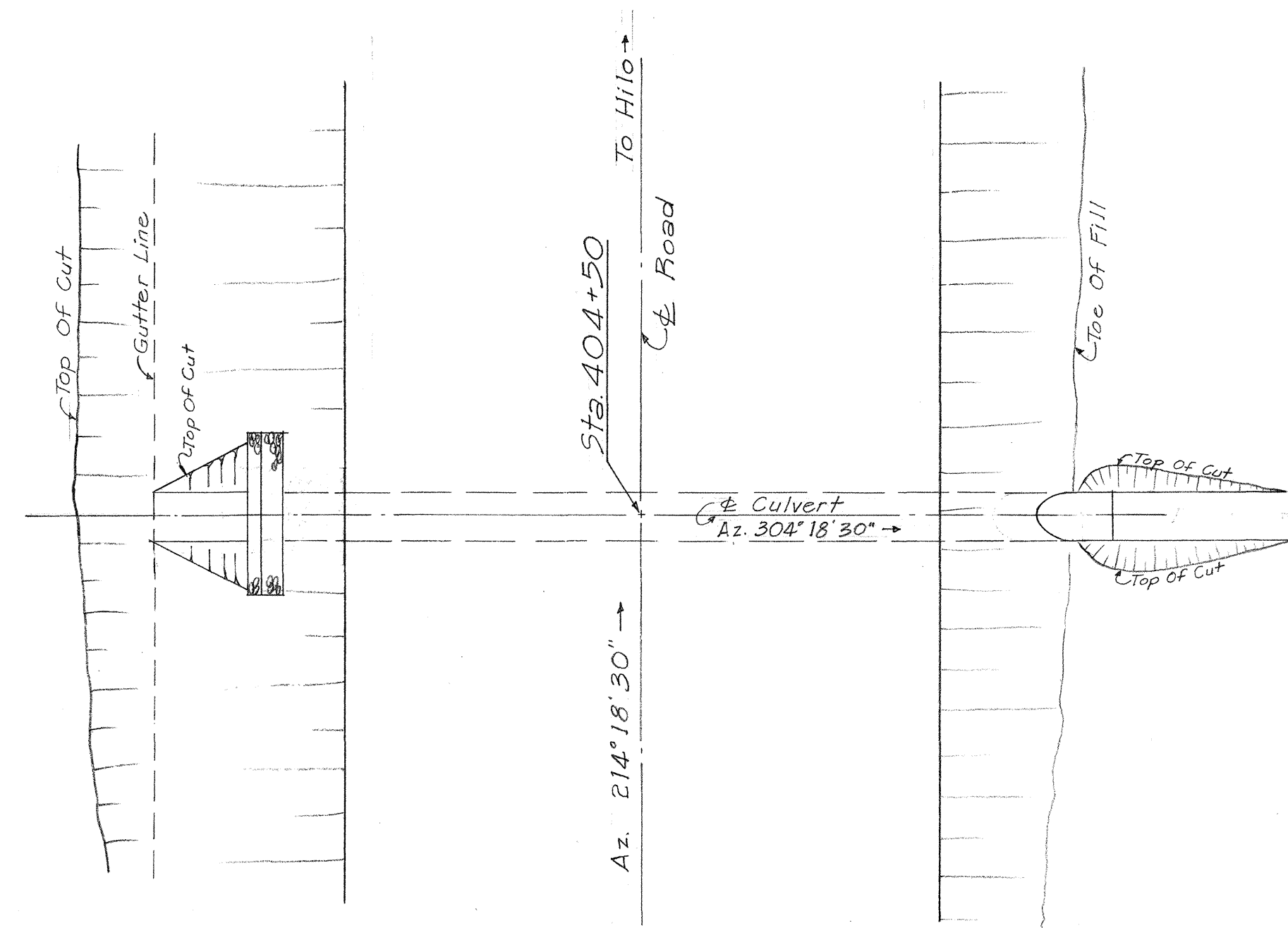
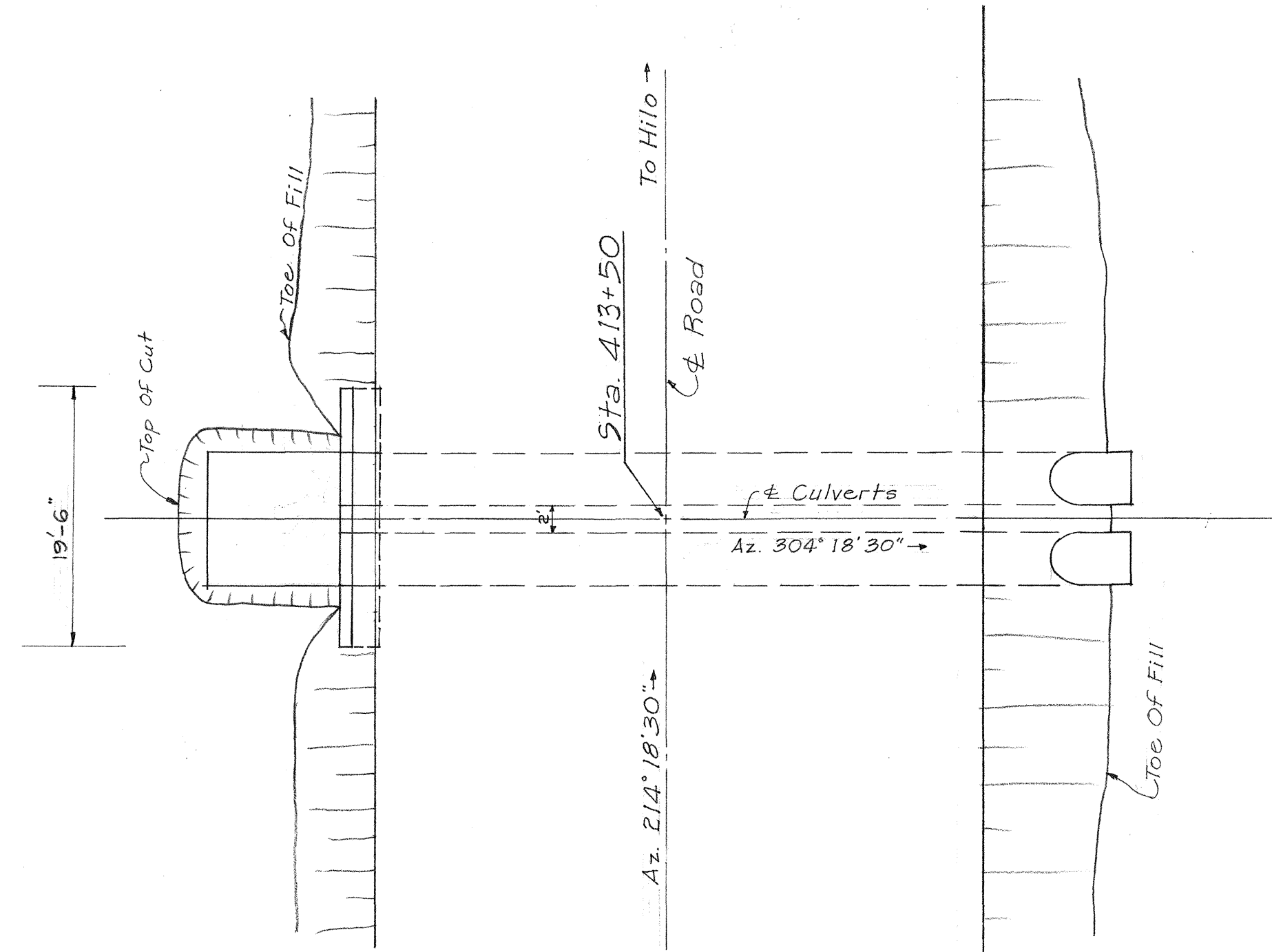




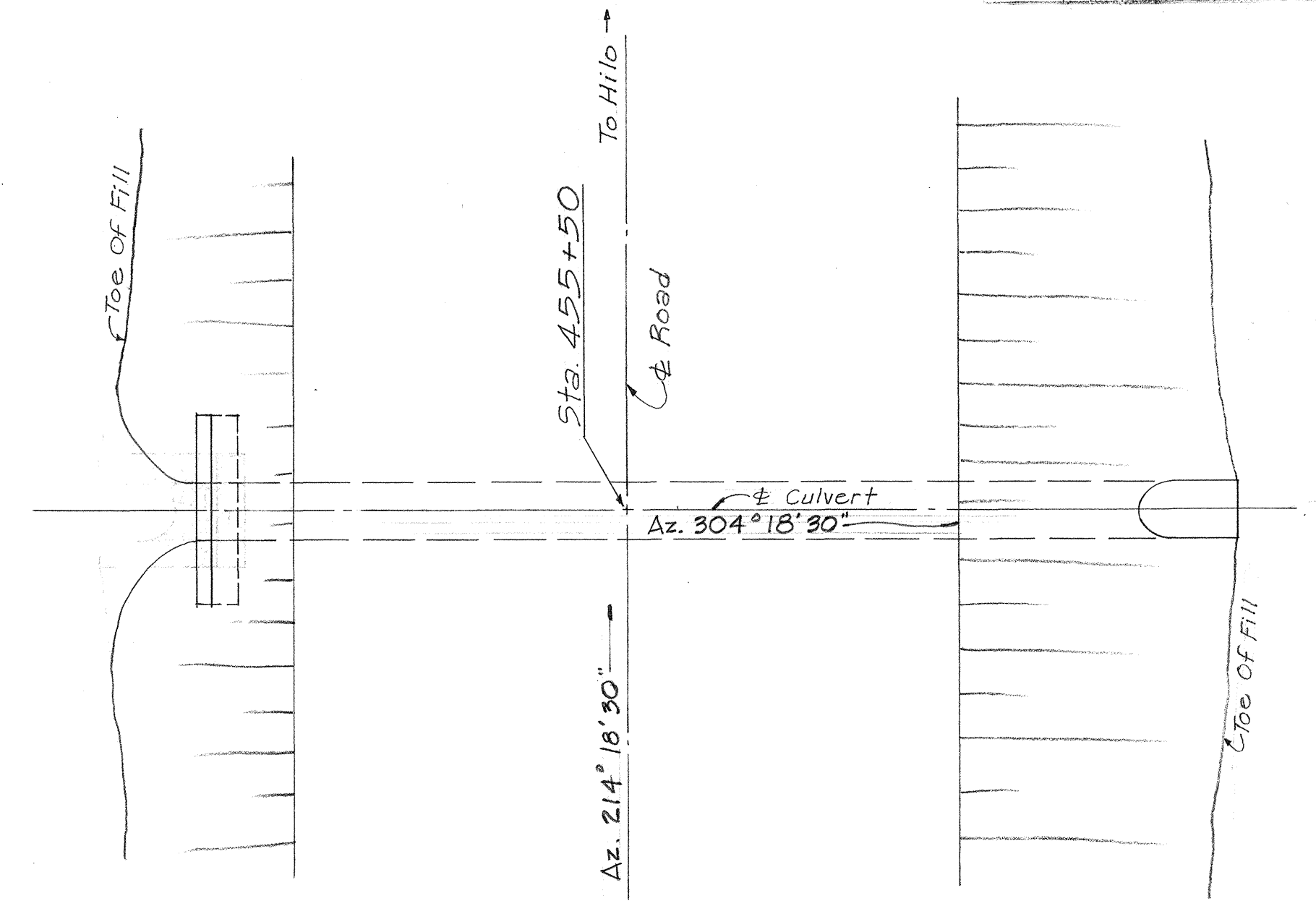
PLAN

Scale: 1"=10'



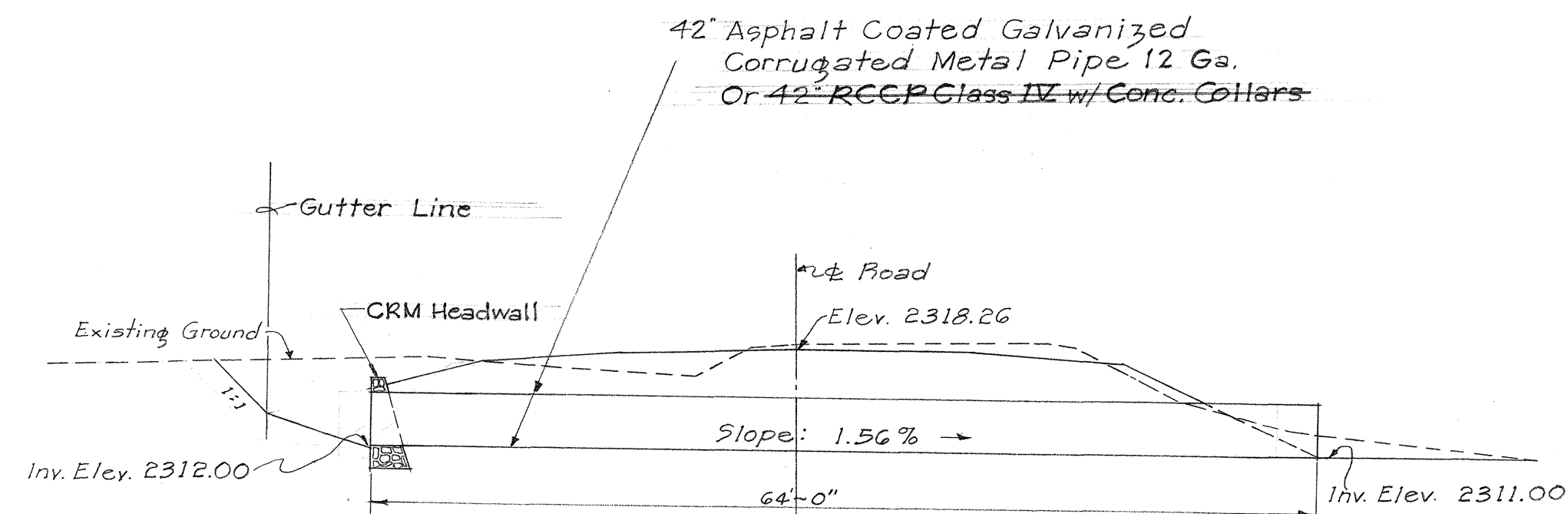
PLAN

Scale: 1"=10'



