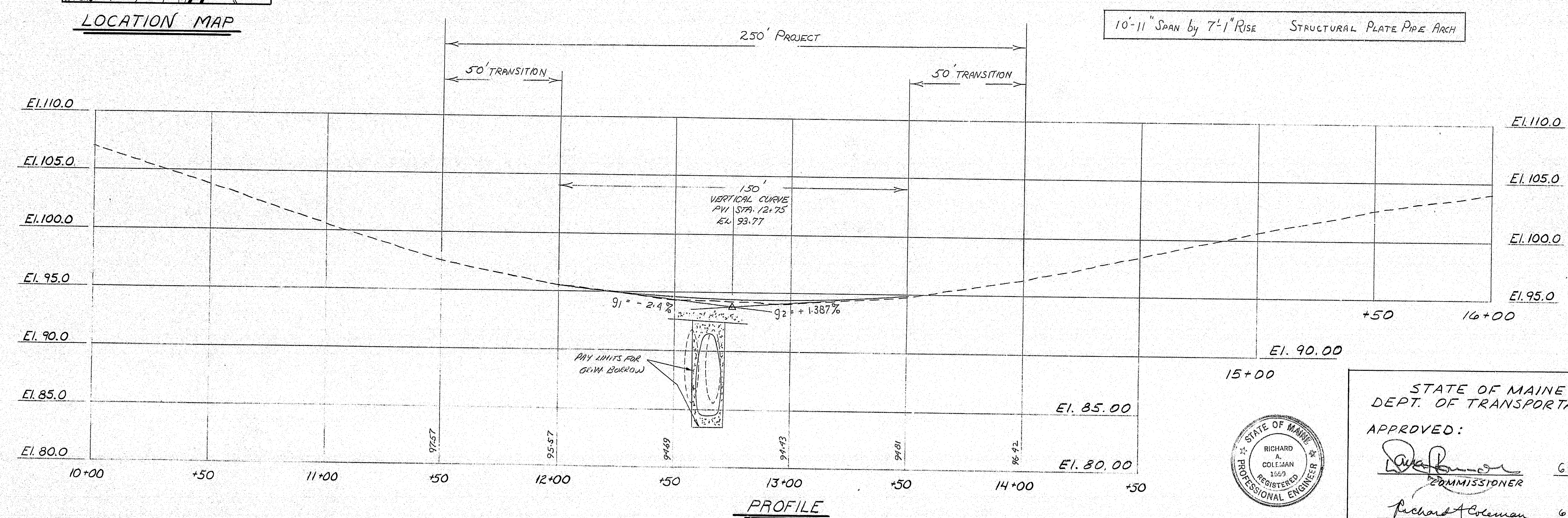
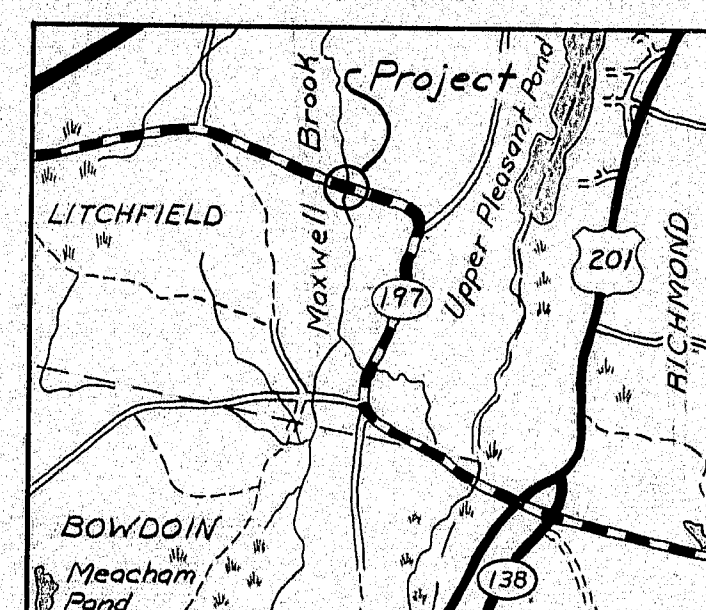
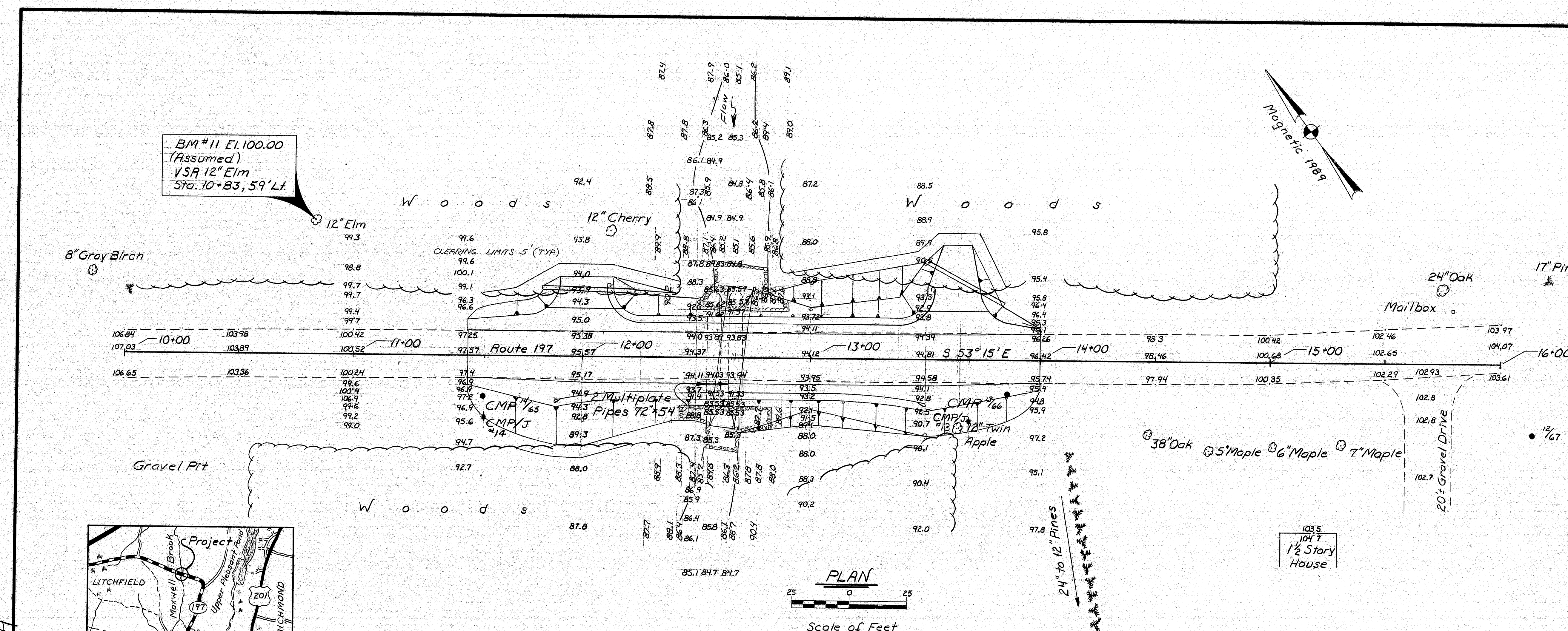


P.I.N. 004207.00

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
MAINE	RS-1545(2)	1	10



SPECIFICATIONS
 DESIGN: LOAD FACTOR DESIGN FOR
 AASHTO STANDARD SPECIFICATIONS FOR
 HIGHWAY BRIDGES 1989 & 1990 INTERIMS
 CONTRACT: STATE OF MAINE, DEPARTMENT
 OF TRANSPORTATION, STANDARD SPECIFICATIONS,
 HIGHWAYS AND BRIDGES, REVISION OF OCT. 1990

DESIGN LOADS
 LIVE LOAD: HS 25

TRAFFIC DATA
 AADT 1989: 770
 AADT 2010: 1530
 DESIGN HOUR VOLUME: 135
 PERCENT HEAVY TRUCKS: 8.3%
 DIRECTIONAL DISTRIBUTION: 60
 18 KMP EQUIVALENT: 2.5

HYDROLOGIC DATA
 DRAINAGE AREA: 2.39 SQ. MI.
 DESIGN DISCHARGE: 380 CFS
 HEADWATER: 9' 10" EL.
 VELOCITY: 18.2 FPS
 CHECK DISCHARGE: 450 CFS
 HEADWATER: 9' 10" EL.
 VELOCITY: 19.9 FPS

Plans As Built
 12-31-91 Richard W. Lantz
 Resident

104-171

A hydrologic report of the bridge site is available for the Contractor's reference at the Bridge Design Office in Augusta. The hydrologic report is based on the interpretation by the Department of Information obtained for the subject site and no assurance is given that the information or the conclusions of the report will be representative of actual conditions at the time of construction.

BOOK NO. 11184
 BRIDGE NO. 2524

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION

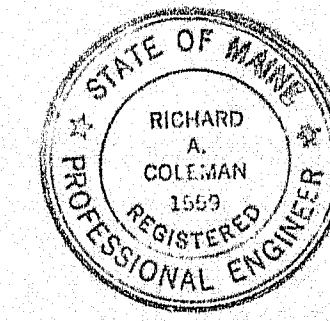
MAXWELL BRIDGE
 OVER
 MAXWELL BROOK
 IN THE TOWN OF
 LITCHFIELD
 HENNEBEC COUNTY
 SURVEY

SHEET 1 OF 10 AUGUSTA, MAINE

STATE OF MAINE
 DEPT. OF TRANSPORTATION

APPROVED:

Richard A. Coleman
 COMMISSIONER
 DATE 6-13-91
 Richard A. Coleman
 CHIEF ENGINEER
 DATE 6-13-91



PROJECT DESIGN ENGINEER	DATE
BY: MWP	5/22/90
CHECKED: BAS	3/91
REVISIONS	
FIELD CHANGES	

45710-1

PROJECT DESIGN ENGINEER	DATE	5/9/
DESIGN-DETAILED	BY	D. Derron
CHECKED		
REVISIONS		
FIELD CHANGES		
PLANS		

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.19	Removing Existing Bridge	1	L. S.
203.20	Common Excavation	750	C. Y.
203.24	Common Borrow	10	C. Y.
203.25	Granular Borrow	135	C. Y.
206.061	Structural Earth Excavation, Drainage & Minor Structures, Below Grade	10	C. Y.
304.10	Aggregate Subbase Course, Gravel	725	C. Y.
403.07	Hot Bituminous Pavement, Grading "B"	95	Ton
403.08	Hot Bituminous Pavement, Grading "C"	75	Ton
509.12	131-Inch Span x 85-Inch Rise Steel Struc. Plate Pipe Arch (16,700 Lb.)	1	L. S.
511.0701	Cofferdam	1	L. S.
603.16	15-Inch Culvert Pipe Option I	80	L. F.
606.35	Guard Rail Delineator Post	4	Each
606.55	Guard Rail Type 3 - Single Rail	225	L. F.
606.77	Breakaway Cable Terminal	4	Each
610.08	Plain Riprap	100	C. Y.
614.18	Applying Fertilizer to Existing Grassed Areas	30	Lb.
615.07	Loam	32	C. Y.
616.08	Sodding	14	S. Y.
618.14	Seeding, Method No. 2	8	Unit
618.16	Crown Vetch Seed	1	Lb.
618.20	Annual Rye Grass Seed	1	Lb.
618.25	Applied Water	1	M. G.
619.12	Mulch	10	Unit
627.61	4-Inch Solid White Pavement Marking Line	500	L. F.
627.64	4-Inch Broken Yellow Pavement Marking Line	250	L. F.
629.05	Hand Labor, Straight Time	2	M. H.
631.12	All Purpose Excavator (including operator)	1	Hour
631.172	Truck - Large (including operator)	2	Hour
637.07	Sprinkling	10	M. G.
637.08	Calcium Chloride	1	Ton
639.19	Field Office Type "B"	1	Each
652.31	Type I Barricade	10	Each
652.312	Type III Barricade	2	Each
652.33	Drum	10	Each
652.34	Cone	10	Each
652.35	Construction Signs	500	S. F.
652.361	Maintenance of Traffic Control Devices (30 C. D.)	1	L. S.
652.38	Flagger	310	M. H.
656.50	Baled Hay, In Place	10	Each
656.51	Sandbag, In Place	10	Each
656.55	Dumped Stone	2	C. Y.
656.631	15-Inch Temporary Silt Fence	25	L. F.
656.632	30-Inch Temporary Silt Fence	500	L. F.
659.10	Mobilization	1	L. S.

