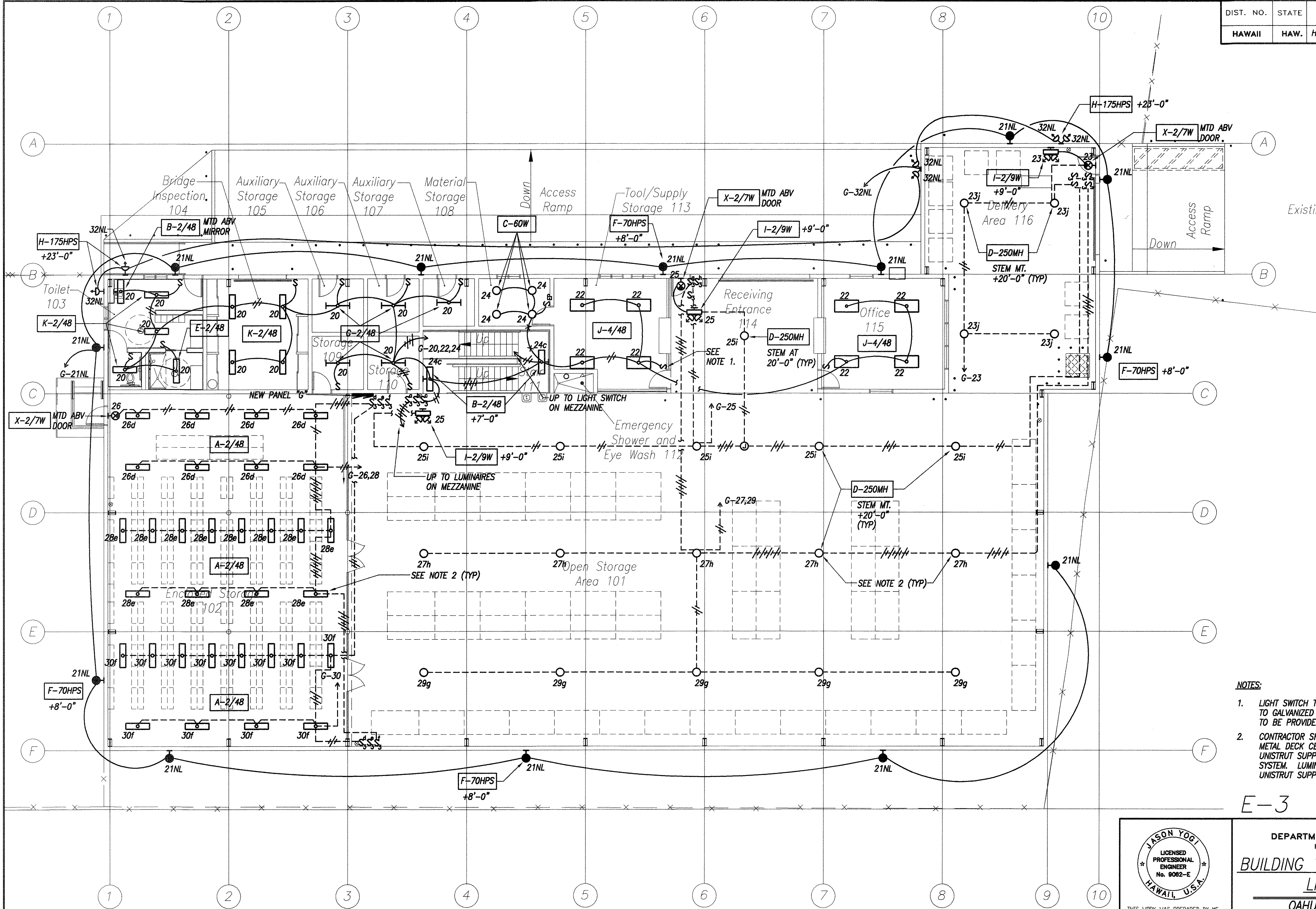
CO.105

ELECTRICAL SITE PLAN

Scale: 1" = 20'-0"

ORIGINAL SURVEY PLOTTED BY	DATE
PLAN	3/3/00
DESIGNED BY	3/3/00
QUANTITIES BY	3/3/00
CHECKED BY	3/3/00

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-98	2000	106	116

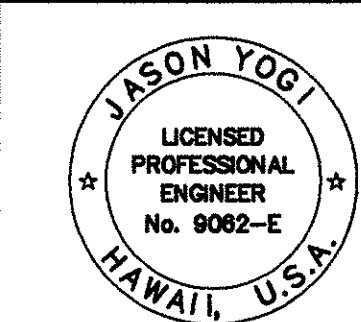


- NOTES:
1. LIGHT SWITCH TO BE MOUNTED ON METAL PLATE WELDED TO GALVANIZED METAL SCREEN PARTITION. METAL PLATE TO BE PROVIDED BY CONTRATOR.
 2. CONTRACTOR SHALL NOT SUPPORT ANY LUMINAIRE FROM METAL DECK CEILING. CONTRACTOR SHALL PROVIDE UNISTRUT SUPPORTS THAT ARE ATTACHED TO FRAMING SYSTEM. LUMINAIRES SHALL BE STEM MOUNTED FROM UNISTRUT SUPPORT.

E-3

ORIGINAL SURVEY PLOTTED BY	DATE
PLAN	3/3/00
DESIGNED BY	3/3/00
QUANTITIES BY	3/3/00
CHECKED BY	3/3/00
No.	

BUILDING 'A' - GROUND FLOOR LIGHTING PLAN
Scale: 1/8" = 1'-0"



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

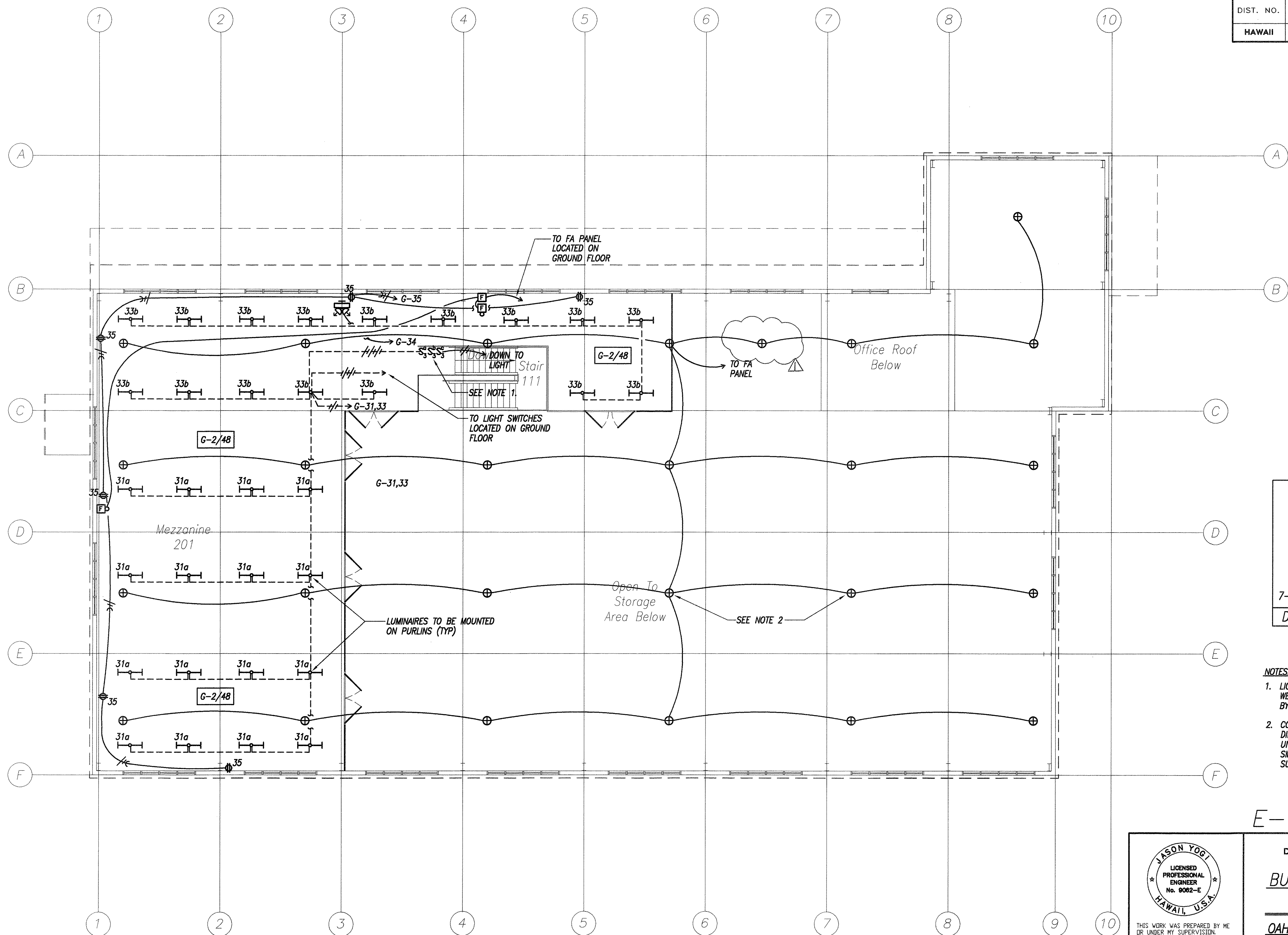
**BUILDING 'A' - GROUND FLOOR
LIGHTING PLAN**

**OAHU DISTRICT BASEYARD
FACILITIES**

Project No. HWY-0-05-98
Scale: AS SHOWN Date: APRIL, 2000

SHEET No. E-3 OF 116 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-98	2000	CO.107	116



7-20-00	ADDITION OF SMOKE DETECTOR
DATE	REVISION

- NOTES:
1. LIGHT SWITCHES TO BE MOUNTED ON METAL PLATE WELDED TO RAILING. METAL PLATE TO BE PROVIDED BY CONTRACTOR.
 2. CONTRACTOR SHALL NOT MOUNT SMOKE DETECTORS DIRECTLY TO CEILING. CONTRACTOR SHALL PROVIDE UNISTRUT SUPPORTED BY METAL FRAMING SYSTEM. SMOKE DETECTORS SHALL BE MOUNTED TO UNISTRUT SUPPORTS.

E-4

ORIGINAL SURVEY PLOTTED BY	DATE
DRAWN BY	3/3/00
TRACED BY	3/3/00
NOTE BOOK DESIGNED BY	3/3/00
QUANTITIES BY	3/3/00
CHECKED BY	3/3/00
No.	

BUILDING 'A' - MEZZANINE ELECTRICAL PLAN
Scale: 1/8" = 1'-0"

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

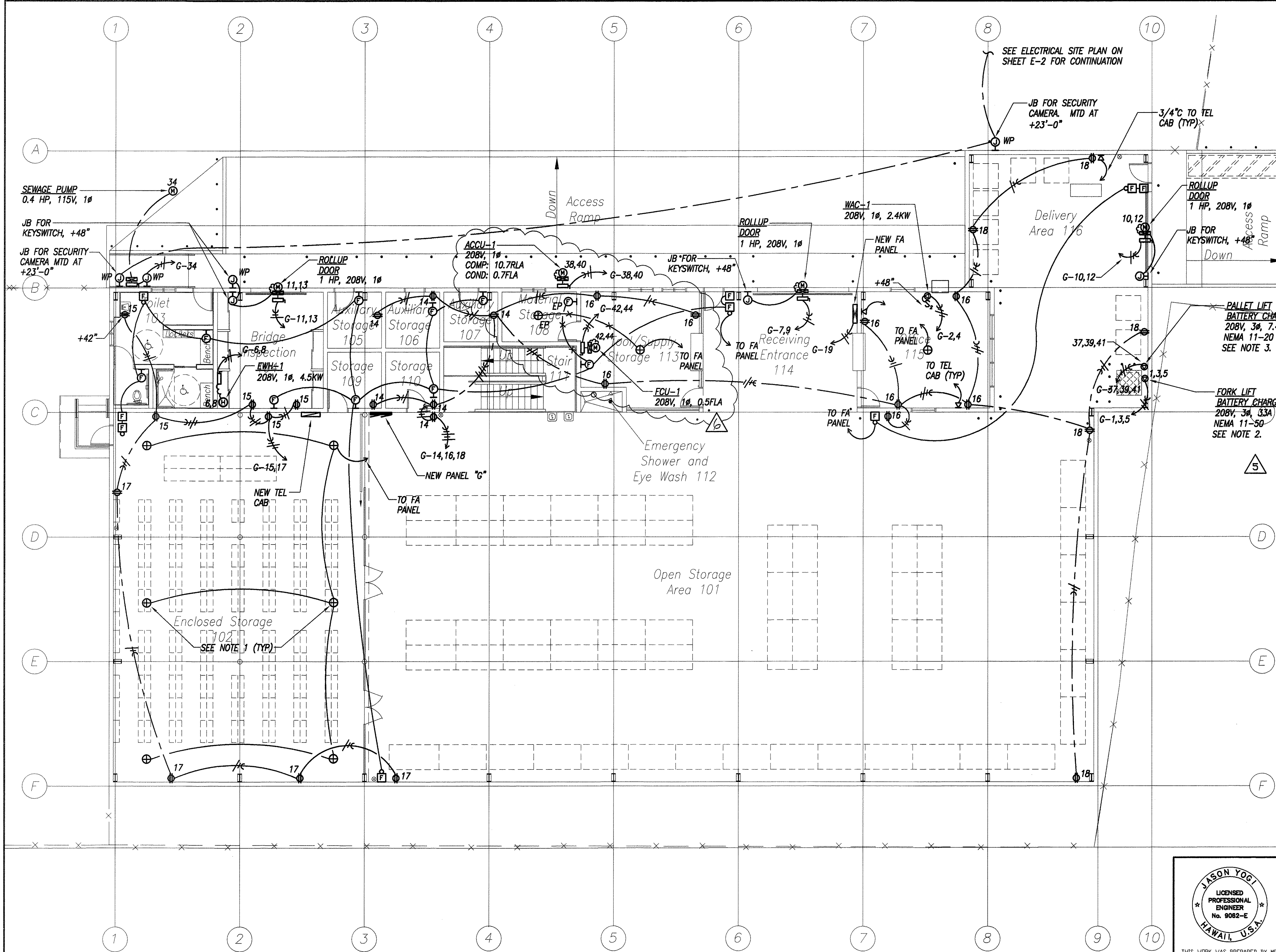
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**BUILDING 'A' - MEZZANINE
ELECTRICAL PLAN**

OAHU DISTRICT WAREHOUSE BUILDING

Project No. HWY-0-05-98
Scale: AS SHOWN Date: APRIL, 2000

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-98	2000	CO.108	116

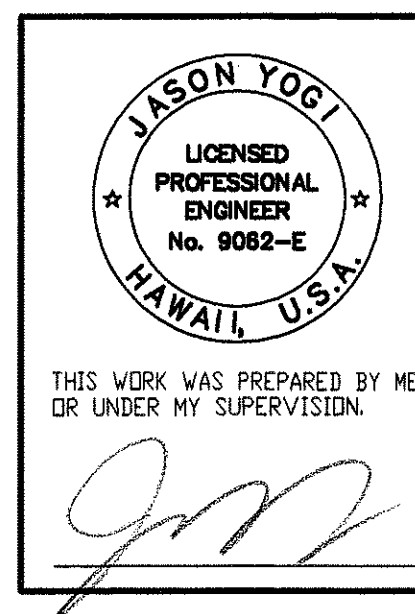


DATE	REVISION
7-18-00	ADDITION OF FLASHING LTS
11-29-00	ADDITION OF SEWAGE PUMP
2-28-01	ADDITION OF CHARGERS
5-4-01	DOT COMMENTS
7-23-01	ADDITION OF ACCU & FCU

- NOTES:
- CONTRACTOR SHALL NOT MOUNT SMOKE DETECTORS DIRECTLY TO CEILING. CONTRACTOR SHALL PROVIDE UNISTRUT SUPPORTED BY METAL FRAMING SYSTEM. SMOKE DETECTORS SHALL BE MOUNTED TO UNISTRUT SUPPORTS.
 - CONTRACTOR SHALL PROVIDE BLACK PHENOLIC SIGN WITH WHITE ENGRAVED LETTERS WITH THE FOLLOWING:
"FORK LIFT CHARGER: 208V, 3Ø, 33 A"
 - CONTRACTOR SHALL PROVIDE BLACK PHENOLIC SIGN WITH WHITE ENGRAVED LETTERS WITH THE FOLLOWING:
"PALLET LIFT CHARGER: 208V, 3Ø, 7.4 A"

ORIGINAL SURVEY PLOTTED BY	DATE
DRAWN BY	3/3/00
TRACED BY	3/3/00
DESIGNED BY	3/3/00
CHECKED BY	3/3/00
No.	

