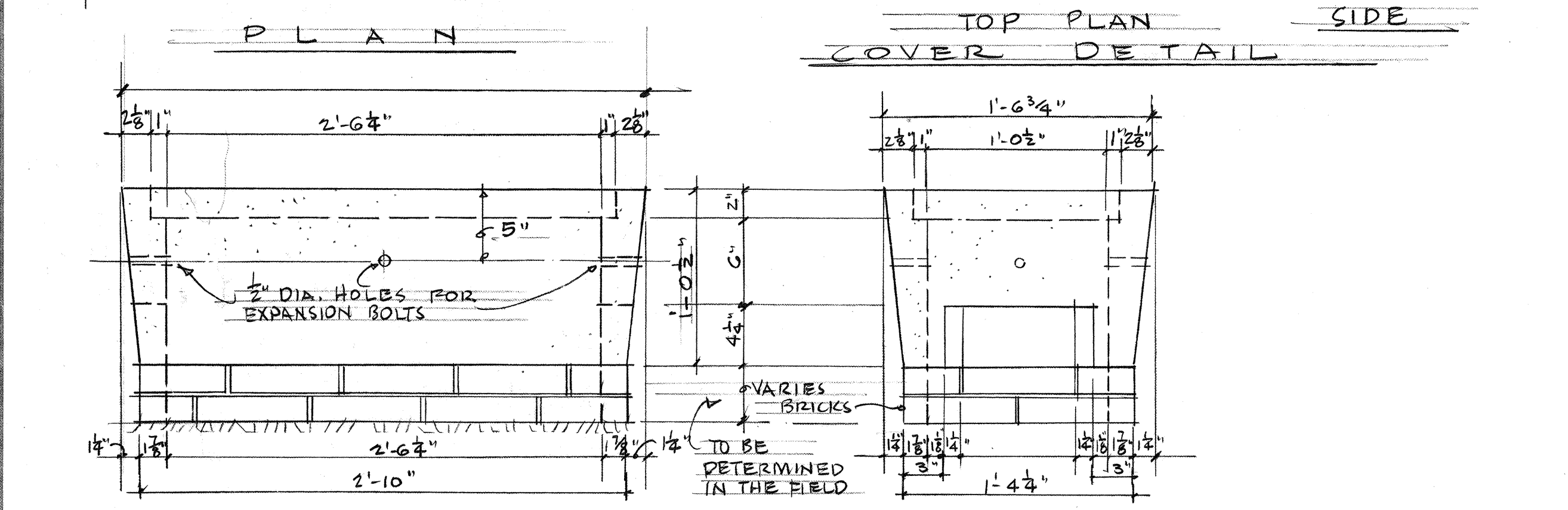
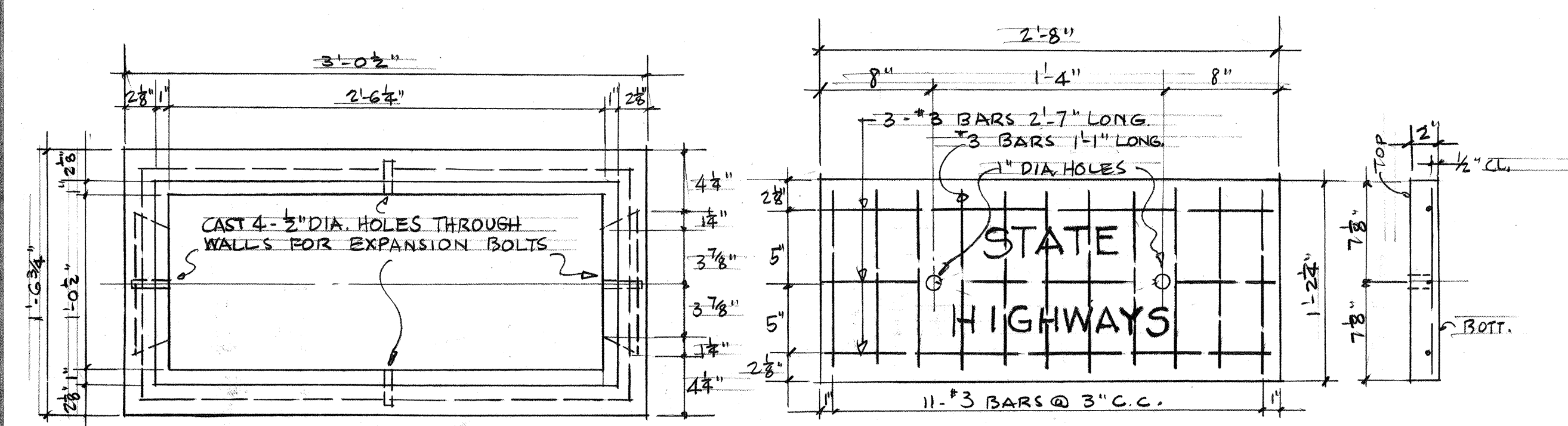
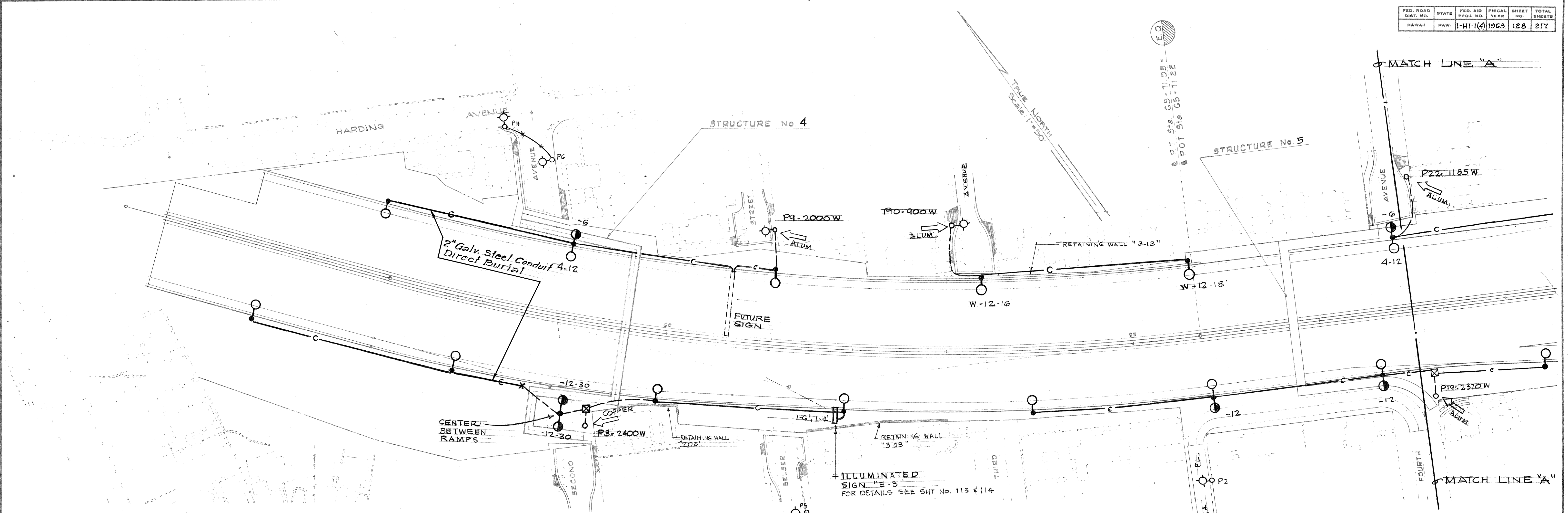
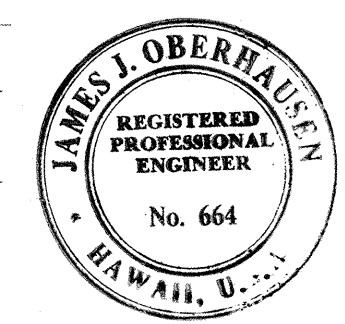