GENERAL NOTES

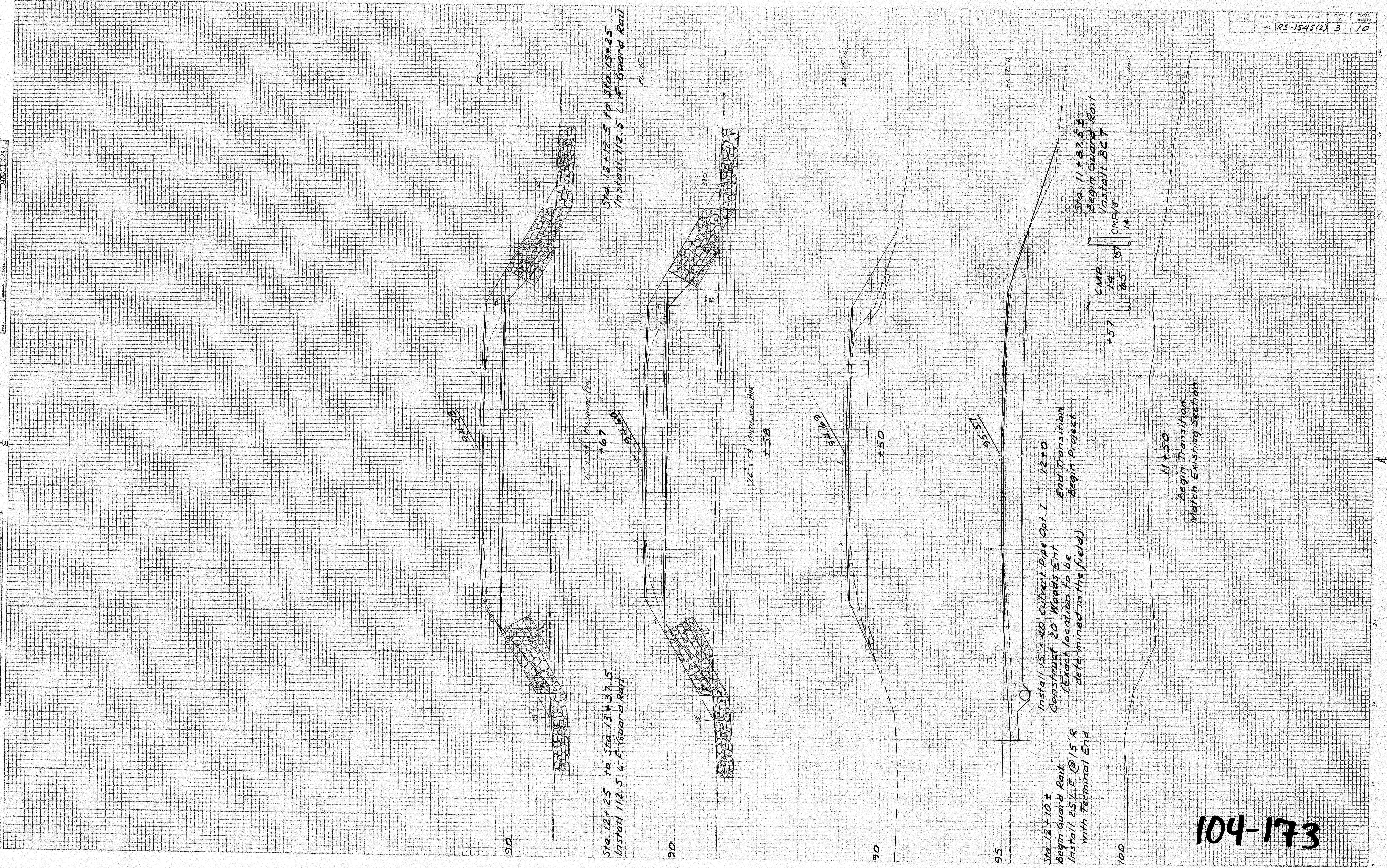
- All utility facilities shall be adjusted by the respective utilities unless noted.
- For easements, construction limits and right-of-way lines, refer to Right of Way Map.
- During construction, the road will be closed to traffic for a period specified in the Special Provisions.
- The clearing limits shown on the plans are approximate. The exact limits will be established in the field by the Engineer. Payment for clearing will be considered incidental to contract items.
- Do not excavate for Aggregate Subbase course where the existing material is suitable as determined by the Engineer. Payment for shaping and compacting of the existing subbase and layers of new subbase six 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 made in accordance with Subsection 104.03, Extra Work.
- One guard rail delineator post shall be installed at each guard rail end.
- Sodded gutters shall be constructed, after paving and shoulder work is completed, where it is apparent that runoff will cause continual erosion.

104-172

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
MAXWELL BRIDGE
OVER
MAXWELL BROOK
IN THE TOWN OF
LITCHFIELD
KENNEBEC COUNTY
ESTIMATED QUANTITIES
SHEET 2 OF 10 AUGUSTA, MAINE

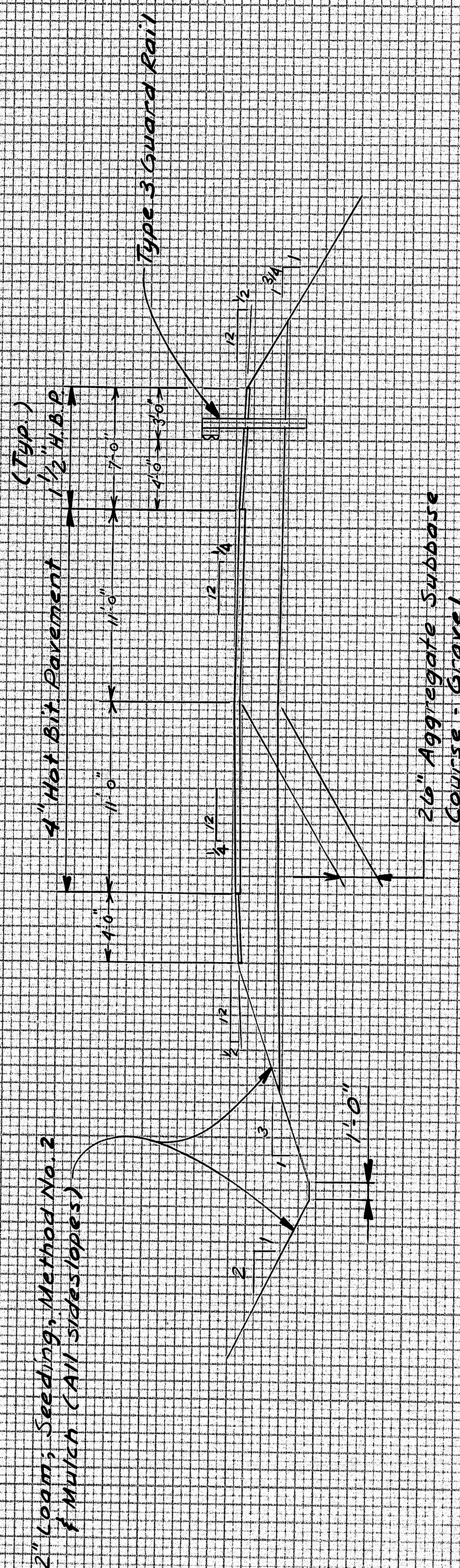
DESIGN	DATE
DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE

FINAL	DATE
DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE

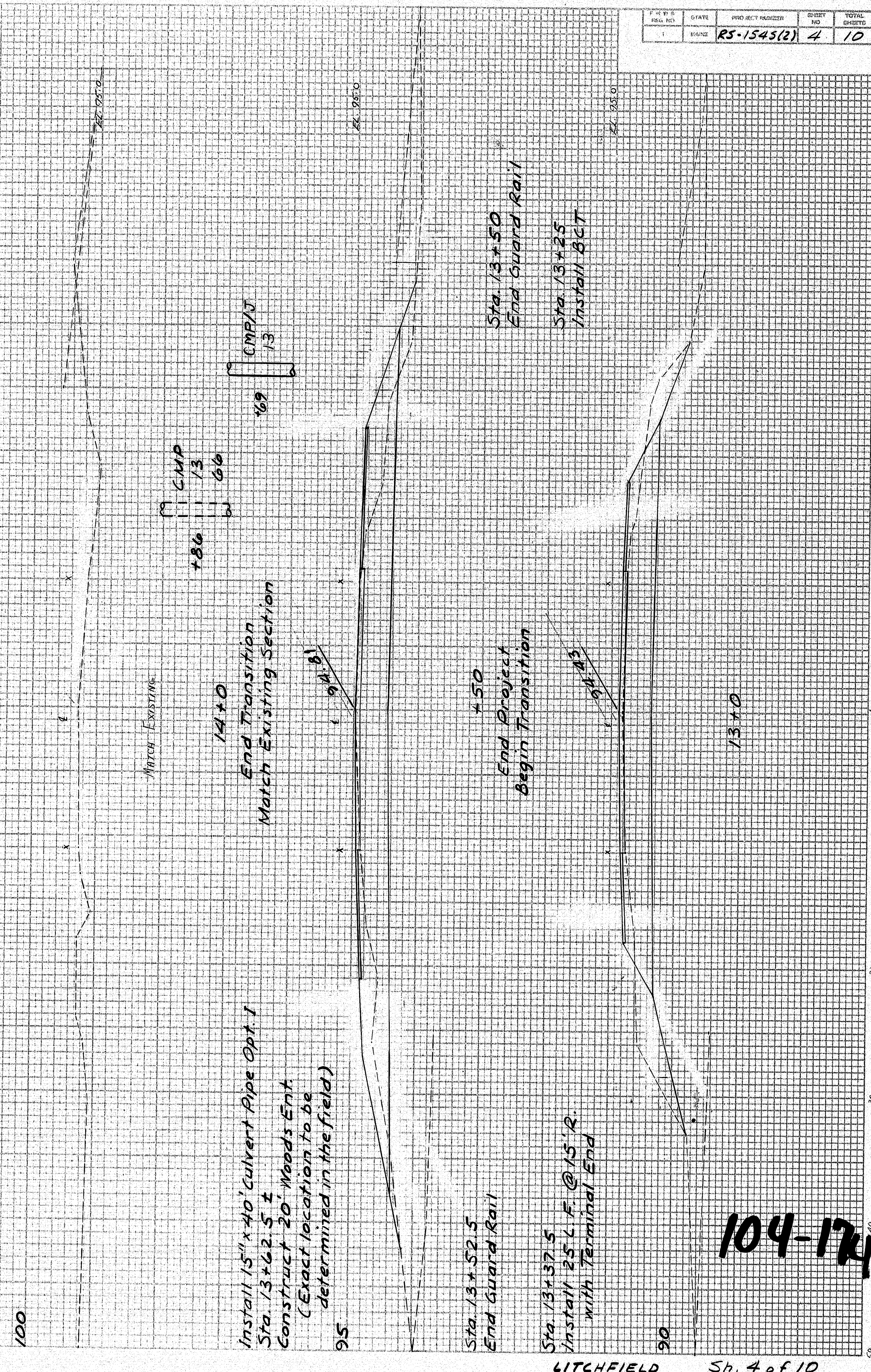


FINAL SURVEY NOTE BOOK			BY	DATE
	SURVEYED			
	PLOTTED			
	TEMPLATE			
APR 30				

SPRINGER 44-232 71285



TYPICAL SECTION



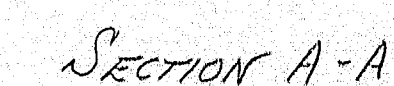
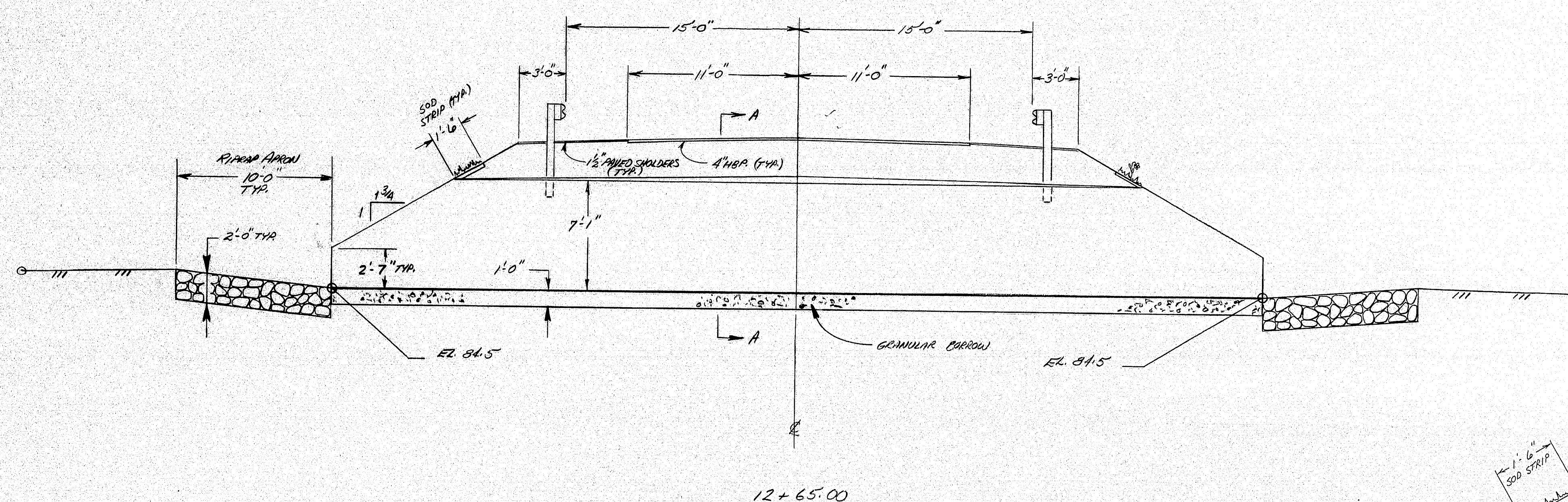
LITCHFIELD

5k, 4 of 10

104-124

R.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	RS-1545(2)	5	10

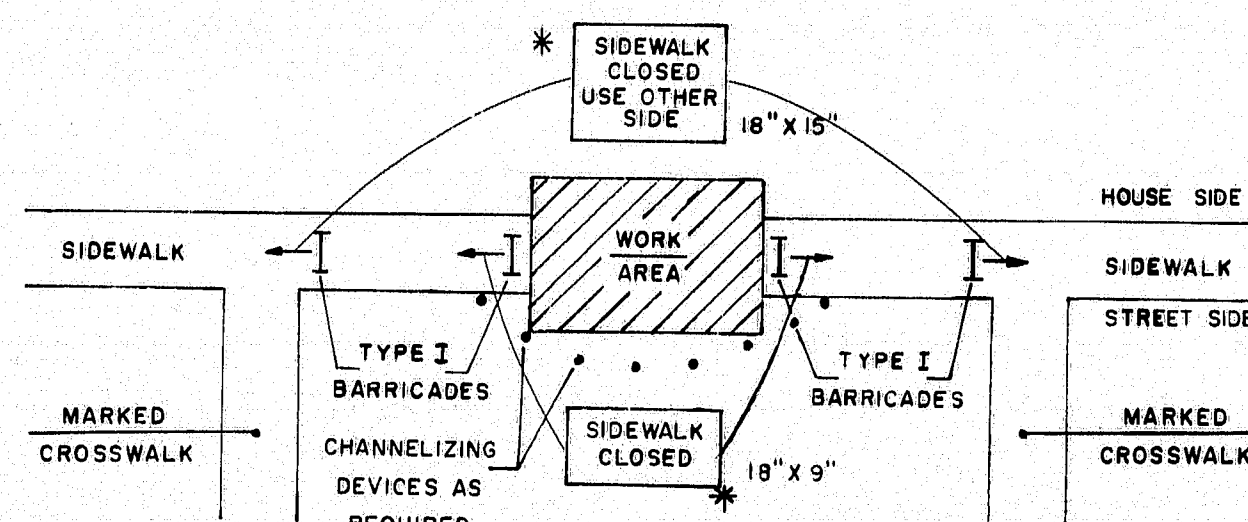
1. One 131-inch span by 85-inch rise steel structural plate pipe arch is required. Top plates shall be 0.138-inch thick, and bottom and corner plates shall be 0.188-inch thick.
2. Ends shall be cut on a $1\frac{3}{4}$: 1 bevel normal to the end of the pipe arch.
3. Bedding material shall meet the requirements of Sub-section 703.19, Material for Underwater Backfill.
4. Riprap adjacent to the pipe arch shall be carefully placed so as not to damage the pipe arch and so that the finished slope will match the ends of the pipe arch. Any extra labor, material or equipment used will be considered incidental to Item 610.08, Plain Riprap.
5. Place a 1'-6" wide strip of sod along the top of the riprap and over the pipe arch. (Typical both ends.)
6. Guard rail posts within the limits of the pipe arch shall be cut to length in the field as required to clear the structure by a minimum of six inches. Cut posts shall be imbedded nine inches in a concrete base two-foot square by one-foot thick. The concrete mix shall be approved by the Engineer. All costs will be considered incidental to the guard rail pay items.