PLAN

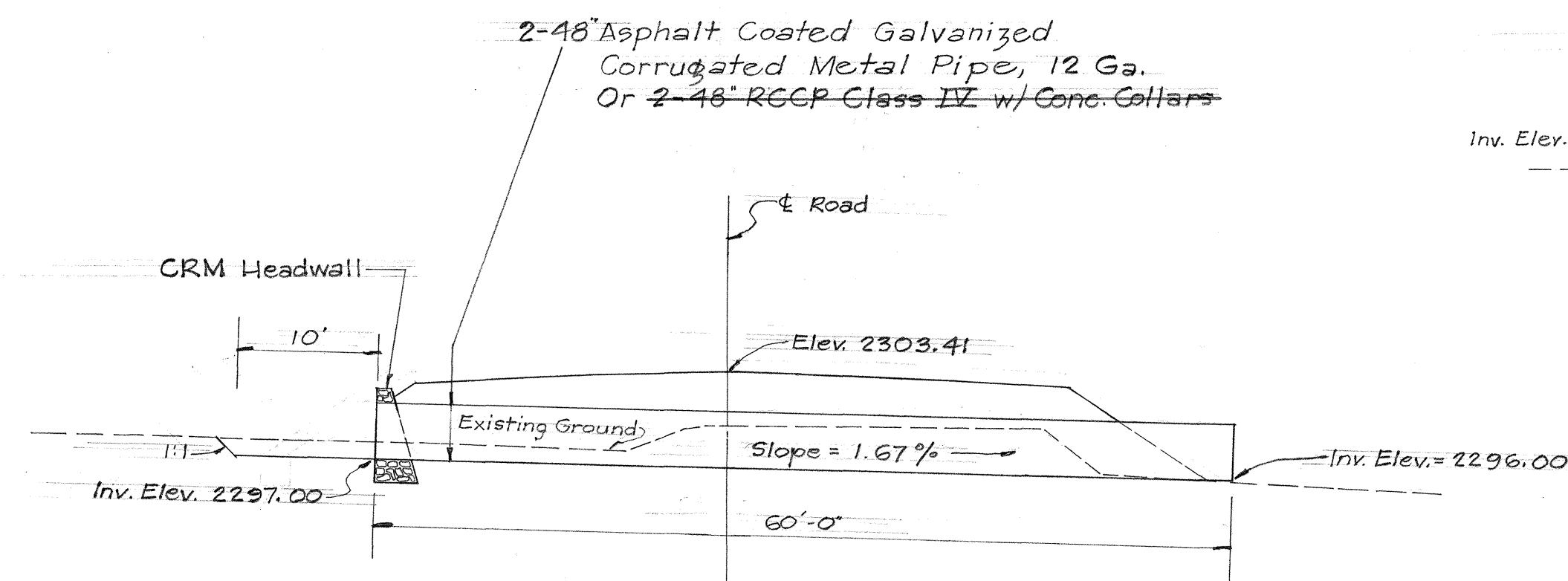
Scale: 1"=10'



SECTION THRU OF CULVERT

Scale: 1"=10'

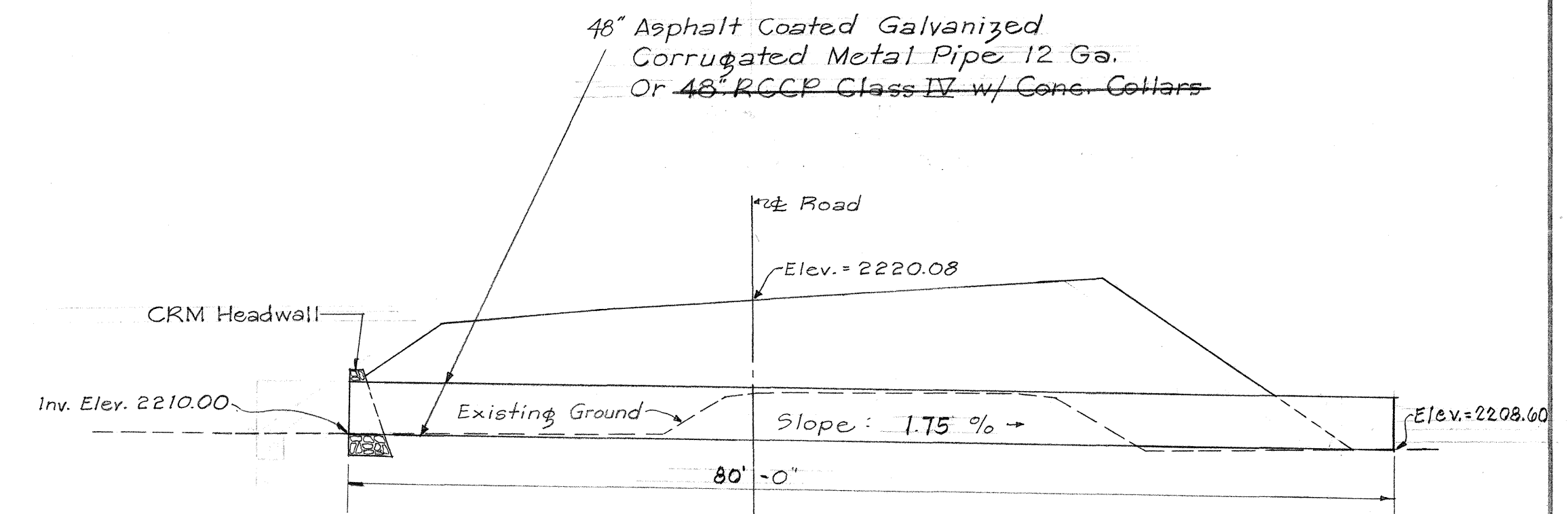
STA. 404+50



SECTION THRU OF CULVERTS

Scale: 1"=10'

STA 413+50



SECTION THRU OF CULVERT

Scale: 1"=10'

STA. 455+50

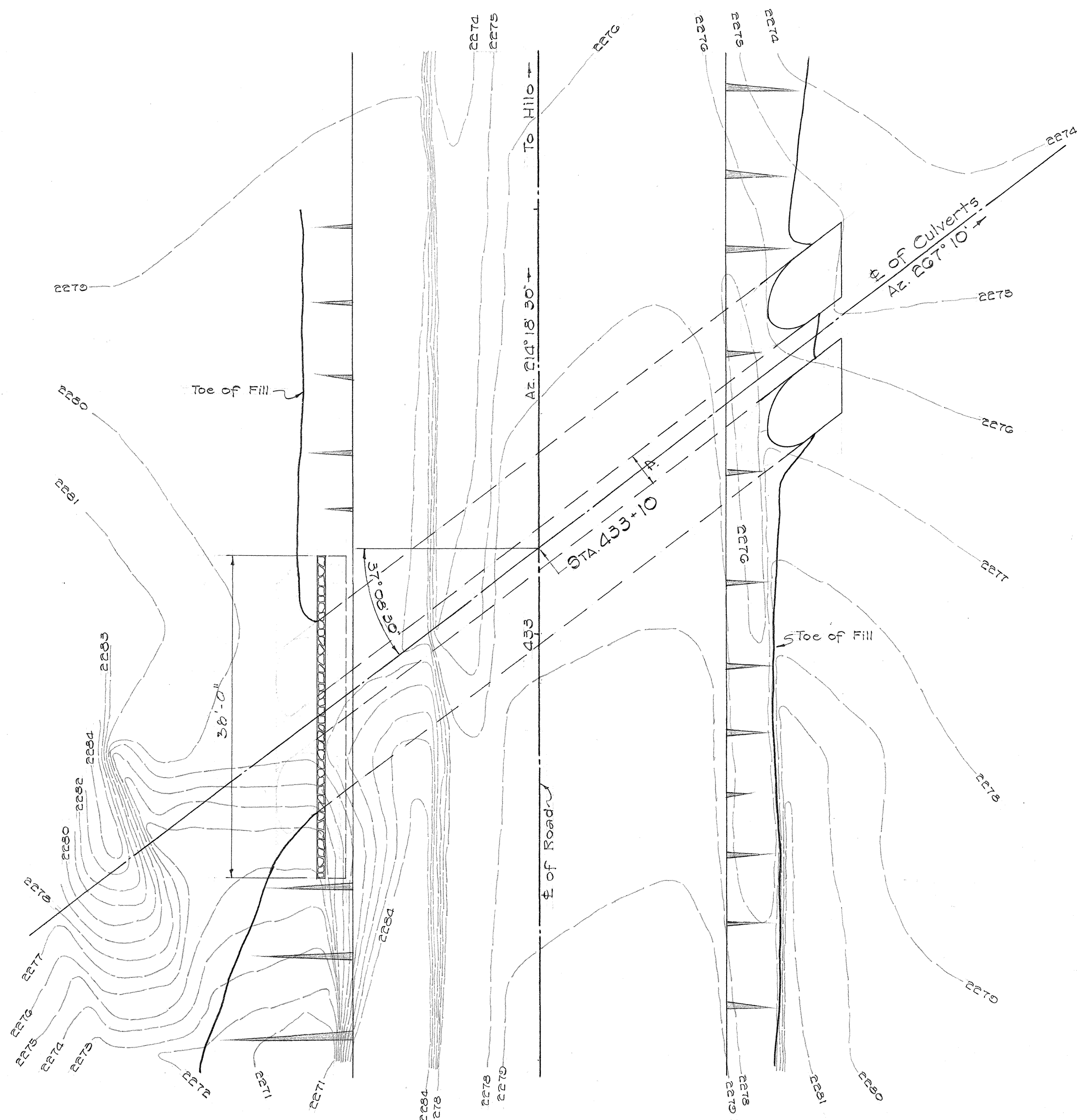
DRAINAGE DETAILS

DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STATE OF HAWAII

CULVERTS
VOLCANO ROAD~GLENWOOD SECTION
PROJECT N° F-011-2 (5)

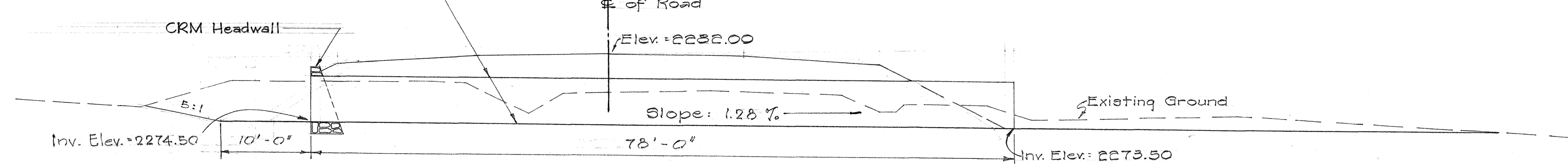
Scale: As Noted Date: May 10, 1965

SHEET NO. 1 OF 6 SHEETS

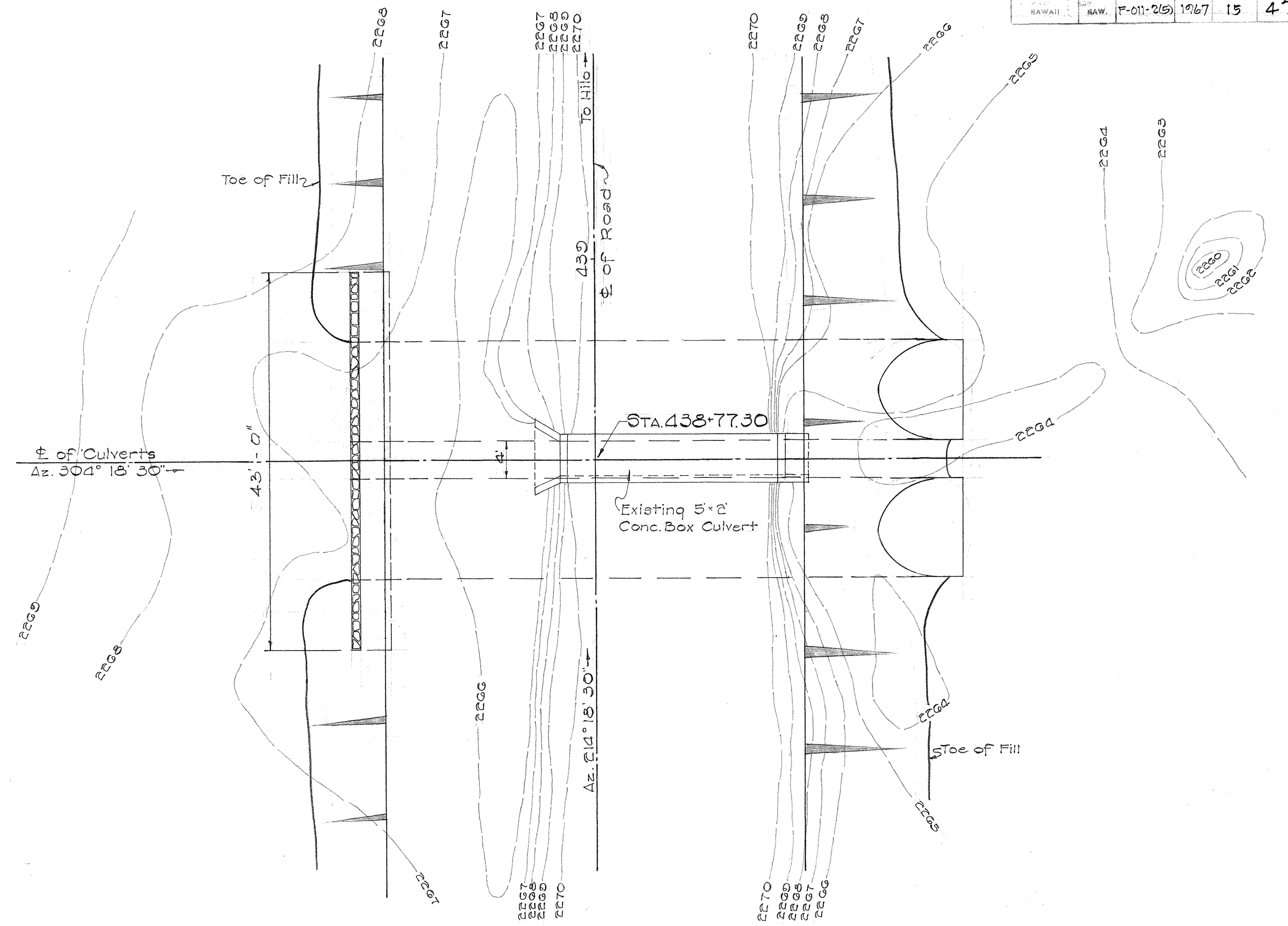


PLAN
Scale: 1" = 10'

