

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-00	2000	11	15

FLASHING WARNING LIGHT QUANTITIES - SITE #1 QUEEN KAAHUMANU & KAWAIHAE ROAD		
ITEM	QUANTITY	UNIT
HELCO SERVICE	F.A.	F.A.
30" PRESSURE TREATED WOOD POLE	1	EA.
1" CONDUIT / APPROPRIATE WIRING	60	LIN. FT.
100 AMP 4 TERMINAL METER SOCKET	1	EA.
NEMA 3R ENCLOSURE	1	EA.
30 AMP SWITCH / 20 AMP BREAKER	1	EA.
WEATHERHEAD	1	EA.
RED LED SIGNAL HEAD ASSY. & FLASHER	2	EA.
RELOCATE SIGN	1	EA.

FLASHING WARNING LIGHT QUANTITIES - SITE #3 HONALO		
ITEM	QUANTITY	UNIT
HELCO SERVICE	F.A.	F.A.
30" PRESSURE TREATED WOOD POLE	1	EA.
1" CONDUIT / APPROPRIATE WIRING	60	LIN. FT.
100 AMP 4 TERMINAL METER SOCKET	1	EA.
NEMA 3R ENCLOSURE	1	EA.
30 AMP SWITCH / 20 AMP BREAKER	1	EA.
WEATHERHEAD	1	EA.
YELLOW LED SIGNAL HEAD ASSY. & FLASHER	1	EA.
RELOCATE SIGN	2	EA.
REMOVE SIGN	1	EA.

FLASHING WARNING LIGHT QUANTITIES - SITE #2A & #2B NAALEHU SCHOOL		
ITEM	QUANTITY	UNIT
HELCO SERVICE	F.A.	F.A.
UTILITY TRENCH	280	LIN. FT.
1" CONDUIT / APPROPRIATE WIRING	80	LIN. FT.
1½" CONDUIT	380	LIN. FT.
CONTROL CABLE (6C, #12)	2000	LIN. FT.
100 AMP 4 TERMINAL METER SOCKET	1	EA.
NEMA 3R ENCLOSURE	1	EA.
30 AMP SWITCH / 20 AMP BREAKER	1	EA.
WEATHERHEAD	3	EA.
LED SIGNAL HEAD ASSY. & FLASHER	4	EA.
SCHOOL SPEED LIMIT SIGN	2	EA.
TYPE 1 SIGNAL STANDARD (12')	2	EA.
FOUNDATION FOR TYPE 1 SIGNAL STANDARD	2	EA.
TYPE "A" PULLBOX FRAME AND COVER	2	EA.
COUNTY SERVICES (CONNECTION & TESTING)	1	L.S.
MODEL 336 ALUMINUM STRETCH CABINET	1	EA.
MODEL 170 EX CONTROLLER W/233 CHIP	1	EA.
MODEL 200 LOAD SWITCH	2	EA.
MODEL 204 FLASHER	2	EA.
PSTN (DIAL-UP) 1200 MODEM	1	EA.

FLASHING WARNING LIGHT QUANTITIES - SITE #4 LAVA FLOW #3 - N.E.		
ITEM	QUANTITY	UNIT
HELCO SERVICE	F.A.	F.A.
UTILITY TRENCH	160	LIN. FT.
1" CONDUIT / APPROPRIATE WIRING	220	LIN. FT.
100 AMP 4 TERMINAL METER SOCKET	2	EA.
NEMA 3R ENCLOSURE	2	EA.
30 AMP SWITCH / 20 AMP BREAKER	2	EA.
WEATHERHEAD	2	EA.
YELLOW LED SIGNAL HEAD ASSY. & FLASHER	2	EA.
TYPE 1 SIGNAL STANDARD (12')	2	EA.
FOUNDATION FOR TYPE 1 SIGNAL STANDARD	2	EA.
TYPE "A" PULLBOX FRAME AND COVER	2	EA.
RELOCATE SIGN	2	EA.
METER PEDESTAL	2	EA.

FLASHING WARNING LIGHT QUANTITIES - SITE #5 LAVA FLOW #2 - S.E.		
ITEM	QUANTITY	UNIT
HELCO SERVICE	F.A.	F.A.
UTILITY TRENCH	140	LIN. FT.
1" CONDUIT / APPROPRIATE WIRING	300	LIN. FT.
100 AMP 4 TERMINAL METER SOCKET	1	EA.
NEMA 3R ENCLOSURE	1	EA.
30 AMP SWITCH / 20 AMP BREAKER	1	EA.
WEATHERHEAD	1	EA.
YELLOW LED SIGNAL HEAD ASSY. & FLASHER	1	EA.
TYPE 1 SIGNAL STANDARD (12')	1	EA.
FOUNDATION FOR TYPE 1 SIGNAL STANDARD	1	EA.
RELOCATE SIGN	1	EA.
TYPE "A" PULLBOX FRAME AND COVER	2	EA.
METER PEDESTAL	1	EA.

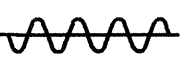
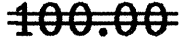
HELCO NOTES

1. HELCO shall not be responsible for any changes to the work being performed.
2. Electrical installation shall comply with:

a. HELCO's Electrical Service Installation Manual

b. Current National Electrical Code

c. HELCO's Project Drawing No. 01-B-306 and specifications
3. Consult with HELCO's Engineering Department for any questions or clarifications regarding the electrical installation.

LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

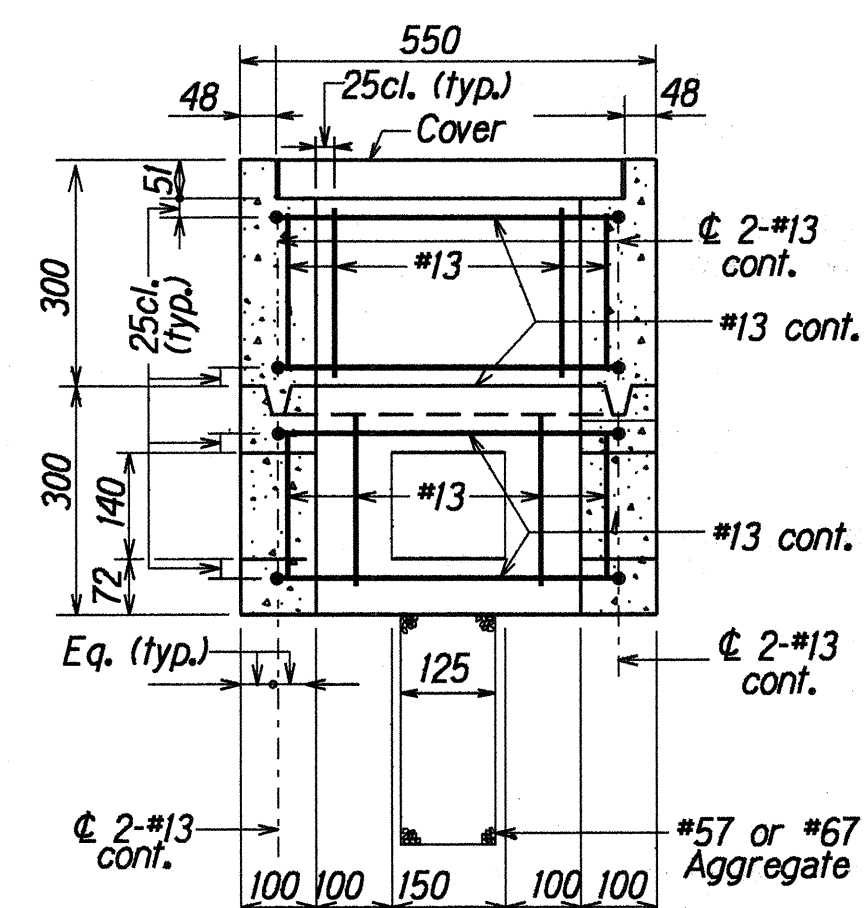
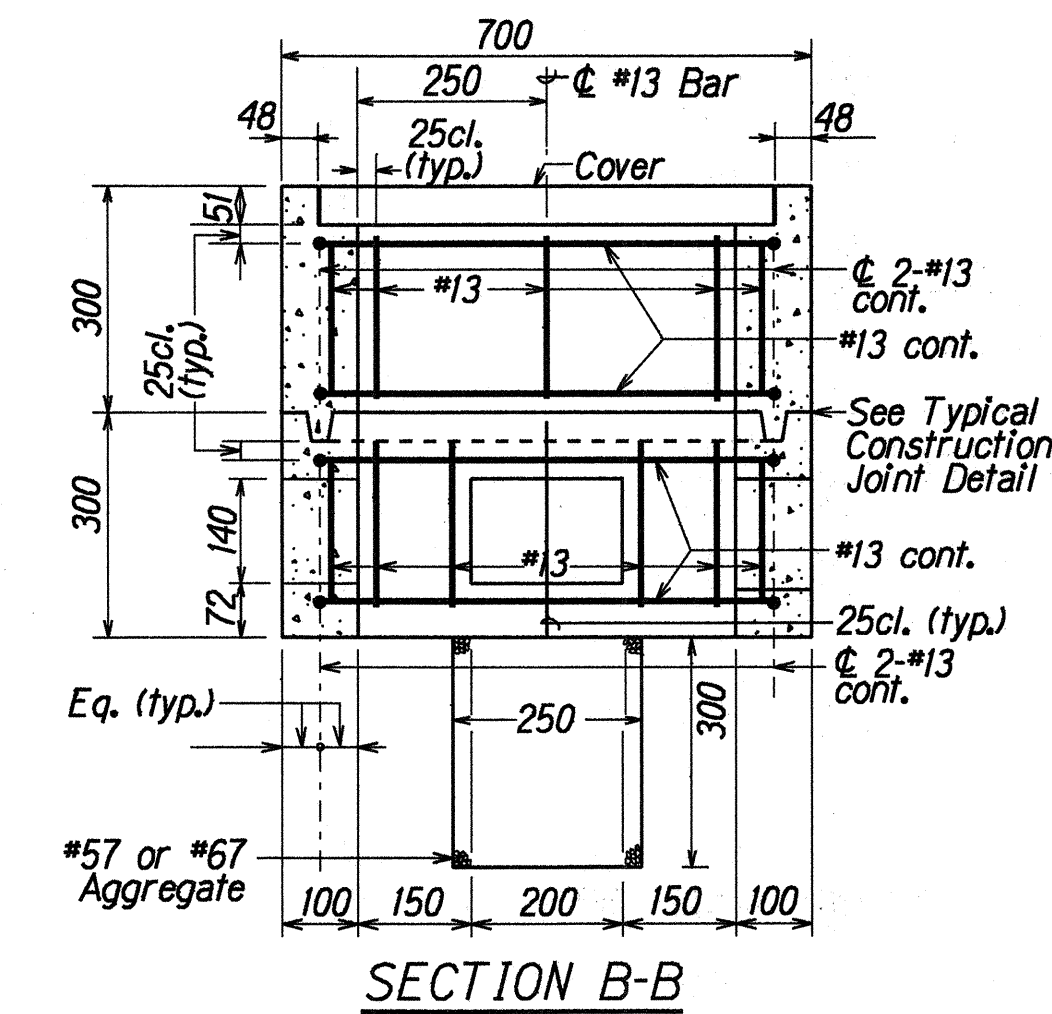
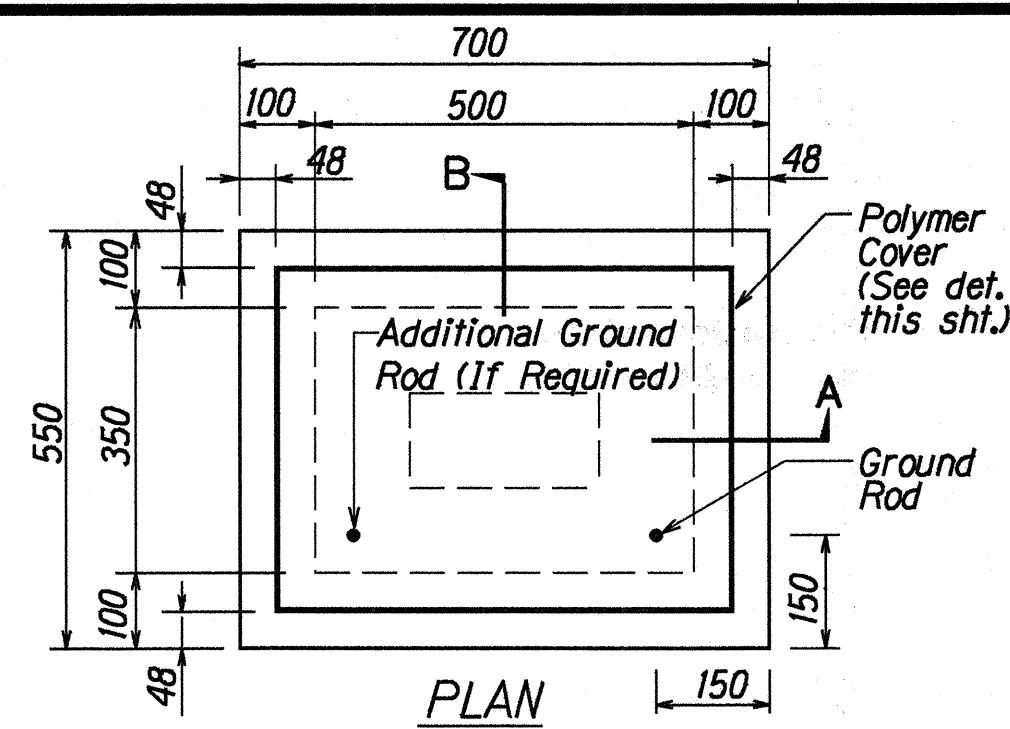
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
QUANTITY SCHEDULES	
FLASHING WARNING LIGHTS VARIOUS HIGHWAY LOCATIONS PROJ. NO. HWY-H-09-00	
Scale: None	Date: April, 2000
SHEET No. 1 OF 1 SHEETS	

