

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(77):13	1969	12	155

NOTES:

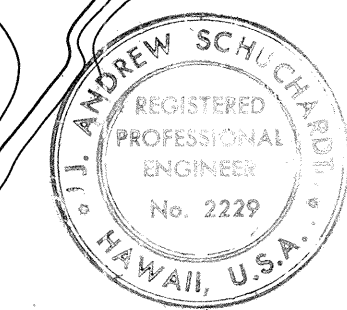
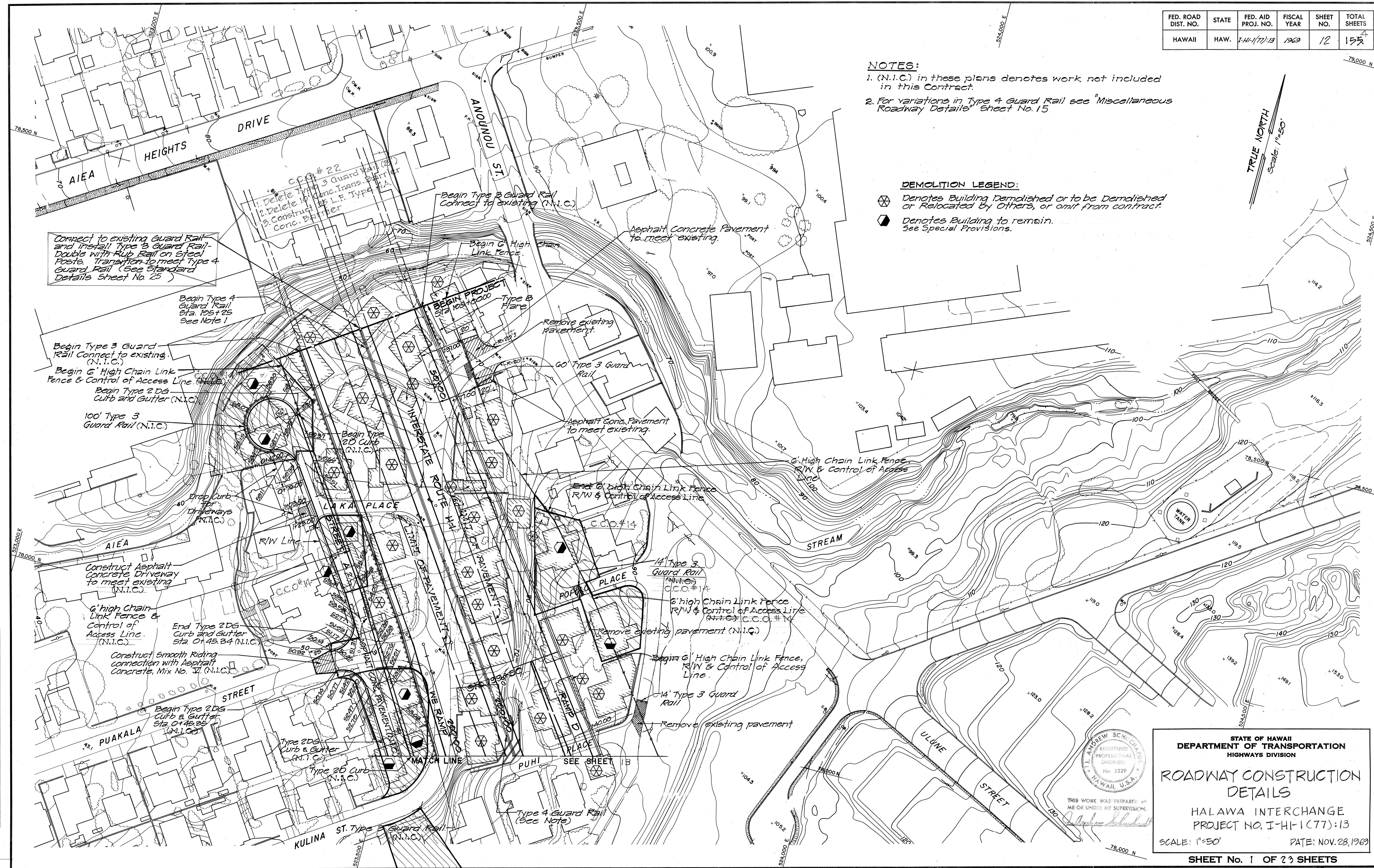
- (N.I.C.) in these plans denotes work not included in this Contract.
- For variations in Type 4 Guard Rail see "Miscellaneous Roadway Details" Sheet No. 15

DEMOLITION LEGEND:

- Denotes Building Demolished or to be Demolished or Relocated by Others, or omit from contract.
- Denotes Building to remain. See Special Provisions.

TRUE NORTH
Scale: 1"=50'

DATE	7/1/69
DESIGNED BY	W. J. SCHULZ
TRACED BY	W. J. SCHULZ
NOTED BY	W. J. SCHULZ
QUANTITIES BY	W. J. SCHULZ
CHECKED BY	W. J. SCHULZ



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**ROADWAY CONSTRUCTION
DETAILS**

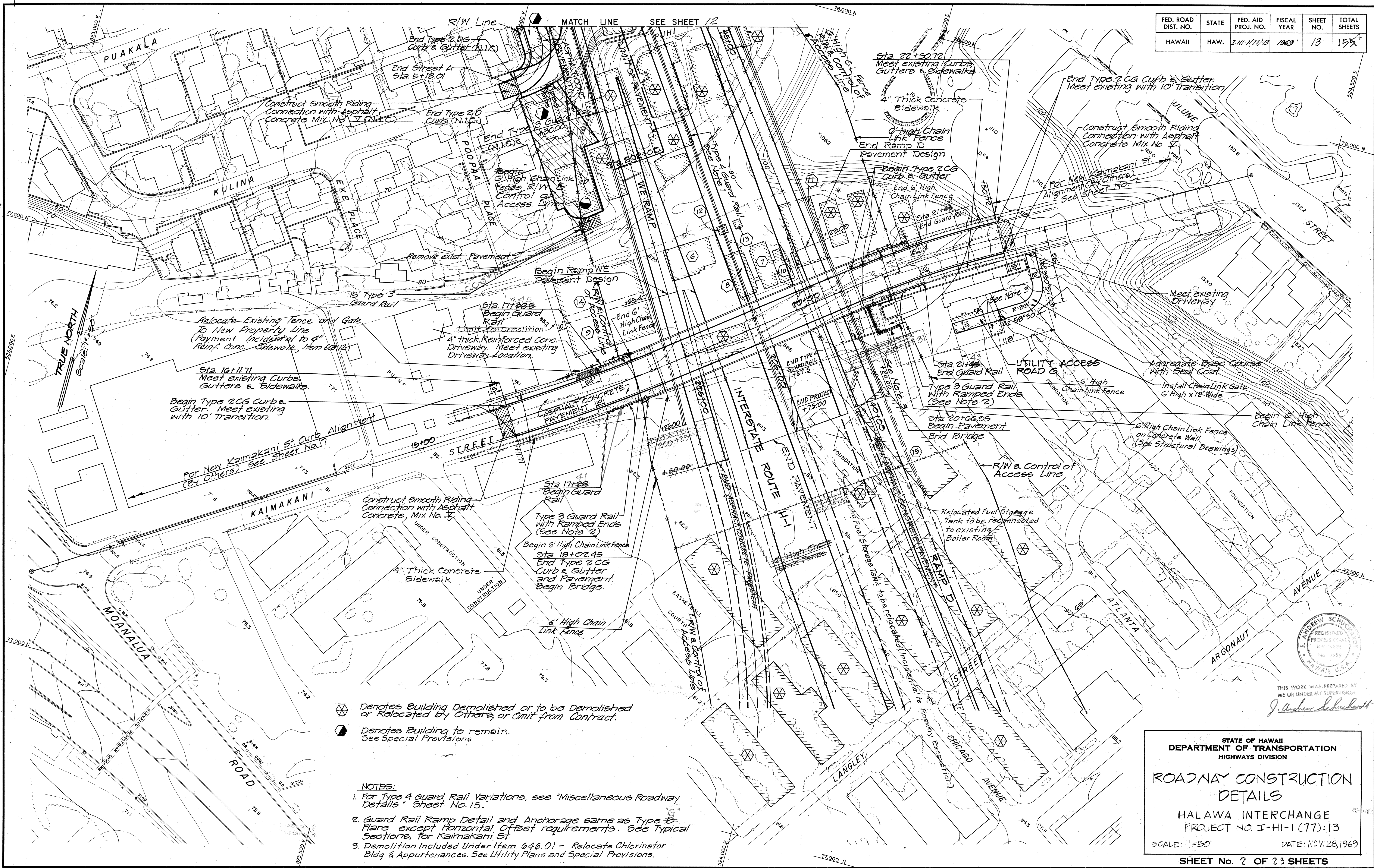
HALAWA INTERCHANGE
PROJECT NO. I-HI-1(77):13

SCALE: 1"=50' DATE: NOV. 28, 1969

SHEET No. 1 OF 23 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(77):13	1969	13	155

DATE	10/29
DESIGNED BY	P. HARRIS
DRAWN BY	J. L. BURGESS
CHECKED BY	J. L. BURGESS
ORIGINAL PLAN	NO.
NOTE BOOK	NO.



- Denotes Building Demolished or to be Demolished or Relocated by Others, or Omit from Contract.
- Denotes Building to remain. See Special Provisions.

- NOTES:
- For Type 4 Guard Rail Variations, see "Miscellaneous Roadway Details" Sheet No. 15.
 - Guard Rail Ramp Detail and Anchorage same as Type 3 Flare, except Horizontal Offset requirements. See Typical Sections, for Kaimakani St.
 - Demolition Included Under Item 646.01 - Relocate Chlorinator Bldg. & Appurtenances. See Utility Plans and Special Provisions.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION
DETAILS

HALAWA INTERCHANGE
PROJECT NO. I-HI-1 (77):13

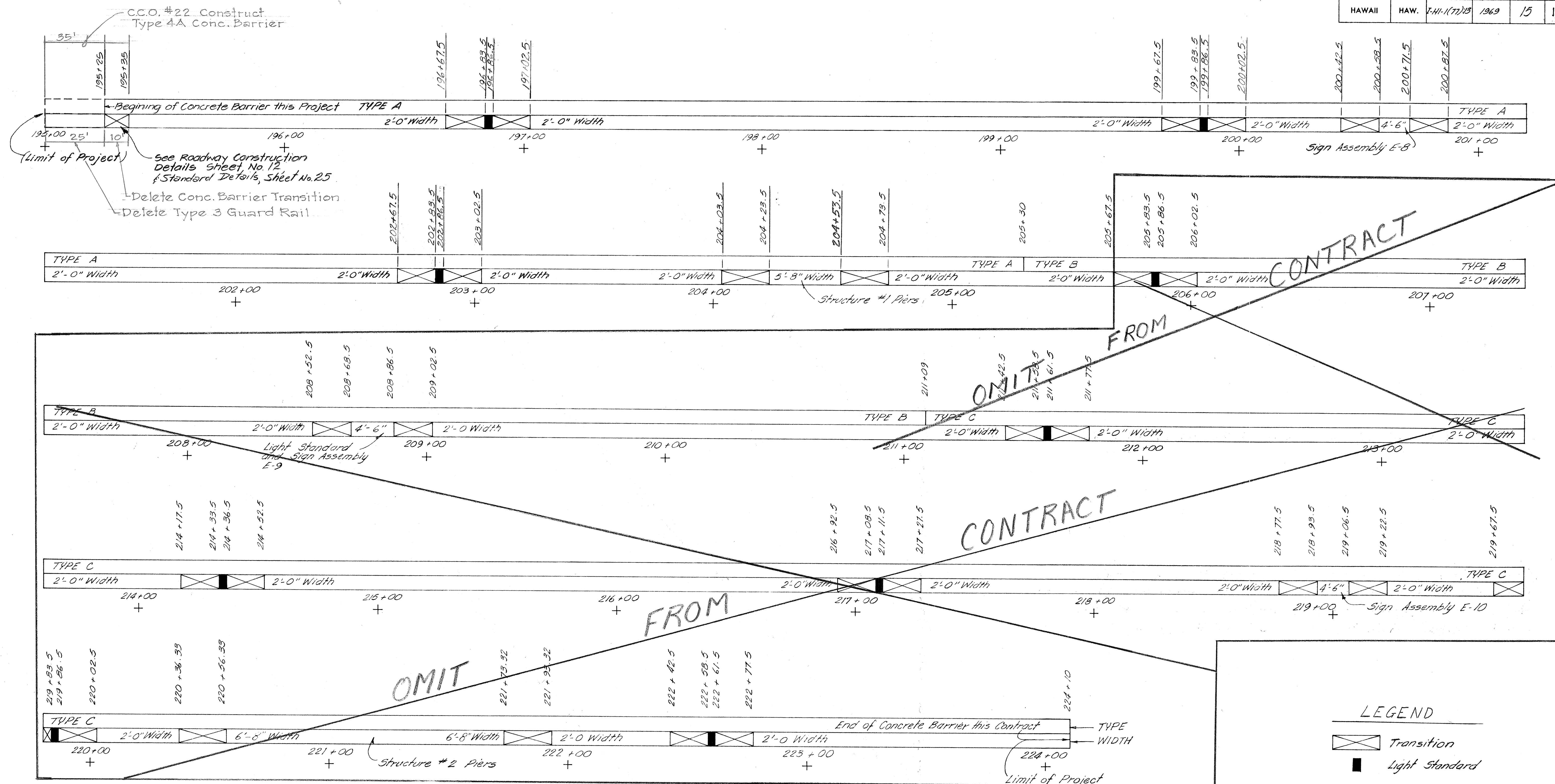
SCALE: 1"=50' DATE: NOV. 28, 1969

SHEET No. 2 OF 23 SHEETS



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
J. Andrew Schuchard

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(77)13	1969	15	155



NOTES:

- Type A, B, & C Concrete Barrier to be paid for as Guard Rail Type 4A, 4B, & 4C respectively on a linear foot basis, including transitions and widened sections around bridge piers and overhead sign support structures.
- The three (3) foot widened section of Concrete Barrier around a lighting standard is to be included in the cost of the lighting standard mounting. See Highway Lighting Details.
- See Bridge Drawings for widened sections of concrete barriers at piers.
- See Sheets No. 63 and 74 for concrete barrier at sign supports and lighting standards.

TYPE 4 GUARD RAIL VARIATIONS

INTERSTATE ROUTE H-1



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

J. Andrew Schuchman

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS ROADWAY DETAILS
CONCRETE BARRIER

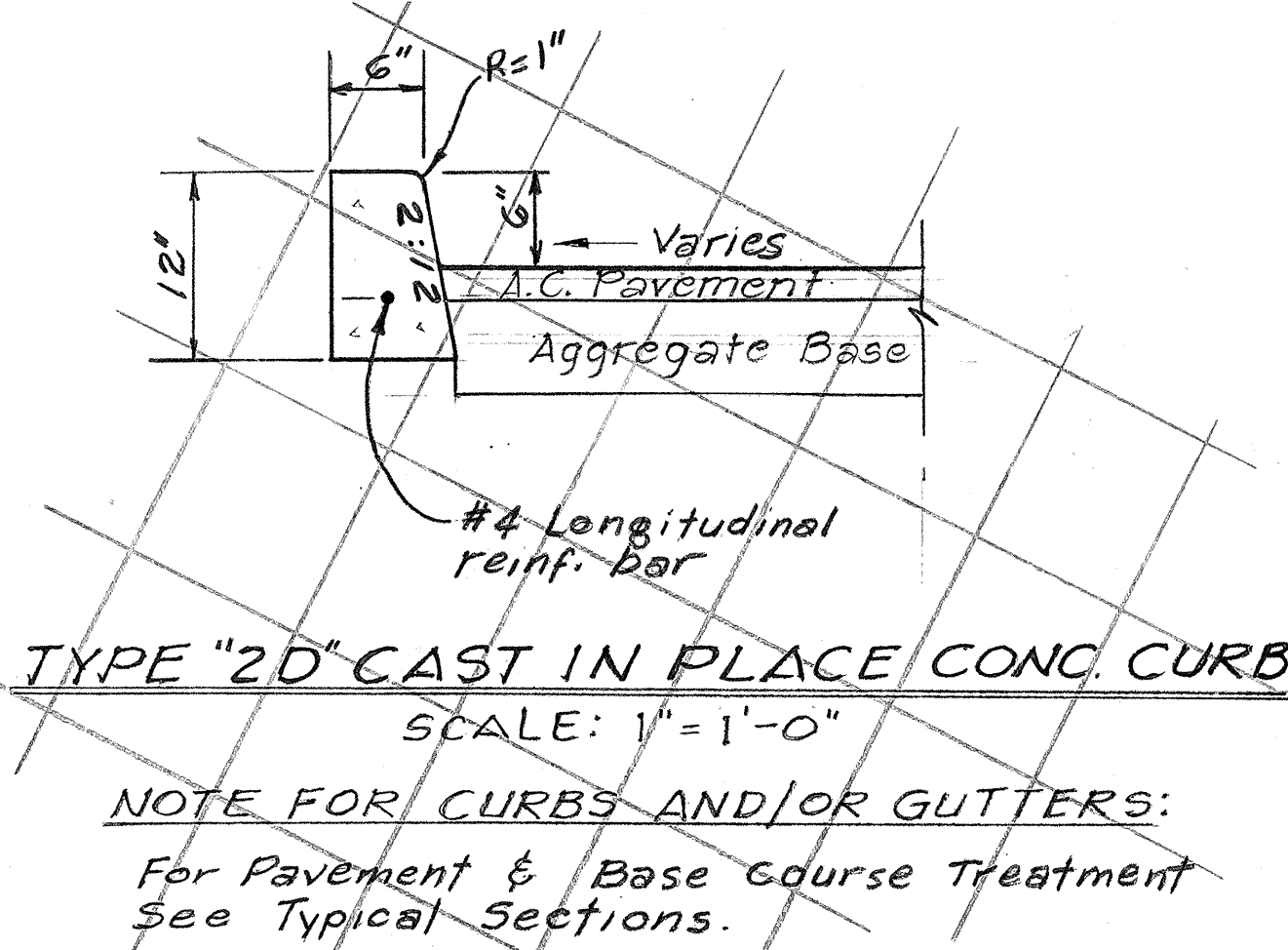
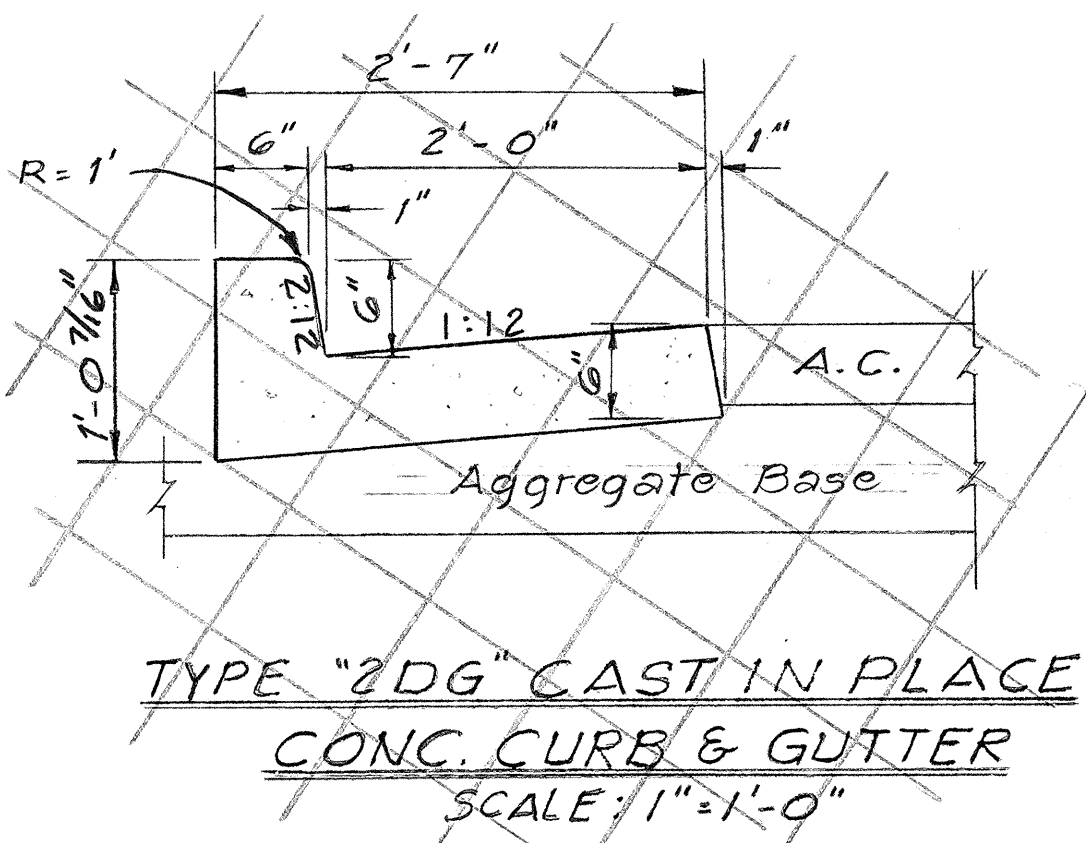
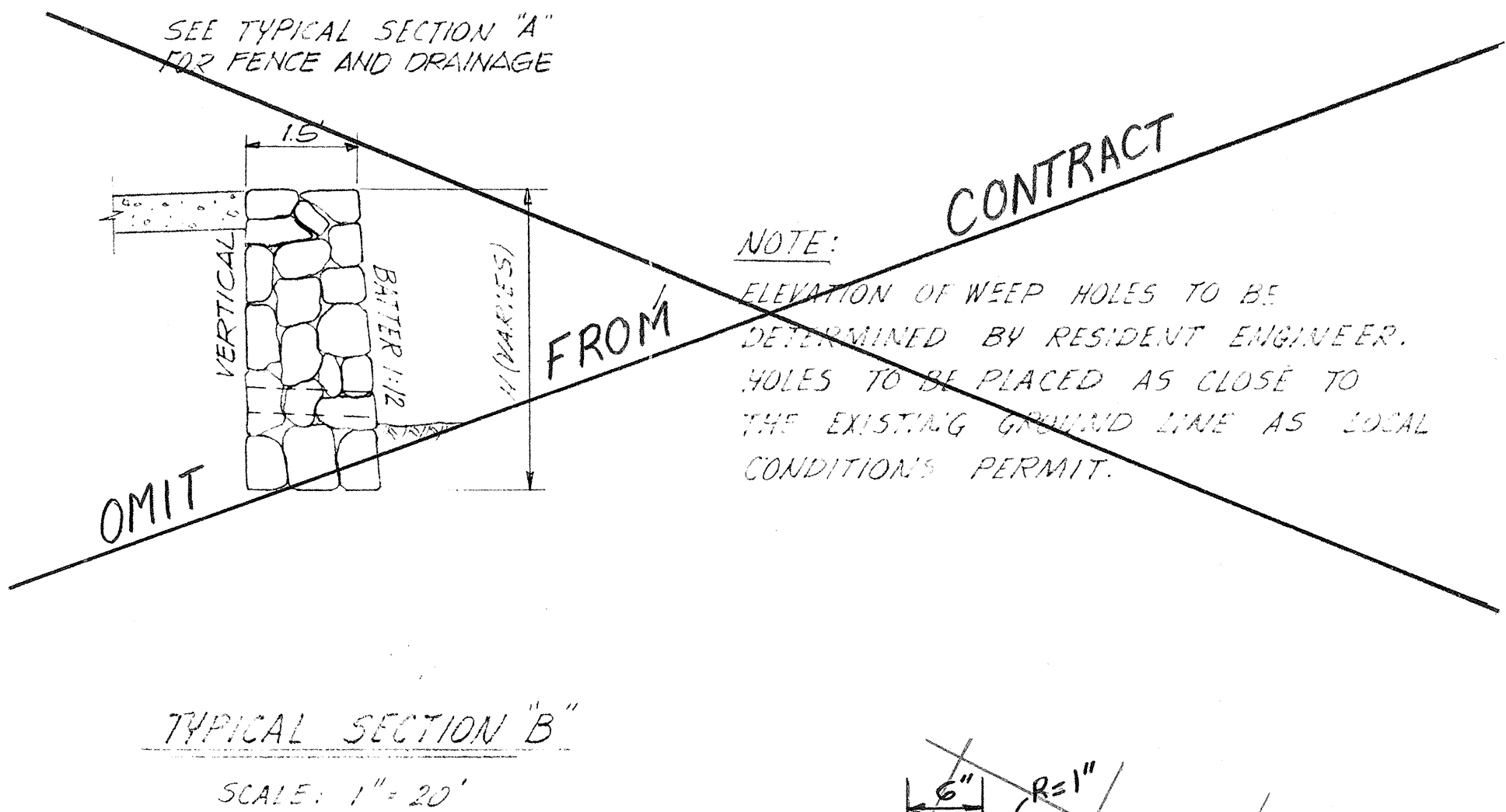
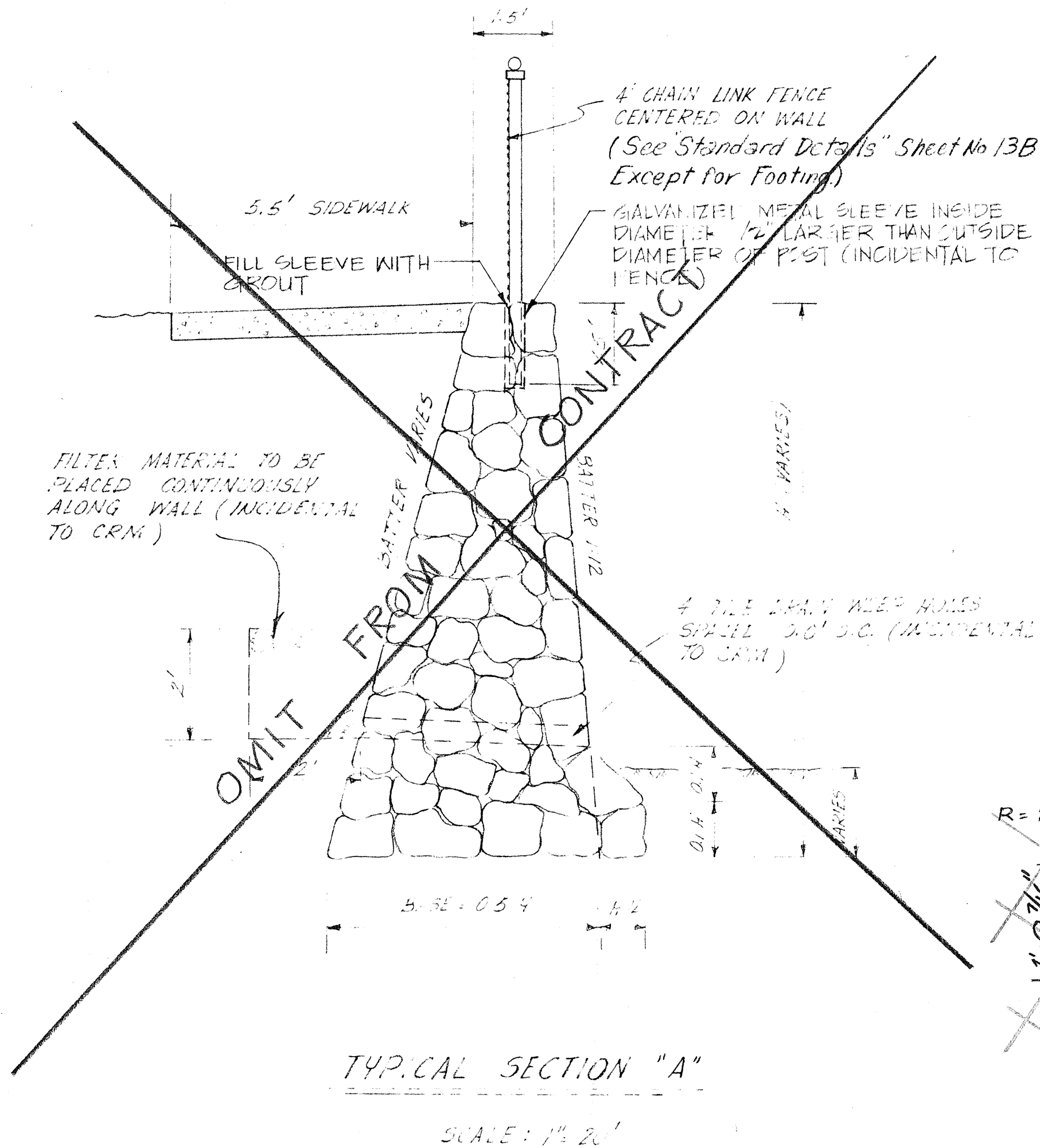
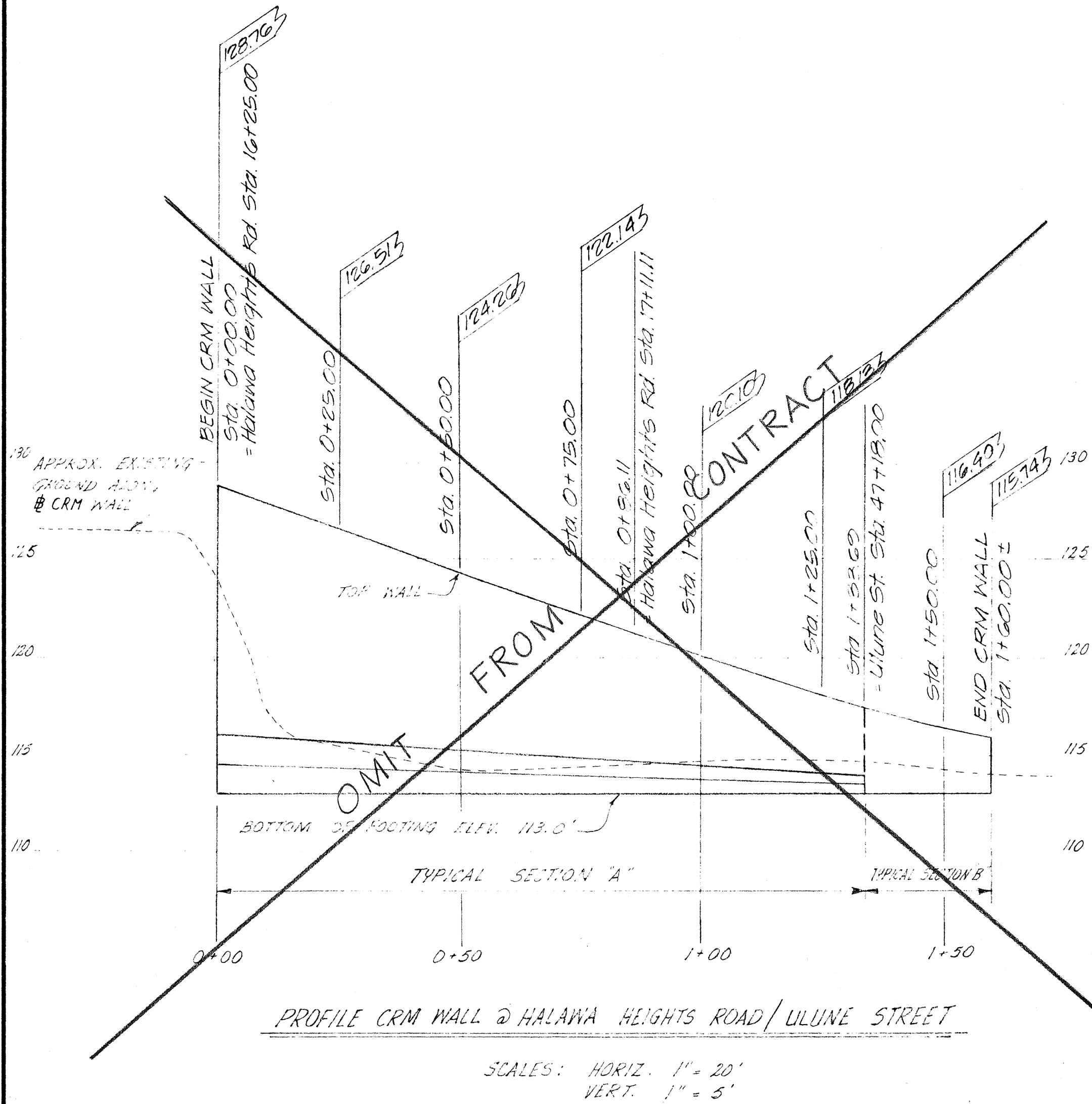
HALAWA INTERCHANGE
PROJECT NO. I-HI-1(77)13

SCALE: 1"=20'

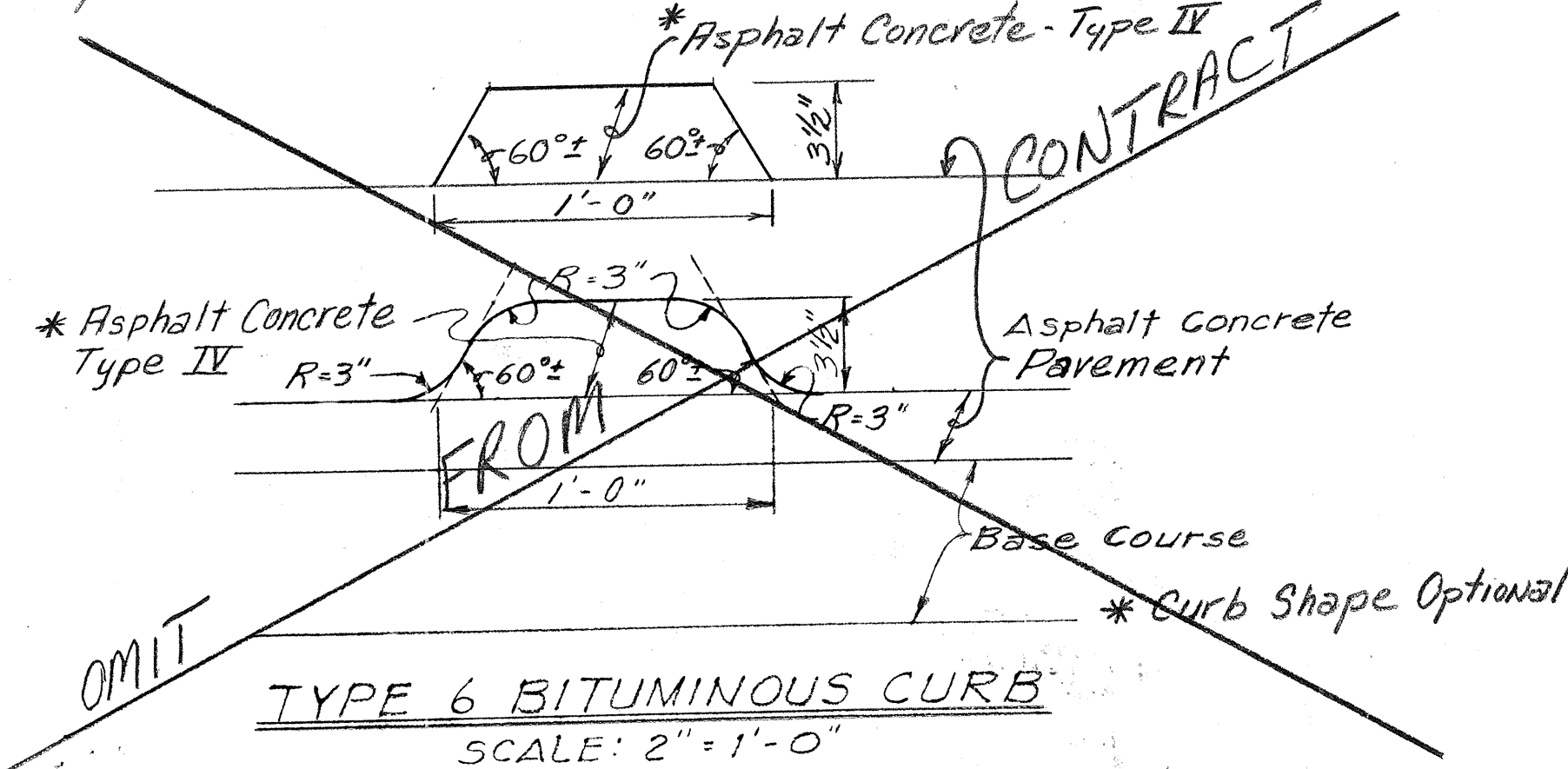
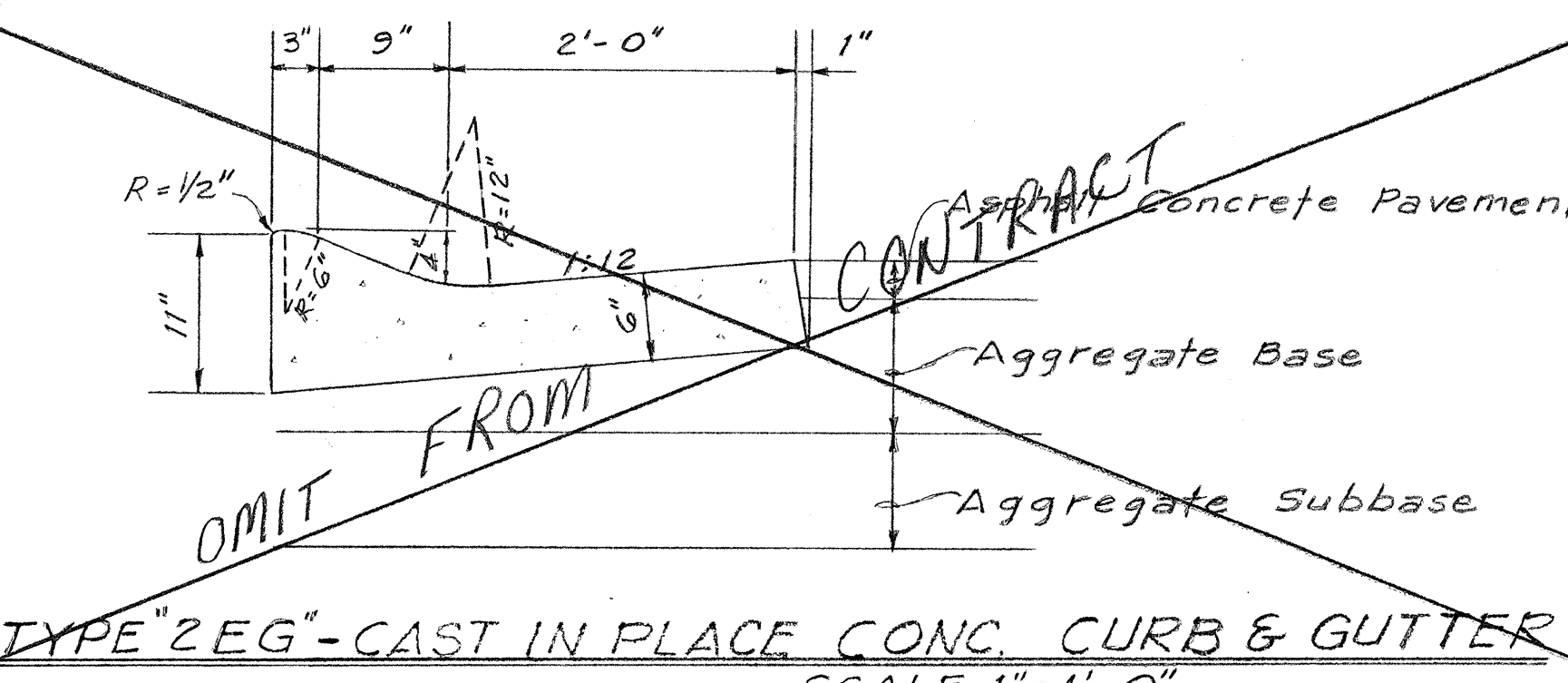
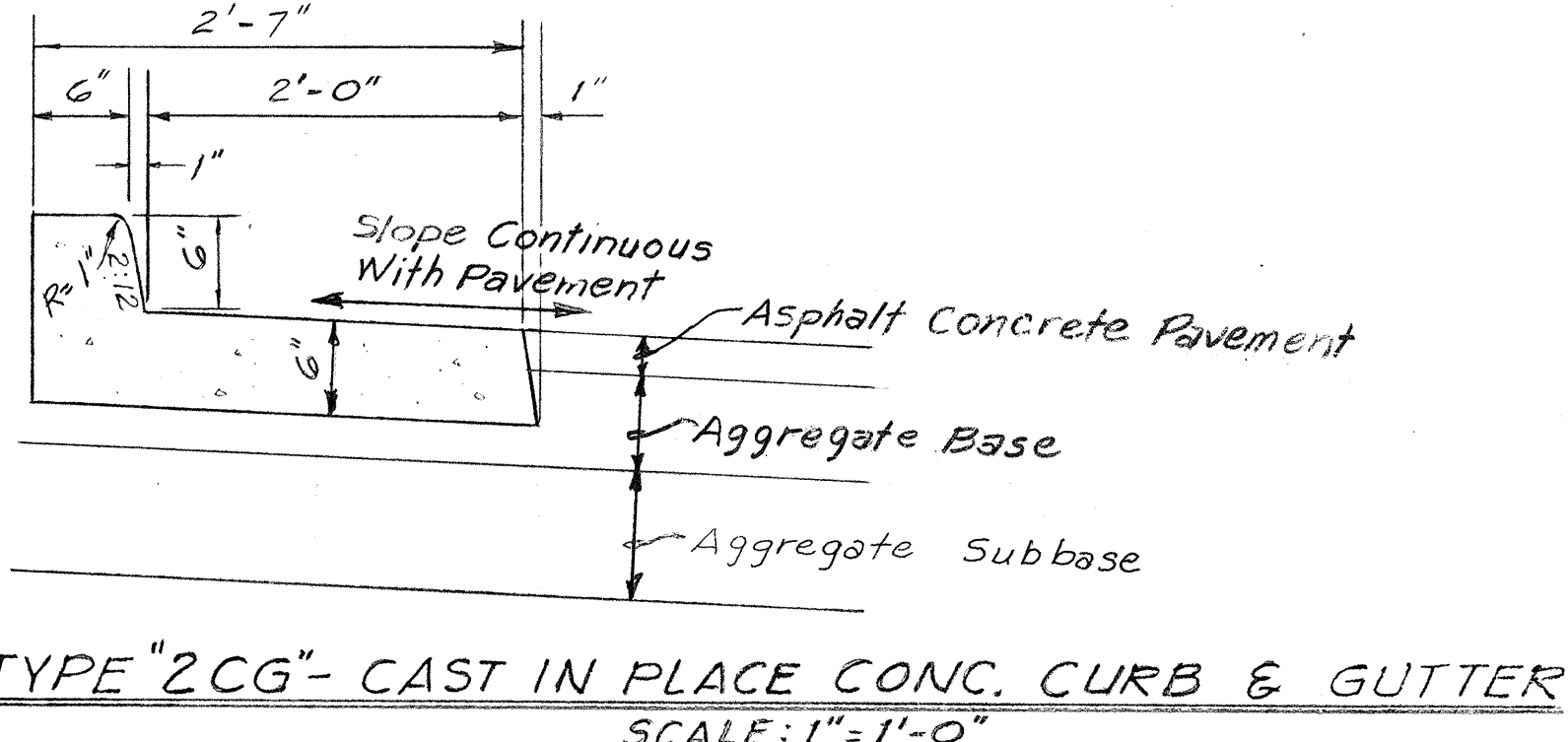
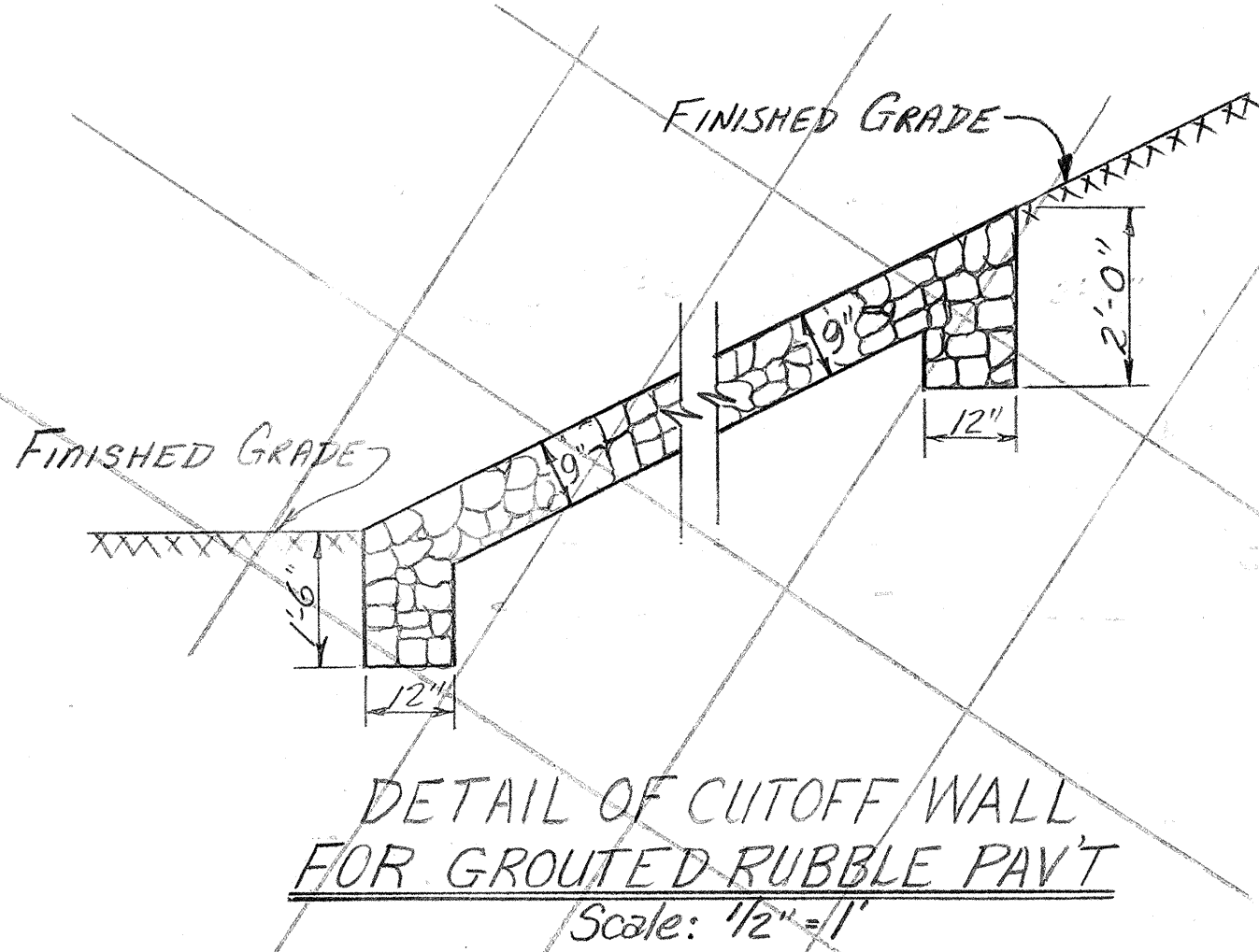
DATE: NOV. 28, 1969

SHEET No. 4 OF 23 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(77):13	1969	16	155



NOTE FOR CURBS AND/OR GUTTERS:
For Pavement & Base Course Treatment
See Typical Sections.