2-SECTIONAL PLATE PIPE-ARCH
SKEWED @ 37°08'30"
DIMENSIONS: SPAN = 7'-3"
RISE = 5'-3"
AREA = (E) 31' EACH
GAGE = 12

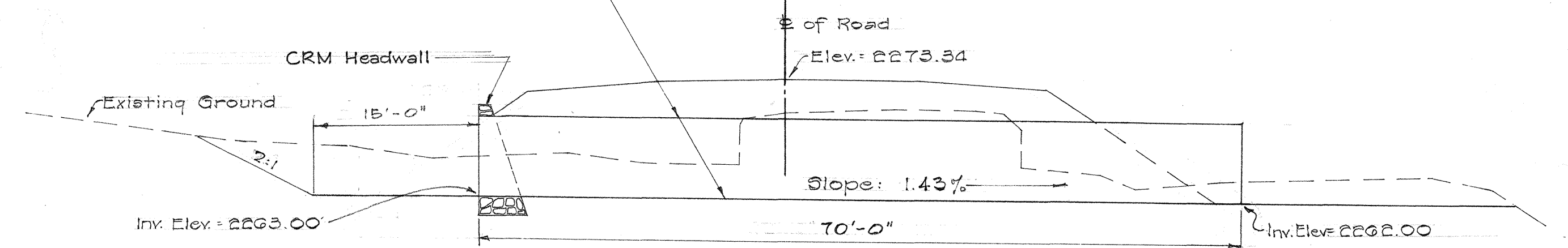


SECTION THRU E. OF CULVERTS
Scale: 1" = 10'
STA. 433 + 10



PLAN
Scale: 1" = 10'

2-SECTIONAL PLATE PIPE-ARCH
DIMENSIONS: SPAN = 11'-5"
RISE = 7'-3"
AREA = (E) 64' EACH
GAGE = 10



SECTION THRU E. OF CULVERTS
Scale: 1" = 10'
STA. 438+77.30

DRAINAGE DETAILS

DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STATE OF HAWAII

CULVERTS
VOLCANO ROAD - GLENWOOD SECTION
PROJECT No. F-011-2 (S)

Scale: As Noted Date: April 18, 1965

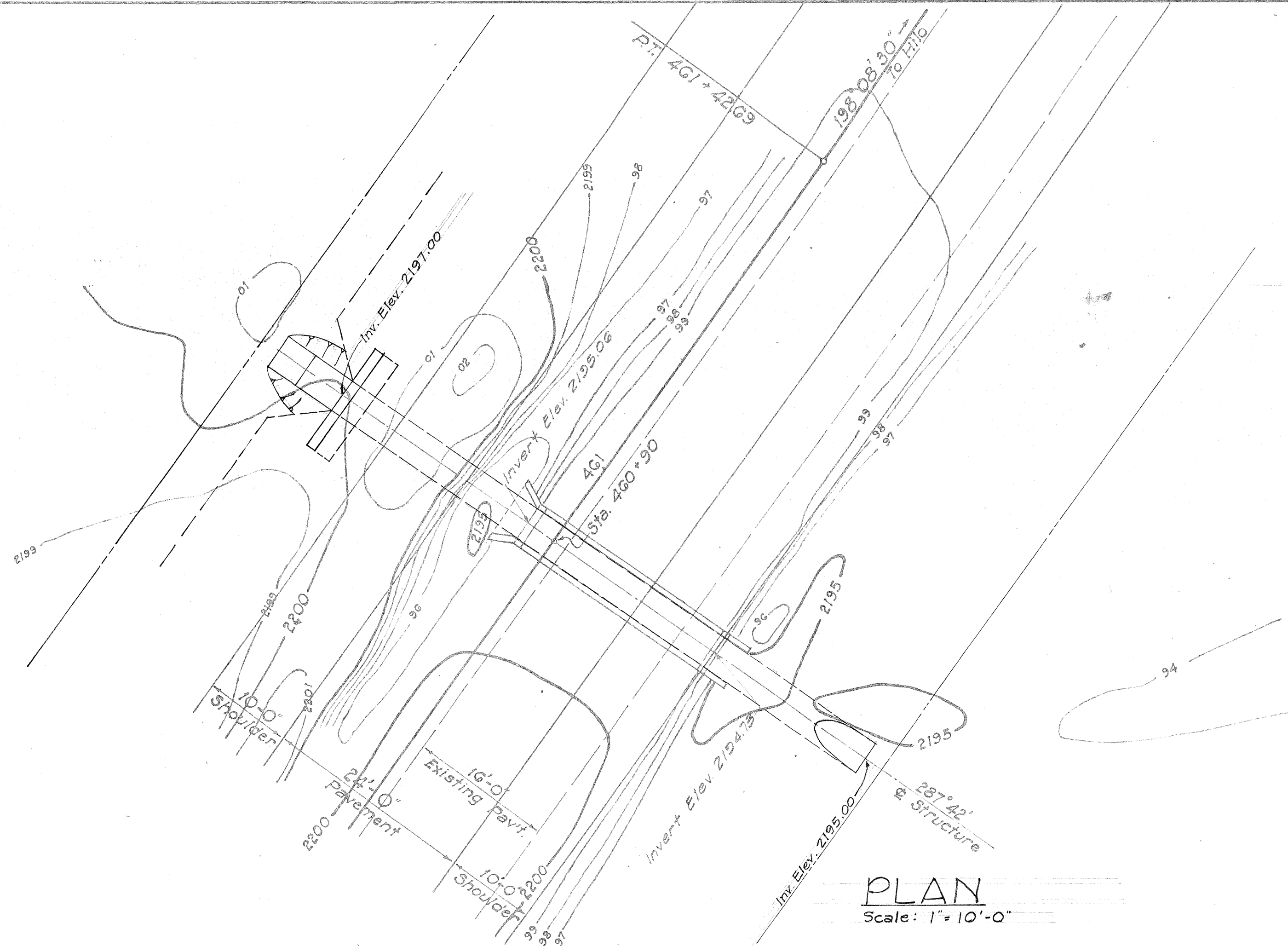
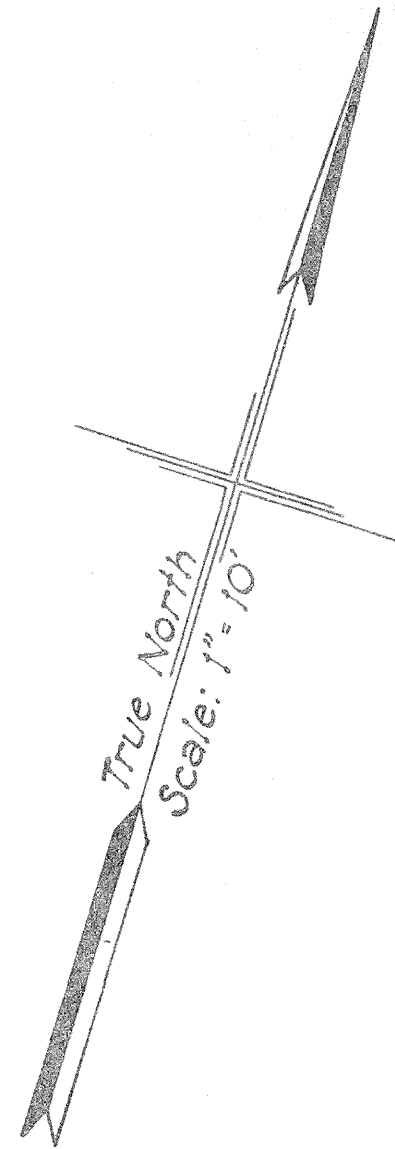
SHEET NO. 2 OF 6 SHEETS

VOLCANO ROAD
GLENWOOD SECTION
PROJ. NO. F-011-2(5)
PUNA, HAWAII

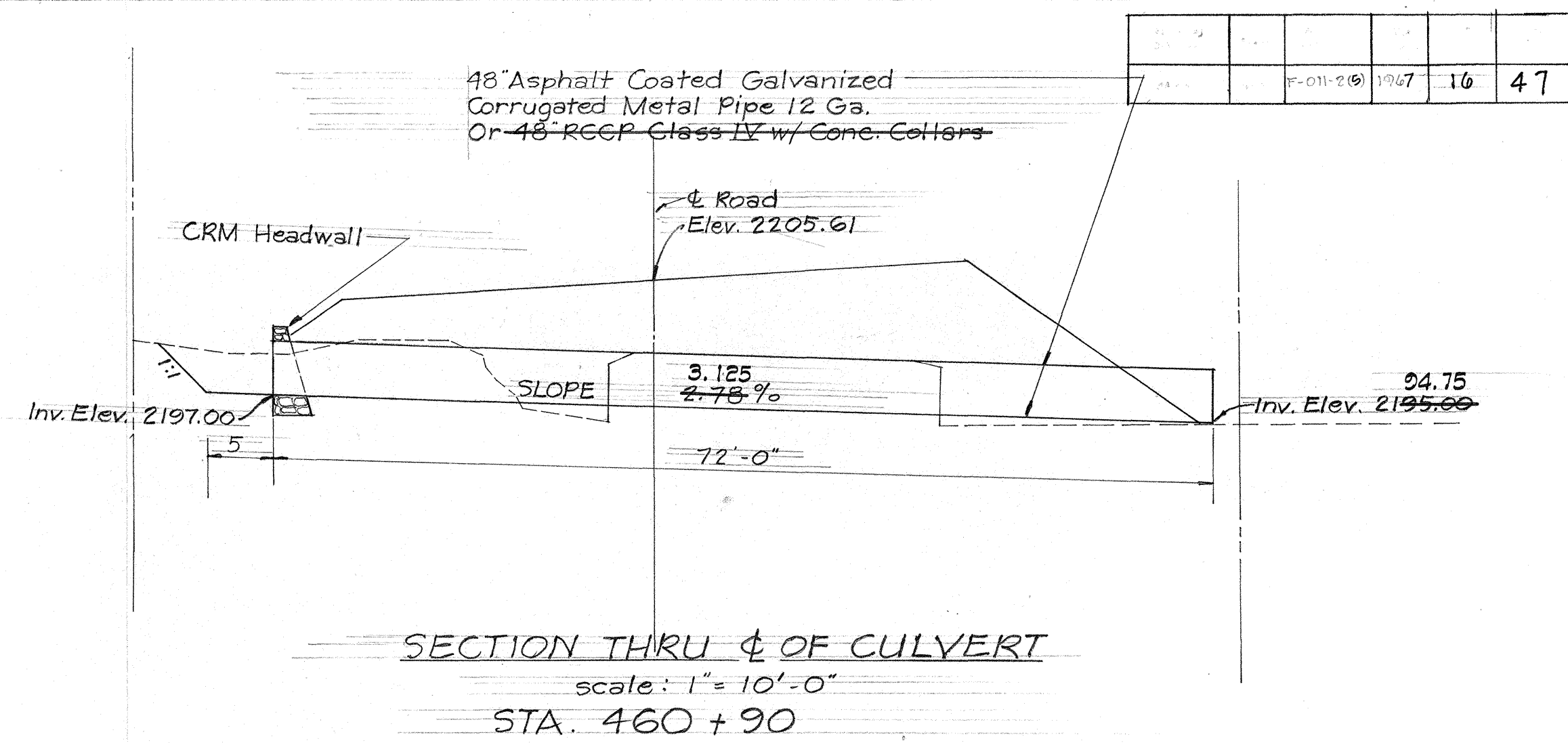
CULVERT AT STA. 460+70
PROJ. F-011-2(5) STA. 460+90
PROJ. EAP 2A STA. 910+80

