STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(16)	1996	2	12

STANDARD PLAN NO.	TITLE	DATE
B-01	Notes and Miscellaneous Details	07/01/86
B-02		
B-03	Typical Structure Excavation and Backfill Pay Limits	07/01/86
B-04		
B-05		
B-06	Concrete Box Girder	07/01/86
B-07	Concrete Box Girder	07/01/86
B-08	Concrete Box Girder	07/01/86
B-09		
B-10		
B-11		
B-12	Prestressed Concrete Piles	r07/16/90
B-13	Prestressed Concrete Piles	r07/16/90

D-01	Chain Link Fence With Toprail	r03/06/87
D-02	Chain Link Fence Without Toprail	r07/26/90
D-03	Wire Fence With Metal Posts	07/01/86
D-04	Typical Details of Curbs and/or Gutters	07/01/86
D-05	Typical Details of Reinforced Concrete Drop Driveway	07/01/86
D-06	Centerline and Reference Survey Monument	07/01/86
D-07	Street Survey Monument	07/01/86
D-08	Landscaping Shrub and Tree Planting	07/01/86
D-09	Field Office	07/01/86
D-10	Field Office	07/01/86
D-11	Project Site Laboratory	07/01/86
D-12	Project Site Laboratory	07/01/86
D-13	Field Office & Project Site Laboratory	07/01/86

H-01	Type A, B, C and D Catch Basin	07/01/86
H-02	Type A1, B1, C1 and D1 Catch Basin	07/01/86
H-03	Type A2, B2, C2 and D2 Catch Basin	07/01/86
H-04	Typical Reinforcing Details for Catch Basins	07/01/86
H-05	Type A, B and C Storm Drain Manhole	07/01/86
H-06	Type D and E Storm Drain Manhole	07/01/86
H-07	Type F Storm Drain Manhole	07/01/86
H-08	Catch Basin and Manhole Casting	07/01/86
H-09	Type A-9 and A-9P Frames and Grates	07/01/86
H-10	Type A-9B Frames and Grates	07/01/86
H-11	Type 61614 and 61214 Grated Drop Inlet	07/01/86
H-12	Type 61616 Grated Drop Inlet	07/01/86
H-13	61214, 61614 & 61616 Steel Frames and Grates	07/01/86
H-14	61214B Steel Frame and Grates	07/01/86
H-15	61614B Steel Frame and Grates	07/01/86
H-16	Concrete and Cement Rubble Masonry Structures	r10/16/90
H-17	Inlet Structures	r10/16/90
H-18	Flared End Section for Culverts	07/01/86
H-19	Outlet Structures	r02/15/91
H-20	Concrete Spillway Inlet	07/01/86
H-21	18" Slotted C.M.P. Drain	07/01/86
H-22	C.M.P. Coupling Details Standard Joint	r10/16/90
H-23	Hat Shaped Coupling Band	r10/16/90

STANDARD PLAN NO.	TITLE	DATE
TE-01	Miscellaneous Sign Details	07/01/86
TE-02	Galvanized Flanged Channel Sign Post Mounting	07/01/86
TE-03	Galvanized Square Tube Sign Post Mounting	07/01/86
TE-04	Regulatory Signs	r09/01/87
TE-05	Warning Signs	07/01/86
TE-06	Miscellaneous Signs	r11/03/89
TE-07	Reserved	07/01/86
TE-08	Construction Signs	r09/01/87
TE-09	Miscellaneous Intersection Signs	r03/06/87
TE-10	Reserved	07/01/86
TE-11	Bike Route Sign and Supplementary Plates	07/01/86
TE-12	State Route Marker and Auxiliary Markers	07/01/86
TE-13	Interstate Route Marker	07/01/86
TE-14	State Route Marker and Border Detail for Guide Signs	07/01/86
TE-15	Route Marker Assemblies	07/01/86
TE-16	Miscellaneous Reflector Markers	07/01/86
TE-17	Type II Object Markers	07/01/86
TE-18	Mileposts	07/01/86
TE-19	Reserved	07/01/86
TE-20	Overhead Sign Supports	07/01/86
TE-21	Overhead Sign Support, Box Truss Type, Aluminum	07/01/86
TE-22	Foundation Details and Schedules	07/01/86
TE-23	Supports for Ground Mounted Guide Sign	r11/03/89
TE-24	Breakaway Sign Supports for Ground Mounted Guide Signs	07/01/86
TE-25	Laminated Aluminum Sign Panels (Overhead)	07/01/86
TE-26	Laminated Aluminum Sign Panels (Ground Mounted)	07/01/86
TE-27	Solid Aluminum Extruded Sign Panel and Accessory Details	07/01/86
TE-28	Guide Signs Luminaire Mountings	07/01/86
TE-29	Reserved	07/01/86
TE-30	Raised Pavement Markers and Striping	r05/09/90
TE-31	Miscellaneous Pavement Markings	r05/09/90
TE-32	Miscellaneous Pavement Markings	r05/09/90
TE-33	Miscellaneous Pavement Markings	r11/03/89
TE-34	Reserved	07/01/86
TE-35	Pavement Alphabets, Numbers & Symbols	07/01/86
TE-36	Pavement Alphabets, Numbers & Symbols	07/01/86
TE-37	Reserved	07/01/86
TE-38	Traffic Signal System, Miscellaneous Details	r11/03/89
TE-39	Traffic Signal System, Miscellaneous Details	07/01/86
TE-40	Loop Detectors	r11/03/89
TE-41	Pullboxes	07/01/86
TE-42	Type III Traffic Signal Standard	07/01/86
TE-43	Concrete Pullbox (2' x 3')	07/01/86
TE-44	Reserved	07/01/86

