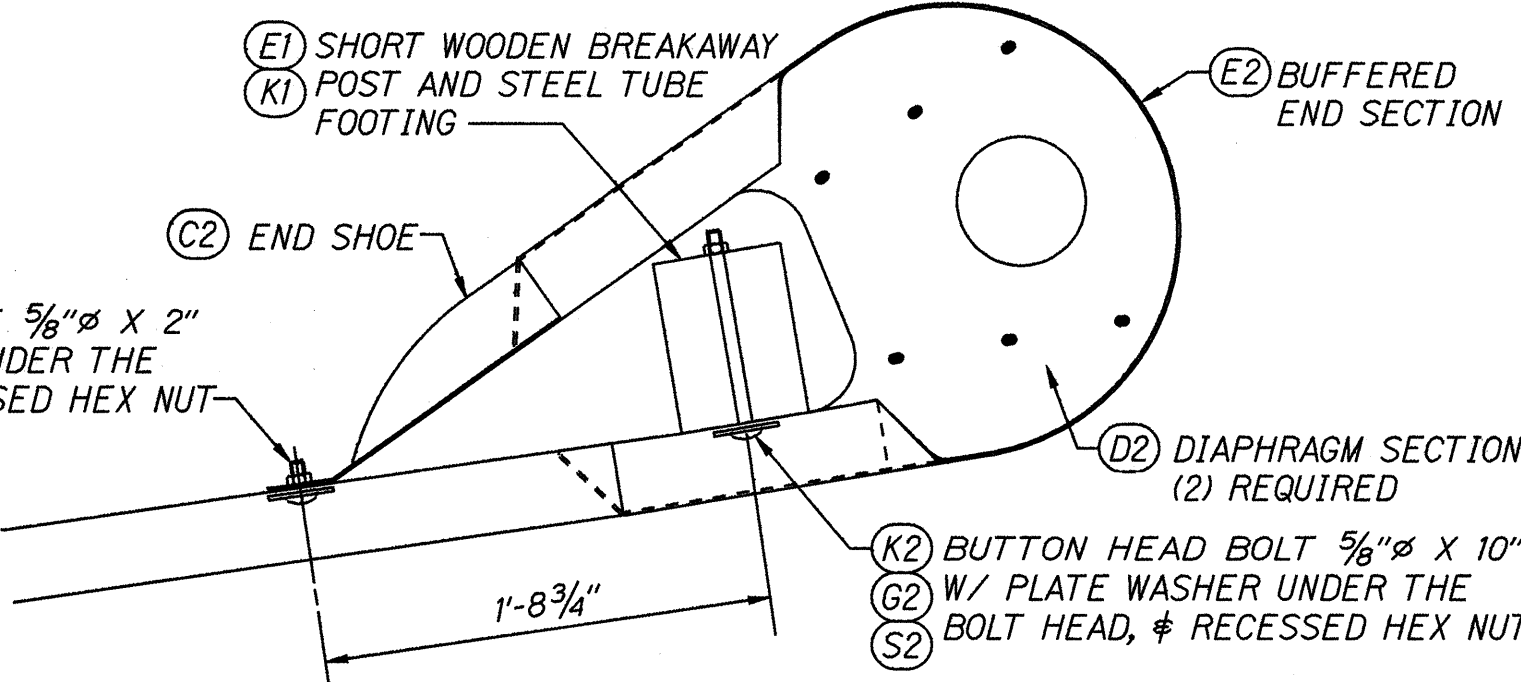


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-K(31)	1995	22	39

NOTES

1. THE POST OFFSET DIMENSIONS ARE GIVEN TO THE CENTER OF THE TRAFFIC FACE OF THE BLOCKOUTS, EXCEPT AT THE FIRST POST, WHERE THE DIMENSION IS TO THE CENTER OF THE TRAFFIC FACE OF THE POST. OFFSET POINTS ARE TO BE LOCATED BY CHORD MEASUREMENTS AT THE BACK OF THE RAIL EQUAL TO THE NOMINAL POST SPACINGS SHOWN. POSTS ARE TO BE SET APPROXIMATELY RADIAL TO THE RAILING AT EACH POST LOCATION.



BUFFERED END ASSEMBLY

SUMMARY OF COMPONENTS

FIND NO.	DESCRIPTION
(A1)	GUARDRAIL, 12GA X 12'-6"
(B1)	GUARDRAIL, 12GA X 12'-6"
(C1)	GUARDRAIL, 12GA X 12'-6"
(D1)	BREAKAWAY LINE POST, TIMBER - 6" X 8" X 6'-0"
(E1)	BREAKAWAY POST, TIMBER - 5 1/2" X 7 1/2" X 3'-6 1/2"
(G1)	BLOCK, TIMBER - 5 1/2" X 7 1/2" X 1'-2"
(H1)	POST - W6 X 8.5 X 6'-0"
(J1)	BLOCK - W6 X 8.5 X 1'-2"
(K1)	SOIL TUBE - TS 8 X 6 X .188 X 5'-0"
(L1)	CABLE ANCHOR BRACKET
(M1)	BEARING PLATE
(R1)	PIPE SPACER
(S1)	SOIL PLATE
(T1)	SHELF ANGLE
(A2)	STRUT & YOKE ASSEMBLY
(B2)	CABLE ASSEMBLY
(C2)	END SHOE
(D2)	DIAPHRAGM PLATE
(E2)	BUFFERED END SECTION
(G2)	WASHER, PLATE
(H2)	BOLT, SPLICE 5/8" X 1 1/4"
(J2)	BOLT, POST 5/8" X 2"
(K2)	BOLT, POST 5/8" X 10"
(L2)	BOLT, POST 5/8" X 18"
(M2)	BOLT, HEX 5/8" X 1 1/2"
(N2)	BOLT, HEX 3/4" X 7 1/2"
(R2)	BOLT, HEX 3/4" X 10"
(S2)	NUT, HEX, RECESSED 5/8"
(T2)	NUT, HEX 5/8"
(U2)	NUT, HEX 3/4"
(W2)	NUT, HEX 1"
(X2)	WASHER, FLAT 5/8"
(Y2)	WASHER, FLAT 3/4"
(Z2)	WASHER, FLAT 1"

NOTE:
ALL WOOD COMPONENTS SHALL BE TREATED TO CONFORM WITH ANY OF THE ACCEPTED METHODS IN SECTION 714 OF THE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND PUBLIC WORKS CONSTRUCTION", 1994.