- LEGEND**
- 11,000 LUMEN LUMINAIRE, 285 WATTS.
 - 20,500 LUMEN LUMINAIRE, 450 WATTS.
 - 72" FLUORESCENT H.O. UNDERPASS LUMINAIRE, 130 WATTS.
 - METAL LAMP POST.
 - JOINT WOOD POLE. (BY OTHERS)
 - 2-6' ILLUMINATED SIGN. 2-6' INDICATES 2-6' SIGN LUMINAIRES.
 - ☒ PULL BOX TYPE "C"
 - X DUCT MARKER.
 - c- DIRECT BURIAL CABLE, 3C, 600V.
#8 AWG. STRANDED, RR (2C TO LAST LIGHT.)
 - - - CONDUIT WITH CABLE, 3C, 600V.
#8 AWG. STRANDED, RR (2C TO LAST LIGHT.)
 - STATE RISER ON WOOD POLE (POLE BY OTHERS) FOR H.E. CO. 120/240V.
P3-2400W MULTIPLE SERVICE. "COPPER" OR "ALUM." INDICATES TYPE OF H.E.CO. SECONDARY.
- AT EACH LAMP POST, WHERE FIRST DESIGNATION IS A NUMERAL, IT INDICATES DISTANCE FROM EDGE OF GUTTER TO FACE OF LAMP POST. WHERE FIRST DESIGNATION IS A LETTER - "W" INDICATES LAMP POST IS ON WALL OR BRIDGE RAIL AND "C" INDICATES LAMP POST IS IMMEDIATELY BEHIND CURB.
- SECOND DESIGNATION NUMERAL INDICATES MAST ARM LENGTH.
- THIRD DESIGNATION NUMERAL INDICATES NOMINAL HEIGHT FROM POLE BASE TO LIGHT CENTER. WHERE THERE IS NO DESIGNATION, IT INDICATES 4-12-30.
- WHERE THERE IS NO SECOND OR THIRD DESIGNATION, IT INDICATES -12-30.
- WHERE THERE IS NO THIRD DESIGNATION, IT INDICATES -30.
- WHERE LUMINAIRE IS ON WOOD POLE, SEE LAYOUT FOR MAST ARM INSTRUCTIONS.

GENERAL NOTES:

1. ALL UNDERGROUND WIRING IN AREAS SUBJECT TO VEHICULAR TRAFFIC SHALL BE IN CONCRETE ENCASED STEEL CONDUITS.

- 4000 LUMEN LUMINAIRE, RELOCATED, (SEE CROSSARM MOUNTING DETAIL) TO BE CONNECTED BY C.B.C. TO EXISTING CIRCUIT EXCEPT WHERE EXTENSION OF SERIES CIRCUIT BY CONTRACTOR IS INDICATED (SEE NEXT SYMBOL)
- *** 2 WIRE SERIES CIRCUIT, #6 AWG MEDIUM HARD DRAWN SOLID COPPER, WEATHER PROOF.

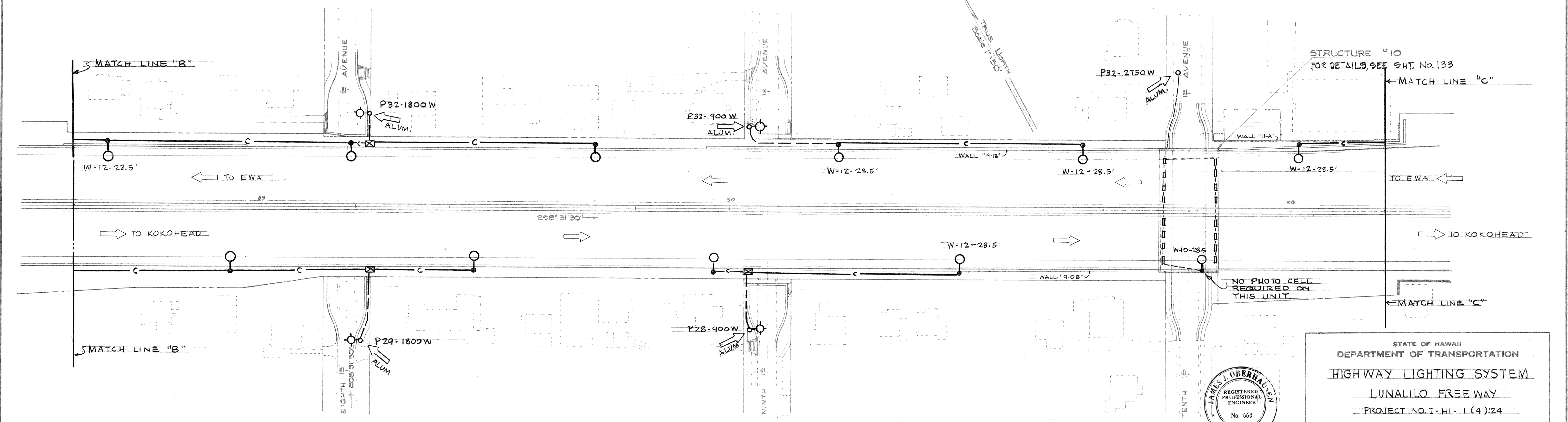
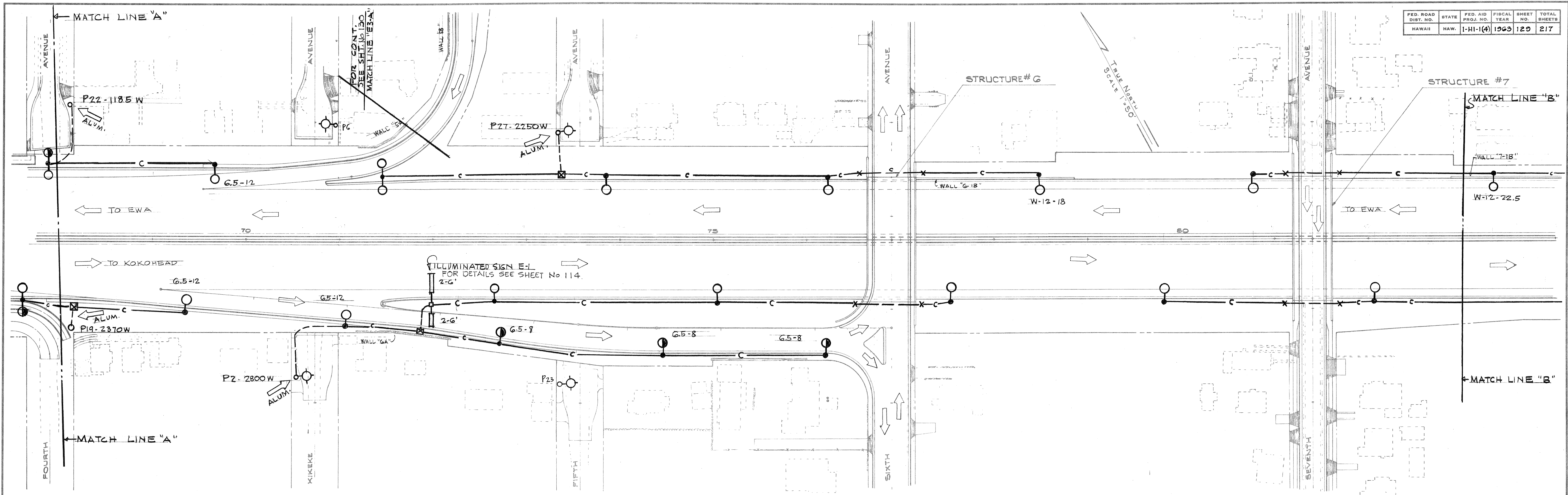


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAY LIGHTING SYSTEM
LUALABA FREEWAY
PROJECT NO. I-HI-1(4):24

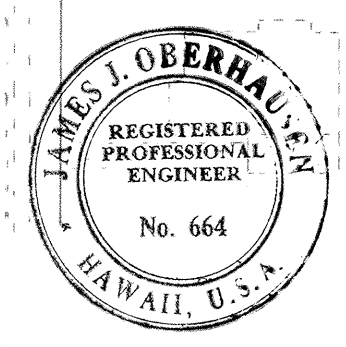
SCALE: 1" = 50' DATE: _____

SHEET NO. OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1(4)	1963	129	217

