

REFERENCE DRAWINGS
WATER PLAN & PROFILE
SEWER PLAN & PROFILE
ELECTRICAL PLAN & PROFILE (FT. SHAFER)
TELEPHONE DUCT LINE (FT. SHAFER)

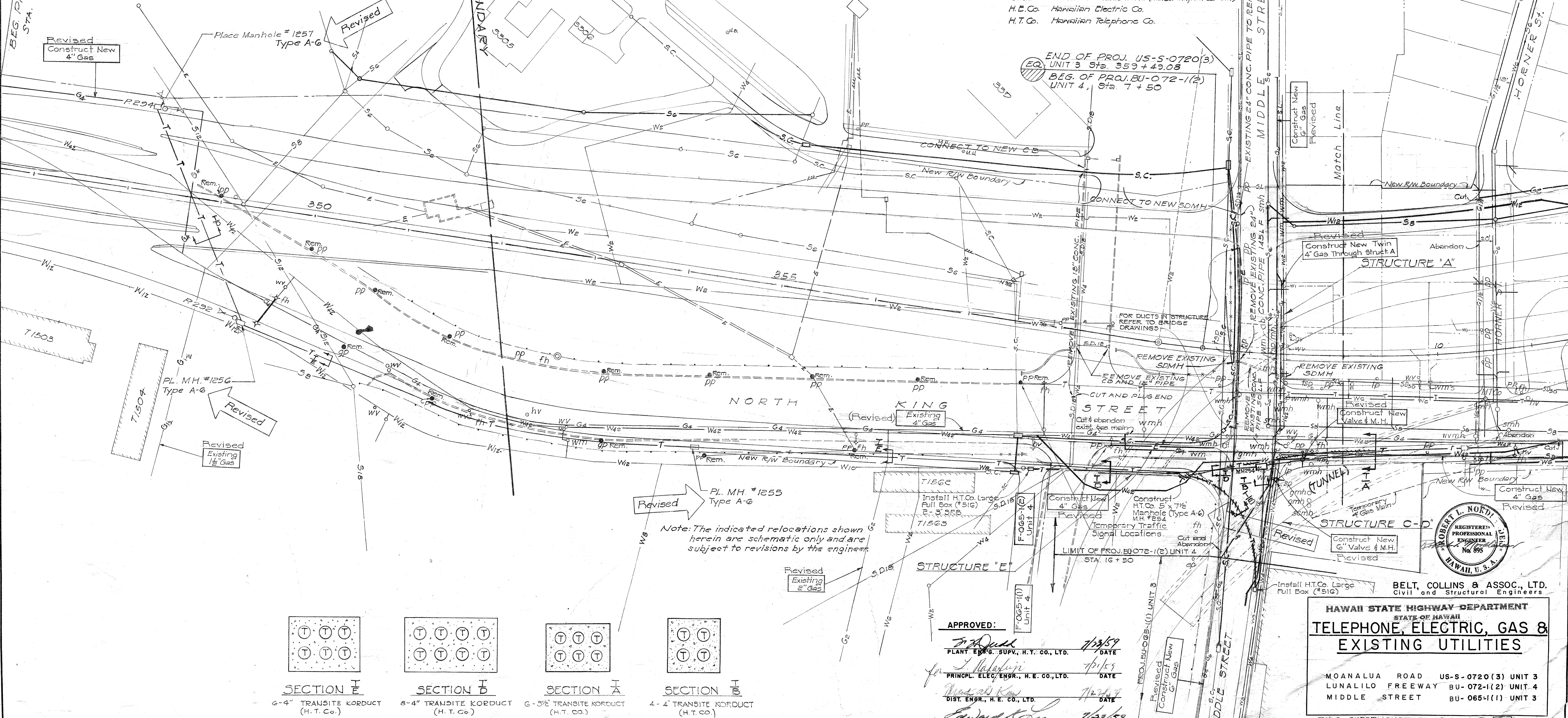
- GENERAL NOTES:
1. W_6 indicates existing 6" Water Line and W_6 (thicker lines) indicates new 6" Water Line or major work to be done on existing Line.
 2. Existing Overhead Electric Lines other than those for U.S. Army are not shown.
 3. Electrical Lines for Hawaiian Electric Co. to be carried by structures are shown but no connections to existing system are shown.
 4. Telephone lines for Hawaiian Telephone Co. to be carried by structures are shown but connections to existing system are shown only where there are underground lines.
 5. The Utility Lines shown on these plans are located from the best sources available. The contractor shall check and verify the exact location and depth of same.
 6. For details of duct, water & gas lines on structures, see Structural Drawing.
 7. Removal of existing power poles will be done by others.