STANDARD PLAN NO.	TITLE	DATE
TE-45	Reserved	07/01/86
TE-46	Reserved	07/01/86
TE-47	Reserved	07/01/86
TE-48	Reserved	07/01/86
TE-49	Reserved	07/01/86
TE-50	Metal Guardrail	r03/06/87
TE-51	Metal Guardrail	r09/01/87
TE-52 ●	Metal Guardrail with Rubrail	r11/03/89
TE-53	Metal Guardrail with Rubrail at Obstruction	r09/01/87
TE-54 ●	Beam Type Guardrail with Rubrail at Obstruction (Shoulder Installation)	r11/03/89
TE-55	Metal Guardrail Connection to Concrete Barrier	r11/03/89
TE-56	Concrete Barrier Transition	07/01/86
TE-57	Guardrail Type 3, Thrie Beam	r11/03/89
TE-57A	Guardrail Type 3, Modified Thrie Beam	11/03/89
TE-58	Approach End Flare, One & Two Way Roadway	07/01/86
TE-59	Trailing End Flare, One & Two Way Roadway	r11/03/89
TE-60	Anchor Block Details	07/01/86
TE-61	Breakaway Cable Terminal (BCT)	r11/03/89
TE-62	Breakaway Cable Terminal (BCT)	r09/01/87
TE-63	Guardrail Type 4 (Rigid Barrier)	r09/01/87
TE-64	Portable Concrete Barrier	r11/03/89
TE-65	Guardrail Type 4, Miscellaneous	r09/01/87
TE-66	Barricades	07/01/86
TE-67	Delineation & Pavement Markings at Bridges	07/01/86
TE-68	Wheelchair Ramps	r07/18/94
TE-69	Wheelchair Ramps	r07/18/94

NOTE:
STANDARD PLANS APPLICABLE TO THIS PROJECT ARE INDICATED BY A "●" NEXT TO THE STANDARD PLAN NO. (FOR EXAMPLE: D-07 ○)

DATE	REVISION
07/18/94	REVISED TE-68 & TE-69
02/15/91	REVISED H-19
10/16/90	REVISED H-16,H-17, H-22 & H-23
07/26/90	REVISED D-02
07/16/90	REVISED B-12,B-13
05/09/90	REVISED TE-30,TE-31 & TE-32
11/03/89	REVISED TE-06,TE-23, TE-30, TE-31, TE-32, TE-33, TE-38, TE-40, TE-52, TE-54, TE-55, TE-57, TE-59, TE-61, TE-64, TE-68 & TE-69, ADDED TE-57A
09/01/87	REVISED TE-04,TE-06, TE-08, TE-32, TE-51, TE-53, TE-54, TE-55, TE-57, TE-59, TE-62, TE-63, TE-65 & TE-69
03/06/87	REVISED D-01, TE-09, TE-40, TE-50, TE-51, TE-57, TE-59, TE-61, TE-63 & TE-64

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY

KAMEHAMEHA HIGHWAY-INSTALLATION OF HIGHWAY LIGHTS
KIPAPA STREET TO WAIKALANI DRIVE
PROJECT NO. NH-099-1(16)

