FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(31), Unit 2	1967	19	217

CURB AND CURB & GUTTER QUANTITIES

LOCATION			LINEAL FEET								
ROAD	STA. TO STA.	SIDE	Item No. 70.01 Type "A" Curb	Item No. 70.55 Type "AG" Curb & Gutter	Item No. 70.58 Type "AGM" Curb & Gutter	Item No. 70.04 Type "D" Curb	Item No. 70.70 Type "DG" Curb & Gutter	Item No. 74.01 Reconstructed Lava Rock Curb	Item No. 70.28 Type "A" Gutter		
Frontage Road "J"	℄ 202+25 to 203+50	Right	129								
Frontage Road "J"	"J" 41+93 to Pensacola	Right		411							
Pensacola		Left		114							
Pensacola		Right		116							
Westbound Lanes	℄ 202+25 to 202+85	Left					60				
℄ Median	℄ 199+00 to 204+19	Left			519						
℄ Median	℄ 199+00 to 204+19	Right			519						
Eastbound Lanes	℄ 202+25 to 202+95	Left					70				
Frontage Road "J"	Pensacola to Piikoi	Right		661							
Piikoi	℄ 3+30 to 4+66	Left		139							
Frontage Road "J"	Frontage Rd. "J" to Piikoi	Left						60			
Frontage Road "J"	Piikoi to Liholilo	Left						343	343		
Ramp "F"	Piikoi to Ramp "F"	Right					160				
Ramp "F"	Piikoi to Ramp "F"	Left	136								
Piikoi Island	℄ 215+00			138							
Piikoi Nose	℄ 215+20	Left	87								
Frontage Road "J"	"J" 53+65 to 57+84	Right		422							
Ramp "F"	"F" 15+83 to 22+00	Left		617							
Ramp "F"	"F" 16+25 to ℄ 227+25	Right				1100					
Eastbound Lanes	℄ 221+30 to 222+00	Right					70				
Ramp "F"	Nose "F" 22+00	Left	4								
Liholiho	Island		58								
Frontage Road "J"	Liholiho to Kewalo	Left						334	334		
Kewalo	Island		123								
Frontage Road "J"	Kewalo to Keeaumoku	Left						679	679		
Frontage Road "J"	"J" 57+84 to 63+30	Right	546								
Westbound Lanes	℄ 219+40 to 230+00	Right			1060						
Eastbound Lanes	℄ 219+40 to 220+25	Left			85						
Eastbound Lanes	℄ 220+25 to 227+50	Left		725							
Eastbound Lanes	℄ 227+50 to 234+93	Left			743						
Westbound Lanes	℄ 224+50 to 224+98	Left					48				
Frontage Road "J"	"J" 63+30 to 66+38	Right	380								
Ramp "G"	℄ 225+00 to 229+00	Left					400				
Westbound Lanes	℄ 228+98 to 229+58	Left							60		
Eastbound Lanes	℄ 227+25 to 228+35	Right					110				
Eastbound Lanes	℄ 228+35 to 228+95	Right							60		
Westbound Lanes	℄ 229+60 to 231+50	Left					190				
Eastbound Lanes	℄ 228+95 to 234+70	Right					574				
Makiki St.	End of Makiki St.	Rt. of ℄					88				
Westbound Lanes	℄ 230+00 to 234+00	Right		400							
Westbound Lanes	℄ 231+54 to 234+50	Left				296					
Keeaumoku St.	℄ 228+00	Right						80			

METAL GUARD RAIL QUANTITIES

LOCATION		SIDE	ESTIMATED LENGTH			
ROAD	STA. TO STA.		80.02 I or 80.05 II Single (Lin. Ft.)	80.12 I or 80.15 II Double (Lin. Ft.)	46.101 Type "A" Concrete (C.Y.)	46.101 Type "B" Concrete (C.Y.)
Eastbound Lanes	℄ 202+25 to 202+95	Right	70			
Freeway Median	℄ 198+75 to 203+50	Median		475		
Freeway Median	℄ 203+50 to 204+20	Lt. & Rt.	140			
Freeway Median	℄ 219+40 to 220+10	Lt. & Rt.	140			
Freeway Median	℄ 220+10 to 228+60	Median		850		
Frontage Road "J"	"J" 62+56 to 63+06	Right	75			
Frontage Road "J"	"J" 65+85 to 66+81	Right	125			
Westbound Lanes	℄ 228+49 to 228+99	Left	50			12
Westbound Lanes	℄ 228+98 to 229+59	Left				12
Westbound Lanes	℄ 229+59 to 230+59	Left	100			
Freeway Median	℄ 228+60 to 229+36	Median			28	
Eastbound Lanes	℄ 227+50 to 228+35	Right	85			
Eastbound Lanes	℄ 228+35 to 228+96	Right				12
Eastbound Lanes	℄ 228+96 to 229+71	Right	75			
Freeway Median	℄ 229+35 to 234+93	Median		560		
Ramp "F"	"F" 18+00 to 21+00	Left	300			

CHAIN LINK FENCE QUANTITIES

LOCATION			Item No. 88.16 6-Ft. Chain Link Fence on Wall (LIN. FT.)	Item No. 88.06 6-Ft. Chain Link Fence in Conc. Footing (LIN. FT.)	Item No. 88.14 3-Ft. Chain Link Fence on Wall (LIN. FT.)	Item No. 89.11 Reconstructed 4-Ft. Chain Link Fence (LIN. FT.)	Item No. 89.10 Reconstruct 6-Ft. Chain Link Fence (LIN. FT.)
ROAD	STA. TO STA.	SIDE					
Eastbound Lanes	℄ 202+94	Right	25				
Eastbound Lanes	℄ 202+94 to 206+47	Right		363			
Ramp "G"	℄ 225+51 to 228+50	Left			300		
Eastbound Lanes	℄ 225+91 to 227+65	Right		175			
Eastbound Lanes	℄ 233+36 to 234+77	Right		145			
Westbound Lanes	℄ 228+50 to 233+47	Left					497
Westbound Lanes	℄ 233+47 to 234+17	Left		70			
Westbound Lanes	℄ 234+17 to 235+22	Left					93
Eastbound Lanes	℄ 227+65 to 233+35	Right					570
Median	℄ 230+00 to 234+93	Median				493	
Ramp "F"	Piikoi 4+64 to "F" 15+88	Right		115			

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

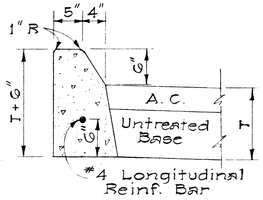
ESTIMATED QUANTITIES
CURB AND CURB & GUTTER,
METAL GUARD RAIL, AND
CHAIN LINK FENCE

INTERSTATE ROUTE H-1
(LUNALILO FREEWAY)
Victoria St. to Keeaumoku St.
F.A.I. Proj. No. I-HI-1(31), Unit 2
Date: April, 1967

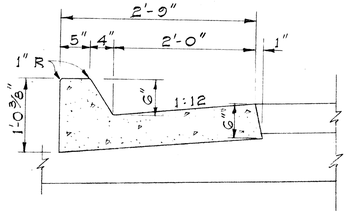
SHEET No. 1 OF 9 SHEETS

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

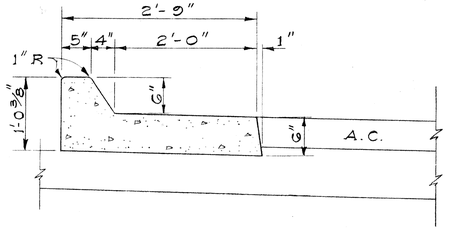
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(31), Unit 2	1967	20	217



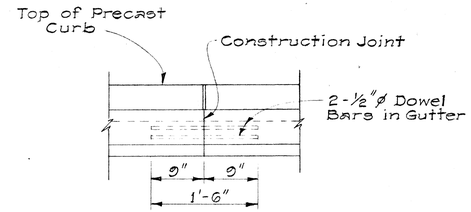
TYPE "A" CURB



TYPE "AG" CURB & GUTTER

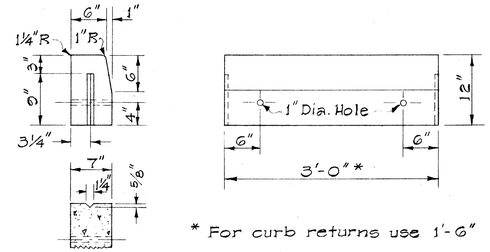


TYPE "AG-M" CURB & GUTTER



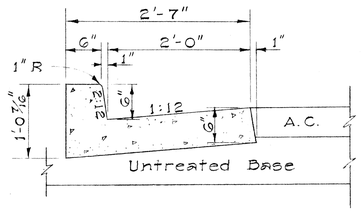
NOTE: All dowel bars shall be painted and oiled to prevent bond with concrete.

CONSTRUCTION JOINT DETAIL FOR TYPE "A" C.I.P. GUTTER

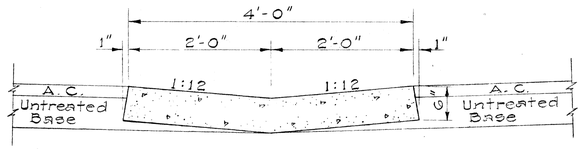


* For curb returns use 1'-6"

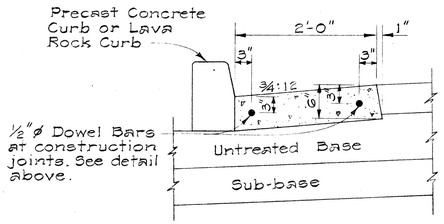
PRECAST CONCRETE CURB



TYPE "DG" CURB & GUTTER

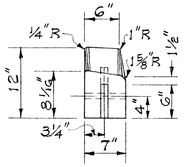


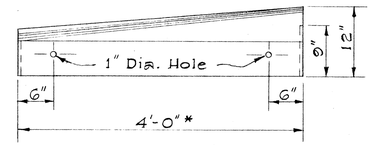
TYPE "G" GUTTER



NOTE: See Traneverse weakened plane joint detail on this sheet.

TYPE "A" CAST-IN-PLACE GUTTER



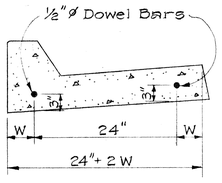


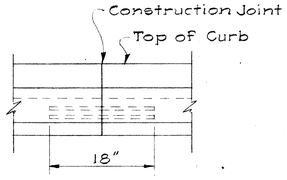
NOTE:
* Reduce to 3'-0" where shown on plans

PRECAST CONCRETE DROP CURB

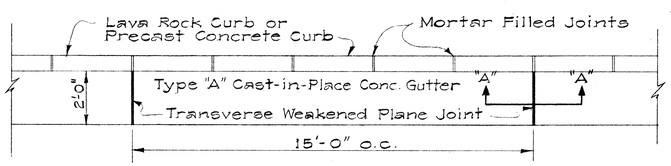
DETAIL OF CAST-IN-PLACE CURBS, GUTTERS AND CURBS & GUTTERS

Scale: 1" = 1'-0"

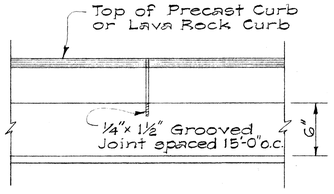




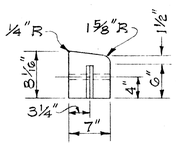
NOTE:
All dowel bars shall be painted and oiled to prevent bond with concrete

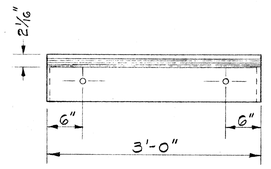


PLAN
Scale: 3/8" = 1'-0"



SECTION "A-A"
Scale: 1½" = 1'-0"

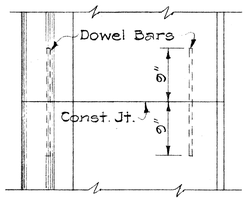




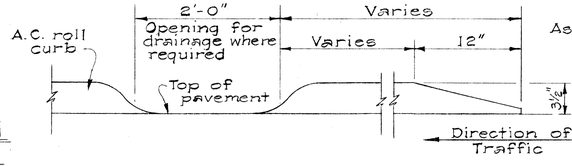
PRECAST CONCRETE DRIVEWAY CURB

PRECAST CONCRETE CURBS
Scale: 1" = 1'-0"

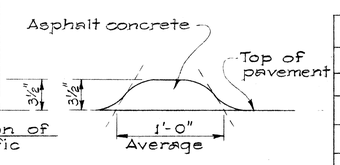
TRANSVERSE WEAKENED PLANE JOINT DETAIL FOR TYPE "A" CAST-IN-PLACE CONC. GUTTERS
Scale: As Shown