- Legend:
- W_6 6" Water Line
 - S_6 6" Sewer Line
 - $S.D. 30$ 30" Storm Drain Line
 - G_4 4" Gas Line
 - T New Telephone Duct
 - $S.C.$ Signal Corps Line
 - $S.L.$ Street Lighting Line
 - E New Electric Duct
 - E Primary Overhead Electric Line
 - E Primary Underground Electric Line
 - E Secondary Overhead Electric Line
 - E Secondary Underground Electric Line
 - PP Existing Power Pole
 - PP New Power Pole (length as noted)
 - ANCHOR
 - REM Remove
 - ON ANCHOR Sidewalk Anchor
 - LRB Long Radius Bend (H.E.Co.-G.I., H.T.Co.-C.I.)
 - SRB Standard Radius Bend (H.E.Co.-G.I., H.T.Co.-C.I.)
 - H.E.Co. Hawaiian Electric Co.
 - H.T.Co. Hawaiian Telephone Co.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	055-0720(3)	1960	33A	79
		BU-072-1(2)	1960	52A	118
		BU-065-1(1)	1960	50A	115

Revised Jan. 16, 1961

BEG. PROJ. US-S-0720(3)
STA. 346 + 50



Note: The indicated relocations shown herein are schematic only and are subject to revisions by the engineer.

SURVEY PLOTTED BY	DATE
ORIGINAL PLAN	1/25/59
TRACED BY	1/25/59
DRAWN BY	1/25/59
CHECKED BY	1/25/59
NOTE BOOK NO.	2, 3, 4

SECTION E	SECTION D	SECTION A	SECTION B
6-4" TRANSITE KORDUCT (H.T. Co.)	8-4" TRANSITE KORDUCT (H.T. Co.)	6-3 1/2" TRANSITE KORDUCT (H.T. Co.)	4-4" TRANSITE KORDUCT (H.T. Co.)

APPROVED:

[Signature] 1/25/59
PLANT ENG. SUPV., H.T. CO., LTD. DATE

[Signature] 1/25/59
PRINCP. ELEC. ENGR., H.E. CO., LTD. DATE

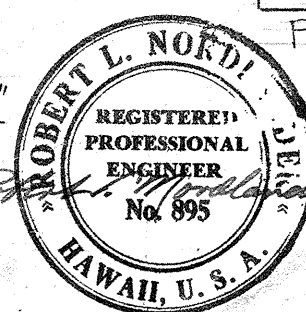
[Signature] 1/25/59
DIST. ENGR., H.E. CO., LTD. DATE

[Signature] 1/25/59
ENGR. HON. GAS CO., LTD. DATE

HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII
TELEPHONE, ELECTRIC, GAS &
EXISTING UTILITIES

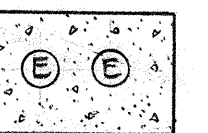
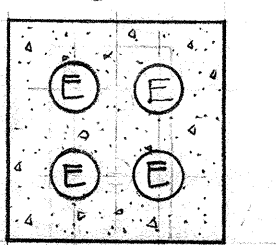
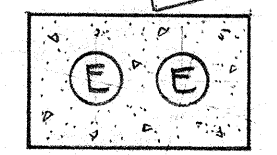
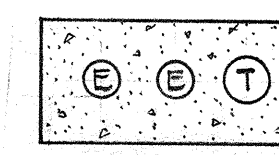
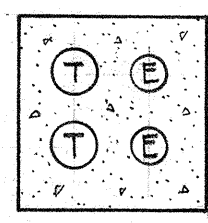
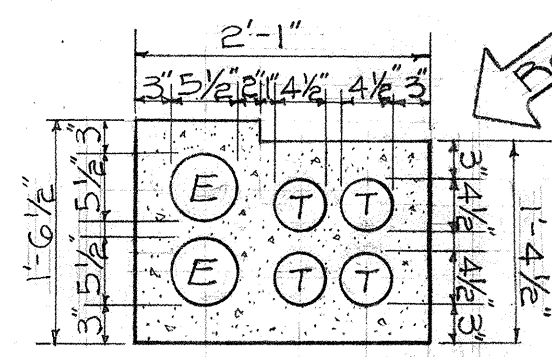
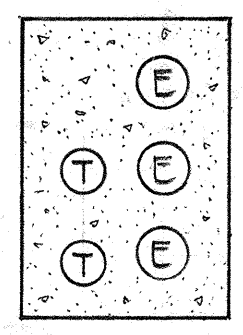
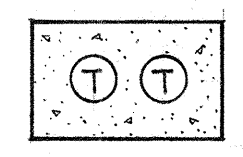
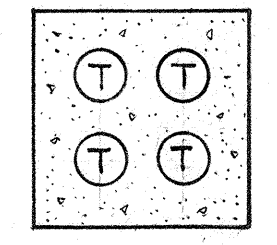
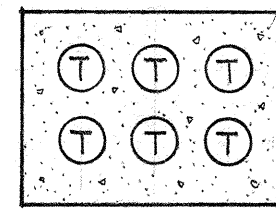
MOANALUA ROAD US-S-0720(3) UNIT 3
LUNALILO FREEWAY BU-072-1(2) UNIT 4
MIDDLE STREET BU-065-1(1) UNIT 3