DATE	BY	DATE	BY
10/28/69	W. J. SCHUCHARDT	10/28/69	W. J. SCHUCHARDT
10/28/69	W. J. SCHUCHARDT	10/28/69	W. J. SCHUCHARDT
10/28/69	W. J. SCHUCHARDT	10/28/69	W. J. SCHUCHARDT
10/28/69	W. J. SCHUCHARDT	10/28/69	W. J. SCHUCHARDT

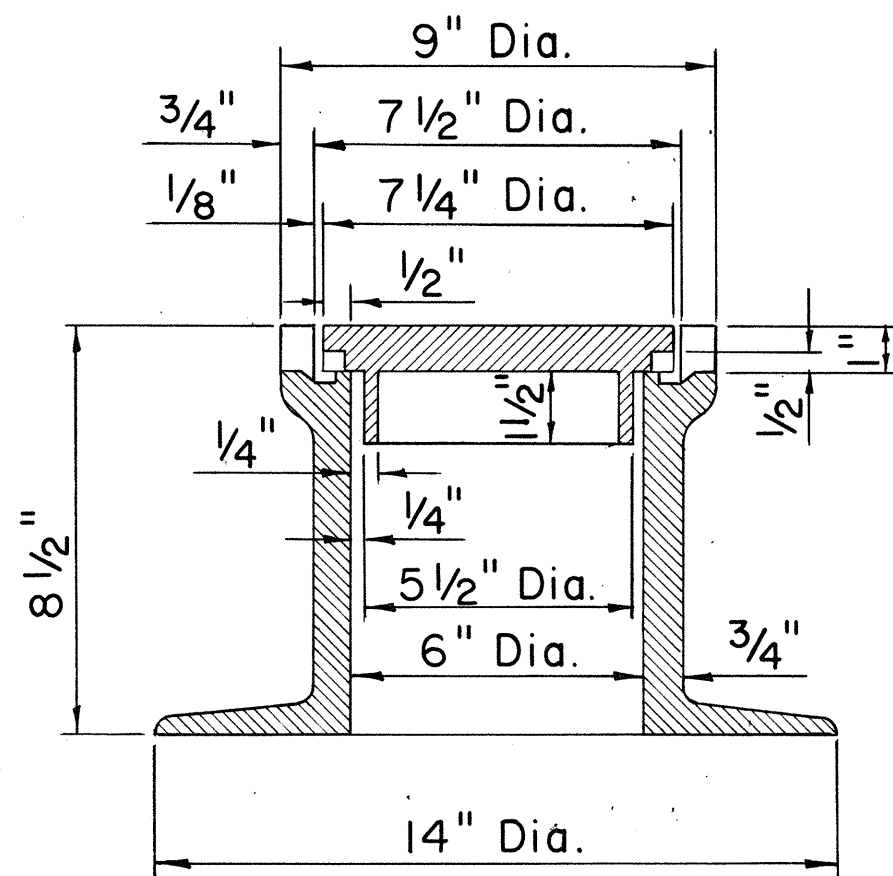
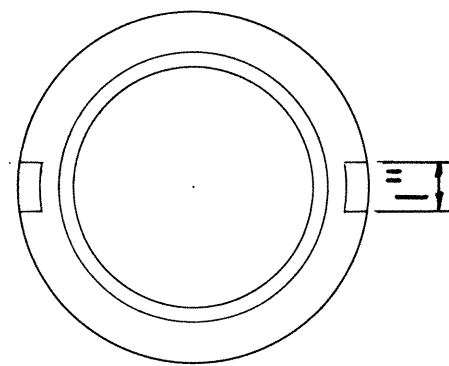
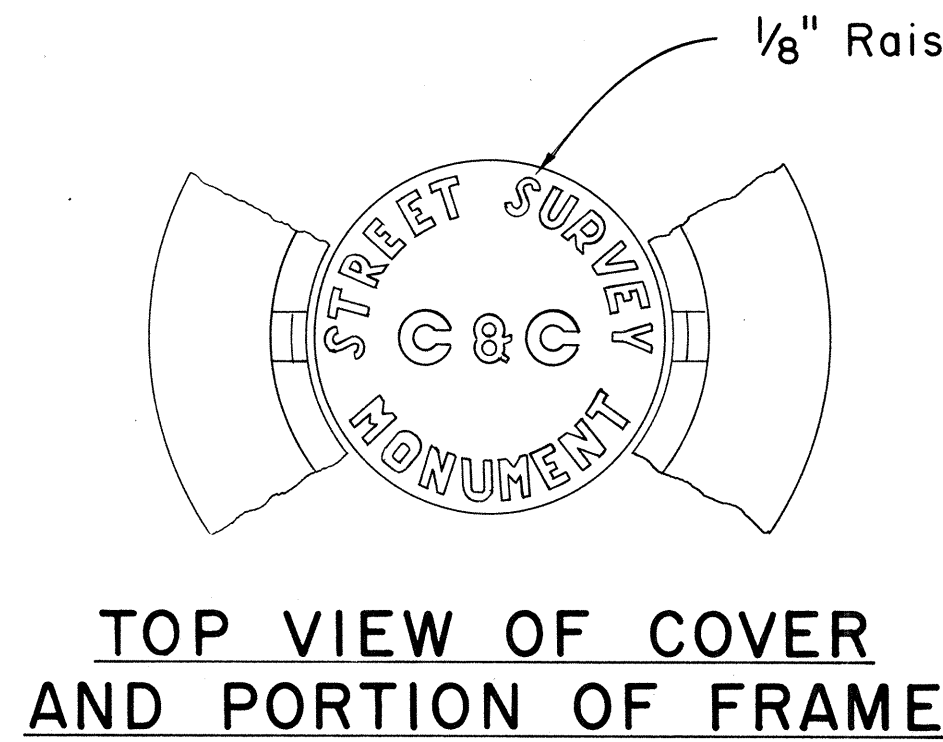


THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
J. Andrew Schuchardt

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

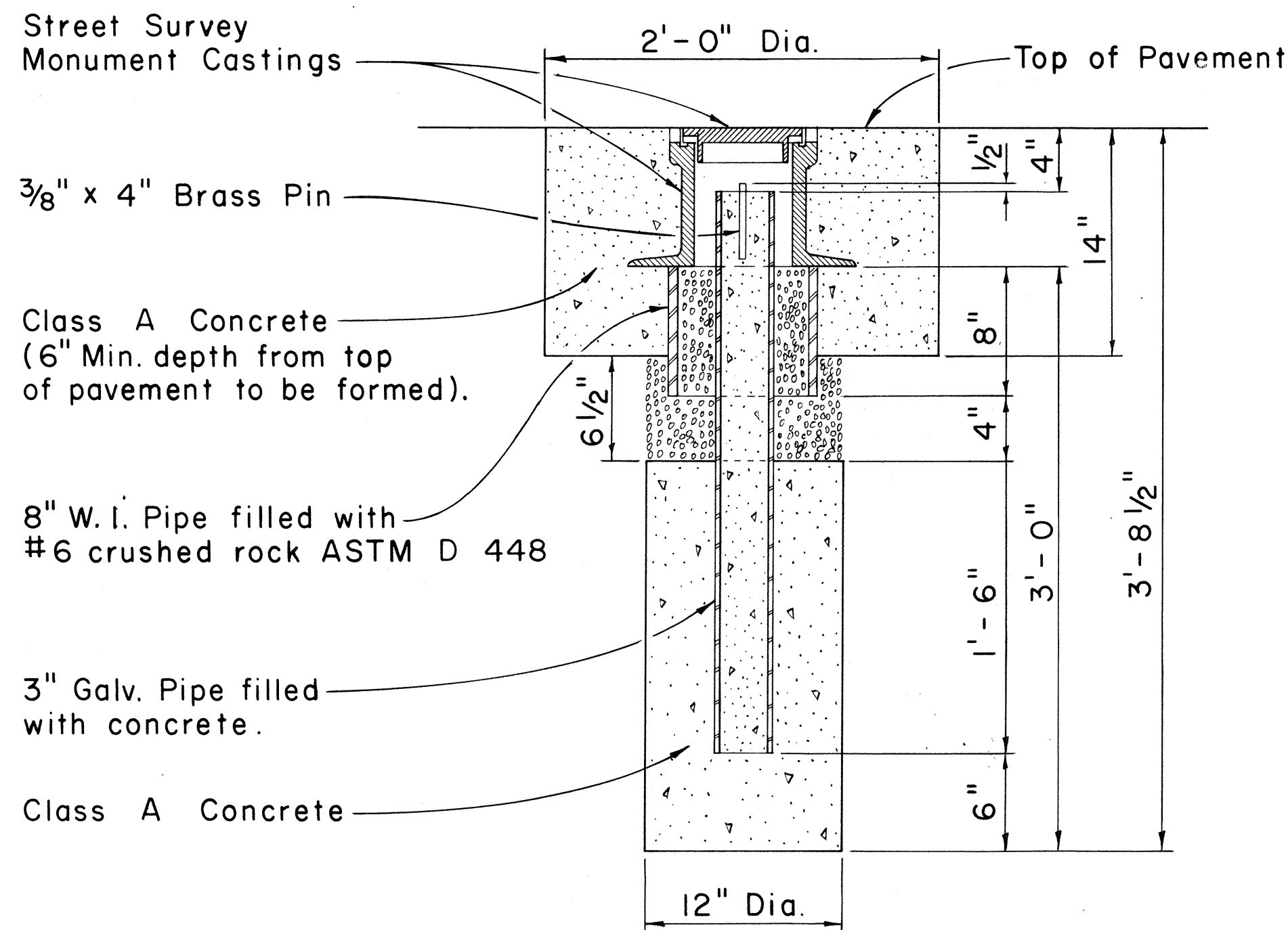
MISCELLANEOUS ROADWAY
DETAILS
HALAWA INTERCHANGE
PROJECT NO. I-HI-1(77):13
SCALE: AS SHOWN
DATE: Nov. 28, 1969

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HI-1(77)-13	1969	17	155 ⁴



STREET SURVEY MONUMENT CASTINGS

Scale: 3" = 1'-0"



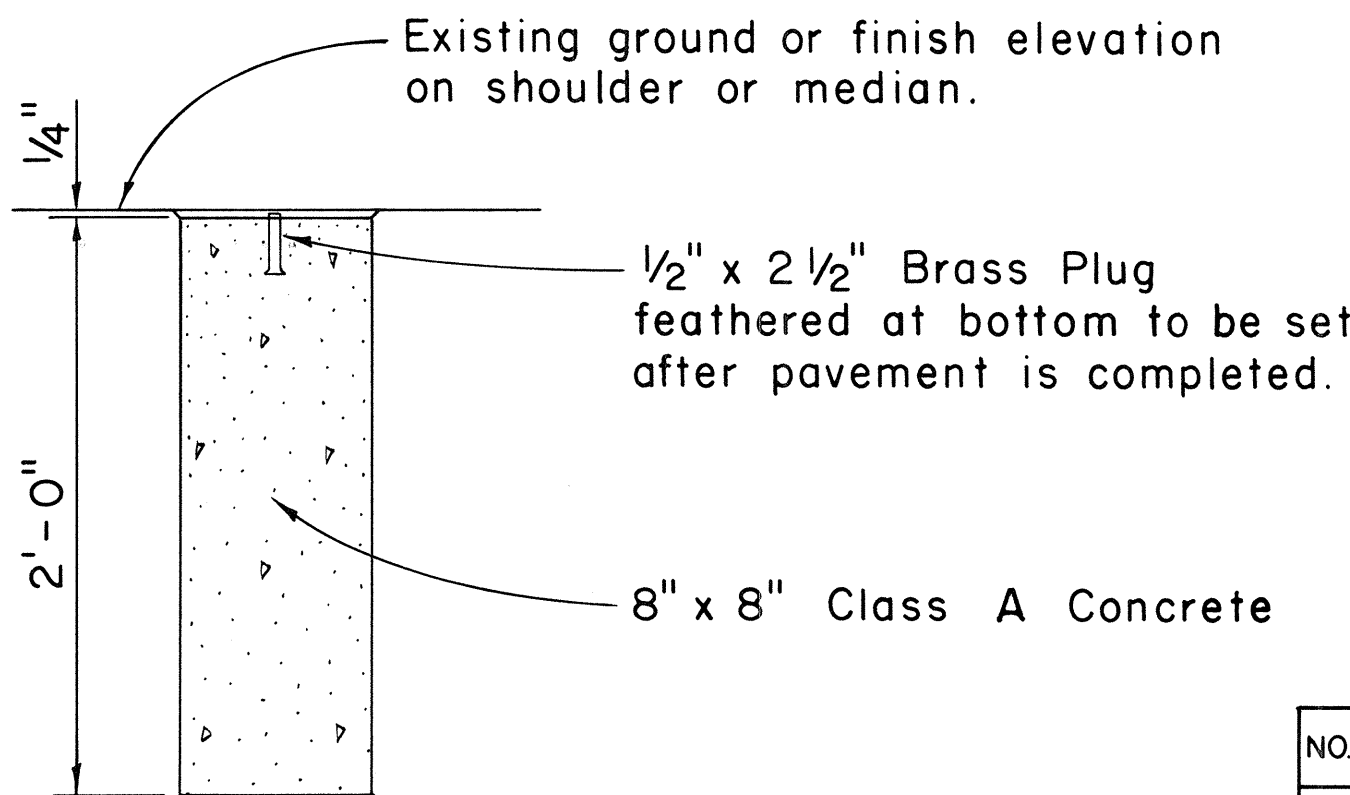
NOTE: Where the excavation extends into solid rock the depth may be decreased if approved by the Engineer.

STREET SURVEY MONUMENT

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

DETAIL FOR AND REFERENCE SURVEY MONUMENT

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



APPROVAL RECOMMENDED: *[Signature]* 12-4-69
HIGHWAY DESIGN ENGINEER DATE

APPROVED: *[Signature]* 12-10-69
ASSISTANT CHIEF, ENGINEERING DATE

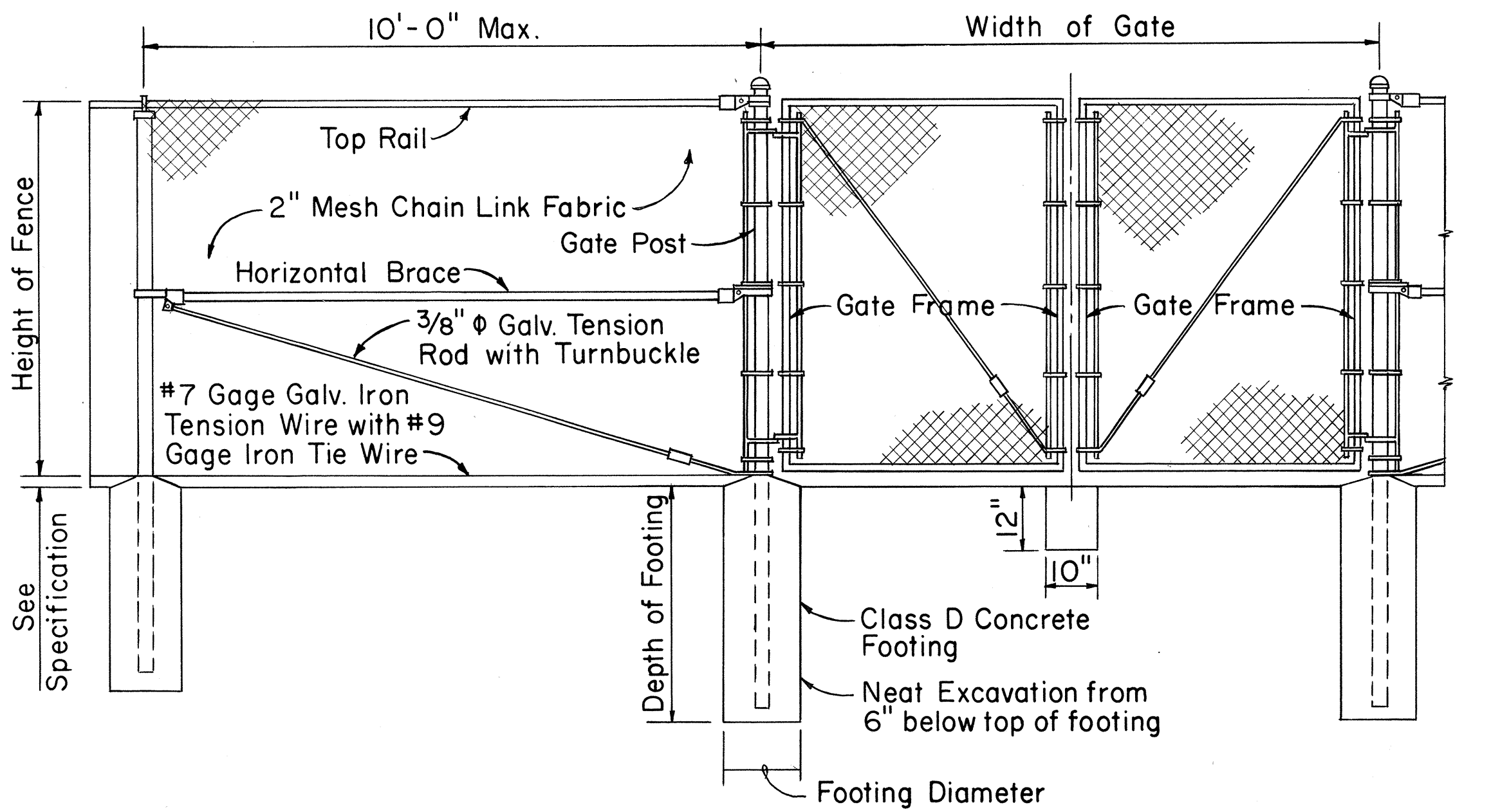
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

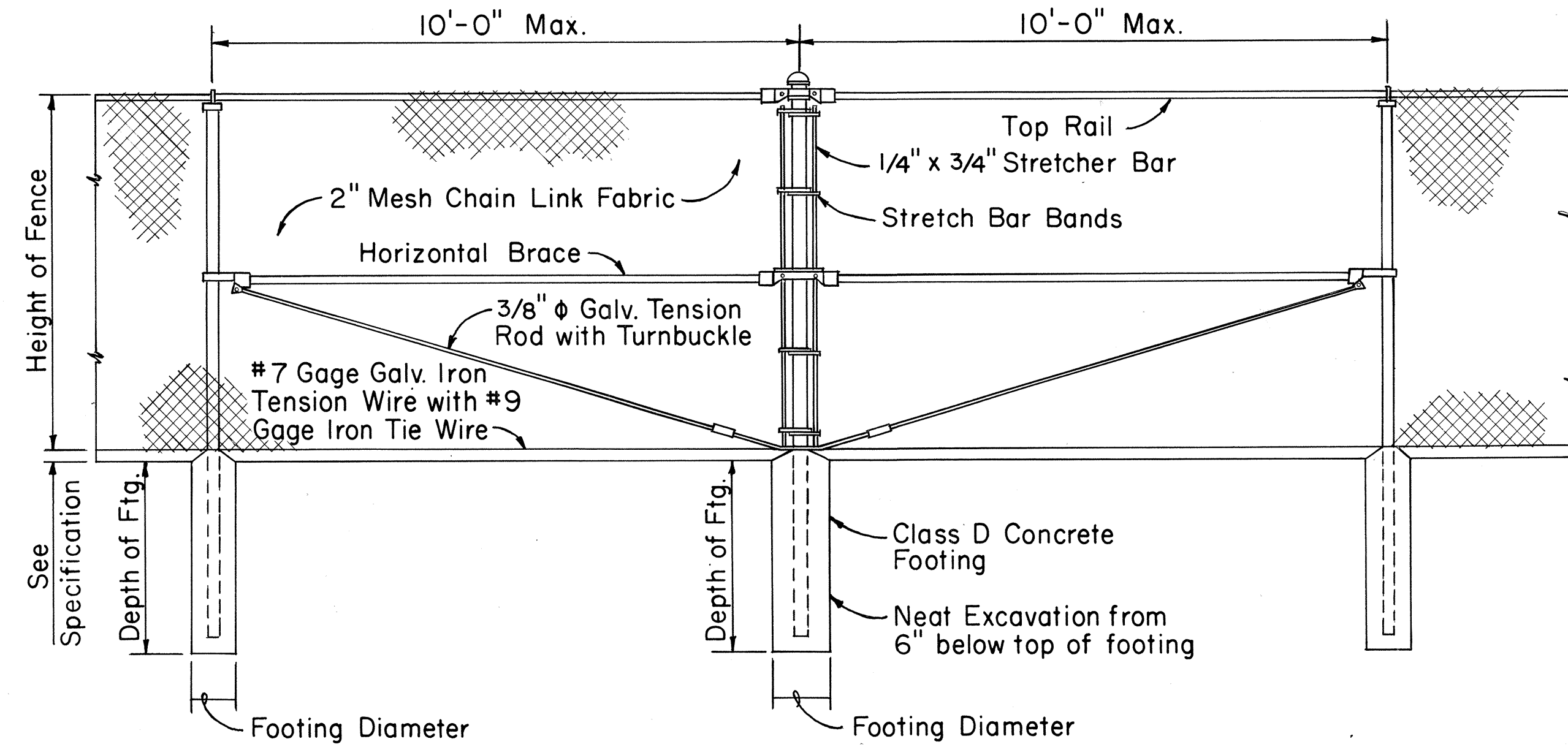
STANDARD DETAILS
CENTERLINE, REFERENCE SURVEY
AND C & C STREET SURVEY
MONUMENTS

Scale: As Shown
SHEET No. 6 OF 23 SHEETS DD 613.1

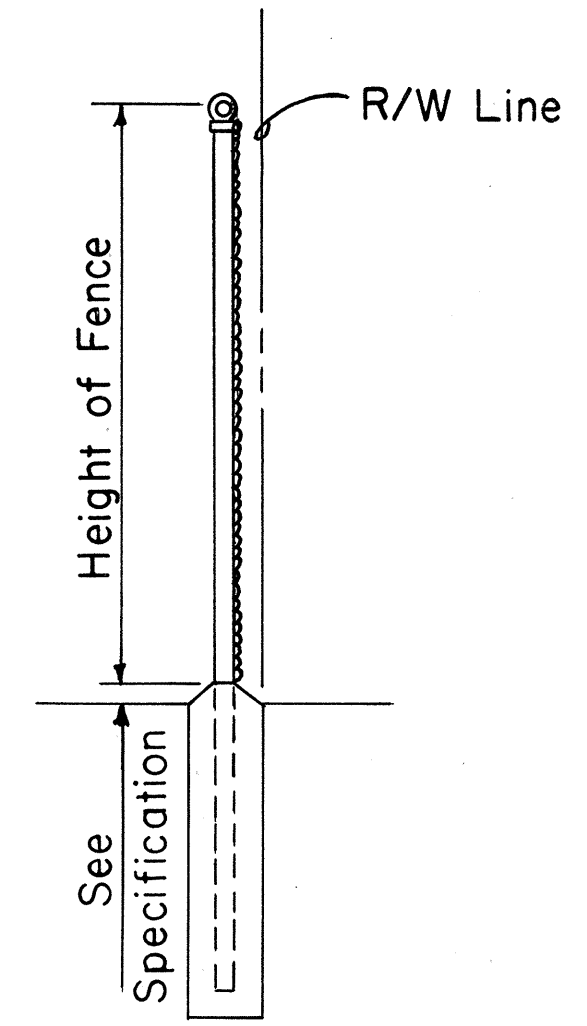
118



LINE POST GATE POST GATE POST



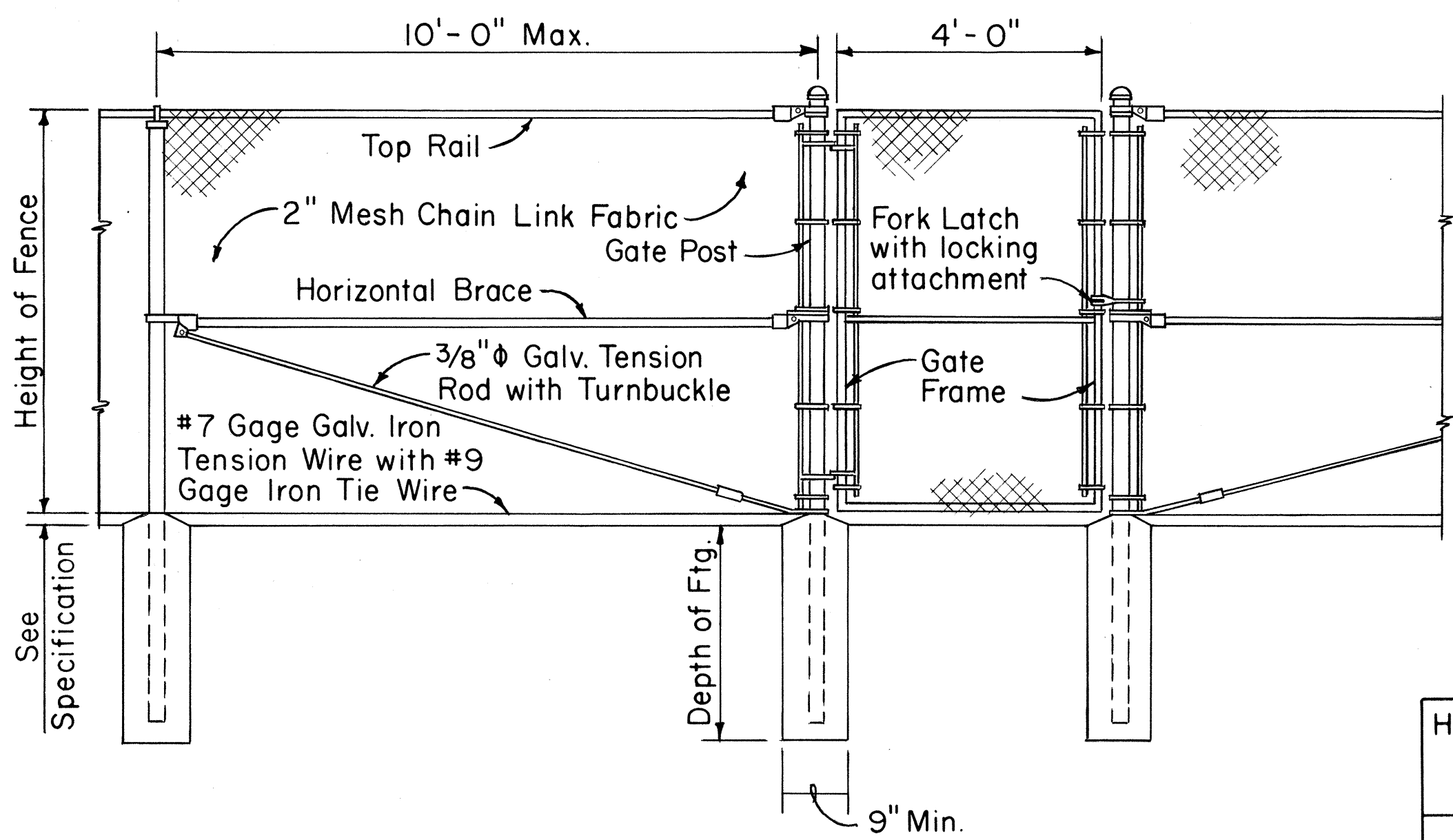
LINE POST PULL POST LINE POST



TYPICAL SECTION
(WITH CONCRETE FOOTING)

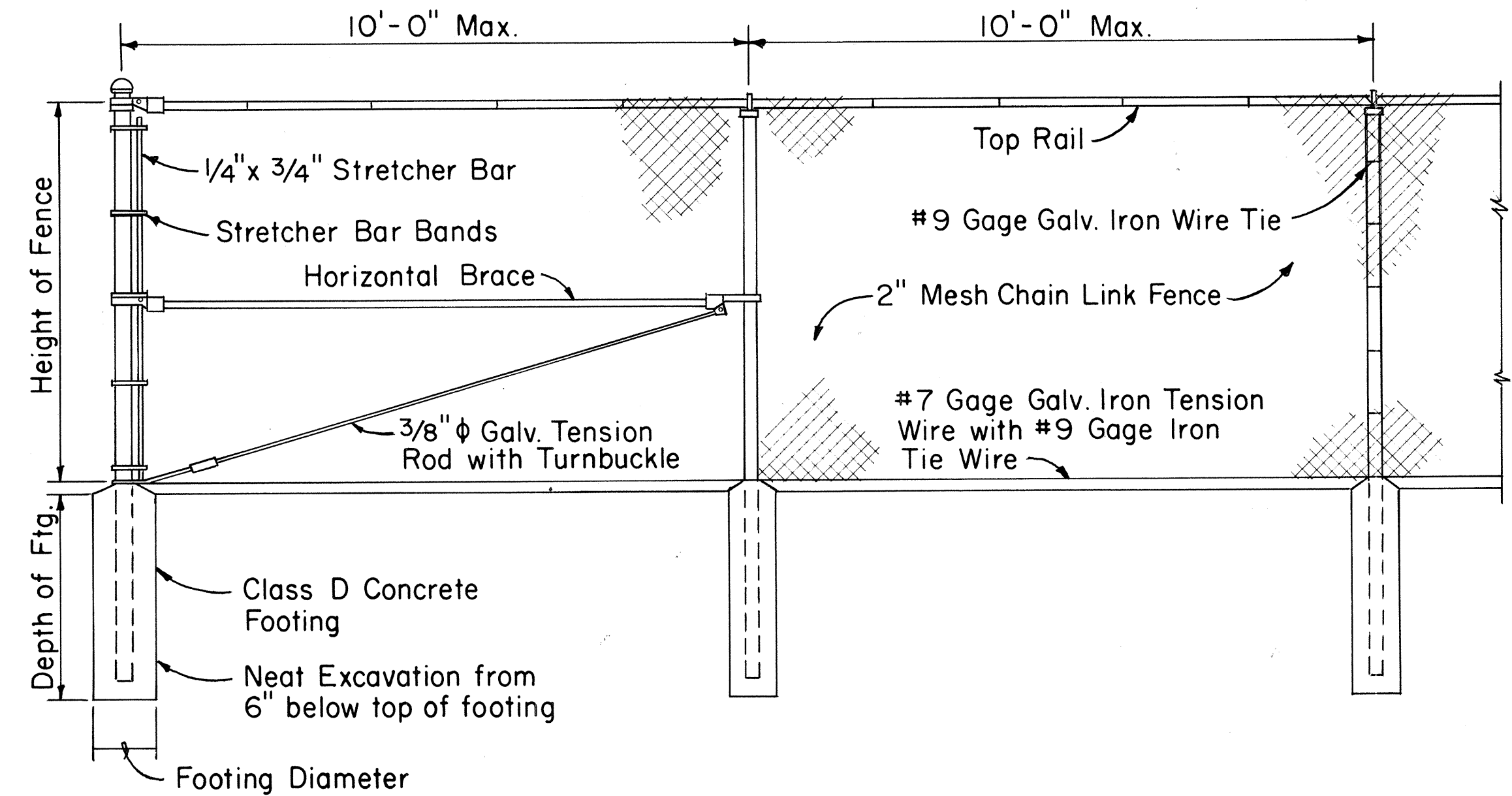
DETAIL OF CHAIN LINK GATE

- NOTE: 1. Gate fork latch and lock, flush plate and anchor, and plunger shall be installed with Gates, and shall be considered as incidental to Chain Link Fence Gate.
2. Gate frames shall be mitered and welded at corners.
3. Fence detail not shown shall be in accordance with the Standard Specifications.

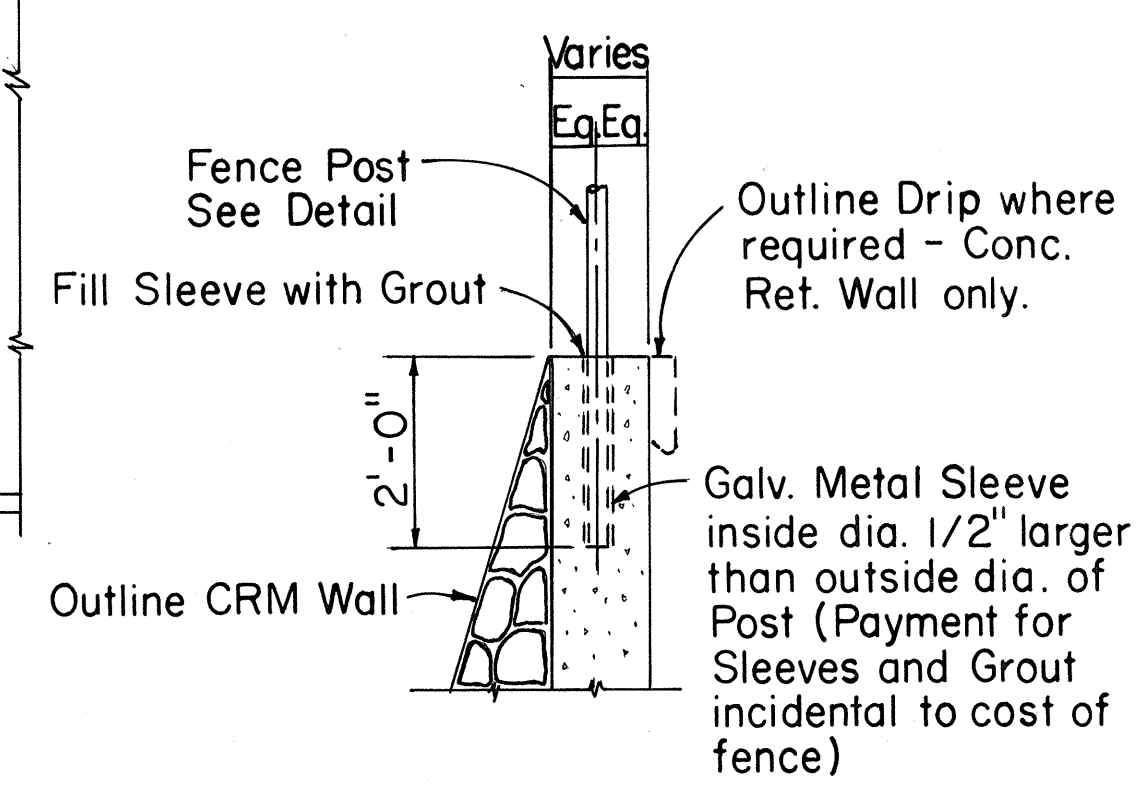


LINE POST GATE POST GATE POST

DETAIL OF 4 FT. CHAIN LINK GATE



END POST LINE POST LINE POST



TYPICAL SECTION
(ON CRM & CONC. RET. WALL)

CHAIN LINK FENCE DETAILS

Height of Fence	Minimum Depth of Footing		Minimum Footing Diameter	
	Line Post	Corner, Pull, End and Gate Posts	Line Post	Corner, Pull and End Posts
3'	2'-0"	2'-6"	8"	8"
4'	2'-6"	2'-6"	8"	8"
5'	3'-0"	3'-0"	8"	8"
6'	3'-0"	3'-0"	8"	9"

APPROVAL, RECOMMENDED:

HIGHWAY DESIGN ENGINEER 12-4-69
DATE

APPROVED:

