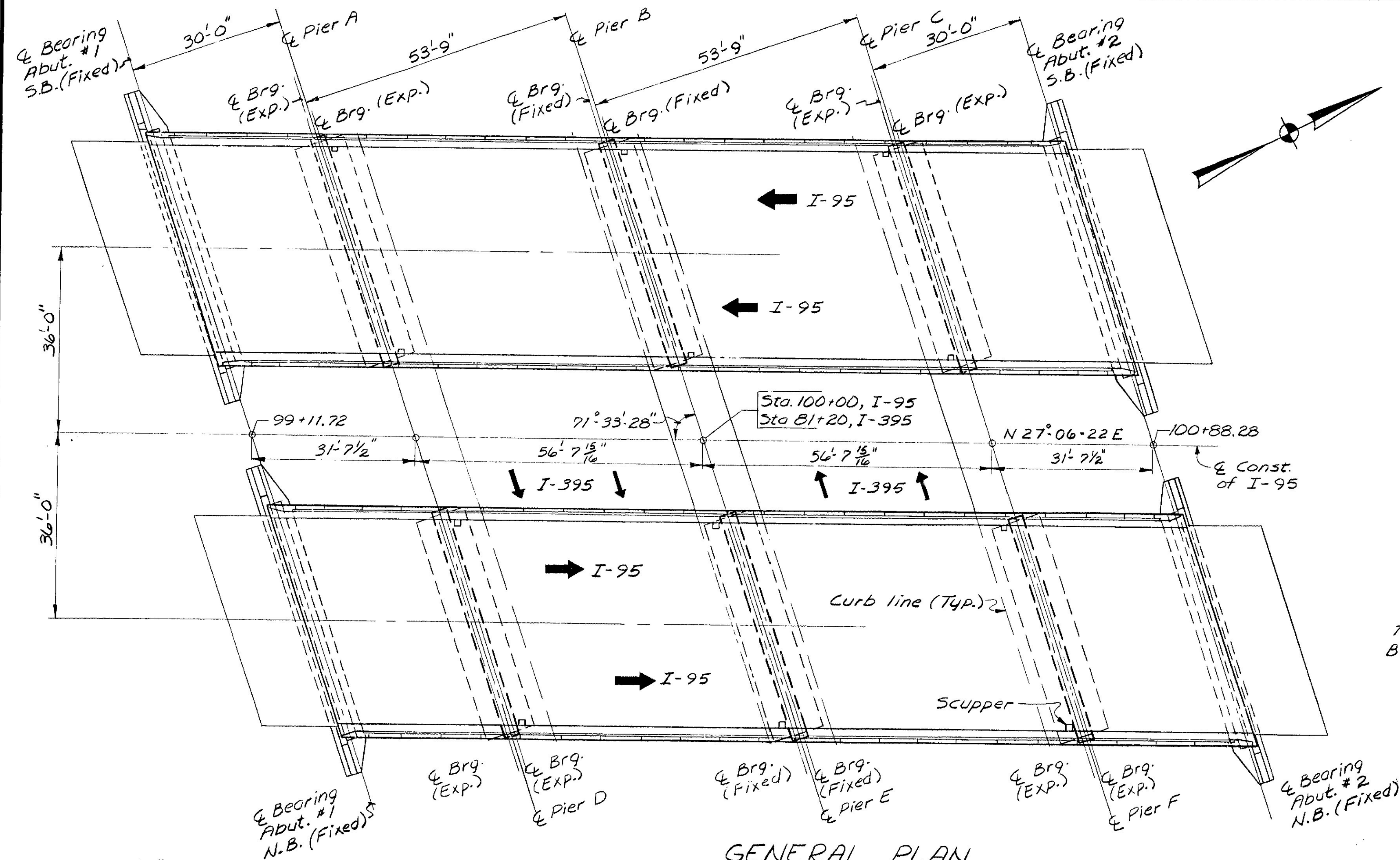
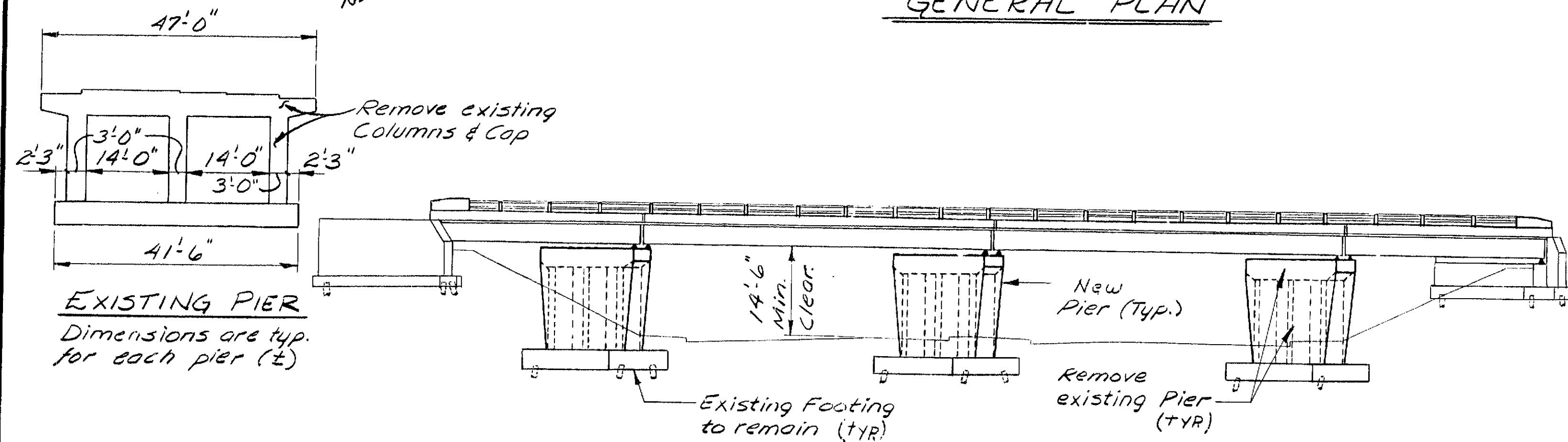


PROJECT DESIGN ENGINEER	DATE
DESIGN - DETAILED	11/83
CHECKED	LSB
REVISIONS	3/84
FIELD CHANGES	
PLANS	

BRUNING 44-132 45710-1



GENERAL PLAN



ELEVATION
(Typ. NB. & S.B.)

SPECIFICATIONS:

DESIGN - Load factor design per AASHTO Standard Specifications for Highway Bridges 1983

CONTRACT - State of Maine, Dept. of Transportation, Standard Specifications, Highways & Bridges, Revision of June 1984.

Plans of the existing bridge are available for the Contractor's reference at the Bridge Design Office in Augusta. The plans are reproductions of original drawings as prepared for the construction of the bridge and it is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.

MATERIALS

Concrete - - - - - Class A
Reinforcing Steel - ASTM A615 Grade 60
Structural Steel - ASTM A36

BASIC DESIGN STRESSES

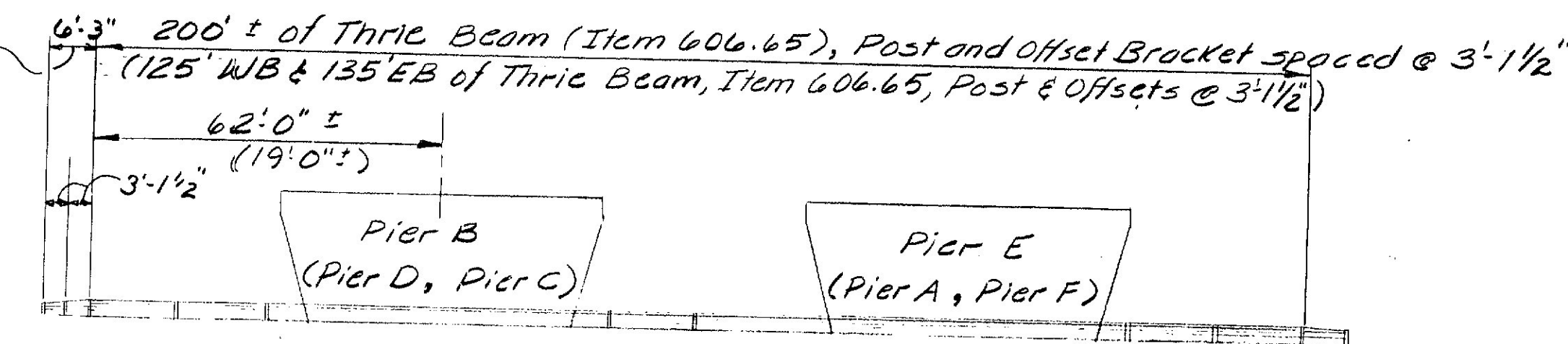
Concrete - - - - - $f_c = 3,000$ psi
Reinforcing Steel - $f_y = 60,000$ psi
Structural Steel - $F_y = 36,000$ psi

DESIGN LOADING

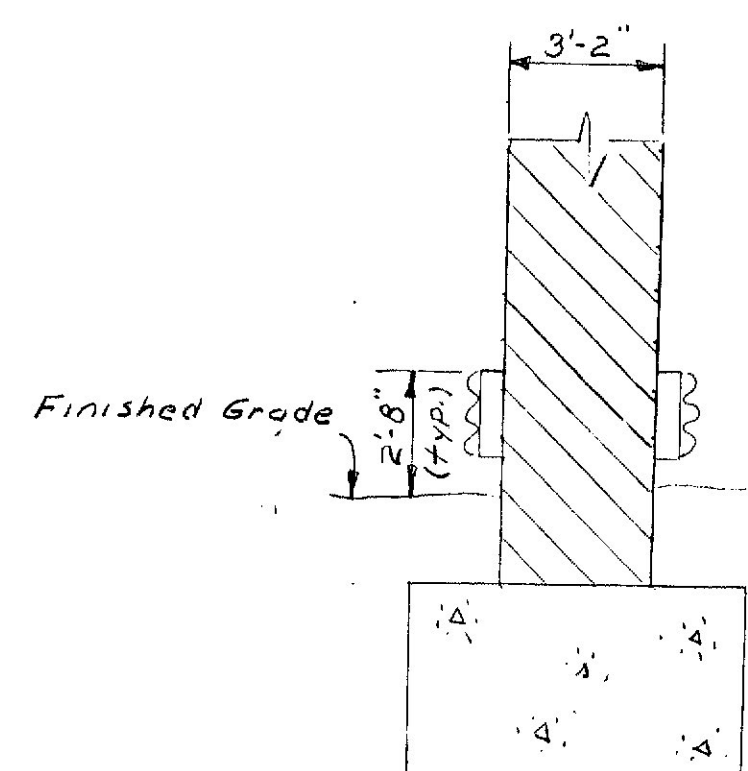
Live Load - H520

ESTIMATED QUANTITIES			
ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
202.121	Removing existing concrete	L.S.	1
206.10	Structural earth excavation - piers	C.Y.	85
502.23	Structural concrete piers	C.Y.	530
503.12	Reinforcing steel fabricated and delivered	LBS.	23,800
503.13	Reinforcing steel placing	LBS.	23,800
504.70	Structural steel fabricated and delivered	L.S.	1
504.71	Structural steel erection	L.S.	1
506.141	Field painting new structural steel	L.S.	1
514.06	Curing box for concrete cylinders	Each	1
526.301	Temporary concrete barrier type 1	L.S.	1
606.65	Guard rail three beam - single rail	L.F.	600
606.70	Transition section - three beam	Each	8
627.621	6 inch broken white pavement marking line	L.F.	1,200
627.67	Removing pavement markings	S.F.	150
627.691	Temp. 6" plastic pavement marking line, yellow or white	L.F.	2,400
652.30	Flashing Arrow Board	Each	2
652.31	Type 1 Barricade	Each	60
652.33	Drum	Each	10
652.34	Cone	Each	10
652.35	Construction signs	S.F.	500
652.361	Maintenance of traffic control devices	L.S.	1
652.38	Flagger	M.H.	200
659.10	Mobilization	L.S.	1
Estimate of Lump Sum Quantities			
202.121	Removing existing concrete	C.Y.	200
504.70	Structural steel fabricated and delivered	LBS.	8544

