FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(7):13 I-H3-1(2):8	1968	19	80

REVISED: June 23, 1969

℄ Sta. 628+50 Lt. to Sta. 631+17± Lt.
Construct: Conc. Lined Shoulder Ditch
(For detail see sht. no. 4)

ESTIMATED QUANTITIES
Ditch & Channel Exc. 14 c.y.
Cl. "B-1" Conc. or Shotcrete 13.5 C.Y.

RAMP K-2 STA. 0+60±
Construct Type "C" C.D.I.
(For detail see sht. no. 27)
Install 24" CGMP, 12 Ga. ~~or 24" RCCP, Cl. III or 24" ACCP, Cl. III~~

ESTIMATED QUANTITIES
Structure Exc. = 266 C.Y.
Cl. "A-1" Conc. = 3 C.Y.
24" Pipe Culvert = 194 L.F.

NOTE:
Pipe Culvert Headwall and Conc. Lined Cut-off Ditches up to ℄ Sta. 627+62 to be constructed with F.A.I. Project No. I-H3-1(7):13.

RAMP K-3 STA. 4+25± TO STA. 8+30±
Construct: Concrete lined Gutter, Concrete lined Shoulder ditch.
(For detail see sht. no. 4)

ESTIMATED QUANTITIES
Ditch & Channel Exc. 9 c.y.
Cl "B-1" Conc. or Shotcrete 28.5 c.y.

R/W and Control of Access Line

MOKAPU SADDLE ROAD

To be done by others

P.C. Sta. 31+47.44
℄ R = 1200'

BEGIN FAI PROJECT NO. I-H-3-1 (7):13
℄ Sta. 628+50
7915.448 N
2857.822 E

Type "B" CRM Headwall
℄ Sta. 627+62
o/s = 194.50 Lt.
Inv. = ~~100.00~~ 116.00

CRM Cut-Off Wall

NOTE:
Contractor to Provide Swale along Embankment Toe for positive drainage

End Type "A" Conc. Lined Cut-off Ditch

Begin Type "A" Conc. Lined Cutoff Ditch

141.0
Inv. = ~~143.0~~

1'x1' Conc. Lined Ditch

Conc. Lined Shoulder Ditch

RAMP K-3

Type "C" C.D.I.
Ramp K-2 Sta. 0+60±
Inv. = 144.0

24" Pipe Culv't.

Type "C" C.D.I.
℄ Sta. 633+05±
9% 62' ± Lt.
Inv. = 175.5

RAMP K-2

Conc. Lined Gutter

36" Pipe Culvert For Profile See Sht. No.

630+00
℄ 214° 00

Conc. Lined Shoulder Ditch

Class B-1 Conc. Lining. Tie in Bench Drainage to Type "C" CDI.

B.W.S.
Kapaa Reservoir

℄ Sta. 633+03± Lt. to Sta. 633+30± Rt.
Construct: 2 Type "C" C.D.I., 1-6161 CDI
(For detail see sht. no. 27 & comp No. 28)
Install: 24" CGMP, 12 Ga. ~~or 24" RCCP, Cl. III or 24" ACCP, Cl. III~~

ESTIMATED QUANTITIES

Struct. Exc.	135 c.y.
Cl. "A-1" Conc.	8.0 c.y.
24" Pipe Culvert	200 l.f.
Type 6161 Steel Frame and Grate	1 ea.
Reinf. Steel	46 lbs

1'x1' Conc. Begin ~~Type A~~ Ditch

20' Transition

End 1'x1' Conc. Ditch, Transition into CRM Headwall.

Conc. Lined Gutter

6" U.T.B. & 2" A.C. Mix II (CCO #26)

24" Pipe Culvert

Type 6161 CDI
℄ Sta. 633+16±
Inv. = 175.0

Class A-1 Conc. Wall (CCO #26)

20' Transition

MATCH LINE ℄ Sta. 634+

Conc. Lined Gutter

Type "C" C.D.I.
℄ 633+30 ± 9% 62' ± Rt.
Inv. = 174.5

24" Pipe Culvert

1% 119'± Mokapu Sta. 37+00 Inv. = 169.4

NOTE:
Drainage at Ramp K-1A, see sht. 24

2'x2' Conc. Lined Ditch

Concrete Lined Gutter

RAMP K-2 Sta. 2+02±1 to Sta. 3+41.66
Construct: Conc. Lined Gutter
(For detail see sht. no. 4)

ESTIMATED QUANTITIES
Cl. "B-1" Conc. or Shotcrete 14.5 c.y.

RAMP K-1 STA. 5+34 TO STA. 14+64±
Construct: Conc. lined Shoulder ditch
(For detail see sht. no. 4)

ESTIMATED QUANTITIES
Ditch & Channel Exc. 46 c.y.
Cl. "B-1" Conc. or Shotcrete 46.5 c.y.

Toe of Fill

RAMP K-1

Conc. Lined Shoulder Ditch

℄ STA. 627+62
Construct: Type "A" & "B" CRM Headwalls
(For detail see sht. no. 23)
Install: 36" CGMP, 12 Gage w/ Double-riveting (No Alternate)

ESTIMATED QUANTITIES

Struct. Exc.	~~363~~ c.y.	442.64
CRM	~~17~~ c.y.	24.75
36" CGMP	~~446~~ l.f.	488.8

PLAN
Scale: 1" = 50'

Type "A" CRM Headwall
℄ Sta. 627+62
o/s = 24.6' Rt.
Inv. = 74.00

℄ STA. 627+62 TO STA. 630+00
Construct: Type "A" Conc. Lined Cut-off Ditch
(See Details this sht.)

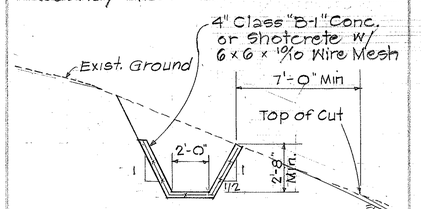
ESTIMATED QUANTITIES

Ditch & Channel Exc.	90 c.y.
Class "B-1" Conc. or Shotcrete	33 c.y.

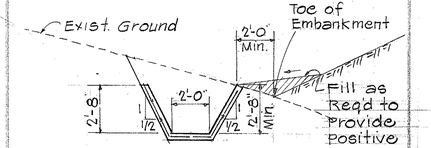
℄ Sta. 628+50 Rt. to Sta. 631+37± Rt.
Construct: Conc. Lined Shoulder Ditch
(For detail see sht. no. 4)

ESTIMATED QUANTITIES
Ditch & Channel Exc. 15 c.y.
Cl. "B-1" Conc. or Shotcrete 14.5 c.y.

GENERAL NOTES
1. Off-set distances for headwalls are approximate. Contractor to verify in field before construction of headwall.
2. Contractor shall verify all Cutoff Ditch Profiles and provide positive drainage where necessary.
3. Wiremesh Reinforcing shall be incidental to Cl. "B-1" Concrete or Shotcrete.
4. Excavation for Concrete Lined Gutters in cut section shall be paid for under Roadway Exc.

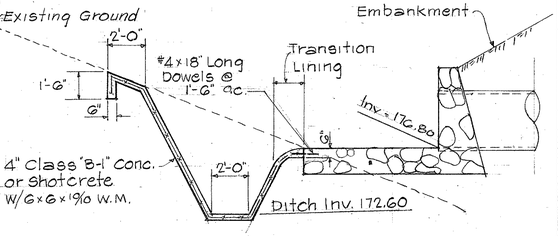


IN CUT



IN FILL

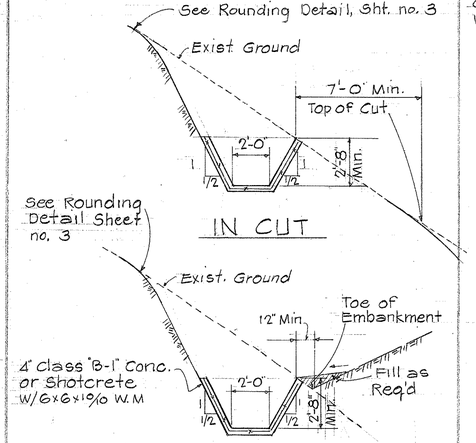
TYPE "A" CUT-OFF DITCH SECTIONS



PLAN

SECTION (A)
Scale: 1/4" = 1'-0"

OUTLET DETAIL AT STA. 639+34
Scale: 1/4" = 1'-0"



IN CUT

IN FILL
AREAS OF EXCESSIVE CUT

TYPE "B" CUT-OFF DITCH SECTIONS
Scale: 1/4" = 1'-0"