BUILDING 'A' - GROUND FLOOR POWER AND SIGNAL PLAN
 Scale: 1/8" = 1'-0"



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

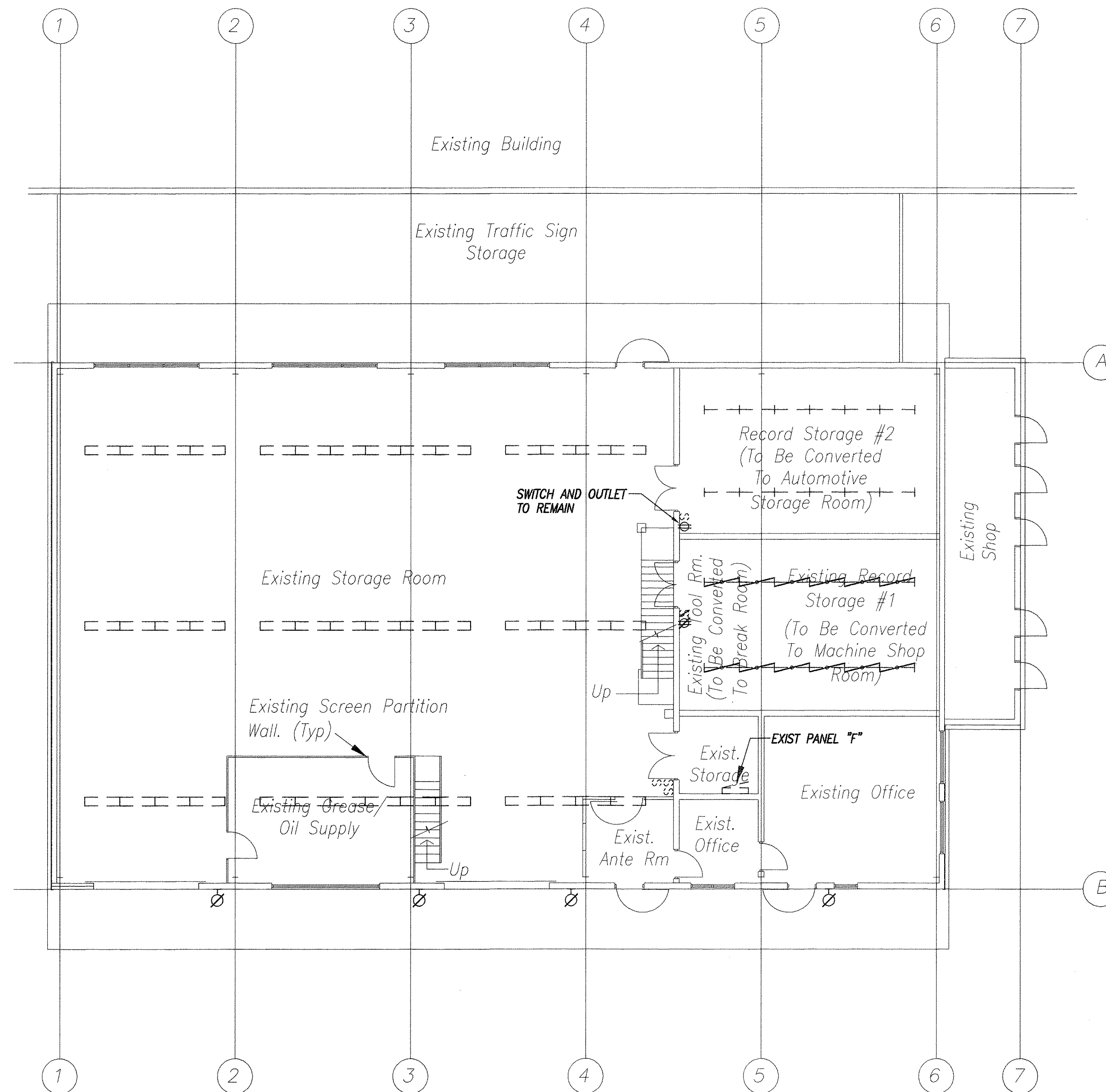
BUILDING 'A' - GROUND FLOOR POWER AND SIGNAL PLAN

OAHU DISTRICT WAREHOUSE BUILDING

Project No. HWY-0-05-98
 Scale: AS SHOWN Date: APRIL, 2000

SHEET No. E-5 OF 116 SHEETS


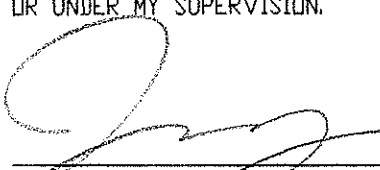
DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-98	2000	109	116



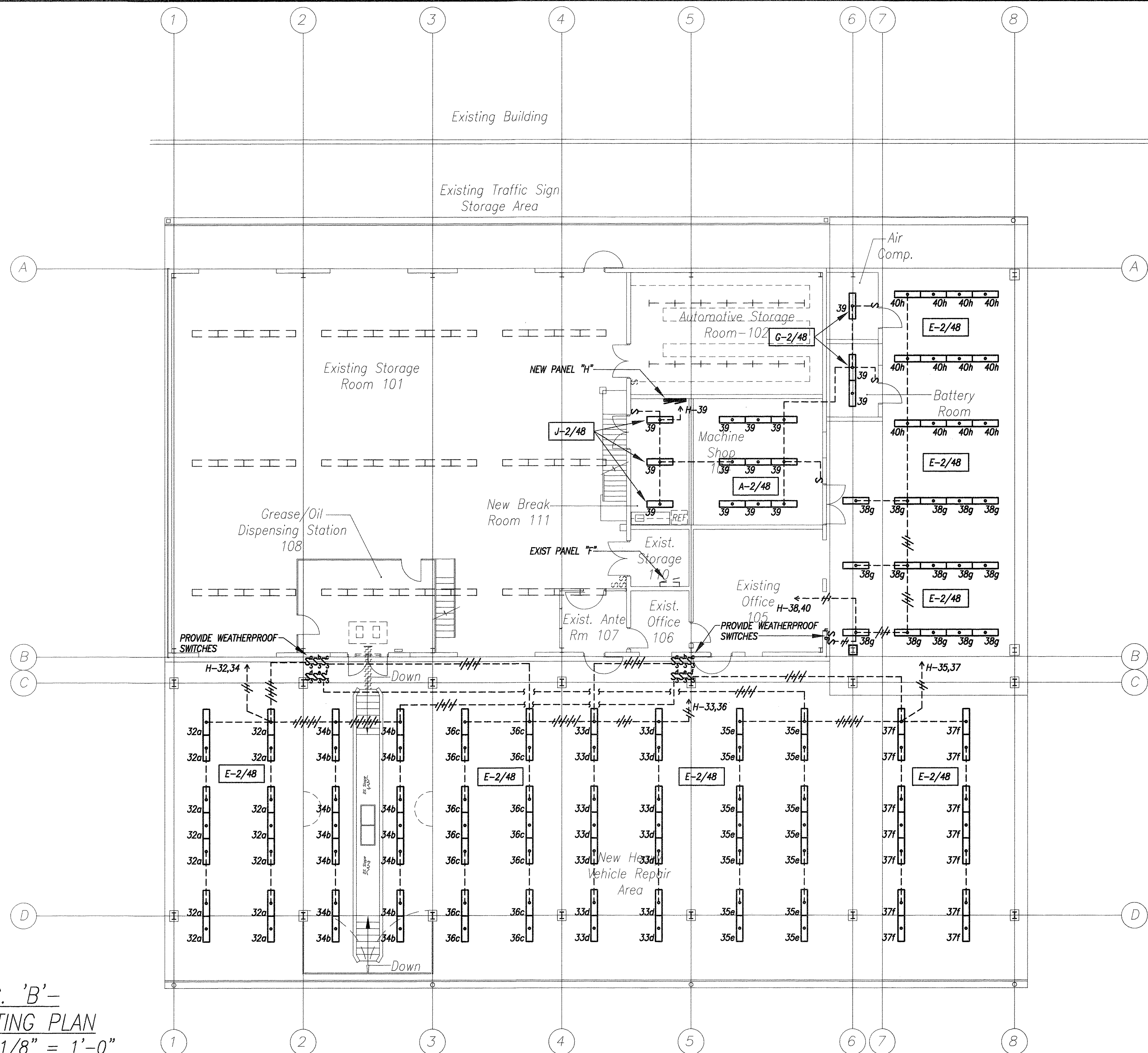
BLDG. 'B' - ELECTRICAL DEMOLITION PLAN
Scale: 1/8" = 1'-0"

ORIGINAL SURVEY PLOTTED BY	DATE
PLAN	3/2/00
DRAWN BY	SI
TRACED BY	SI
NOTED BY	SI
CHECKED BY	SI
No.	

E-6

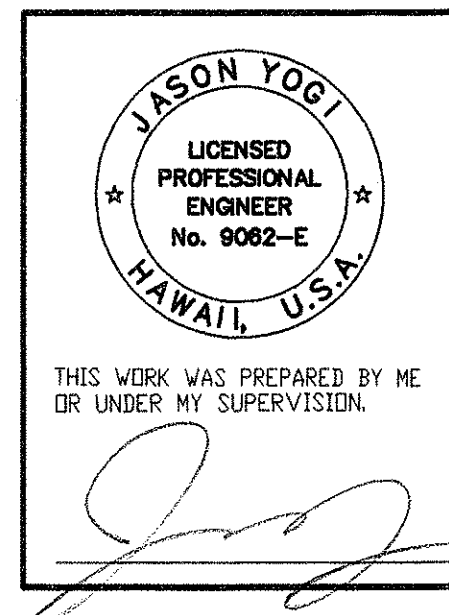
 <small>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.</small> 	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <u>BUILDING 'B'-ELECTRICAL</u> <u>DEMOLITION PLAN</u> <u>OAHU DISTRICT BASEYARD</u> <u>FACILITIES</u> Project No. HWY-0-05-98 Scale: AS SHOWN Date: APRIL, 2000
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DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-98	2000	110	116



ORIGINAL SURVEY PLOTTED BY	DATE
DRAWN BY	3/2/00
TRACED BY	3/2/00
DESIGNED BY	3/2/00
QUANTITIES BY	3/2/00
CHECKED BY	3/2/00
No.	

BLDG. 'B' -
LIGHTING PLAN
Scale: 1/8" = 1'-0"



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BUILDING 'B'
LIGHTING PLAN

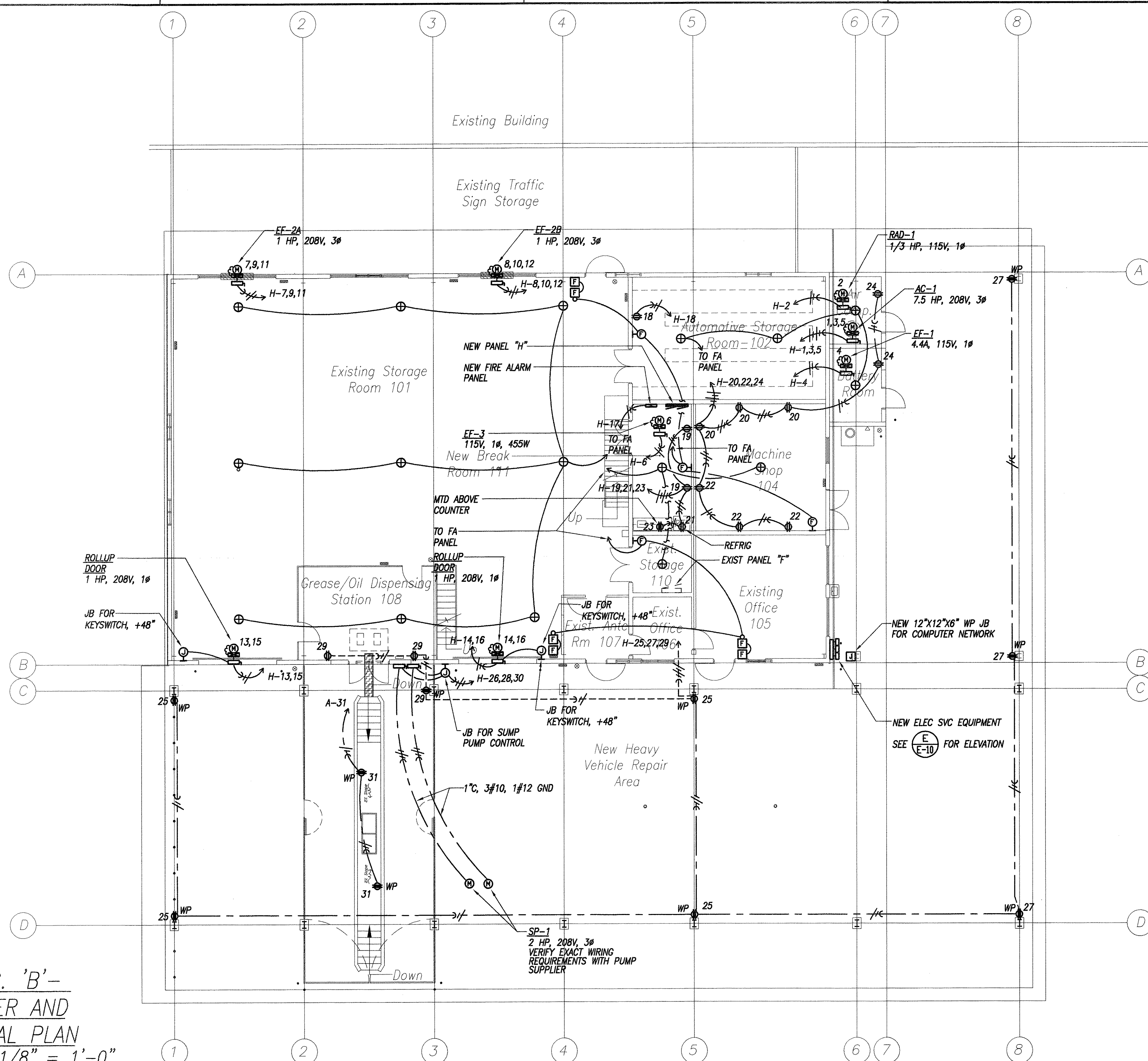
OAHU DISTRICT BASEYARD FACILITIES

Project No. HWY-0-05-98
Scale: AS SHOWN Date: APRIL, 2000

SHEET No. E-7 OF 116 SHEETS

E-7

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-98	2000	ADD.111	116



6-7-00	REVISED AC-1 SIZE, REVISED SP-1 SIZE AND CONNECTION
DATE	REVISION

NOTES:
1. CONTRACTOR SHALL BREAK EXISTING WALLS AND CEILING TO FLUSH MOUNT ALL NEW OUTLETS AND CONCEAL ALL NEW RACEWAY AND PATCH TO MATCH EXISTING.

