

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83B-01-73 83D-01-73	1974	2	6

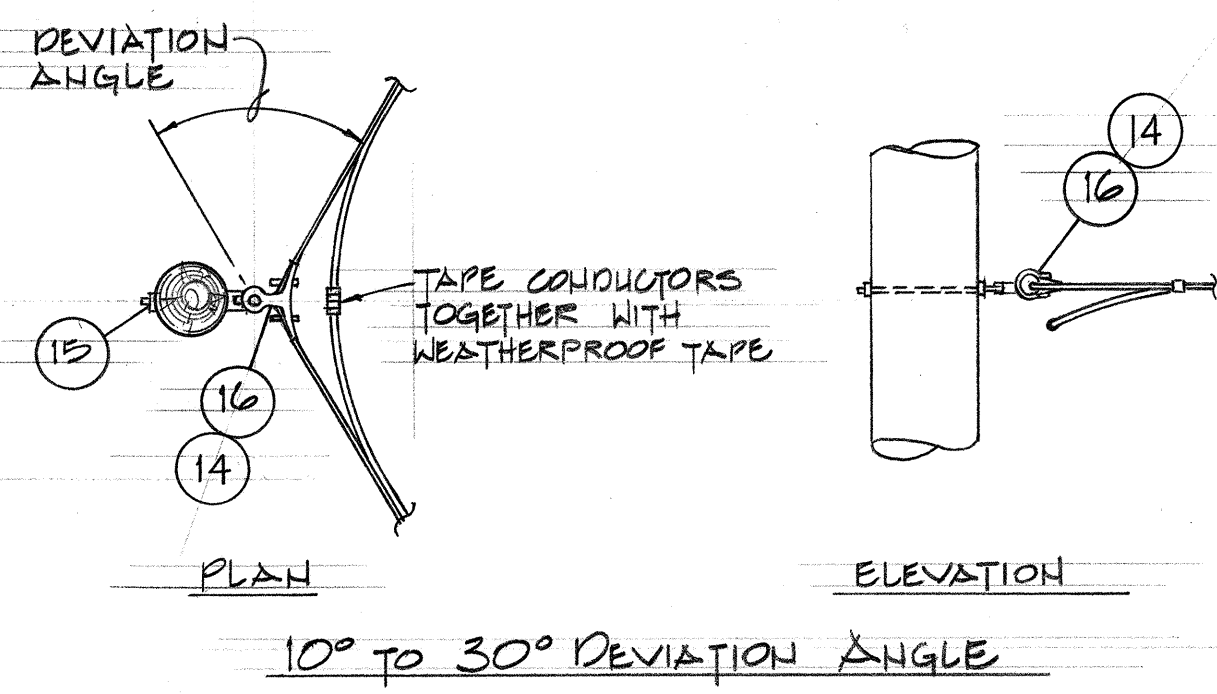
SYMBOLS

- ⊗ EXIST'G STATE MULTIPLE FIXTURE TO BE REMOVED. APPLICABLE ONLY TO PROJECT NO 83B-01-73 (SHEETS NO 2, 3 & 4).
- ⊙ EXIST'G STATE SERIES FIXTURE TO BE REMOVED. APPLICABLE ONLY TO PROJECT NO 83D-01-73 (SHEET NO 5).
- 10- EXIST'G 150W SODIUM FIXTURE. NUMBER INDICATES MAST ARM LENGTH IN FEET (PROJ. NO 83B-01-73 ONLY. SHTS 2, 3 & 4).
- 8- EXIST'G 400W MERCURY FIXTURE. NUMBER INDICATES MAST ARM LENGTH IN FEET (PROJ. NO 83D-01-73 ONLY. SHEET 5).
- 0 EXIST'G WOOD POLE. FIRST NO INDICATES SETBACK, IN FEET, FROM TRAVELLED EDGE TO FACE OF POLE; SECOND NO INDICATES POLE NUMBER ("JP" = JOINTLY-OWNED POLE).
- 16-JP193 NEW STATE-OWNED POLE, CLASS 3. SETBACK AS INDICATED ON PLANS. POLE HEIGHTS VARY, SEE PLANS.
- STATE — STATE LIGHTING CIRCUIT DEAD-END. HIGH OR LOW VOLTAGE, SERIES OR MULTIPLE CIRCUIT AS INDICATED ON PLAN.
- OH — NEW OVERHEAD SECONDARY CABLE BY CONTRACTOR. ARROW INDICATES CONNECTION BY H.E.CO.