ASSISTANT CHIEF, ENGINEERING 12-10-69
DATE

NO.	REVISION	APPROVED BY	DATE

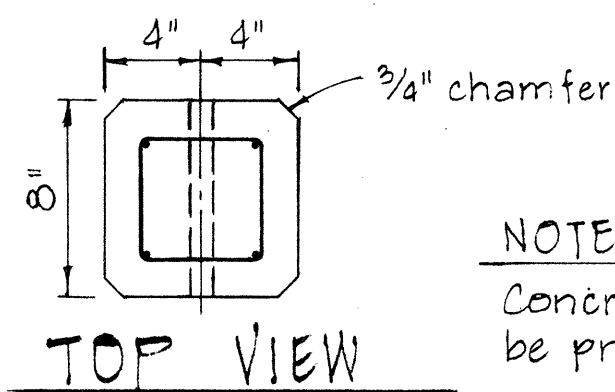
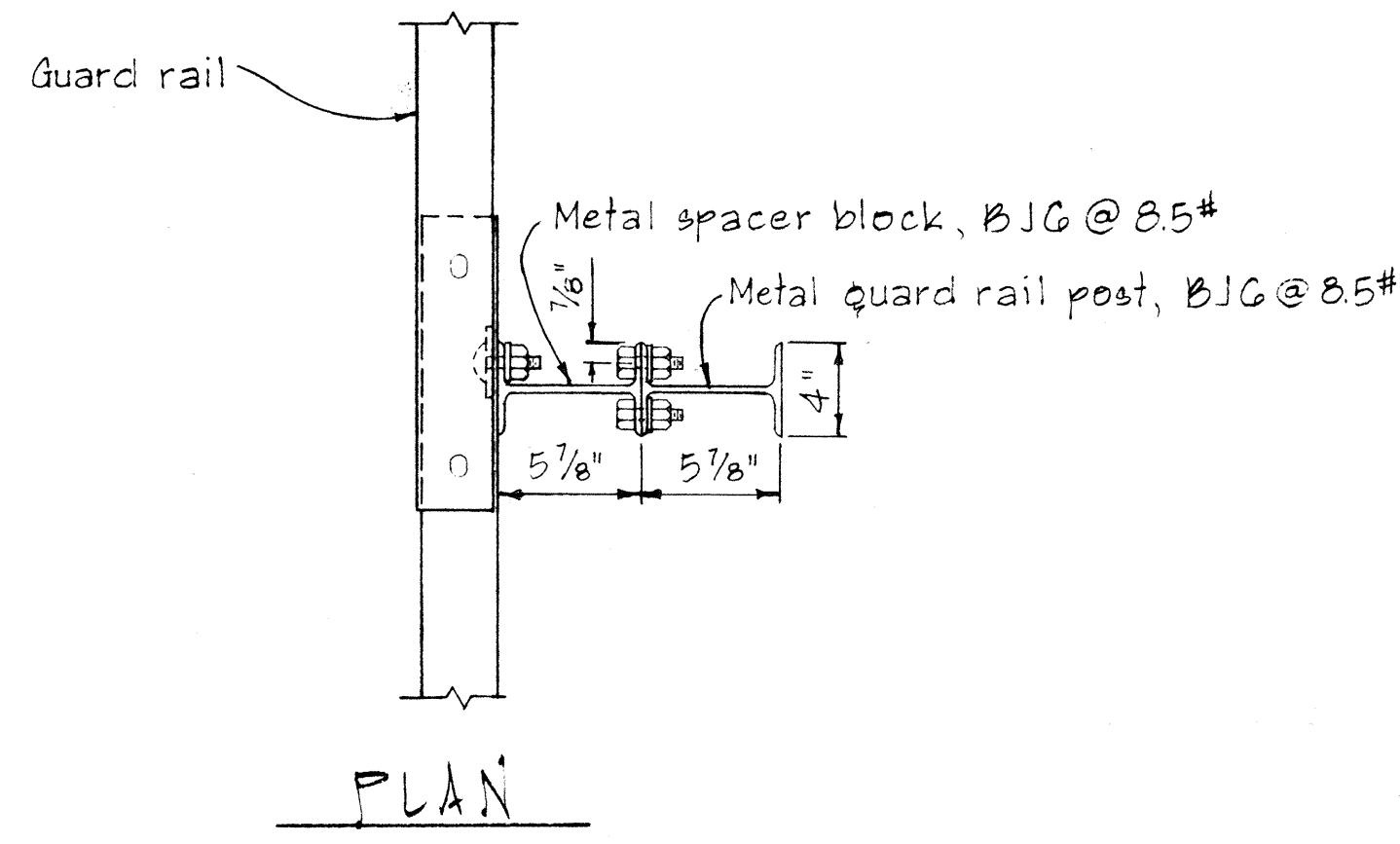
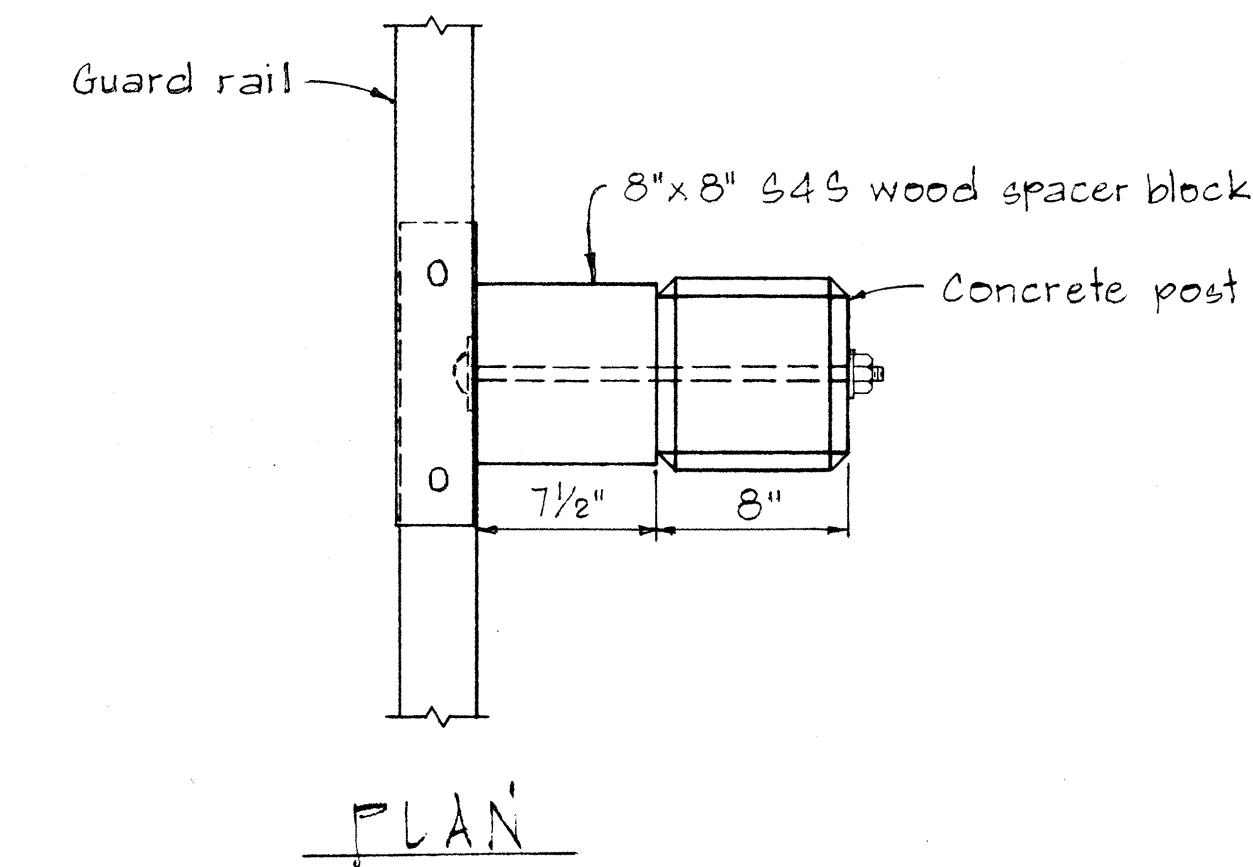
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

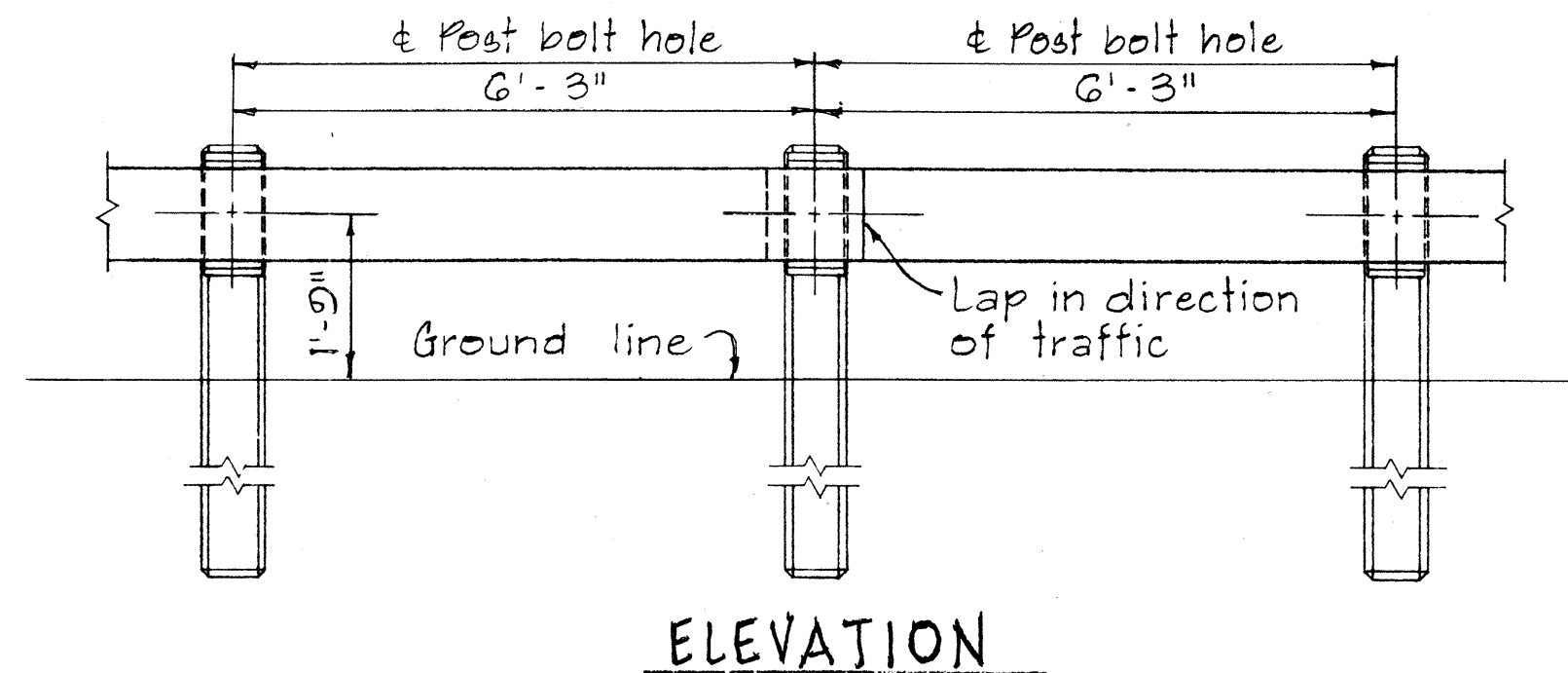
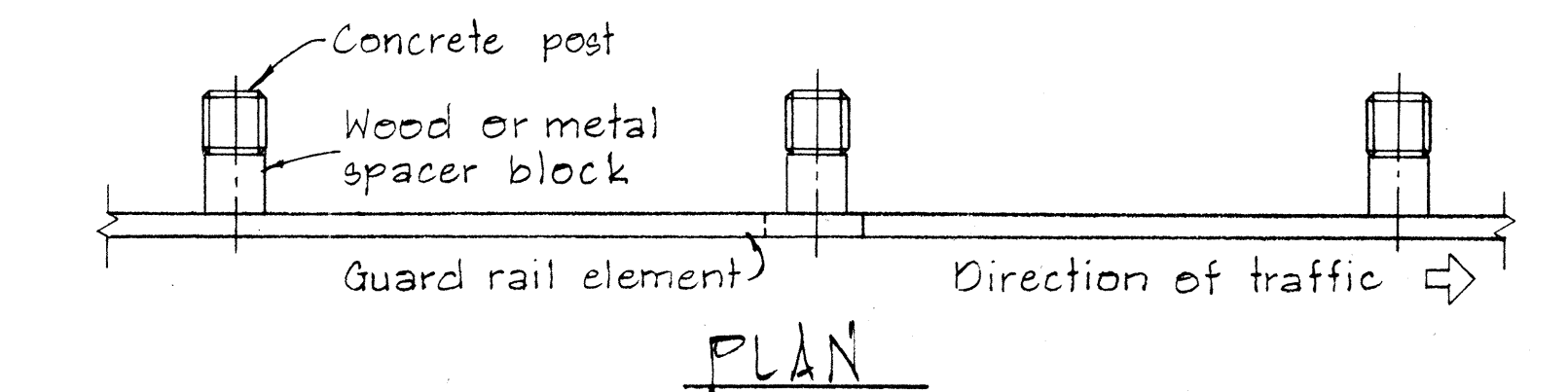
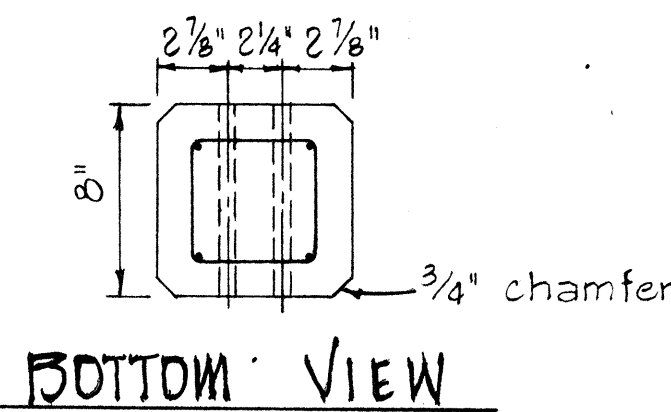
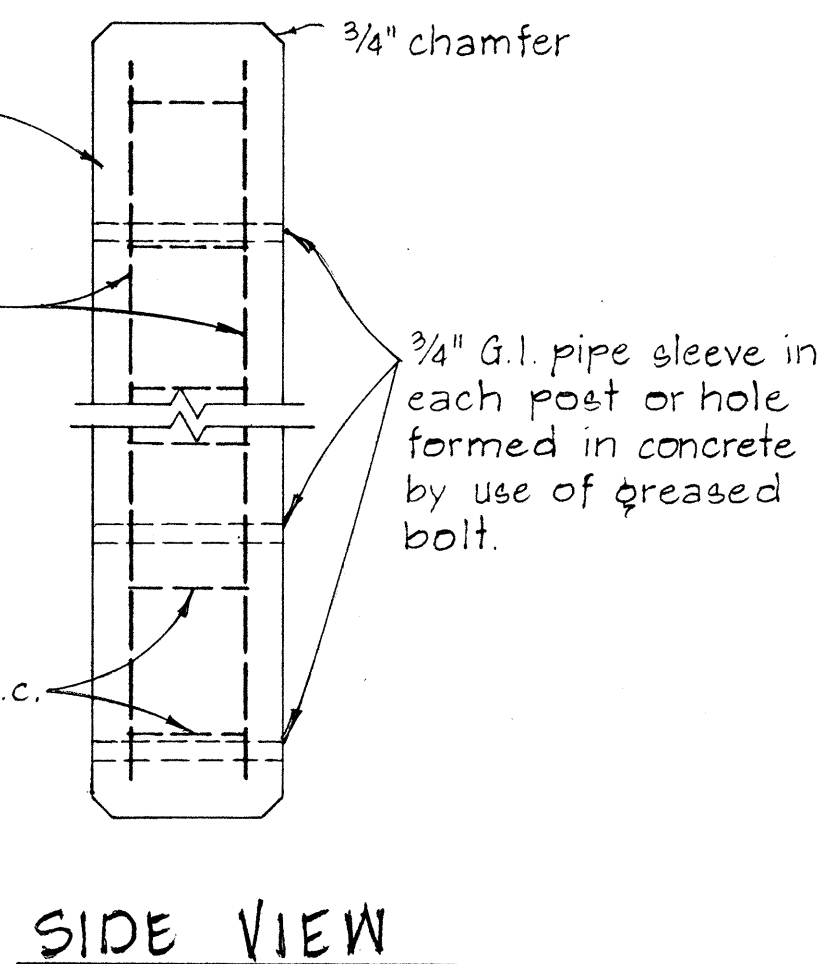
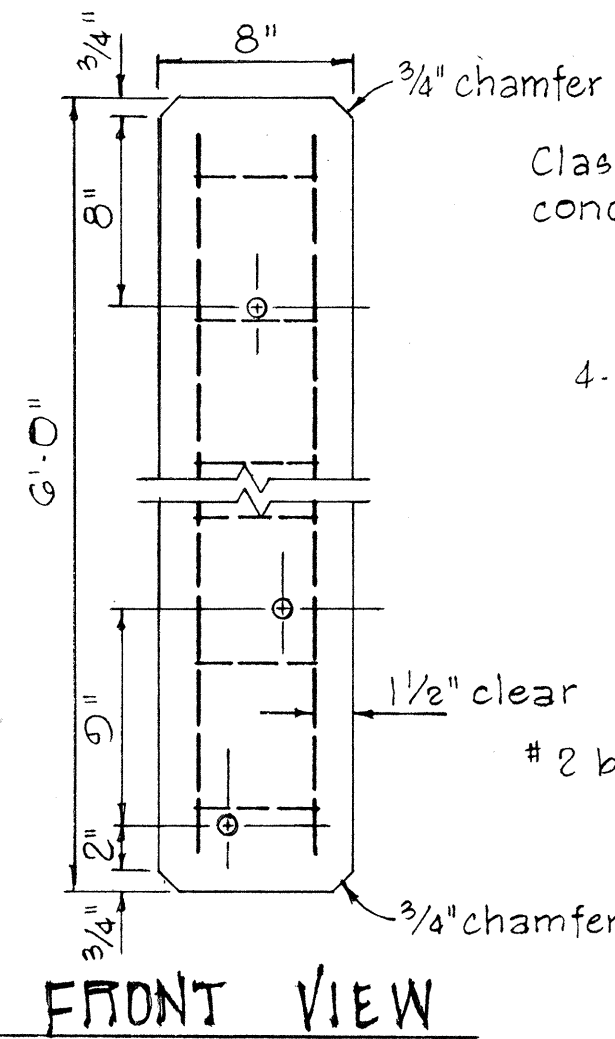
CHAIN LINK FENCE
(WITH TOPRAIL)

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H1-1(17)-13	1969	19	195

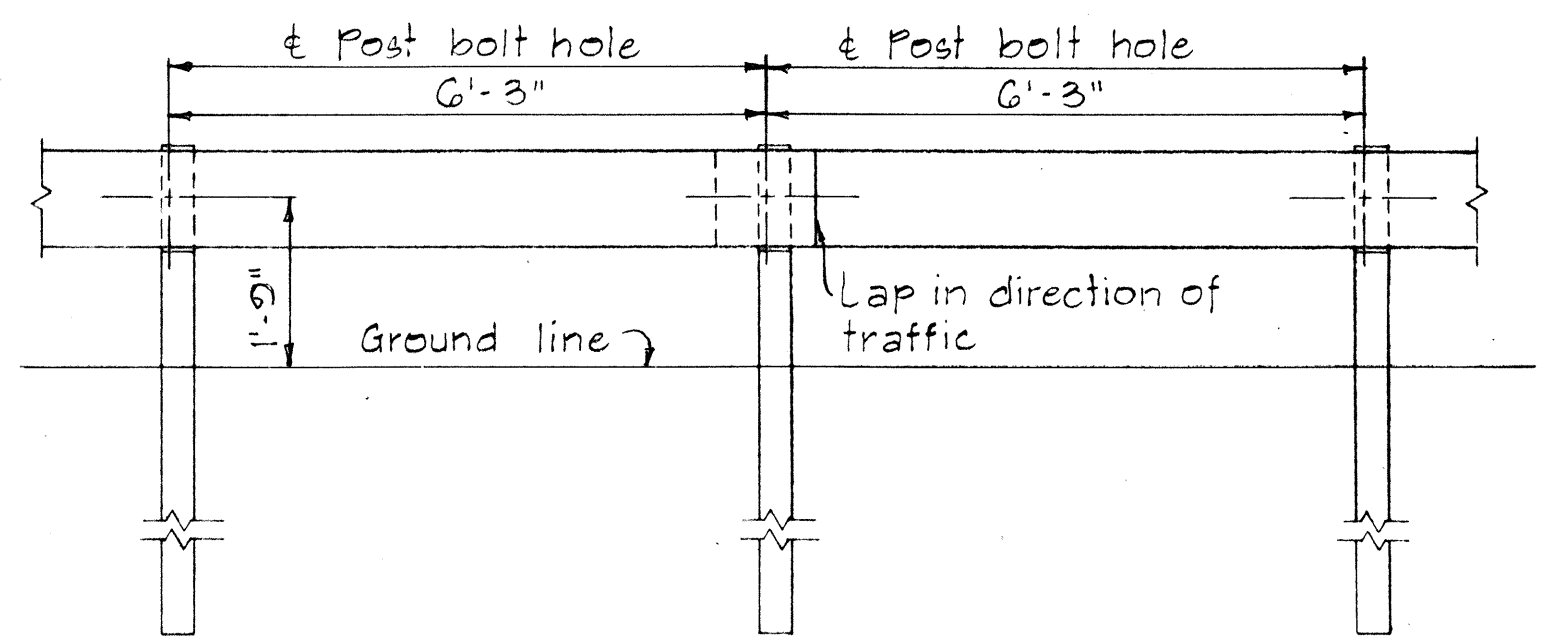
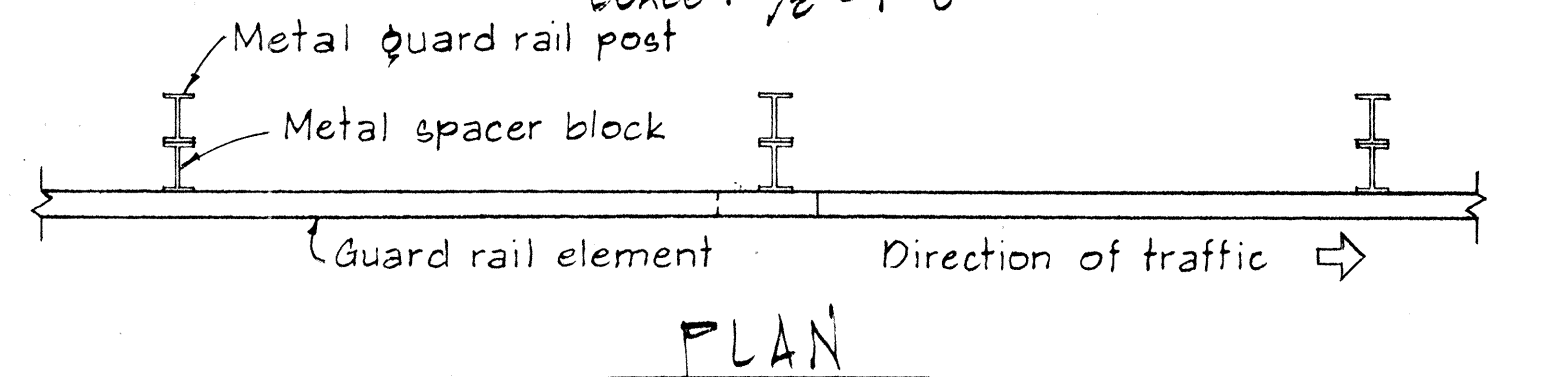


NOTE:
Concrete post shall be precast



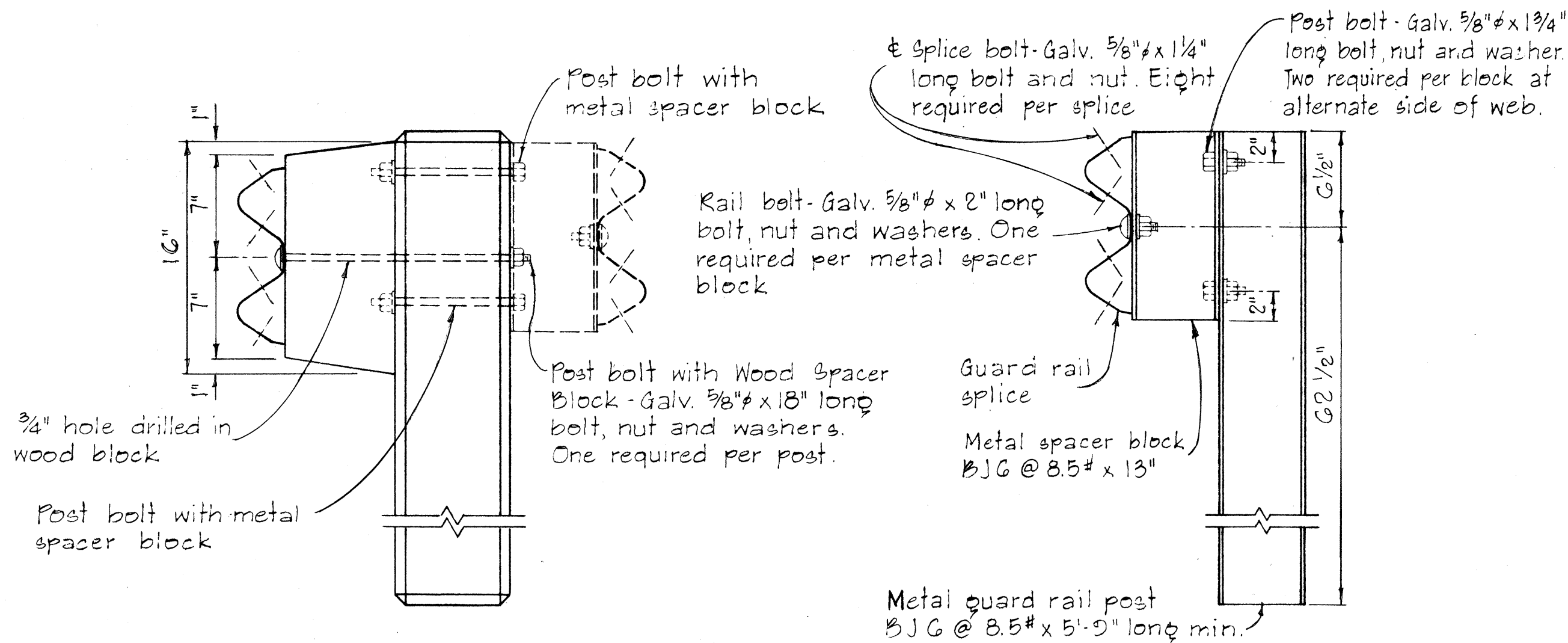
METAL GUARD RAIL ON CONCRETE POST WITH WOOD OR METAL SPACER BLOCK

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



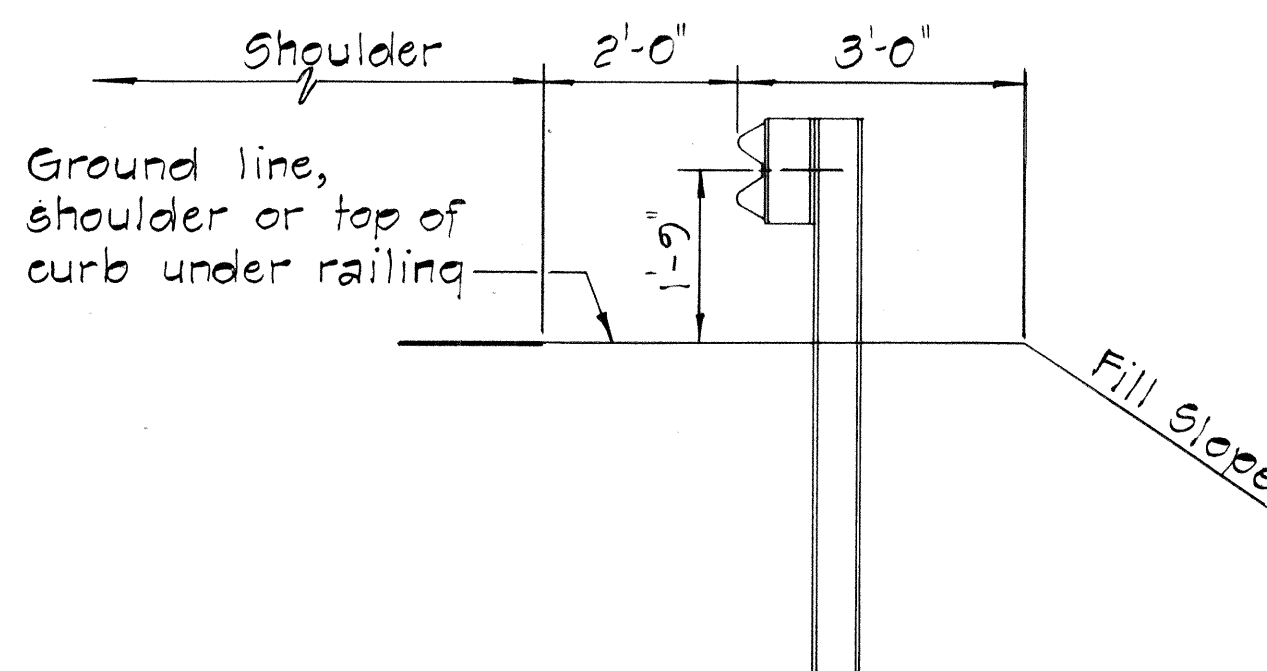
METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK

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



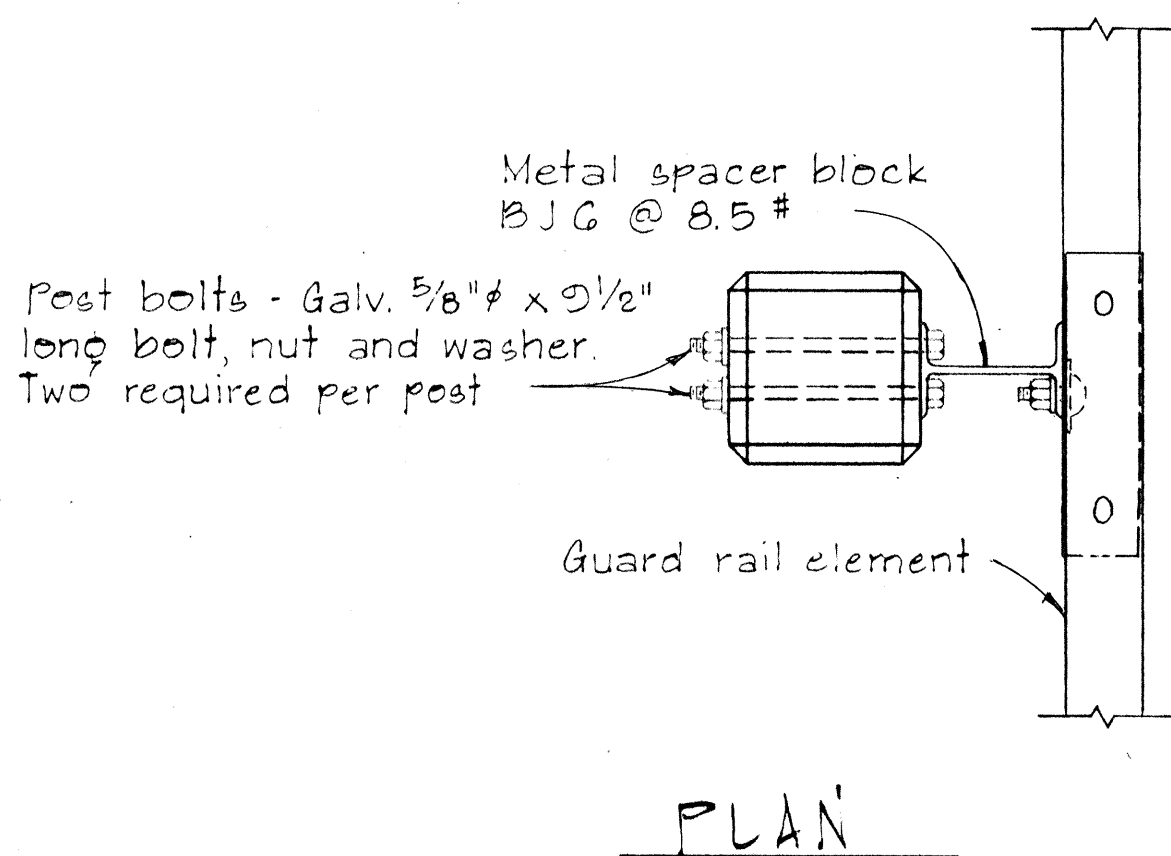
SINGLE METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK

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



TYPICAL METAL GUARD RAIL DETAIL

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



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

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

APPROVAL RECOMMENDED:
Erich Tanaka
TRAFFIC ENGINEER

12/29/69
DATE

APPROVED:
Assistant Chief, Engineering

12-30-69
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL GUARD RAIL

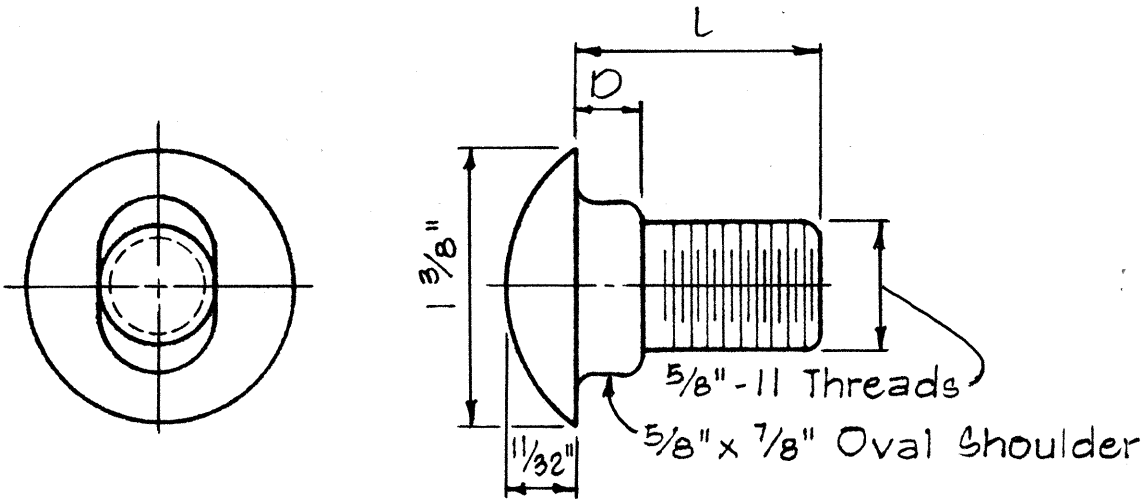
SCALE: AS SHOWN NOV. 1968

SHEET No. 8 OF 23 SHEETS DT 500

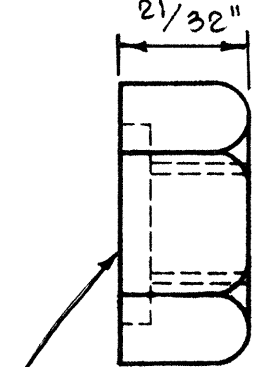
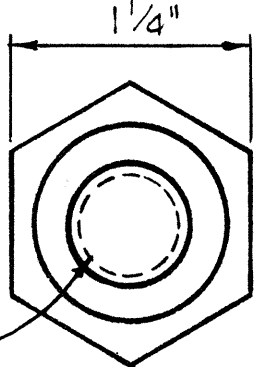
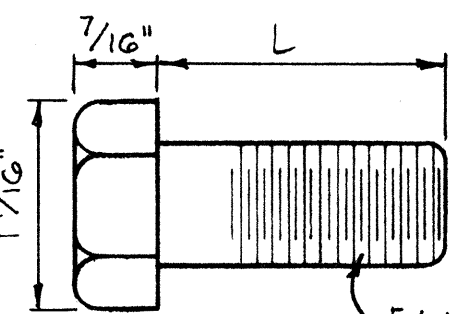
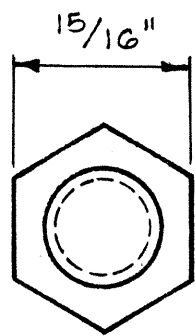
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(77)	1969	20	155

BOLT DIMENSIONS		
TYPE A BOLT		
Splice Bolt	5/16"	1 1/4"
Post Bolt for Conc. Post w/ Double Wood Blocks	3/32"	24"
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	
Post Bolt for Conc. Post w/ Metal Blocks	5 1/2"
Post Bolt for Metal Post w/ Metal Block	1 3/4"



TYPE A BOLT



5/32" Deep x 15/16" Dia. C' Bore for Type A Bolt only.
Plain nut for Type B Bolt.

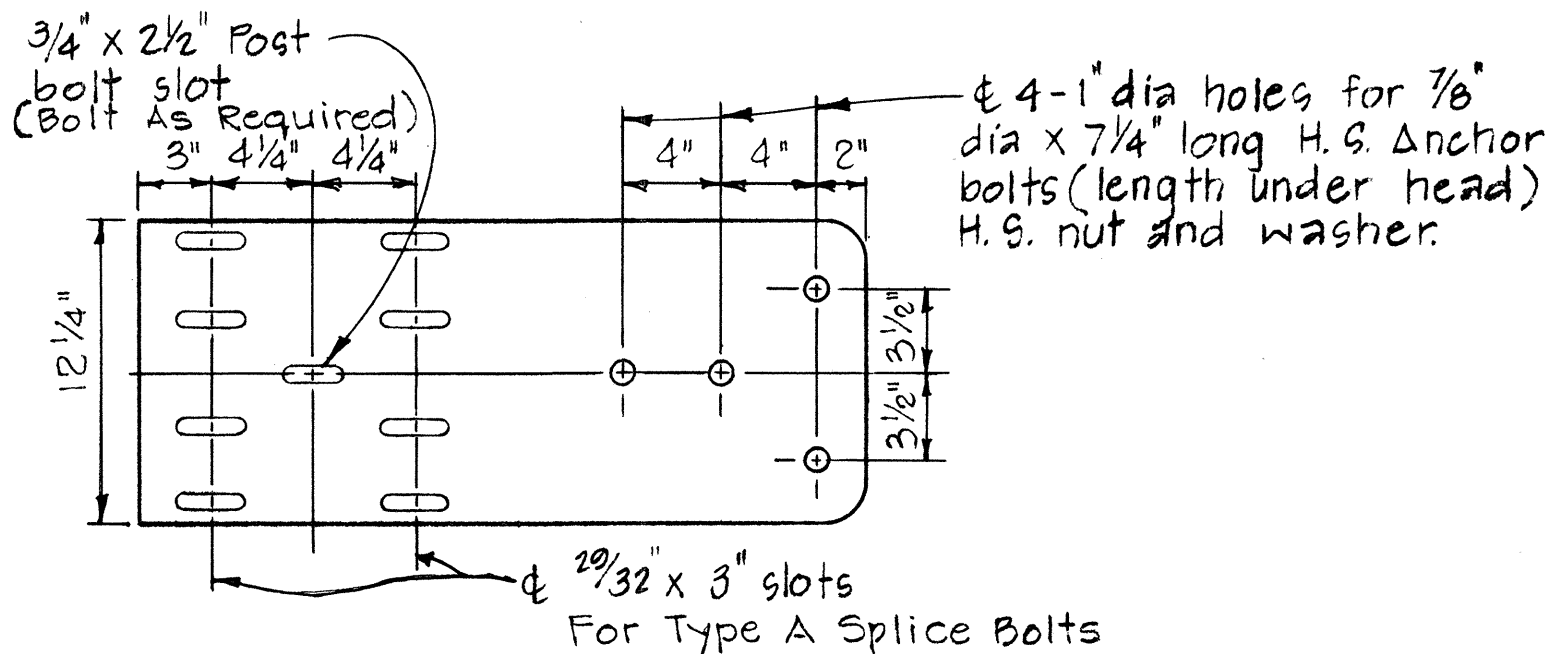
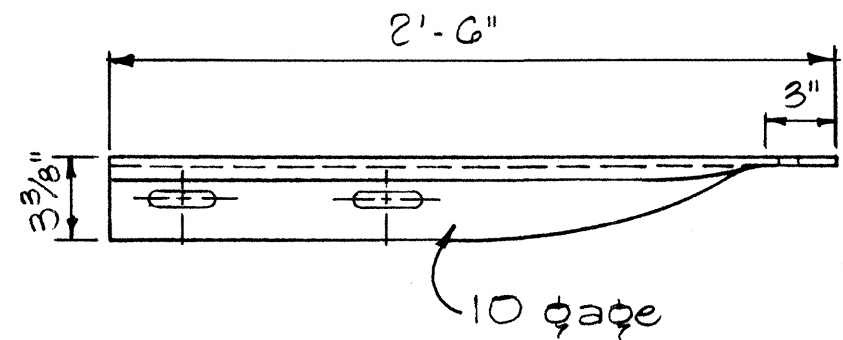
TYPE B BOLT

SPUCE RAIL AND POST BOLTS

Scale: Full Size

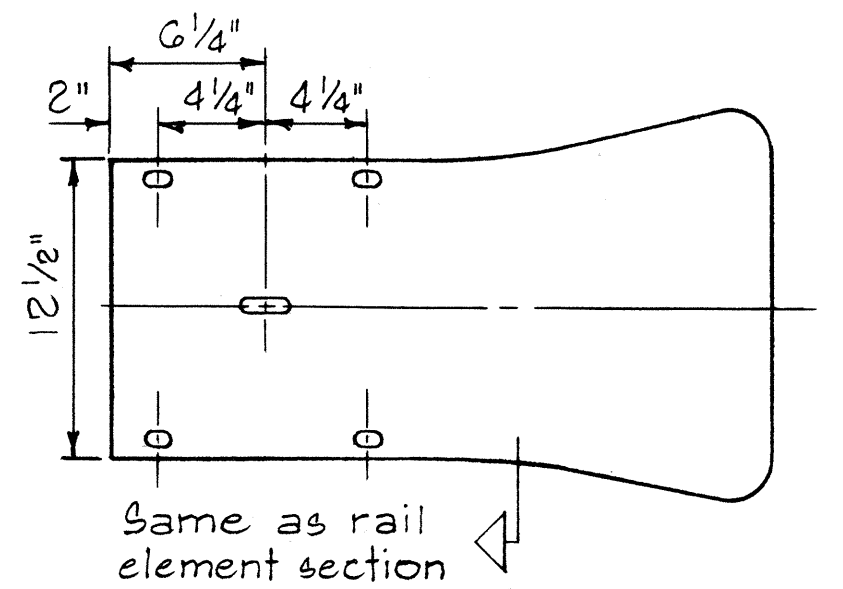
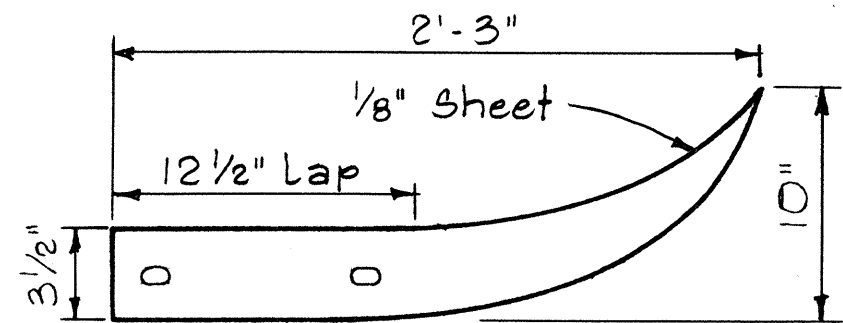
HEXAGON NUT