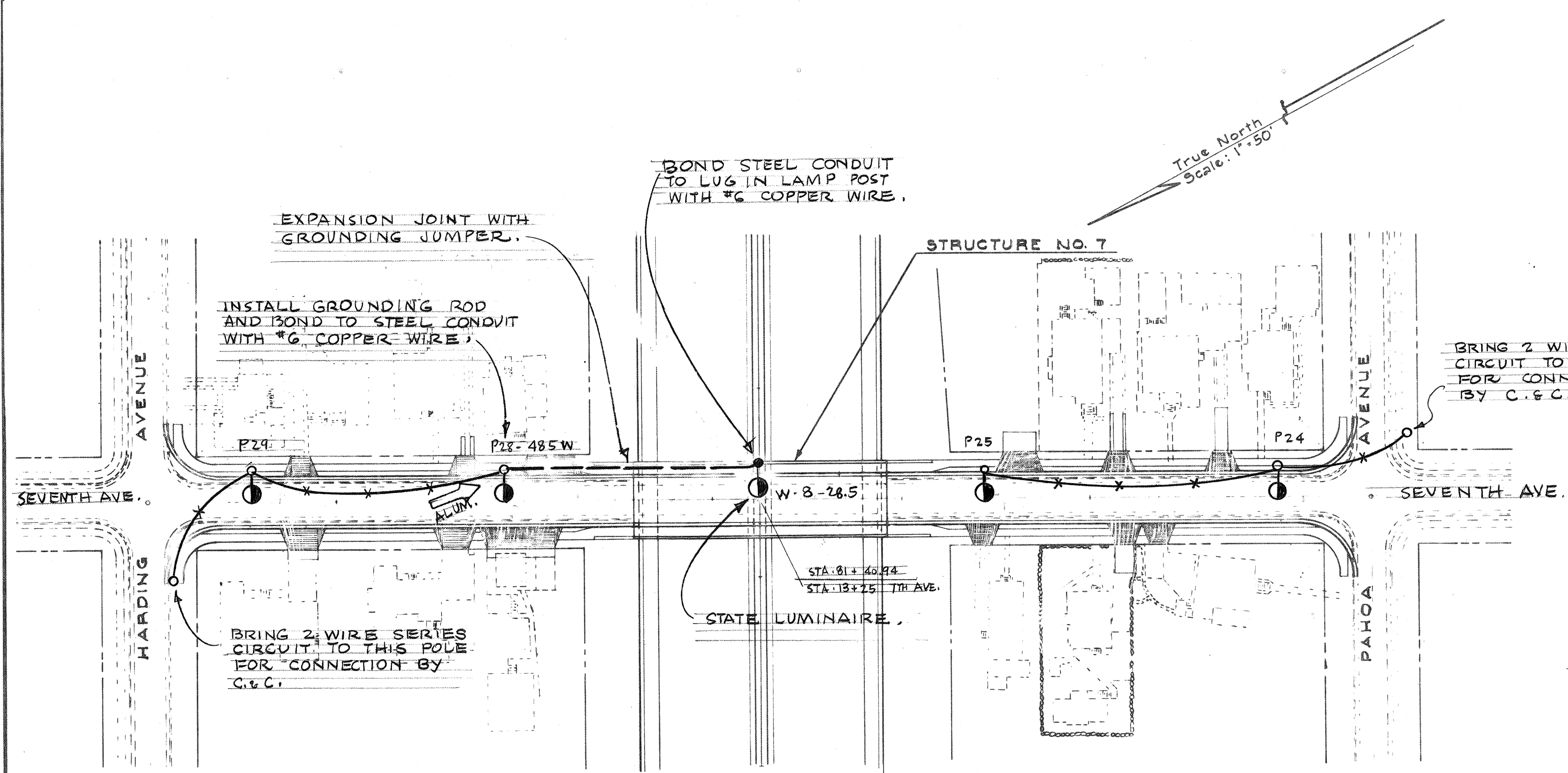


SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
QUANTITIES BY	
NOTED BY	
NO.	

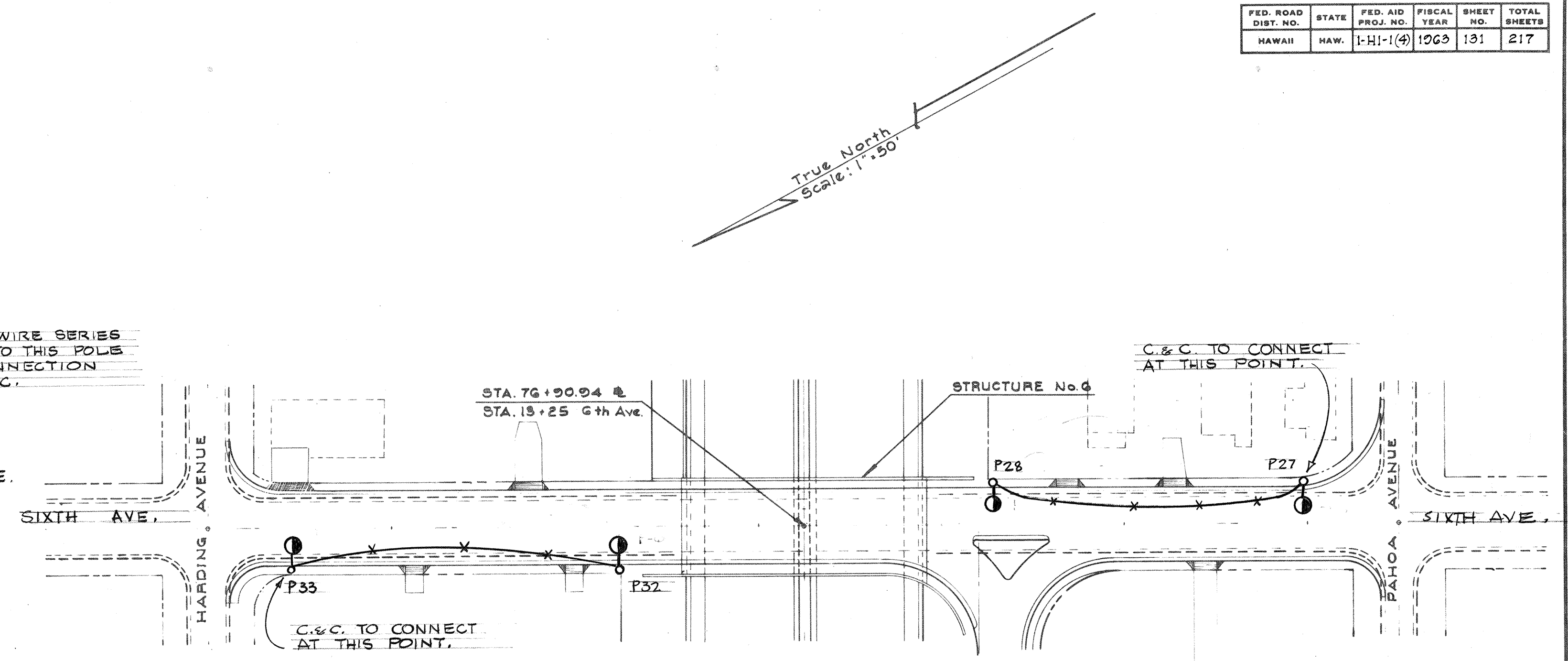


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAY LIGHTING SYSTEM
LUNALILO FREEWAY
PROJECT NO. 1-HI-1(4)24
SCALE: 1" = 50'
DATE: _____
SHEET NO. OF SHEETS