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

PRINTED ON NO. 1000H CLEARPRINT

WALLACE S. MIYAHIRA
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

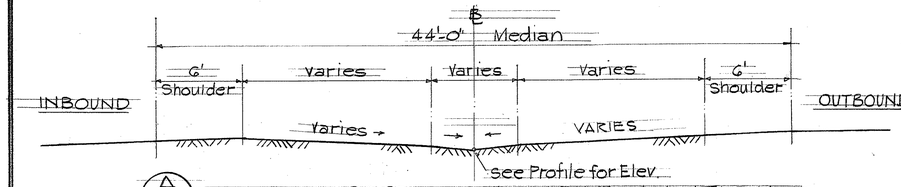
DRAINAGE LAYOUT & DETAILS
℄ STA. 628+50 to STA. 634+50

F.A.I. Proj. No. I-H3-1(7):13, I-H3-1(2):8
Scale: As Shown Date: Jan. 1968

SHEET No. D-1 OF 2 SHEETS

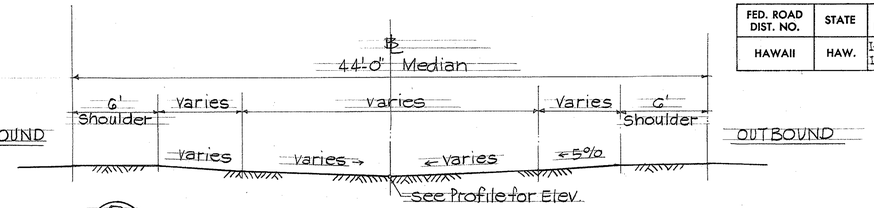
19. 102

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(7):13 I-H3-1(2):8	1968	20	86



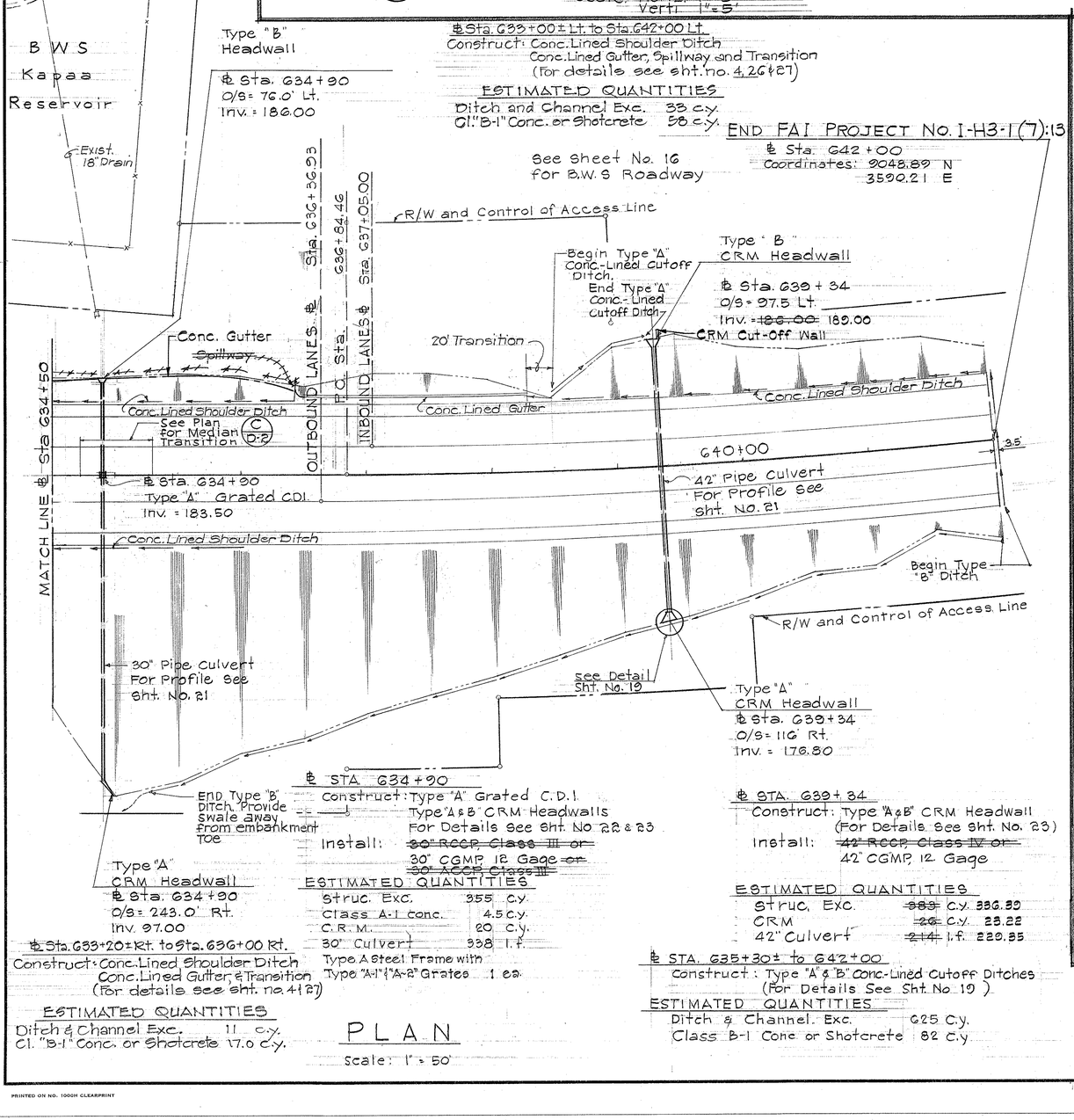
A D-2 TYPICAL SECTION THROUGH TRANSITION

Scale: Horiz. 1"=5'
Vert. 1"=5'



B D-2 TYPICAL SECTION THROUGH TRANSITION

Scale: Horiz. 1"=5'
Vert. 1"=5'



℄ Sta. 633+20± Rt. to Sta. 636+00 Rt.
Construct: Conc.-Lined Shoulder Ditch
Conc. Lined Gutter & Transition
(For details see sht. no. 4 & 27)

ESTIMATED QUANTITIES

Ditch & Channel Exc.	11 c.y.
Cl. "B-1" Conc. or Shotcrete	17.0 c.y.

℄ STA. 634+90
Construct: Type "A" Grated C.D.I.
Type "A & B" CRM Headwalls
For Details See Sht. No. 22 & 23
Install: ~~30" RCCP, Class III or~~ 30" CGMP 12 Gage ~~or 30" ACCP, Class III~~

ESTIMATED QUANTITIES

Struc. Exc.	355 c.y.
Class A-1 conc.	4.5 c.y.
C.R.M.	20 c.y.
30" Culvert	338 l.f.
Type A Steel Frame with Type "A-1" & "A-2" Grates	1 ea.

PLAN

Scale: 1" = 50'

℄ STA. 639+34
Construct: Type "A & B" CRM Headwall
(For Details See Sht. No. 23)
Install: ~~42" RCCP, Class IV or~~ 42" CGMP 12 Gage

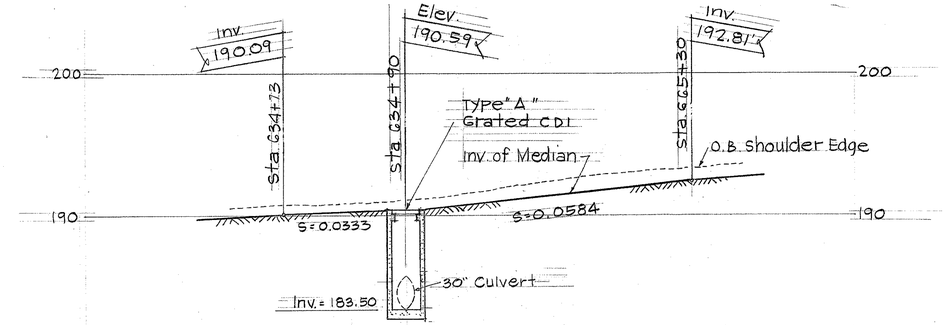
ESTIMATED QUANTITIES

Struc. Exc.	~~383~~ C.Y. 336.30
CRM	~~26~~ C.Y. 23.22
42" Culvert	~~214~~ l.f. 220.35

℄ STA. 635+30± to 642+00
Construct: Type "A" & "B" Conc.-Lined Cutoff Ditches
(For Details See Sht. No. 19)

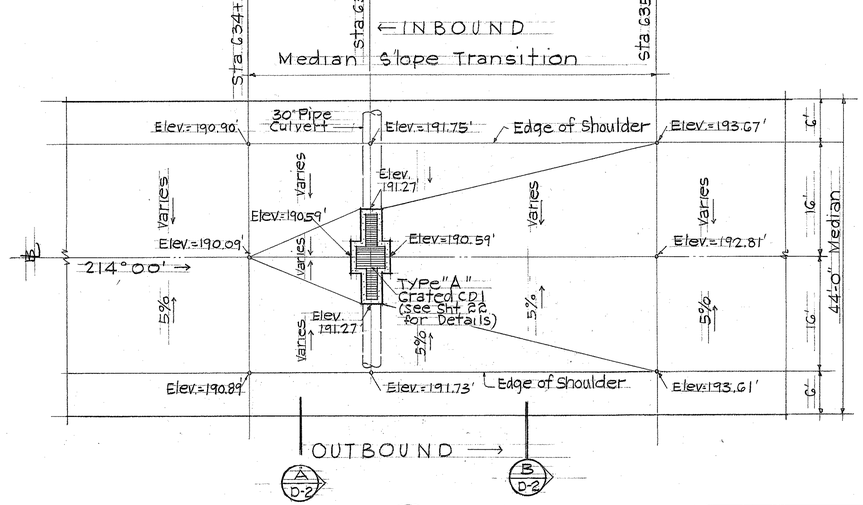
ESTIMATED QUANTITIES

Ditch & Channel Exc.	625 C.Y.
Class B-1 Conc or Shotcrete	82 C.Y.