E-8

ORIGINAL SURVEY PLOTTED BY	DATE
DRAWN BY	3/2/00
DESIGNED BY	3/2/00
NOTED BY	3/2/00
CHECKED BY	3/2/00

BLDG. 'B'-
POWER AND
SIGNAL PLAN
Scale: 1/8" = 1'-0"

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

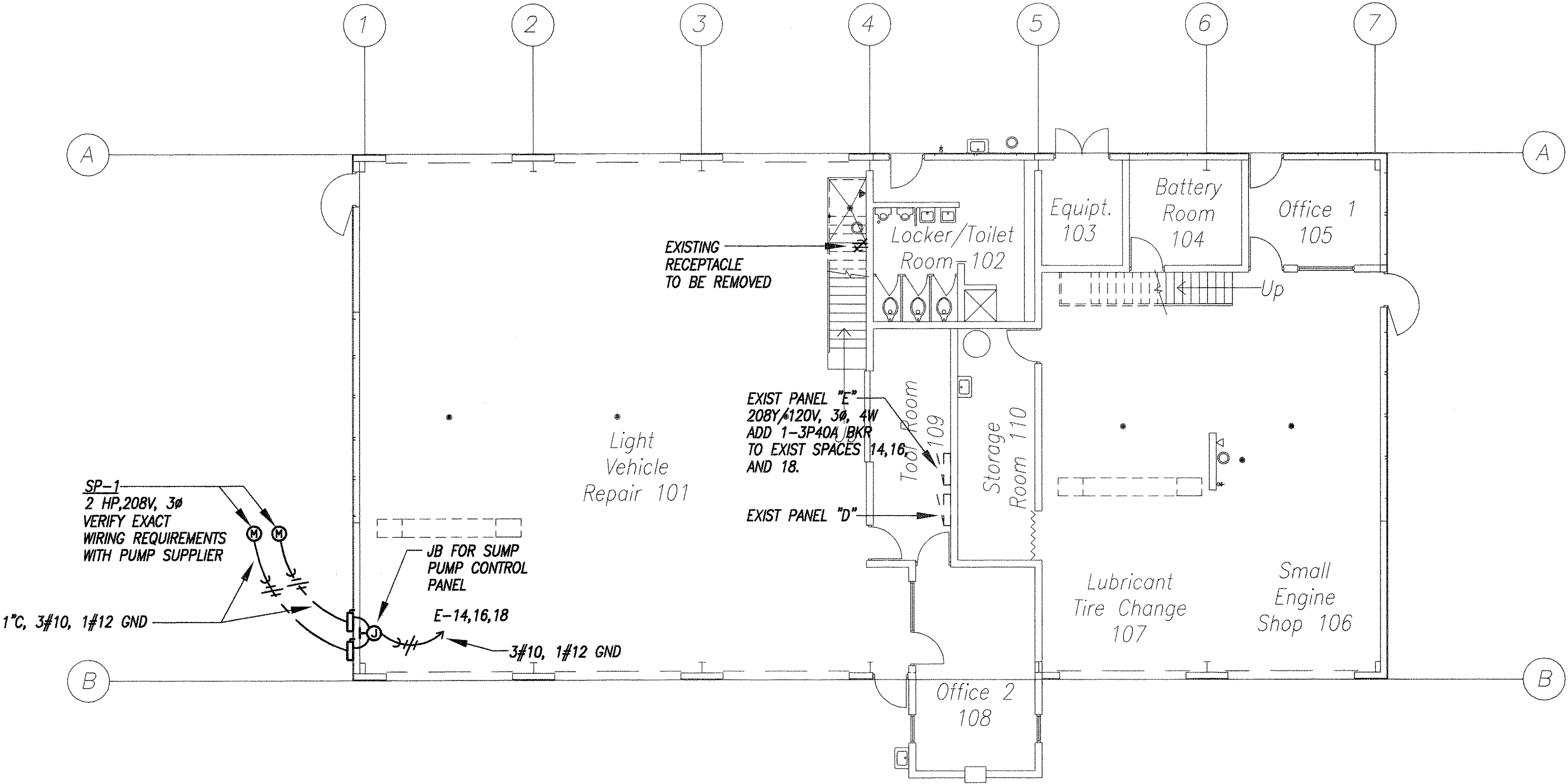
**BUILDING 'B' - POWER
AND SIGNAL FLOOR PLAN**

OAHU DISTRICT WAREHOUSE BUILDING

Project No. HWY-0-05-98
Scale: AS SHOWN Date: APRIL, 2000

SHEET No. E-8 OF 116 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-98	2000	ADD.112	116



BLDG. C - GROUND FLOOR ELECTRICAL PLAN
 Scale: 1/8" = 1'-0"

6-7-00	REVISED SP-1 SIZE AND CONNECTION
DATE	REVISION

NOTE: ALL WORK DONE AT THIS BUILDING IS TO BE CONSIDERED PHASE 3.

E-9

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DESIGNED BY	AS.BI	5/13/99
NOTE BOOK	DESIGNED BY	LC.BI
QUANTITIES BY	LC	5/13/99
CHECKED BY	LC	5/13/99
No.		

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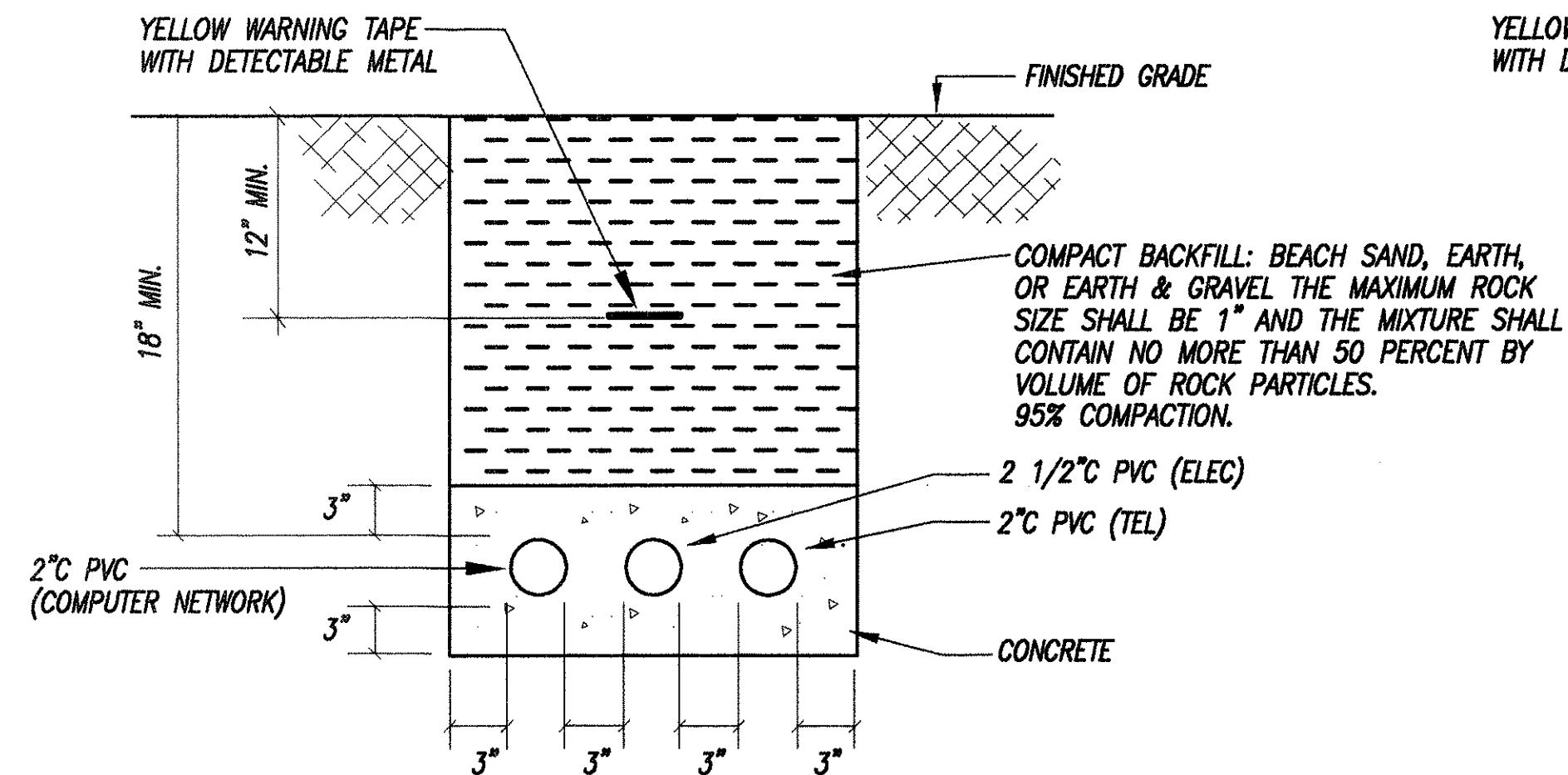
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