TYPICAL CONSTRUCTION JOINT DETAIL FOR CAST-IN-PLACE CONC. CURB & GUTTER
Scale: 1" = 1'-0"



ELEVATION



SECTION

A.C. TRAFFIC ROLL CURB
Not to Scale

PAYMENT FOR CURB AND CURB & GUTTER TRANSITIONS		
TYPE OF TRANSITION		MEASURED FOR PAYMENT AS:
From	To	
C.I.P. Curb or Precast Curb	C.I.P. Curb & Gutter	C.I.P. Curb & Gutter
C.I.P. Curb & Gutter	Pre-cast Curb & C.I.P. Gutter	C.I.P. Curb & Gutter
C.I.P. Curb & Gutter Type	C.I.P. Curb & Gutter Type	C.I.P. Curb & Gutter ½ of Transition to each type
C.I.P. Curb Type	C.I.P. Curb Type	C.I.P. Curb ½ of Transition to each type
Bridge Abutments	C.I.P. Curb and/or Gutter or Precast Curb or Lava Rock Curb	C.I.P. Curb and/or Gutter or Precast Curb or Lava Rock Curb

NOTE: C.I.P. = Cast-in-Place

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETAILS FOR CONCRETE CURBS AND GUTTERS

INTERSTATE ROUTE H-1
Victoria St. to Keeaumoku St.
F.A.I. Proj. No. I-HI-1(31), Unit 2

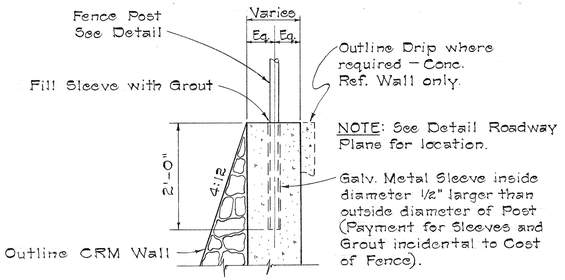
Scale: As Shown Date: April 1967

SHEET No. 2 OF 9 SHEETS

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

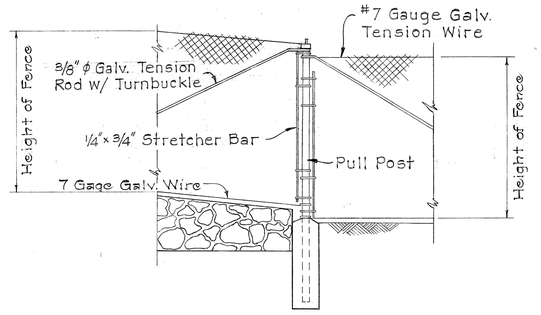
PRINTED ON NO. 1000H CLEARPRINT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(31) UNIT 2	1967	21	217



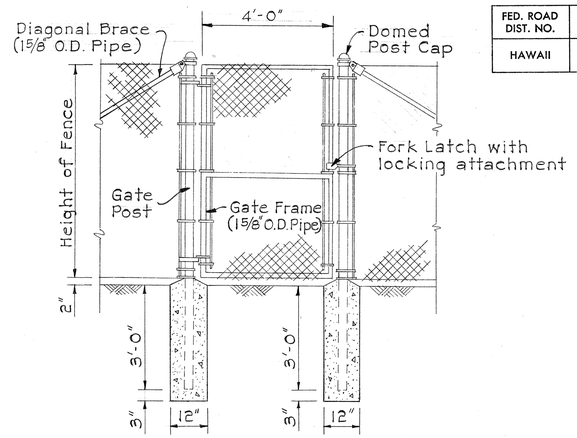
TYPICAL SECTION OF FENCE POST ON CRM & CONC. RETAINING WALL

Scale: 3/4" = 1'-0"



TYPICAL FENCE CONNECTION DETAIL AT RETAINING WALL

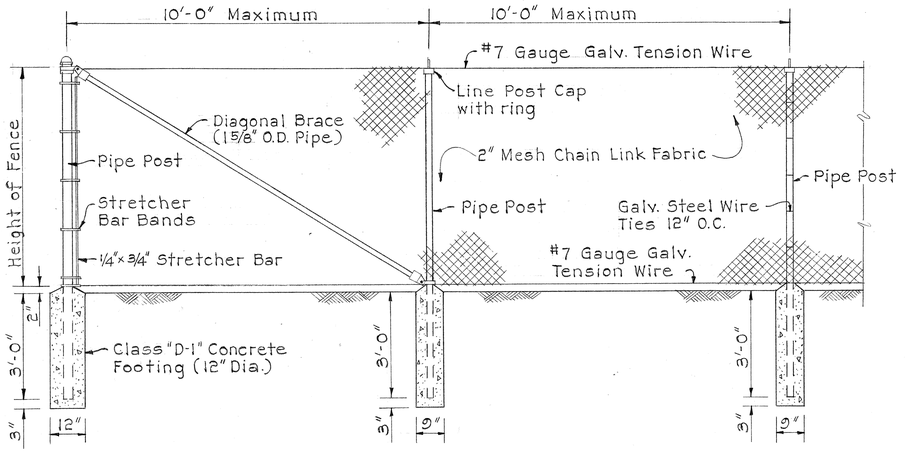
Scale: 3/8" = 1'-0"



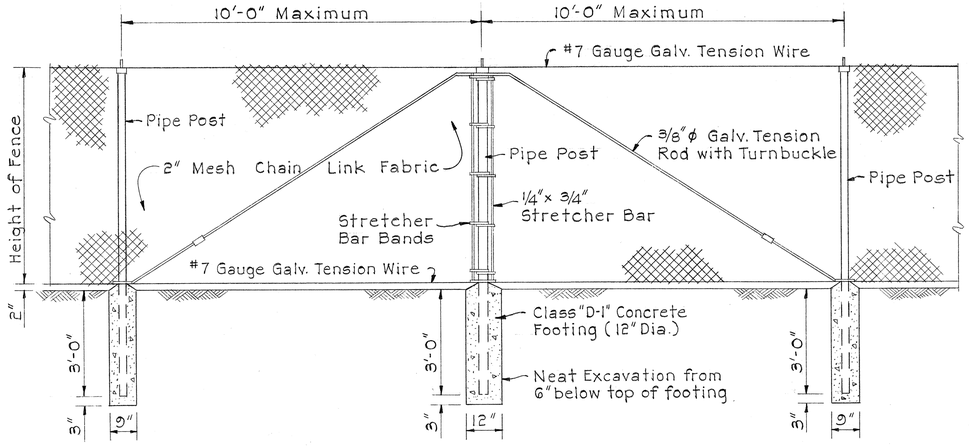
GATE POST GATE POST

DETAIL OF 4 FT. CH. LK. GATE

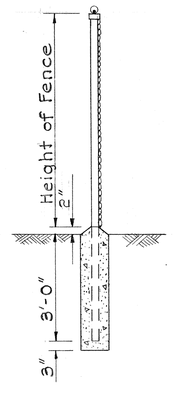
Scale : 1/2" = 1'-0"



END POST LINE POST LINE POST



LINE POST PULL POST LINE POST



TYPICAL SECTION

NOTE : See Standard Specifications for pipe post sizes for the varies heights of fence

CHAIN LINK FENCE DETAILS

Scale : 1/2" = 1'-0"

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CHAIN LINK FENCE

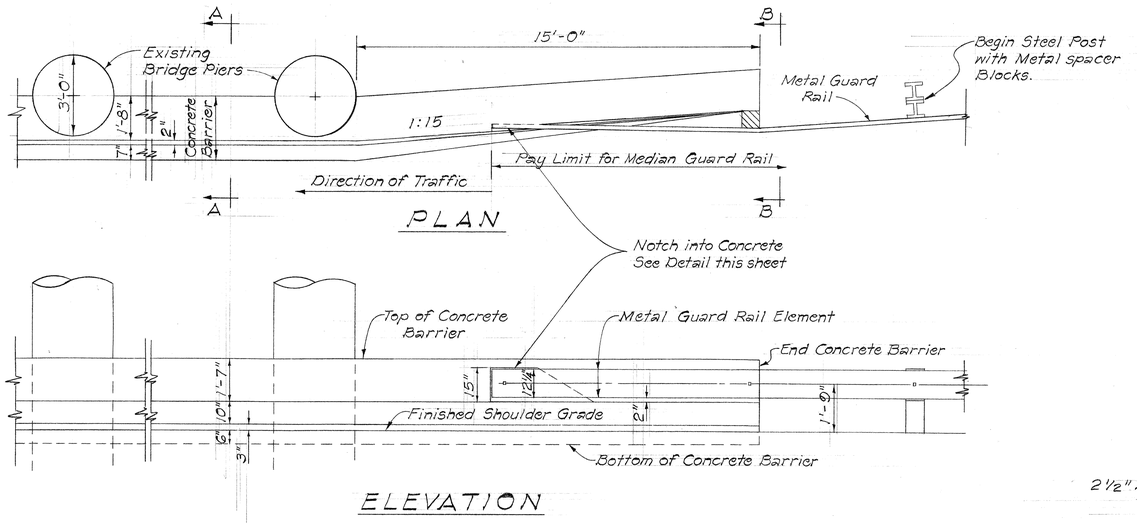
INTERSTATE ROUTE H-1
Victoria St. to Keeaumoku St.
F.A.I. Proj. No. I-HI-1(31), Unit 2

Scale : As Shown Date : April 1967

SHEET No. 3 OF 9 SHEETS

21

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(31), Unit 2	1967	C022	217

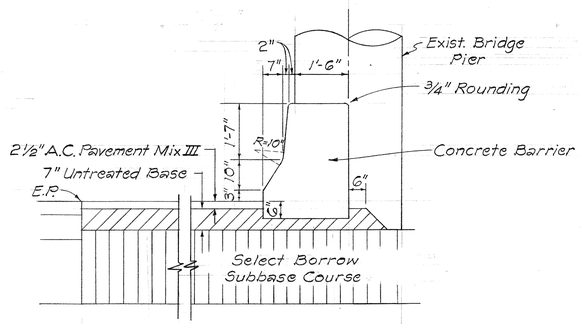


PLAN

ELEVATION

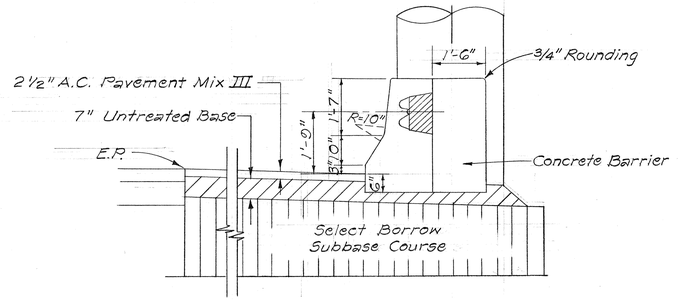
TYPE "B" CONCRETE BARRIER (FOR ROADSIDES) AT METAL GUARD RAIL

Scale: 3/8"=1'-0"



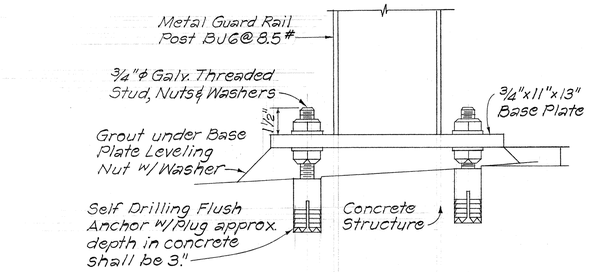
SECTION "A-A"

Scale: ½"=1'-0"

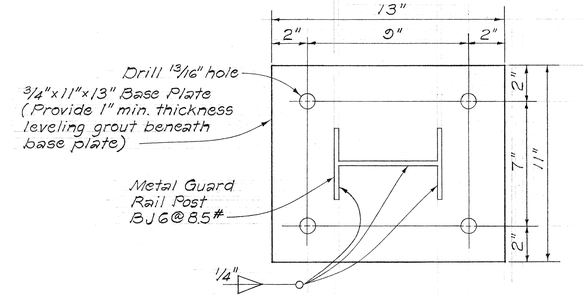


SECTION "B-B"

Scale: ½"=1'-0"



DETAIL OF CONNECTION

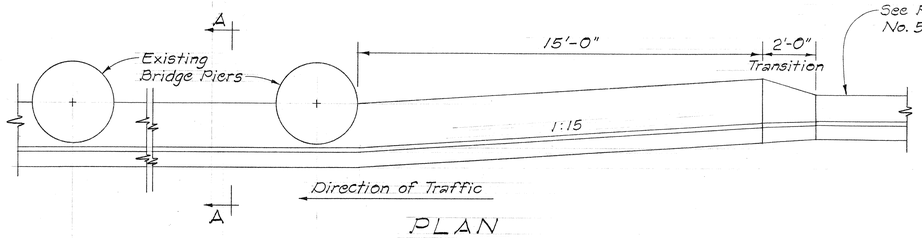


PLAN

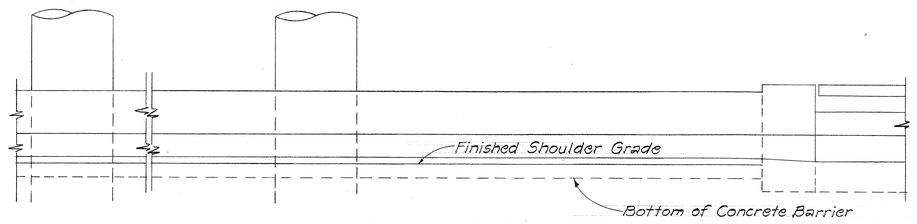
METAL GUARD RAIL ON CONCRETE STRUCTURES

Scale: 3"=1'-0"

NOTE: This detail applies whenever a Metal Guard Rail Post must be located on a concrete structure.