PROFILE

Scale: Horiz. 1"=10'
Vert. 1"=5'



PLAN C D-2

Scale: 1"=10'

℄ Sta. 634+90

NOTE:
Median Slope Transition shall be paved w/ 2" A.C., Class V and 6" Untreated Base Course.

℄ STA. 642+03.5
Construct: Type "B" Conc.-Lined Cutoff Ditches
For Details See Sht. No. 19

ESTIMATED QUANTITIES

Ditch & Channel Exc.	35 C.Y.
Class B-1 Conc. or Shotcrete	11 C.Y.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE LAYOUT & DETAILS
℄ STA. 634+50 to STA 642+00

F.A.I. Proj. No. I-H3-1(7):13, I-H3-1(2):8
Scale: As Shown Date: Jan. 1968

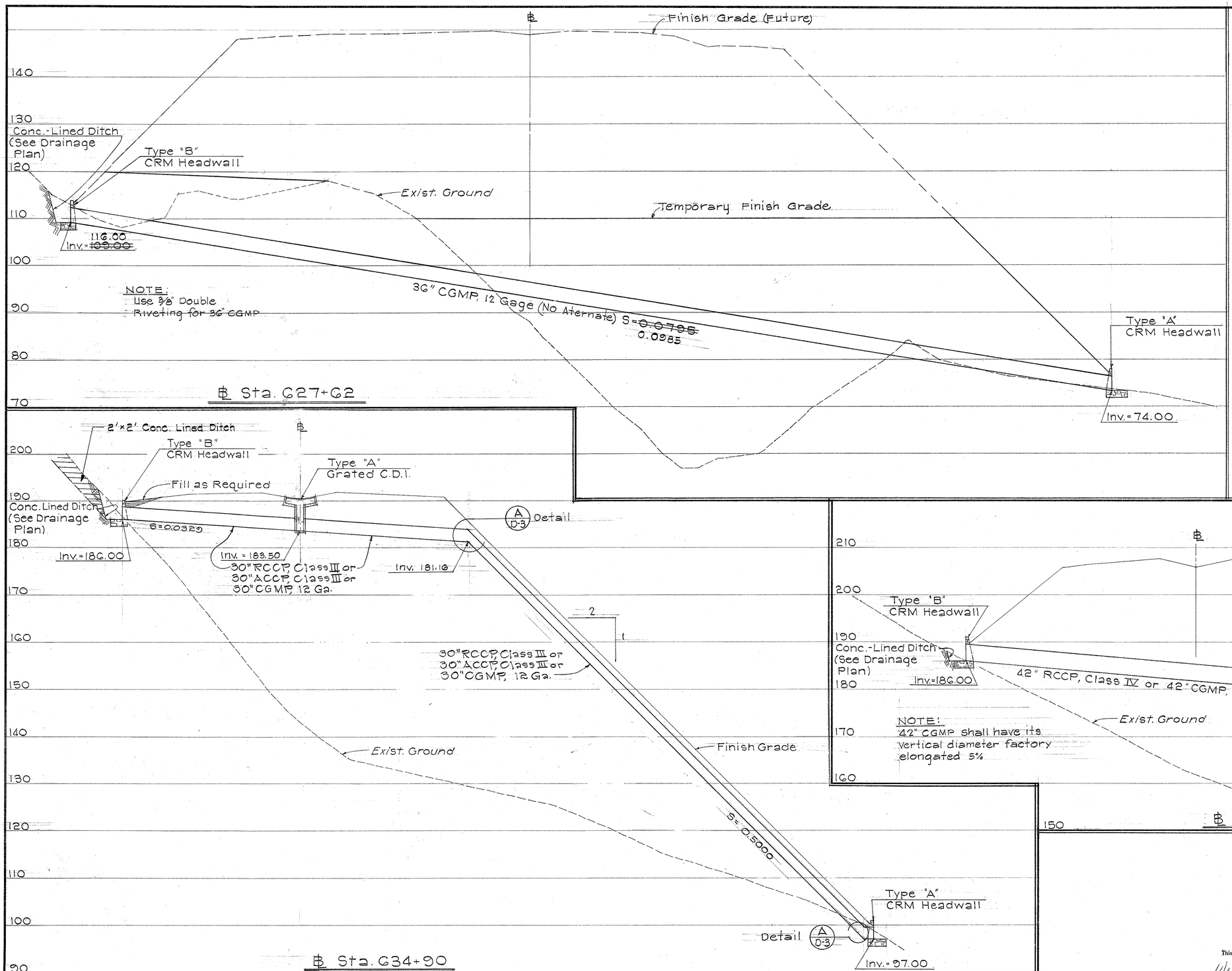
SHEET No. D-2 OF 9 SHEETS

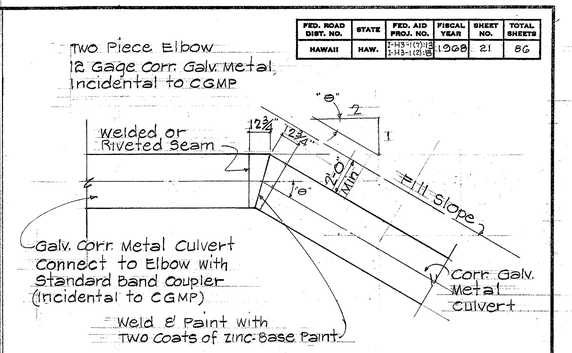
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

PRINTED ON NO. 1000H CLEARPRINT

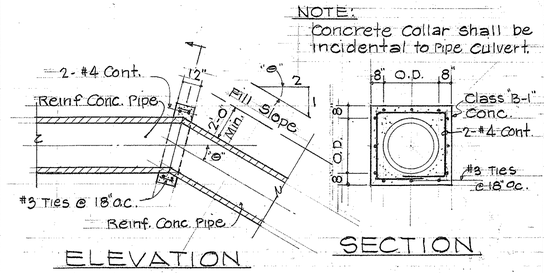
20. 103

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(7):13 I-H3-1(2):8	1968	21	86





CGMP CONNECTION



RCCP CONNECTION

DETAIL (A / D-3)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS PIPE CULVERT CROSSINGS

F.A.I. Proj. No. I-H3-1(7):13, I-H3-1(2):8
Scale: Horiz. 1"=20'
Vert. 1"=10'
Date: Jan. 1968

SHEET No. D-3 OF 9 SHEETS

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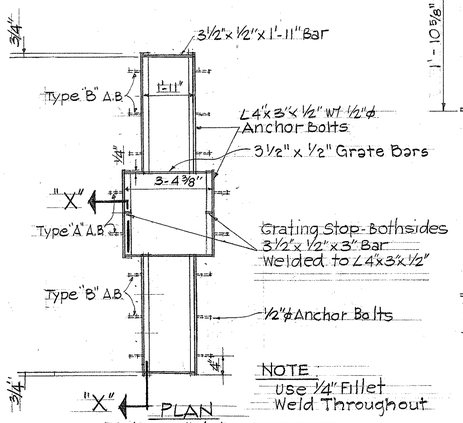
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	TRACED BY	
NOTE BOOK	DESIGNED BY	
No.	QUANTITIES BY	
	CHECKED BY	

PRINTED ON NO. 1000H CLEARPRINT

21. 104

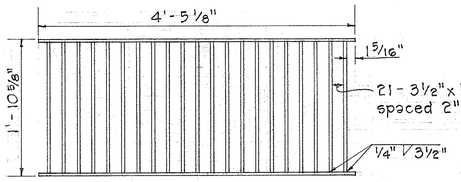
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(7):13 I-H3-1(2):8	1968	22	86



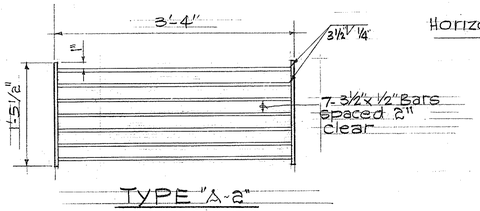
TYPE "A"