THIS SHEET SUPERCEDES SHT. 32
SHEET NO. 1 OF 4 SHEETS



BELT, COLLINS & ASSOC., LTD.
Civil and Structural Engineers

\$526.33A \$174.52A \$161.50A 82A



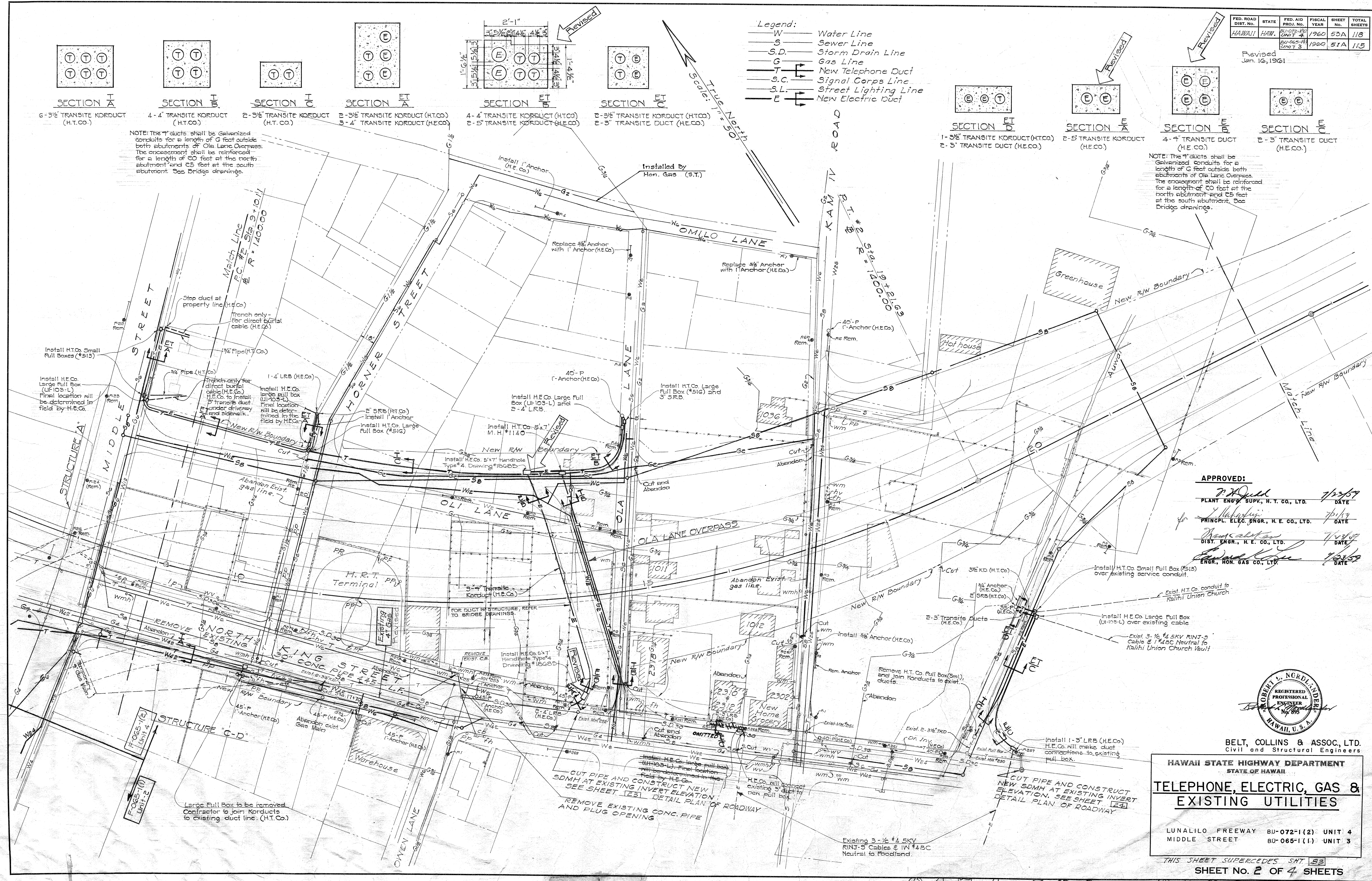
- Legend:
- W Water Line
 - S Sewer Line
 - S.D. Storm Drain Line
 - G Gas Line
 - T New Telephone Duct
 - S.C. Signal Corps Line
 - S.L. Street Lighting Line
 - E New Electric Duct