BUILDING C - GROUND FLOOR ELECTRICAL PLAN

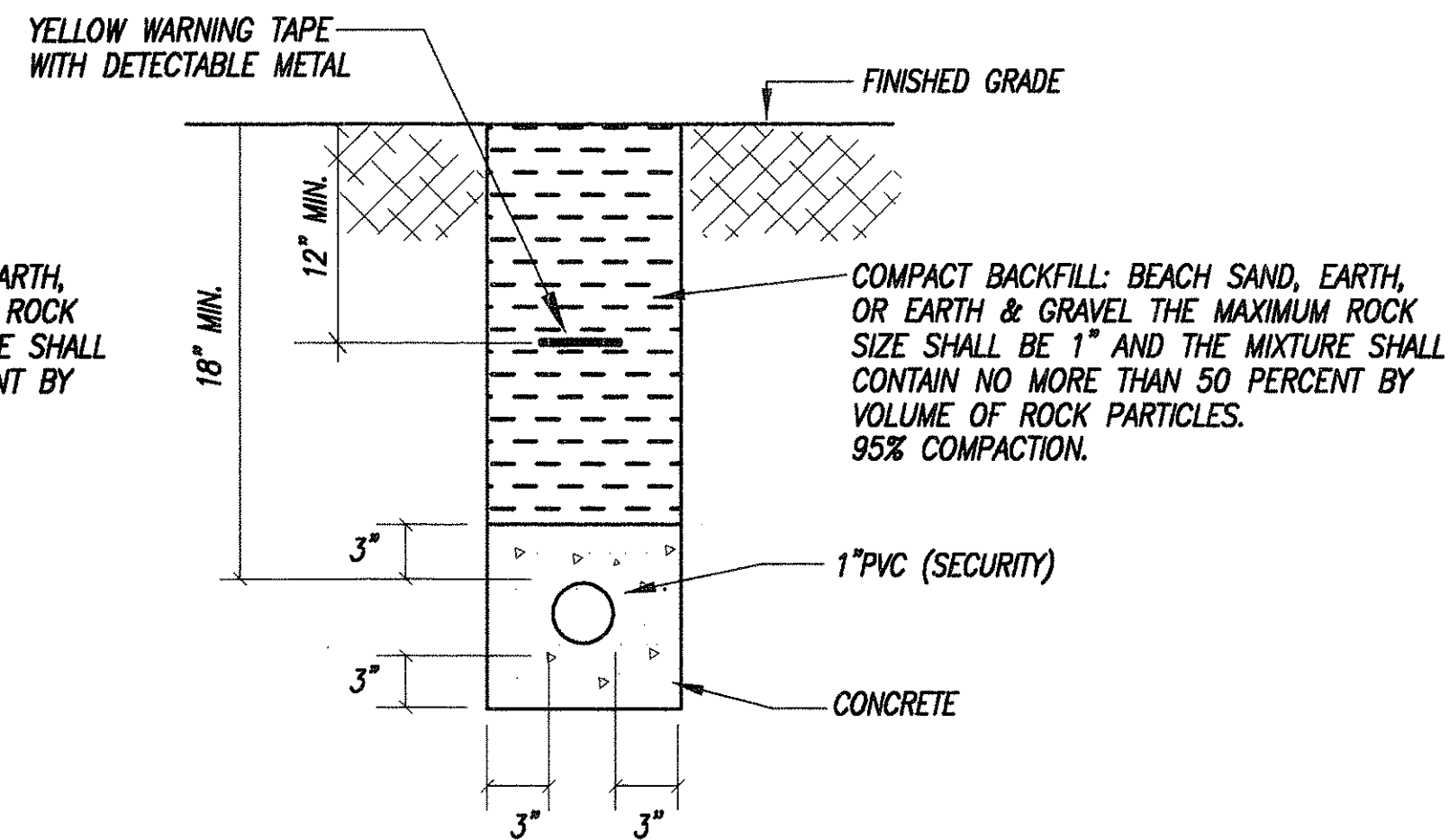
OAHU DISTRICT WAREHOUSE BUILDING

Project No. HWY-0-05-98
 Scale: AS SHOWN Date: APRIL, 2000

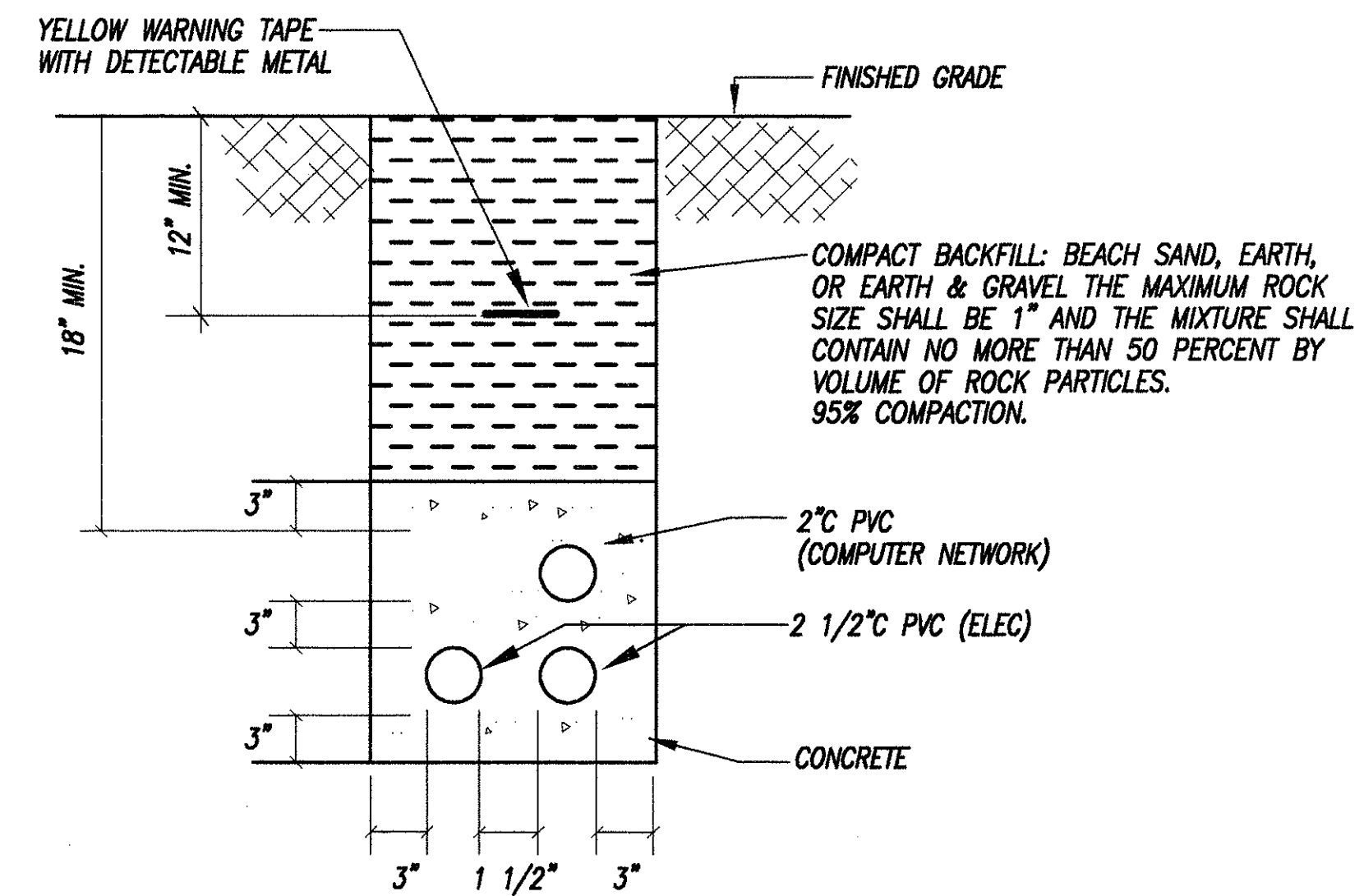
DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-98	1998	C.O.113	116



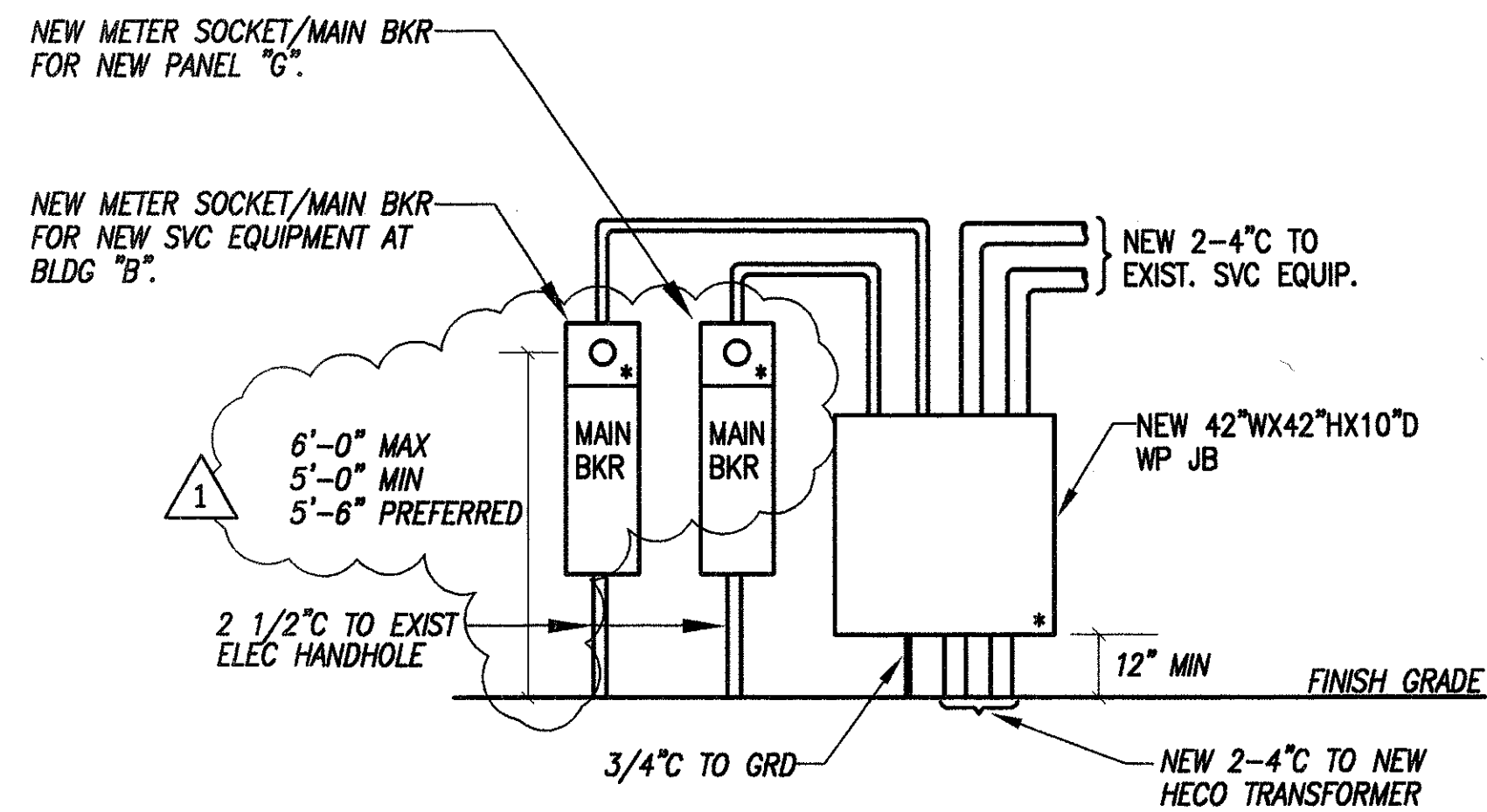
A
E-10
DUCT SECTION
NOT TO SCALE



B
E-10
DUCT SECTION
NOT TO SCALE

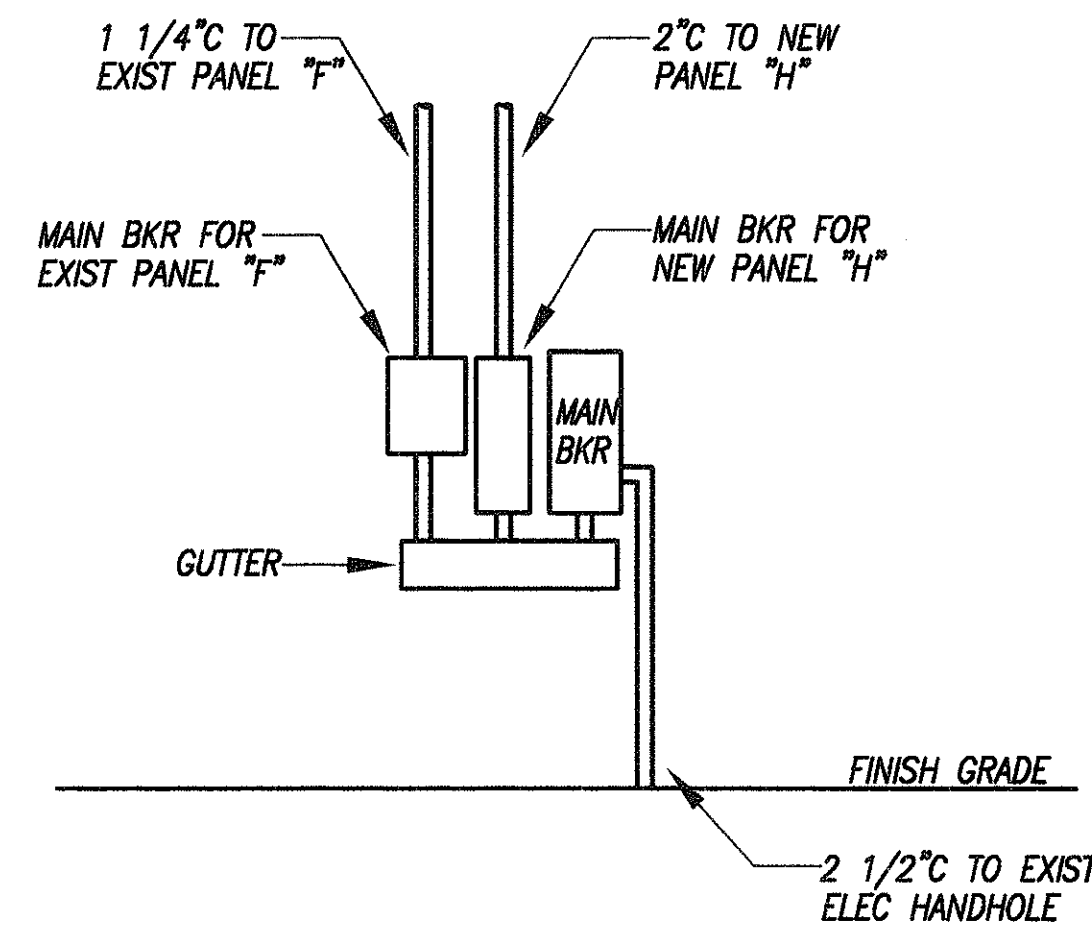


C
E-10
DUCT SECTION
NOT TO SCALE



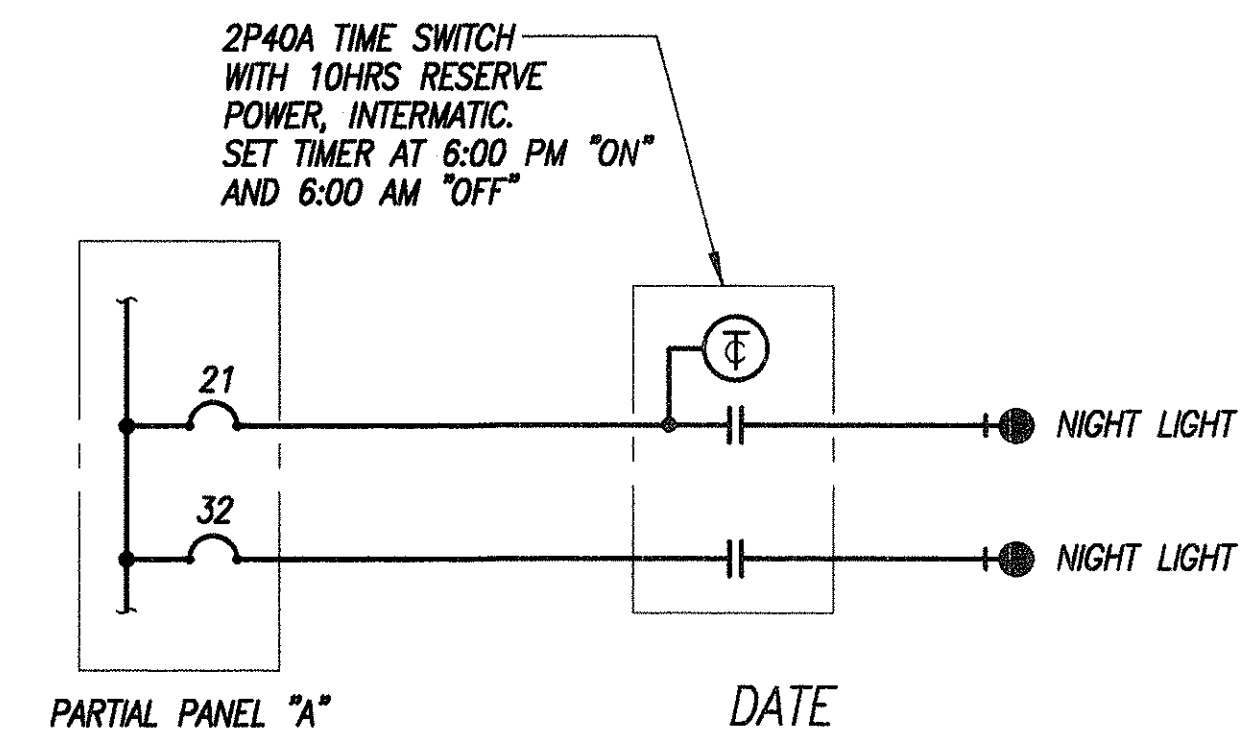
D
E-10
MAIN SERVICE EQUIPMENT ELEVATION
SCALE: 3/8" = 1'-0"

- NOTES:
- * - INDICATES SEALABLE ENCLOSURE
 - ALL EQUIPMENT TO BE NEMA 3R WEATHERPROOF
 - PROVIDE IDENTIFICATION NAMEPLATE FOR EACH METER SOCKET WHICH SHALL INCLUDE UNIT NUMBER OR NUMBER OF FINAL SPACE SERVED.
 - PROVIDE AND MAINTAIN 4'-0" CLEAR AND LEVEL WORK SPACE CLEARANCE IN FRONT OF METERING EQUIPMENT.



