

- HAWAIIAN TELEPHONE SYSTEM NOTES:

1. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL LICENSES AND PERMITS AND SHALL GIVE ALL NOTICES NECESSARY AND INCIDENT TO THE DUE AND LAWFUL PROTECTION OF THE WORK.
2. THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THEIR LOCATION AND SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THESE UTILITIES AS A RESULT OF HIS OPERATIONS. ADJUSTMENTS TO THE NEW DUCTLINE ALIGNMENT, IF REQUIRED, SHALL BE MADE TO PROVIDE THE REQUIRED CLEARANCES.
3. SHOULD FIELD CONDITIONS AND CONSTRUCTION PROCEDURES REQUIRE THAT UTILITY POLES BE BRACED, THE CONTRACTOR SHALL CONTACT THE FOLLOWING PERSONS FOR POLE BRACING INSTRUCTIONS A MINIMUM OF 72 HOURS IN ADVANCE OF ACTUAL REQUIRED BRACING: HTCO. -J. GILMAN - AREA CONSTRUCTION INSPECTOR AT. 831-4054.
4. THE CONTRACTOR SHALL SAW-CUT A.C. PAVEMENT AND CONCRETE GUTTER WHEREVER NEW MANHOLES OR DUCTLINES ARE TO BE PLACED AND SHALL RESTORE TO EXISTING CONDITION OR BETTER.
5. THE CONTRACTOR SHALL COMPLY WITH THE POLICY ADOPTED BY THE DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU AND DEPARTMENT OF TRANSPORTATION, HIGHWAYS DIVISION, STATE OF HAWAII, CONCERNING RESTORING PAVEMENT AND OTHER IMPROVEMENTS AFTER EXCAVATION WORK.
6. PRIOR TO THE EXCAVATION OF THE DUCTLINE, THE CONTRACTOR SHALL REQUEST THE HAWAIIAN TELEPHONE COMPANY TO LOCATE EXISTING DUCTLINE WHEREVER REQUIRED.
7. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTION NOT TO DAMAGE EXISTING CABLES OR DUCTS. ANY WORK INVOLVING EXISTING CABLES OR DUCTS SHALL BE DONE IN THE PRESENCE OF THE HAWAIIAN TELEPHONE COMPANY INSPECTOR OR HIS REPRESENTATIVE.
8. THE CONTRACTOR SHALL PUMP ALL MANHOLES DRY DURING FINAL INSPECTION.
9. THE CONTRACTOR SHALL NOTIFY THE HAWAIIAN TELEPHONE COMPANY INSPECTOR 24 HOURS PRIOR TO THE POURING OF CONCRETE OR BACKFILLING: J. GILMAN 831-4054.
10. WHEREVER CONNECTIONS TO EXISTING UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES PRIOR TO EXCAVATION OF THE MAIN TRENCHES TO VERIFY THEIR LOCATIONS AND DEPTHS.
11. SHOULD IT BECOME NECESSARY, ANY WORK REQUIRED TO RELOCATE UNDERGROUND OR OVERHEAD FACILITIES SHALL BE DONE BY HTCO. AND PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION.
12. FOR FIELD LOCATION OF HTCO FACILITIES, CONTACT HTCO. OUTSIDE PLANT ENGINEERING SECTION, A MINIMUM OF 72 HOURS IN ADVANCE PRIOR TO START OF EXCAVATION.
13. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN THE EXCAVATION AND CONSTRUCTION CROSSES OR IS IN CLOSE PROXIMITY OF UNDERGROUND TELEPHONE AND SIGNAL CABLE FACILITIES AND MAINTAIN ADEQUATE CLEARANCE FOR HIS EQUIPMENT WHILE WORKING CLOSE TO AND/OR UNDER THE OVERHEAD FACILITIES. ANY DAMAGE TO THE EXISTING UNDERGROUND FACILITIES SHALL BE REPAIRED AND PAID FOR BY THE CONTRACTOR.
14. CONTRACTOR SHALL PROVIDE ALL MATERIALS, AND FURNISH ALL LABOR AND EQUIPMENT NECESSARY TO INSTALL THE DUCTLINE IN PLACE COMPLETE.
15. WHEN CONNECTING TO MANHOLE WALLS, ALL EXISTING REINFORCING BARS SHALL BE LEFT INTACT. DUCT SHALL BE ADJUSTED IN THE FIELD IN ORDER TO CLEAR REINFORCING.