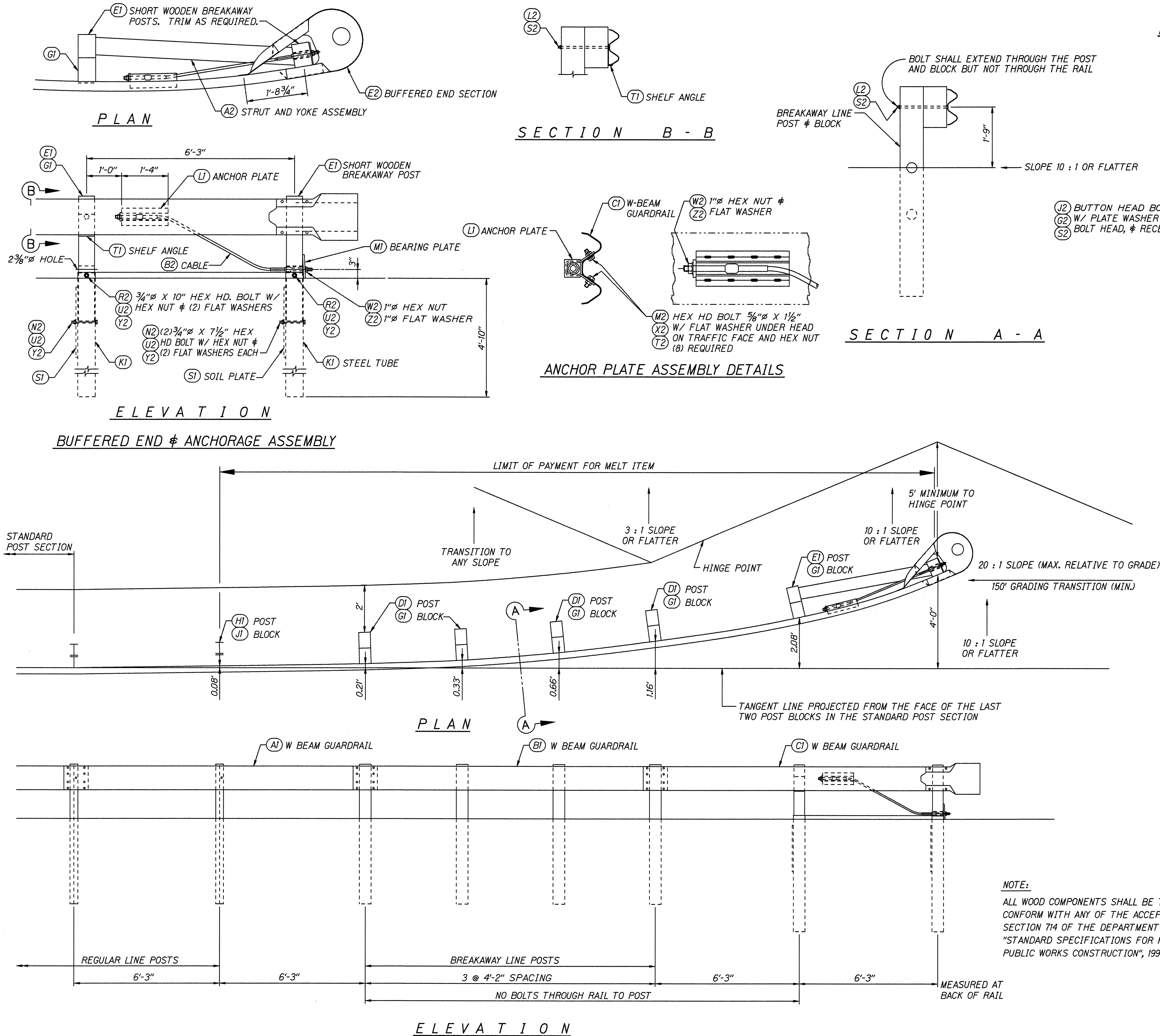
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MODIFIED ECCENTRIC LOADER
TERMINAL (MELT)

POST LAYOUT & ERECTION DETAILS

Federal Aid Project No. NH-083-K(31)

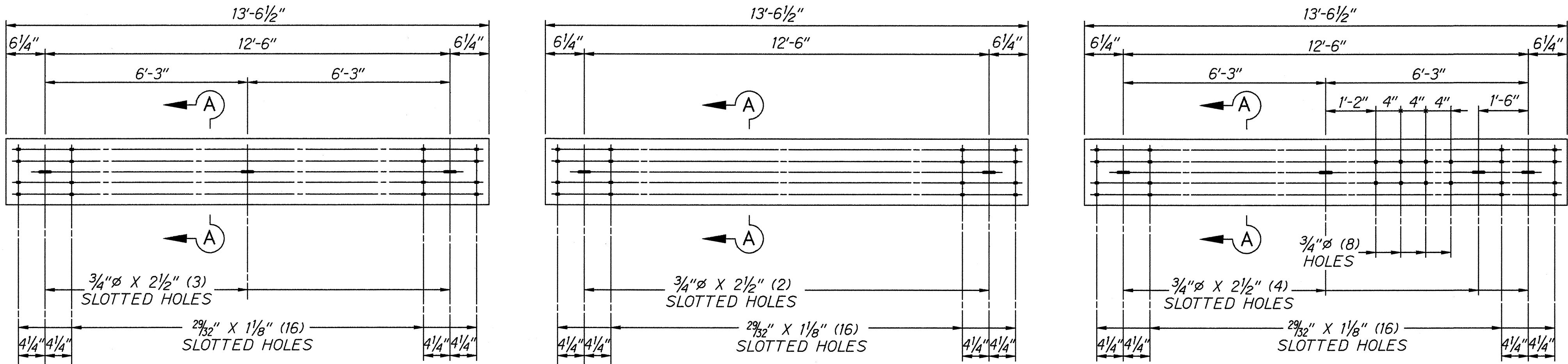
Not to Scale Date: Feb., 1995
SHEET No. 1 OF 3 SHEETS



