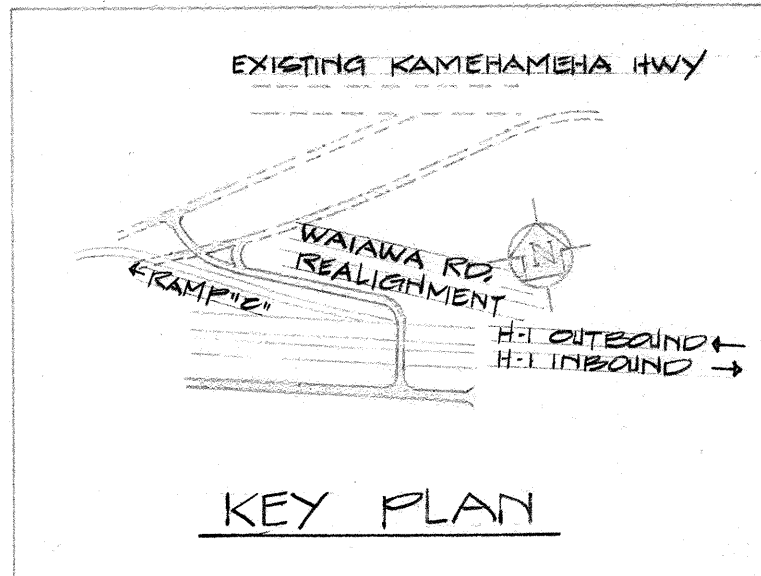
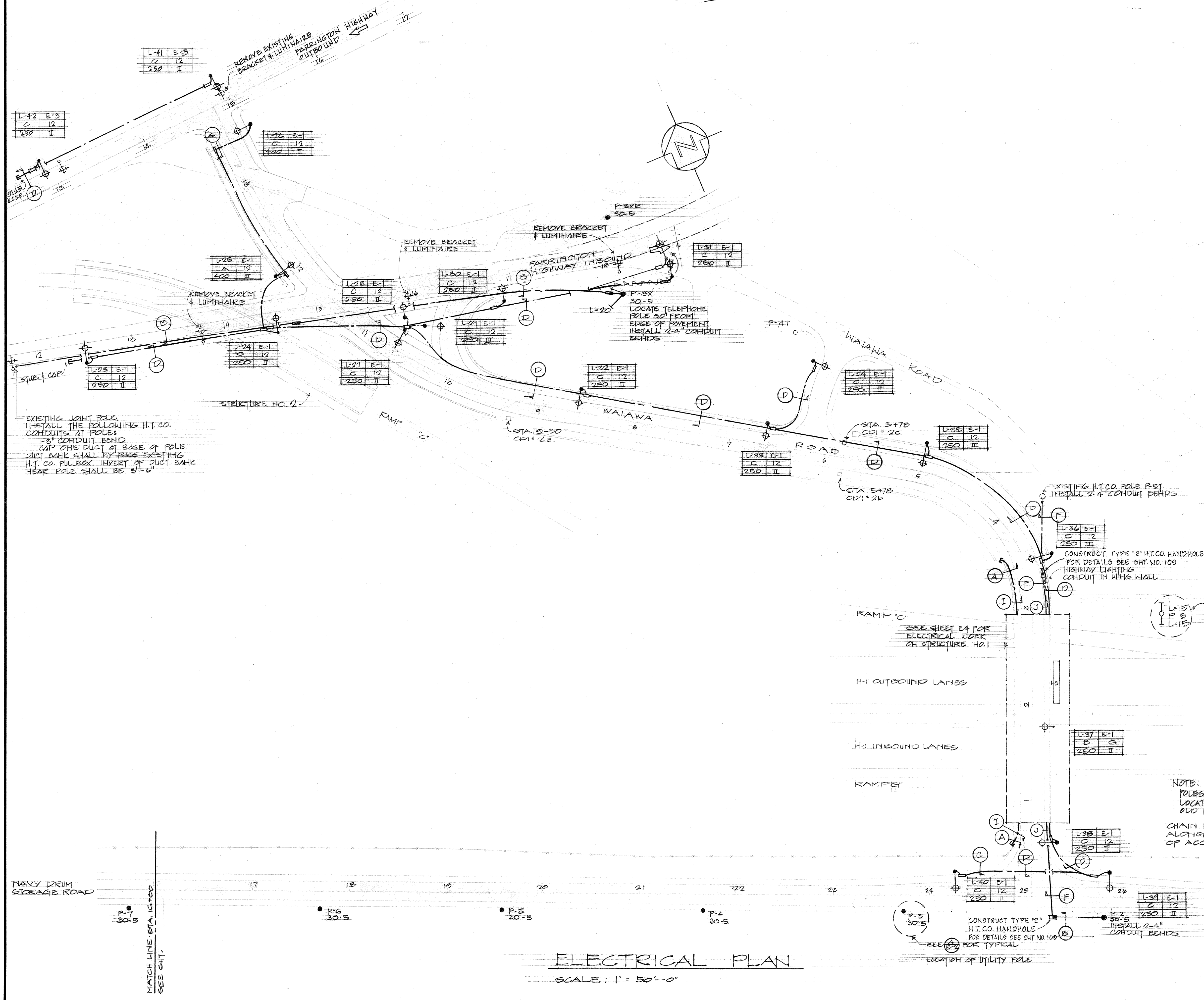




ELECTRICAL SYMBOL LIST

- NEW LIGHT STANDARD
- LIGHT NO. L-1 I
- STANDARD TYPE A 12
- LAMP WATTS 400 III
- LIGHTED EXPRESSWAY SIGN
- STREET LIGHT PULLBOX
- CONDUIT OR DUCTLINE
- DUCTLINE INDICATOR. SEE DUCT SECTIONS
- EXPANSION COUPLING
- TELEPHONE PULLBOX PROVIDED BY HAWAIIAN TELEPHONE CO. INSTALLED BY CONTRACTOR
- NEW UTILITY POLE. HOLE BY CONTRACTOR, POLE PROVIDED & INSTALLED BY UTILITY CO. SEE SCHEDULE OF POLE DEPTHS SHEET E-11
- EXISTING UTILITY POLE TO REMAIN
- ✕ EXISTING UTILITY POLE TO BE REMOVED BY UTILITY CO.
- INDICATES GUY LENGTH
- NEW GUY AND ANCHOR DEADMAN & ROD PROVIDED BY H.T. CO. & INSTALLED BY CONTRACTOR. GUY BY UTILITY CO.
- INDICATES 30 FOOT, CLASS 3 WOOD POLE
- EXISTING HANDHOLE
- EXISTING HIGHWAY LIGHT ON WOOD POLES
- TELEPHONE HANDHOLE, COVERS, PULLING-IN IRONS, MACHINE BOLTS & GROUND ROD PROVIDED BY HAWAIIAN TELEPHONE CO. & INSTALLED BY CONTRACTOR. CONTRACTOR TO FURNISH AND INSTALL REMAINDER.



APPROVED:

[Signature] 8-14-68
HAWAIIAN ELECTRIC Co. Inc. DATE

[Signature] 8-14-68
HAWAIIAN TELEPHONE Co. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WAIALA INTERCHANGE
UNIT I

ELECTRICAL PLAN
WAIALA ROAD, NAVY DRUM
STORAGE ROAD

F.A.I. PROJ. NO. 1-H-1(48)2

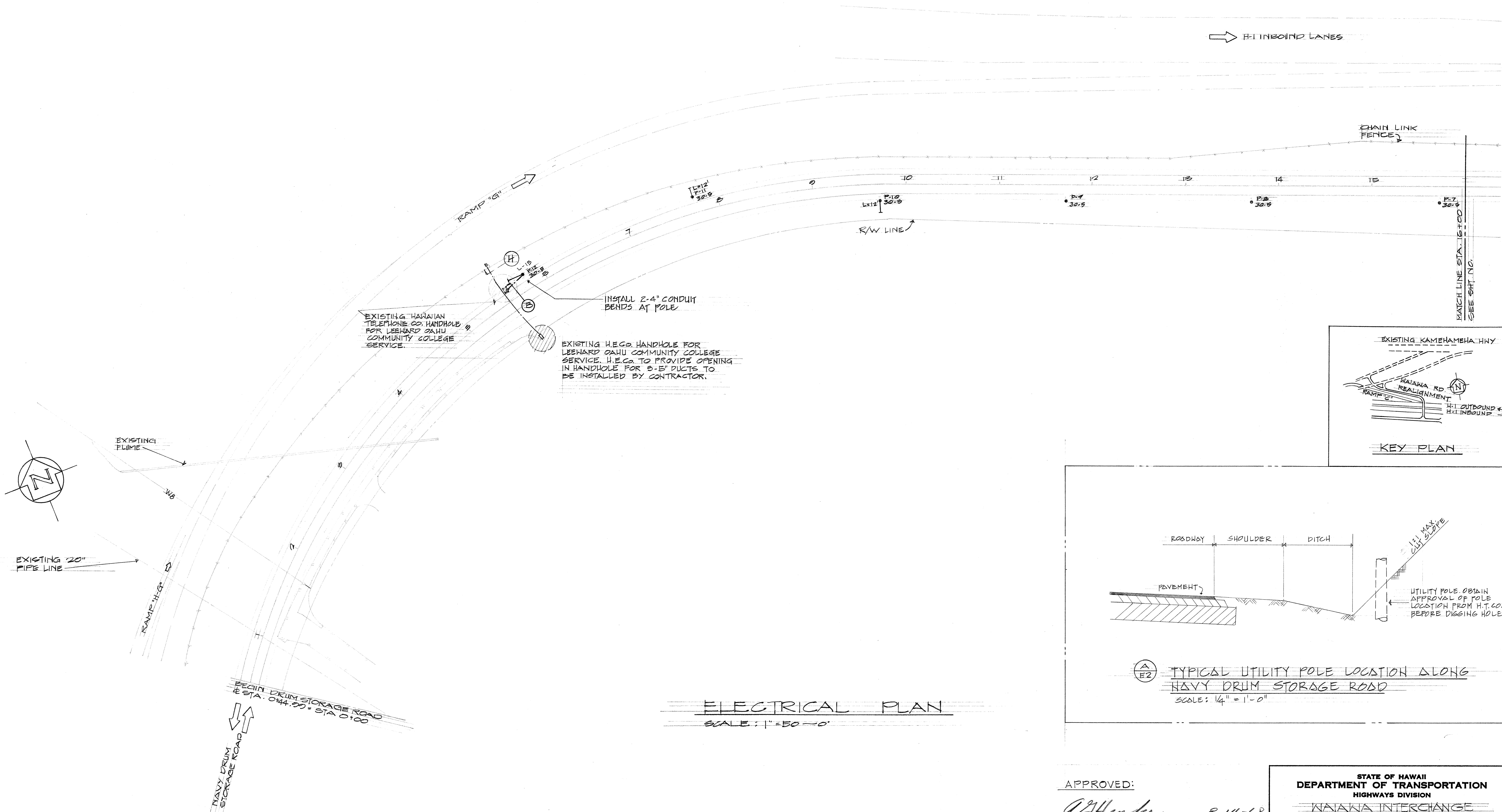
SCALE AS SHOWN DATE: AUG. 1968

SHEET No. E1 OF E16 SHEETS

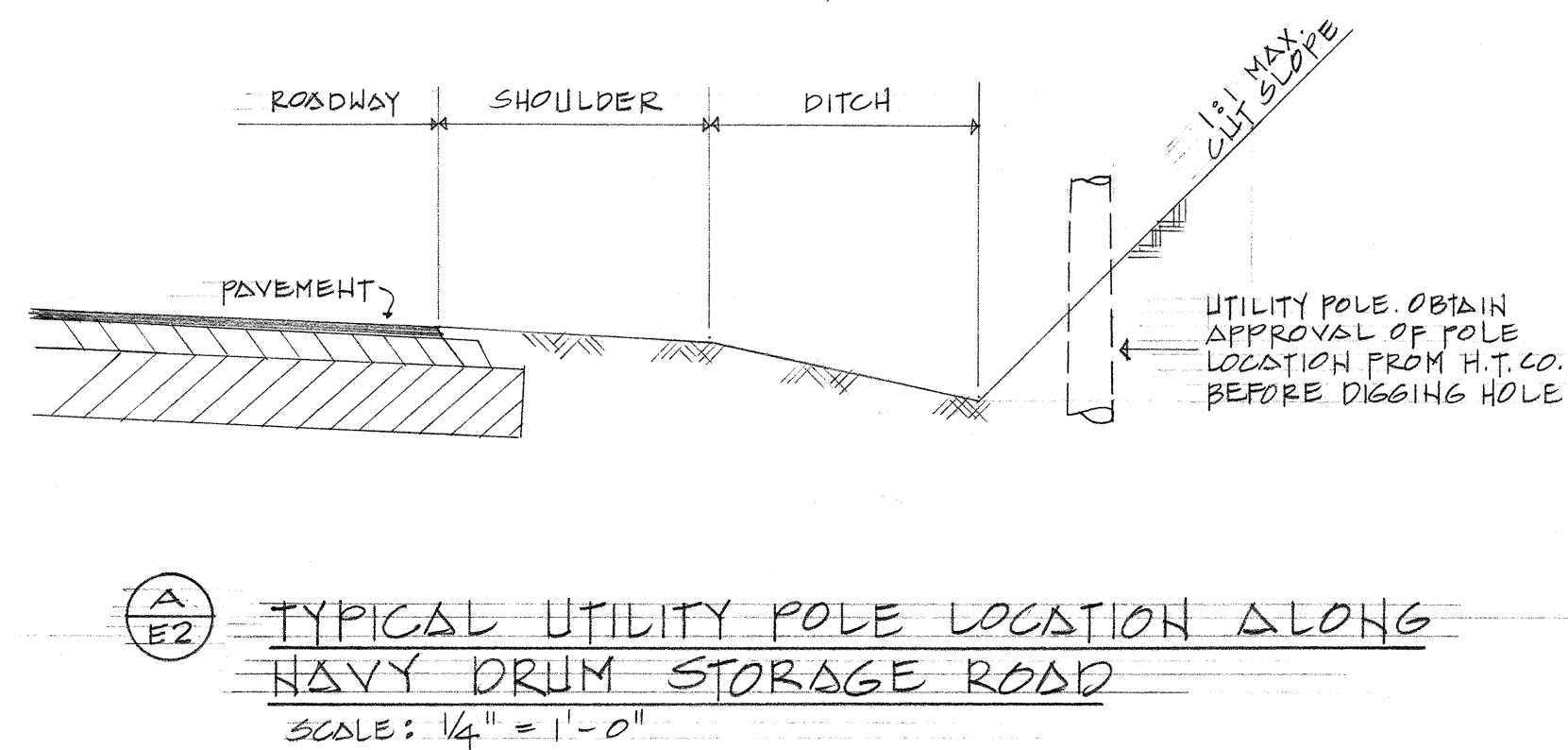
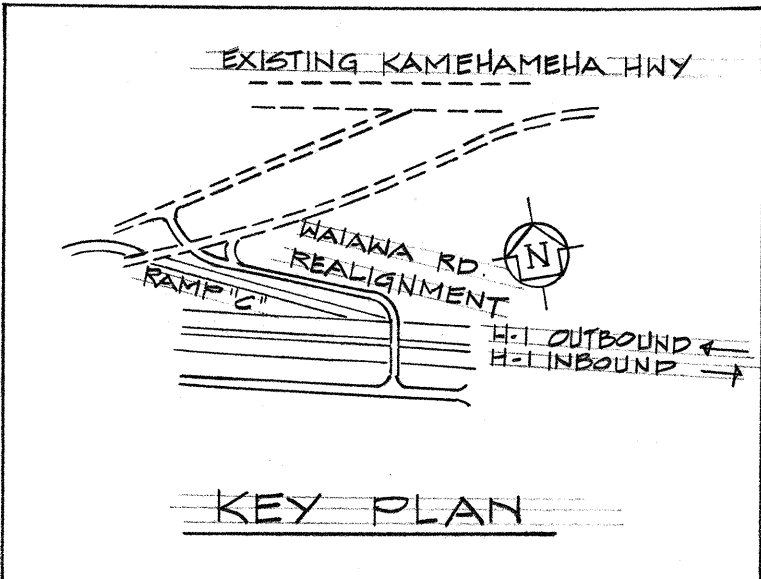
ELECTRICAL PLAN
SCALE: 1" = 50'-0"