- HV HIGH VOLTAGE STATE SERIES CONDUCTORS & INSULATORS TO BE REMOVED FROM CROSSARM. APPLICABLE ONLY TO PROJECT #83D-01-73 (SHEET NO 5).
- LV LOW VOLTAGE STATE SERIES CONDUCTORS & INSULATORS TO BE REMOVED FROM CROSSARM. APPLICABLE ONLY TO PROJECT #83D-01-73 (SHEET NO 5).
- HVA HIGH VOLTAGE STATE SERIES CONDUCTORS, INSULATORS AND CROSSARM TO BE REMOVED. APPLICABLE ONLY TO PROJECT #83D-01-73 (SHEET NO 5).
- LVA LOW VOLTAGE STATE SERIES CONDUCTORS, INSULATORS AND CROSSARM TO BE REMOVED. APPLICABLE ONLY TO PROJECT #83D-01-73 (SHEET NO 5).
- MA STATE MULTIPLE CONDUCTORS, INSULATORS & CROSSARM TO BE REMOVED. APPLICABLE ONLY TO PROJECT #83B-01-73 (SHEETS NO 2, 3 & 4).
- L=10 — POLE GUY, SEE DETAIL SHEET NO 6
- ★ EXISTING POLE TO BE REPLACED WITH NEW WOOD POLE BY CONTRACTOR.

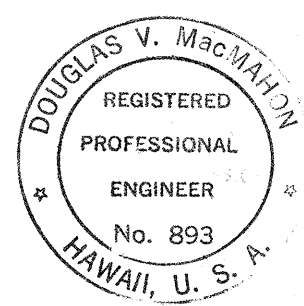
BEGIN PROJECT #83B-01-73
STA. 103+52

KAMEHAMEHA HIGHWAY NEAR WAIMEA BAY SCALE: 1" = 40'

KAMEHAMEHA HIGHWAY NEAR WAIMEA BAY SCALE: 1" = 40'



ANGLE POLE DETAIL
(FOR GUY INFORMATION, SEE PLANS & DETAIL, SHT. 6)
N.T.S.