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BU-072-1(2) UNIT 4	1960	53A	118
		BU-065-1(1) UNIT 3	1960	51A	115

Revised Jan. 16, 1961

NOTE: The 4" ducts shall be galvanized conduits for a length of 6 feet outside both abutments of Ola Lane Overpass. The encasement shall be reinforced for a length of 20 feet at the north abutment and 25 feet at the south abutment. See Bridge drawings.

NOTE: The 4" ducts shall be galvanized conduits for a length of 6 feet outside both abutments of Ola Lane Overpass. The encasement shall be reinforced for a length of 20 feet at the north abutment and 25 feet at the south abutment. See Bridge drawings.



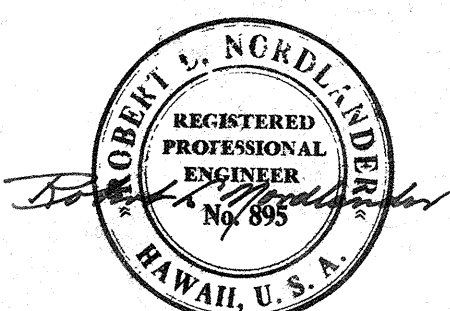
APPROVED:

[Signature] 7/23/57
PLANT ENGR. SUPV., H. T. CO., LTD. DATE

[Signature] 7/1/59
PRINCPL. ELEC. ENGR., H. E. CO., LTD. DATE

[Signature] 7/1/59
DIST. ENGR., H. E. CO., LTD. DATE

[Signature] 7/23/59
ENGR., HON. GAS CO., LTD. DATE



BELT, COLLINS & ASSOC., LTD.
Civil and Structural Engineers

HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII
TELEPHONE, ELECTRIC, GAS & EXISTING UTILITIES
LUNALILO FREEWAY BU-072-1(2) UNIT 4
MIDDLE STREET BU-065-1(1) UNIT 3

THIS SHEET SUPERCEDES SHT. 53
SHEET No. 2 OF 4 SHEETS

SURVEY PLOTTED BY	DATE
DESIGNED BY	
DRAWN BY	
QUANTITIES CHECKED BY	
NOTE BOOK	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
HAWAII HAW.		BU-072-1(2)	1960	54A	118

Revised
Jan. 10, 1961

Legend:

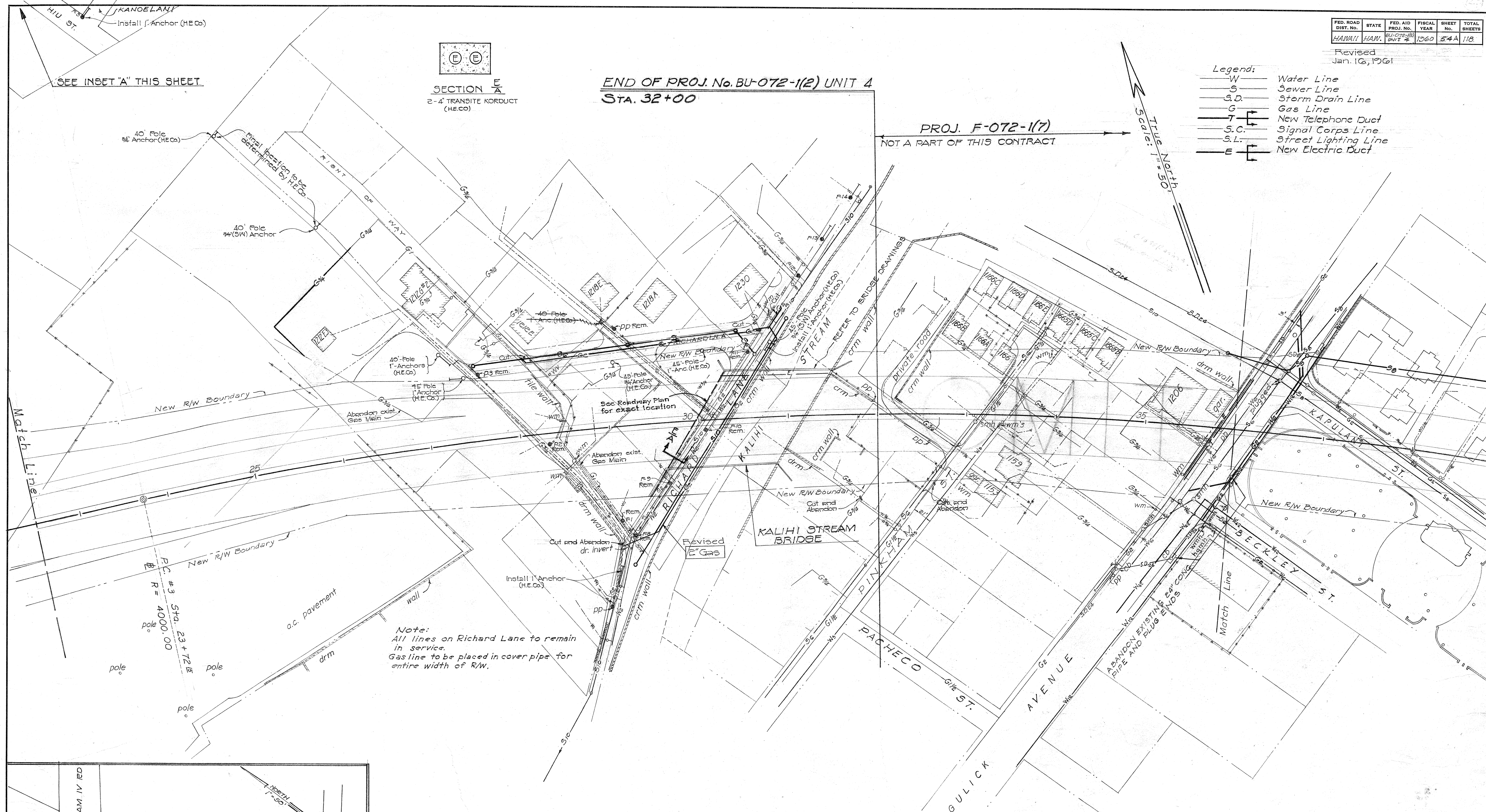
- W Water Line
- S Sewer Line
- S.D. Storm Drain Line
- G Gas Line
- T New Telephone Duct
- S.C. Signal Corps Line
- S.L. Street Lighting Line
- E New Electric Duct