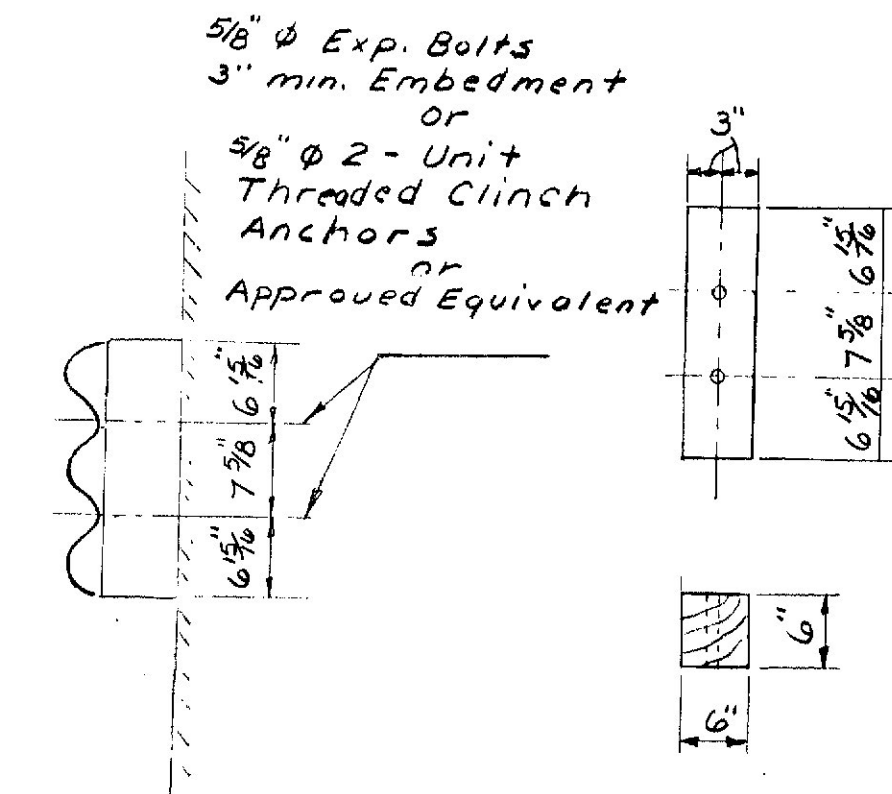
Transition Three Beam to Standard (TYP.) (Item 606.70)



ELEVATION

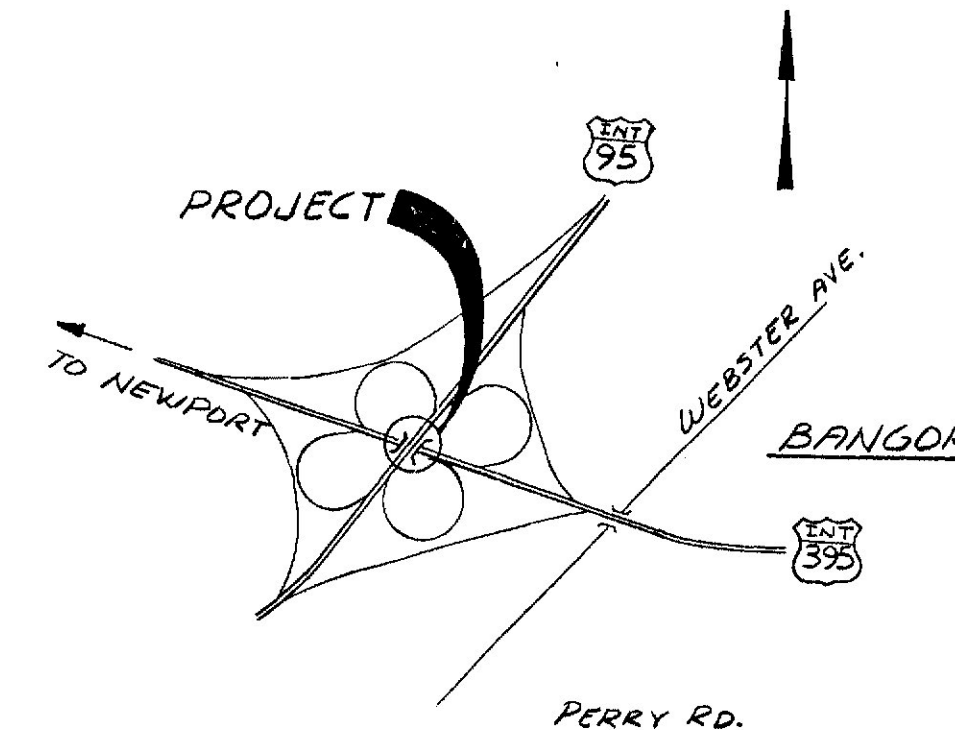


SECTION



DETAIL

WOOD OFFSET BRACKET



LOCATION PLAN

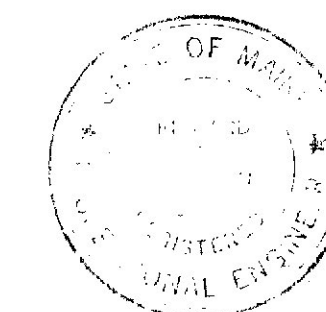
Scale in feet

LIST OF DRAWINGS

1. General Plan
2. Reinforcing Steel Schedule
3. Piers

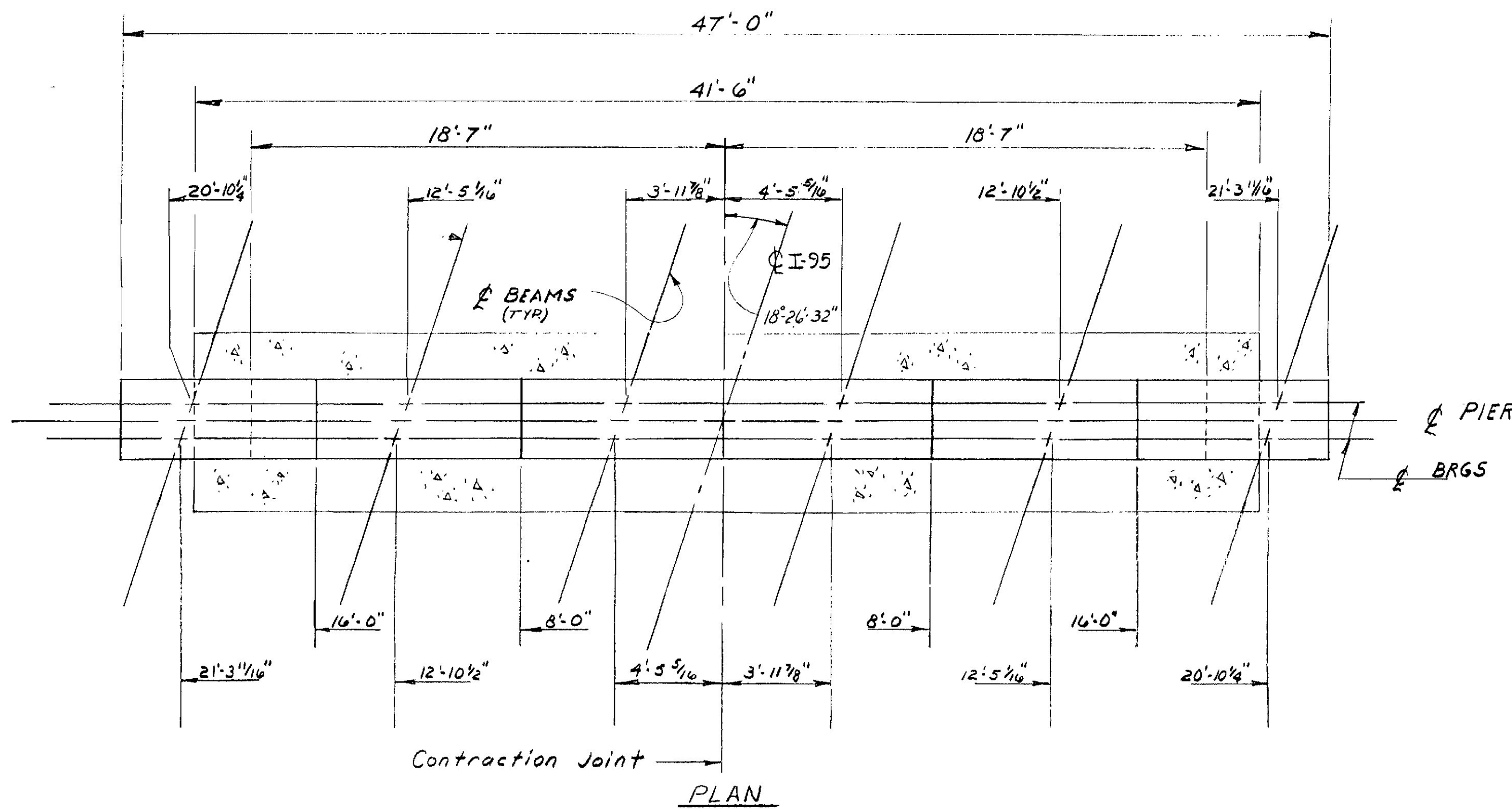
Standards

4. BD101-81
5. BD127-81
6. Maintenance of Traffic



United States Department of Transportation Federal Highway Administration	
Approved:	Date
Division Administrator	
Approved: State of Maine Department of Transportation	
Commissioner	11-19-84 Date
Chief Engineer	11-19-84 Date

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
INTERSTATE 95 over INTERSTATE 395
BANGOR PENOBSCOT COUNTY GENERAL PLAN
SHEET 1 OF 8 AUGUSTA, MAINE

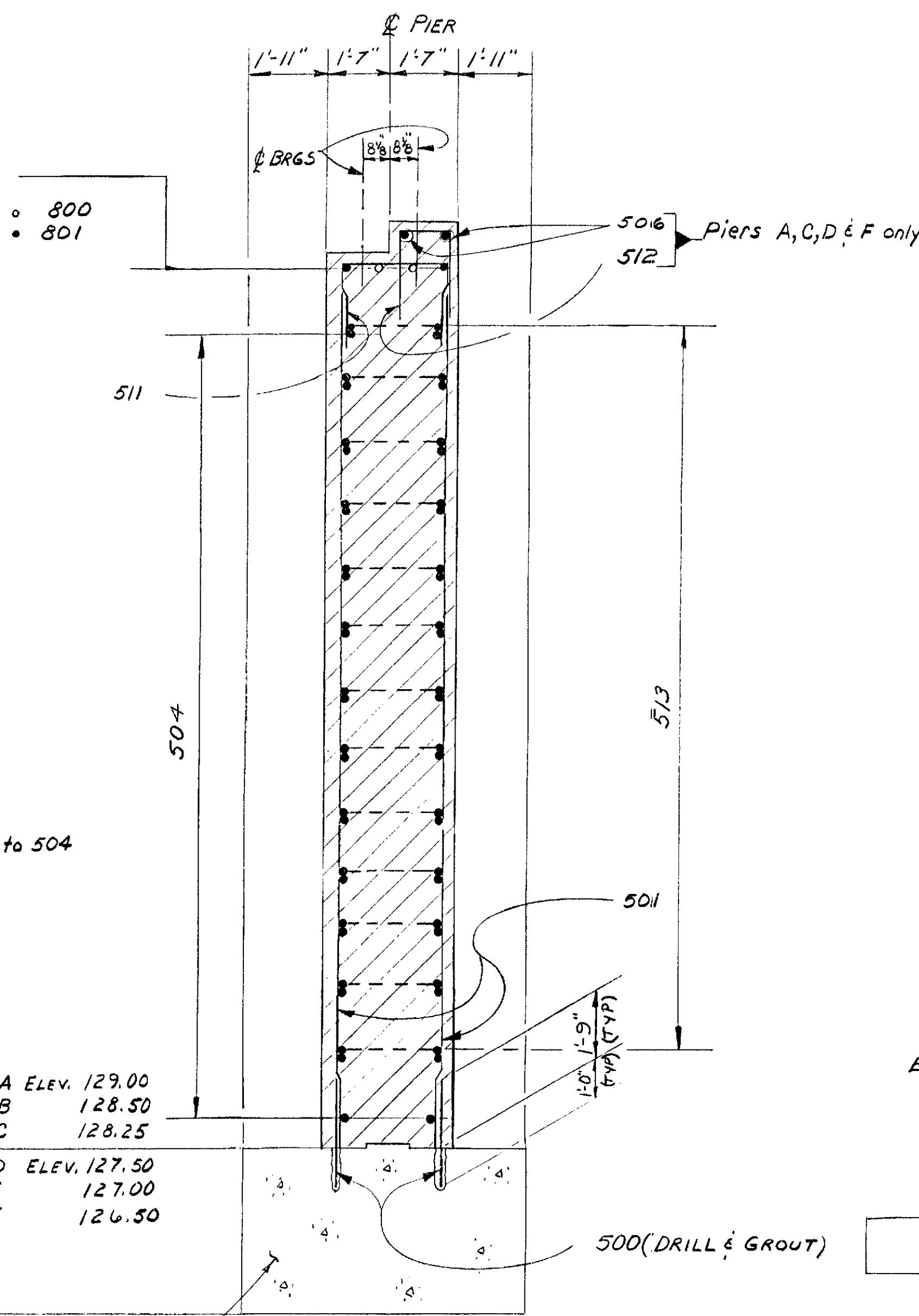


SCHEDULE OF BRIDGE SEAT ELEVATIONS					
PIER A		PIER B		PIER C	
144.66	144.62	145.27	145.28	144.72	144.76
145.32	144.80	145.44	145.44	144.89	145.41
145.52	145.00	145.63	145.64	145.07	145.65
145.67	145.15	145.77	145.77	145.21	145.73
145.63	145.11	145.73	145.73	145.15	145.68
144.95	144.92	145.53	145.53	144.95	144.98
PIER D		PIER E		PIER F	
145.00	144.94	145.52	145.53	144.92	144.95
145.68	145.15	145.73	145.73	145.11	145.63
145.73	145.21	145.78	145.77	145.15	145.67
145.60	145.07	145.63	145.63	144.99	145.52
145.41	144.89	145.45	145.44	144.80	145.32
144.76	144.73	145.27	145.27	144.63	144.66

ELEVATIONS IN THE LEFT COLUMN REPRESENT SOUTHERLY BRIDGE SEAT ELEVATIONS AND ARE GIVEN WEST TO EAST.