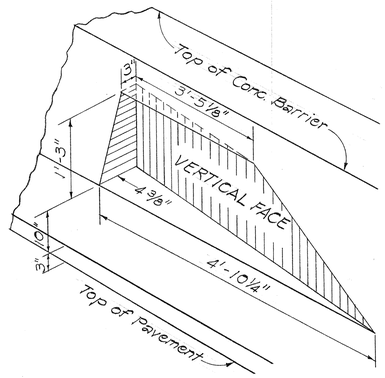
PLAN



ELEVATION

TYPE "B" CONCRETE BARRIER (FOR ROADSIDES) AT CONCRETE RAILING ON RETAINING WALL

Scale: 3/8"=1'-0"



DETAIL OF NOTCH IN CONC. BARRIER

Not to Scale

NOTE:

Dimensions shown are for Type "A" Concrete Barriers at structures with col. diameter of 2'-6" only. The Contractor shall measure and provide notches of appropriate sizes to fit Barries.

GENERAL NOTES

1. Concrete for Concrete Barriers shall be Class "A-1."
2. Concrete Barriers shall be constructed after bridge structures are completed unless otherwise noted.
3. Refer to Roadway Plan Sheets for superelevation, finished grades, pavement design and median widths.
4. Height of Guard Rails from finished shoulder grade to ℄ guard rail element shall be 1'-6".
5. The Contractor shall furnish and install ⅝" ϕ bolts of appropriate lengths, and appurtenant washers, nuts and wooden blocks for anchoring metal guard rail elements to Concrete Barrier. (Incidental to Metal Guard Rail.)

THIS SHEET SUPERSEDES AND REPLACES SHEET NO. 22.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPE "B" CONCRETE BARRIER & METAL GUARD RAIL ON CONCRETE STRUCTURES

Interstate Route H-1
Victoria Street to Keeaumoku Street
F.A.I. Proj. No. I-HI-1(31), Unit 2

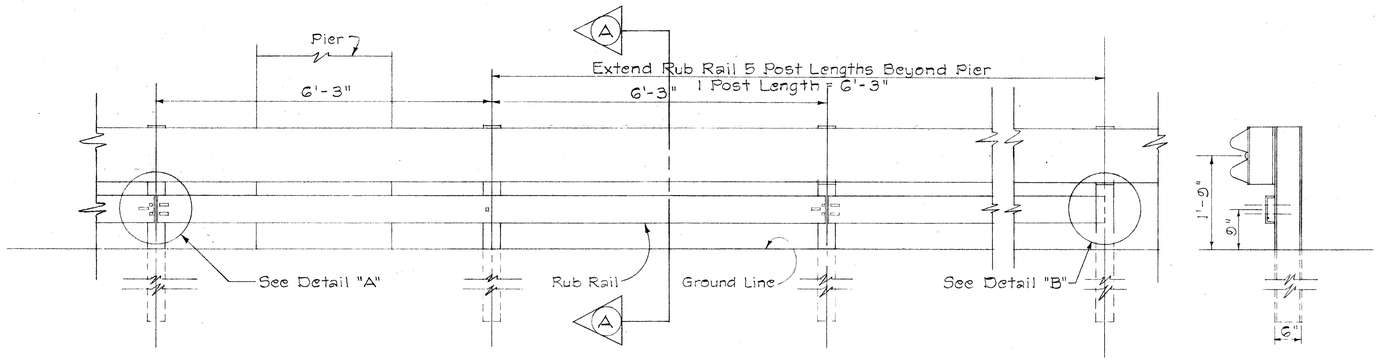
Scale: As Shown Date: Dec. 8, 1967

SHEET No. 62 OF 62 SHEETS

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

PRINTED ON NO. 1000H CLEARPRINT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(31), Unit 2	1967	C0225	217



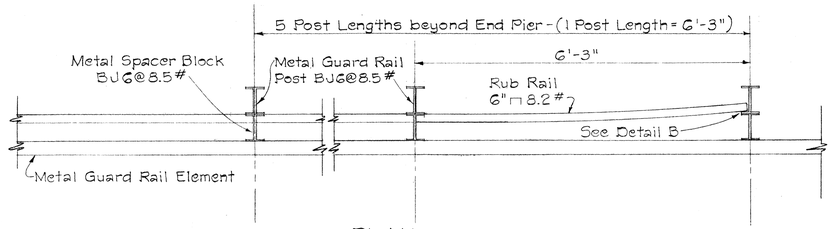
NOTE:
1. Cut washers are required at all bolt installations.

ELEVATION

RUB RAIL

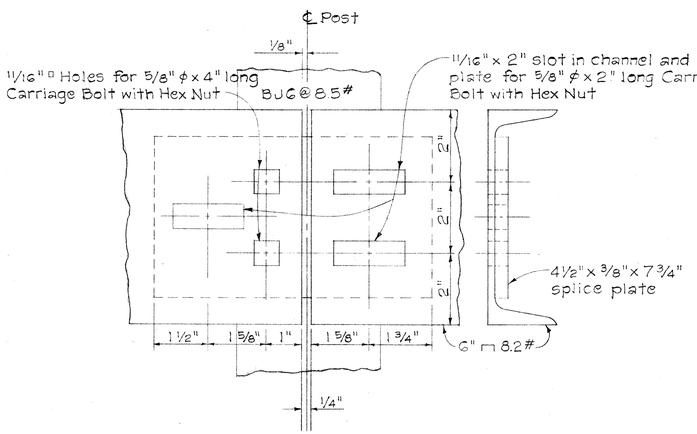
Scale: 3/4" = 1'-0"

SECTION "A-A"



PLAN

Scale: 3/4"=1'-0"

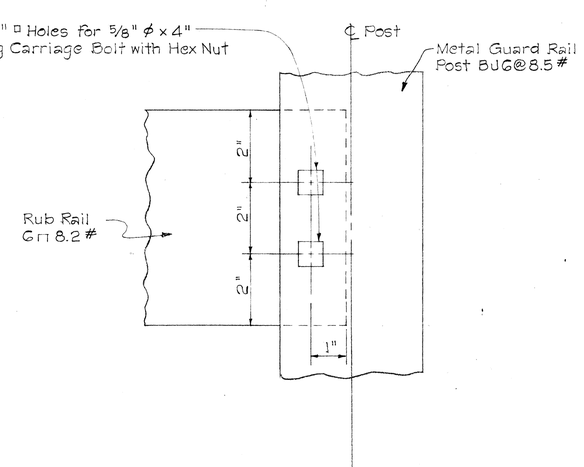


ELEVATION

DETAIL "A" OF RUB RAIL SPLICE

(Rail Splices to occur at 12'-6")

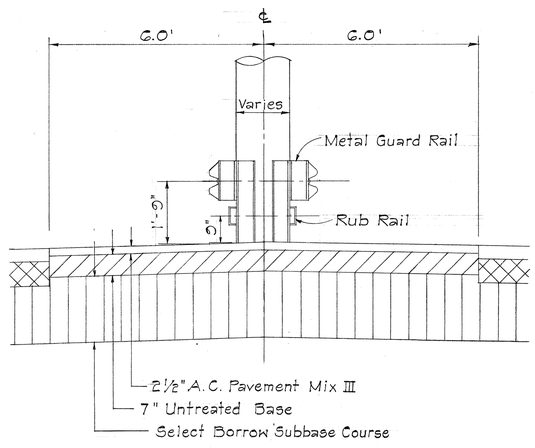
Scale 6"=1'-0"



ELEVATION

DETAIL "B"

Scale: 6"=1'-0"



TYPICAL SECTION AT OBSTRUCTION

Scale: 1/2" = 1'-0"

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

THIS SHEET IS A SUPPLEMENT TO THE CONTRACT DRAWINGS.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETAILS OF RUB RAIL

Victoria Street to Keeaumoku Street

F.A.I. Proj. No. I-HI-1(31), Unit 2

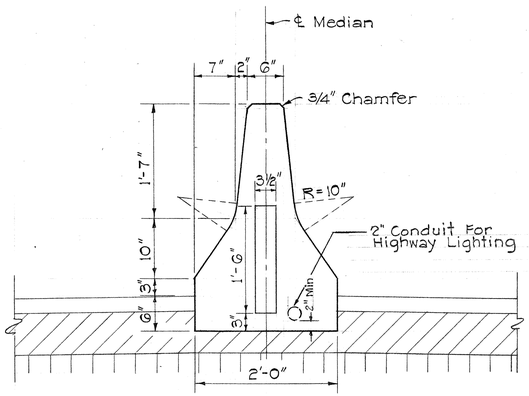
Scale: As Shown Date: Dec., 1967

SHEET No. OF SHEETS

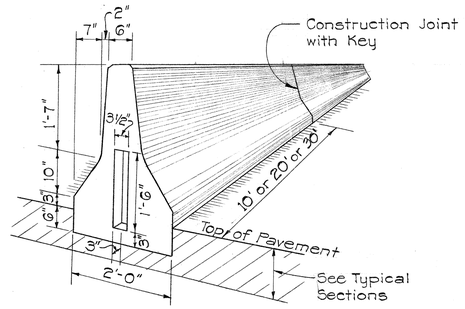
C0225

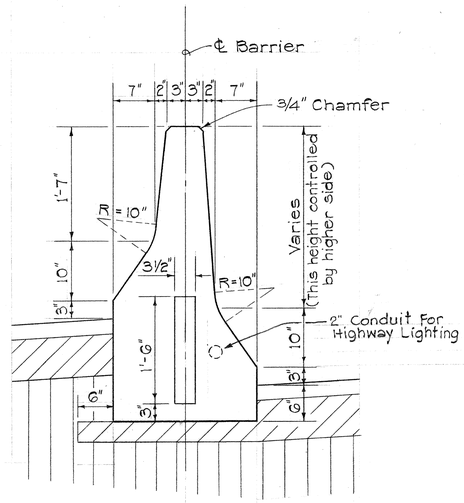
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(31), Unit 2	1968	C0225(1)	217

Revised : April 1, 1969
April 7, 1969



TYPICAL SECTION
(TANGENT SECTION)
Scale : 1" = 1'-0"





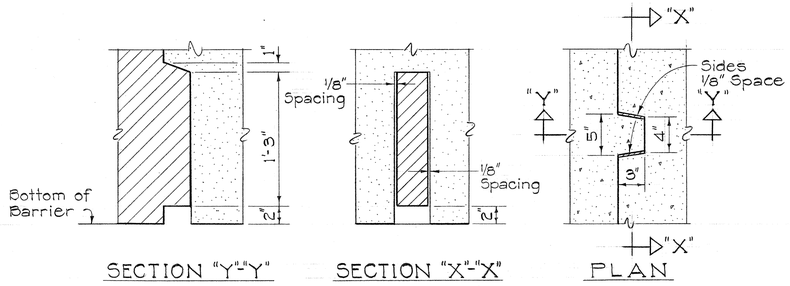
TYPICAL SECTION TYPE "C"
CONCRETE BARRIER
(SUPERELEVATED SECTION)
Scale : 1" = 1'-0"

DETAILS FOR CAST-IN-PLACE TYPE "C" CONCRETE BARRIER

SUMMARY OF CONCRETE MEDIAN BARRIER					
℄ STATION	TYPE "A"	TYPE "B"	TYPE "C"	TYPE "C" AT EXPRESS WAY SIGN OR HWY. LIGHTING	TRANS.
	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.
202+25 to 202+56				6	25
202+56 to 202+89			33		
202+89 to 203+24				3	32
203+24 to 203+83			59		
203+83 to 204+18				3	32
204+18 to 219+40	See Concrete Barrier on Viaduct Details				
219+40 to 228+76			579	30	327
228+76 to 229+22	46	122			
229+22 to 230+03				6	75
230+03 to 233+72			369		
233+72 to 234+28				6	50
234+28 to 234+93			65		
TOTALS	46	122	1080	54	566

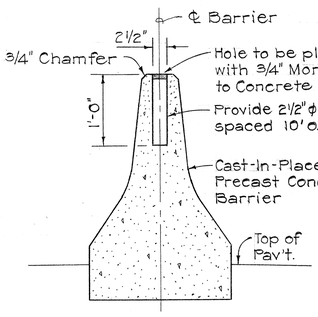
NOTE: All the quantities shown are original theoretical quantities. For actual quantities, refer to project ledger and/or computation book.