STATE HIGHWAY DIVISION HILO, HAWAII
Dec. 1949
REVISED SEPT. 25, 1963

PLAN	DATE
NO.	
BY	
SURVEYED	
NOTE BOOK	
ALIGNED CHECKED	
RT. OF WAY CHECKED	

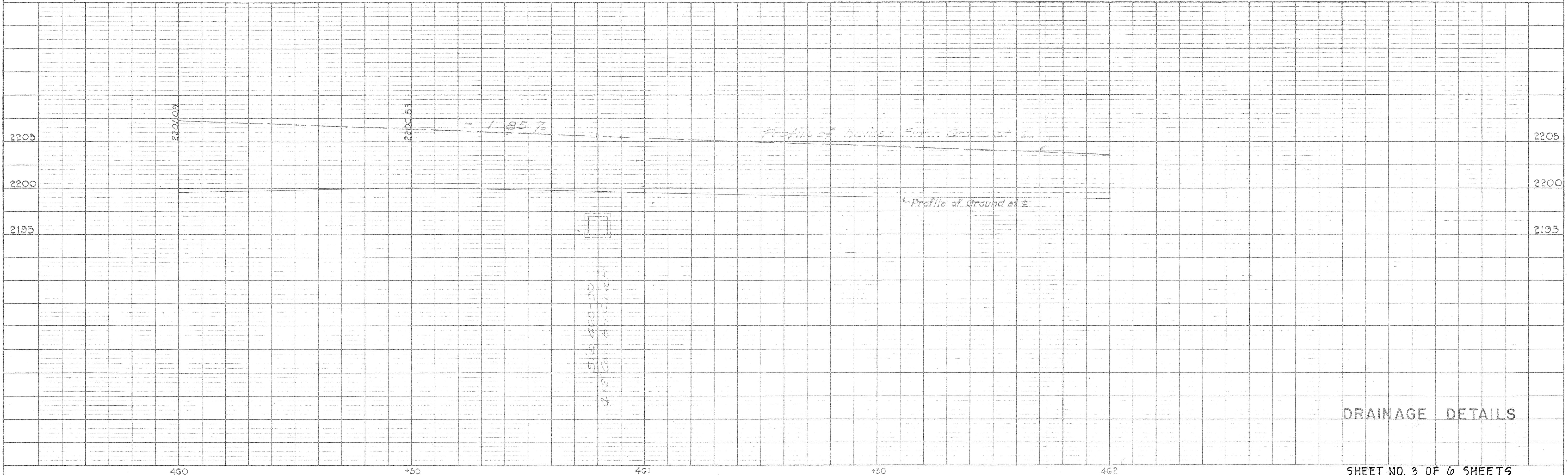


PLAN
Scale: 1" = 10'-0"



SECTION THRU ϕ OF CULVERT
Scale: 1" = 10'-0"
STA. 460+90

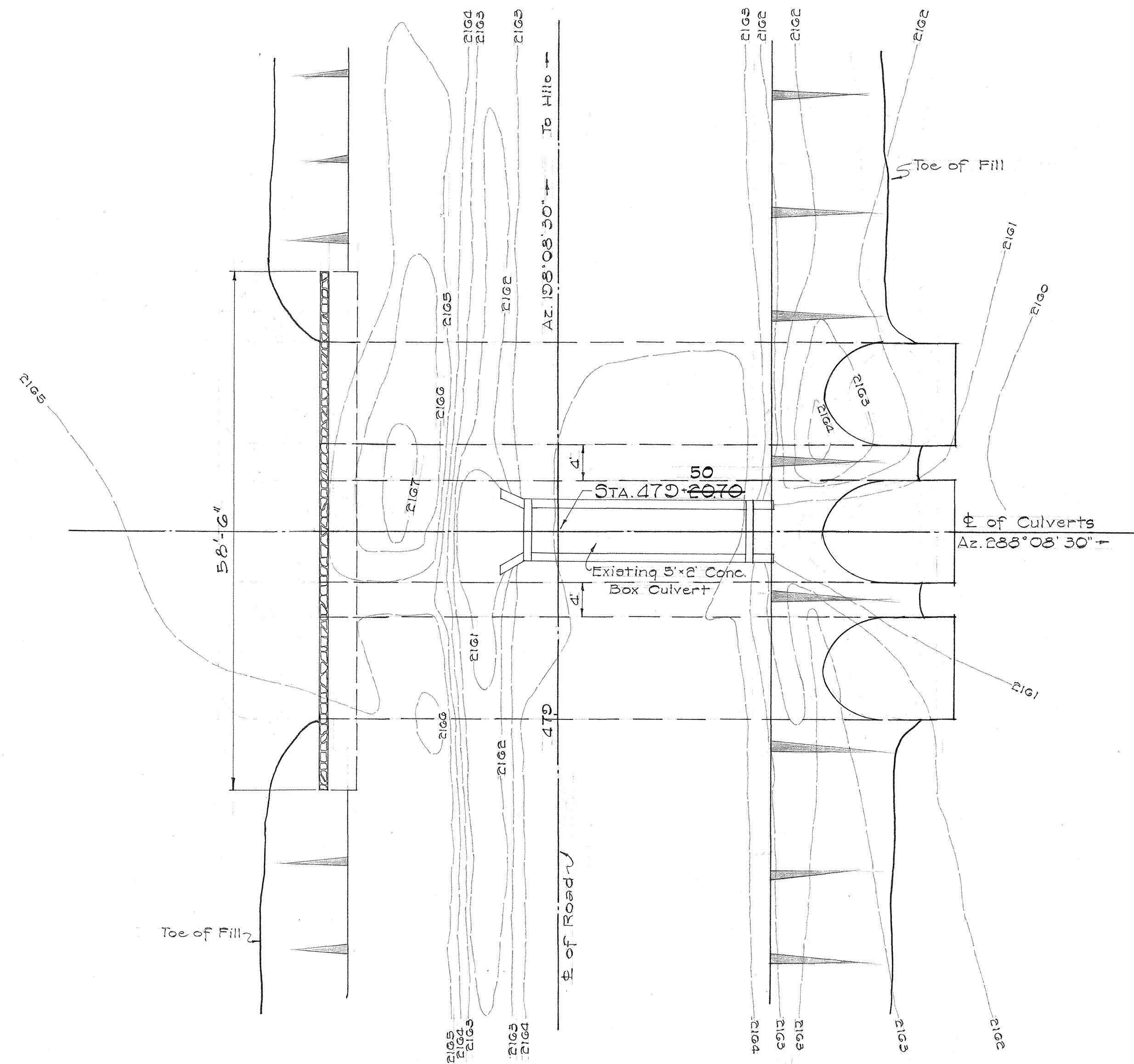
PROFILE	DATE
NO.	
BY	
SURVEYED	
NOTE BOOK	
GRADES CHECKED	
IS M.S. NOTED	
STRUCTURE NOT AS CHD.	



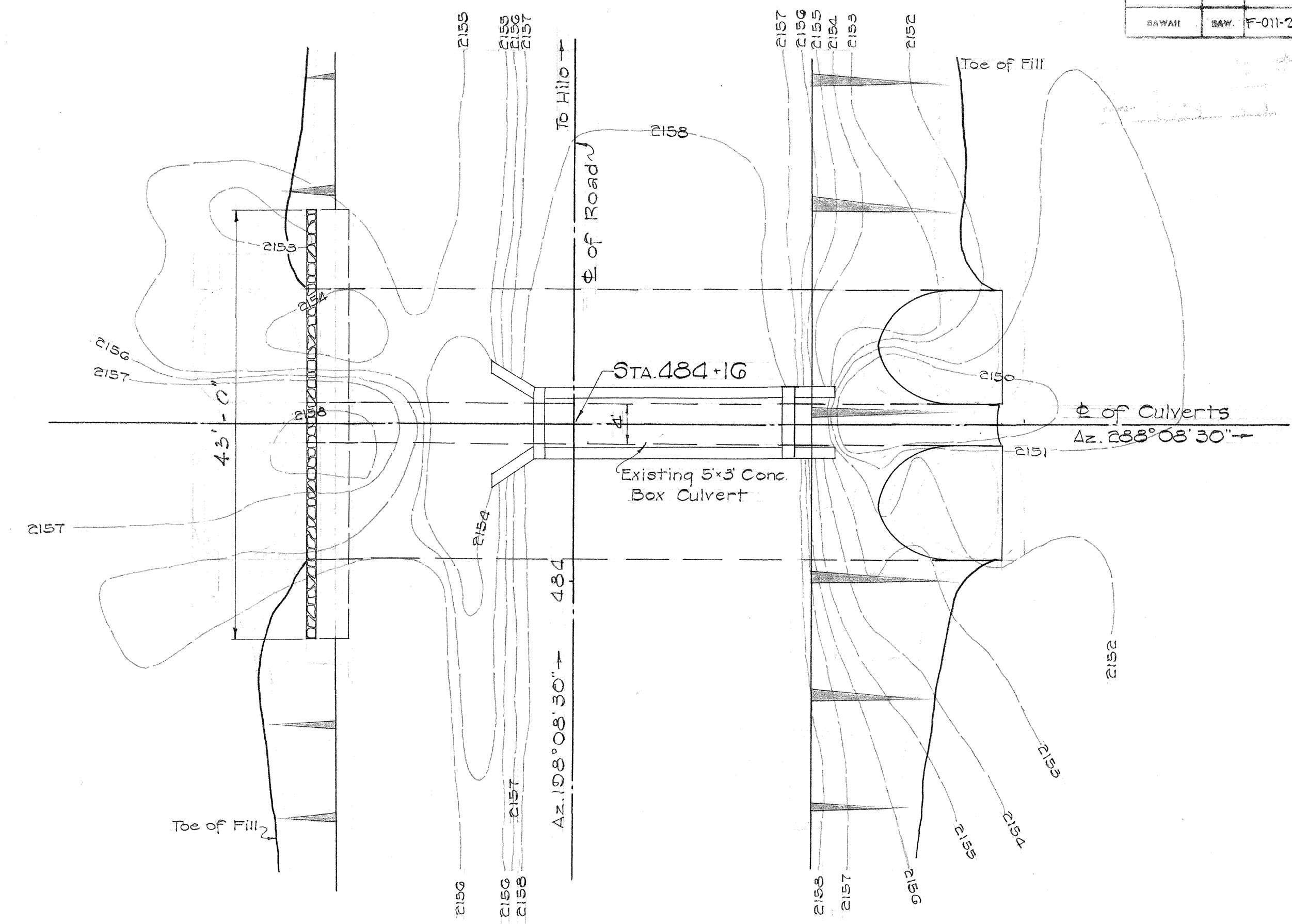
DRAINAGE DETAILS

SHEET NO. 3 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	SAW	F-011-213	1967	17	47

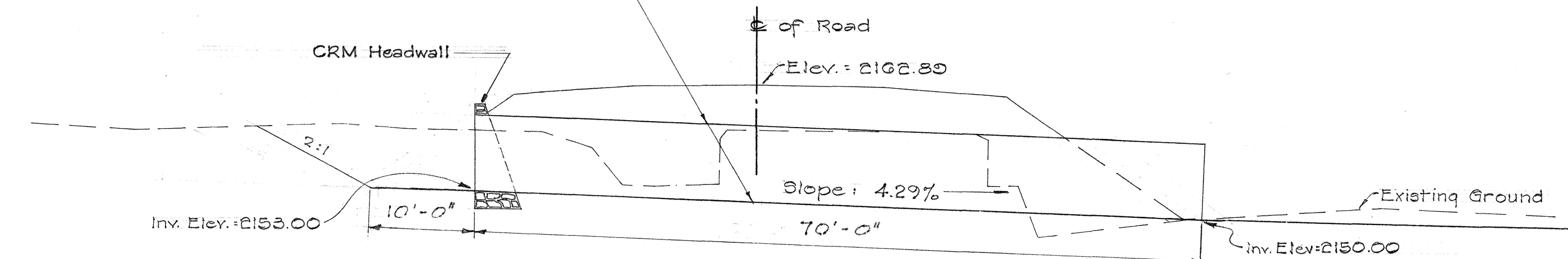


PLAN
Scale: 1" = 10'

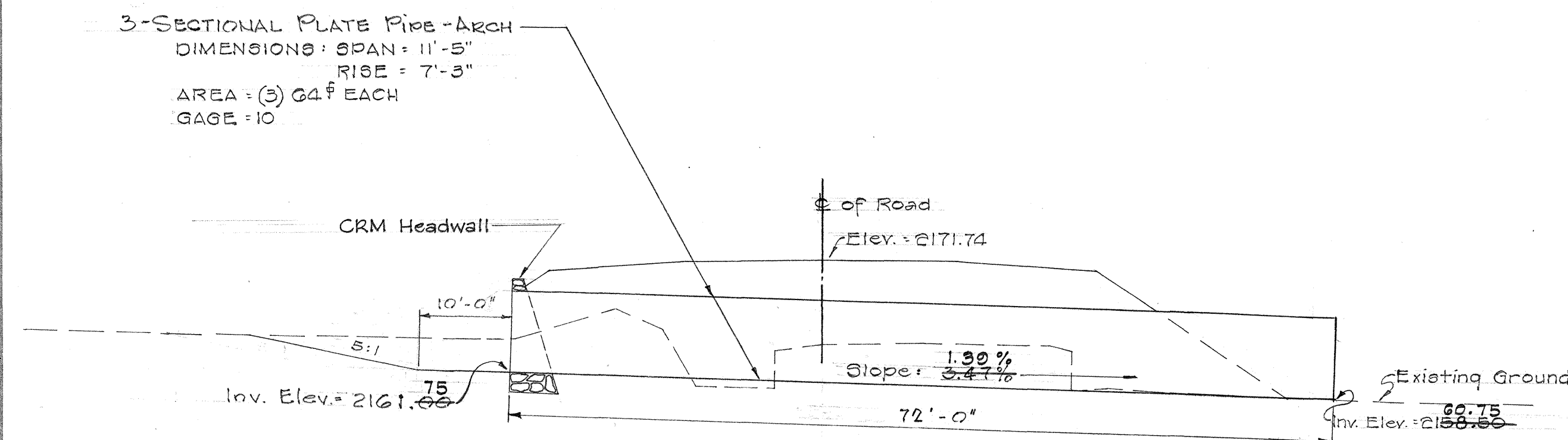


PLAN
Scale: 1" = 10'