NOTES

1. Reinforcing steel shall have 3 inches minimum cover.
2. Grout shall contain a non-shrink additive and shall be approved by the Engineer. Drilling and grouting shall be considered incidental to reinforcing steel placing.
3. Existing dowels to remain shall be cleaned.
4. Traffic shall be channeled for lane closure by use of continuous concrete barrier. The barrier shall be tapered at 14:1 for the width of the lane closure.
5. Elevation datum is taken from plans of the existing bridge. The existing vertical alignment of the superstructure shall be maintained.
6. The superstructure shall be supported by falsework for not more than one pier at a time per bridge. See special provision; Section 502.
7. Removal and resetting of bearings at piers B and E shall be considered incidental to related contract items. (24 required)
8. Removal of bearings at piers A, C, D, & F shall be considered incidental to item 202.121, Removing Existing Concrete.
9. All existing expansion bearings and masonry plates at piers A, C, D & F shall be replaced with EPC-2 type bearings conforming to standard detail BD101-81. (48 required)
10. Two 1/4" Ø swedge bolts with hex nuts and washers shall be installed at each bearing on piers B & E and shall be 25" long with 15" of embedment and 5" of threaded length. Payment shall be considered incidental to items 504.70 and 504.71.
11. Piers shall be backfilled to the existing elevations.
12. Maintain full traffic on I-95. Maintain one 12' lane of traffic on I-395 in each direction.
13. Material for wood offset brackets shall be as specified for wood posts in subsection 710.07(a). Payment for wood offset brackets and anchorage in pier concrete shall be considered incidental to item 606.65.
14. Existing Guard Rail shall be removed to install new Thrie Beam Guard Rail. Removal and disposal of existing Guard Rail will be considered incidental to Item 606.65. Connection of the existing Guard Rail to transition Thrie Beam shall be as directed by the engineer and considered incidental to Item 606.70.



PIER: A	ELEV. 129.00
B	128.50
C	128.25
PIER: D	ELEV. 127.50
E	127.00
F	126.50

LEGEND

E.F. = EACH FACE

SYMBOLS

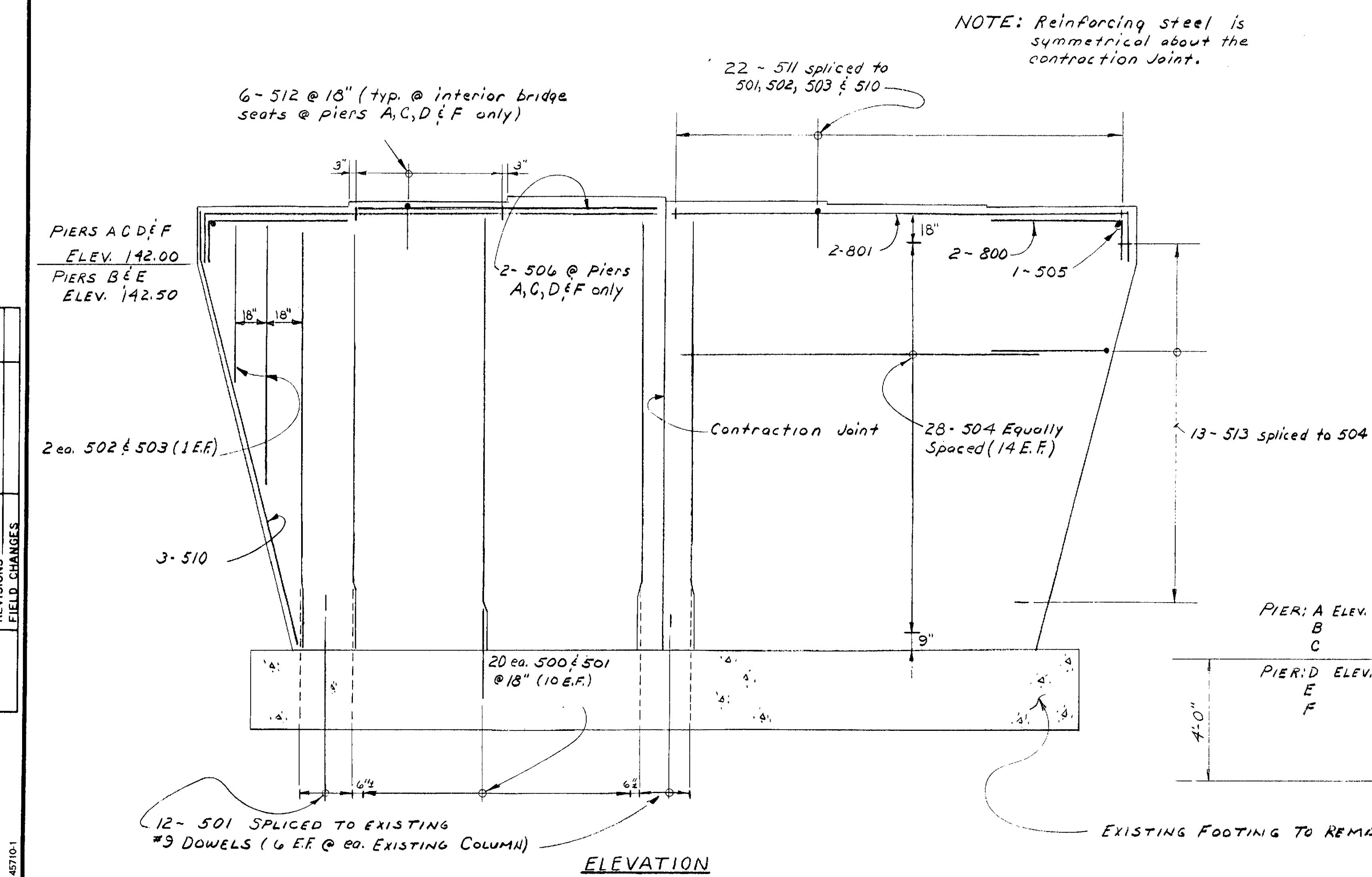
- NEW CONCRETE (PLAN & ELEVATION)
- NEW CONCRETE (SECTION)
- EXISTING CONCRETE (TO REMAIN)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

INTERSTATE 95
OVER
INTERSTATE 395
BANGOR
PIERS

PROJECT DESIGN ENGINEER	DATE
BY: JEB	2-94
CHECKED: JEB	3/94
REVISIONS	
FIELD CHANGES	

PLANS



ELEVATION

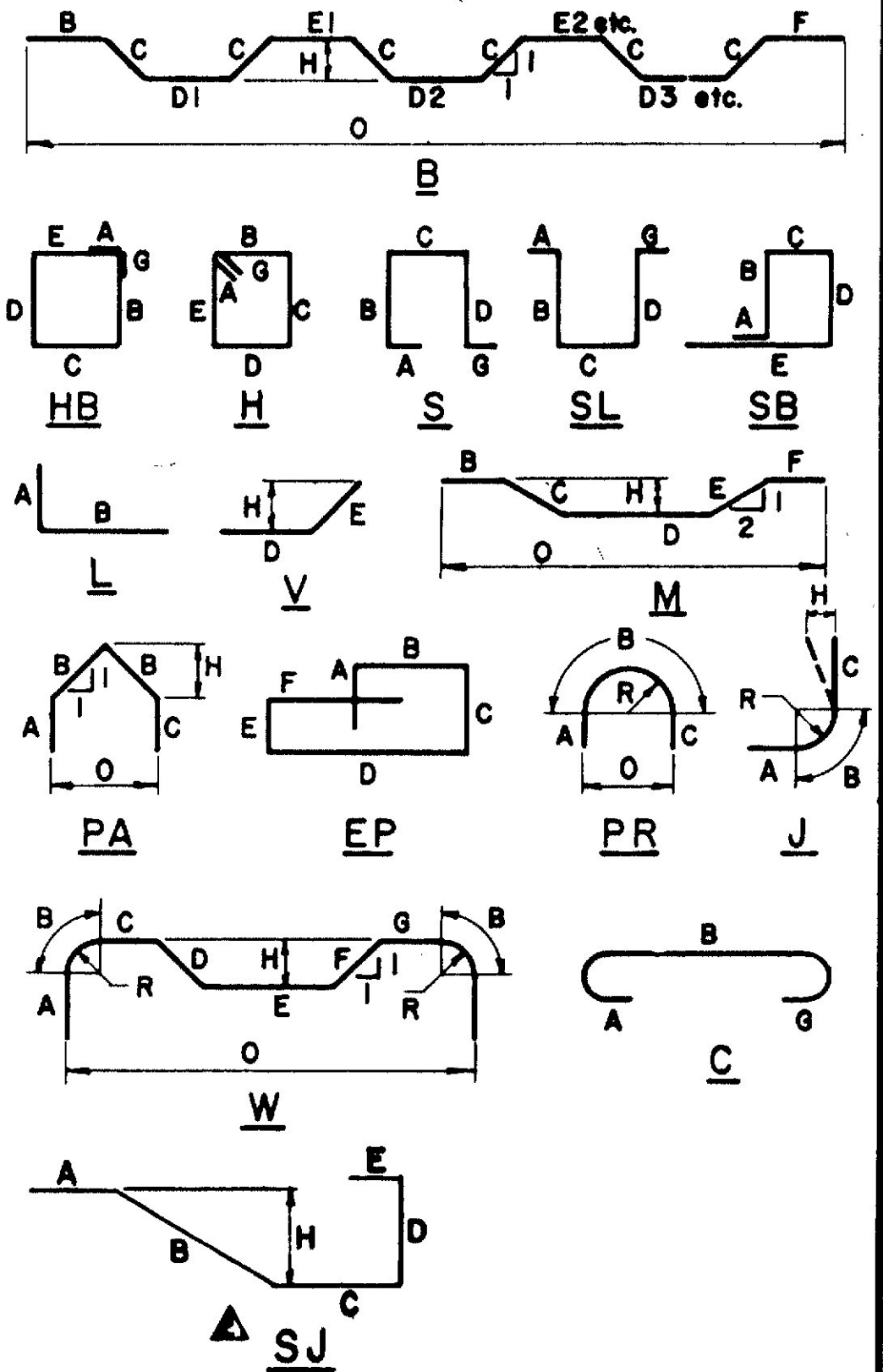
SECTION

REINFORCING STEEL SCHEDULE

FWA REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE		3	8

IR-95-8(31) 176

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar
Bending details and hooks shall conform to
the recommendations of the current revision
of ACI Standard 318. Δ
Reinforcing Bar: A57M A615 Grade 60

GENERAL NOTES

1. 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
2. Each truss bar, Type B, may be replaced by two (2) straight bars (one top & one bottom) of the same bar size as the truss bar. Payment in either case shall be based on truss bars as scheduled on plans.