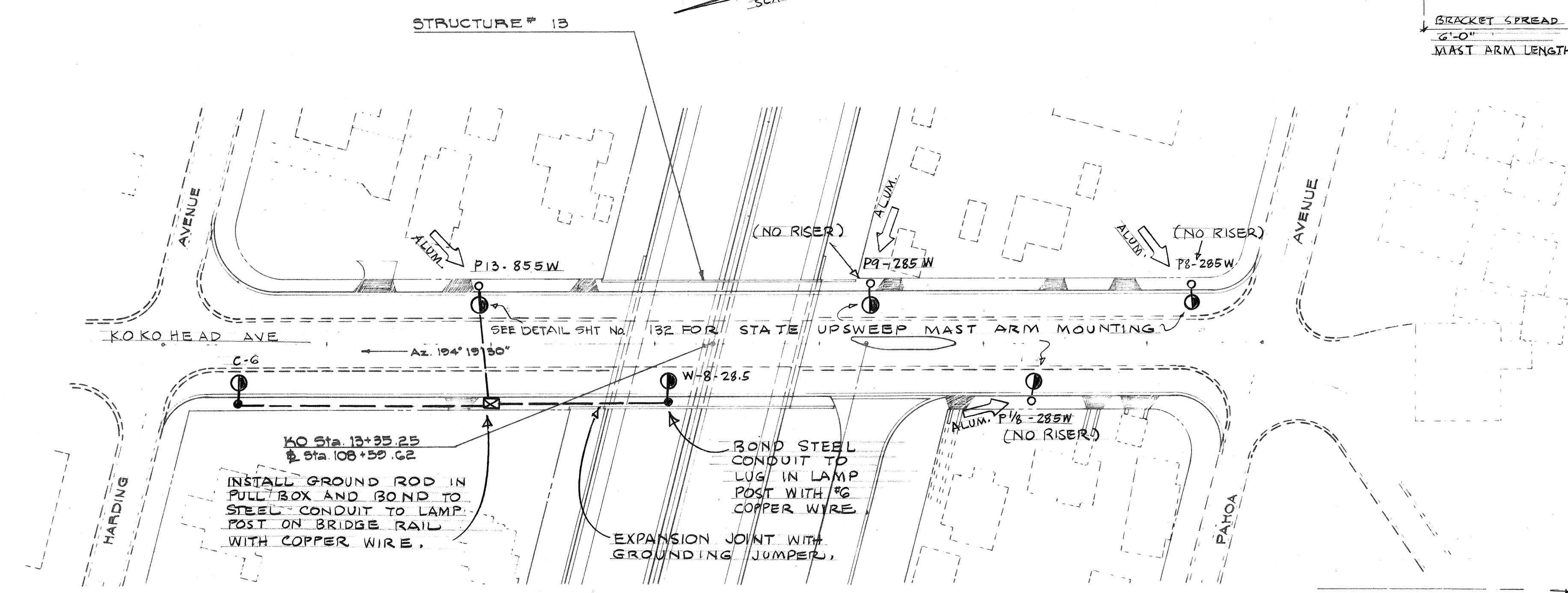
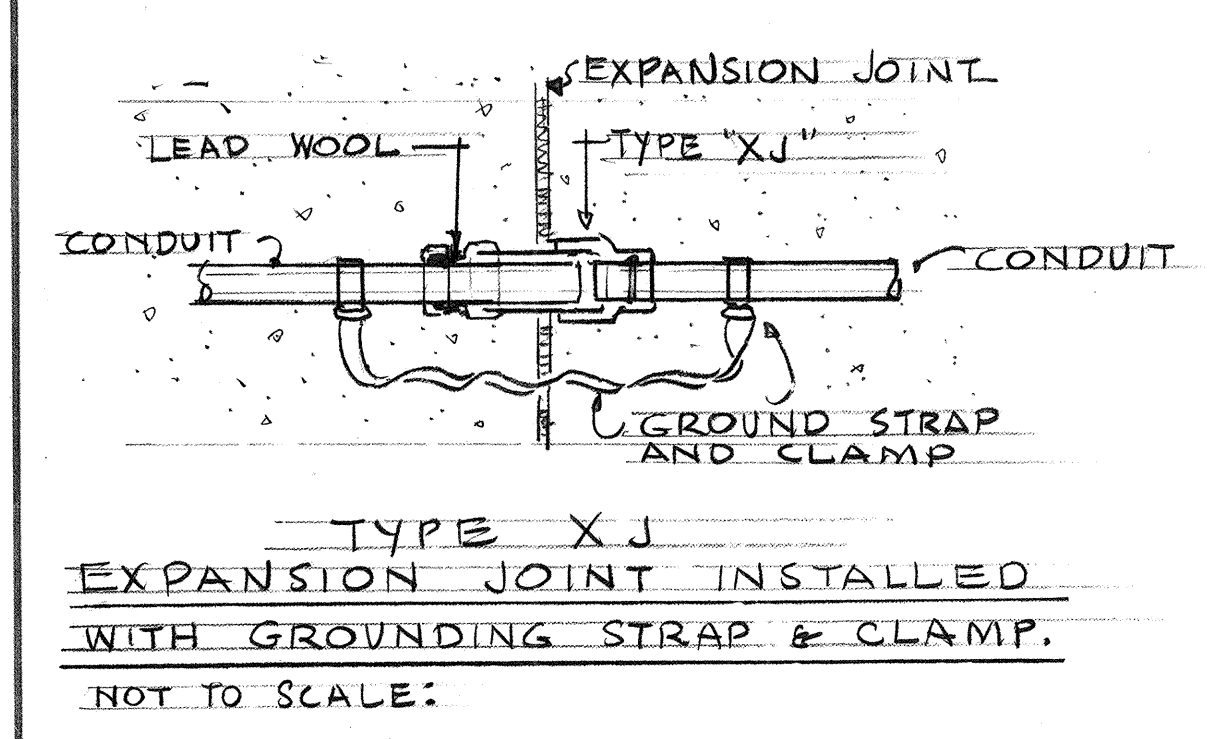
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1(4)	1963	131	217



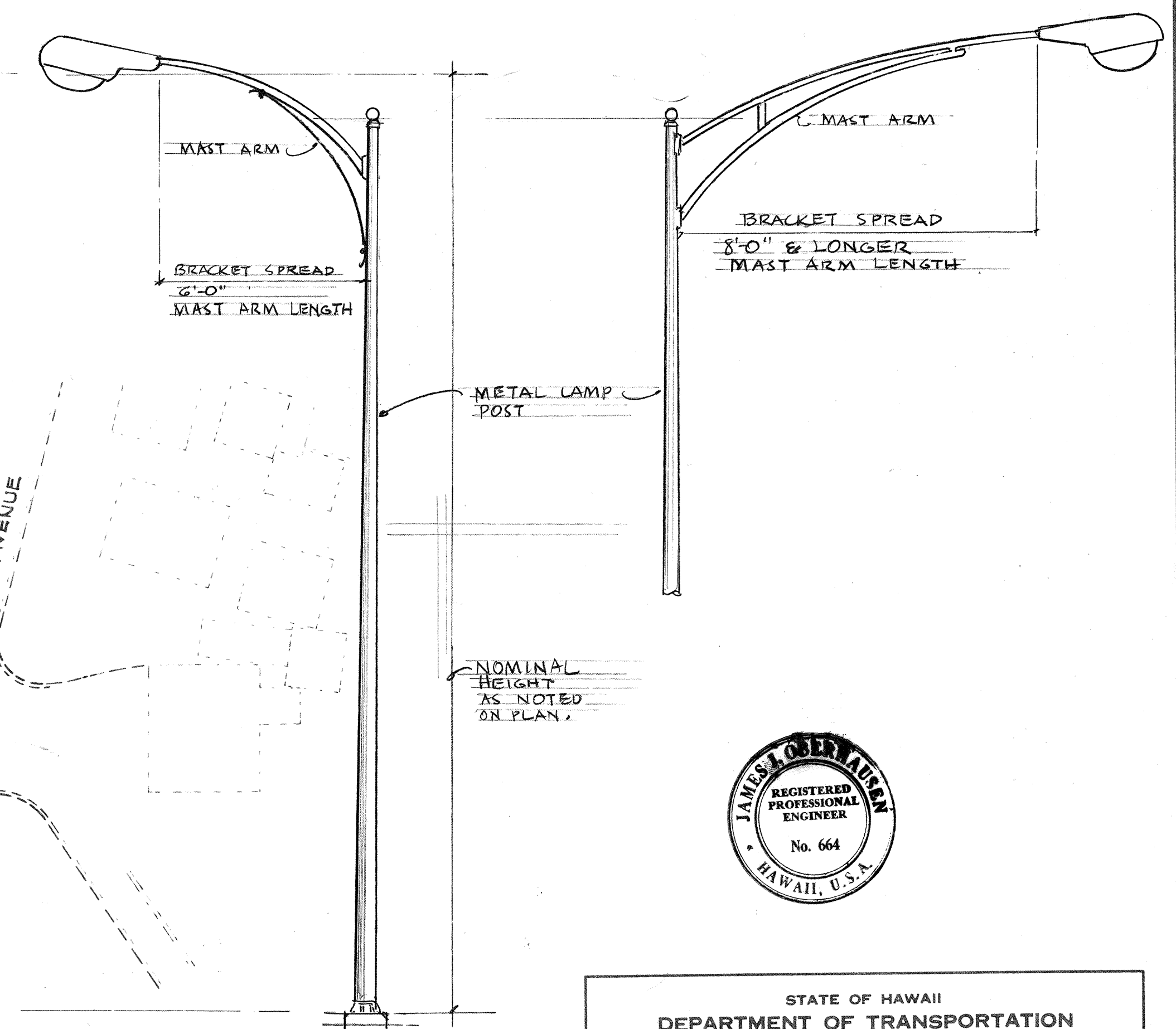
SEVENTH AVE. - STRUCTURE #7
 BETWEEN HARDING AVE. AND PAHOA AVE.
 SEE DETAIL FOR C & C CROSS ARM MOUNTING OF LUMINAIRE, SHEET No. 132



SIXTH AVE. - STRUCTURE NO. 6
 BETWEEN HARDING AVE. & PAHOA AVE.
 SEE DETAIL FOR C & C CROSS ARM MOUNTING OF LUMINAIRE, SHEET No. 132