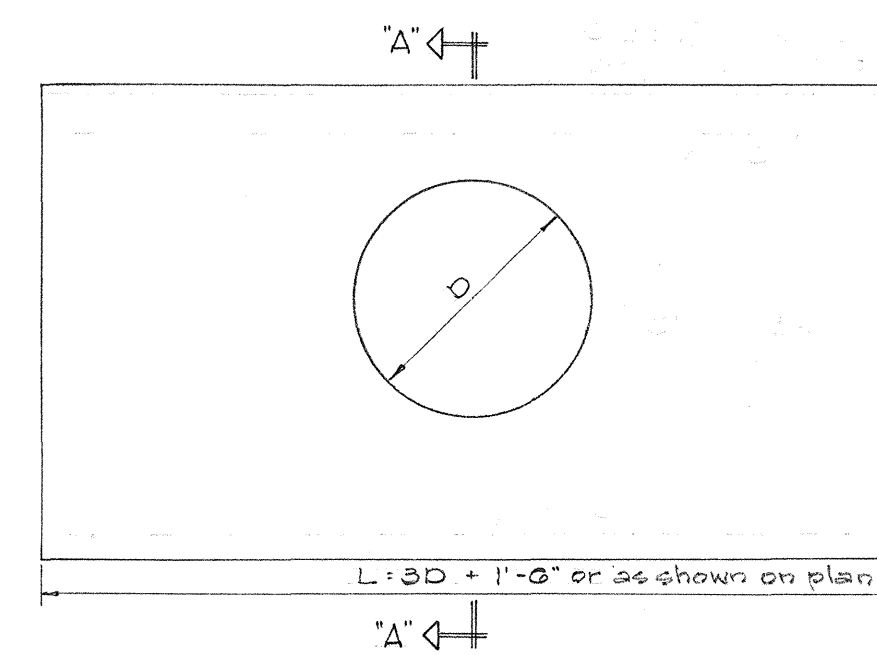
2-SECTIONAL PLATE PIPE-ARCH
DIMENSIONS: SPAN = 11'-5"
RISE = 7'-3"
AREA = (6) 64 sq ft EACH
GAGE = 10



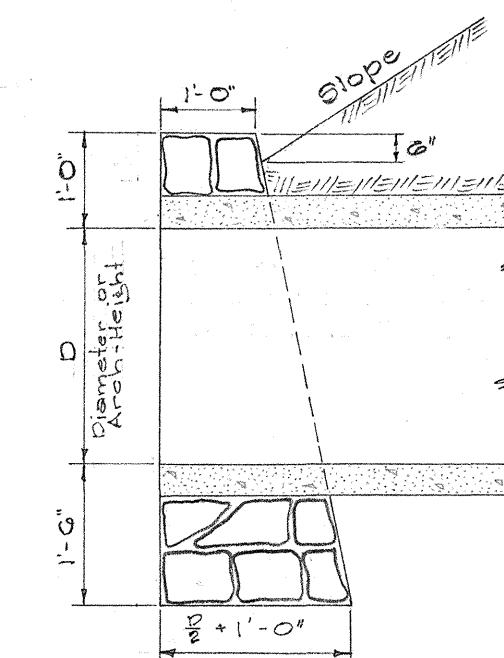
SECTION THRU ϕ OF CULVERTS
Scale: 1" = 10'
STA. 484+16



SECTION THRU ϕ OF CULVERTS
Scale: 1" = 10'
STA. 479+60.70



ELEVATION



SECTION "A-A"

DETAIL OF CRM HEADWALL
Scale: 1/2" = 1'-0"

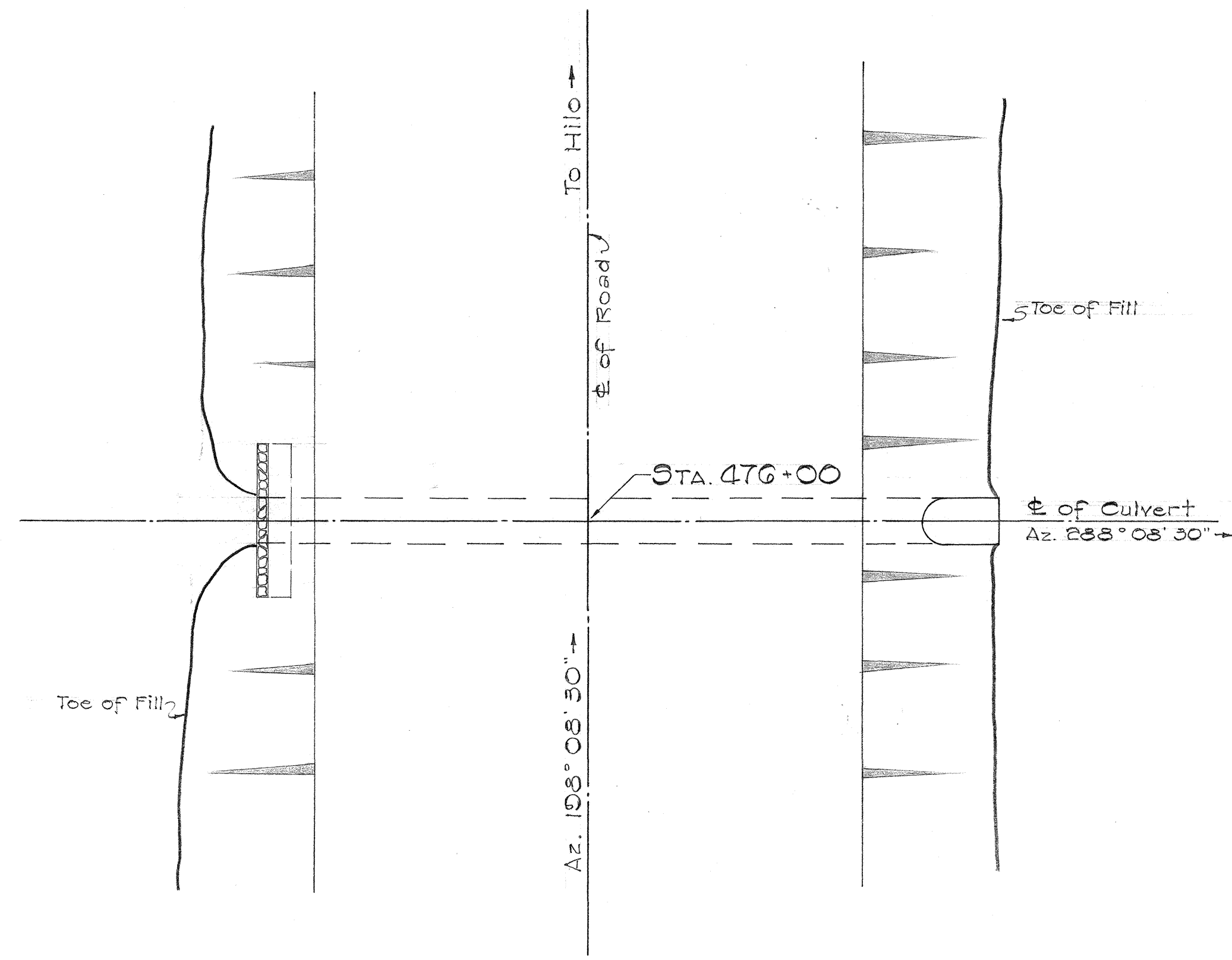
DRAINAGE DETAILS

DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STATE OF HAWAII

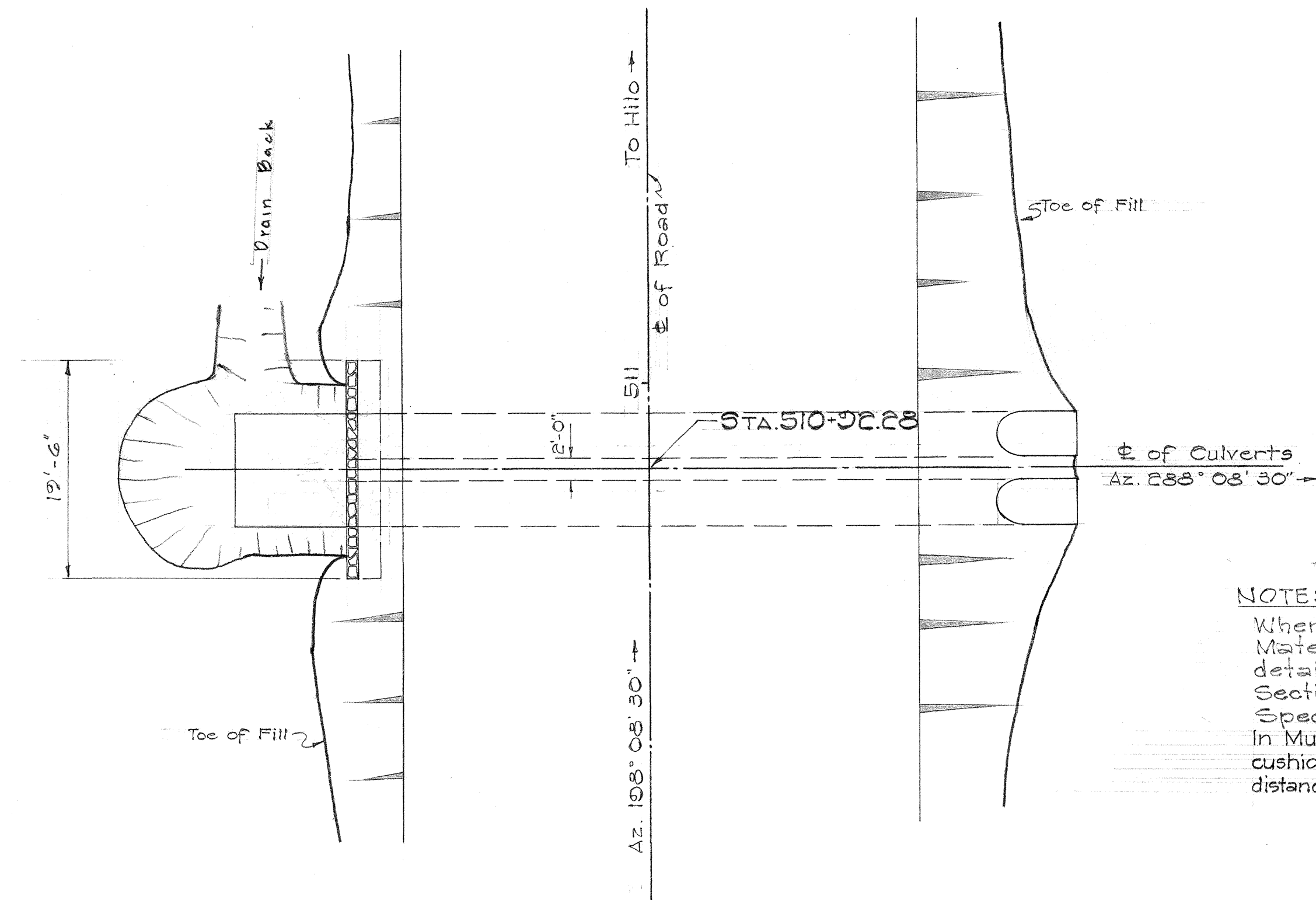
CULVERTS
VOLCANO ROAD - GLENWOOD SECTION
PROJECT NO. F-011-2 (5)

Scale: As Noted Date: April 12, 1965

SHEET NO. 4 OF 6 SHEETS

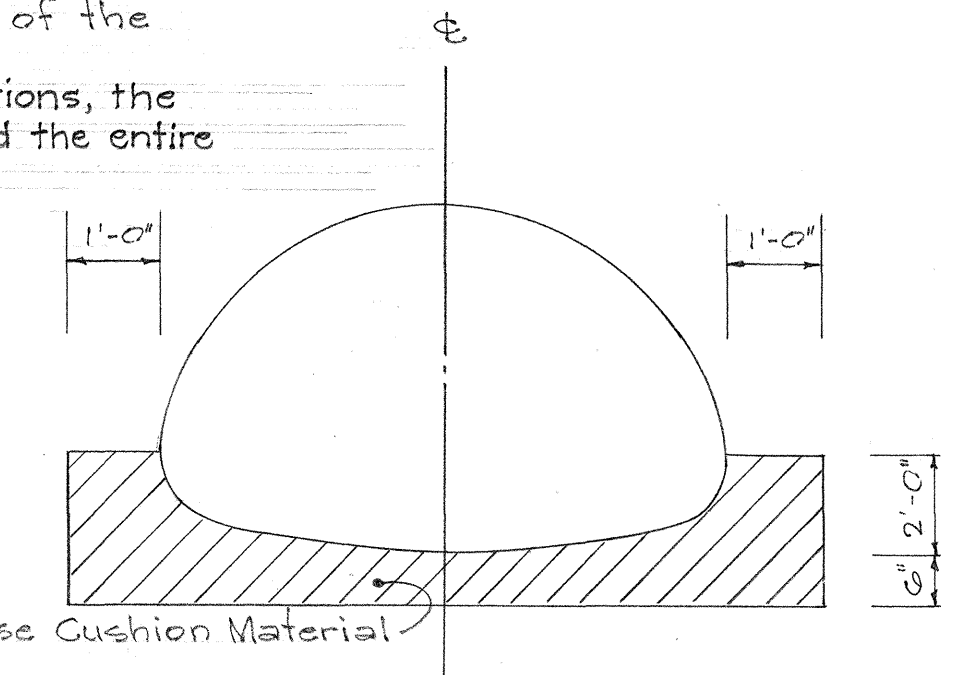


PLAN
Scale: 1"=10'