Δ New Bent Bar Type 5J	9-26-83
Δ Revised ACI Standard	5-12-83

REVISIONS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

INTERSTATE 95
OVER
INTERSTATE 395
BANGOR

REINFORCING STEEL SCHEDULE

SHEET 3 OF 8 AUGUSTA, MAINE

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
			PIER A				PIER F									PIER	A									
A500	40	2'-9"	Dowels	F500	40	2'-9"	Dowels					A510	6	16'-3"	V				13'-11"	2'-4"				0'-10"		Vertical
501	76	15'-4"	Vertical	501	76	17'-10"	Vertical					511	44	7'-0"	S	O	2'-2"	2'-8"	2'-2"			O				Stirrups
502	4	11'-10	"	502	4	13'-9"	"					512	24	4'-5"	S	O	1'-8"	1'-1"	1'-8"			O				"
503	4	8'-1"	"	503	4	9'-1"	"					513	26	15'-4"	S	O	6'-4"	2'-8"	6'-4"			O				Horizontal
504	56	18'-4"	Horizontal	504	56	18'-4"	Horizontal																			
505	2	2'-8"	"	505	2	2'-8"	"					A800	4	10'-9"	L	2'-9"	8'-0"									Horizontal
506	4	15'-6"	"	506	4	15'-6"	"					801	4	25'-9"	L	2'-9"	23'-0"									"
																PIER	B									
			PIER B																							
B500	40	2'-9"	Dowels									B510	6	17'-4"	V				14'-10"	2'-6"				0'-10"		Vertical
501	76	16'-6"	Vertical									511	44	7'-0"	S	O	2'-2"	2'-8"	2'-2"			O				Stirrups
502	4	12'-8"	"																							
503	4	8'-5"	"									B513	26	15'-4"	S	O	6'-4"	2'-8"	6'-4"			O				Horizontal
504	56	18'-4"	Horizontal																							
505	2	2'-8"	"									B800	4	10'-9"	L	2'-9"	8'-0"									Horizontal
												801	4	25'-9"	L	2'-9"	23'-0"									"
																PIER	C									
			PIER C									C510	6	17'-0"	V				14'-7"	2'-5"				0'-10"		Vertical
C500	40	2'-9"	Dowels									511	44	7'-0"	S	O	2'-2"	2'-8"	2'-2"			O				Stirrups
501	76	16'-2"	Vertical									512	24	4'-5"	S	O	1'-8"	1'-1"	1'-8"			O				"
502	4	12'-6"	"									513	26	15'-4"	S	O	6'-4"	2'-8"	6'-4"			O				Horizontal
503	4	8'-4"	"																							
504	56	18'-4"	Horizontal									C800	4	10'-9"	L	2'-9"	8'-0"									Horizontal
505	2	2'-8"	"									801	4	25'-9"	L	2'-9"	23'-0"									"
506	4	15'-6"	"													PIER	D									
												D510	6	17'-9"	V				15'-3"	2'-6"				0'-10"		Vertical
			PIER D									511	44	7'-0"	S	O	2'-2"	2'-8"	2'-2"			O				Stirrups
D500	40	2'-9"	Dowels									512	24	4'-5"	S	O	1'-8"	1'-1"	1'-8"			O				"
501	76	16'-11"	Vertical									513	26	15'-4"	S	O	6'-4"	2'-8"	6'-4"			O				Horizontal
502	4	13'-0"	"																							
503	4	8'-8"	"									D800	4	10'-9"	L	2'-9"	8'-0"									Horizontal
504	56	18'-4"	Horizontal									D801	4	25'-9"	L	2'-9"	23'-0"									"
505	2	2'-8"	"													PIER	E									
506	4	15'-6"	"									E510	6	18'-9"	V				16'-3"	2'-6"				0'-10"		Vertical
												511	44	7'-0"	S	O	2'-2"	2'-8"	2'-2"			O				Stirrups
			PIER E																							
E500	40	2'-9"	Dowels									E513	26	15'-4"	S	O	6'-4"	2'-8"	6'-4"			O				Horizontal
501	76	18'-0"	Vertical																							
502	4	13'-9"	"									E800	4	10'-9"	L	2'-9"	8'-0"									Horizontal
503	4	9'-1"	"									801	4	25'-9"	L	2'-9"	23'-0"									"
504	56	18'-4"	Horizontal													PIER	F									
505	2	2'-8"	"									F510	6	18'-7"	V				16'-3"	2'-4"				0'-8"		Vertical
												511	44	7'-0"	S	O	2'-2"	2'-8"	2'-2"			O				Stirrups
												512	24	4'-5"	S	O	1'-8"	1'-1"	1'-8"			O				"
												513	26	15'-4"	S	O	6'-4"	2'-8"	6'-4"			O				Horizontal
												F800	4	10'-9"	L	2'-9"	8'-0"									Horizontal
												F801	4	25'-9"	L	2'-9"	23'-0"									"
												MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

DATE	BY	DESIGN - DETAIL	CHECKED	REVISIONS	FIELD CHANGES
3-84	JEB	JEB	JEB		
11-84					



A.S.T.M. STEEL CLASSIFICATION

- ## REVISIONS

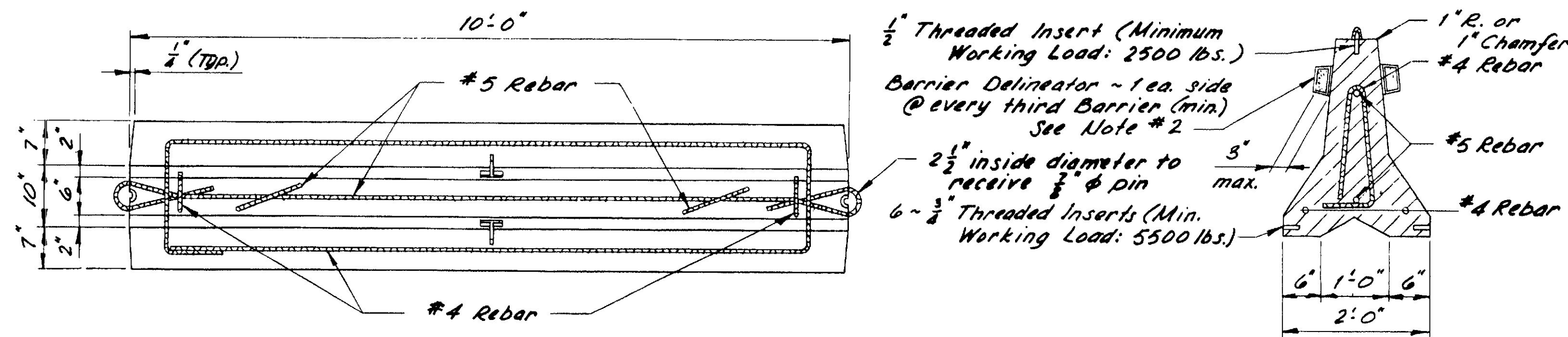
DATE SHEET 4 OF 8 AUGUSTA, MAINE JUNE 1981

PEDESTALS — ALLOWABLE LOADS & DIMENSIONS														
<i>Pedestal</i>	<i>Load</i>	A	B	C	D	E	F	G	H	J	K	L	M	N
EPA	132 ^K	—	—	—	—	—	—	—	—	8"	4"	3½"	5½"	
FPA	150 ^K	—	—	—	—	—	—	—	—	—	—	—	—	
EPB-1	120 ^K	—	6"	8"	17"	8"	10"	6"	7½"	2"	8"	4"	3½"	5½"
EPB-2	165 ^K	—	7"	10"	14½"	9"	14"	7"	8"	3"	10"	5"	3½"	6½"
EPB-3	224 ^K	—	8"	14"	24"	10"	14"	8"	10"	4½"	14"	5"	4½"	28"
FPB-1	120 ^K	—	6"	8"	17"	8"	—	—	7½"	2"	—	—	—	—
FPB-2	165 ^K	—	7"	10"	14½"	9"	—	—	8"	3"	—	—	—	—
FPB-3	224 ^K	—	8"	14"	24"	10"	—	—	10"	5"	—	—	—	—
EPC-1	70 ^K	9½"	6"	8"	14"	8"	1½"	3½"	3"	3"	4½"	—	½"	6"
EPC-2	100 ^K	11½"	8"	8"	14"	8"	1½"	3½"	3"	3"	6½"	—	½"	6"
EPC-3	130 ^K	14"	10"	8"	14"	9"	1½"	4"	3"	3"	8½"	—	½"	7"
EPC-4	160 ^K	17"	10"	8"	14"	9"	1½"	4"	4"	3"	24"	—	½"	7"
EPC-5	190 ^K	14"	14"	10"	9"	24"	10"	2"	4½"	5"	3"	24"	—	½"
EPC-6	220 ^K	14½"	14"	10"	24"	14"	2½"	5"	5"	3"	10½"	—	1"	8"
EPC-7	250 ^K	14½"	14"	14"	14"	2½"	14"	2½"	5"	5"	4"	10½"	—	1"
FPC-1	100 ^K	—	—	8"	14"	9"	1½"	2½"	8"	—	6½"	—	—	6"
FPC-2	160 ^K	—	—	8"	14"	10"	1½"	3"	8"	—	6½"	—	—	7"
FPC-3	190 ^K	—	—	9"	24"	10"	1½"	3"	10"	—	6½"	—	—	8"
FPC-4	220 ^K	—	—	10"	24"	14"	1½"	4"	10"	—	6½"	—	—	8"
FPC-5	250 ^K	—	—	14"	24"	14"	2"	4"	10"	—	6"	—	—	8"

STANDARD DETAILS

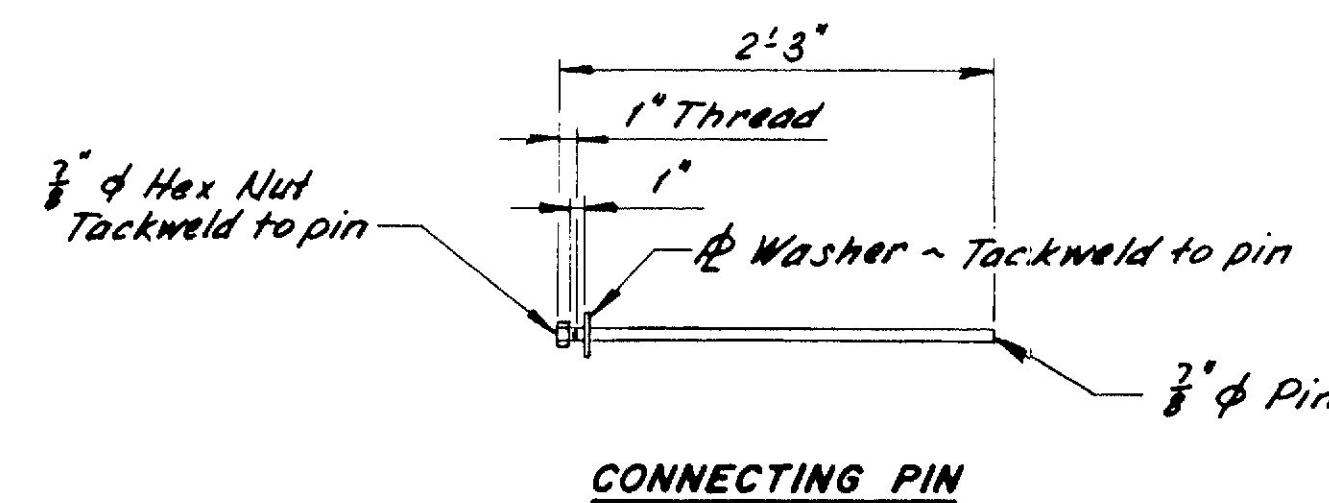
(BD 101 - 81)

BEARING PEDESTALS

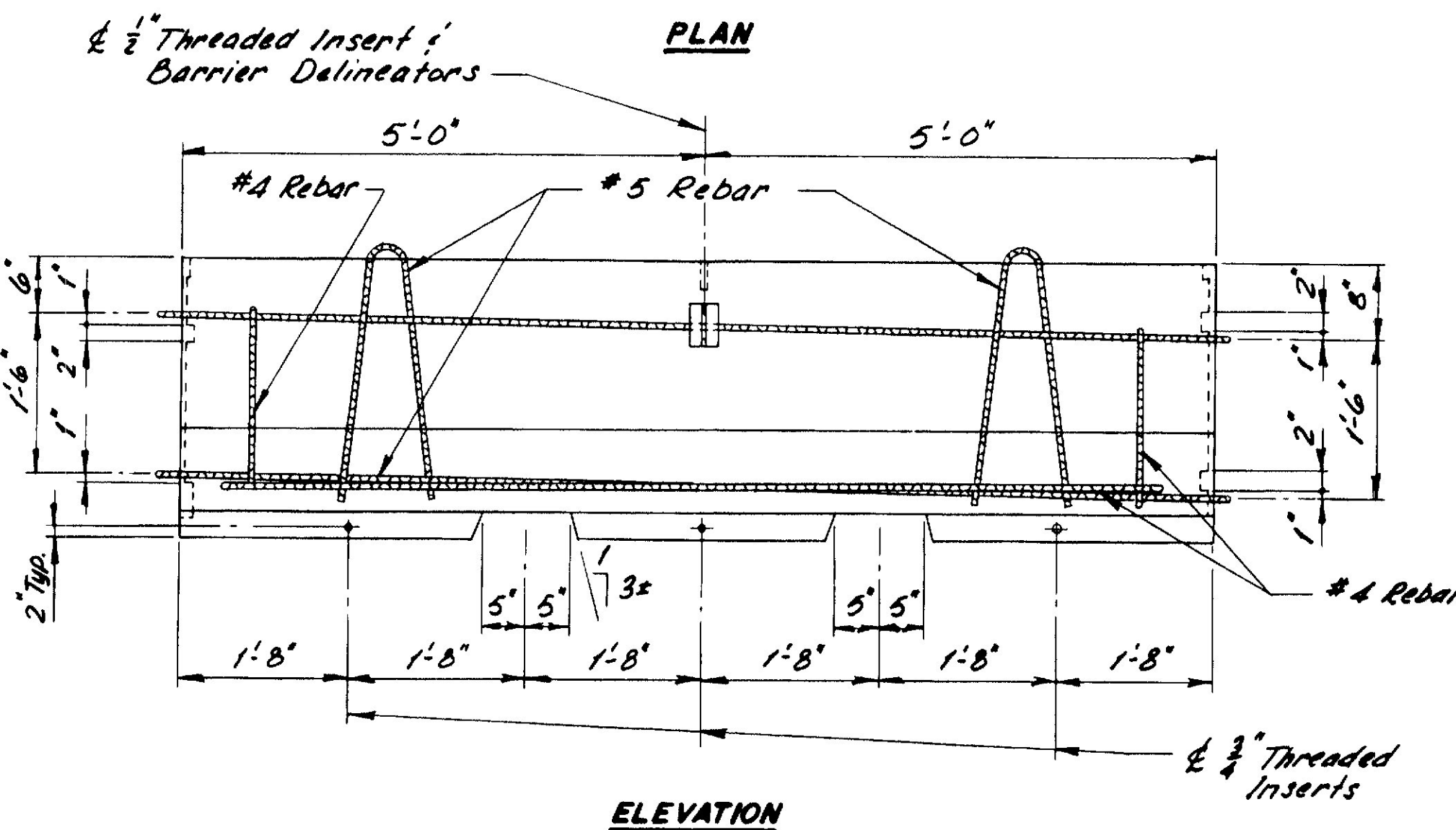


NOTES:

- The reinforcing steel, end connections, lifting arrangement, and sizes and locations of hold-down inserts are advisory only. It shall be the Contractor's responsibility to provide adequate reinforcing, and connections, lifting points, and hold-down arrangements.
- Barrier Delineators shall be bi-directional with a minimum effective reflex 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.