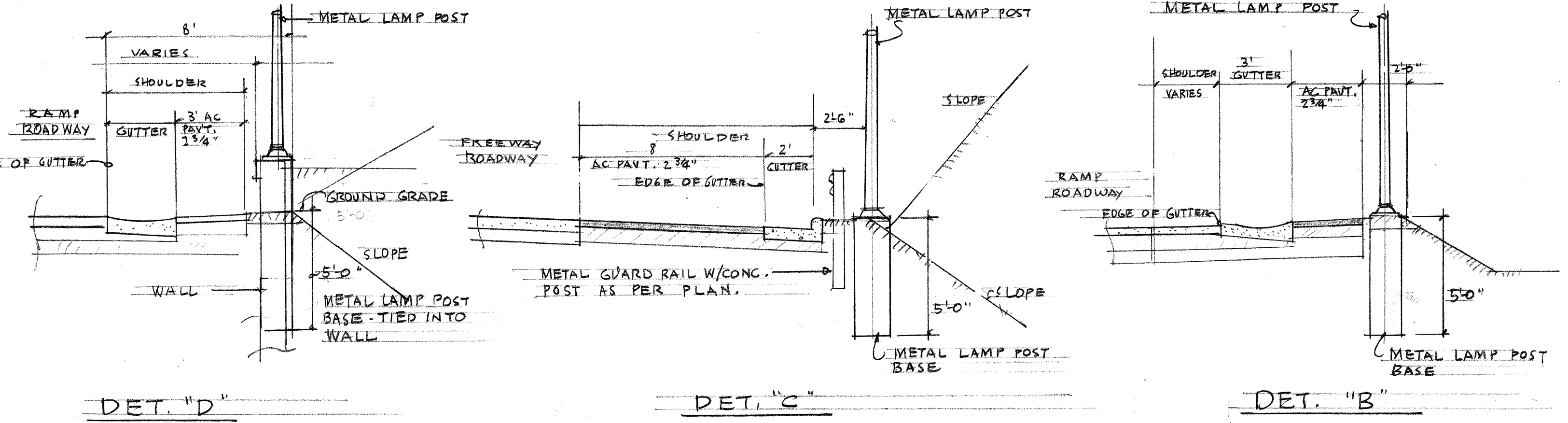


KOKO HEAD AVE. STRUCTURE #13
 BETWEEN HARDING AVE. & PAHOA AVE.



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAY LIGHTING SYSTEM
 LUNALILO FREEWAY
 PROJECT NO. I-HI-1(4):24
 SCALE: 1" = 50' DATE: _____
 SHEET NO. OF SHEETS

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



CONNECT GROUND WIRE
TO LUG IN LAMP POST.

FLUSH COUPLING

SQUARE NUTS UNDER BASE
FOR PLUMB LINE. SEPARATE
STEEL BOLTS FROM ALUMINUM
LAMP BOLTS WITH NEOPRENE
WASHERS

GRADE

3"

12"

2" GALV. STEEL CONDUIT
(SMOOTH BEND) DIRECTION
OF ENTRANCE TO FOUNDATION
TO SUIT ROUTING OF
STREET LIGHTING CIRCUIT.

1/2" GALV. STEEL CONDUIT
(SMOOTH BEND) DIRECTION
OF ENTRANCE TO FOUNDATION
TO SUIT ROUTING OF
STREET LIGHTING CIRCUIT.

4. 1" x 4" x 40" ANCHOR BOLTS
GALV. ON EXPOSED ENDS.
LOCATED TO SUIT LAMP
POST PROVIDED. BOND
ANCHOR RODS, 2" GALV.
CONDUIT WITH FOUNDATION
WITH 1/2" GALV. COPPER
GROUND WIRE, &
CONNECT TO GROUND
ROD. EXTEND INTO LAMP POST.

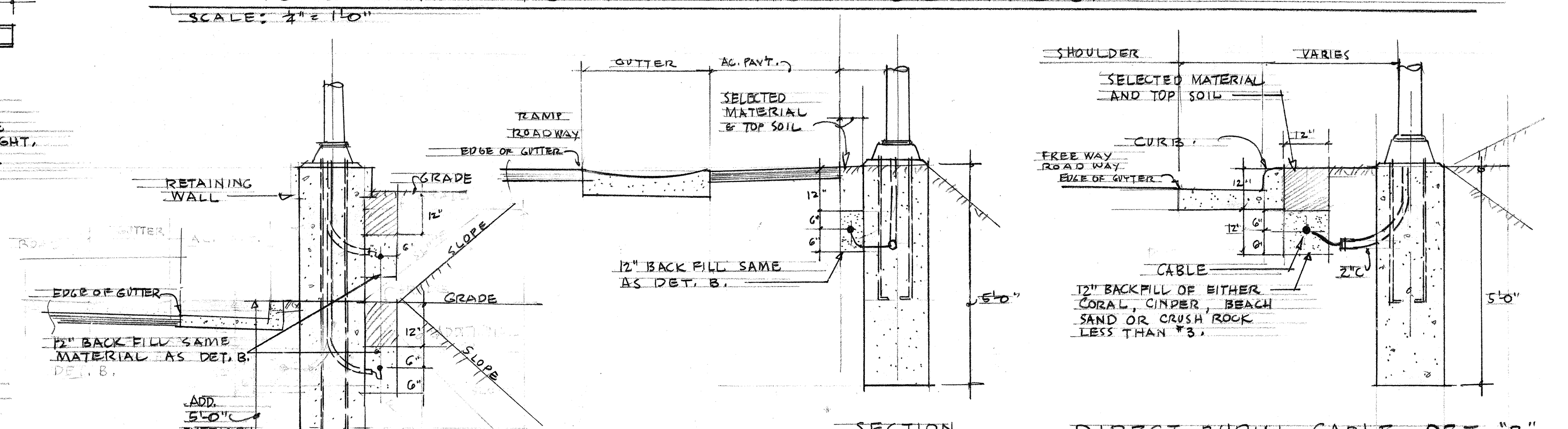
HOOKS

5'-0"

5/8" x 3/4" GALV. COPPER GRD. WIRE

REINFC. CONC. BASE WITH ONE
WRAP OF 6x6 1/2" WIRE

CLASS B-1 CONCRETE



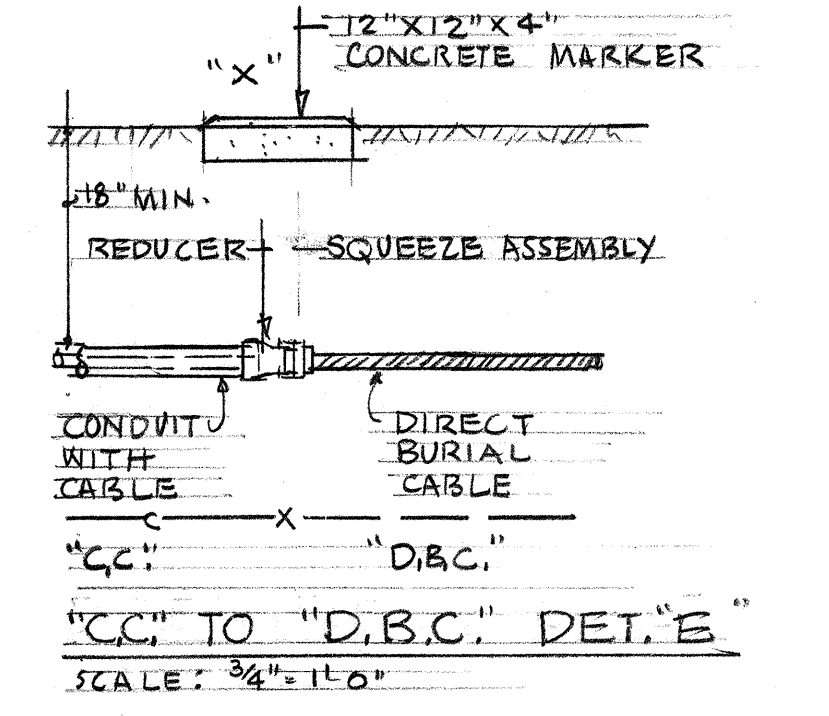
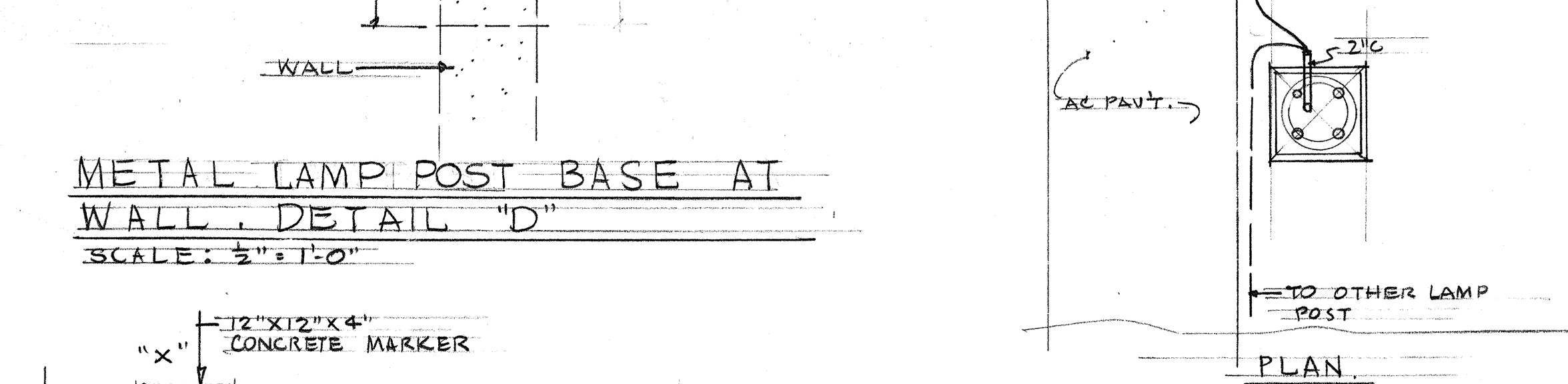
BASE DIMENSIONS MUST BE APPROVED
BY SUPPLIER OF METAL LAMP POST.