Scale: 1" = 50'
True North

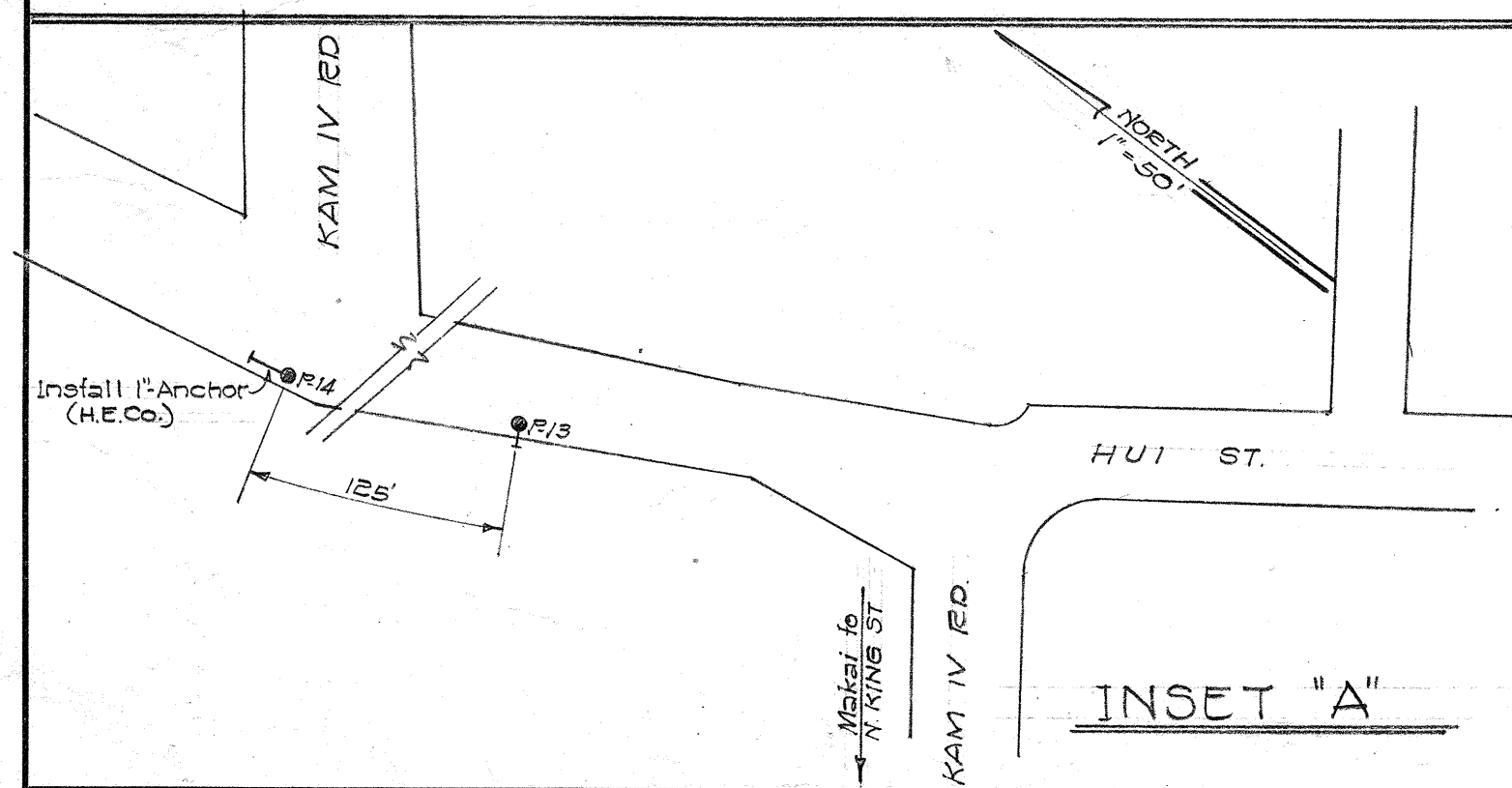
SECTION E
2-4' TRANSITE KODUCT
(H.E.CO.)

END OF PROJ. No. BU-072-1(2) UNIT 4
STA. 32+00

PROJ. F-072-1(7)
NOT A PART OF THIS CONTRACT



Note:
All lines on Richard Lane to remain
in service.
Gas line to be placed in cover pipe for
entire width of R/W.



APPROVED:

PRINCL. ELEC. ENGR., H. E. CO., LTD.

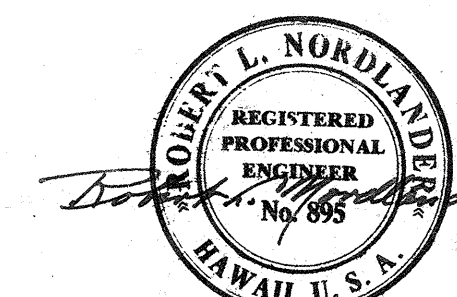
DIST. ENGR., H. E. CO., LTD.

ENGR. HON. GAS CO., LTD.

7/31/59

7/13/59

7/23/59



BELT, COLLINS & ASSOC., LTD.
Civil and Structural Engineers

HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII

TELEPHONE, ELECTRIC, GAS &
EXISTING UTILITIES

LUNALILO FREEWAY BU-072-1(2) UNIT 4

This sheet supercedes sh. 134
SHEET No. 3 OF 4 SHEETS

8174.54A

84A

ORIGINAL PLAN	DATE
DESIGNED BY	7/31/59
TRACED BY	7/13/59
QUANTITIES CHECKED BY	7/23/59
CHECKED BY	7/23/59
NOTE BOOK No.	