SCALE: NONE Date:

SHEET No. 2 OF 12 SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(16)	1996	3	12

GENERAL NOTES FOR TRAFFIC CONTROL PLAN

1. ALL PROTECTIVE FACILITIES AND PRECAUTIONS TO BE TAKEN SHALL CONFORM WITH THE "HAWAII ADMINISTRATION RULES GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON OR ADJACENT TO PUBLIC STREETS AND HIGHWAYS" ADOPTED BY THE DIRECTOR OF TRANSPORTATION AND CURRENT U.S. FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, PART VI, TRAFFIC CONTROLS FOR STREET AND HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS."
2. THE CONTRACTOR SHALL NOT WORK ON WEEKENDS OR HOLIDAYS, UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER IN WRITING.
3. THE CONTRACTOR SHALL CHECK AND MAINTAIN THE TRAFFIC CONTROL DEVICES PERIODICALLY DURING WORKING HOURS AT NO ADDITIONAL COST TO THE STATE.
4. TRAFFIC CONES SHALL BE 18 INCHES (MINIMUM) HIGH.
5. ALL TRAFFIC CONTROL SIGNS AND DEVICES INCLUDING BARRICADES, ARROW BOARDS, TRAFFIC CONES AND OTHER APPROPRIATE TRAFFIC CONTROL APPURTENANCES SHALL BE VERIFIED AND APPROVED BY THE ENGINEER PRIOR TO THE ISSUANCES OF THE PUBLIC NOTICE FOR THE LIGHTING WORK AND DETOUR.
6. THE CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS AT INTERSECTIONS, DRIVEWAYS, BRIDGES, STRUCTURES, ETC., TO FIT FIELD CONDITIONS.
7. TRAFFIC CONTROL DEVICES SHALL BE INSTALLED SUCH THAT THE SIGN OR DEVICES FARTHEST FROM THE WORK AREA SHALL BE PLACED FIRST. THE OTHERS SHALL THEN BE PLACED PROGRESSIVELY TOWARD THE WORK AREA.
8. FLAGGERS AND/OR POLICE OFFICERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES.
9. ALL TRAFFIC LANES SHALL BE A MINIMUM OF 10 FEET WIDE.
10. ALL CONSTRUCTION WARNING SIGNS SHALL BE PROMPTLY REMOVED OR COVERED WHENEVER THE MESSAGE IS NOT APPLICABLE OR NOT IN USE.
11. THE BACK OF ALL SIGNS USED FOR TRAFFIC CONTROL SHALL BE APPROPRIATELY COVERED TO PRECLUDE THE DISPLAY OF INAPPLICABLE SIGN MESSAGES (I.E., WHEN SIGNS HAVE MESSAGES ON BOTH FACES).
12. AT THE END OF EACH DAY'S WORK OR AS SOON AS THE WORK IS COMPLETED, THE CONTRACTOR SHALL REMOVE ALL TRAFFIC CONTROL DEVICES NO LONGER NEEDED TO PERMIT FREE AND SAFE PASSAGE OF PUBLIC TRAFFIC. REMOVAL SHALL BE IN THE REVERSE ORDER OF INSTALLATION.