STEEL FRAME

Scale: ⅜"=1'-0"



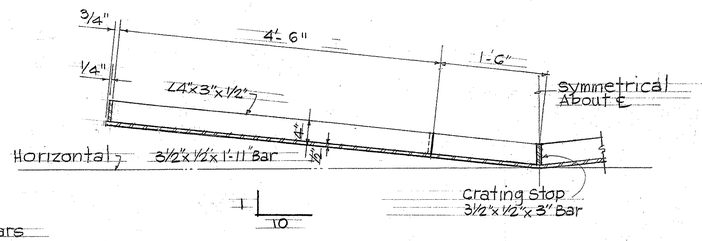
TYPE "A-1"



TYPE "A-2"

RECTANGULAR GRATES

Scale: 1"=1'-0"

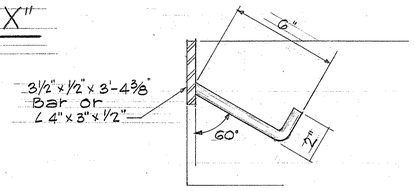


SECTION "X-X"

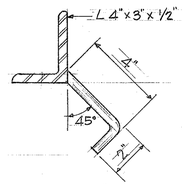
Scale: 1"=1'-0"

GENERAL NOTES

1. Grates and frames shall have edges grinded smooth after fabrication.
2. Grates and frames may be galvanized or asphalt dipped. See Standard Specifications or Special Provisions.
3. Full penetration butt welds may be substituted for the fillet welds on all anchors.
4. Standard square, hexagon round or equivalent headed anchors may be subsituted for the right angle hooks on the anchors shown on this plan.
5. All steel shall be structural grade
6. Location of standard manhole rungs to be determined by the Engineer.



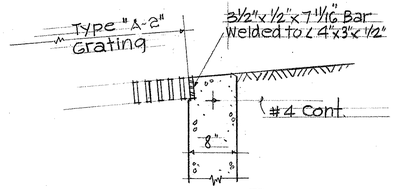
TYPE "A"



TYPE "B"

TYPICAL ANCHOR BOLT DETAILS

Scale: 3"=1'-0"

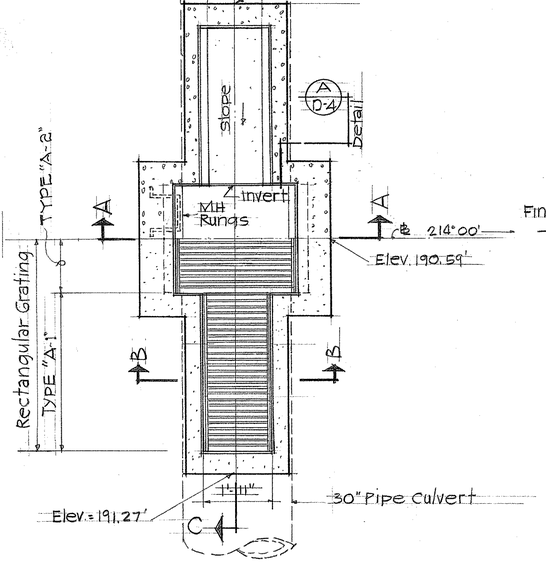


DETAIL A D-4

Scale: 1"=1'-0"

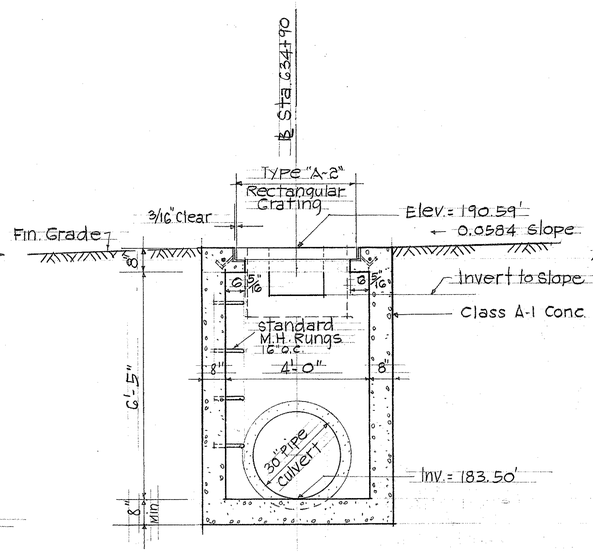
TYPE "A" STEEL FRAME WITH TYPE "A-1" AND "A-2" GRATES

Scale: as shown



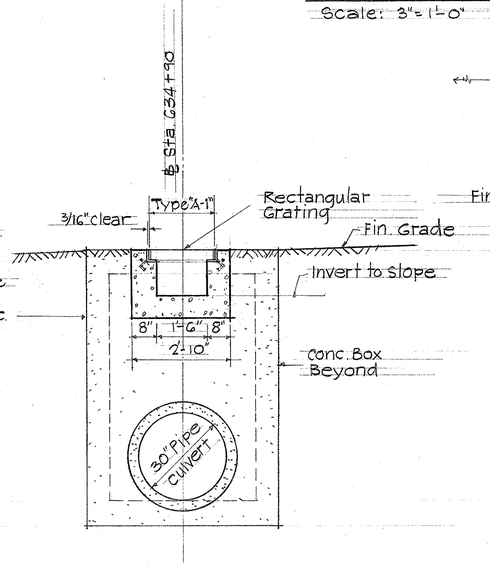
PLAN — ℄ Sta 634+90

Scale: ½"=1'-0"



SECTION "A-A"

Scale ½"=1'-0"

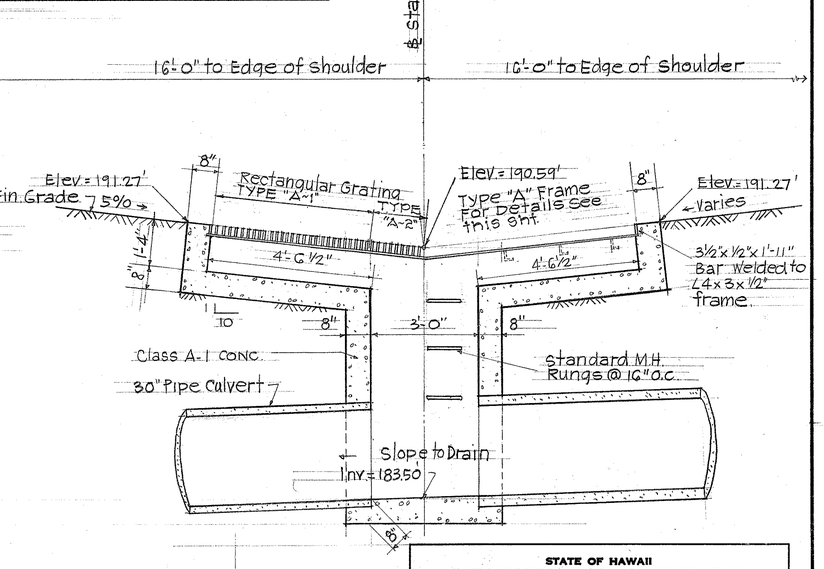


SECTION "B-B"

Scale: ½"=1'-0"

SECTION "C-C"

Scale: ½"=1'-0"



TYPE "A" GRATED CONCRETE DROP INTAKE

Scale: As Shown

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

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Wallace Miyahira

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

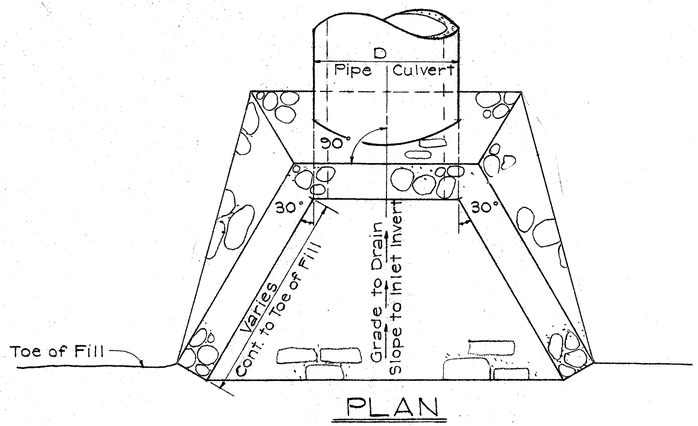
DETAILS OF
GRATED CONCRETE DROP INTAKE
TYPE "A"