NOTES :
1. Concrete for Concrete Barriers shall be A-1.
2. Reinforcing Steel and Construction Joint shall be provided at all Structure Columns as shown in Details for Type "A" Concrete Barrier (Incidental to Concrete Barrier).
3. Expansion Joint shall be constructed at ninety (90) foot intervals or at existing expansion joints of Structures (Use ½" pre-molded joint filler, incidental to Concrete Barrier).
4. Construction Joints with Keys shall be provided for all Concrete Barrier.
5. Precast Type "C" Concrete Barrier may be installed as an alternate to Cast-in-Place Type "C" Concrete Barrier at tangent section.
6. 2½" ϕ hole spaced 10'o.c. as shown in details shall be provided for all Concrete Barriers (Incidental to Concrete Barrier).

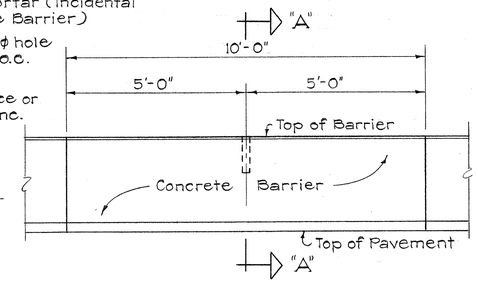


SECTION "Y"-"Y" SECTION "X"-"X" PLAN

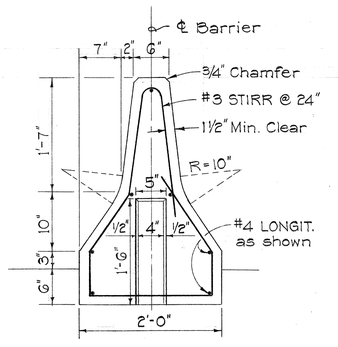
TYPICAL CONSTRUCTION JOINT KEY
(See Sheet C01355(3) for Details of Alternate Construction Joints)
Scale : 1½" = 1'-0"



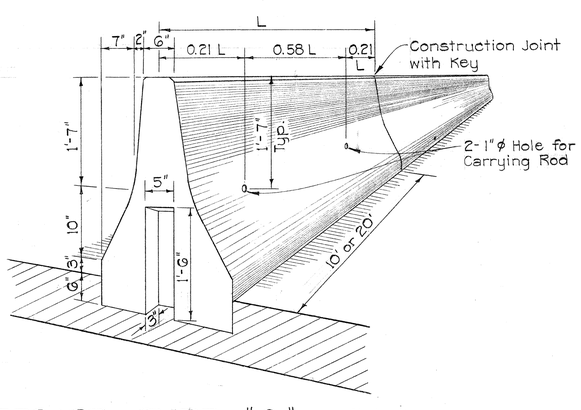
SECTION "A"-"A"
Scale : 1" = 1'-0"



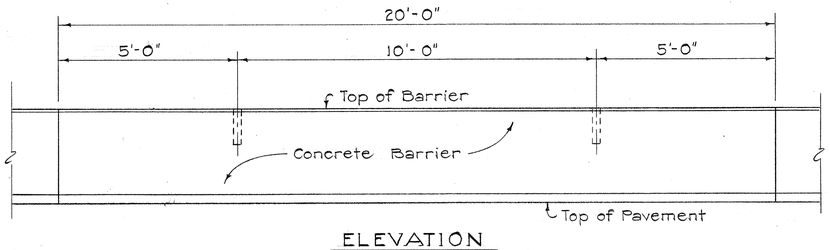
ELEVATION
10' LENGTH CONCRETE BARRIER
Scale : ½" = 1'-0"



TYPICAL SECTION
Scale : 1" = 1'-0"



DETAILS FOR PRECAST TYPE "C" CONCRETE BARRIER



ELEVATION
20' LENGTH CONCRETE BARRIER
Scale : ½" = 1'-0"

HOLE SPACING DETAILS FOR CONC. BARRIER

THIS SHEET IS A SUPPLEMENT TO THE CONTRACT PLANS AND SUPERSEDES & REPLACES SHEET NO. CO 22 S

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONCRETE MEDIAN BARRIER

INTERSTATE ROUTE H-1
Victoria St. to Keeaumoku St.
F.A.I. Proj. No. I-HI-1(31), Unit 2

Scale : As Shown Date : Aug., 1968

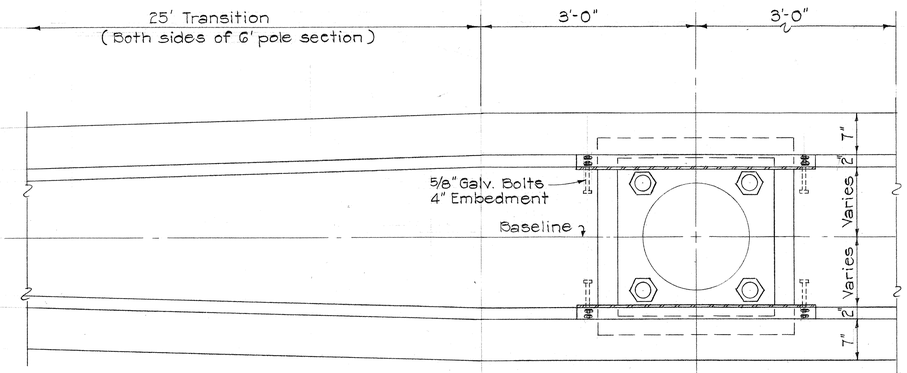
SHEET No. OF SHEETS

C O 2 2 S(1)

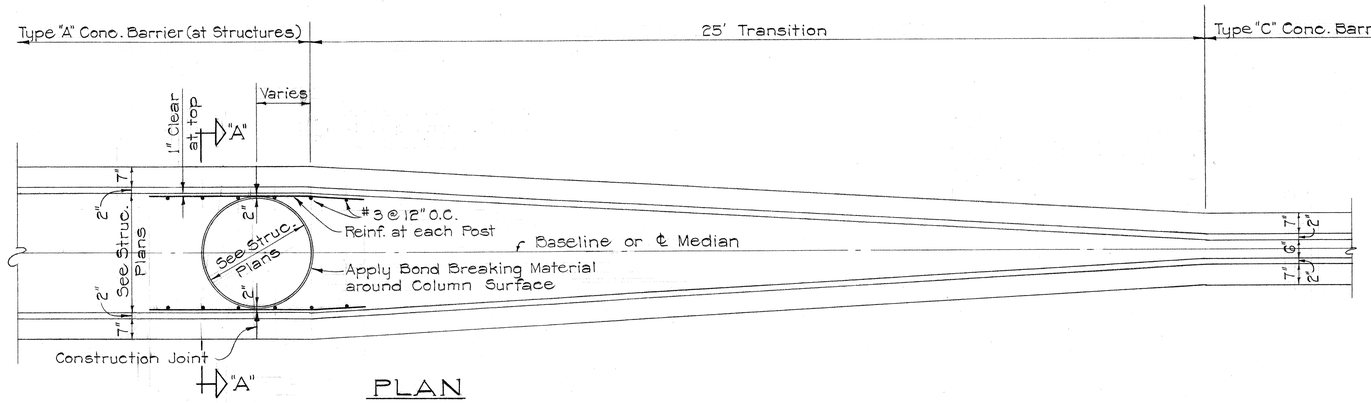
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
No.	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(31), Unit 2	1968	C0225(2)	217

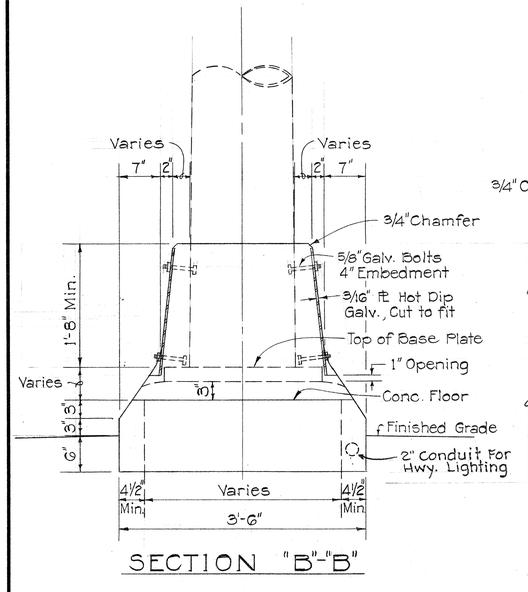
Revised : April 1, 1969
April 7, 1969



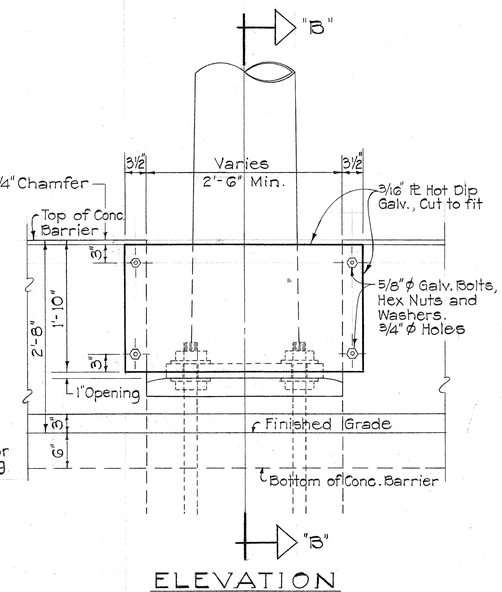
PLAN



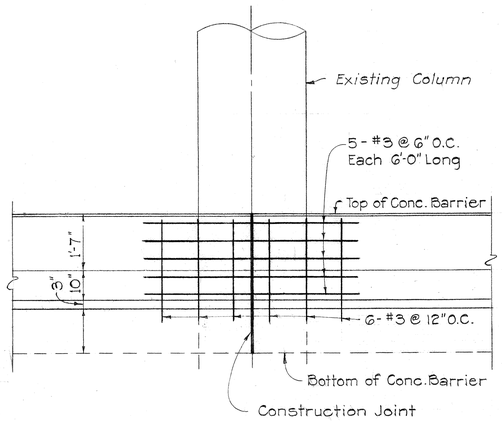
PLAN



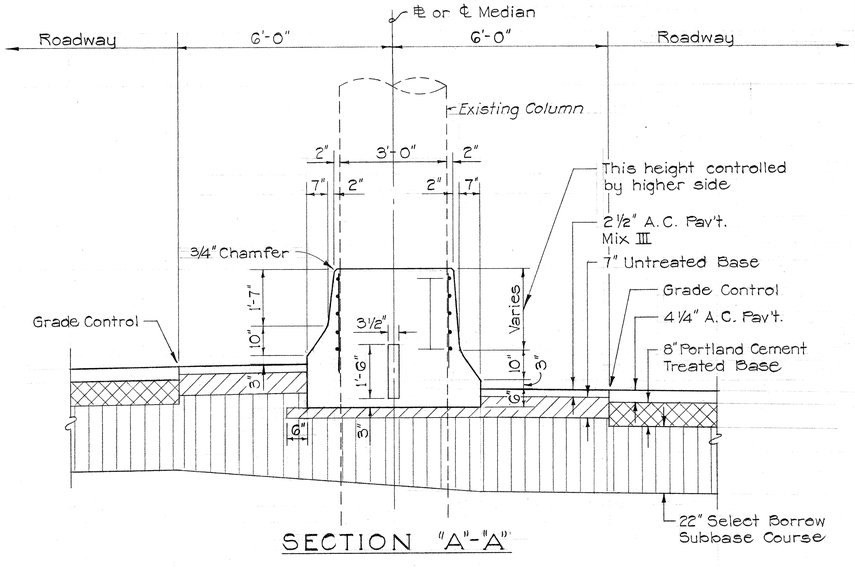
SECTION "B"-"B"



ELEVATION



ELEVATION



SECTION "A"-"A"

TYPE "C" CONCRETE BARRIER AT EXPRESSWAY SIGN POLE

Scale : 1" = 1'-0"

TYPE "A" CONCRETE BARRIER

Scale : 1/2" = 1'-0"

NOTES :
1. Constructing Concrete Barrier for Expressway Sign Pole shall consist of all work and materials necessary for constructing the 6'-0" Concrete Barrier section as shown on the plans. The work shall include furnishing & installing cover plate, nuts, bolts and all other appurtenances, and labor including galvanizing, as shown and necessary to complete the work.
2. The length of the Steel Plate shall be determined in the field.
3. Refer to PLAN, TYPE "A" CONCRETE BARRIER for transition details of Type "C" Concrete Barrier at Expressway Sign Pole.

