

LEGEND

- EXISTING 12" RY← STANDARD TRAFFIC SIGNAL HEAD
- EXISTING STANDARD TRAFFIC AND PEDESTRIAN SIGNAL HEADS MOUNTED ON TYPE I SIGNAL STANDARD, HEIGHT = 10'
- EXISTING TRAFFIC SIGNAL HEADS MOUNTED ON TYPE II SIGNAL STANDARD, ARM SPREAD SHOWN, IS 30' AND DISTANCE BETWEEN SIGNAL HEADS IS 12'
- EXISTING 12" RY← TRAFFIC SIGNAL HEAD
- EXISTING 12" RY↑ TRAFFIC SIGNAL HEAD
- EXISTING PROGRAMMED VISIBILITY HEAD
- CONTROLLER CABINET (WITH PIPE GUARDS WHERE SHOWN ON PLAN)
- EXISTING CONTROLLER CABINET
- NEW TYPE "A" PULLBOX
- NEW TYPE "B" PULLBOX
- NEW TYPE "B" PULLBOX WITH MODIFIED COVER
- NEW LOOP DETECTOR, SERIES-PARALLEL CONNECTED
- NEW LOOP DETECTOR, SERIES CONNECTED
- EXISTING TRAFFIC SIGNAL PULLBOX
- PP ○ POWER POLE
- TP ○ TELEPHONE POLE
- JP ○ JOINT POLE
- WM □ WATER METER
- WV ○ WATER VALVE
- WMH ○ WATER MANHOLE
- FH ○ FIRE HYDRANT
- TMH ○ TELEPHONE MANHOLE
- HTCO HAWAIIAN TELEPHONE PULLBOX
- SMH ○ SEWER MANHOLE
- CB CATCH BASIN
- SDMH ○ STORM DRAIN MANHOLE

- R EXISTING PEDESTRIAN SIGNAL HEAD TO BE REPLACED
- R EXISTING 12" RY↑ TRAFFIC SIGNAL HEAD TO BE REPLACED
- NEW STANDARD TRAFFIC AND PEDESTRIAN SIGNAL HEADS MOUNTED ON NEW TYPE I SIGNAL STANDARD, HEIGHT = 10'
- NEW TRAFFIC SIGNAL HEADS MOUNTED ON NEW TYPE II SIGNAL STANDARD, ARM SPREAD SHOWN IS 30' AND DISTANCE BETWEEN SIGNAL HEADS IS 12'

- GMH ○ GAS MANHOLE
- **** EXISTING STRIPING AND MARKERS TO BE REMOVED
- EXISTING PAVEMENT ARROW TO BE REMOVED
- EXISTING PAVEMENT ARROW TO REMAIN
- ↗ NEW PAVEMENT ARROW
- TS ● NEW TRAFFIC SIGNAL STANDARD
- III EXISTING CROSSWALK MARKINGS TO BE REMOVED
- III EXISTING CROSSWALK MARKINGS TO REMAIN
- III NEW CROSSWALK MARKINGS
- EXISTING MARKINGS
- NEW STRIPING
- Wg EXISTING UTILITY LINES AND SIZES AS INDICATED
- W = WATER
- D = DRAIN
- S = SEWER
- F = FUEL
- FO = FUEL OIL
- G = GAS
- SC = SIGNAL CORPS
- T = TELEPHONE
- EU = UNDERGROUND ELECTRIC
- TU = UNDERGROUND TELEPHONE
- E/T= OVERHEAD ELECTRIC OR TELEPHONE