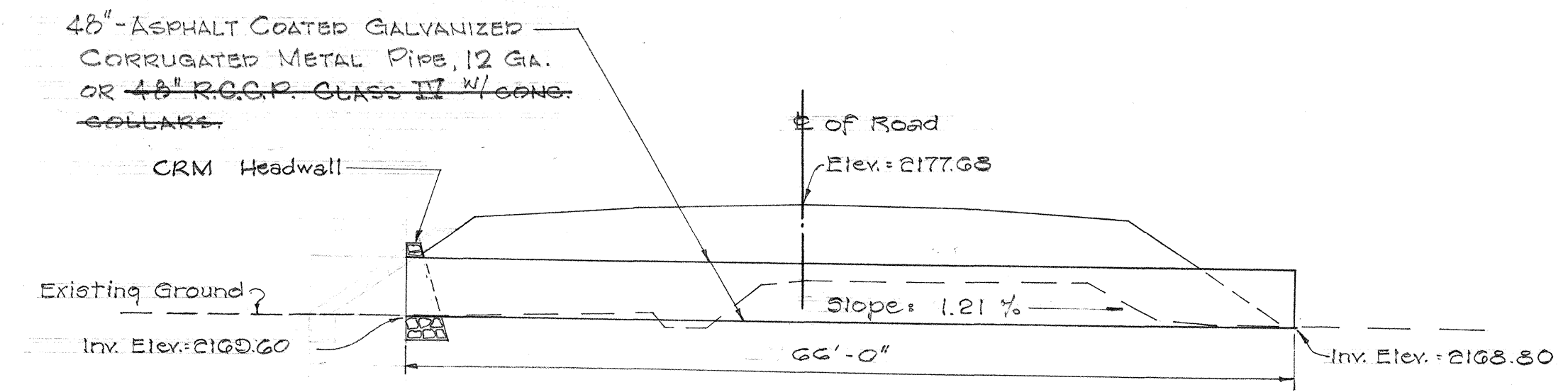


PLAN
Scale: 1"=10'

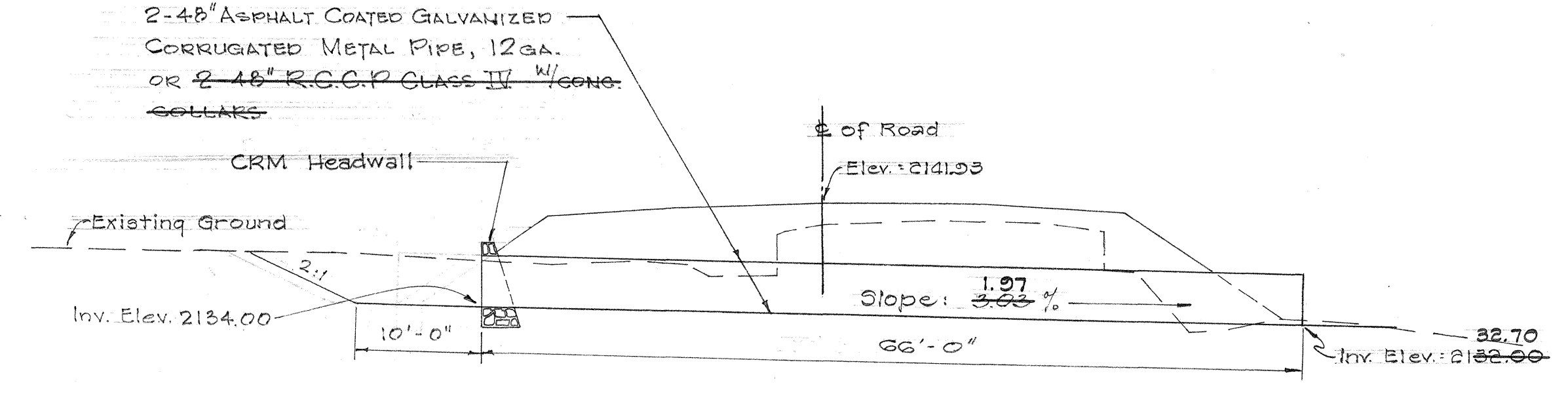
NOTE:
Where Solid Rock or Unavailable Material is encountered, this detail does not apply. Refer to Section 60, Article 60.3 of the Special Provisions.
In Multiple Culvert installations, the cushion material shall extend the entire distance between culverts.



PIPE FOUNDATION FOR
SECTIONAL PLATE PIPE-ARCHES
Not to Scale



SECTION THRU ϕ OF CULVERT
Scale: 1"=10'
STA. 476+00



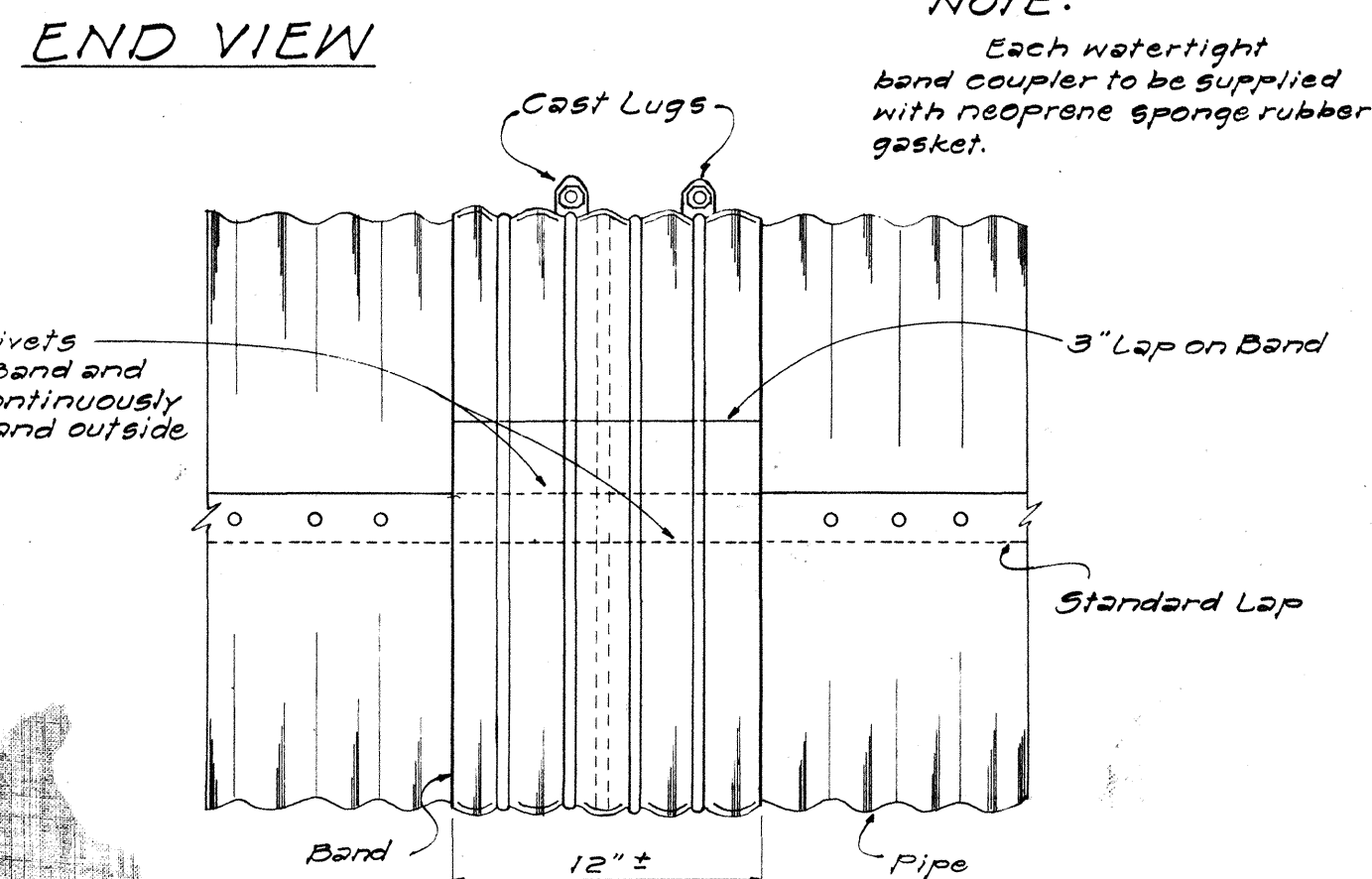
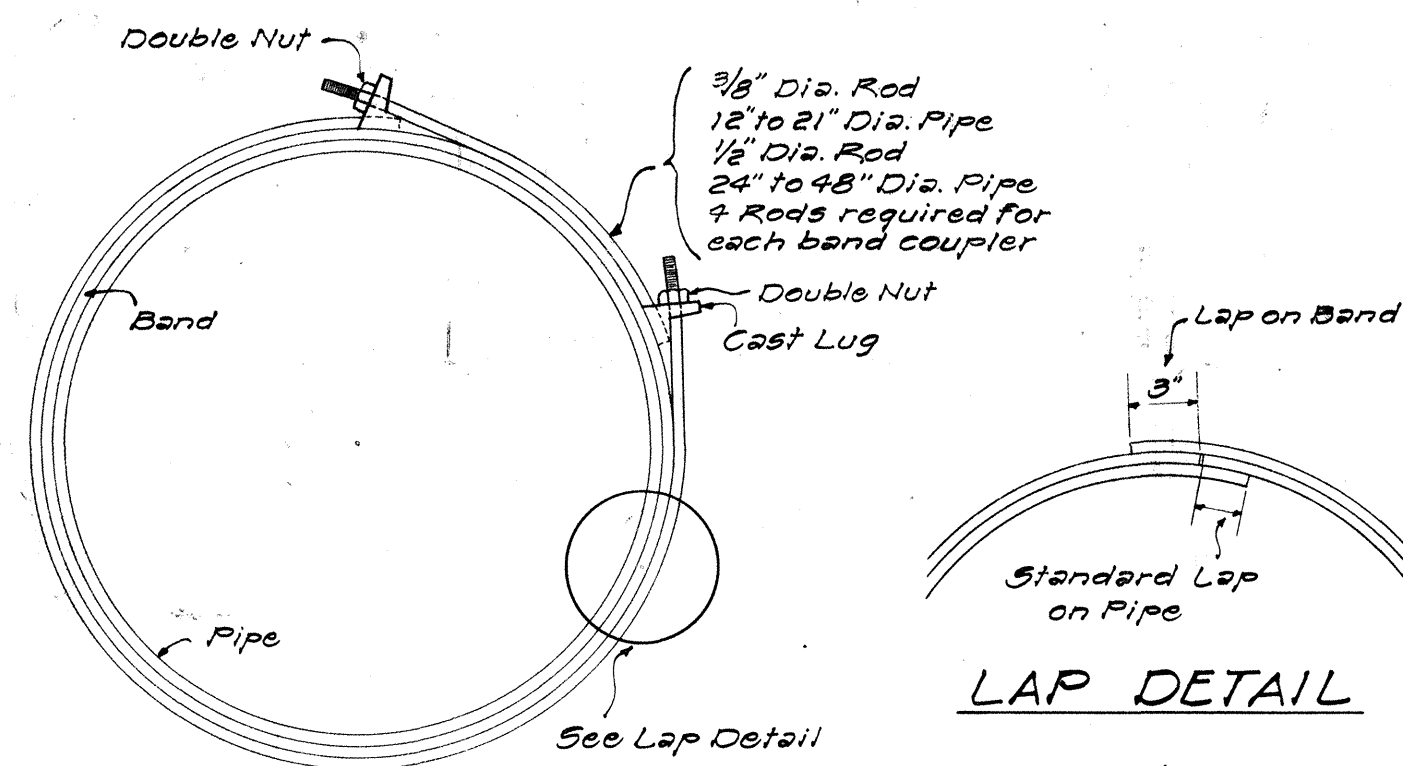
SECTION THRU ϕ OF CULVERTS
Scale: 1"=10'
STA. 510+92.28