THIS SHEET IS A SUPPLEMENT TO THE CONTRACT PLANS

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONCRETE MEDIAN BARRIER

INTERSTATE ROUTE H-1
Victoria St. to Keeaumoku St.
F.A.I. Proj. No. I-HI-1(31), Unit 2

Scale: As Shown Date : Aug., 1968

SHEET No. OF SHEETS

C 0 2 2 5 (2)

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

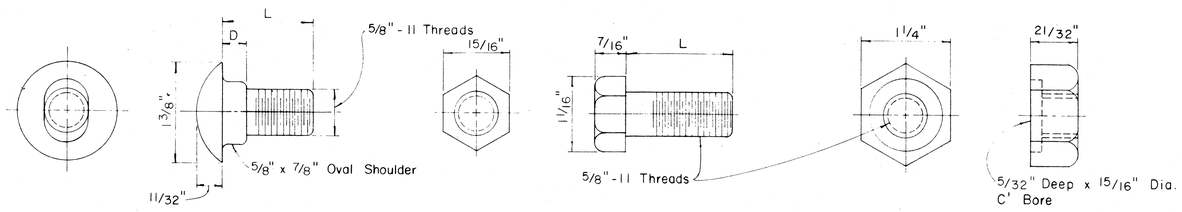
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(31)UNIT 2	1967	23	217

BOLT DIMENSIONS

TYPE A BOLT	D	L
Splice Bolt	5/16"	1 1/4"
Post Bolt for Conc. Post W/ Double Wood Blocks	3/32"	25"
Post Bolt for Conc. Post W/ Single Wood Block	3/32"	18"
Rail Bolt for Metal Block	3/32"	2"

BOLT DIMENSIONS

TYPE B BOLT	L
Post Bolt for Conc. Post W/ Metal Blocks	9 1/2"
Post Bolt for Metal Post W/ Metal Block	1 3/4"



TYPE A BOLT

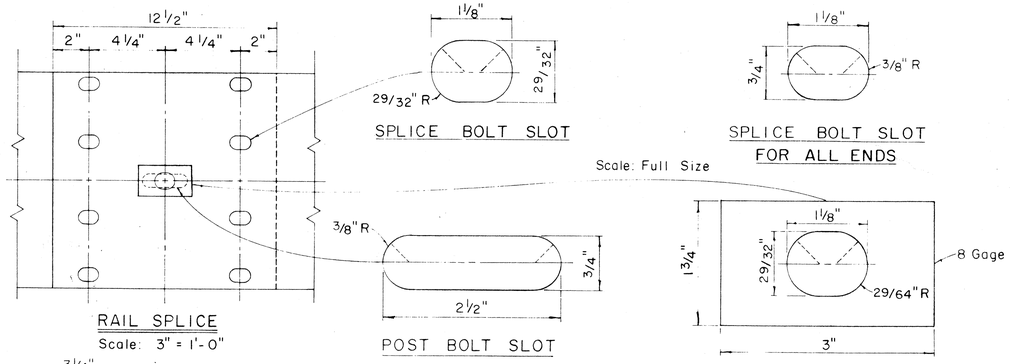
TYPE B BOLT

HEXAGON NUT

Scale: Full Size

SPLICE RAIL AND POST BOLTS

Scale: Full Size



RAIL SPLICE

Scale: 3" = 1'-0"

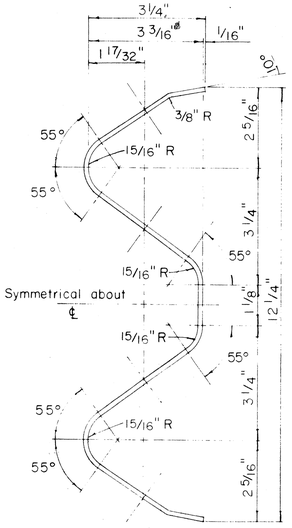
SPLICE BOLT SLOT

SPLICE BOLT SLOT FOR ALL ENDS

Scale: Full Size

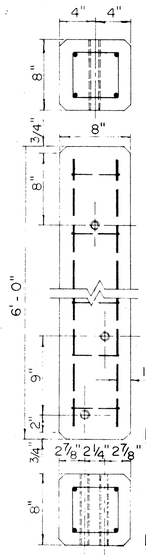
POST BOLT SLOT

RAIL WASHER

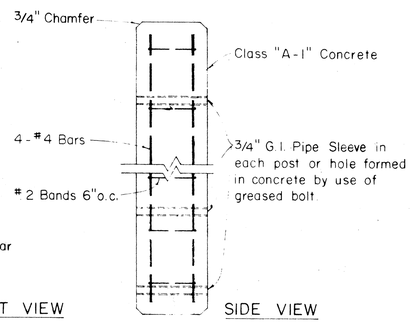


RAIL ELEMENT SECTION

Scale: 6" = 1'-0"



NOTE:
Concrete post shall be precast

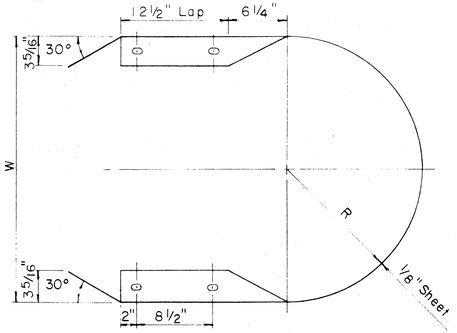


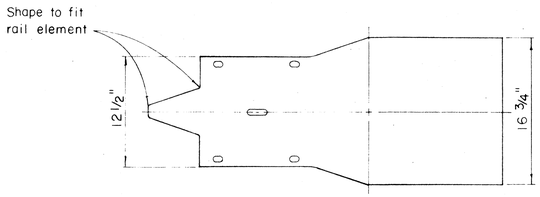
FRONT VIEW

SIDE VIEW

DETAIL OF CONCRETE POST

Scale: 1 1/2" = 1'-0"



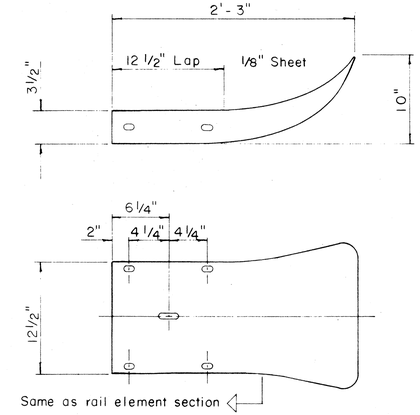


MEDIAN END

Scale 1 1/2" = 1'-0"

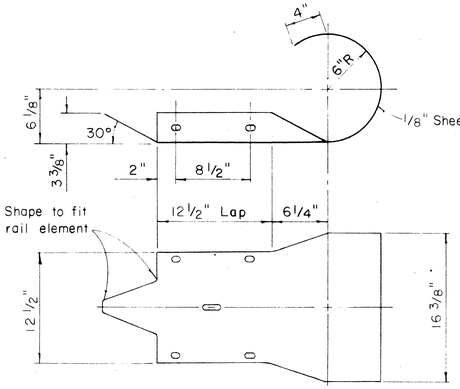
MEDIAN END DIMENSIONS

TYPE OF POST AND BLOCK	W	R
Double Metal Guard Rail on Concrete Post with Wood Blocks	29 3/4"	14 7/8"
Double Metal Guard Rail on Concrete Post with Metal Blocks (BJ6)	26 1/2"	13 1/4"
Double Metal Guard Rail on Metal Post with Metal Blocks (BJ6)	24 3/8"	12 3/16"



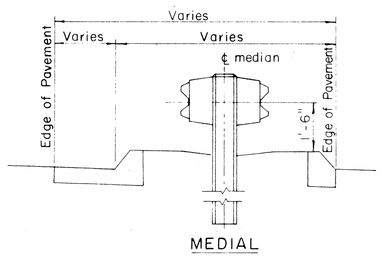
FLARED END

Scale: 1 1/2" = 1'-0"

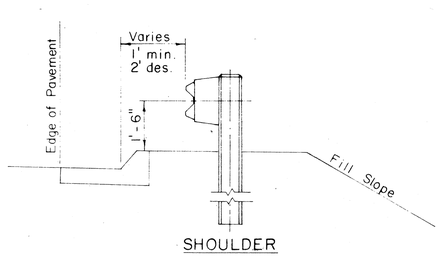


CURVED END

Scale: 1 1/2" = 1'-0"



MEDIAL



SHOULDER

TYPICAL GUARD RAIL DETAIL

Scale: 1/2" = 1'-0"

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

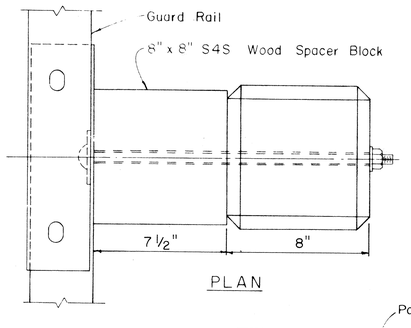
METAL GUARD RAIL

Scale: as noted

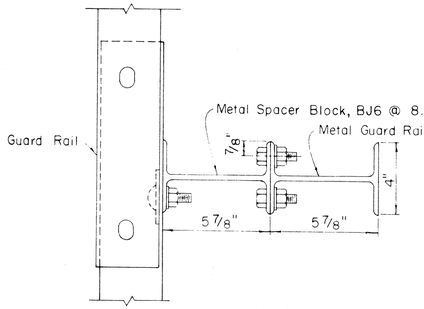
Date: April, 1967

SHEET No. 5 OF 9 SHEETS

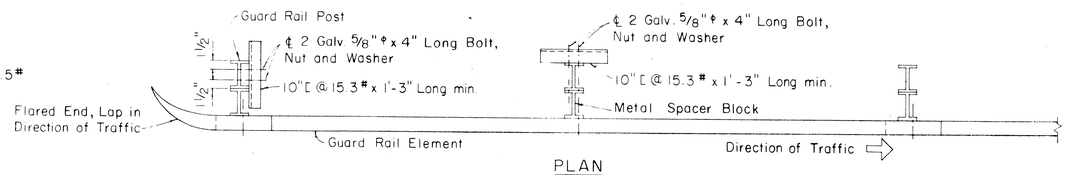
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(61) UNIT 2	1967	24	217