SECTION

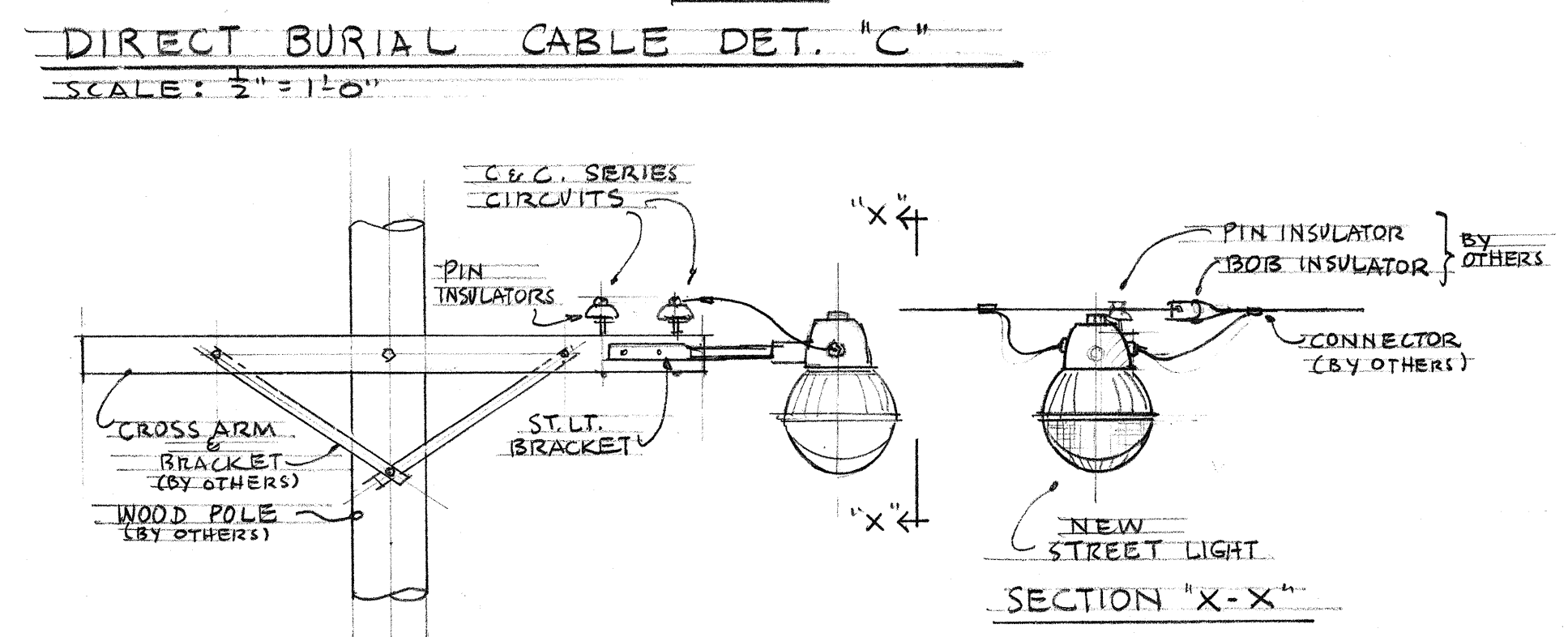
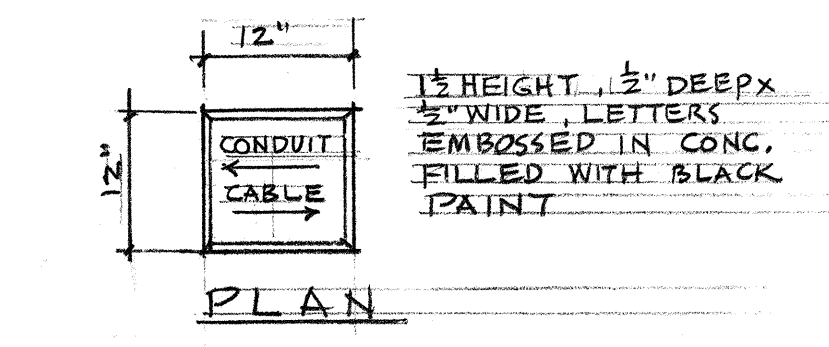
TYPICAL

METAL LAMP POST BASE DET. 'A'

SCALE: $\frac{3}{4}'' = 1'-0''$



"C.C." TO "D.B.C." DET. "E"
SCALE: $\frac{3}{4}" = 1'0"$



DIRECT BURIAL CABLE 2

2" C

1.5" STEEL CONDUIT

CONDITION #1

CONDITION #2

CONDITION #3

METAL LAMP POST BASE CONDITIONS. DETAIL "G"

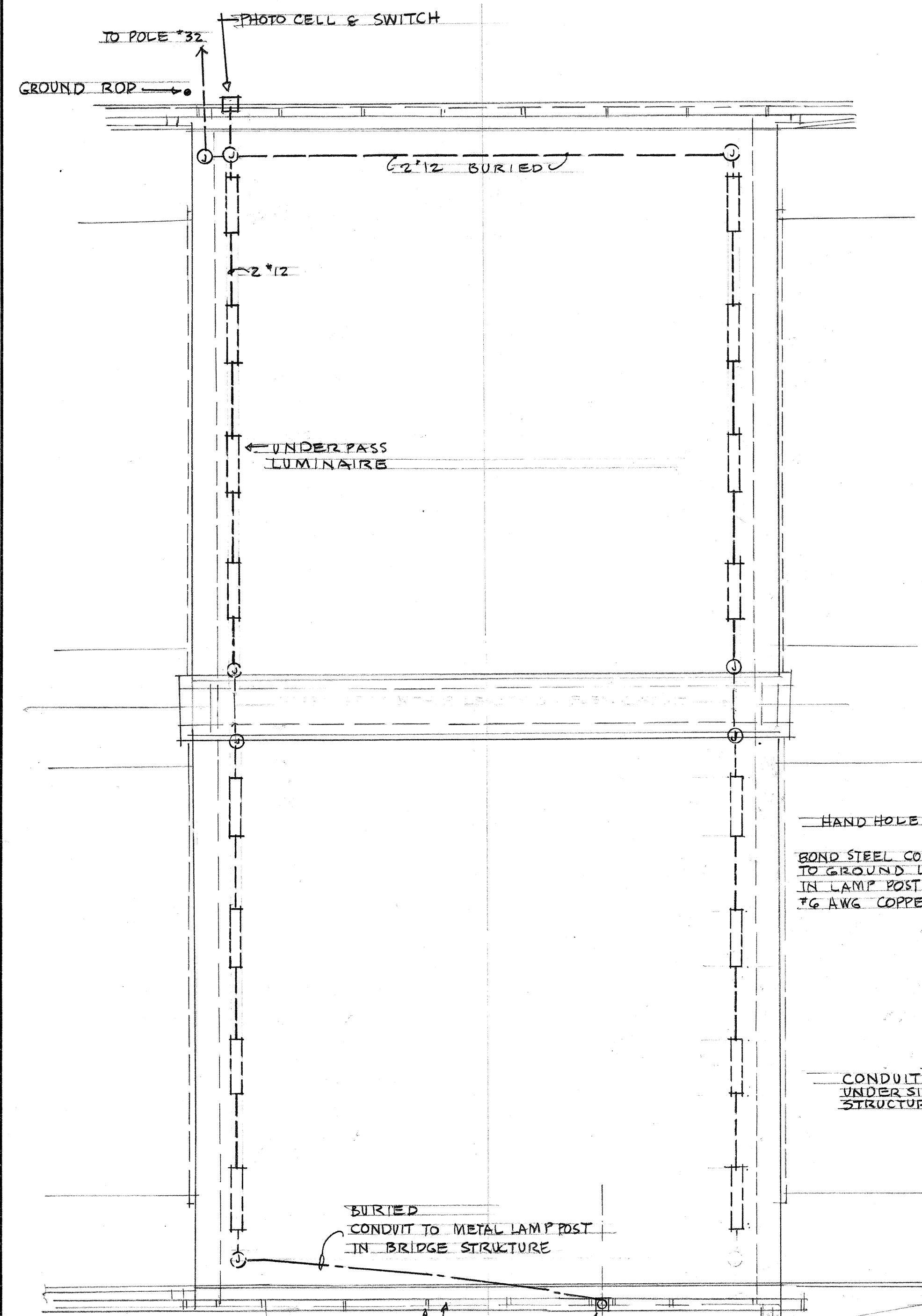
NOT TO SCALE: SEE LAYOUT PLAN FOR CONDUIT CONDITION.