Scale: Full Size



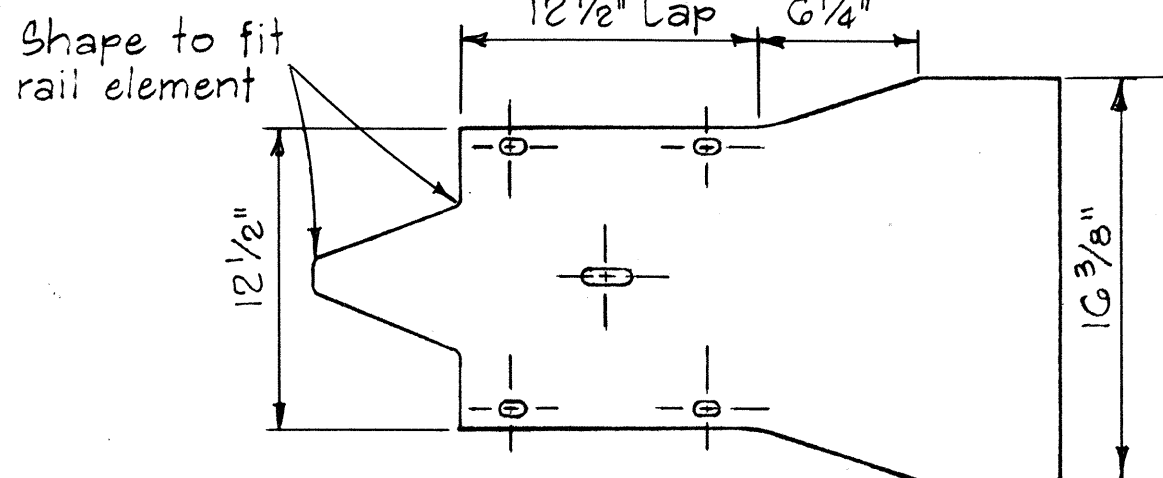
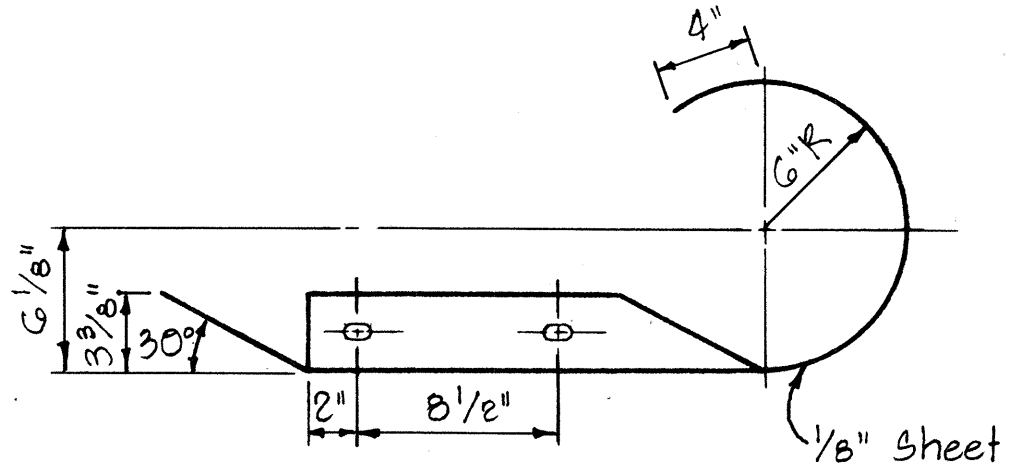
SPECIAL END SHOE

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



FLARED END

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



CURVED END

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

APPROVAL RECOMMENDED:

TRAFFIC ENGINEER

APPROVED:

ASSISTANT CHIEF, ENGINEERING

12/23/69
DATE

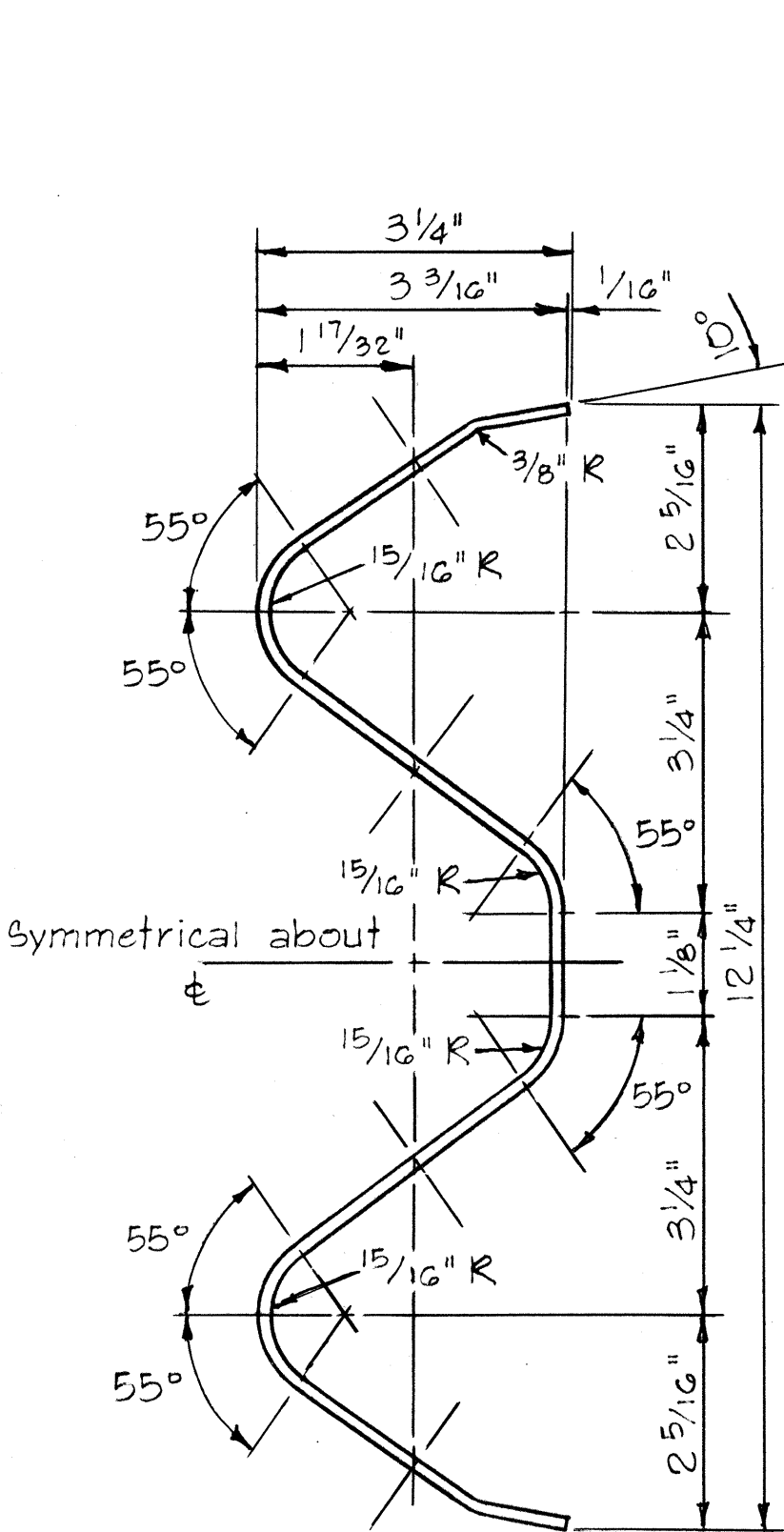
12-20-69
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL GUARD RAIL

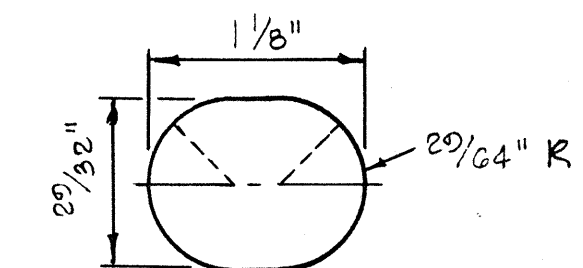
Scale: As Noted August, 1968

SHEET No. 20 OF 23 SHEETS DT 501

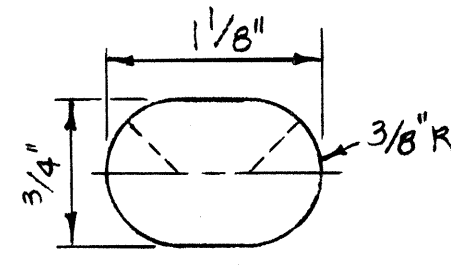


RAIL ELEMENT SECTION

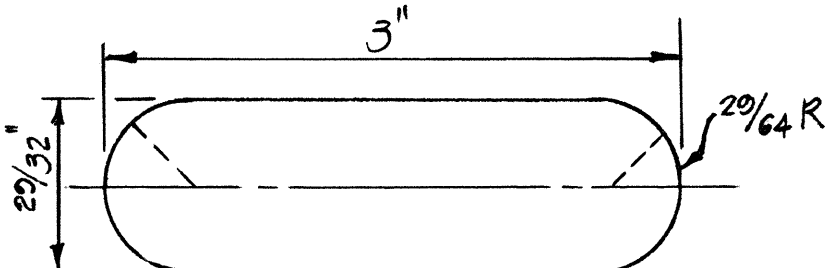
Scale: 6" = 1'-0"



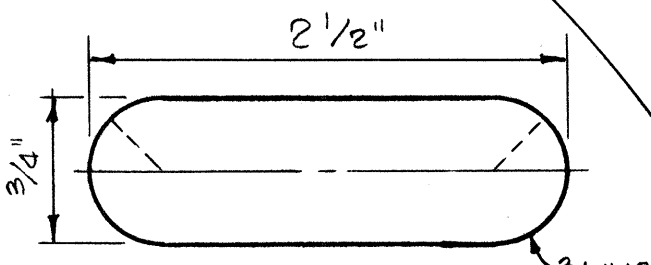
SPUCE BOLT SLOT



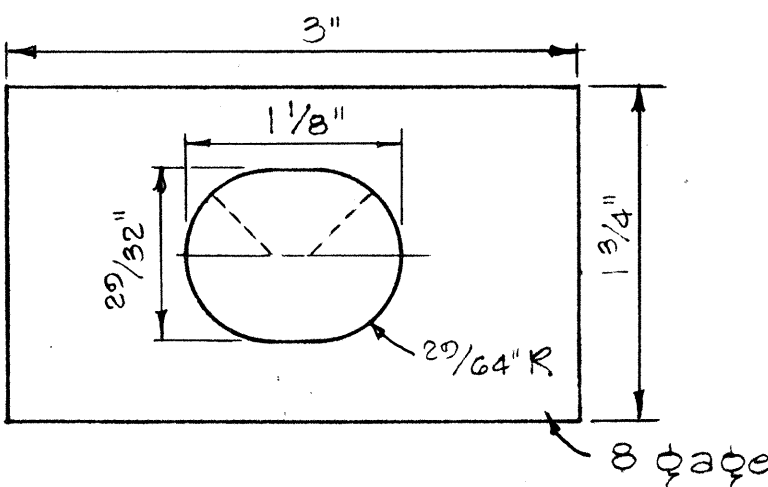
SPUCE BOLT SLOT FOR ALL ENDS



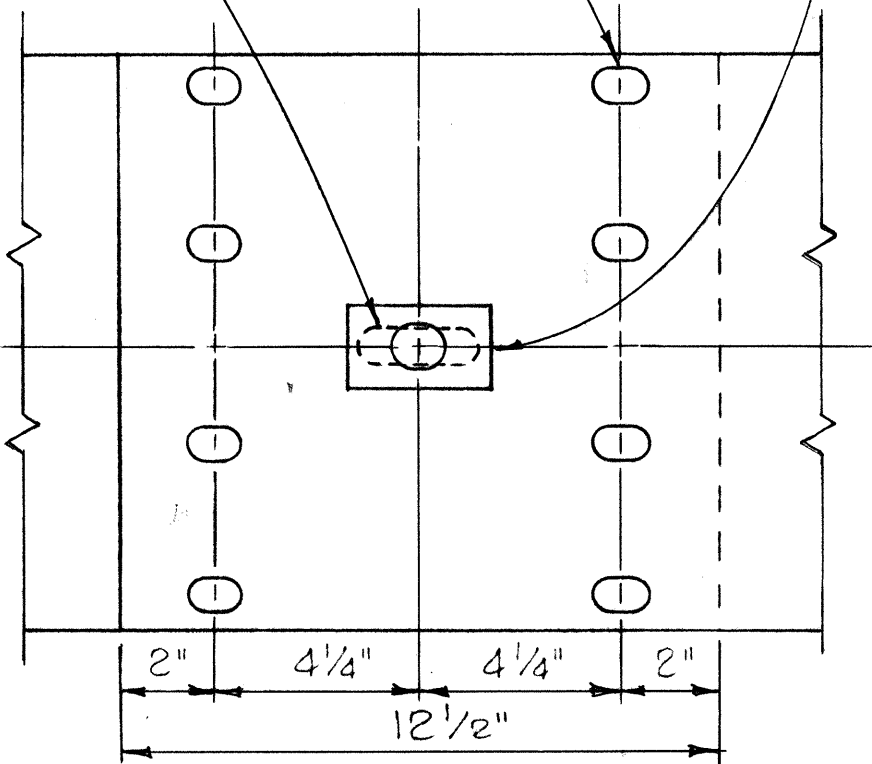
SPUCE BOLT SLOT FOR SPECIAL END SHOE



POST BOLT SLOT



RAIL WASHER



RAIL SPLICE

Scale: 3" = 1'-0"

NOTES:

1. H.S. Bolts shall conform to the requirements of ASTM A 325.
2. Special End Shoe shall be fabricated from 10 Gage steel conforming to the requirements of AASHO 180.

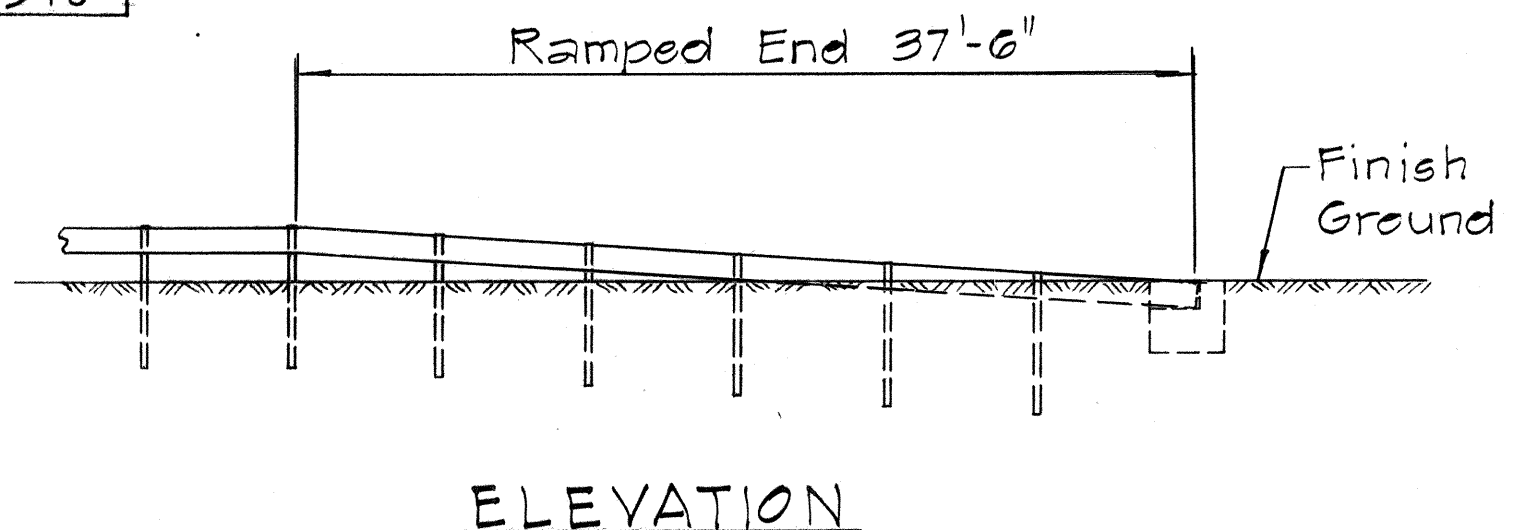
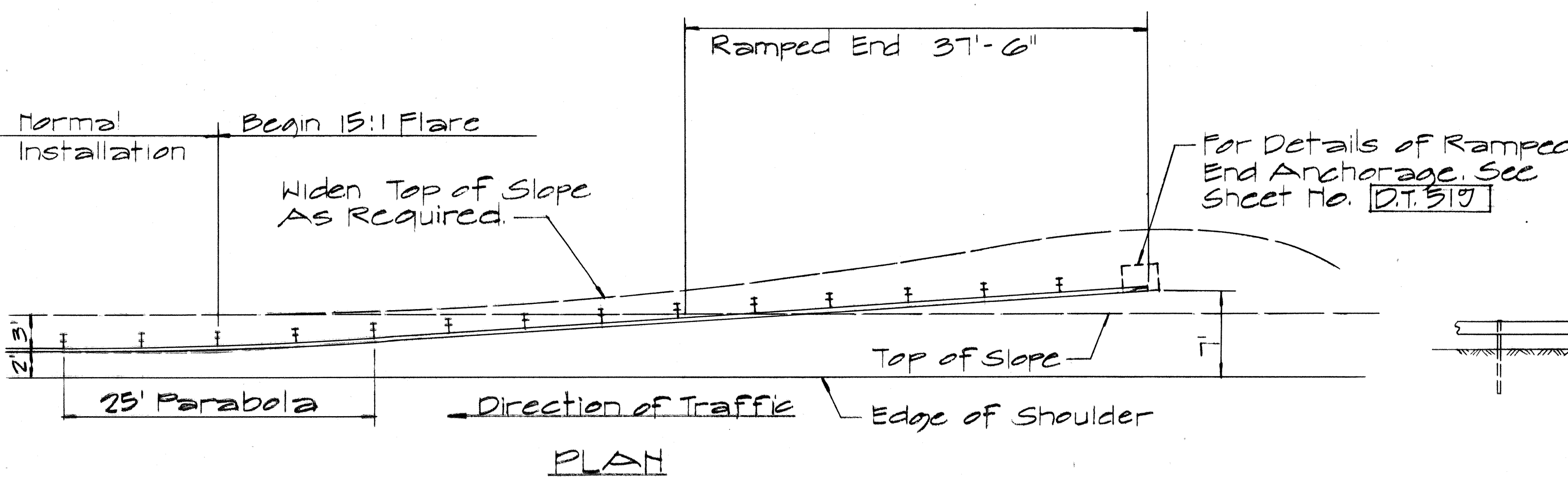
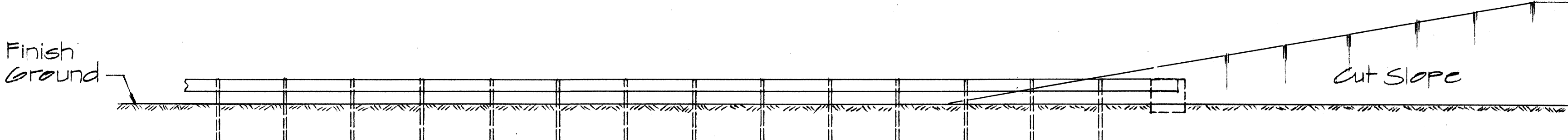
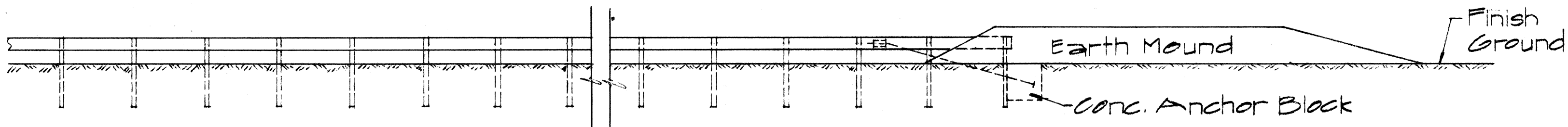
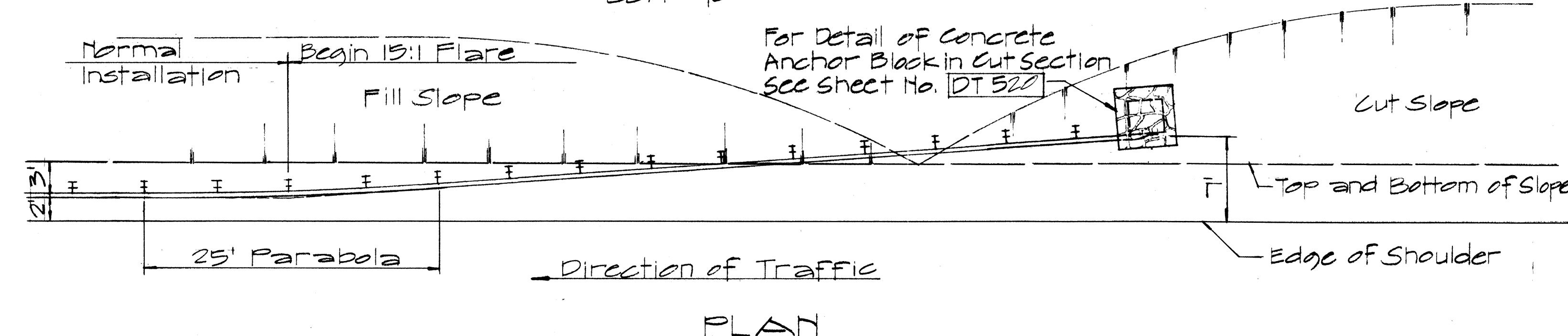
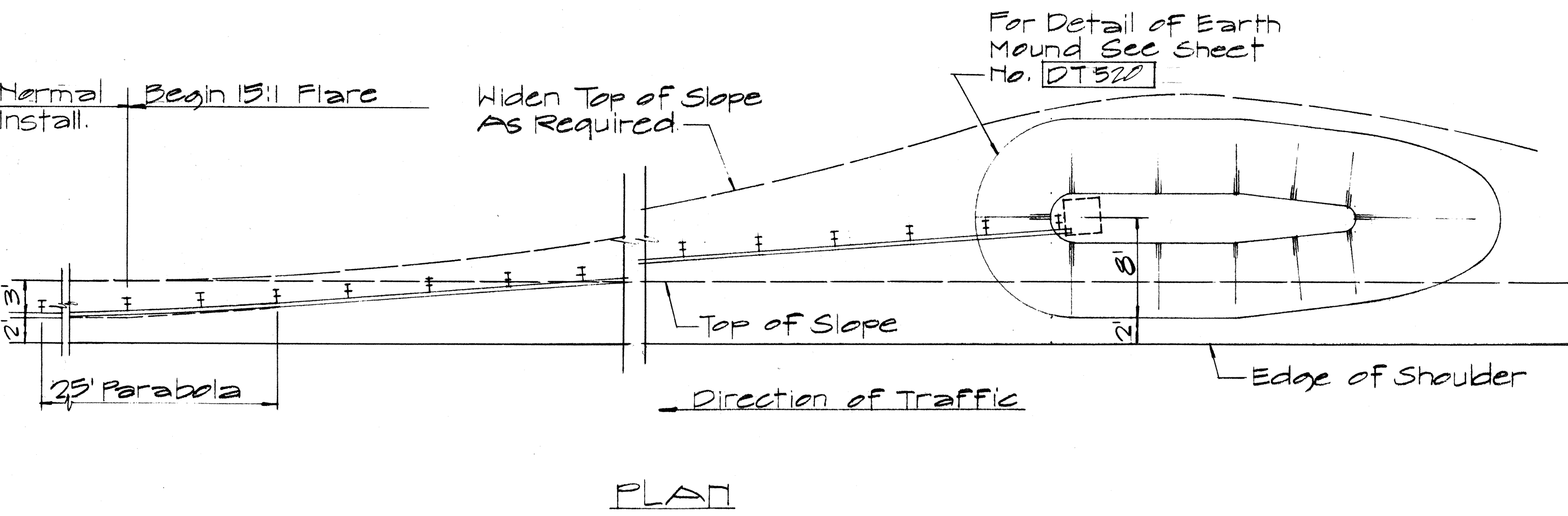
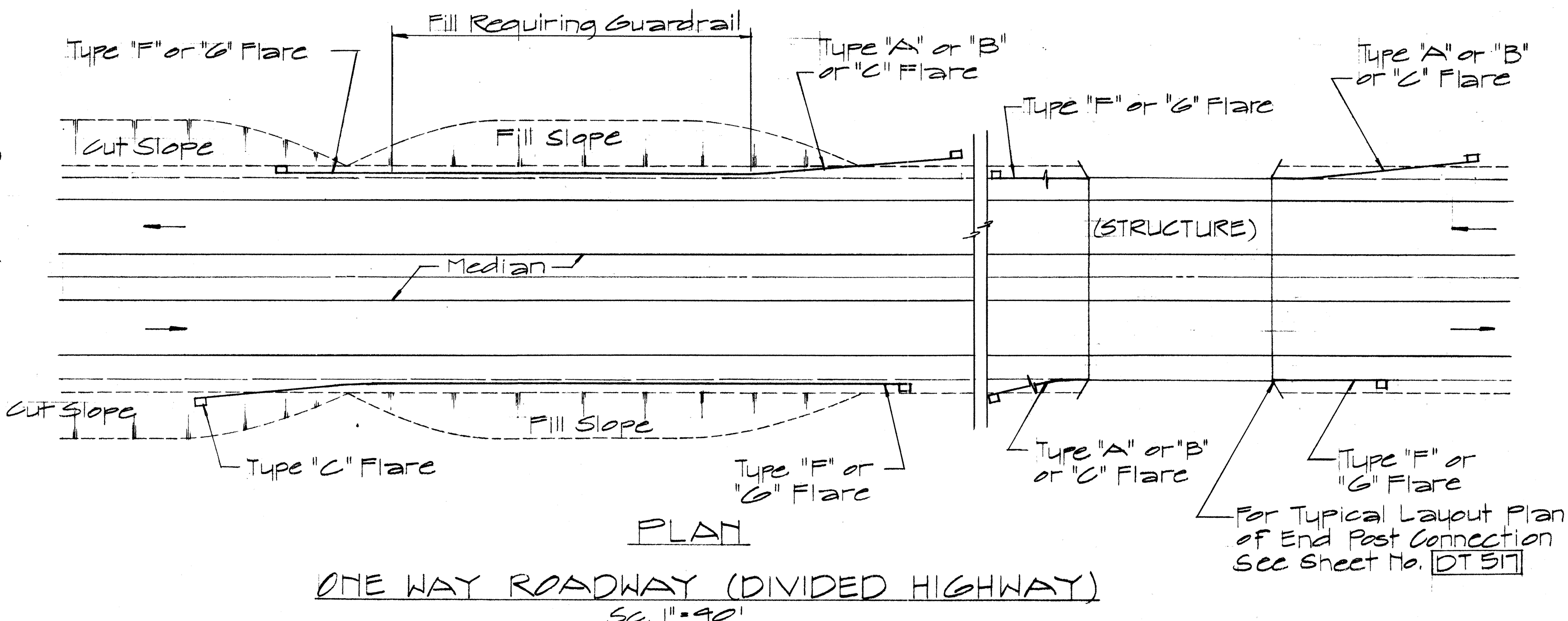
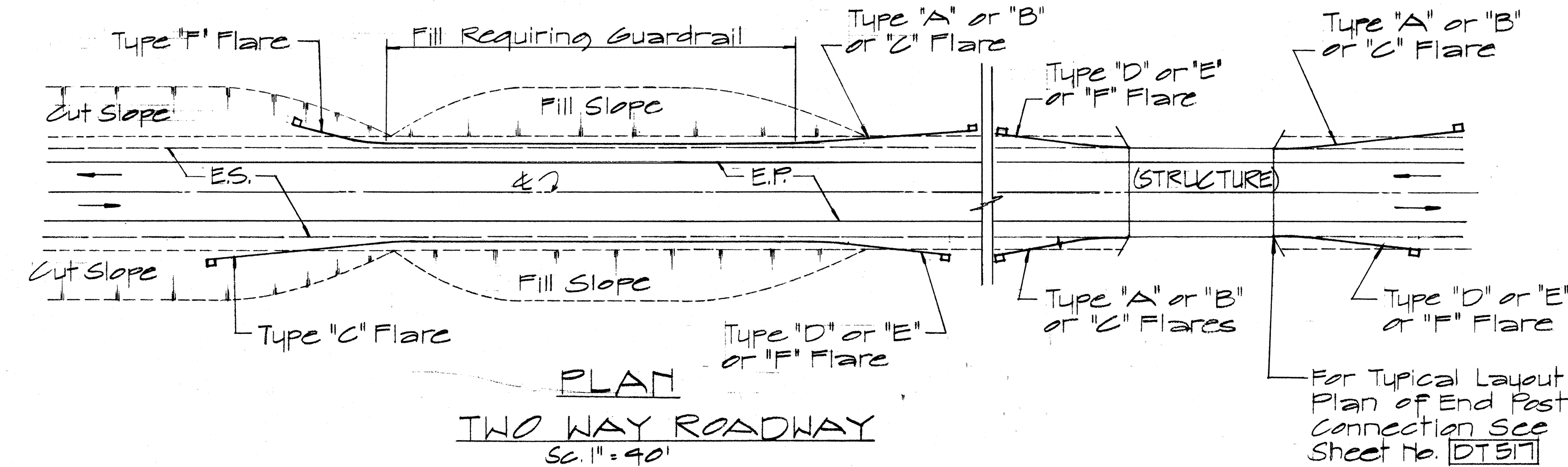
MEDIAN END DIMENSIONS		
TYPE OF POST AND BLOCK	W	R
Double Metal Guard Rail on Concrete Post with Wood Blocks	29 3/4"	14 3/8"
Double Metal Guard Rail on Concrete Post with Metal Blocks (BJG)	26 1/2"	13 1/4"
Double Metal Guard Rail on Metal Post with Metal Blocks (BJG)	24 3/8"	12 3/16"

NO	REVISION	APPROVED BY	DATE

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRAFFIC ENGINEER	
NOTE BOOK	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H-1(77)13	1969	21	154

NOTE:
Metal guard rail connection to structures requires End Post Connection. See structure plans.



APPROVAL RECOMMENDED:
Eishi Tanaka 12/23/69
TRAFFIC ENGINEER DATE

APPROVED:
W. S. S. S. 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

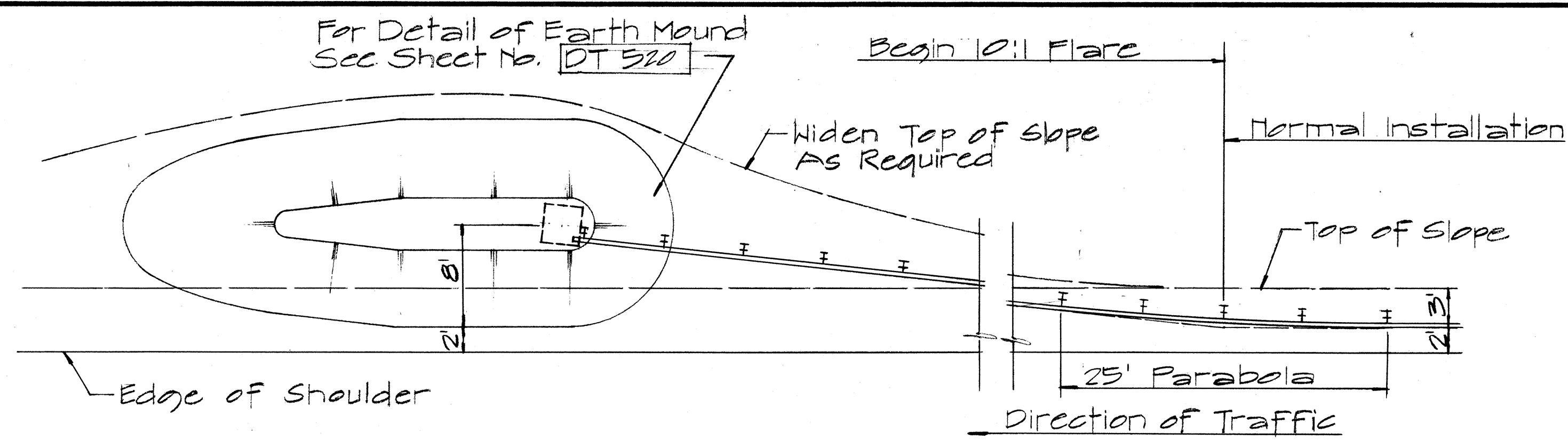
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**STANDARD DETAILS
OF APPROACH END
FLARE - ONE & TWO
WAY ROADWAY**

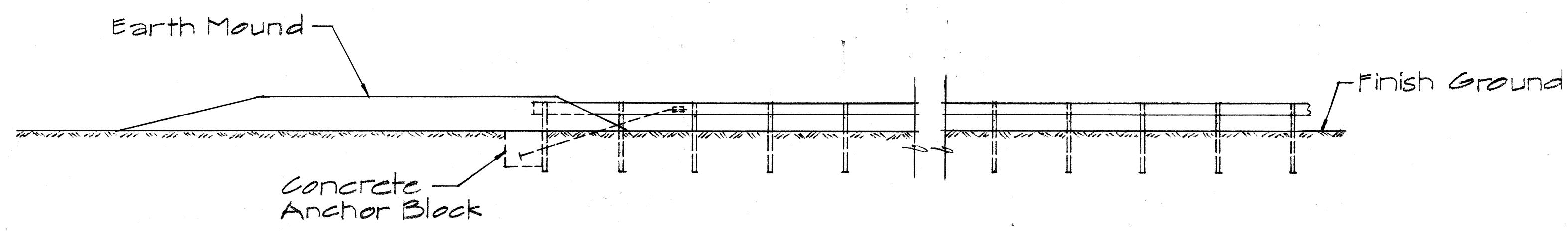
Sc. As Noted April 1969
SHEET No. 10 OF 23 SHEETS DT 516

DATE	
DESIGNED BY	
CHECKED BY	
QUANTITIES BY	
NOTE BOOK	
ORIGINAL PLAN	

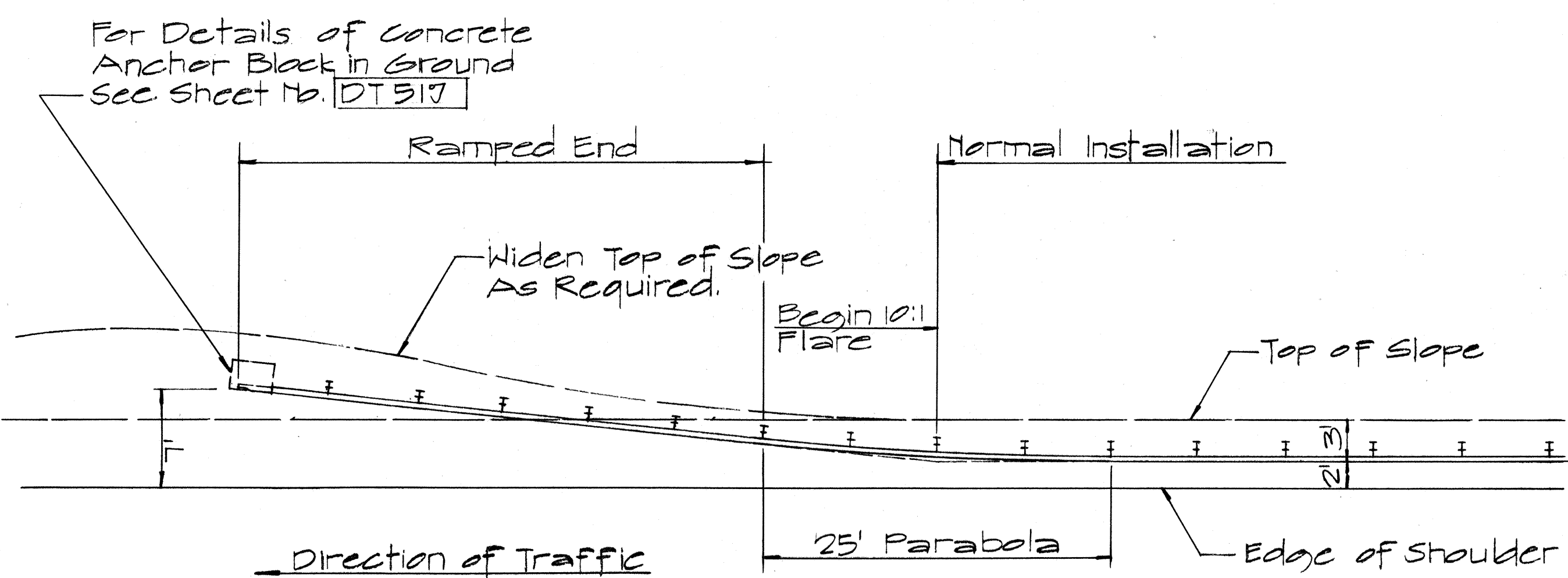
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H-1(77)19	1969	22	155



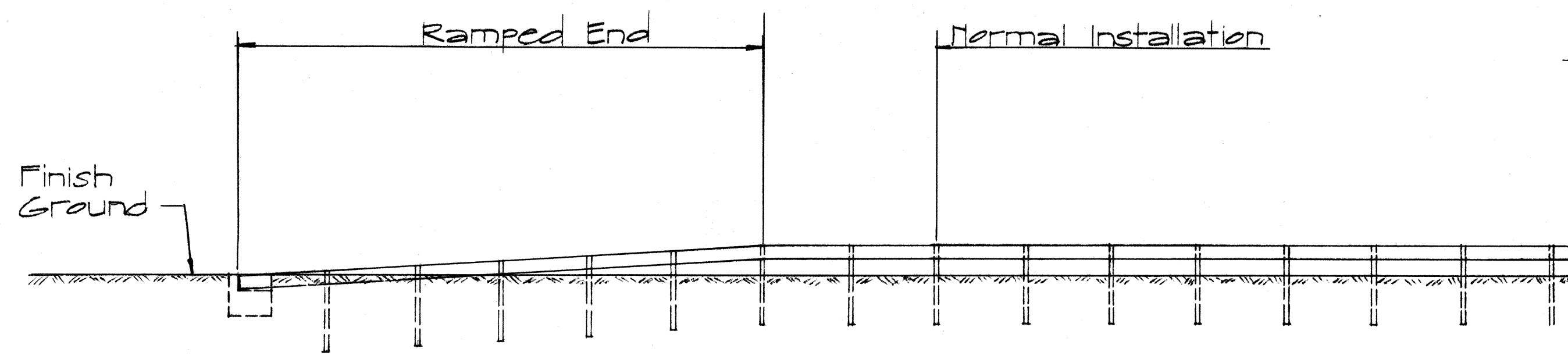
PLAN



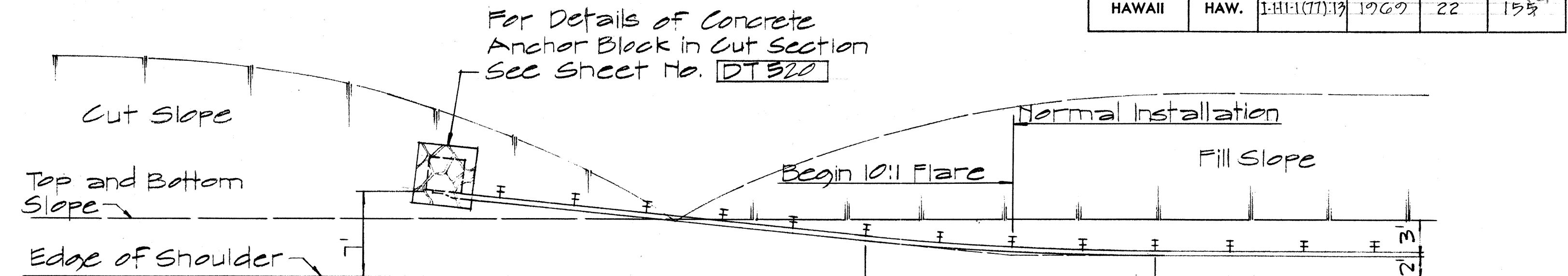
ELEVATION
TYPE "D" FLARE
Sc. 1/8" = 1'-0"



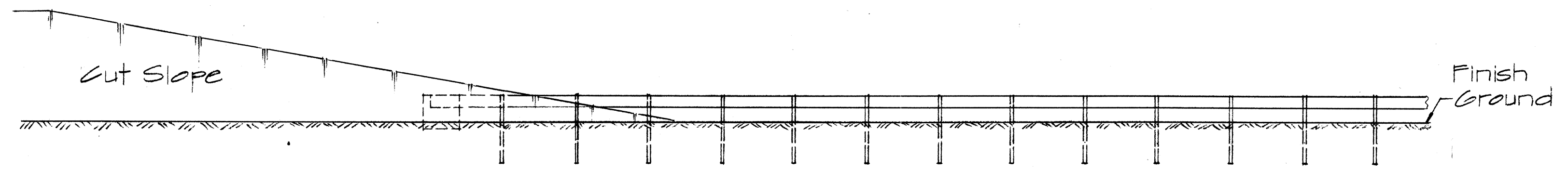
PLAN



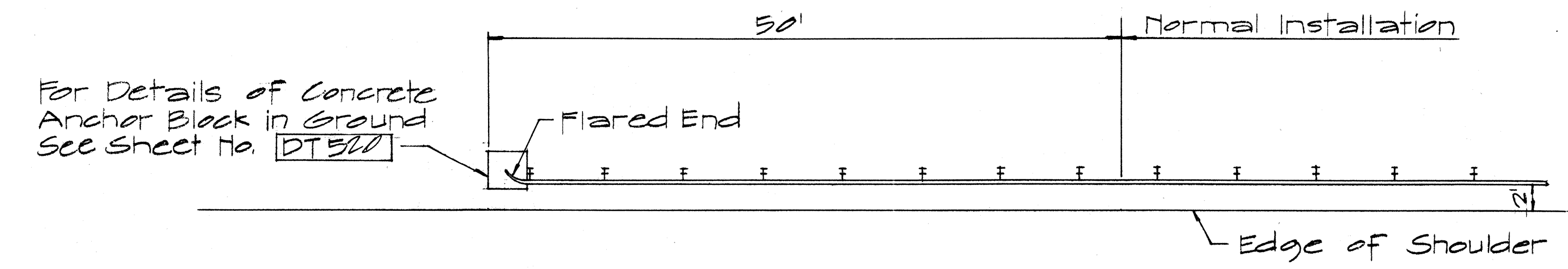
ELEVATION
TYPE "E" FLARE
Sc. 1/8" = 1'-0"