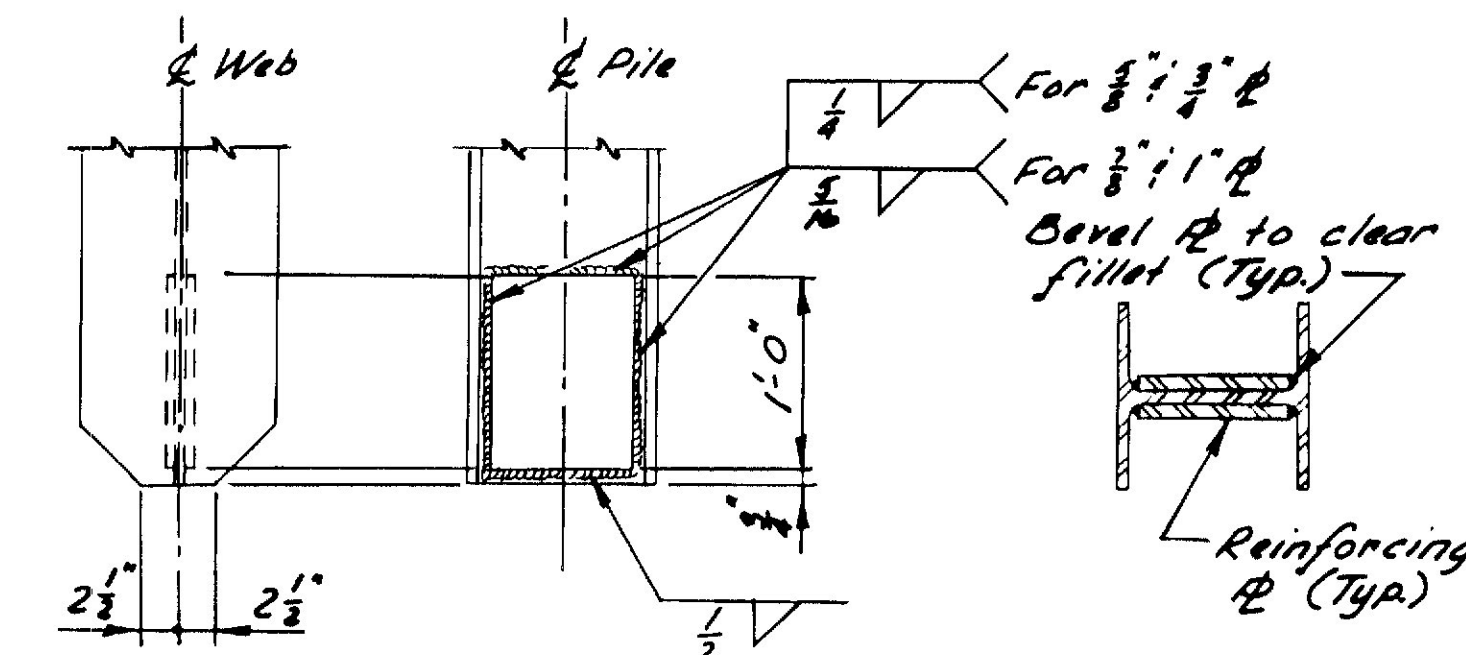
CONNECTING PIN



TYPICAL SECTION

END VIEW

TEMPORARY CONCRETE BARRIER - TYPE 1

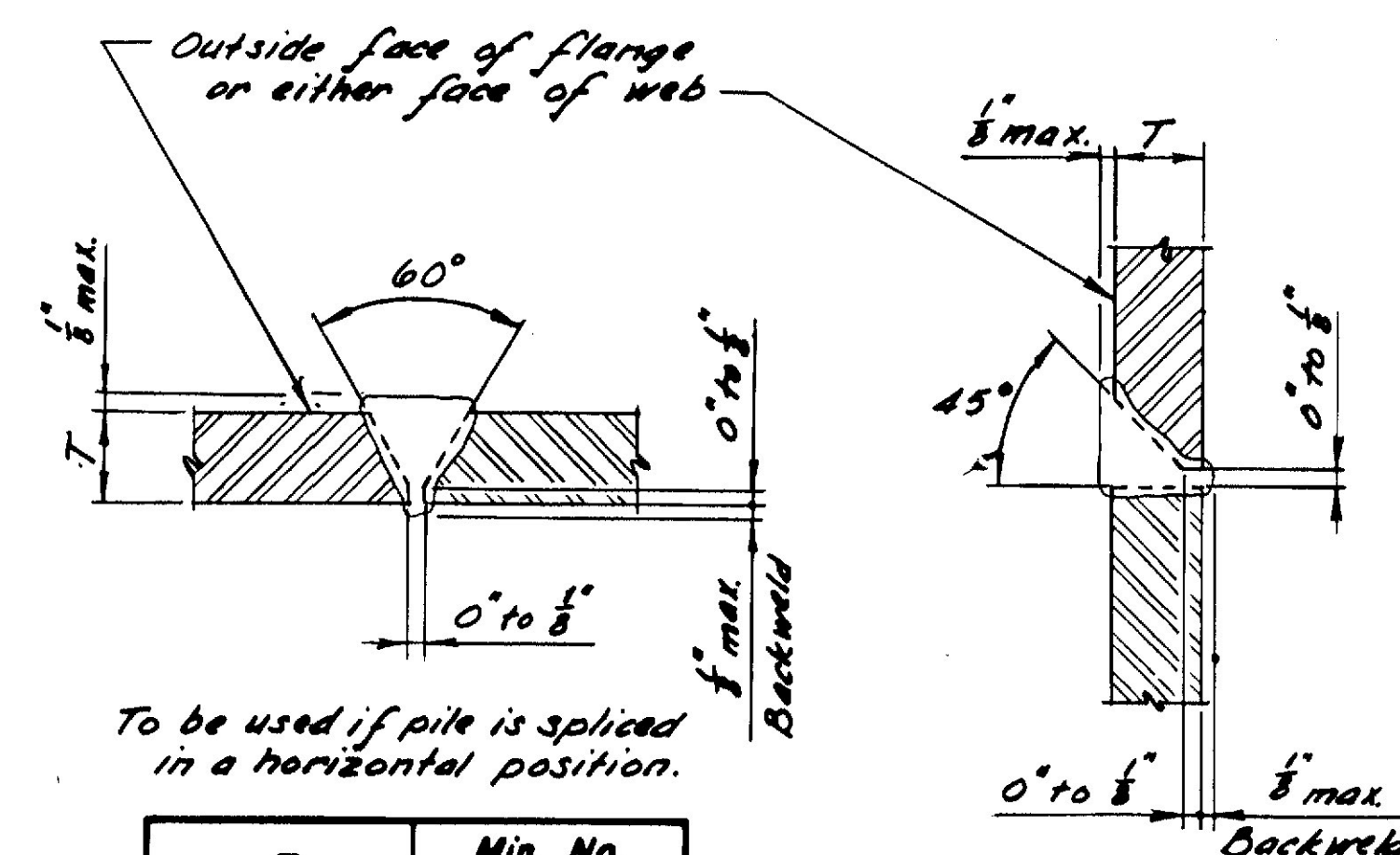


Pile Size	Reinf. ϕ Size	Pile Size	Reinf. ϕ Size
HP 10x42	8 3/4" x 5/8" x 1'-0"	HP 13x60 Δ	11 1/2" x 3/4" x 1'-0"
HP 10x57	8 3/4" x 7/8" x 1'-0"	HP 13x73 Δ	11 1/2" x 7/8" x 1'-0"
HP 12x53	10 3/4" x 5/8" x 1'-0"	HP 13x87 Δ	11 1/2" x 1" x 1'-0"
HP 12x63	10 3/4" x 3/4" x 1'-0"	HP 14x73	12 1/2" x 7/8" x 1'-0"
HP 12x74	10 3/4" x 7/8" x 1'-0"	HP 14x89	12 1/2" x 1" x 1'-0"

NOTES:

- Alternate Pointed Reinforced Pile Tips may be used if they have at least the cross-sectional area of the pile tip shown and are approved by the Engineer.
- Plates may be shop or field welded.
- Use Manual Shielded Metal-Arc Process and 6010, 6011, or 6012 electrodes, unless a different process has been approved by the Engineer.
- Electrodes shall be dry when used, in accordance with the provisions of A.W.S. Spec. D1.1, as amended by AASHTO.

POINTED REINFORCED PILE TIP



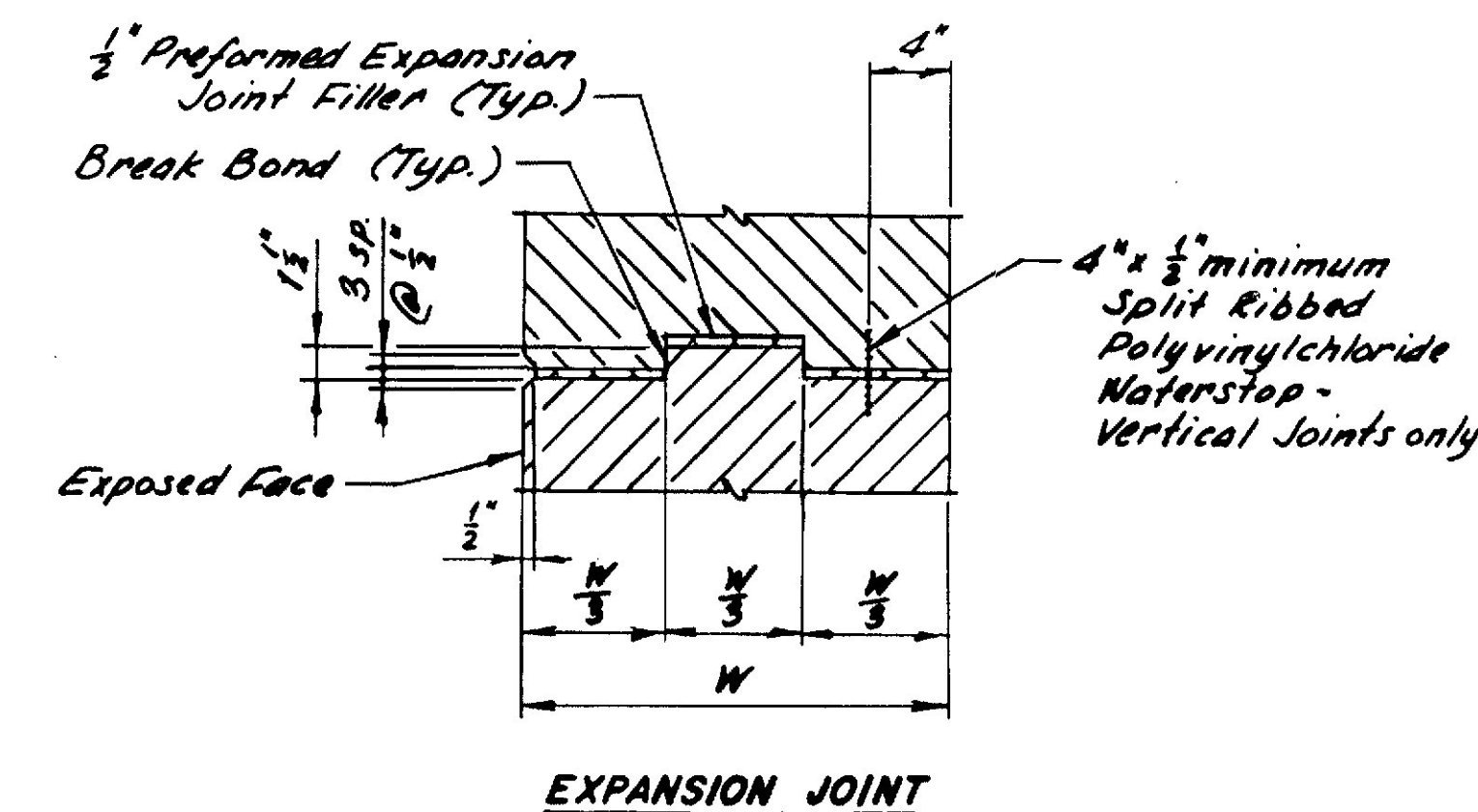
To be used if pile is spliced in a horizontal position.