E
E-10
ELECTRICAL SERVICE EQUIPMENT ELEVATION
SCALE: 3/8" = 1'-0"

- NOTES:
- ALL EQUIPMENT TO BE NEMA 3R WEATHERPROOF



NIGHT LIGHT CONTROL DIAGRAM

8-17-00	REVISED MAIN SERVICE EQUIPMENT ELEVATION
6-7-00	REVISED DUCT SECTIONS AND ELEVATION
	REVISION

SURVEY PLOTTED BY	DATE
DRAWN BY	3/2/00
DESIGNED BY	3/2/00
QUANTITIES BY	3/2/00
CHECKED BY	3/2/00
No.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**DUCT SECTIONS, NIGHT LIGHT DIAGRAM
ELECTRICAL EQUIPMENT ELEVATIONS**

OAHU DISTRICT WAREHOUSE BUILDING

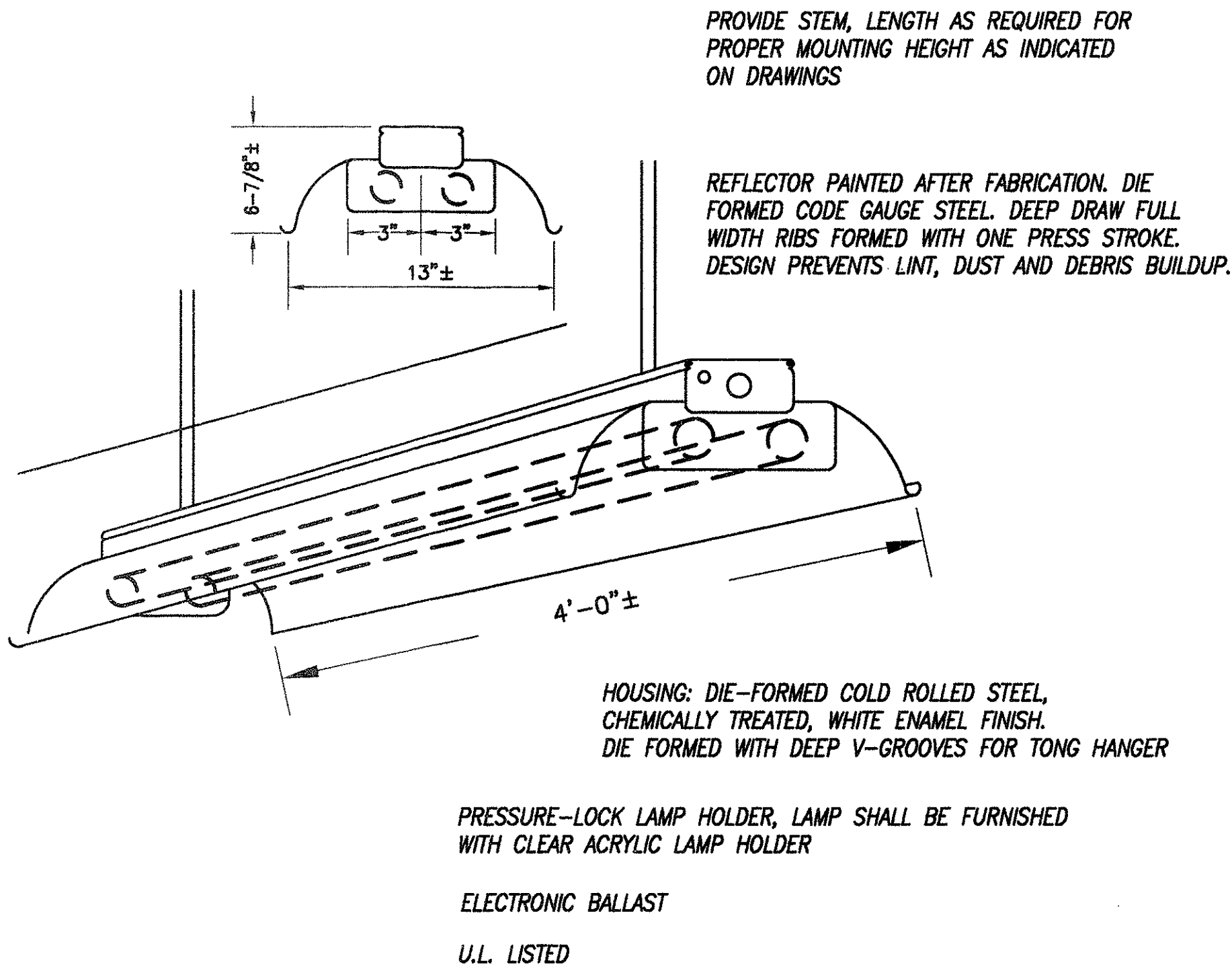
Project No. HWY-0-05-98
Scale: AS SHOWN Date: APRIL, 2000

SHEET No. E-10 OF 116 SHEETS

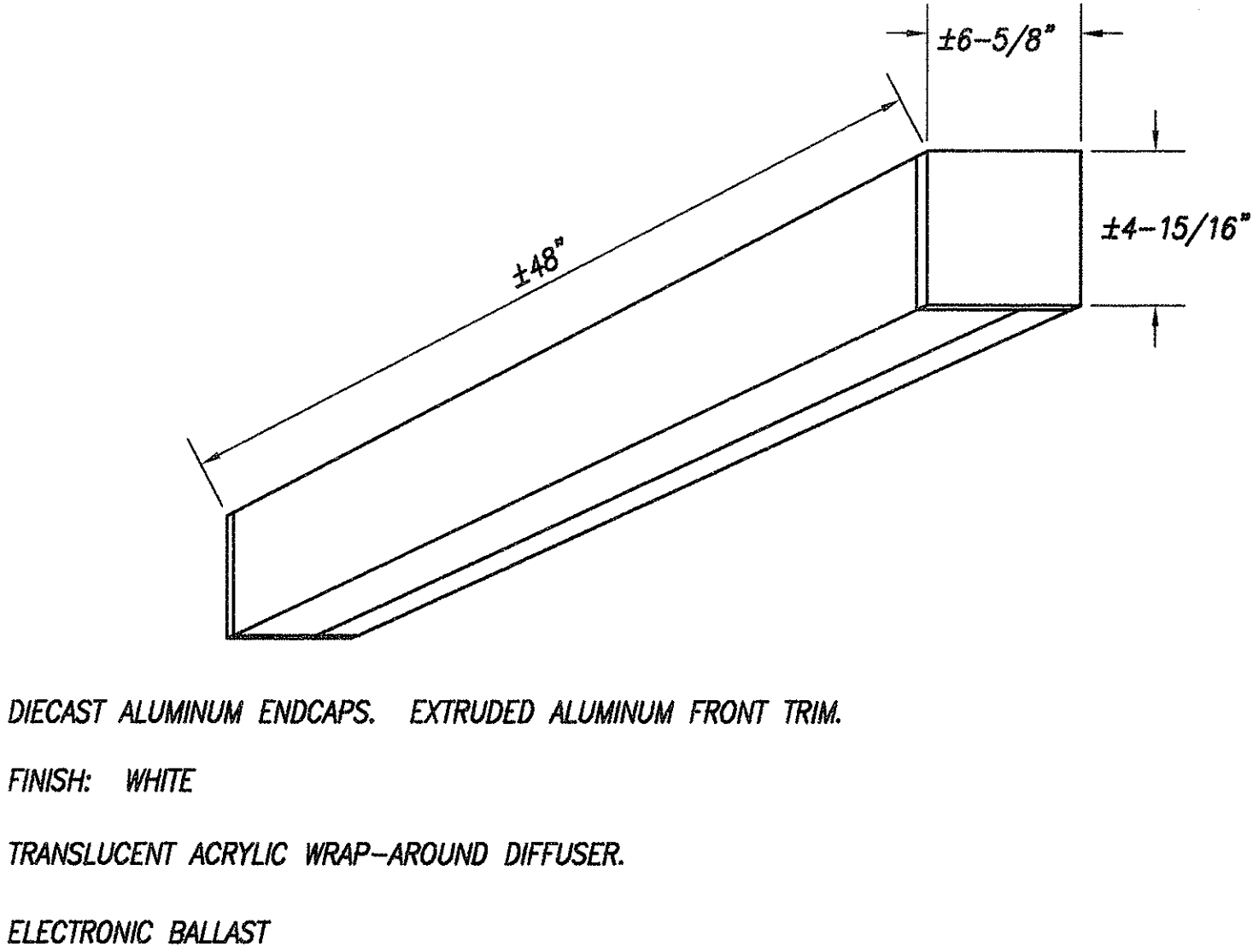
E-10

C.O.113

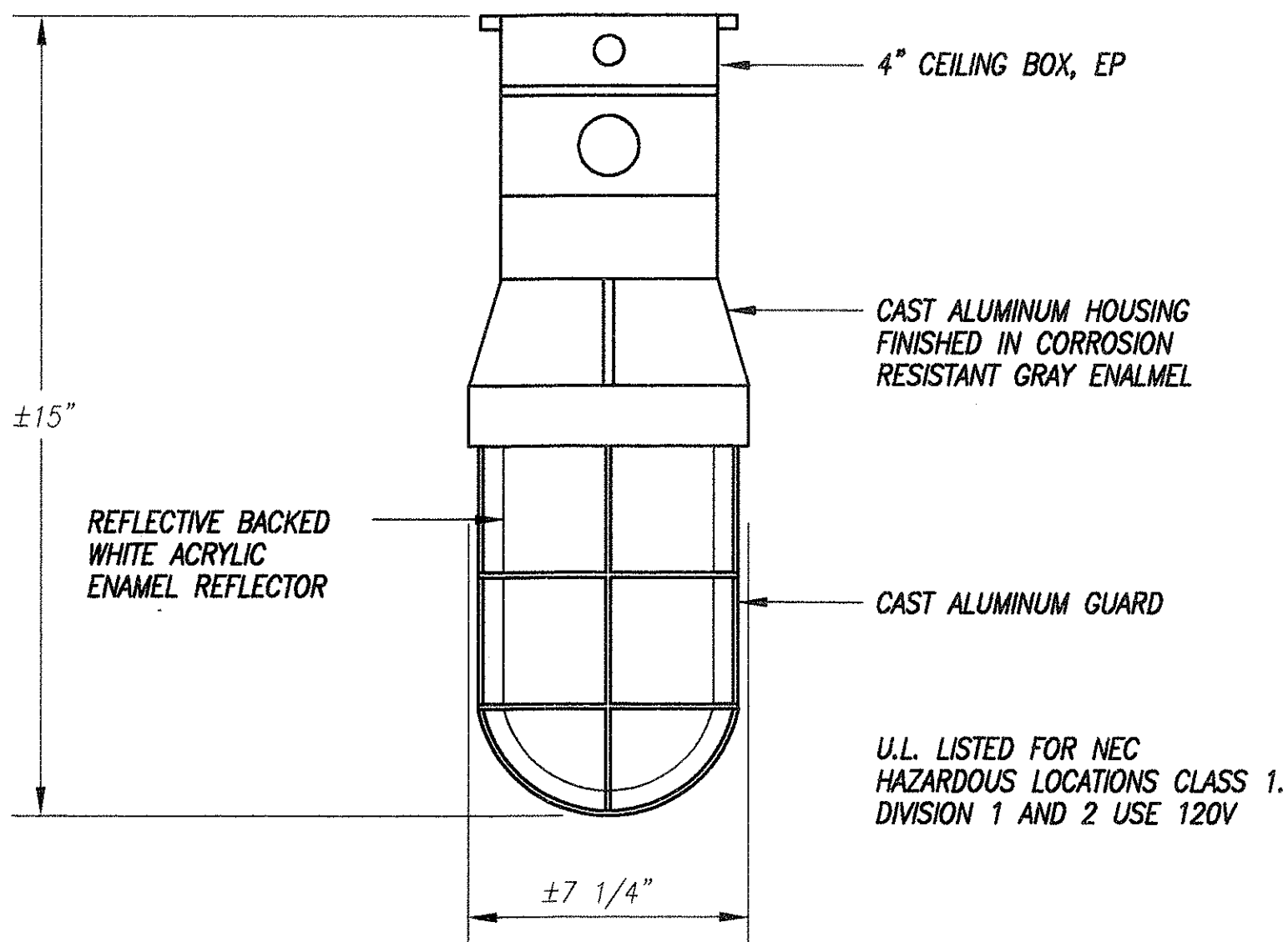
DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-98	2000	114	116



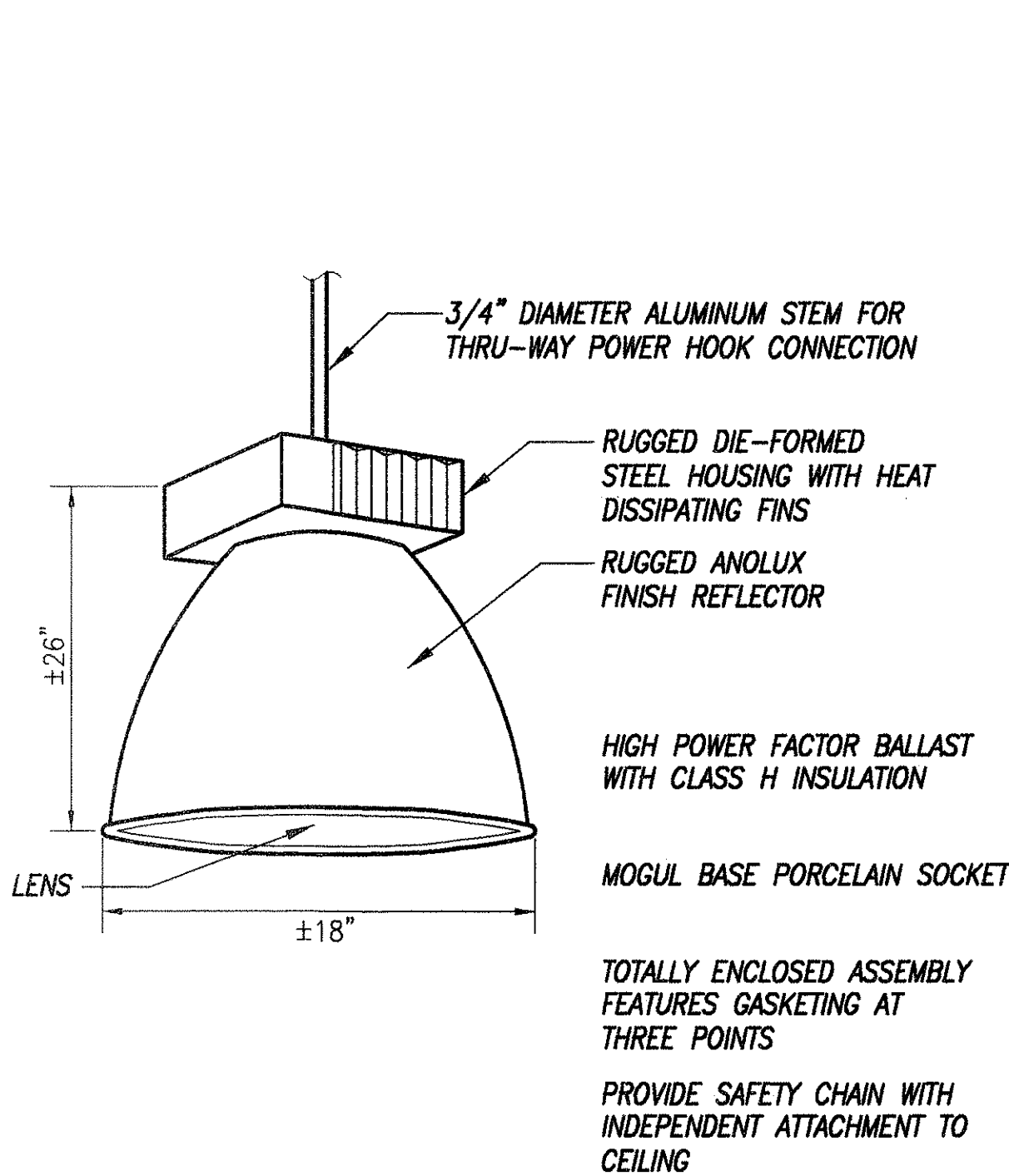
LUMINAIRE TYPE A-2/48 2-32W FLUORESCENT LAMPS