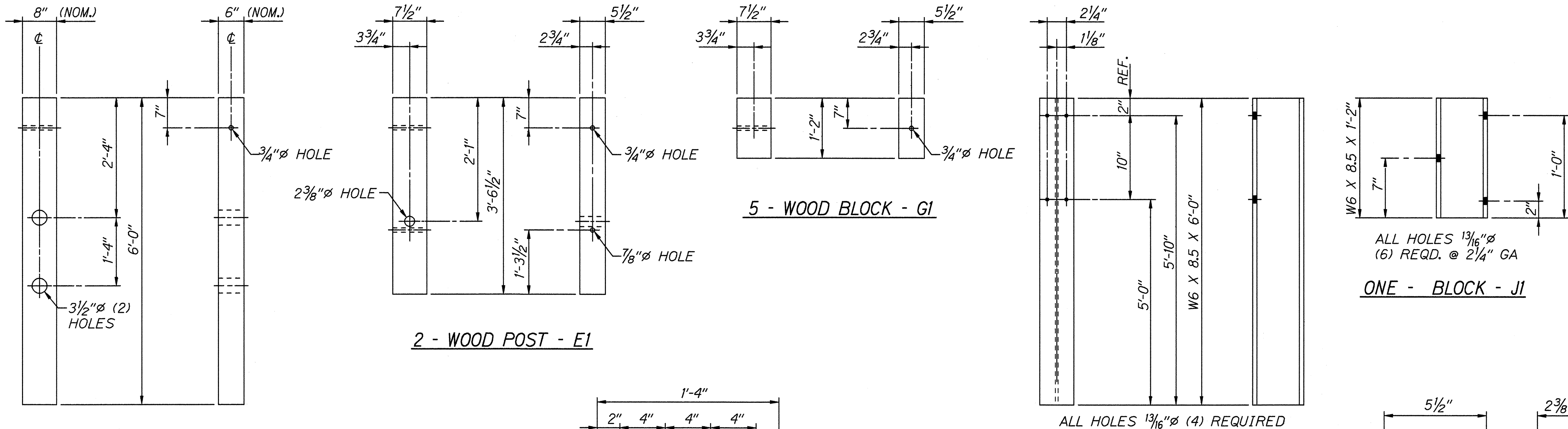
SURVEY PLOTTED BY	DATE
DRAWN BY	4/1/95
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
DATE	
BY	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(31)	1995	23	39

MATERIAL SCHEDULE					
FIND NO.	PIECE MARK	MATERIAL	LENGTH FEET	WEIGHT	REMARKS
A1		GUARDRAIL, W-BEAM		95.0	A123
		12 GA. W-BEAM GUARDRAIL	12	6	89.0 M180
B1		GUARDRAIL, W-BEAM		95.0	A123
		12 GA. W-BEAM GUARDRAIL	12	6	89.0 M180
C1		GUARDRAIL, W-BEAM		95.0	A123
		12 GA. W-BEAM GUARDRAIL	12	6	89.0 M180
D1		BREAKAWAY LINE POST		88.0	
		TIMBER POST 6 X 8	6	0	352.0 M168
E1		BREAKAWAY POST, SHORT		44.6	
		TIMBER POST 5 1/2 X 7 1/2	3	6 1/2	89.2 M168
G1		BLOCK		16.8	
		TIMBER BLOCK 5 1/2 X 7 1/2	1	2	84.0 M168
H1		POST		54.9	A123
		W6 X 8.5	6	0	52.0 A36
J1		BLOCK		11.0	A123
		W6 X 8.5	1	2	10.1 A36
K1		SOIL TUBE		88.9	A123
		TS 8 X 6 X J875	5	0	170.8 A500B
L1		CABLE ANCHOR BRACKET		19.3	A123
a		PL 1/4 X 12 3/8	1	4	17.6 A36
b		PL 1/2 X 2 3/4	0	3	1.17 A36
M1		BEARING PLATE		11.9	A123
		PL 5/8 X 8	0	8	11.3 A36
		PL 3/16 X 1	0	8	0.4 A36
R1		PIPE SLEEVE		1.76	A123
		PIPE 2" STD	0	5 1/2	1.67 A53
S1		SOIL PLATE		84.8	A123
		PL 1/4 X 24	2	0	40.8 A36
T1		SHELF ANGLE		3.7	A123
		PL 1/4 X 6	0	8 1/2	3.61 A36