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

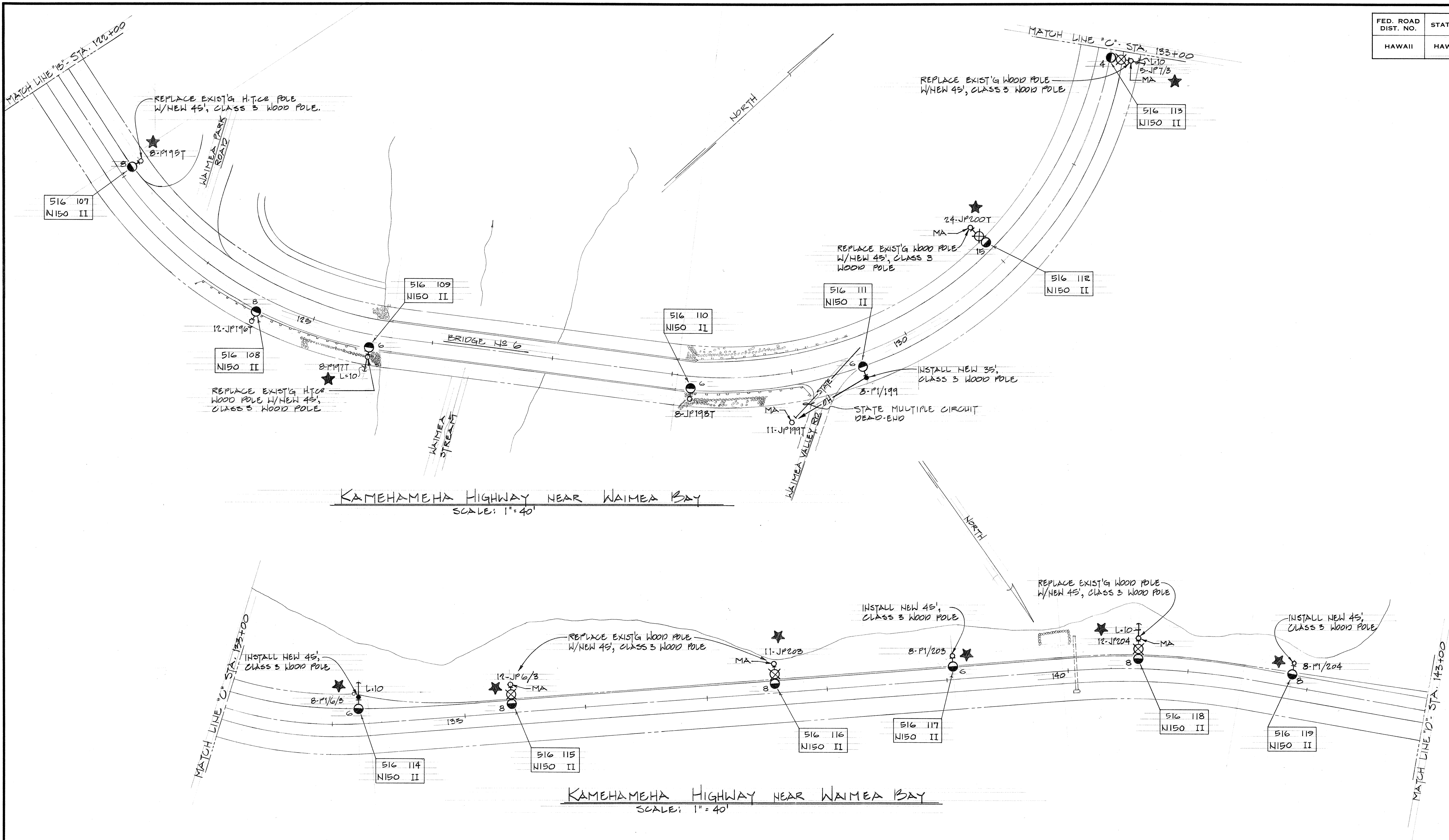
HIGHWAY LIGHTING SYSTEM

**KAMEHAMEHA HIGHWAY NEAR
WAIMEA BAY**

PROJECT NO 83B-01-73

SHEET NO. 2 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83B-01-73 83D-01-73	1974	3	6



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

DOUGLAS V. MACMAGON
REGISTERED
PROFESSIONAL
ENGINEER
No. 893
HAWAII, U. S. A.

Douglas V. MacMahon

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OR UNDER MY SUPERVISION.