F.A.I. Proj. No. I-H3-1(7):13, I-H3-1(2):8
Scale: As Shown Date: Jan. 1968

SHEET No. D-4 OF 9 SHEETS

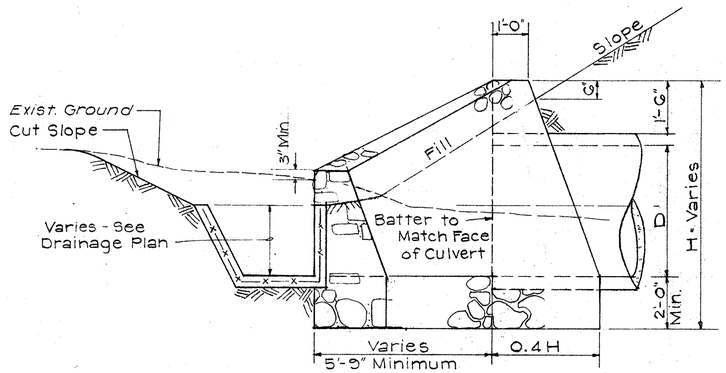
22. 105

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(7):13 I-H3-1(2):8	1968	23	86

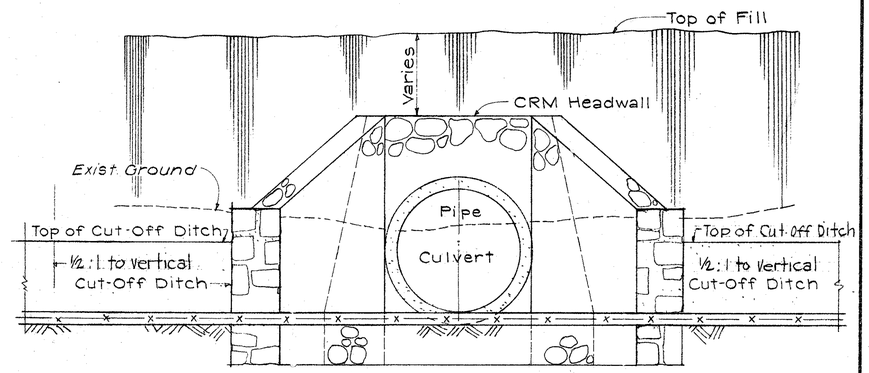


PLAN

NOTE:
When outlet is skewed to embankment slope, the embankment may be contoured to cover the exposed section of wall and pipe.



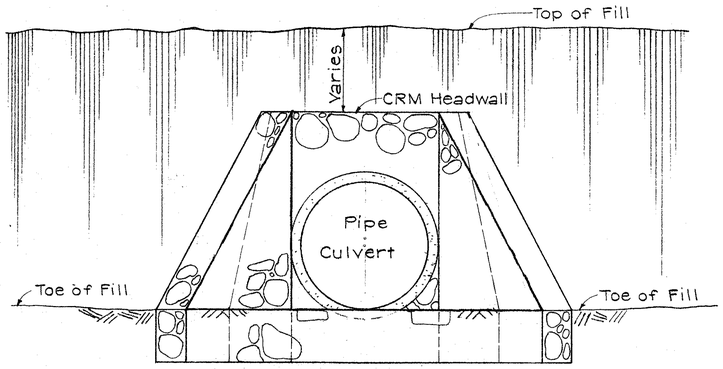
SIDE ELEVATION



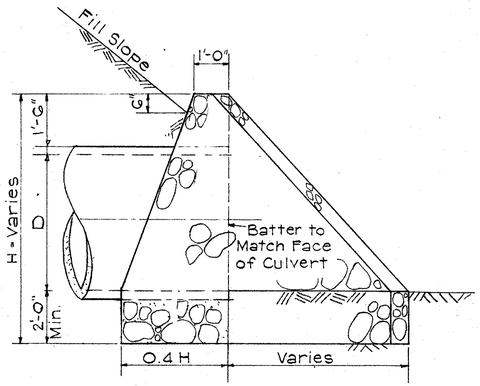
FRONT

TYPE "B" CRM HEADWALL

Scale: ½" = 1'-0"



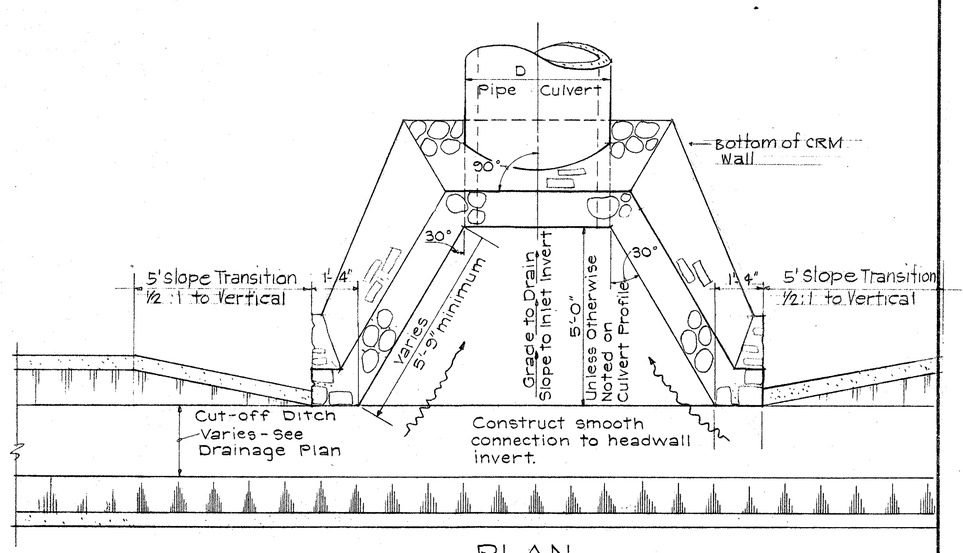
FRONT



SIDE ELEVATION

TYPE "A" CRM HEADWALL

Scale: ½" = 1'-0"



PLAN

NOTE:
When outlet is skewed to embankment slope, the embankment may be contoured to cover the exposed section of wall and pipe.

WALLACE S. MIYAHIRA
REGISTERED PROFESSIONAL ENGINEER
No. 1313
HAWAII, U.S.A.

This work was prepared by me or under my supervision.
Wallace Miyahira

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE STRUCTURE DETAILS
CRM HEADWALL
TYPE "A" & "B"

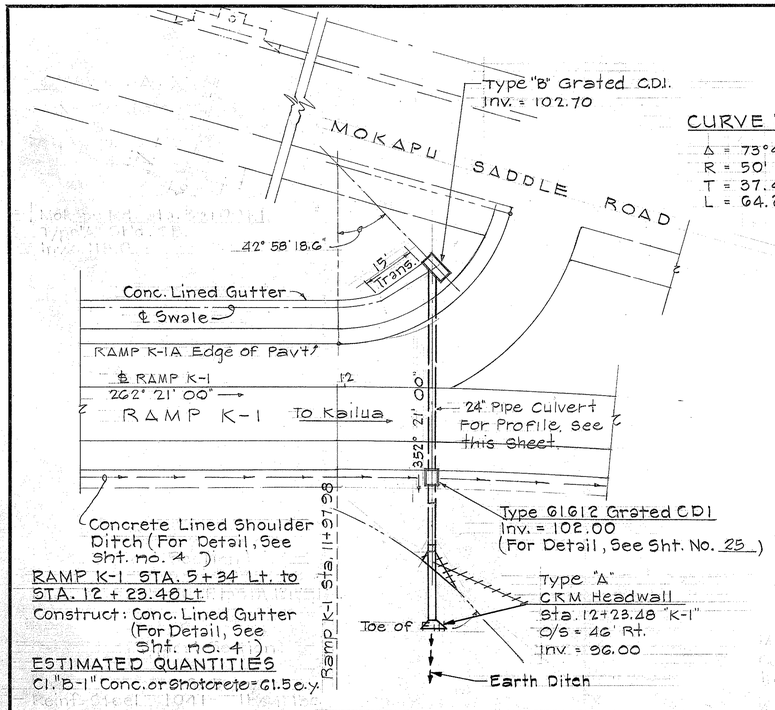
F.A.I. Proj. No. I-H3-1(7):13, I-H3-1(2):8
Scale: ½" = 1'-0" Date: Jan. 1968

SHEET No. D-5 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-H3-1(7):13 I-H3-1(2):8	1968	24	86



RAMP K-1 STA. 5+34 Lt. to STA. 12+23.48 Lt.
Construct: Conc. Lined Gutter (For Detail, See Sht. no. 4)

ESTIMATED QUANTITIES
Cl. "B-1" Conc. or Shotcrete = 61.5 c.y.