**TRAFFIC SIGNAL NOTES:**

1. CONDUITS AND CABINET LOCATIONS AS SHOWN ON THE PLANS ARE SCHEMATIC. THEY MAY BE MODIFIED BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER.
2. THE CONTRACTOR SHALL NOTIFY THE CITY ELECTRICAL AND MAINTENANCE SERVICES DIVISION, DEPARTMENT OF TRANSPORTATION SERVICES, THREE (3) WORKING DAYS PRIOR TO COMMENCING WORK ON THE TRAFFIC SIGNAL SYSTEM (PHONE 527-5007).
3. ALL WORK FOR THE INSTALLATION AND MODIFICATION OF THE TRAFFIC SIGNAL SYSTEM SHALL CONFORM TO THE "HAWAII STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 1985" AND SHEETS T-38, T-39, T-40, T-41, T-42 AND T-43 OF THE "STANDARD PLANS" OF THE DEPARTMENT OF TRANSPORTATION, HIGHWAYS DIVISION AND AS SHOWN ON THESE DRAWINGS.

## ELECTRIC SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	STREET LIGHT, 150W, ALUM., TRANSF. BASE, 15FT. ARM, SEE DETAIL "A", SHEET 52		ELECTRIC/SIGNAL DUCTLINE WITH DESIGNATORS; INDICATES TYPE "S-A" DUCT SECTION WITH "2-4" DUCTS. SEE SHEETS 61 & 62 FOR DUCT SECTIONS AND CONDUIT SCHEDULES
	STREET LIGHT, 150W, ALUM. WITH BREAK AWAY BASE, SEE DETAIL "C" ON SHEET 53		STUB, CAP, & MARK CONDUITS
	STREET LIGHT, 150W, ALUM., TRANSF. BASE, 8 FT. ARM, SEE DETAIL "A", SHEET 52		STREET LIGHT DUCTLINE & WIRING
			TRAFFIC SIGNAL DUCTLINE
	EXST. STREET LIGHT		
	REMOVE EXST. STREET LIGHT		
	EXST. STATE 250W		EXST. ELEC/SIGNAL DUCTLINE & WIRING
	EXST. STATE 400W		EXST. WIRING TO BE REMOVED BY RESPECTIVE UTILITY CO.; CAP ENDS OF EXST. ELEC/SIGNAL DUCTS & ABANDON IN PLACE
	EXST. 250W STREET LIGHT TO BE REMOVE. CONCRETE BASE TO BE REMOVED 2 FT. BELOW FINISHED GRADE		EXST. OVERHEAD ELECTRIC LINES
	EXST. UTILITY POLE TO BE REMOVED BY RESPECTIVE UTILITY CO.		EXST. STREET LIGHT DUCTLINE & WIRING
	EXST. UTILITY POLE		EXST. TRAFFIC SIGNAL DUCTLINE
			EXST. DIRECT BURIED "WOLFE" CABLE
			EXST. DIRECT BURIED "WOLFE" CABLE TO BE ABANDONED IN PLACE
	HECO 2' X 4' HANDHOLE		EXST. STREET LIGHT DUCTLINE W/ NEW WIRING
	EXST. HECO 6' X 11' MANHOLE		NEW OVERHEAD LINES TO MATCH EXST.
			CONCRETE STUB-OUT MARKER, SEE DETAIL "E", SHEET 52
			EXST. METER EQUIPMENT & ENCLOSURE
			TRAFFIC SIGNAL & S.L.T. METERING EQUIP. SEE DETAIL C/64
	HTCO 2' X 4' HANDHOLE, PER HTCO DWG. NO. 24056.		12" RYG TRAFFIC SIGNAL HEAD
	HTCO 5' X 10' MANHOLE, SEE DETAIL ON SHEET 69		12" RYG↑ TRAFFIC SIGNAL HEAD
	HTCO 5' X 10' 6" MANHOLE, PER HTCO DWG. NO. 180016, SHT 70		PEDESTRIAN SIGNAL HEAD
	EXST. HTCO 4' X 6' HANDHOLE		TYPE I SIGNAL STANDARD, HEIGHT=10', SEE DETAIL "C", SHEET 66
	EXST. HTCO MANHOLE		TYPE II SIGNAL STANDARD, SEE DETAIL "E", SHEET 66
	DEMOLISH EXST. HTCO HANDHOLE		TYPE III SIGNAL STANDARD, SEE DETAIL "B", SHEET 67
			LOOP DETECTORS, SEE DETAILS ON SHEET 68
	CATV 2' X 6' HANDHOLE, PER CATV REQ'MTS, SHT. 71		TRAFFIC SIGNAL CONTROLLER, SEE DETAIL "A", SHEET 67
	CATV 2' X 4' HANDHOLE, PER CATV REQ'MTS, SHT. 71		
	EXST. CATV 2' X 4' HANDHOLE		REMOVE EXST. TRAFFIC SIGNAL EQUIPMENT
	TRAFFIC SIGNAL 19" X 28" PULLBOX, SEE DETAIL "B", SHEET 56		12" RY → PROGRAMABLE TRAFFIC SIGNAL HEAD
	TRAFFIC SIGNAL 2' X 4' PULLBOX, SEE DETAIL "A", SHEET 63		12" RY↑ TRAFFIC SIGNAL HEAD
	STREET LIGHT 19" X 28" PULLBOX, SEE DETAIL "B", SHEET 56 63		
	STREET LIGHT 2' X 4' HANDHOLE, SEE DETAIL "A", SHEET 56		
	EXST. PULLBOX/HANDHOLE		
	REMOVE EXST. PULLBOX/HANDHOLE		
	SECONDARY ELEC. 2' X 4' HANDHOLE		OPTICOM DETECTOR, SEE DETAIL "C", SHEET 63
			OPTICOM DETECTOR, SEE DETAIL "E", SHEET 63