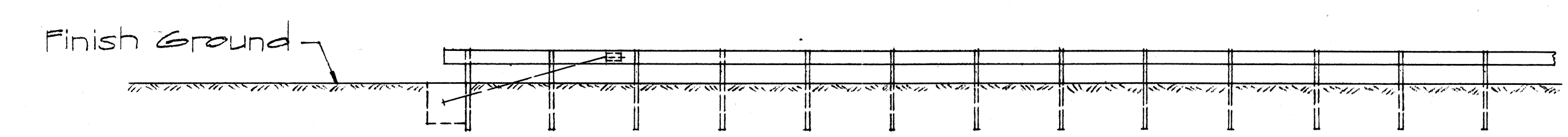
PLAN



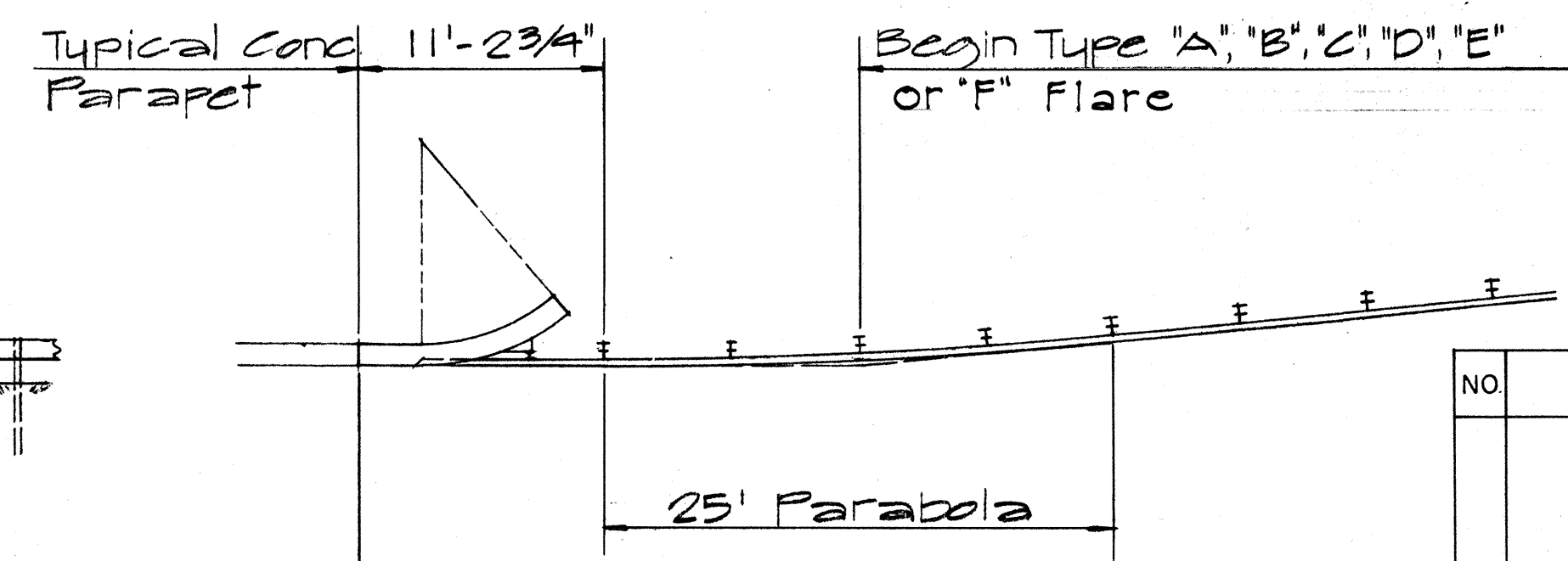
ELEVATION
TYPE "F" FLARE
Sc. 1/8" = 1'-0"



PLAN



ELEVATION
TYPE "G" FLARE
Sc. 1/8" = 1'-0"



TYPICAL LAYOUT PLAN OF
END POST CONNECTION
Sc. 1/8" = 1'-0"

APPROVAL RECOMMENDED:
Eishi Tanaka 12/29/69
TRAFFIC ENGINEER DATE

APPROVED:
Wm. J. Sal 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

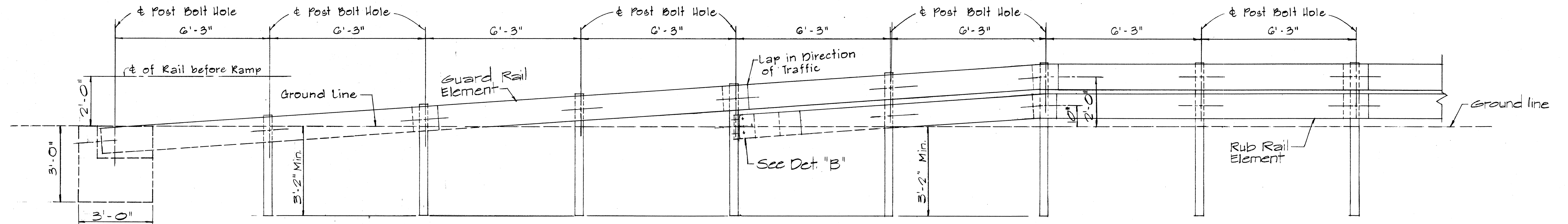
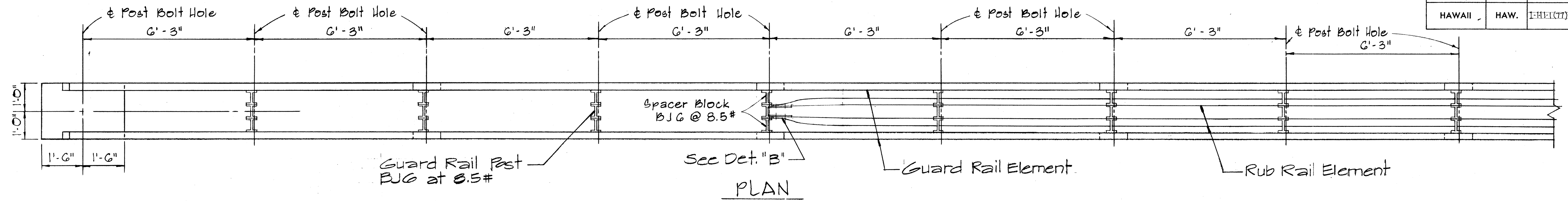
STANDARD DETAILS
OF TRAILING END
FLARE - ONE & TWO
WAY ROADWAY

Sc. As Noted APRIL 1969

SHEET No. 11 OF 23 SHEETS DT 517

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HH(11)12	1969	24	154

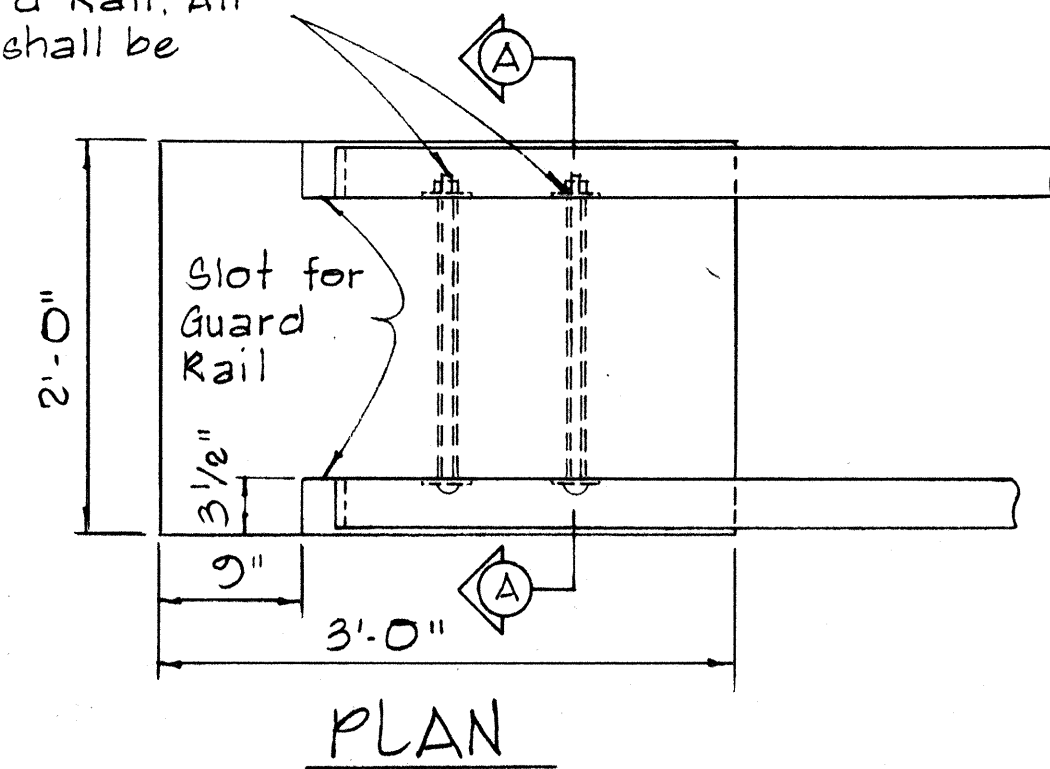


ELEVATION

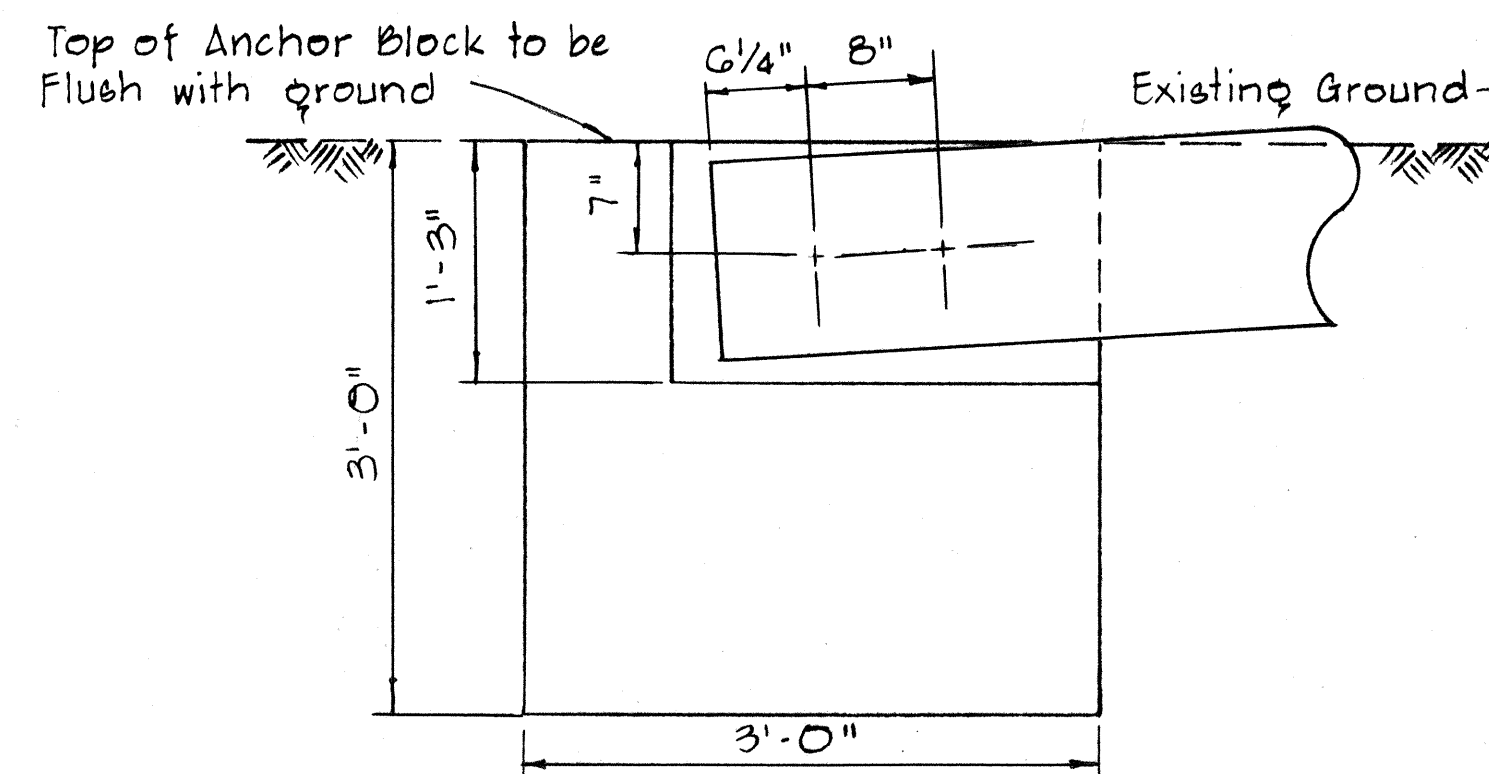
STRAIGHT APPROACH - RAMP END ANCHORAGE (MEDIAN)

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

5/8" Bolts with 3/4" G.I. Pipe Sleeve in each hole. Incidental to Metal Guard Rail. All Metal Pieces shall be Galvanized.



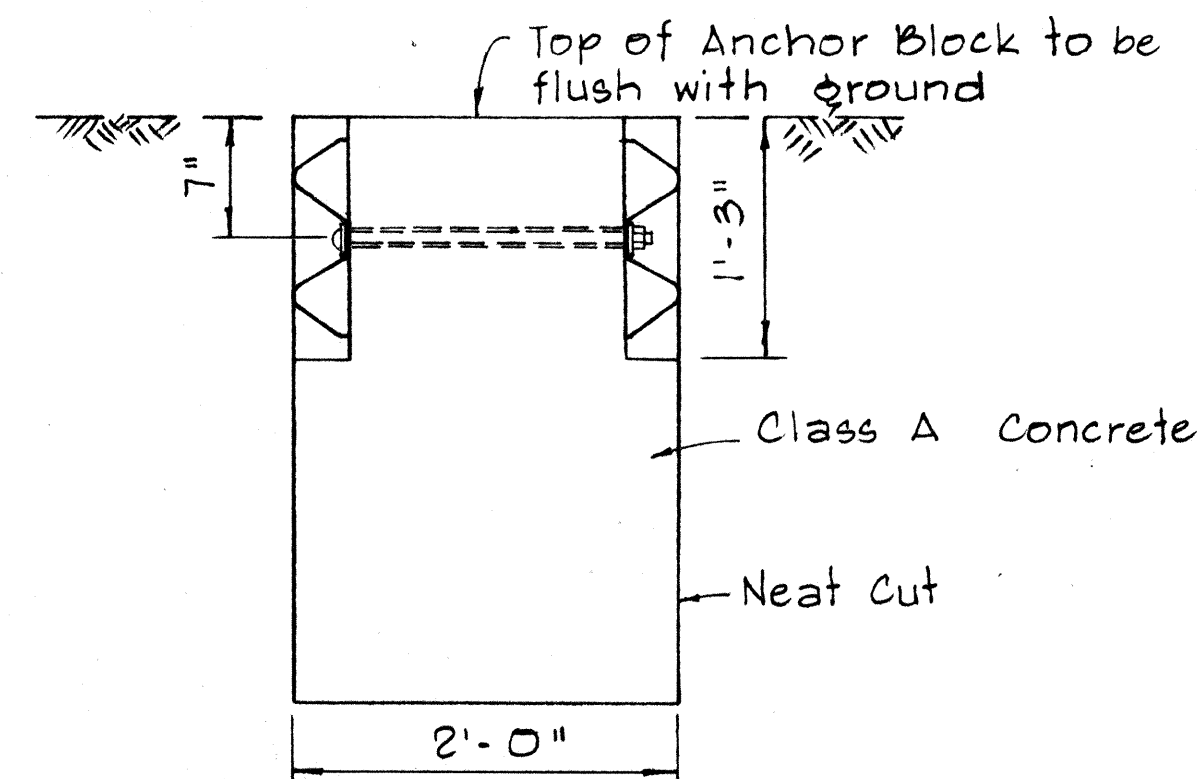
PLAN



ELEVATION

CONCRETE ANCHOR BLOCK FOR RAMP END

Scale: 1" = 1'-0"



SECTION A-A

NOTE: Concrete, Excavation, and Miscellaneous Appurtenances necessary to anchor the Guard Rail Ends, shall be incidental to the Metal Guard Rail.

NOTE: All Shoe Assembly, including anchor bolts, nuts, and washers, shall be galvanized.

3/4" Dia. holes for 5/8" dia. bolts

1" Dia. holes for 7/8" dia. bolts

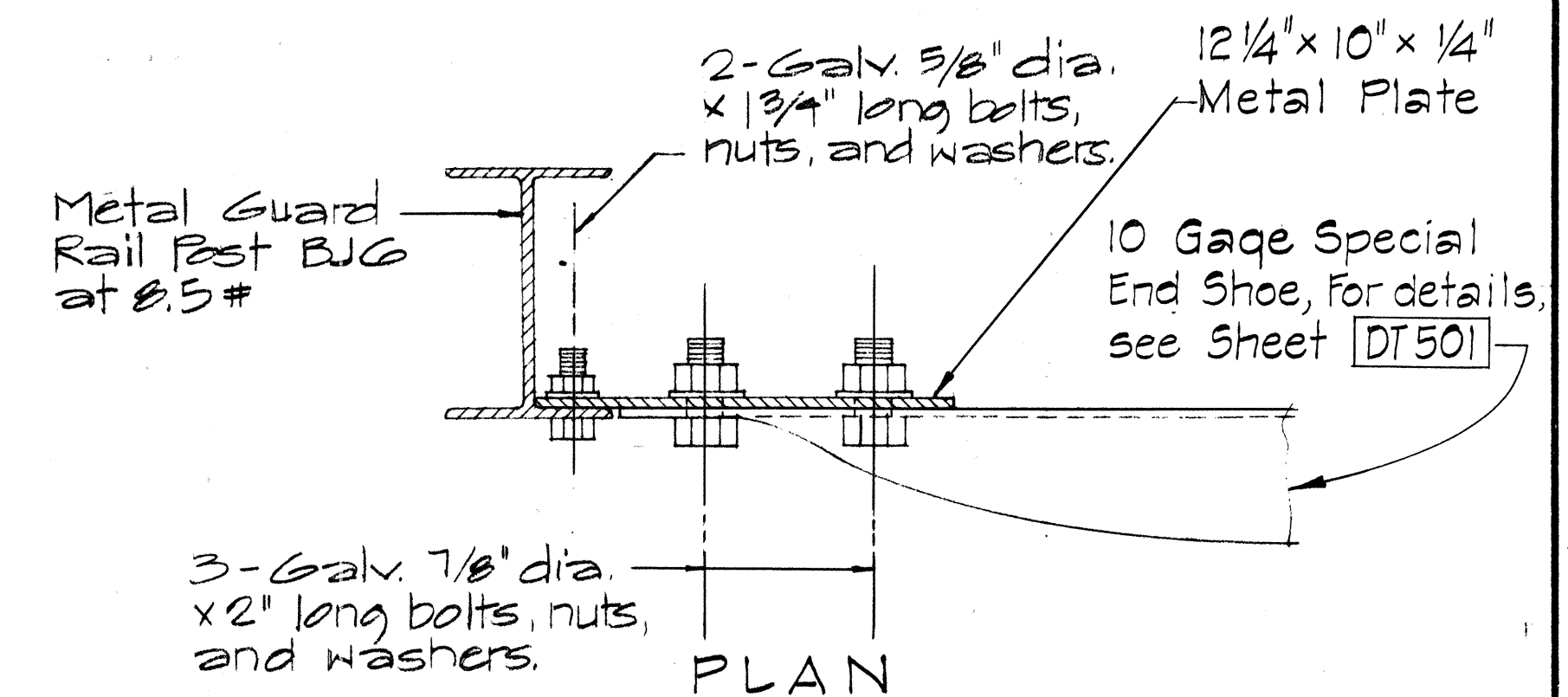
10 Gage Special End Shoe, For details, see Sheet DT 501

Finish ground

ELEVATION

DETAIL "B"

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



PLAN

APPROVAL RECOMMENDED:
TRAFFIC ENGINEER

12/29/69
DATE

APPROVED:
ASSISTANT CHIEF, ENGINEERING

12-20-69
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAIL
GUARD RAIL
RAMP END ANCHORAGE

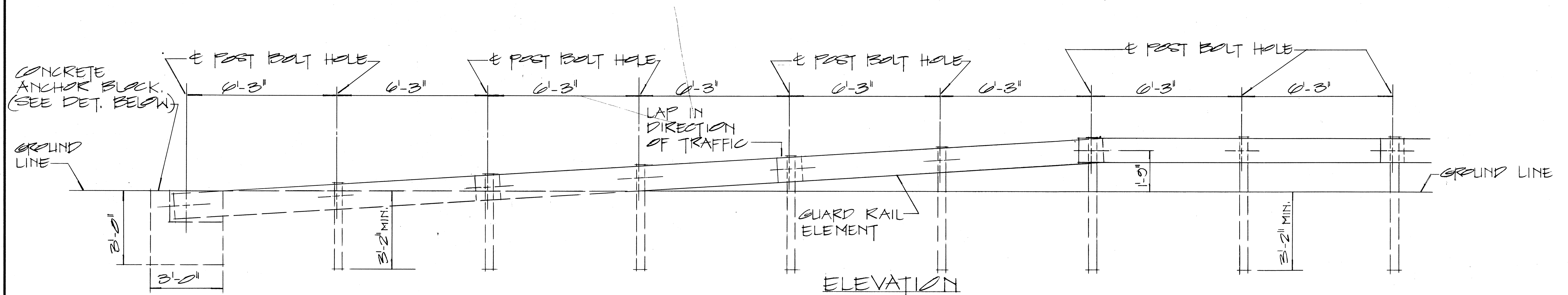
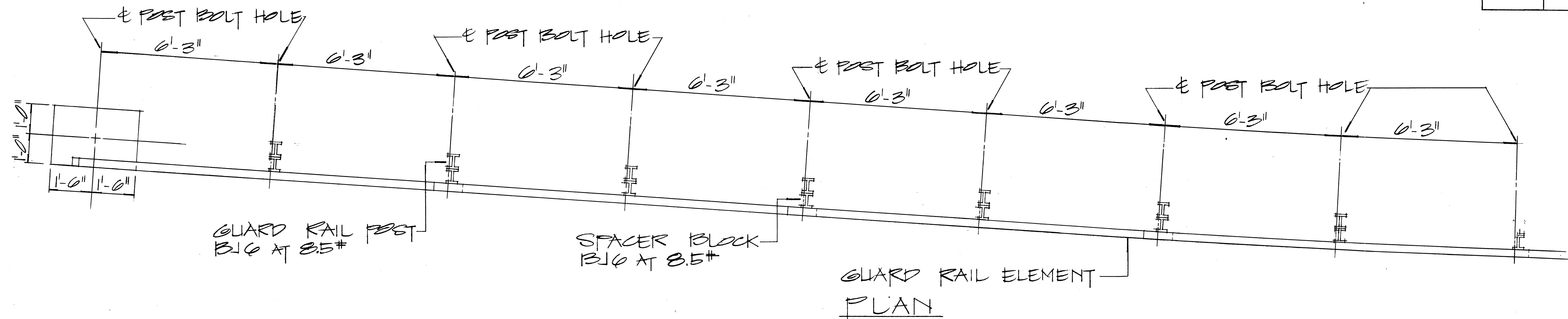
Scale: as Noted

August, 1968

SHEET No. 13 OF 23 SHEETS DT 502

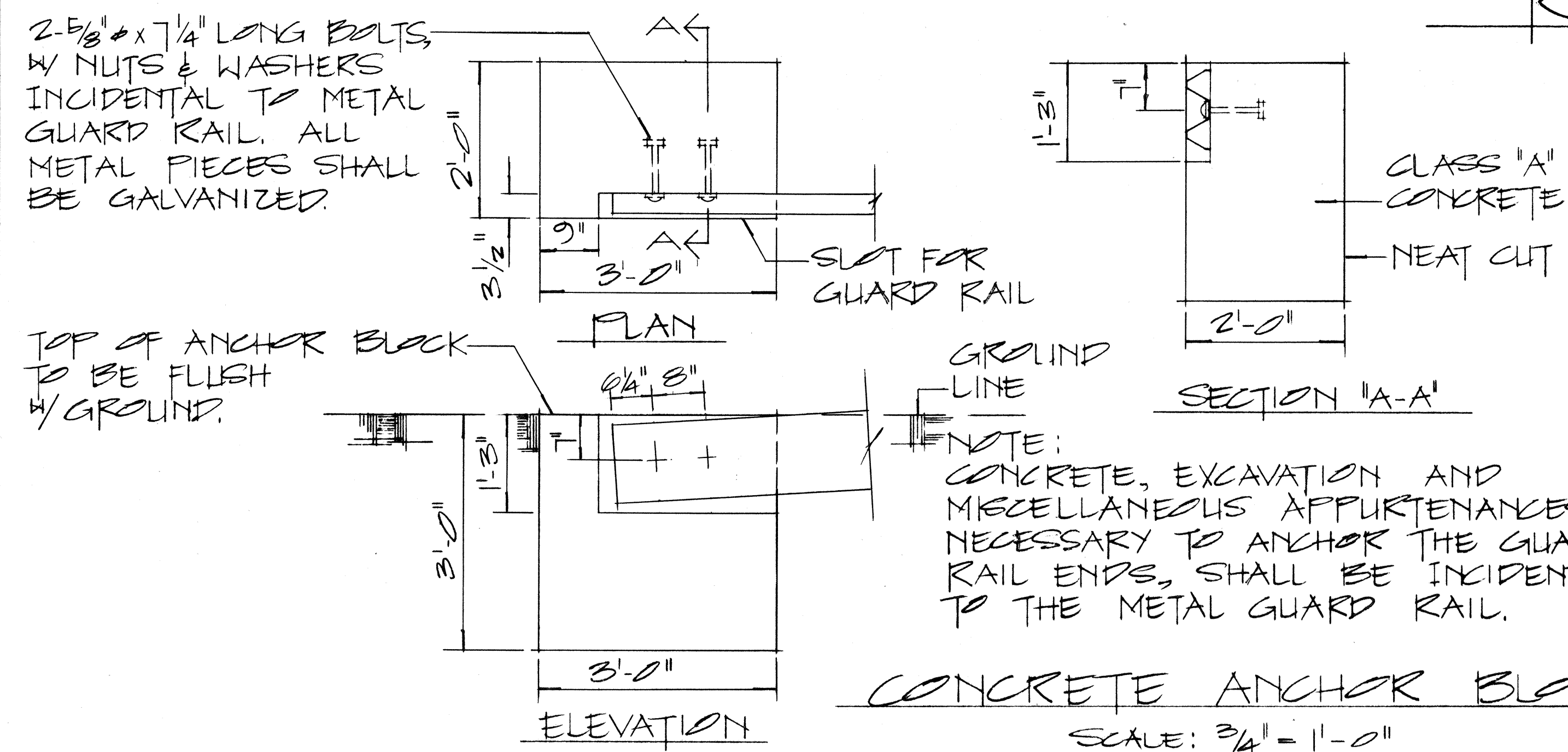
DATE	
SURVEY PLOTTED BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HFH(77):13	1969	24 A	155 ⁴



RAMP END ANCHORAGE

SCALE: $\frac{1}{2}'' = 1'-0''$



APPROVAL RECOMMENDED:
Erich Tanaka
TRAFFIC ENGINEER

12/29/69
DATE

APPROVED: John J. J. J. 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

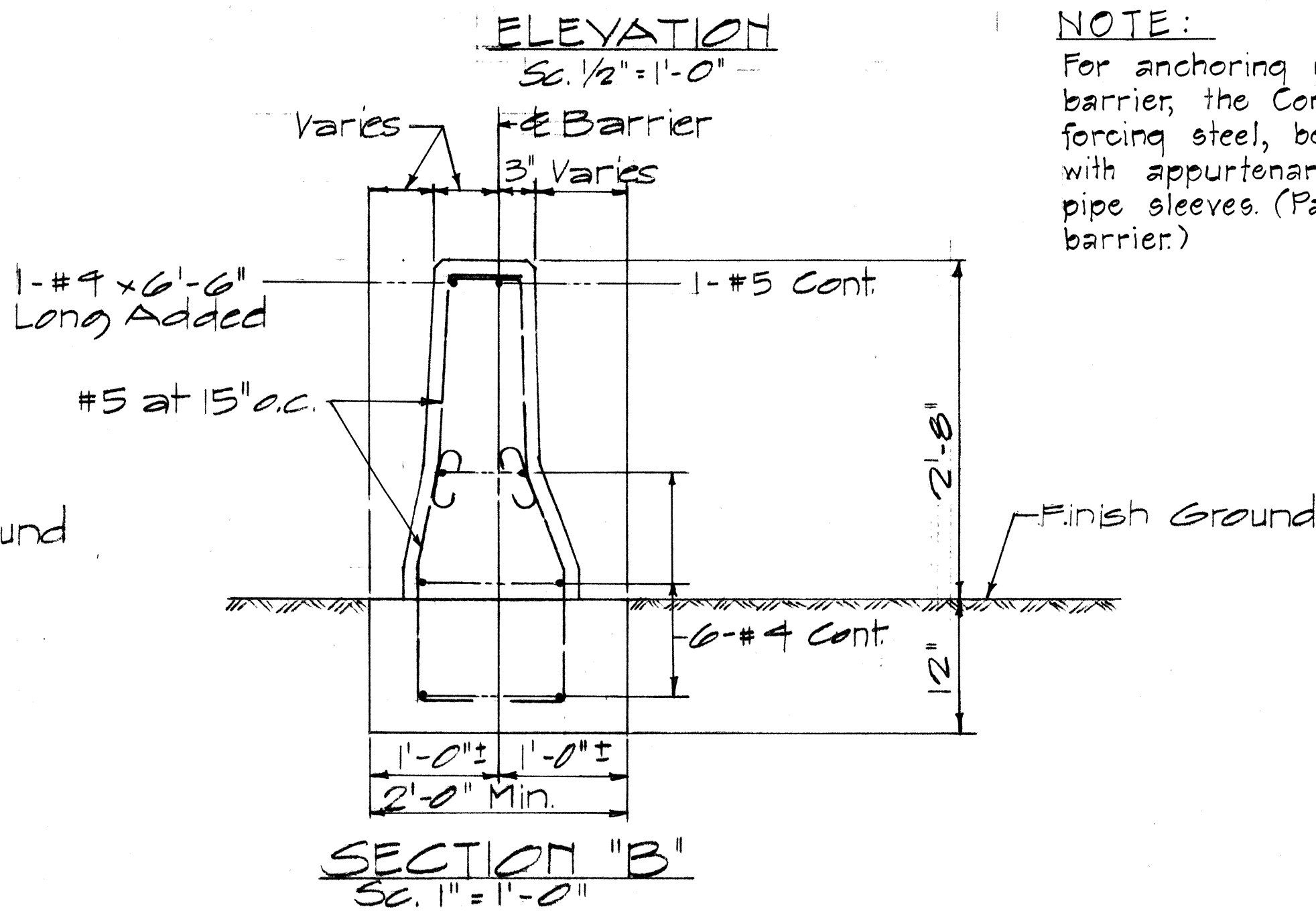
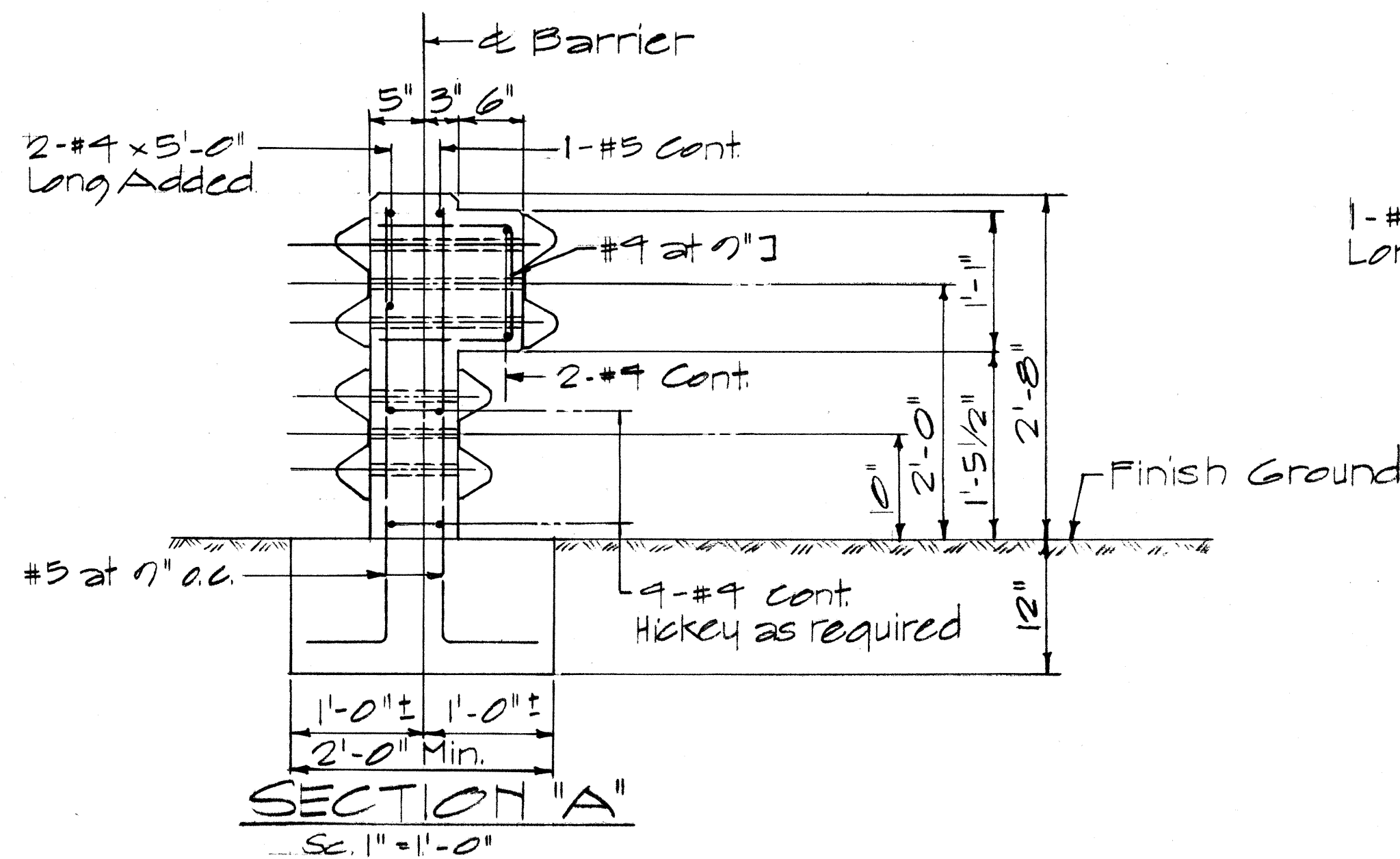
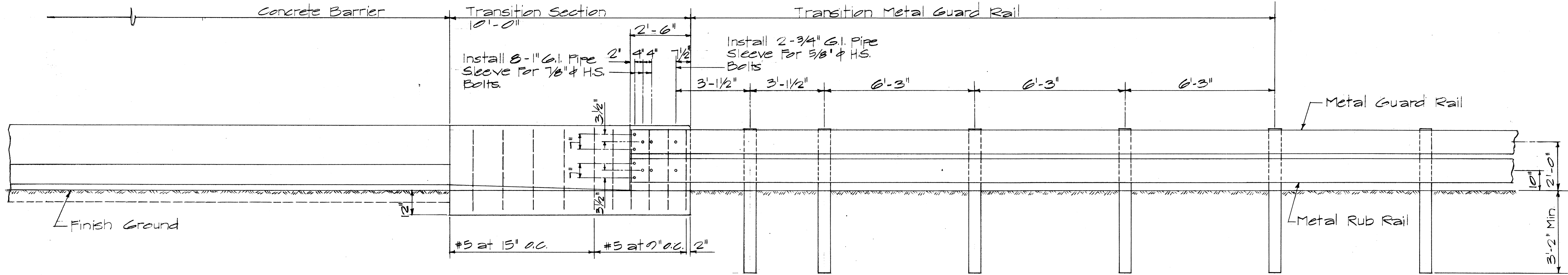
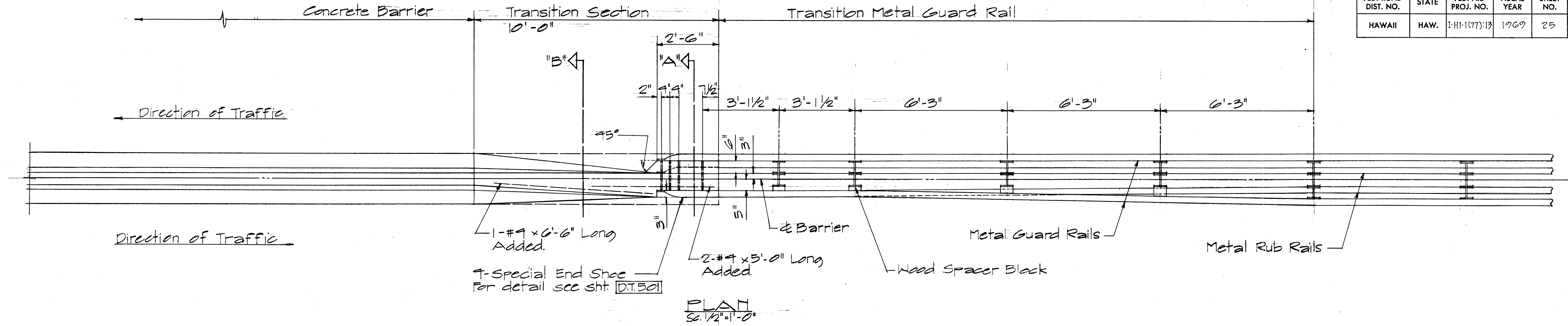
STANDARD DETAILS

GUARD RAIL, TYPE 3
RAMP END ANCHORAGE

SCALE: AS SHOWN

SHEET No. 14 OF 23 SHEETS DT512

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H1-1(77)-13	1969	25	154



NOTE:
For anchoring metal guard rail elements to concrete barrier, the Contractor shall furnish and install reinforcing steel, bolts of appropriate lengths and size with appurtenant washers, nuts, wooden blocks and pipe sleeves. (Payments shall be incidental to concrete barrier.)