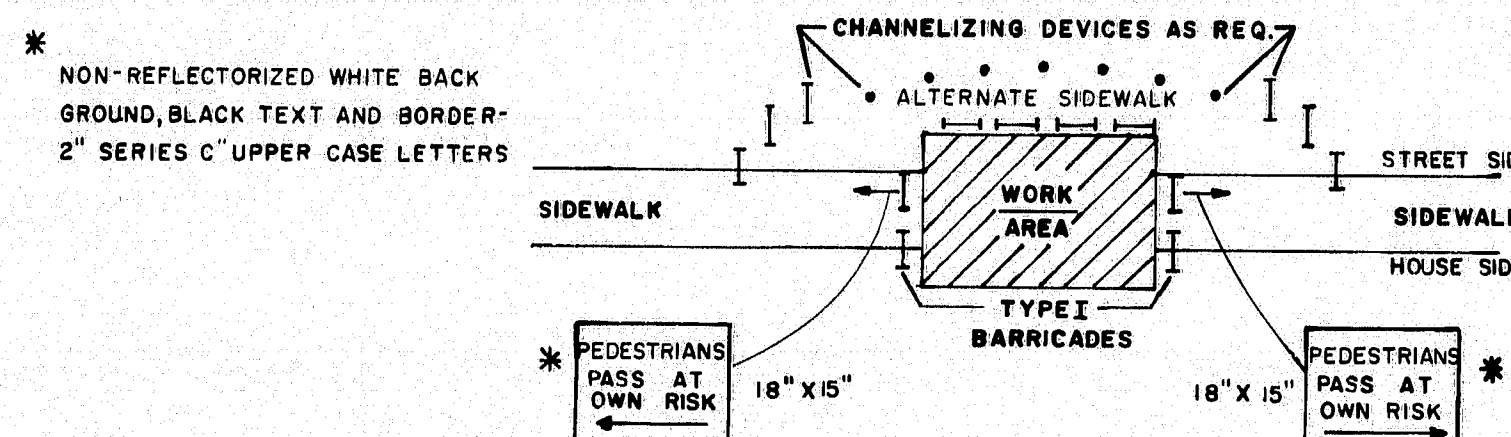
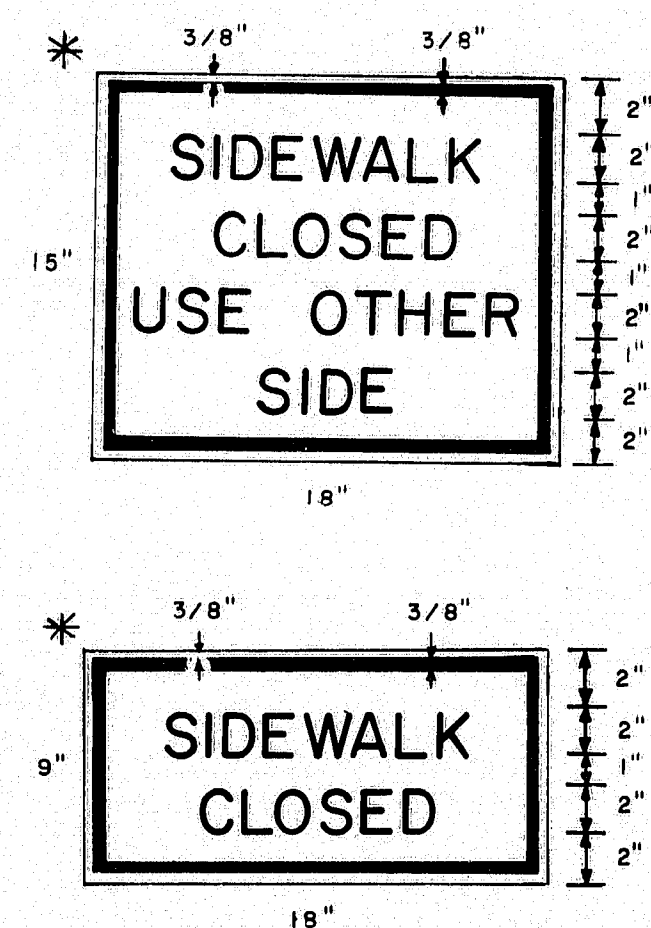
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SHEET 5 OF 10 AUGUSTA, MAINE

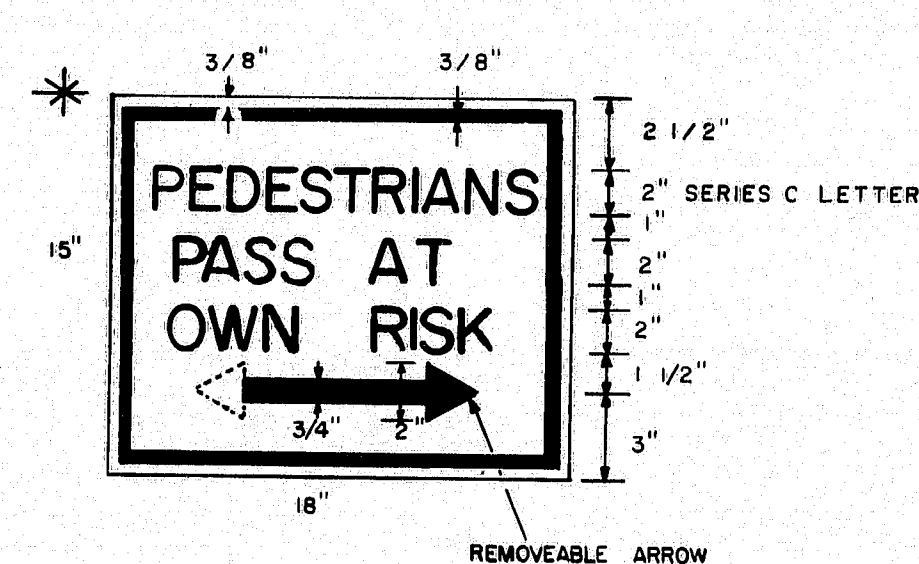
PLANS	PROJECT DESIGN ENGINEER	BY	DATE
	DESIGN - DETAILED		
	CHECKED		
	REVISIONS		
	FIELD CHANGES		



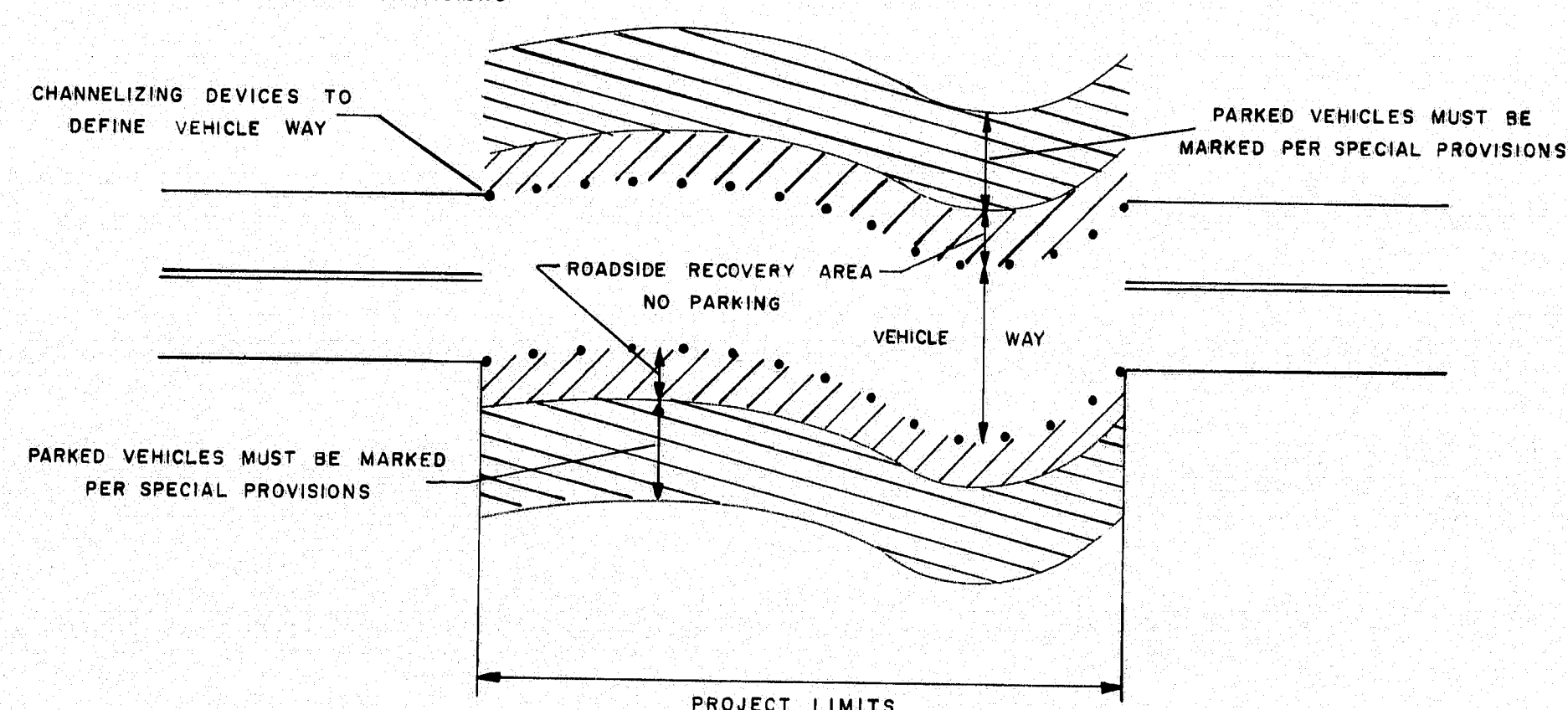
SIDEWALK CLOSURE
WITHOUT ALTERNATE SIDEWALK



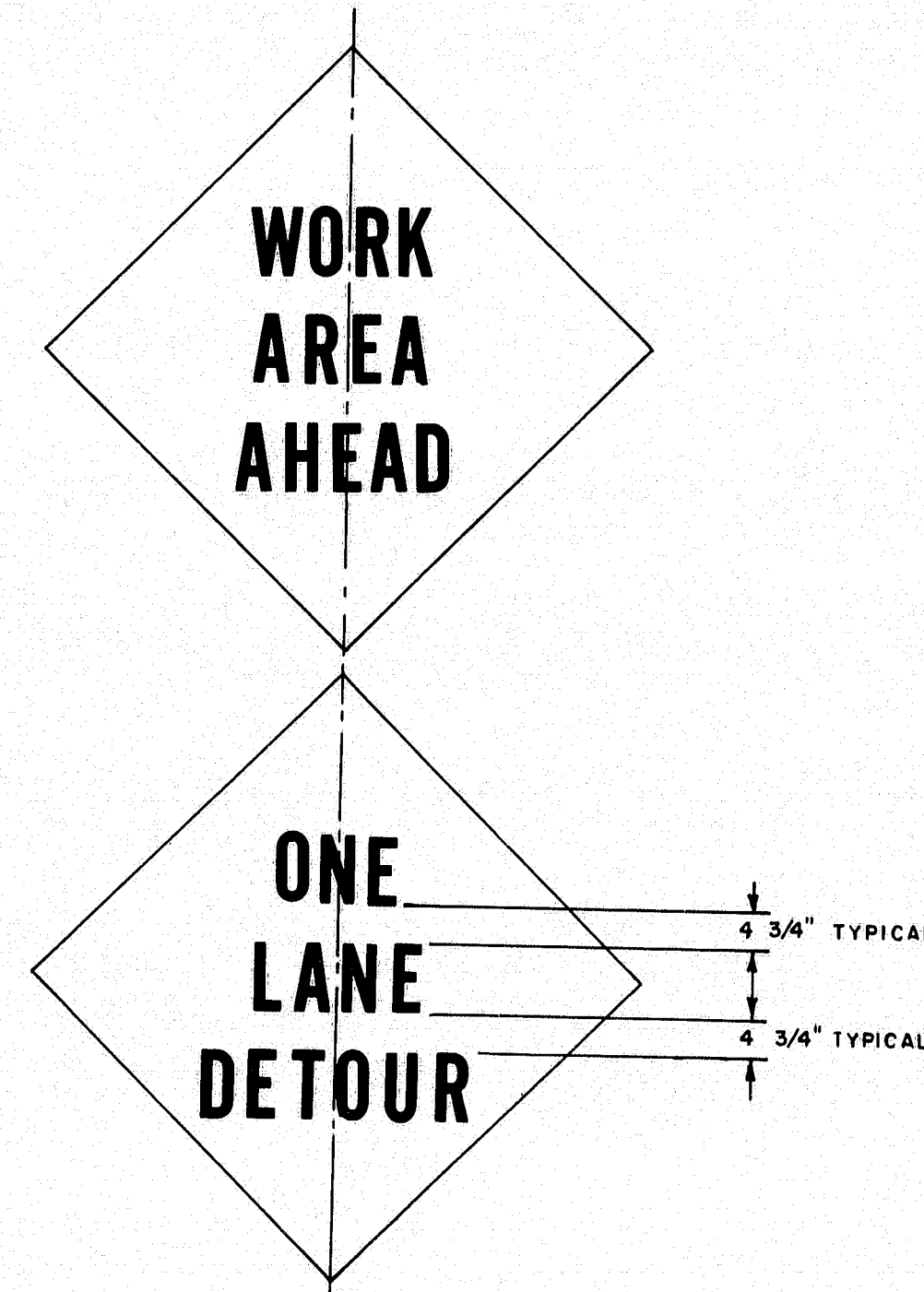
SIDEWALK CLOSURE WITH ALTERNATE SIDEWALK