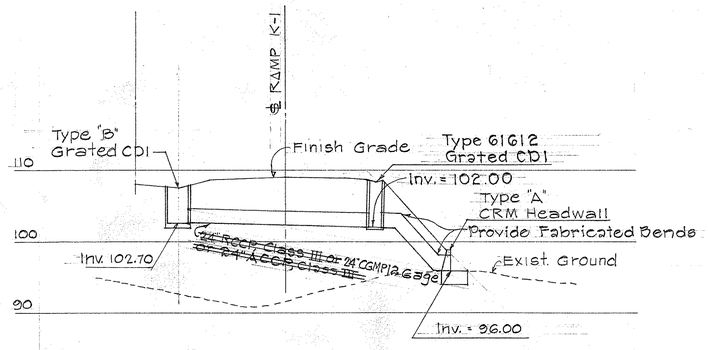
PLAN
Scale: 1" = 20'

CURVE DATA
Δ = 73°40'
R = 50'
T = 37.45
L = 64.29

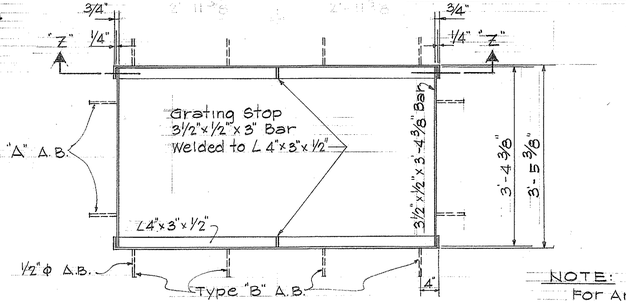
RAMP "K-1" STA. 12 + 23.48
Construct: Type "B" Grated C.D.I.
Type "A" CRM Headwall
Type G1612 Grated C.D.I.
For Details, See this Sht. & Sht. Nos. 23 & 25
Install: ~~24" RCCP, Class III or~~ 24" CGMP, 12 Gage ~~or 24" ACCP, Class III~~

ESTIMATED QUANTITES

Struc. Exc.	~~70~~	c.y.	126.8
Class A-1 Conc.	~~7~~	c.y.	6.84
Reinf. Steel	~~46~~	lbs.	48.0
C.R.M.	~~8~~	c.y.	4.77
24" Culvert Type "B" Steel Frame with Type "A-2" Steel Grates	~~74~~	l.f.	102.8
	1	ea.	
Type G1612 Steel Frame and Grates	1	ea.	
Ditch & Channel Exc.	14.0	c.y.	



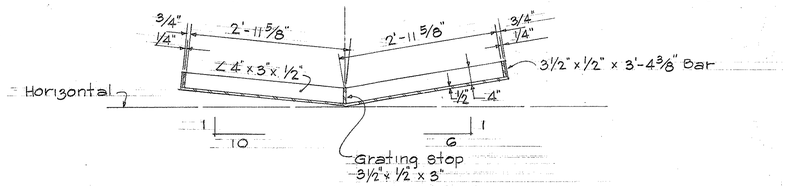
PROFILE
Scale: Horiz. 1"=20'
Vert. 1"=10'



PLAN

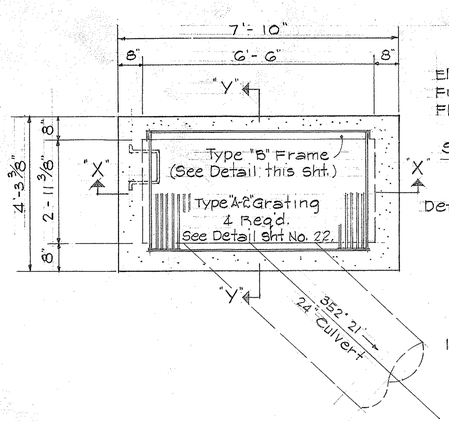
NOTE:
For Anchor Bolt Detail See Sht. No. 22.

NOTE:
Use ¼" Fillet Weld Throughout

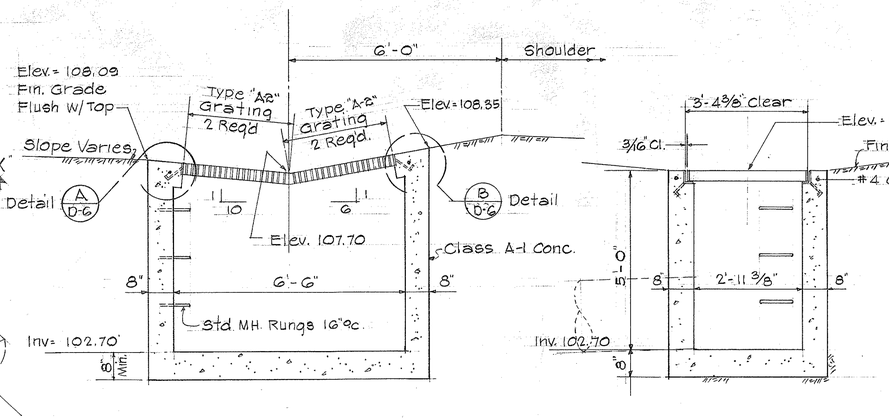


SECTION "Z-Z"

TYPE "B" STEEL FRAME
Scale: 3/4" = 1'-0"

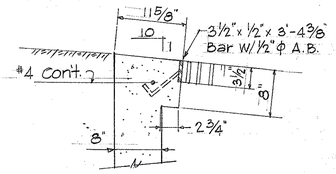


PLAN

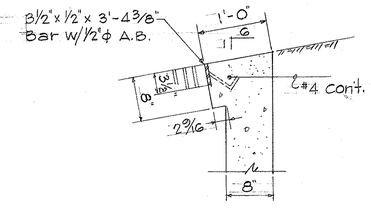


SECTION "X-X"

SECTION "Y-Y"



DETAIL A D-6
Scale: 1"= 1'-0"



DETAIL B D-6
Scale: 1"= 1'-0"

TYPE "B" GRATED CONCRETE DROP INTAKE
Scale: ½" = 1'-0"

WALLACE S. MIYAHIRA REGISTERED PROFESSIONAL ENGINEER No. 1513 HAWAII, U.S.A.

This work was prepared by me or under my supervision.
William Murphin

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE LAYOUT & DETAILS
CURB RETURN @
RAMP "K-1" & MOKAPU SADDLE ROAD

F.A.I. Proj. No. I-H3-1(7):13, I-H3-1(2):8
Scale: As shown Date: Jan. 1968

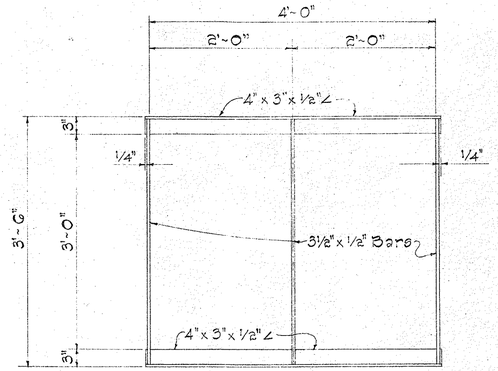
SHEET No. D-6 OF 9 SHEETS

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

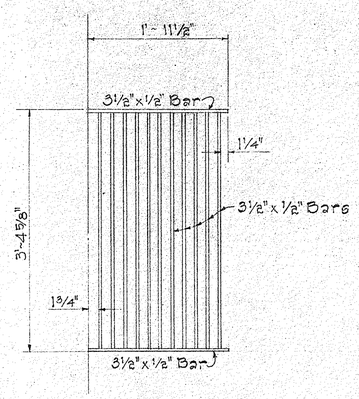
PRINTED ON NO. 1000H CLEARPRINT

24. 107

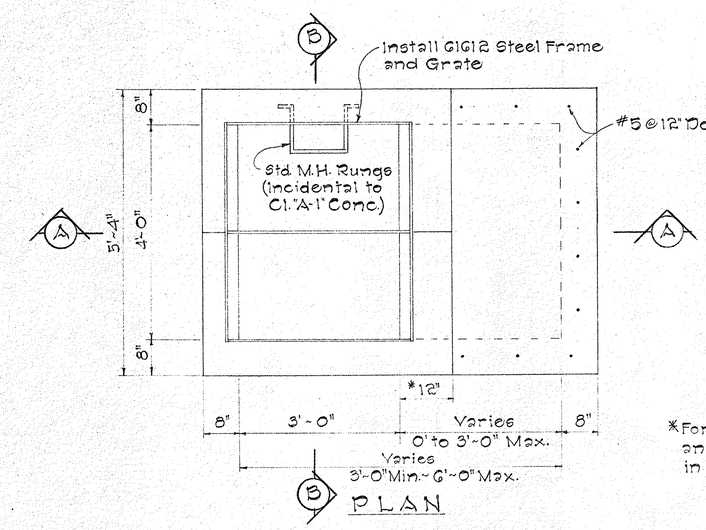
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(7):13 I-H3-1(2):8	1968	25	30



PLAN
Scale: 1" = 1'-0"

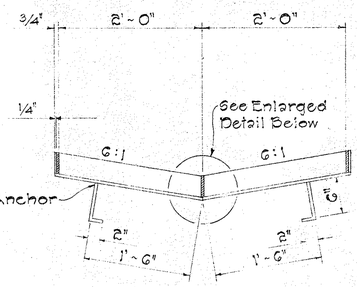


PLAN
Scale: 1" = 1'-0"

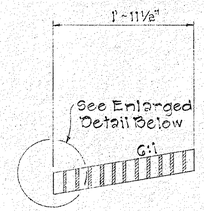


PLAN

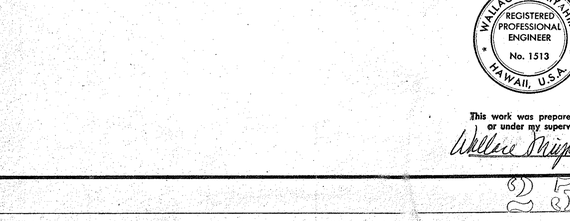
*For Minimum size box of 3'-0" only use 8" and eliminate reinforcing steel shown in the top portion.