CONSTRUCTION NOTES

- LOCATIONS OF EXISTING UNDERGROUND STRUCTURES AND UTILITIES SUCH AS PIPELINES, CONDUITS, CABLES, ETC., SHOWN ON PLANS ARE APPROXIMATE ONLY. IT IS NOT THE INTENT OF THESE PLANS TO SHOW THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES WITH THE RESPECTIVE OWNERS. EXISTING UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN COST.
- THE CONTRACTOR SHALL VERIFY AND CHECK ALL DIMENSIONS AND DETAILS SHOWN ON THE DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
- THE CONTRACTOR SHALL NOTIFY ALL AGENCIES TO VERIFY THE ACTUAL LOCATION OF ALL UTILITIES IN THE PROJECT AREA PRIOR TO EXCAVATING. THE CONTRACTOR SHALL COORDINATE ALL WORK.
- THE CONTRACTOR SHALL TONE AND LOCATE EXISTING UTILITIES ALONG DUCTLINE PRIOR TO EXCAVATION.
- THE LOCATIONS OF THE NEW TRAFFIC SIGNAL STANDARDS, TRAFFIC SIGNAL STANDARDS WITH MAST-ARM, PEDESTRIAN PUSH BUTTONS, TRAFFIC CONTROLLER, PULLBOXES, CONDUITS AND LOOP DETECTORS SHALL BE STAKED OUT IN THE FIELD BY THE CONTRACTOR AND APPROVAL OF THE LOCATIONS SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO CONSTRUCTION AND INSTALLATION.
- ALL TRAFFIC SIGNAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", FEDERAL HIGHWAY ADMINISTRATION (1988) AND AMENDMENTS.
- LOCATIONS OF NEW PAV'T. STRIPING, MARKERS, AND MARKINGS (PAVEMENT ARROW, STOP LINES, CROSSWALK, ETC.) SHOWN ON THE PLANS SHALL BE VERIFIED WITH THE ENGINEER PRIOR TO THE INSTALLATION OF THE TRAFFIC SIGNAL SYSTEM.
- MAINTENANCE OF TRAFFIC THROUGH THE CONSTRUCTION AREA SHALL BE IN ACCORDANCE WITH PART VI OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", FEDERAL HIGHWAY ADMINISTRATION (1988) AND AS SPECIFIED IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ADEQUATE BARRICADES, BLINKERS, CONSTRUCTION SIGNS, ETC. FOR THE SAFETY OF THE MOTORING PUBLIC.
- REMOVAL OF EXISTING SIGNS SHALL ALSO INCLUDE THE REMOVAL OF POSTS AND FOUNDATIONS UNLESS OTHERWISE NOTED. COSTS FOR REMOVAL AND TEMPORARY INSTALLATION OF SIGNS, POSTS, AND FOUNDATIONS SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS OF WORK.

HIRI OIL LINE NOTES

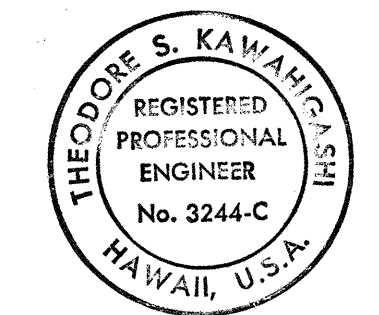
- AN EXCAVATION PERMIT IS REQUIRED FOR ALL CONSTRUCTION OR INSTALLATIONS WITHIN 10 FEET OF THE HIRI PIPELINES.
- THE PERMIT FORM IS AVAILABLE AT THE OFFICE OF THE SUPERINTENDENT OF MAINTENANCE AND CONSTRUCTION, HIRI REFINERY AT CAMPBELL INDUSTRIAL PARK. TELEPHONE: 682-4505.
- THE PERMIT WILL BE ISSUED WHEN THE CONSTRUCTION DRAWINGS INCLUDE THESE CONSTRUCTION NOTES, THE INSTALLATION IS SHOWN TO BE A MINIMUM OF 12 INCHES FROM THE HIRI PIPELINE, AND STATE THE SUPERINTENDENT OF MAINTENANCE AND CONSTRUCTION MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO EXCAVATION IN ORDER THAT AN HIRI REPRESENTATIVE LOCATE THE HIRI PIPELINE.
- THE CONTRACTOR WILL BACKFILL ONLY IN THE PRESENCE OF AN HIRI REPRESENTATIVE. BACKFILL CUSHION TO BE INORGANIC SAND CONSISTING OF AT LEAST 6-INCH DEPTH ENTIRELY AROUND THE PIPELINES.
- THE COMPLETE SET OF FINAL CONSTRUCTION DRAWINGS COVERING THE INSTALLATION OR CONSTRUCTION MUST BE PRESENTED WHEN REQUESTING THE PERMIT FORM. THESE DRAWINGS WILL BE RETAINED UNTIL SUCH TIME THAT THE PROJECT "AS BUILT" DRAWINGS ARE MADE AVAILABLE.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99D-02-87	1990	3	15