DATE
DESIGNED BY
CHECKED BY
ORIGINAL PLAN
TRACED BY
NOTE BOOK
QUANTITIES BY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	141-1(48)	1968	42	133



ELECTRICAL PLAN
SCALE: 1" = 50'-0"

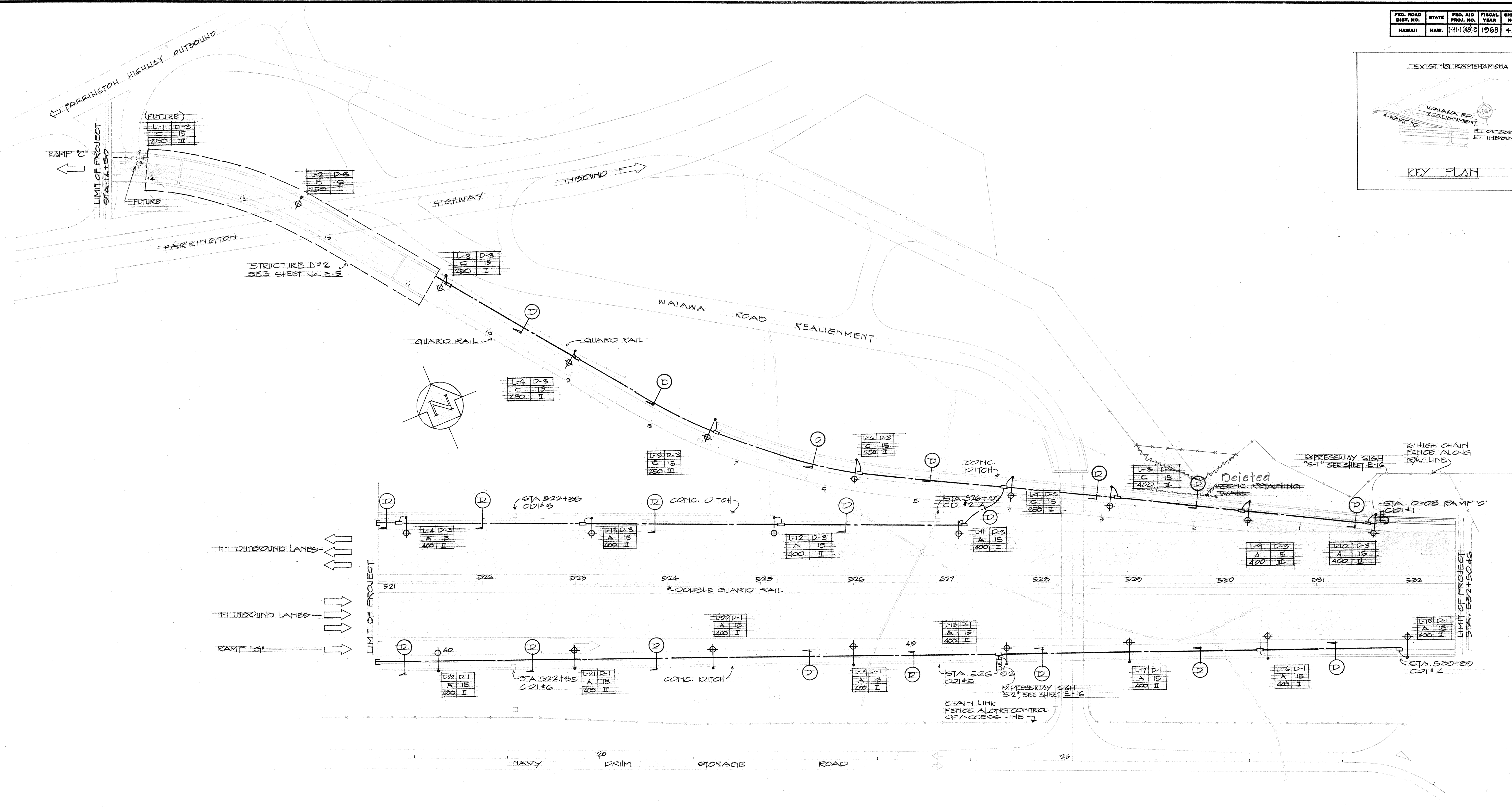
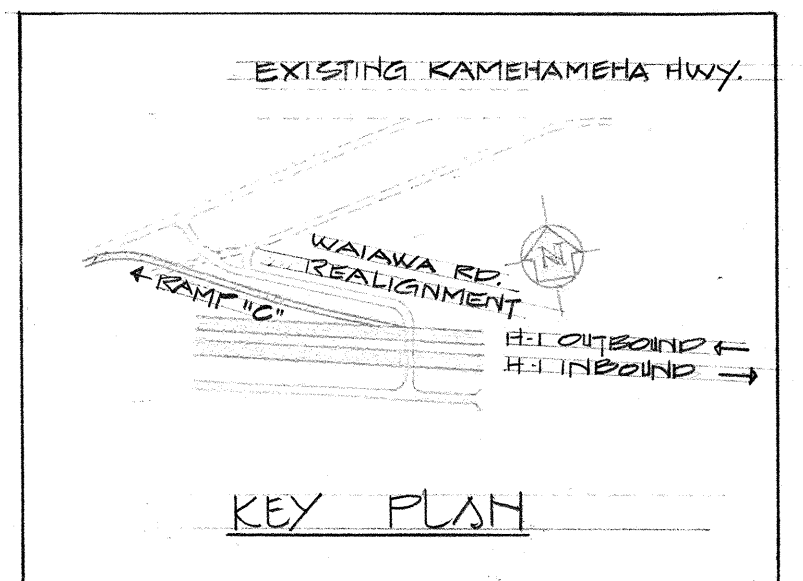


APPROVED:
AJ Henderson 8-14-68
 HAWAIIAN ELECTRIC Co. Inc. DATE
J. A. Add 8-14-68
 HAWAIIAN TELEPHONE Co. DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 KAIKAWA INTERCHANGE
 UNIT I
 ELECTRICAL PLAN
 NAVY DRUM STORAGE ROAD
 F.A.I. PROJ. NO. I-H-1(48):2
 COST EST. 66 SKOWN DATE: AUG. 1968
 SHEET No. E2 OF E16 SHEETS

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HH-1(40)	1968	43	133



ELECTRICAL PLAN
SCALE: 1" = 50' - 0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**WAIAWA INTERCHANGE
UNIT I**

ELECTRICAL PLAN
H-1 OUTBOUND, H-1 INBOUND & RAMP 'C'

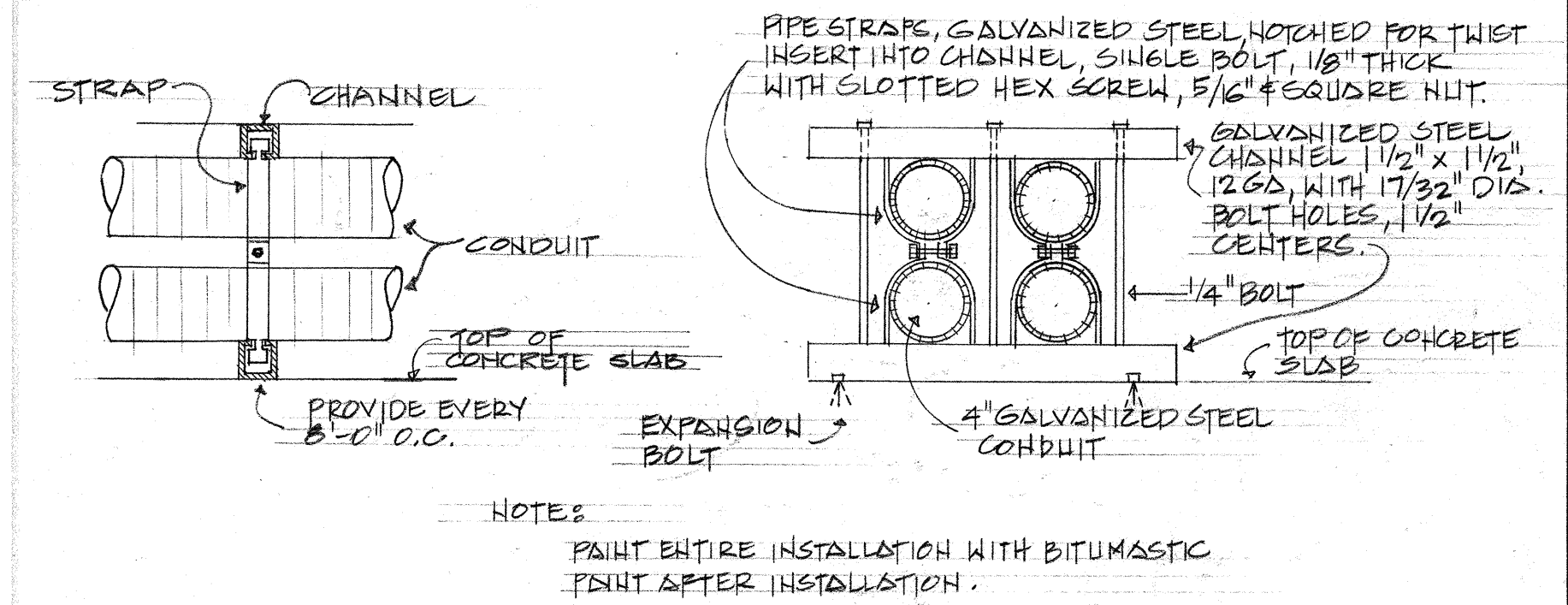
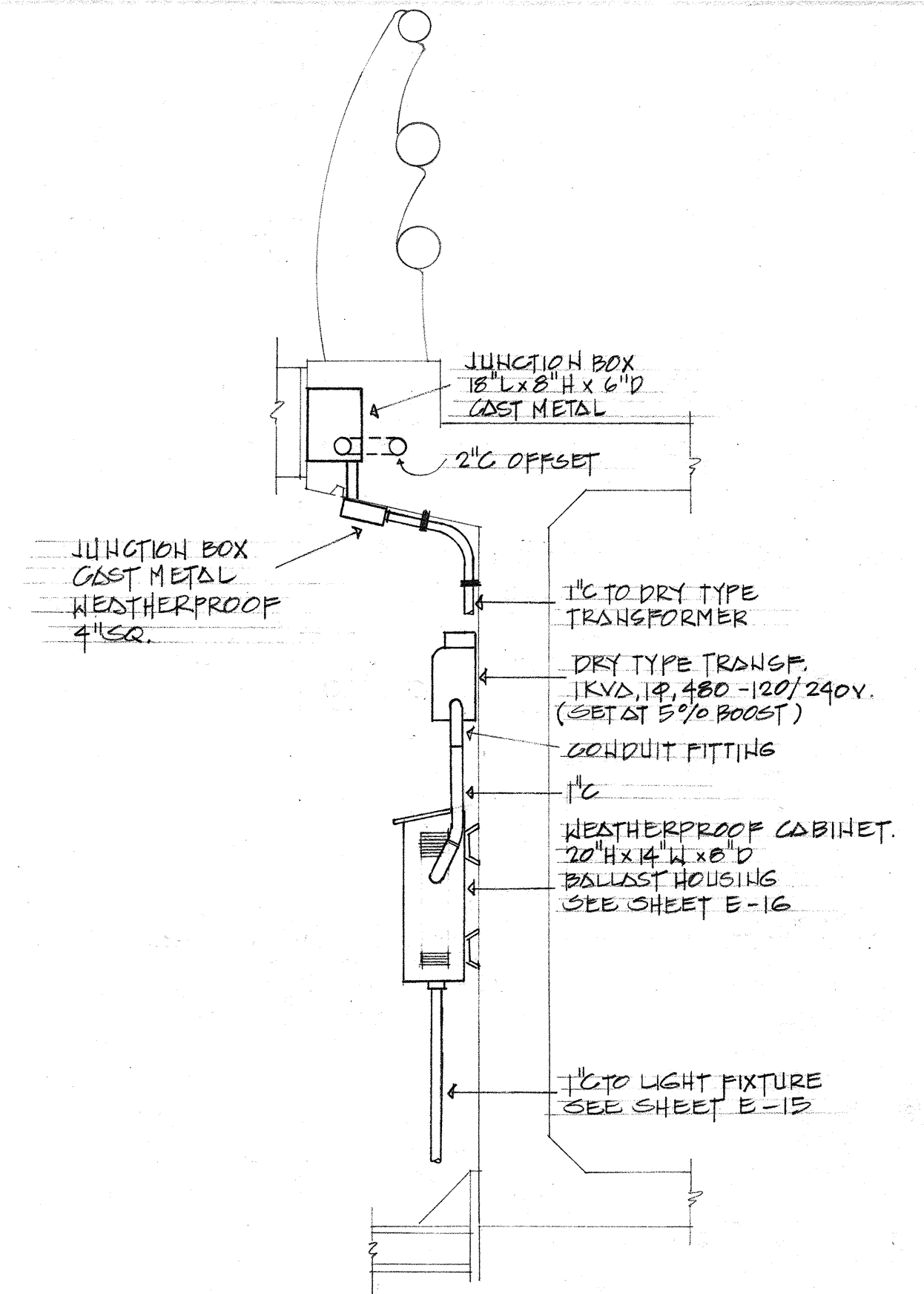
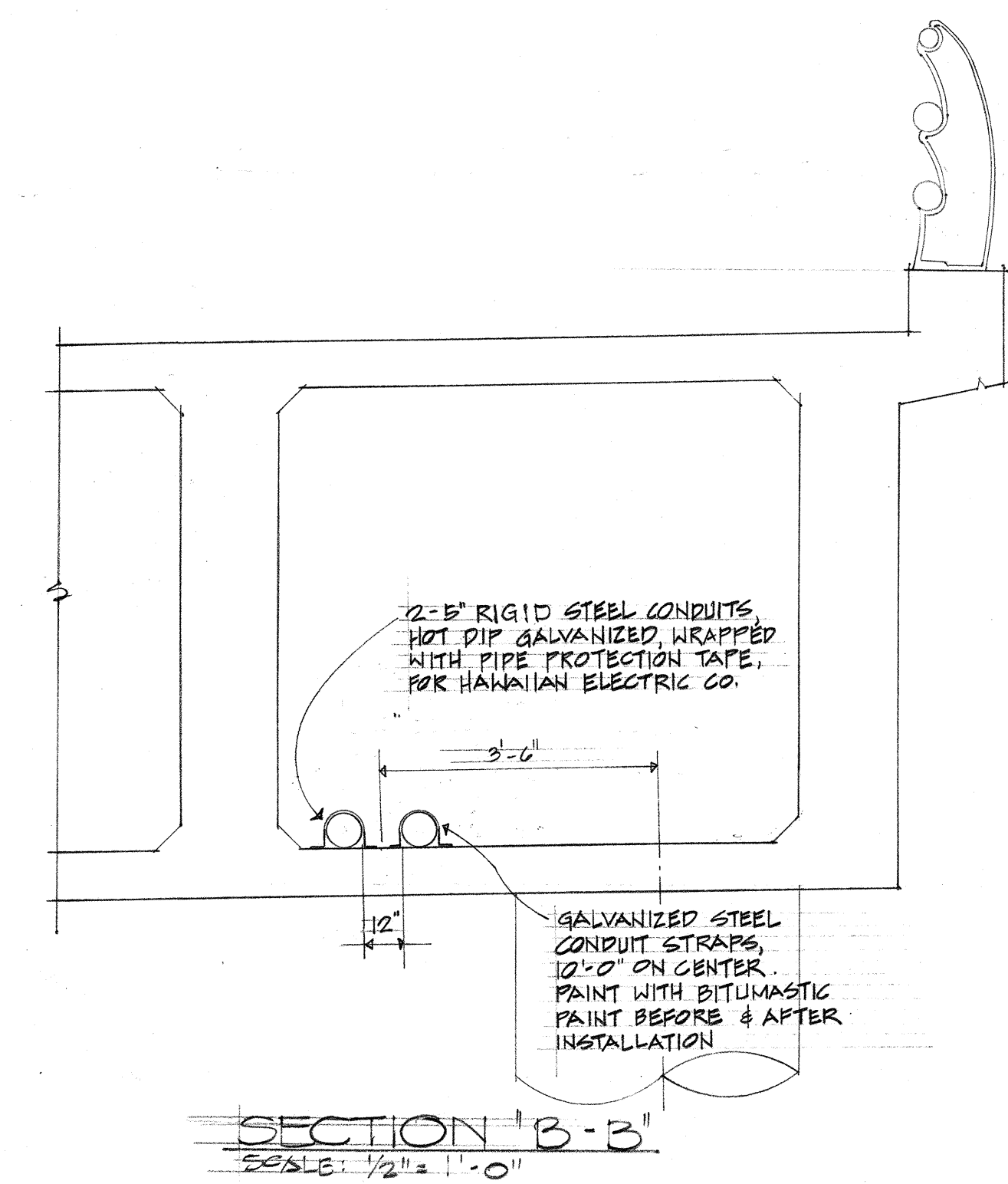
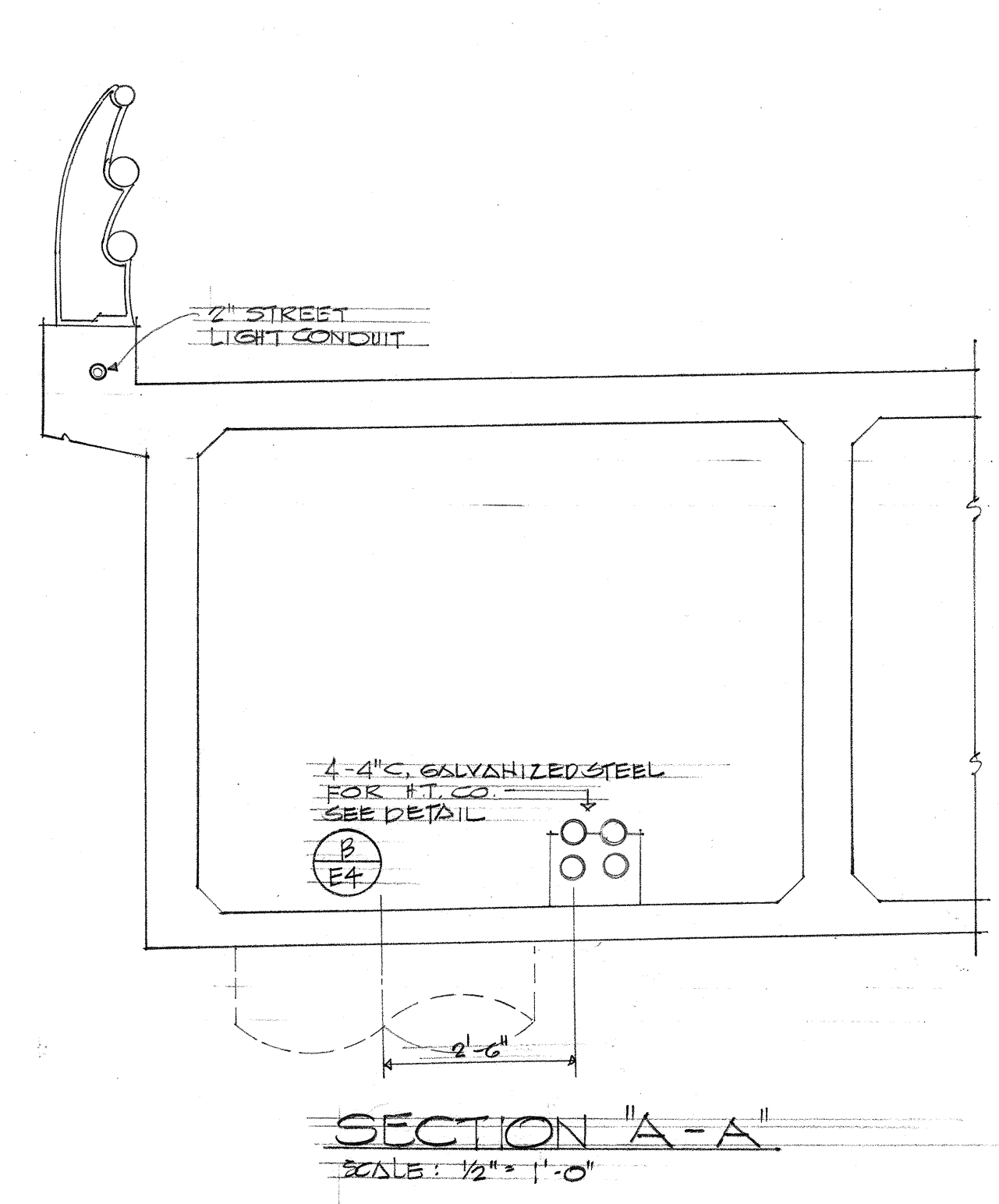
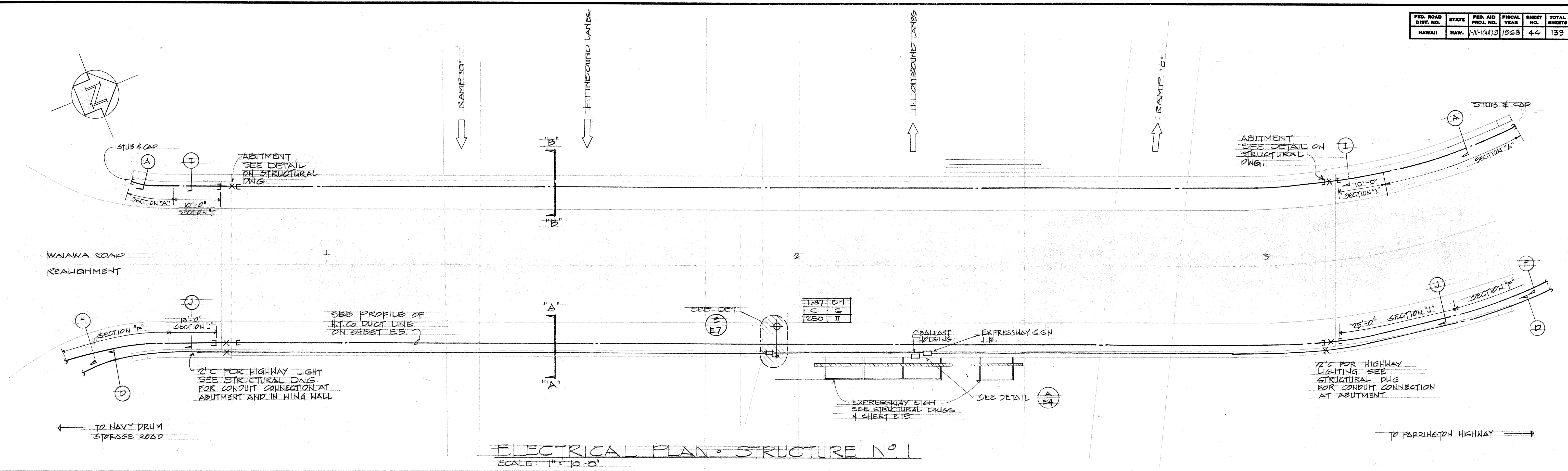
FAT PROJ NO: 1-H-1(40):0