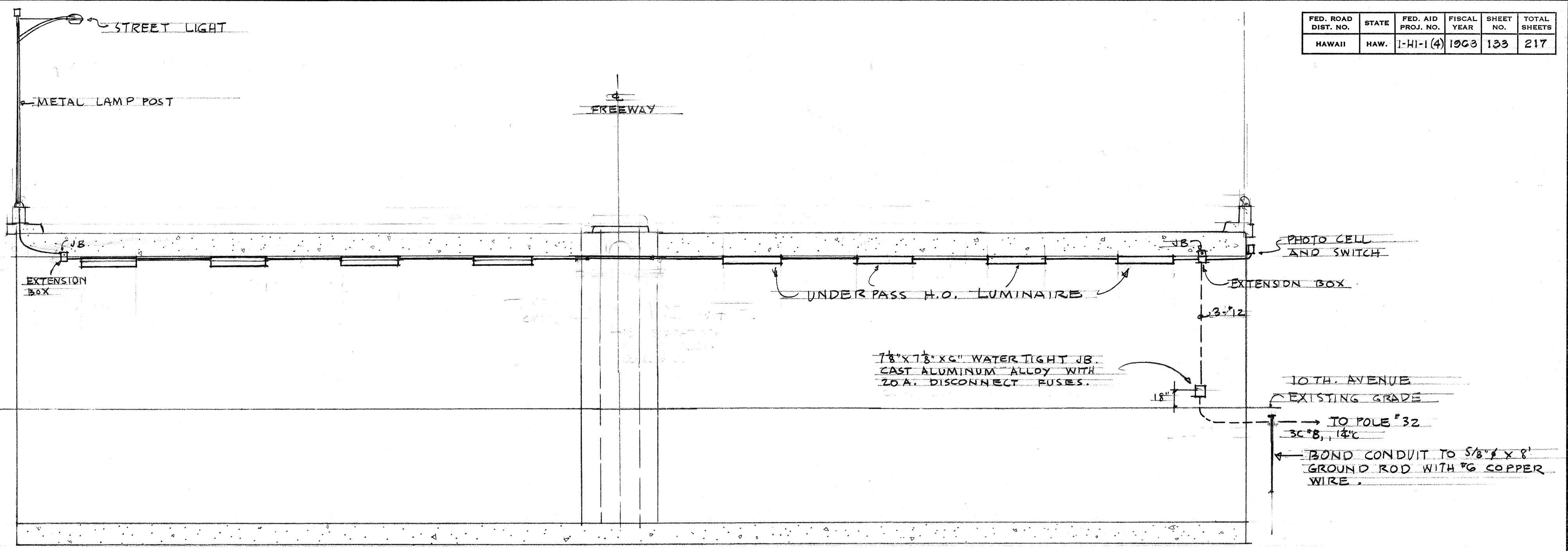
1 3 2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(4)	1963	133	217

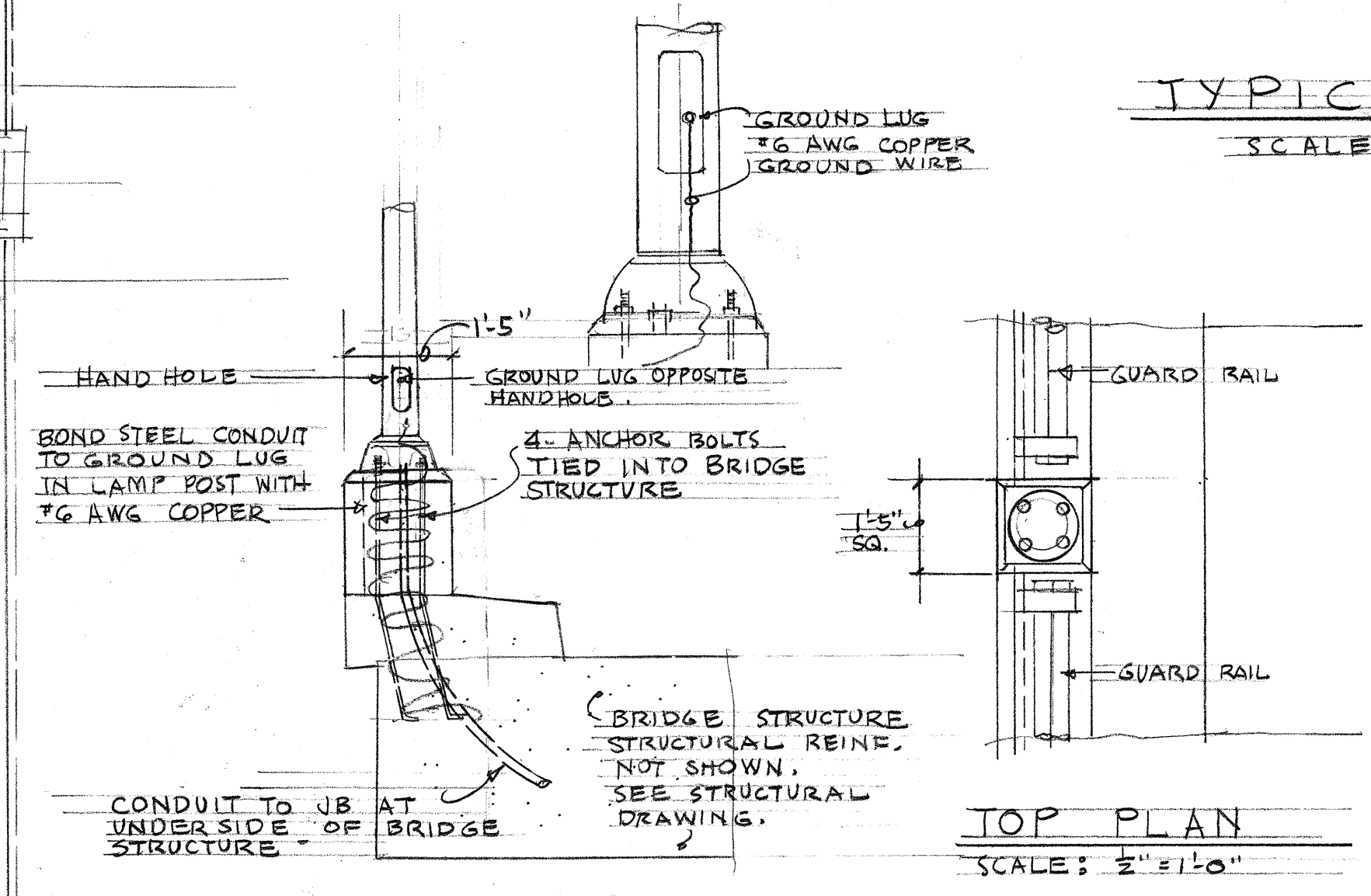
NOTE:
1. ALL --- DASH LINES INDICATES CONDUITS AT UNDER SIDE OF BRIDGE STRUCTURE #10, 3/4" STEEL WHERE BURIED, 3/4" ALUMINUM WHERE EXPOSED.



