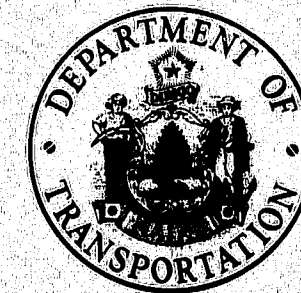


HH 25

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION



BUREAU OF HIGHWAYS  
COOMBS MILL BRIDGE  
OVER  
BOND BROOK  
IN THE CITY OF  
AUGUSTA  
KENNEBEC COUNTY  
PROJECT NO 5747  
LENGTH OF PROJECT 0.038 MILES

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	5747	1	21

SPECIFICATIONS

DESIGN: AASHTO Specifications for Highway Bridges 1977 and Interim Specifications 1978, 1979.

CONTRACT: State of Maine, State Highway Commission, Standard Specifications, Highways and Bridges, Revision of June 1968.

DESIGN LOADING

LIVE LOAD: HS20

MATERIALS

CONCRETE: Abutments ..... Class A or B  
All Other ..... Class A

REINFORCING STEEL: ASTM A615 Grade 60

BASIC ALLOWABLE STRESSES

CONCRETE:  $f_c = 1200$  psi.  $n = 9$

REINFORCING STEEL:  $f_s = 24000$  psi.

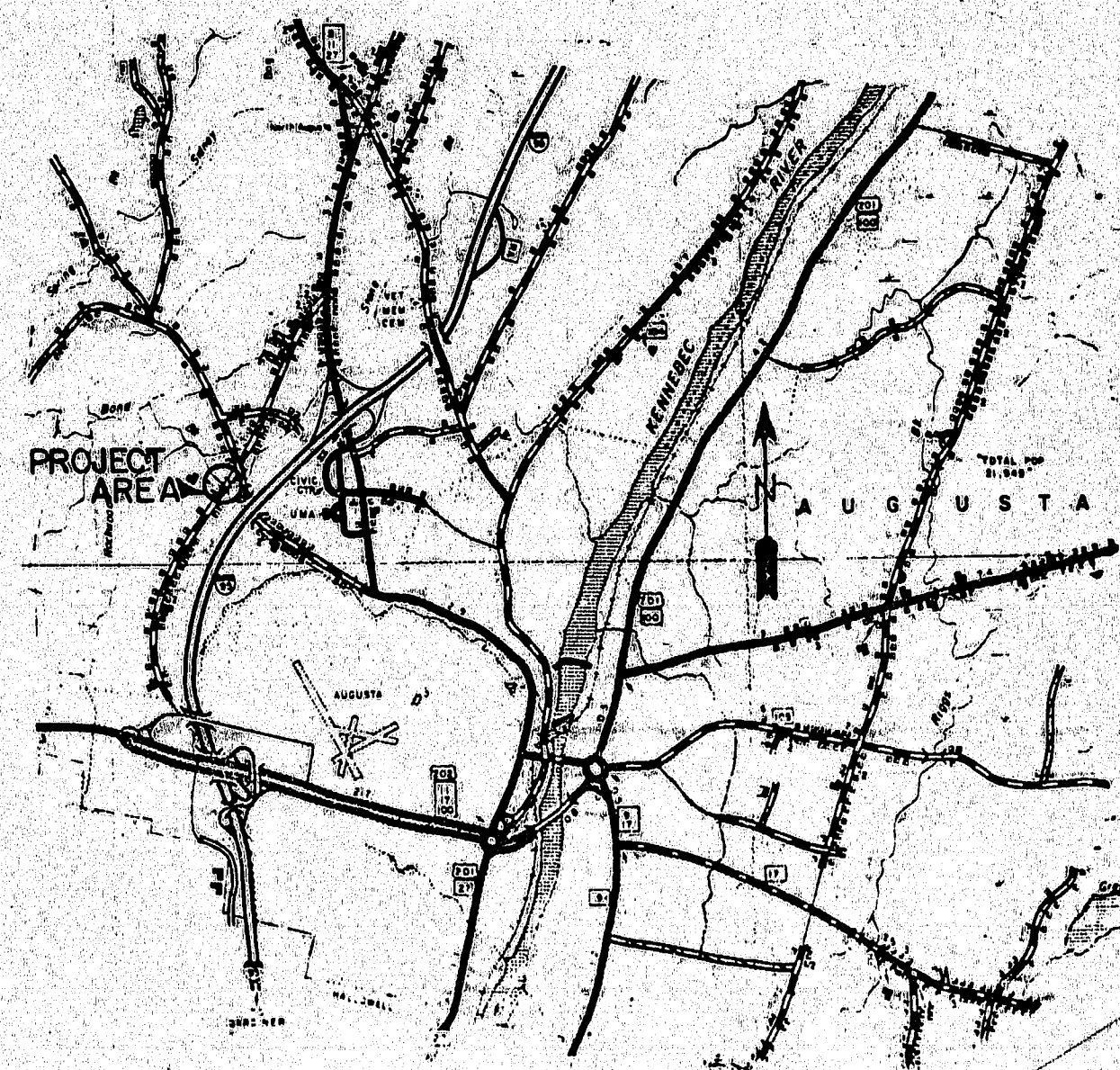
HYDROLOGIC DATA

Drainage Area = 12.8 square miles  
Design Discharge (Q50) = 1600 cfs  
Check Discharge (Q100) = 1900 cfs  
Headwater Elevation at (Q50) = 113.0  
Headwater Elevation at (Q100) = 113.0  
Discharge Velocity (Q50) = 6.0 fps  
Discharge Velocity (Q100) = 6.8 fps

TRAFFIC DATA

ADT 1960 = 2120  
ADT 2000 = 2180  
DHV = 413  
T (%) = 5  
D (%) = 60  
18-kips (P 2,5) = 28

NOTE: ALL WORK CONTEMPLATED UNDER THIS CONTRACT SHALL BE GOVERNED BY AND CONFORMING WITH THE STANDARD SPECIFICATIONS (REVISION OF JUNE, 1968) AND SUPPLEMENTS THERETO EXCEPT AS MODIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS.



LOCATION MAP

Scale of miles

INDEX OF SHEETS

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ABUTMENT PLANS	6
BARRIER DETAILS	7
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CROSS SECTIONS	9 - 11
FOUNDATION SURVEY	12
HIGHWAY STANDARDS	
AUG. 1969 5 GUARD RAIL (Rev. 6/1/78)	13
AUG. 1969 6 GUARD RAIL (Rev. 6/1/78)	14
AUG. 1969 9 BEAM GUARD RAIL END TREATMENT (Rev. 10/24/75)	15
AUG. 1969 11 BARRICADES, WARNING SIGNS, etc (Rev. 3/22/77)	16
AUG. 1969 12 FIELD OFFICE (Rev. 3/16/73)	17
RIGHT OF WAY MAP	18
TRAFFIC CONTROL PLANS	19 - 21

As Built

Project started 7/80

completed 11/80

Dennis Dubois 12/80

APPROVED:

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

DATE

6-4-80

*George N. Campbell*  
COMMISSIONER  
*Richard P. [Signature]*  
BUREAU DIRECTOR AND CHIEF ENGINEER

6-4-80

UNITED STATES  
DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
REGION 1

APPROVED:

DIVISION ENGINEER

DATE

172-50



F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	5747	2	21

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.12	Removal of Existing Structural Concrete	2	C.Y.
203.20	Common Excavation	1275	C.Y.
203.24	Common Borrow	10	C.Y.
203.25	Granular Borrow	109	C.Y.
203.26	Gravel Borrow	33	C.Y.
206.081	Structural Earth Excavation - Abuts. & Retaining Walls	270	C.Y.
304.10	Aggregate Subbase Course - Gravel	875	C.Y.
460.22	Hot Bituminous Pavement	80	Ton
501.212	Steel H-Beam Piles 42 lbs./ft.	380	L.F.
502.21	Structural Concrete, Abuts. & Retaining Walls	178	C.Y.
502.25	Structural Concrete Superstructure Slabs	1	L.S.
503.12	Reinforcing Steel, Fab. & Delivered	11,160	LB.
503.13	Reinforcing Steel, Placing	11,160	LB.
511.0701	Cofferdams	1	L.S.
511.0702	Cofferdams	1	L.S.
512.07	French Drains (stones Only)	5	C.Y.
514.06	Curing Box for Concrete Cylinders	1	Each
515.20	Protective Coating for Concrete Surfaces	104	S.Y.
603.202	30 Inch Bit. Coated Corr. Metal Pipe	8	L.F.
606.26	Terminal Ends - Single Rail	4	Each
606.35	Guard Rail Delineator Posts	4	Each
606.36	Guard Rail, Removed and Reset	100	L.F.
606.55	Guard Rail Type 3 - Single Rail	163	L.F.
606.59	Guard Rail Type 3 - Circular - 15 ft. Radius & Less	38	L.F.
606.60	Guard Rail Type 3 - Circular - Greater 15 ft. Radius	25	L.F.
610.08	Plain Riprap	103	C.Y.
615.07	Loam	25	C.Y.
616.08	Sodding	25	S.Y.

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
618.14	Seeding, Method No. 2	5	Unit
618.15	Temporary Seeding	10	Lb.
619.12	Mulch	8	Unit
629.05	Labor, straight time	10	M. Hr.
(630.0606)	Traffic Officers (non-bid)	30	M. Hr.
631.10	Air Compressor (Inc. Operator)	10	Hr.
631.11	Air Tool (Inc. Operator)	10	Hr.
631.12	All Purpose Excavator (Inc. Operator)	10	Hr.
631.13	Bulldozer (Inc. Operator)	10	Hr.
631.14	Grader (Inc. Operator)	10	Hr.
631.171	Truck - small (Inc. Operator)	10	Hr.
631.22	Front End Loader (Inc. Operator)	10	Hr.
632.08	Warning Lights	2	Grp
637.07	Sprinkling	15	M. G.
637.08	Calcium Chloride	2	Ton
639.09	Field Office, Type B	1	Each
652.31	Type I Barricades	10	Each
652.34	Cones	10	Each
652.35	Construction Signs	260	S.F.
652.36	Maintenance of Traffic Control Devices	90	Cal. Day
656.50	Baled Hay, in place	10	Each
656.51	Sandbags, in place	10	Each
657.201	Seed and Application, Method A	4	Unit
659.10	Mobilization	1	L.S.

[illegible]

GENERAL CONSTRUCTION NOTES

1. All utility facilities shall be adjusted by the respective utilities unless noted.
2. Place a 2 foot wide strip of sod on the side slopes along the top of the riprap and in back of upstream wings.
3. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Engineer. Shaping and compacting of the existing subbase and layers of new subbase 6 inches or less thick, in areas where the Engineer directs the Contractor not to excavate to the subgrade line shown on the plans, will be paid for with appropriate equipment rental items.
4. Payment for the new superstructure slab concrete will be made under Item 500.25 Superstructural Concrete Superstructure Slabs. Concrete for Abutments, Wings, Footings and Concrete Barriers will be paid for under Item 502.21 Structural Concrete Abutments and Retaining Walls.
5. Cover all joints on the back between the new structure and the existing structure, and the joint between the slab and abutments with two layers of heavy roofing, 10 inches wide. Coat the concrete and back of each layer as applied with plastic roofing cement. Recess the area to be covered in the joint between the new slab and new abutment 1/4 inch.
6. In the area of the Temporary Paved Detour as shown on the General Plan and Cross Sections, the existing pavement shall be removed and the area regraded to form a smooth transition between the new construction and existing road as directed by the engineer. A temporary pavement of Hot Bituminous Binder shall be placed as shown on the Temporary Paved Detour. Also, see Note # 9.
7. Protective Coating shall be applied to all exposed areas of concrete as follows: Safety Barrier and the slab fascias down to the drip notch, top of wings and parapets.
8. Drill and grout for the bars placed into the existing structure. The grout shall contain an approved non-shrink additive. Payment for drilling the holes and grouting the bars as shown on the plans, including all materials, labor and equipment shall be incidental to Item 503.12 and 503.13.
9. The Bituminous Binder and Guard Rail may be eliminated by the Engineer if the planned construction of an adjacent State Aid Highway project goes forward in a timely manner to allow the installation of the Guard Rail and Bituminous Binder under the State Aid Contract.

<b>PLANS</b>	DESIGN - DETAILED	BY <b>NLB</b>	DATE <b>DEW</b>
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

COOMBS MILL BRIDGE  
OVER  
BOND BROOK  
IN THE CITY OF  
AUGUSTA  
KENNEBEC COUNTY  
ESTIMATED QUANTITIES

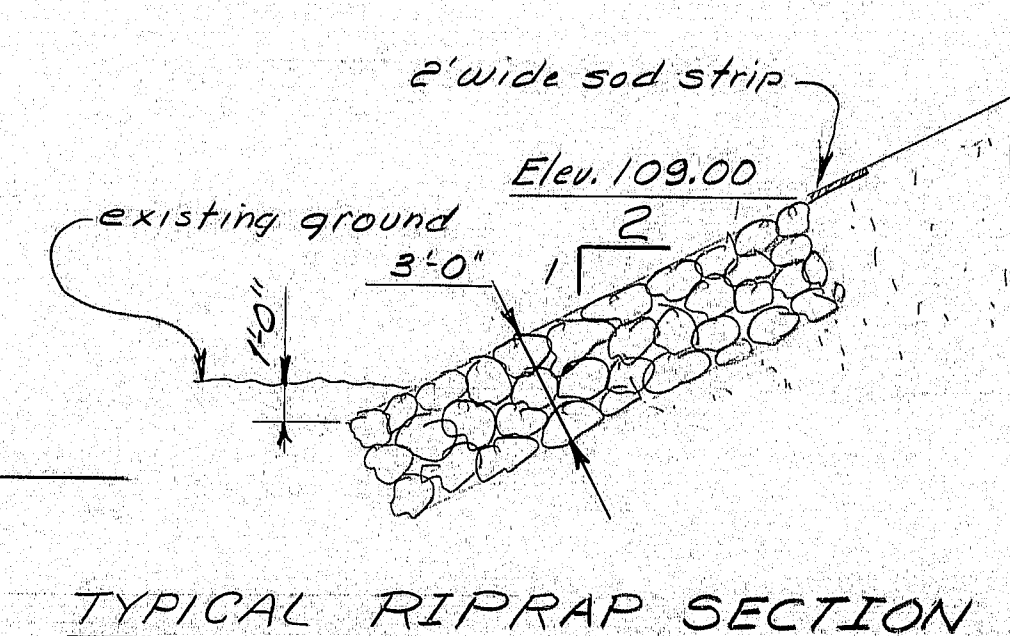
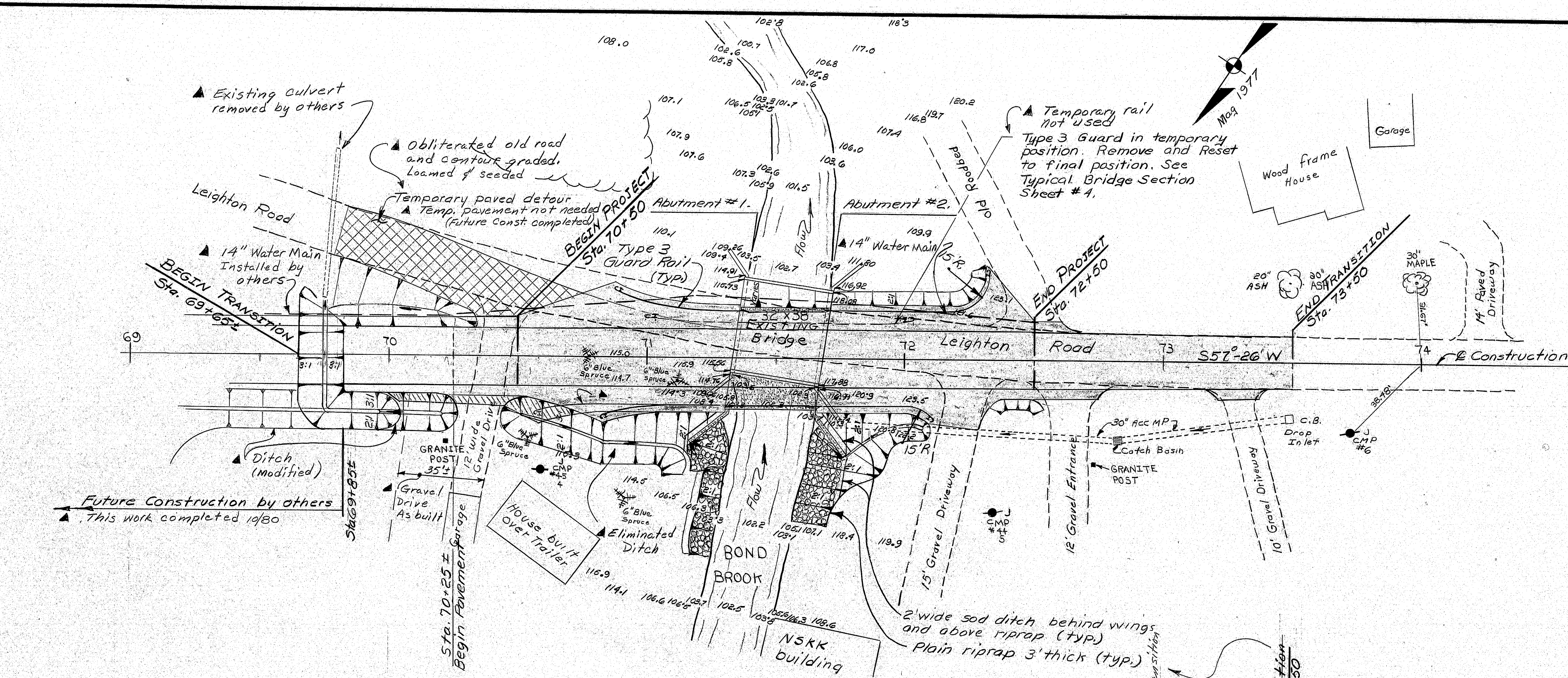
SHEET 2 OF 21 AUGUSTA, MAINE May, 1980

As built DMD 12/11/80

172-51



F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	5747	3	21



**SURVEY NOTES**

STREAM - Fast moving with rock bottom.

HIGH Water - Local resident in house at Sta. 70+50 has seen water and ice at level of bridge seat.

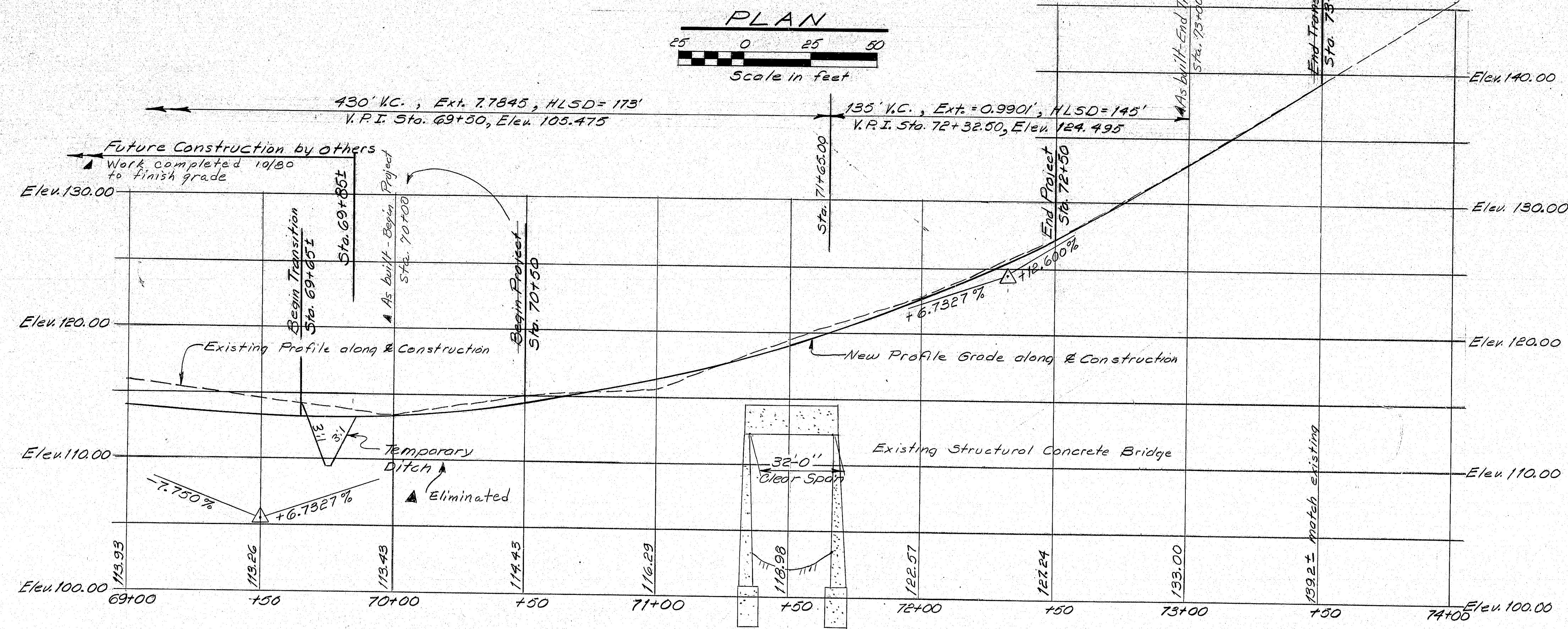
SUBSTRUCTURE - Reinforced structural concrete footing on timber piles. Mass structural concrete abutments. In good shape appears to be fairly new.

SUPERSTRUCTURE - 32' clear span, 26" reinforced structural concrete slab. In good shape appears to be fairly new.

Approaches - 20' wide bituminous paved travel way.

UTILITIES - Augusta Water District  
Augusta Sewer District  
Central Maine Power Co.  
New England Telephone & Telegraph Co.  
State Cable T.V.

Installation of 14" Water Main completed to Sta. 72+54±. Work done by others.



PROFILE ALONG @ CONSTRUCTION

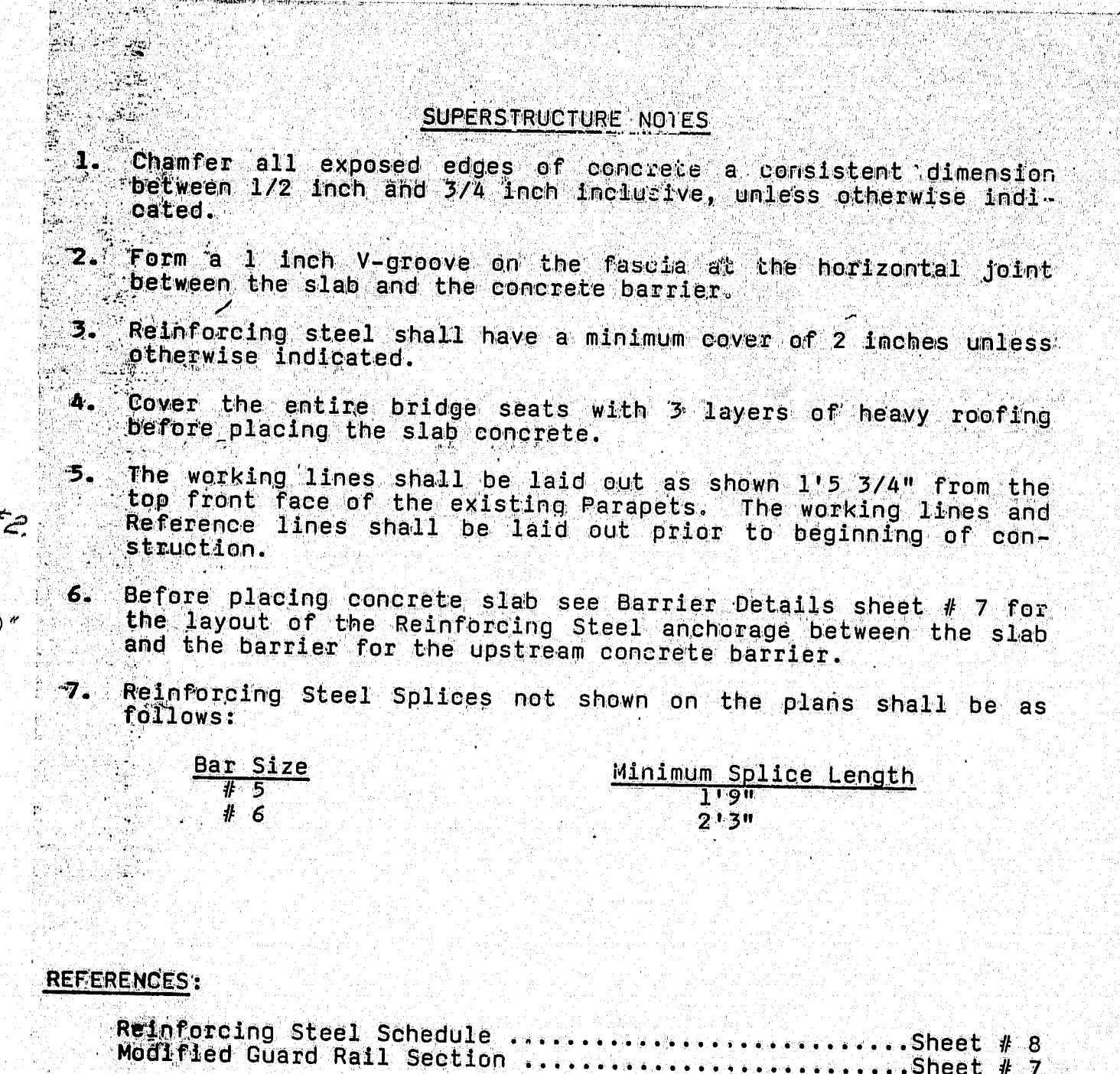
PROJECT DESIGN ENGINEER	DATE
BY	5/80
DESIGN - DETAILED	5/80
CHECKED	5/80
REVISIONS	
FIELD CHANGES	

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

**COOMBS MILL BRIDGE**  
OVER  
**BOND BROOK**  
IN THE CITY OF  
**AUGUSTA**  
KENNEBEC COUNTY  
GENERAL PLAN & PROFILE



Type 3 Guard Rail in temporary position. Remove and Reset in the permanent position after construction of downstream barrier is complete. This is to be paid for under Item 606.36, Guard Rail, & Construction Removed and Reset.



STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

COOMBS MILL BRIDGE  
OVER  
BOND BROOK  
IN THE CITY OF  
AUGUSTA  
KENNEBEC COUNTY

LAYOUT PLAN AND SUPERSTRUCTURE

SHEET 4 OF 21 AUGUSTA, MAINE May 1980

As built changes 172-12-18-53



Technical drawing of a bridge pier cross-section showing reinforcement details. The drawing includes dimensions for shear blocks (18" x 18" x 2"), reinforcing bars (#6), and an HP10 x 42 pile. Elevation markers indicate 100.77' and 97.77'.

18" x 18" x 2" shear blocks  
2'-6" on center  
(See pile layout)

#6 reinforcing bars as shown in Pileup Plan

AG13 or BG36 (see reinforcing steel layout) bent as necessary to clear abutment forms 6".

Elev. 100.77' ± match existing

Elev. 97.77' ± match existing

HP10 x 42

Varies

Varies

### PILE NOTES

1. Piles shall be driven to ledge or practical refusal.
2. All piles shall have Pointed Reinforced Pile Tips as shown on Pointed Reinforced Pile Tips Detail.
3. Alternate types of Pointed Reinforced Pile Tips may be used if they have at least the cross-sectional area of the Pointed Reinforced Pile Tip shown on the plans and are approved by the Engineer.
4. Estimated driven lengths of piles are determined from available soils information with no allowance for uncertain pile penetration.
5. Embedment of piles in footings may vary between 1'0" and 2'0" and the actual embedment length up to a maximum of 1'6" will be included in the measurement for payment.
6. Piles marked thus  $\Rightarrow$ , shall be battered 3 inch per foot in the direction of the arrow.
7. Maximum calculated pile loads: 55 tons.
8. Following are pile locations, number of piles required, size of piles and estimated driven lengths:

Abutment Number 1	12 - HP 10 @ 42 c 17 feet
Abutment Number 2	11 - HP 10 @ 42 c 16 feet

Working lines and Reference line Layout .....Sheet # 4  
Reinforcing Steel Schedule .....Sheet # 8

[illegible]

Technical drawing of a pile cap showing plan and cross-section views.

**Plan View (Left):**

- Labels:  $\phi$  Web,  $\phi$  Pile.
- Dimensions:  $1'0"$  (height),  $2'2"$  (width),  $2'2"$  (width).
- Angle:  $1'1"$ .

**Cross-section View (Right):**

- Labels:  $\phi$  Pile,  $\phi$  Web,  $\phi$  Pile.
- Dimensions:  $1'0"$  (height),  $2'2"$  (width).
- Angle:  $1'1"$ .
- Text: "Grind flt to clear pile's fillet (Typ)".
- Text: "Reinforcing  $R 5 \frac{3}{8} \times 5' \times 1'0"$  (Typ)".

NOTE~Plates may be shop or field welded

NOTE ~ Drill for and grout with approved non-shrink mortar the #600 rebar 1"6" into the existing structure. Bend as necessary to clear forms by 6". See note #8 sheet #2

Working Line Abutment #1

Existing footing

A601 thru A608 top @ 12"

A601 thru A608 bottom @ 12"

Reference Line

13-A612 @ 18"

90°0'

5-A611 top @ 12"

5-A611 bottom @ 12"

5-A610 top @ 12"

5-A610 bottom @ 12"

5-A609 top @ 12"

5-A609 bottom @ 12"

3-A600 top (flared)

3-A600 bottom (flared)

18-A612 top (flared with 12" maximum spacing)

18-A612 bottom (flared with 12" maximum spacing)

Flow

NOTE~ Drill for and grout with approved non-shrink mortar the F600 rebar 1'-6" into the existing structure. Bend as necessary to clear forms by 6". See note #3 sheet #2

Working Line Abutment #2

B634

2-B607 top

2-B607 bottom

11-F600 top @ 18"

11-F600 bottom @ 18"

Existing footing

Reference Line

90°0'

B608 thru B634 top @ 12"

B608 thru B634 bottom @ 12"

14-F606 @ 18"

1-B635 top

2-B635 bottom

B606

B608

B600

B600 thru B606

B600 thru B606

1'-0"

2'-0"

2'-0"

POINTED REINFORC.