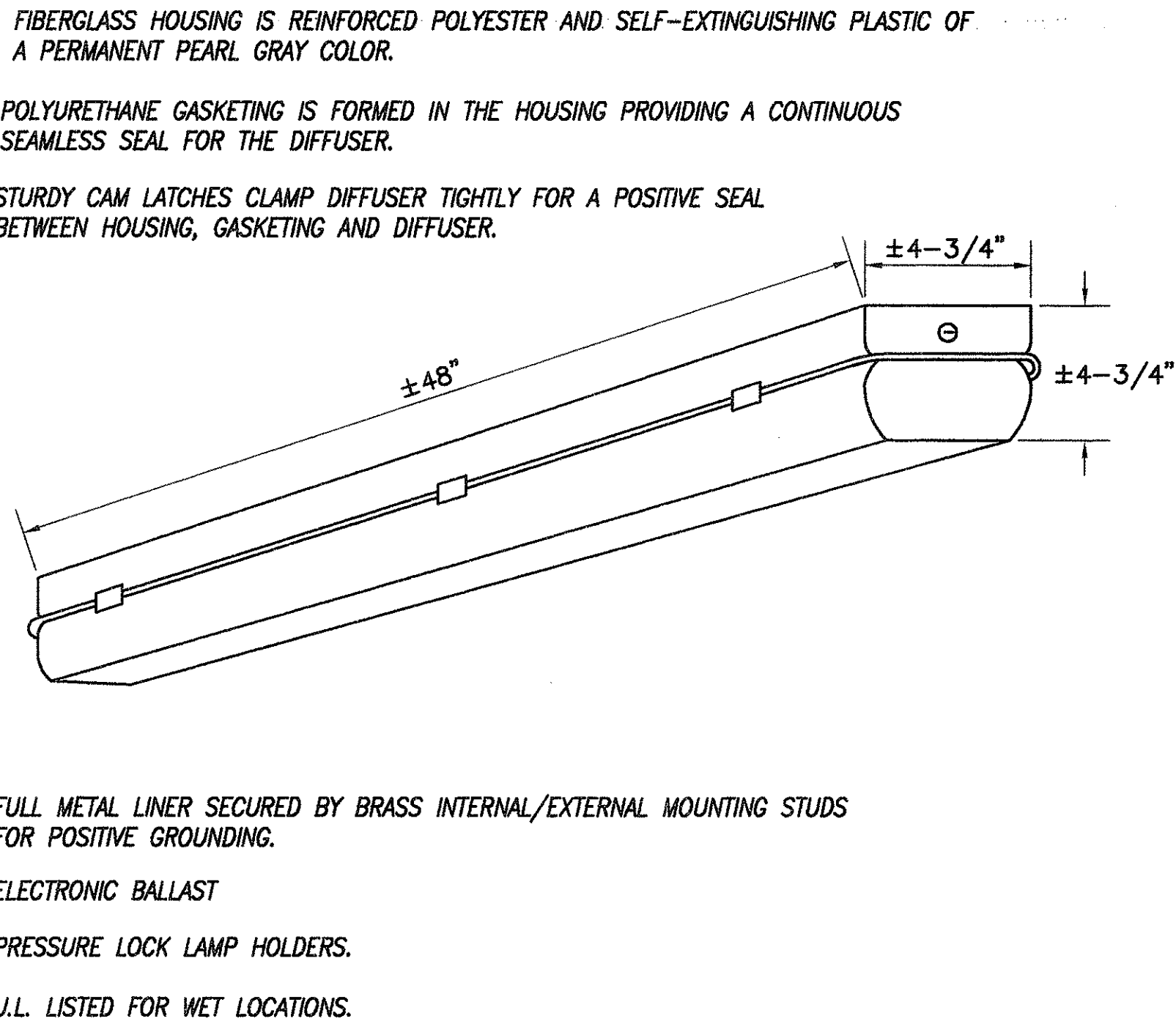
LUMINAIRE TYPE B - 2/48 2-32W FLUORESCENT LAMP



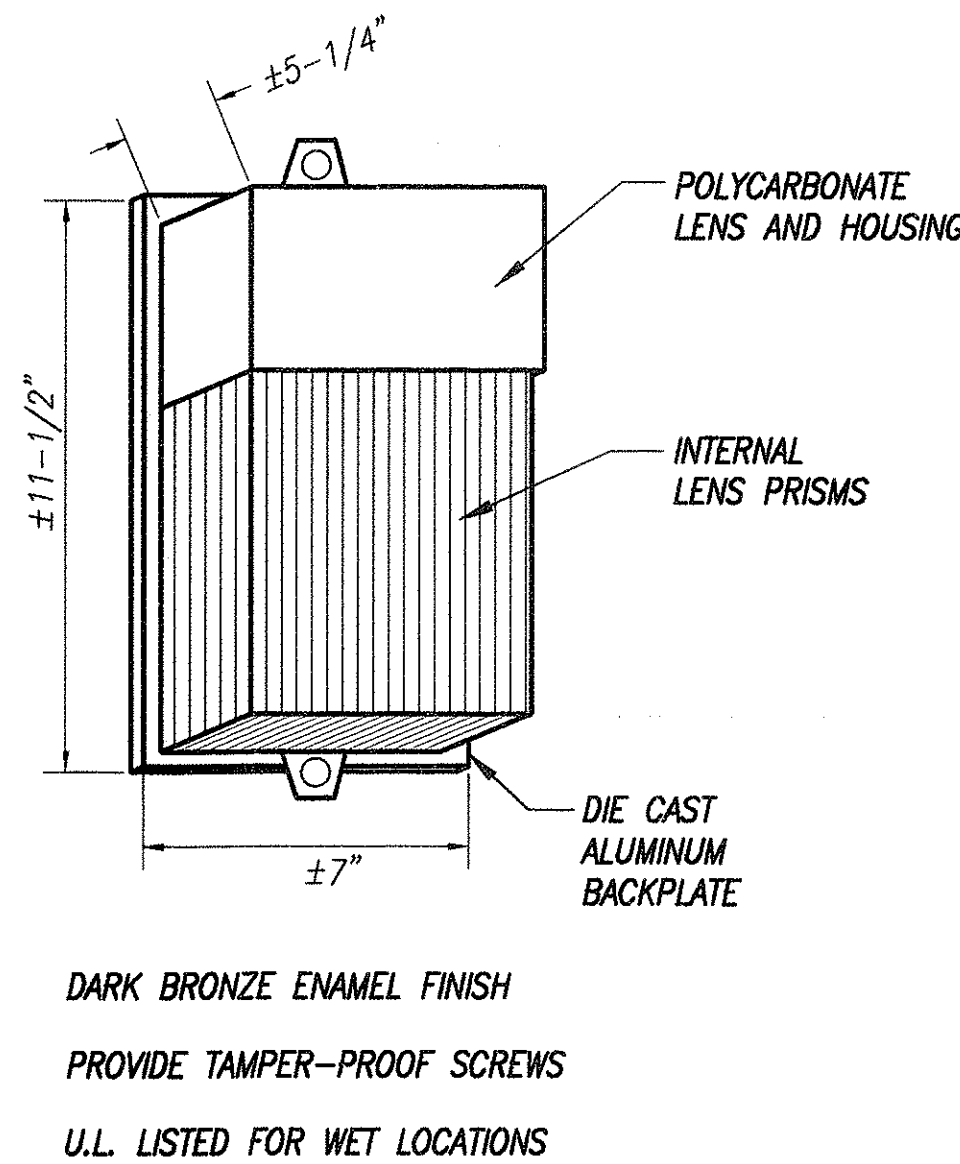
LUMINAIRE TYPE C - 60W INCANDESCENT LAMP



LUMINAIRE TYPE D-250W METAL HALIDE LAMP



LUMINAIRE TYPE E-2/48 2-34W COOL WHITE FLUORESCENT LAMPS



LUMINAIRE TYPE F - 70W HIGH PRESSURE SODIUM LAMP

E-11

ORIGINAL SURVEY PLOTTED BY	DATE
PLAN	3/2/00
DRAWN BY	SI
TRACED BY	SI
NOTE BOOK	3/2/00
QUANTITIES BY	SI
CHECKED BY	JT
No.	