SECTION A - A



4 - WOOD POST - D1

2 - WOOD POST - E1

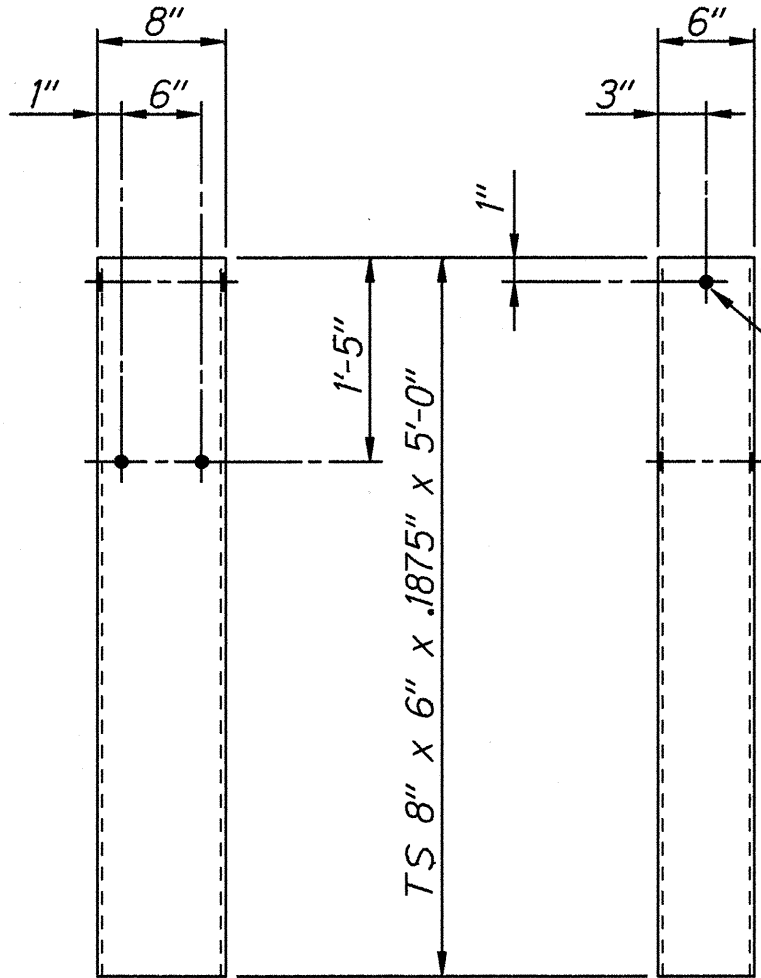
5 - WOOD BLOCK - G1

ONE - POST - H1

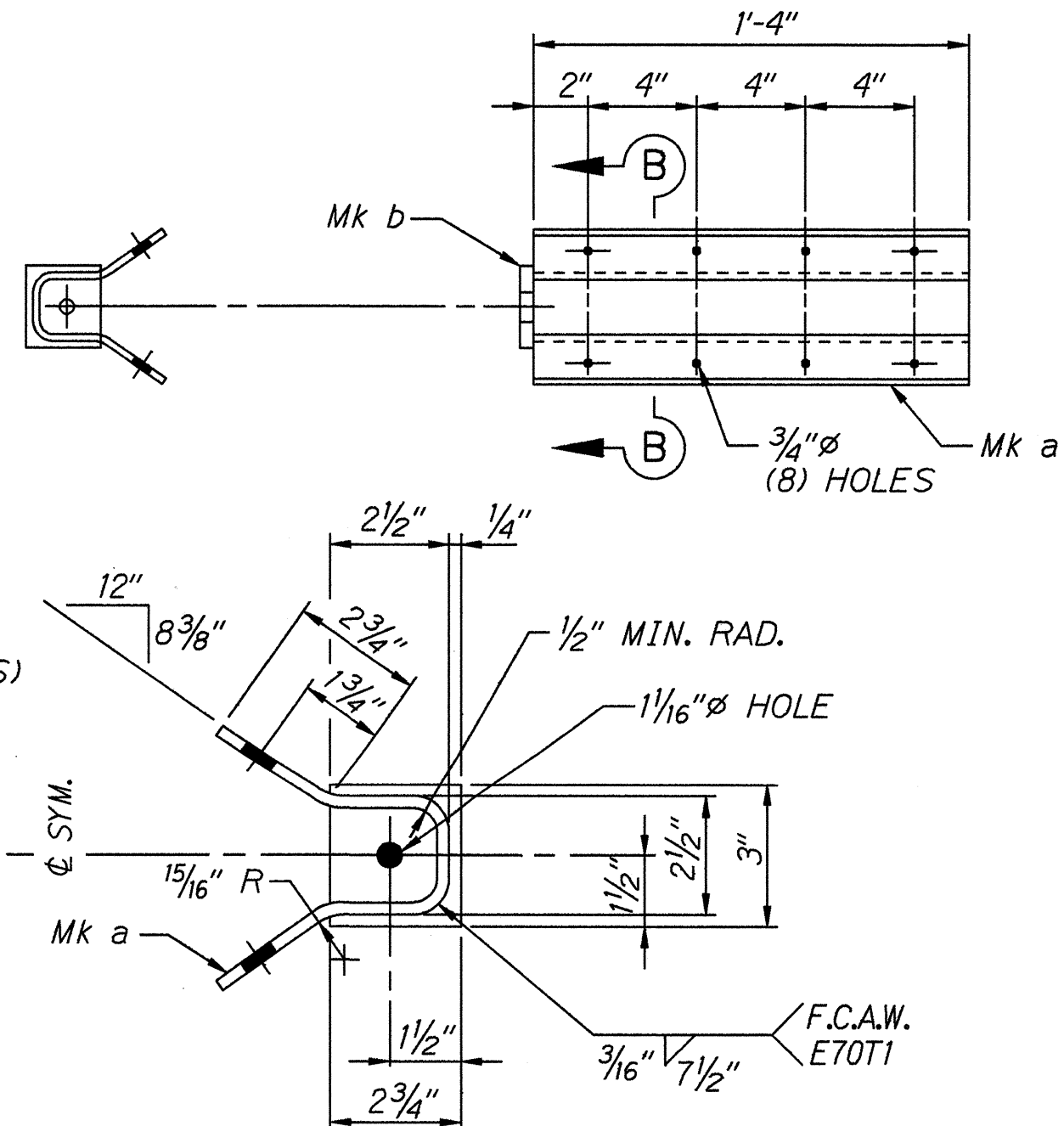
ONE - PIPE SPACER - R1

ONE - SHELF ANGLE - T1

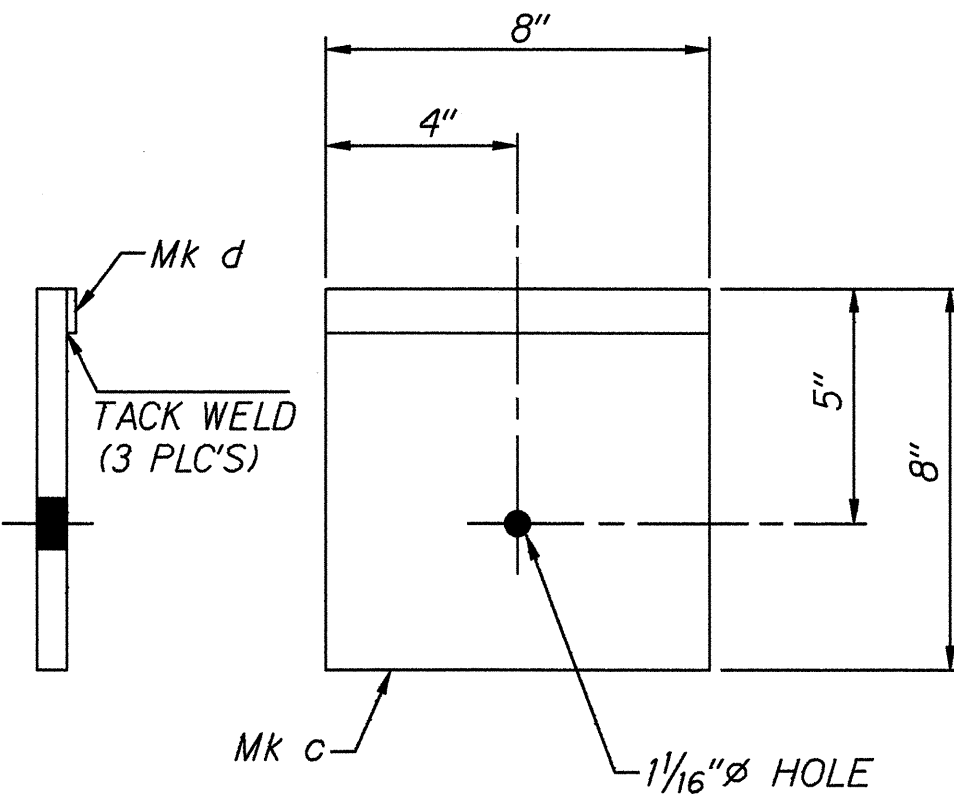
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
PLAN	DRAWN BY	4-17-95
NOTE BOOK	TRACED BY	
add/jason	DESIGNED BY	
N. Vandenliet	CHECKED BY	



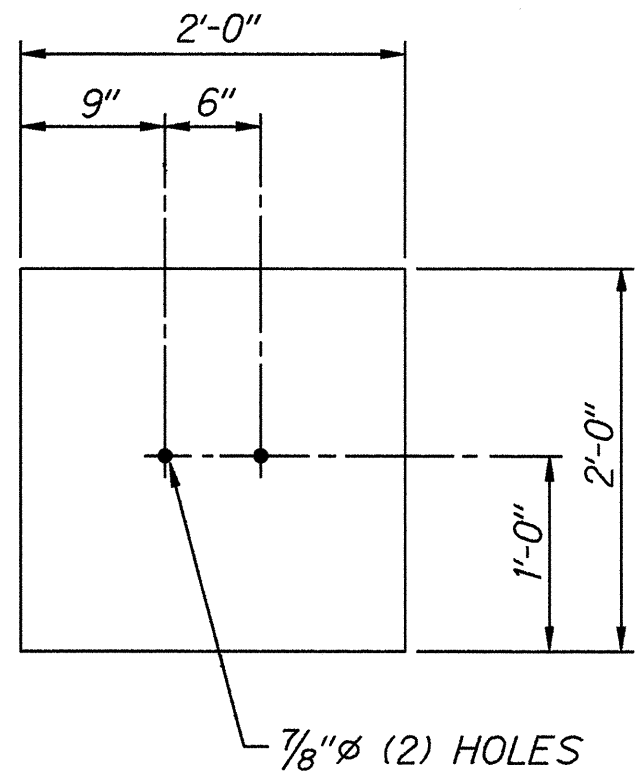
2 - SOIL TUBE - K1



SECTION B - B
ONE - CABLE ANCHOR BRACKET - L1



ONE - BEARING PLATE - M1



2 - SOIL PLATE - S1

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

MODIFIED ECCENTRIC LOADER

TERMINAL (MELT)