Note~ Plates may be shop

REINFORCING STEEL LAYOUT

FOOTING PLANS

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

COOMBS MILL BRIDGE  
OVER  
BOND BROOK  
IN THE CITY OF  
AUGUSTA  
KENNEBEC COUNTY  
FOOTING PLAN

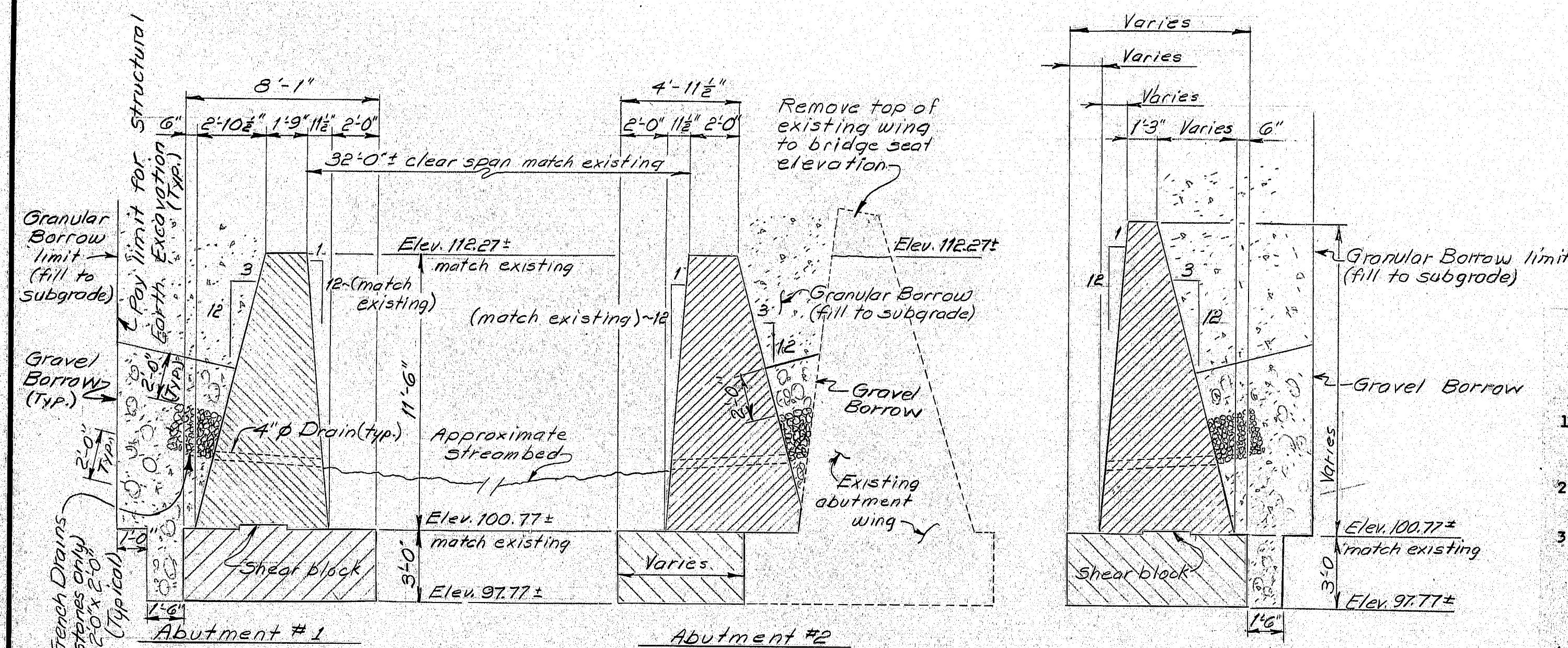
SHEET 5 OF 21 AUGUSTA, MAINE May 1980

As built DMD 12/9/80

STA, MAINE May 1980  
172-54

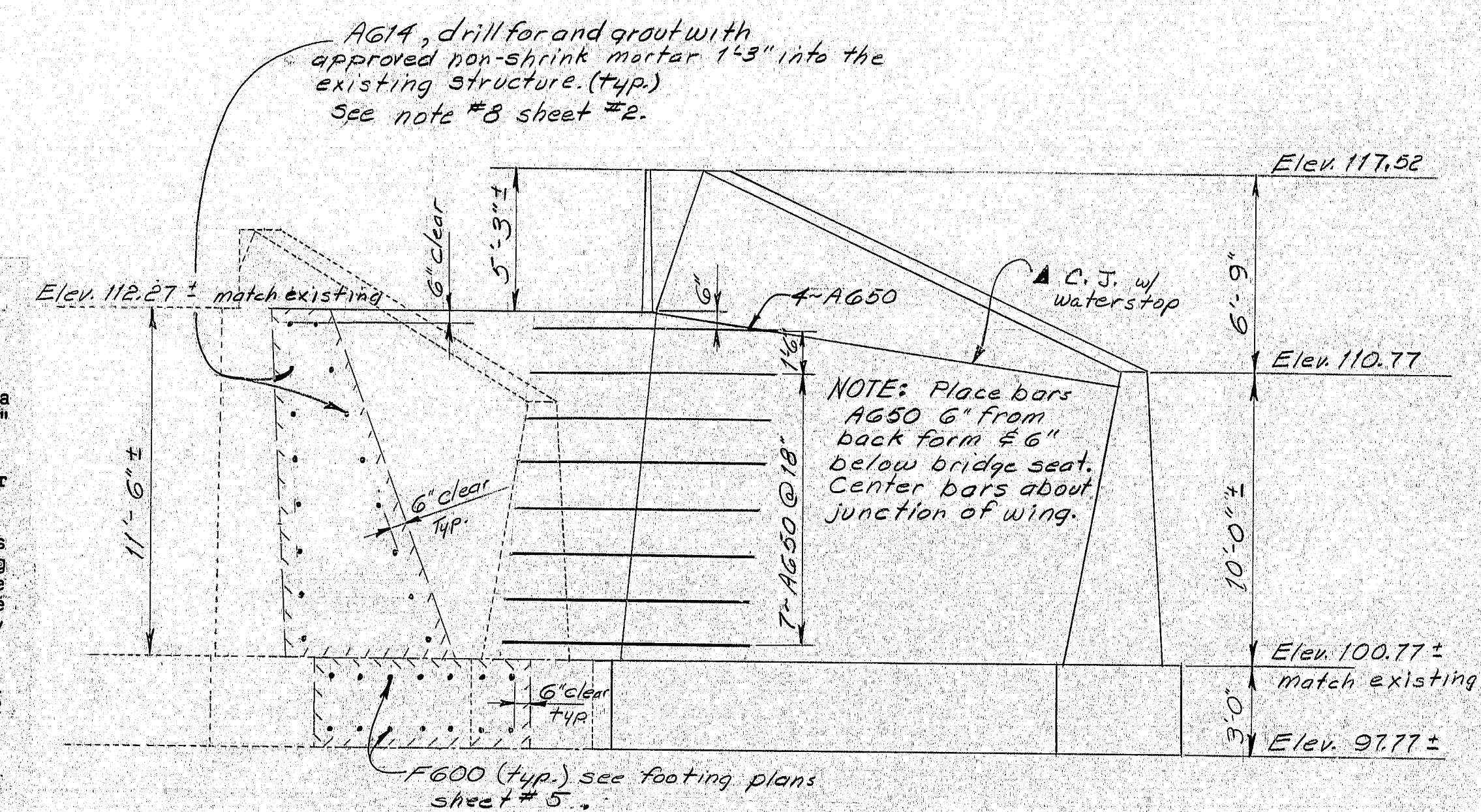


R.H.A. RES. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	5747	6	21

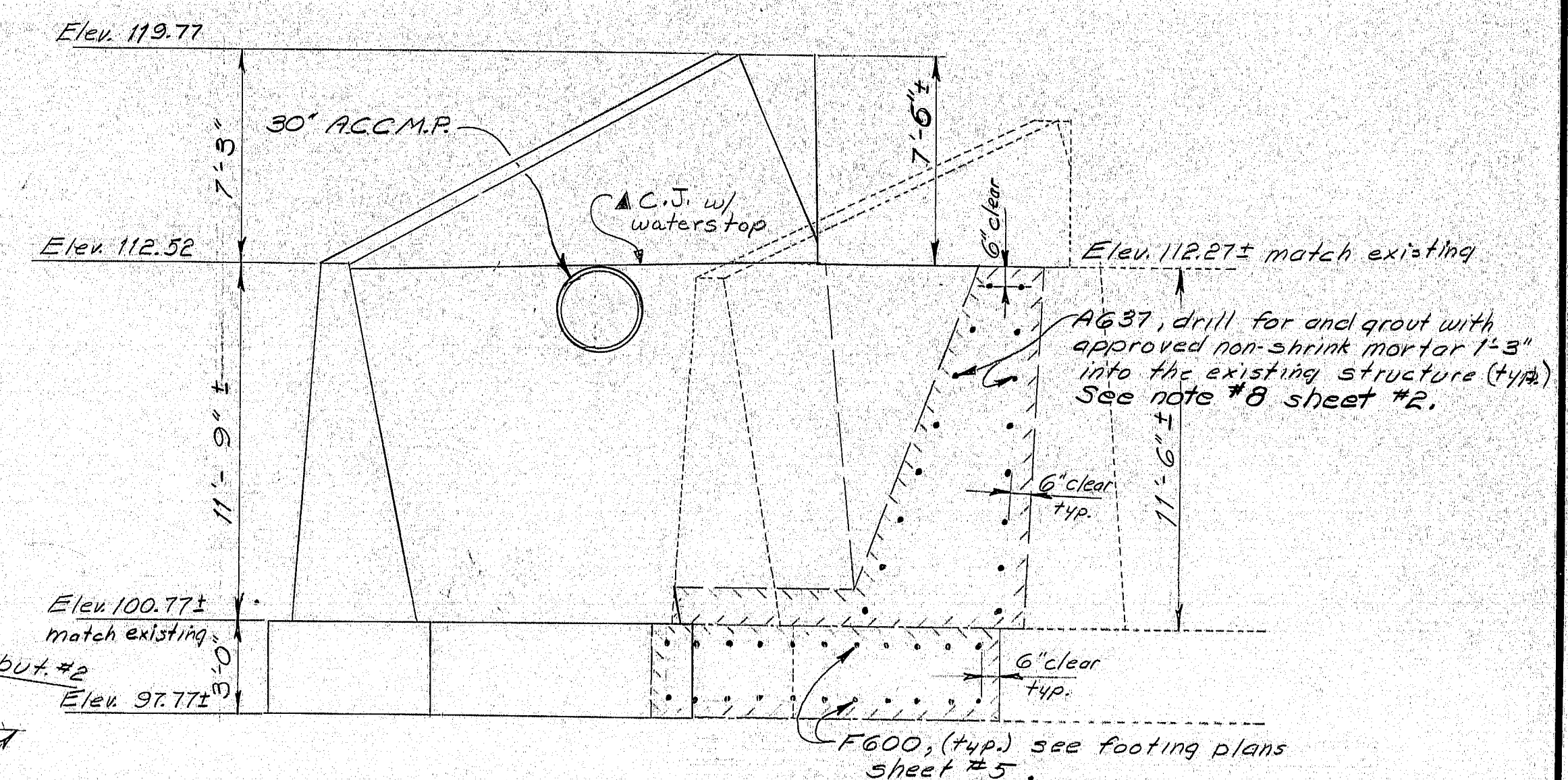
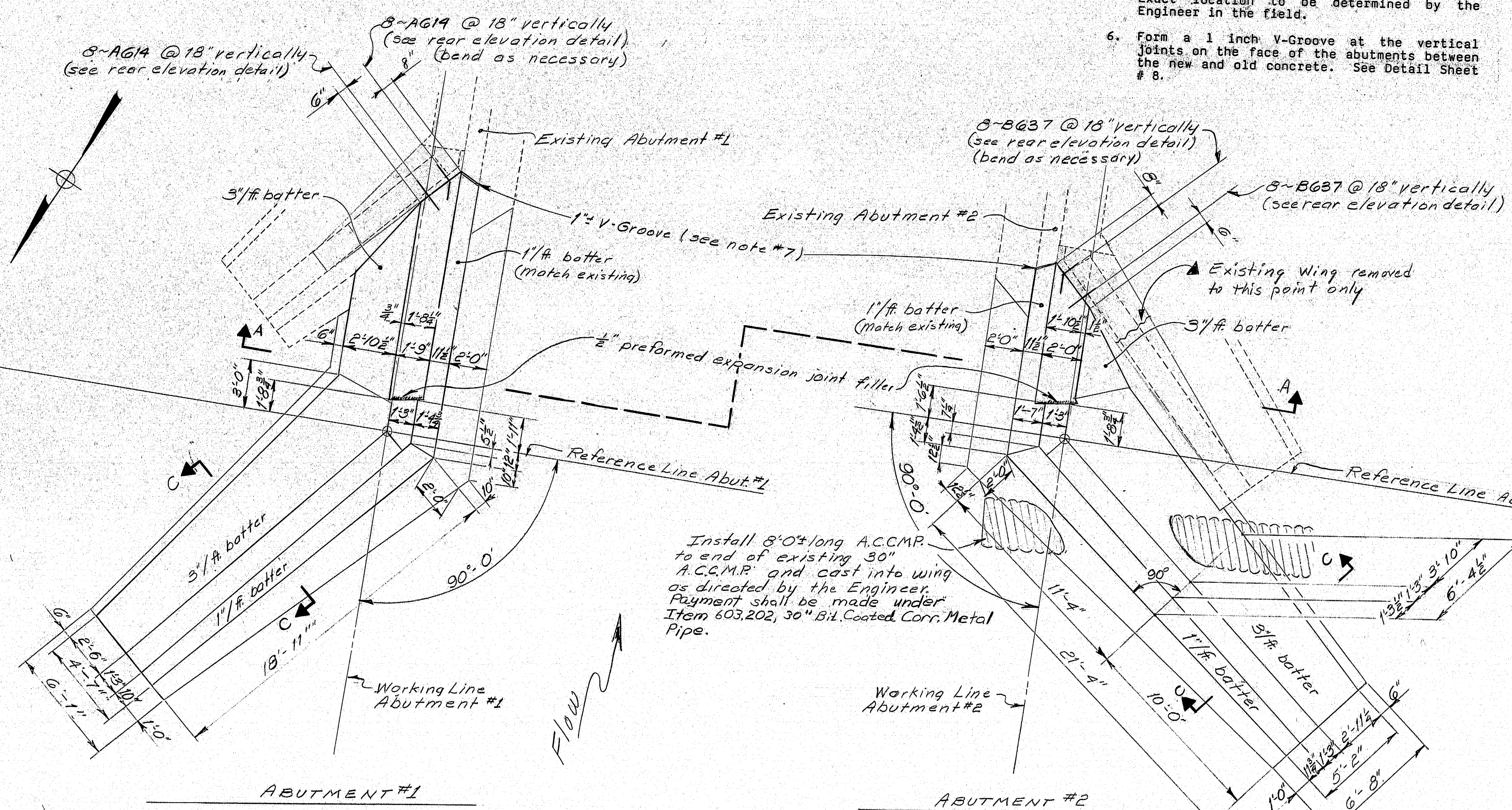


NOTE: Pile and footing reinforcing steel not shown, see sheet #8

- ABUTMENT NOTES**
1. Chamfer all exposed edges of concrete a consistent dimension between 1/2" and 3/4" inclusive, unless otherwise indicated.
  2. Reinforcing steel shall have 2 inches cover unless otherwise indicated.
  3. The top of the existing upstream wings shall be removed down to the existing bridge seat elevation of 112.27' and the surfaces under the slab shall be made smooth bearing areas with an approved epoxy grout.
  4. Payment for removal of existing structural concrete will be made under Item 202.12 Removal of Existing Structural Concrete.
  5. Place 4 inch diameter drains in breastwall and wings at 20 foot maximum spacing, with a minimum of 2 in each new substructure. Exact location to be determined by the Engineer in the field.
  6. Form a 1 inch V-Groove at the vertical joints on the face of the abutments between the new and old concrete. See Detail Sheet #8.



REAR ELEVATION ABUTMENT NO. 1



REAR ELEVATION ABUTMENT NO. 2

PROJECT DESIGN ENGINEER	DATE
DESIGN - DETAILED	3-80
CHECKED	
REVISIONS	
FIELD CHANGES	

- REFERENCES:**
- Working Lines and Reference Line Layout ..... Sheet # 4
  - Reinforcing Steel Schedule ..... Sheet # 8

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

**COOMBS MILL BRIDGE**  
OVER  
**BOND BROOK**  
IN THE CITY OF  
**AUGUSTA**  
KENNEBEC COUNTY  
ABUTMENT PLANS

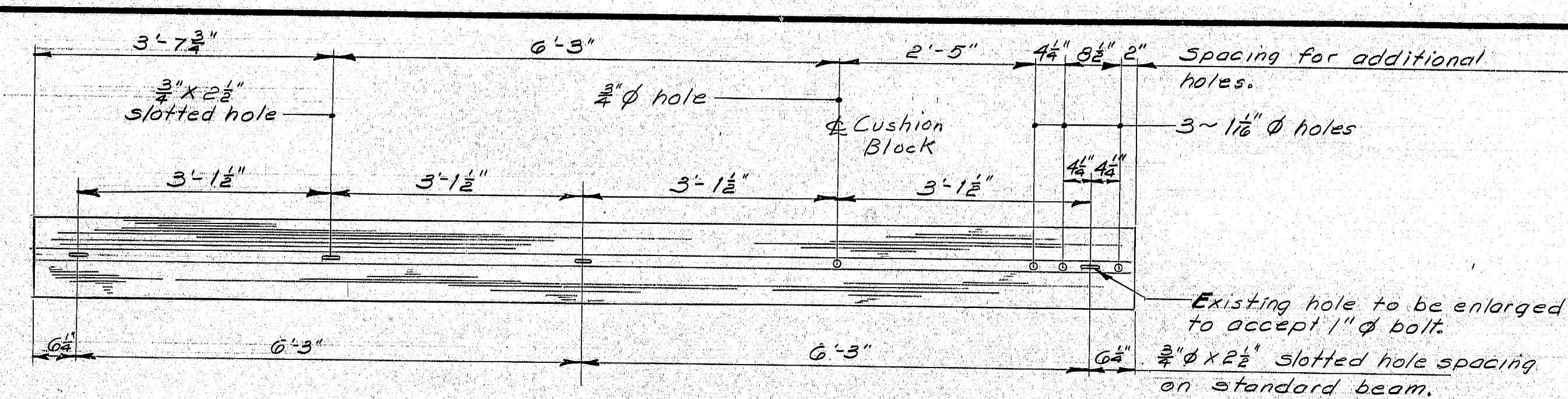
SHEET 6 OF 21 AUGUSTA, MAINE May 1980

As built change DMD 12/9/80

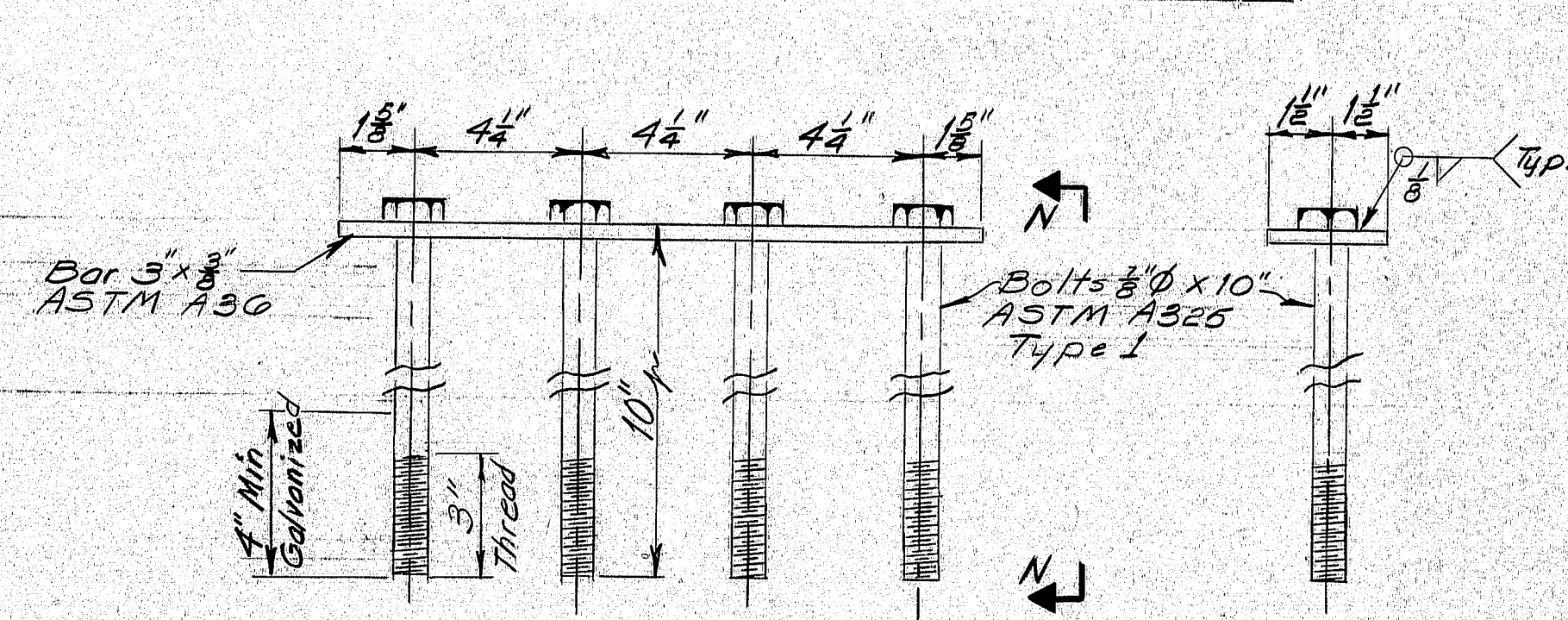
172-55



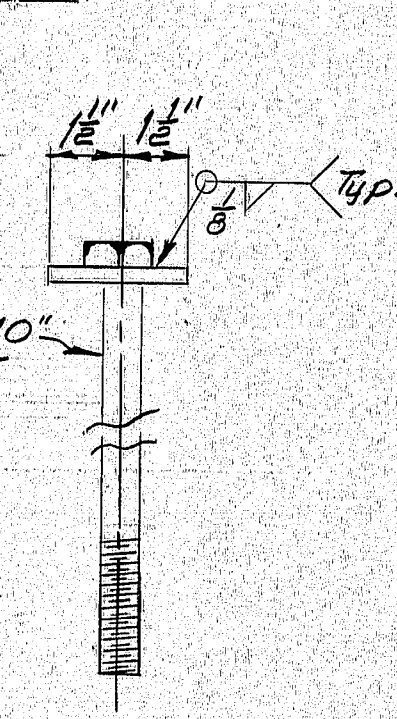
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	5747	7	21



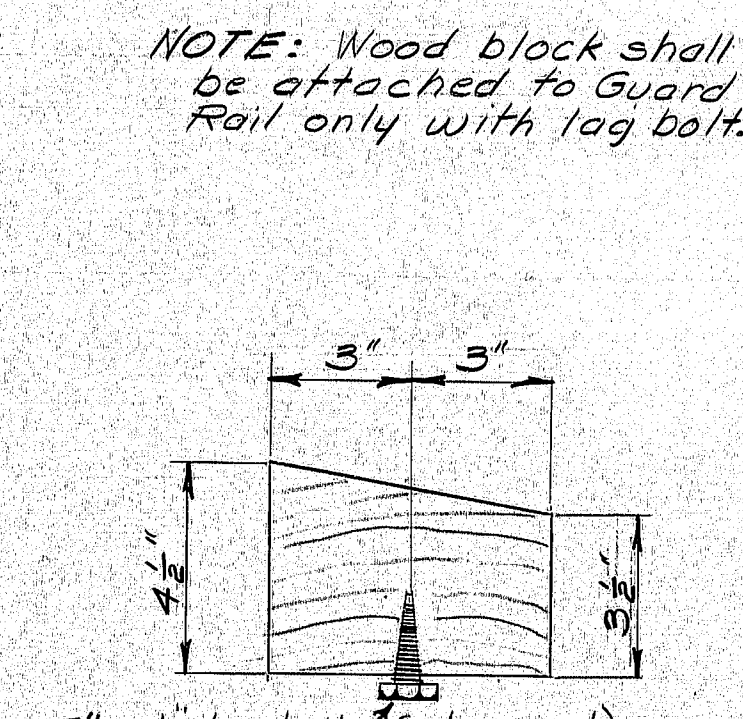
MODIFIED GUARD RAIL SECTION



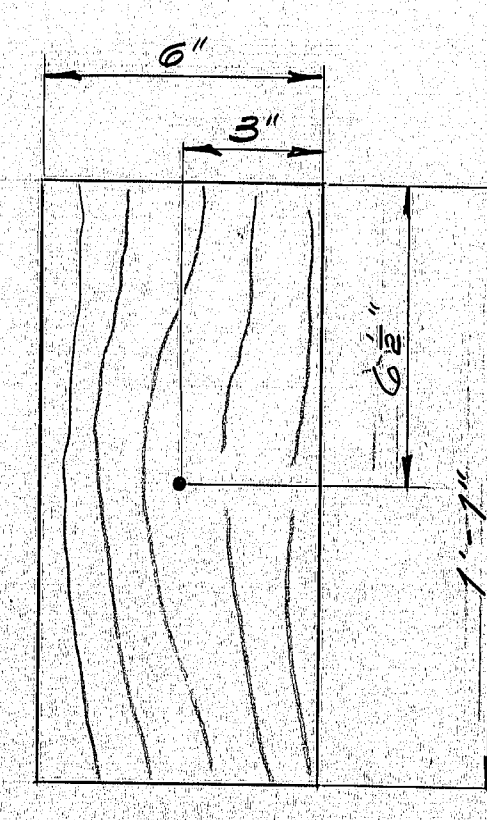
DETATI



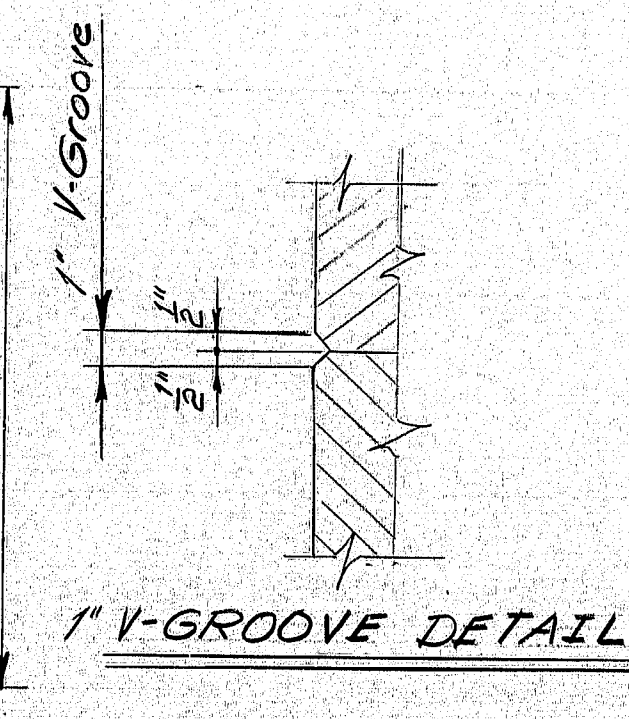
VIEW "N~N"



Top View



5111



1" V-GROOVE DETAIL

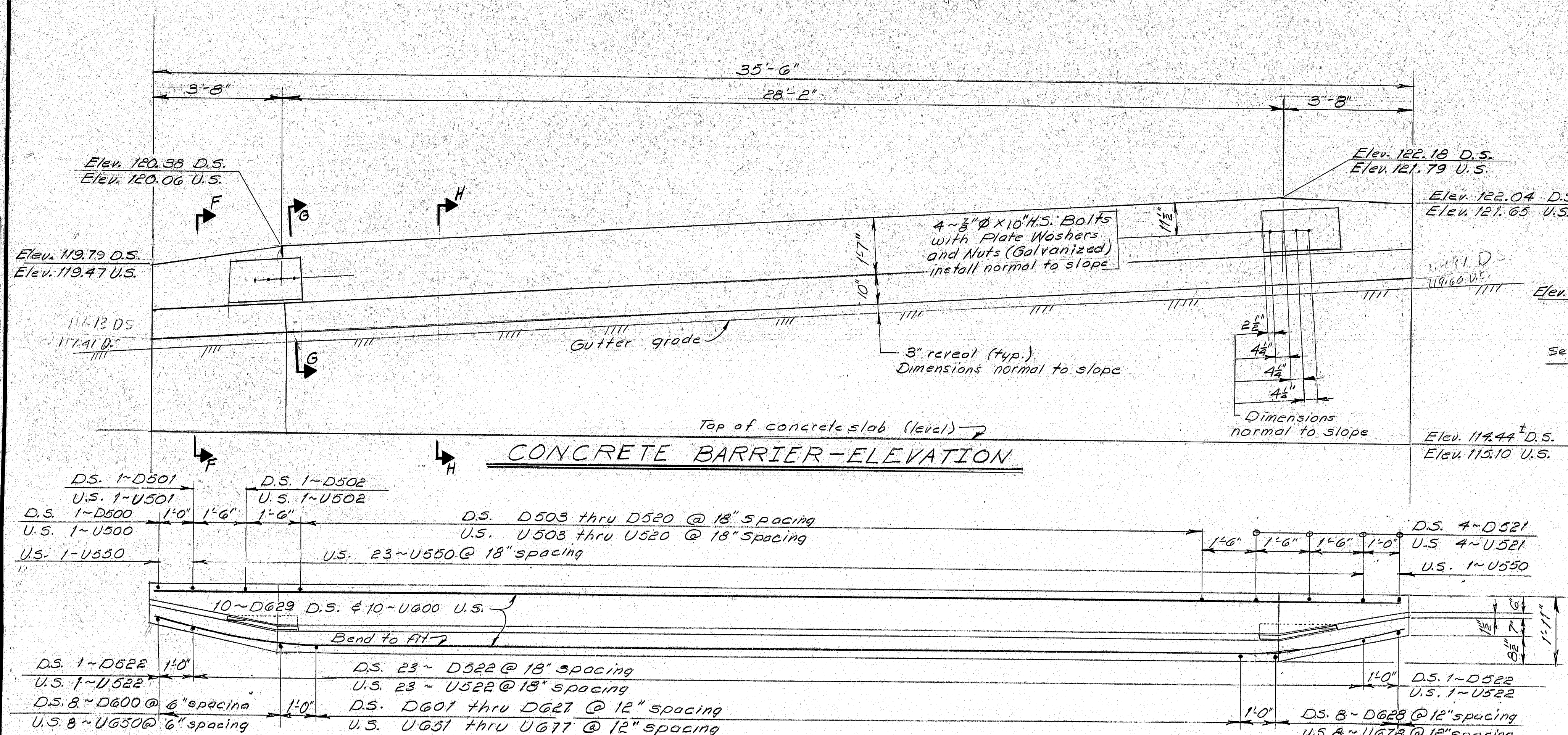
NOTE: Wood block shall be attached to Guard Rail only with lag bolt.

- ## CONCRETE BARRIER NOTES

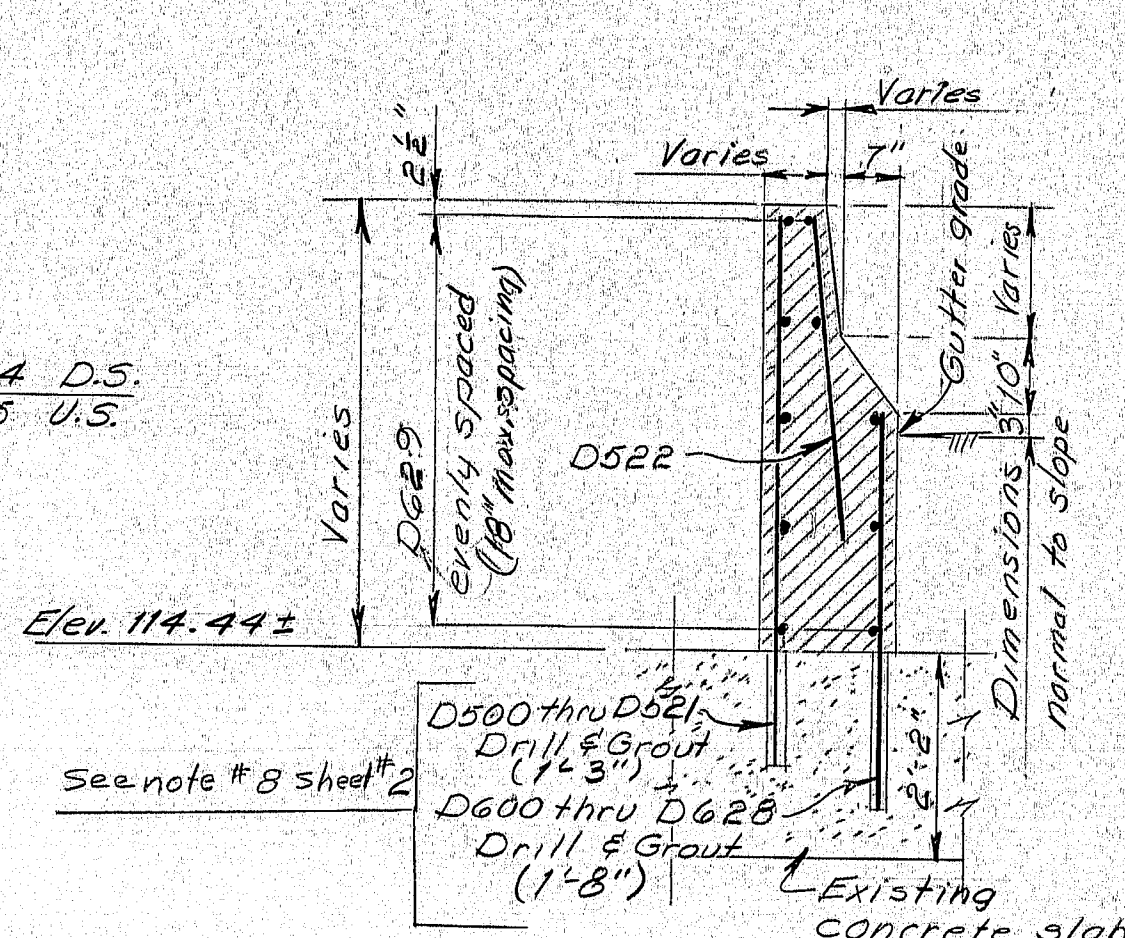
1. Payment for the high strength bolts, nuts and washers shall be considered incidental to Item 502.21, Structural Concrete, Abutments and Retaining Walls.
2. The Cushion Block material shall be as specified in Subsection 710.07, paragraphs b and c and treated in accordance with the provisions of Subsection 406.03(b) of the standard specifications. Payment to be incidental to Guard Rail pay item.
3. Additional holes in the Modified Guard Rail Section shall be made by drilling, punching, or any other method that produces a neat, clean hole of the required size. Burning of holes will not be allowed.
4. After installation of the guard rail is completed upset the ends of the anchor bolts in three places around each bolt, at the junction of the nut and exposed thread, with a center punch or similar tool.
5. Form a 1 inch V-groove on the fascia at the horizontal joint between the Slab and the upstream concrete barrier. See Detail this sheet.
6. Chamfer all exposed edges of concrete a consistent dimension between 1/2-inch and 3/4 inch inclusive, unless otherwise indicated.
7. Reinforcing steel shall have 2 inches of cover unless otherwise indicated.
8. Excavation for the upstream concrete barrier shall be paid for under Item 206.081, Structural Earth Excavation.

## REFERENCES:

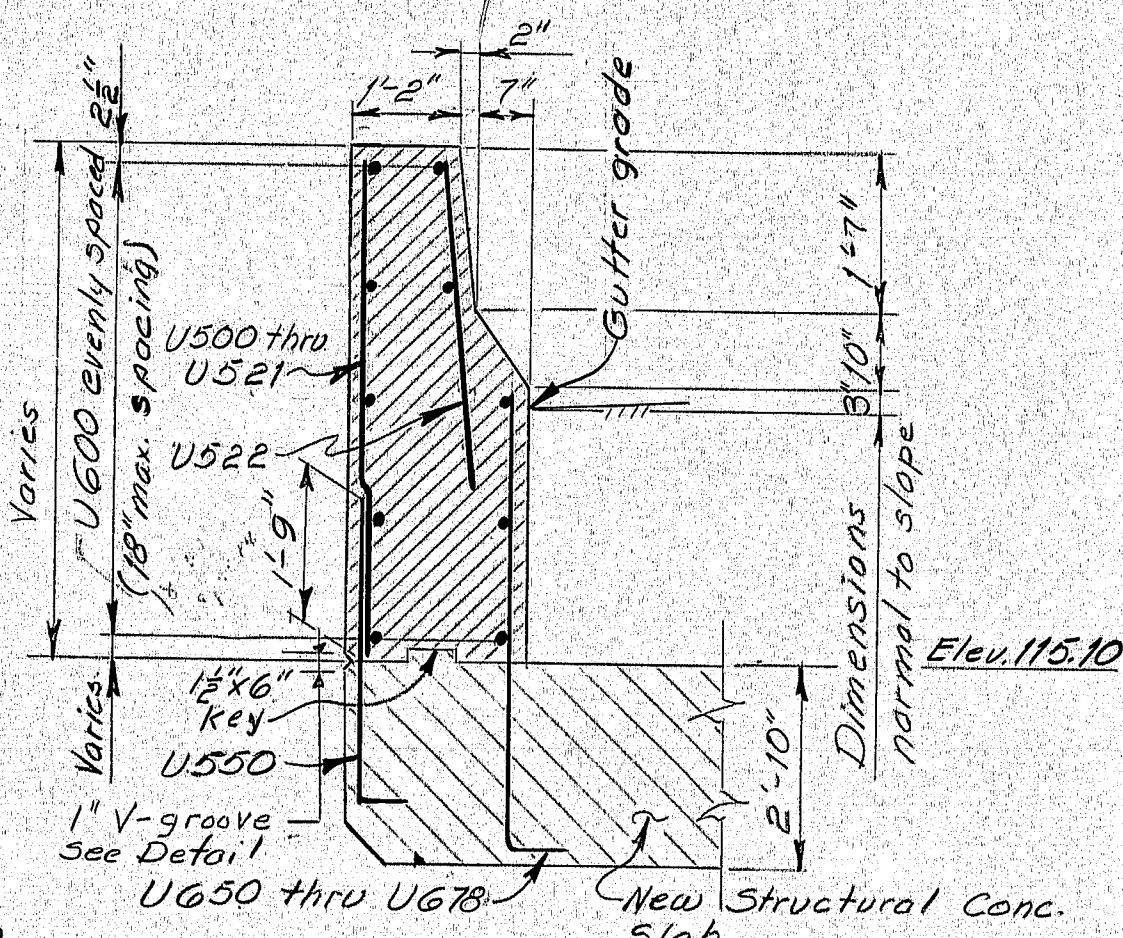
- |   |           |
|---|-----------|
| Reinforcing Steel Schedule .....              | Sheet # 8 |
| Location of Concrete Barriers .....           | Sheet # 4 |
| Location of Modified Guard Rail Section ..... | Sheet # 4 |



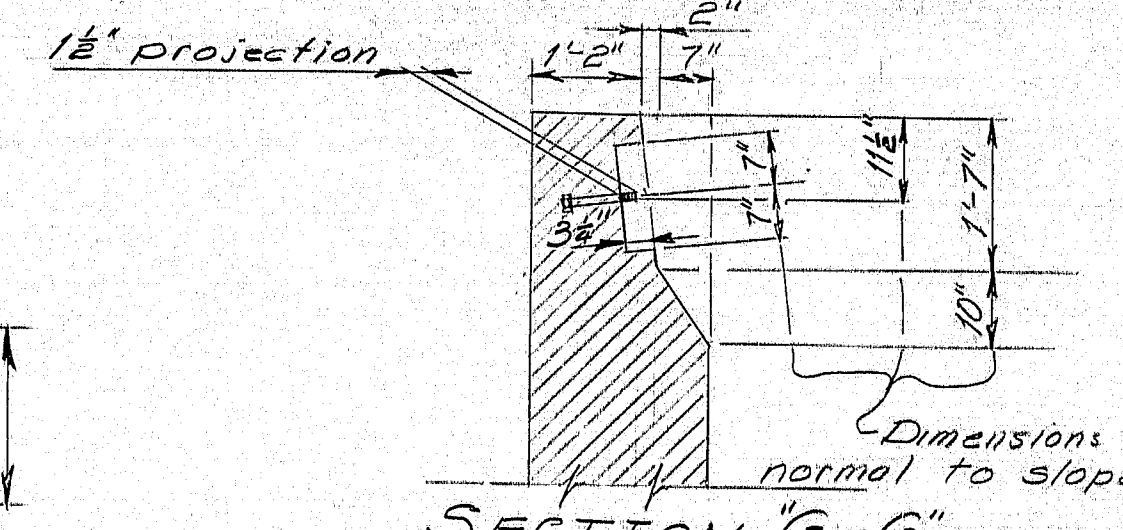
## CONCRETE BARRIER-ELEVATION



SECTION "F-F"  
(showing downstream installation)



SECTION "H-H"  
(showing upstream installation)



SECTION "G-G"

NOTE: Downstream Barrier shown,  
Upstream Barrier similar.  
D.S. = Downstream  
U.S. = Upstream

<b>PLANS</b>	PROJECT DESIGN ENGINEER	BY	DATE
	DESIGN - DETAILED	MLB	5-80
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