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LIGHTING DETAILS

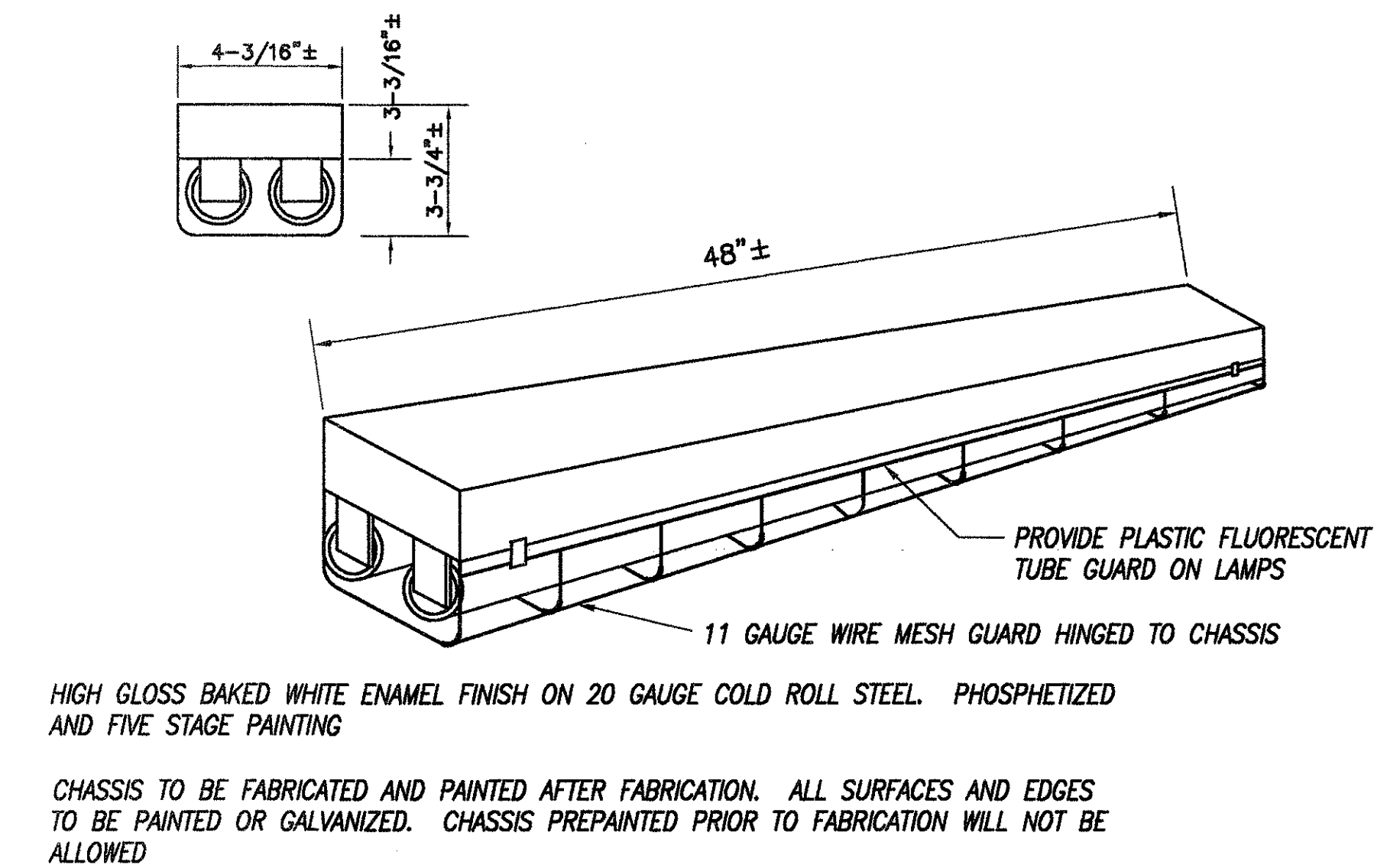
OAHU DISTRICT BASEYARD FACILITIES

Project No. HWY-0-05-98

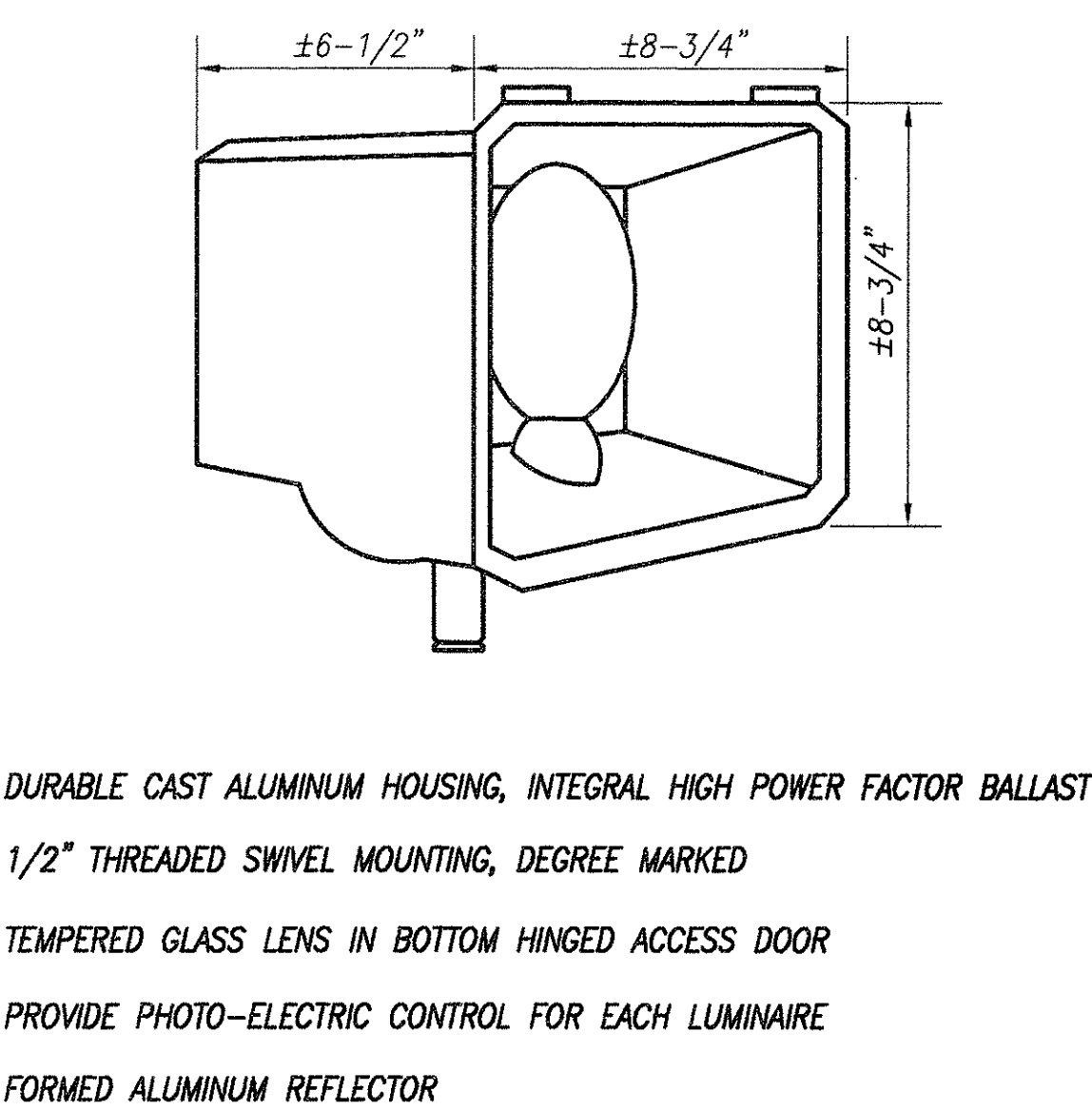
Scale: AS SHOWN Date: APRIL, 2000

SHEET No. E-11 OF 116 SHEETS

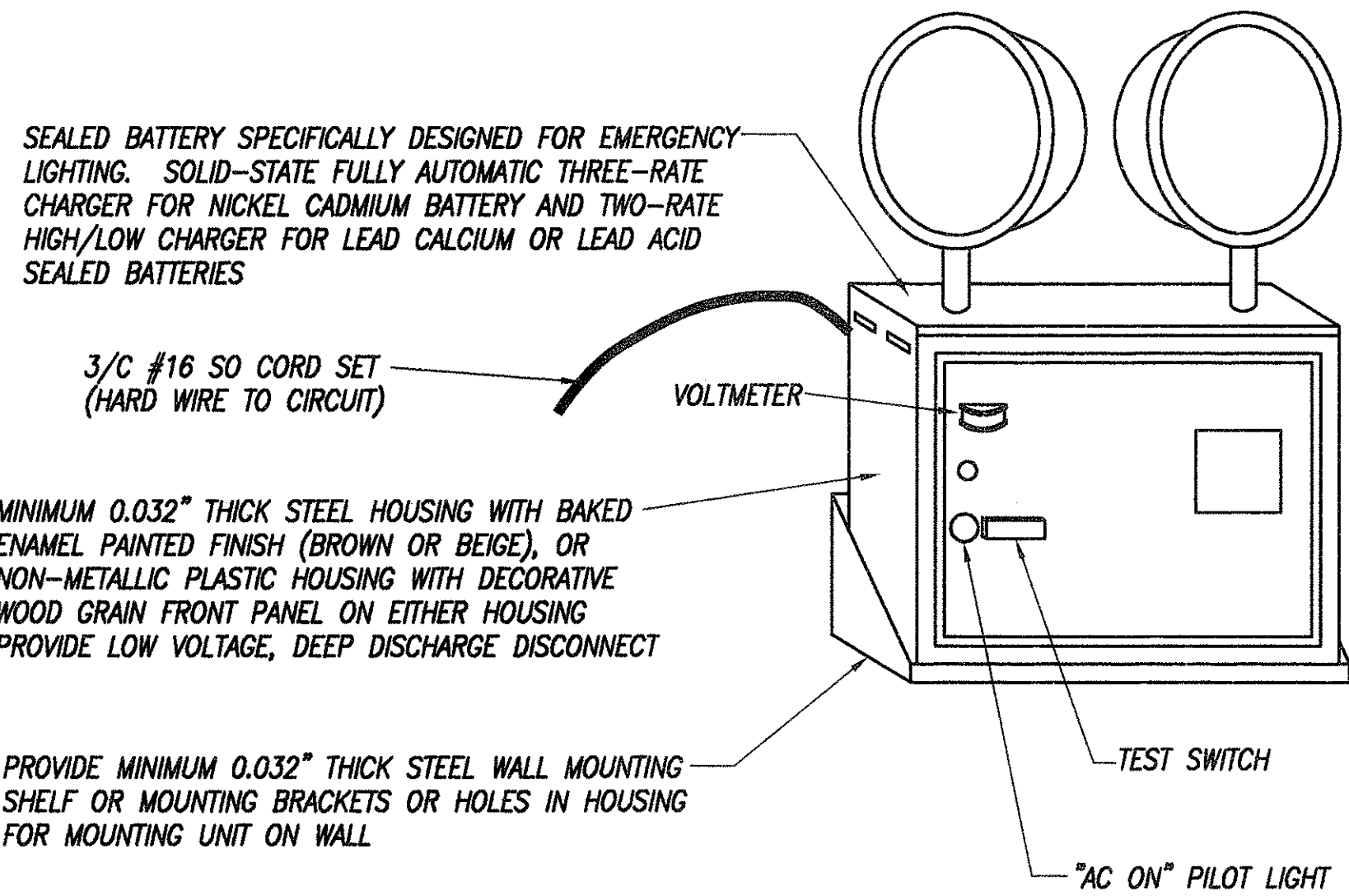
DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-98	2000	115	116



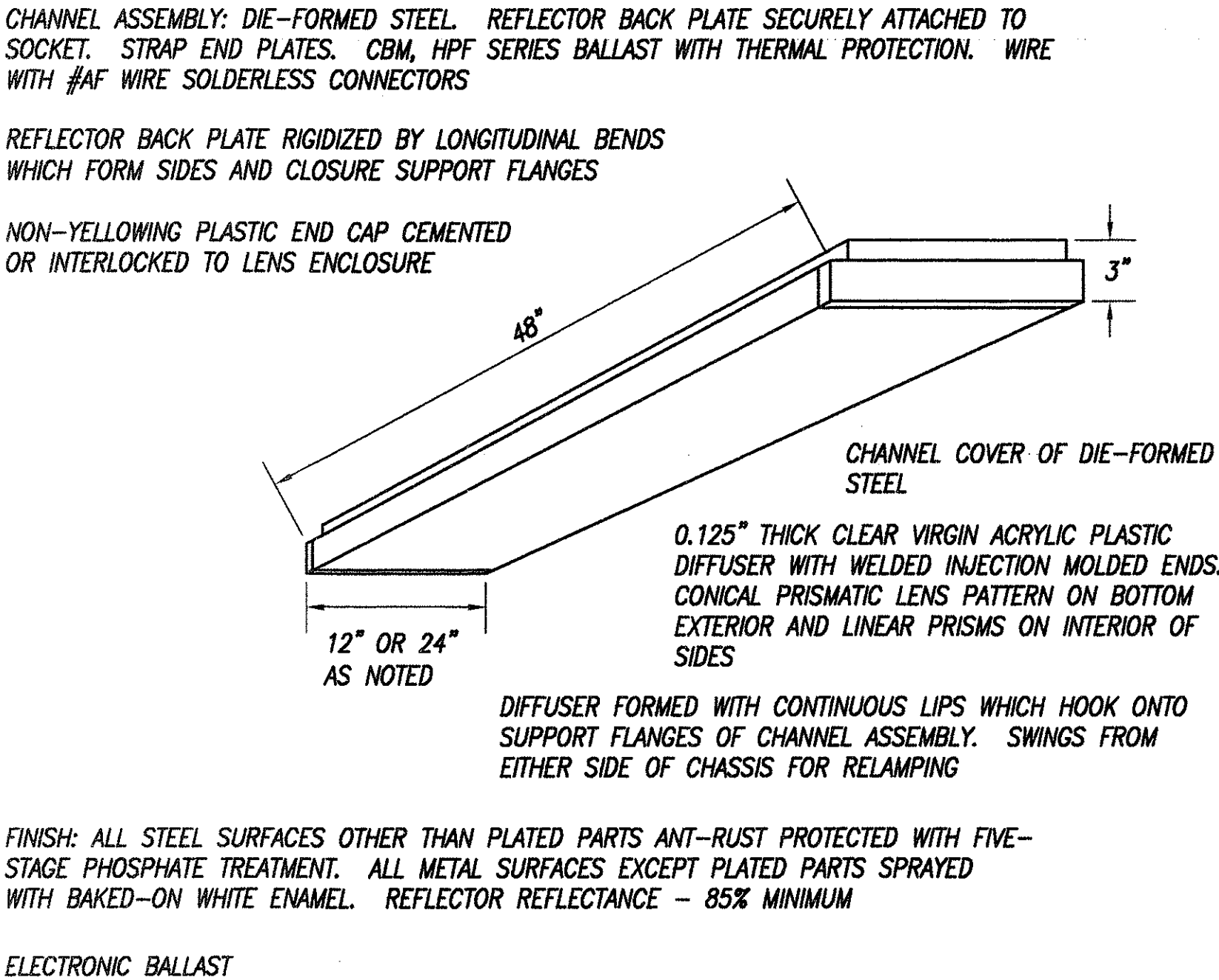
LUMINAIRE TYPE G-2/48 2-32W FLUORESCENT LAMPS



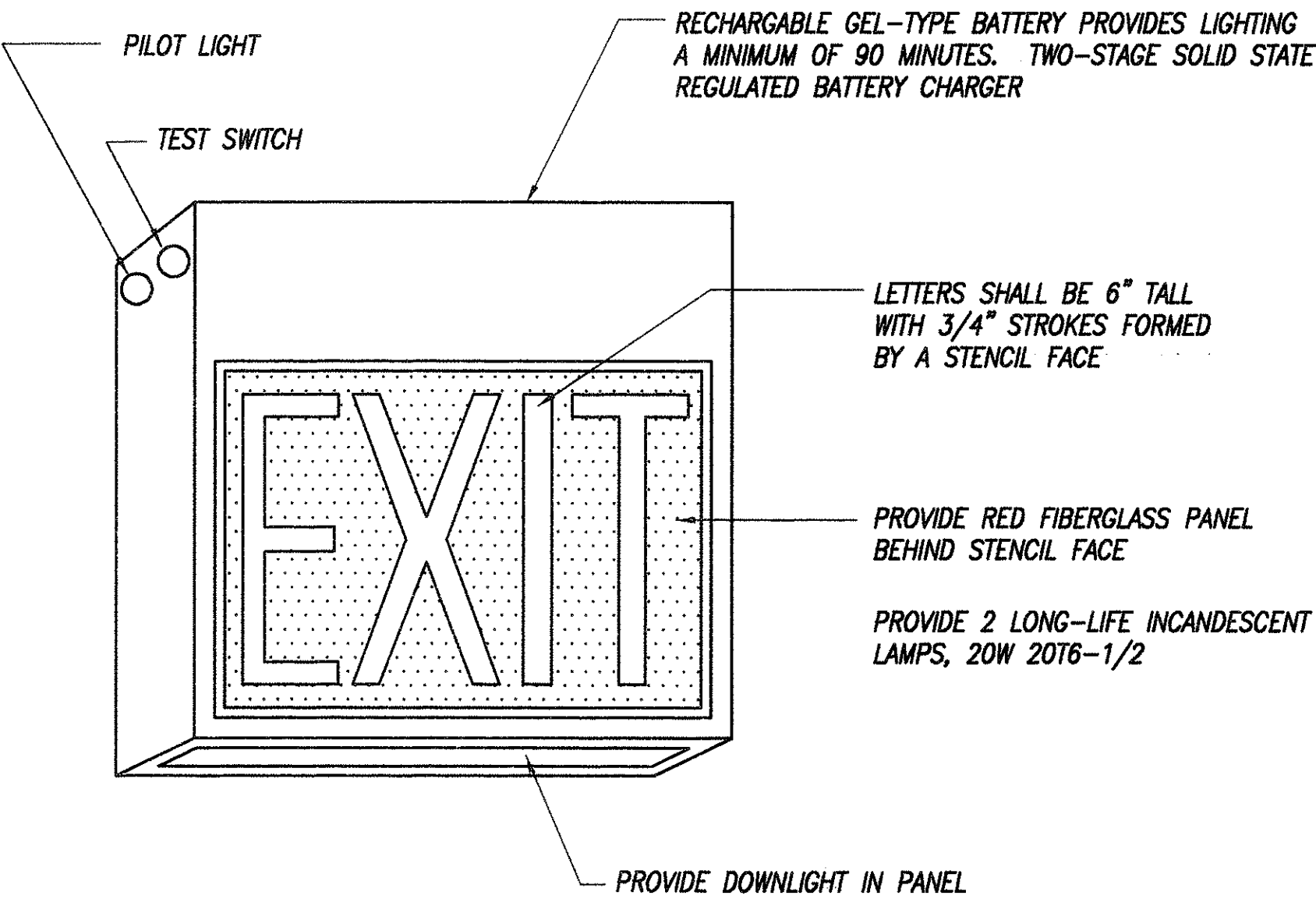
LUMINAIRE TYPE H - 175W HIGH PRESSURE SODIUM LAMP



LUMINAIRE TYPE I-2/9W 9W INCANDESCENT LAMP



LUMINAIRE TYPE J (24"x48")-4/48 4-32W FLUORESCENT LAMP
LUMINAIRE TYPE K (12"x48")-2/48 2-32W FLUORESCENT LAMP



LUMINAIRE TYPE X-2/7W 2-7W FLUORESCENT LAMP

ORIGINAL SURVEY PLOTTED BY	DATE
DRAWN BY	3/3/00
TRACED BY	SU
NOTE BOOK DESIGNED BY	SU
QUANTITIES BY	3/3/00
CHECKED BY	N
No.	3/3/00