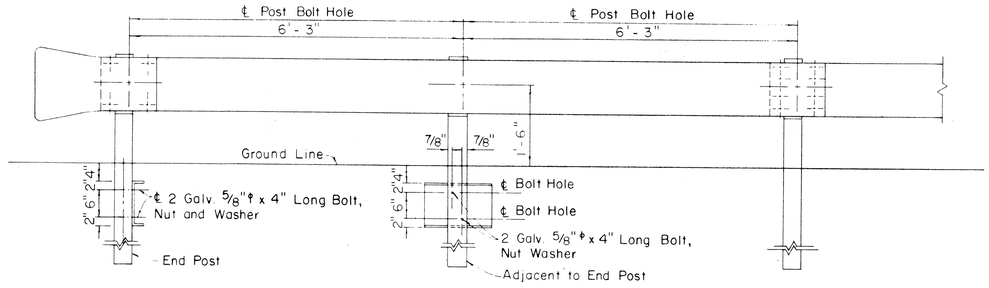
PLAN



PLAN



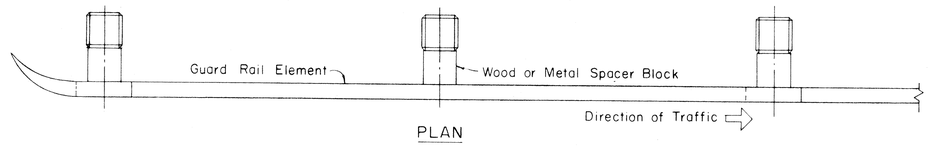
PLAN



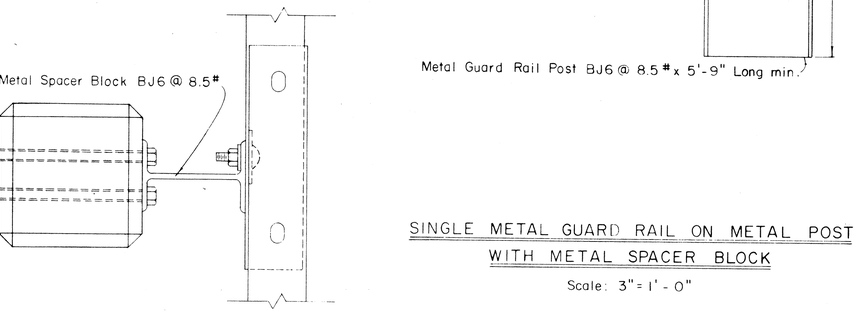
ELEVATION

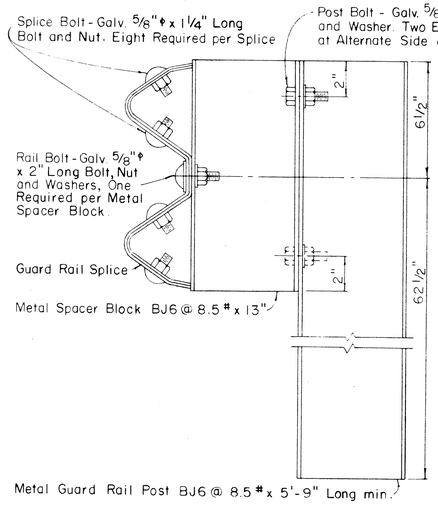
METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK

Scale: 3/4" = 1'-0"



PLAN





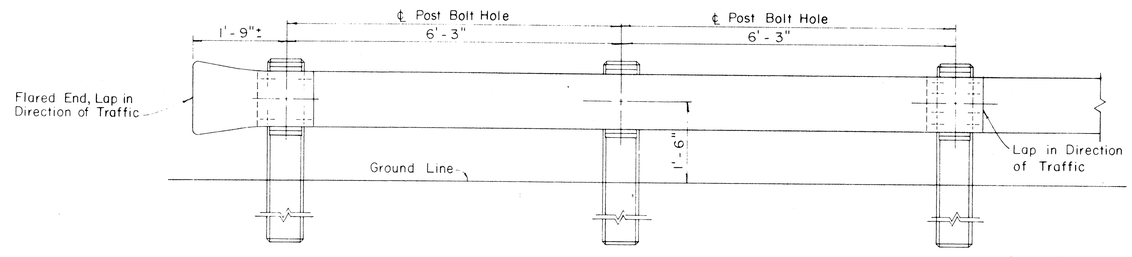
PLAN

SINGLE METAL GUARD RAIL ON PRECAST CONCRETE POST WITH WOOD OR METAL SPACER BLOCK

Scale: 3" = 1'-0"

SINGLE METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK

Scale: 3" = 1'-0"



ELEVATION

METAL GUARD RAIL ON CONCRETE POST WITH WOOD OR METAL SPACER BLOCK

Scale: 3/4" = 1'-0"

NOTE:

Single Guard Rails Shown. For Double Guard Rails Additional Spacer Blocks and Rail Elements Required on Opposite Side of Posts. See Bolt Schedule for Required Bolt Lengths.

DETAILS FOR SINGLE GUARD RAIL

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

METAL GUARD RAIL

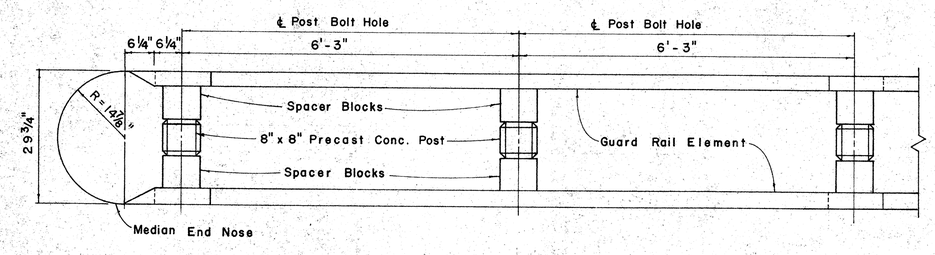
Scale: as noted Date: April, 1967

SHEET No. 6 OF 9 SHEETS

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

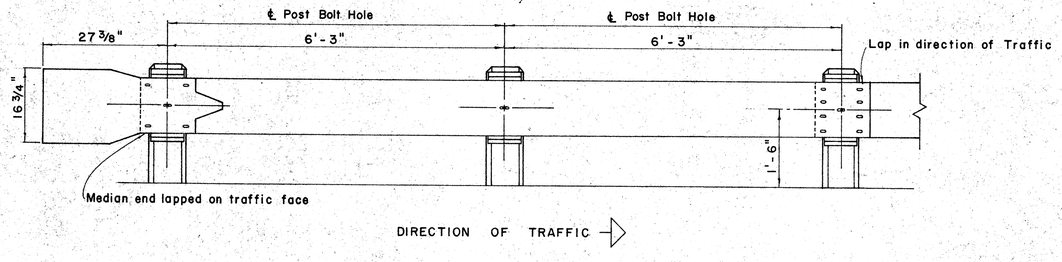
PRINTED ON NO. 1000H CLEARPRINT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	S-HI-1(21) UNIT 2	1967	25	217



PLAN

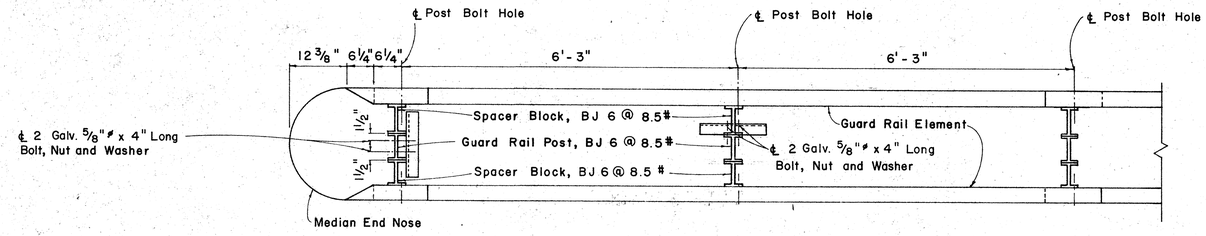
Scale: ¾" = 1'-0"



ELEVATION

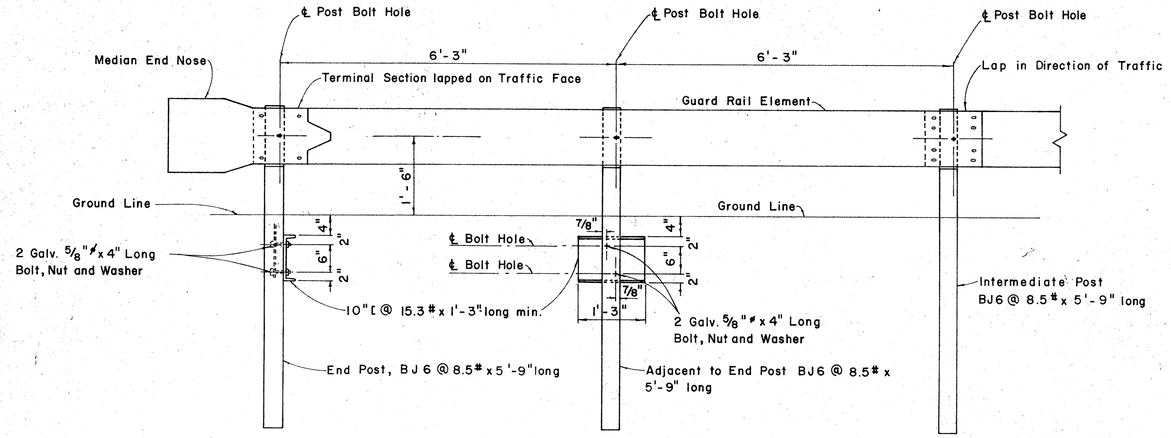
METAL GUARD RAIL ON CONCRETE POSTS AND WOOD SPACER BLOCKS

Scale: ¾" = 1'-0"



PLAN

Scale: ¾" = 1'-0"



ELEVATION

METAL GUARD RAIL ON METAL POSTS AND METAL SPACER BLOCKS

Scale: ¾" = 1'-0"

DETAIL FOR DOUBLE METAL GUARD RAIL IN MEDIAN

Scale: As Shown

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

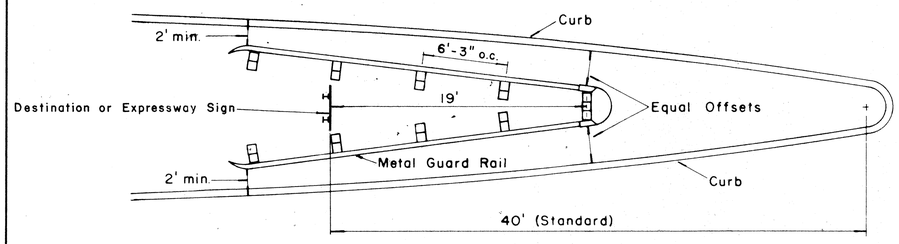
METAL GUARD RAIL

Scale: As Noted Date: April, 1967

SHEET No. 7 OF 9 SHEETS

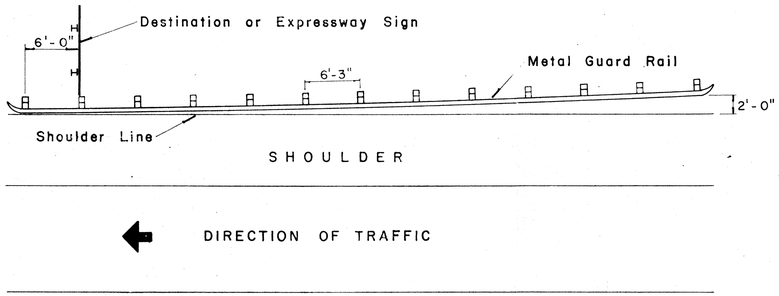
25

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-I(31) UNIT 2	1967	26	217



GORE MOUNTED SIGN

Scale: 3/16" = 1'-0"



SHOULDER MOUNTED SIGN

Scale: 1/8" = 1'-0"

X	Y					
	W=3'	W=4'	W=5'	W=6'	W=7'	W=8'
12.5	0.19	0.16	0.14	0.12	0.09	0.08
25.0	0.75	0.64	0.55	0.49	0.35	0.32
37.5	1.69	1.44	1.25	1.10	0.78	0.72
50.0	3.00	2.56	2.22	1.96	1.38	1.28
62.5		4.00	3.47	3.06	2.16	2.00
75.0			5.00	4.41	3.11	2.85
87.5				6.00	4.23	3.92
100.0					5.53	5.12
112.5					7.00	6.48
125.0						8.00