# COOMBS MILL BRIDGE

OVER  
BOND BROOK

BOND BROOK  
IN THE CITY OF

**AUGUSTA**  
**KENNEREC COUNT**

## Kennebec County

### Barrier Details

SHEET 7 OF 21 AUGUSTA, MAINE May 1980

As built DMD 12/10/80

172-56

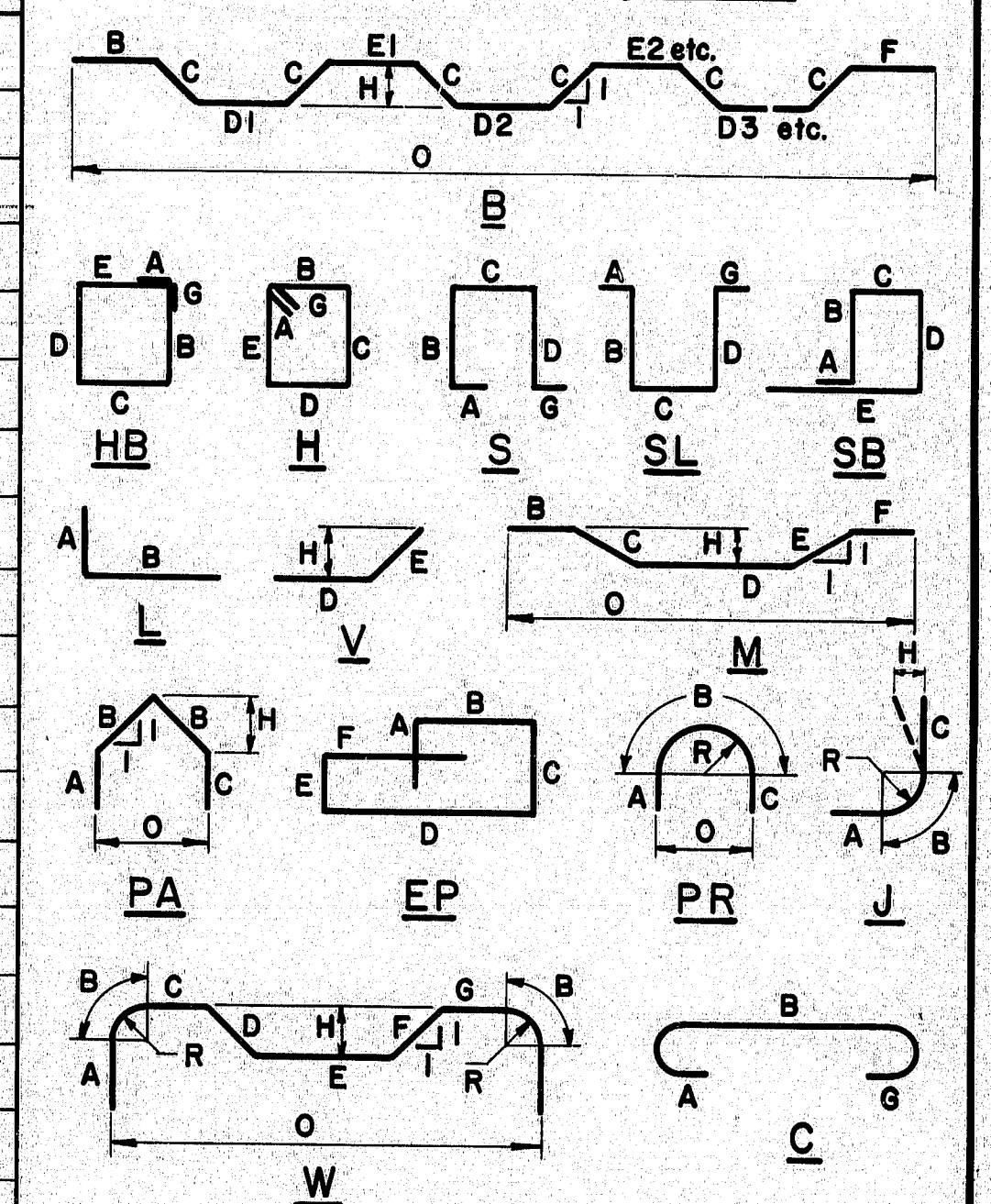


# REINFORCING STEEL SCHEDULE

STRAIGHT BARS												BENT BARS																
MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION		
<u>Footings</u>												<u>Abutment #1</u>																
F600	36	3'-0"	Footings Dowels	B632	2	4'-3"	Footings					A650	11	8'-0"	V				4'-0"	4'-0"				2'-4"			Wing Corner	
				B633	2	3'-0"	do	<u>Concrete Barrier (U.S.)</u>																				
				B634	2	1'-9"	do																					
<u>Abutment #1</u>				B635	3	11'-6"	do	U500	1	4'-2"	U.S. Vertical	<u>Concrete Barrier (U.S.)</u>																
				B636	14	2'-6"	Footings Dowels	U501	1	4'-3"	do																	
A600	18	19'-8"	Footings	B637	16	3'-0"	Abutment Dowels	U502	1	4'-6"	do	U650	8	5'-6"	L	5'-0"	0'-6"									Anchorage		
A601	2	4'-6"	do									U503	1	4'-10"	U.S. Vertical	U651	1	5'-10"	L	5'-3 1/2"	0'-6"					Anchorage		
A602	2	5'-0"	do																									
A603	2	7'-8"	do	<u>Concrete Barrier (D.S.)</u>																								
A604	2	8'-4"	do									Thru	@ 1" increments				Thru	@ 3/4" inc.										
A605	2	10'-0"	do	D600	8	4'-11"	D.S. Anchorage																					
A606	2	11'-8"	do									U512	1	5'-7"	U.S. Vertical	U677	1	7'-5"	L	6'-11"	0'-6"					Anchorage		
A607	2	13'-6"	do	D601	1	5'-2 1/2"	D.S. Anchorage																					
A608	2	14'-4"	do									U513	1	5'-9"	U.S. Vertical	U678	8	7'-6"	L	7'-0"	0'-6"					Anchorage		
				Thru	@ 3/4" increments																							
A609	10	5'-10"	Footings									Thru	@ 1" increments				U550	25	4'-6"	L	4'-0"	0'-6"					Anchorage	
A610	10	6'-8"	do	D627	1	6'-10"	D.S. Anchorage																					
A611	10	7'-7"	do									U520	1	6'-4"	U.S. Vertical													
A612	36	7'-9"	do	D628	8	7'-0"	D.S. Anchorage																					
				D629	10	35'-0"	D.S. Horizontal	U521	4	6'-4"	U.S. Vertical																	
A613	13	2'-6"	Footings Dowel									U522	25	3'-6"	do	<u>Superstructure</u>												
A614	16	3'-0"	Abutment Dowel																									
				D500	1	6'-4"	D.S. Anchorage	U600	10	35'-0"	U.S. Horizontal	S1150	11	37'-5"	M		1'-10"	3'-7 3/4"	26'-5"	3'-7 3/4"	1'-10"	2'-7"	35'-3"			Longitudinal		
				D501	1	6'-6"	do									S1151	1	37'-0"	M		1'-10"	2'-11 1/4"	27'-5"	2'-11 1/4"	1'-10"	2'-1"	35'-3"	do
<u>Abutment #2</u>				D502	1	6'-9"	do																					
								<u>Superstructure</u>																				
B600	2	22'-0"	Footings	D503	1	7'-1"	D.S. Anchorage					5500	70	2'-0"	Dowels													
thru	@ 9" increments			Thru	@ 1" increments							5501	2	8'-0"	Transverse top													
B606	2	26'-6"	Footings	D512	1	7'-10"	D.S. Anchorage					5502	2	8'-5"	do													
B607	4	9'-6"	Footings	D513	1	8'-0"	D.S. Anchorage					5503	2	8'-10"	do													
B608	2	6'-2"	Footings	Thru	@ 1" increments							5504	2	9'-3"	do													
Thru	@ 2" increments			D520	1	8'-7"	D.S. Anchorage					5505	2	9'-9"	do													
B619	2	8'-0"	Footings	D521	4	8'-9"	D.S. Anchorage					5506	2	10'-2"	do													
B620	2	6'-3"	Footings	D522	25	3'-6"	D.S. Vertical					5507	2	10'-7"	do													
Thru	@ 1" increments			5513	3	7'-6"	Transverse bottom					5508	2	11'-0"	do													
B629	2	7'-0"	Footings	5514	3	7'-11"	do					5509	2	11'-6"	do													
B630	2	6'-9"	Footings	5515	3	8'-4"	do					5510	2	11'-11"	do													
B631	2	5'-6"	do	5516	3	8'-9"	do					5511	2	12'-4"	do													
				5517	3	9'-3"	do					5512	2	12'-9"	do													
				5518	3	9'-8"	do					5100	12	35'-5"	Longitudinal													
				5519	3	10'-4"	do					5520	3	10'-6"	Transverse bottom													
												5521	3	11'-0"	do													
												5522	3	11'-5"	do													
												5523	3	11'-10"	do													
												5524	3	12'-3"	do													
												MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION		

FHWA	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	5747	8	21

## TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar.  
Bending details and hooks shall conform to the recommendations of ACI Standard 315-65.  
Reinforcing Bar - ASTM A 615 Grade 60

## GENERAL NOTES

- First digit(s) following the letter of the Mark indicates size of reinf. bar.  
Mark (A 502) bar size - #5  
Mark (P 1001) bar size - #10  
Mark (S 603) bar size - #6
- Letter of Marks A, P & S locates bars of Abutments, Piers, and Superstructure parts respectively.
- Abbreviations: do ~ ditto  
U.S. ~ Upstream  
D.S. ~ Downstream

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

COOMBS MILL BRIDGE  
OVER  
BOND BROOK  
IN THE CITY OF  
AUGUSTA  
KENNEBEC COUNTY  
REINFORCING STEEL SCHEDULE

SHEET 8 OF 21 AUGUSTA, MAINE May 1980

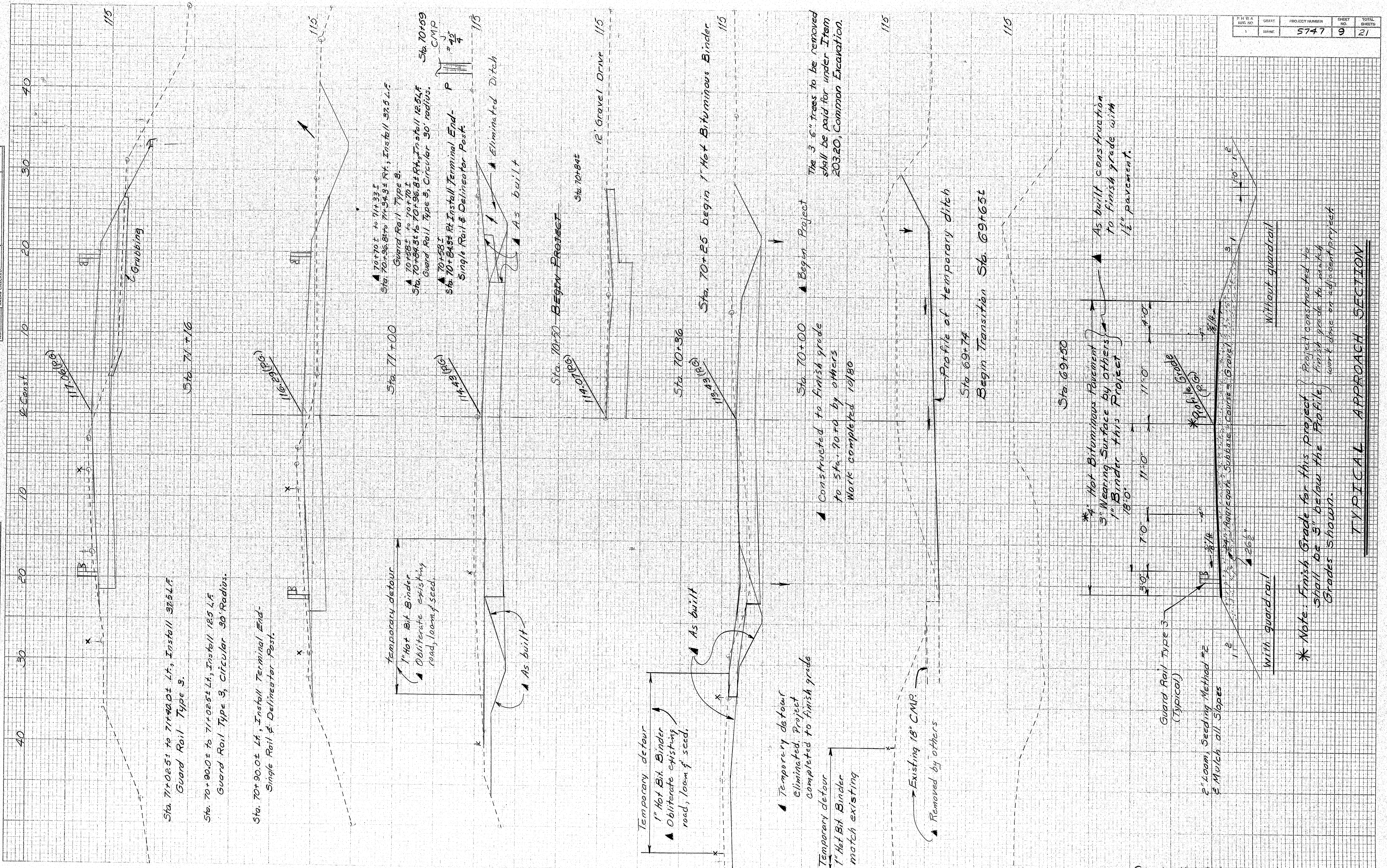
As built DMD 12/19/80

172-57



ORIGINAL SURVEY	DATE
BY LAD	12-30
NOTE BOOK	5-20
AREA	
NO.	

FINAL SURVEY	DATE
BY	
NOTE BOOK	
AREA	
NO.	

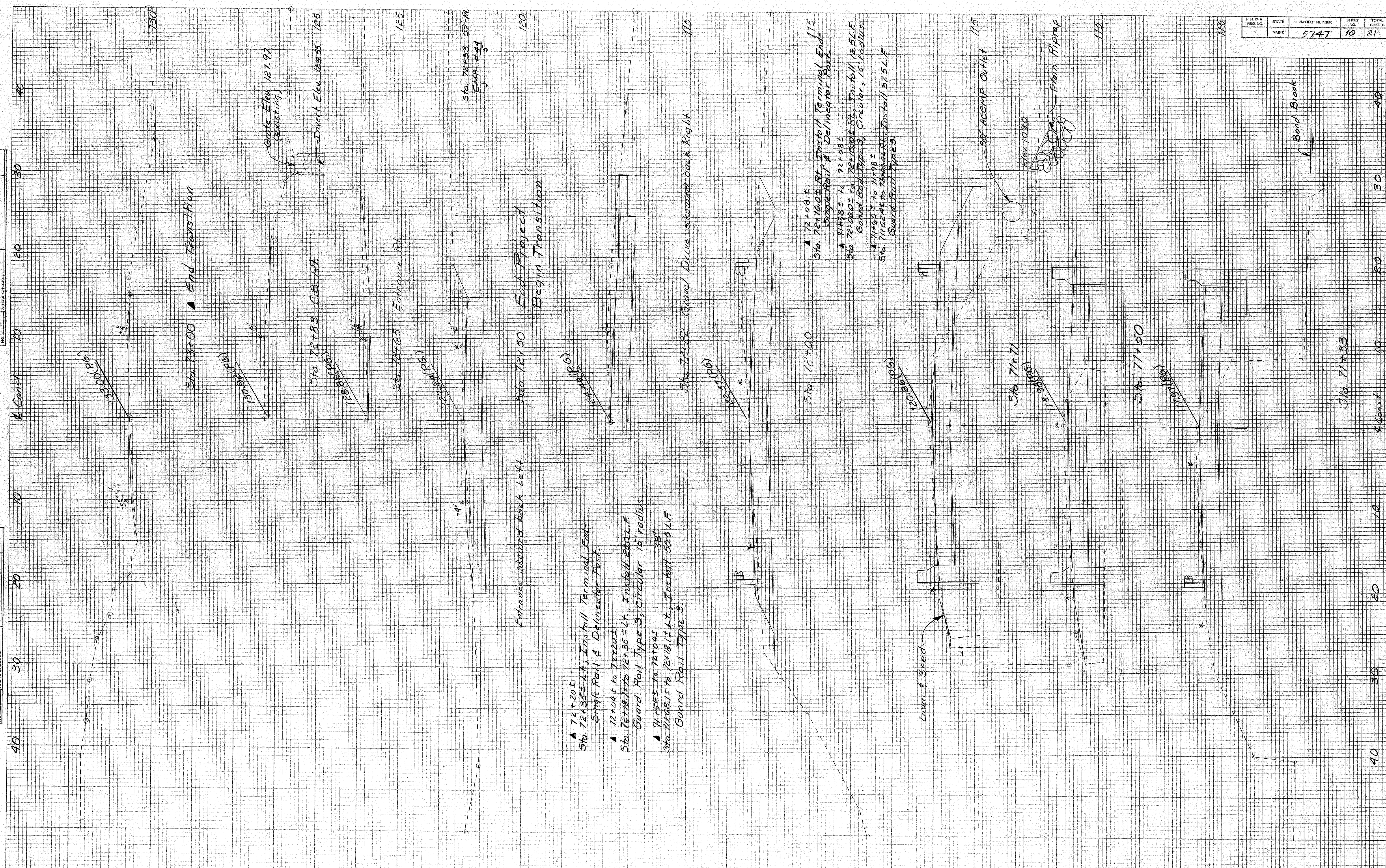


PLAN NO.	DATE	PROJECT NAME	SHEET NO.	TOTAL SHEETS
5747	9	21		

Coombs Mill Bldg., Augusta 5747  
▲ As built changes DMD 12/10/80 172.58



FINAL SURVEY	NOTE BOOK	SURVEYED	BY	DATE
		PLOTTED		
		TEMPLATE		
		AREAS		



Coombs Mill Bldg., Augusta 5747  
▲ As built changes DMD 12/11/80 172-59



ORIGINAL SURVEY NOTE BOOK NO.	BY LAW	DATE 4-82
SURVEYED TEMPLATE AREA CHECKED		

FINAL SURVEY NOTE BOOK NO.	BY	DATE
SURVEYED TEMPLATE AREA CHECKED		

P.H. W.A. RES. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
	MAINE	5747	11	21

Sta 13+50 End Transition  
Match Existing Pavement  
▲ End Transition  
Sta. 13+00

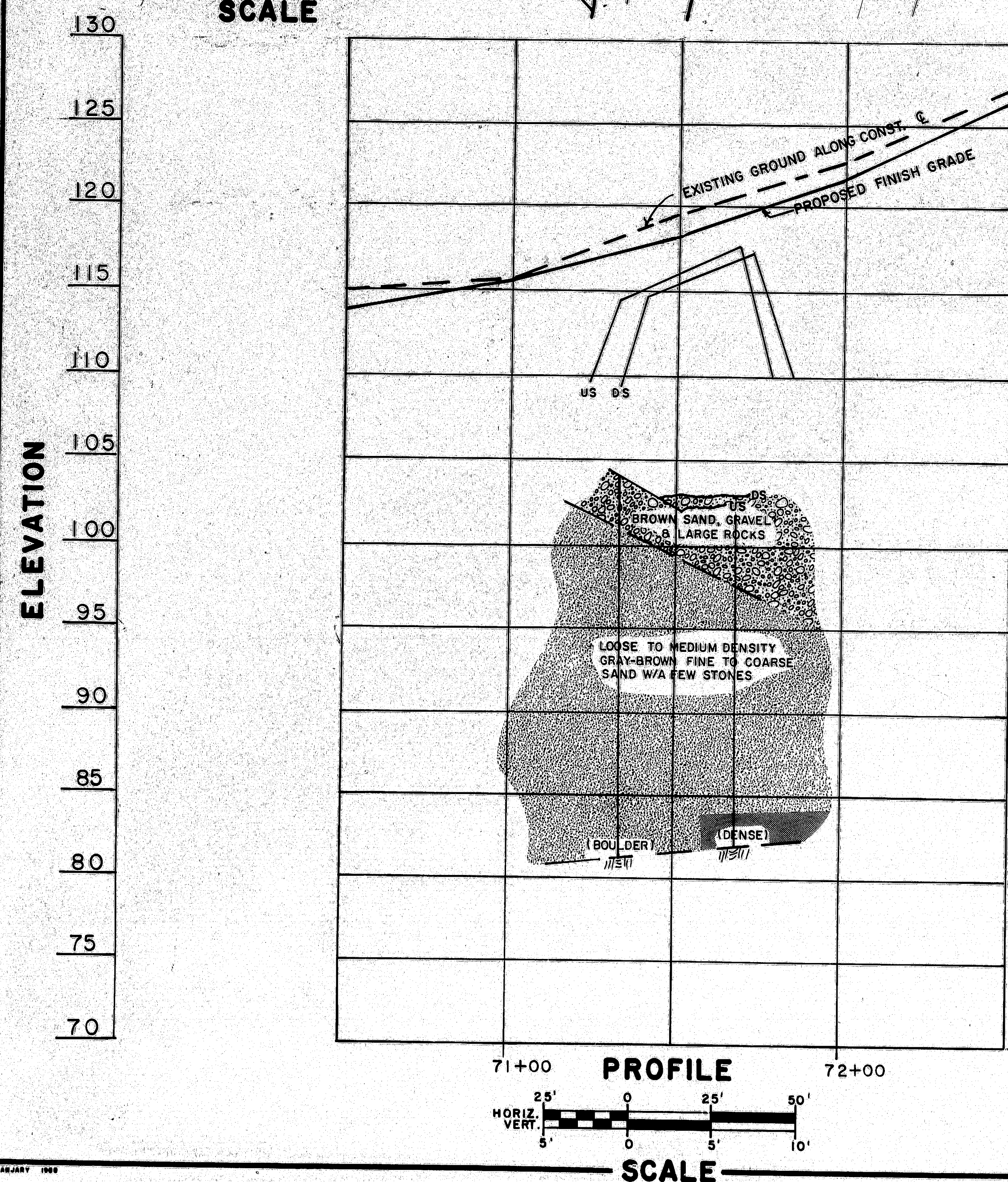
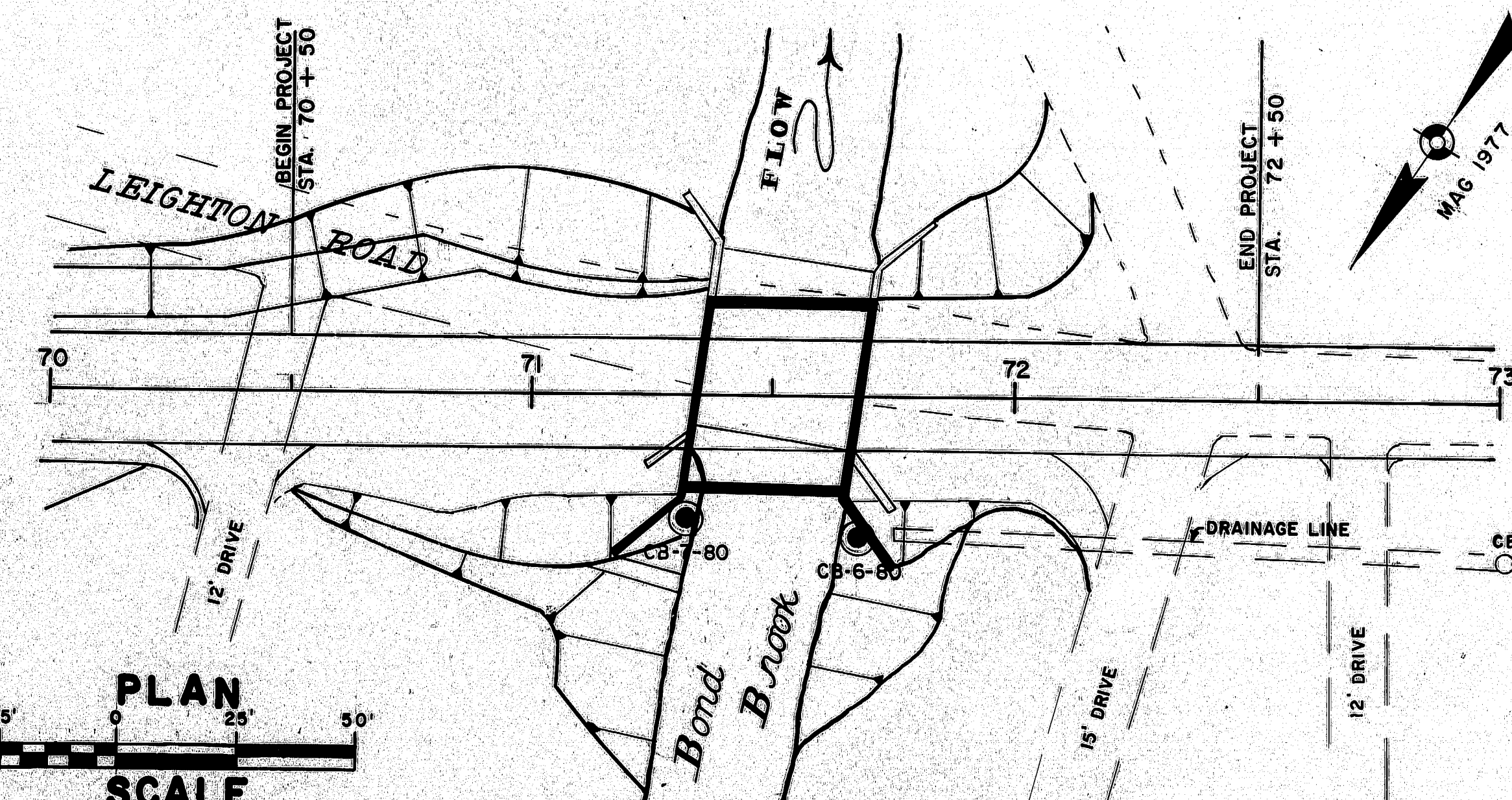
Sta 13+38 Gravel Drive skewed Ahead Right

Coombs Mill Bldg., Augusta, ME 0747  
▲ As built changes DMD 12/11/80

172.60

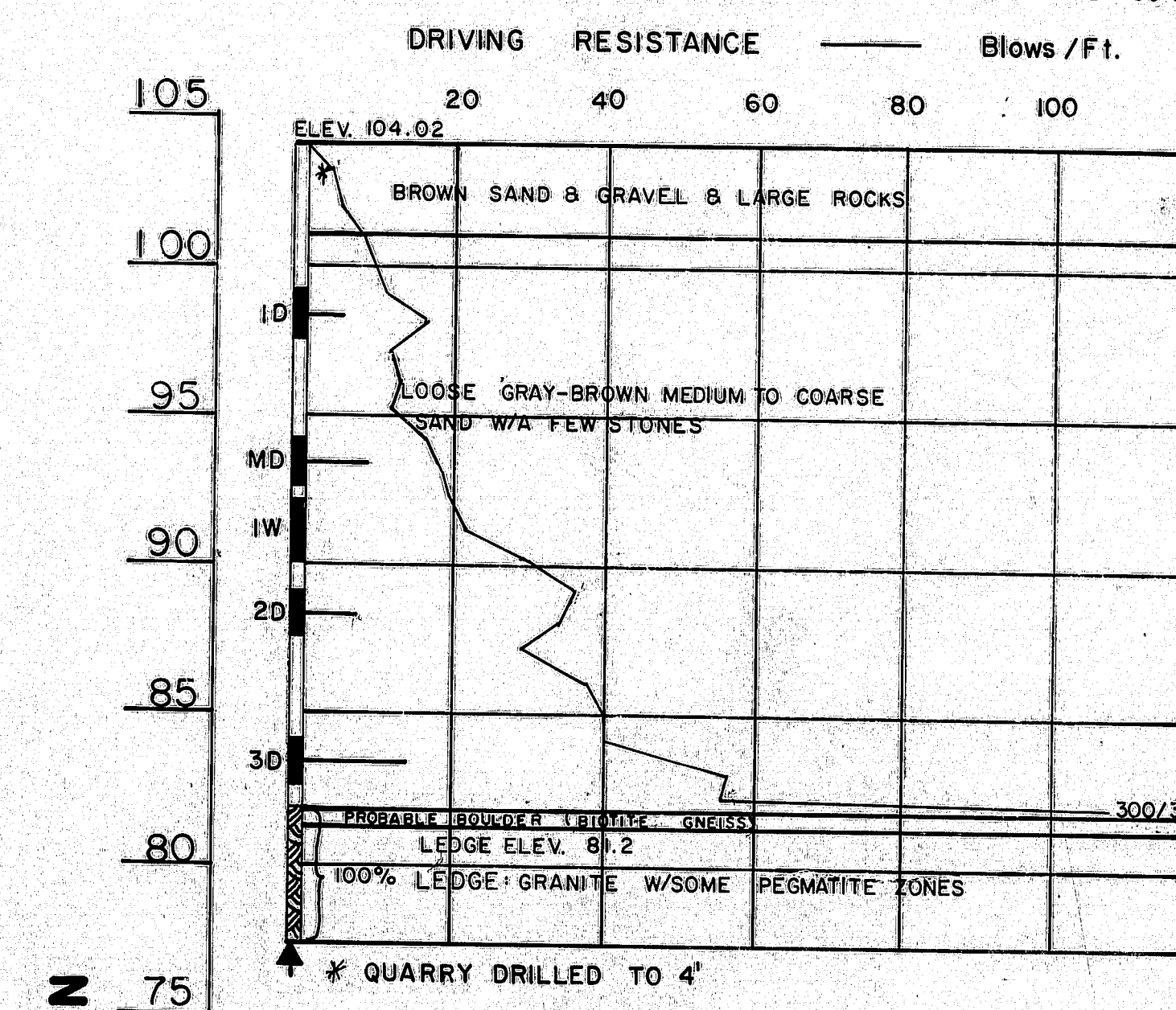


F.H.W.A. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	5747	12	21

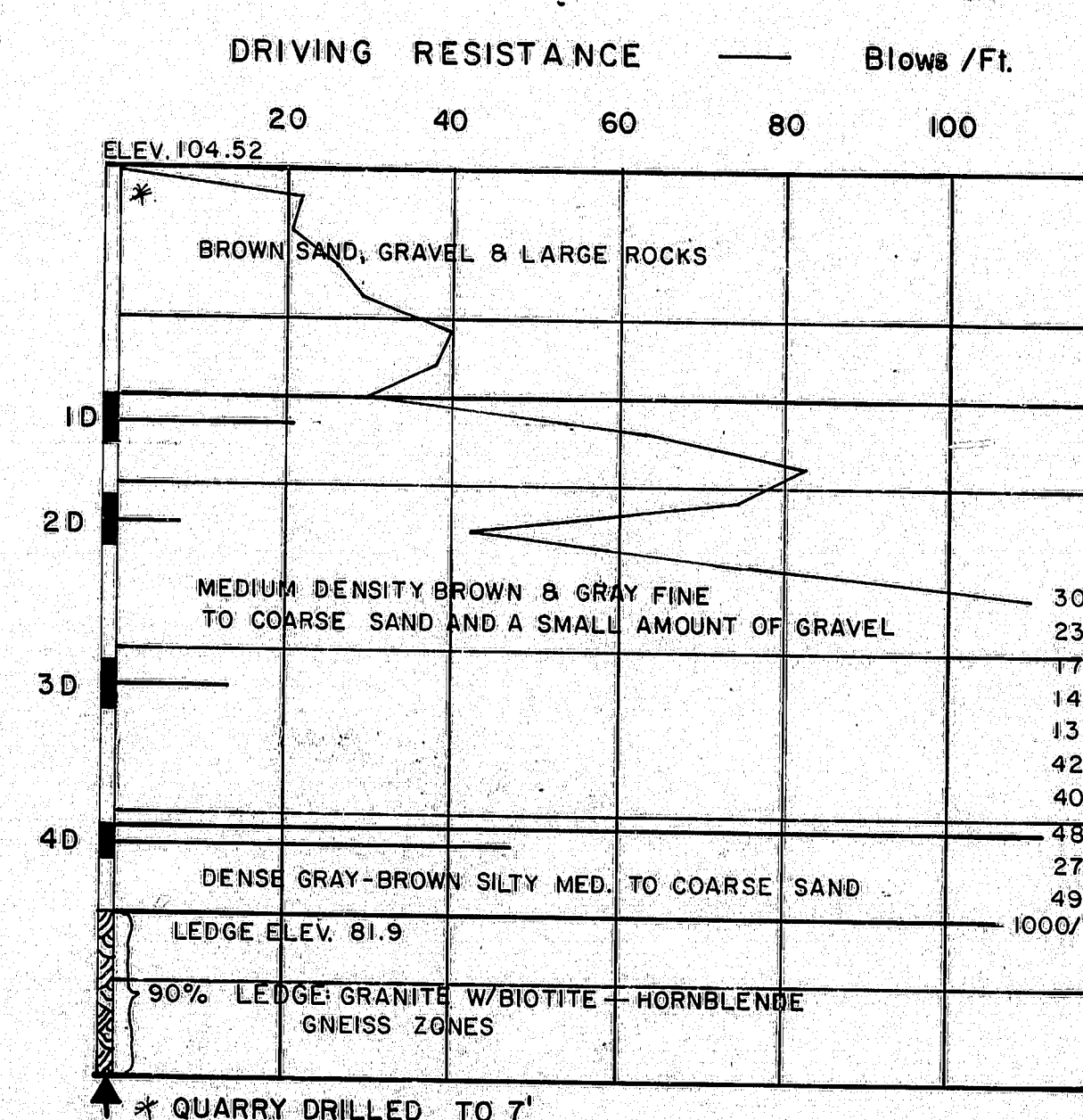


PROJECT DESIGN ENGINEER	BY	DATE
PLANS	DESIGN, DETAILED, CHECKED, REVISIONS, FIELD CHANGES	

**BORING CB-7-80 STATION 71+33-25' RT.**

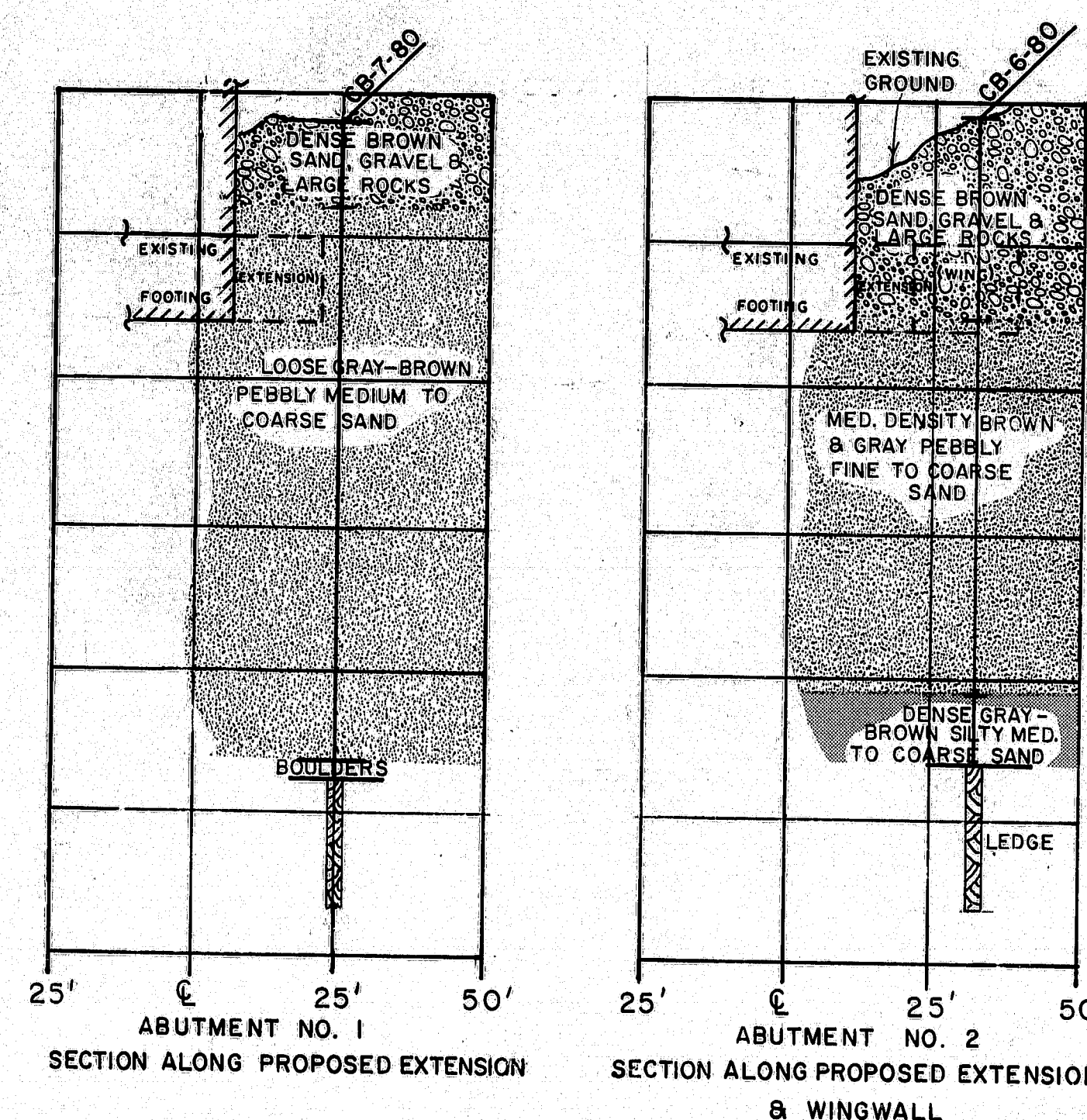


**BORING CB-6-80 STATION 71+68-30' RT.**

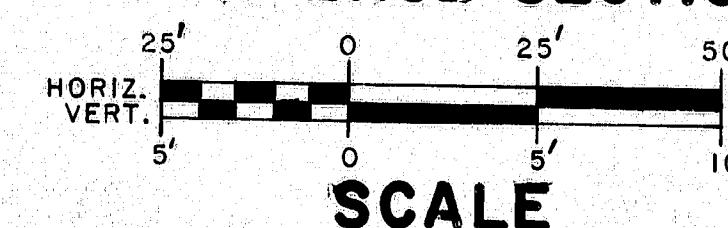


### BORING NOTES

- 4" Casing used
- 2 1/2" Casing used
- All samples and vane tests made ahead of casing
- Number of blows required to drive extra heavy casing one foot with 400 ft. lbs. of energy per blow
- Location of sample or sample attempt
- ID S & H Sampler #1290's
- IW Wash sample and number
- MD Unsuccessful sample attempt and type sampler
- Number of blows required to drive spoon or tubing one foot with 350 ft. lbs. of energy per blow
- Bottom of boring (may not be bottom of soil strata)
- Location cored by diamond bit and percent recovery of rock