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

E-12

LIGHTING DETAILS

OAHU DISTRICT BASEYARD FACILITIES

Project No. HWY-0-05-98

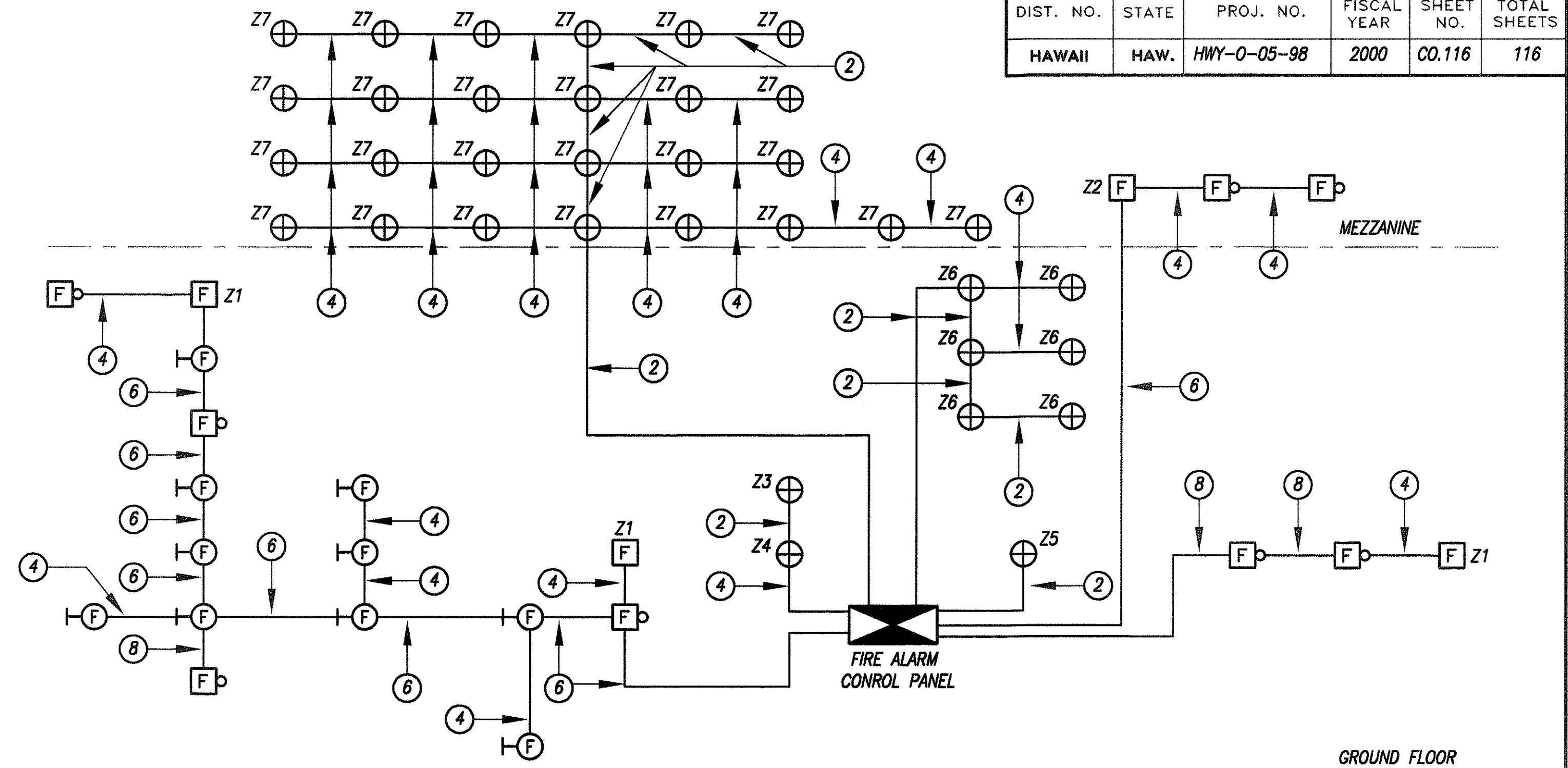
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SHEET No.E-12 OF 116 SHEETS

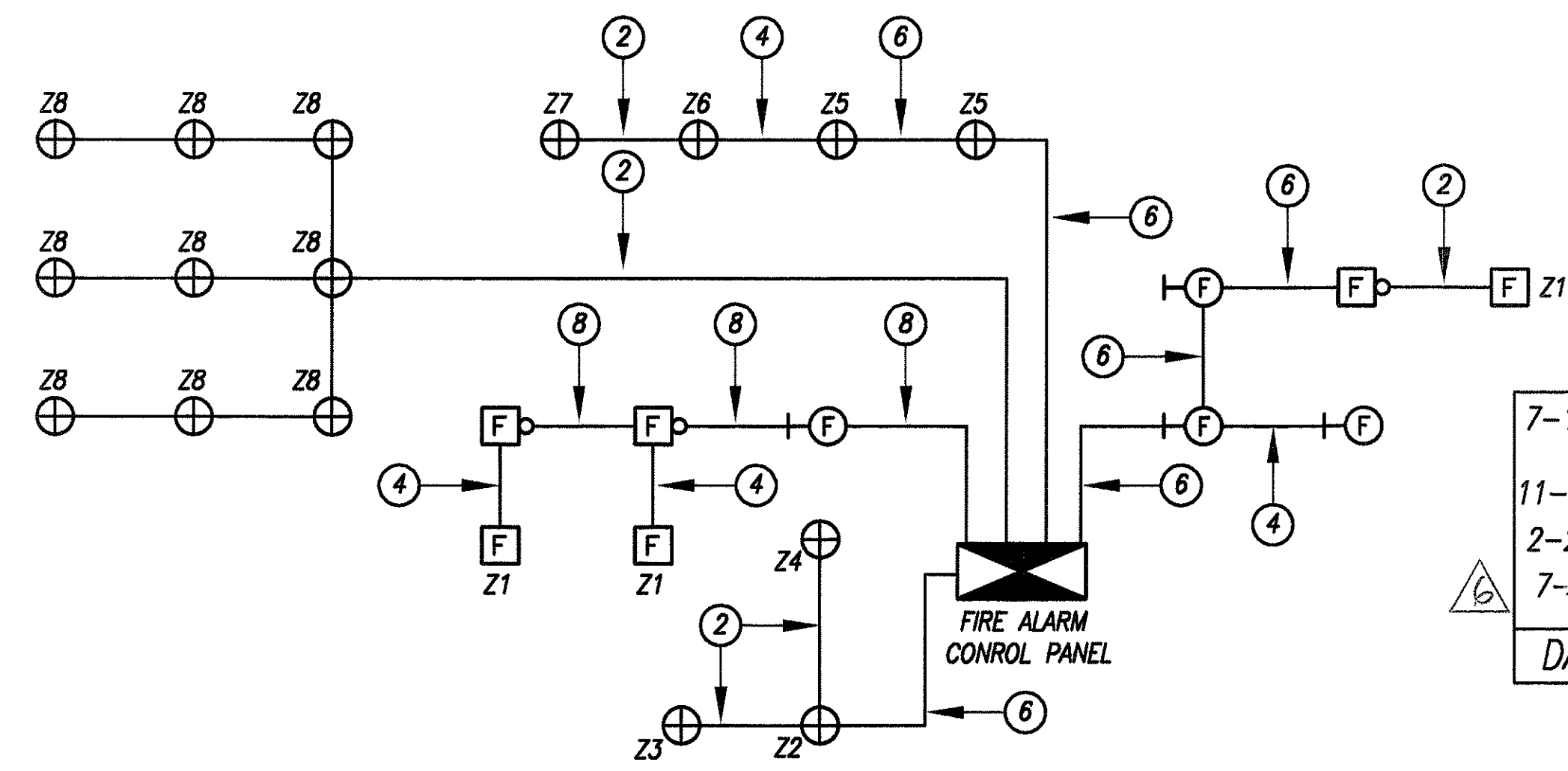
ORIGINAL
PLAN
DATE
3/2/00
DESIGNED BY
SU
CHECKED BY
N
3/2/00
N.C.

NEW PANEL "G" (TWO-SECTION)		208Y/120 VOLTS	3Ø, 4WSN			
225A MAIN LUGS ONLY		BRANCH BKR I.C.	10,000A			
SURFACE,		2-20" WIDE CABINETS, INDUSTRIAL-BOLTED				
CKT NO.	BKR	L O A D	KVA			WIRE
			A	B	C	
1,3,5	3P50A	BATTERY CHARGER	4.0	4.0	4.0	6
2,4	2P30A	WAC-1	1.2	1.2		12
6,8	2P30A	EWB-1	2.3		2.3	10
7,9	2P30A	ROLLUP DOOR	1.0	1.0		10
10,12	2P30A	ROLLUP DOOR		1.0	1.0	10
11,13	↓	ROLLUP DOOR	1.0		1.0	10
14	1P20A	RECEP - STORAGE	1.2			12
15		- BRIDGE INSP/STORAGE		1.0		
16		- OFFICE, TOOL/STORAGE		1.2		
17		- ENCLOSED STORAGE			1.0	
18		↓ - DELIVERY AREA			1.0	
19		FA PANEL	1.0			
20		LIGHTS - AUX STOR, TOILET, BRIDGE	1.4			
21		- NIGHT LIGHT		1.3		
22		- OFFICE, TOOL/SUPPLY		1.6		
23		- DELIVERY AREA			1.2	
24		- MATERIAL STOR, STAIRS			0.6	
25		- OPEN STORAGE	1.8			
26		- ENCLOSED STORAGE	0.8			
27		- OPEN STORAGE		1.5		
28		- ENCLOSED STORAGE		1.2		
29		- OPEN STORAGE			1.5	
30		- ENCLOSED STORAGE			1.2	
31		- MEZZANINE	1.6			
32		- FLOOD LIGHTS	1.0			
33		↓ - MEZZANINE		1.6		
34		SEWAGE PUMP		1.1		
35		RECEP - MEZZANINE			1.0	↓
36	↓	SPARE				
37,39,41	3P20A	PALLET LIFT CHARGER	0.9	0.9	0.9	12
38,40	2P40A	ACCU-1	1.2	1.2		↓
42,44	2P20A	FCU-1	0.1		0.1	12
43	1P20A	SPARE				
45	1P20A	SPARE				
46						
47						
48	↓	↓				
49	1P	PFB				
50						
51						
52						
53						
54						
55						
57						
58						
59						
60	↓	↓				

NEW PANEL "H" (TWO-SECTION)			208Y/120 VOLTS	3Ø, 4WSN		
225A MAIN LUGS ONLY			BRANCH BKR I.C.	10,000A		
SURFACE,			2-20" WIDE CABINETS, INDUSTRIAL-BOLTED			
CKT NO.	BKR	L O A D	KVA			WIRE
			A	B	C	
1,3,5	3P60A	AC-1	2.9	2.9	2.9	8
2	1P20A	RAD-1	0.6			12
4	1P20A	EF-1		0.5		12
6	1P20A	EF-3			0.4	12
7,9,11	3P20A	EF-2A	0.5	0.5	0.5	
8,10,12	↓	EF-2B	0.5	0.5	0.5	↓
13,15	2P30A	ROLLUP DOOR	1.0	1.0		10
14,16	↓	ROLLUP DOOR	1.0	1.0		↓
17	1P20A	FA PANEL			1.0	12
18		RECEP - AUTOMOTIVE STORAGE			1.0	
19		- BREAK ROOM	0.5			
20		- MACHINE SHOP	1.0			
21		- REFRIG		1.0		
22		- MACHINE SHOP		1.0		
23		- BREAK ROOM GFI			0.5	
24		- AIR COMP, BATTERY			1.0	
25	↓	↓ - HEAVY VEHICLE REPAIR	0.5			↓
26,28,30	3P40A	SP-1	1.8	1.8	1.8	10
27	1P20A	RECEP - HEAVY VEHICLE REPAIR		0.5		12
29	1P20A	RECEP - GREASE/OIL DISPENSER			0.5	12
31	1P20A	RECEP - PIT AREA	1.0			12
32		LIGHTS - HEAVY VEHICLE REPAIR	1.4			
33		- HEAVY VEHICLE REPAIR		1.4		
34		- HEAVY VEHICLE REPAIR		1.4		
35		- HEAVY VEHICLE REPAIR			1.4	
36		- HEAVY VEHICLE REPAIR			1.4	
37		- HEAVY VEHICLE REPAIR	1.5			
38		- OUTSIDE (MAUKA)	1.4			
39		- MACHINE SHOP		1.5		
40		↓ - OUTSIDE (MAUKA)		1.2		↓
41		SPARE				
42	↓	↓				
43	PFB					
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						
54						
55						
57						
58						
59						
60	↓					
TOTAL			15.6	16.2	12.9	

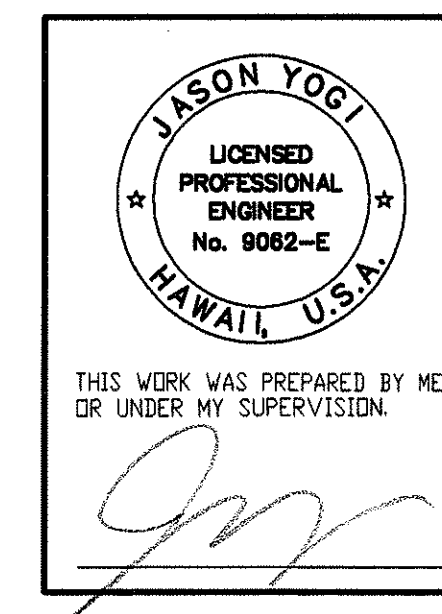


FIRE ALARM RISER DIAGRAM - BUILDING "A"



FIRE ALARM RISER DIAGRAM - BUILDING "B"

- FIRE ALARM NOTES:
1. VERIFY WIRING AND JUNCTION BOX SIZES WITH EQUIPMENT SUPPLIER PRIOR TO BID.
 2. ALL WIRE SHALL BE NO. 14 THWN MINIMUM.
 3. ALL EQUIPMENT SHALL BE U.L. APPROVED.
 4. FIRE ALARM SYSTEM SHALL BE ELECTRICALLY SUPERVISED.
 5. CONDUIT SHALL BE 3/4" MINIMUM.
 6. (2) - INDICATES NUMBER OF WIRES, 2-WIRES INDICATED.
 7. Z = ZONE
 8. FIRE ALARM SYSTEM SHALL CONFORM WITH UFC 14, NFPA 72 AND UFC 1988.
 9. ALL EQUIPMENT SHALL BE A.D.A. COMPLIANT.
 10. VERIFY ALL WIRE COUNTS AND TYPE WITH EQUIPMENT SUPPLIER AND PROVIDE ADDITIONAL WIRING AND DEVICES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
 11. SHALL BE IN ACCORDANCE WITH ARTICLE 87, UFC 1988 AS AMENDED.



E-13

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PANEL SCHEDULES
FIRE ALARM RISER DIAGRAMS
OAHU DISTRICT WAREHOUSE BUILDING
Project No. HWY-0-05-98
Scale: AS SHOWN Date: APRIL, 2000
SHEET No. E-13 OF 116 SHEETS