

NEWPORT → HOWLAND

STATE OF MAINE STATE HIGHWAY COMMISSION

PLANS

CONVENTIONAL SIGNS

STATE OR NATIONAL LINE	-----	SURVEY LINE	
COUNTY LINE	-----	CULVERT	
TOWN LINE	-----	DROP INLET	
UNFENCED PROPERTY	-----	TROLLEY POLE	
FENCE	-----	POWER POLE	
RIGHT OF WAY LINE	-----	TEL. POLE	
TRAVELED WAY	-----	MARSH	
RAILROAD	-----	TREES	
RETAINING WALL	-----	STONE WALL	

MAINE FEDERAL AID PROJECTS

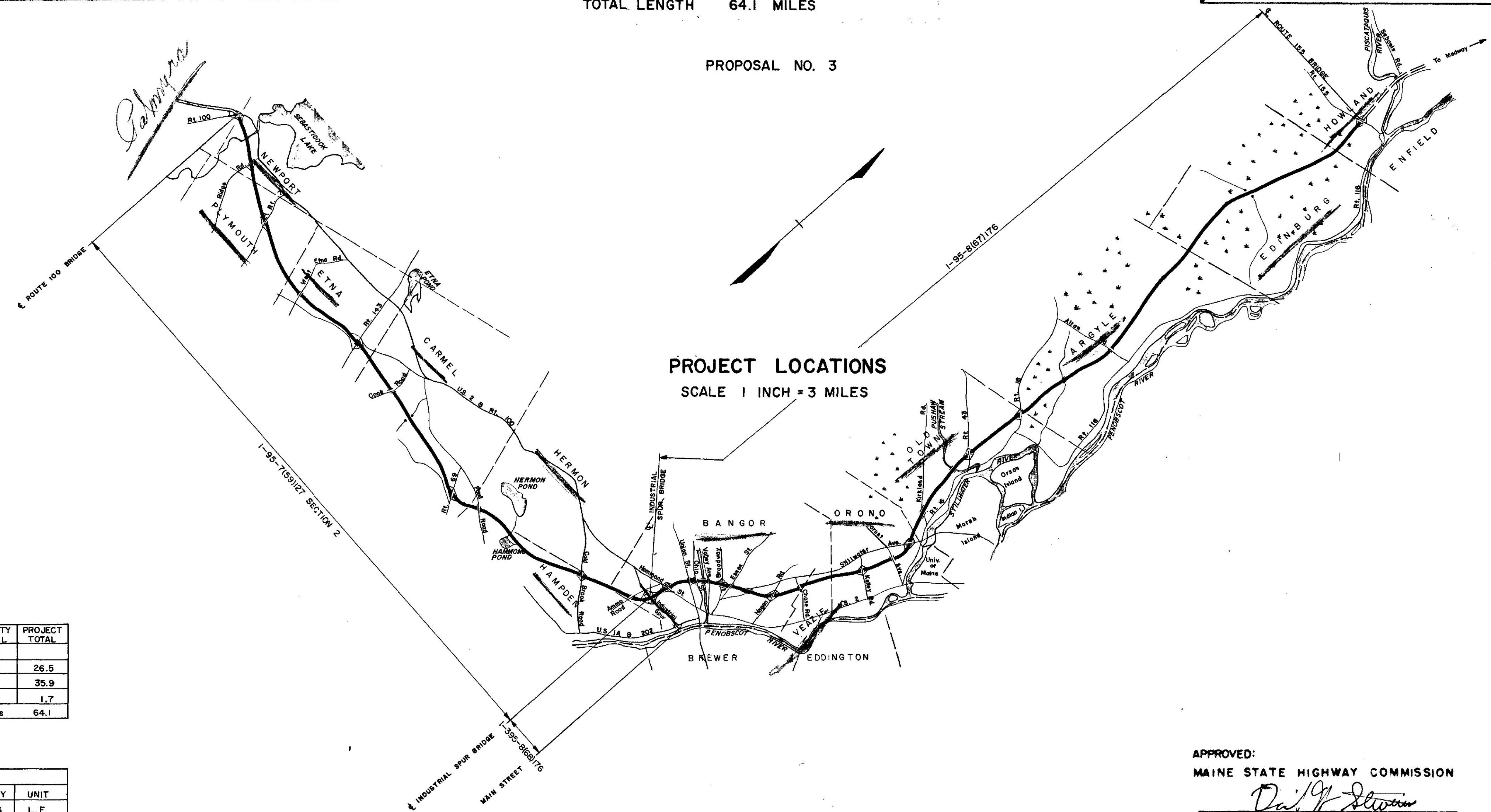
GUARD RAIL ALTERATIONS

1-95-7(59)127 SECTION 2	26.5 MILES	PALMYRA To BANGOR
1-95-8(67)176	35.9 MILES	BANGOR To HOWLAND
1-395-8(68)176	1.7 MILES	BANGOR
TOTAL LENGTH	64.1 MILES	

INDEX OF SHEETS

SHEET NO. 1	TITLE PAGE	STA.
SHEET NO.	TYPICAL SECTIONS	
SHEET NO. 1	QUANTITIES	
SHEET NO. 2	STANDARD DETAILS	
SHEET NO.	PLAN AND PROFILE	STA.
SHEET NO.	CROSS-SECTIONS	STA.
SHEET NO.	BRIDGES	STA.
SHEET NO. 3-4-5-6	SPECIAL DETAILS	

PROPOSAL NO. 3



PROJECT NO.	COUNTY	MILES URBAN	MILES RURAL	COUNTY TOTAL	PROJECT TOTAL
1-95-7(59)150 SECTION 2	Somerset	0.0	0.3	0.3	
	Penobscot	0.0	26.2	26.2	26.5
1-95-8(67)176	Penobscot	3.8	32.1	35.9	35.9
1-95-8(68)176	Penobscot	1.7	0.0	1.7	1.7
Project Total Miles					64.1

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
606.17	Guard Rail Type 3b Single Rail	1,386	L.F.
606.171	Remove and Reset Guard Rail Type 3b Single Rail	1,250	L.F.
606.172	Bridge Connections Type 1	13	EACH
606.173	Bridge Connections Type 2	18	EACH
606.174	Bridge Connections Type 3	28	EACH
606.175	Bridge Connections Type 4	2	EACH
606.211	Guard Rail Flared Ends	650	EACH
609.42	Vertical Curb Type 1 With Hot Bit Pavement Backing	33	EACH
630.06	Traffic Officers	1,820	M.H.