**TRANSVERSE SECTIONS**

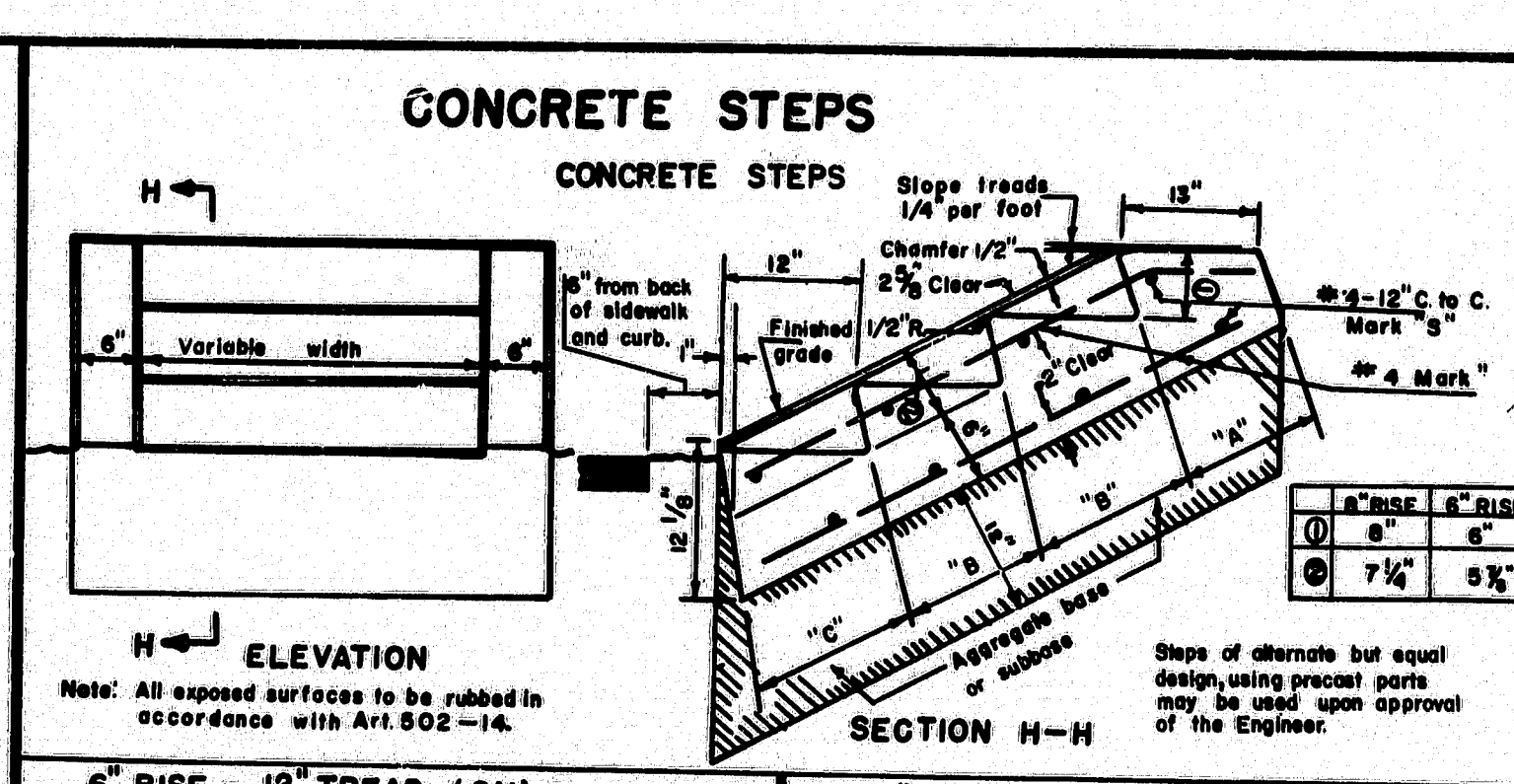
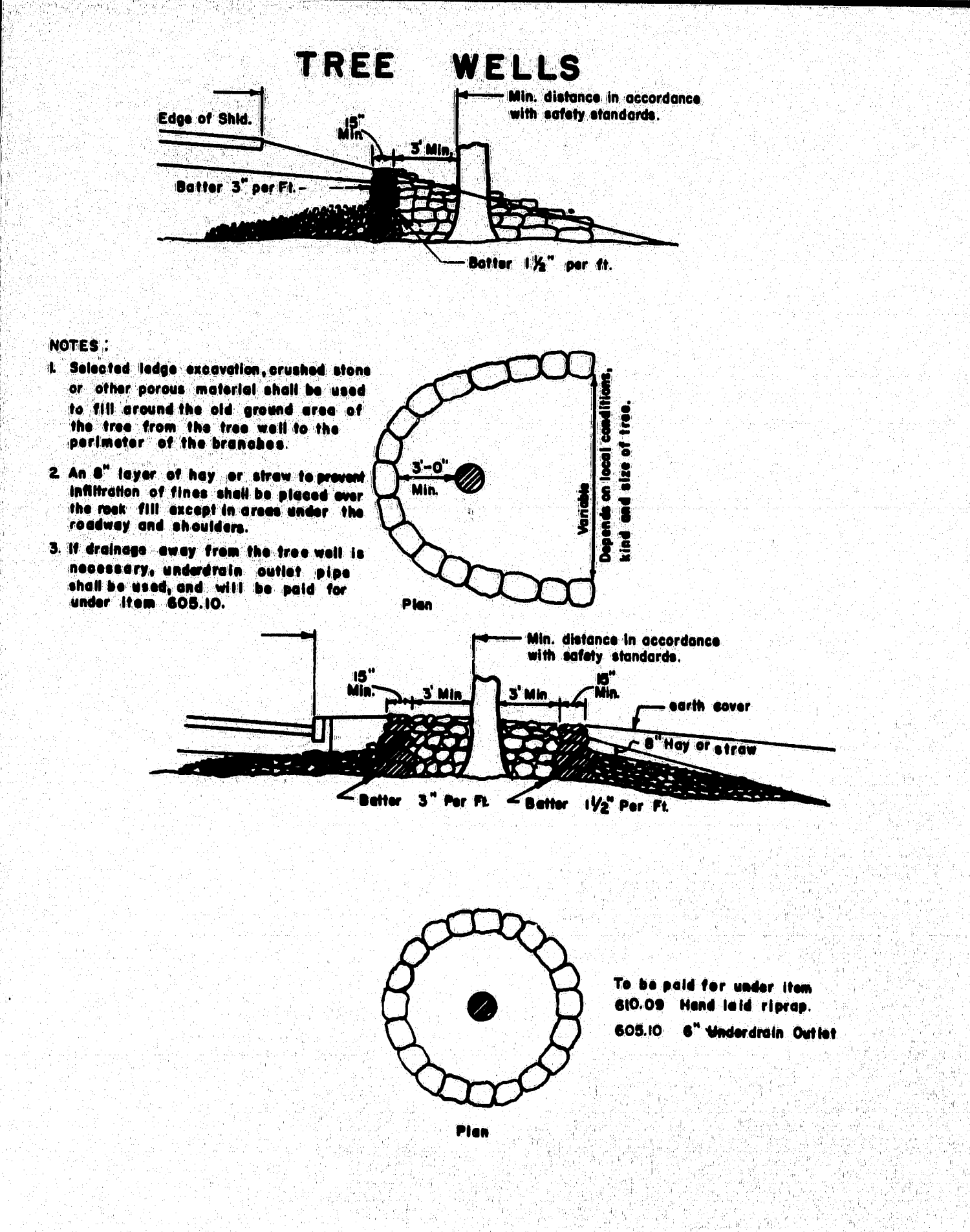
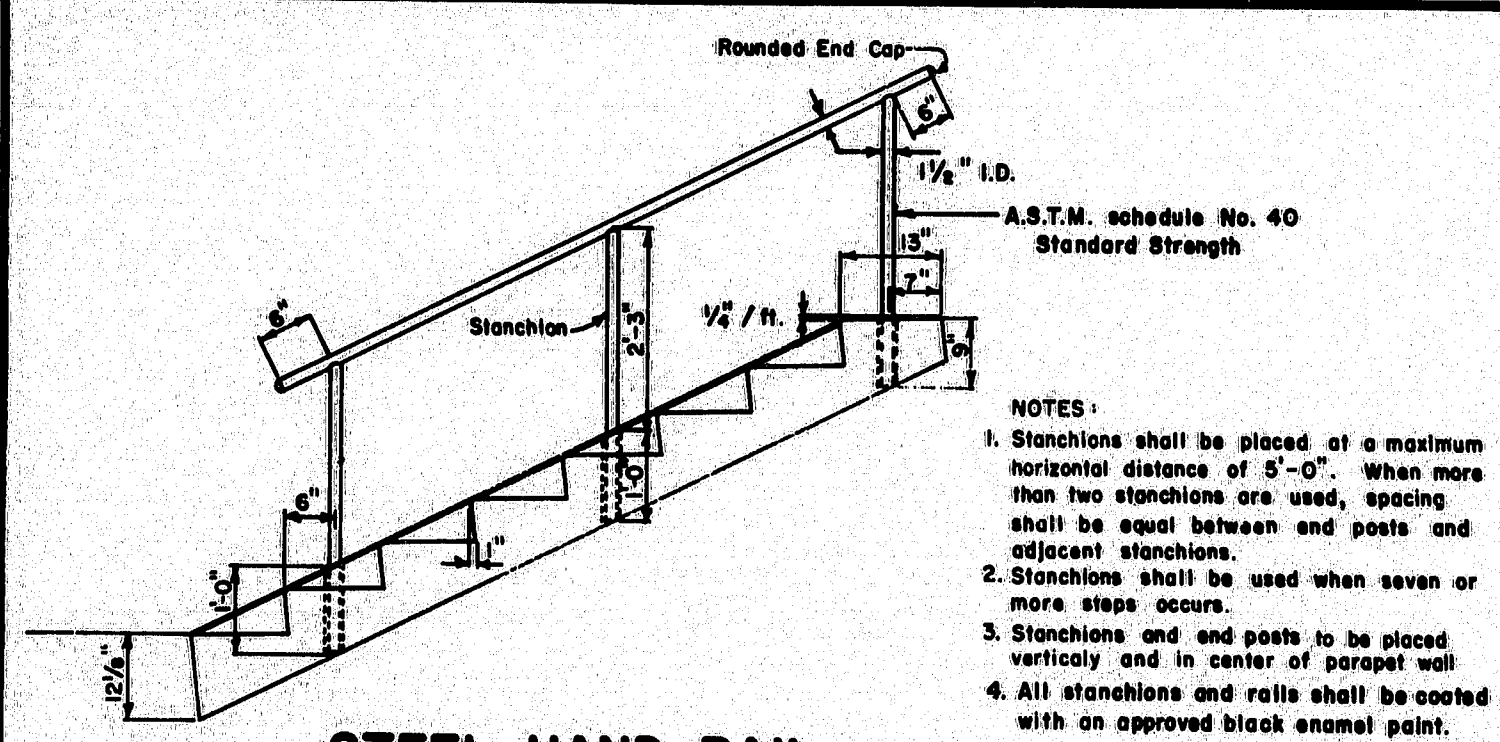
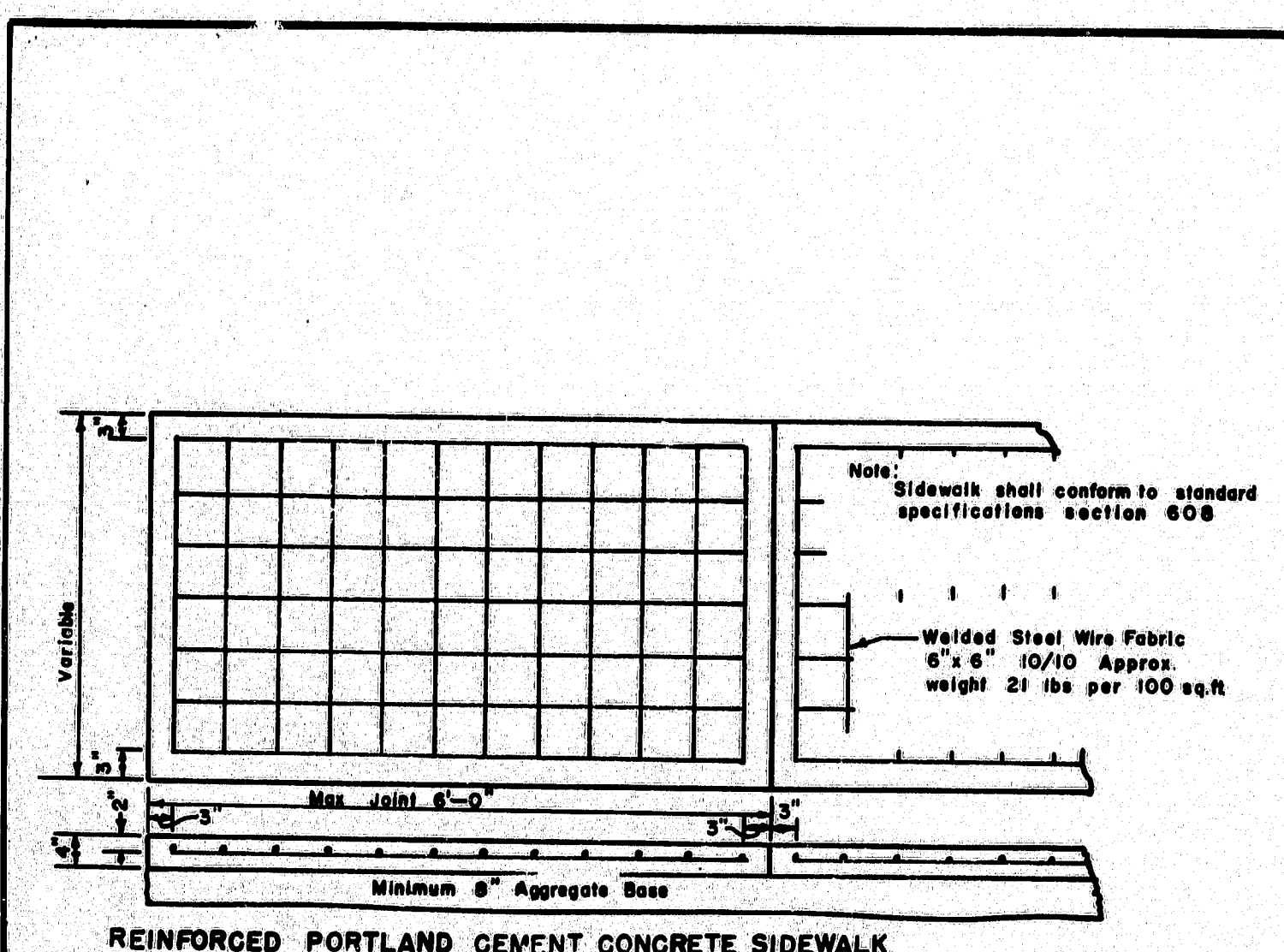


STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
**COOMBS MILL BRIDGE**  
OVER  
**BOND BROOK**  
IN THE CITY OF  
**AUGUSTA**  
**KENNEBEC COUNTY**  
FOUNDATION SURVEY, BORING DETAILS  
AND TRANSVERSE SECTIONS

SHEET 12 OF 21 AUGUSTA, MAINE May 1980

172-61



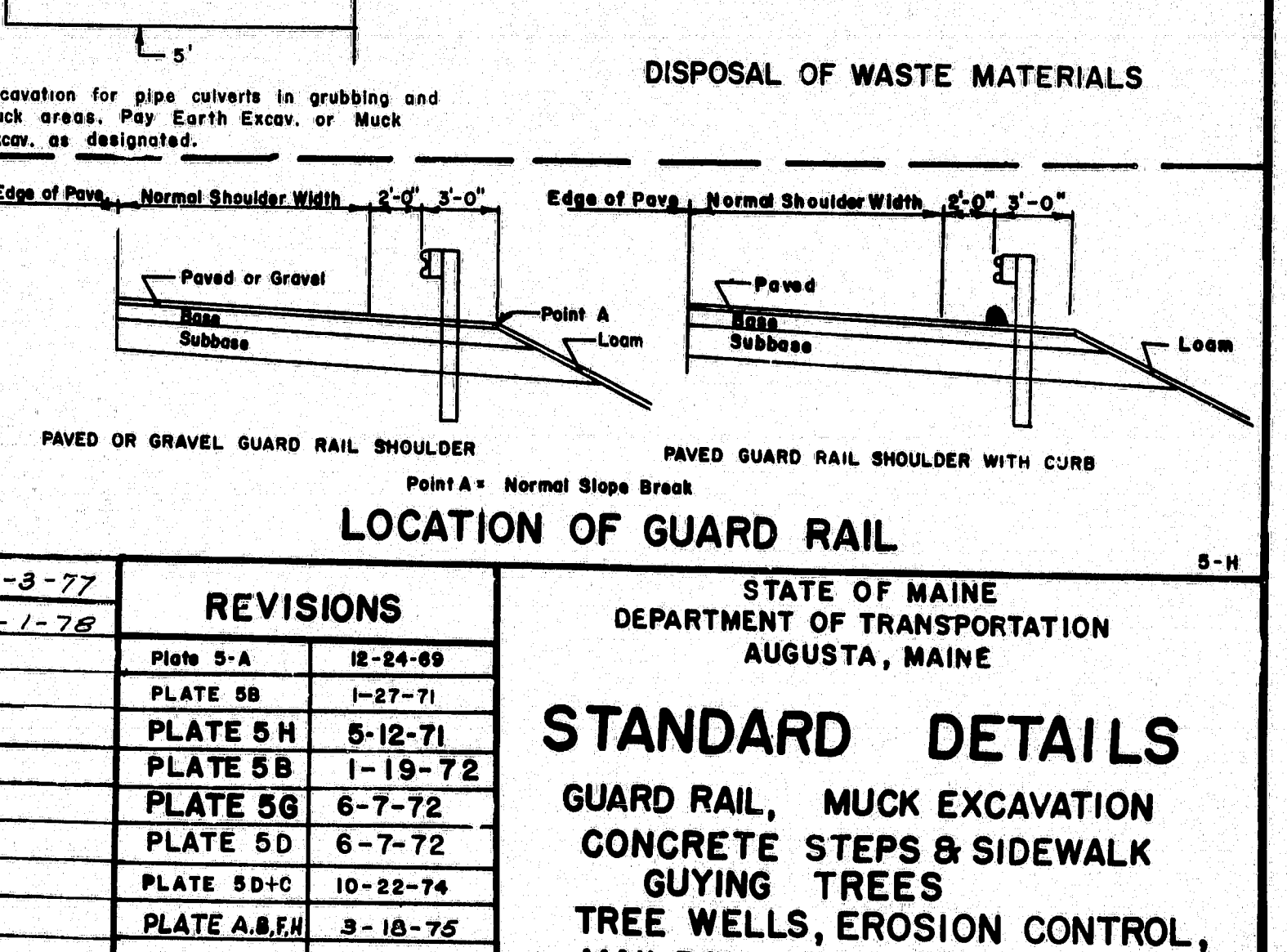
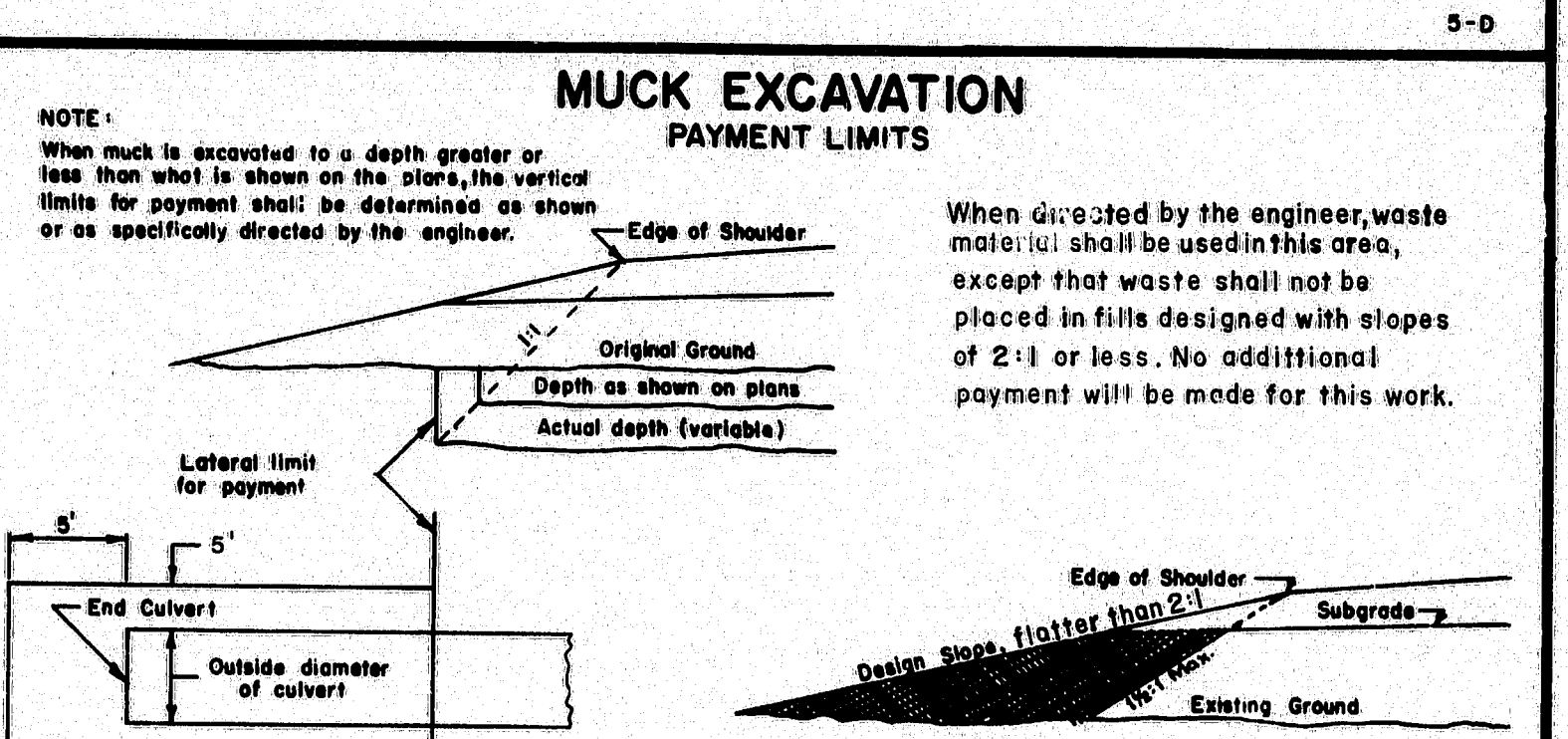
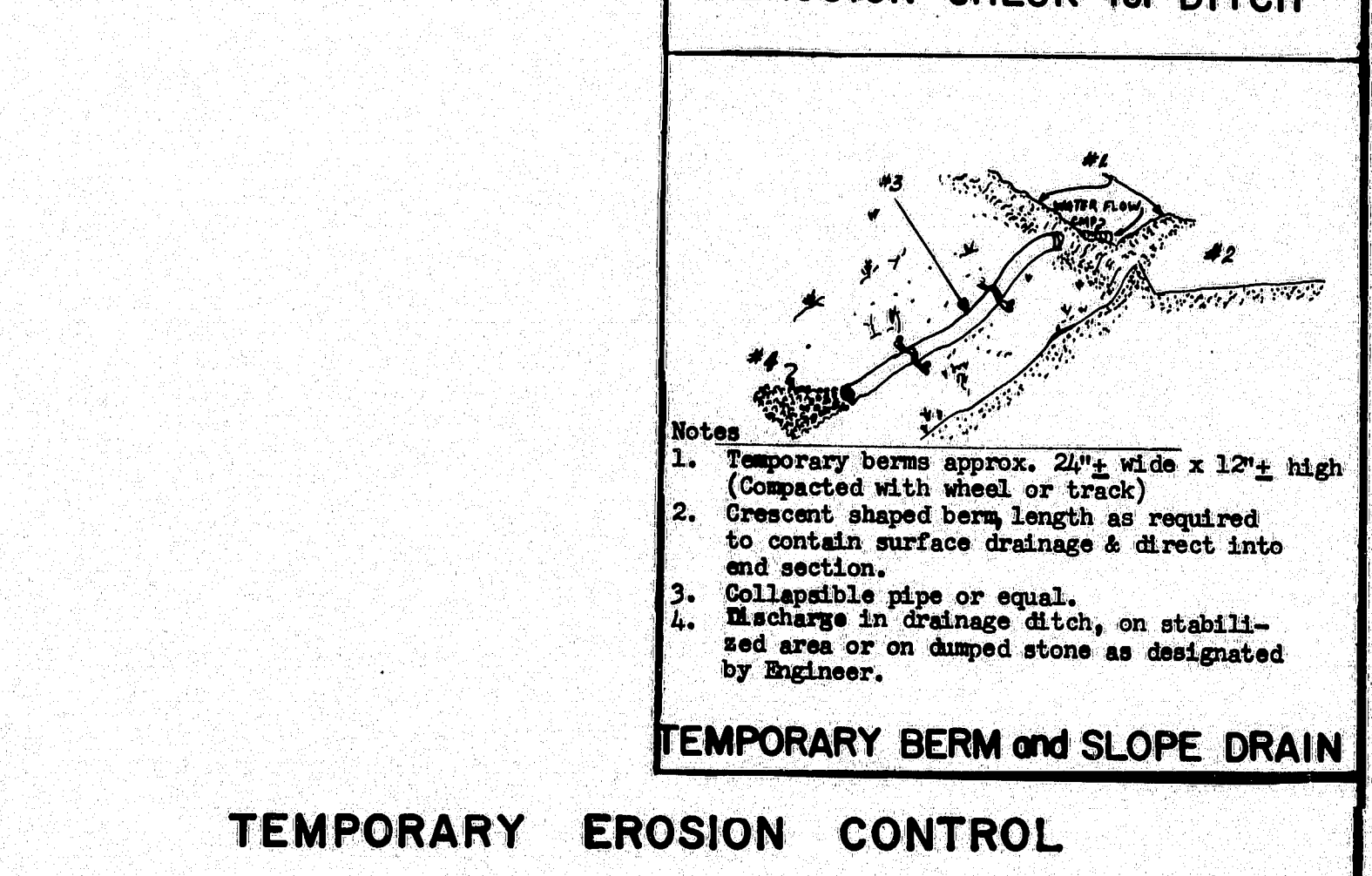
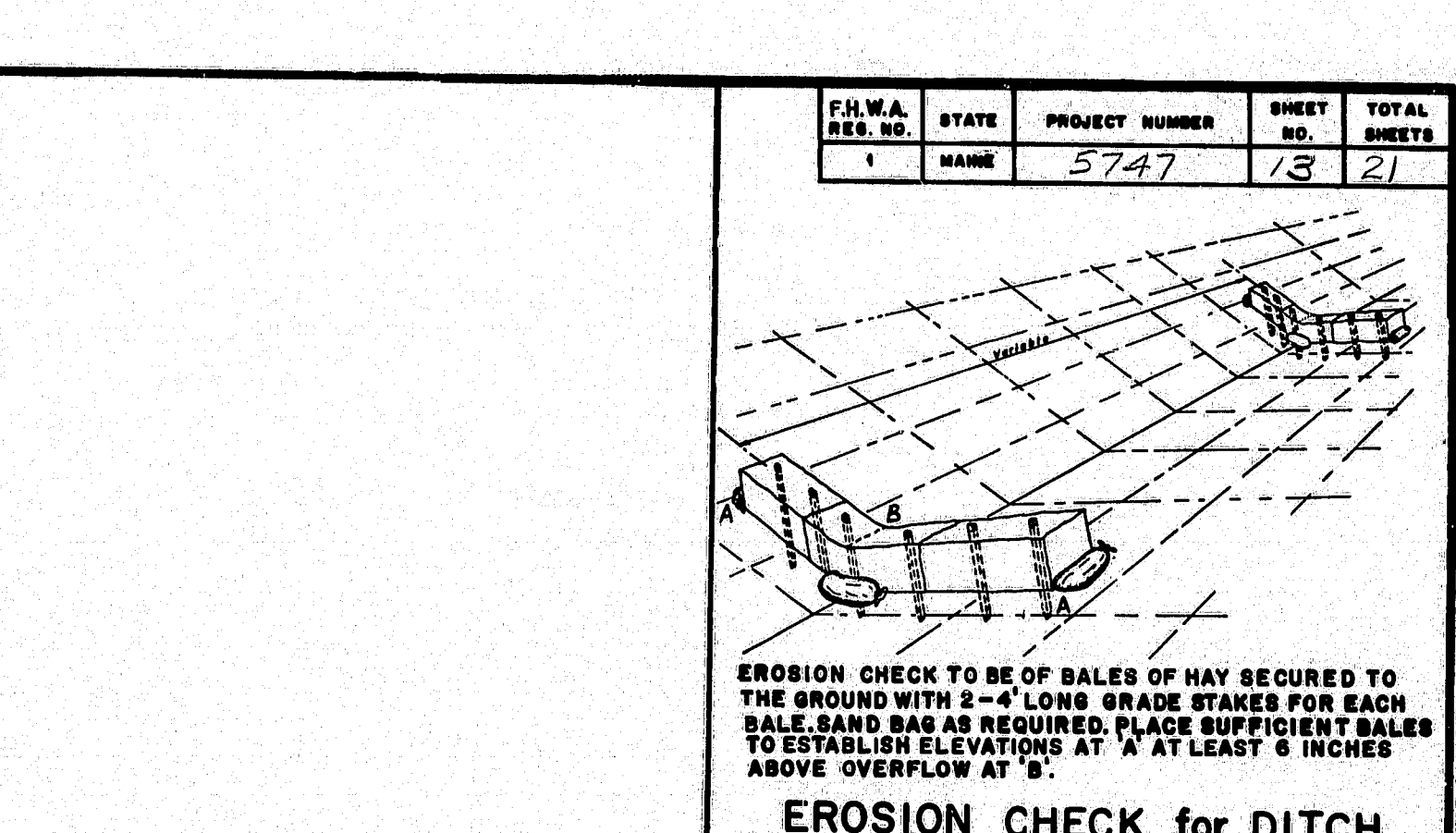
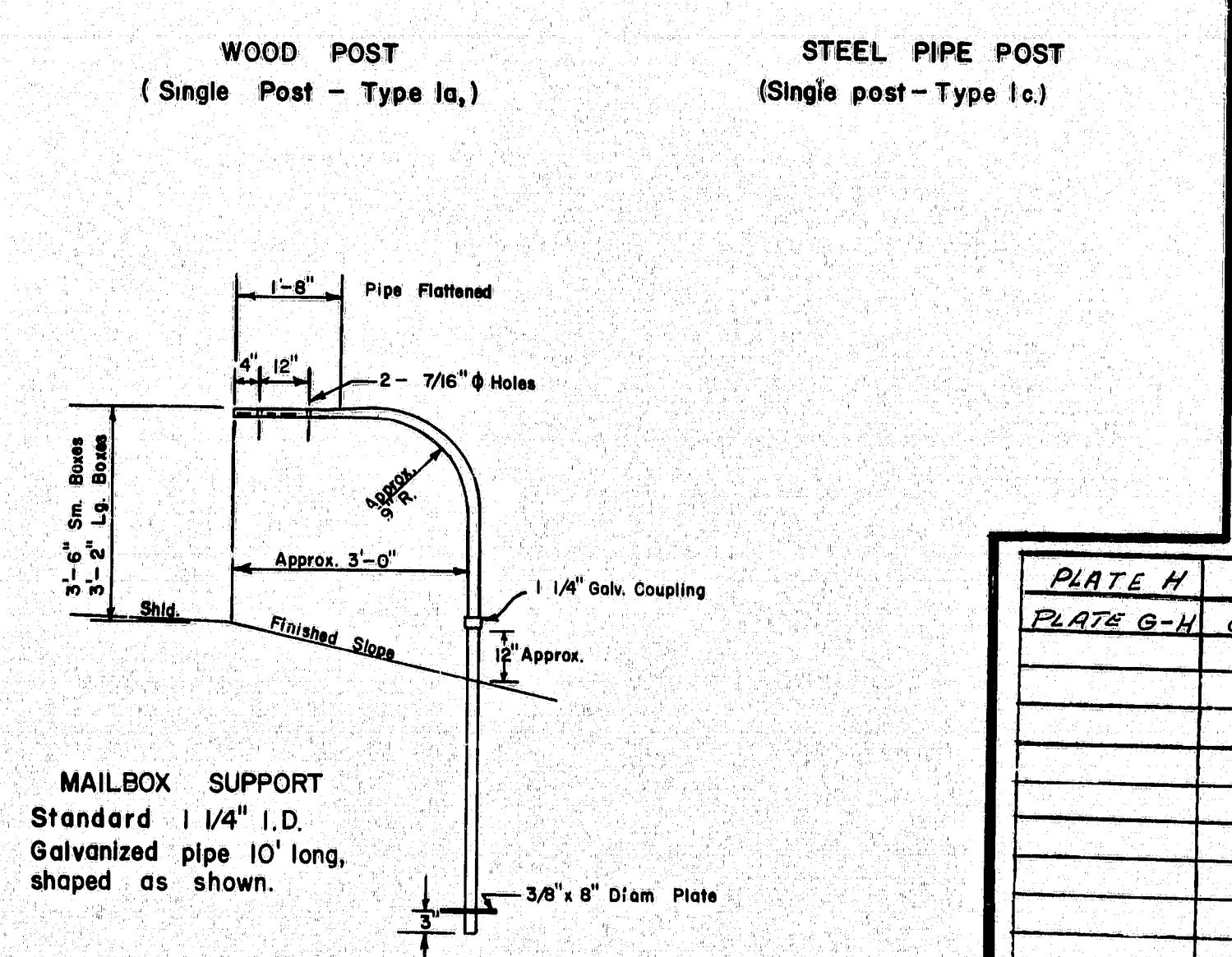
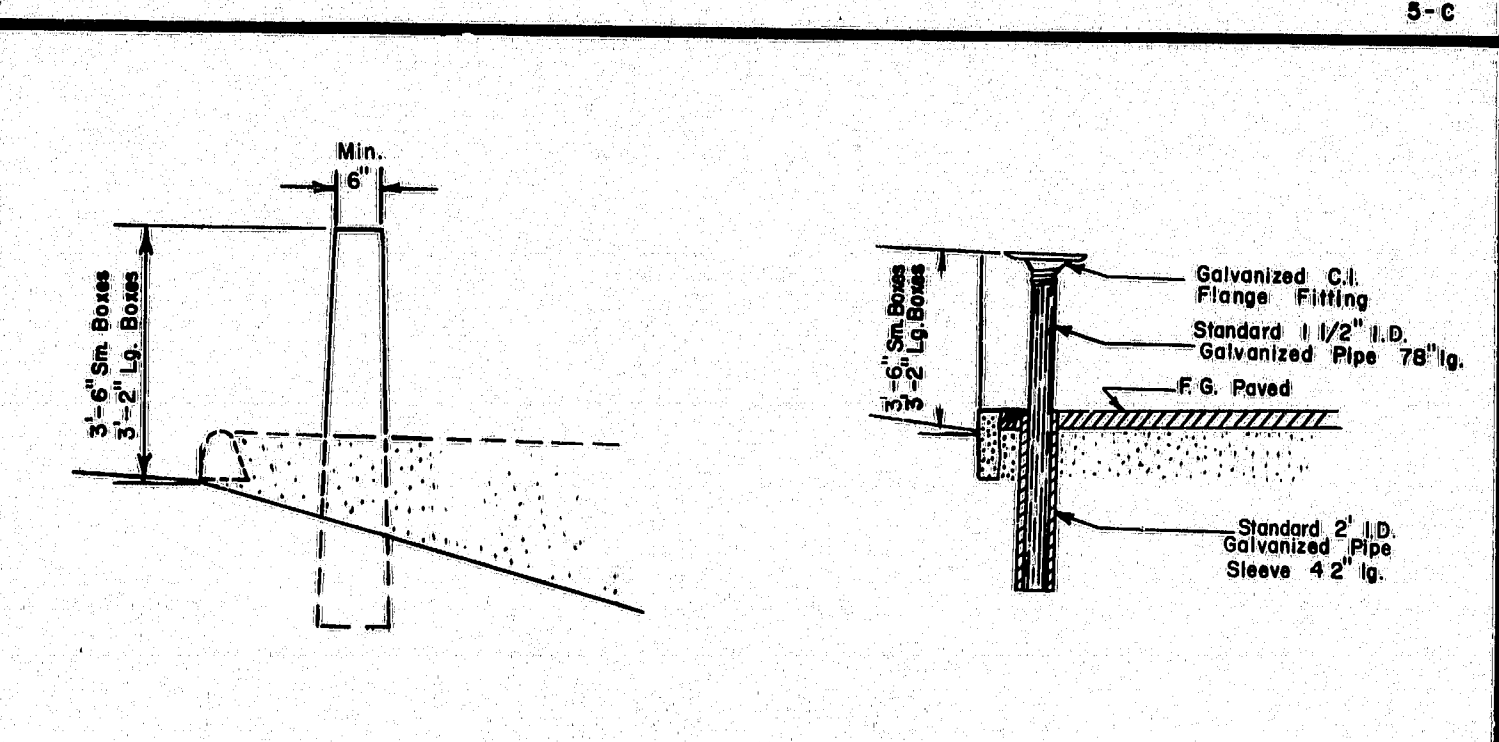
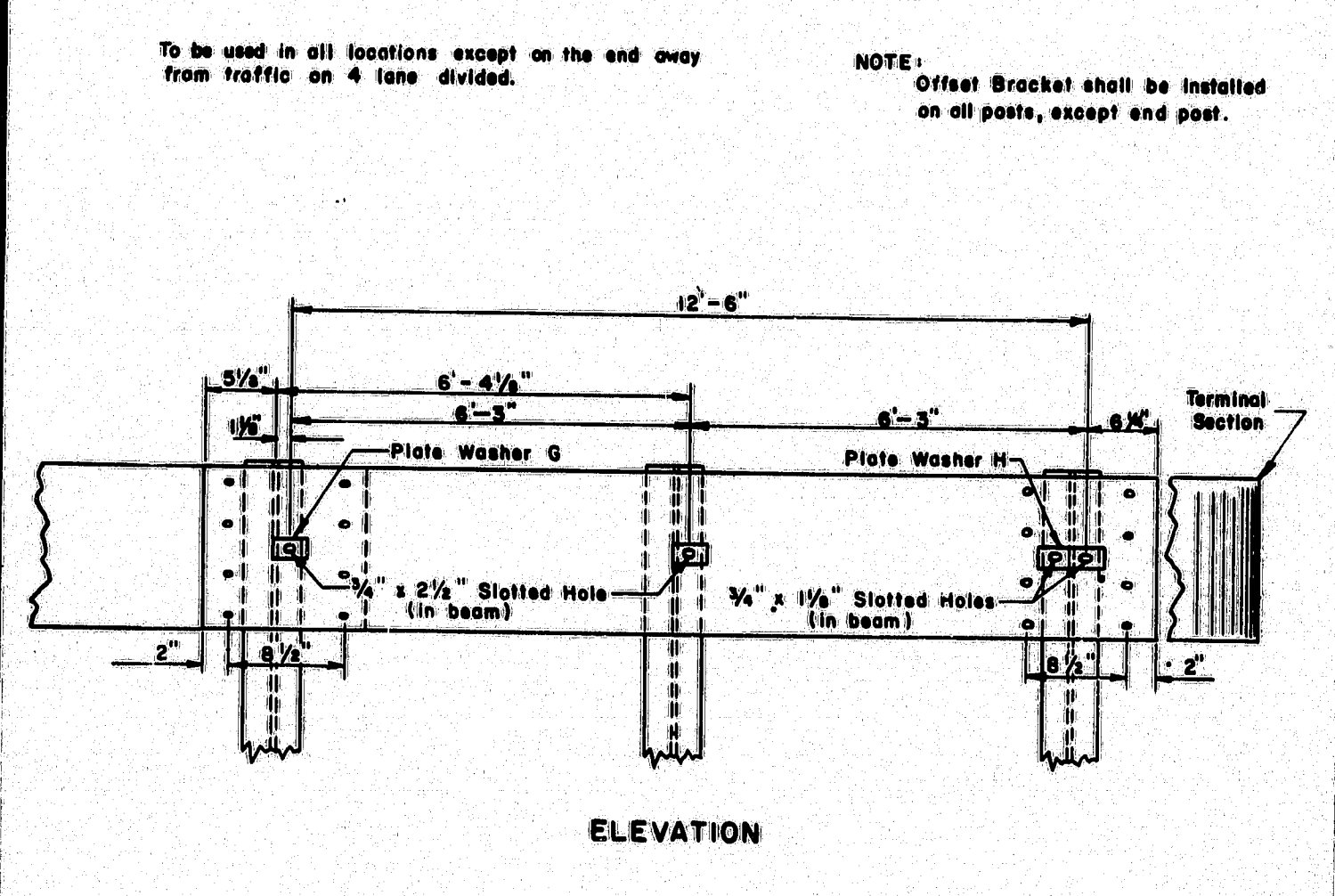
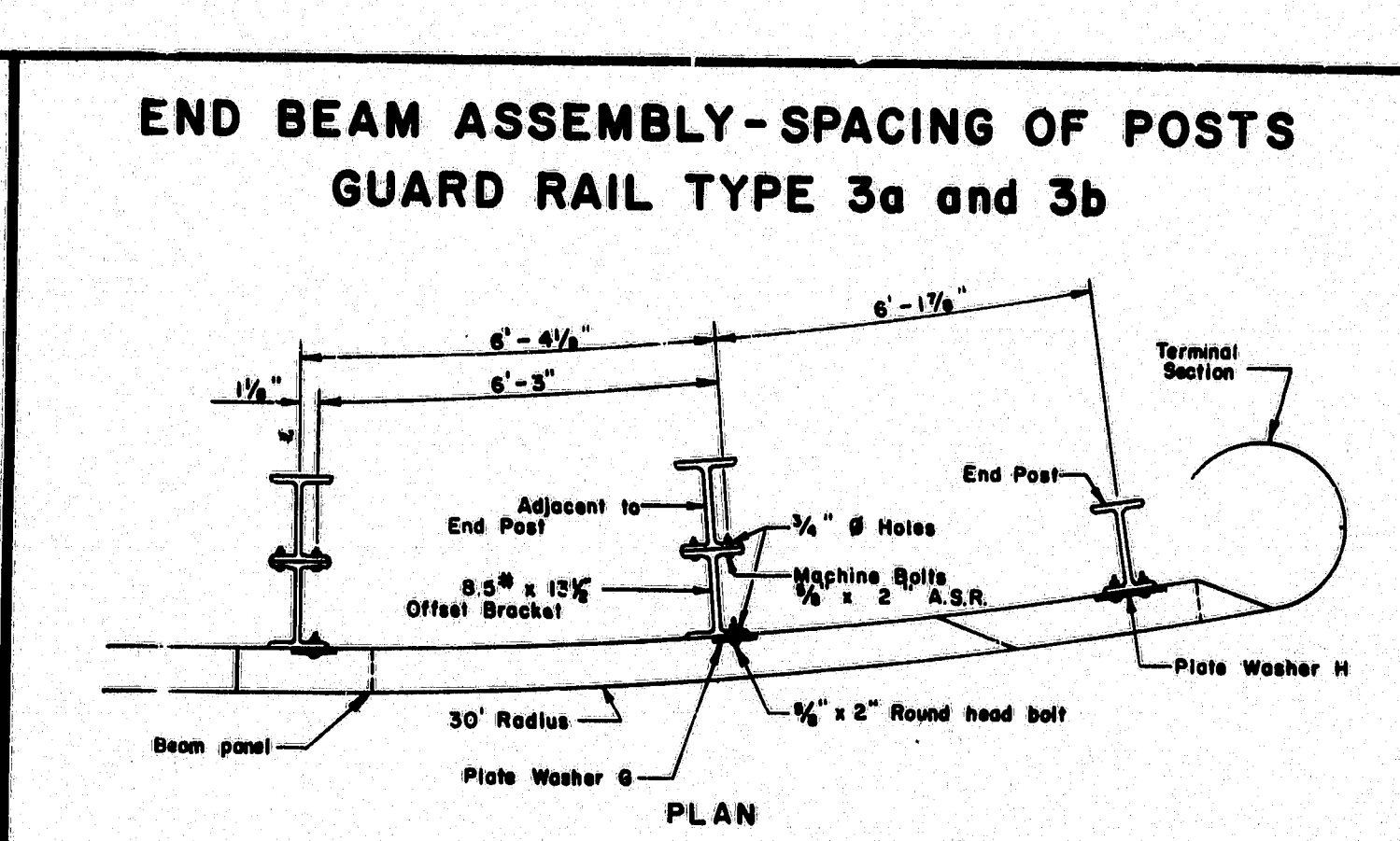
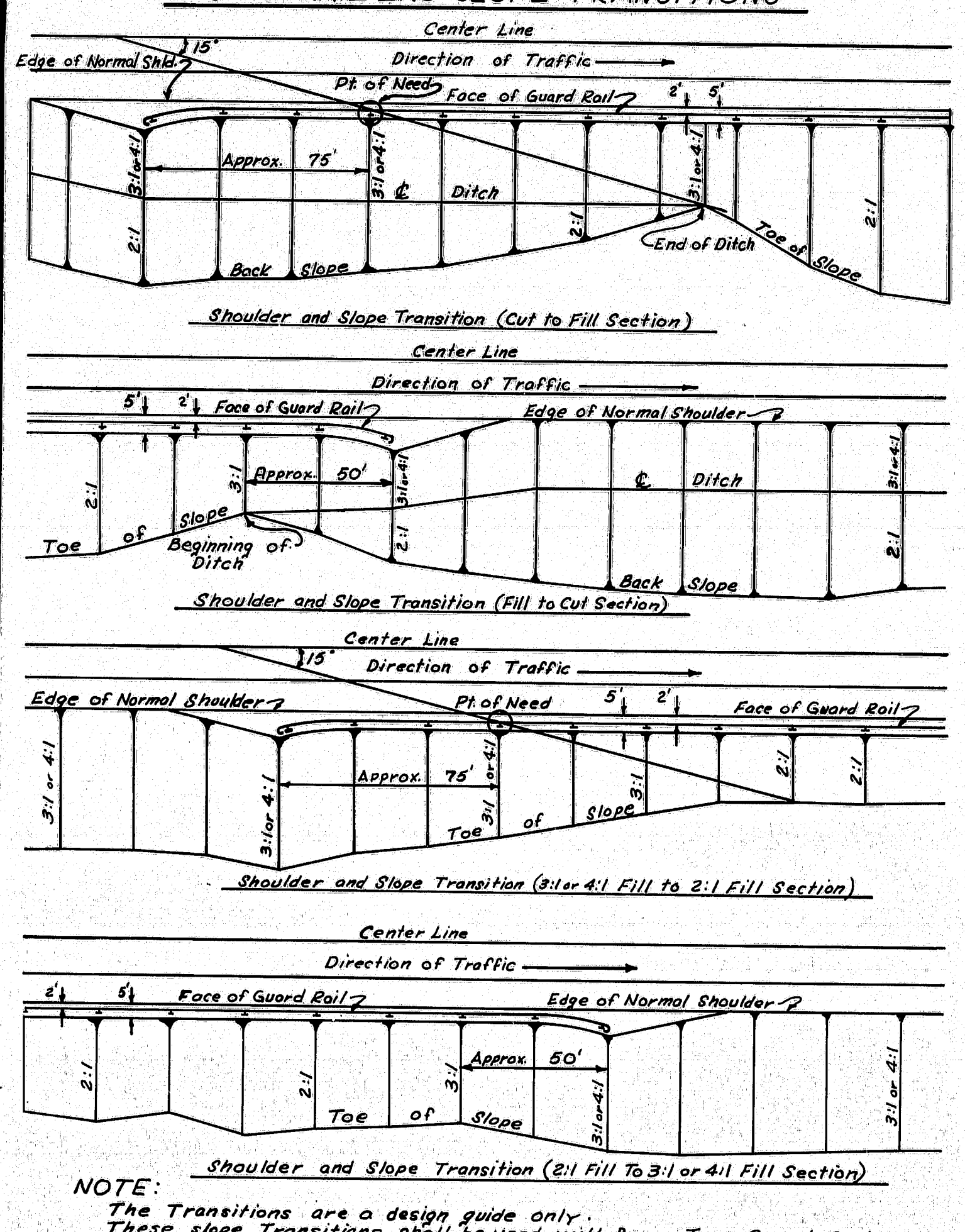
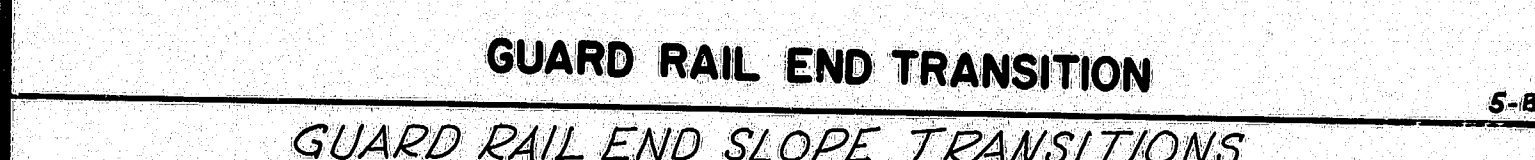