SCALE: AS SHOWN DATE: AUG. 1968

SHEET No. E3 OF E16 SHEETS

DATE	_____
DESIGNED BY	_____
TRACED BY	_____
NOTED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
NO.	_____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-(48)9	1968	44	133



APPROVED:

A. Henderson 8-14-68
HAWAIIAN ELECTRIC Co. Inc. DATE

V. Quill 8-14-68
HAWAIIAN TELEPHONE Co. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WAIAWA INTERCHANGE
UNIT I

ELECTRICAL PLAN & DETAILS
STRUCTURE NO. 1

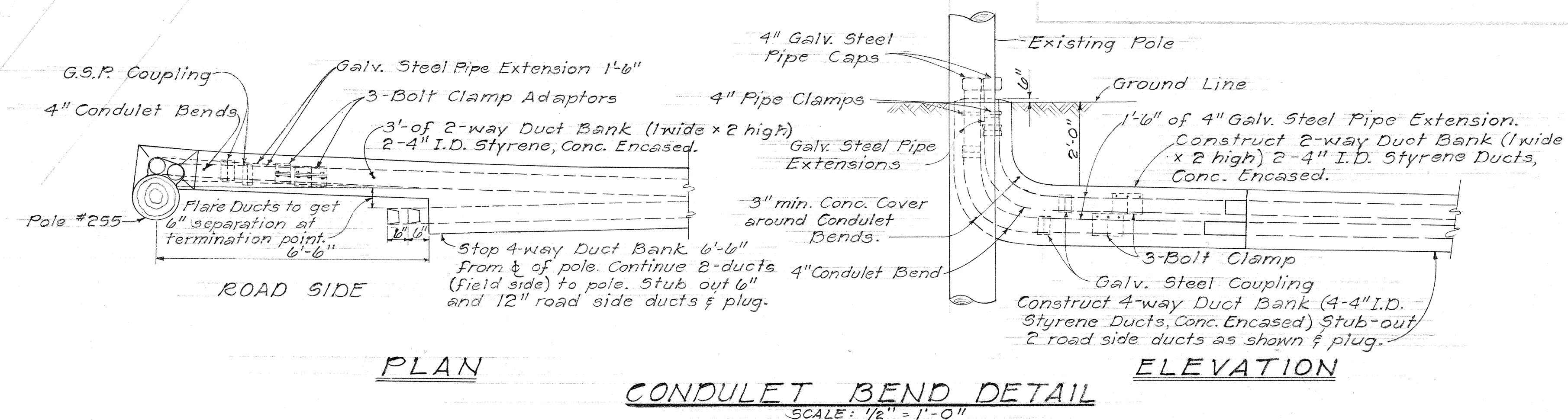
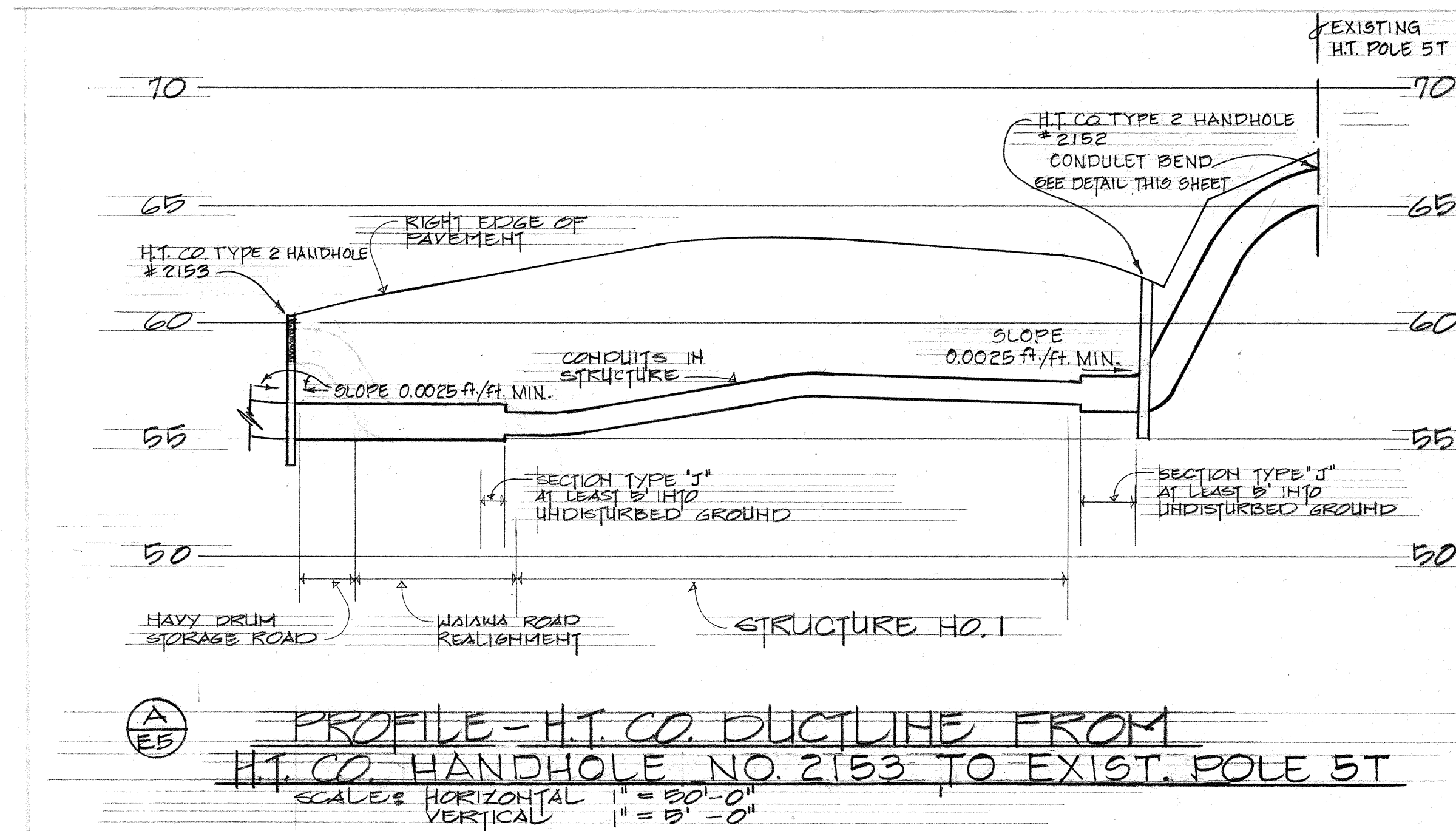
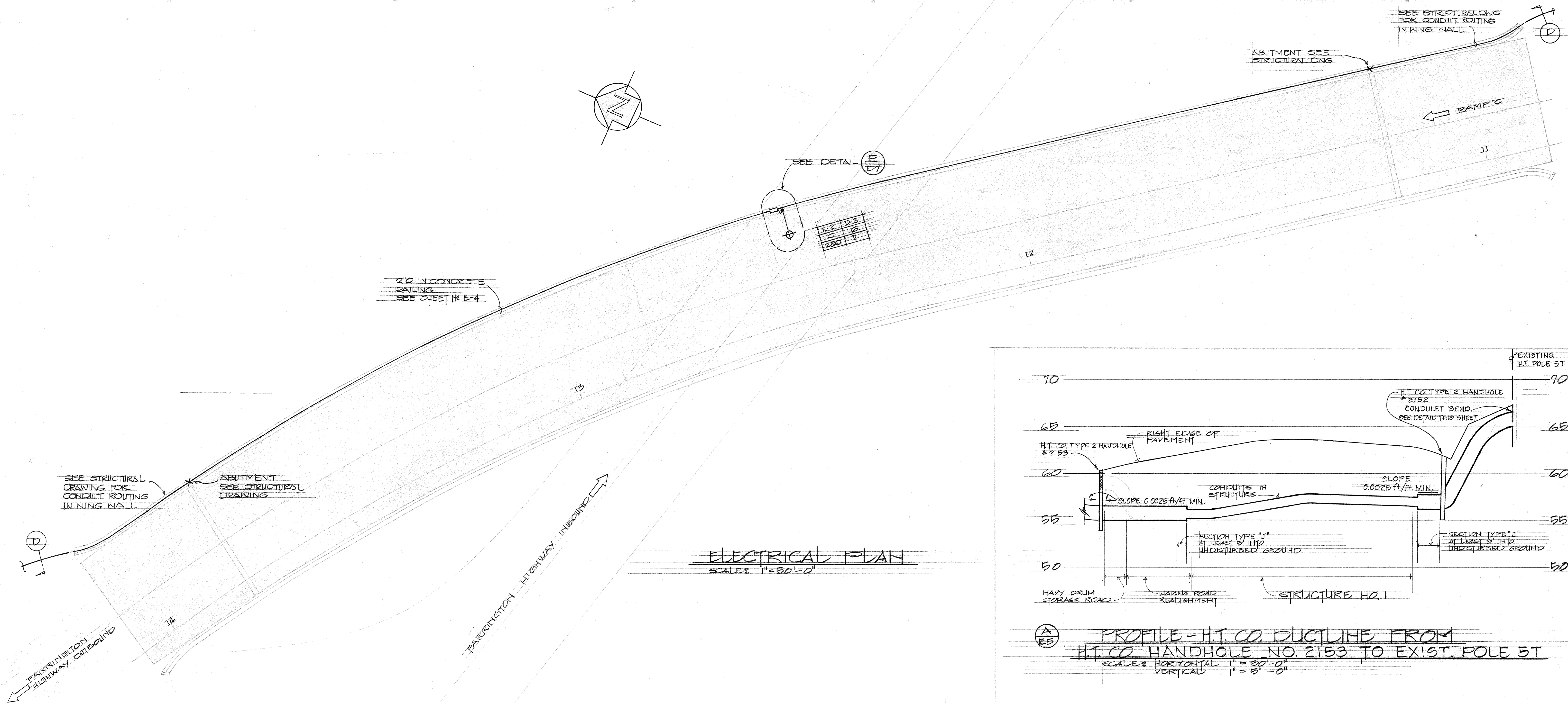
F.A.I. PROJ NO. I-HI-(48)9