APPROVED:
MAINE STATE HIGHWAY COMMISSION

David J. Stearns
CHAIRMAN

DATE: MAY 25, 1966

Richard J. Lockwood
MAY 25, 1966

Charles J. [Signature]
MAY 25, 1966

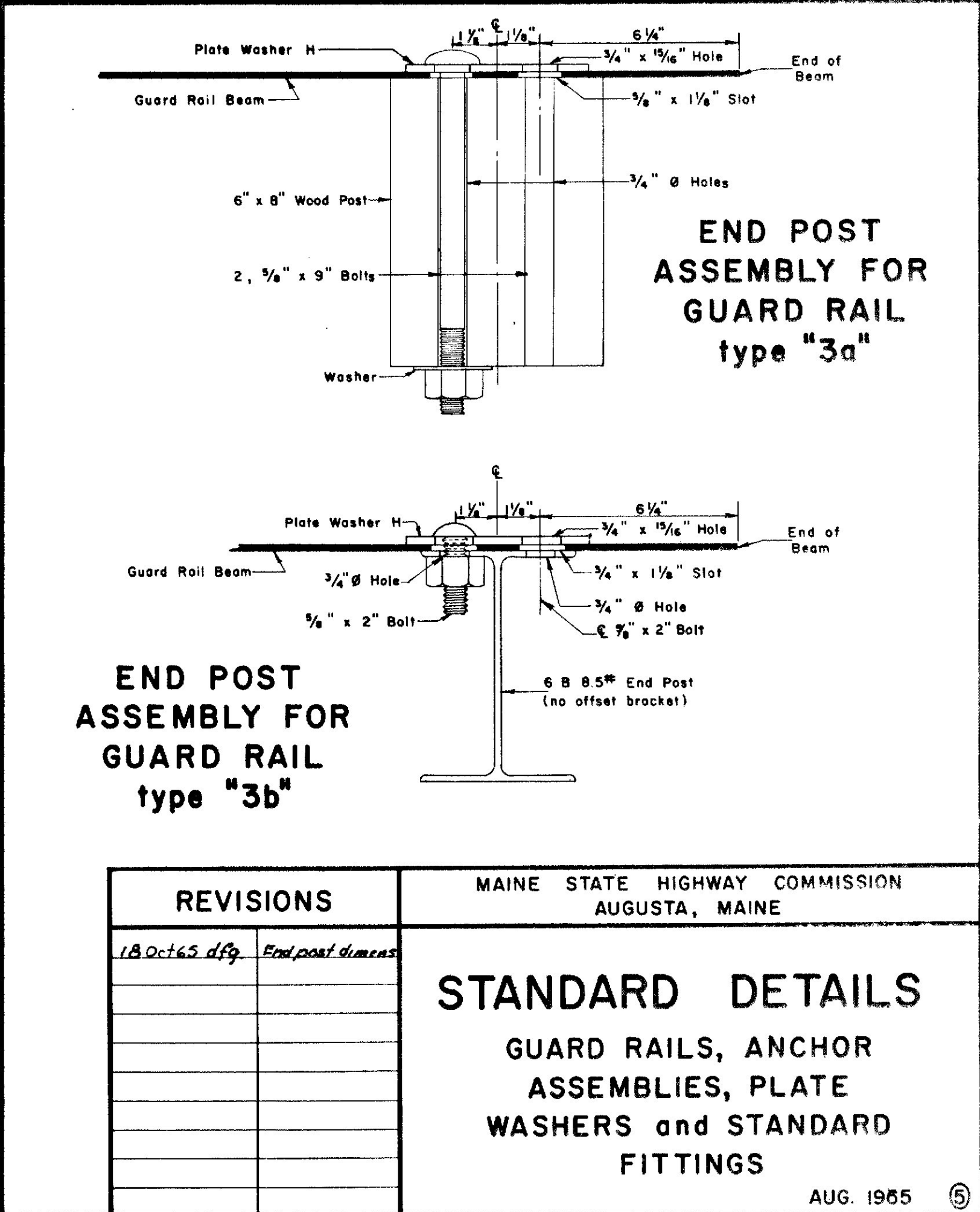
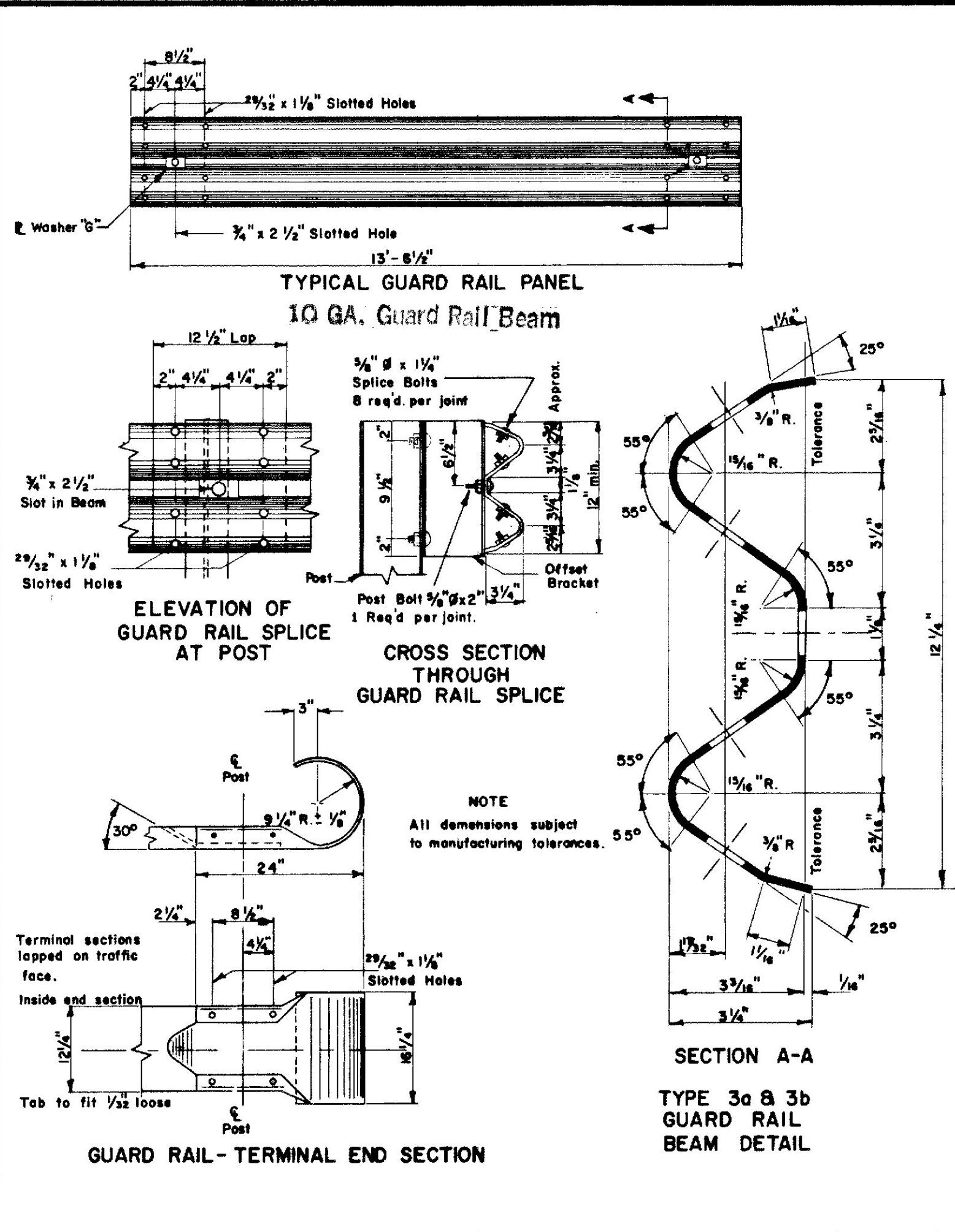
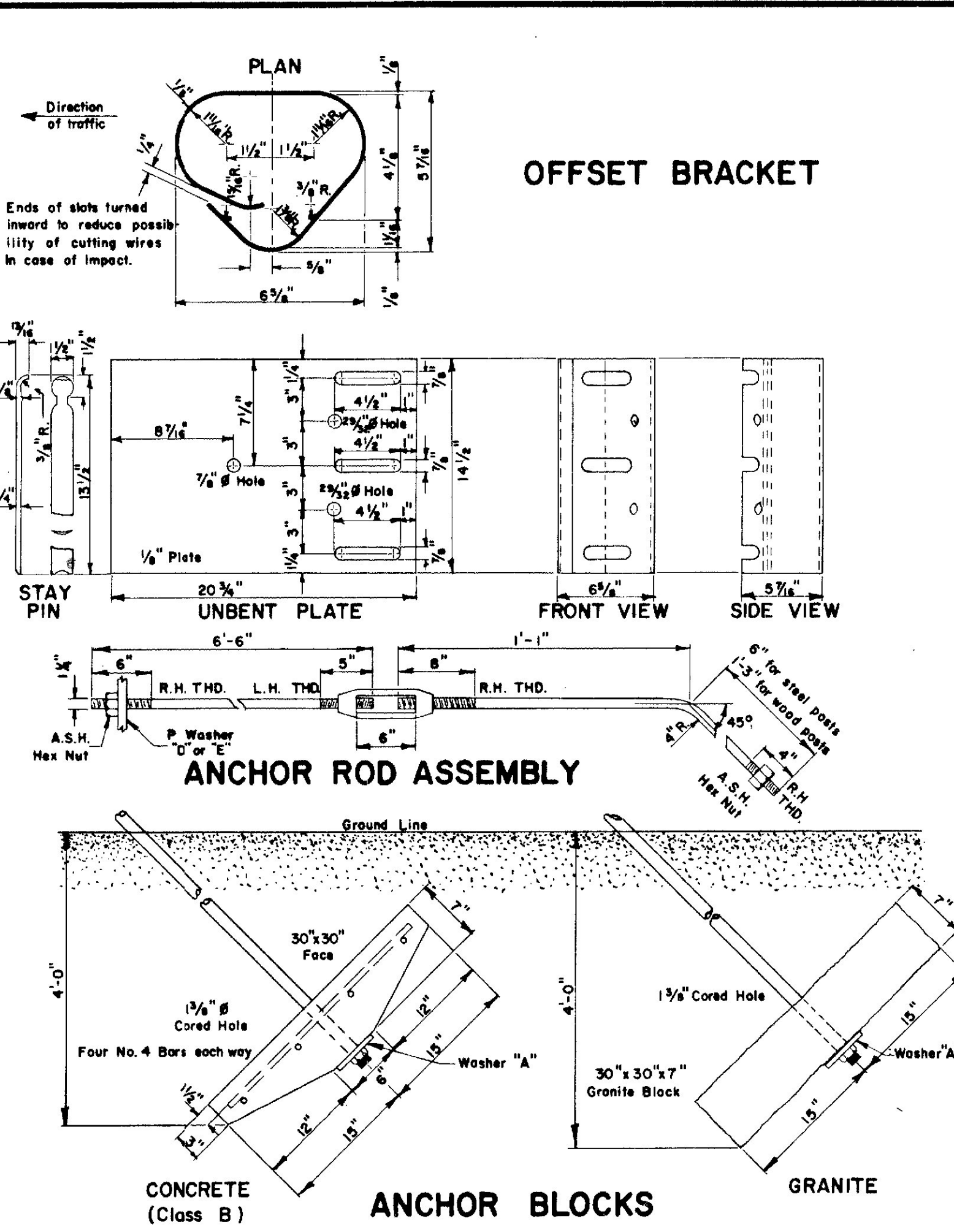