**REINFORCING STEEL**

Mark	Size	Number	Length (Each)	Mark	Size	Number	Length (Each)
R	#4	2 Each parapet	11' For "A"	R	#4	2 Each parapet	11' For "A"
S	#4	1 Each ft. of width	+12' For "B"	S	#4	1 Each ft. of width	+12' For "B"
S	#4	2 For "A"	4 Each parapet	S	#4	2 For "A"	4 Each parapet
S	#4	2 For "B"	+12' Per ft. of width	S	#4	2 For "B"	+12' Per ft. of width

**CONCRETE CLASS 'A'**

Section	Slope per ft. of width	Parapet each wall	Section	Slope per ft. of width	Parapet each wall
"A" Header	.030 cu. yds.	.015 cu. yds.	"A" Header	.030 cu. yds.	.015 cu. yds.
"B" Each Intec step	.030 cu. yds.	.020 cu. yds.	"B" Each Intec step	.030 cu. yds.	.020 cu. yds.
"C" Footer	.030 cu. yds.	.020 cu. yds.	"C" Footer	.030 cu. yds.	.020 cu. yds.



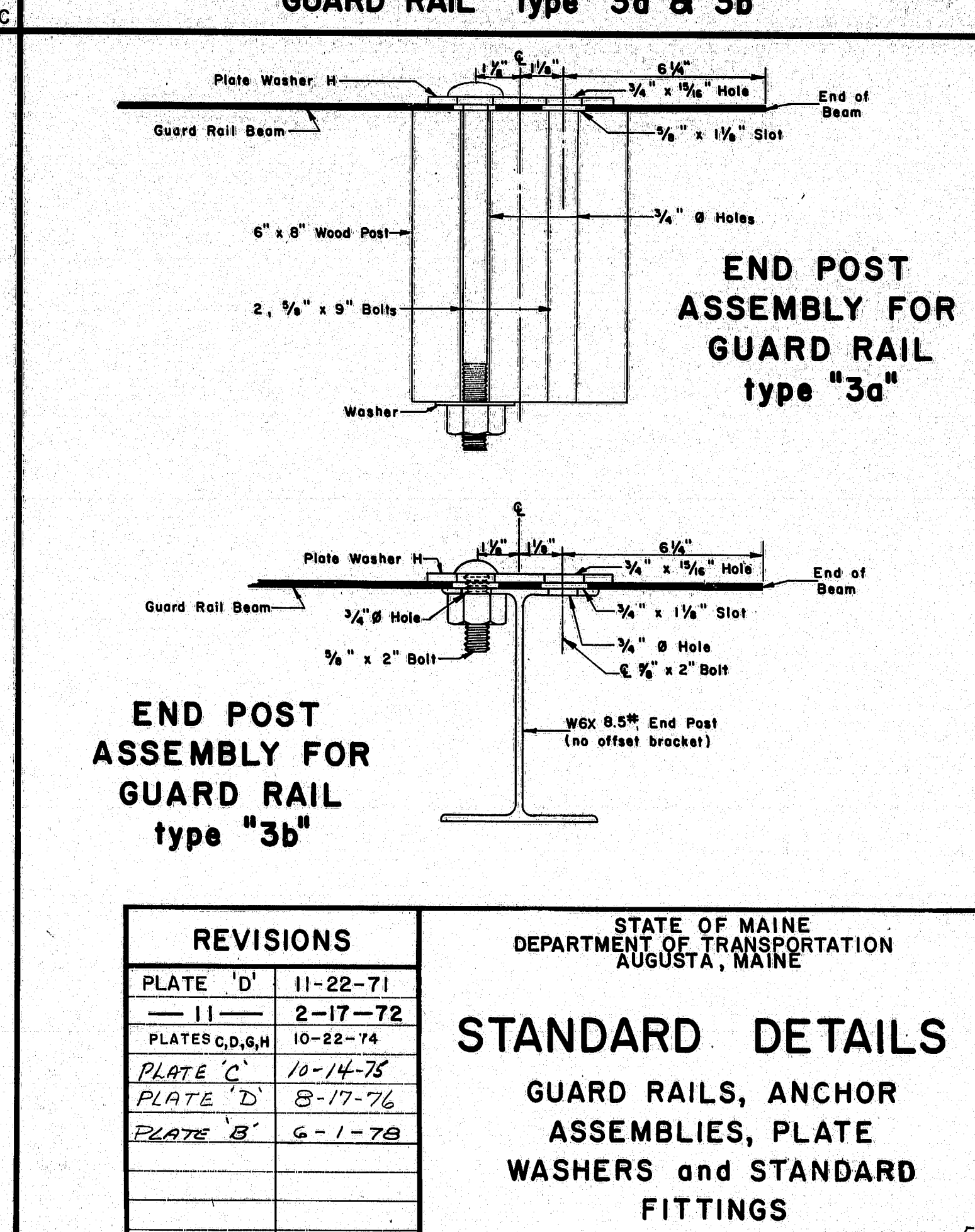
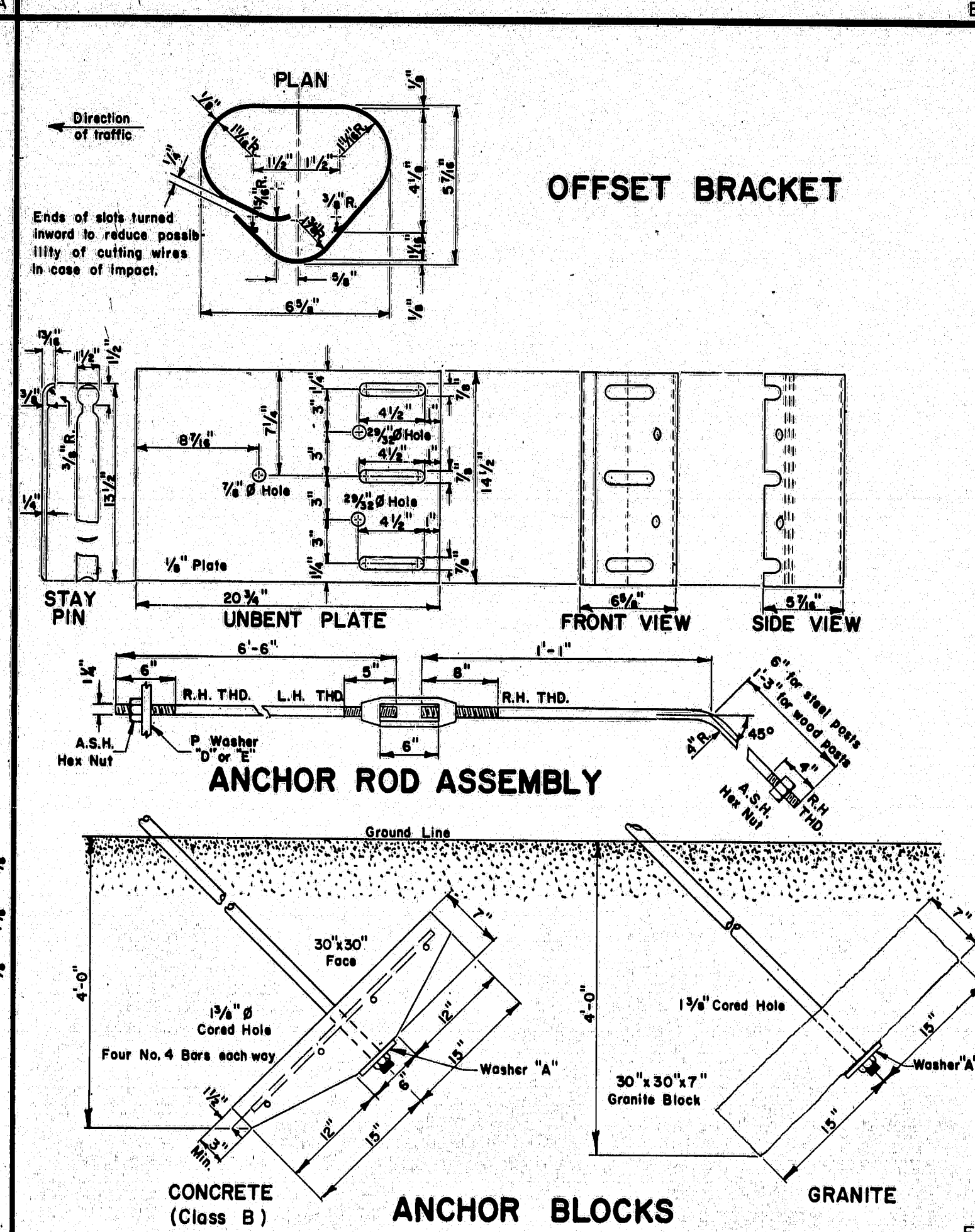
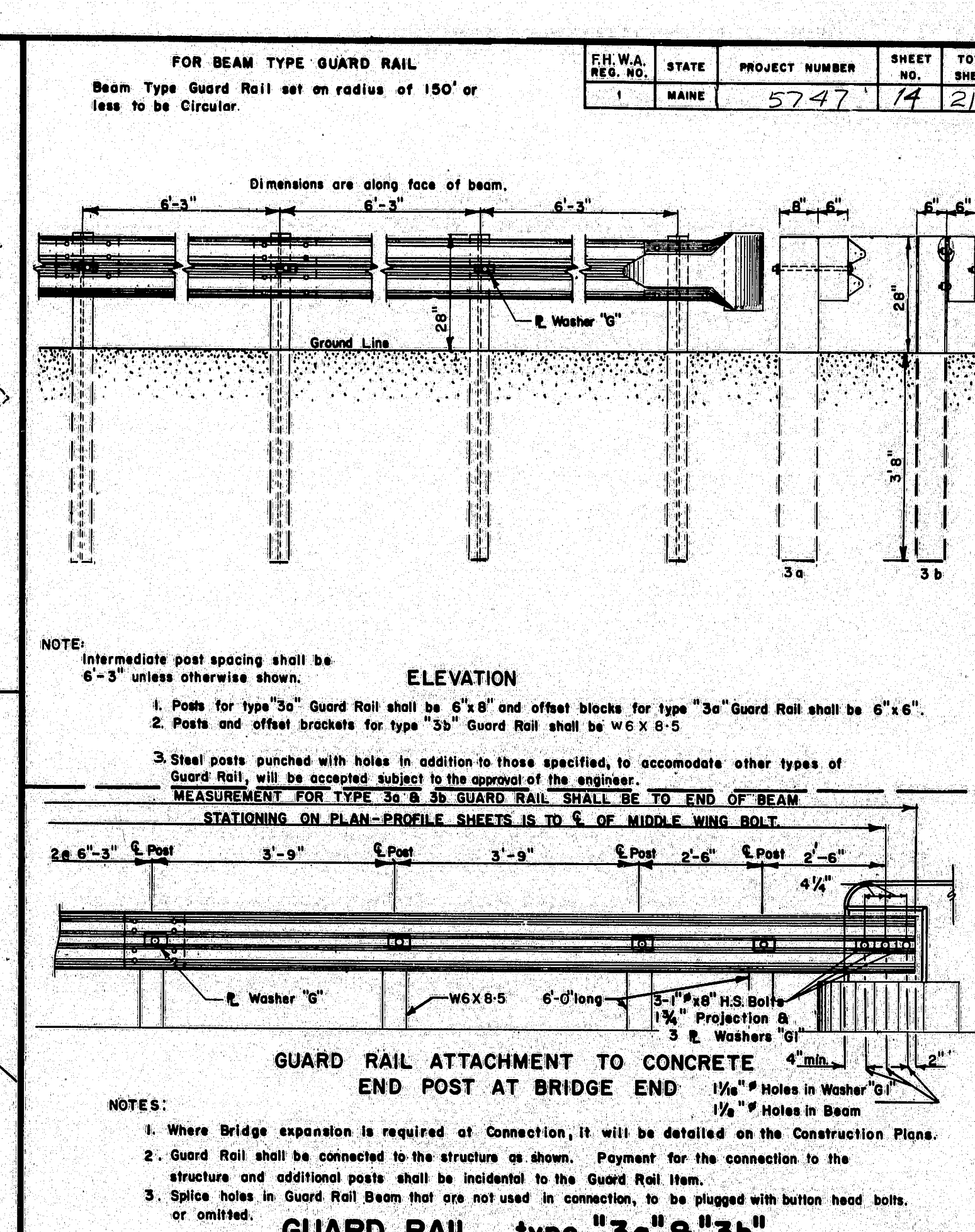
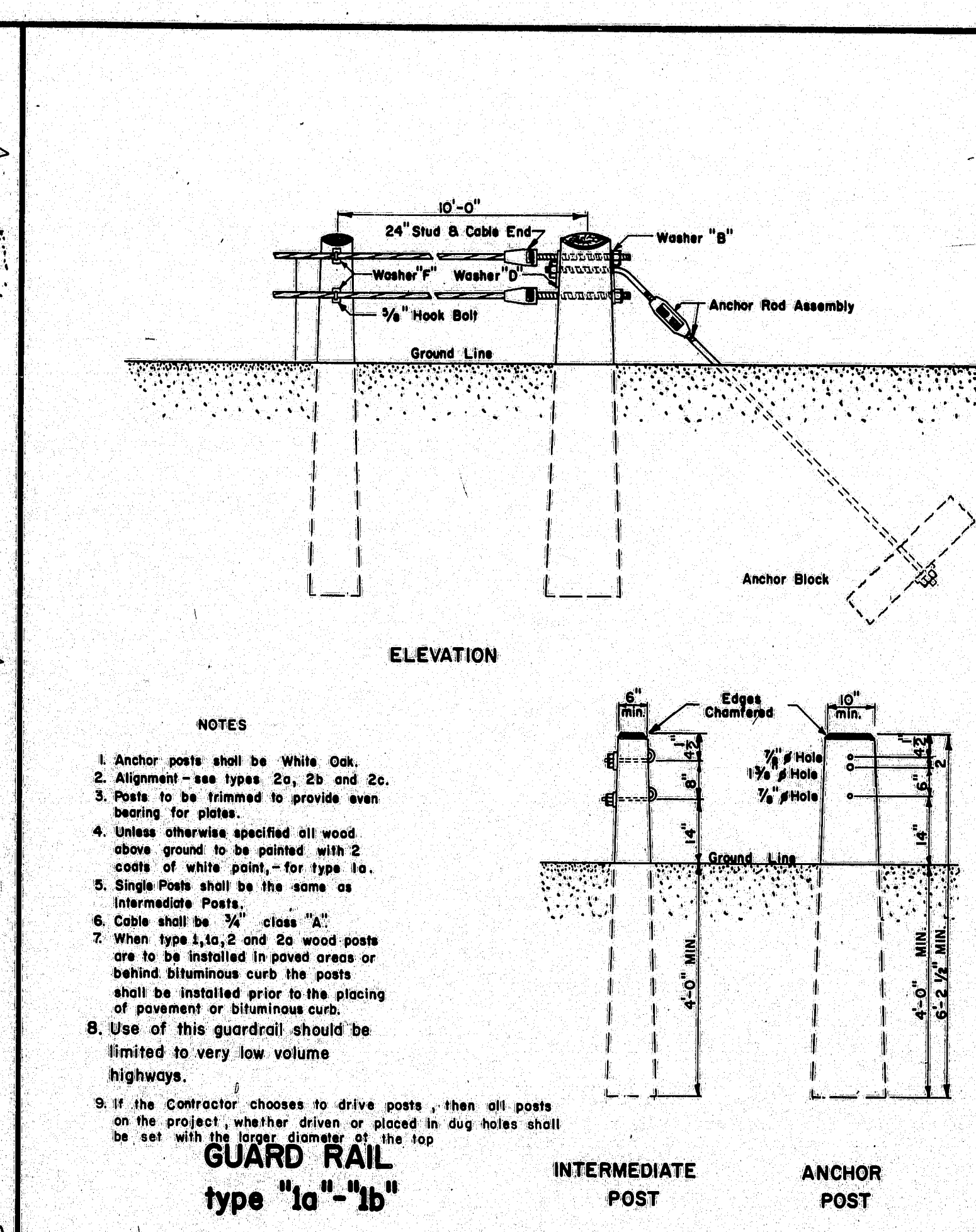
**LOCATION OF GUARD RAIL**

PLATE	REVISIONS
PLATE 5-A	12-24-69
PLATE 5-B	1-27-71
PLATE 5-H	5-12-71
PLATE 5-B	1-19-72
PLATE 5-G	6-7-72
PLATE 5-D	6-7-72
PLATE 5-D+C	10-22-74
PLATE A.B.H.	3-18-75
PLATE 5-H	6-26-75
PLATE G	10-14-75

**STATE OF MAINE**  
**DEPARTMENT OF TRANSPORTATION**  
**AUGUSTA, MAINE**

**STANDARD DETAILS**  
**GUARD RAIL, MUCK EXCAVATION**  
**CONCRETE STEPS & SIDEWALK**  
**GUYING TREES**  
**TREE WELLS, EROSION CONTROL,**  
**MAILBOX SUPPORTS.** AUG. 1969





REVISONS	
PLATE 'D'	11-22-71
— II —	2-17-72
PLATES C,D,G,H	10-22-74
PLATE 'C'	10-14-75
PLATE 'D'	8-17-76
PLATE 'B'	6-1-78