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	
NOTE BOOK DESIGNED BY QUANTITIES BY	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

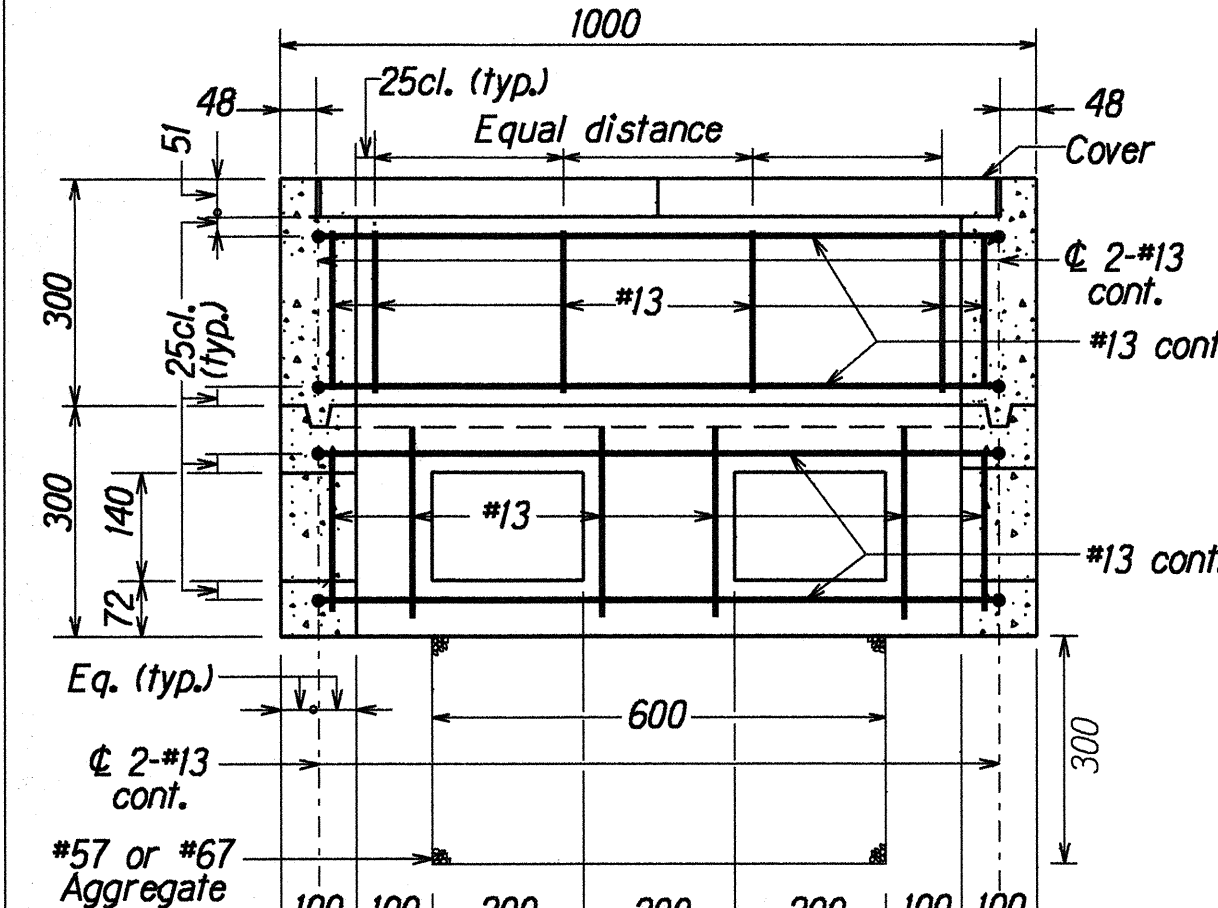