TRAFFIC SIGNAL NOTES

- ALL TRAFFIC SIGNAL CONTROLLER EQUIPMENT SHALL BE COMPLETELY WIRED IN THE CABINET AND SHALL CONTROL THE TRAFFIC SIGNALS AS CALLED FOR IN THE PLANS.
- SIGNAL INDICATIONS DURING CLEARANCE INTERVAL:
 - IF A SIGNAL IS G OR ←G AND WILL REMAIN G OR ←G DURING THE NEXT PHASE, IT SHALL BE G OR ←G DURING THE CLEARANCE INTERVAL.
 - IF A SIGNAL IS G OR ←G AND WILL BECOME R OR EXTINGUISHED DURING THE NEXT PHASE, IT SHALL BE Y OR →Y DURING CLEARANCE INTERVAL.
 - IF A SIGNAL IS R AND WILL REMAIN R OR BECOMES G DURING THE NEXT PHASE, IT SHALL REMAIN R DURING THE CLEARANCE INTERVAL.
- THE LOOP AMPLIFIER UNITS FURNISHED FOR THIS PROJECT SHALL BE CAPABLE OF OPERATING THE LOOP DETECTOR CONFIGURATIONS SHOWN ON THE PLANS.
- A SOLID #8 BARE COPPER WIRE SHALL BE PULLED WITH THE TRAFFIC CONTROL CABLE FOR EQUIPMENT GROUND. COST SHALL BE INCIDENTAL TO THE INSTALLATION OF THE CONTROL CABLE.
- THE CONTRACTOR SHALL KEEP THE EXISTING TRAFFIC SIGNALS AND LOCAL INTERSECTION CONTROLLERS IN OPERATION UNTIL SUCH TIME AS THE NEW CONTROLLERS AND COMMUNICATION SYSTEM ARE PLACED IN OPERATION. THE LOCAL INTERSECTION SHALL NOT BE PLACED OUT OF OPERATION WITHOUT THE PERMISSION OF THE ENGINEER.
- CONDUITS, OVERHEAD CABLE AND CABINET LOCATIONS AS SHOWN ON THE PLANS ARE SCHEMATIC. THEY MAY BE MODIFIED BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER.
- WHEN THE NEW LOCAL CONTROLLERS ARE IN SATISFACTORY OPERATION, THE CONTRACTOR SHALL REMOVE ALL OBSOLETE CONTROLLERS, CABINETS, FOUNDATIONS AND PEDESTALS.
- THE CONTRACTOR SHALL SPLICE ALL SIGNAL CONDUCTORS IN PULL-BOX. NO SPLICES SHALL BE PERMITTED IN DETECTOR LEAD-IN CABLE.
- THE CONTRACTOR SHALL INSTALL NEW CONTROLLER AND CABINET IN THE INDICATED LOCATION. THE NEW CABINETS ARE TO BE INSTALLED A MINIMUM OF 3 FEET (WHERE POSSIBLE) FROM THE OLD CABINET LOCATIONS.
- NO SPLICES SHALL BE PERMITTED IN THE COMMUNICATIONS CABLE EXCEPT AT THE CONTROLLER CABINETS AS INDICATED ON THE PLANS.
- COSTS FOR EXTRA CABLE LENGTHS REQUIRED FROM EXISTING PULL-BOX TO NEW CABINET LOCATION SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS OF WORK.

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Theodore S. Kawahigash
 Signature

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

LEGEND AND NOTES

**KAMEHAMEHA HWY. INTERCONNECTION
 OF TRAFFIC SIGNAL SYSTEM
 FROM AIEA TO PEARL CITY
 PROJECT NO. 99D-02-87**

SCALE: NONE DATE: APR. 16, 1990

SHEET No. 1 OF 1 SHEETS