ALL DIMENSIONS AND OTHER REQUIREMENTS AS
SPECIFIED IN THE SPECIAL PROVISIONS

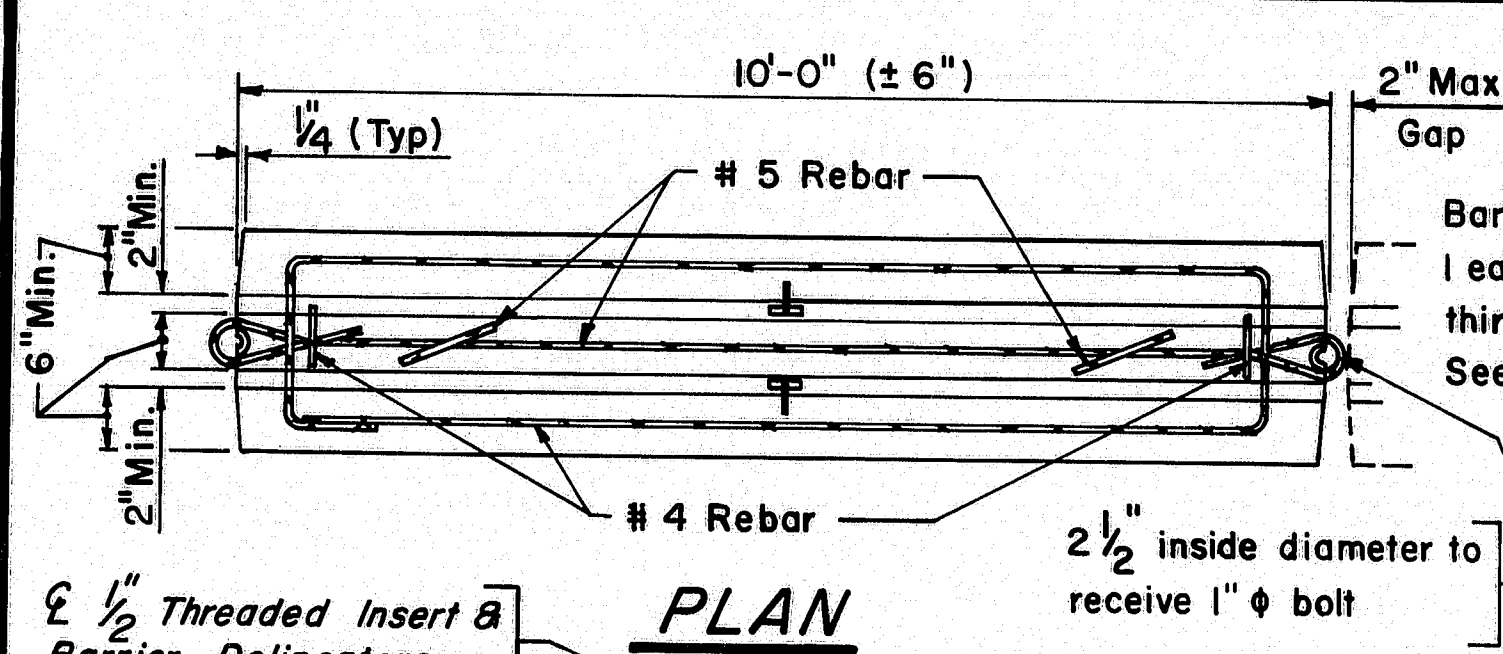


ROADSIDE RECOVERY AREA

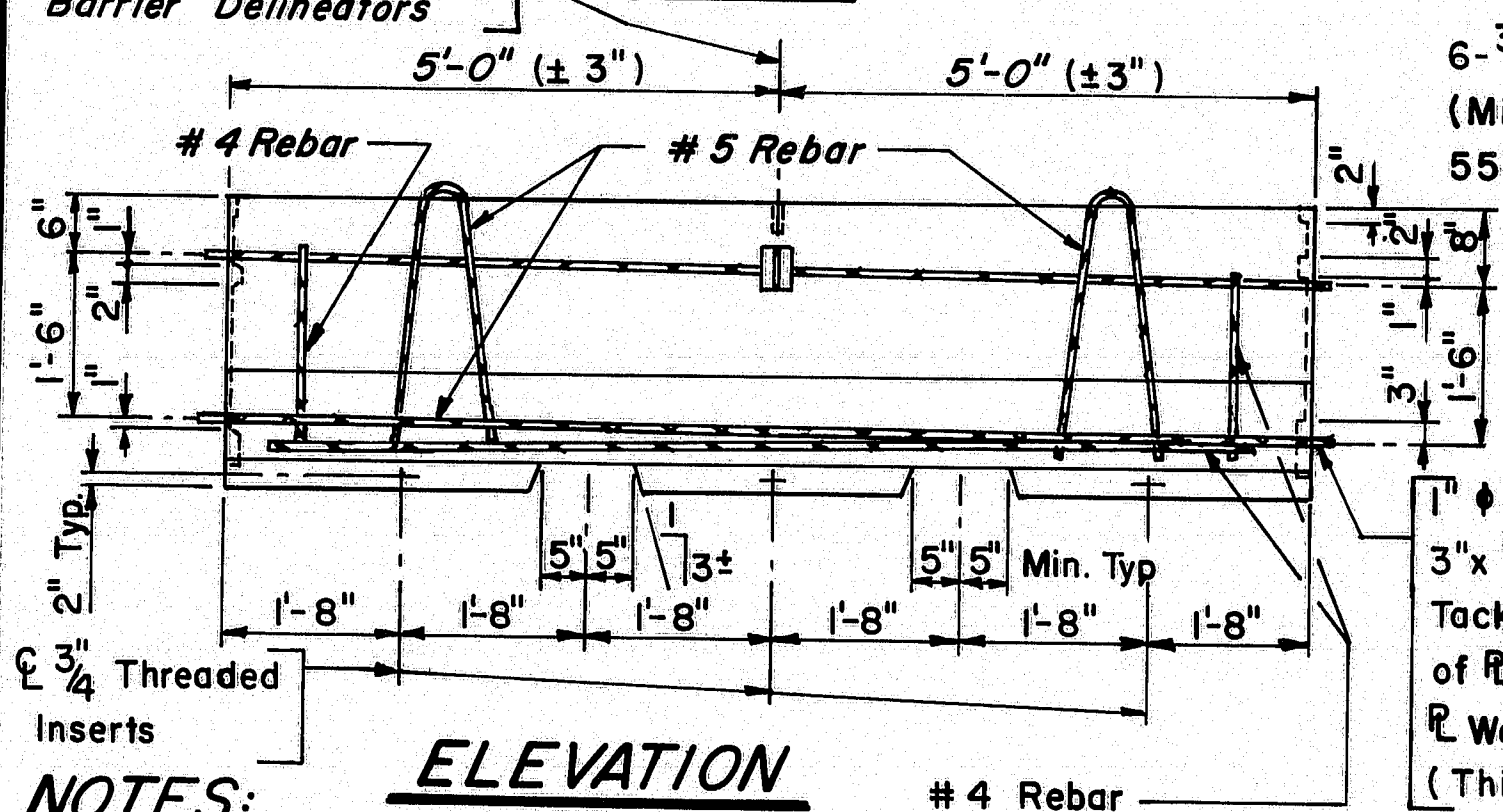


1. Letter size shall be 8" Series 'D'.
2. Border dimensions and legend design shall conform to "Standard Highway Signs".

CONSTRUCTION WARNING SIGN DETAIL

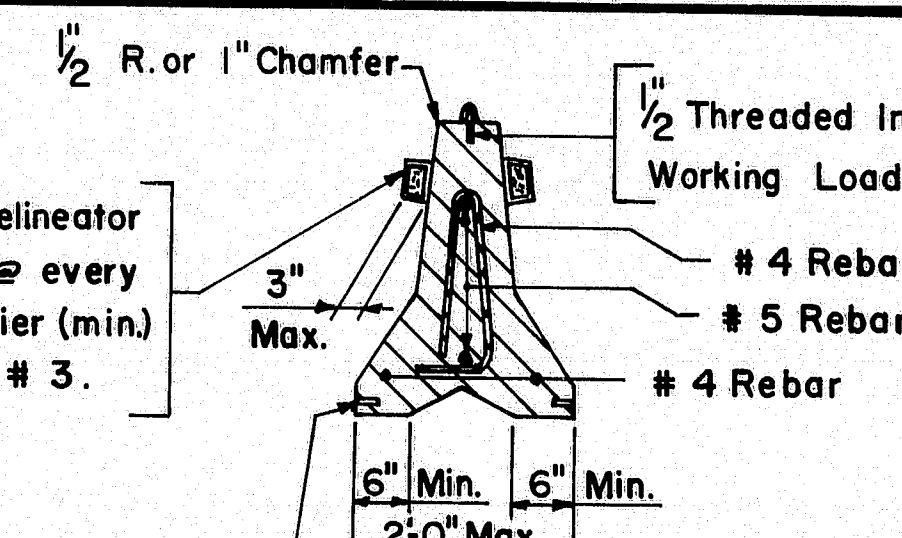


PLAN

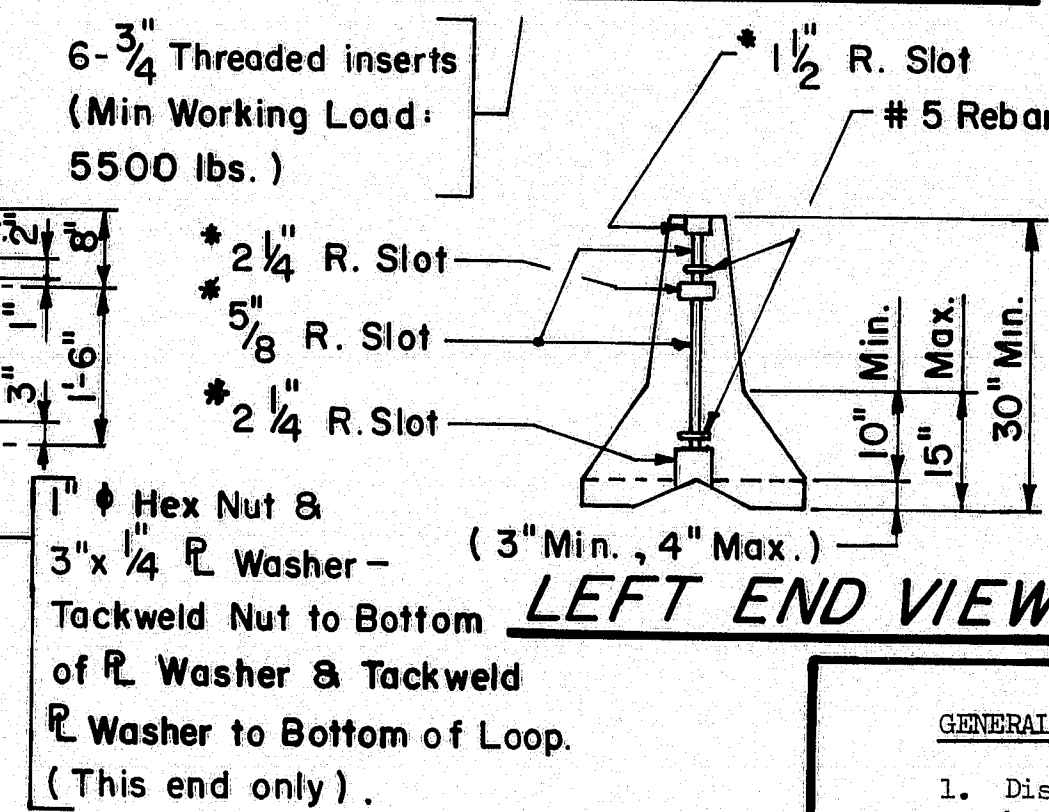
ELEVATION

NOTES:

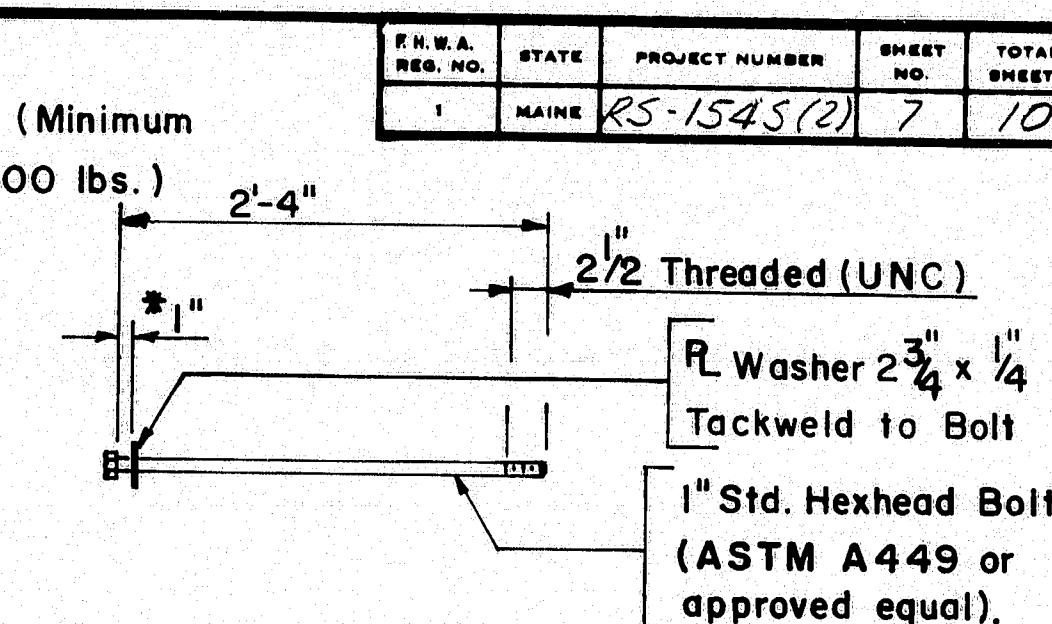
1. Subject to approval by the Engineer end connections other than the one detailed may be used, provided they are of equivalent or greater strength. All end connections submitted for approval shall incorporate a connecting pin or other locking device that is positively secured against accidentally being dislodged under impact.
2. The reinforcing steel shown is the minimum required. Lifting arrangement and size and locations of hold-down inserts are advisory only. It shall be the Contractor's responsibility to provide adequate lifting points and hold-down arrangements.
3. Barrier Delineators shall be bi-directional with a minimum effective reflective area of 8.0 square inches as approved by the Engineer. The Reflector shall preferably be of Methyl Methacrylate, and the Housing of Acrylonitrile Butadiene Styrene. As an alternate reflectors may be mounted on the top of the barrier.



TYPICAL SECTION



LEFT END VIEW



CONNECTING BOLT

- * The slots may be $2\frac{1}{4}$ " radius full height with the 1" space on the Connecting Bolt increased to 4".

TEMPORARY CONCRETE
BARRIER-TYPE 1

GENERAL NOTES

1. Distances shown for sign placement are nominal, exact locations shall be determined by the Engineer.
2. Grades on temporary roadways through the construction zone used by the public shall not exceed 10 percent.
3. Advisory speed consistent with prevailing conditions shall be as determined by the Engineer.
4. Use shaded signs when specified in the Special Provisions. 
5. The length of tapers shall be determined from the following formulas:

If S is equal to or less than 40 MPH

$$L = (W \times S \times S) / 60$$

If S is equal to or greater than 45 MPH
I = WS

Where

L = taper length in feet
S = operating speed in MPH
W = width of roadway to be closed in feet

Taper lengths shall be rounded to the nearest five feet.

It may be required to extend lane closure tapers to provide a smooth transition where geometric alignment reduces sight distance.

6. The maximum longitudinal spacing of channelizing devices shall conform to the following:
- (a) 50 feet through work areas
 - (b) A distance in tapered equal to the numerical value of the operating speed in miles per hour. If the speed is 45 feet in miles per hour
 - (c) In all areas not covered above maximum spacing shall be as follows:

Radius of curve	Spacing
90' to 300'	25
300' to 700'	50
700' to 1000'	75
over 1000'	5 times the operating speed
- The maximum transverse spacing in tapered shall be determined from the following formula:

$$D = (W \times S) / L$$

Where:

D = transverse spacing in feet
W = width of roadway to be closed in feet
L = taper length in feet
S = operating speed in MPH

7. BORDER DIMENSIONS AND LEGEND DESIGN SHALL CONFORM TO THE STANDARD HIGHWAY SIGNS BOOKLET.

[illegible]

104-176

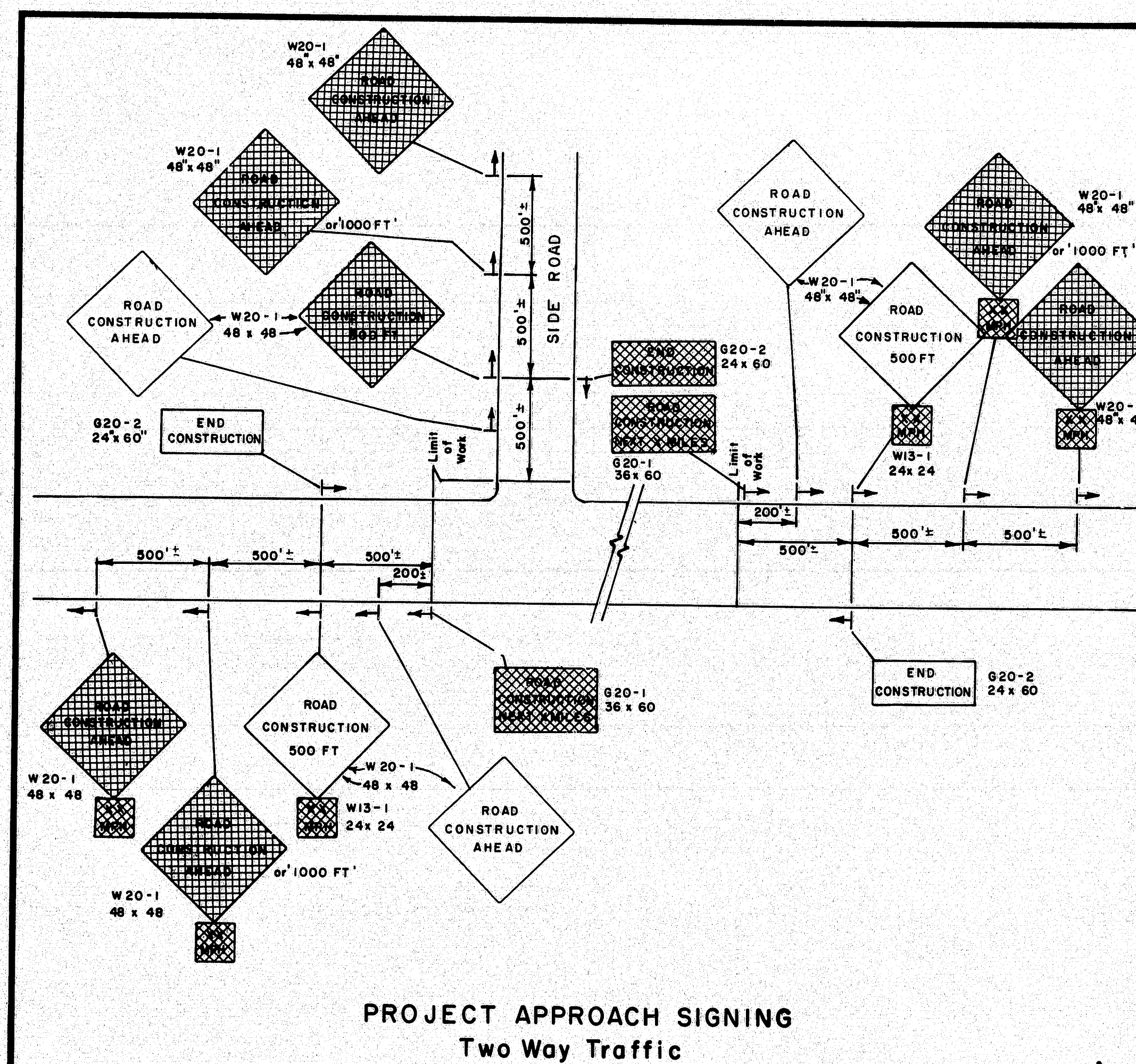
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC IN CONSTRUCTION ZONES

SHEET 7 OF 10 AUGUSTA, MAINE

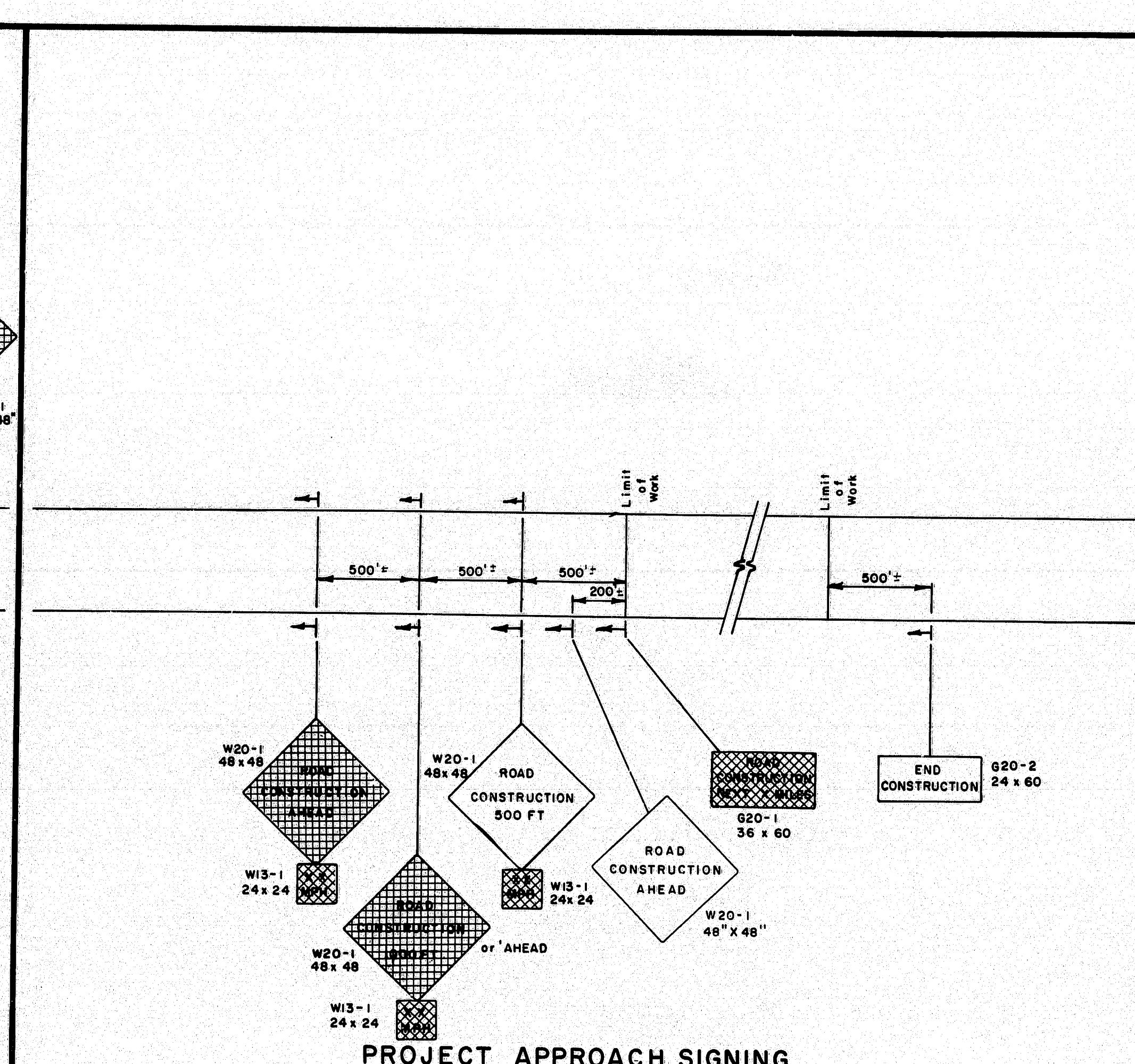
(HD - 10)