APPROVED:

Kyle G. Dielman  
OCEANIC CABLE DATE

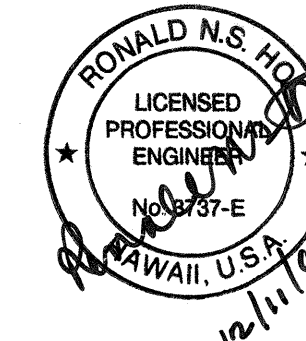
APPROVED:

HAWAIIAN ELECTRIC CO.	DATE
<i>vs. Dora T. Hayashi</i>	4/11/96
HAWAIIAN TELEPHONE CO.	DATE

DRAWING REVIEW  
Reviewed for HECO's  
Facilities Only

Date 5-7-96 By <sup>SKU</sup>AC F.K. Min  
SE  
Engineering & Project Management Dept.  
Hawaiian Electric Company, Inc.

HECO's review of these drawings shall in no way relieve the Customer, its Consultant, its Contractor or anyone acting on the Customer's behalf from the responsibility for engineering, design, materials and any liability associated with this project.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
GENERAL AND UTILITY NOTES,  
ELECTRIC AND TELEPHONE LEGENDS

**KUNIA ROAD WIDENING; AND**  
**H-1, KUNIA I.C., RAMP KO WIDENING**  
**F.A.I. PROJECT NO. IM-STP-0750(10)**

**SCALE: AS NOTED** **DATE: APRIL 1999**

**SHEET No. 1 OF 1 SHEETS**

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
NOTE BOOK	DRAWN BY _____	" _____
	DESIGNED BY _____	" _____
	QUANTITIES BY _____	" _____
	CHECKED BY _____	" _____
No. _____		

NO. \_\_\_\_\_  
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