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
AUGUSTA, MAINE

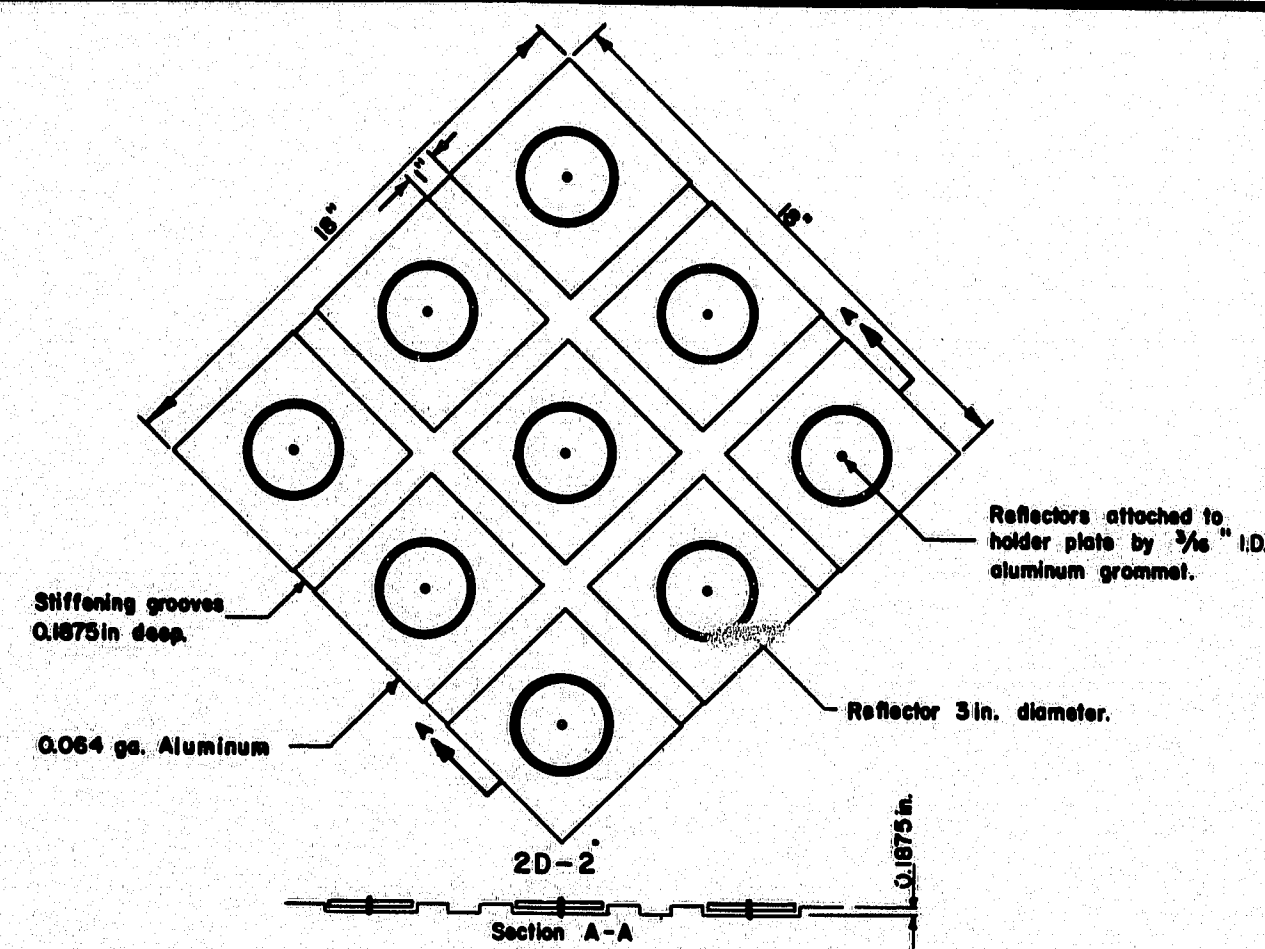
**STANDARD DETAILS**

**GUARD RAILS, ANCHOR  
ASSEMBLIES, PLATE  
WASHERS and STANDARD  
FITTINGS**

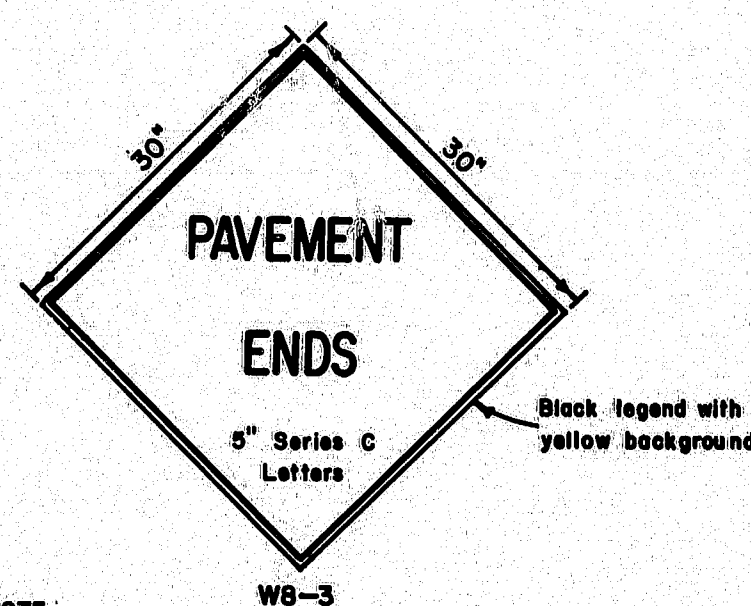




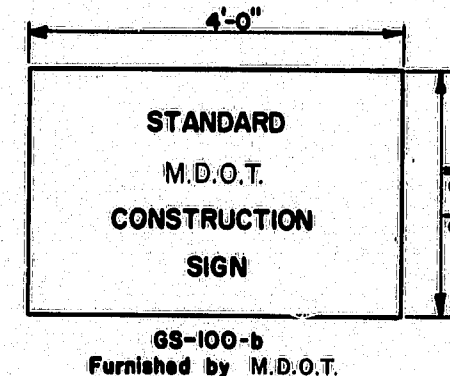
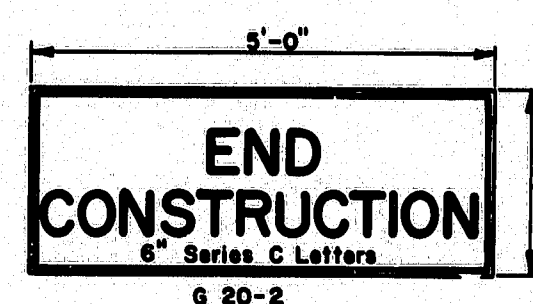




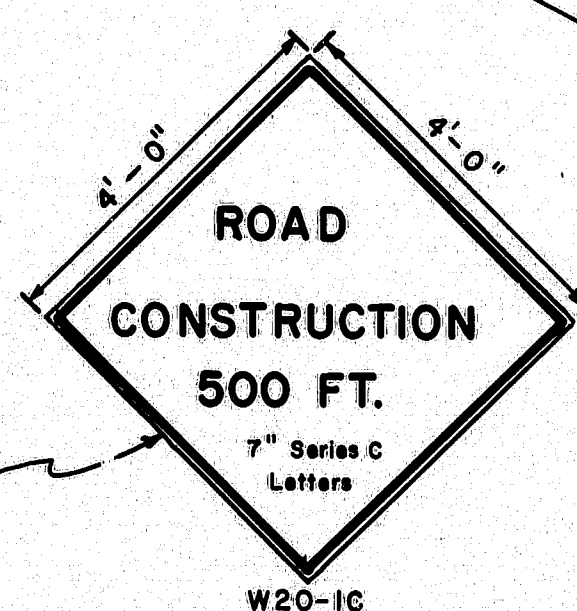
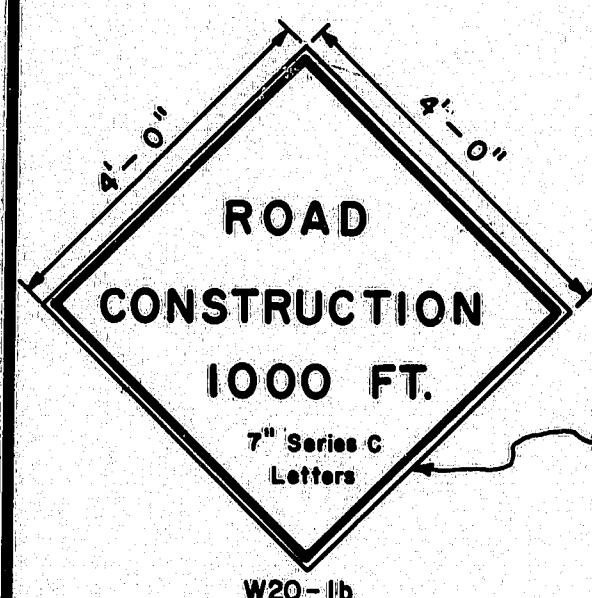
HAZARD MARKER



GENERAL NOTE  
Construction Signs  
1. Sign Borders: All signs shall have borders conforming to the sizes and spacing as shown below:  
a. 30" x 30" Sign - 1/4" Border, 1/2" Space from sign edge.  
b. 2' x 5' Sign - 1/4" Border, 1/2" Space from sign edge.  
c. 3' x 4' Sign - 1/4" Border, 1/2" Space from sign edge.  
d. 4' x 4' Sign - 1/4" Border, 1/2" Space from sign edge.



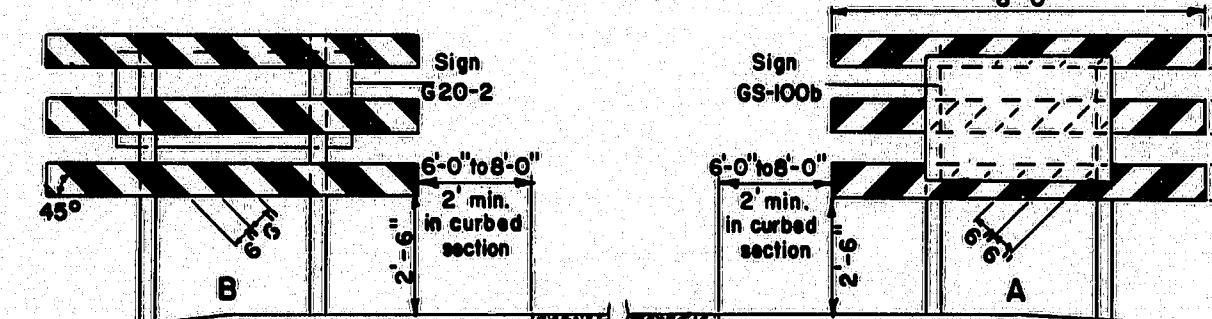
CONSTRUCTION SIGNS



- GENERAL NOTES - BARRICADES
- Unless otherwise designated, sign designation letters shall refer to the "Manual of Uniform Traffic Control Devices for Streets and Highways," published by the U.S. Department of Transportation, Federal Highway Administration, 1971.
  - White stripes shall be of silver reflective sheeting bonded to 0.019 minimum gauge aluminum, 16 minimum gauge galvanized steel, or 1/4" plywood. Individual white sheets may be attached to the background by orange and white stripes. At the Contractor's option the reflective sheeting and backing may extend the full width of the barricade with an opaque film or paint applied to form the stripes.
  - All signs shall be of reflective sheeting on 5/8" thick plywood. The plywood shall conform to subsection 712.25.
  - Pressure sensitive reflective sheeting will be an acceptable alternate to the reflective sheeting required by

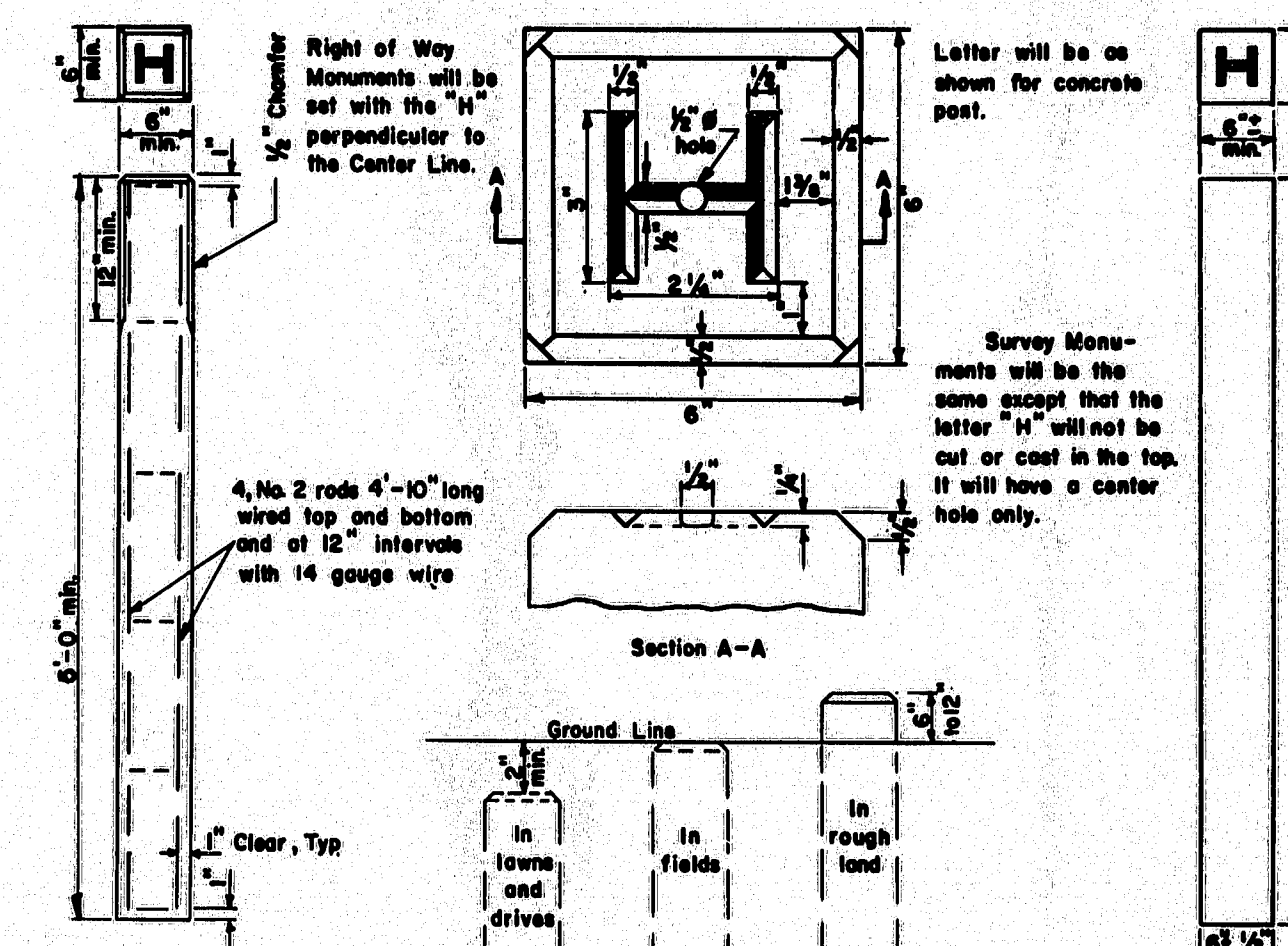
- NOTES - PORTABLE BARRICADES
- Lumber sizes for portable barricades shall be 2" x 8" except posts which shall be 4" x 4" (nominal sizes).
  - The detour sign shall be an oversized M-10 sign with a demountable "DETOUR" message which shall be made of screened reflective sheeting on 1/4" plywood, masonite, sheet steel or sheet aluminum.
  - Hazard markers shall be attached to the barricade with a bolt assembly of steel cadmium plated 5/16" bolt, lock washer and vandal resistant nuts.
  - When two W-1-6 signs are required, R11-2, R11-3, or R11-4 signs shall be omitted.
  - Flashing lights housings shall be mounted to permit rotating in a vertical axis to allow for adjustment to face oncoming traffic.
  - Location of electric service and meter to be determined after the power source has been located.

- NOTES - WING BARRICADES
- Lumber sizes for wing barricades shall be 1" x 8" except posts which shall be 4" x 4" (nominal sizes).
  - Wing barricades will not be required unless specifically called for in the special provisions.
  - Location of signs and barricades will be determined by the Engineer.



WING BARRICADES

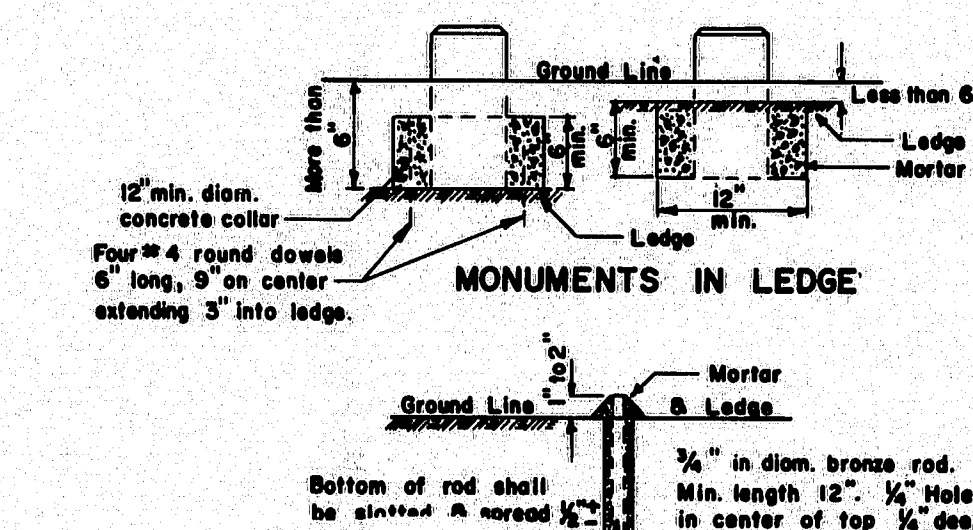
RIGHT OF WAY & SURVEY MONUMENTS



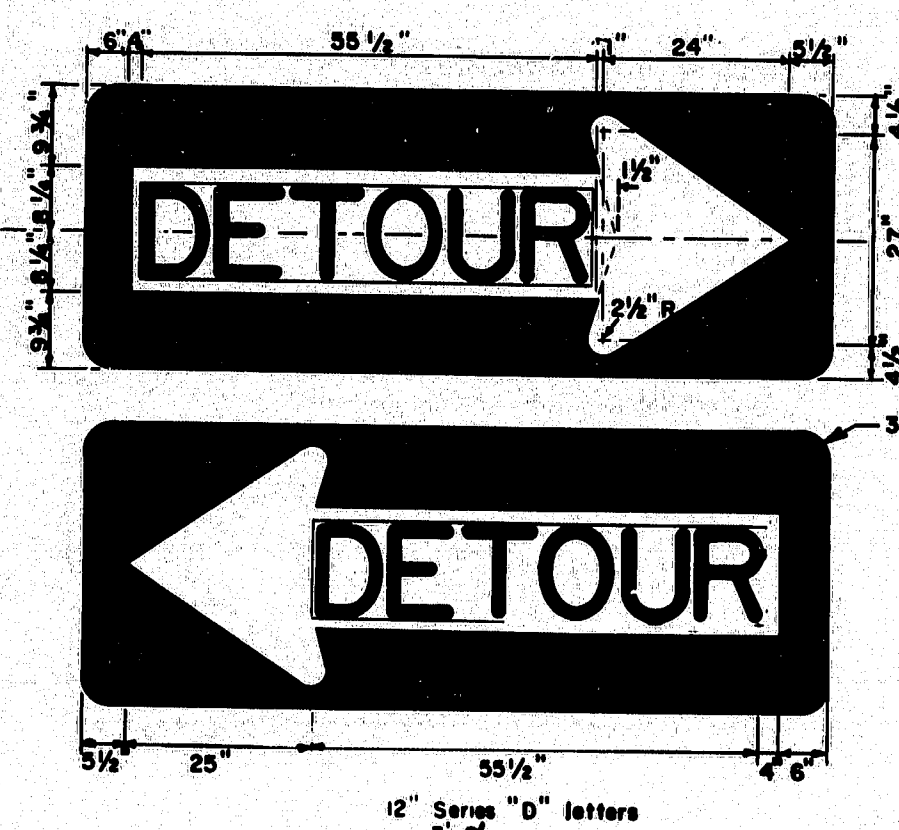
CONCRETE MONUMENT

MONUMENTS IN EARTH

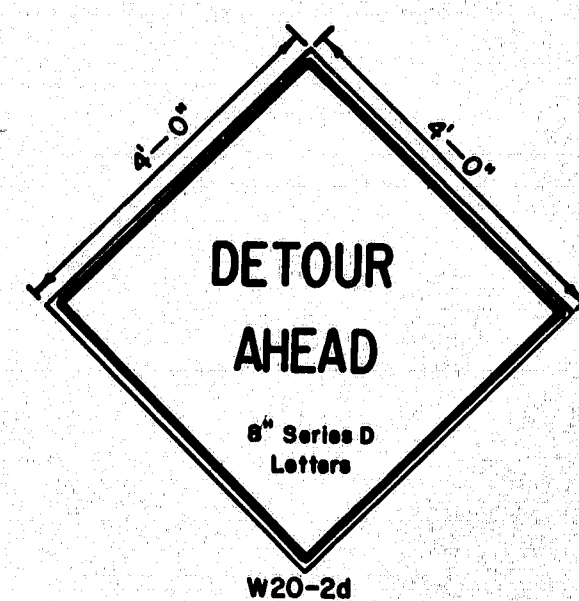
GRANITE MONUMENT



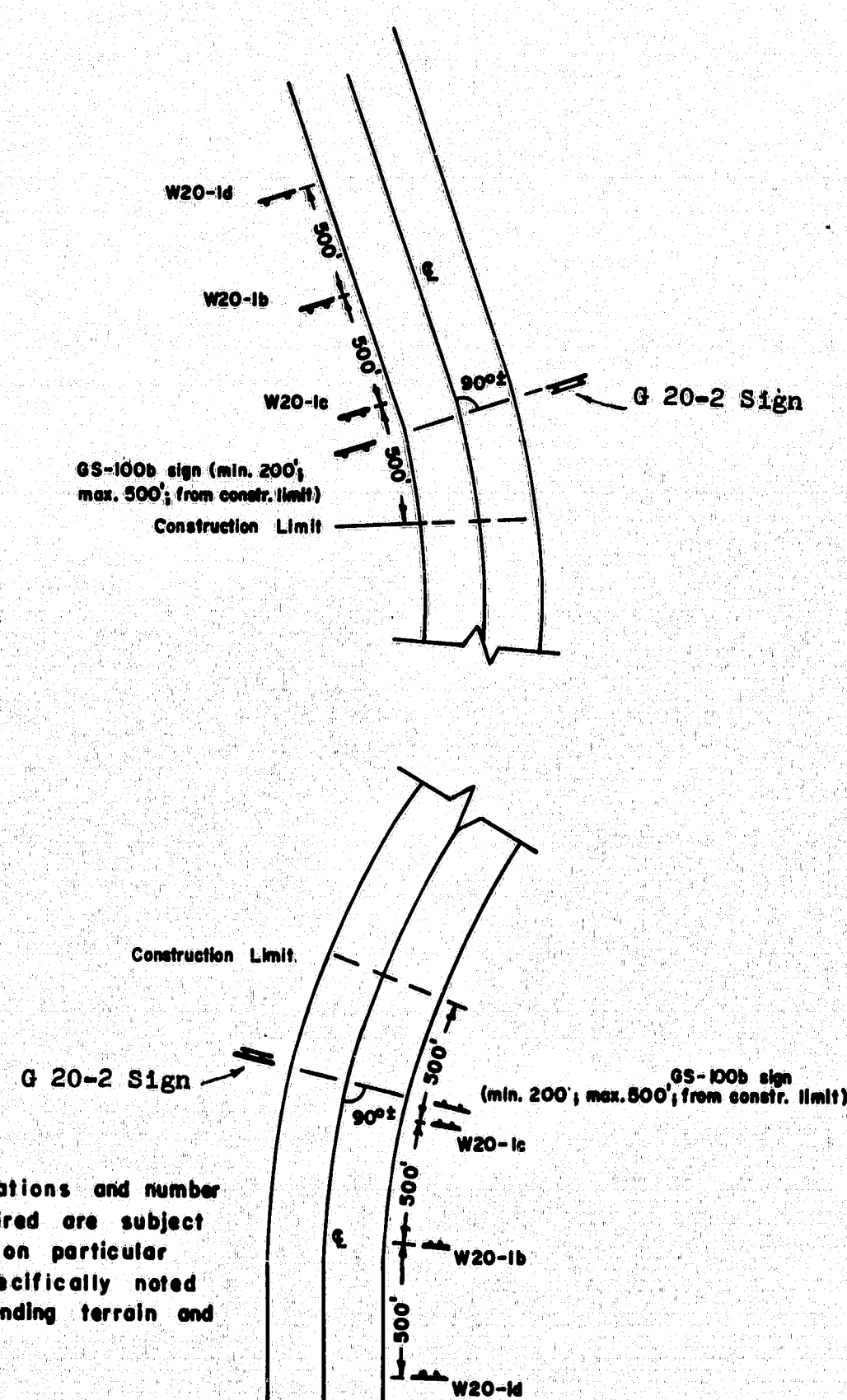
BRONZE PIN MARKERS



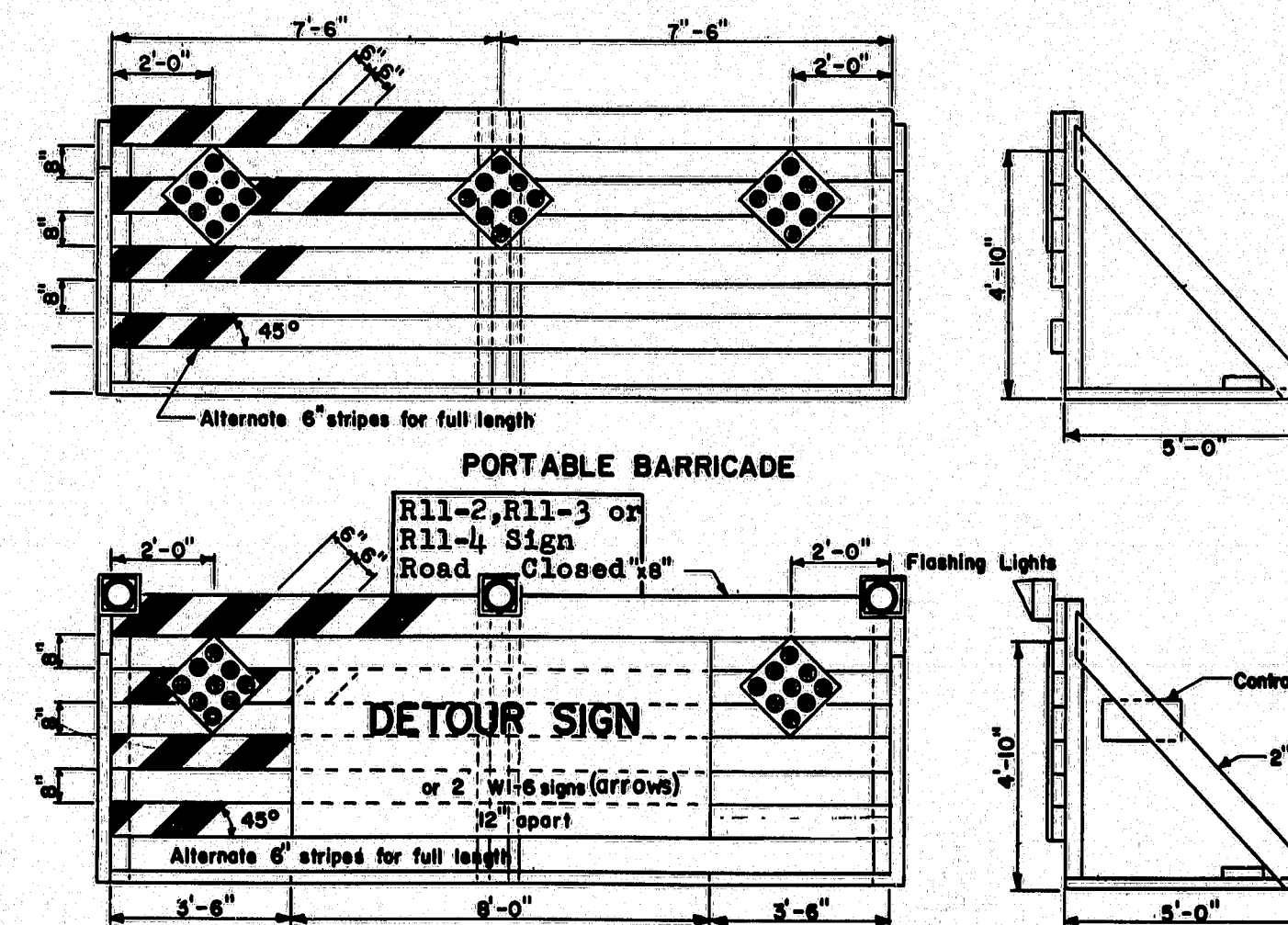
DETOUR SIGN  
M 4-(1)



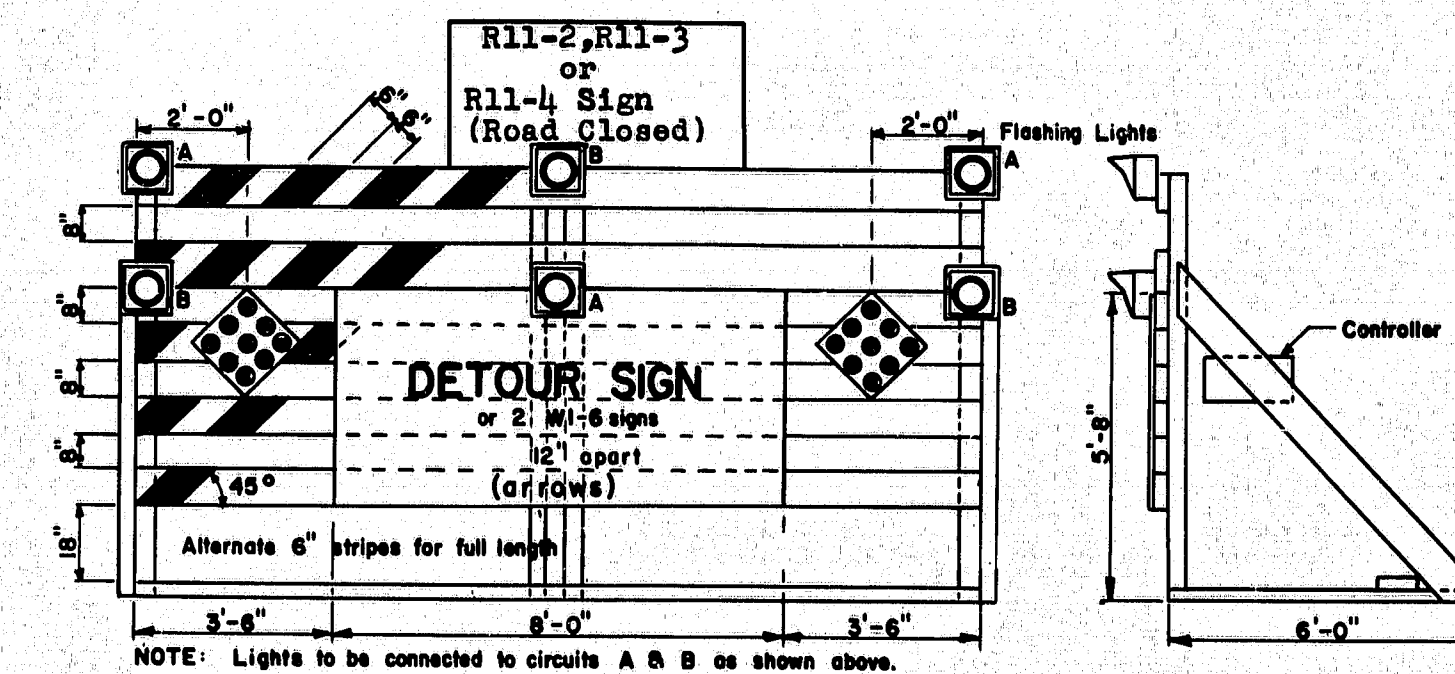
STANDARD SIGN LOCATIONS



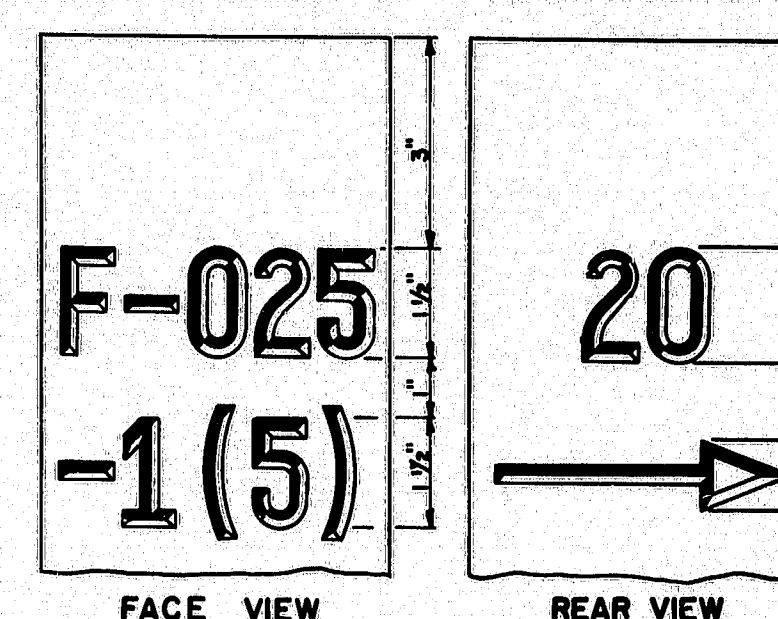
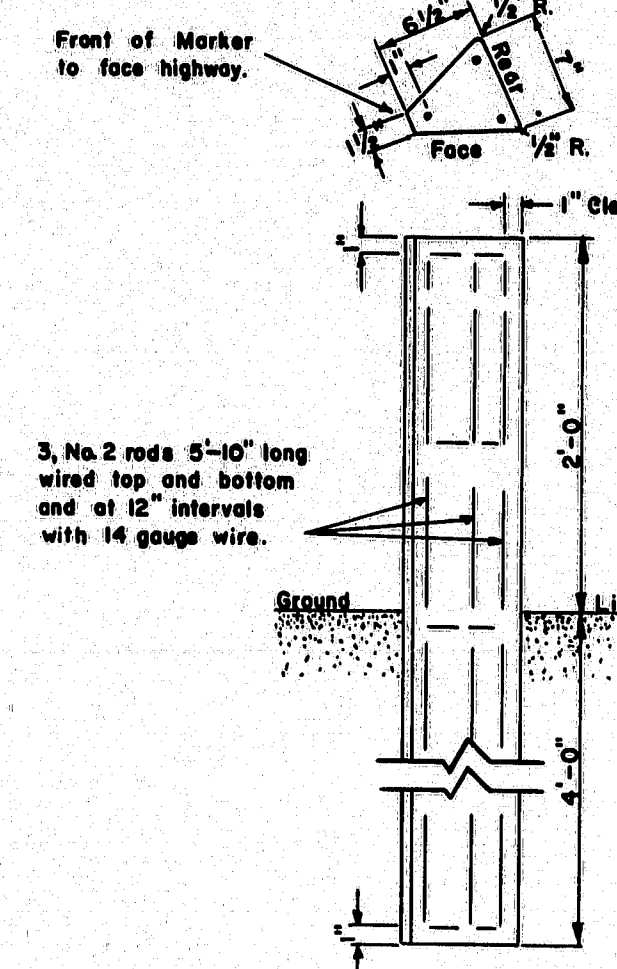
NOTE:  
Standard locations and number of signs required are subject to variation on particular projects if specifically noted due to surrounding terrain and use.



PORTABLE BARRICADE WITH FLASHING LIGHTS (NORMAL SIZE)



OVERSIZED PORTABLE BARRICADE WITH FLASHING LIGHTS  
BARRICADES



NOTES

- Distance from roadway shall be 30' minimum.
- When posts cannot be set on the exact station, the front of the post shall be pointed back from the top to 3" down, and the offset distance marked on rear with an arrow pointing in direction of beginning or end of project.
- All markings to be 1/4" deep and 1/4" wide.