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	RS-1545(2)	8	10



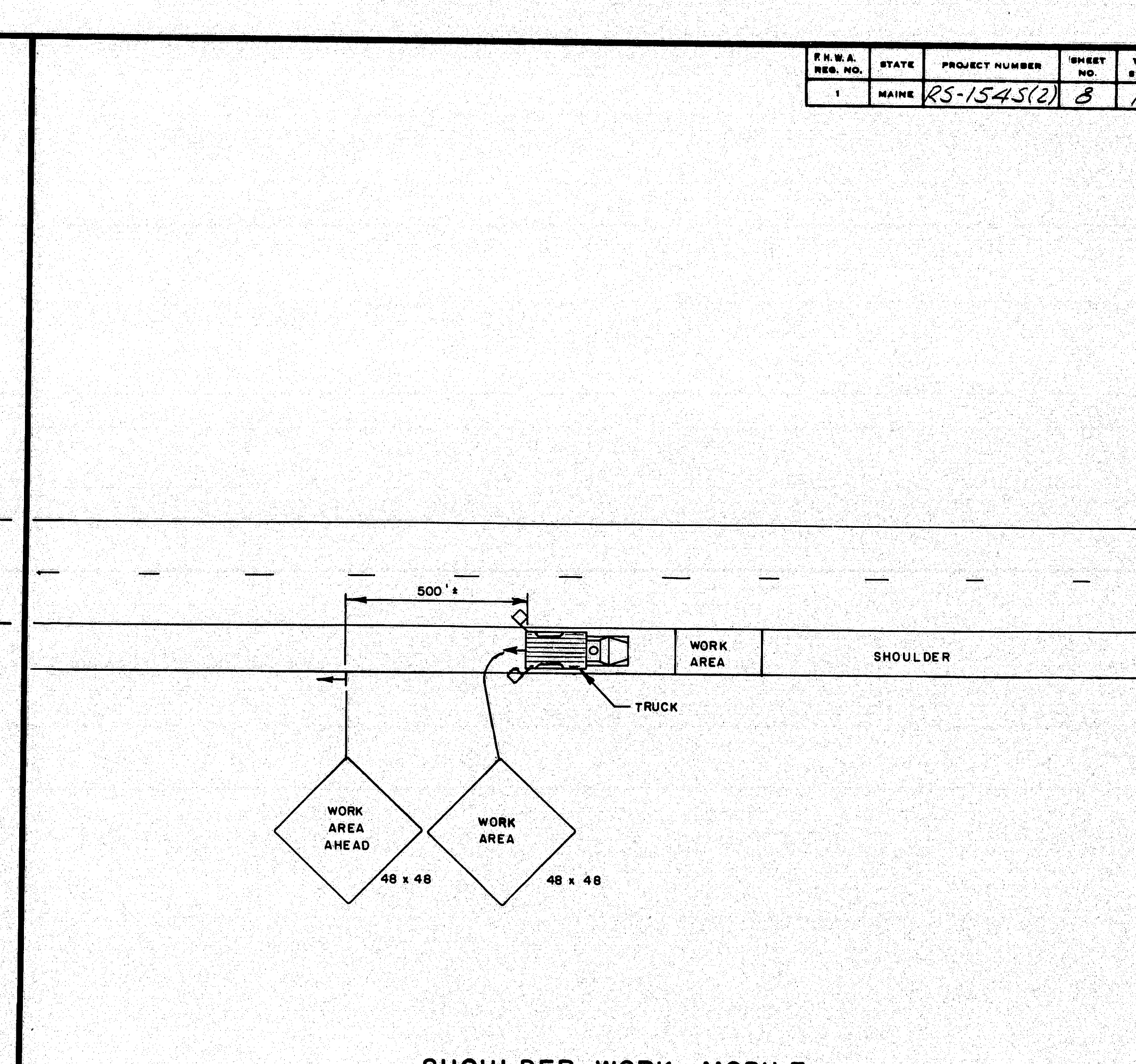
PROJECT APPROACH SIGNING
Two Way Traffic

A



PROJECT APPROACH SIGNING
Expressway

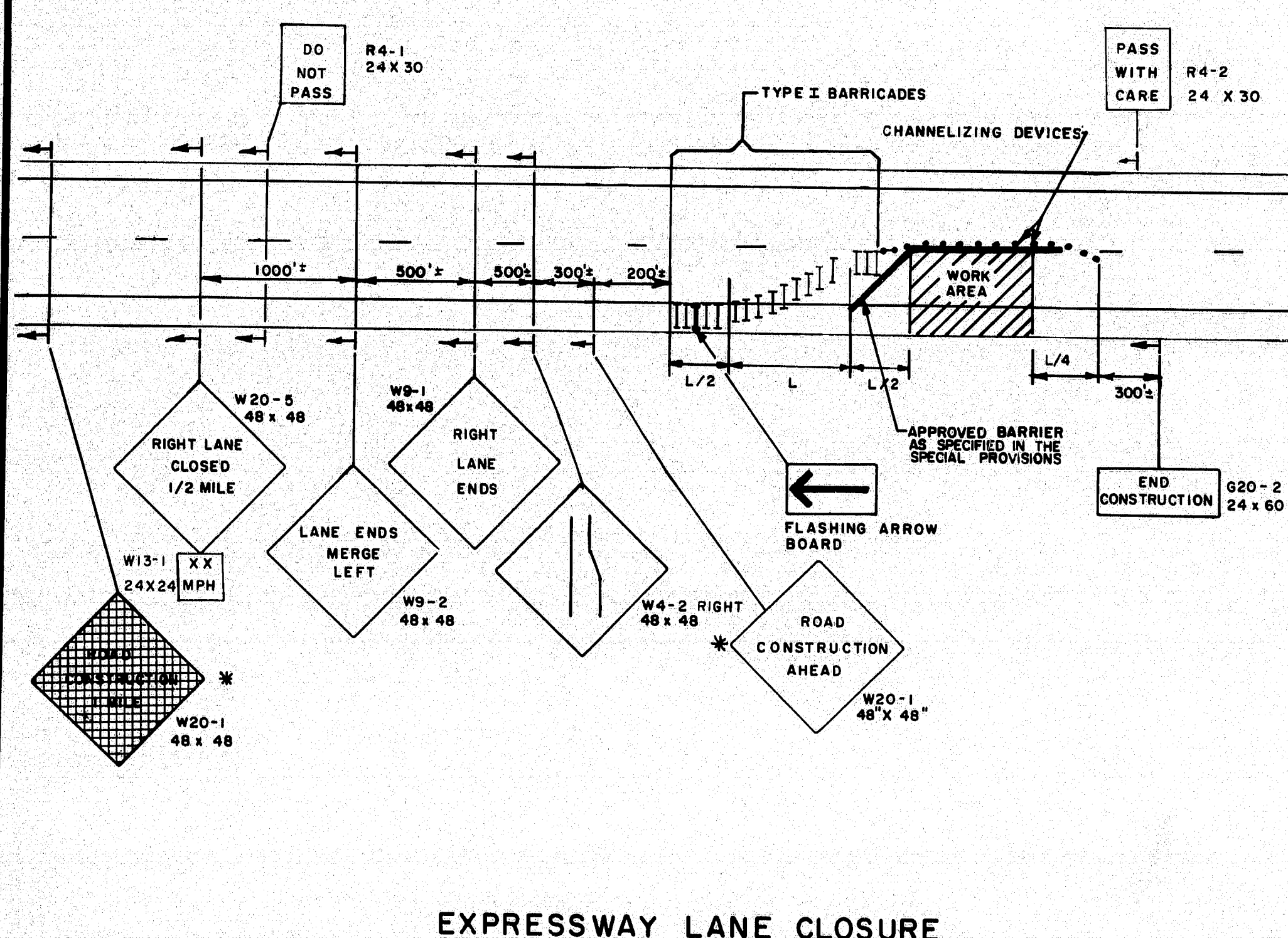
B



SHOULDER WORK - MOBILE

C

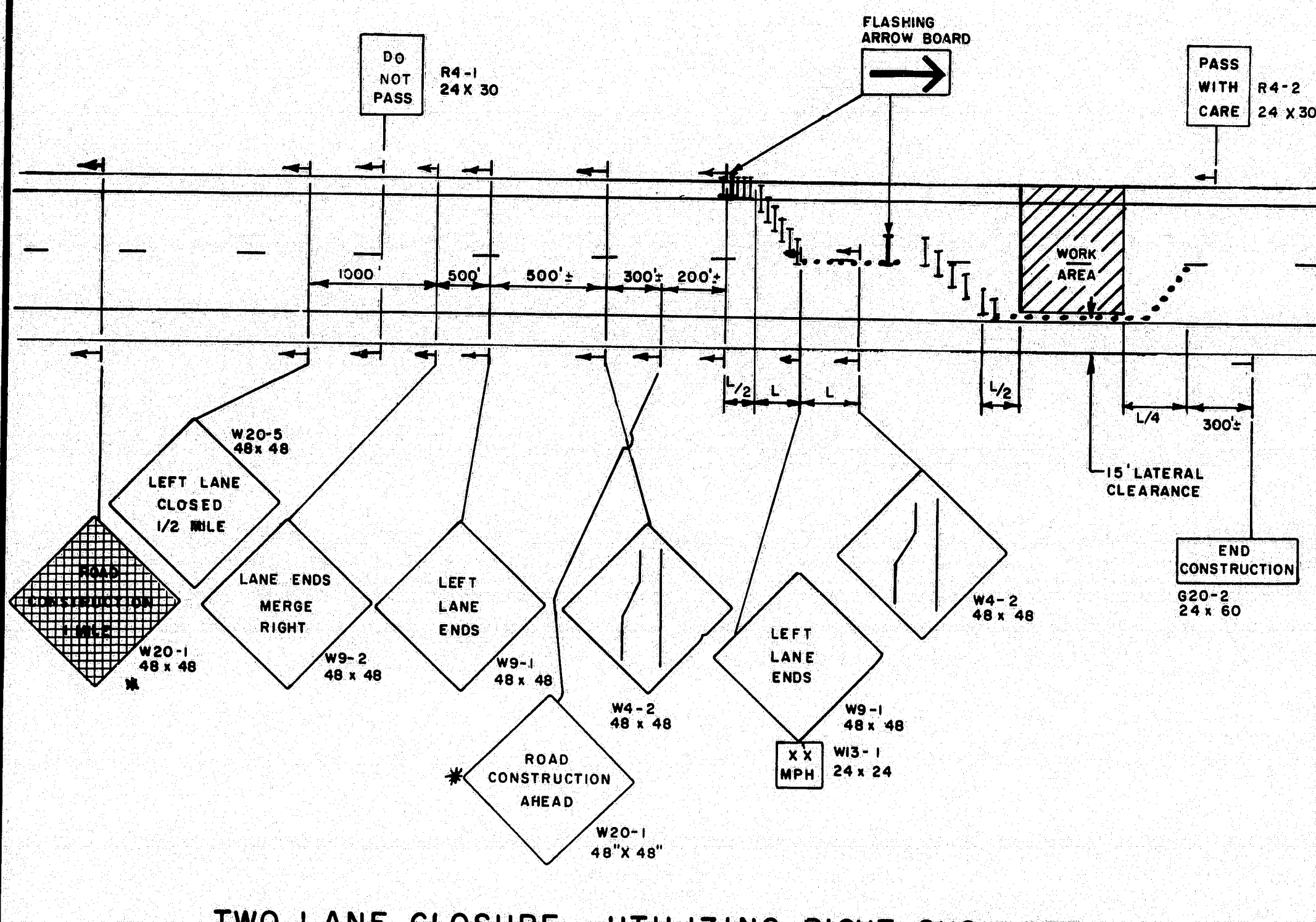
NOTE
* OMIT W20-1
WITHIN PROJECT LIMITS.
IF LANE CLOSURE SIGNING ARRAY IS
ALTER PAVEMENT MARKINGS AS REQUIRED. MAINTAIN 15 FT LATERAL
CLEARANCE.
USE SIMILAR SIGNING FOR LEFT LANE CLOSURE.



EXPRESSWAY LANE CLOSURE

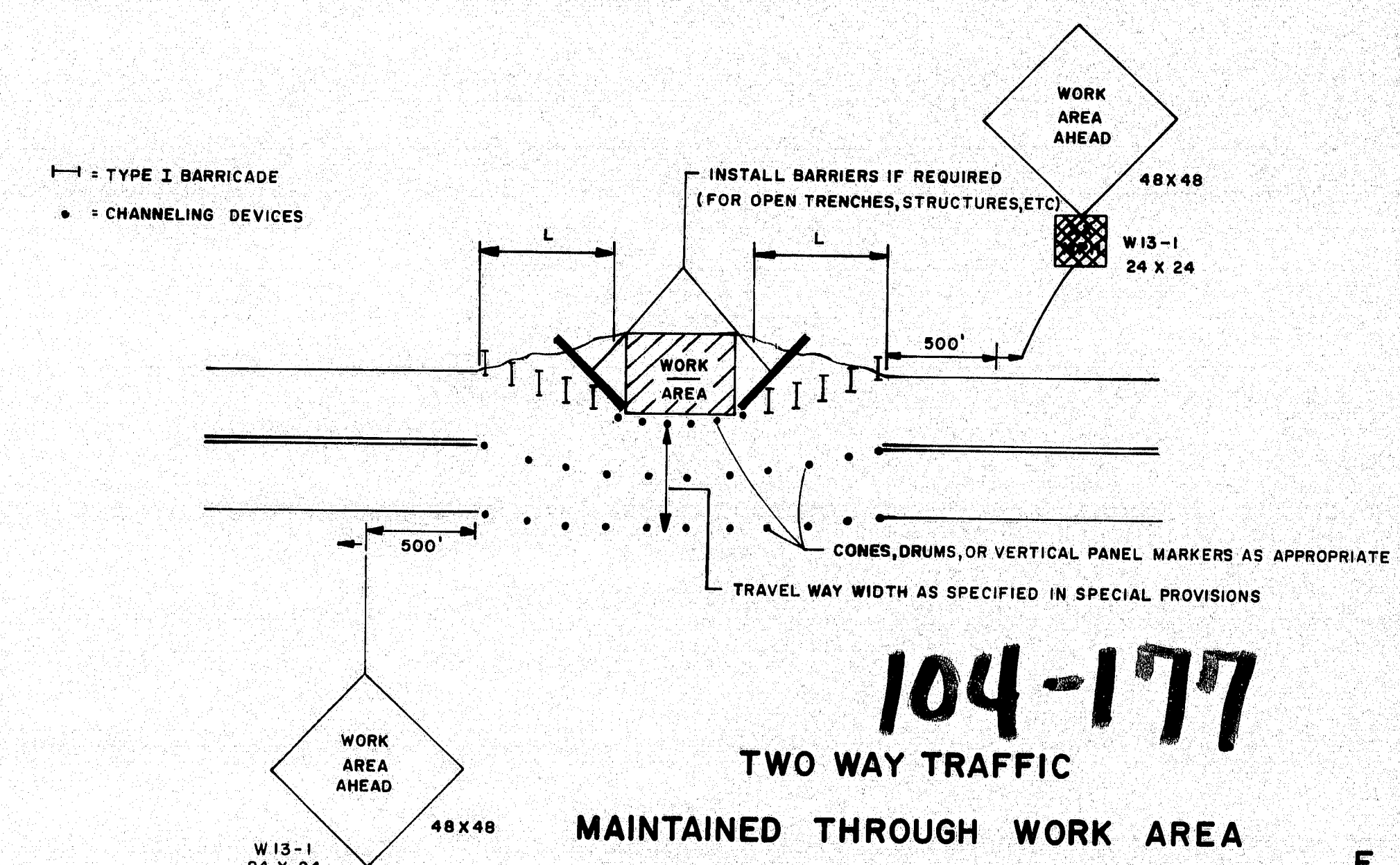
D

NOTE
W20-1
SHALL BE USED ONLY WHEN THE CLOSURE IS THE ACTUAL
CONSTRUCTION PROJECT AND NOT A PART THEREOF.
ALTER PAVEMENT MARKINGS AS NECESSARY.
USE SIMILAR SIGNING FOR RIGHT LANE CLOSURE.