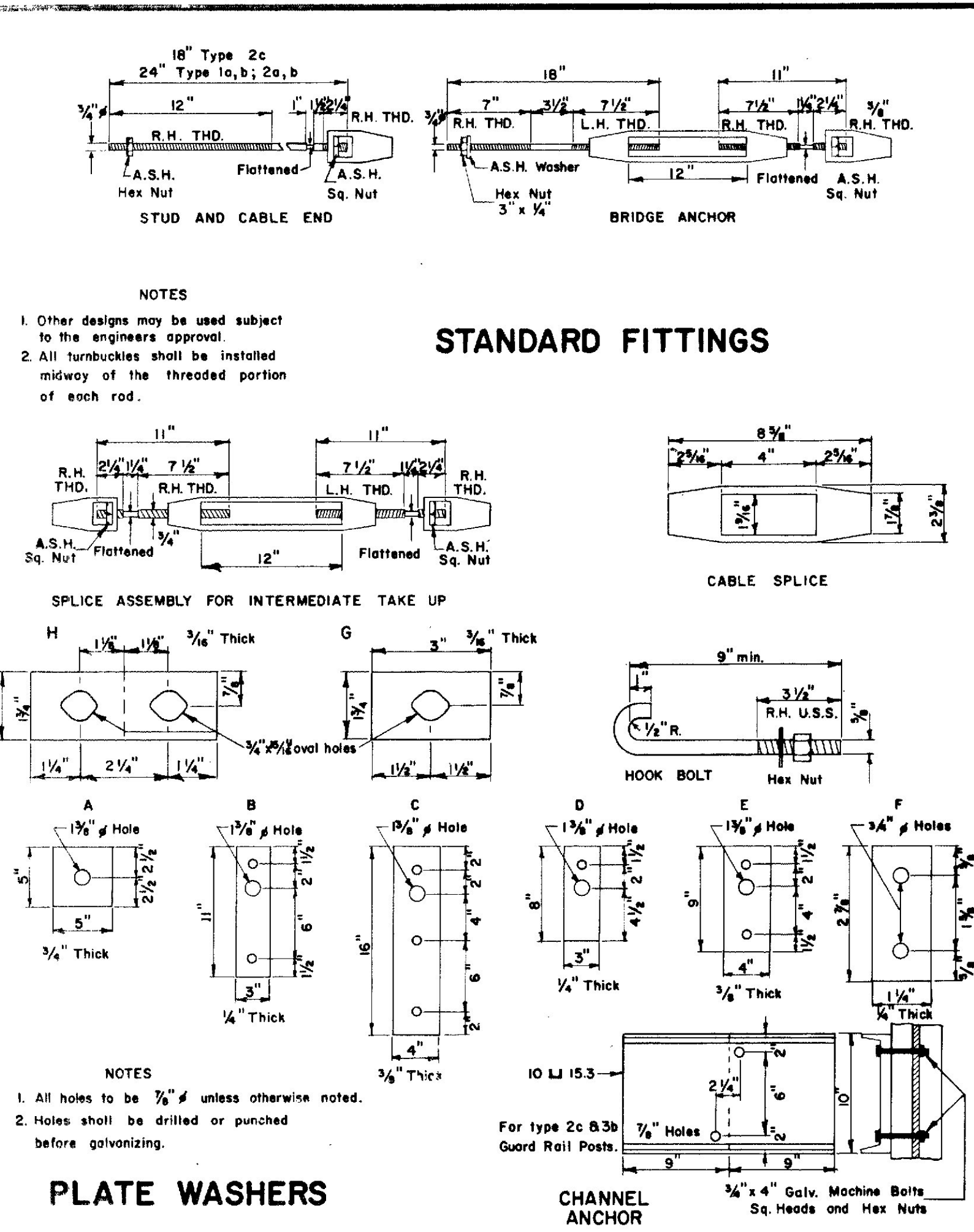
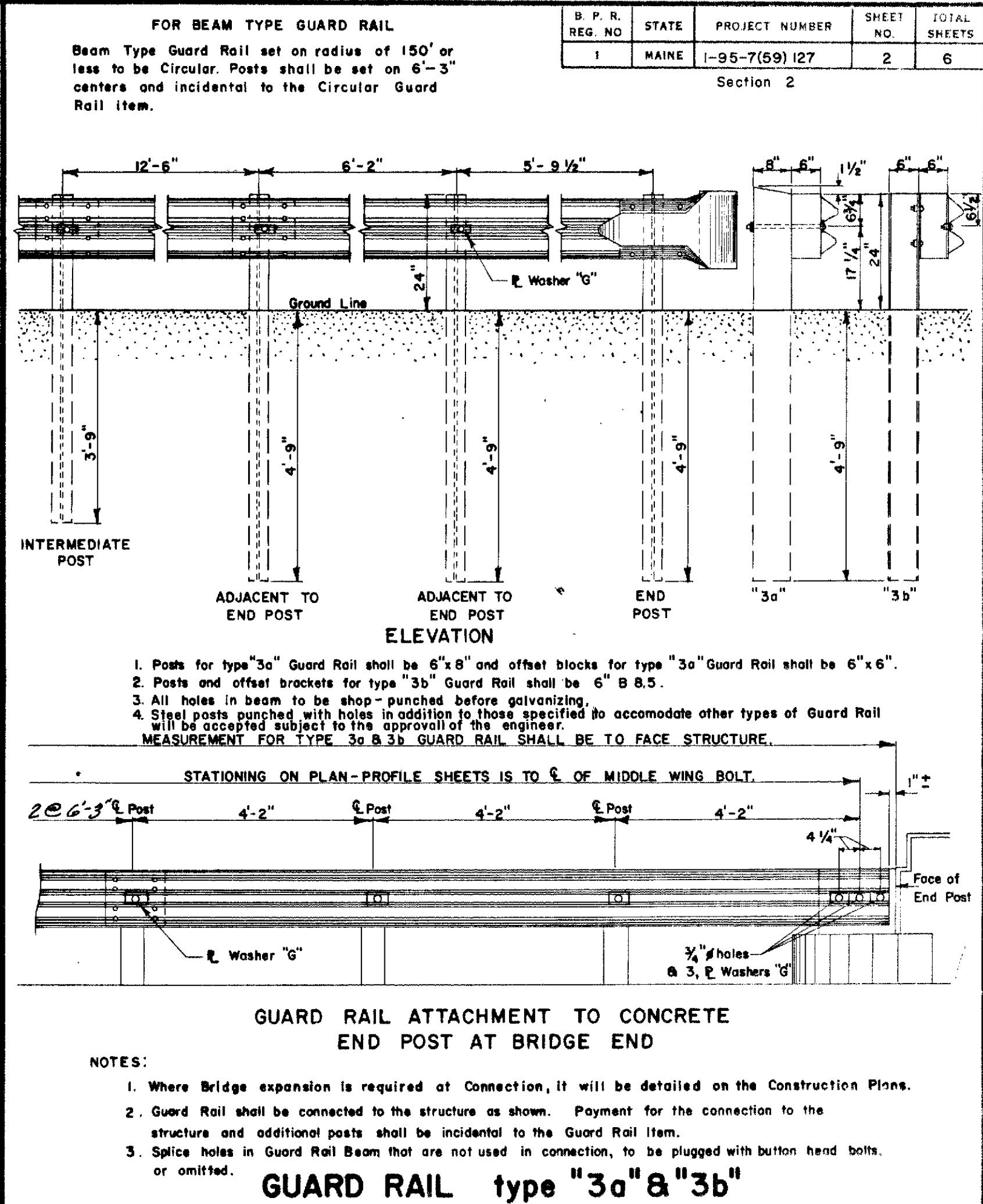
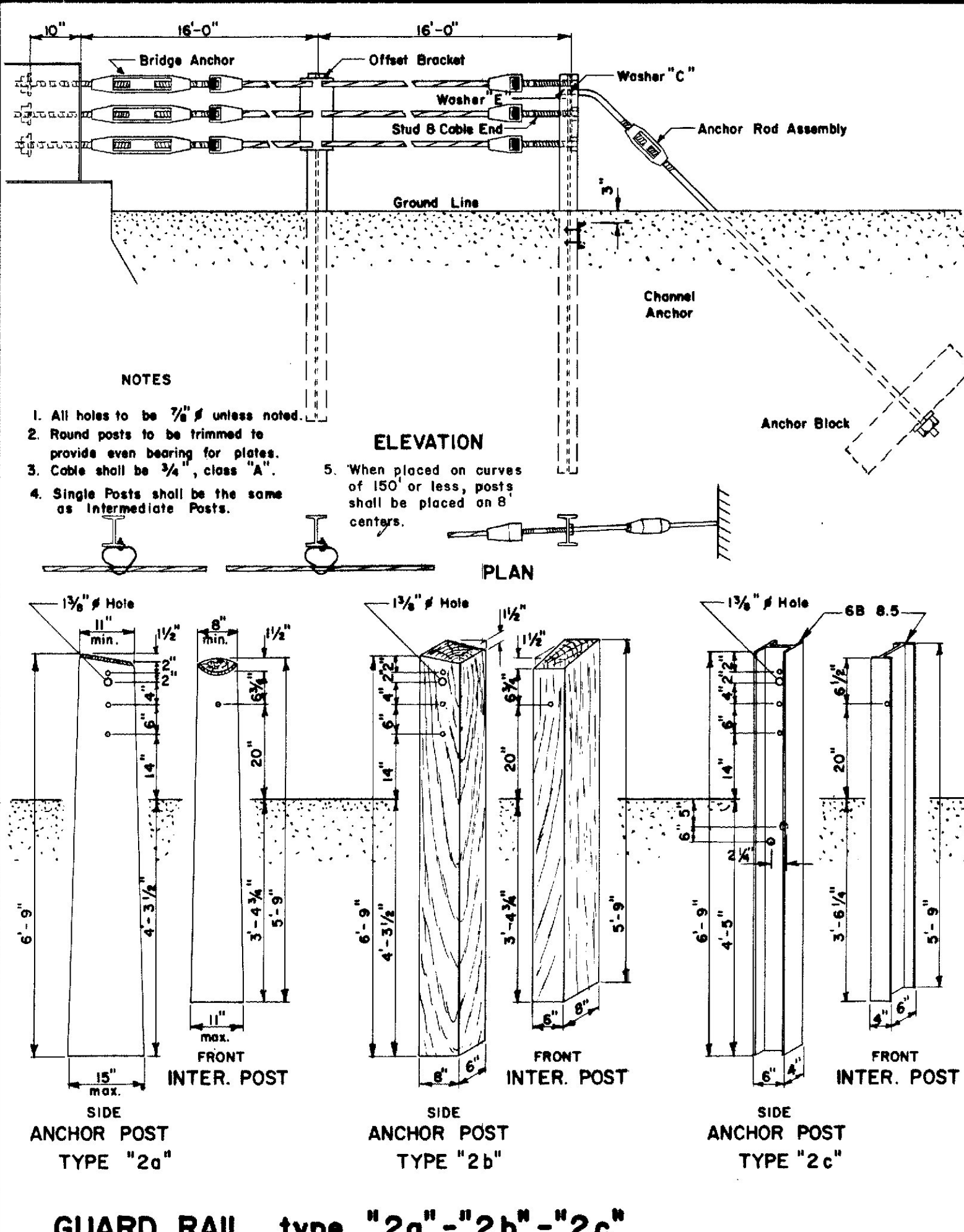
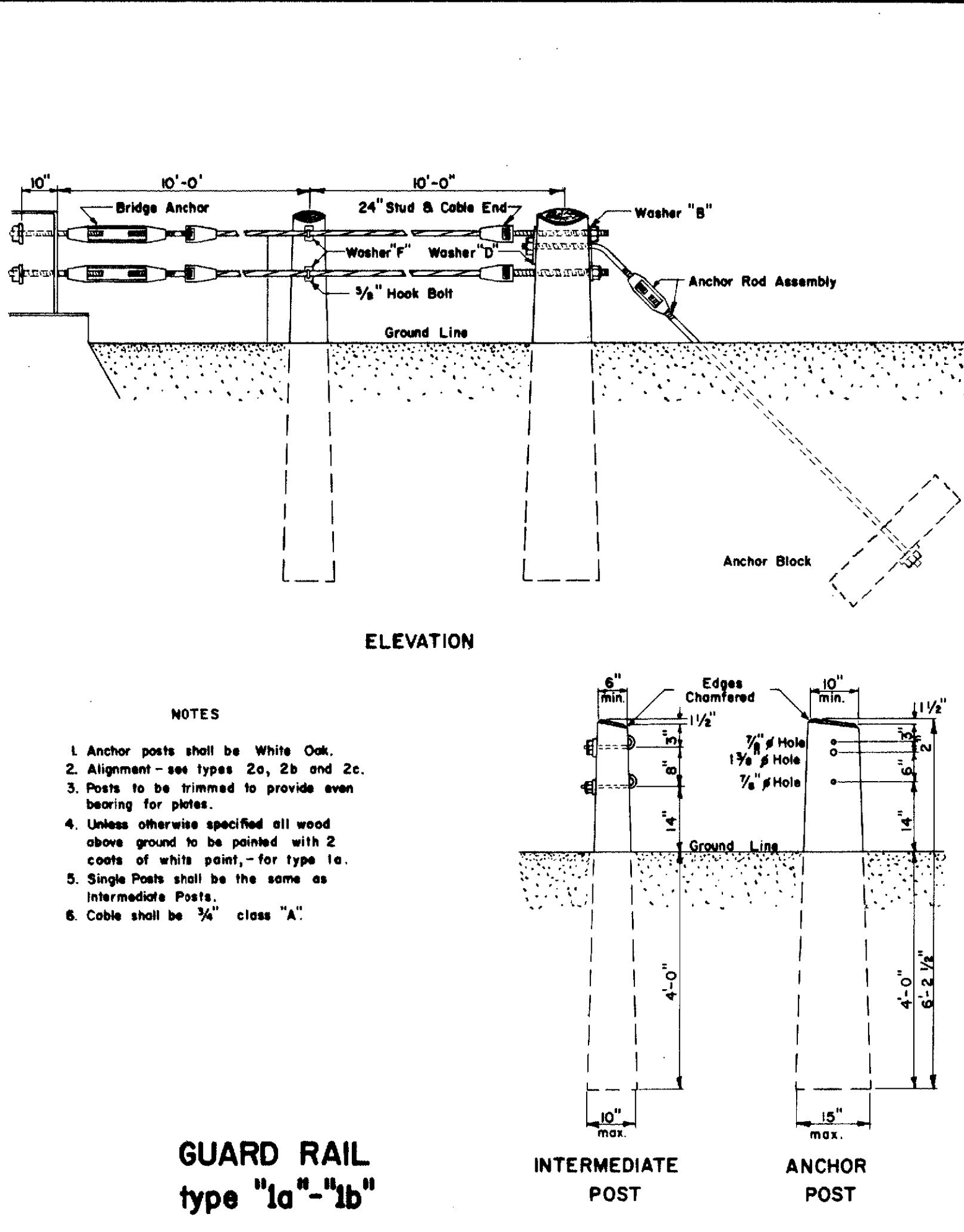
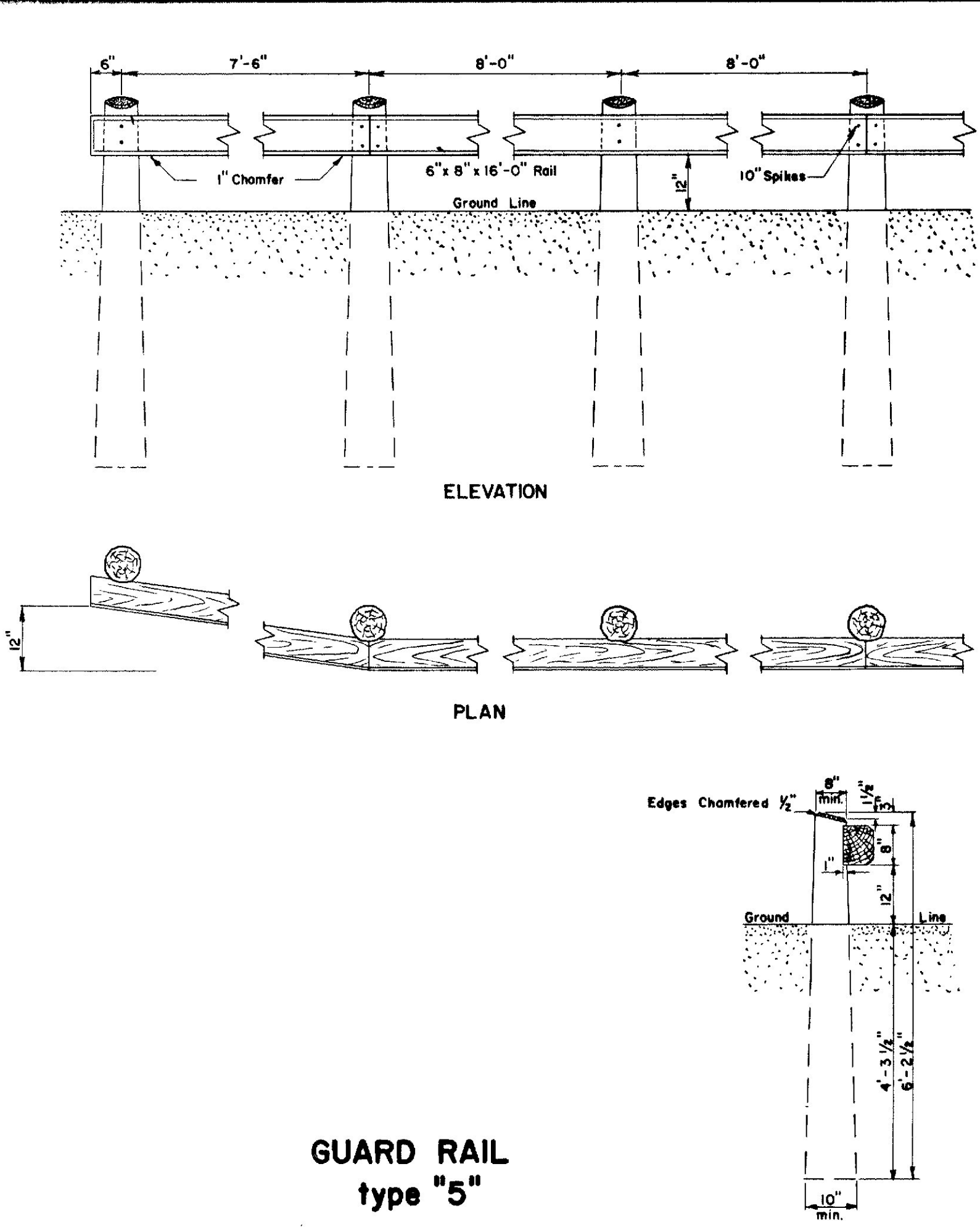
DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
REGION 1