APPROVAL RECOMMENDED:
Enishi Tanaka 12/29/69
TRAFFIC ENGINEER DATE

APPROVED:
John S. S. S. 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

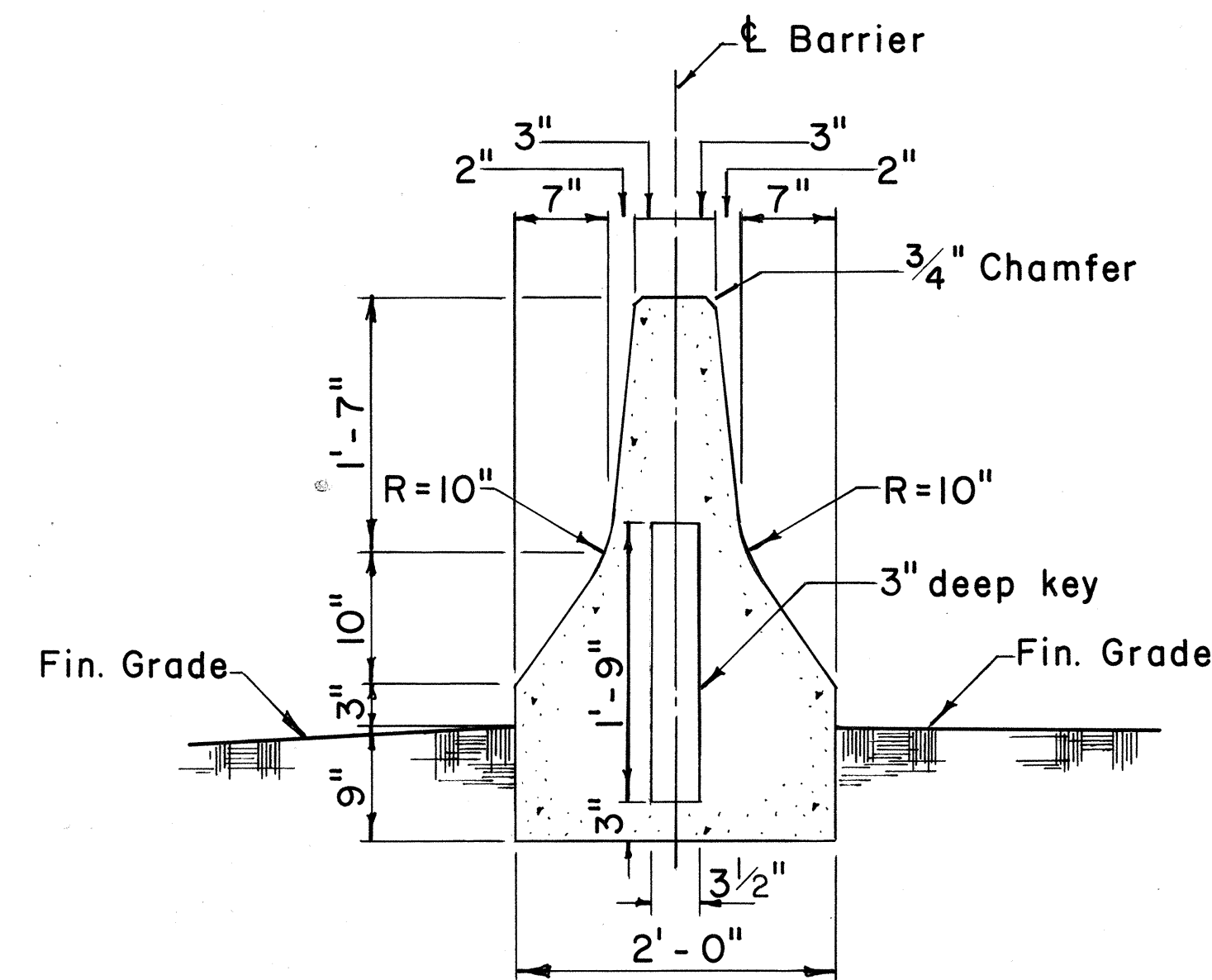
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**STANDARD DETAIL
METAL GUARD RAIL
CONNECTION TO CONG.
BARRIER**

Scale As Noted Feb. 1969
SHEET No. 15 OF 23 SHEETS DT 513

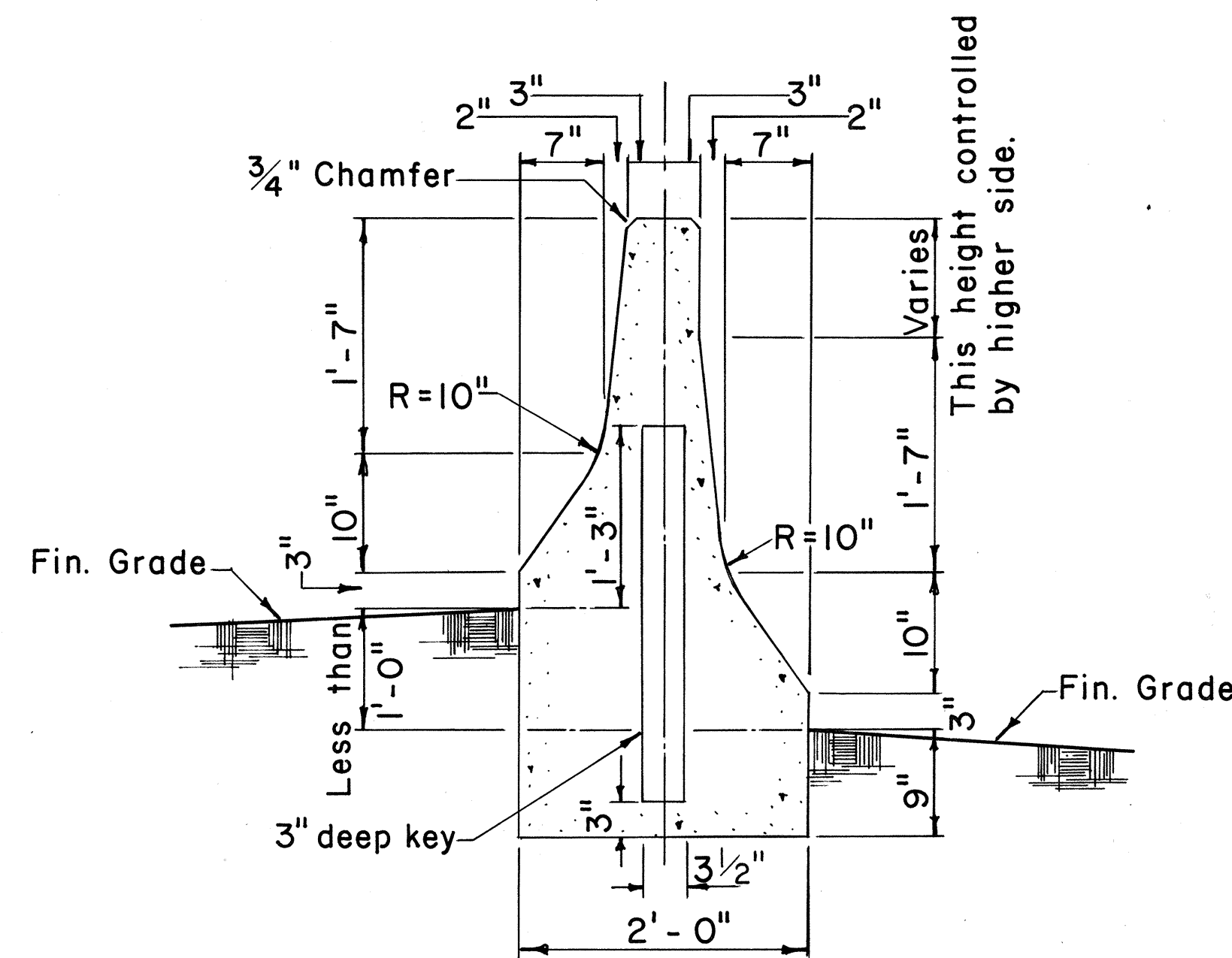
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(77)-13	1969	26	155



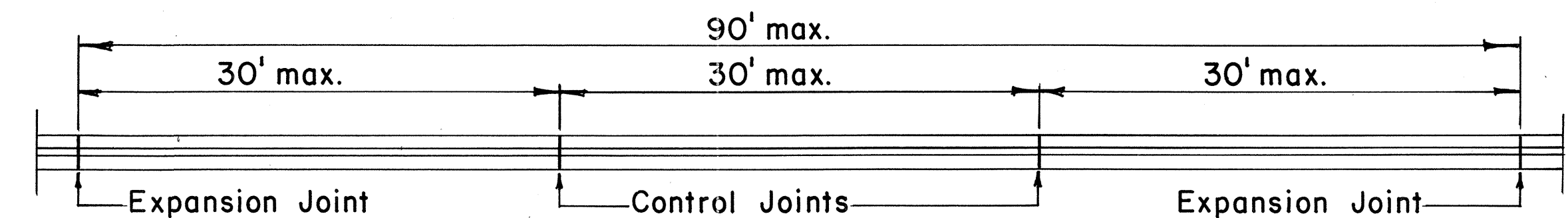
TYPE 4A

Scale: 1" = 1'-0"



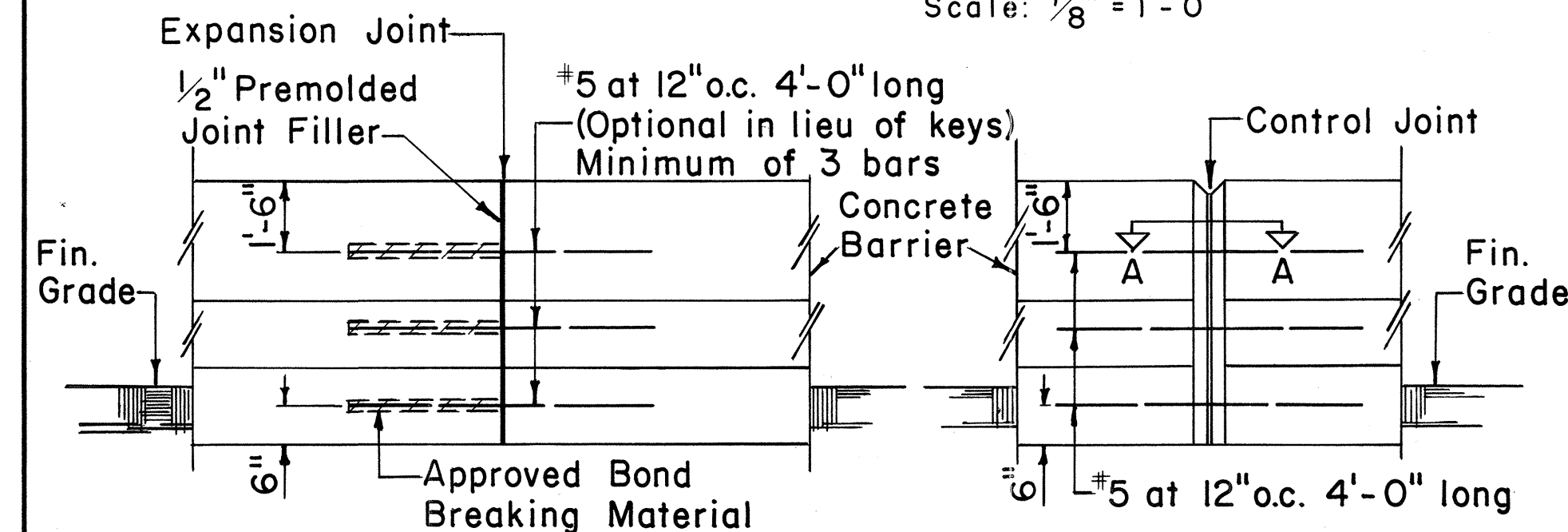
TYPE 4B

Scale: 1" = 1'-0"



PLAN

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

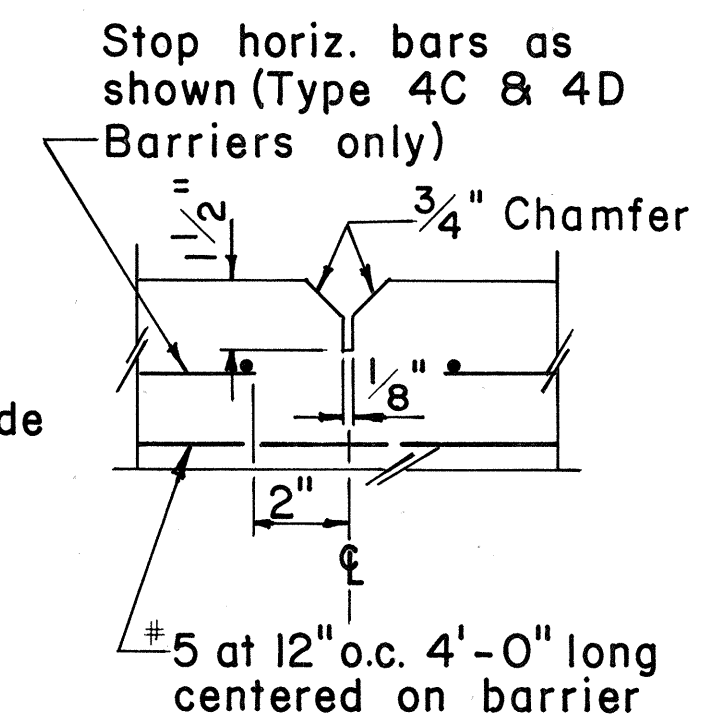


EXPANSION JOINT

CONTROL JOINT

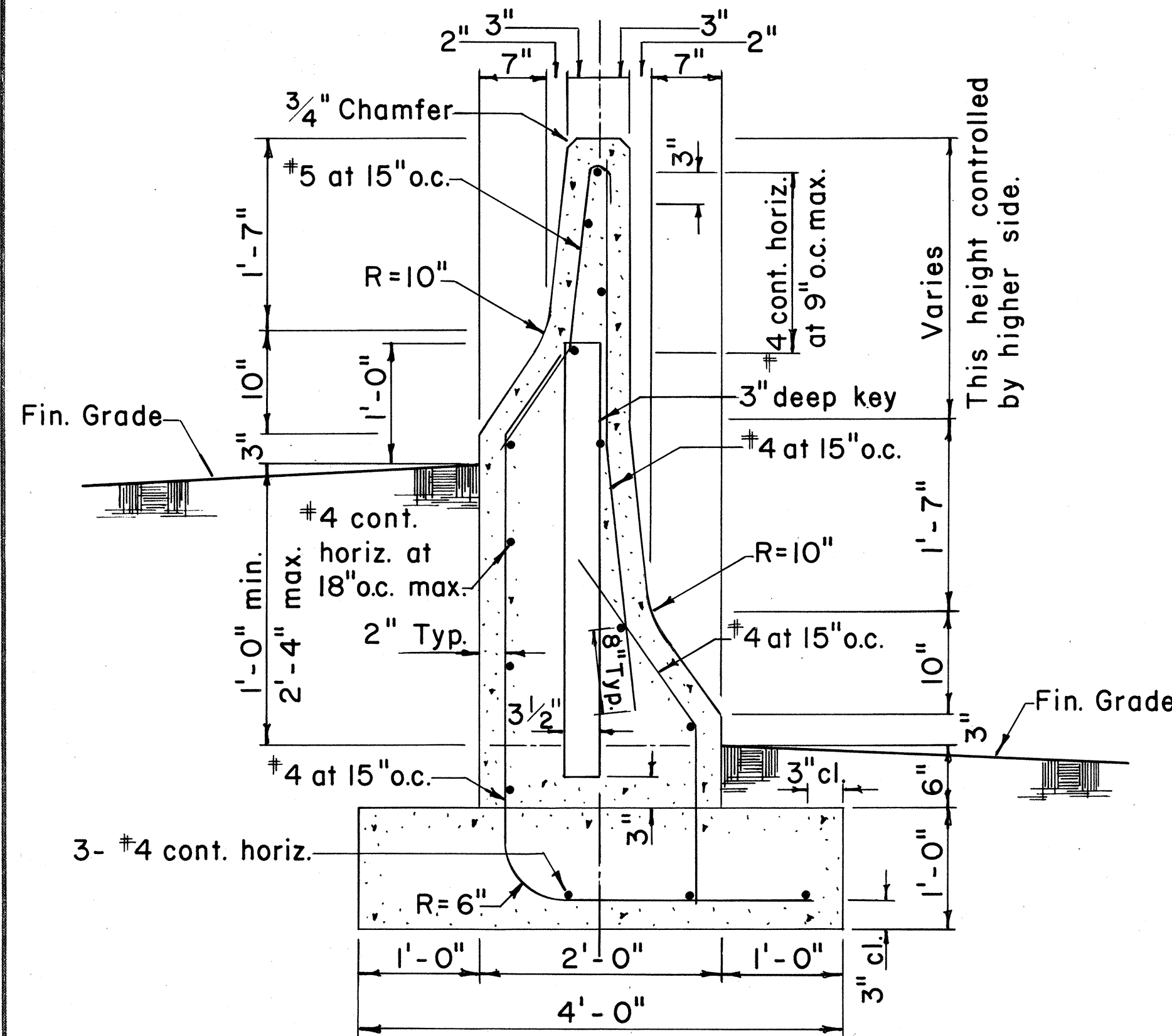
ELEVATION

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



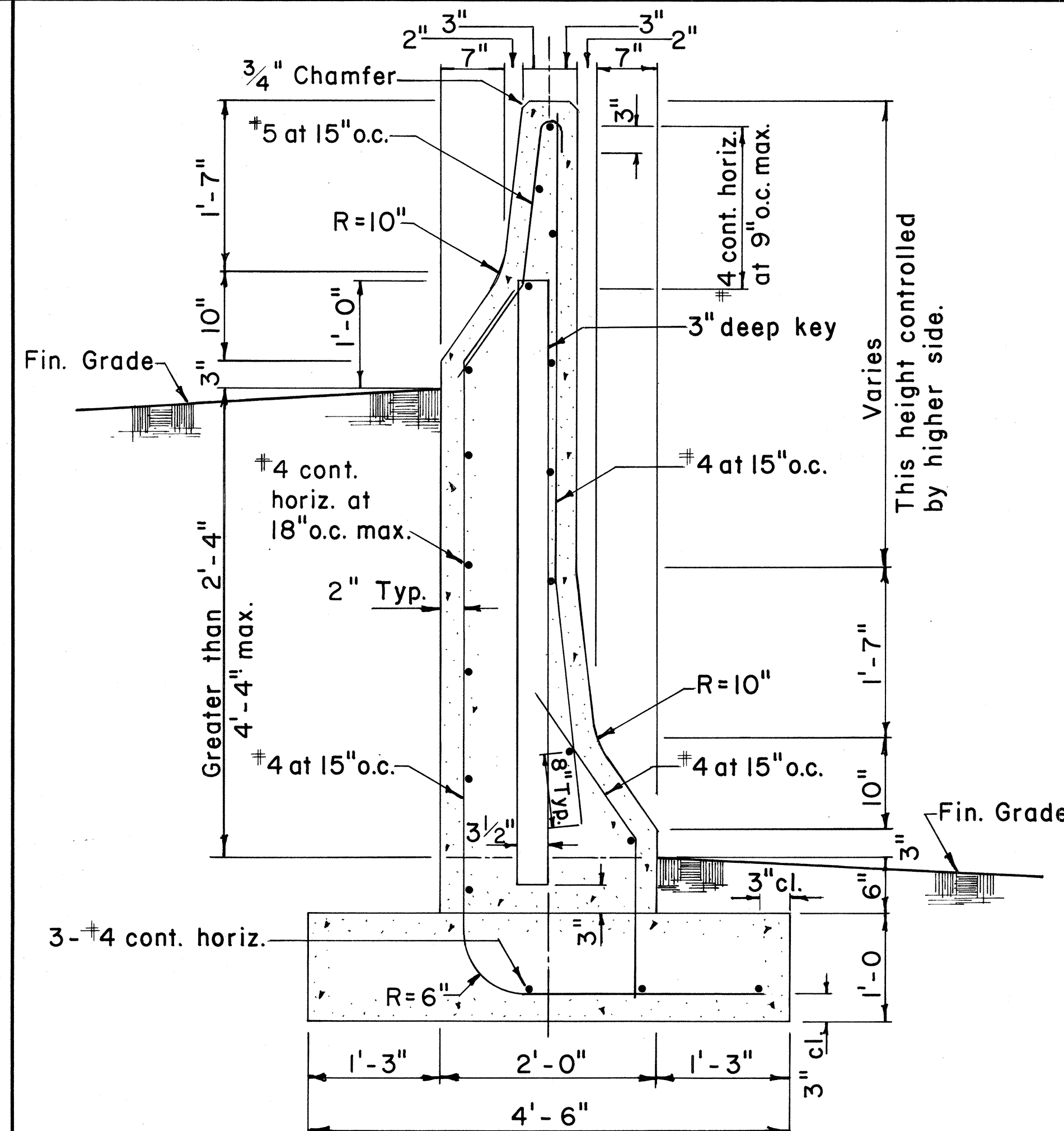
SECTION "A-A"

Scale: 3" = 1'-0"



TYPE 4C

Scale: 1" = 1'-0"

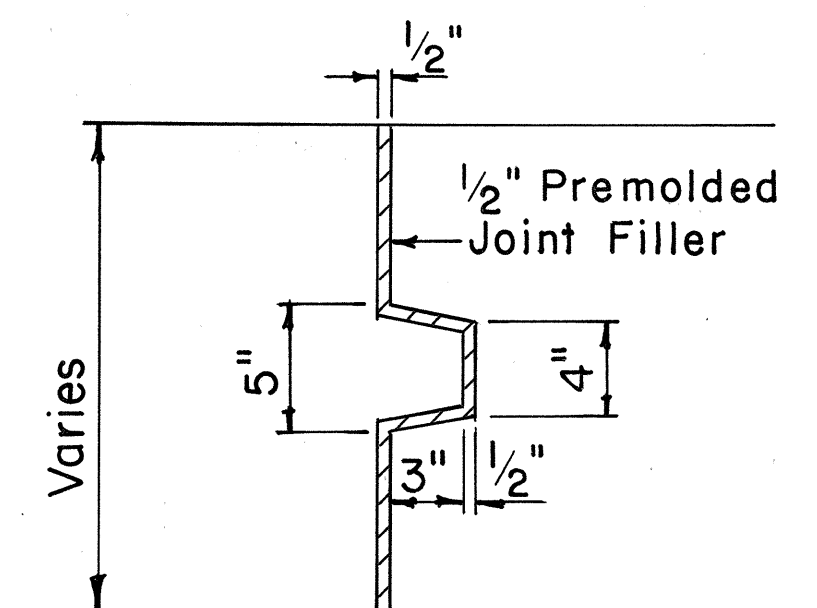


TYPE 4D

Scale: 1" = 1'-0"

GENERAL NOTES

1. Precast Rigid Barrier Guard Rail may be installed as an option to cast-in-place Type 4 Rigid Barrier Guard Rail. Contractor shall submit shop drawings to Engineer for approval.
2. Expansion Joints shall be constructed at ninety-foot (90 ft.) maximum intervals and at existing expansion joints of structures. (Use 1/2" premolded joint filler, incidental to Type 4 Rigid Barrier Guard Rail). Control Joints shall be placed between expansion joints at 30' maximum. Shear keys shall be required at all construction joints.
3. The exterior surface and vertical alignment of the Type 4 Rigid Barrier Guard Rail shall be constructed to give a uniform and presentable appearance. Variation of more than 1/4" in 20' max. and 1/2" in 40' or more will be considered objectionable. The Engineer shall determine the acceptability of the work. During the course of the work, samples may be tested and measurements made to establish whether or not the specified values or dimensions are being met. If the specified values or dimensions are not being met, the Engineer shall determine the degree of the non-conformance, the effect on the serviceability of the project, whether the work be accepted and remain in place and, if so, the amount to be paid for such work, or whether the work shall be removed and replaced or otherwise corrected at the Contractor's expense.



SECTION THRU KEY AT EXPANSION JOINT

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

APPROVAL RECOMMENDED:

Erich Tanaka
TRAFFIC ENGINEER

12/20/69
DATE

APPROVED:

[Signature]
ASSISTANT CHIEF, ENGINEERING

12/30/69
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
GUARD RAIL TYPE 4
(RIGID BARRIER)

Scale: As Shown

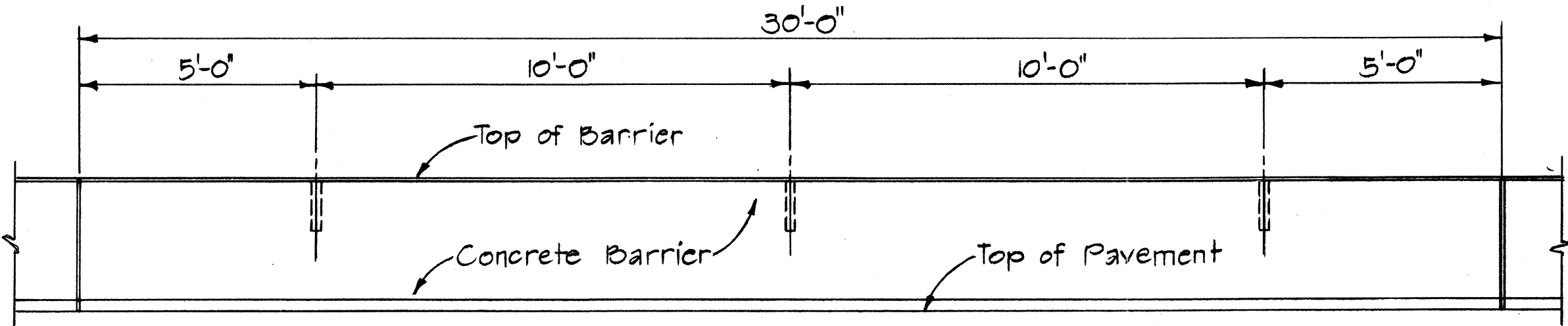
Oct. 1969

SHEET No. 16 OF 23 SHEETS

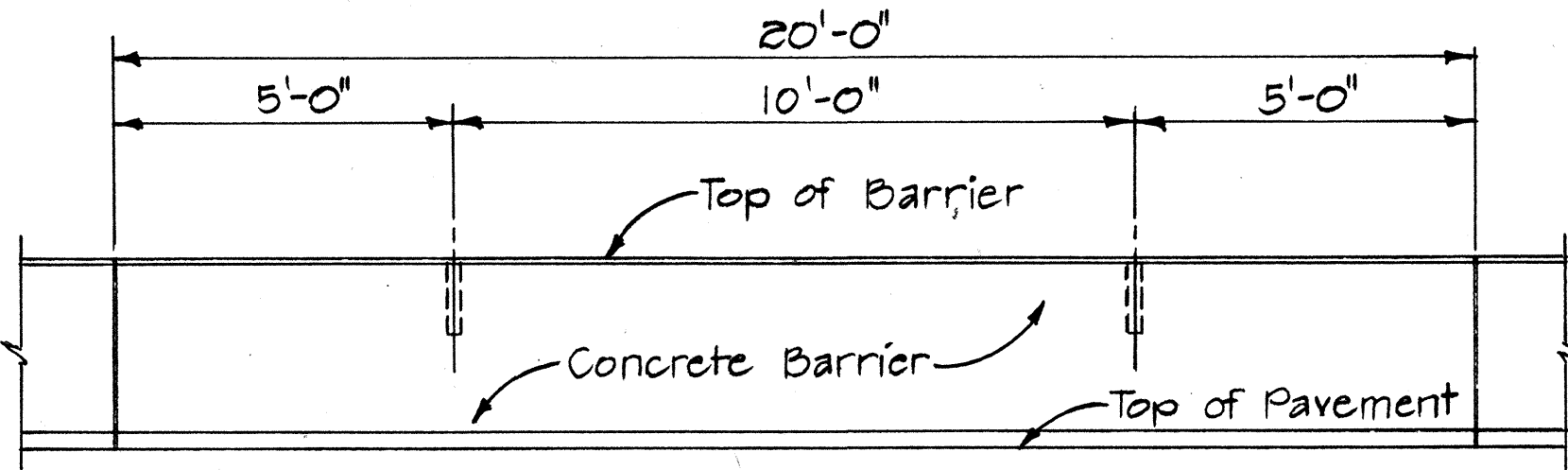
26

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

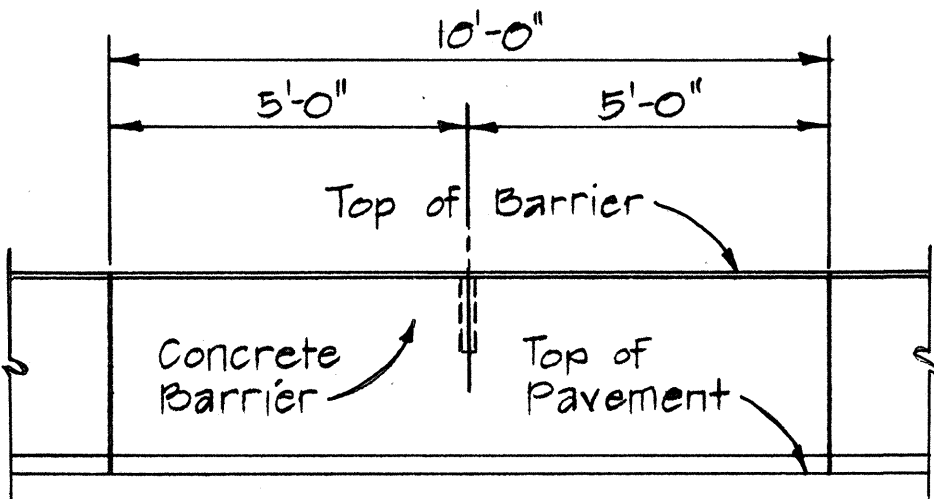
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H1-1(77)-17	1969	27	154



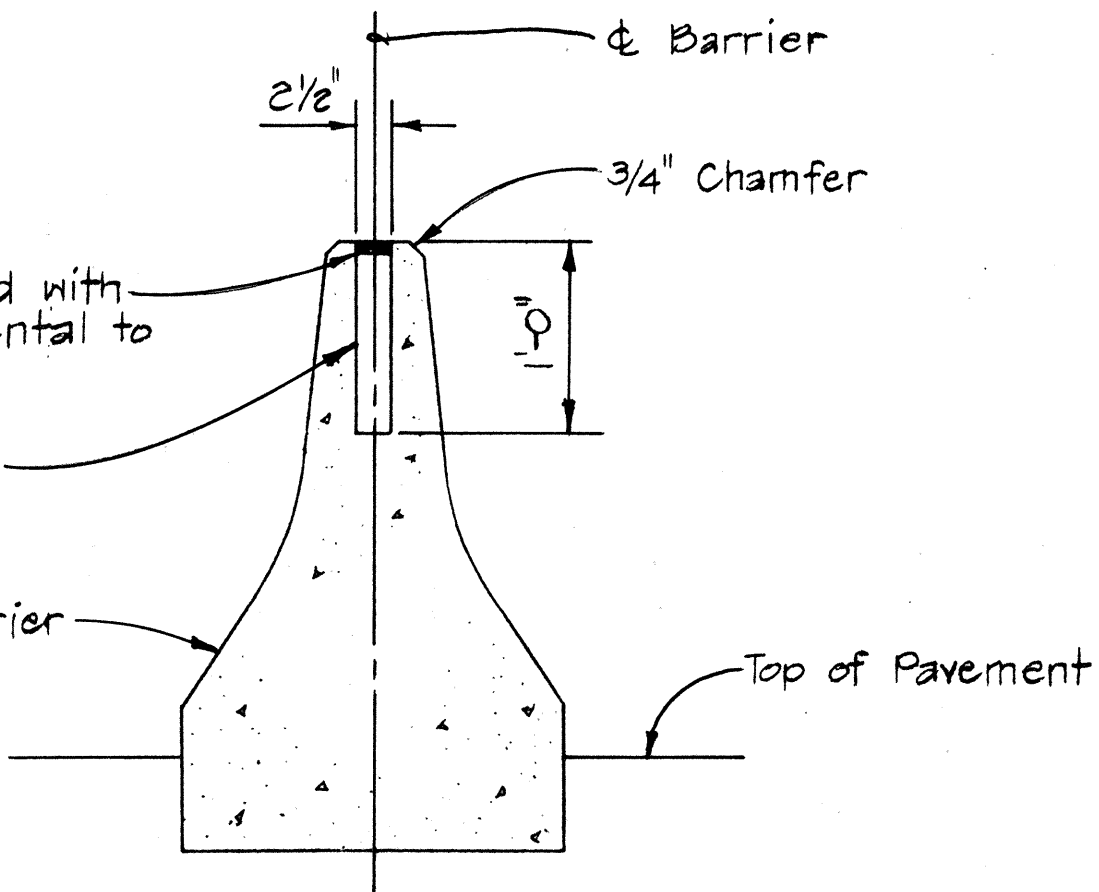
ELEVATION
30' LENGTH CONCRETE BARRIER
Scale: 3/8" = 1'-0"



ELEVATION
20' LENGTH CONCRETE BARRIER
Scale: 3/8" = 1'-0"



ELEVATION
10' LENGTH CONC. BARRIER
Scale: 3/8" = 1'-0"



Hole to be plugged with 3/4" Mortar (Incidental to Concrete Barrier)

Provide 2 1/2" hole spaced 10' o.c.

Cast-In-Place or Precast Conc. Barrier

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

HOLE SPACING DETAIL FOR CONCRETE BARRIER

APPROVAL RECOMMENDED:
Eishi Tanaka
TRAFFIC ENGINEER
12/29/69
DATE

APPROVED:
Julius J. J. J.
ASSISTANT CHIEF, ENGINEERING
12-30-69
DATE

NO.	REVISION	APPROVED BY	DATE

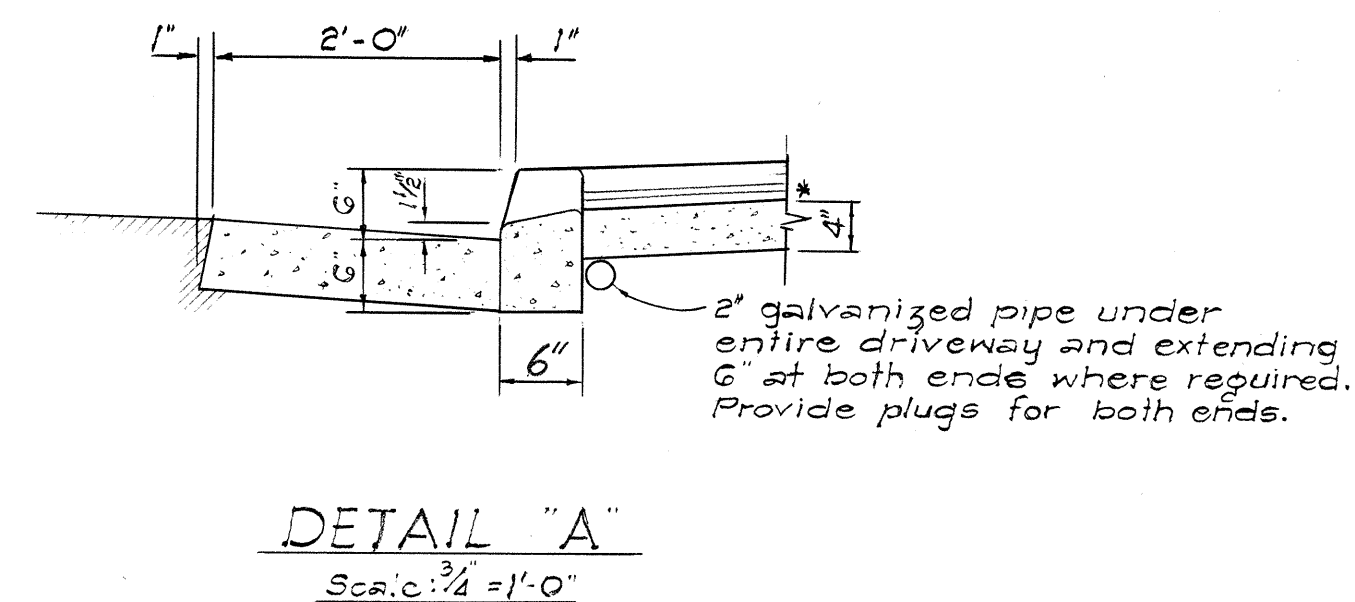
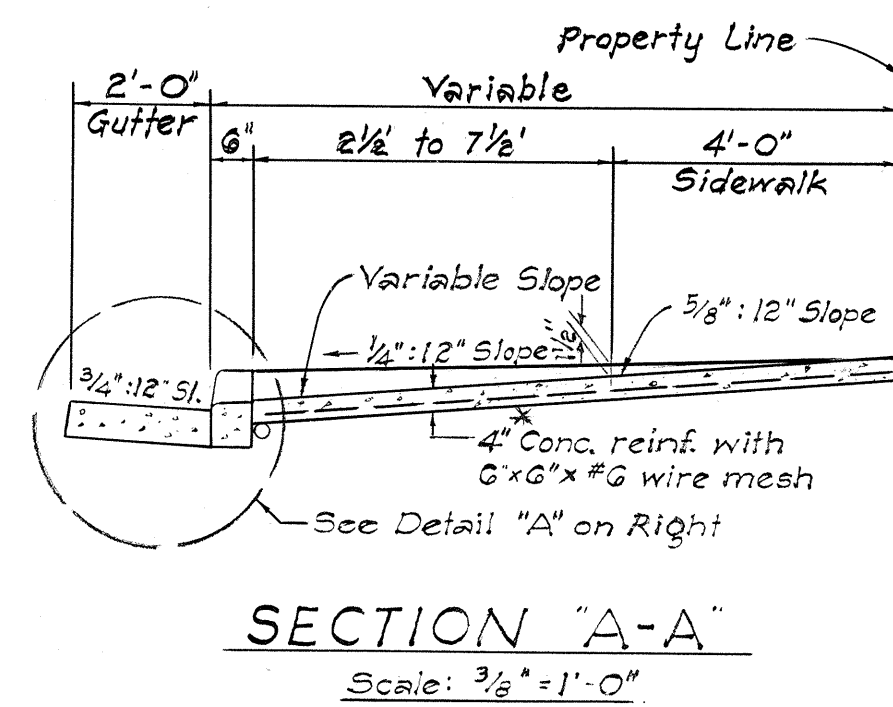
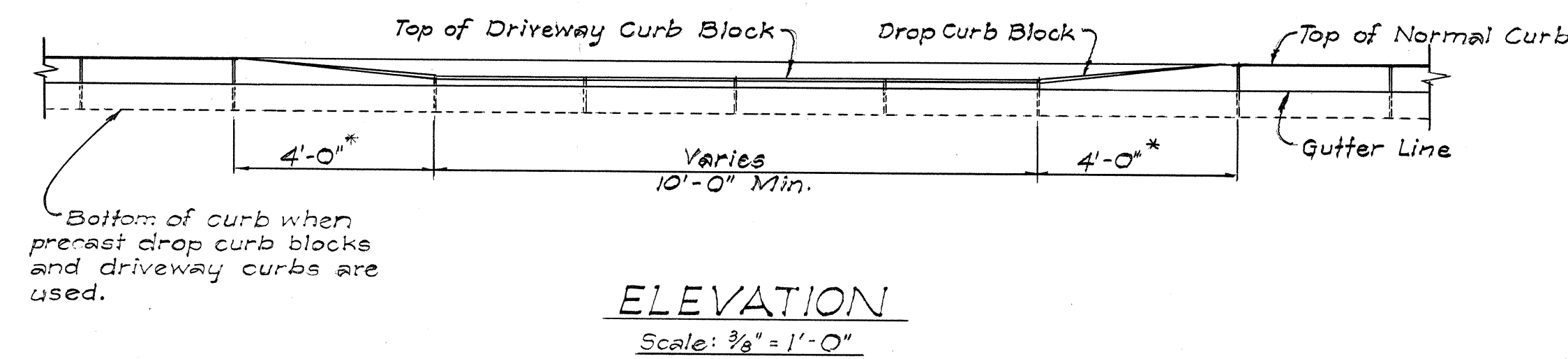
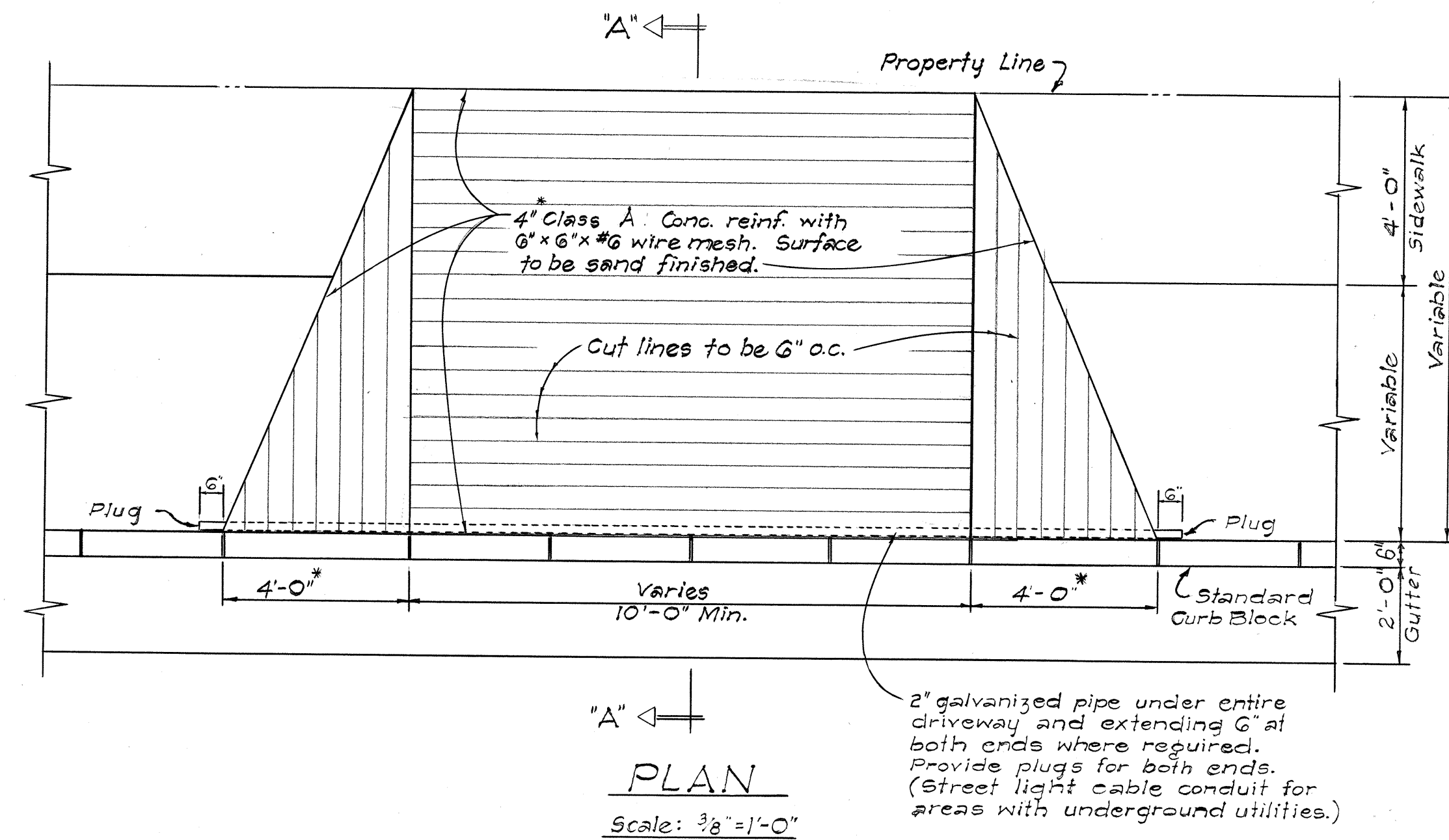
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HOLE SPACING DETAILS
FOR CONC. BARRIER

Scale: As Shown
Nov. 1968

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
NO.	

LIST OF DRIVEWAYS



CONSTRUCTION DETAILS FOR DROP DRIVEWAY

* Use dimension shown unless otherwise noted on the plans.

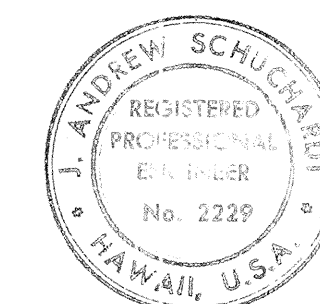
[illegible]

** Denotes 6" thick P.C.C. dropped driveway.

NOTES:

1. All measurements shown on this sheet are estimated only.
2. Private A.C. driveways shall have the following pavement section:
Wearing Surface: 2" Asphalt Concrete Mix II
Base Course: G" Aggregate Base
Aggregate Subbase: None
3. Dropped driveways in Business Zone shall be G" thick.