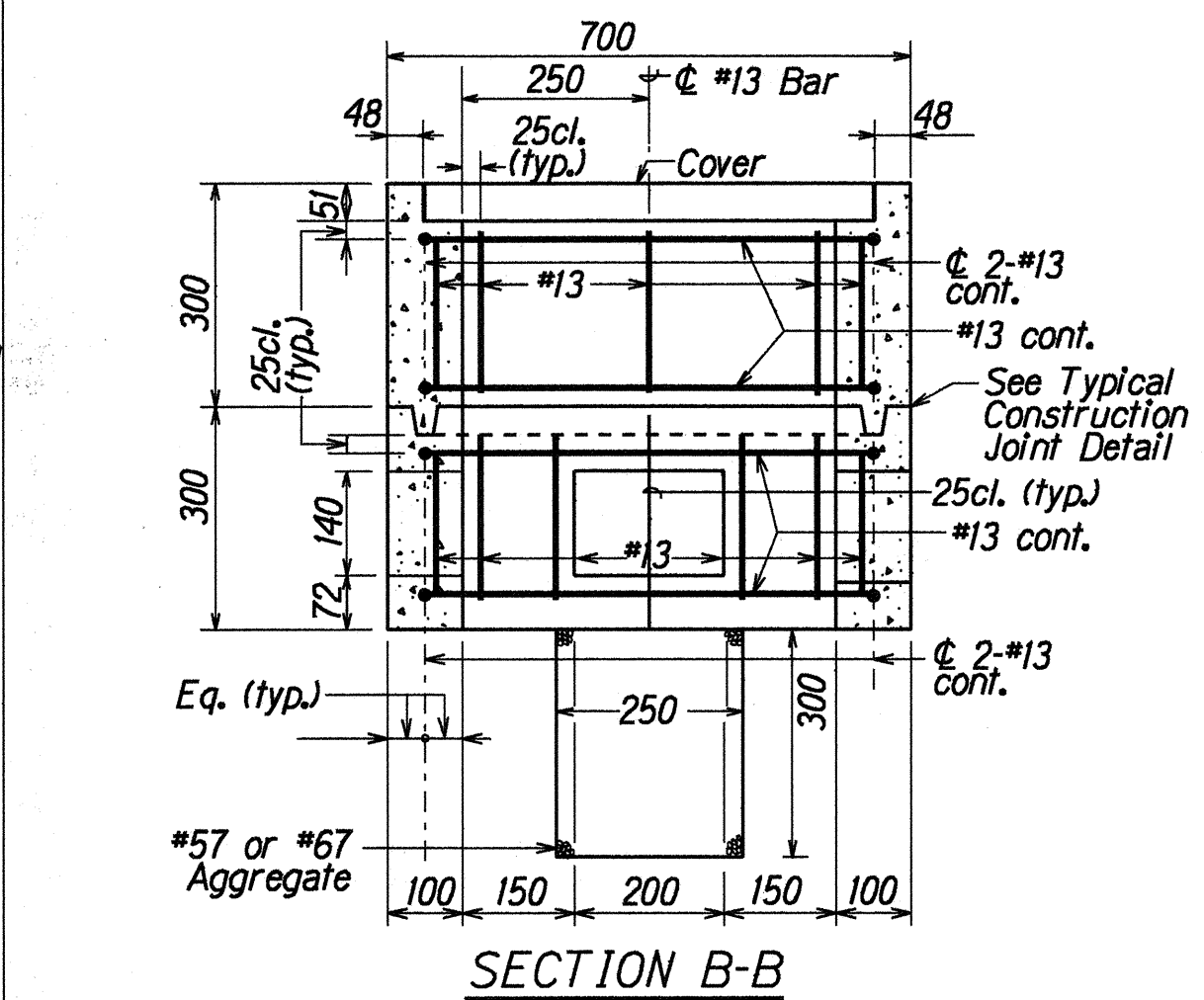
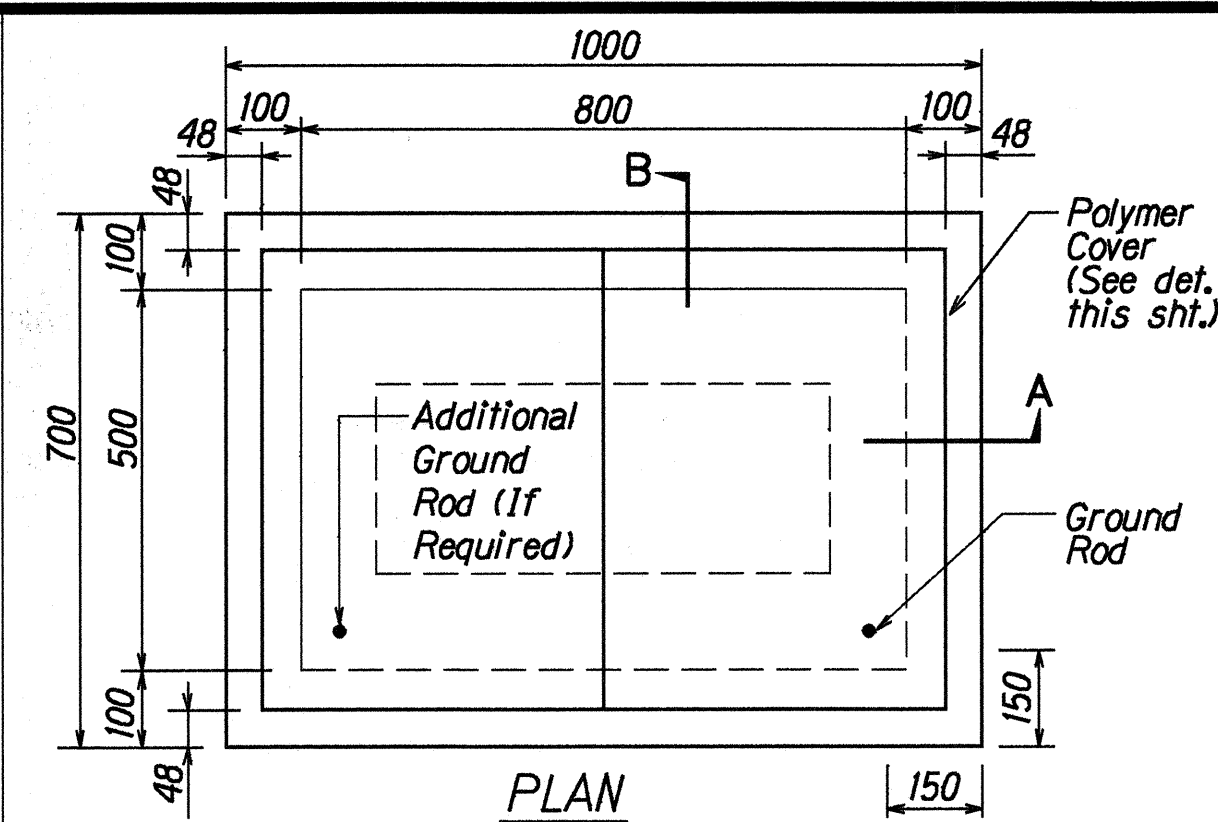
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-09-00	2000	13	15