T	Min. No. Passes
7/8"	3
1/2" x 3/8"	4
1/2" x 1/2"	5

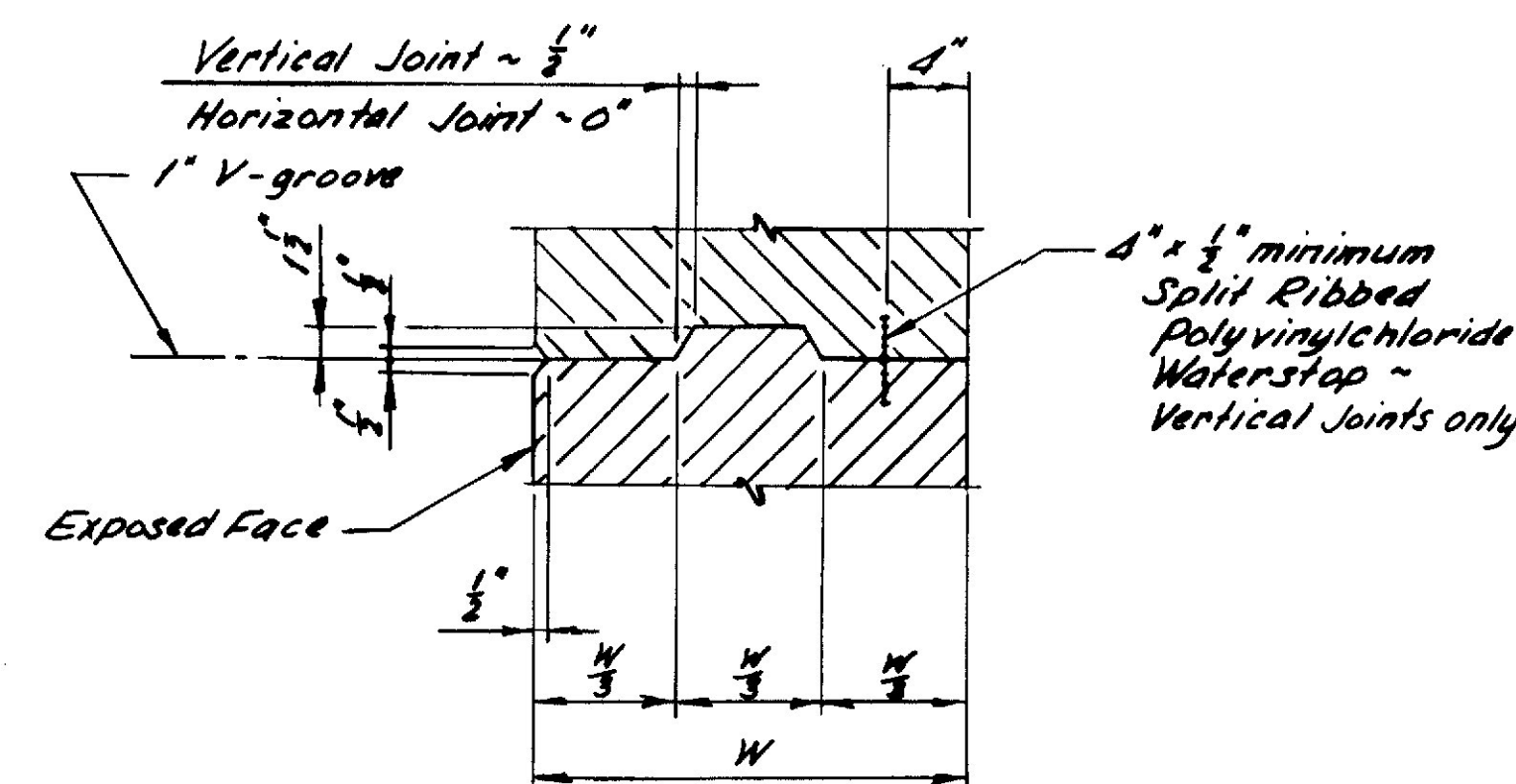
NOTES:

- All cutting shall be done with the use of a mechanical guide.
- Use Manual Shielded Metal-Arc Process and 6010, 6011, or 6012 electrodes, unless a different process has been approved by the Engineer.
- Electrodes shall be dry when used, in accordance with the provisions of A.W.S. Spec. D1.1, as amended by AASHTO.
- Gauge root before welding second side.

PILE SPLICE

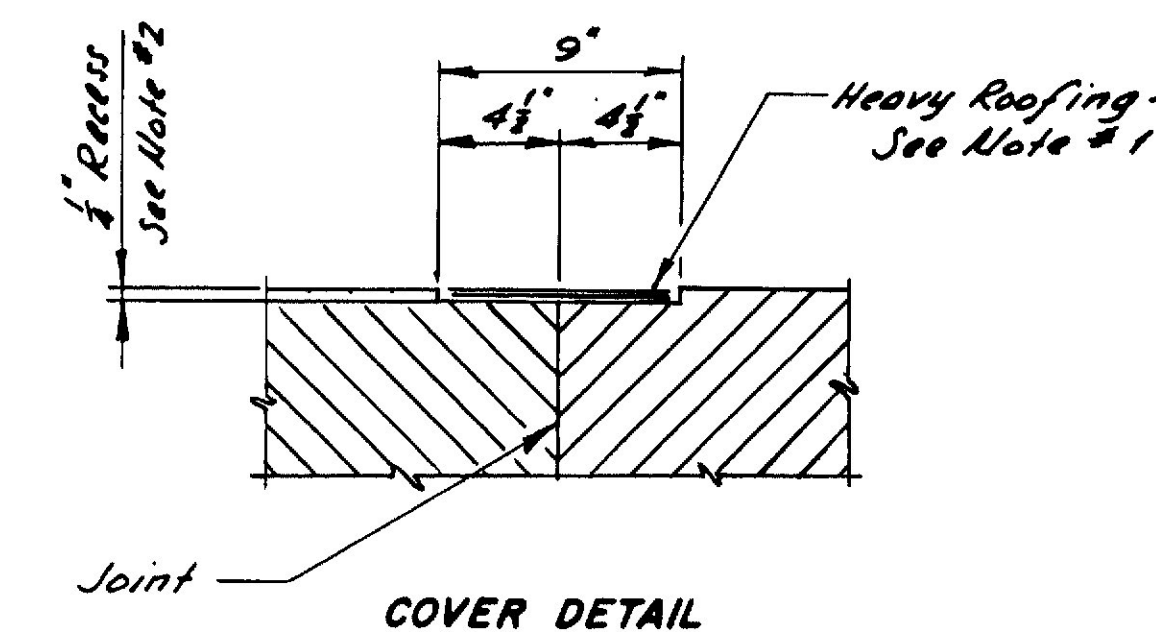


EXPANSION JOINT



CONSTRUCTION OR CONTRACTION JOINTS

CONCRETE JOINTS



NOTES:

- Where called for, cover horizontal and vertical construction, contraction, or expansion joints with two (2) 9" wide layers of heavy roofing felt. Coat the concrete and back of each layer as applied with plastic roofing cement.
- Recess the covered area 1/2" unless otherwise indicated on Design Drawings.

CONCRETE JOINT COVER

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

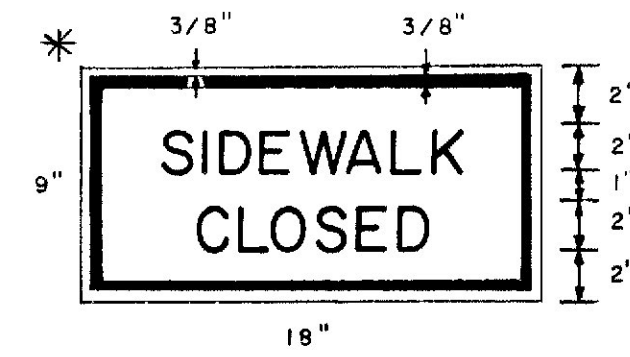
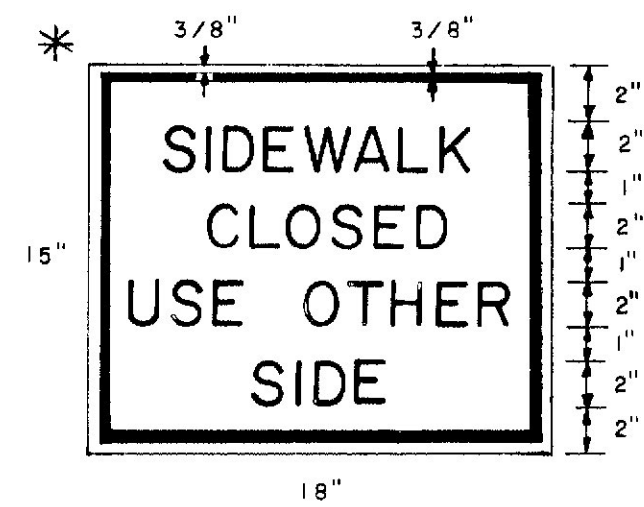
STANDARD DETAILS
(BD 127-81)

MISCELLANEOUS DETAILS

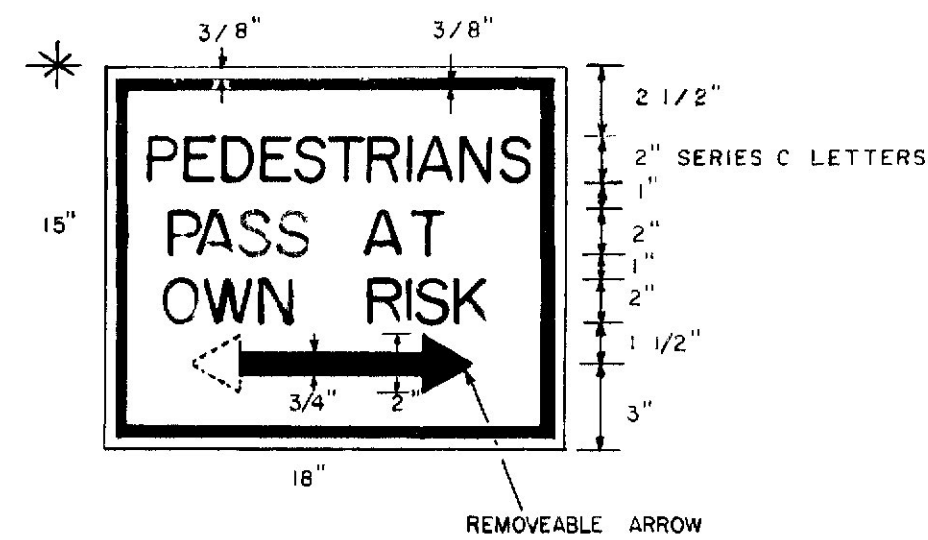
TEMP. CONC. BARRIER - TYPE 1
POINTED REINF. PILE TIP
PILE SPLICE - CONC. JOINTS
CONCRETE JOINT COVER

Δ Added 13 HP's
REVISIONS
Date

7-83
SHEET 5 OF 8 AUGUSTA, MAINE JUNE 1991



A



B



- 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

$$L = WS$$

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 feters equal to the numerical value of the operating speed, i.e., 50 MPH is 40 feet
 - (c) In all areas not covered above maximum spacing shall be as follows:
- | | |
|-----------------|-----------------------------|
| Radius of curve | |
| 300' to 300' | 25' |
| 300' to 700' | 50' |
| 700' to 1000' | 75' |
| over 1000' | 5 times the operating speed |