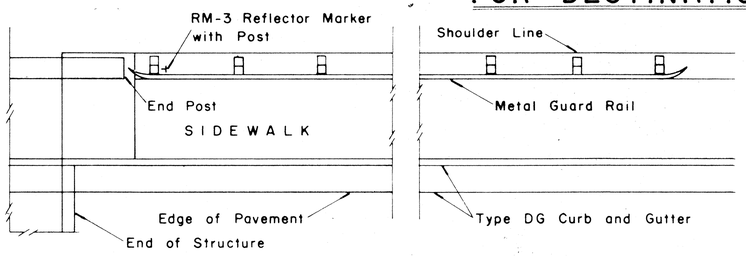
W = GUARD RAIL FLARE

X = DISTANCE FROM POST AT BRIDGE TO OFFSET POINTS

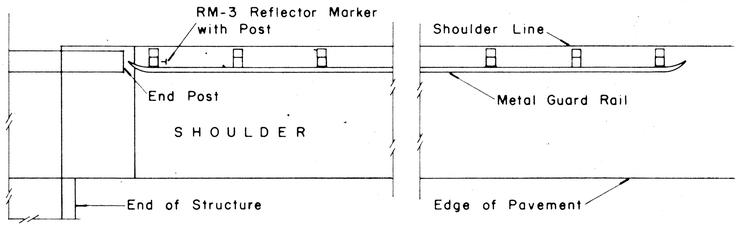
Y = GUARD RAIL FLARE OFFSET

GUARD RAIL OFFSET

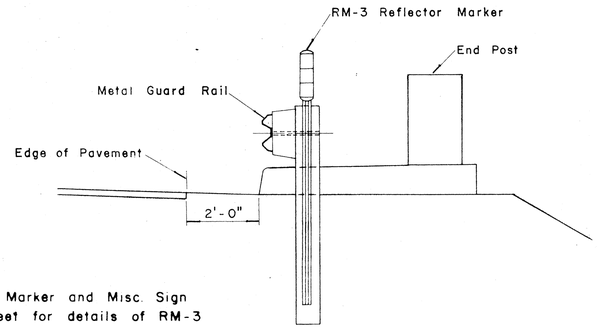
INSTALLATION OF METAL GUARD RAIL FOR DESTINATION AND EXPRESSWAY SIGNS



SIDEWALK CARRIED THROUGH STRUCTURE



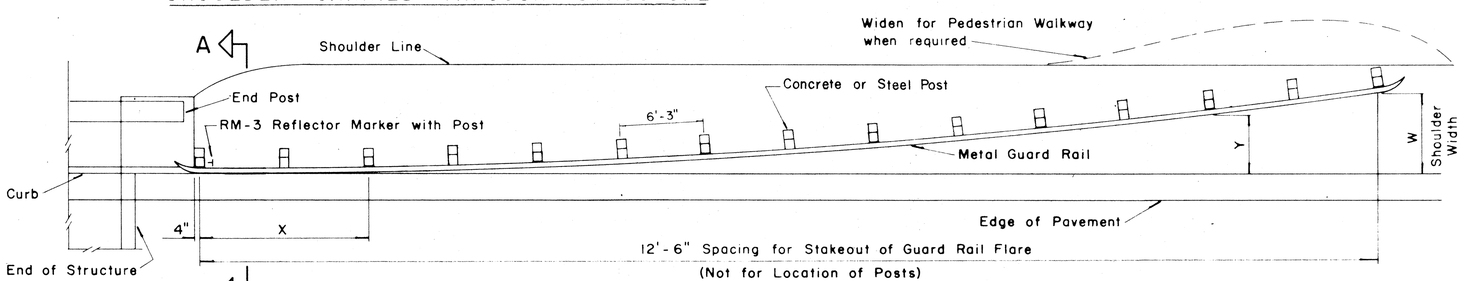
SHOULDER CARRIED THROUGH STRUCTURE



NOTE
See F.A. Marker and Misc. Sign Detail sheet for details of RM-3 Reflector Marker with Post.

SECTION "A-A"

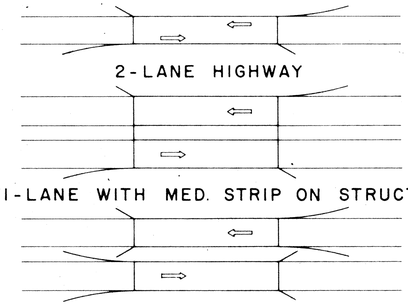
Scale: 1/2" = 1'-0"



SHOULDER NOT CARRIED THROUGH STRUCTURE

INSTALLATION OF METAL GUARD RAIL FLARE AT STRUCTURES

Scale: 3/16" = 1'-0"



TYPICAL GUARD RAIL FLARES AT STRUCTURE APPROACHES

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL GUARD RAILS AT STRUCTURES & GUIDE SIGNS

Scale: As Noted Date: April, 1967

SHEET No. 8 OF 9 SHEETS

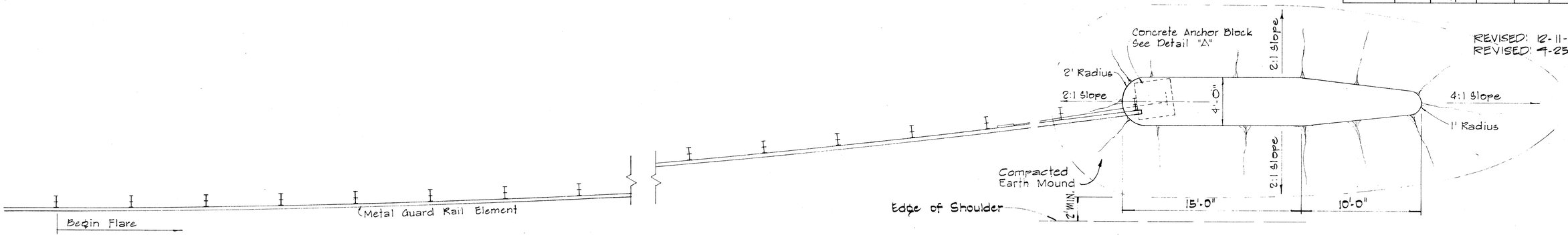
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
	DESIGNED BY	
No.	QUANTITIES BY	
	CHECKED BY	

PRINTED ON CLEARPRINT 1000 H

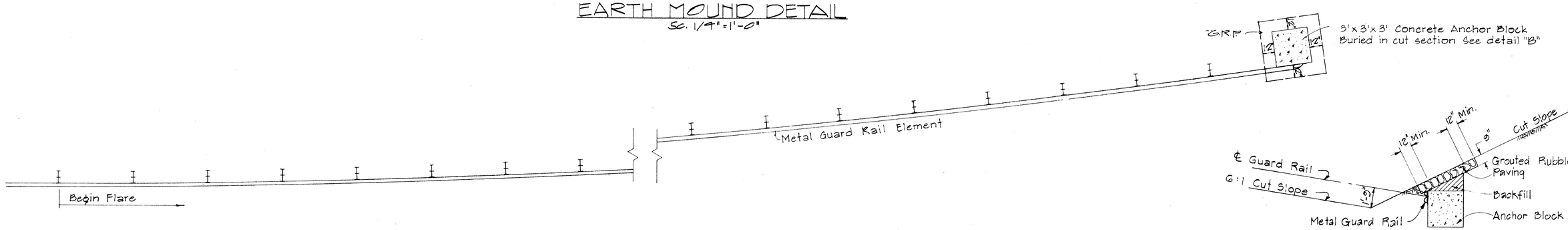
26

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	~~HH-1(8)~~ UNIT 2	1967	~~CO 26~~ S-1	217

REVISED: 12-11-68
REVISED: 4-25-69

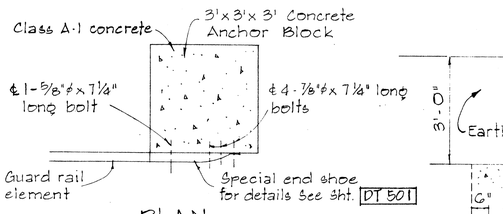


EARTH MOUND DETAIL
Sc. 1/4"=1'-0"

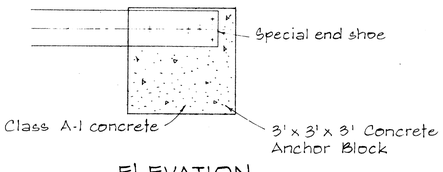


ANCHOR BLOCK IN CUT SECTION
Sc. 1/4" = 1'-0"

DETAIL "B"
Not to Scale

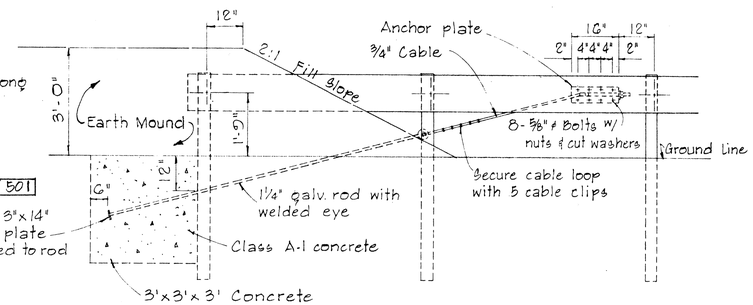


PLAN



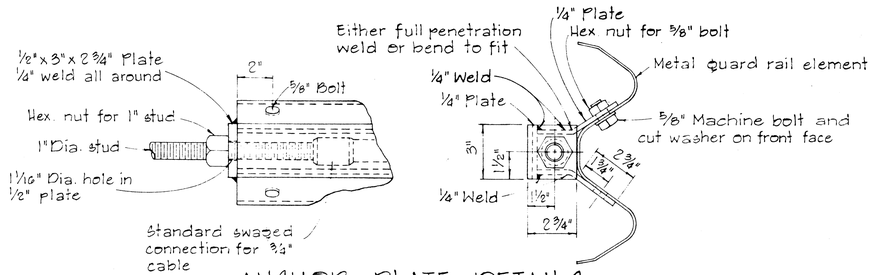
ELEVATION

ANCHOR BLOCK DETAIL
Scale: 1/2"=1'-0"

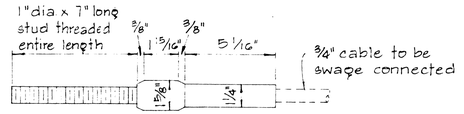


DETAIL "A"
Scale: 1/2"=1'-0"

NOTE:
1. Galvanized Anchor Rod, Metal Guard Rail and Post buried in ground shall be covered with coat of coal tar enamel
2. Concrete, GRP, Excavation, Earth Mound, Anchor Rods, and Miscellaneous Appurtenances necessary to anchor the Guard Rail Ends, shall be incidental to the Metal Guard Rail.



ANCHOR PLATE DETAILS
Scale: 1"=3"



STANDARD SWAGED FITTING AND STUD
Scale: 1"=3"

NOTE:
THIS SHEET IS A SUPPLEMENT TO THE CONTRACT DRAWINGS.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS EARTH MOUND AND ANCHOR BLOCK DET.

Scale: As Shown — Nov. 1968

SHEET No. OF SHEETS | DT 503

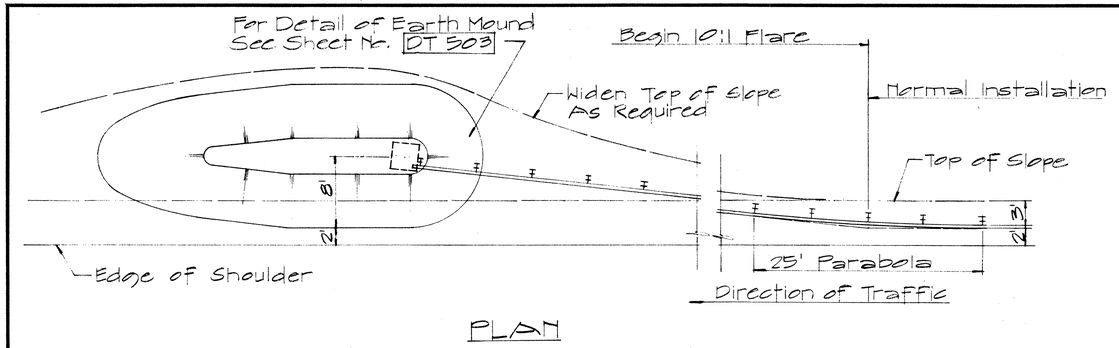
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
No.	QUANTITIES BY	
	CHECKED BY	

PRINTED ON NO. 1000H CLEARPRINT

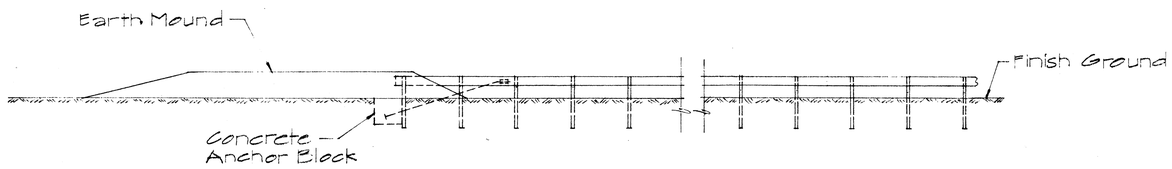
CO 26 S-1

~~CO 26 S-1~~

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(31) UNIT 2	1967	FR.26 S-2	217