APPROVED:

DIVISION ENGINEER

DATE

DD8



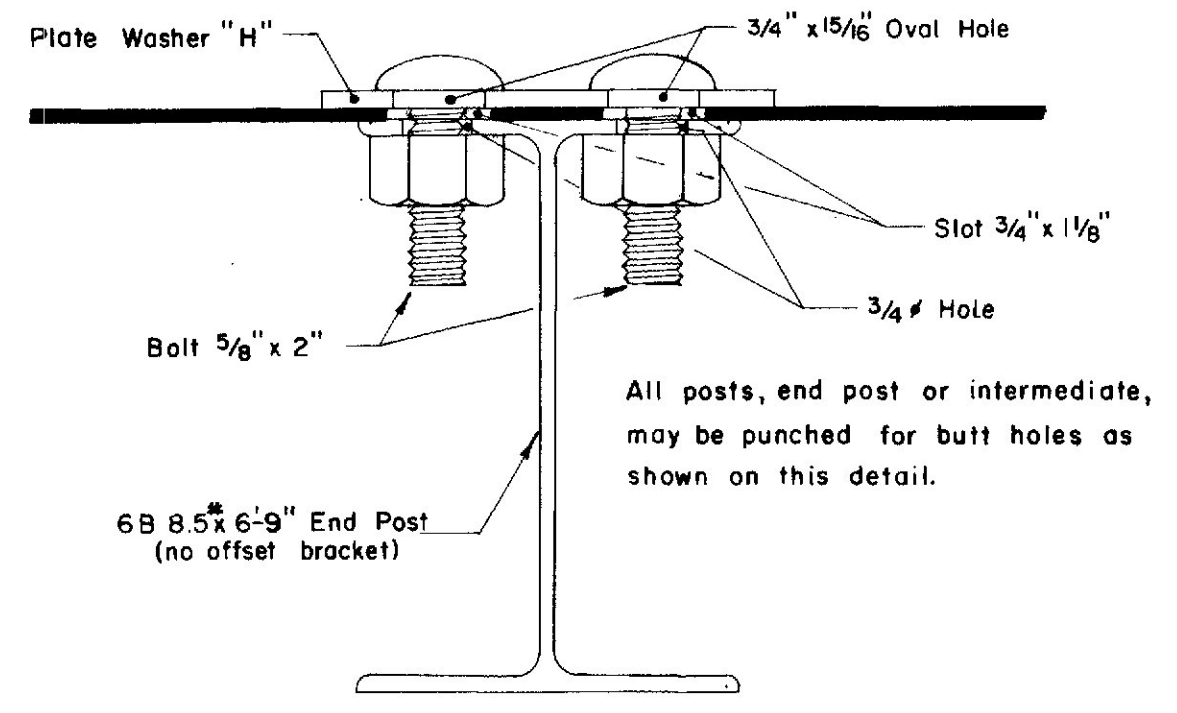
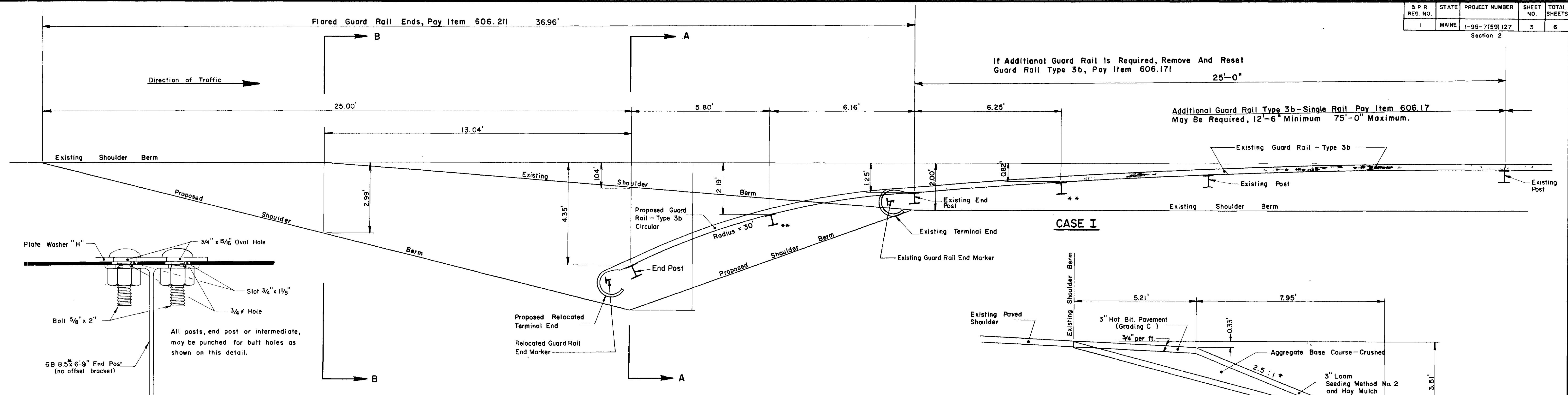
REVISIONS
18 Oct 65 dfg. End post dimens

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

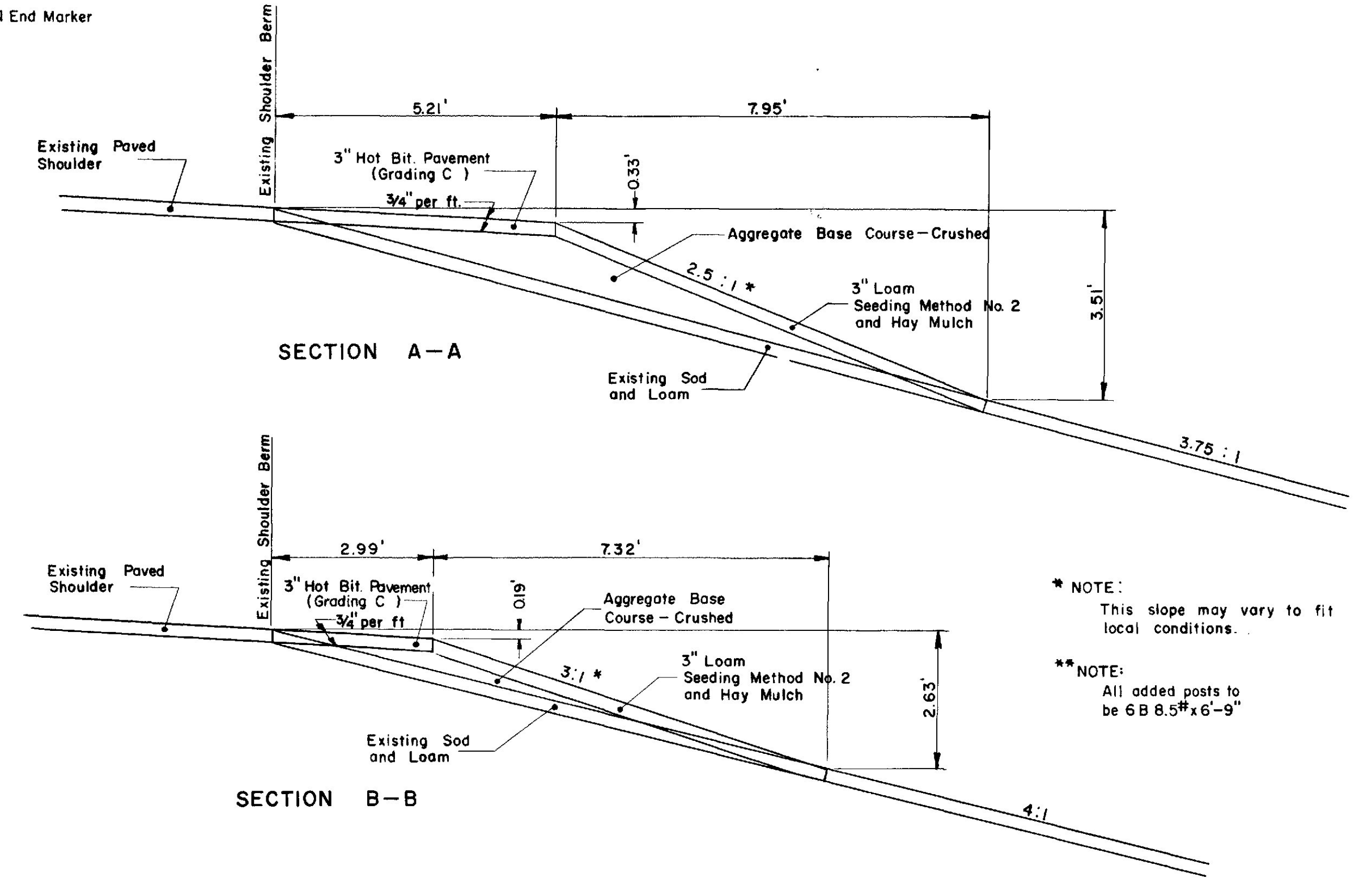
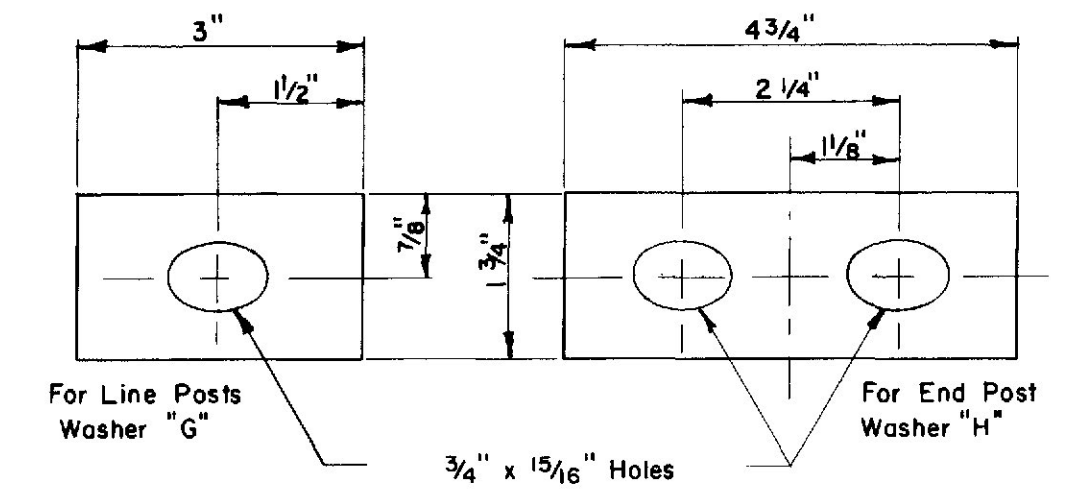
STANDARD DETAILS

GUARD RAILS, ANCHOR ASSEMBLIES, PLATE WASHERS and STANDARD FITTINGS

AUG. 1965

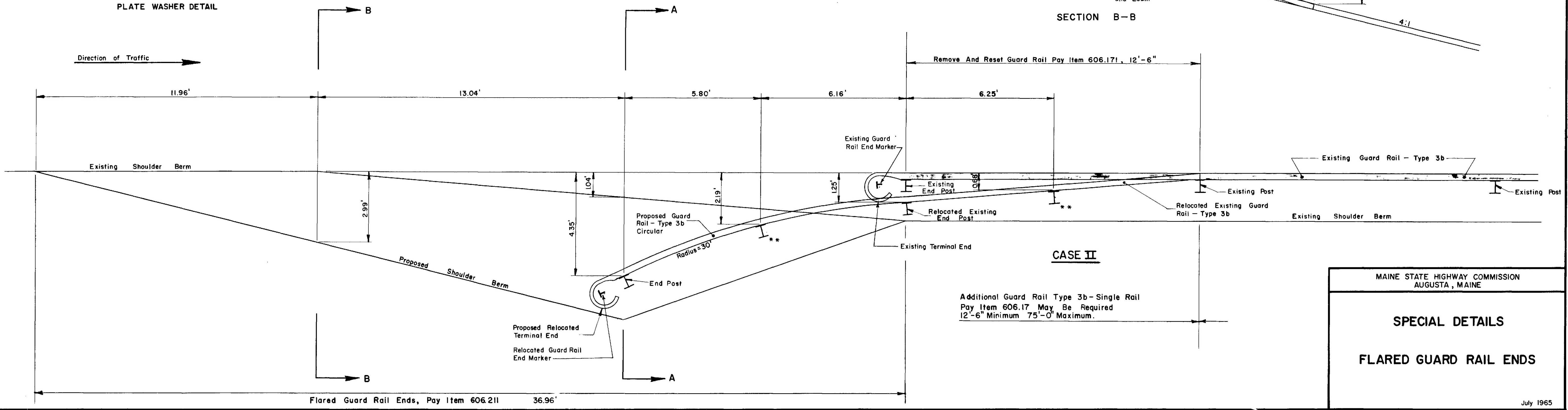


NOTE: Flared Guard Rail Ends shall be constructed on approximately thirty existing guard rail sections located behind granite curb in the Bangor area. These sections shall be graded to match the surrounding ground, loamed, seeded and hay mulched as directed by the Engineer.