GENERAL NOTES

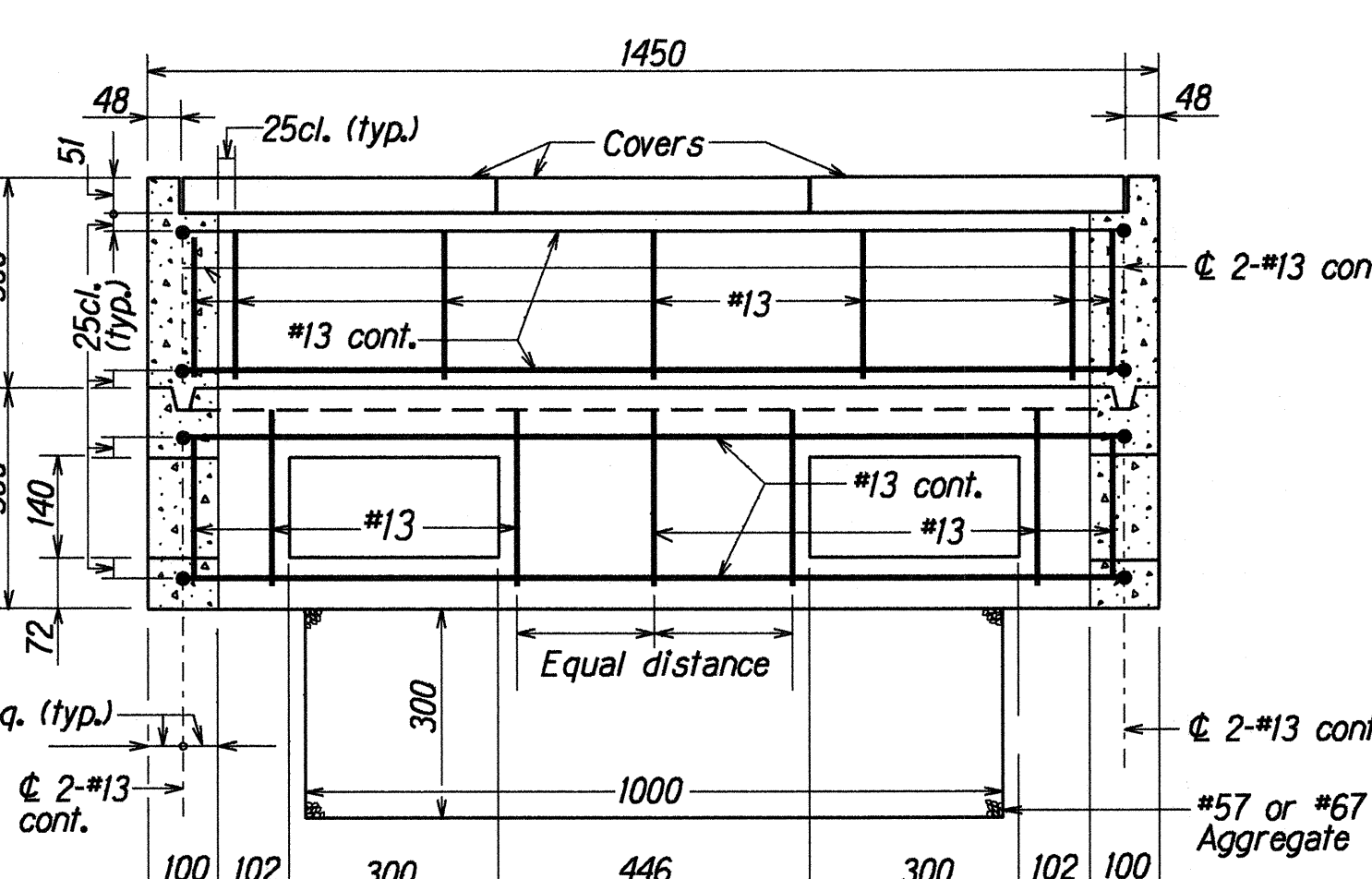
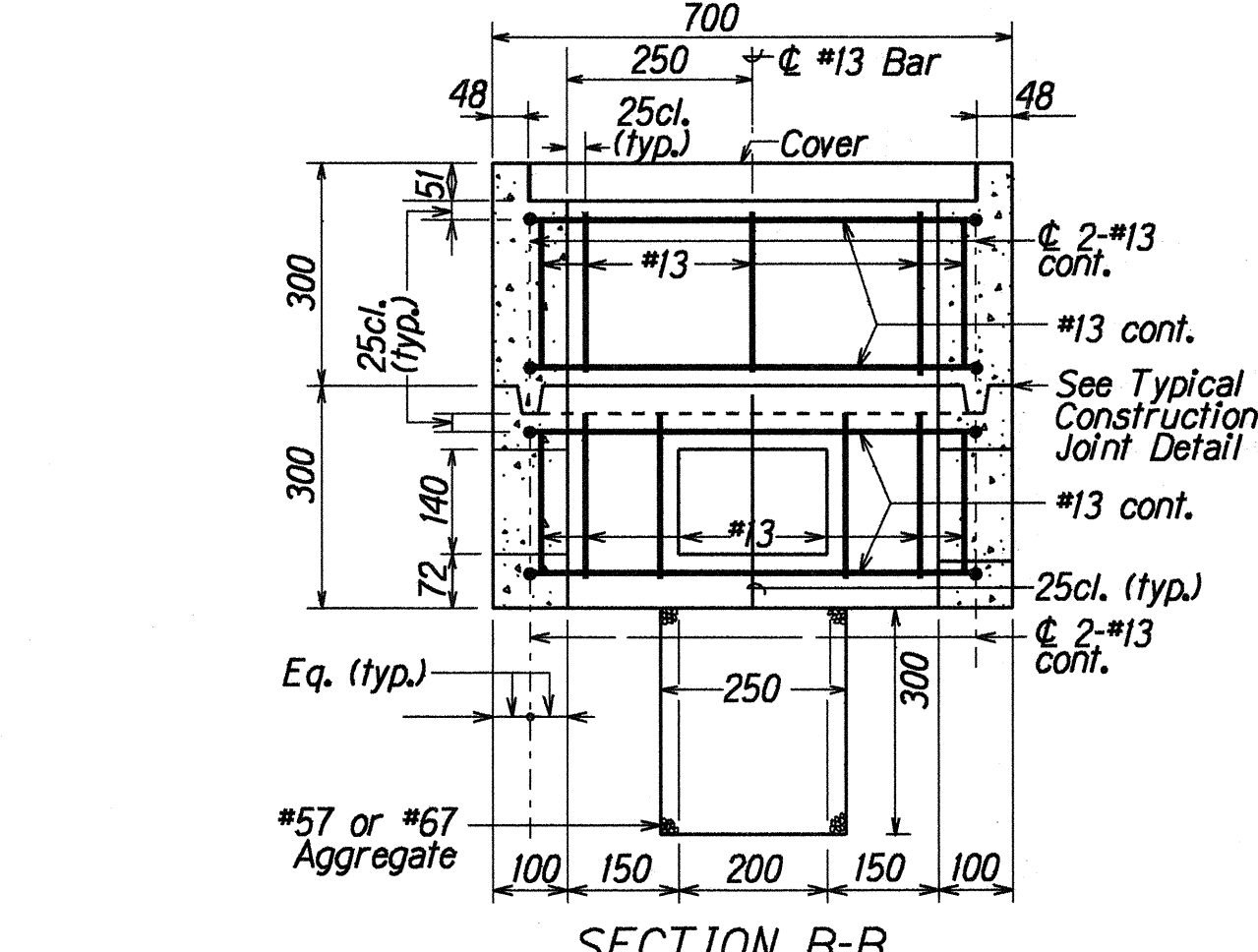
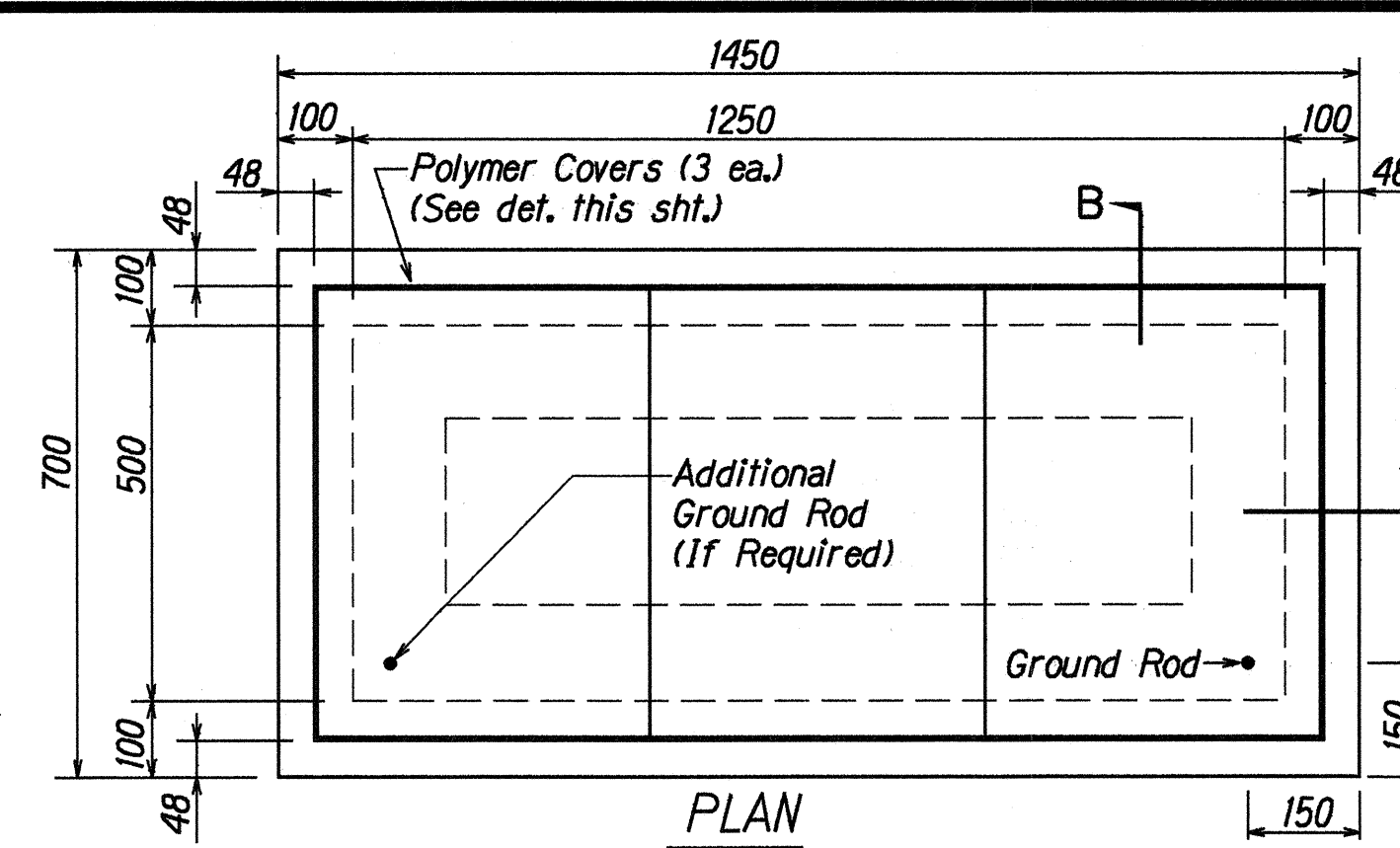
1. Provide a minimum of one 16 ϕ x 2.5m Copperweld Ground Rod in each pullbox. When directed by the Traffic Signal Inspector/Engineer, install additional Ground Rods. Cost of Ground Rods shall be incidental to the pullboxes.
2. All pre-cast concrete pullboxes shall be manufactured in two pieces.
3. The pullbox with cover shall be capable of supporting an MS 18 Loading.
4. The maximum weight of the pullbox cover shall not exceed 27 kilograms.
5. The openings for the conduits on all pullboxes shall be pre-cast concrete knockouts.
6. After installing the conduits in the openings of the pullboxes, the Contractor shall fill the excess opening in the pre-cast knockouts with concrete mortar.
7. Prior to installing the pullboxes, the Contractor shall level the bottom of the trench and achieve a minimum of 95% relative compaction of the bottom of the trench.
8. All concrete shall be Class A (25MPa, min.)
9. Rebars shall be Grade 300 and all lapped splices shall be 360mm minimum.
10. The #57 or #67 size aggregate shall conform to latest version of AASHTO M43.