SCALE AS SHOWN DATE: AUG. 1968

SHEET No. E4 OF E10 SHEETS

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H-488	1968	45	133



APPROVED: *J. A. D.* 8-14-68
HAWAIIAN TELEPHONE CO. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WAIANA INTERCHANGE
UNIT I

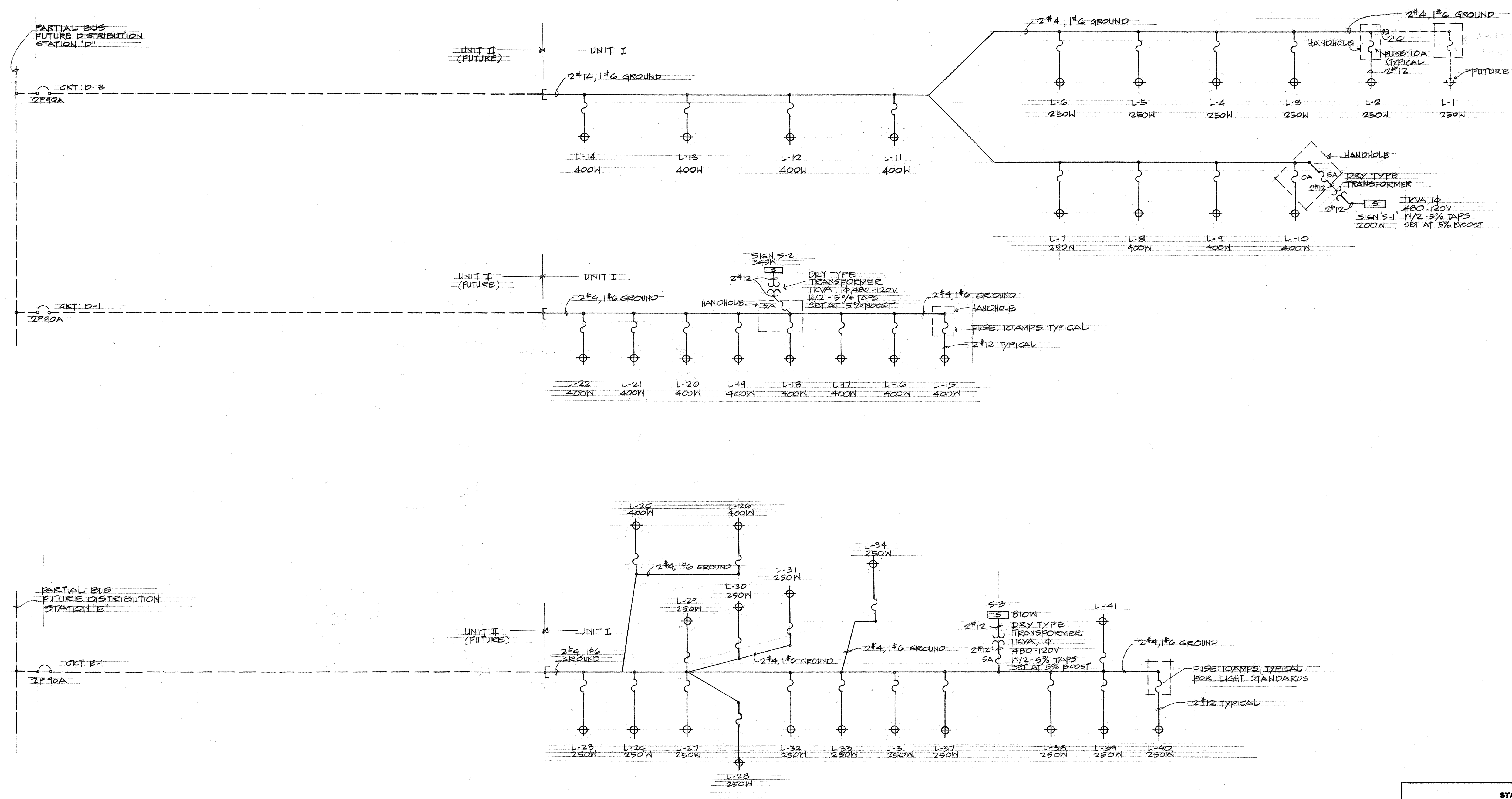
ELECTRICAL PLAN
STRUCTURE NO. 2

F.A.I. PROJ. NO. 1-H-488

SCALE: AS SHOWN DATE: AUG. 1968

SHEET No. E5 OF 516 SHEETS

DATE	DATE
DESIGNED BY	DESIGNED BY
TRACED BY	TRACED BY
QUANTITIES BY	QUANTITIES BY
CHECKED BY	CHECKED BY
ORIGINAL PLAN	ORIGINAL PLAN
NOTE BOOK	NOTE BOOK
NO.	NO.



ONE LINE DIAGRAM

NOTE: ALL FUSES SHALL BE RATED 10 AMPS.

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

WAIKANA INTERCHANGE

UNIT I

ELECTRICAL ONE LINE

DIAGRAM

F.A.I. PROJ. No I-HI-1(48)3

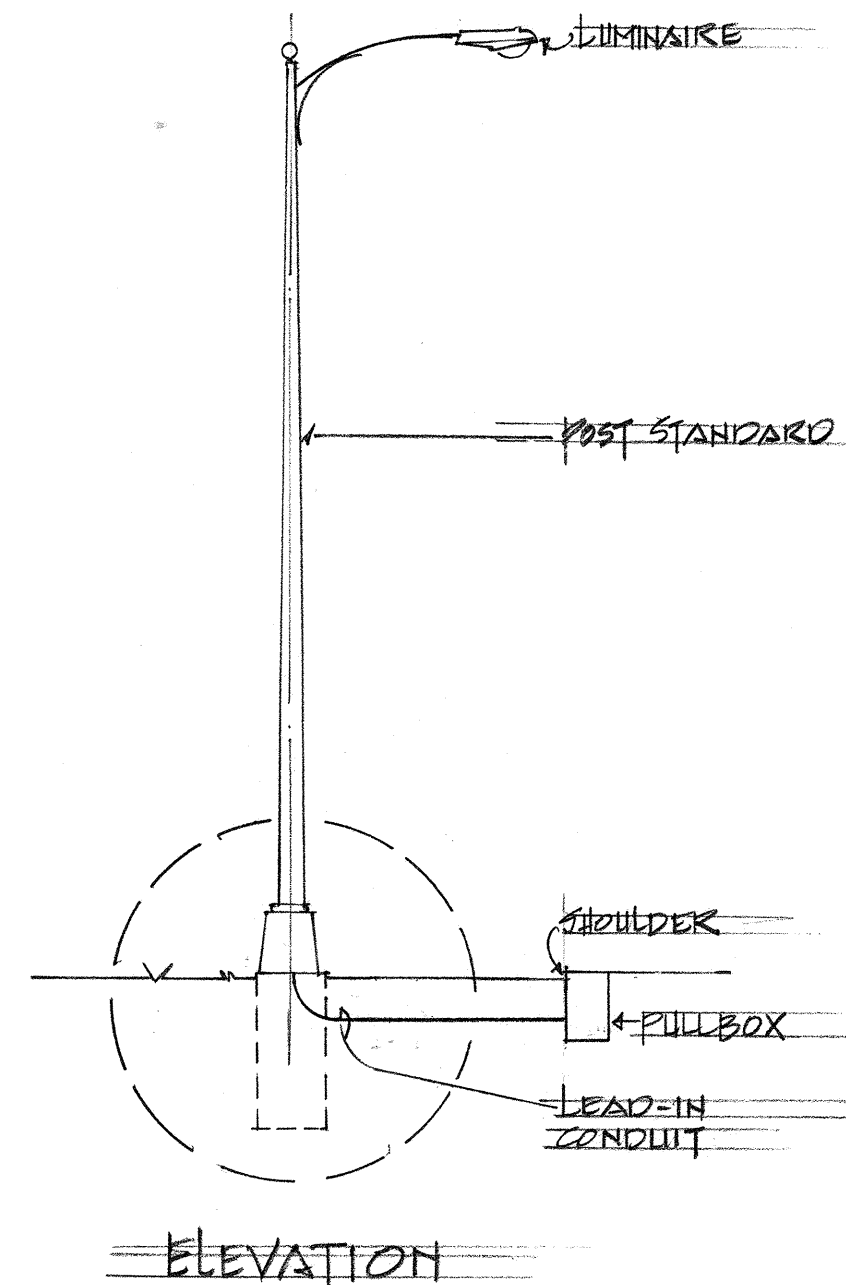
SCALE: NONE

DATE: AUG. 1968

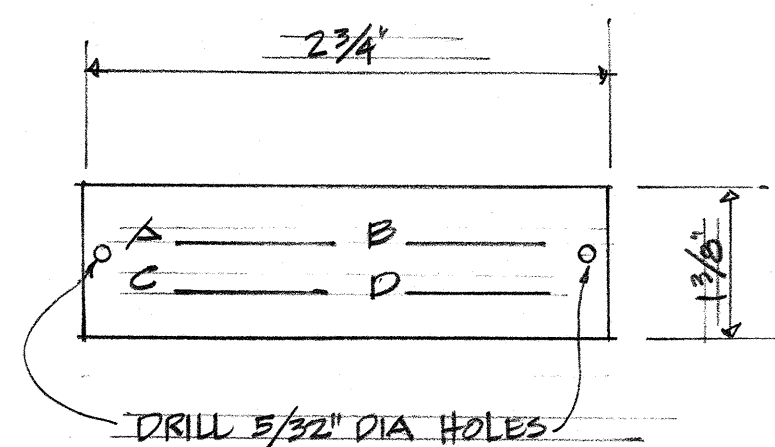
SHEET No. 46 OF 116 SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-(40)2	1968	47	133



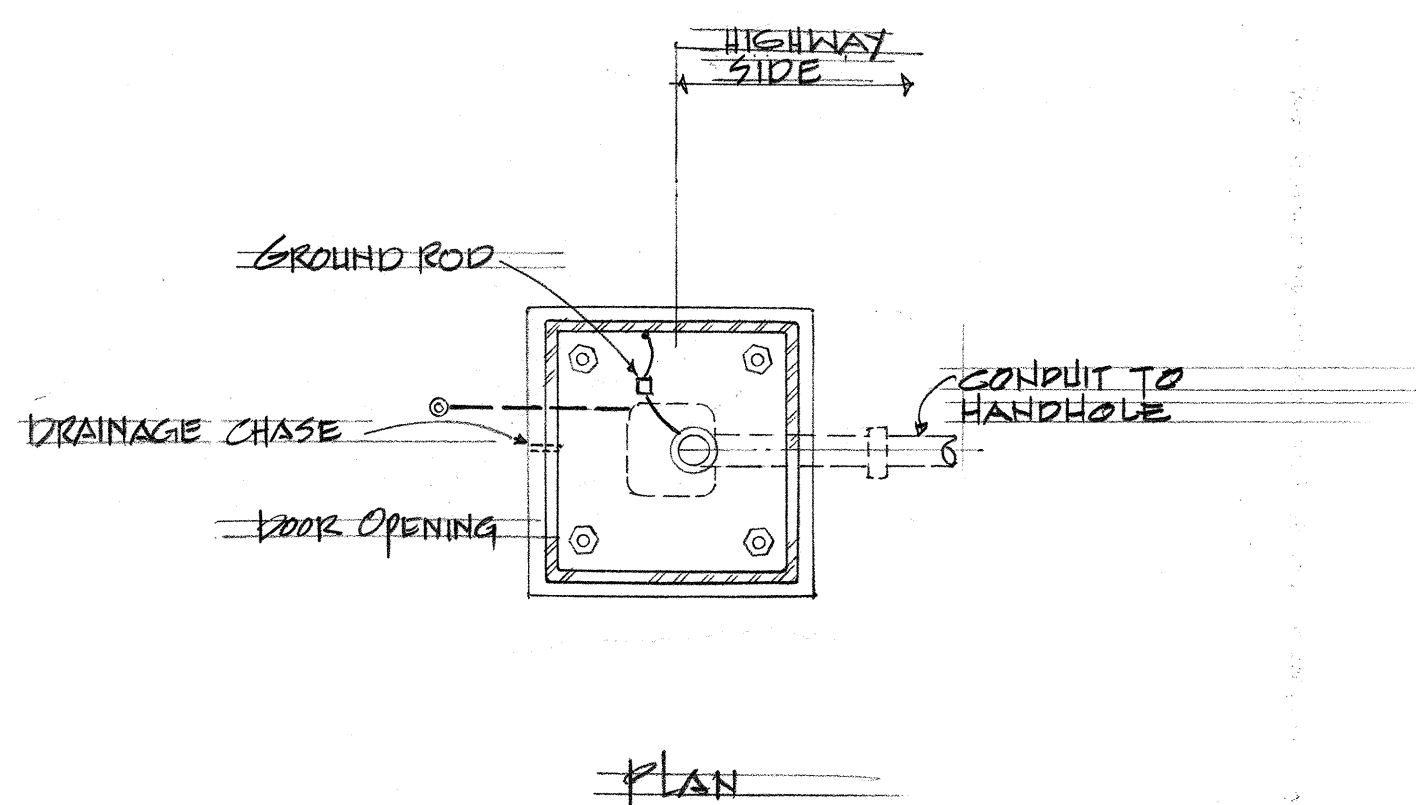
A
E7 LIGHT STANDARD TYPE "A" & "C"
NOT TO SCALE