* NOTE: This slope may vary to fit local conditions.

** NOTE: All added posts to be 6B 8.5" x 6'-9"



MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

SPECIAL DETAILS

FLARED GUARD RAIL ENDS

July 1965

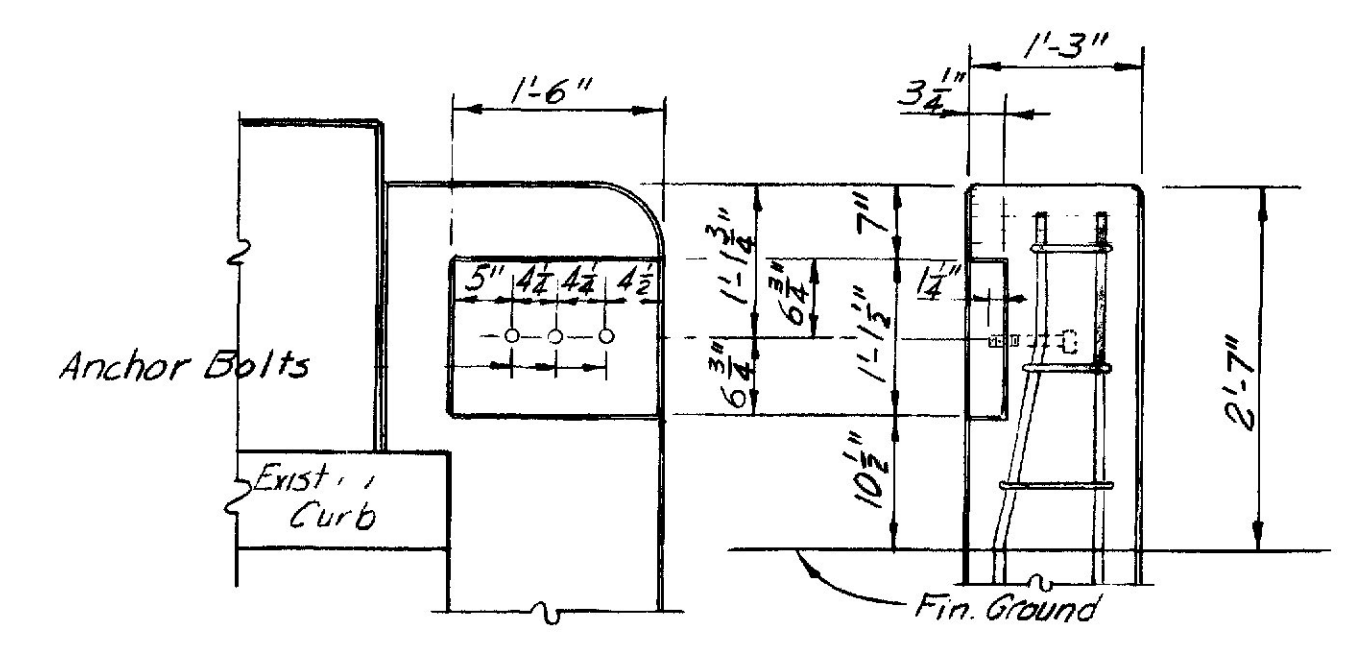
LOCATION CHART

GENERAL NOTES

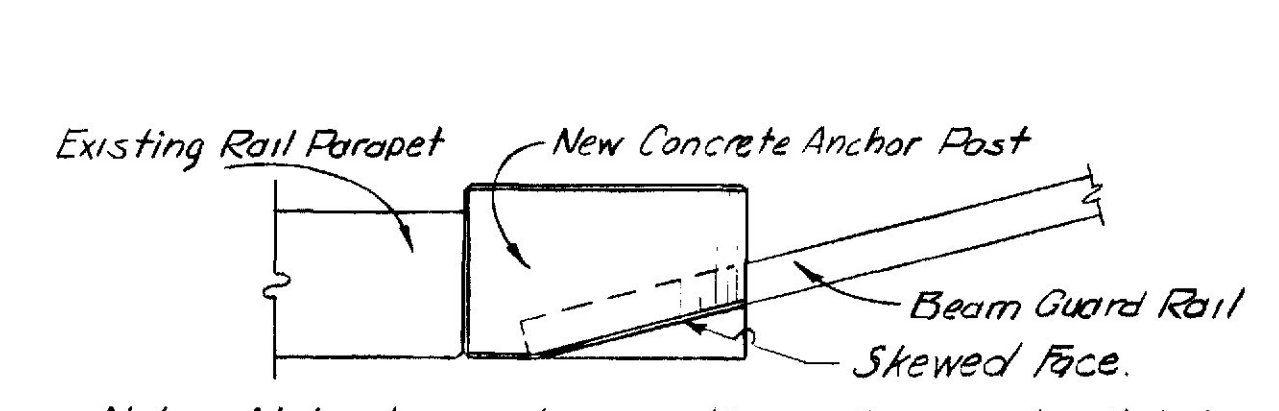
Concrete for Anchor Posts shall be Class Y.
 Chamfer all exposed edges of concrete $\frac{1}{2}$ ".
 Reinforcing Steel to have 2" minimum cover.
 Construct the new Concrete Anchor Post to match the grade of the existing structure.
 Guard Rail Anchorages shall be constructed only at a bridge approach, towards oncoming traffic.
 It may be necessary to modify plans to fit field conditions as they exist. Such changes shall be subject to approval of the Engineer.
 Concrete required for each Anchor Post, Types 1 & 2, is $\frac{1}{2}$ c.y. to $\frac{3}{4}$ c.y.
 Concrete required for each Anchor Post, Types 3 & 4, is $\frac{1}{3}$ c.y. to $\frac{1}{4}$ c.y.

Proj. No. Rural-Urban	NAME OF BRIDGE	CITY OR TOWN	NORTHBOUND				SOUTHBOUND			
			RIGHT		LEFT		RIGHT		LEFT	
			TYPE	REMARKS	TYPE	REMARKS	TYPE	REMARKS	TYPE	REMARKS
I-295-3(16)	Overpass No. 2 (N.B. only)	Portland	1(a)	See Note 1	1(a)	See Note 1	1(a)	See Note 1	1(a)	See Note 1
	Overpass No. 1 (S.B. only)	Portland	-	-	-	-	1(a)	See Note 1	1(a)	See Note 1
	Tukey Bridge	Portland	-	No Work Required	-	No Work Required	1(a)	See Note 1	-	No Work Required
	Kensington Street	Portland	-	No Work Required	-	No Work Required	1(b)	See Note 6	-	No Work Required
	Veranda Street	Portland	1(c)	See Note 6	-	No Work Required	1(c)	See Note 2	-	No Work Required
	Presumpscot River - N.B.	Falmouth	1(c)	See Note 6	1(c)	See Note 3 & 6	-	-	-	-
	Presumpscot River - S.B.	Falmouth	-	-	-	-	1(c)	See Note 6	1(c)	See Note 3 & 6
I-95-4(20)	Route 88	Yarmouth	1(c)	See Note 2	1(c)	See Note 3	1(c)	-	1(c)	See Note 3
	Royal River	Yarmouth	1(c)	See Note 2	1(c)	See Note 3 & 6	1(c)	See Note 6	1(c)	See Note 3 & 6
	Route U.S. 1	Yarmouth	1(c)	See Note 6	1(c)	See Note 3 & 6	1(c)	See Note 6	1(c)	See Note 3 & 6
	Cousins River	Yarmouth-Freeport	-	No Work Required	1(b)	See Note 6	-	No Work Required	-	No Work Required
	M.C.R.R.	Freeport	-	No Work Required	2(b)	Omit expansion Material	-	No Work Required	2(b)	Omit Expansion Material
I-95-6(37)	Bond Brook	Augusta	1(a)	See Note 6	1(a)	See Note 3 & 6	1(a)	See Note 6	1(a)	See Note 3 & 6
	New Belgrade Road	Augusta	1(a)	-	1(a)	See Note 3	1(a)	-	1(a)	See Note 3
	Webb Road	Waterville	1(a)	-	1(a)	-	1(a)	-	1(a)	-
	Oakland Road	Waterville	2(a)	See Note 1	2(a)	See Note 1	2(a)	See Note 1	2(a)	See Note 1
	County Road	Waterville	2(a)	See Note 1	2(a)	See Note 1	2(a)	See Note 1	2(a)	See Note 1
	Messalonskee Stream	Waterville	1(b)	See Note 1	1(b)	See Note 1	2(a)	See Note 1	2(a)	See Note 1
	Main Street	Waterville	2(a)	See Note 1	2(a)	See Note 1	2(a)	See Note 1	2(a)	See Note 1
	Route U.S. 201	Fairfield	2(a)	See Note 1	-	No Work Required	2(a)	See Note 6	-	No Work Required
	M.C.R.R.	Fairfield	3	-	-	No Work Required	2(b)	-	-	No Work Required
	Clinton A. Clouson - N.B.	Fairfield	1(b)	See Note 6	1(b)	See Note 1 & 3	-	-	-	-
I-95-7(59) Section 1	Clinton A. Clouson - S.B.	Benton	-	-	-	-	1(b)	See Note 6	1(b)	See Note 6
	River Road	Benton	1(b)	-	1(b)	-	1(b)	-	1(b)	-
	Hinkley Road	Clinton	1(a)	-	1(a)	-	1(a)	-	1(a)	-
	Webb Road	Pittsfield	1(a)	-	1(a)	-	1(a)	-	1(a)	-
	Somerset Avenue	Pittsfield	1(a)	-	1(a)	-	1(a)	-	1(a)	-
	M.C.R.R. (N.B. only)	Pittsfield	1(a)	-	1(a)	-	-	-	-	-
	Route 152	Pittsfield	1(a)	-	1(a)	-	1(a)	-	1(a)	-
	Sebasticook River	Pittsfield	1(a)	-	1(a)	-	1(a)	-	1(a)	-
	North Main Street	Pittsfield	1(a)	-	1(a)	-	1(a)	-	1(a)	-
I-95-7(59) Section 2	M.C.R.R.	Newport	1(b)	See Note 6	1(b)	See Note 3 & 6	1(b)	See Note 6	1(b)	See Note 3 & 6
	Sebasticook River	Newport	1(b)	See Note 6	1(b)	See Note 3 & 6	1(b)	See Note 6	1(b)	See Note 3 & 6
	Route 143	Etna	1(b)	-	1(b)	-	1(b)	-	1(b)	-
	Soudabscook Stream (West)	Hampden	3	-	3	-	3	-	3	-
	Soudabscook Stream (Center)	Hampden	3	-	3	-	3	-	3	-
	Soudabscook Stream (East)	Hampden	3	-	3	-	3	-	3	-
	Emerson Mill Road f R.R.	Hampden	3	-	3	-	3	-	3	-
	M.C.R.R. & Ferry Road	Bangor	2(b)	See Note 6	2(b)	See Note 3 & 6	See Note 1	-	2(b)	See Note 3 & 6
	I-395 Industrial Spur-NB.	Bangor	2(a)	See Note 1	2(a)	See Note 1 & 3	-	-	-	-
I-95-8(67)	I-395 Industrial Spur-SB.	Bangor	-	-	-	-	2(a)	See Note 1	2(a)	See Note 1 & 3
	Kenaukeag Stream	Bangor	1(b)	See Note 1	-	No Work Required	2(a)	See Note 1	-	No Work Required
	Broadway	Bangor	2(a)	See Note 1 & 4	-	No Work Required	2(a)	See Note 1 & 4	-	No Work Required
	Stillwater Avenue-N.B.	Bangor	2(a)	See Note 1	2(a)	See Note 1	-	-	-	-
	Stillwater Avenue-S.B.	Bangor	-	-	-	-	2(a)	See Note 1	2(a)	See Note 1
	Kirkland Road	Old Town	3	See Note 5	3	See Note 5	3	See Note 5	3	See Note 5
	Pushow Stream	Old Town	3	-	3	-	3	-	3	-
	Birch Stream	Old Town	3	-	3	-	3	-	3	-
I-395-2(68)	Webster Avenue	Bangor	2(a)	See Note 1	-	No Work Required	2(a)	See Note 1	-	No Work Required
	Main Street	Bangor	2(a)	See Note 1	-	No Work Required	1(b)	See Note 1	-	No Work Required
	Roundhouse Retaining Wall	Bangor	4(a)	See Note 1	-	No Work Required	-	-	-	-