PROJECT MARKERS

REVISION	
PLATE B	12-21-70
PLATE C	12-15-71
PLATE D	10-12-72
PLATE E	3-25-76
PLATE F	3-22-77

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
AUGUSTA, MAINE

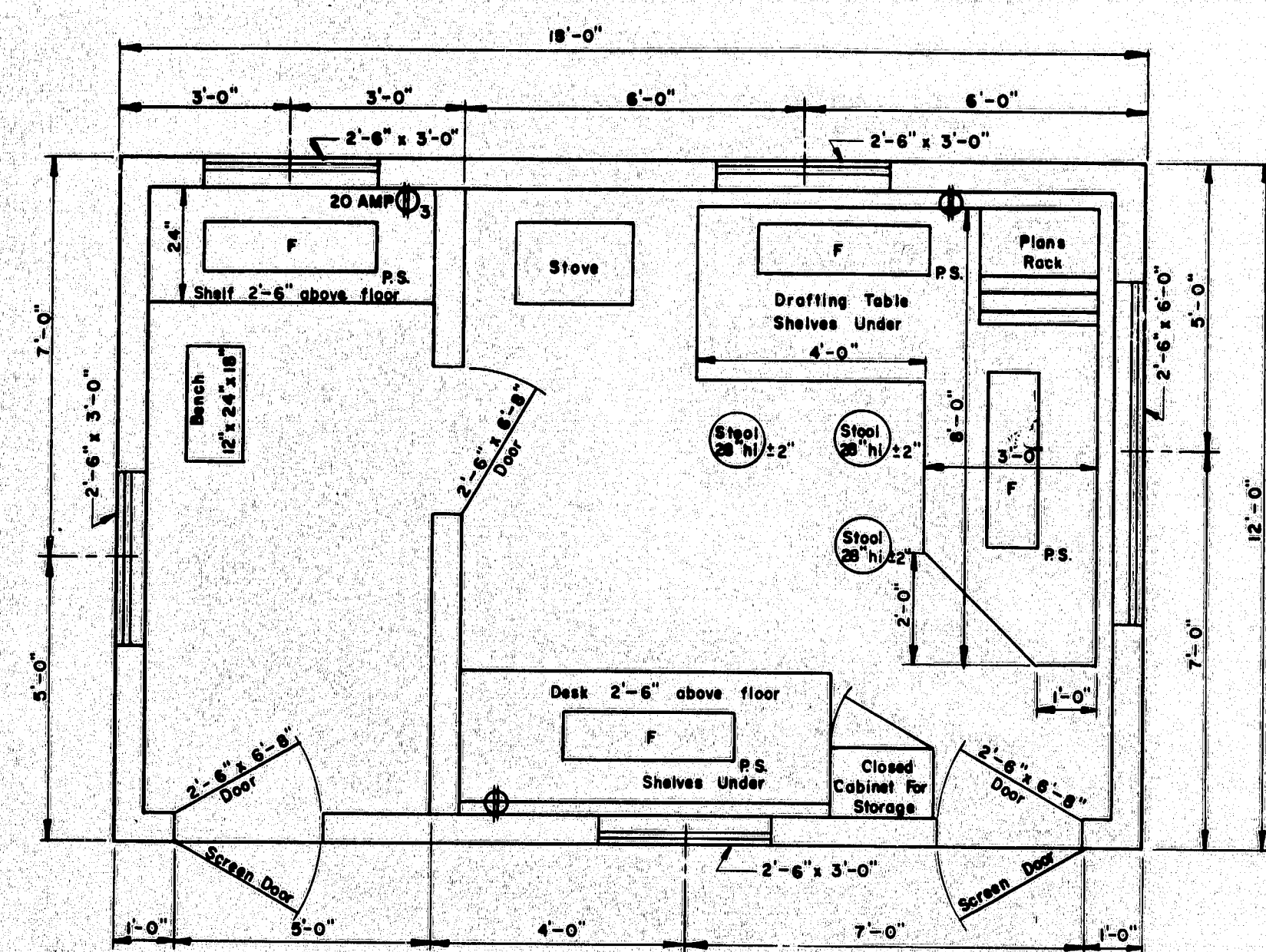
**BARRICADES  
WARNING SIGNS  
MONUMENTS  
PROJECT MARKERS**

AUG. 1969

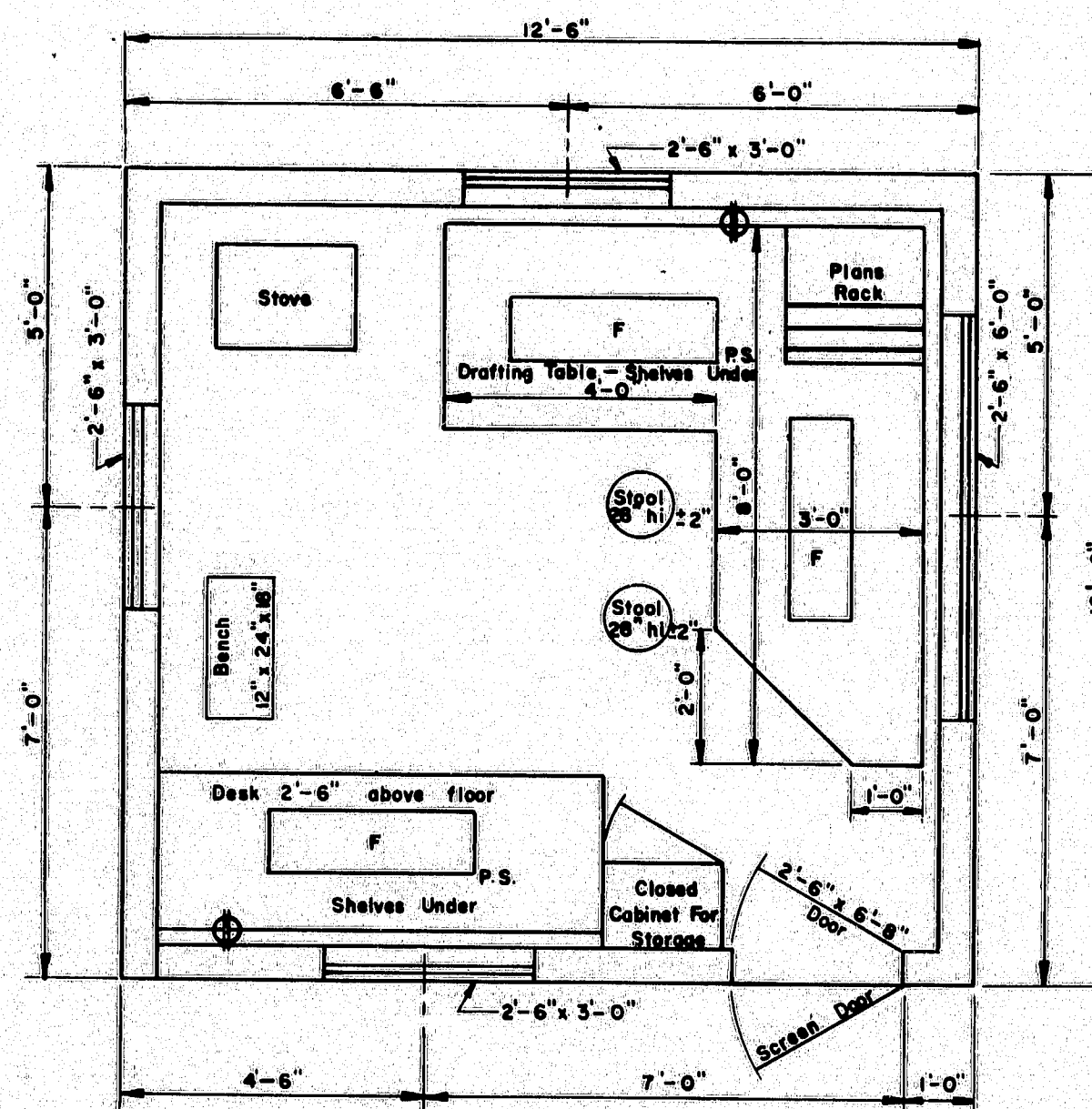
172-65



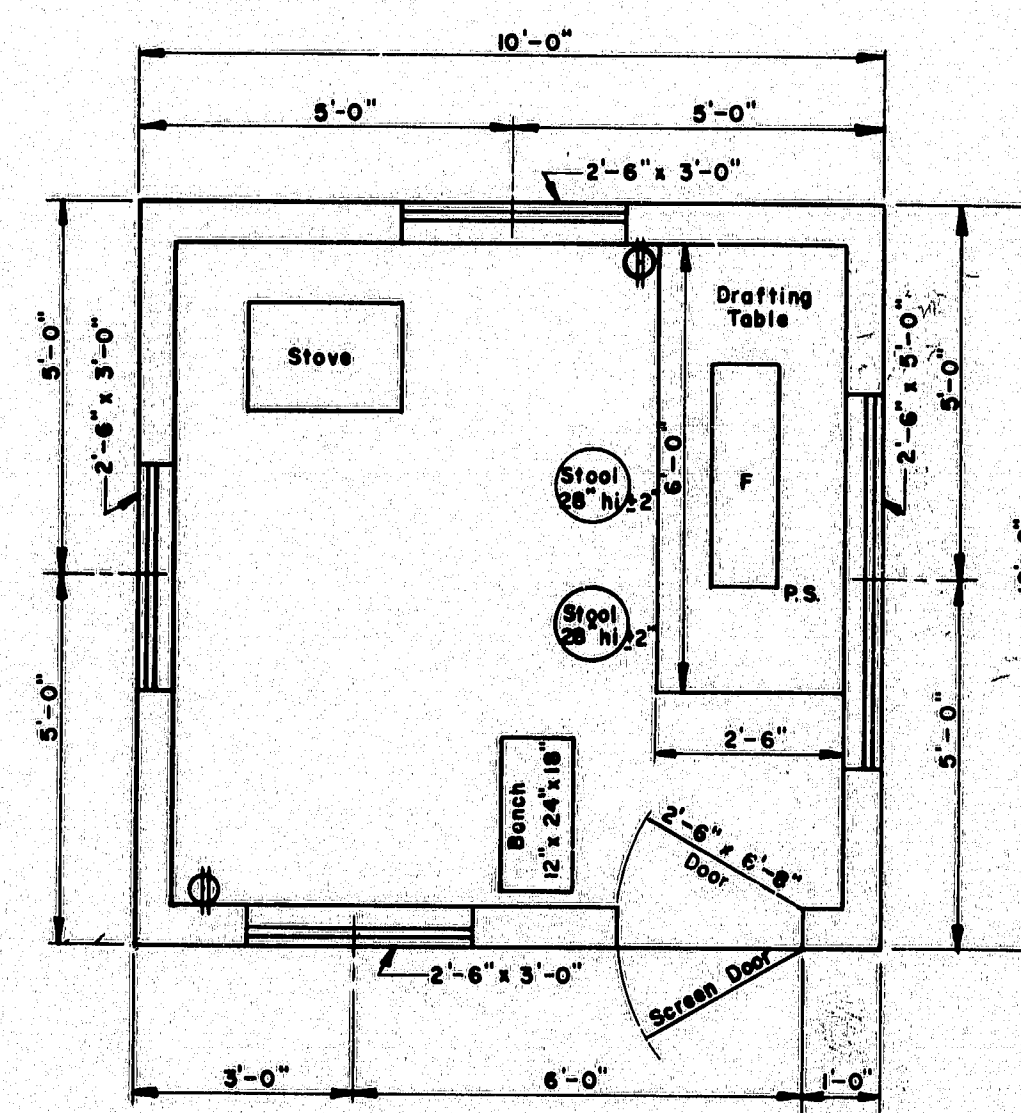
F.H.W.A. RES. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	5747	17	21



FLOOR PLAN  
TYPE "A"

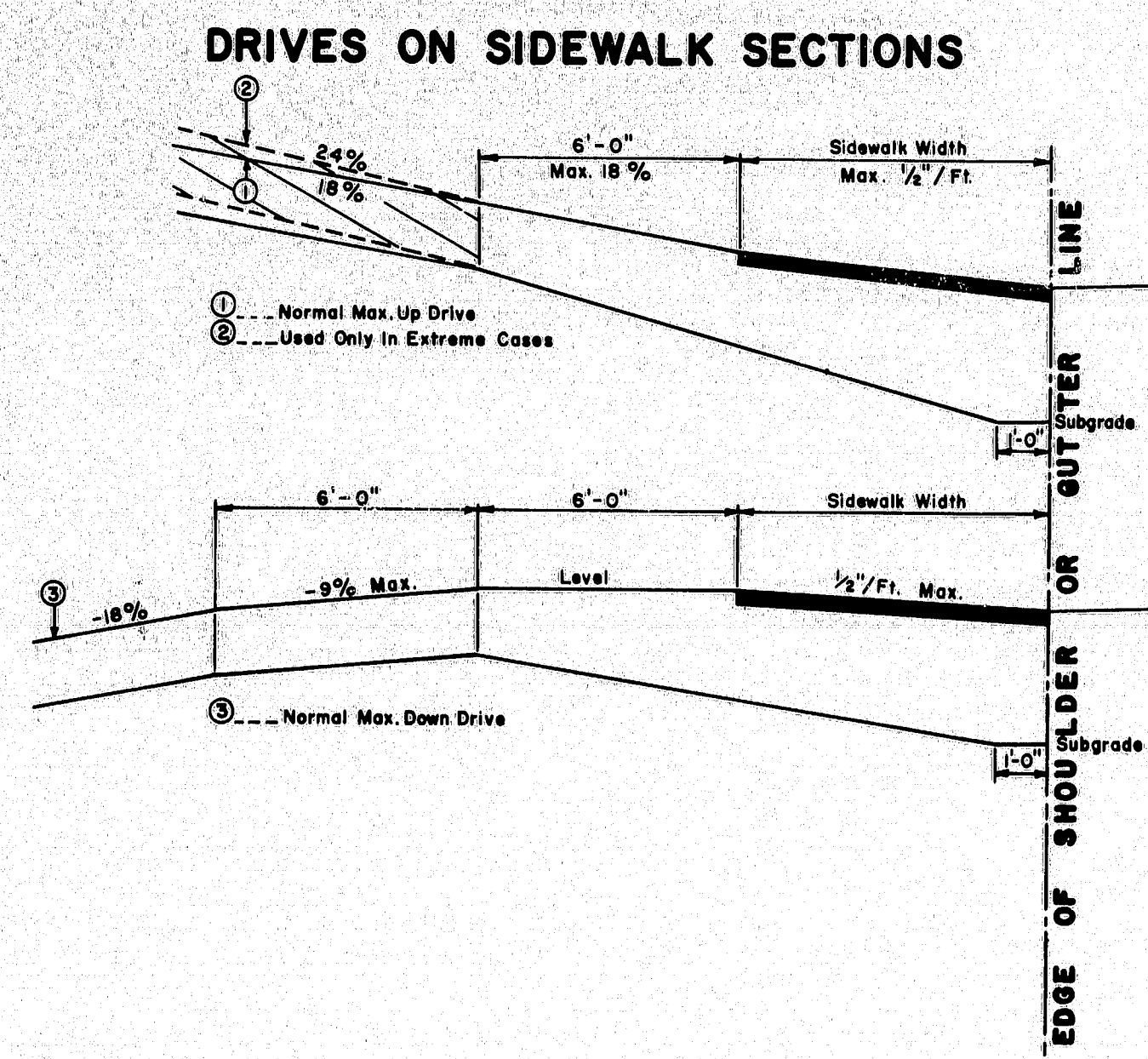


FLOOR PLAN  
TYPE "B"



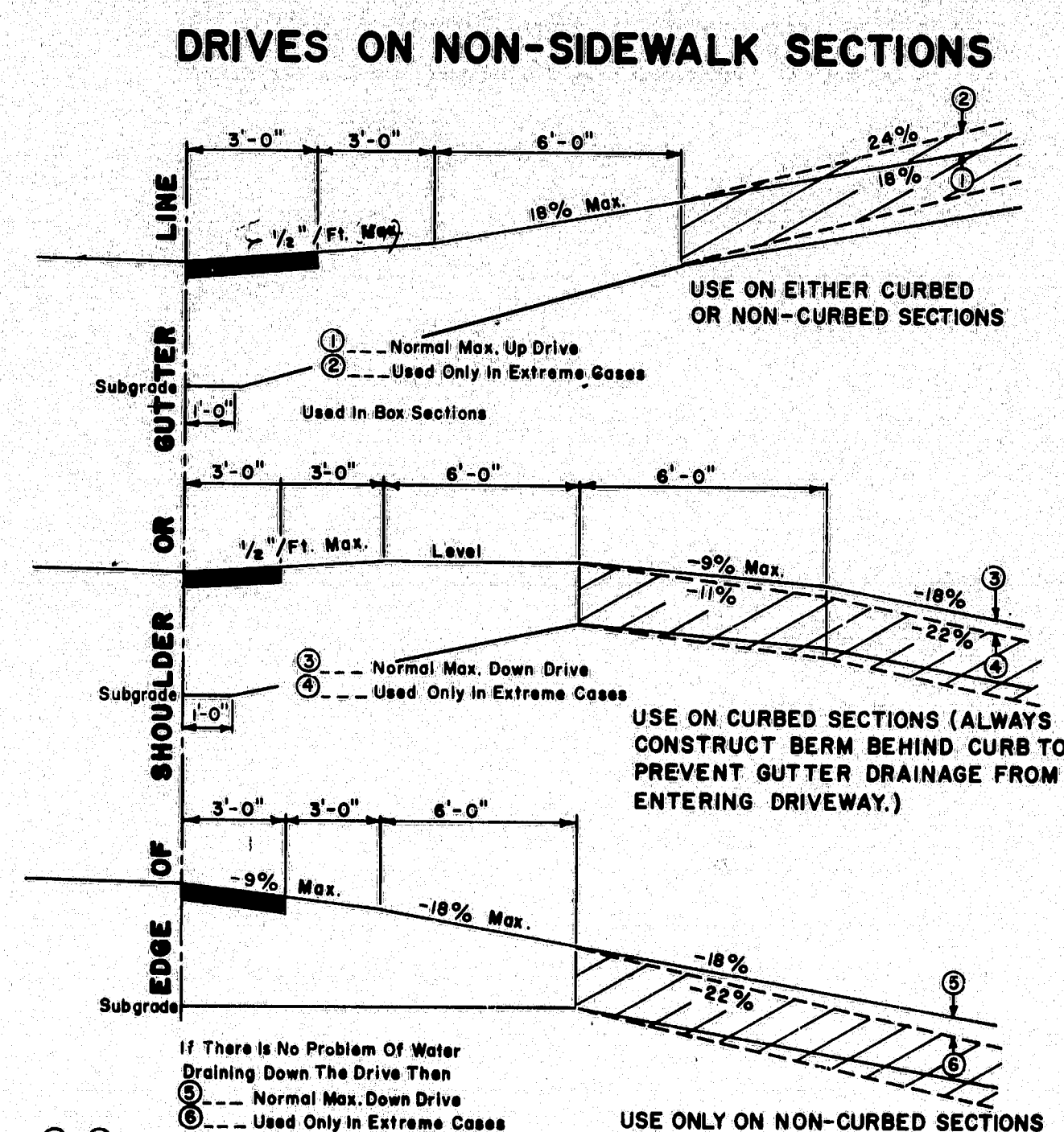
FLOOR PLAN  
TYPE "C"

- GENERAL NOTES**
- Drafting table shall be 3'-4" high at front edge and placed 2" from studs to allow prints to hang down behind table when in use.
  - Shelves under desk shall be constructed to receive 1 1/2" x 14" x 25" transfiles.
  - Windows shall be double hung.
  - Stovepipe shall not be in direct contact with combustible material; the pipe shall be surrounded with at least 6" of fireproof material.
  - Continuous 110 volt 60 cycle electric service shall be supplied.
  - The engineer may rearrange the items shown on the plan views during construction of the field office.
  - FURNISHINGS TO BE SUPPLIED:**
    - 2 Straight back chairs for types A and B
    - 1 Bench for types A, B & C
    - 2 Stools for type A
    - 2 Stools for types B & C
  - SYMBOLS:**
    - F Fluorescent lights (2 light, rapid start 48" strips and 40 watt bulbs.)
    - P.S. Pull switch
    - ⊕ Duplex wall outlet—15 amp unless otherwise noted.
    - ⊕ Triplex Wall Outlet
  - For the Type "A" Field Office one clean 55 gal. drum shall be supplied, installed on a suitable rack and equipped with a spigot suitable for drawing off water. The drum shall be furnished with water at all times.



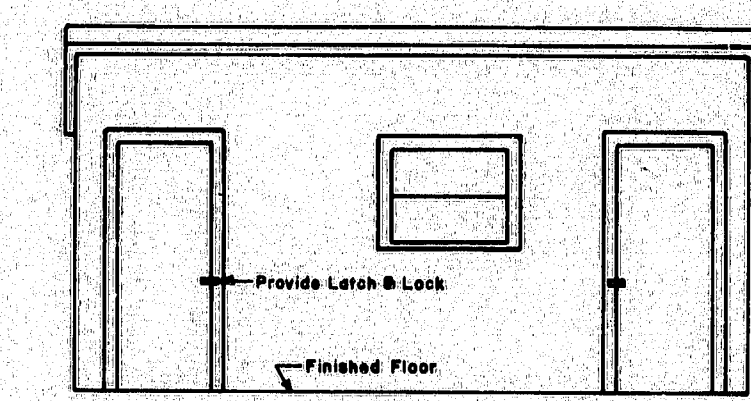
- GENERAL NOTES**
- The sidewalk width shall be paved in all cases.
  - All residential or commercial drives 10% and over shall be paved.

- NOTES ON MAXIMUM DRIVEWAY PROFILES**
- These profiles are a guide for the majority of cases, but should be field checked when the main line grade is steep (4% to 6% or greater) or the angle of approach to the drive is unusual.
  - Generally the majority of drives on a project will be built with flatter profiles than these maximum cases.
  - When grading drives which are flatter than the maximum profiles the following rule of thumb should be used, do not exceed a grade % change of more than 9% in a 6 foot increment of driveway length. This applies to both up and down profiles.

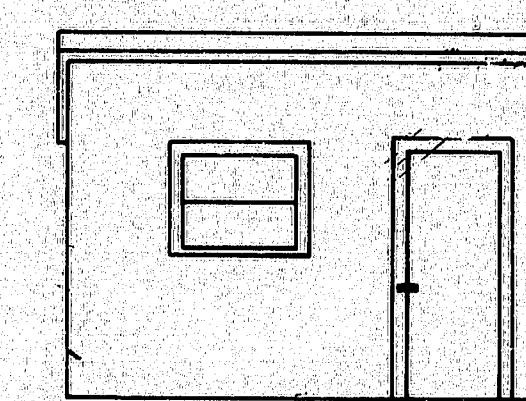


- GENERAL NOTES**
- The first 'S' shown as pavement shall be paved only when abutting a paved area.
  - All residential or commercial drives 10% and over shall be paved.

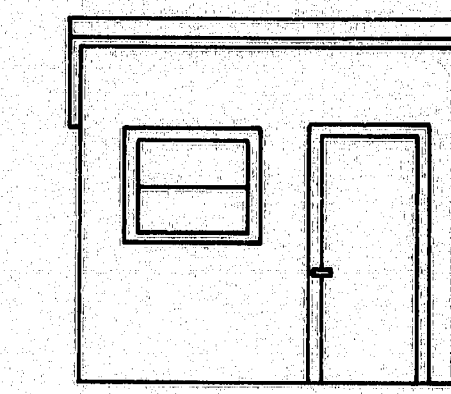
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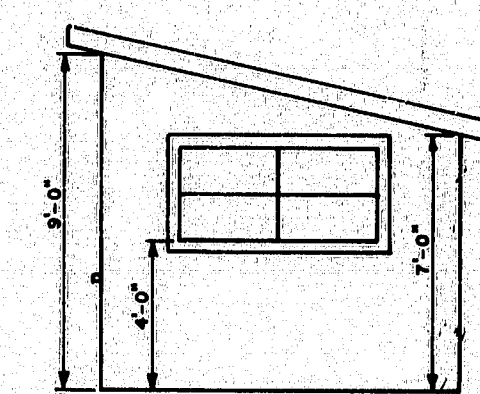
FRONT ELEVATION  
TYPE "A"



FRONT ELEVATION  
TYPE "B"



FRONT ELEVATION  
TYPE "C"



SIDE ELEVATION  
TYPES "A", "B" & "C"

REVISIONS		
PLATE	D'E	3-16-73

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
AUGUSTA, MAINE

**STANDARD DETAILS**

DRIVEWAY DETAILS  
FIELD OFFICES  
TESTING LABORATORY

AUG. 1969

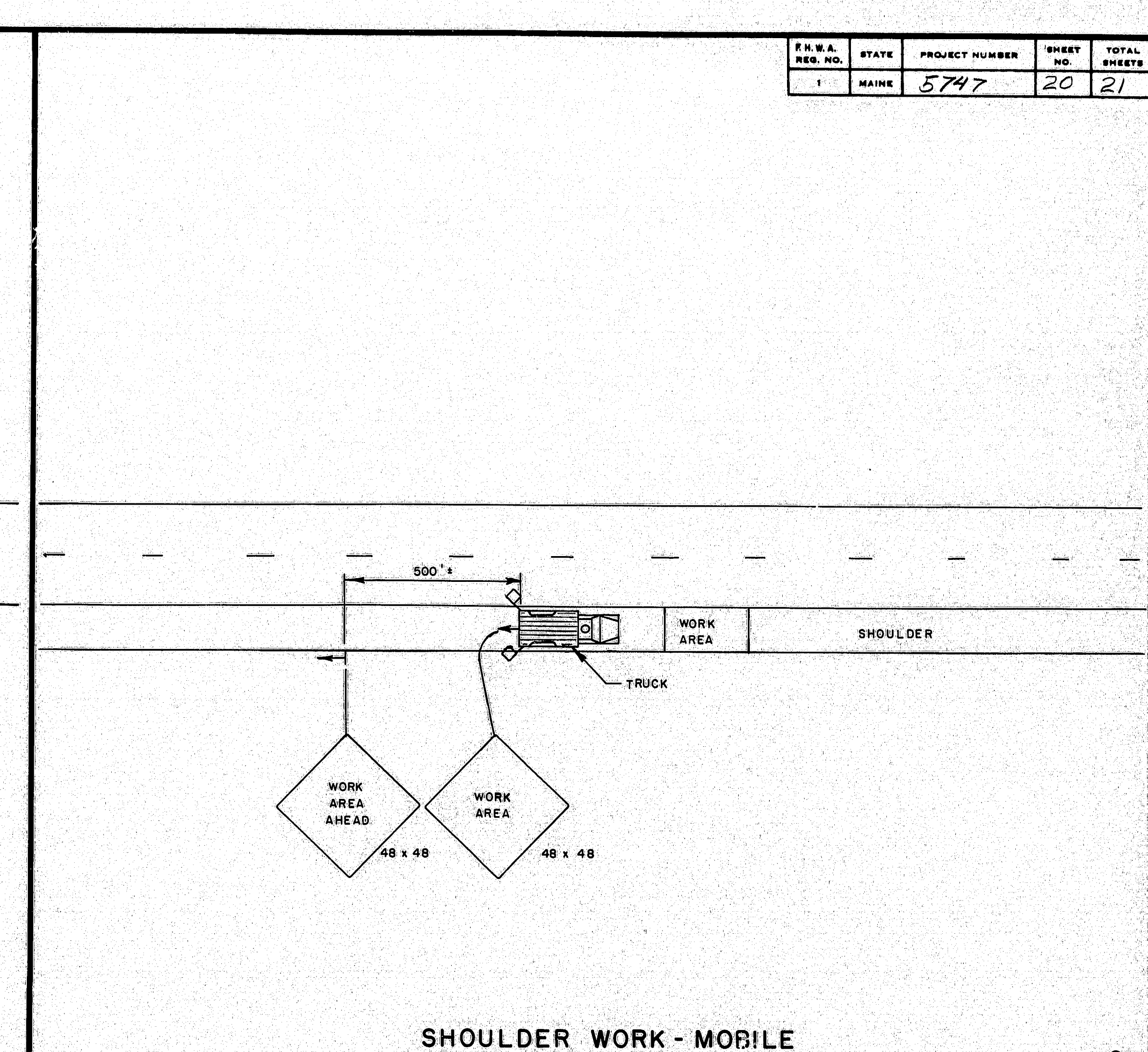
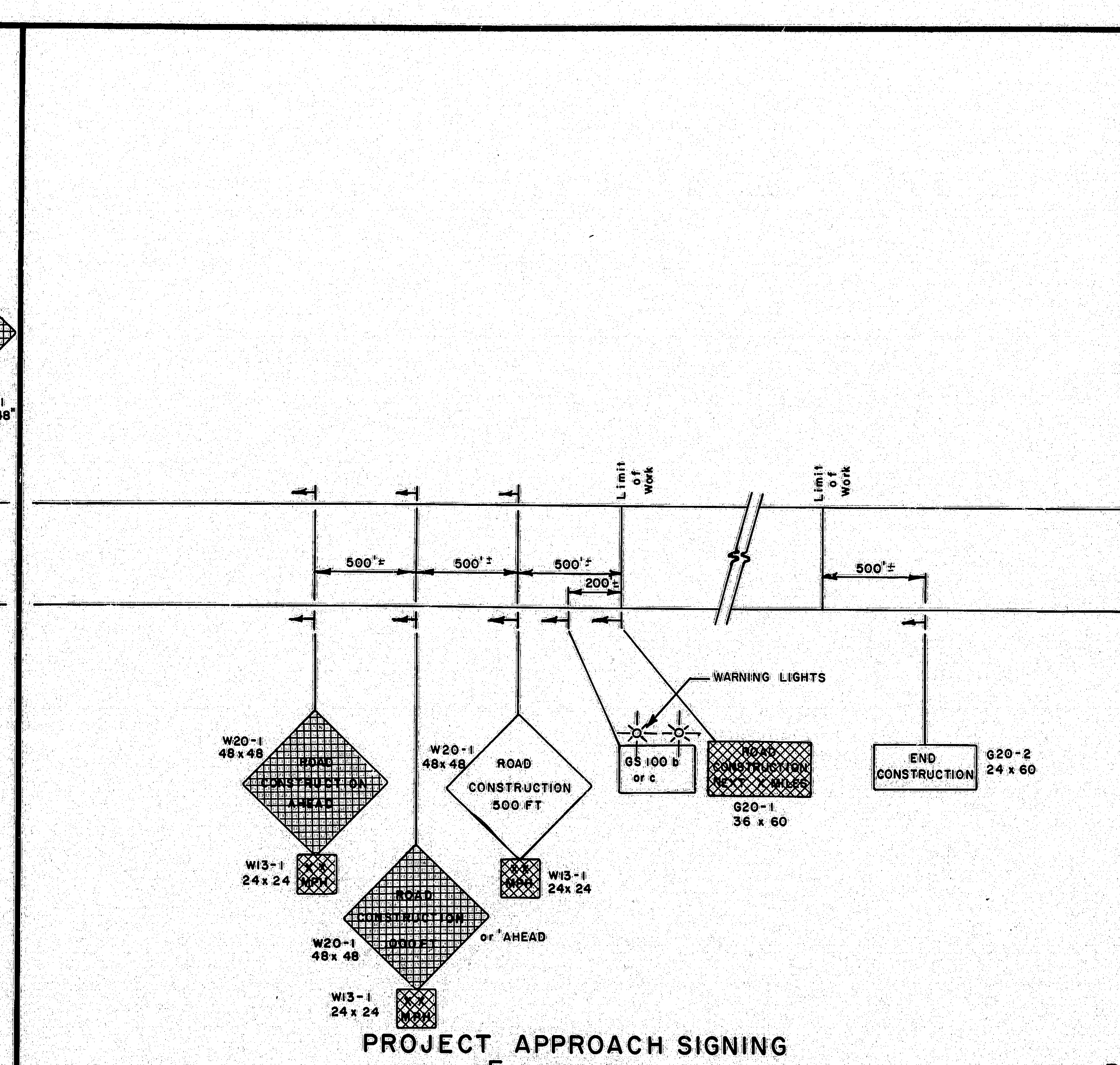
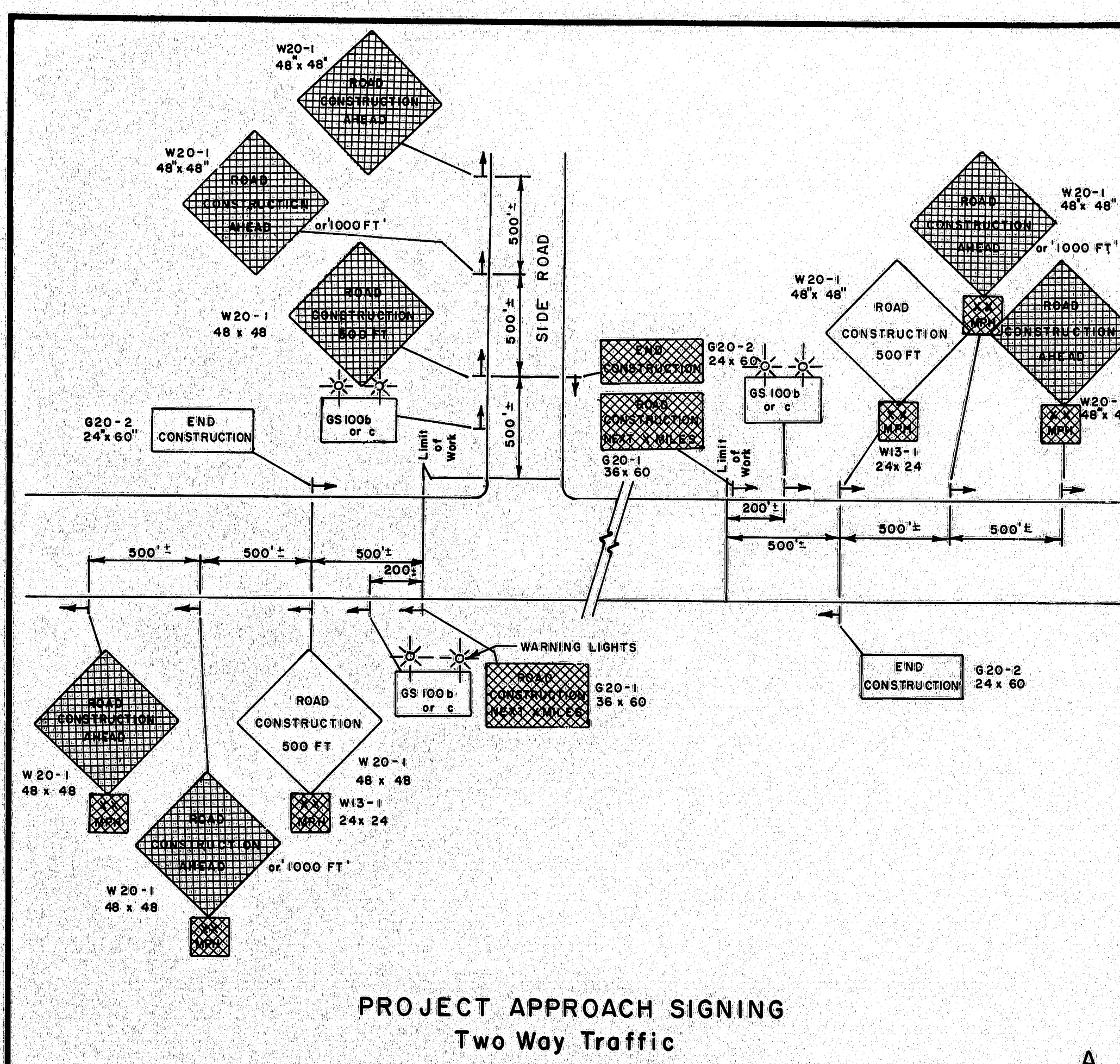
172-66