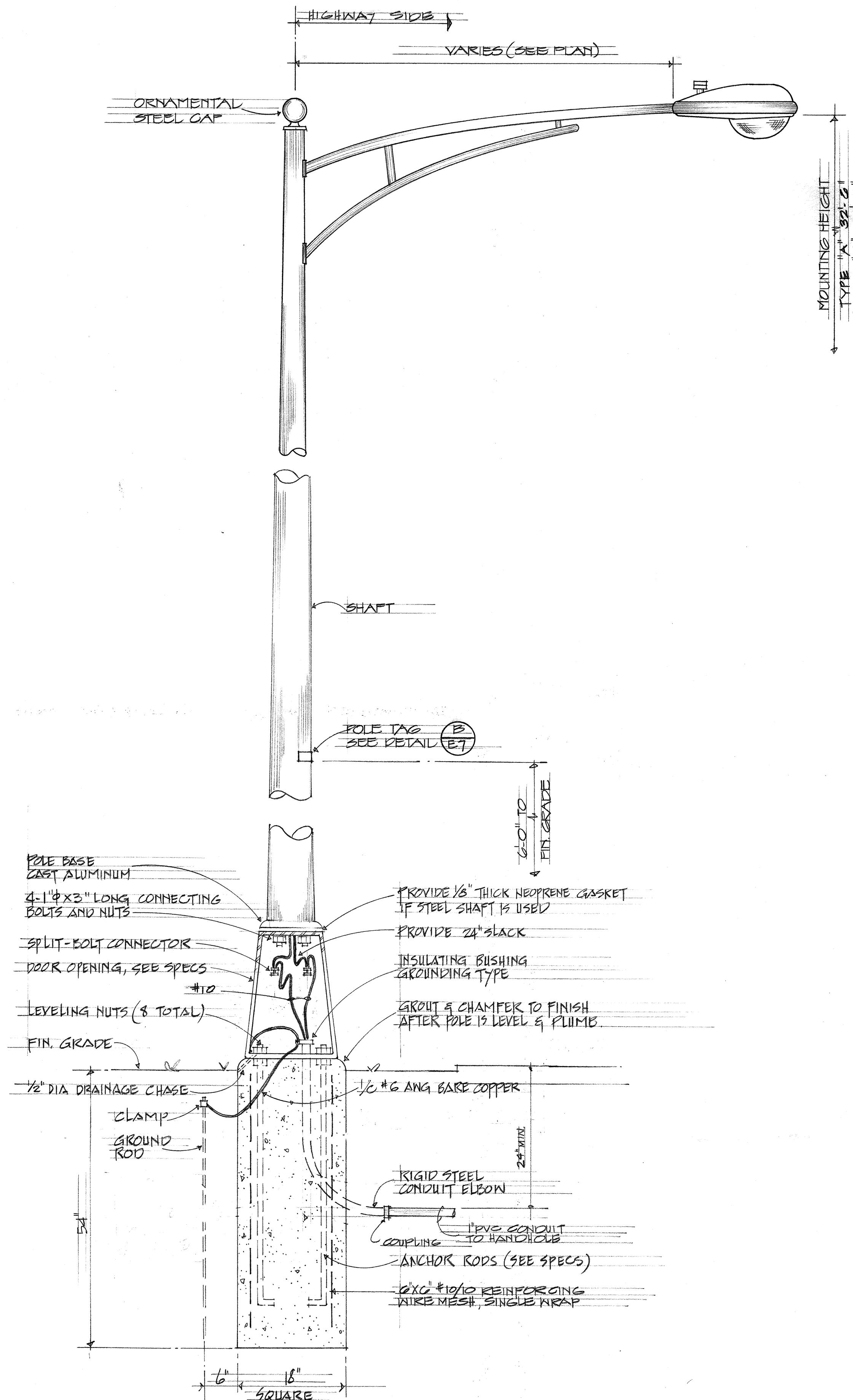
POLE TAG
MAKE FROM 0.040" ALUMINUM SHEET WITH 1/4" HIGH COMMERCIAL GOTHIC LETTERS, ENGRAVED OR STENCILED
2 ATTACH TO POLE WITH NO. 6 CADMIUM PLATED SCREWS

ENGRAVING SCHEDULE
A CONTRACT NO
B LIGHT NUMBER
C LAMP DATA
D REFRACTOR DATA

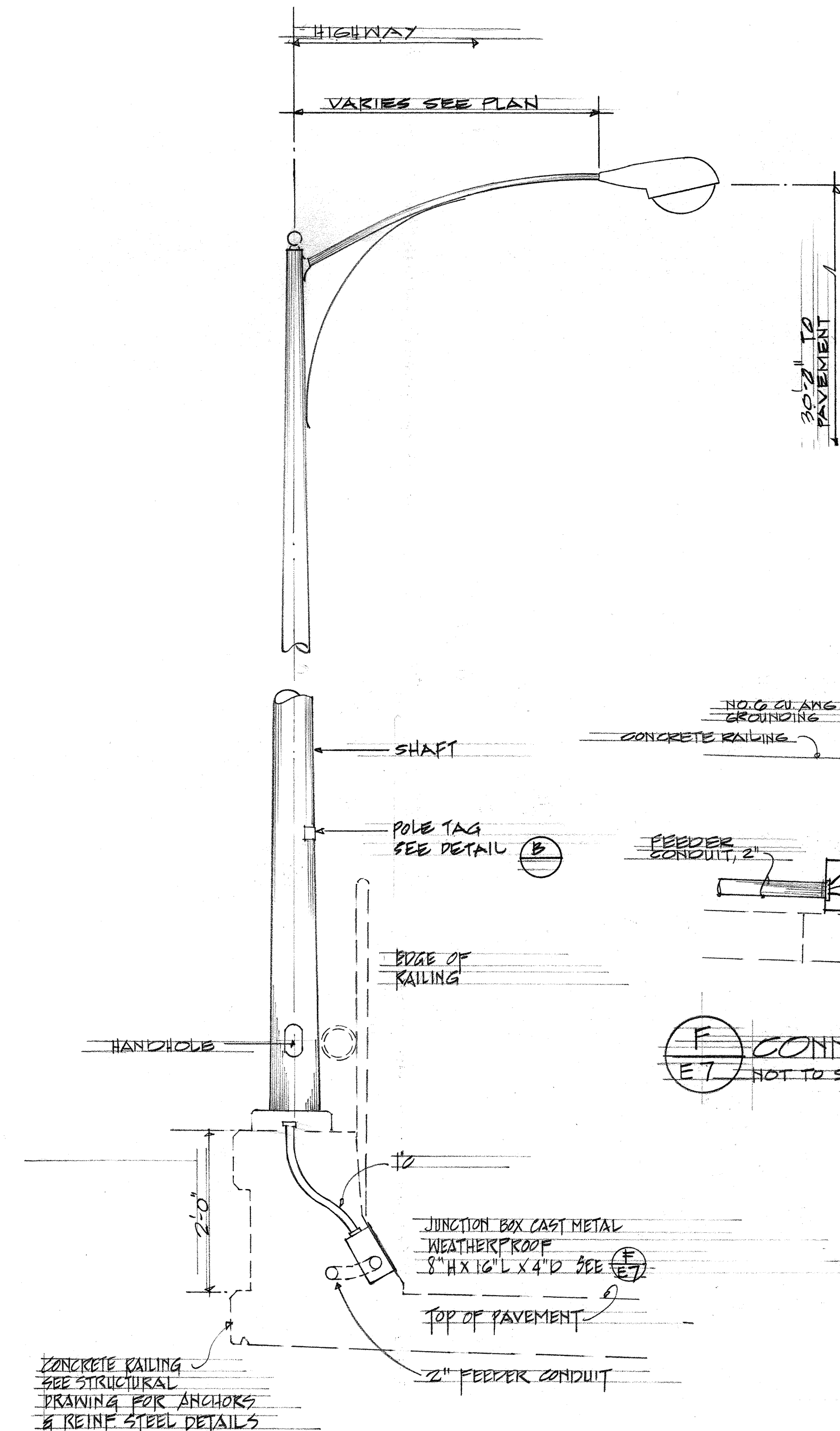
B
E7 POLE TAG DETAIL
NOT TO SCALE



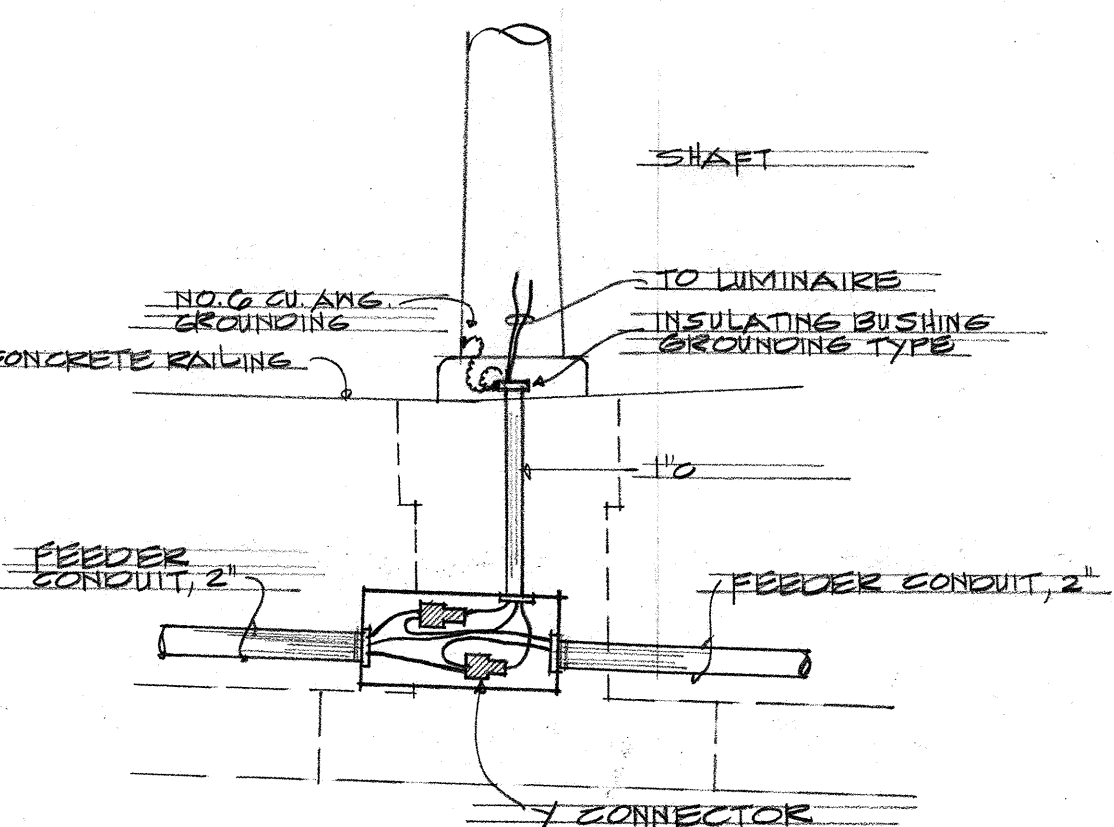
C
E7 PLAN SECTION OF POST STANDARD
NOT TO SCALE



D
E7 TYPE "A" & "C" POST STANDARD DETAIL
NOT TO SCALE



E
E7 LIGHT STANDARD TYPE "B"
NOT TO SCALE



F
E7 CONNECTION DETAIL
NOT TO SCALE

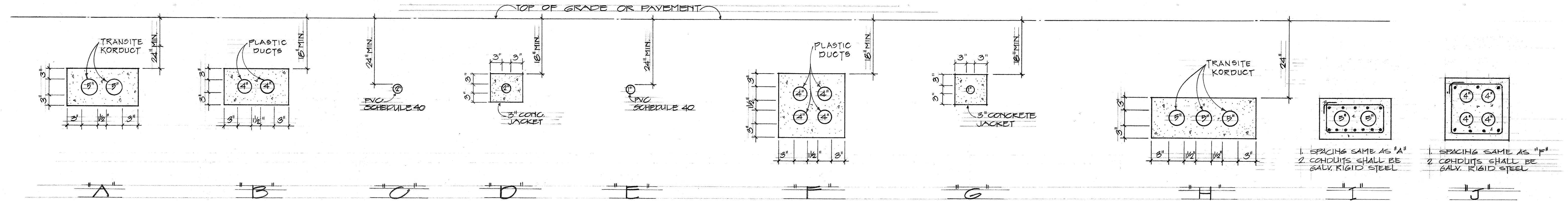
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KAAKAA INTERCHANGE
UNIT I