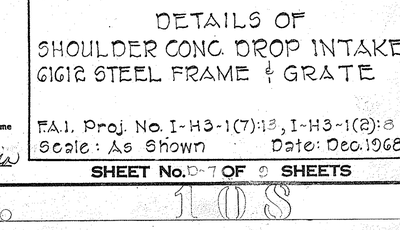
SECTION
Scale: 1" = 1'-0"



SECTION
Scale: 1" = 1'-0"



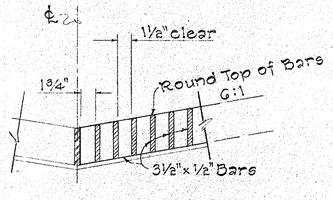
SECTION "A-A"



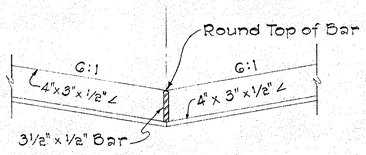
SECTION "B-B"

NOTE:
Culvert shall leave C.D.I. from any position and any direction indicated by plans or ordered by the Engineer. Culvert may both enter and leave C.D.I. so that C.D.I. will act as manhole.

SHOULDER CONCRETE DROP INTAKE
Scale: 3/4" = 1'-0"



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



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

DETAILS OF G1G12 STEEL FRAME AND GRATES

NOTES:
1. All welds 3/8" unless otherwise noted.
2. Grates and Frame shall be hot dip galvanized after fabrication, see specifications.
3. The various materials shall conform to the specifications of ASTM Designation Structural Steel A 283, Grade D and the Standard Specifications.

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

WALLACE S. MIYASHIRA
REGISTERED PROFESSIONAL ENGINEER
No. 1513
HAWAII, U.S.A.

This work was prepared by me or under my supervision.
Wallace Miyashira

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

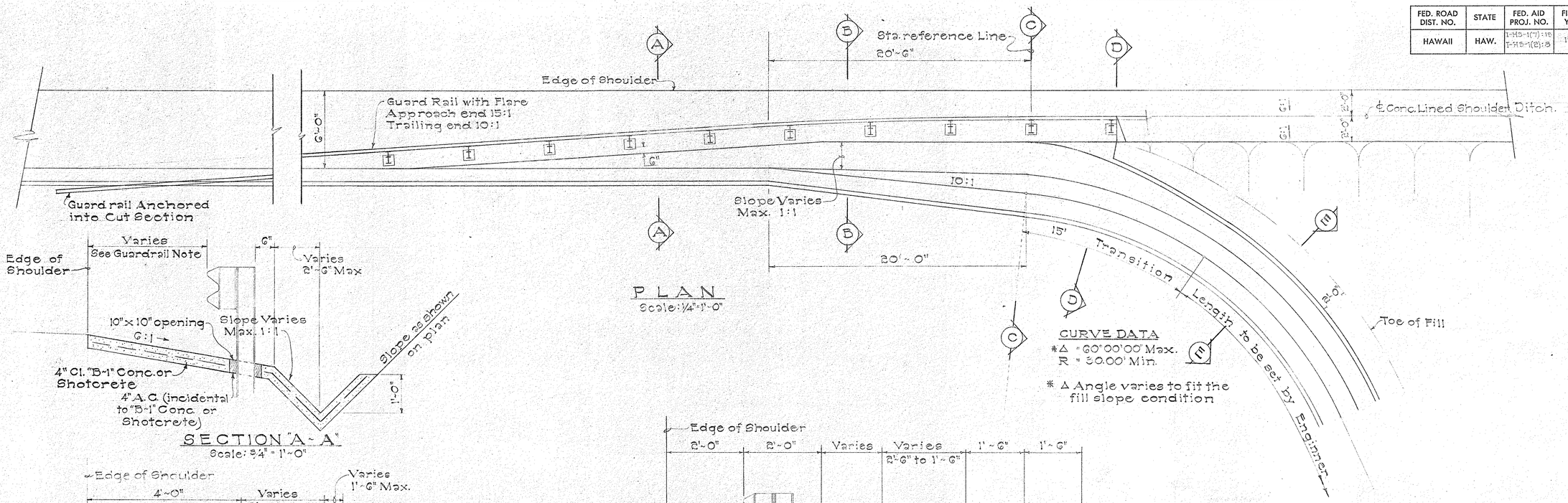
DETAILS OF
SHOULDER CONC. DROP INTAKE
G1G12 STEEL FRAME & GRATE

F.A.I. Proj. No. I-H3-1(7):13, I-H3-1(2):8
Scale: As Shown Date: Dec. 1968

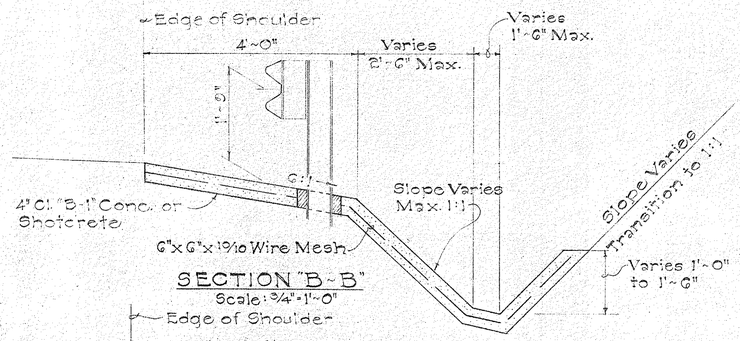
SHEET No. D-7 OF 9 SHEETS

25. 105

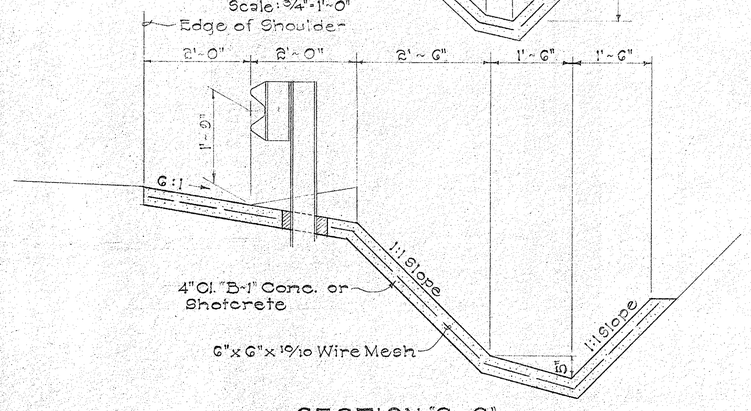
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HS-1(7):18 I-HS-1(8):8	1968	26	36



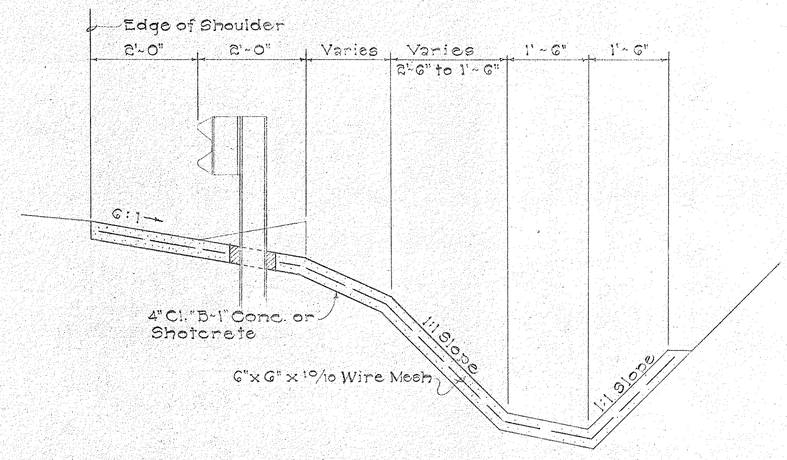
SECTION "A-A"
Scale: 3/4" = 1'-0"