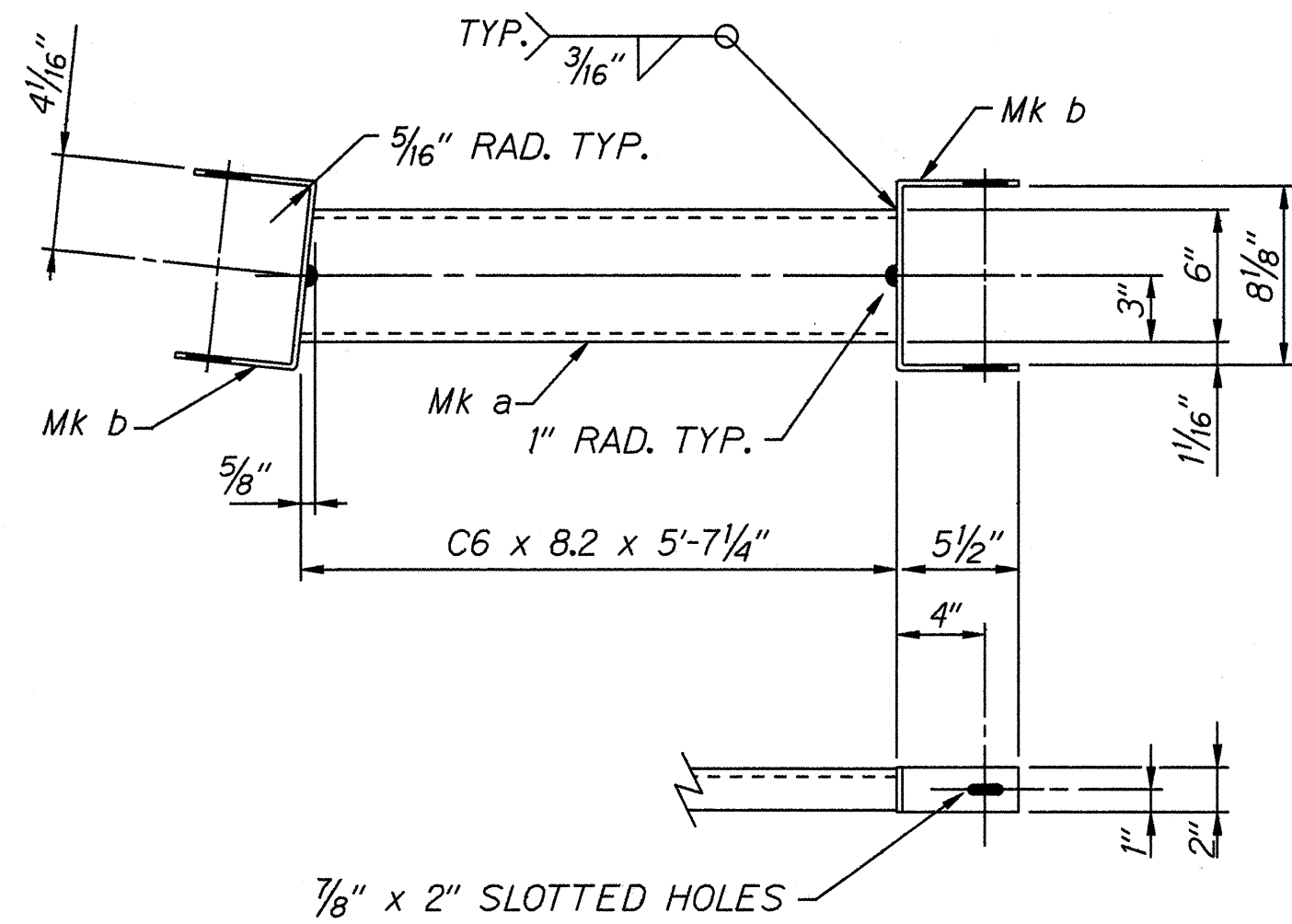
COMPONENT DETAILS

Federal Aid Project No. NH-083-1(31)