DRAINAGE DETAILS

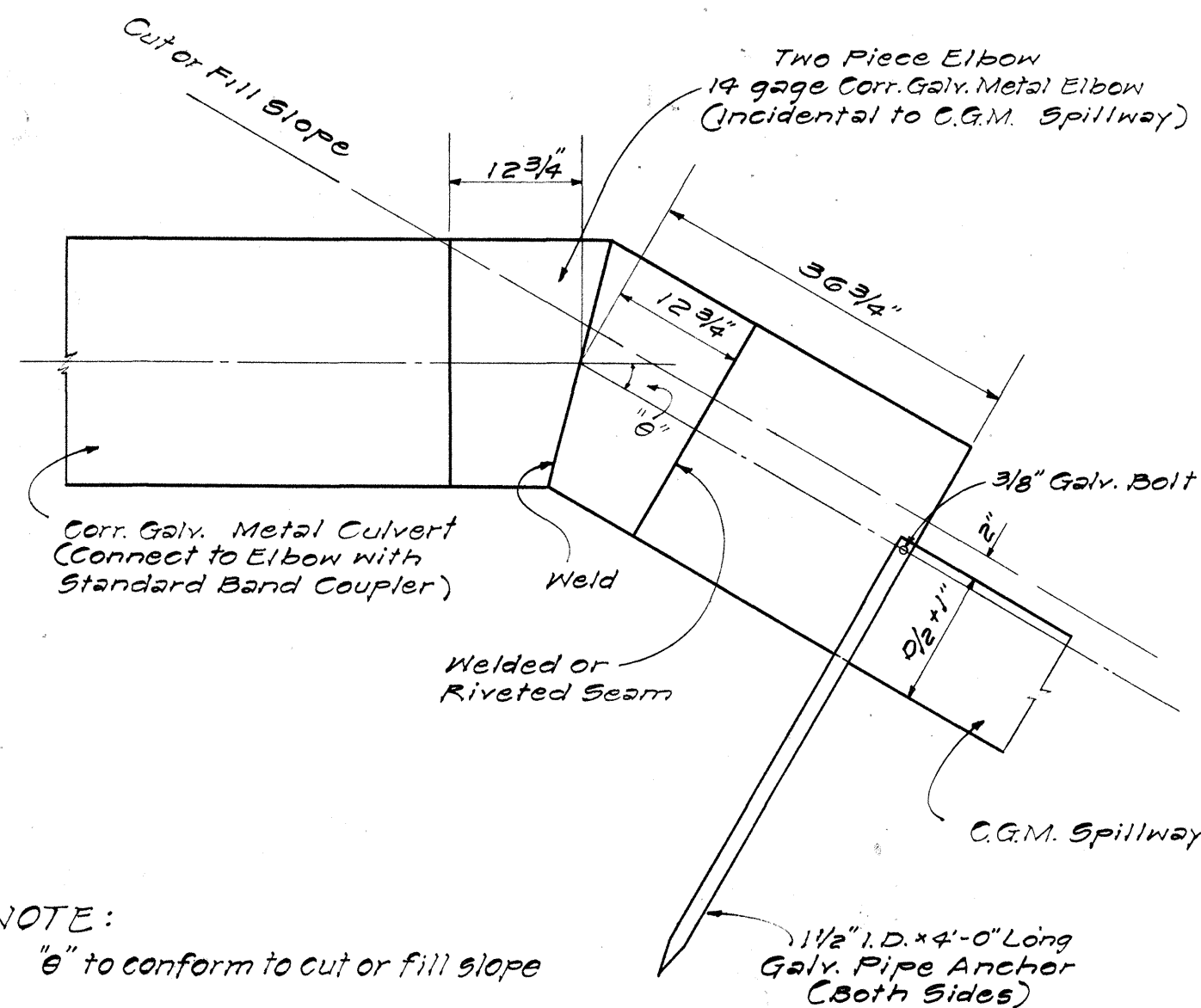
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STATE OF HAWAII

CULVERTS
VOLCANO ROAD - GLENWOOD SECTION
PROJECT N^o F-011-2 (5)

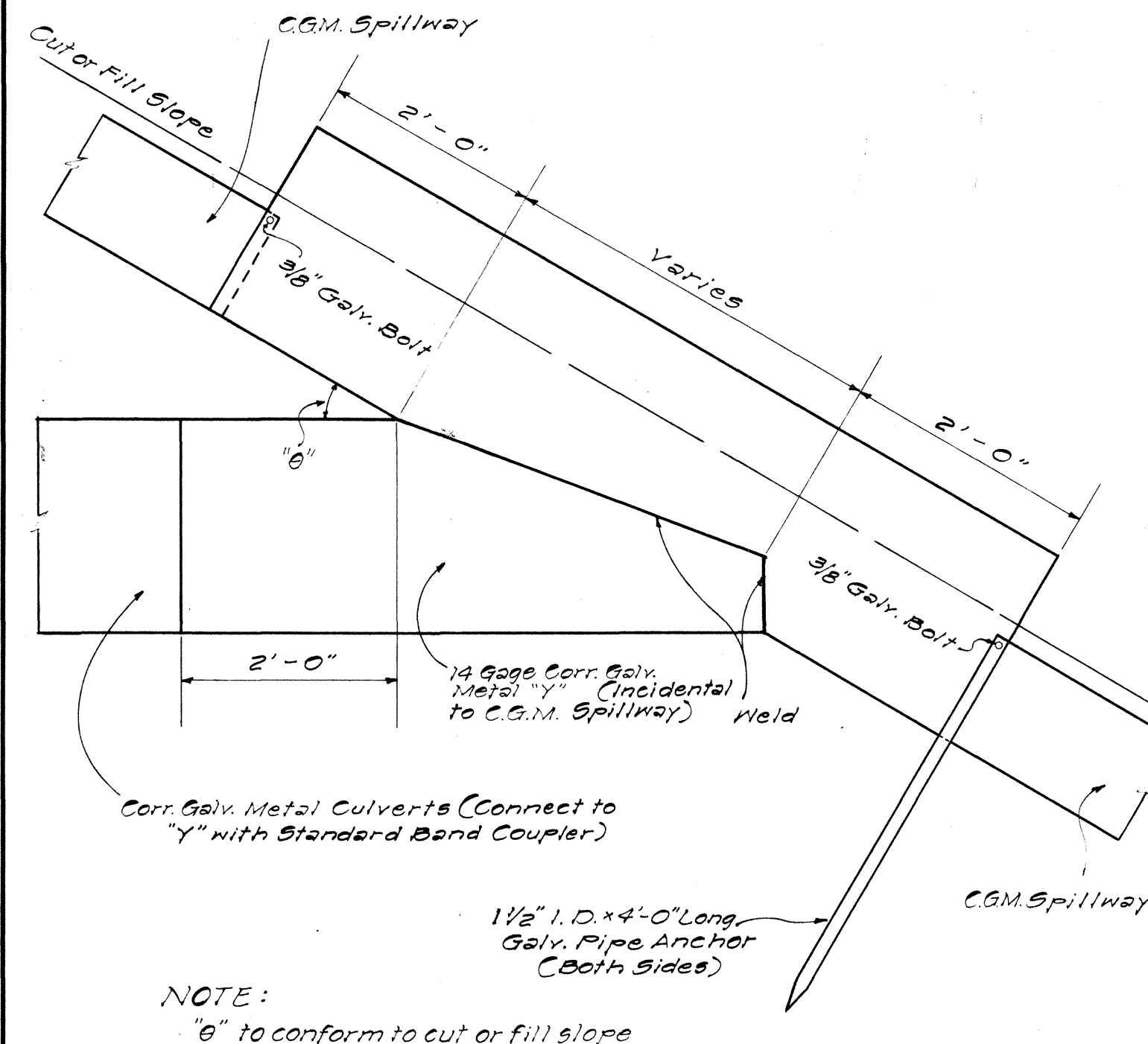
Scale: As Noted Date: May 10, 1965
SHEET NO. 5 OF 6 SHEETS



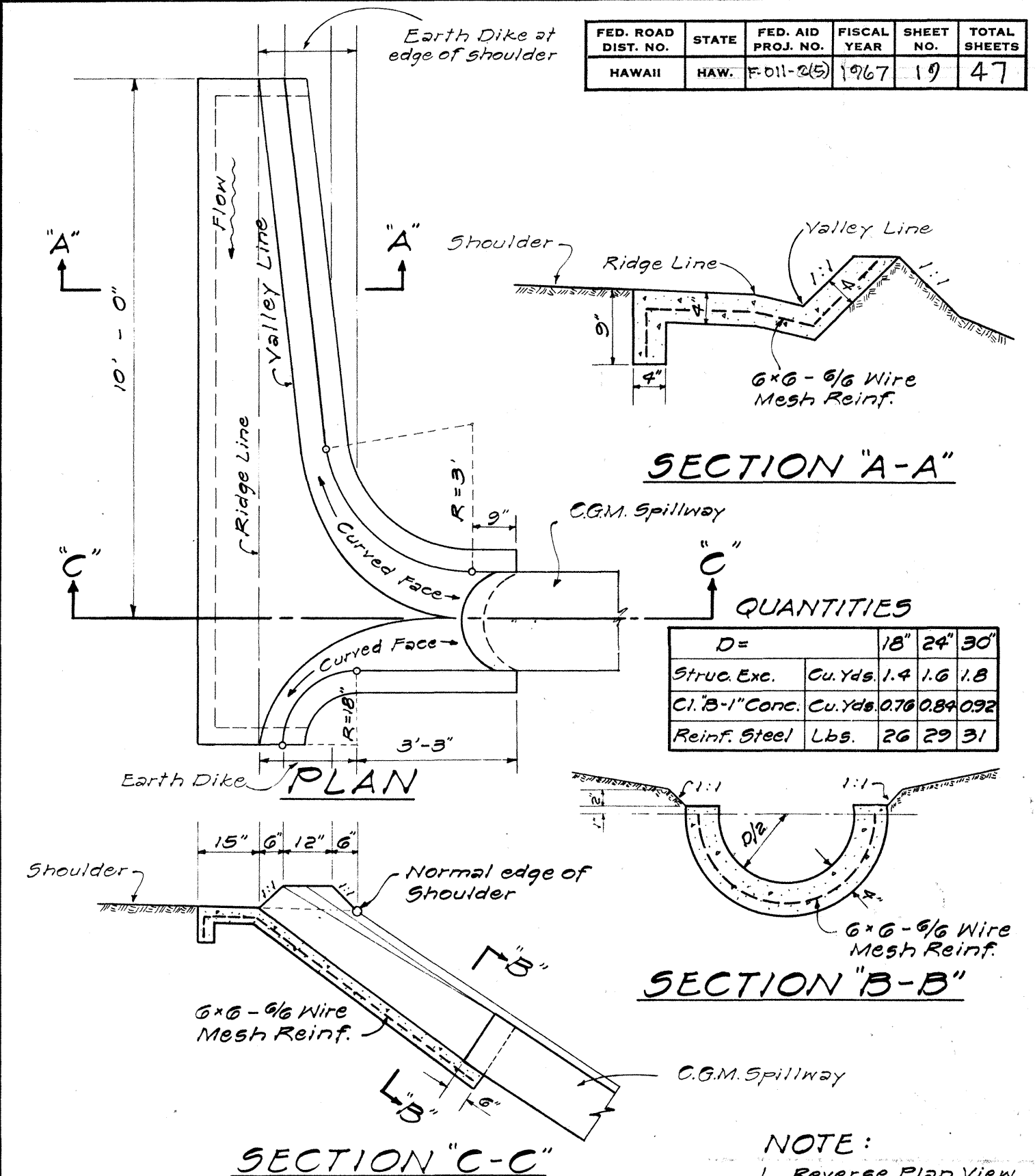
DETAIL OF WATERTIGHT BAND COUPLER
NOT TO SCALE



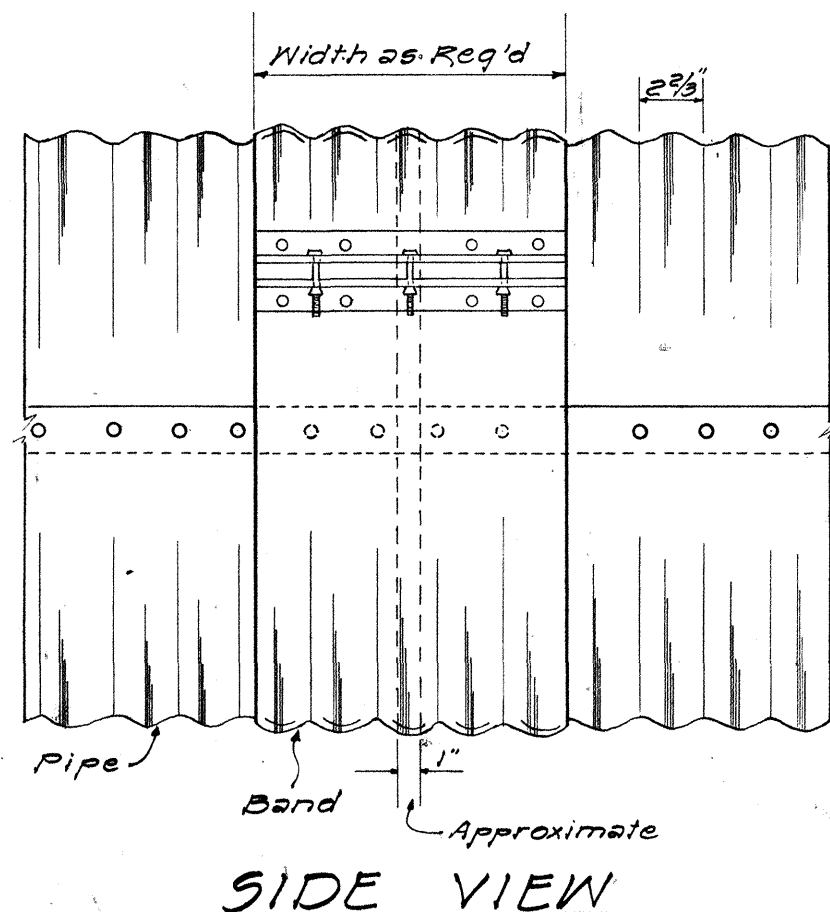
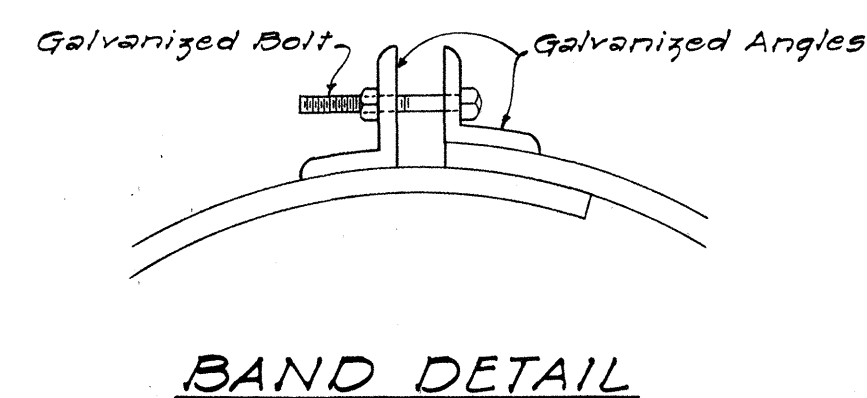
DETAIL OF CULVERT TO SPILLWAY CONNECTION
NOT TO SCALE