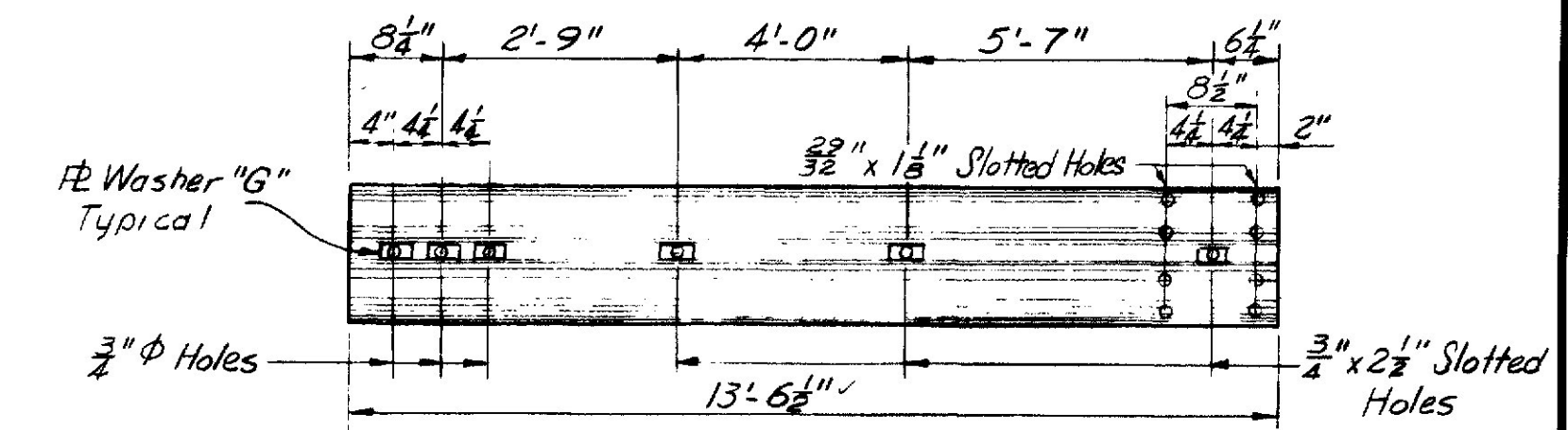
TYPICAL DETAILS



DETAIL A
 DETAIL OF RECESS FOR BEAM TYPE GUARD RAIL

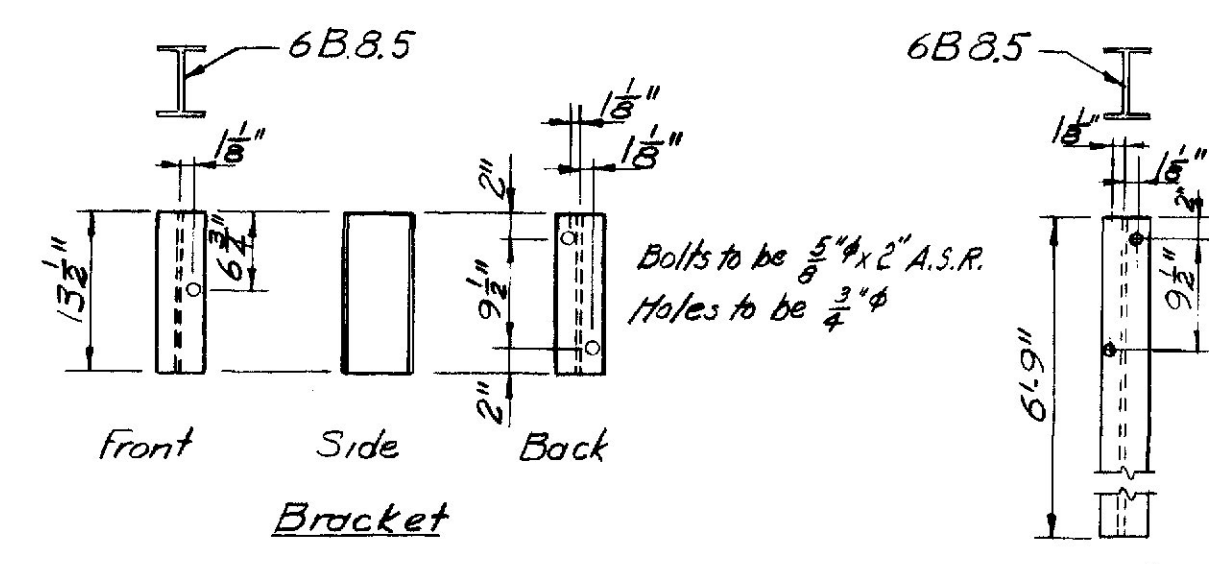
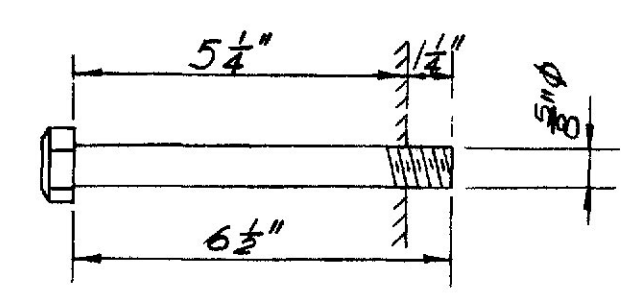


Note: At locations where existing median guard rail is in the form of a bullet nose (see Location Chart note 3) the guard rail may have extreme flare or may be difficult to adjust. At these and similar locations the face of the post that is above ground may be skewed to match the existing guard rail line.



Note: All details are the same as standard Details except as noted.

DETAIL B
 BEAM DETAIL FOR CONCRETE ANCHOR POST CONNECTION



DETAIL E
 OFFSET BRACKET AND GUARD RAIL POST TYPE 3b

Note: All parts to be galvanized.

Note 1 - Granite Approach Curb
 Note 2 - Bituminous Concrete Approach Curb
 Note 3 - Guard Rail in form of a bullet nose
 Note 4 - Approach Slab extends beyond face of curb
 Note 5 - Remove the existing concrete end post and replace with a new reinforced concrete end post having the same dimensions as the original post with the recess and anchor bolts as detailed in Typical Detail A. Payment will be made under Item 606.174, Type 3.
 Note 6 - Construct Vertical Curb-Type 1 with Hot Bituminous Pavement Backing. See Sheet No. 3 for Details.

MISCELLANEOUS INFORMATION

Proj. No.	Description	Estimated No. of Sites
1	Granite Approach Curb in excavation area that may require removal and relaying	41
2	Bituminous Concrete Approach Curb in excavation area that may require removal and replacing	3
3	Guard Rail in the form of a bullet nose	21
4	Remove a small section of the Approach Slab, if encountered.	2
5	Remove and reconstruct existing end post	4
6	Construct Vertical Curb-Type 1 with Hot Bituminous Pavement Backing	33

SUMMARY

Project No.	Number Required							
	Rural				Urban			
	1	2	3	4	1	2	3	4
I-295-3(16)	2	0	0	0	10	0	0	0
I-95-4(20)	13	2	0	0	0	0	0	0
I-95-6(37)	16	13	1	0	0	4	0	0
I-95-7(59)	44	4	16	0	0	2	0	0
I-95-8(67)	0	2	12	0	1	7	0	0
I-395-8(68)	0	0	0	0	0	3	0	2
	Type							
	1	2	3	4				
Total	86	37	29	2				