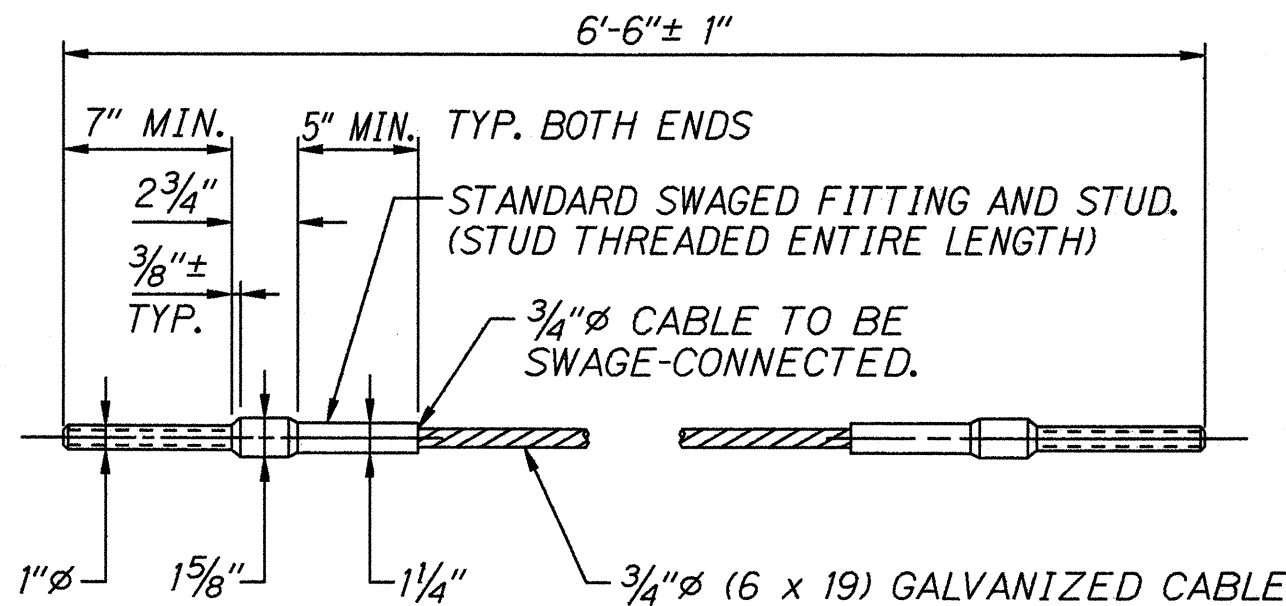
Not to Scale Date: Feb, 1995

SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-K(31)	1995	24	39

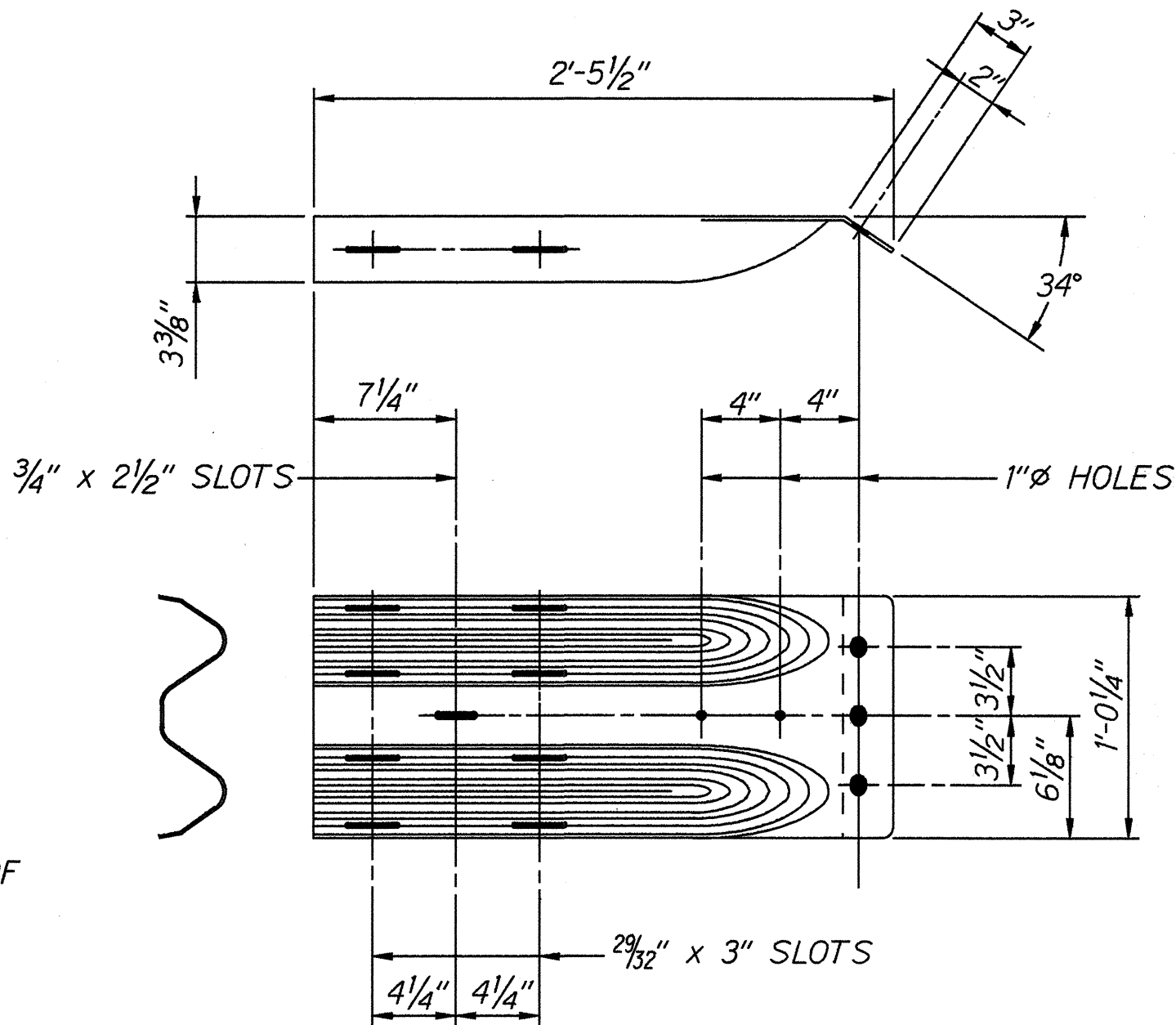


ONE - STRUT AND YOKE ASSEMBLY - A2



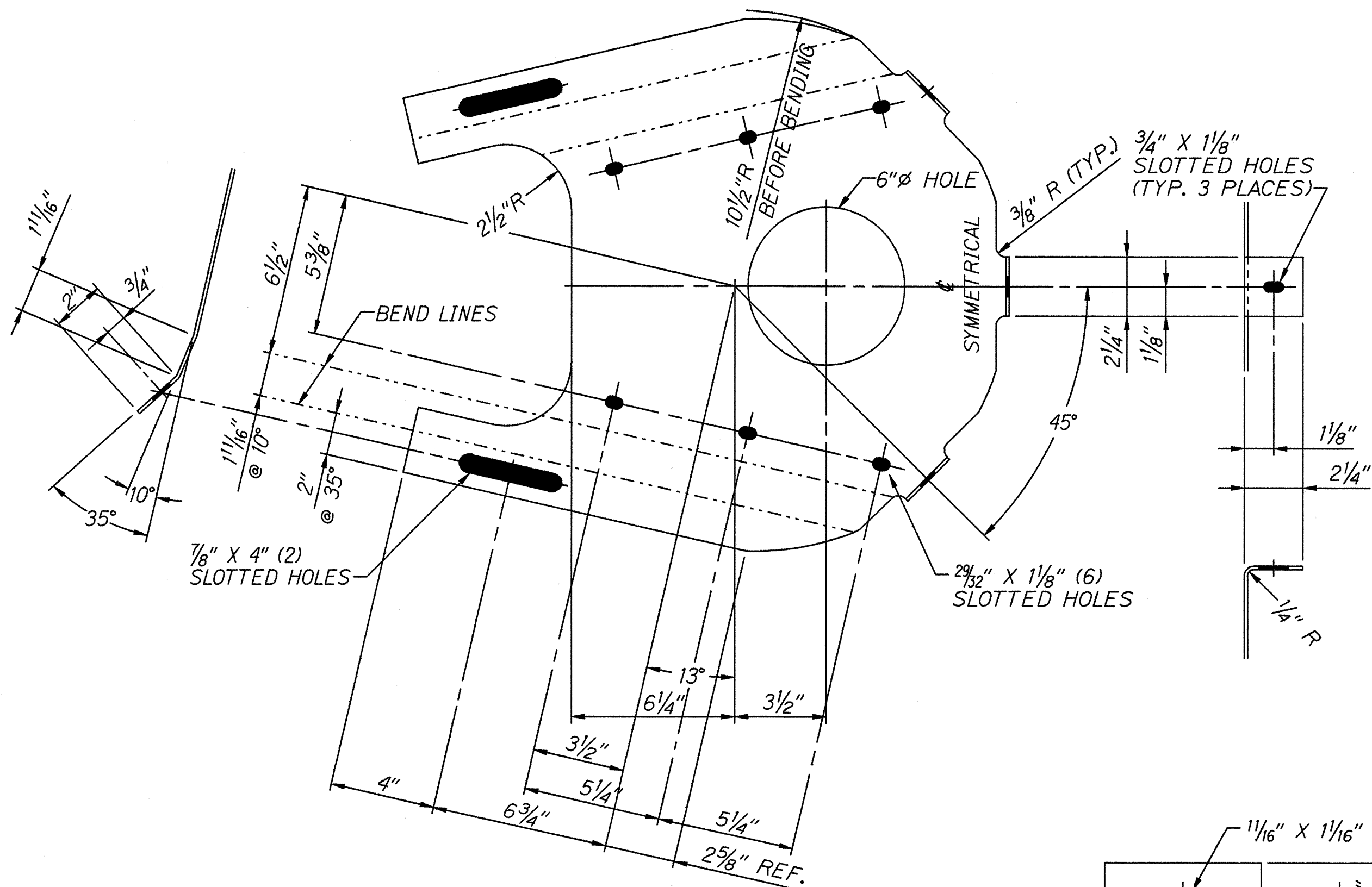
NOTES:
 THE STUD SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A449 AND SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A153. THE THREADS SHALL HAVE A CLASS 2A FIT BEFORE GALVANIZING.
 WIRE ROPE SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. M-30 AND SHALL BE 3/4-INCH PREFORMED, 6 x 19, WIRE STRAND CORE OR INDEPENDENT WIRE ROPE CORE (IWRC), GALVANIZED, RIGHT REGULAR LAY, MANUFACTURED OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 46,000 POUNDS.
 THE SWAGED FITTING, STUD, AND NUT SHALL DEVELOP THE BREAKING STRENGTH OF THE WIRE ROPE.