ORIGINAL PLAN	NOTE BOOK	SURVEY PLOTTED BY	DATE
		DRAWN BY	01
		TRACED BY	02
		DESIGNED BY	03
		QUANTITIES BY	04
		CHECKED BY	05



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
J. Andrew Schuchardt

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

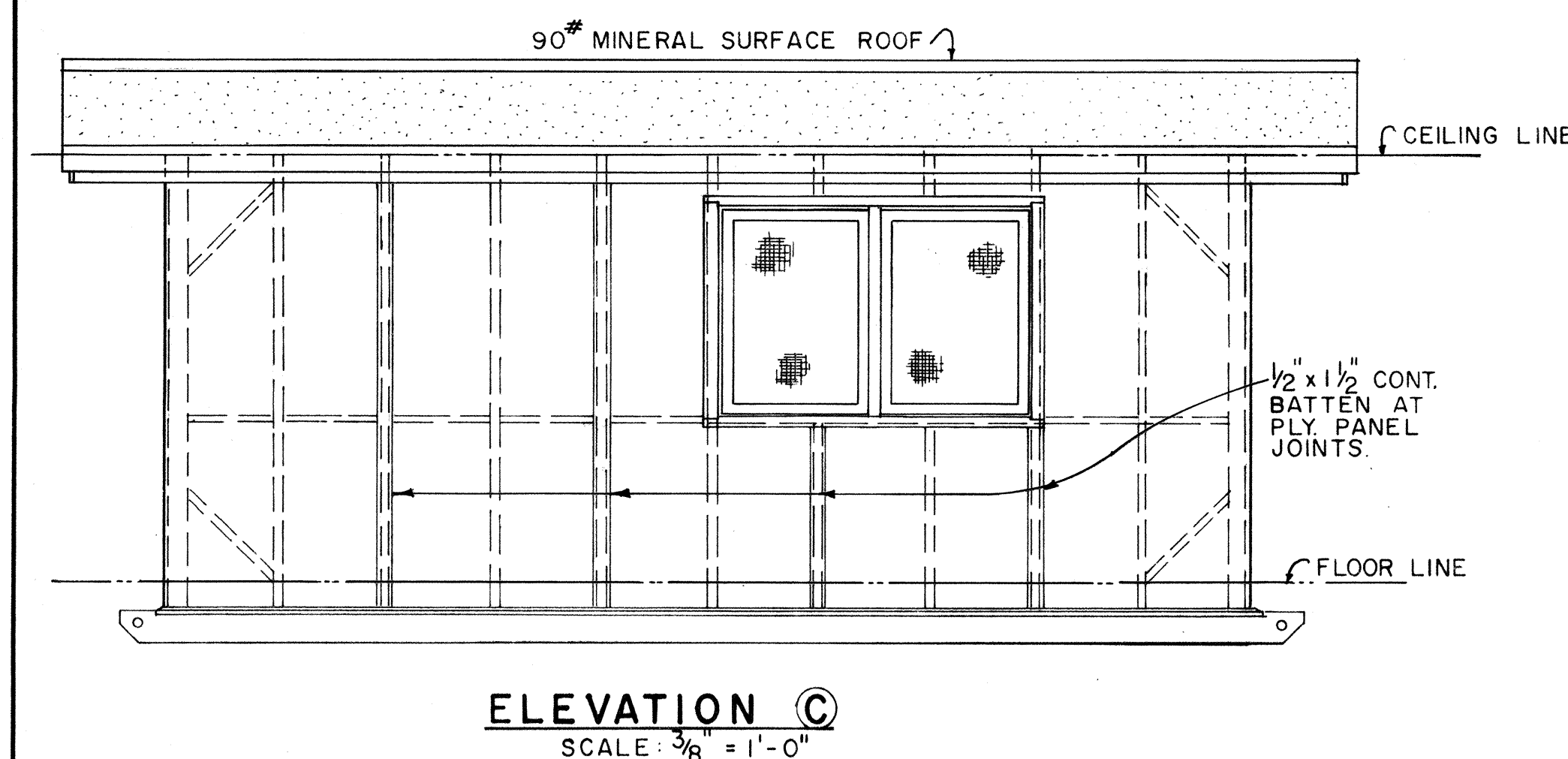
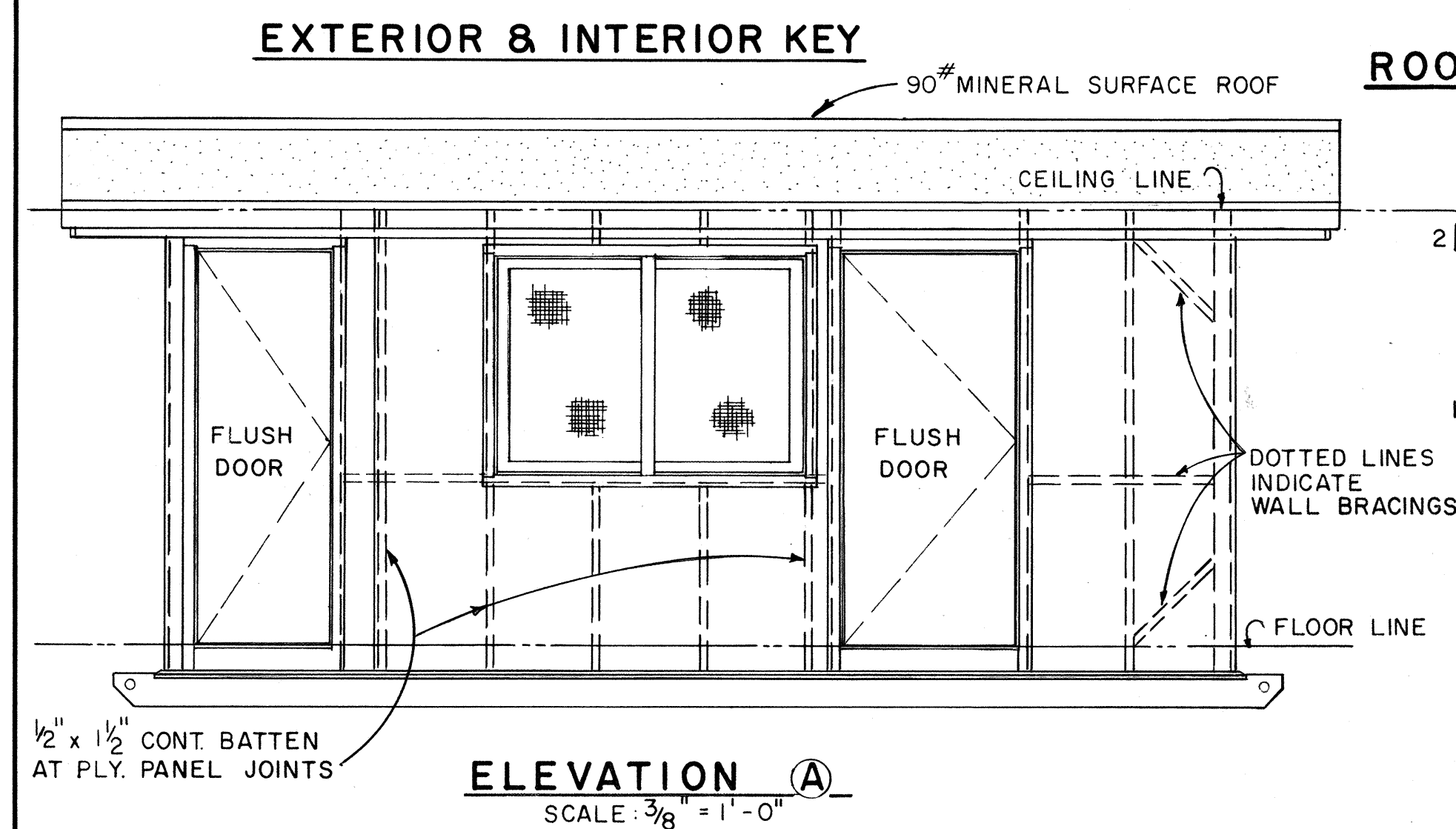
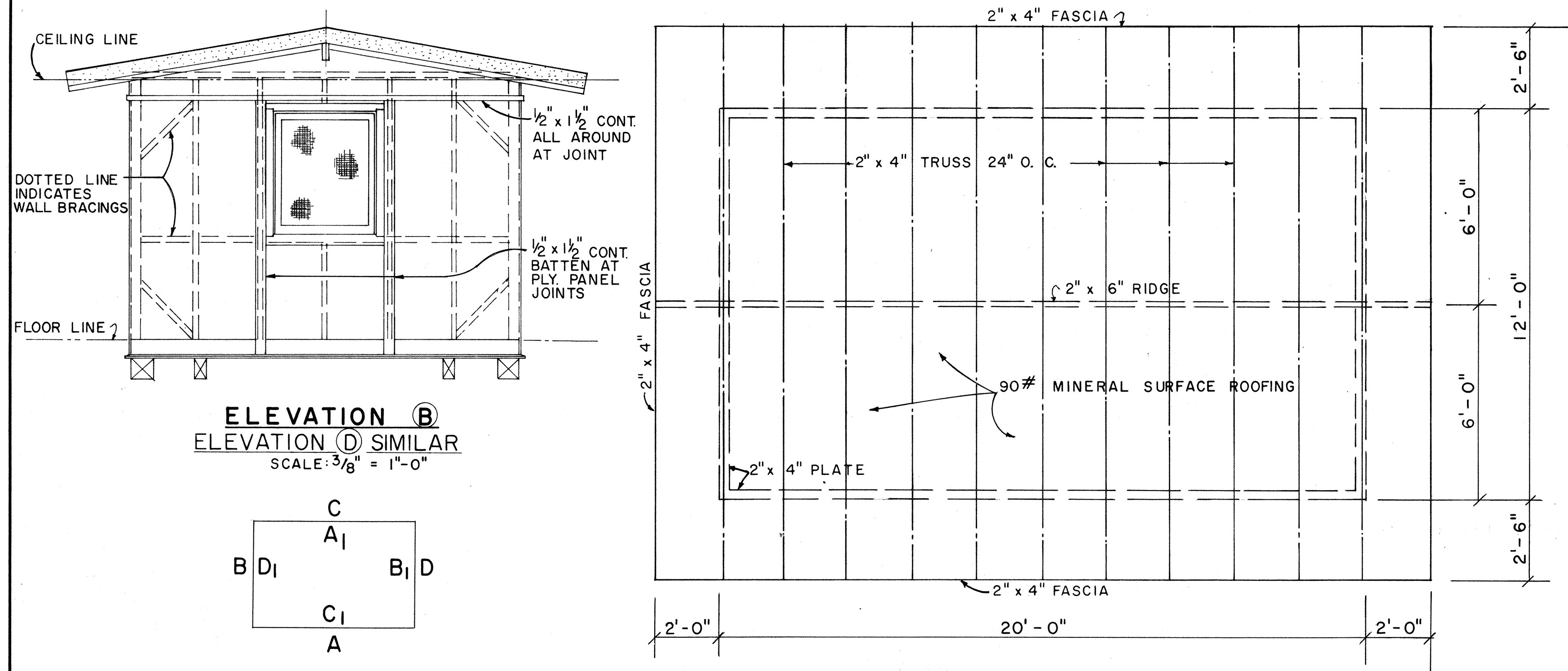
DETAILS FOR DRIVEWAYS

HALAWA INTERCHANGE
PROJECT NO. I-H-1 (77):13

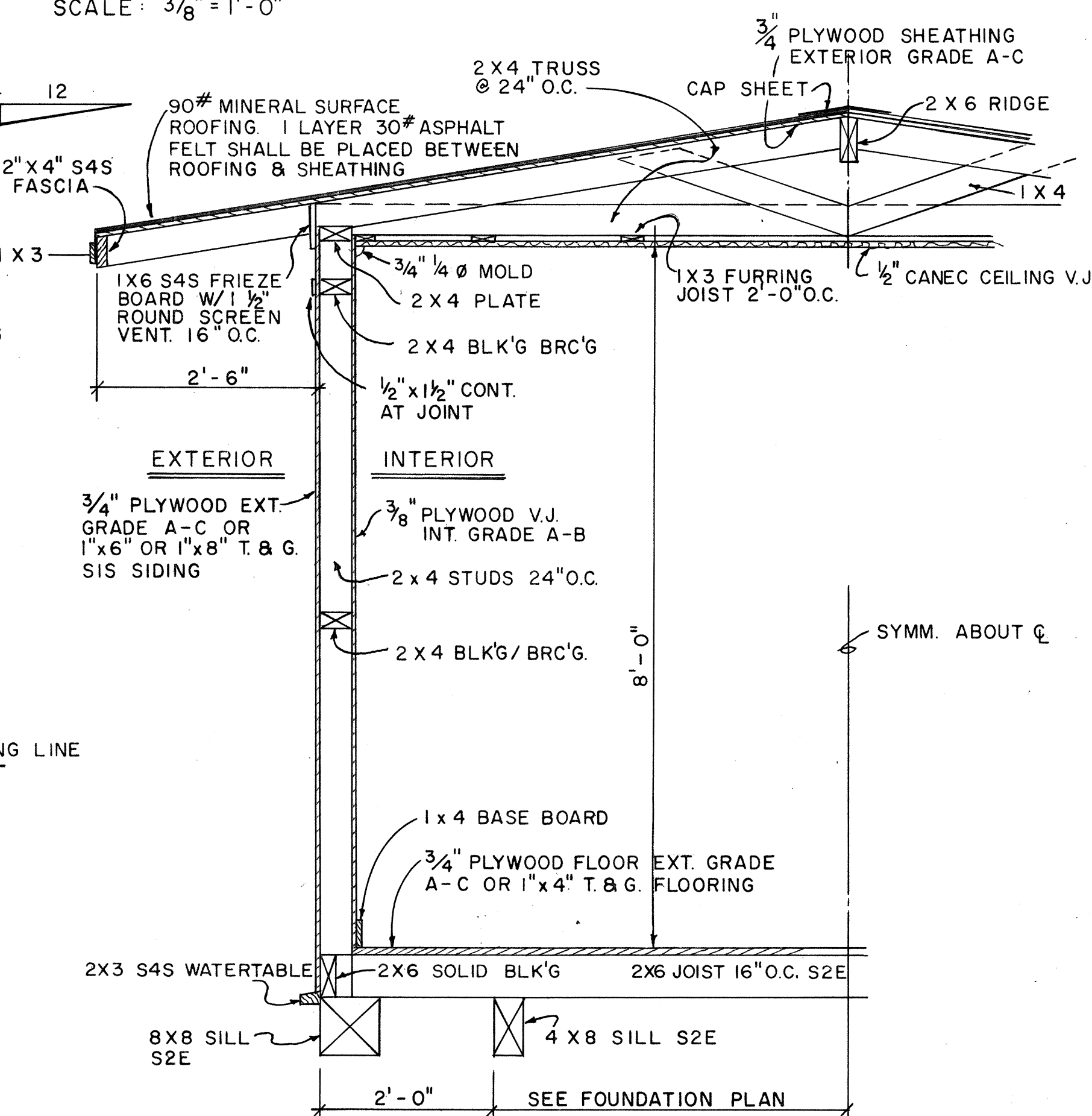
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SHEET No. 18 OF 23 SHEETS

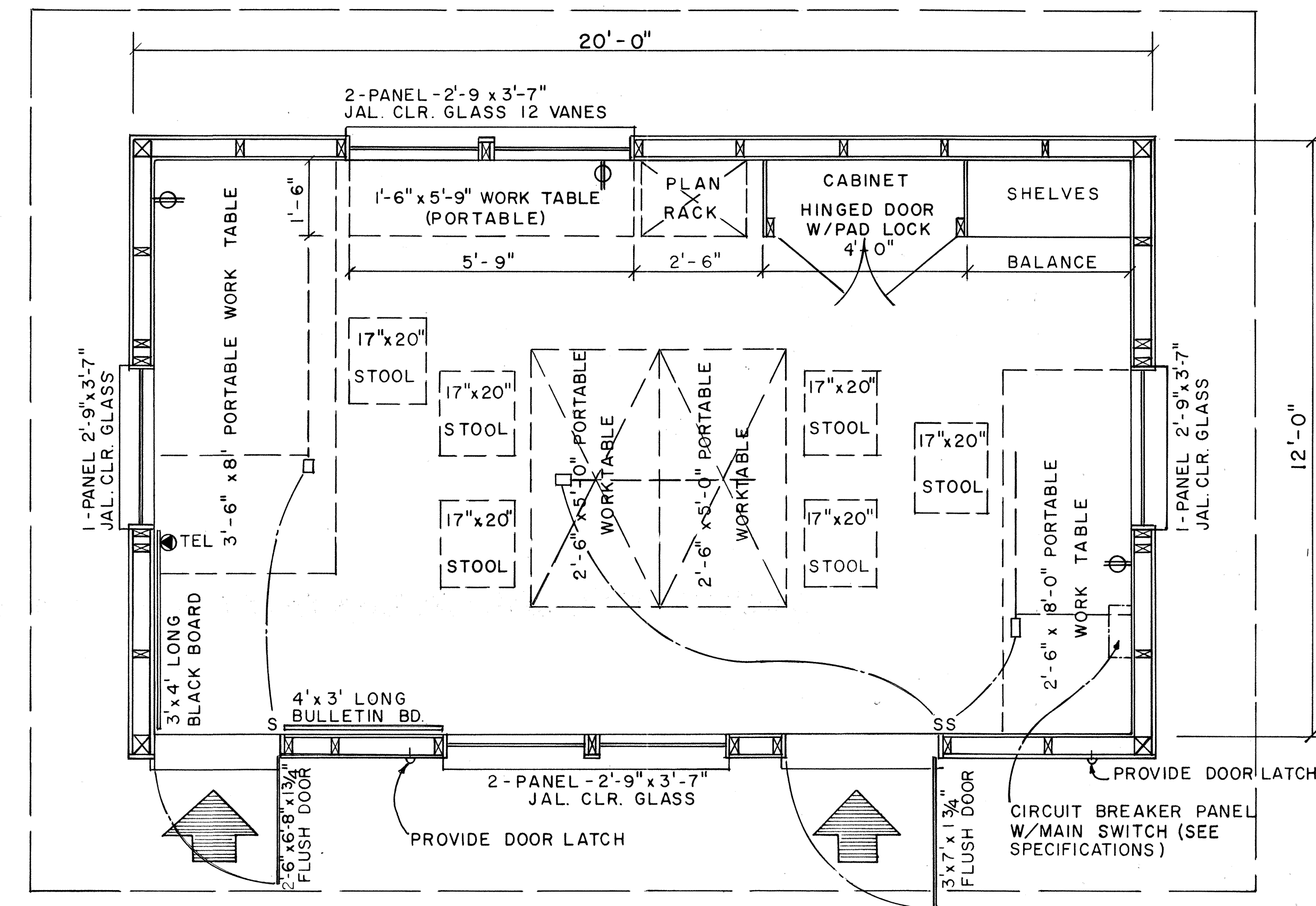
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	I-H-1(77)-13	1969	20	154



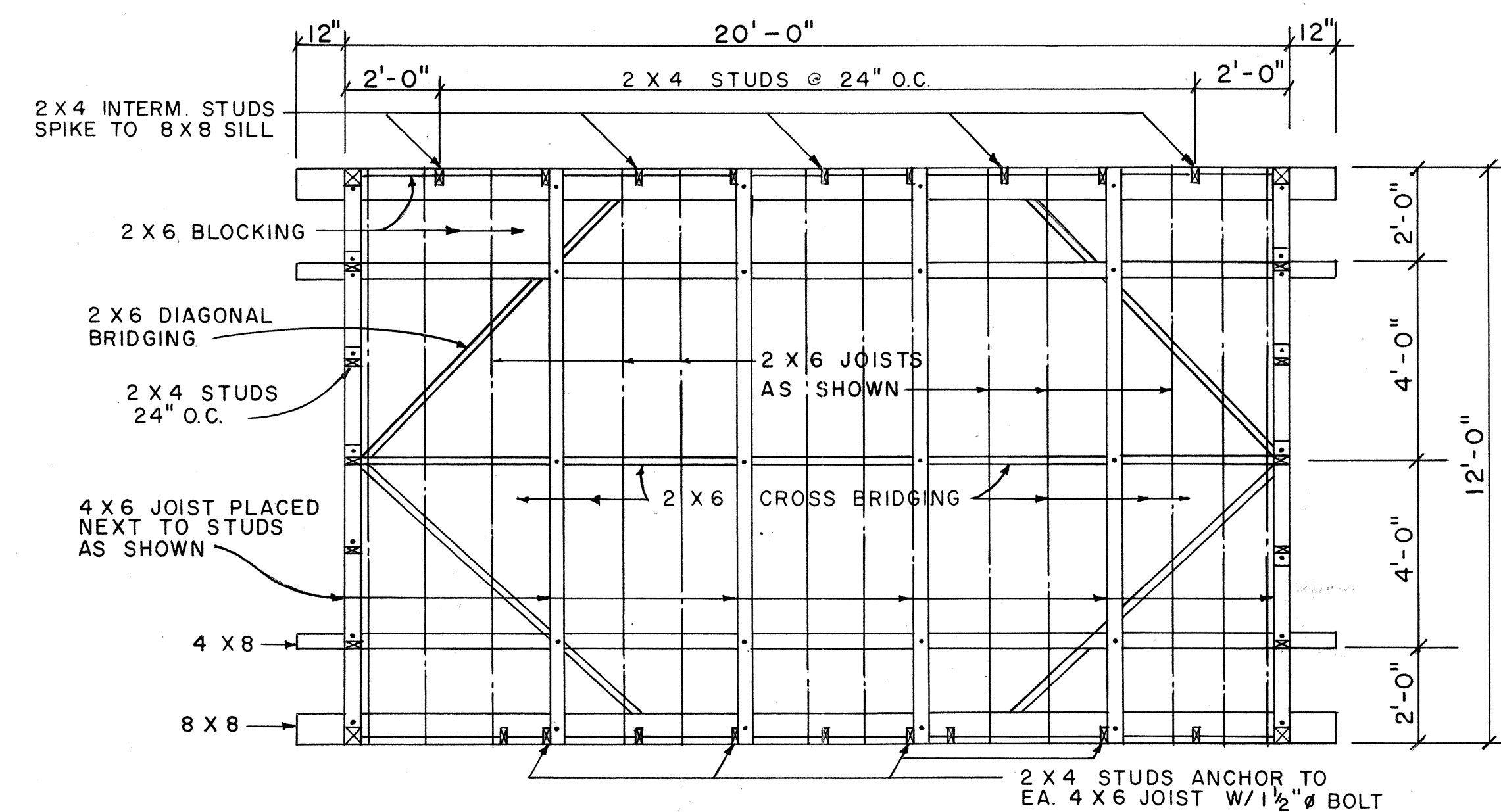
ROOF FRAMING PLAN
SCALE: 3/8" = 1'-0"



TYPICAL WALL SECTION
SCALE: 3/4" = 1'-0"



FLOOR PLAN
SCALE: 1/2" = 1'-0"



FOUNDATION FRAMING PLAN
SCALE: 3/8" = 1'-0"

APPROVAL RECOMMENDED:
[Signature] 12-4-69
HIGHWAY DESIGN ENGINEER DATE

APPROVED:
[Signature] 12-10-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION

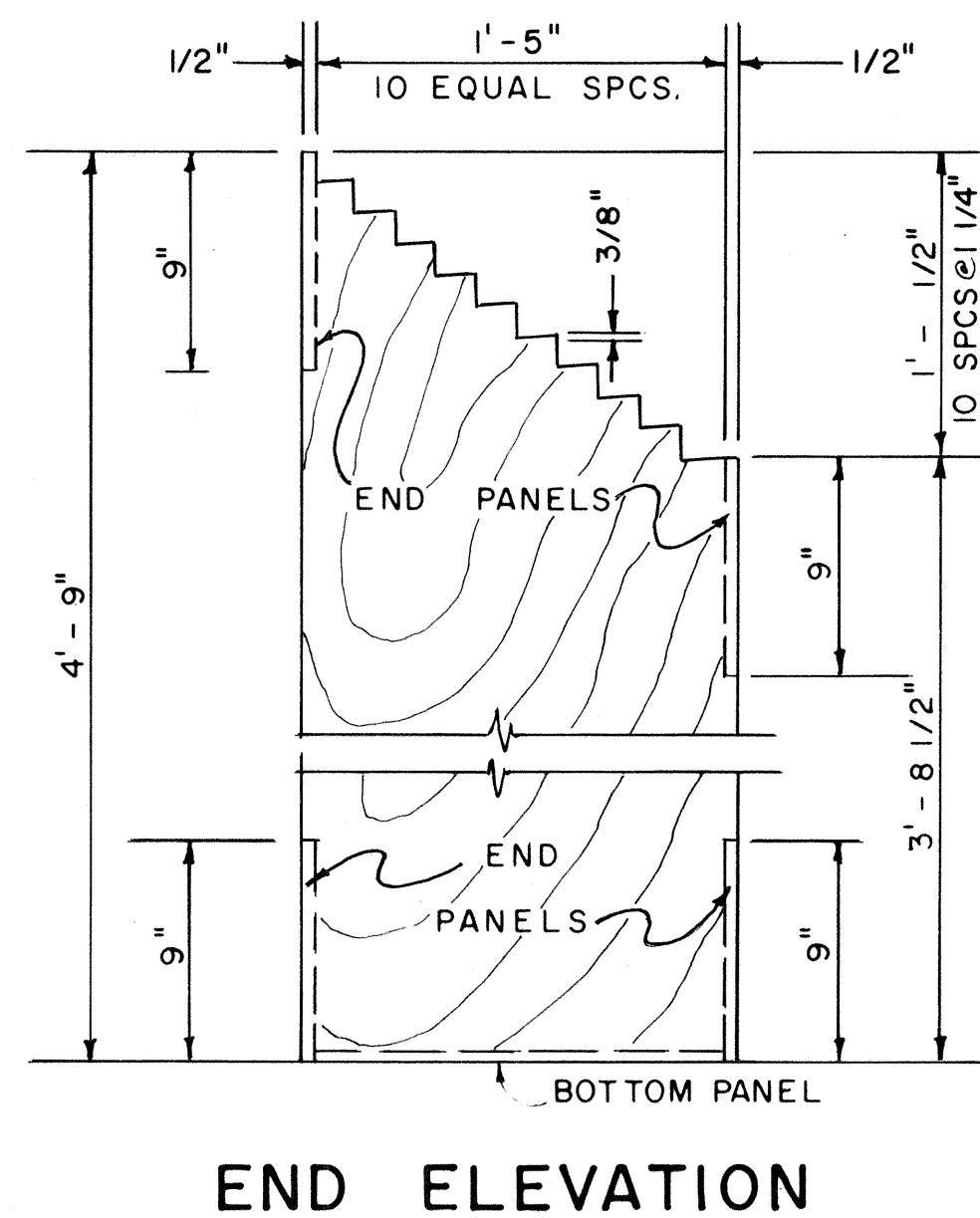
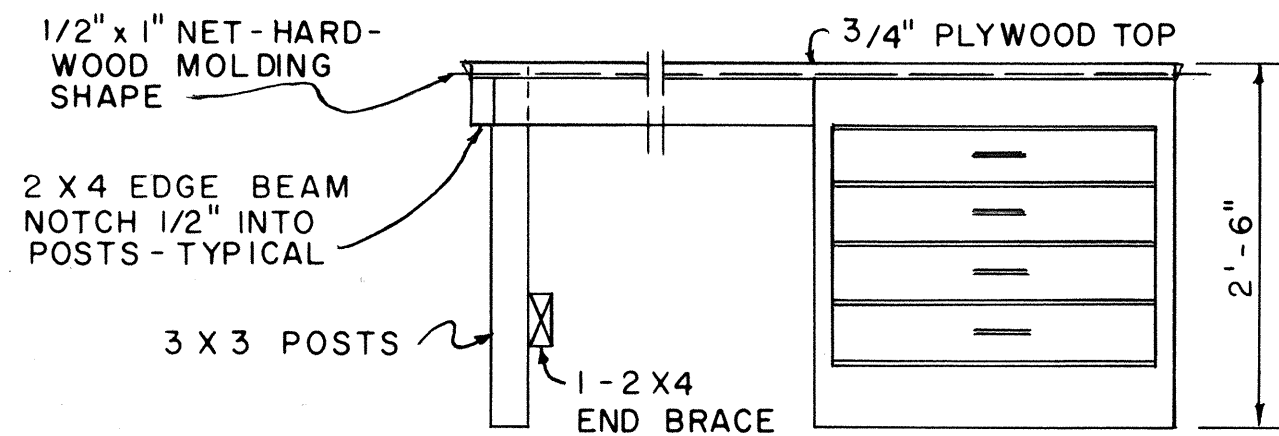
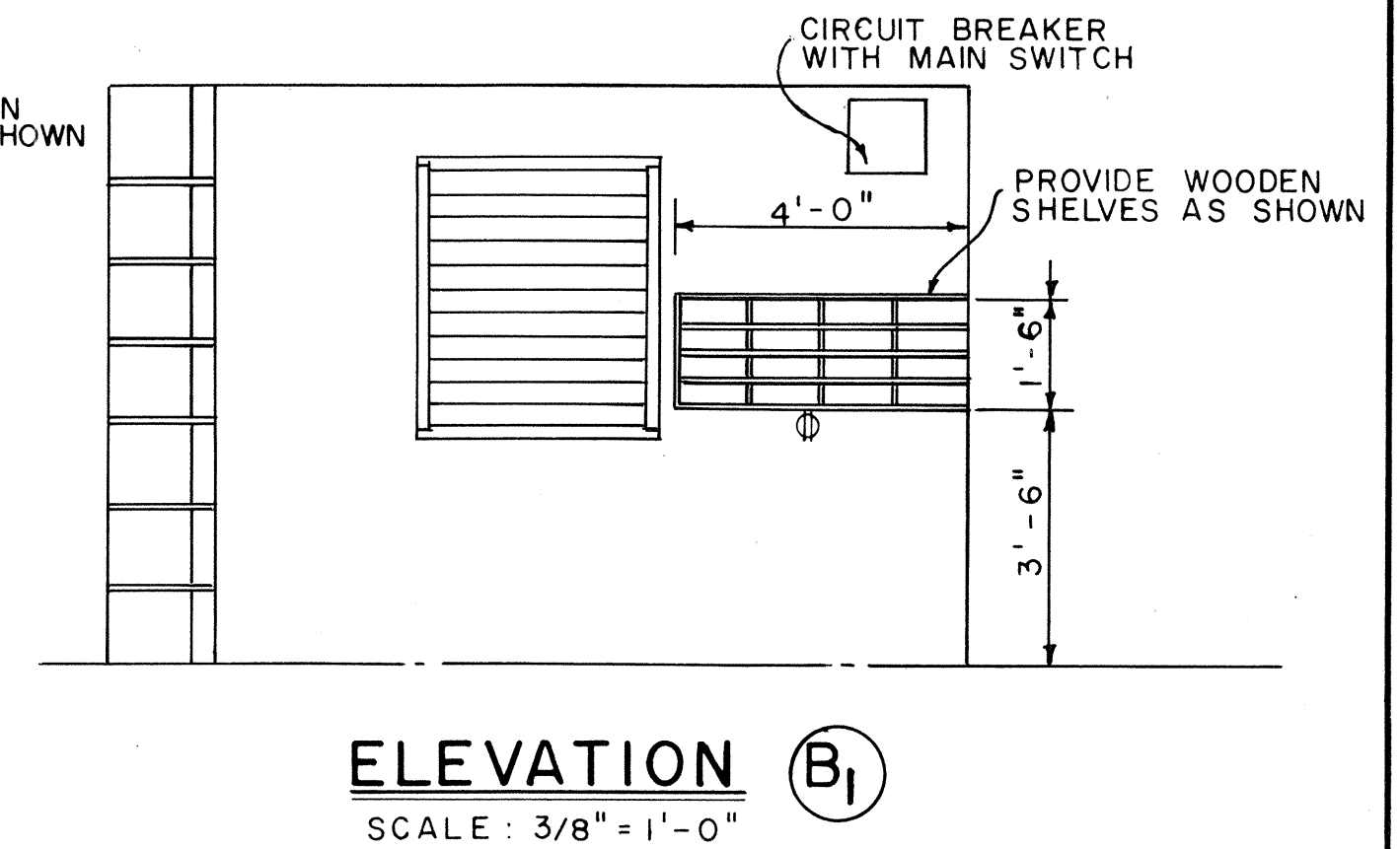
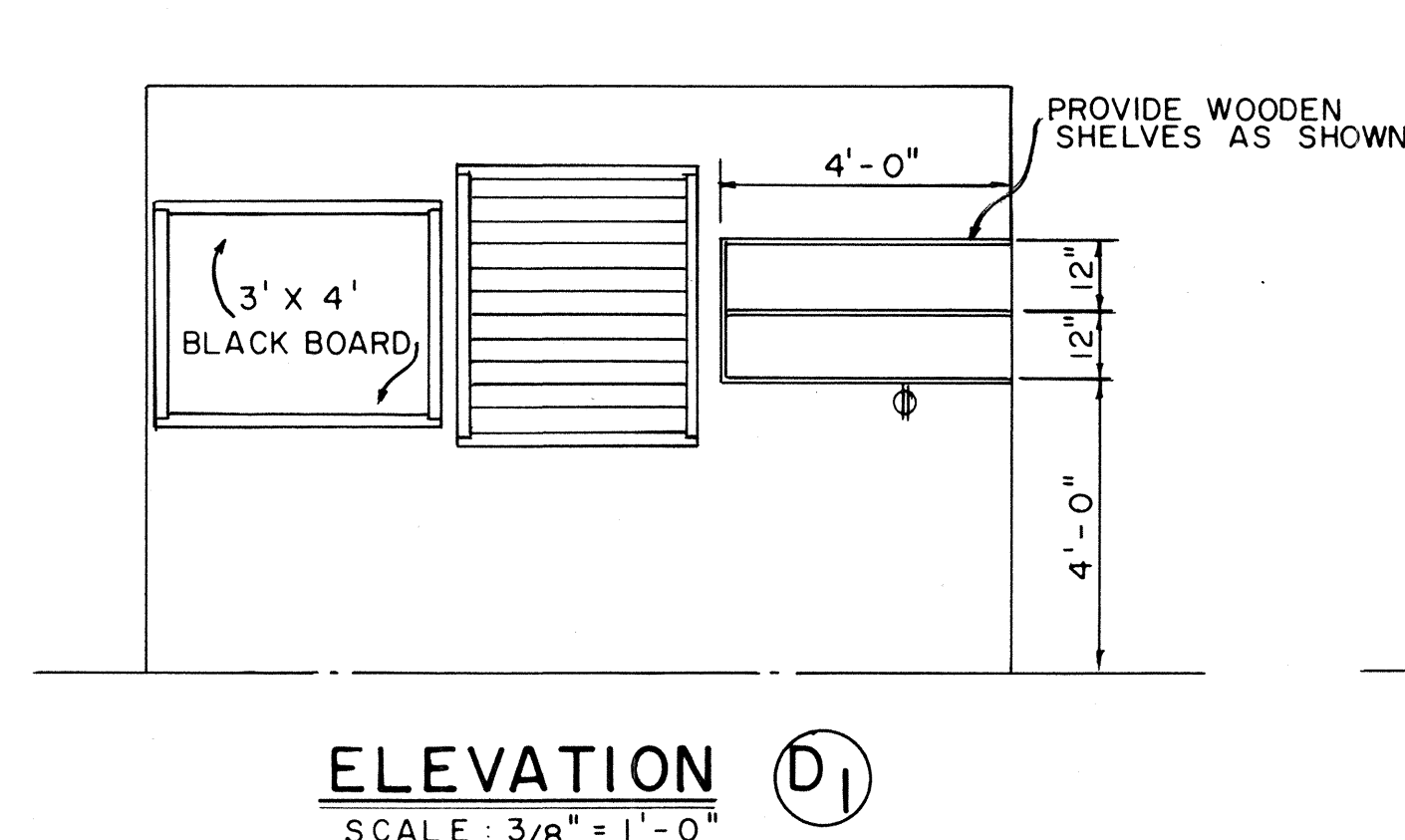
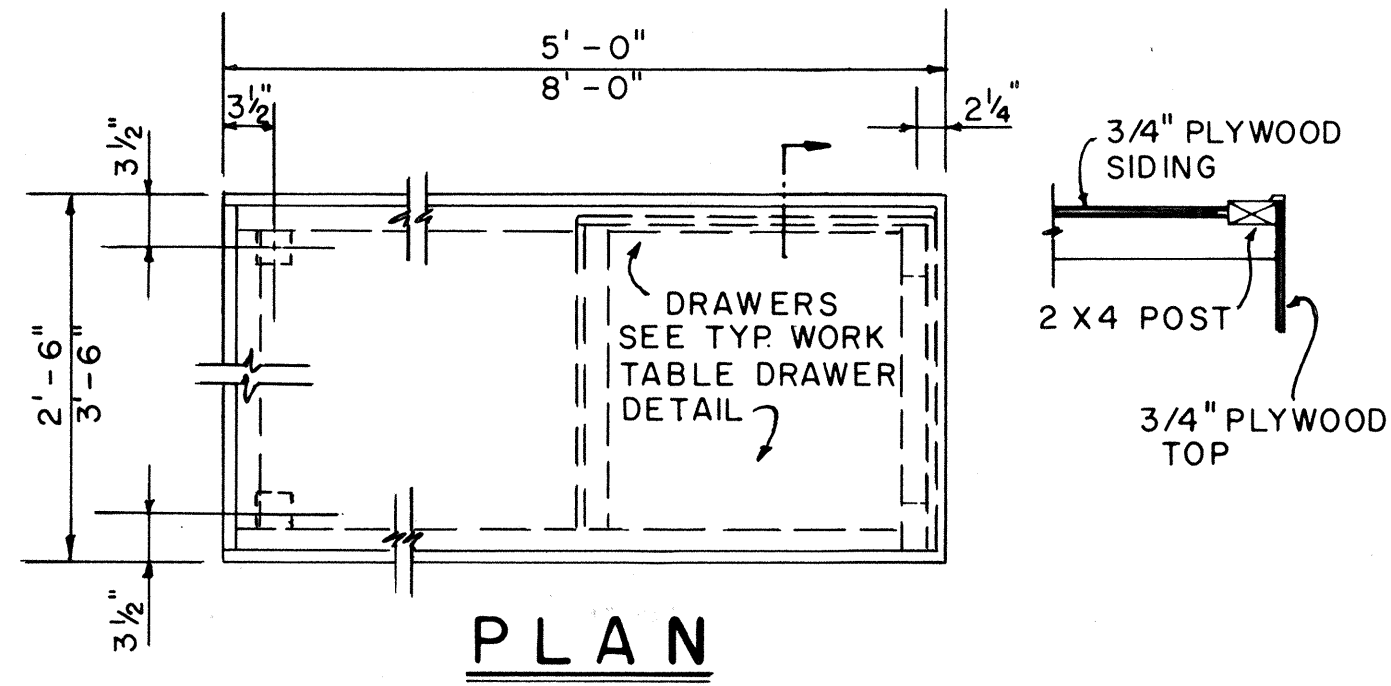
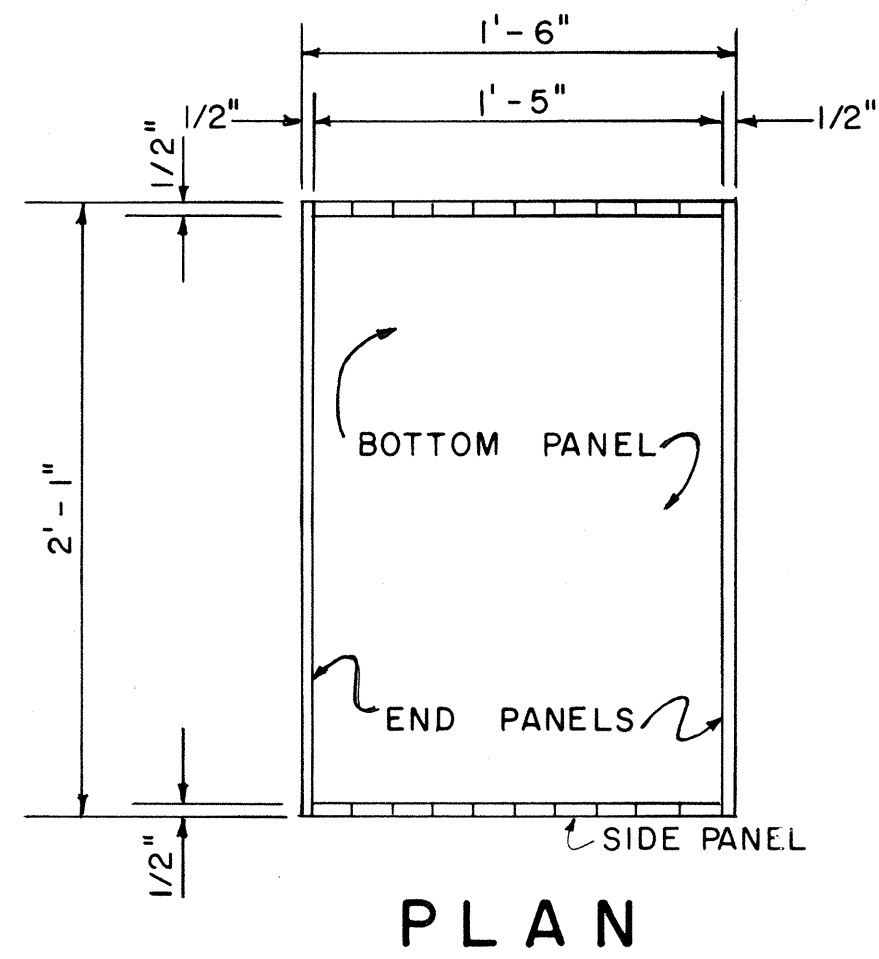
FIELD OFFICE

Scale: As Noted

SHEET NO 19 OF 23 SHEETS DD 636.1

SURVEY PLOTTED BY: _____ DATE: _____
DRAWN BY: _____
CHECKED BY: _____
NOTE BOOK NO. _____

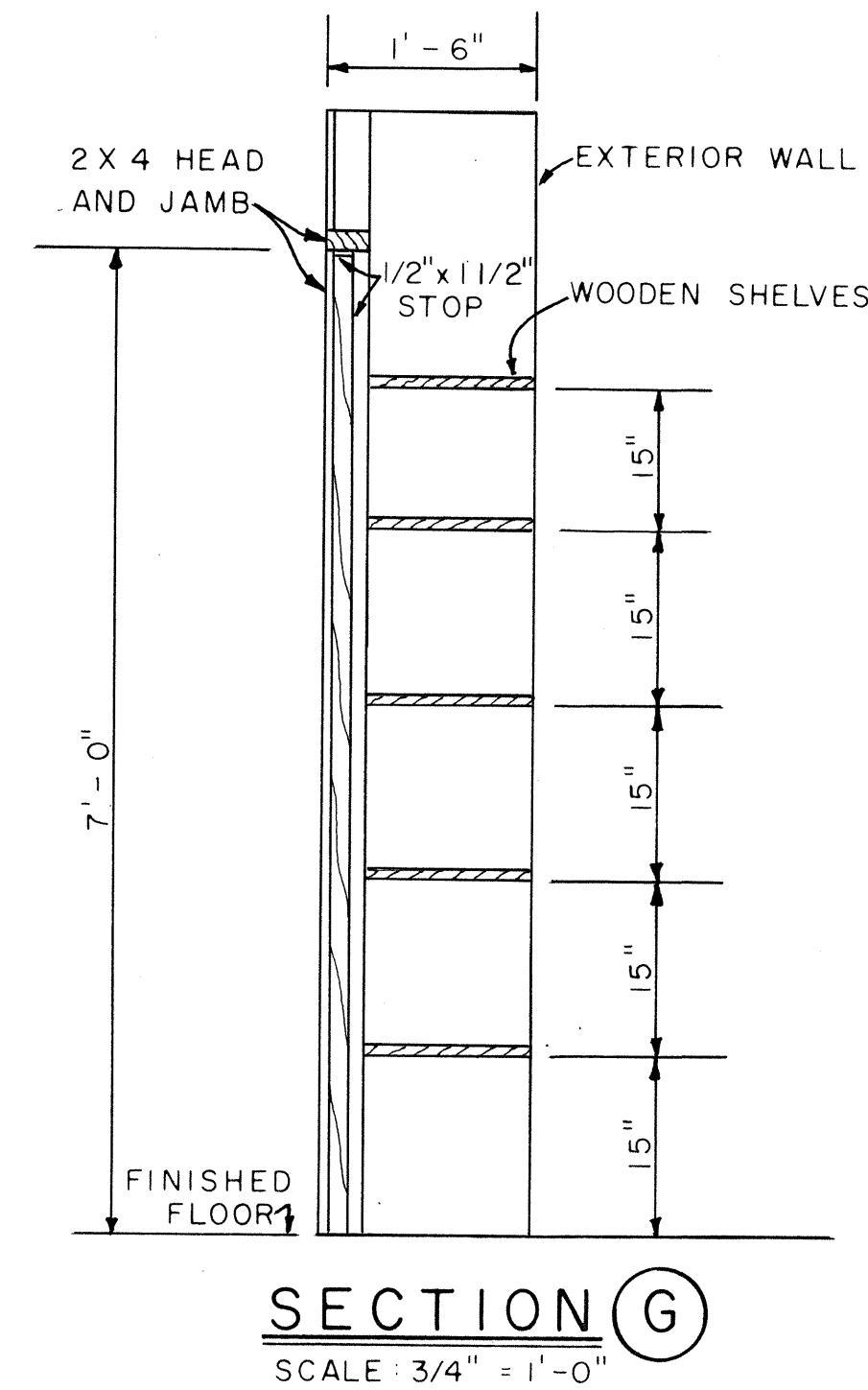
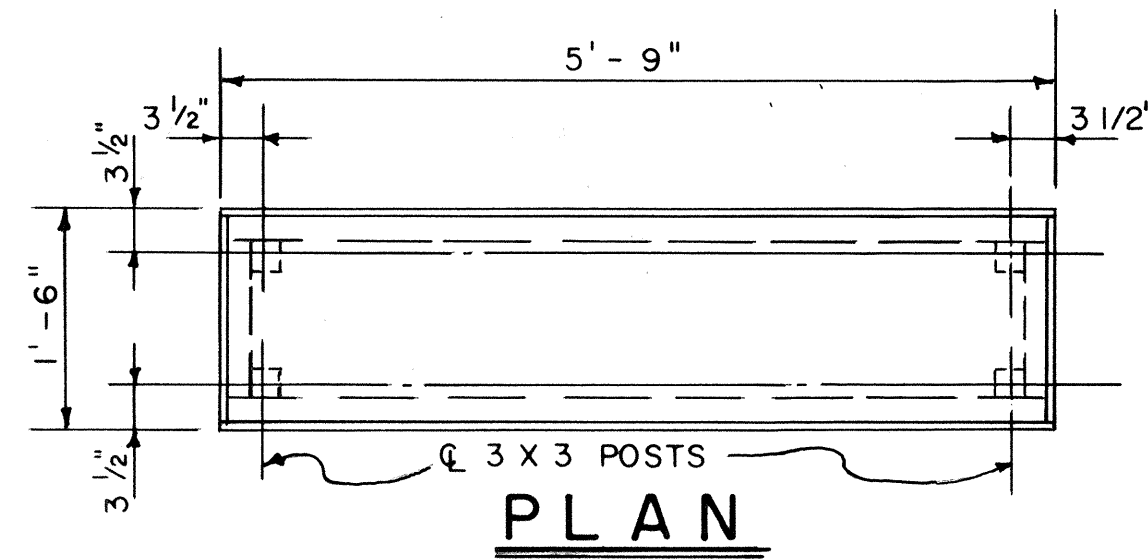
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	1-111(77):13	1967	30	155