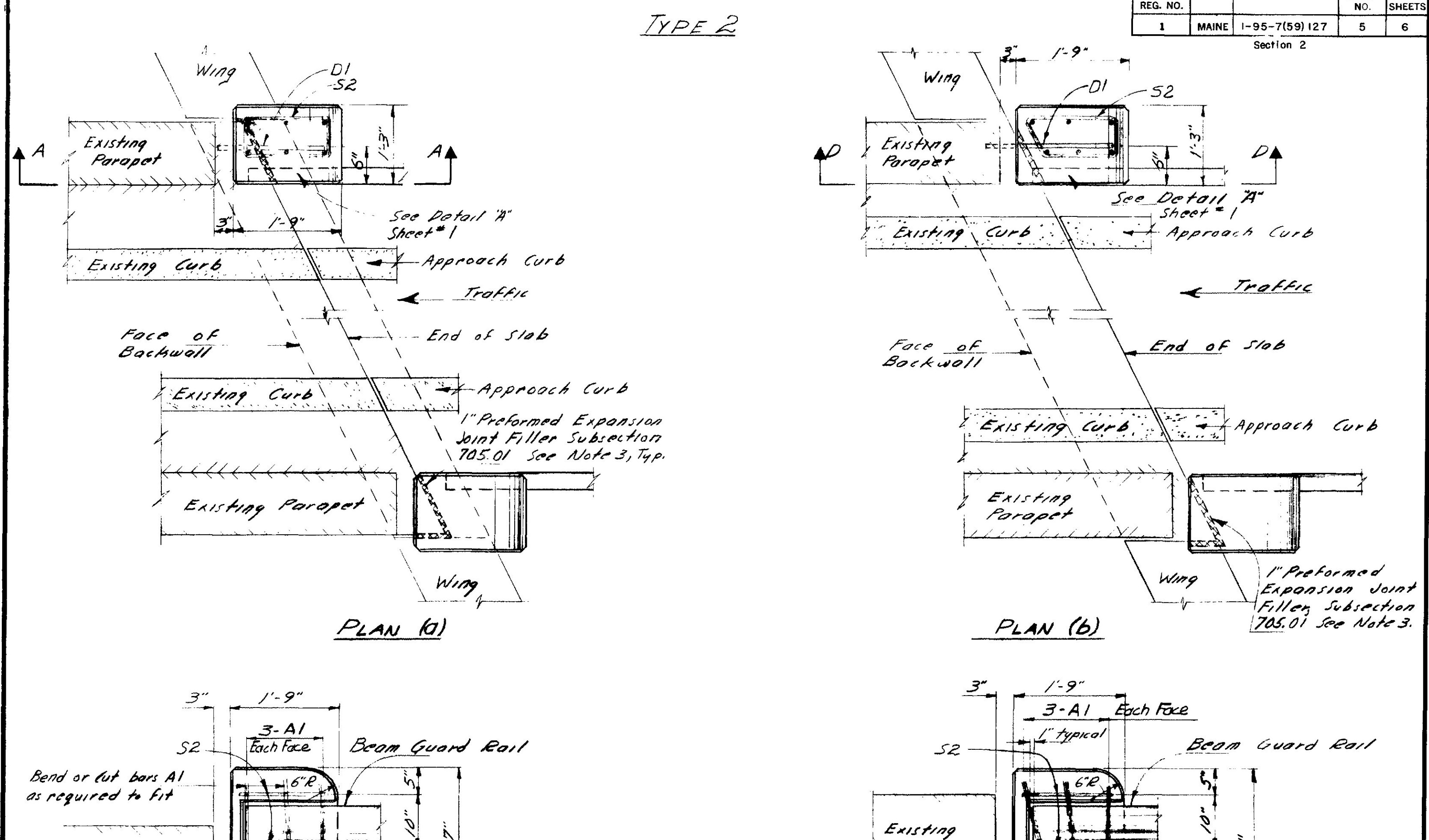
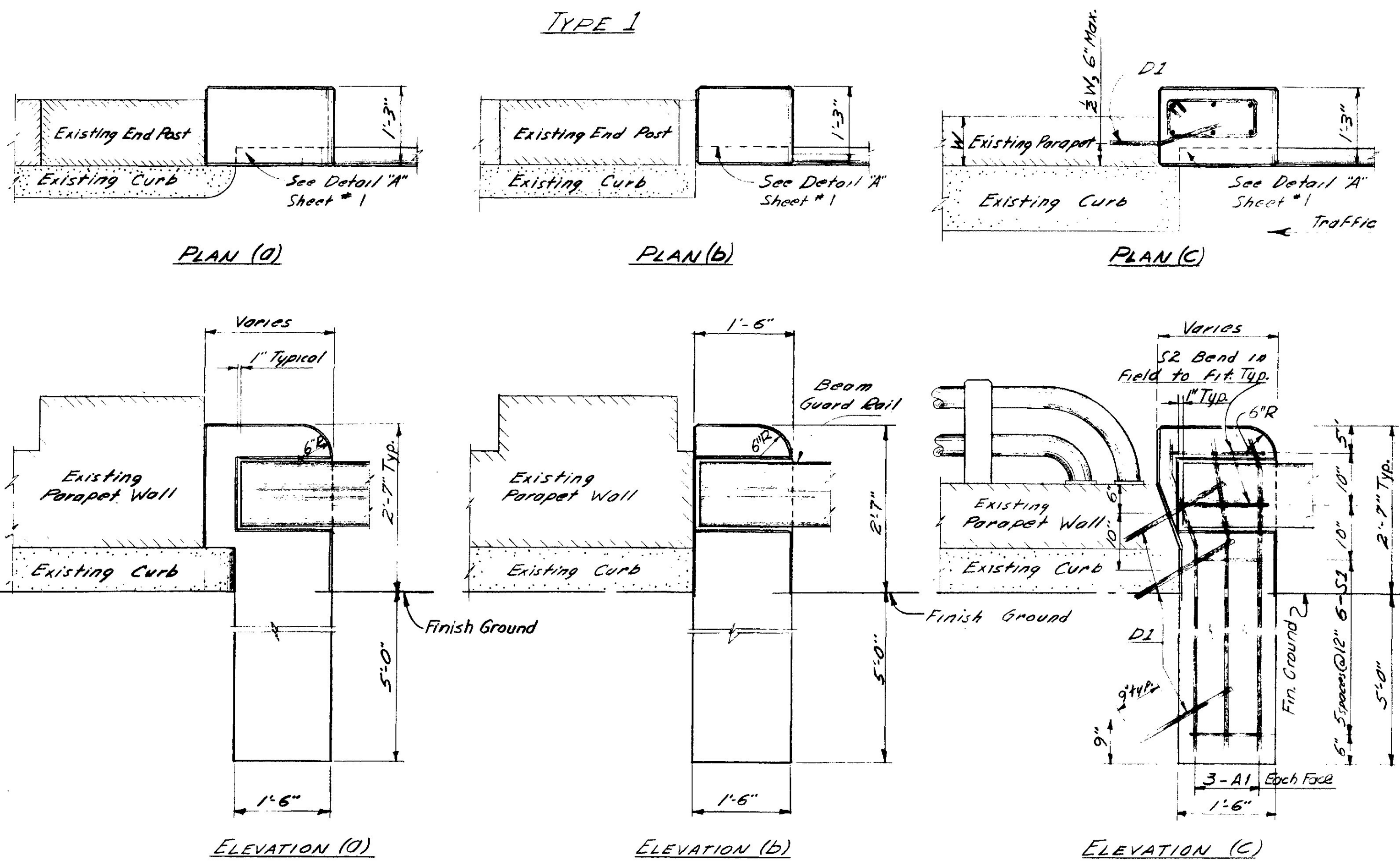
DESIGN - E. BARNARD
 TRACE - R. A. SURVEY - PLOT -
 CHECK - J. CHANDLER

BRIDGE NO. _____
 SURVEY - PLOT - _____

STATE HIGHWAY COMMISSION
 BRIDGE DIVISION

**GUARD RAIL ANCHORAGES
 AT EXISTING
 BRIDGE STRUCTURES**

SHEET 1 OF 3 AUGUSTA, MAINE MARCH 1966



- NOTES:**
1. A reinforced concrete guard rail anchor post Type 1, details (a, b, or c) shall be constructed at locations where the existing abutment wings are "L" shaped. If a concrete rail parapet was not constructed on the existing wing, use Type 1, Detail (b).
 2. Dimensions and reinforcing for Type 1 details (a, b, and c) are similar except as shown.
 3. Three (3) dowels per post located as shown in detail (c) are to be set and grouted into the existing concrete. The top dowel shall be placed six (6) inches below the top of the existing concrete.
 4. See Typical Details for the following:
 Detail A - Recess for Beam Type Guard Rail.
 Detail B - Beam Detail for Concrete Anchor Post Connection.
 Detail C - Anchor Bolt Detail.
 5. Plan (a)(b)(c) shown for right side of bridge. Left side of bridge details are opposite hand to details shown.

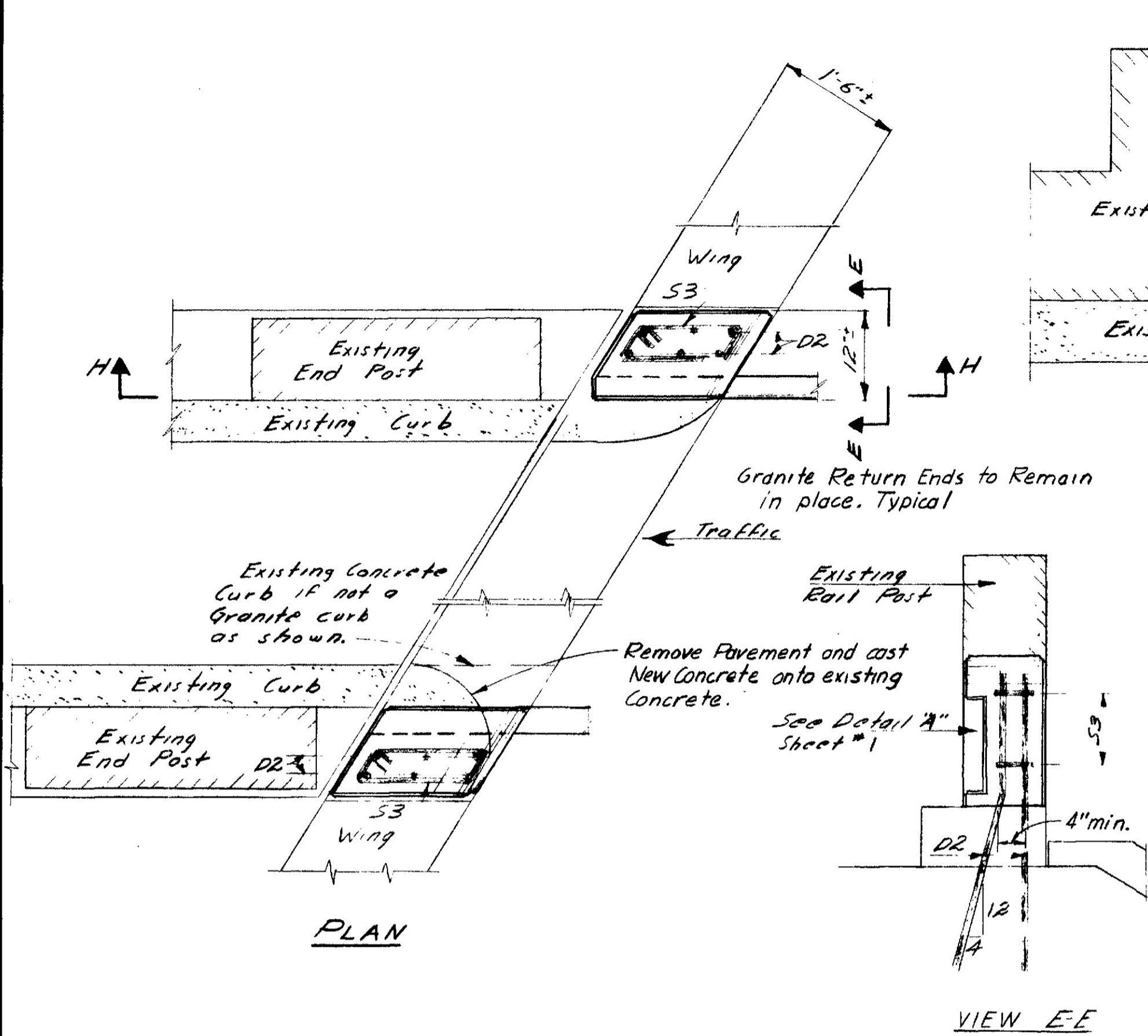
- NOTES:**
1. A reinforced concrete guard rail anchor post Type 2, detail (a or b) shall be constructed at locations where the anchor post is to be at the end of the existing superstructure.
 2. Dimensions and reinforcing shown for Type 2 details (a or b) are typical, but due to different skews and parapet wall features of different bridges, modifications may be made to adjust this type to local conditions.
 3. Place one (1) inch Preformed Expansion Joint Filler in the contact areas between the existing concrete and the new concrete post as indicated on the plan.
 4. Three (3) dowels per post located as shown in Sections 2 are to be set and grouted into the existing concrete. The top dowel shall be placed six (6) inches below the top of the abutment backwall.
 5. See Typical Detail for the following:
 Detail A - Recess for Beam Type Guard Rail.
 Detail B - Beam Detail for Concrete Anchor Post Connection.
 Detail C - Anchor Bolt Detail.
 6. Detail shown shall be modified, where necessary, to fit different skews.

REINFORCING STEEL SCHEDULE

				Bend to fit in the field S1	S2-S3	NOTES: 1. All dimensions are to 1/8" Bars. 2. All Reinforcing Bars shall be intermediate steel.
Bent Bars						
MARK	SIZE	NUMBER	LENGTH	LOCATION		
S1	#3	516	4'-8"	Type 1		
S2	#2	474	4'-8"	Type 1, 2, and 4		
S3	#2	58	4'-2"	Type 3		
STRAIGHT BARS						
A1	#6	738	7'-3"	Type 1 and 2		
D1	#8	369	1'-9"	Type 1 and 2		
D2	#8	174	3'-8"	Type 3		
D3	#8	12	4'-5"	Type 4		