LIGHT STANDARD DETAILS

F.A.I. PROJ. NO. I-HI-1 (40) : 2

SCALE: AS SHOWN DATE: AUG. 1968

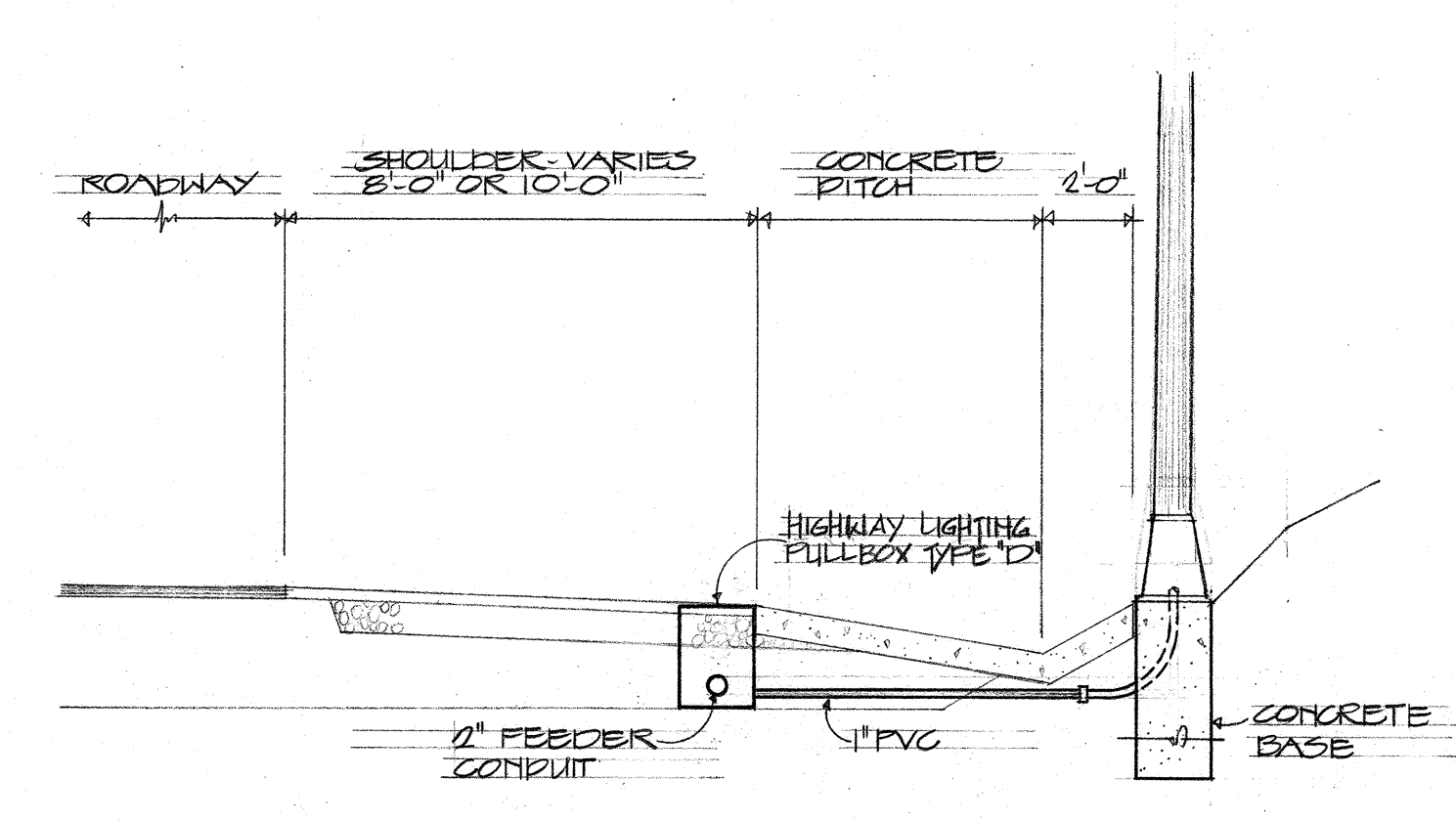
SHEET No. E7 OF E16 SHEETS



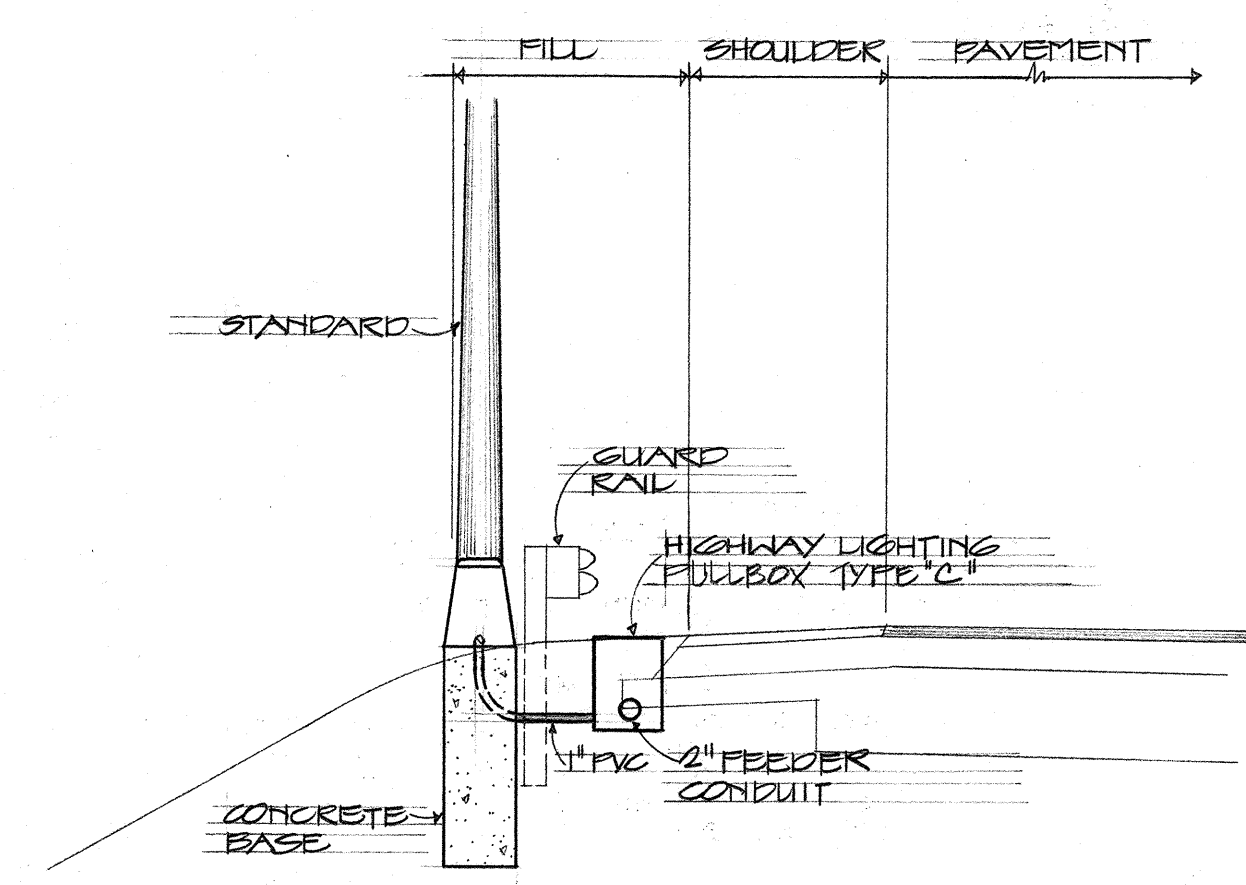
DUCT SECTIONS

N.T.S.

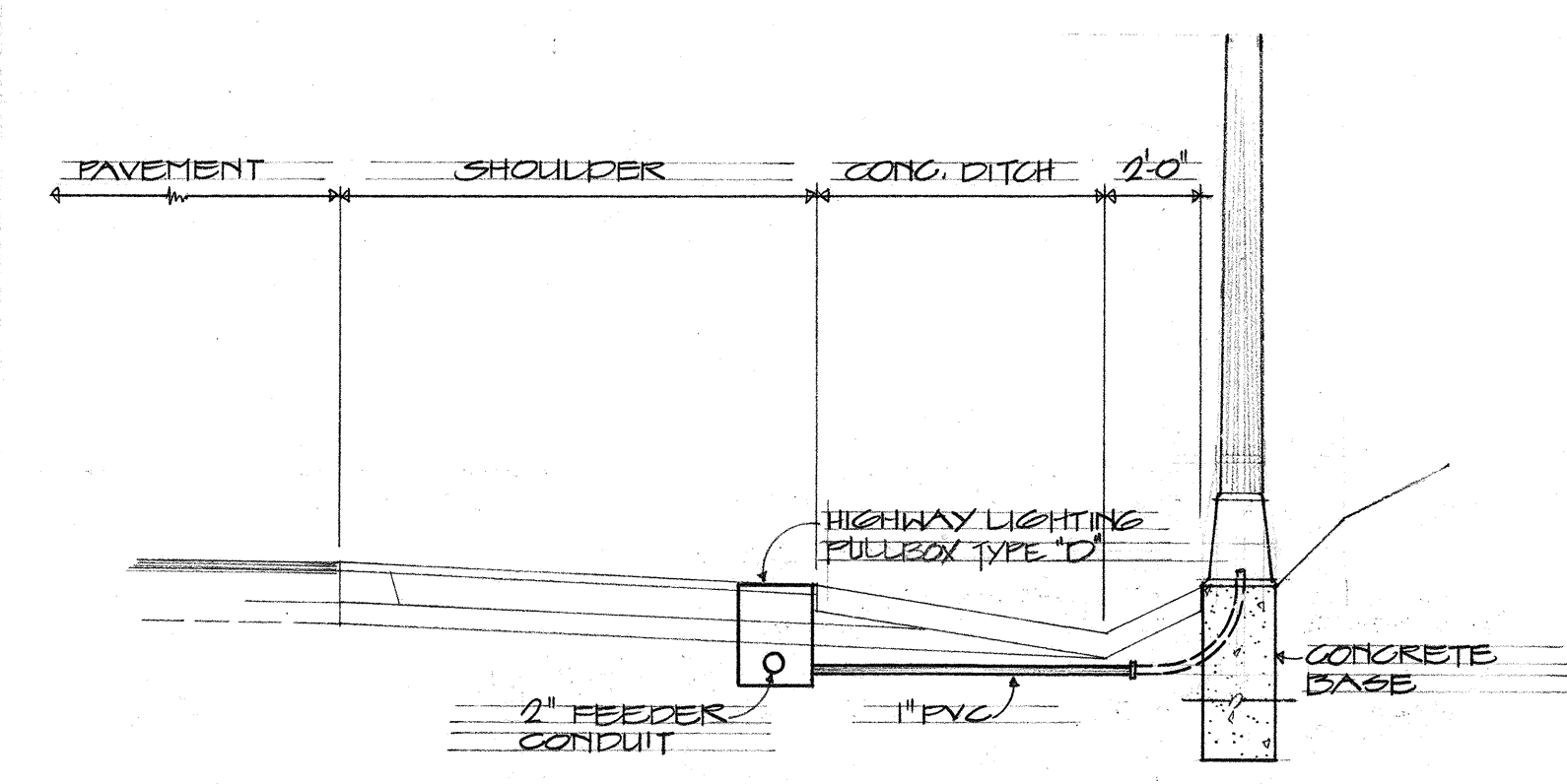
NOTE:
FOR REINFORCING AND CONCRETE CLEARANCE
SEE SHEET NO. 82.



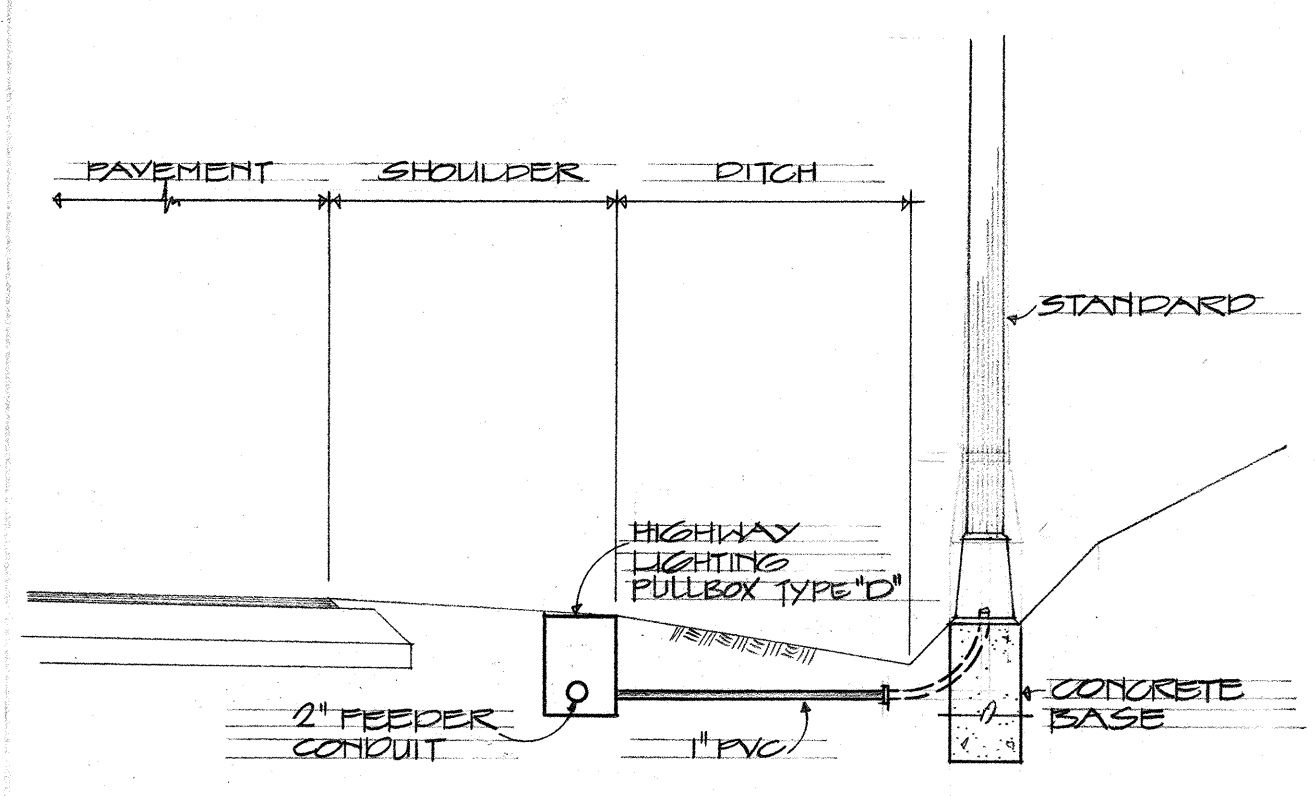
A
E-8
TYPICAL LIGHT STANDARD
LOCATION ALONG H-1 INBOUND
& OUTBOUND & RAMP C LANES
SCALE: 1/4" = 1'-0"



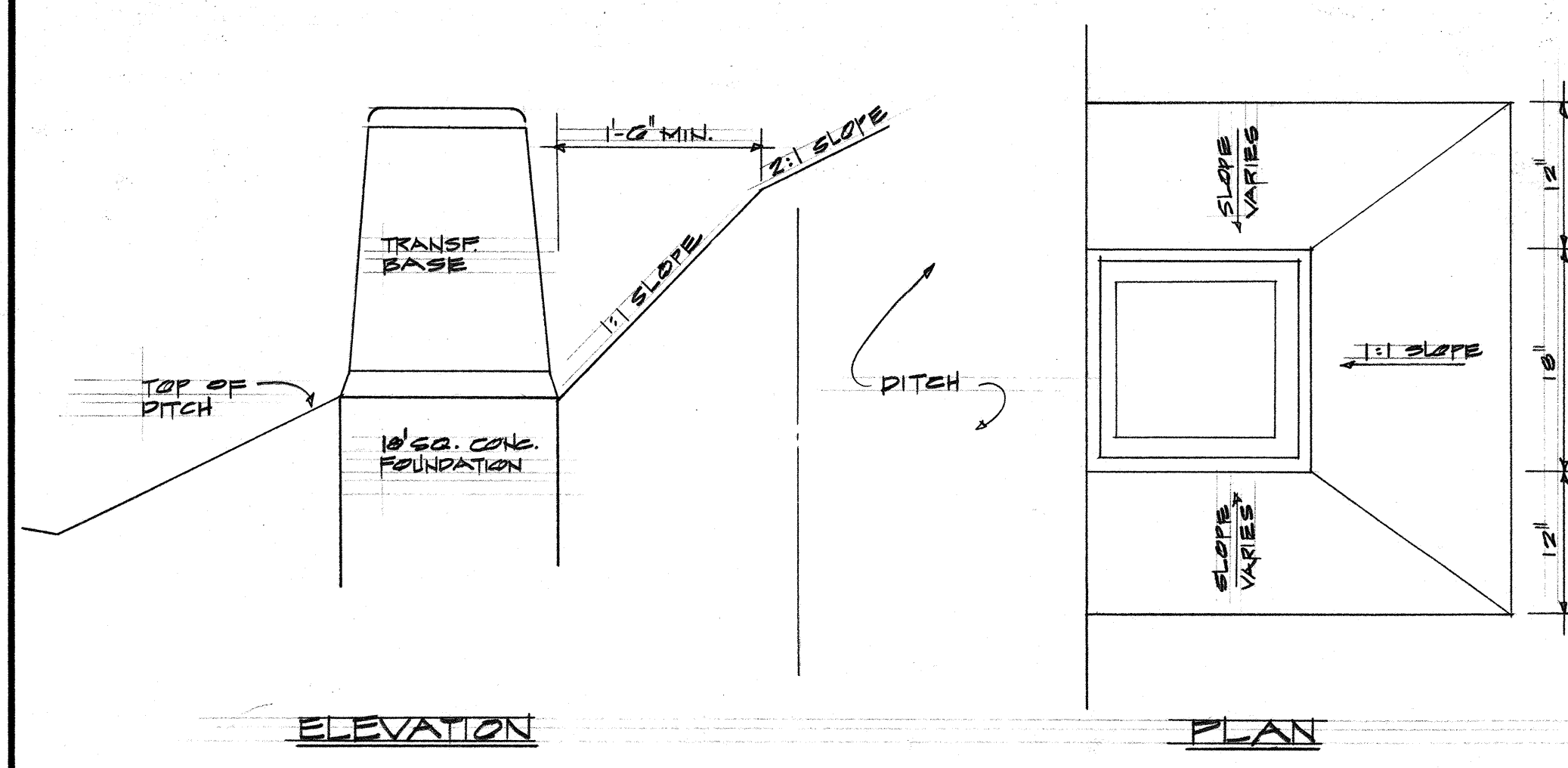
B
E-8
TYPICAL LIGHT STANDARD
LOCATION BEHIND GUARD
RAIL
SCALE: 1/4" = 1'-0"