ONE - CABLE ASSEMBLY - B2

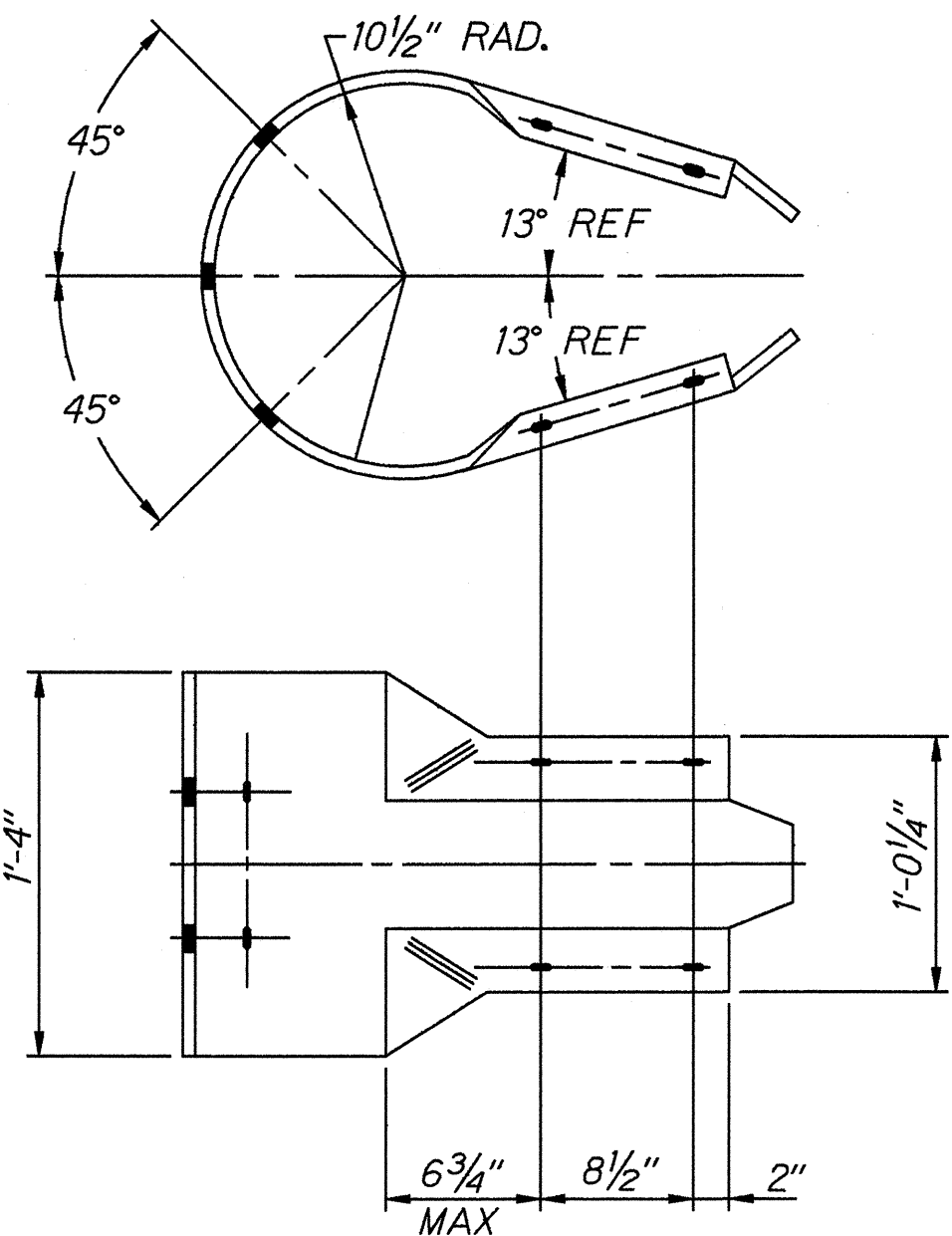


ONE - END SHOE - C2

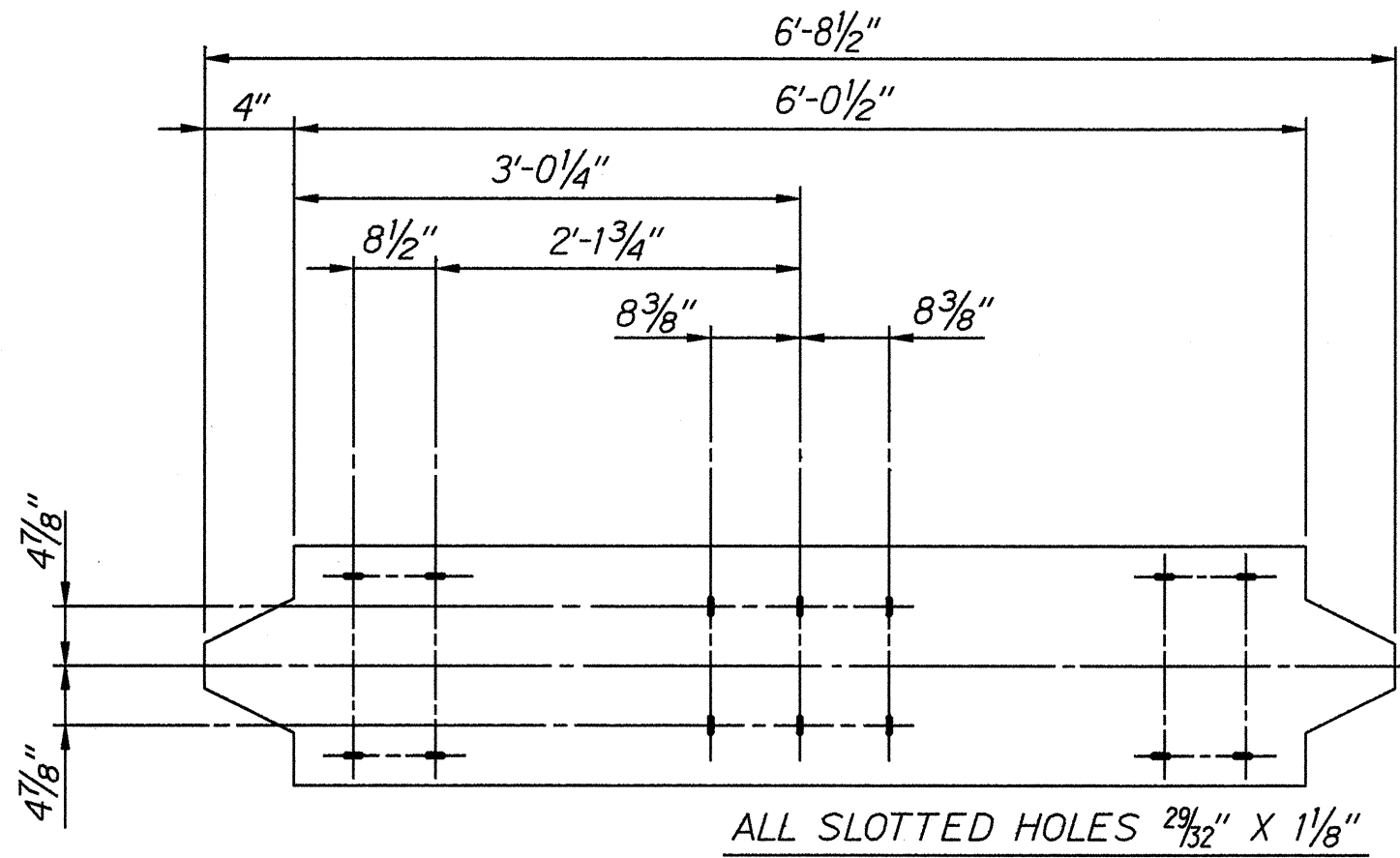
MATERIAL SCHEDULE					
FIND No.	PIECE MARK	MATERIAL	LENGTH FEET	INCHES	UNIT WEIGHT
A2		STRUT AND YOKE ASSEMBLY			52.0
	a	C6 X 8.2	5	7 1/4	46.0
	b	BAR 2 X 3/16	1	6 3/4	4.0
B2		CABLE ASSEMBLY			9.6
		3/4\"	6	6	
C2		END SHOE			23.1
		PL 10 GA. X 19 1/8	2	6	21.9
D2		DIAPHRAGM PLATE			9.7
		PL 12 GA. X 21	2	1 5/8	32.6
E2		BUFFERED END SECTION			37.5
		PL 12 GA. X 16	6	8 1/2	39.0
G2		WASHER, PLATE			.22
		PL 3/16 X 1 3/4	0	3	.56
H.A.R.D.W.A.R.E.					
H2		BOLT, SPLICE 5/8\"			6.3
J2		BOLT, POST 5/8\"			.44
K2		BOLT, POST 5/8\"			.88
L2		BOLT, POST 5/8\"			7.75
M2		BOLT, HEX 5/8\"			2.04