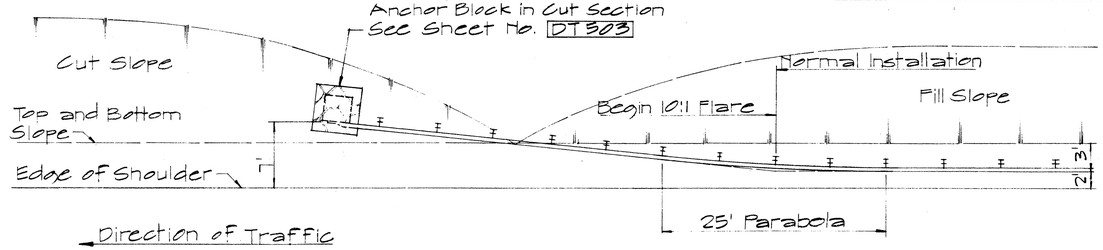
PLAN



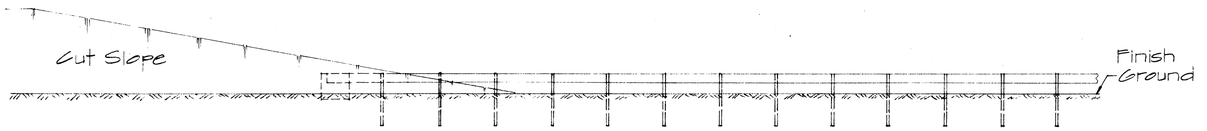
ELEVATION

TYPE "D" FLARE

Sc. 1/8" = 1'-0"



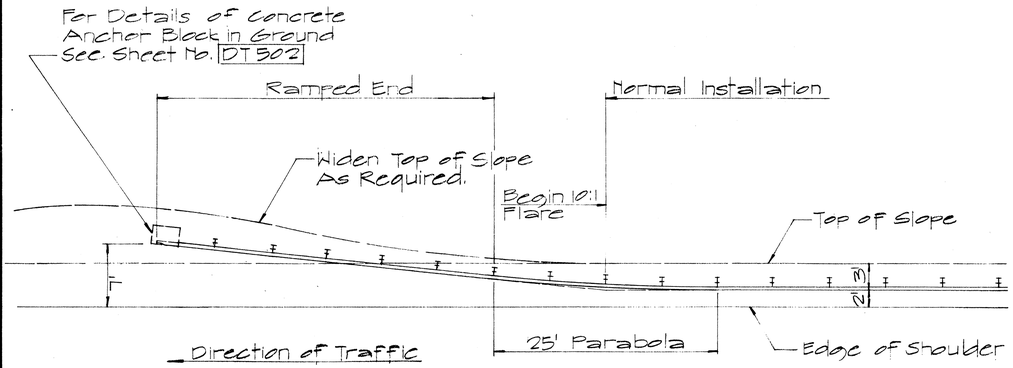
PLAN



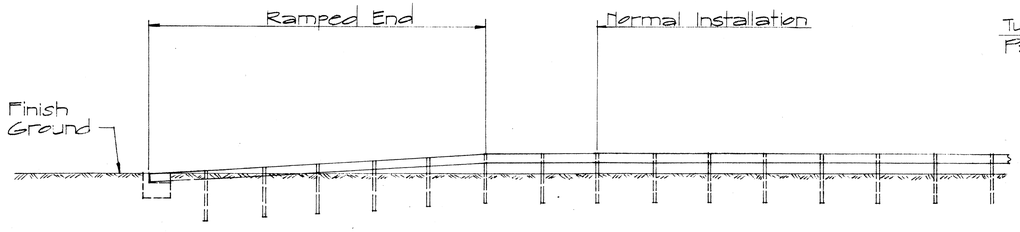
ELEVATION

TYPE "F" FLARE

Sc. 1/8" = 1'-0"



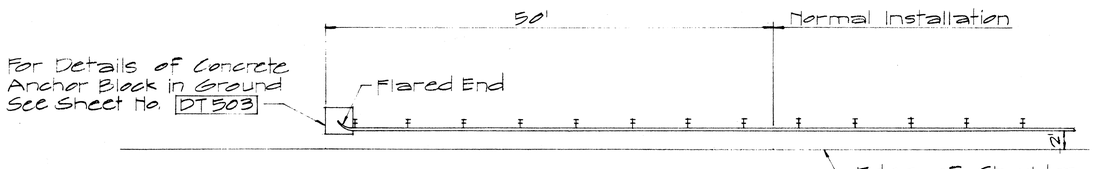
PLAN



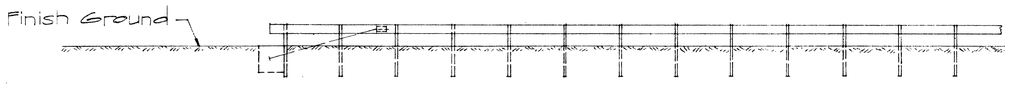
ELEVATION

TYPE "E" FLARE

Sc. 1/8" = 1'-0"



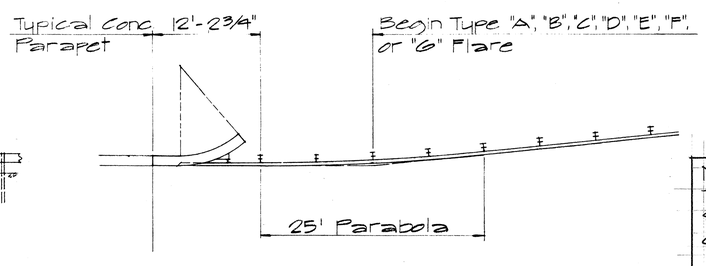
PLAN



ELEVATION

TYPE "G" FLARE

Sc. 1/8" = 1'-0"



TYPICAL LAYOUT PLAN OF END POST CONNECTION

Sc. 1/8" = 1'-0"

NOTE:
THIS SHEET IS A SUPPLEMENT TO THE CONTRACT DRAWINGS.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS OF TRAILING END FLARE - ONE & TWO WAY ROADWAY

Sc. As Noted — April 1960

SHEET No. OF SHEETS | DT 517

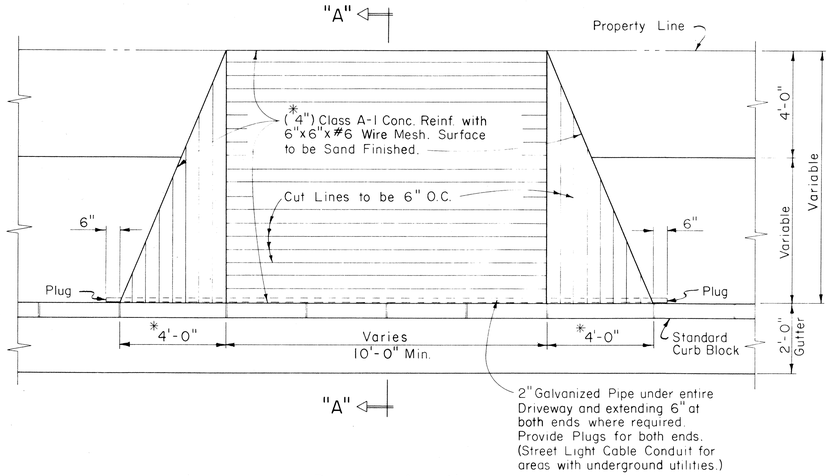
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	TRACED BY	
NOTE BOOK	DESIGNED BY	
No.	QUANTITIES BY	
	CHECKED BY	

PRINTED ON NO. 1000H CLEARPRINT

CO 26 S-2

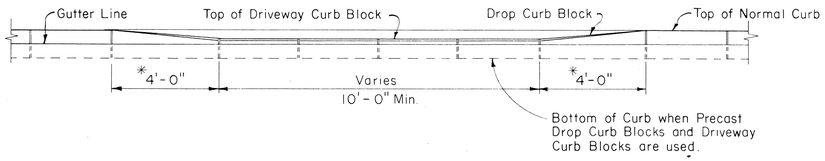
CO 26 S-2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(31) Unit 2	1967	27	217



P L A N

Scale: 3/8"= 1'-0"



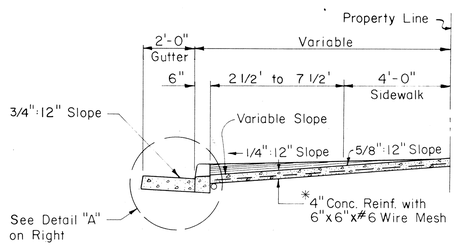
E L E V A T I O N

Scale: 3/8"= 1'-0"

LIST OF CONCRETE DROPPED DRIVEWAYS

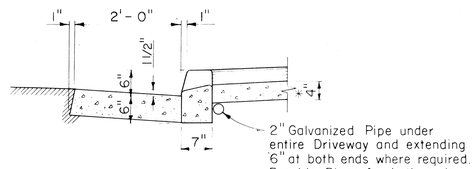
LOCATION			ITEM NO. 77.06 6-INCH REINFORCED CONCRETE DRIVEWAYS		DRIVEWAY IN PRIVATE PROPERTY			
					ITEM NO. 77.06 6-INCH REINFORCED CONCRETE DRIVEWAYS		ASPHALT CONCRETE & 6" UNTREATED BASE	
STREET	STATION	LOT TAX KEY NO.	WIDTH (Ft.)	AREA (Sq. Ft.)	WIDTH (Ft.)	AREA (Sq. Ft.)	WIDTH (Ft.)	AREA (Sq. Ft.)
Piikoi St.	4+30 (Right)	(State Owned)	10	60				
Lunalilo St.	54+~~36~~42 (Left)	2-4-20:55	12	96	~~12~~	~~60~~		
Lunalilo St.	55+~~51~~59 (Left)	2-4-20:54	14	112	Conform at Right-of-Way			
Lunalilo St.	58+22 (Left)	2-4-20:18	20	160			20	100
Lunalilo St.	58+47 (Left)	2-4-20:17	14	112	14	70		
Lunalilo St.	62+55 (Left)	2-4-21:76	~~16~~ 18	~~128~~ 144			*~~16~~ 18	*~~80~~ 90
Lunalilo St.	62+91 (Left)	2-4-21:75	12	96			*12	*60
Lunalilo St.	63+51 (Left)	2-4-21:29	30' Joint 16.5	240 132			*18	*90
Lunalilo St.	63+67 (Left)	2-4-21:70	30' Joint 13.5	240 108			13.5	68
Lunalilo St.	64+20 (Left)	2-4-21:77	~~16~~ 30	~~128~~ 240			~~16~~ 30	~~80~~ 150

NOTE: * 6" Untreated Base Only.



S E C T I O N "A-A"

Scale: 3/8"= 1'-0"



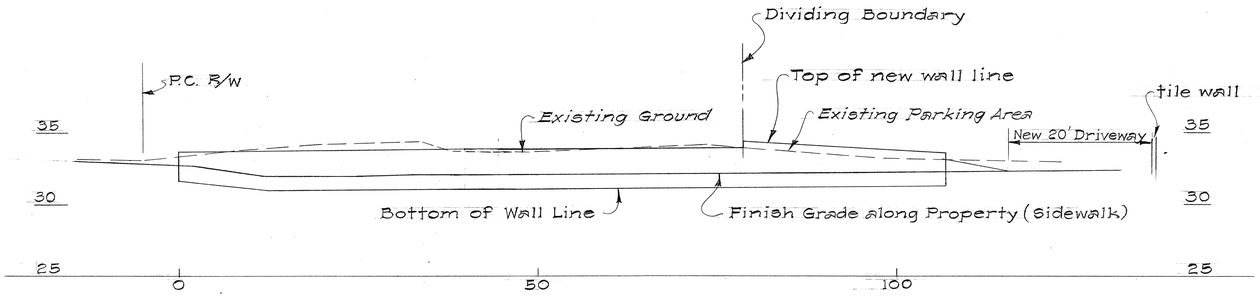
D E T A I L "A"

Scale: 3/4"= 1'-0"

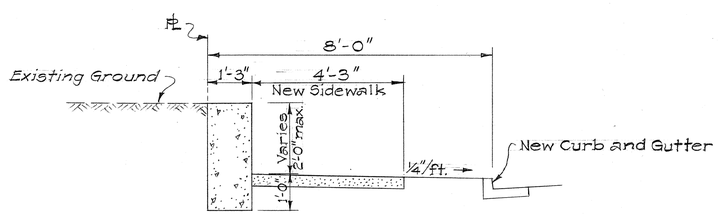
TYPICAL DETAIL OF REINF. CONC. DROP DRIVEWAY

Scale: As Noted

* Use dimension shown unless otherwise noted on the plans.



PROFILE ALONG PROPERTY LINE
FRONTAGE RD. STA. 57+00 to 58+00 (Lt.)



TYPICAL PLAIN CONC. WALL SECTION
VICINITY OF FRONTAGE RD. STA. 57+50 (Lt.)

Scale: 1/2"= 1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRIVEWAYS AND RETAINING WALL PROFILE AND DETAIL

INTERSTATE ROUTE H-1
(LUNALILO FREEWAY)
Victoria St. to Keeaumoku St.
F.A.I. Proj. No. I-HI-1(31), Unit 2

Scale: As Shown Date: April 1967

SHEET No. 9 OF 9 SHEETS

27

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