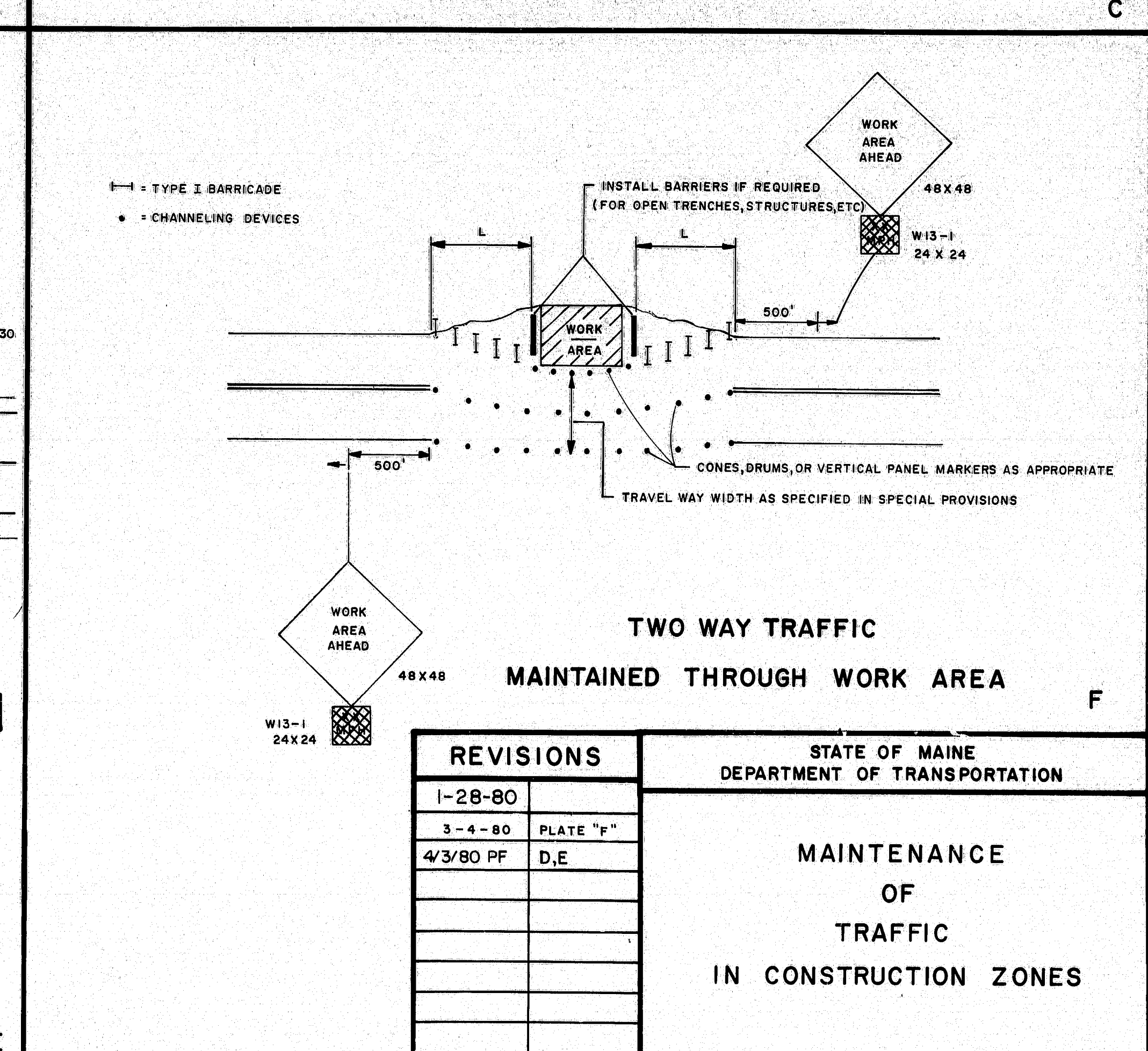
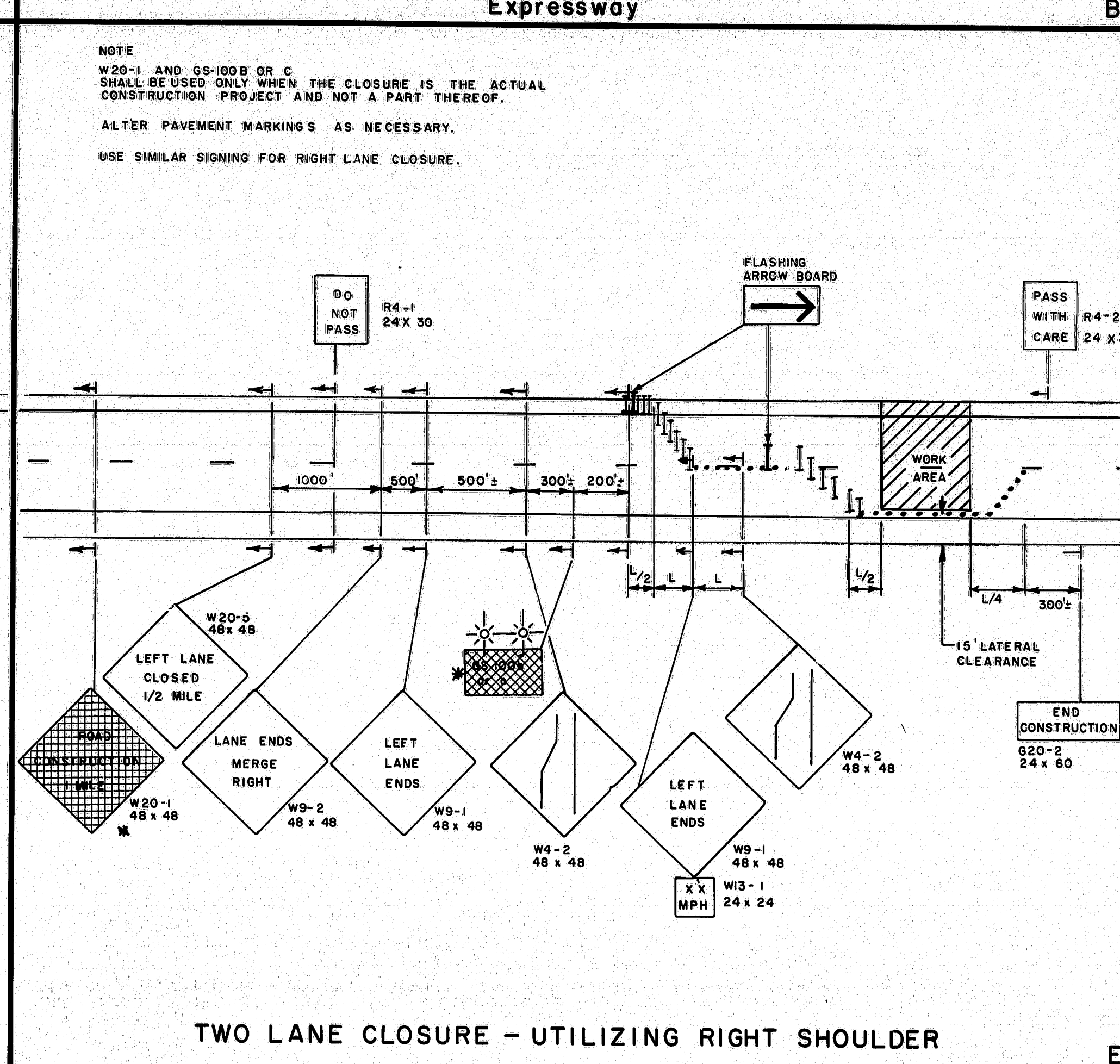
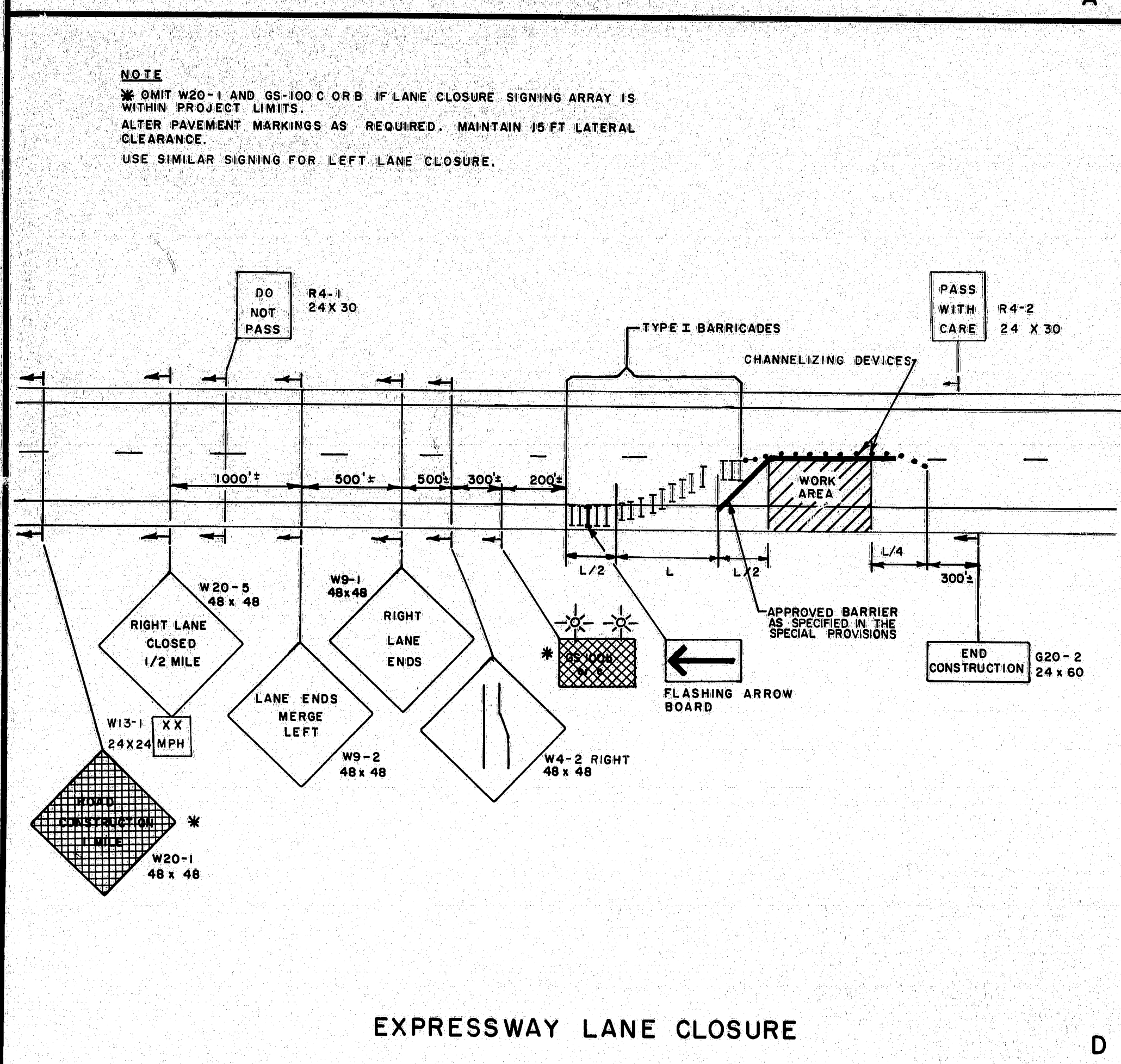




F.R.W.A. REV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	5747	20	21



NOTE  
 \* OMIT W20-1 AND GS-100 C OR B IF LANE CLOSURE SIGNING ARRAY IS WITHIN PROJECT LIMITS.  
 ALTER PAVEMENT MARKINGS AS REQUIRED. MAINTAIN 15 FT LATERAL CLEARANCE.  
 USE SIMILAR SIGNING FOR LEFT LANE CLOSURE.



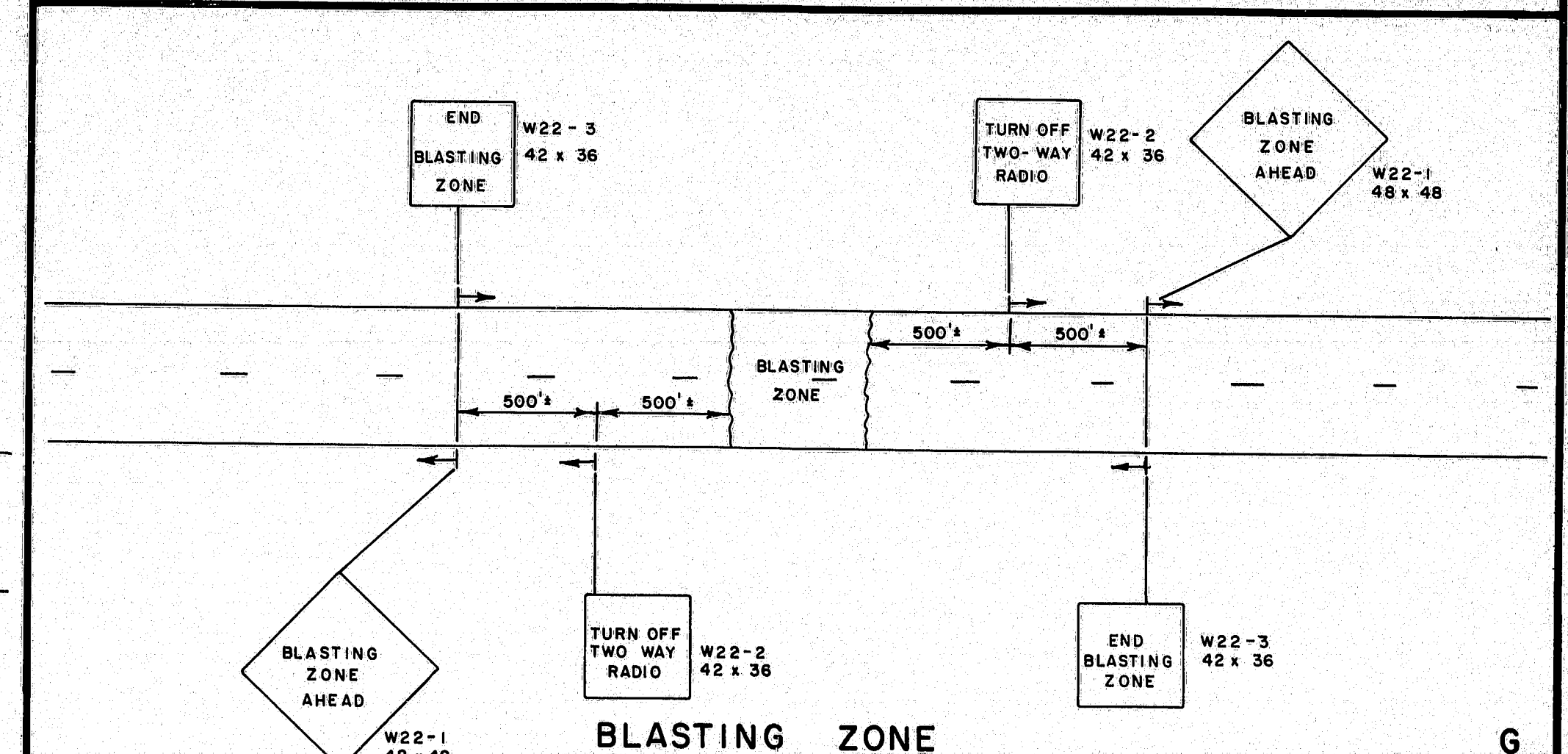
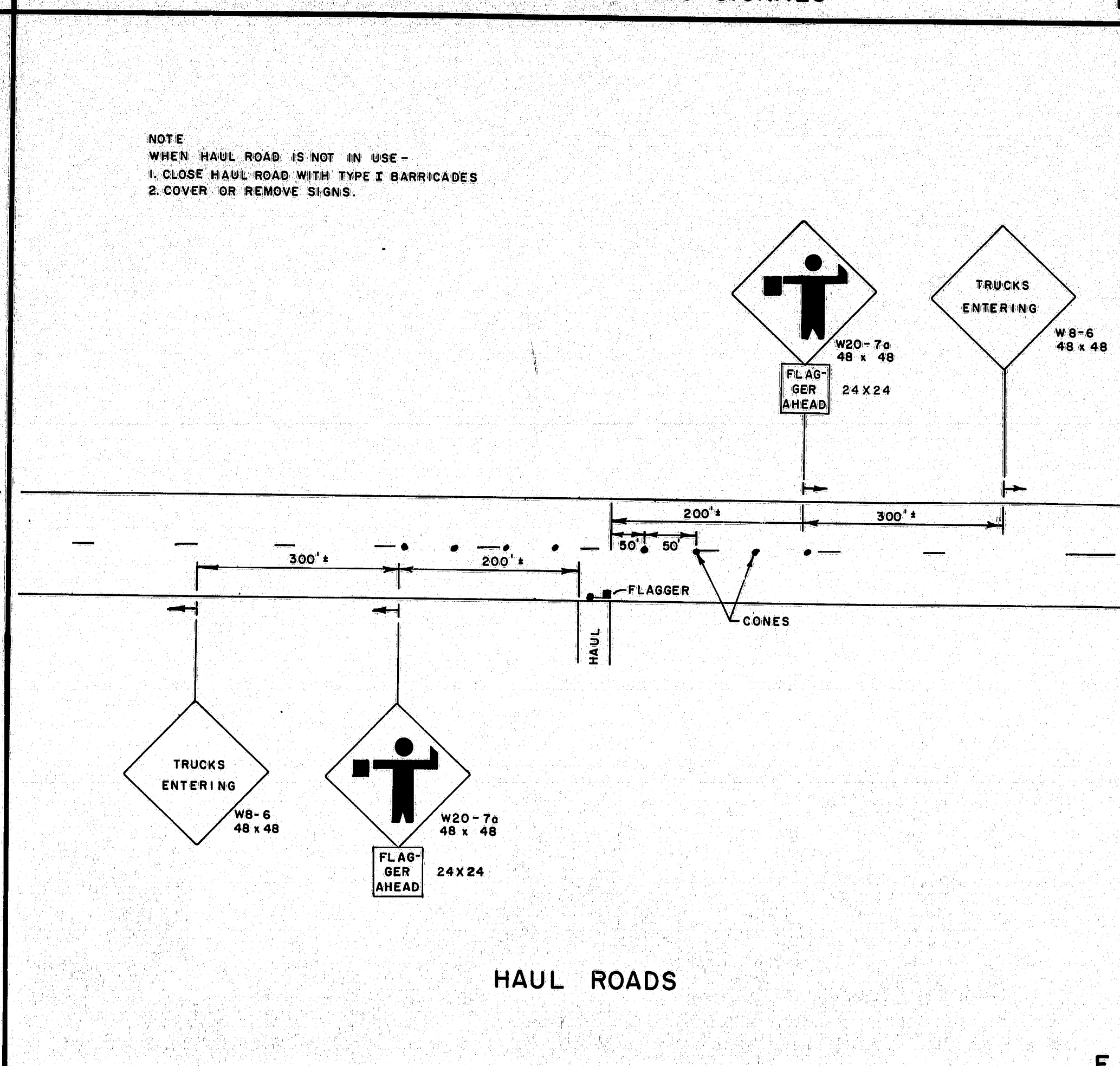
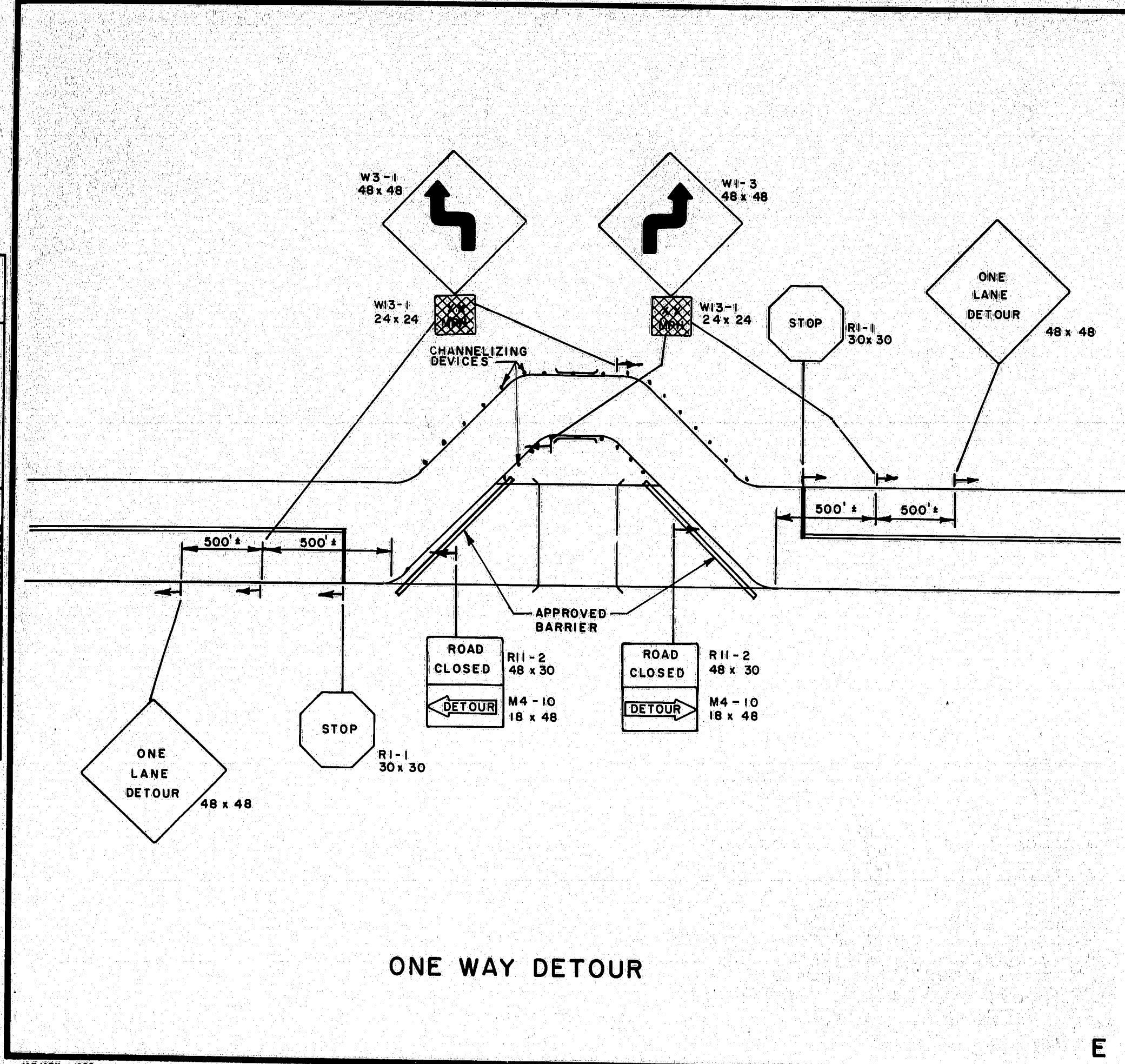
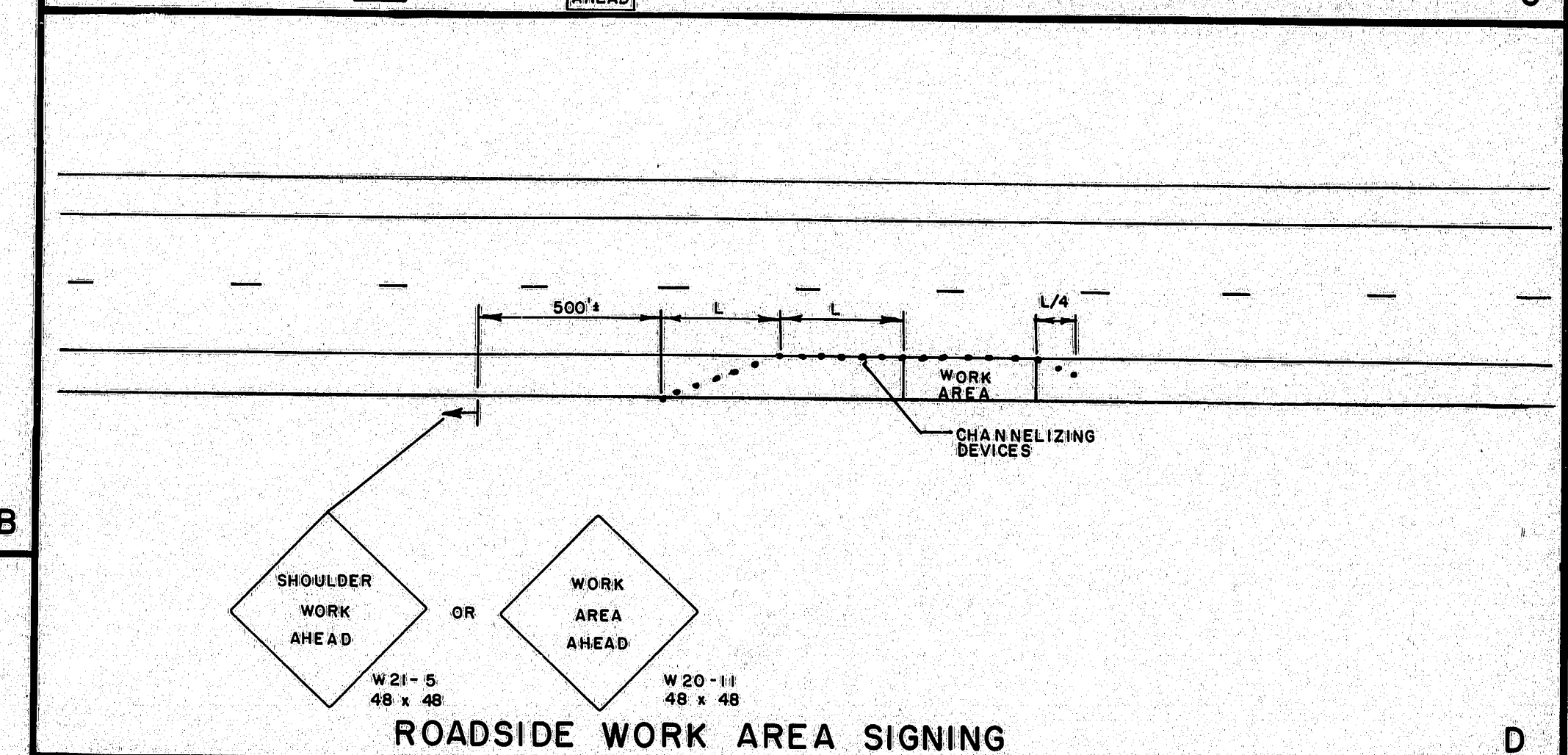
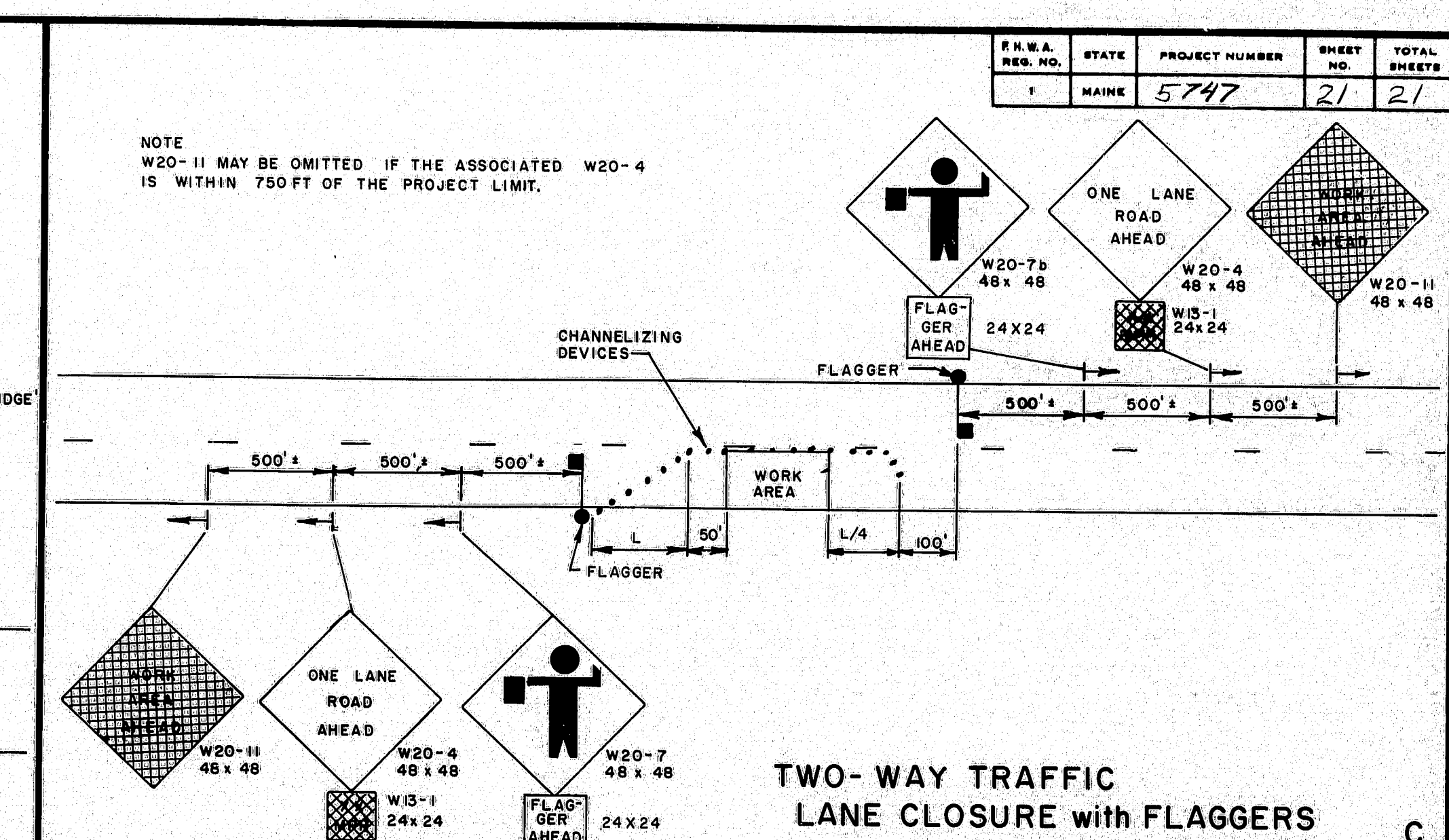
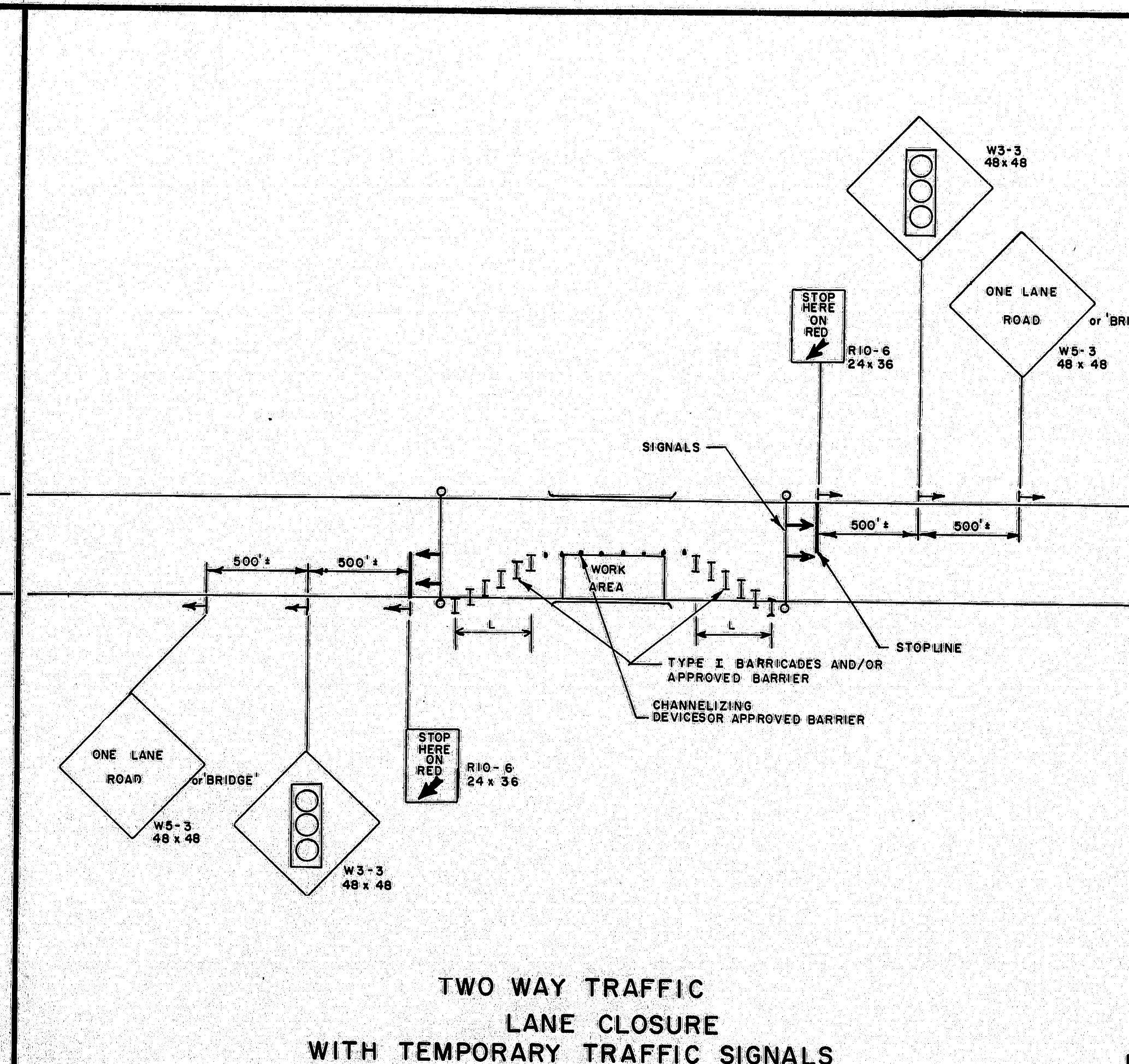
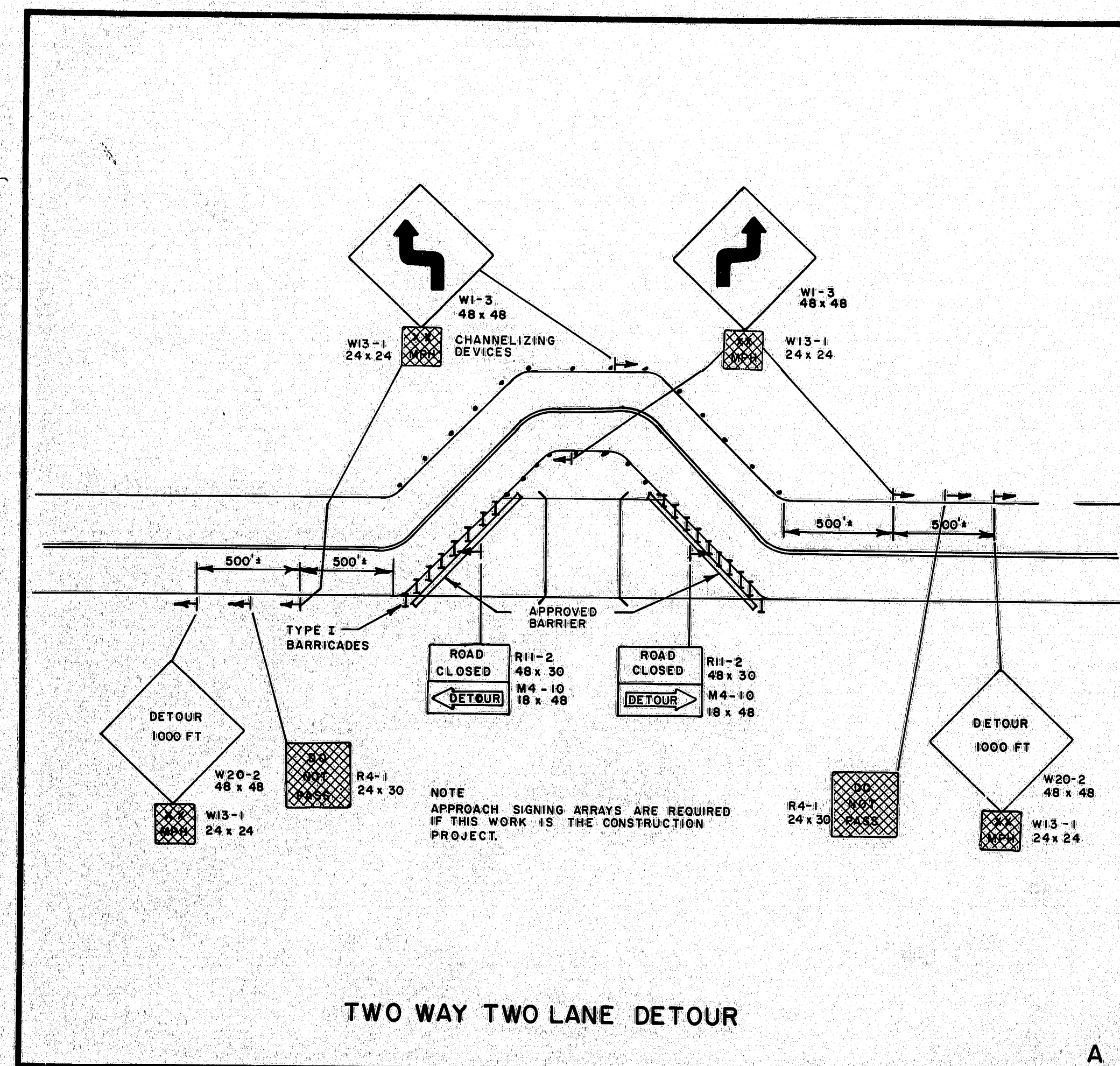
PROJECT DESIGN ENGINEER	DATE
BY	
DESIGN - DETAILED	
CHECKED	
REVISIONS	
FIELD CHANGES	
PLANS	

REVISIONS	
1-28-80	
3-4-80	PLATE "F"
4/3/80 PF	D,E

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
MAINTENANCE OF TRAFFIC IN CONSTRUCTION ZONES



PROJECT DESIGN ENGINEER	DATE
PLANS	
DESIGN - DETAIL	
CHECKED	
REVISIONS	
FIELD CHANGES	



REVISIONS			STATE OF MAINE DEPARTMENT OF TRANSPORTATION	
4/3/80	PF	B,C,D	MAINTENANCE OF TRAFFIC IN CONSTRUCTION ZONES	
SHEET 3 OF 3			AUGUSTA, MAINE	

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