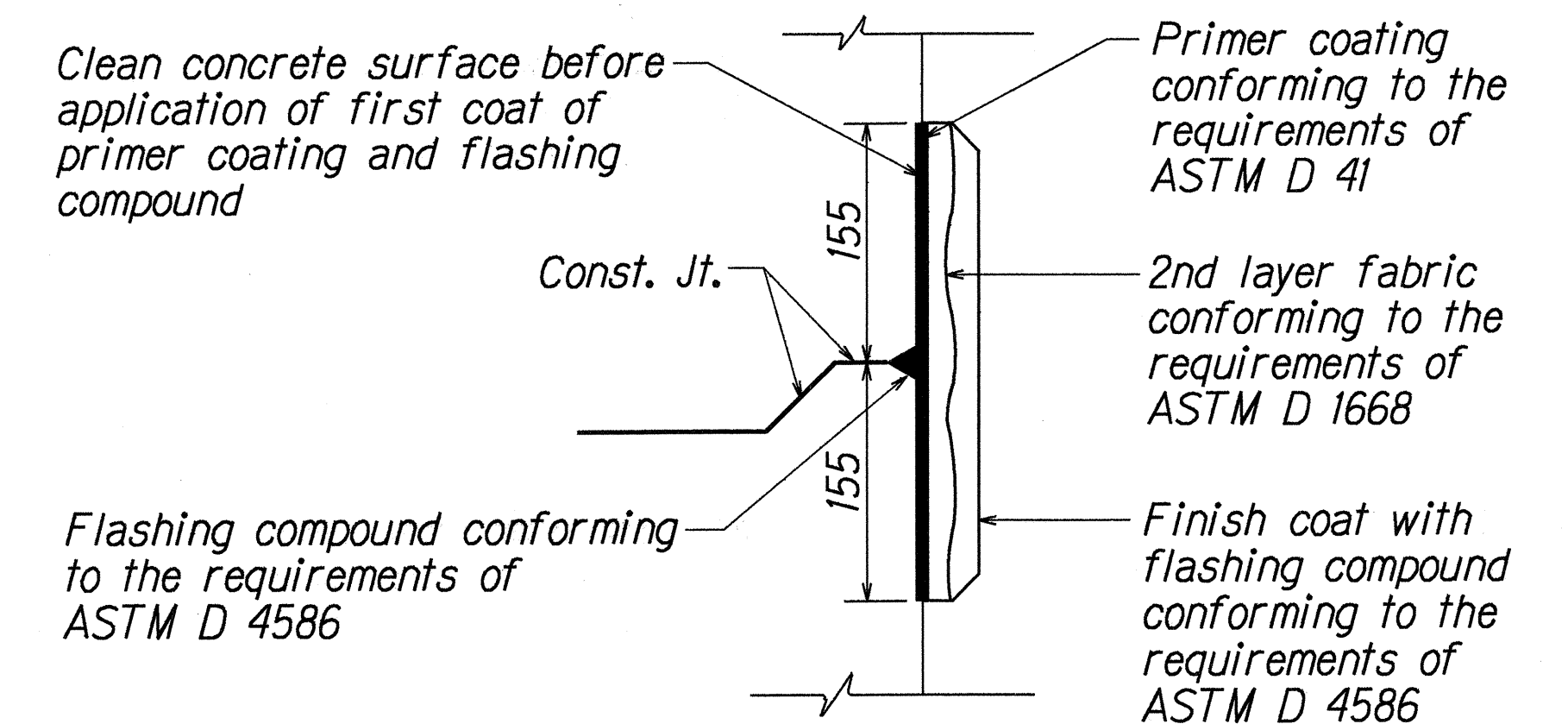
TYPE "A" PULLBOX
(Old Type "B")
Scale: 1 : 100