N2		BOLT, HEX 3/4\"			4.2
R2		BOLT, HEX 3/4\"			2.66
S2		NUT, HEX, RECESSED 5/8\"			7.31
T2		NUT, HEX 5/8\"			1.3
U2		NUT, HEX 3/4\"			.72
W2		NUT, HEX 1\"			.57
X2		WASHER, FLAT 5/8\"			.75
Y2		WASHER, FLAT 3/4\"			.95
Z2		WASHER, FLAT 1\"			.29



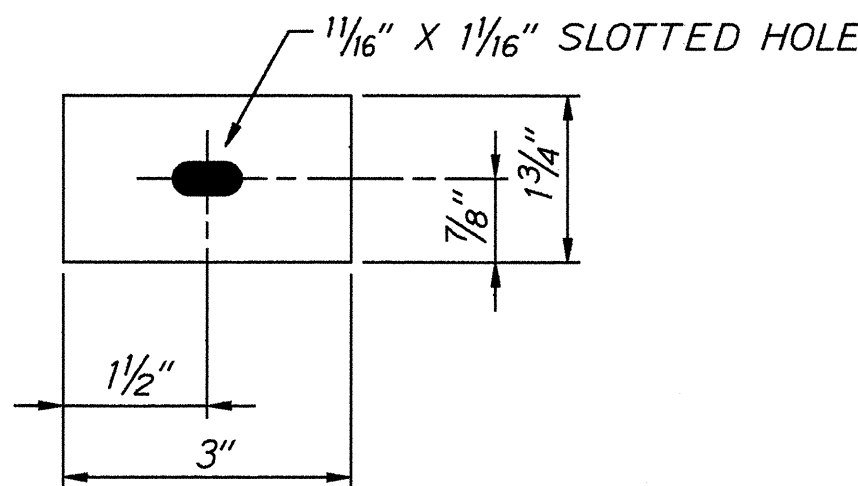
2 - DIAPHRAGM PLATE - D2



ONE - BUFFERED END SECTION - E2



BUFFERED END SECTION, FLAT PLATE LAYOUT



2 - WASHERS, PLATE - G2

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	4/1/95
checked by	DESIGNED BY	
checked by	QUANTITIES BY	
	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MODIFIED ECCENTRIC LOADER
TERMINAL (MELT)
COMPONENT DETAILS

Federal Aid Project No. NH-083-K(31)

Not to Scale
Date: Feb., 1995

SHEET No. 3 OF 3 SHEETS