TWO LANE CLOSURE - UTILIZING RIGHT SHOULDER

E



104-177
TWO WAY TRAFFIC
MAINTAINED THROUGH WORK AREA

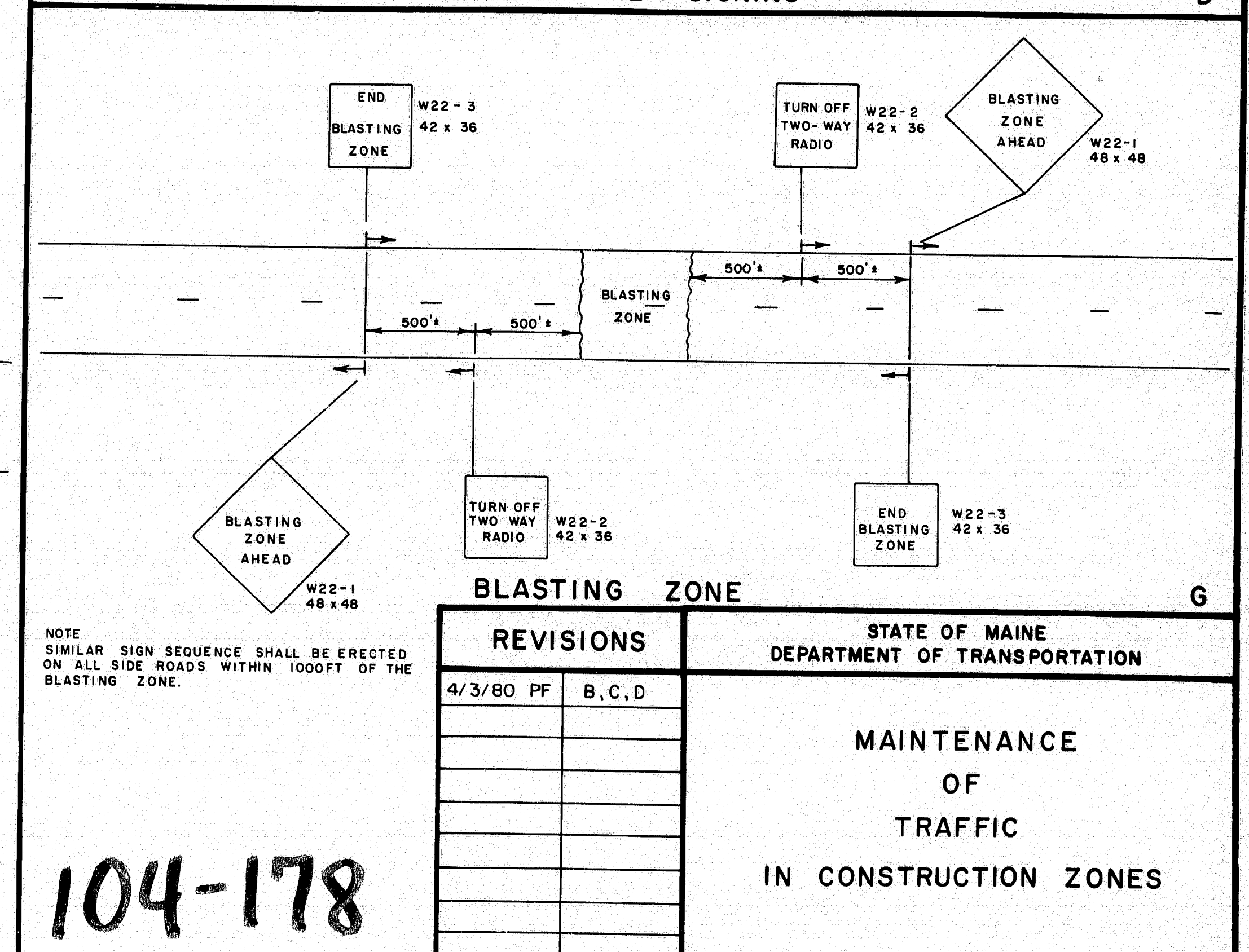
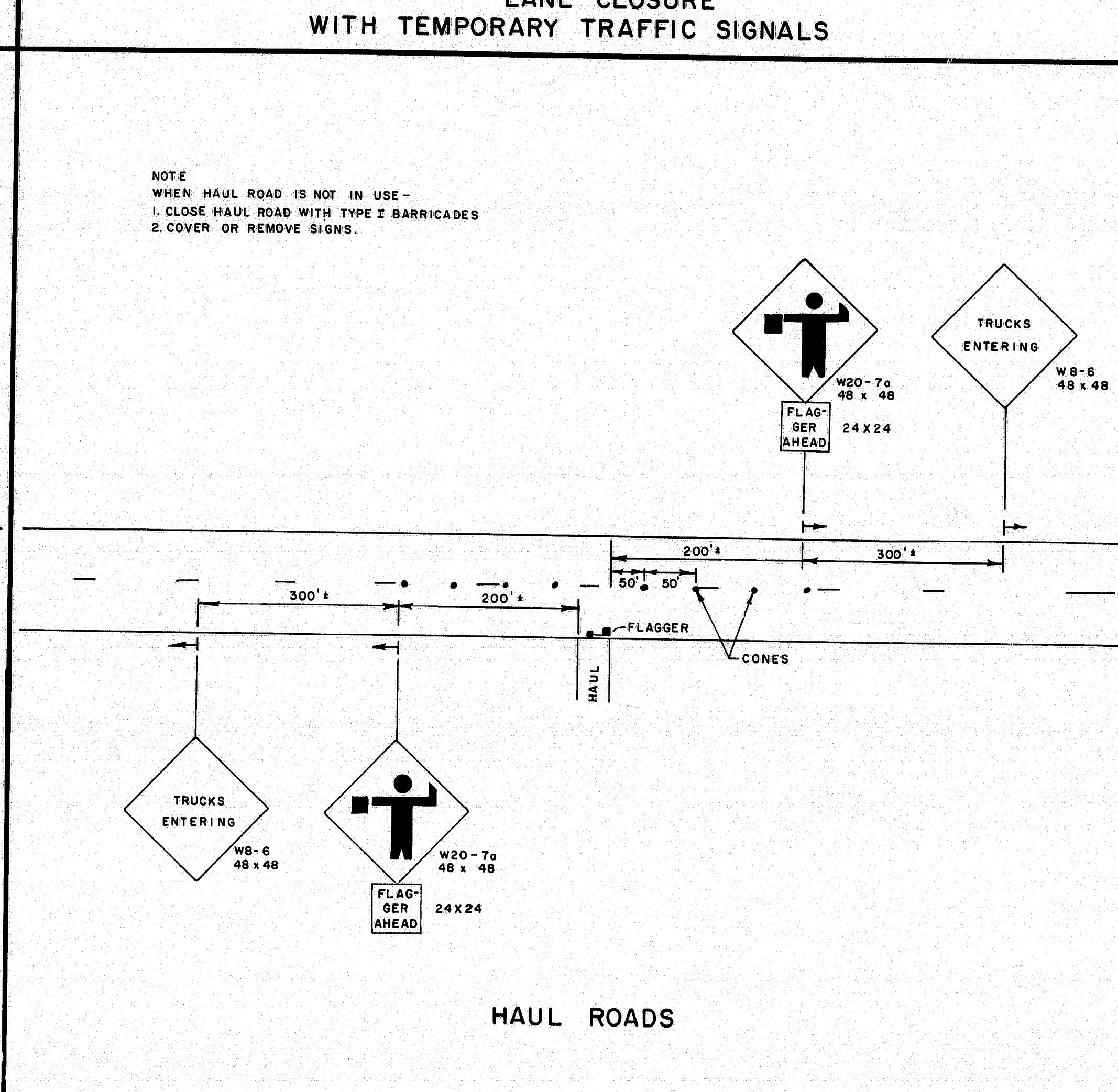
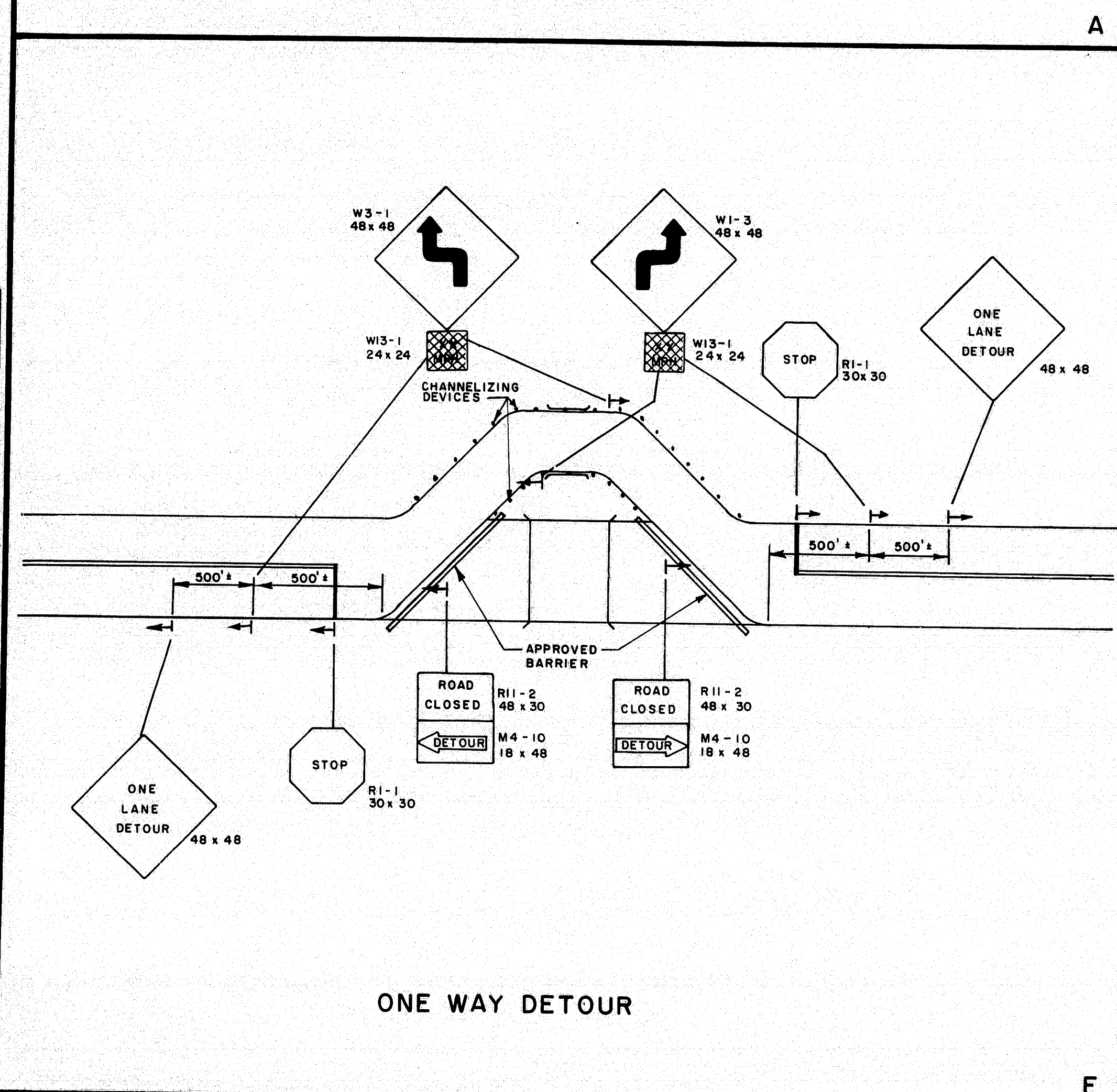
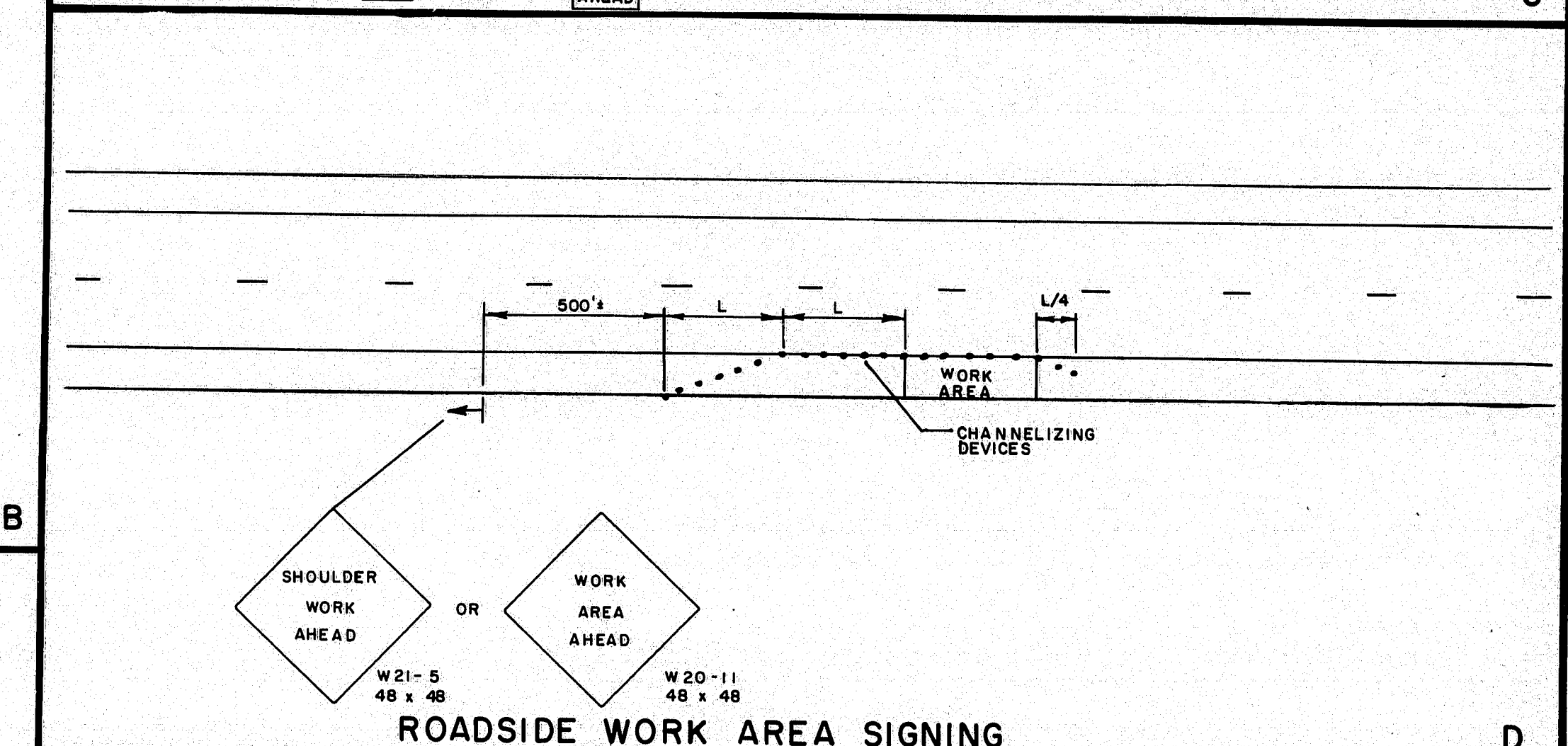
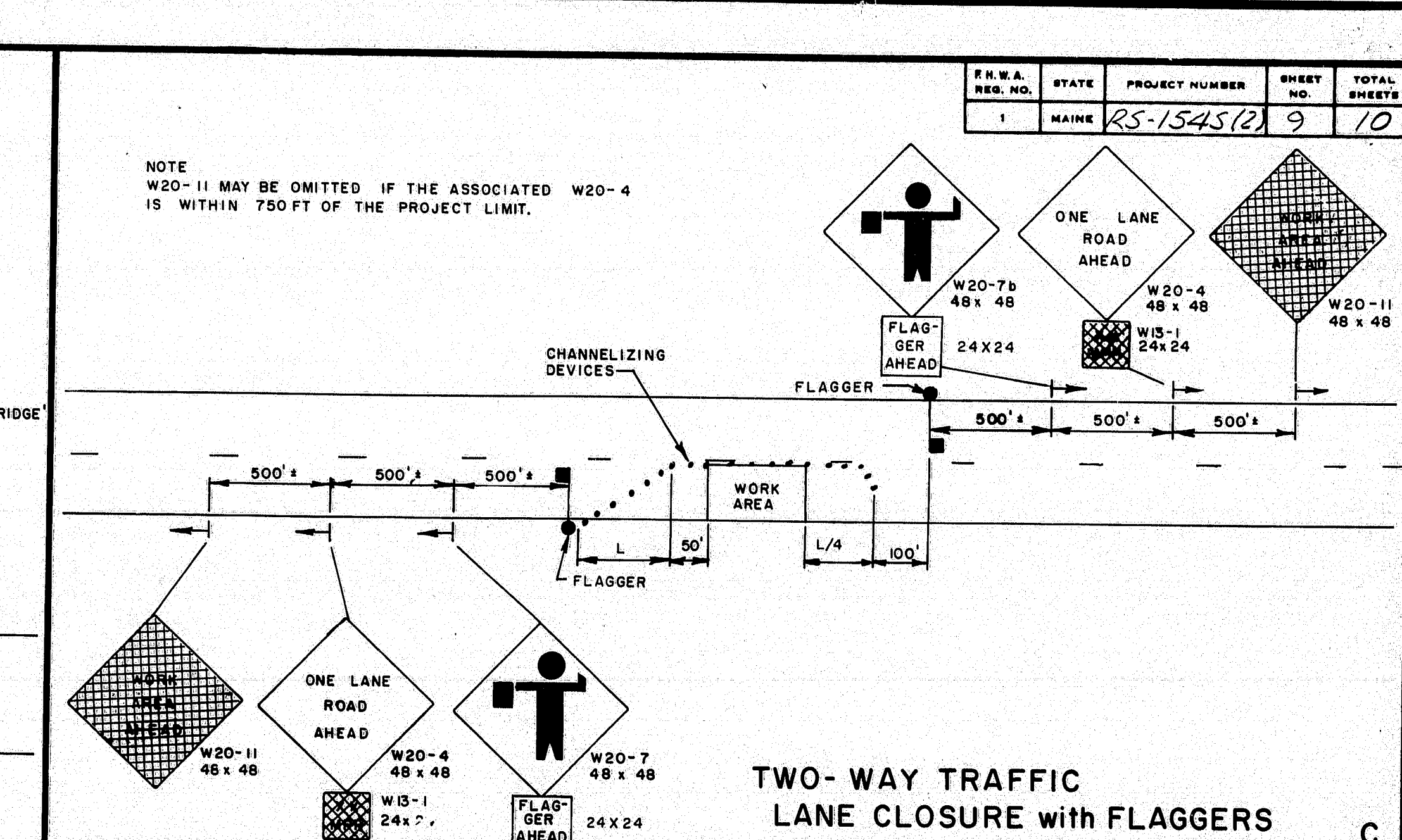
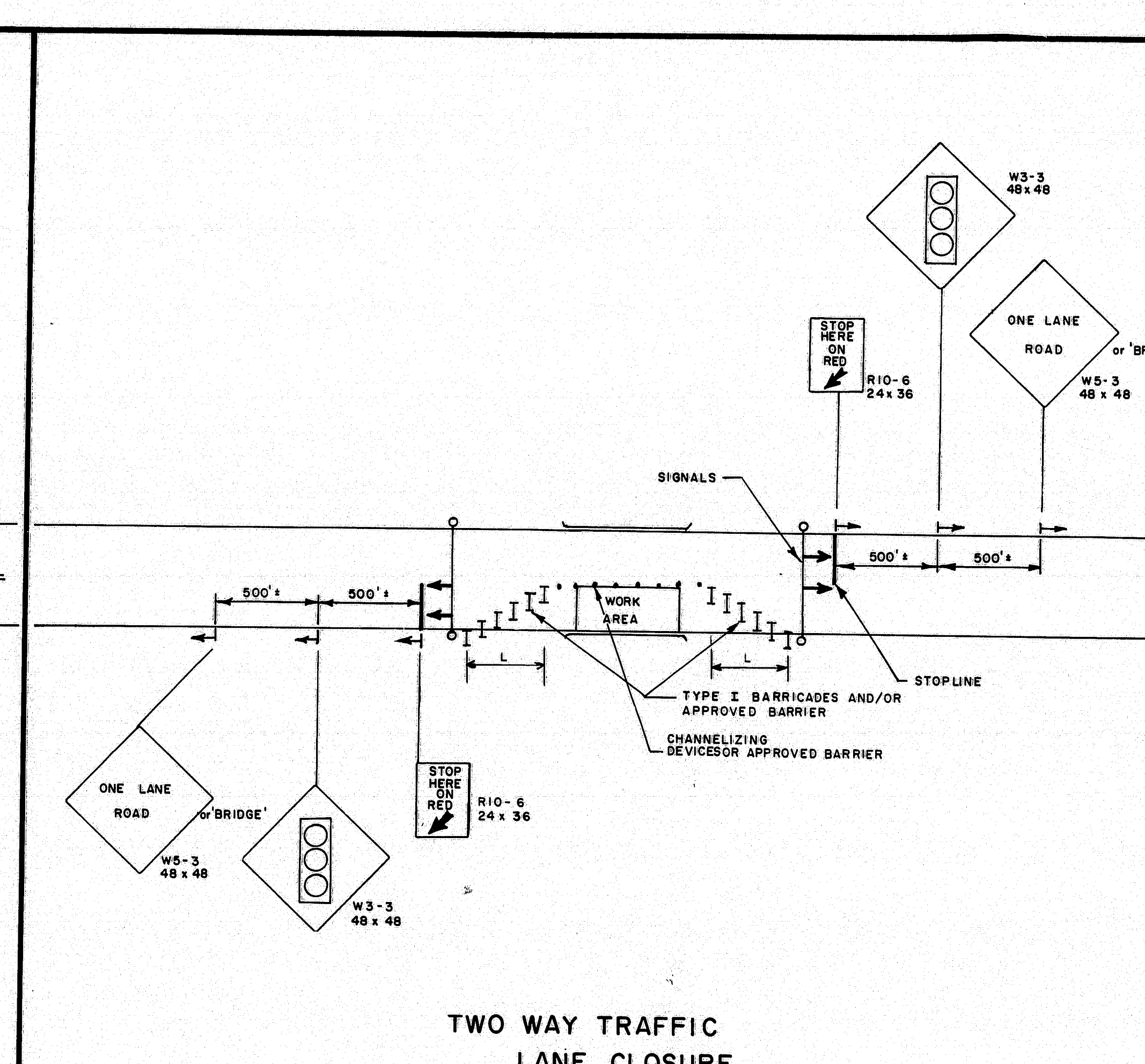
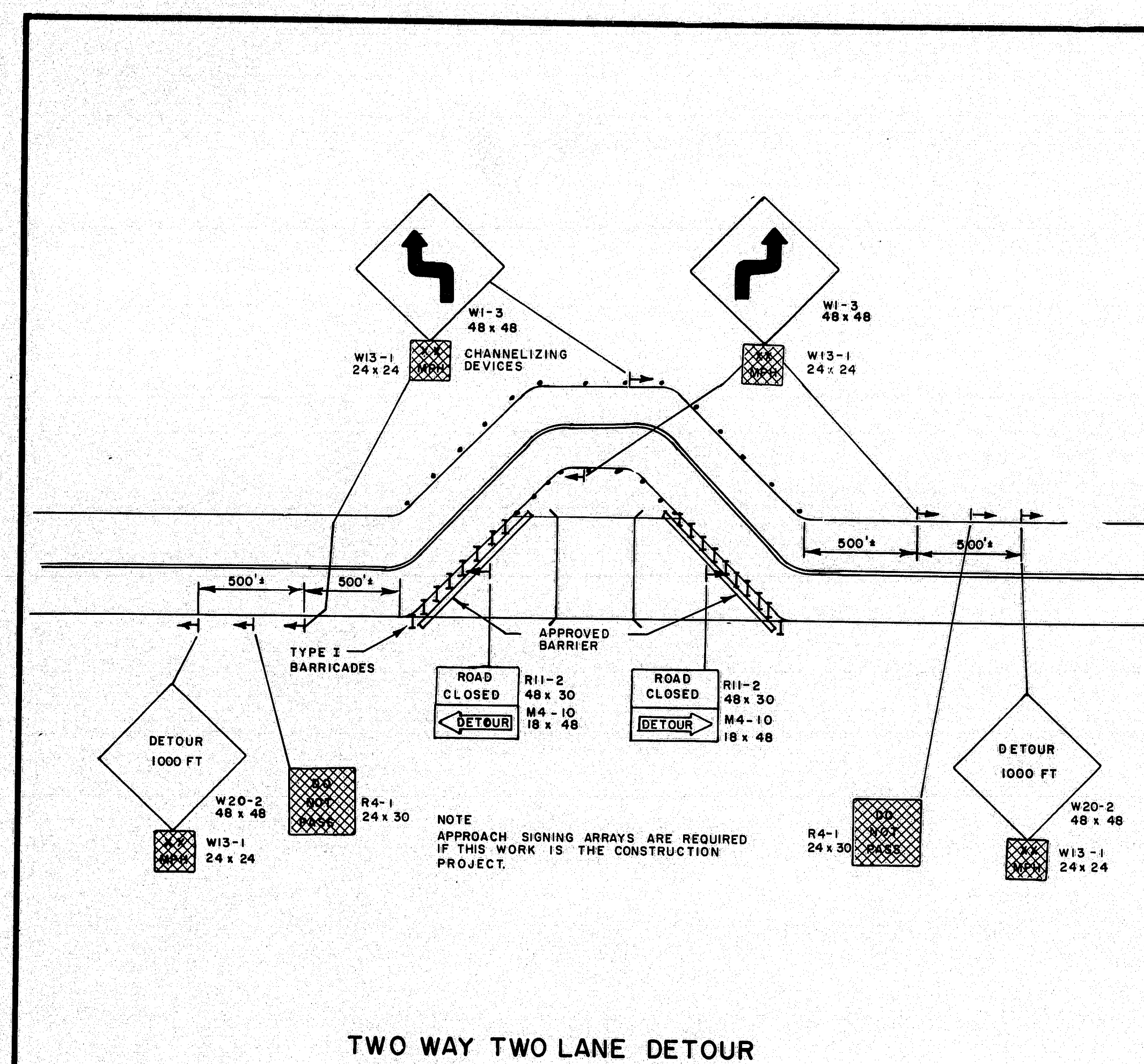
F

APPROVED F.H.W.A.	REVISIONS
	1-28-80
	3-4-80 PLATE "F"
	4/3/80 PF D.E.
	5-15-90 A, B, D, E, F

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MAINTENANCE
OF
TRAFFIC
IN CONSTRUCTION ZONES

SHEET 8 OF 10 AUGUSTA, MAINE (HD-11)
Litchfield



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

[illegible]

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC IN CONSTRUCTION ZONES

SHEET 9 OF 10 AUGUSTA, MAINE

(FD - 12)