CONSTRUCTION NOTES: STATE RIGHT-OF-WAY

1. CONSTRUCTION AND RESTORATION OF ALL EXISTING HIGHWAY FACILITIES WITHIN STATE RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND PUBLIC WORKS CONSTRUCTION," DATED 1994.
2. THE CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES, AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR PROTECTION AND FOR THE CONVENIENCE AND SAFETY OF PUBLIC TRAFFIC, ALL SUCH PROTECTIVE FACILITIES AND PRECAUTIONS TO BE TAKEN SHALL CONFORM WITH THE "ADMINISTRATIVE RULES OF HAWAII GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON OR ADJACENT TO PUBLIC STREET AND HIGHWAYS" ADOPTED BY THE HIGHWAY SAFETY COORDINATOR, AND THE U.S. FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, PART VI – TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS." IF LANE CLOSURES ARE REQUIRED DURING CONSTRUCTION, A TRAFFIC CONTROL PLAN SHALL BE INCORPORATED INTO THE CONSTRUCTION PLANS AND MUST BE APPROVED BY THE ENGINEER PRIOR TO THE ISSUANCE OF THE PERMIT.
3. LONGITUDINAL DRAINAGE ALONG THE HIGHWAY SHALL BE MAINTAINED.
4. ALL SIGNS, PAVEMENT MARKINGS, STRIPING, GUARDRAILS, ETC. REMOVED OR DAMAGED BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.
5. ALL REGULATORY, GUIDE AND CONSTRUCTION SIGNS AND BARRICADES SHALL BE OF HIGH INTENSITY REFLECTIVE SHEETING.
6. NO MATERIAL AND/OR EQUIPMENT SHALL BE STOCKPILED OR OTHERWISE STORED WITHIN HIGHWAY RIGHT-OF-WAY EXCEPT AT LOCATIONS DESIGNATED IN WRITING AND APPROVED BY THE DISTRICT ENGINEER.
7. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ADEQUATE, SAFE BRIDGING MATERIAL OVER THE TRENCH, INCLUDING SHORING, WHEN TRENCHING IN PAVEMENT AREAS TO HANDLE ALL TYPES OF VEHICULAR TRAFFIC.
8. NO TRENCH SHALL BE OPENED MORE THAN 50 FEET IN ADVANCE OF THE INSTALLED AND TESTED DUCT LINE. NO JUMPS OR SPACES WILL BE PERMITTED UNLESS APPROVED BY THE ENGINEER.

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

VINCENT K. MIYAGAWA
LICENSED PROFESSIONAL ENGINEER
No. 4534-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

EOS, INC.
By
Its PROJECT ENGINEER
Date 5-22-92

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES

KAMEHAMEHA HIGHWAY – INSTALLATION OF HIGHWAY LIGHTS
KIPAPA STREET TO WAIKALANI DRIVE
PROJECT NO. NH-099-1(16)

SCALE: NO SCALE DATE:

SHEET No. 3 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(16)	1996	4	12

ELECTRICAL SYMBOL LIST

(ALL ITEMS ARE NEW UNLESS OTHERWISE NOTED)

SYMBOL	DESCRIPTION
	EXISTING STREET LIGHTING LUMINAIRE ON METAL STANDARD
	NEW STREET LIGHTING LUMINAIRE ON METAL STANDARD
	CONCEALED CONDUIT BELOW GRADE
	EQUIPMENT AS INDICATED ON PLANS
	STREET LIGHTING PULLBOX
	ELECTRICAL SERVICE EQUIPMENT
T	EXISTING PAD MOUNTED TRANSFORMER
1	DUCT SECTION INDICATOR
1	NOTE INDICATOR
A / 5	DETAIL INDICATOR: TOP HALF DENOTES DETAIL, BOTTOM HALF DENOTES SHEET NUMBER
X	DENOTES DEMOLITION/REMOVAL

SYMBOL	DESCRIPTION
—w—	EXISTING WATER LINE
—F—	EXISTING FUEL LINE
—s—	EXISTING SEWER LINE
—sc—	EXISTING SIGNAL CABLE
—t—	EXISTING TELEPHONE LINE
—tp—	EXISTING TRANS PACIFIC CABLE
—ts—	EXISTING TRAFFIC SIGNAL DUCT
—g—	EXISTING GAS LINE

GENERAL NOTES:

1. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES AND STRUCTURES AS SHOWN ON THE PLANS ARE FROM THE LATEST AVAILABLE DATA BUT ARE NOT GUARANTEED AS TO ACCURACY, OR THAT OTHER OBSTACLES MAY NOT BE ENCOUNTERED DURING THE COURSE OF THE WORK. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN THE CONSTRUCTION IS IN CLOSE PROXIMITY OF UNDERGROUND UTILITY FACILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL PAY FOR ALL DAMAGES TO THE EXISTING UTILITIES.

   TELEPHONE/ CATV LINES: CONTRACTOR TO OBTAIN EXCAVATION CLEARANCE 3 WORKING DAYS PRIOR TO ANY EXCAVATION WORK. USE EXTREME CAUTION DURING EXCAVATION.