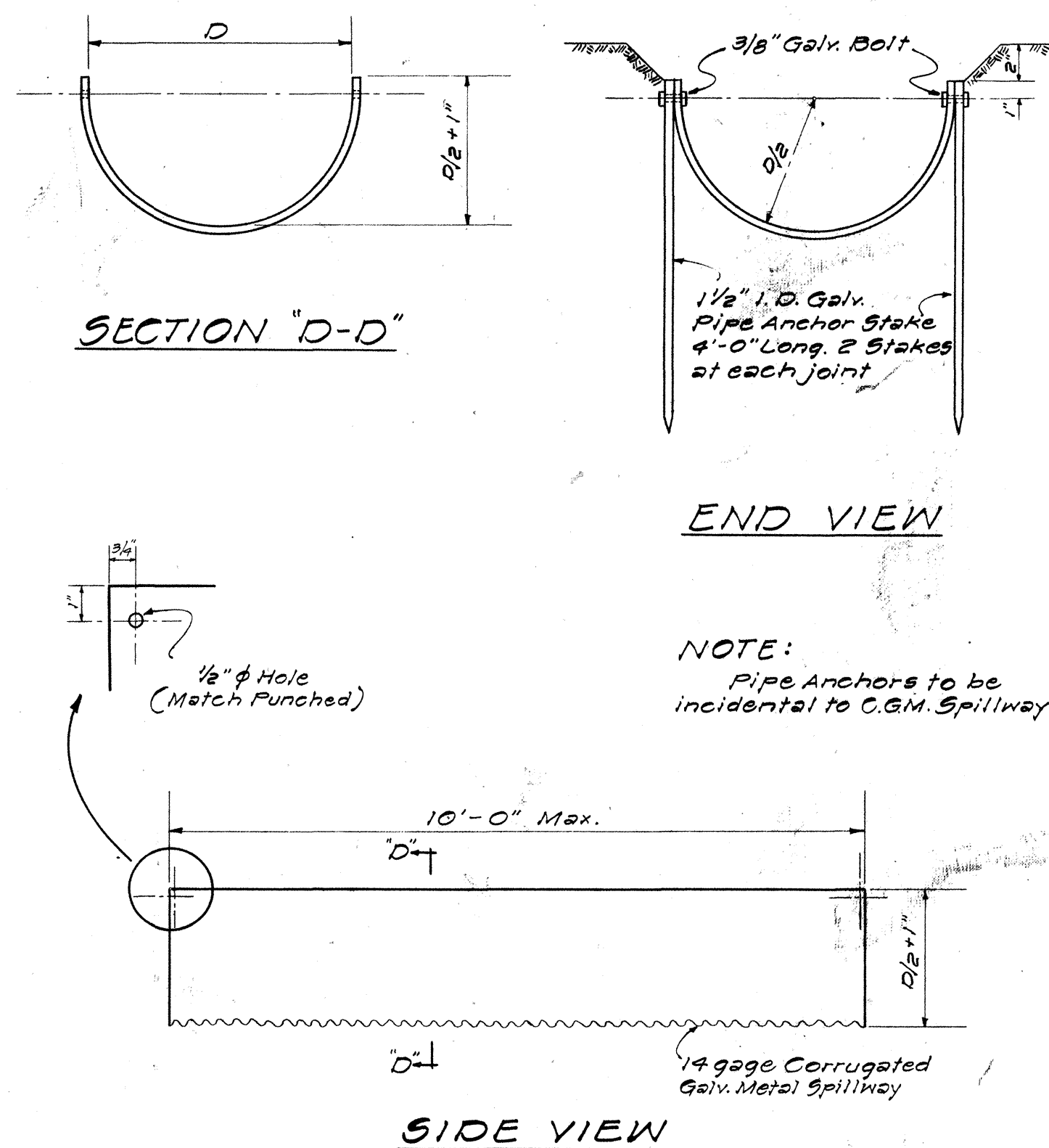
DETAIL OF CULVERT TO SPILLWAY "Y" CONNECTION
NOT TO SCALE



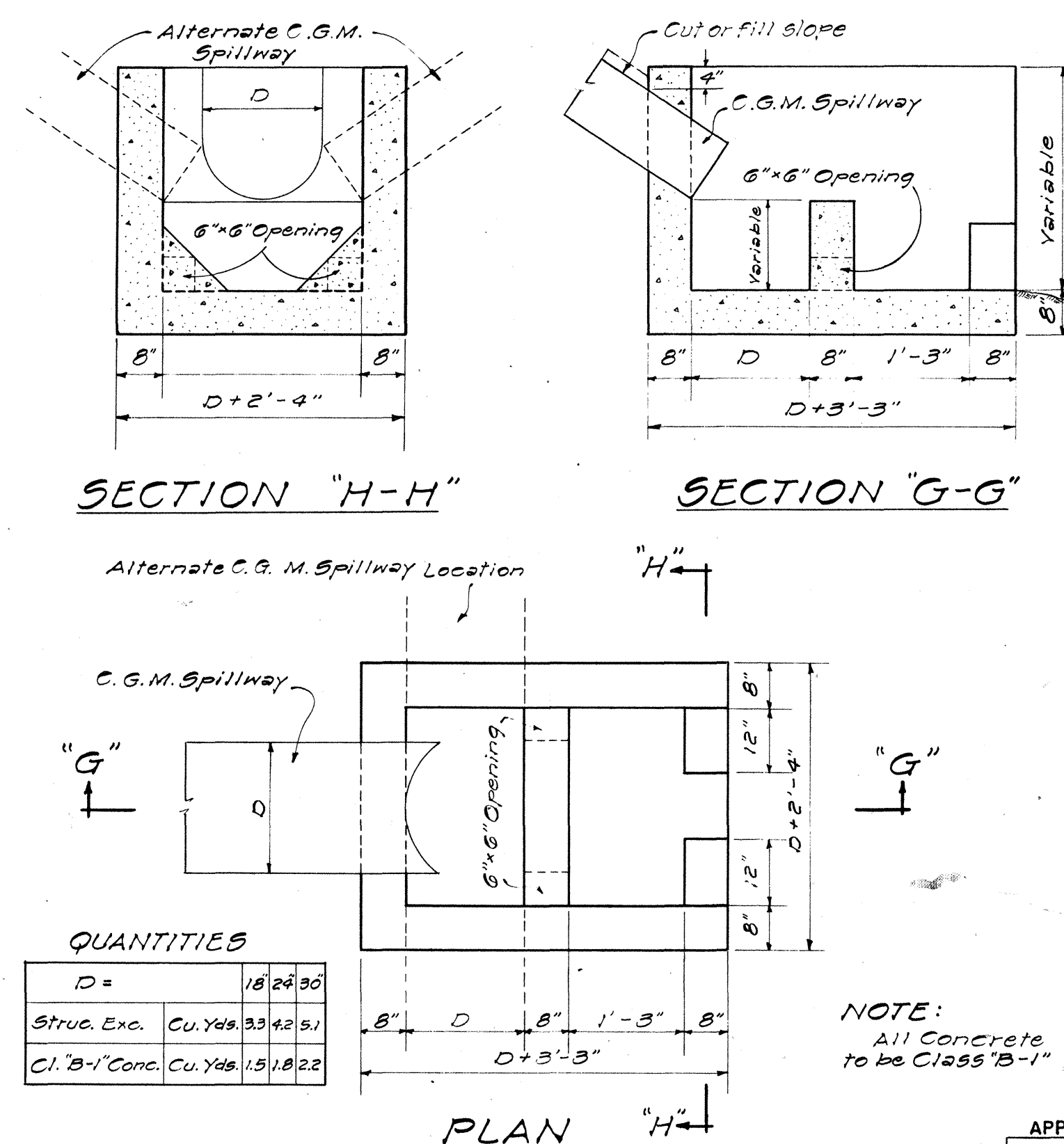
DETAIL OF SPILLWAY INLET
NOT TO SCALE



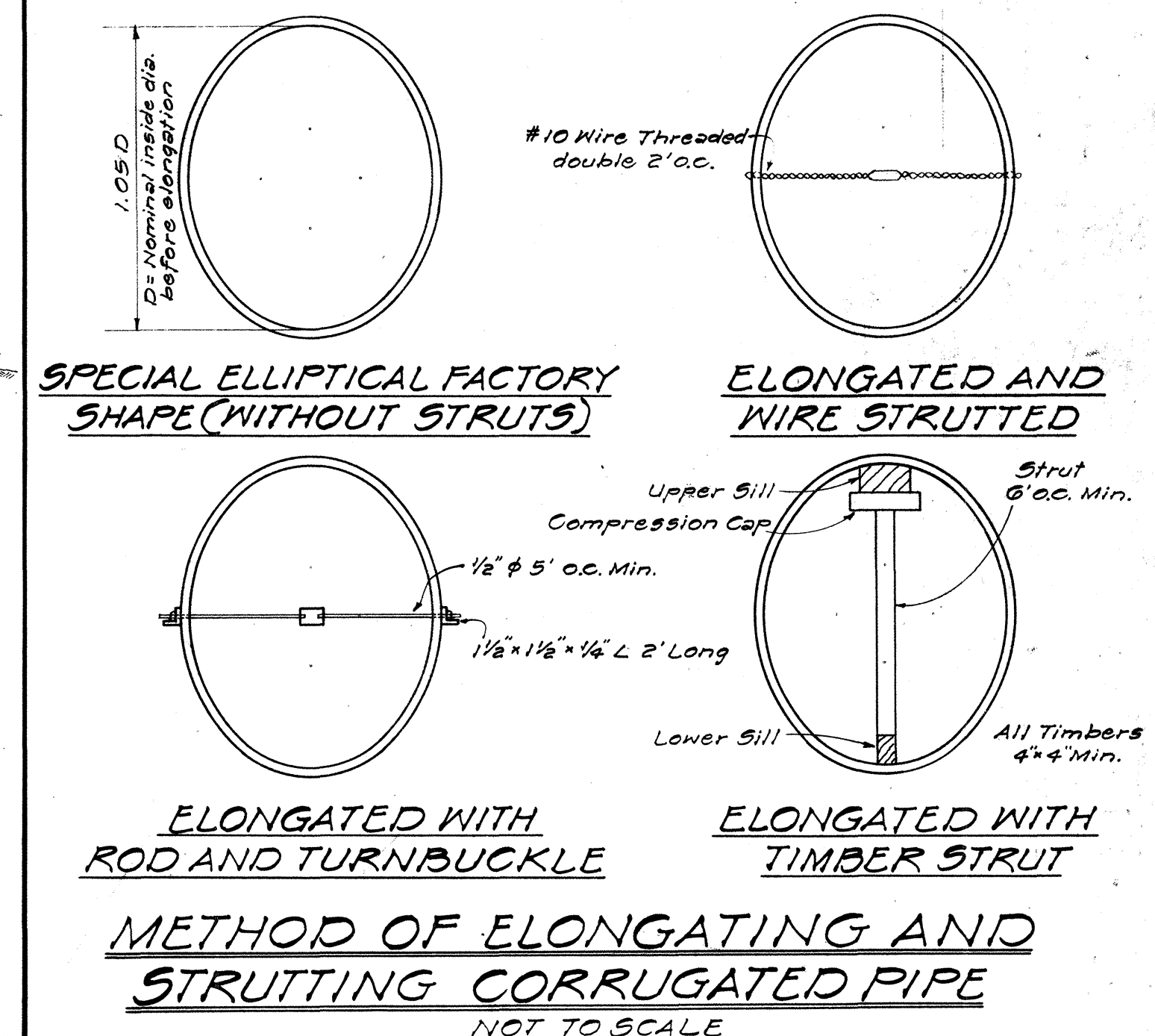
DETAIL OF STANDARD BAND COUPLER
NOT TO SCALE



C. G. M. SPILLWAY
NOT TO SCALE



DETAILS OF CONC. DROP BOX AT OUTLET OF C.G.M. SPILLWAY
NOT TO SCALE



METHOD OF ELONGATING AND STRUTTING CORRUGATED PIPE
NOT TO SCALE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
CORRUGATED GALVANIZED METAL CULVERTS, SPILLWAYS, AND SPECIAL DETAILS
SCALES AS NOTED
SHEET NO 6 OF 6 SHEETS

DATE	5-22-64
DESIGNED BY	R. Y.
DRAWN BY	G. M.
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	
NO.	

APPROVED: DATE: 8-14-64
DIRECTOR OF TRANSPORTATION