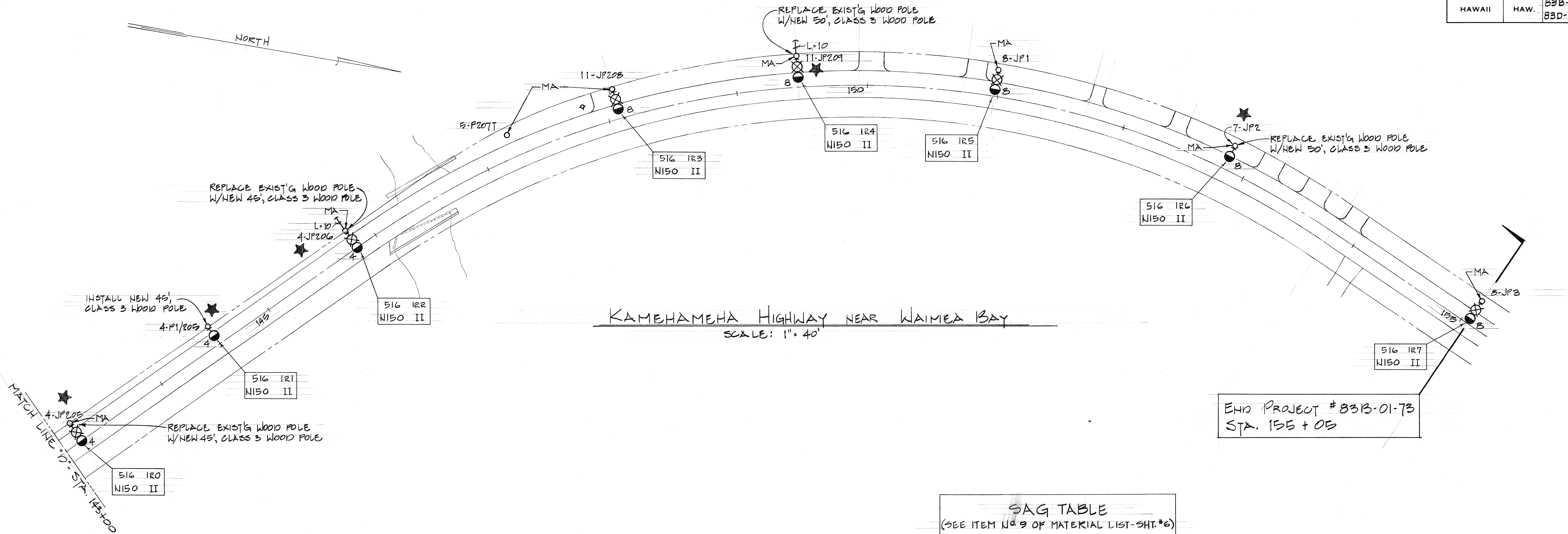
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING SYSTEM

KAMEHAMEHA HIGHWAY NEAR
WAIMEA BAY

PROJECT NO 83B-01-73

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83B-01-73 83D-01-73	1974	4	6



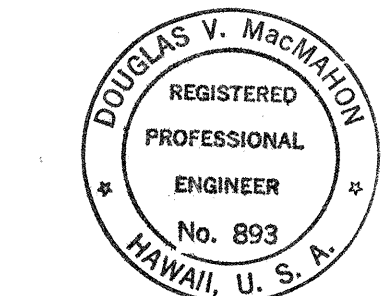
SAG TABLE
(SEE ITEM NO 9 OF MATERIAL LIST-SHT.#6)

SPAN	INITIAL SAG	MAXIMUM SAG	MAX. TENSION IN LBS.
50'	9"	1'-3"	384
75'	1'-3"	1'-11"	413
100'	2'-0"	2'-9"	384
125'	2'-9"	3'-8"	409
150'	3'-9"	4'-8"	410
175'	5'-6"	6'-0"	357
200'	6'-6"	7'-6"	352

DESIGN CONDITIONS:

MAXIMUM TENSION AT 60°F, 0 WIND = $35\% \times 886 \text{ LBS.} = 289 \text{ LBS.}$
 AND AT 25°F, 8 LBS./FT² WIND = $50\% \times 886 \text{ LBS.} = 413 \text{ LBS.}$
 MAXIMUM SAG AT 135°F, 0 WIND = 20 FT CLEARANCE ABOVE GROUND

SURVEY PLOTTED BY _____	DATE _____
DESIGNED BY _____	TRACED BY _____
NOTE BOOK _____	QUANTITIES BY _____
NO. _____	CHECKED BY _____



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HIGHWAY LIGHTING SYSTEM

KAMEHAMEHA HIGHWAY NEAR
WAIMEA BAY

PROJECT NO 83B-01-73