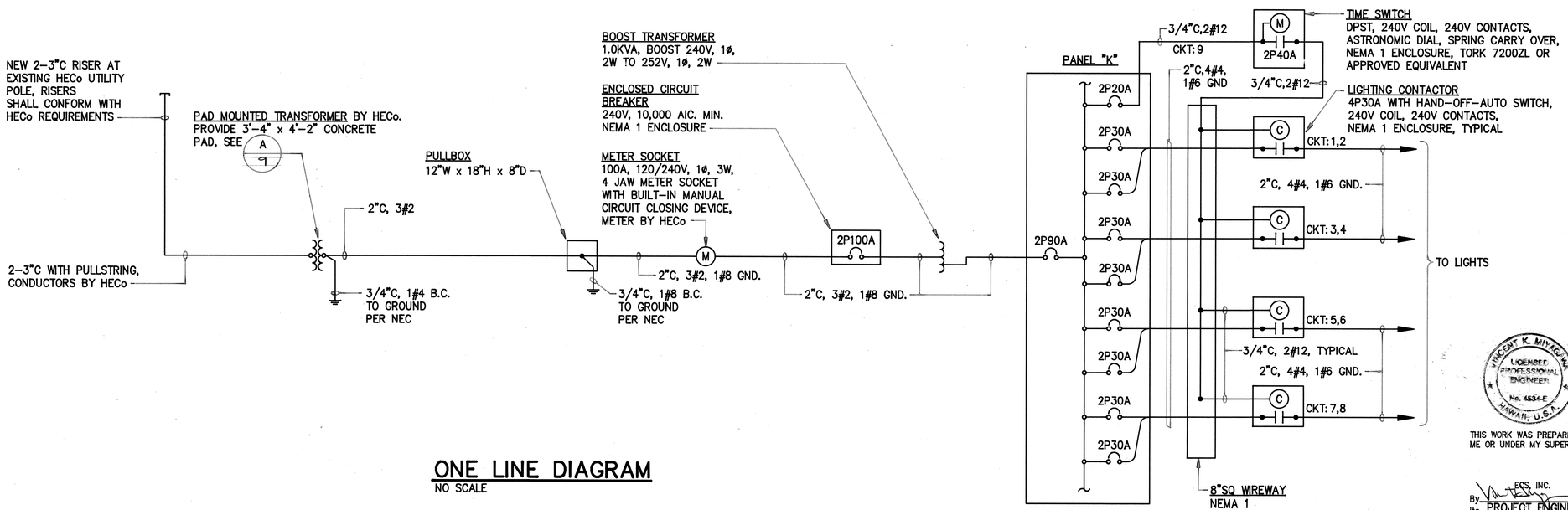
   WATER LINES: CONTRACTOR TO CALL BOARD OF WATER SUPPLY, CITY AND COUNTY OF HONOLULU FOR FIELD LOCATIONS OF WATER MAINS AND APPURTENANCES A MINIMUM OF 48 HOURS BEFORE STARTING PROJECT EXCAVATION.

   SEWER LINES: CONTRACTOR TO CALL DIVISION OF SEWERS, CITY AND COUNTY OF HONOLULU FOR FIELD LOCATIONS OF SEWER LINES AND LATERALS A MINIMUM OF 48 HOURS BEFORE STARTING PROJECT EXCAVATION.

2. THE MINIMUM CLEARANCE BETWEEN FIRE HYDRANTS AND UTILITY POLES OR LIGHT STANDARDS SHALL BE 3'-0".

3. THE CONTRACTOR SHALL TRIM OR REMOVE ALL TREES, SHRUBS, BUSHES, ETC. ENCROACHING UPON THE NEWLY INSTALLED HIGHWAY LIGHTING STANDARDS. FOLIAGE SHALL BE TRIMMED SO AS NOT TO INTERFERE WITH THE LUMINAIRE'S LIGHT DISTRIBUTION PATTERN.

4. DESIGN ILLUMINATION LEVEL = 1.0 FOOTCANDLE AVERAGE MAINTAINED.
   DESIGN UNIFORMITY RATIO (AVE./MIN.) = 3:1 MAX.
   DESIGN MAINTENANCE FACTOR = 0.65.



ONE LINE DIAGRAM

NO SCALE

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

VINCENT K. MIYAGUMA
LICENSED PROFESSIONAL ENGINEER
No. 4534-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

ECS, INC.
By
Its PROJECT ENGINEER
Date 5-22-96

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ELECTRICAL SYMBOL LIST, ONE-LINE DIAGRAM, GENERAL NOTES

KAMEHAMEHA HIGHWAY – INSTALLATION OF HIGHWAY LIGHTS
KIPAPA STREET TO WAIKALANI DRIVE
PROJECT NO. NH-099-1(16)

SCALE: NO SCALE DATE:

SHEET No. 4 OF 12 SHEETS