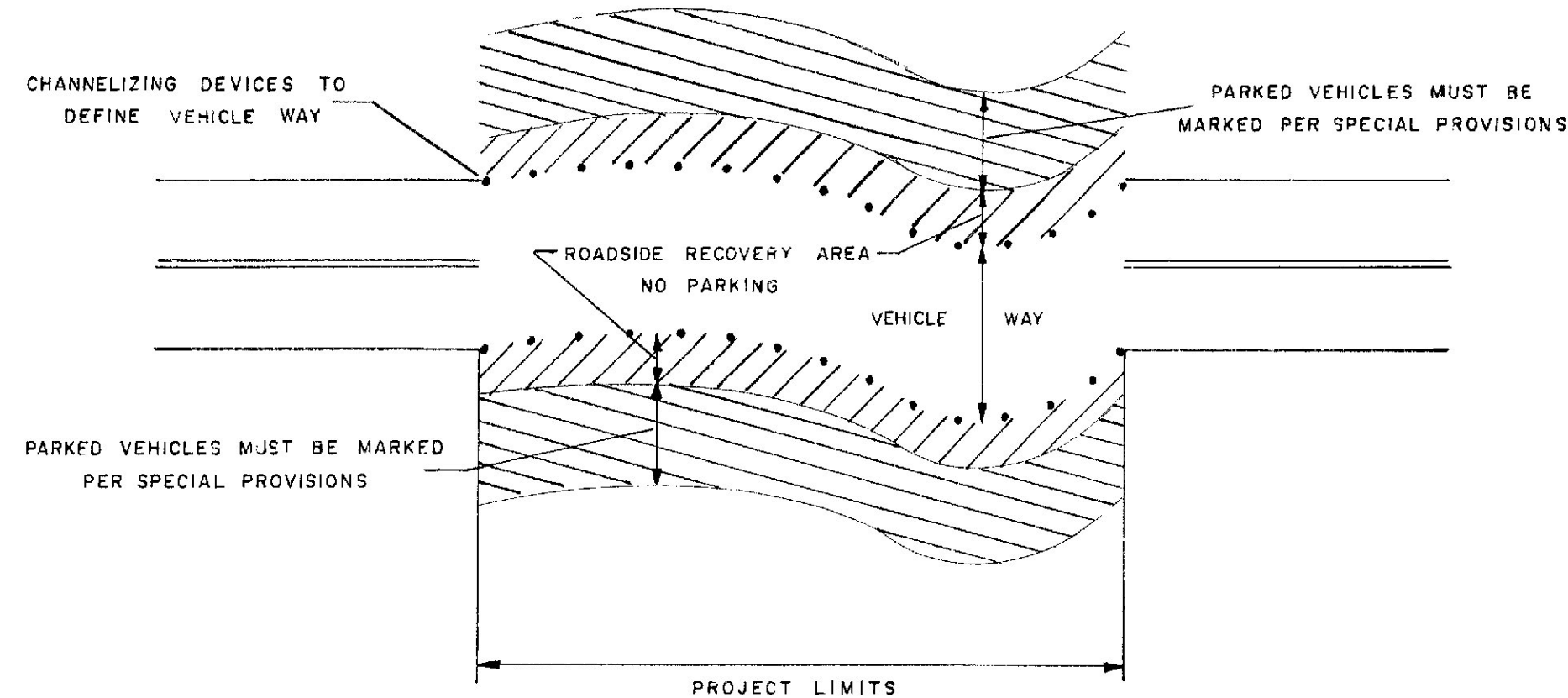
The maximum transverse spacing in tapers shall be determined from the the following formula:

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

Where:

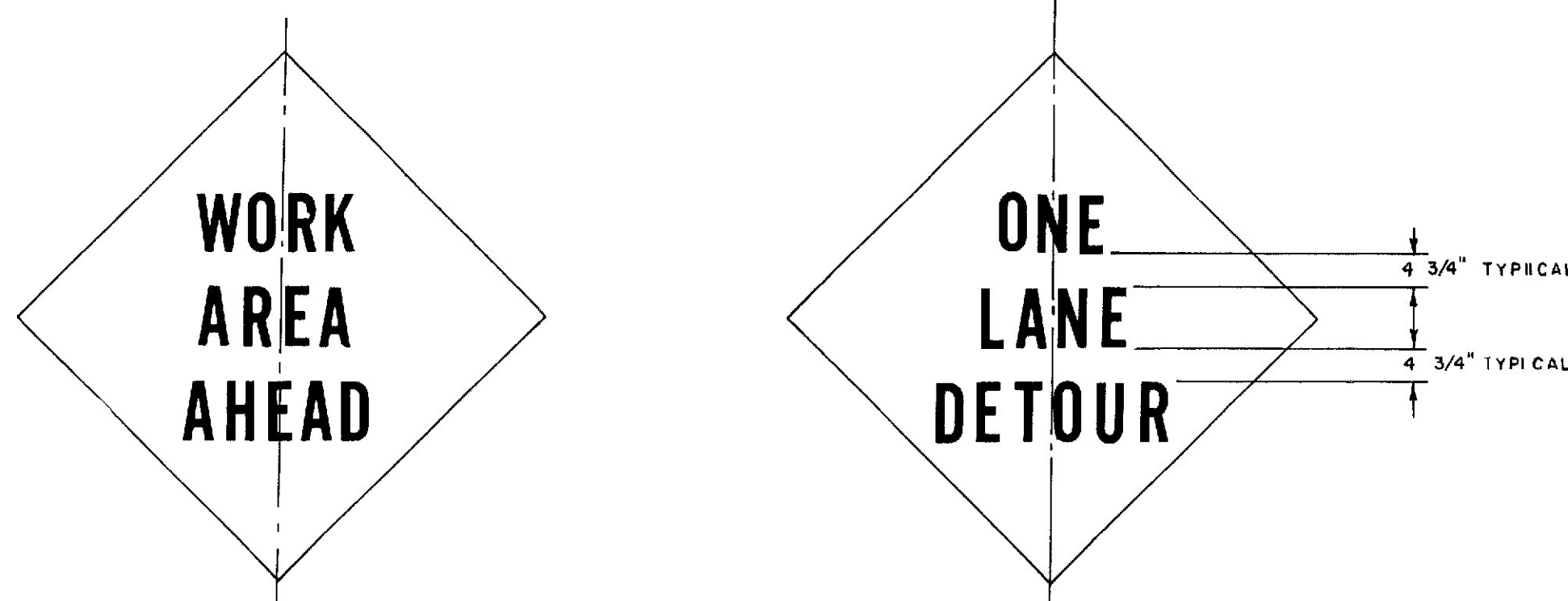
D = transverse spacing in feet
W = width of roadway to be closed in feet
L = taper length in feet
S = operating speed in MPH