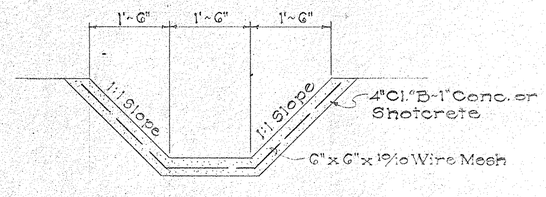
SECTION "B-B"
Scale: 3/4" = 1'-0"



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



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



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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS
CONCRETE SPILLWAY

F.A.I. Proj. No. I-HS-1(7):18, I-HS-1(8):8

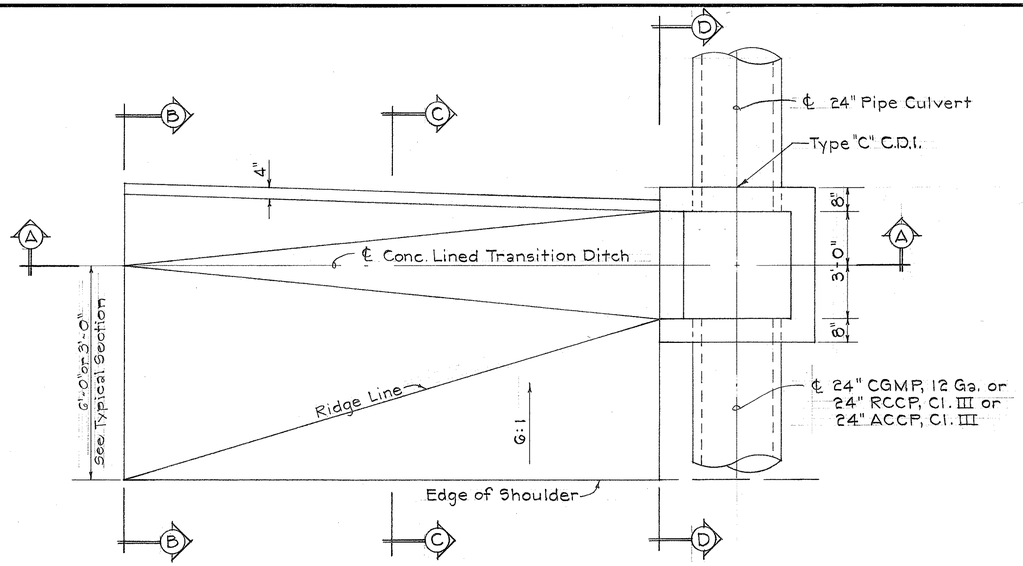
Scale: As Shown Date: April, 1969

SHEET No. D-8 OF 9 SHEETS

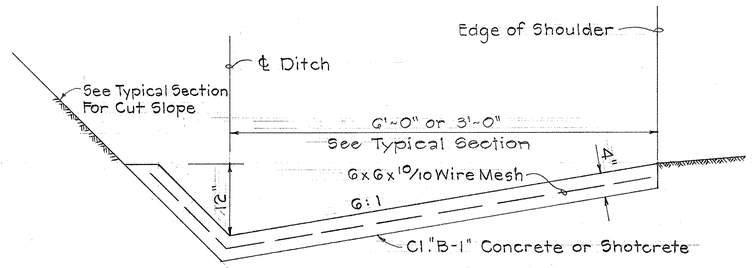
PRINTED ON NO. 1000H CLEARPRINT

26. 109

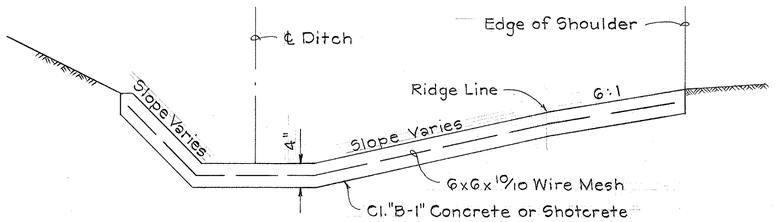
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(7):13 I-H3-1(2):8	1968	27	80



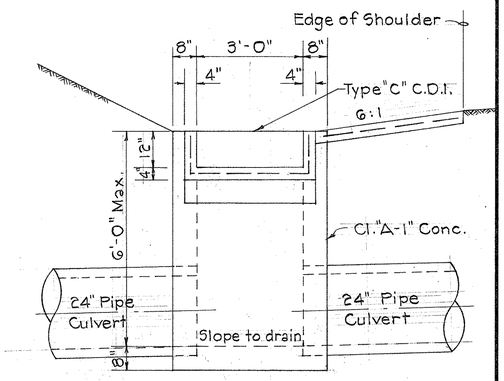
PLAN
Scale: ½"=1'-0"



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



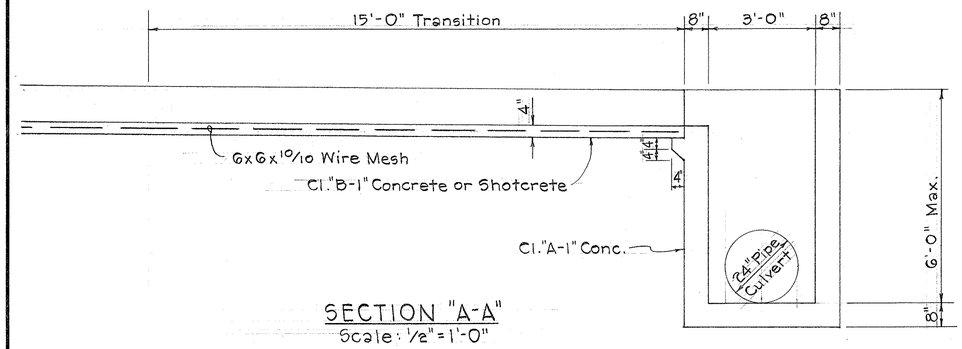
SECTION "C-C"
Scale: 1"=1'0"



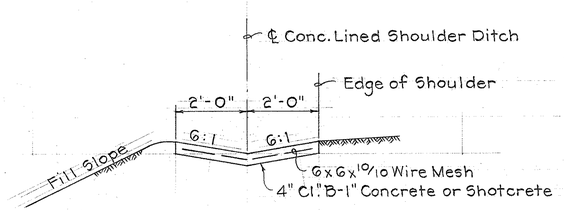
SECTION "D-D"
Scale: ½"= 1'-0"

NOTE: Culvert shall leave C.D.I. from any position and any direction indicated by plans or ordered by the Engineer. Culvert may both enter and leave C.D.I. so that C.D.I. will also act as Manhole.

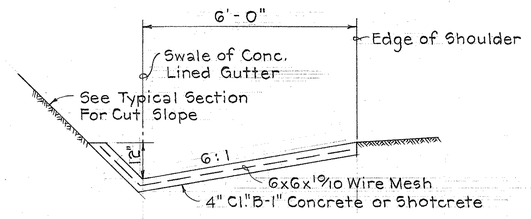
DETAILS OF TYPE "C" C.D.I.



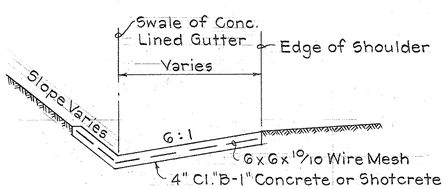
SECTION "A-A"
Scale: ½"=1'-0"



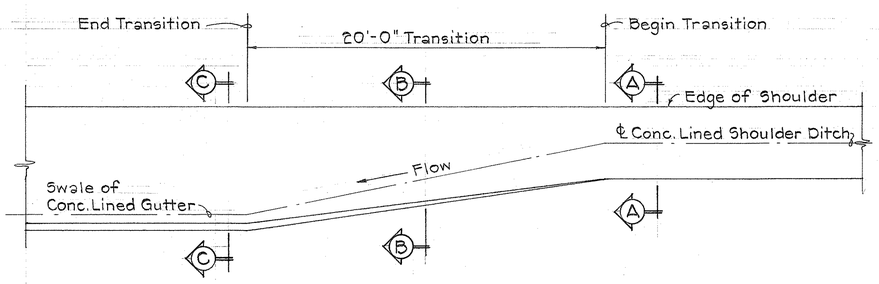
SECTION "A-A"
Scale: ½"=1'-0"



SECTION "C-C"
Scale: ½"=1'-0"



SECTION "B-B"
Scale: ½"=1'-0"



PLAN
Scale: ¼"=1'-0"

NOTE: Reverse plan view if direction of flow is in the opposite direction.

TRANSITION FROM FILL SECTION TO CUT SECTION OF SHOULDER DITCH

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

TYPE "C" C.D.I. AND
SHOULDER DITCH TRANSITION

F.A.I. Proj. No. I-H3-1(7):13, I-H3-1(2):8

Scale: As Shown Date: April, 1969

SHEET No. D-9 OF 9 SHEETS