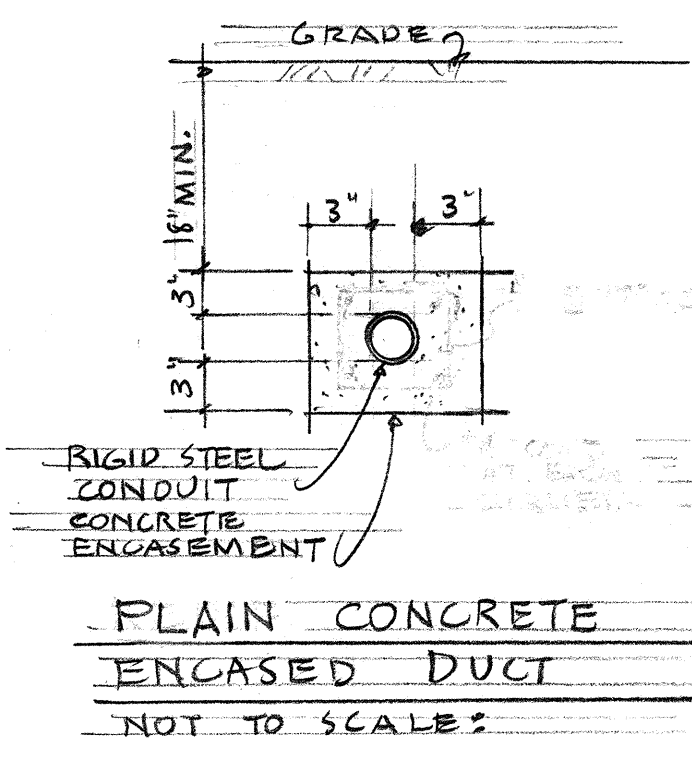
STRUCTURE #10
LIGHTING PLAN
SCALE: 1" = 10'



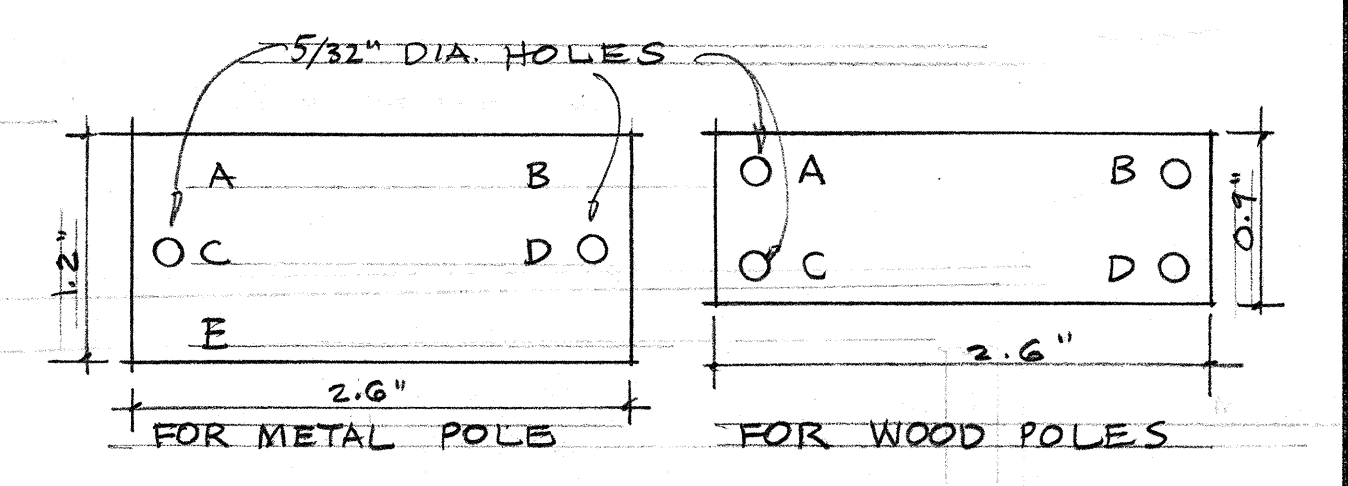
TYPICAL CROSS SECTION
SCALE: 1/8" = 1'-0"



SECTION
SCALE: 1/2" = 1'-0"
METAL LAMP POST AT BRIDGE STRUCTURE #10



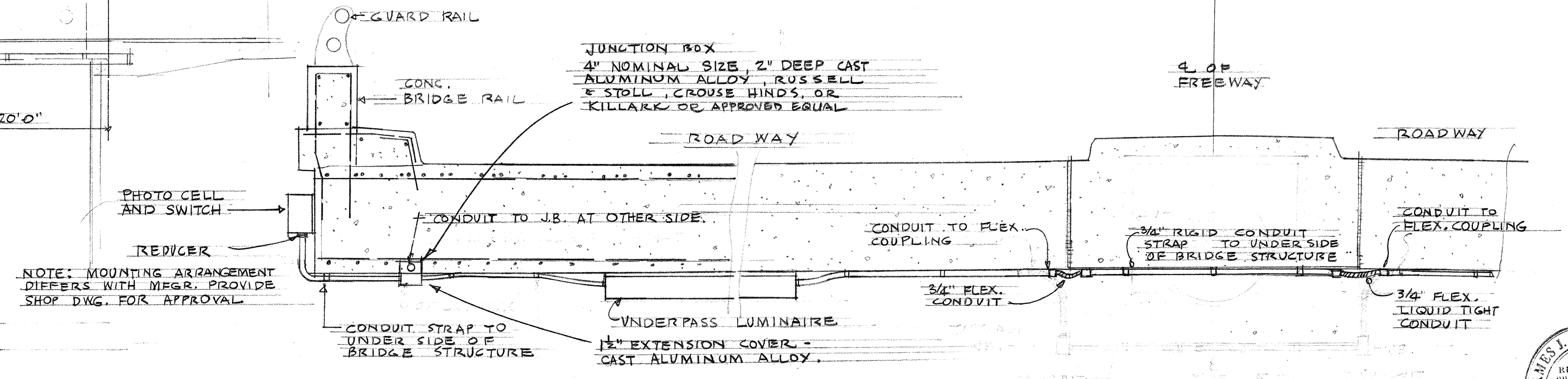
TOP PLAN
SCALE: 1/2" = 1'-0"



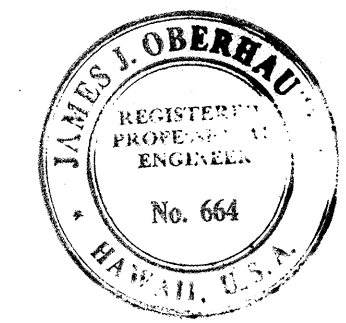
LEGEND:
A = CONTRACT NUMBER, OBTAIN FROM STATE OR HAWAIIAN ELECTRIC CO. LTD.
B = LIGHT NUMBER, FROM CONTRACT DRAWINGS, STATE OR HAWAIIAN ELECTRIC CO. LTD.
C = LAMP DATA, SEE BELOW.
D = REFRACTOR DATA, USE ROMAN NUMERAL "IES" TYPE AS INDICATED ON DRAWING OR IN SPECIFICATIONS I - V.
E = POST NUMBER, OBTAIN FROM STATE OR HAWAIIAN ELECTRIC CO. LTD.

NOTES:
1. MAKE FROM LAMINATED "GRAVOFLEX" BLACK ON WHITE.
2. ATTACH TO ALUMINUM POSTS WITH NO.7 ALUMINUM DRIVE SCREWS. ATTACH TO STEEL POSTS WITH NO.7 CARB. PLATED DRIVE SCREWS. NO.24 DRILL HOLES IN POST.
3. ATTACH TO WOOD POLES WITH 4D ALUMINUM NAILS.
4. LETTERS NO.5 REDUCTION, 1/5" ENGRAVED OR STENCILED.
5. ATTACH TO ALL POLES WITH STATE MULTIPLE SYSTEM LUMINAIRES LAMP DATA CODE - H250 (250 WATT) OR H400 (400 WATT). IF POST IS DOUBLE BRACKET, CODE SHALL INDICATE NUMBER AND TYPE OF LUMINAIRES, I.E., 2-H250 (TWO 250 WATT) OR 2-H400 (TWO 400 WATT)

MULTIPLE STREET LIGHTING IDENTIFICATION TAG.



TYPICAL DETAIL SHOWING UNDERPASS LIGHTING H.O. LUMINAIRE
SCALE: 1/2" = 1'-0"



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING SYSTEM
LUNALILO FREEWAY
PROJECT NO. I-HI-1(4):24

SCALE: AS SHOWN DATE:

SHEET No. OF SHEETS