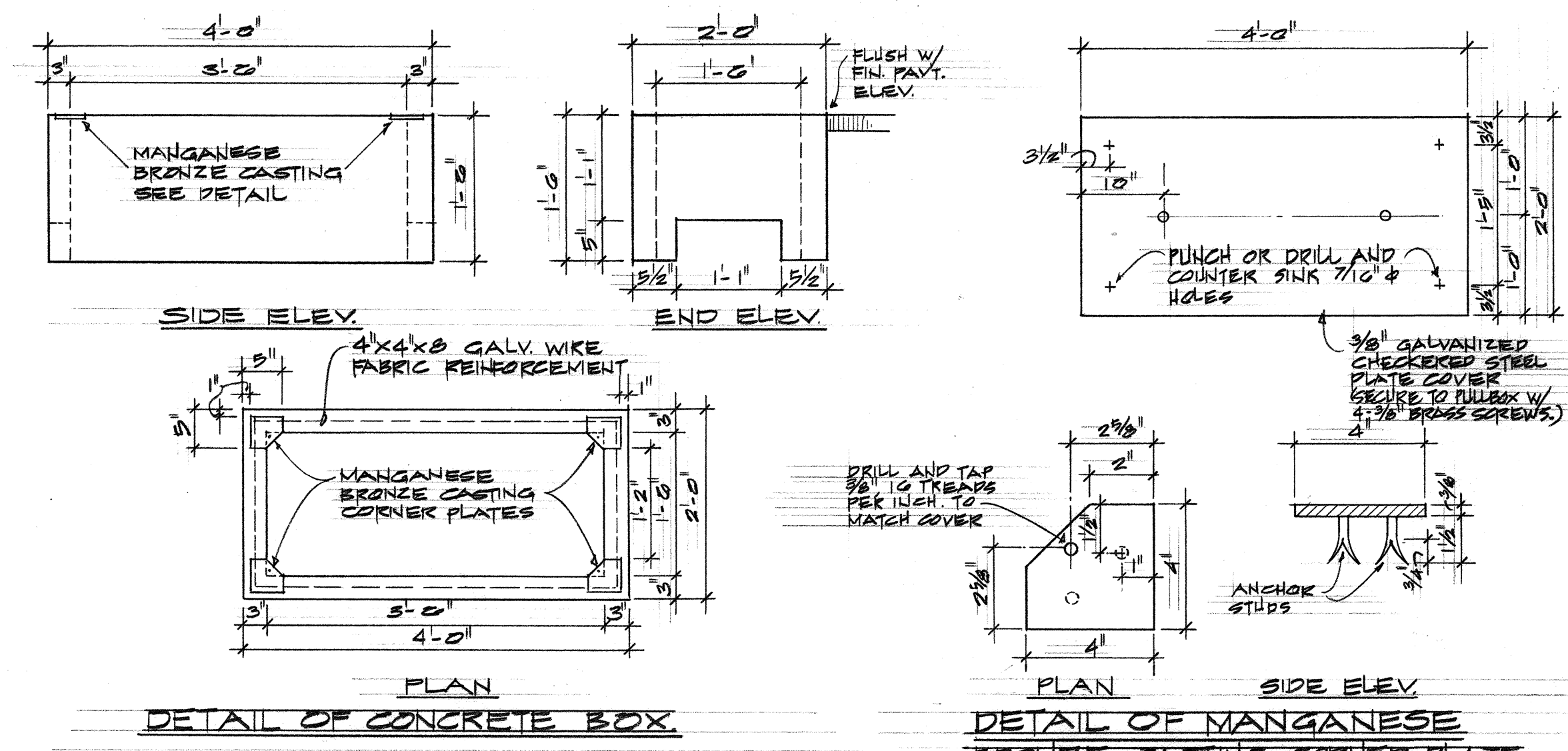
C
E-8
TYPICAL LIGHT STANDARD
LOCATION ALONG FARRINGTON
HIGHWAY
SCALE: 1/4" = 1'-0"



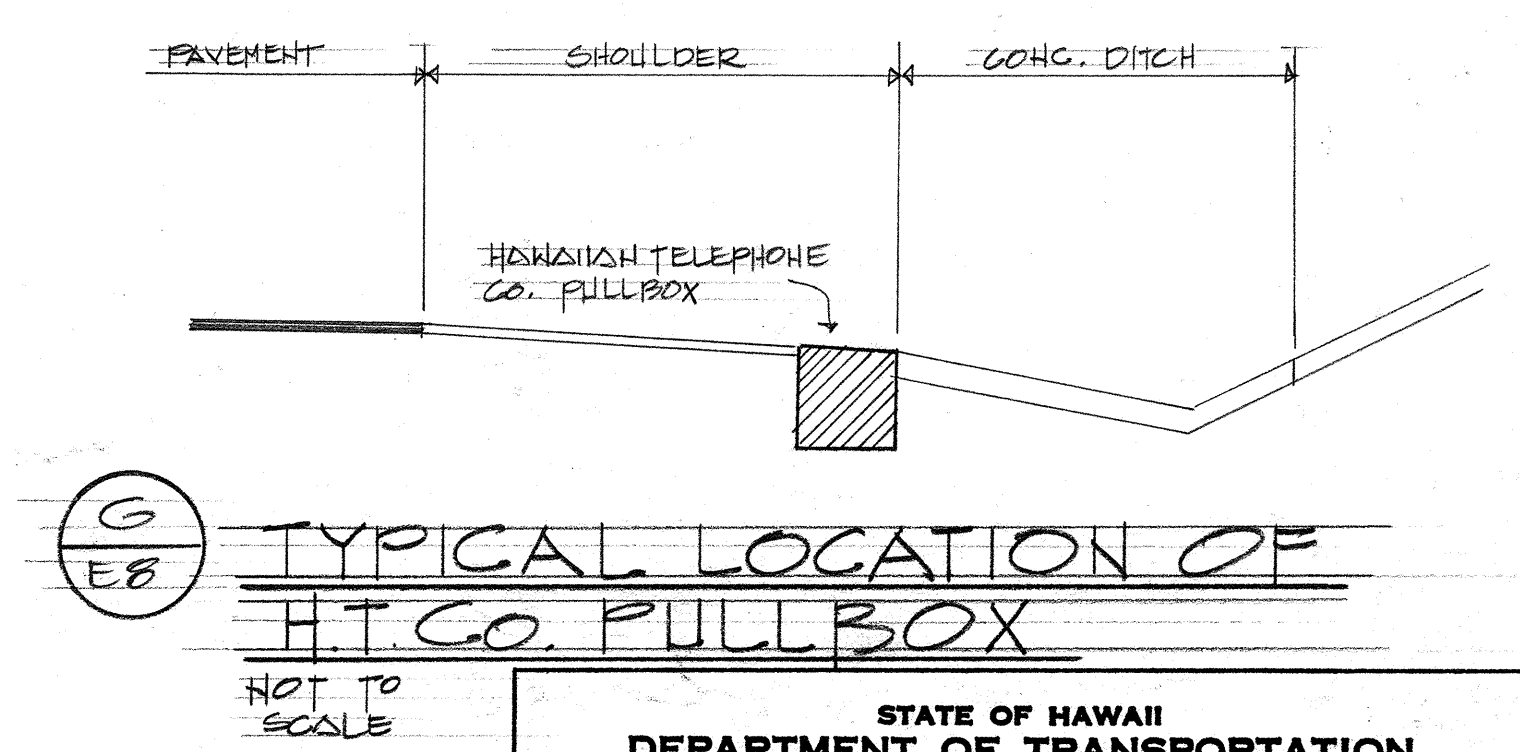
D
E-8
TYPICAL LIGHT STANDARD
LOCATION ALONG WAIAWA RD
& NAVY DRUM STORAGE ROAD
SCALE: 1/4" = 1'-0"



E
E-8
DETAIL-TYPICAL LIGHT
STANDARD INSTALLATION
NOT TO SCALE



F
E-8
TYPICAL HIGHWAY LIGHTING HANDHOLE-TYPE D
NOT TO SCALE



G
E-8
TYPICAL LOCATION OF
H.T.C. PULLBOX
NOT TO SCALE

APPROVED:

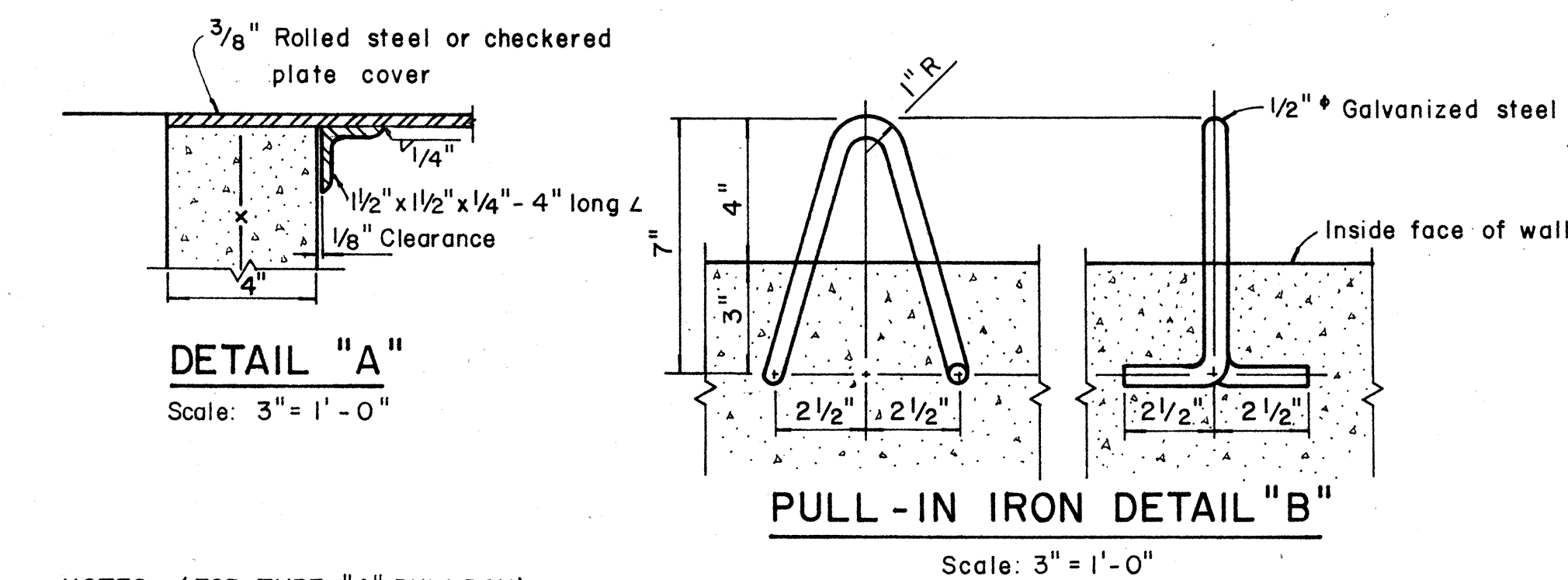
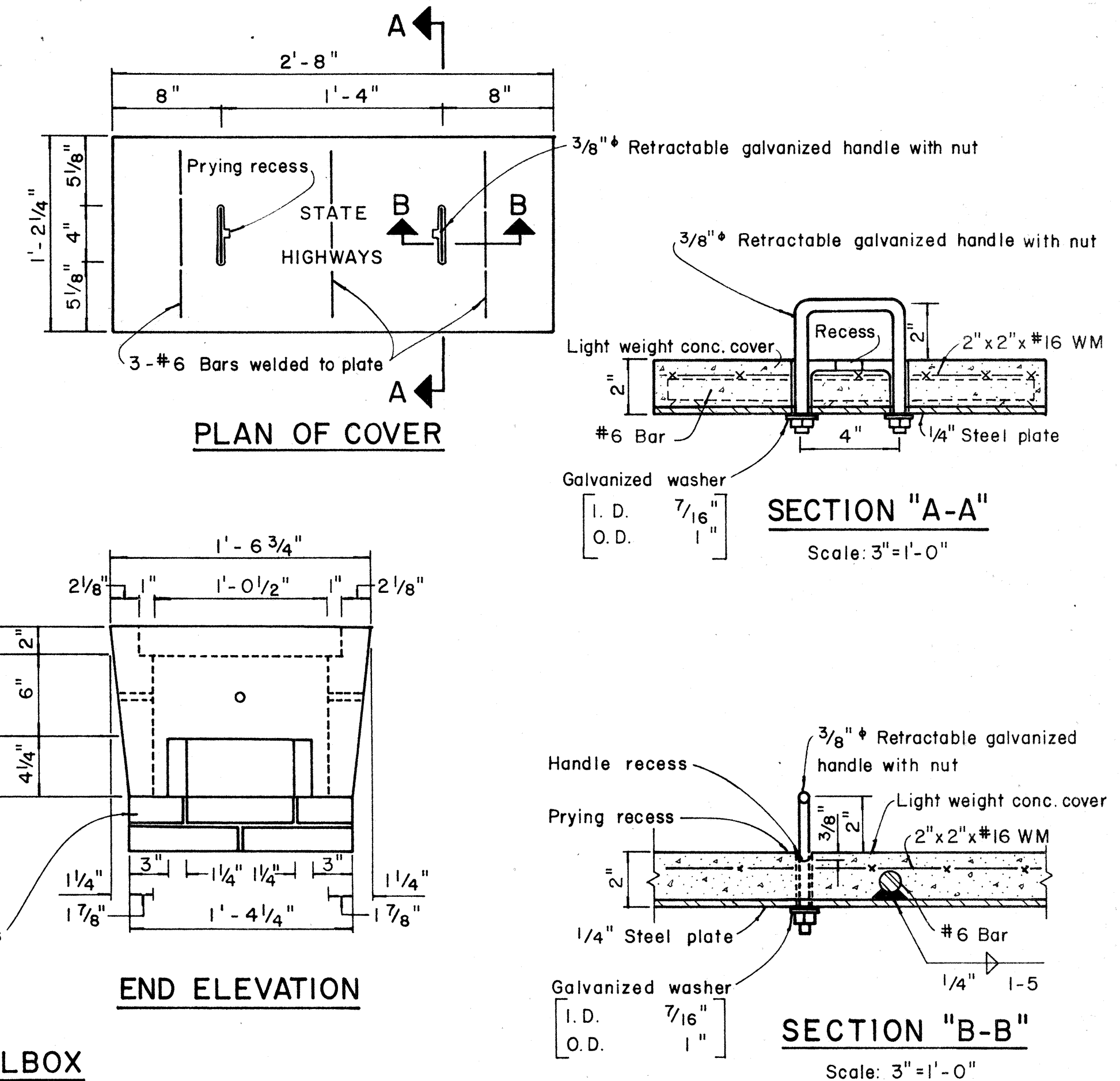
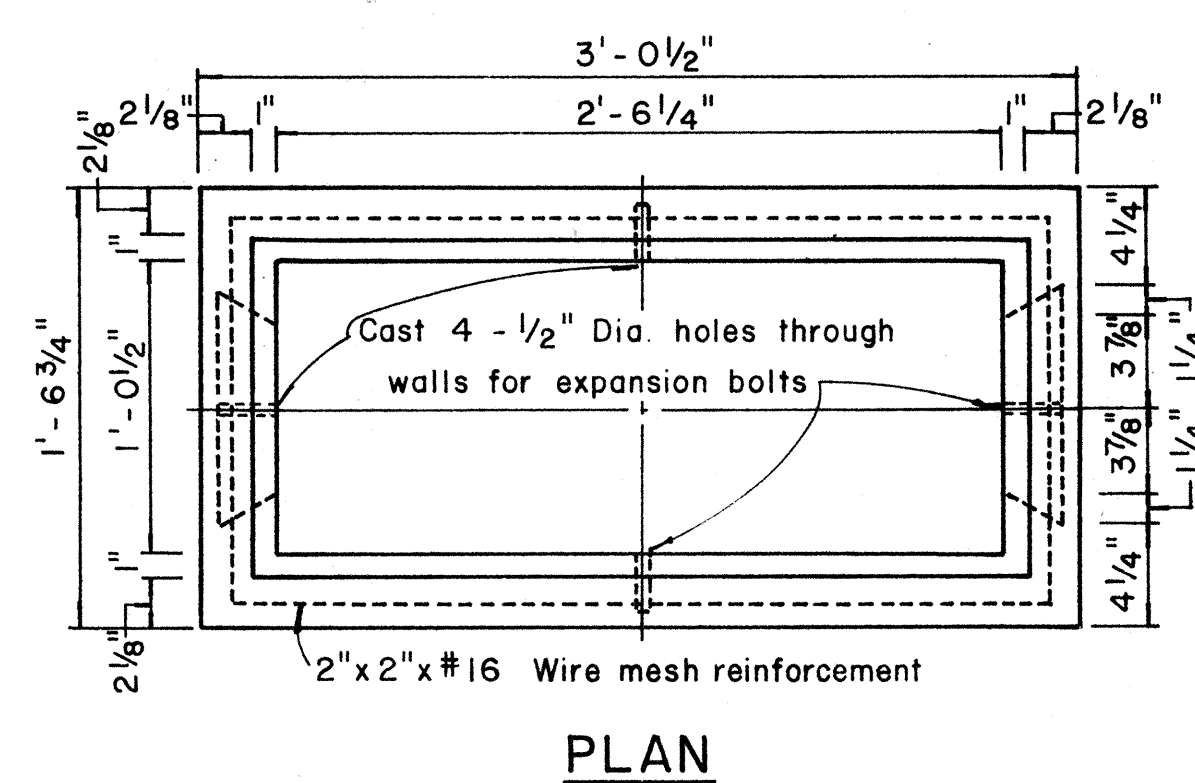
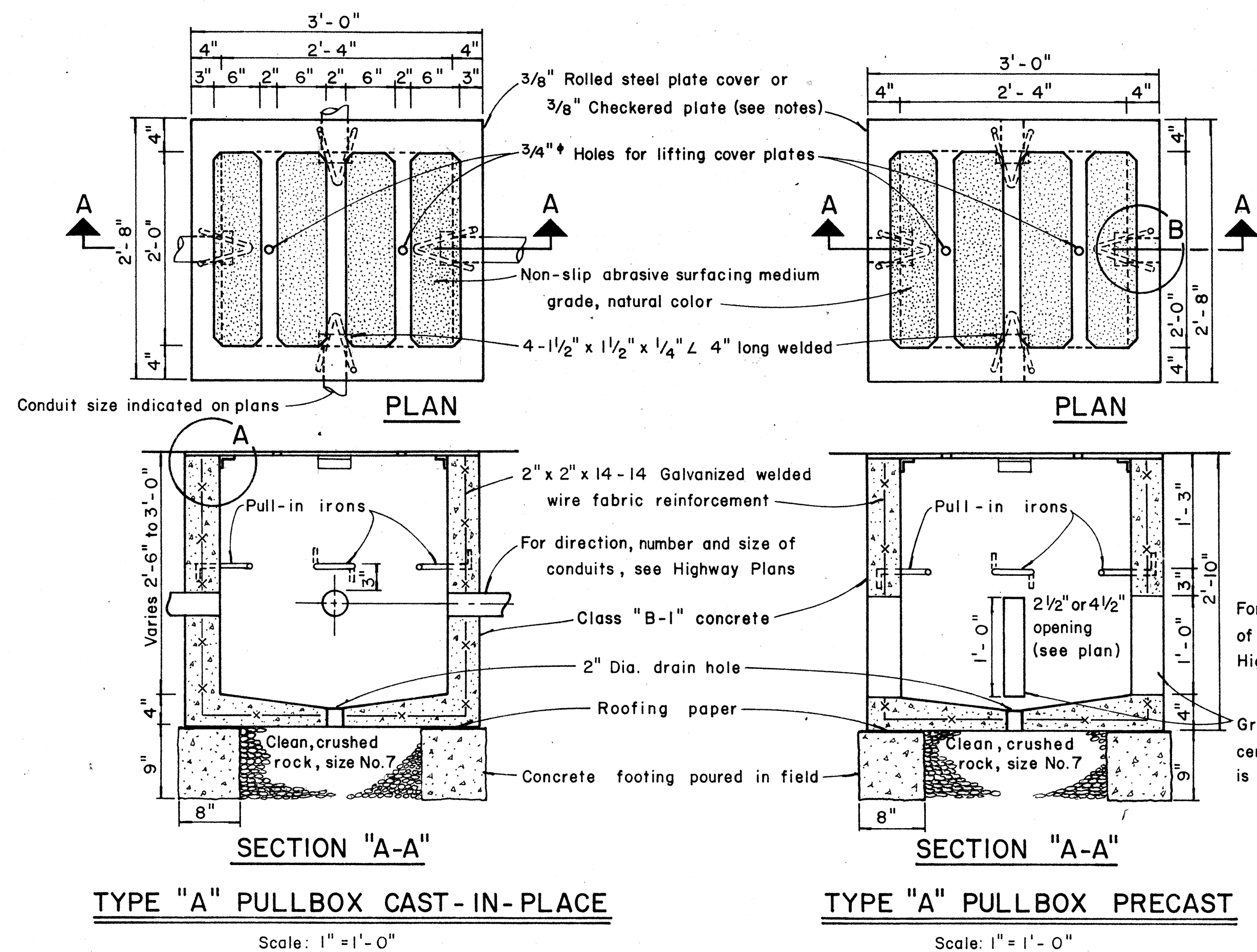
W. Henderson 8-14-68
HAWAIIAN ELECTRIC Co., Inc. DATE