ELEVATION
2'-6" x 5'-0" 2 REQ'D
3'-6" x 8'-0" 1 REQ'D
2'-6" x 8'-0" 1 REQ'D

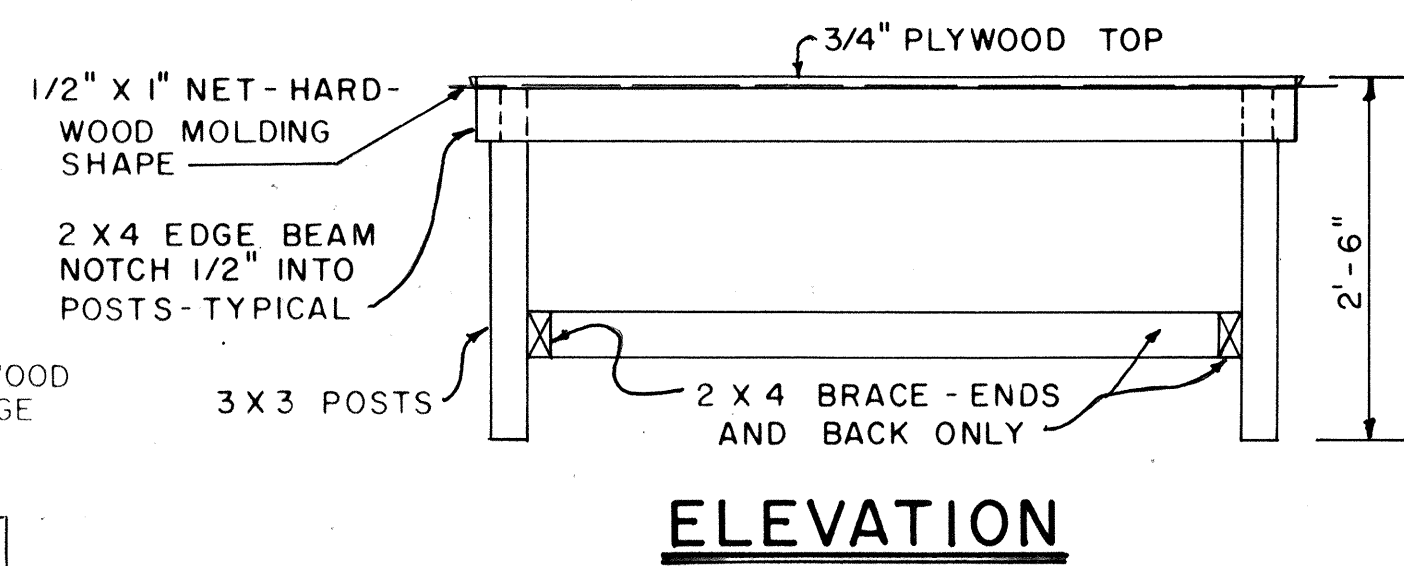
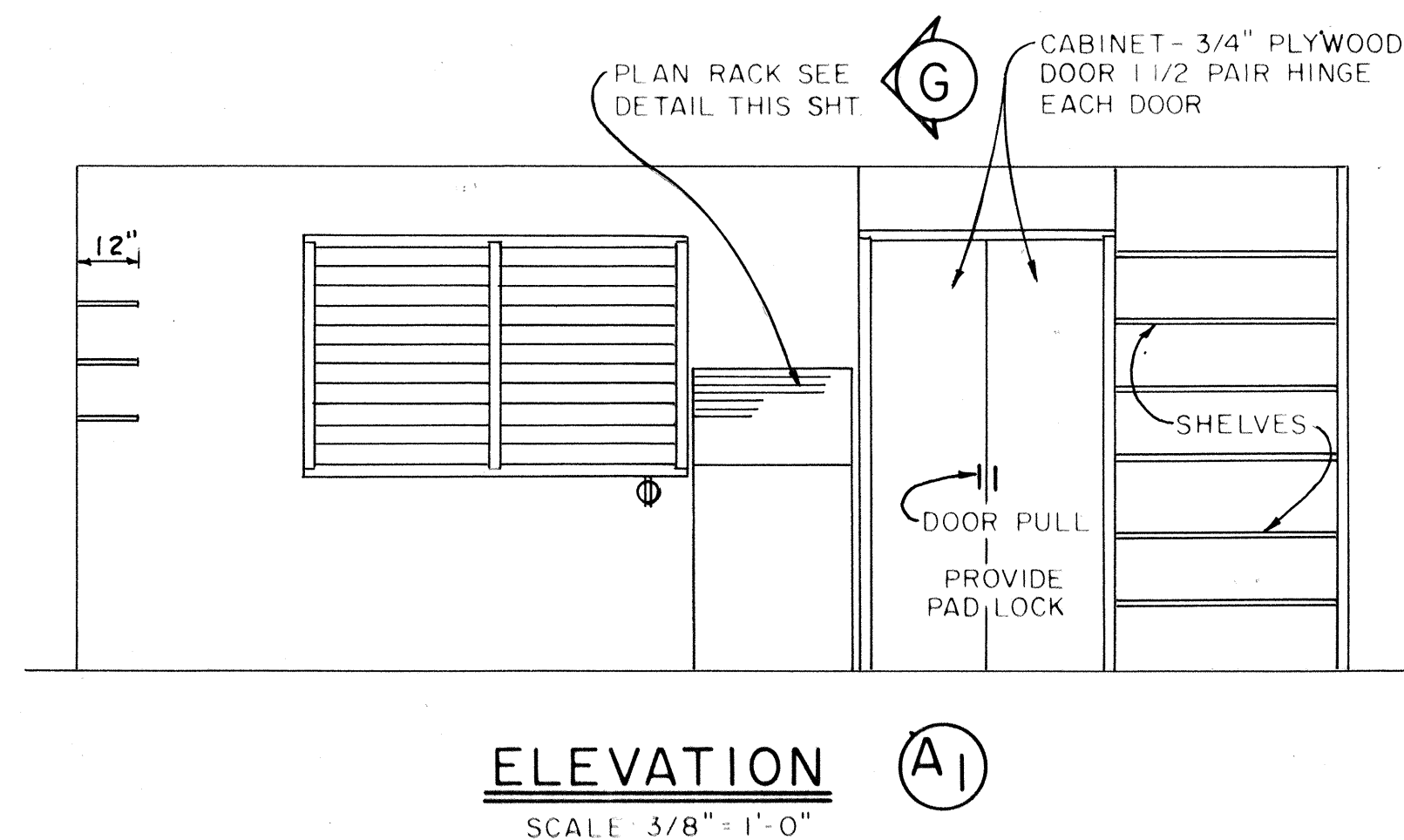
PORTABLE WORK TABLE DETAIL

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



PLAN RACK DETAIL

SCALE: 1 1/2" = 1'-0"
(ONE REQUIRED)



1'-6" x 5'-9" PORTABLE WORK TABLE DETAIL

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

APPROVAL RECOMMENDED:
Mr. H. H. H. 12-4-69
HIGHWAY DESIGN ENGINEER DATE

APPROVED:
Mr. S. S. S. 12-10-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

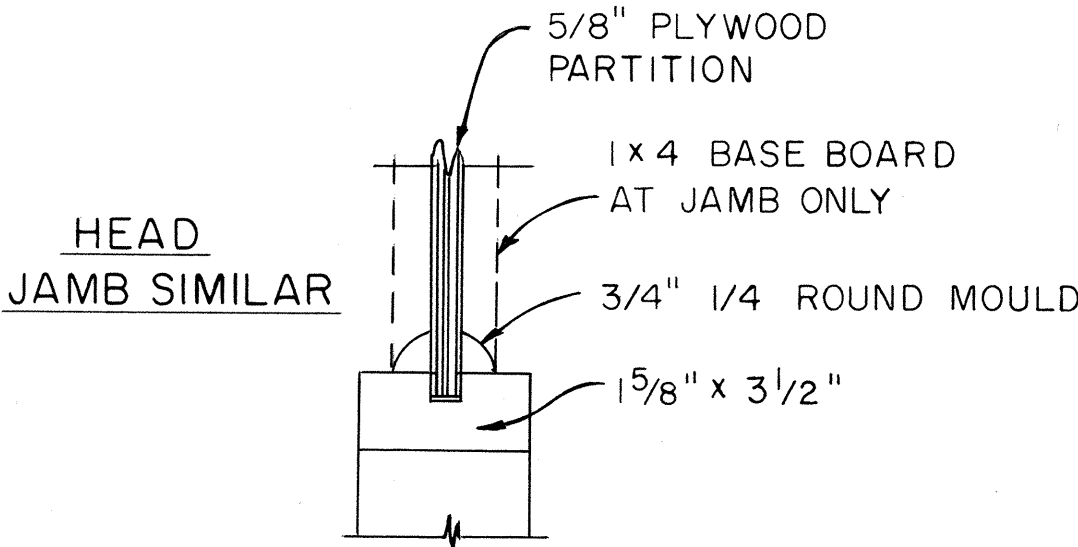
FIELD OFFICE

Scale: As Noted

ORIGINAL PLAN	SURVEY PLOTTED BY _____		DATE _____	
	DRAWN BY _____		_____	
NOTE BOOK	TRACED BY _____		_____	
	DESIGNED BY _____		_____	
	QUANTITIES BY _____		_____	
	CHECKED BY _____		_____	

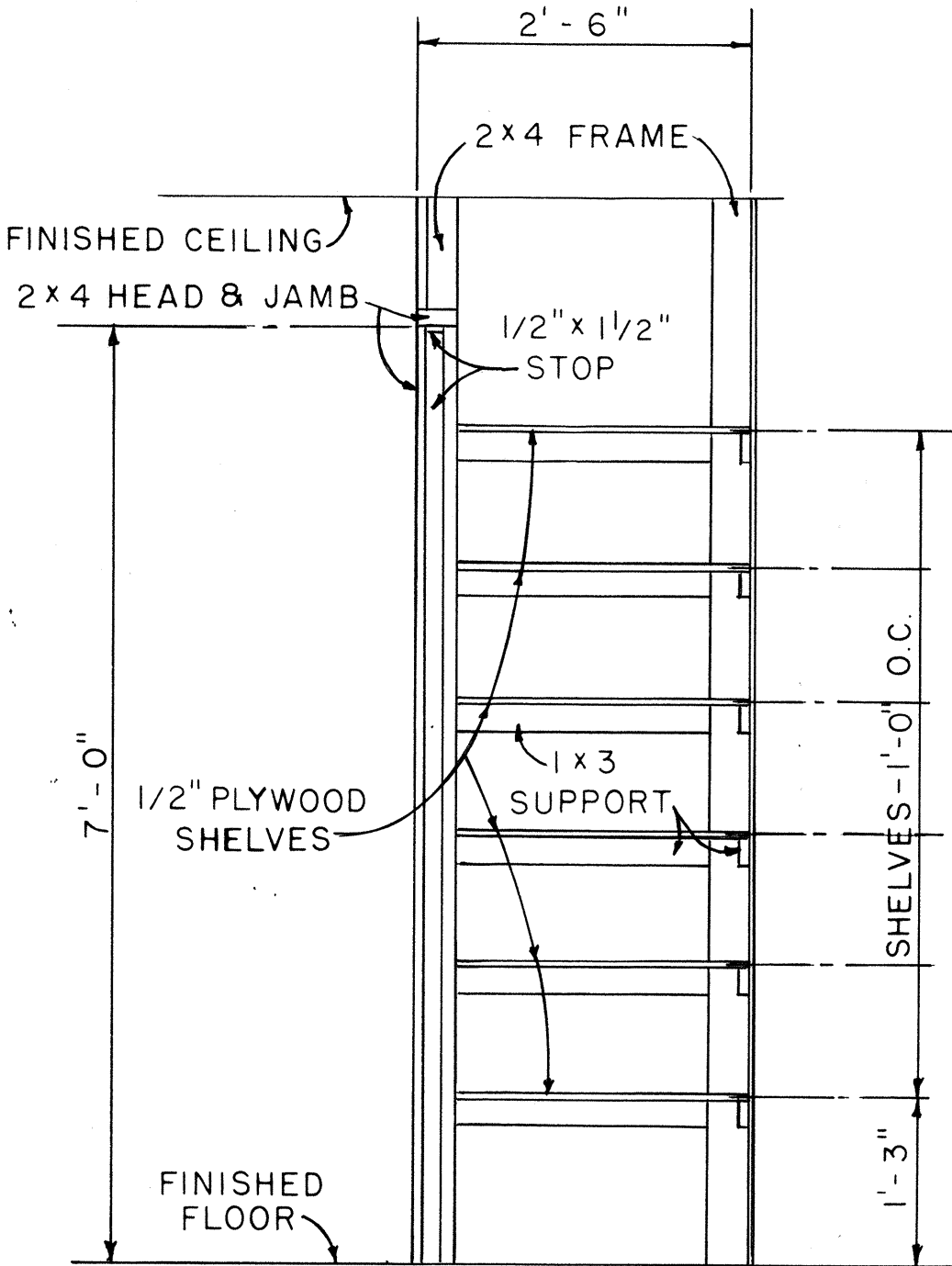


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(17)-13	1969	32	158



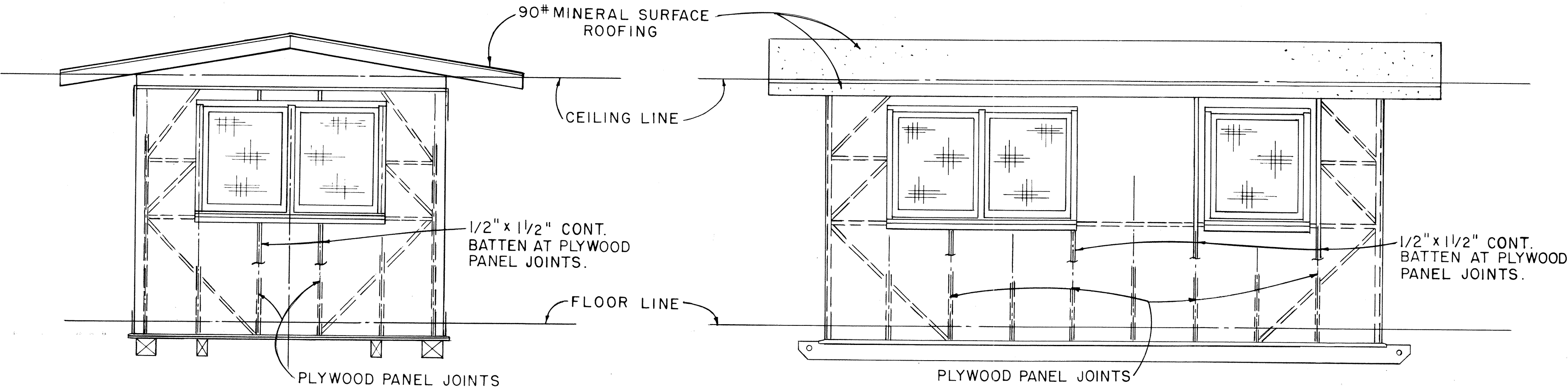
CASEMENT DETAIL

SCALE: 3" = 1'-0"



CABINET DETAIL

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

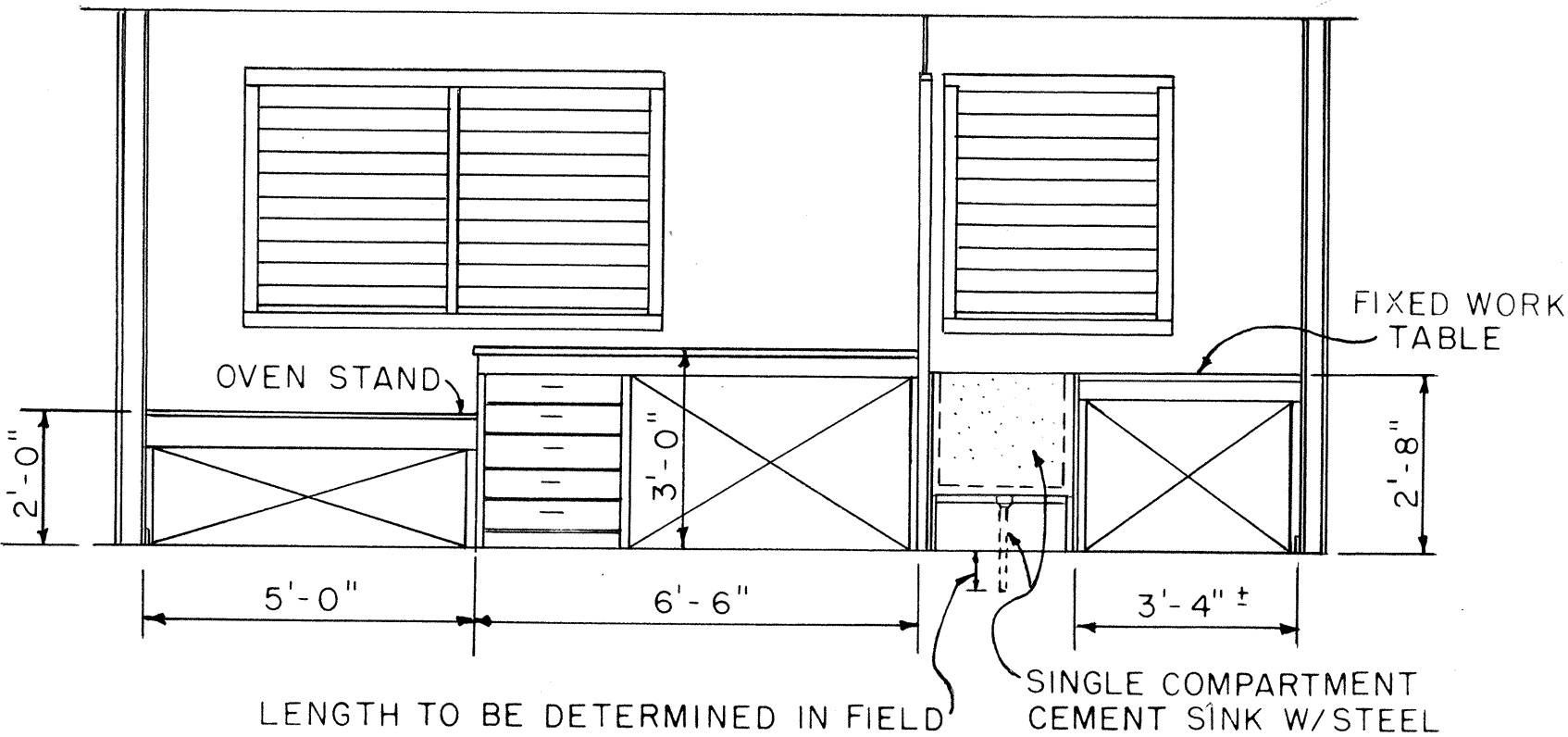


ELEVATION D

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

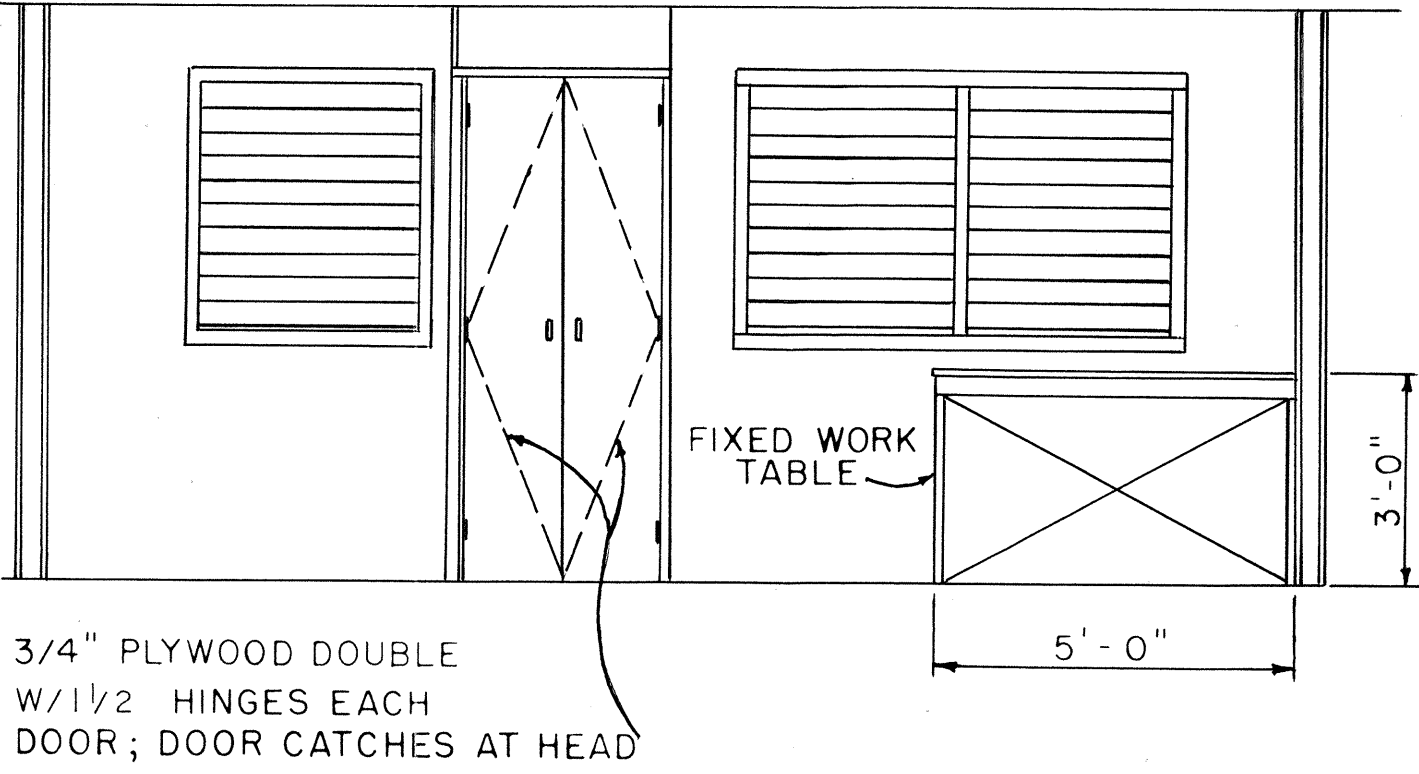
ELEVATION C

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



ELEVATION C1

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



ELEVATION A1

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

ORIGINAL PLAN	SURVEY LOCATED BY	DATE
NOTED BY	DRAWN BY	
DESIGNED BY	TRACED BY	
CHECKED BY		

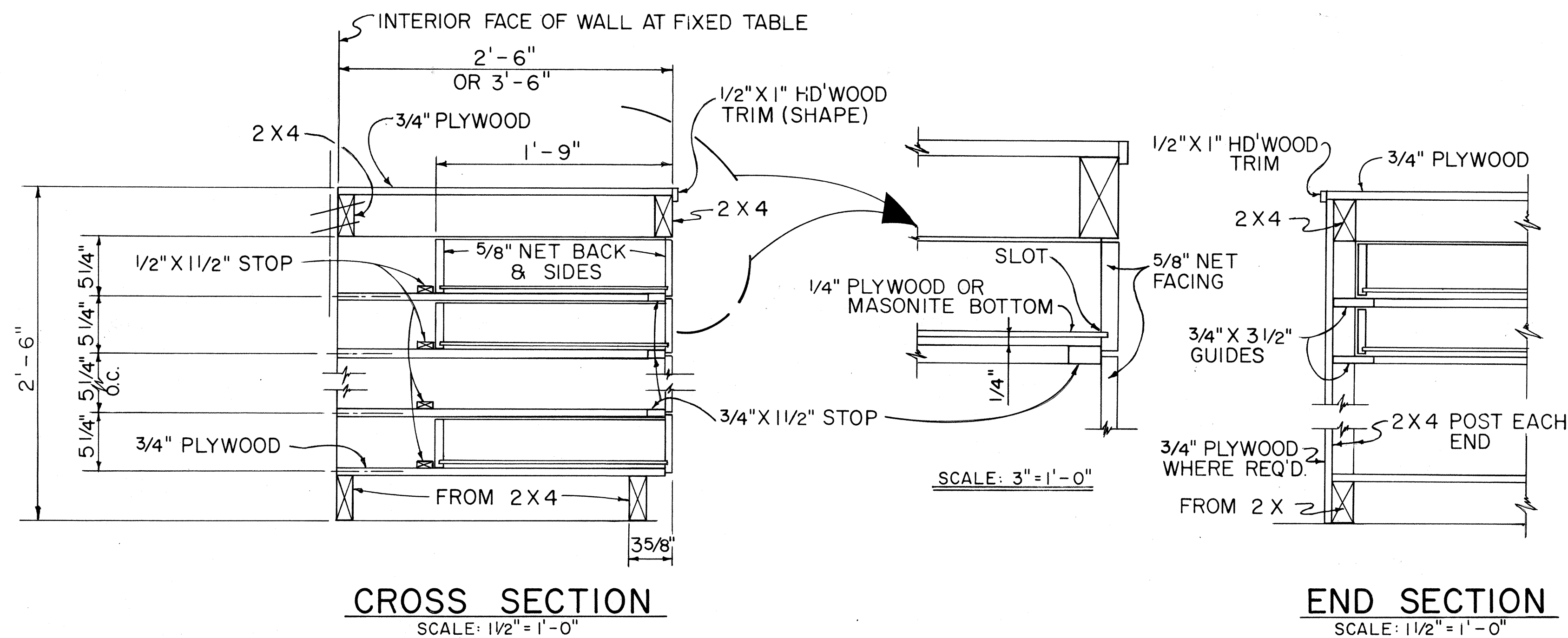
APPROVAL RECOMMENDED:
HIGHWAY DESIGN ENGINEER
12-4-69
DATE

APPROVED:
ASSISTANT CHIEF, ENGINEERING
12-10-69
DATE

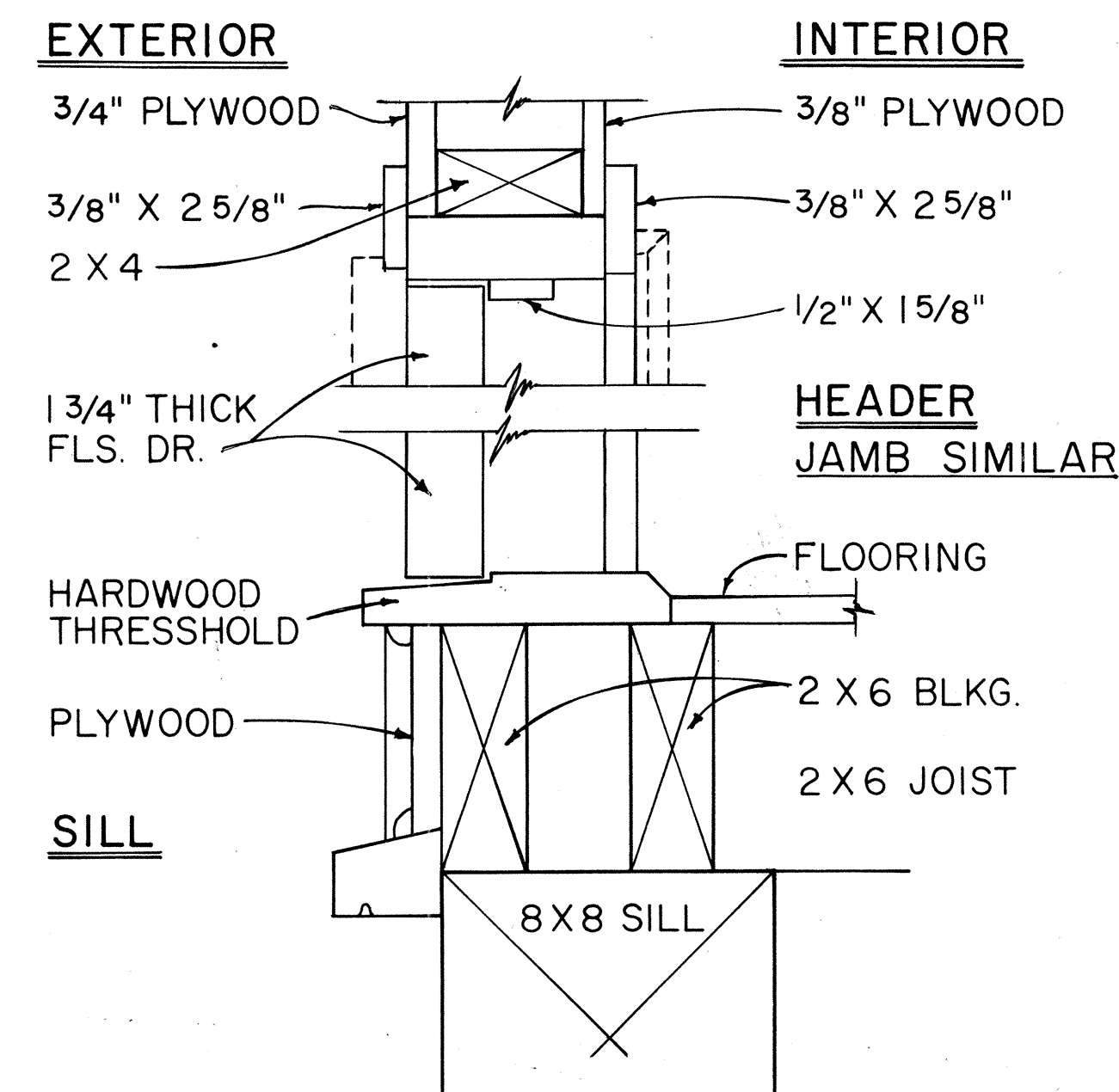
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
PROJECT SITE LABORATORY
Scale As Noted

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	1-111-1(17)	1967	33	154

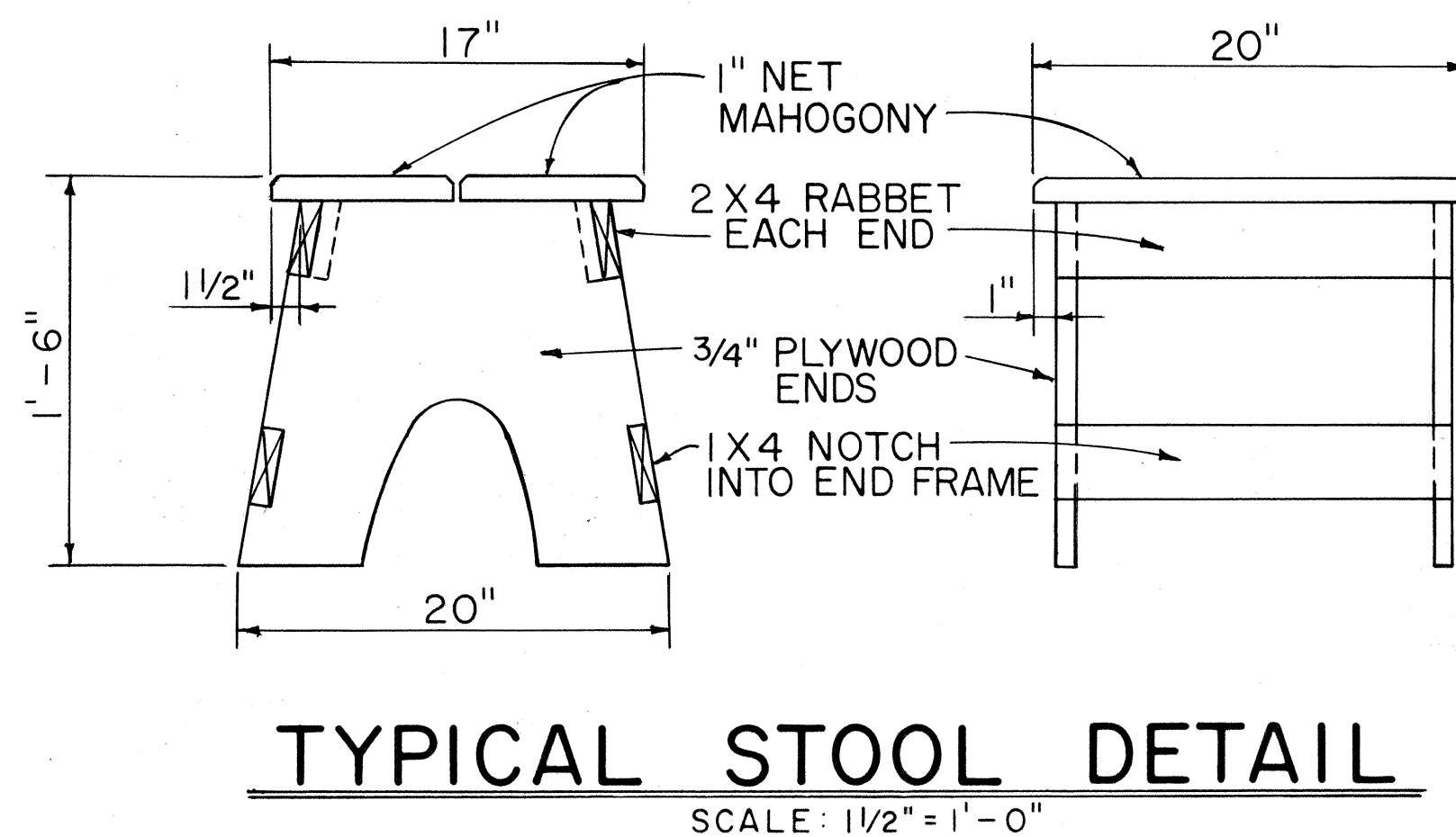


TYPICAL WORK TABLE DRAWER DETAIL

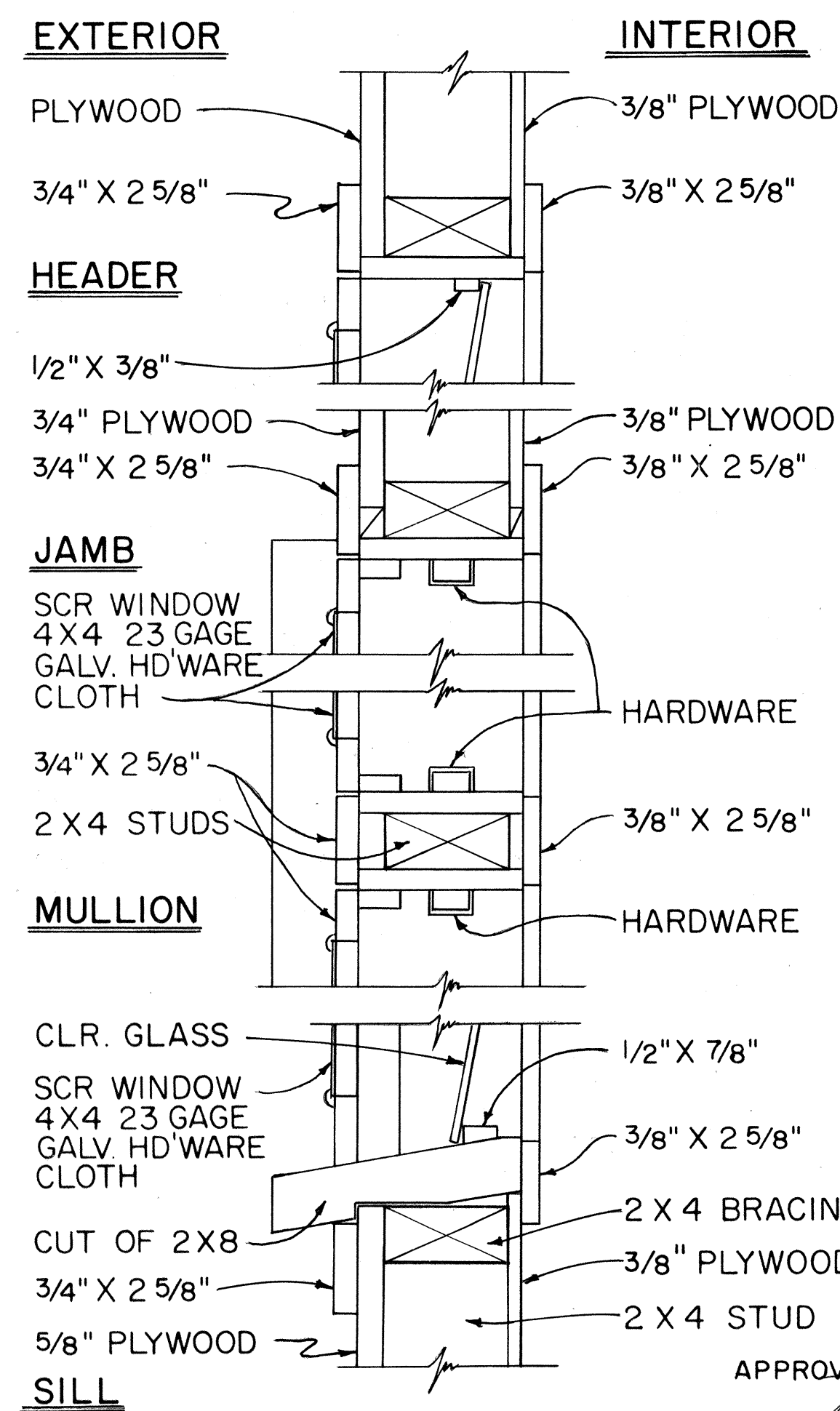


TYP. SWING OUT DOOR

TYPICAL SINGLE OR DOUBLE EXTERIOR DOOR DETAIL



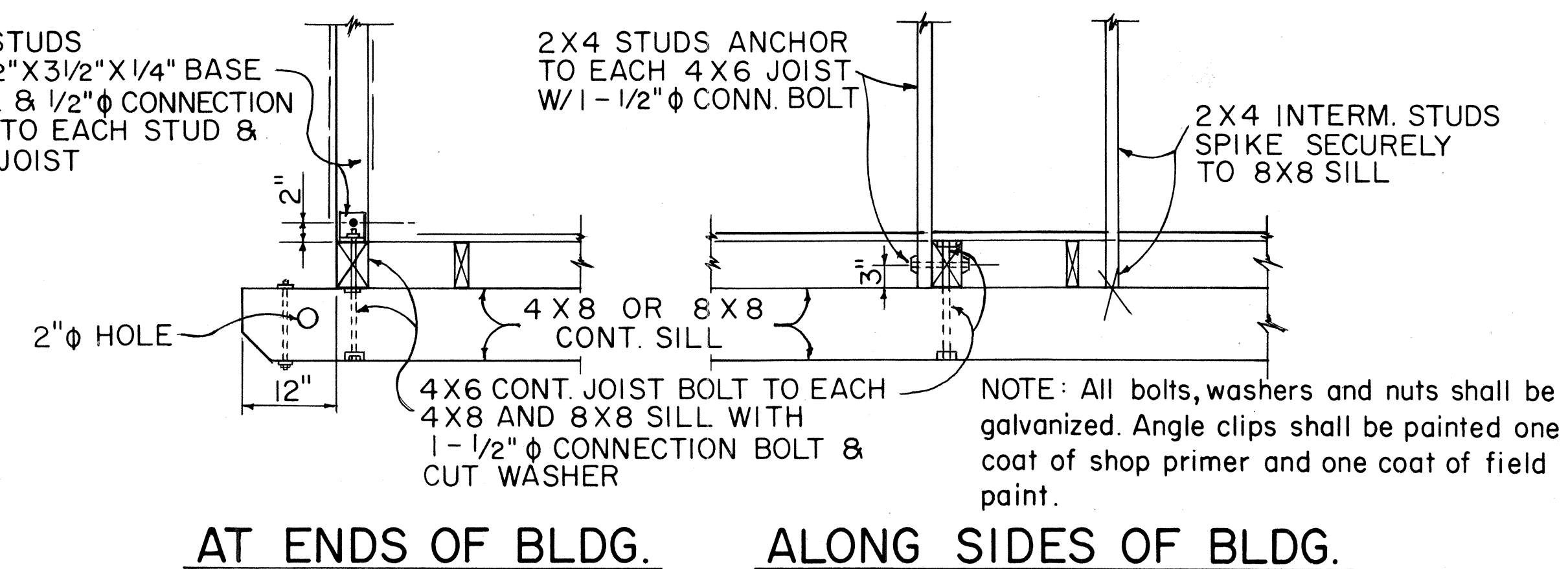
NOTE: CONTRACTOR MAY WITH THE APPROVAL OF THE ENGINEER FURNISH THE FIELD OFFICE OR PROJECT SITE LABORATORY WITH STOOLS OTHER THAN THE TYPE SHOWN IN THE DETAIL.



TYPICAL DETAIL JALOUSIES WINDOWS
SCALE: 3" = 1'-0"

APPROVAL RECOMMENDED:
M. H. H. H.
HIGHWAY DESIGN ENGINEER
DATE: 12-4-67

APPROVED:
M. H. H. H.
ASSISTANT CHIEF, ENGINEERING
DATE: 12-10-67



TYPICAL 2 X 4 STUD & 4 X 6 FLOOR JOIST BASE CONNECTION DETAILS

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
FIELD OFFICE & PROJECT SITE LABORATORY
Scale: As Noted