TYPE "B" PULLBOX (Old Type "C")
Scale: 1 : 100

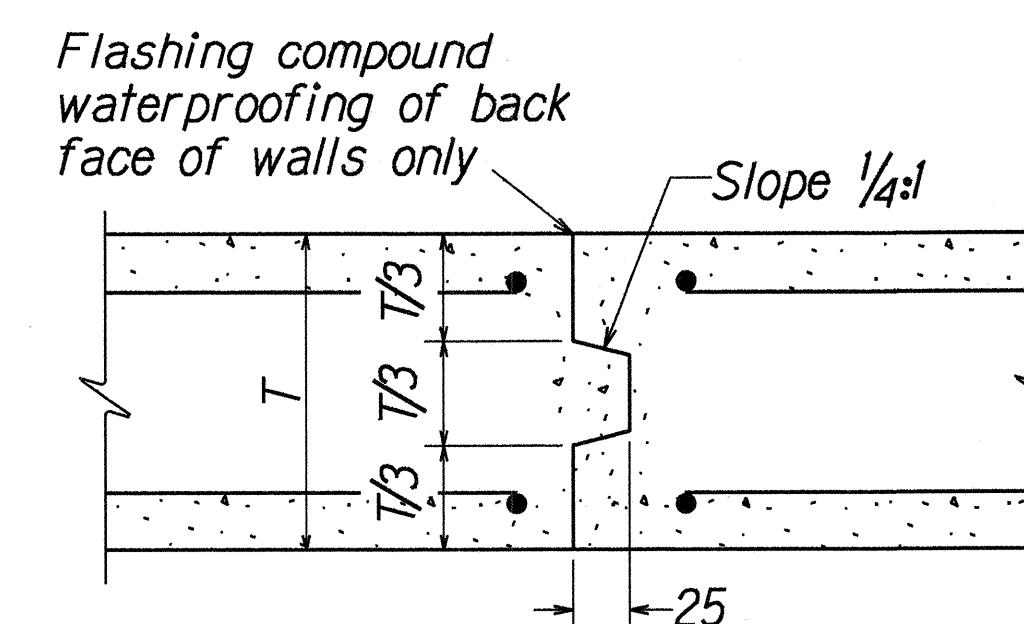
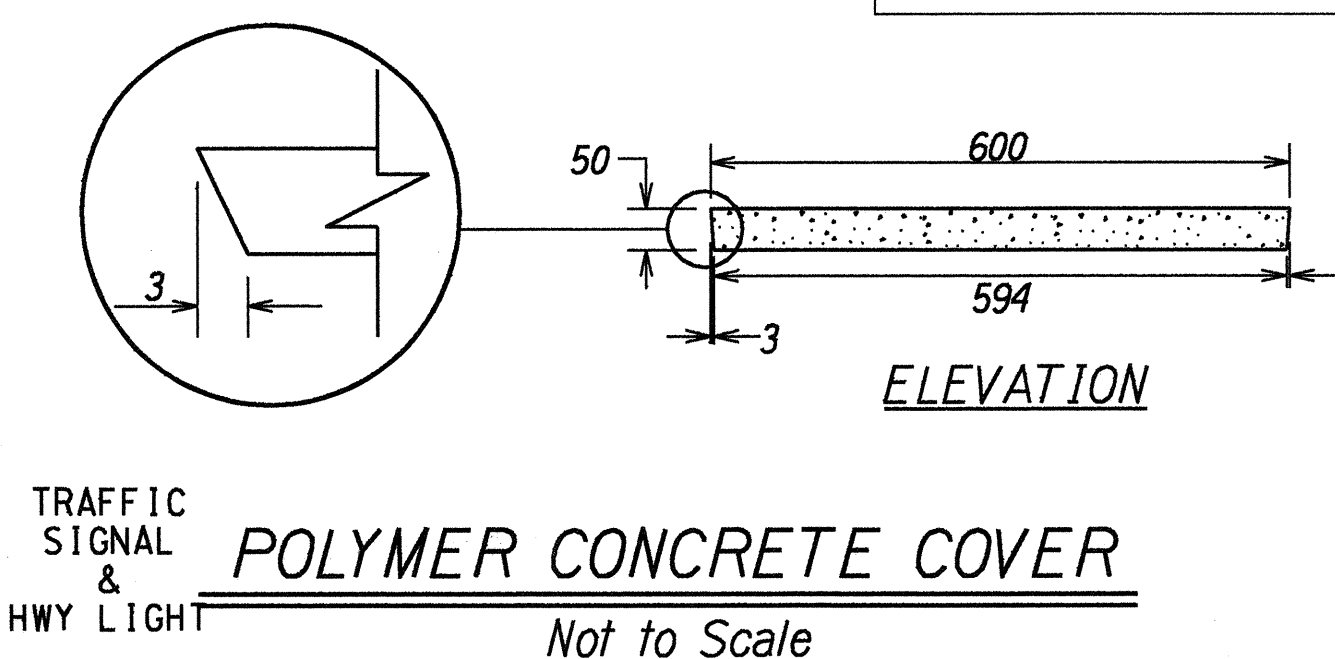
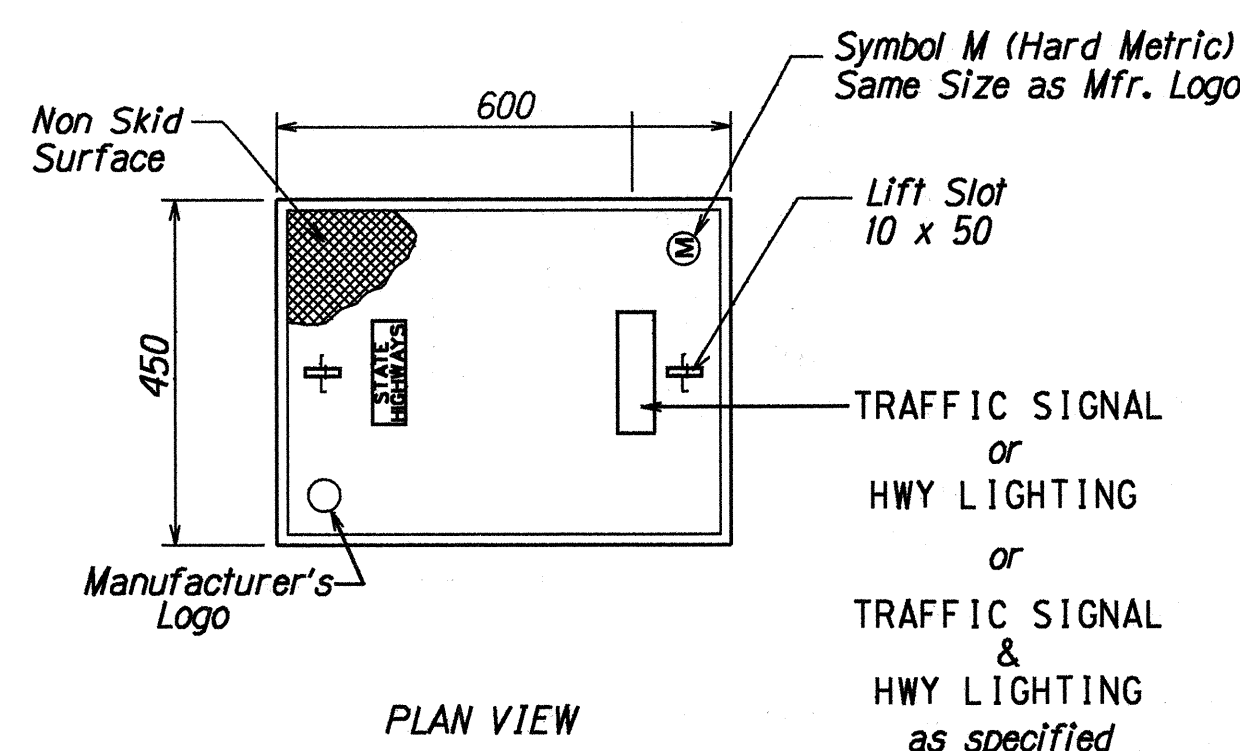


TYPE "C" PULLBOX (Old Type "D")
Scale: 1 : 100



TYPICAL FLASHING COMPOUND WATERPROOFING DETAILS
Not to Scale

ALL DIMENSIONS ARE IN MILLIMETERS
UNLESS OTHERWISE SHOWN



TYPICAL CONSTRUCTION JOINT DETAIL
Not to Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PULLBOX & COVER DETAILS

FLASHING WARNING LIGHTS
VARIOUS HIGHWAY LOCATIONS
PROJ. NO. HWY-H-09-00

Scale: As Shown Date: April, 2000
SHEET No. 1 OF 1 SHEETS