W. Henderson 8-14-68
HAWAIIAN TELEPHONE Co. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
WAIAWA INTERCHANGE
UNIT I
ELECTRICAL DUCT SECTIONS
AND DETAILS
F.A.T. PROJ. NO. I-H-1(40):5
SCALE: AS SHOWN DATE: AUG. 1968
SHEET No. 48 OF 116 SHEETS

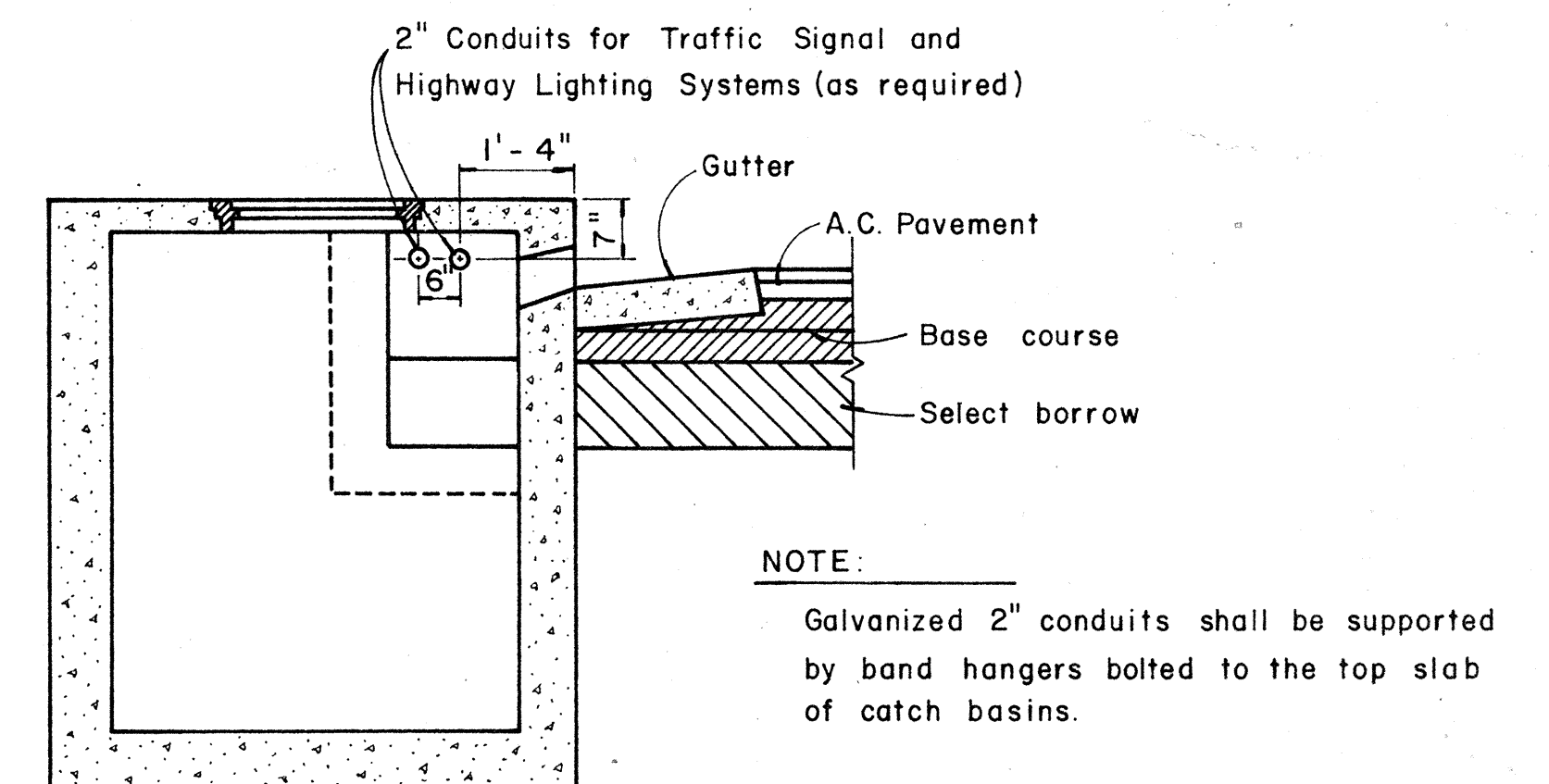
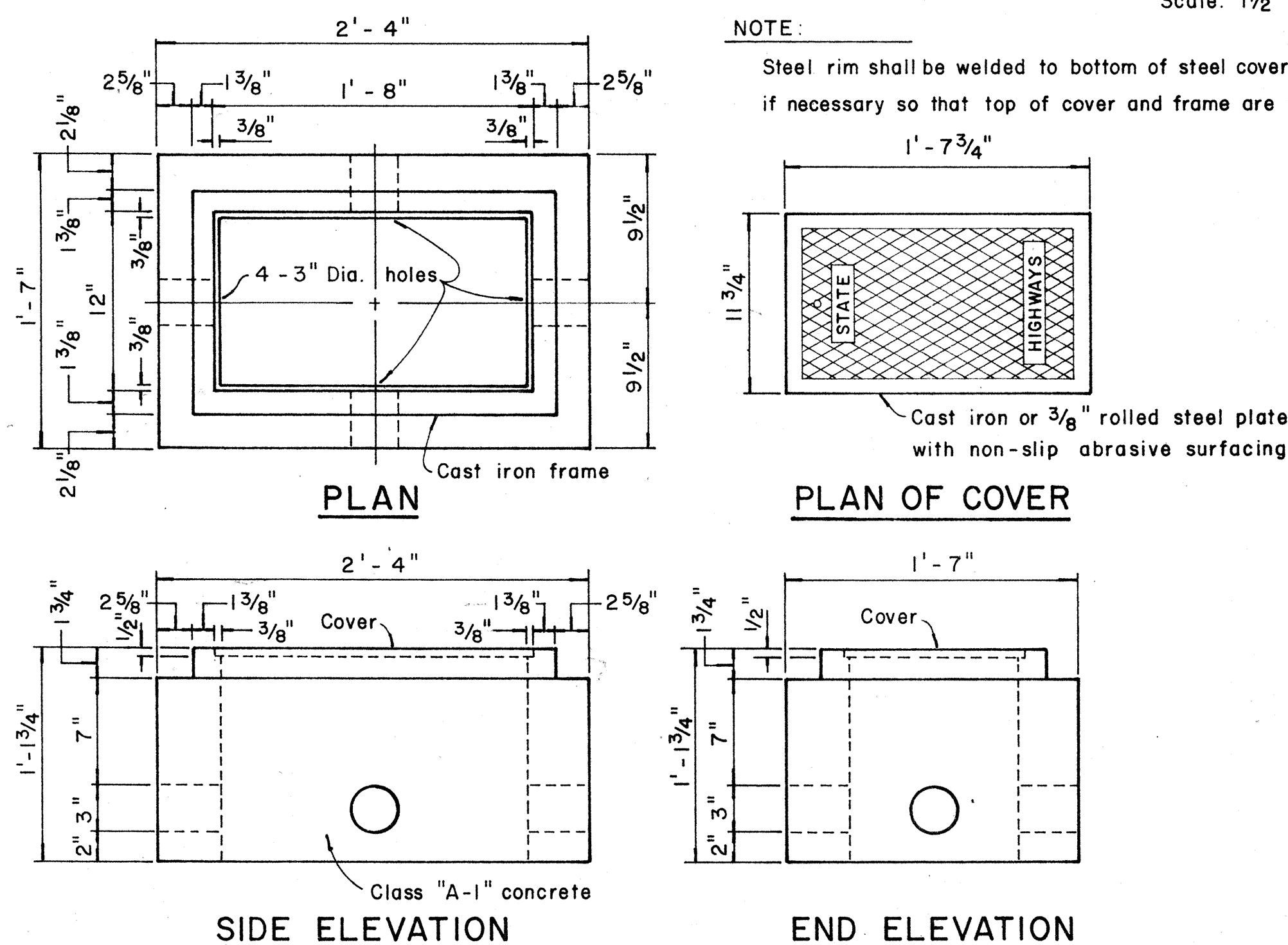
DATE: _____
DESIGNED BY: _____
CHECKED BY: _____
NOTED BY: _____
ORIGINAL PLAN: _____
NOTE BOOK: _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-41-1(48)9	1968	49	133



- NOTES: (FOR TYPE "A" PULLBOX)

1. $\frac{3}{8}$ " Rolled steel plate cover with non-slip abrasive surfacing medium grade, natural color shall be used on all pullboxes located on sidewalk areas where pedestrians are walking.
2. $\frac{3}{8}$ " Checkered plate cover shall be used on all pullboxes located in median areas and other locations where there are no pedestrians walking.
3. Pull irons shall be placed opposite each conduit slot.
4. Covers on all pullboxes located in sidewalk areas shall be set flush with the concrete sidewalk.
5. Each pullbox shall have a pair of pull irons opposite each other for lifting purposes.



TYPICAL SECTION SHOWING CONDUITS
PASSING THROUGH CATCH BASINS

Scale: $\frac{1}{2}'' = 1' - 0''$

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

PULLBOXES

Scale as noted

Date: AUG. 1968

SHEET No. E9 OF E16 SHEETS