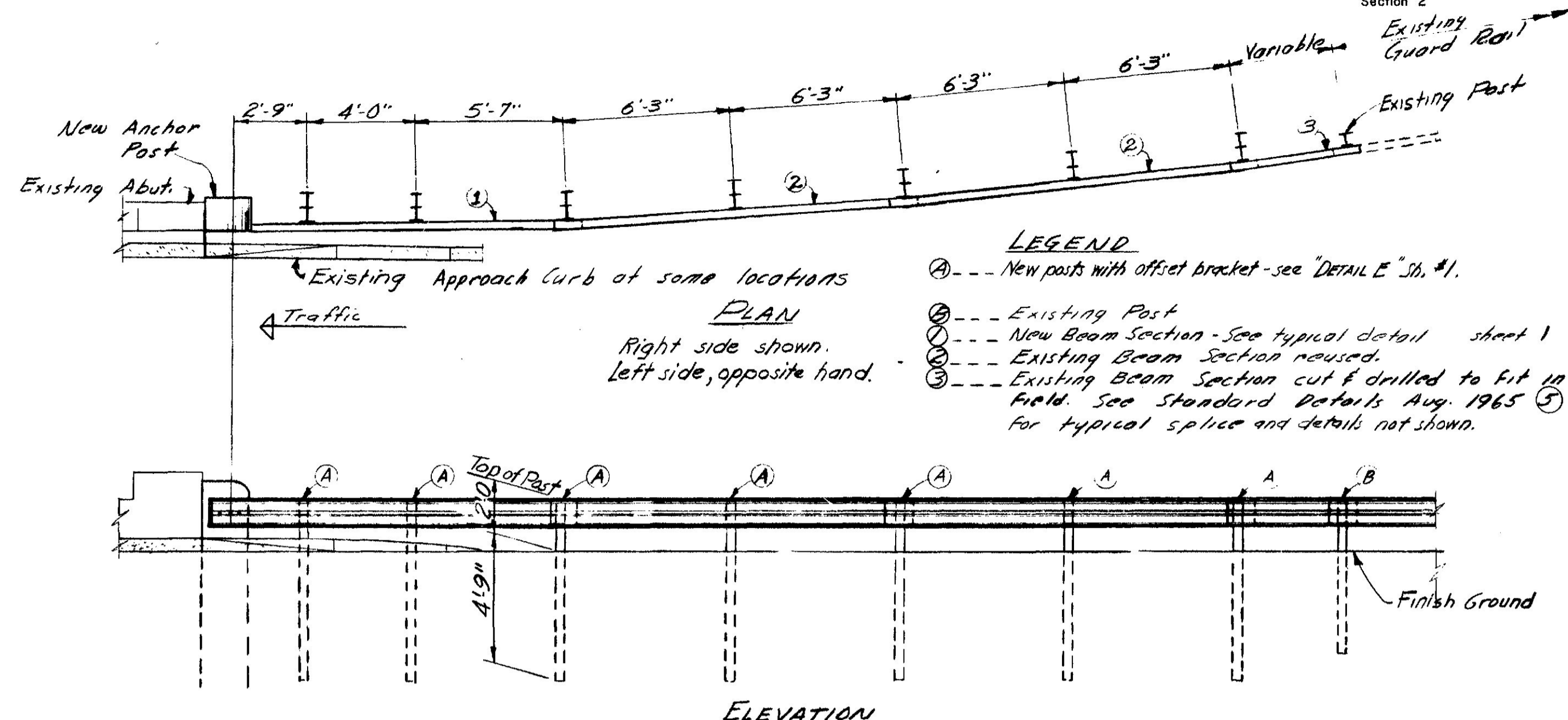
DESIGN - E. BARNARD	BRIDGE NO.
TRACE - R. T. A.	SURVEY -
CHECK - J. CHANDLER	PILOT -
STATE HIGHWAY COMMISSION BRIDGE DIVISION	
GUARD RAIL ANCHORAGES AT EXISTING BRIDGE STRUCTURES	
SHEET 2 OF 3 AUGUSTA, MAINE MARCH 1966	

TYPE 3



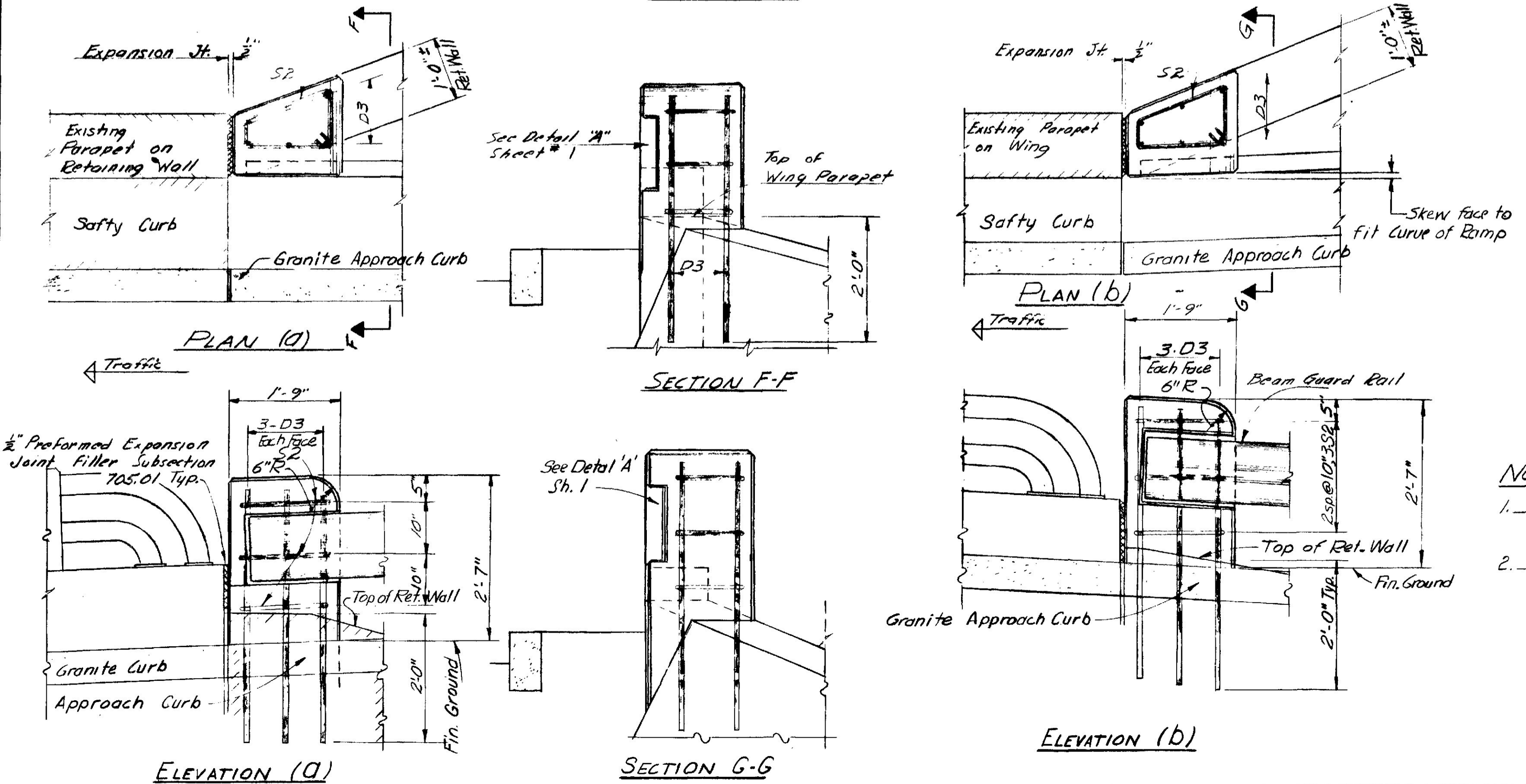
- NOTES:**
1. A reinforced concrete guard rail anchor post Type 3, shall be constructed at locations where the anchor post is to be built on top of an existing backwall adjacent to an open joint.
 2. Details shown shall be modified to fit different skews and types of backwalls.
 3. See Typical Details for the following:
 Detail A --- Recess for Beam Type Rail
 Detail B --- Beam Detail for Concrete Anchor Post Connection.
 Detail C --- Anchor Bolt Detail.

APPROACH GUARD RAIL

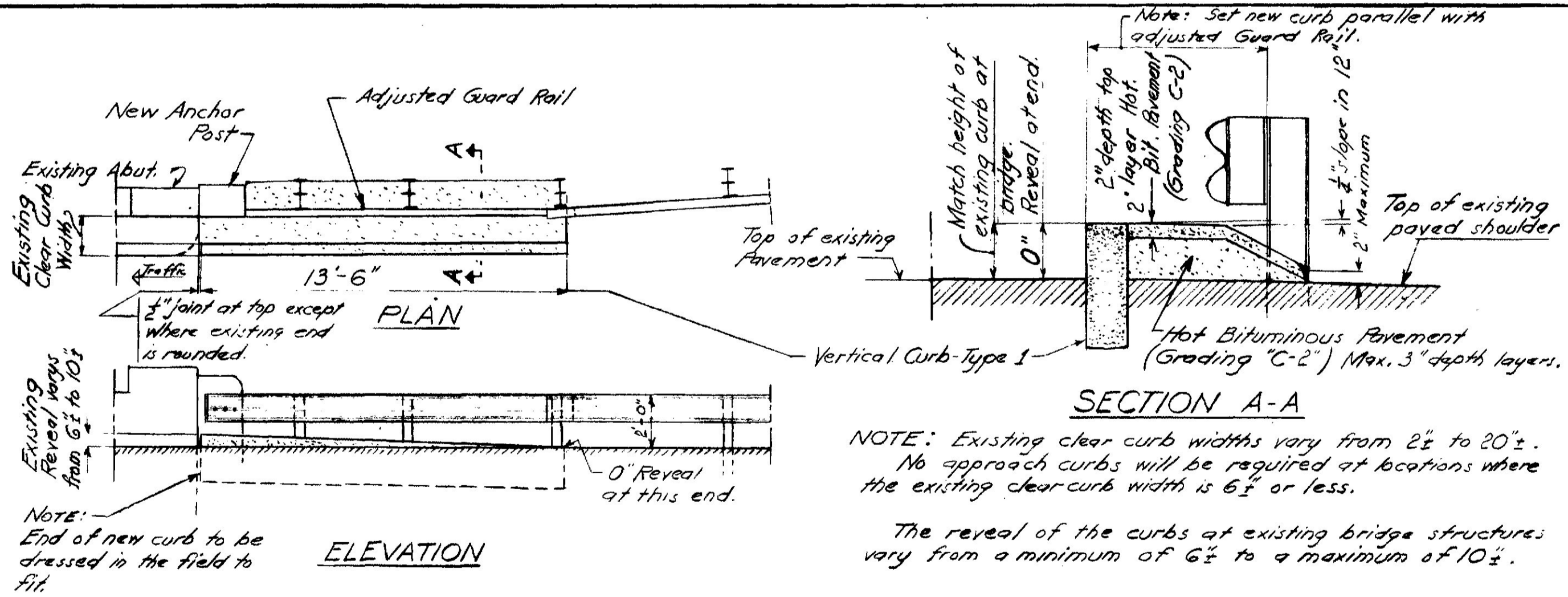


- LEGEND**
- Ⓐ --- New posts with offset bracket - see "Detail E" Sh. #1.
 - Ⓑ --- Existing Post
 - Ⓒ --- New Beam Section - See typical detail sheet 1
 - Ⓓ --- Existing Beam Section reused.
 - Ⓔ --- Existing Beam Section cut & drilled to fit in field. See Standard Details Aug. 1965 Ⓔ for typical splice and details not shown.
- NOTES:**
1. Plan and Elevation shown indicate in general the method and materials required to connect the existing beam type guard rail to the new concrete anchor post.
 2. At locations where the existing guard rail is in the form of a bullet nose, remove only sections necessary to make the connection. In some cases alterations, as shown in Typical Detail "D", sheet #1, may be necessary. At all other locations remove three (3) 12'-6" sections of existing guard rail and replace as shown above.
 3. All cuts, holes, and abrasions in the new or existing guard rail caused by installation in the field shall be thoroughly cleaned and painted with one coat of Dimecoat No. 4 as manufactured by Amercoat Corporation, Brea, California or an equivalent approved by the Engineer.
- A. In general the existing guard rail shall remain in place until such time that the new guard rail installation can be completed. It may be necessary to cut the first section of existing beam adjacent to the new concrete anchor post and relocate the existing end post to clear the work area. It is essential that a minimum gap be maintained.

TYPE 4



- NOTES**
1. A reinforced concrete guard rail anchor post Type 4 (a orb) shall be constructed at the locations shown in "Location Chart" Sh. #1.
 2. See Typical Details for the following:
 Detail A --- Recess for Beam Type Rail
 Detail B --- Beam Detail for Concrete Anchor Post Connection.
 Detail C --- Anchor Bolt Detail.



- NOTE:** Existing clear curb widths vary from 2 1/2' to 20'. No approach curbs will be required at locations where the existing clear curb width is 6' or less.
- The reveal of the curbs at existing bridge structures vary from a minimum of 6 1/2' to a maximum of 10 1/2'.

DESIGN - E. BARNARD TRACE - R. T. A. CHECK - J. CHANDLER	BRIDGE NO. SURVEY - PLOT -
STATE HIGHWAY COMMISSION BRIDGE DIVISION	
GUARD RAIL ANCHORAGES AT EXISTING BRIDGE STRUCTURES	
SHEET 3 OF 3 AUGUSTA, MAINE MARCH 1966	