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



C

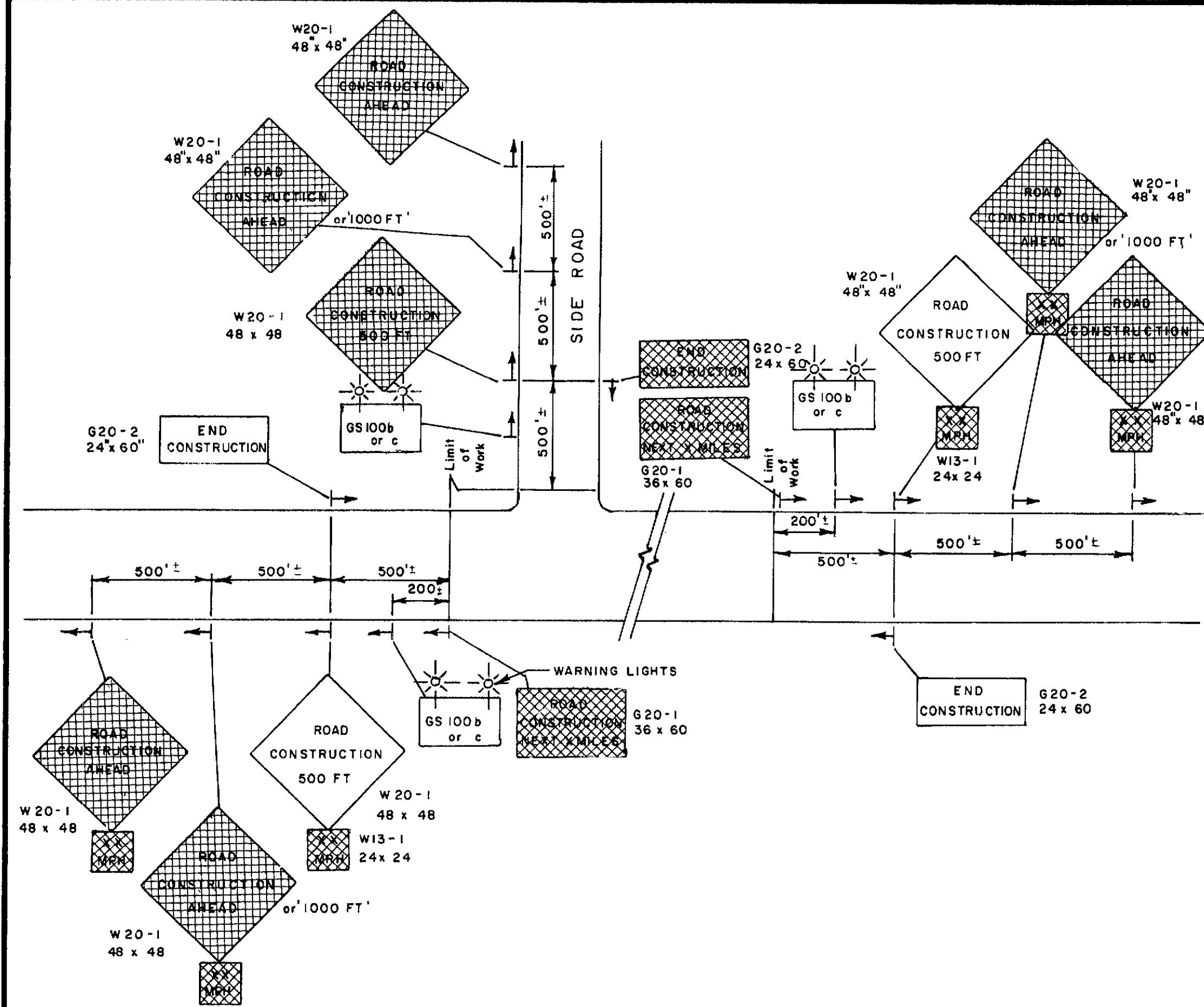
CONSTRUCTION WARNING SIGN DETAIL



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

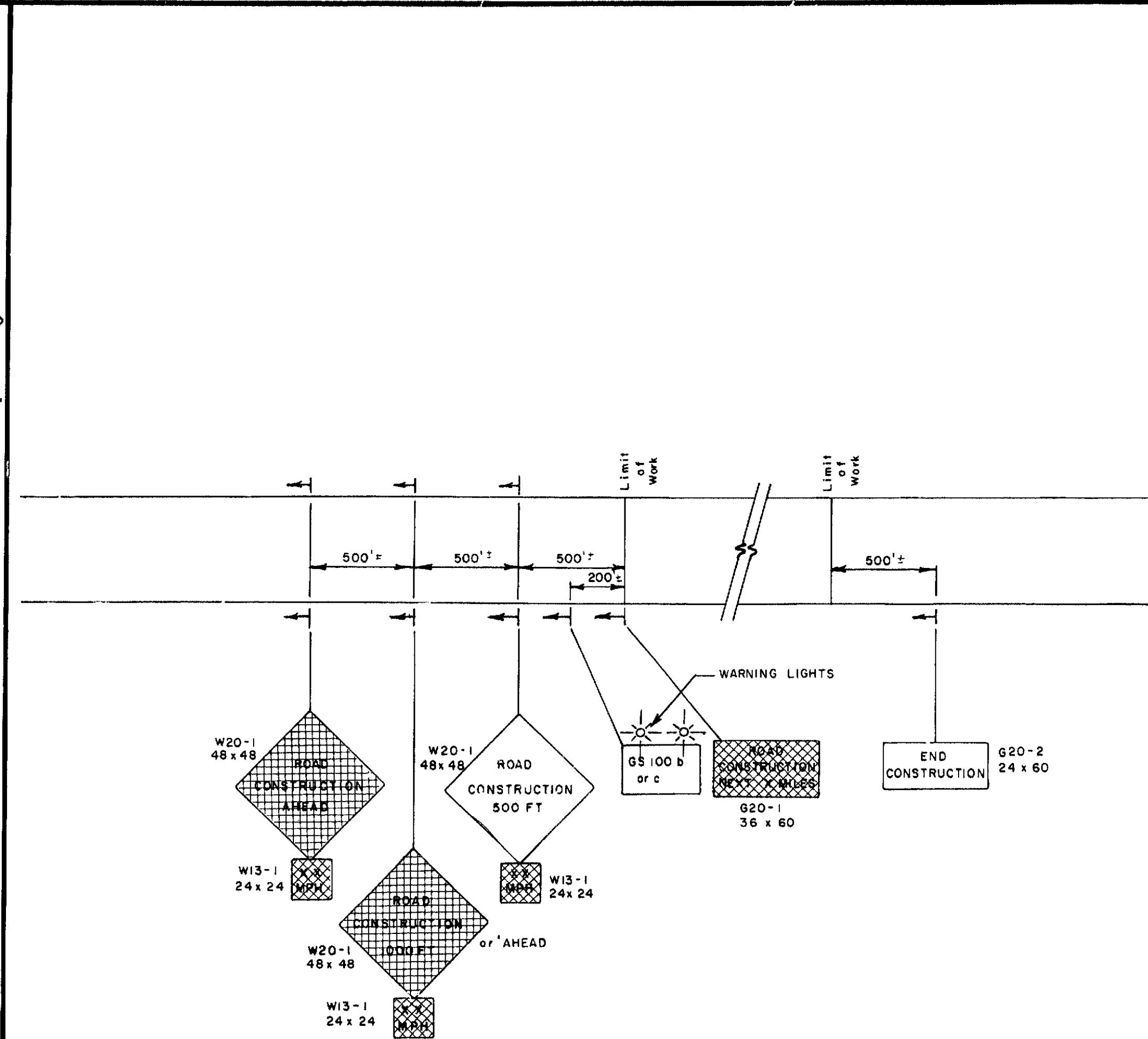
D

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



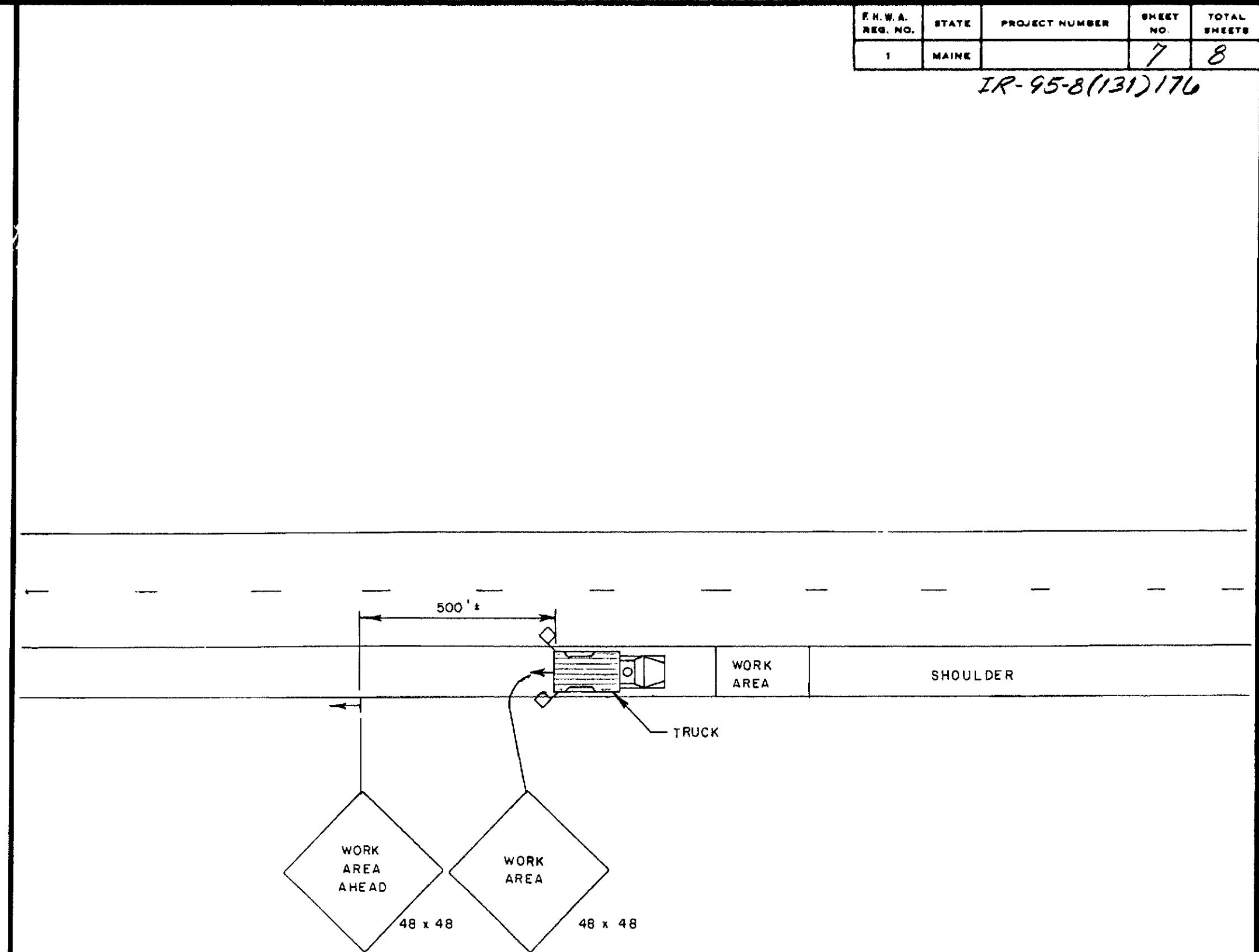
PROJECT APPROACH SIGNING
Two Way Traffic

A



PROJECT APPROACH SIGNING
Expressway

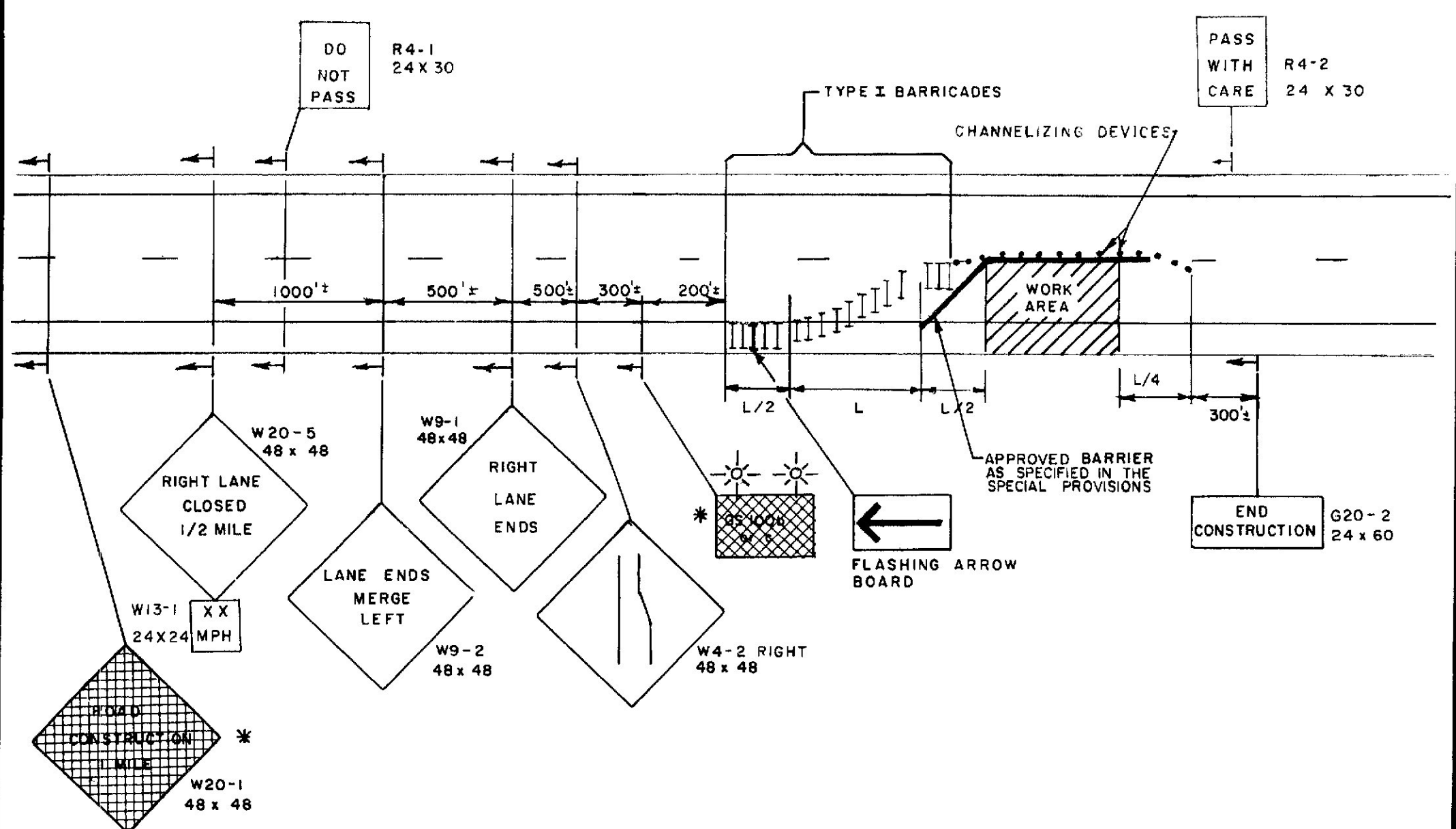
B



SHOULDER WORK - MOBILE

C

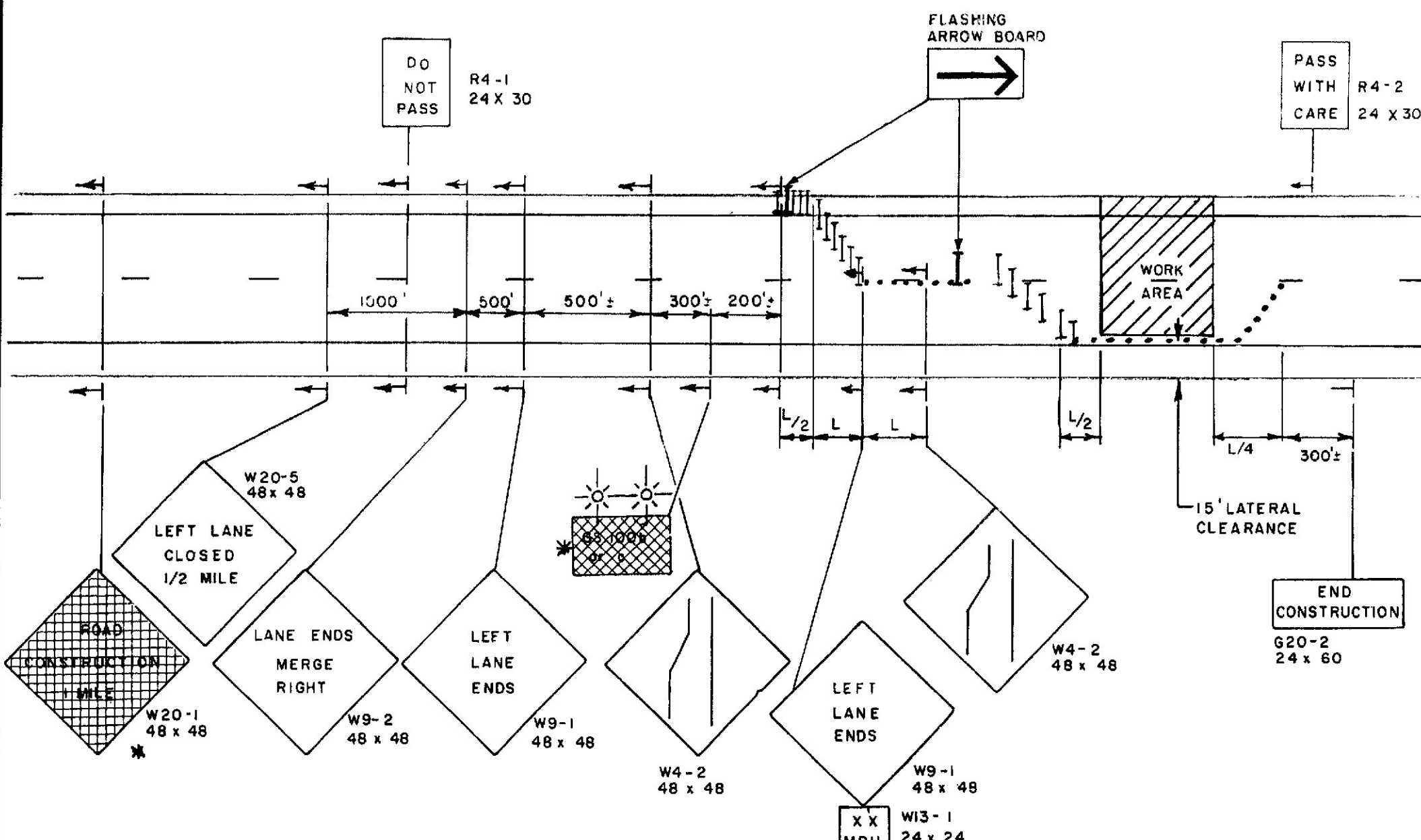
NOTE
* OMIT W20-1 AND GS-100C OR B IF LANE CLOSURE SIGNING ARRAY IS WITHIN PROJECT LIMITS.
ALTER PAVEMENT MARKINGS AS REQUIRED. MAINTAIN 15 FT LATERAL CLEARANCE.
USE SIMILAR SIGNING FOR LEFT LANE CLOSURE.



EXPRESSWAY LANE CLOSURE

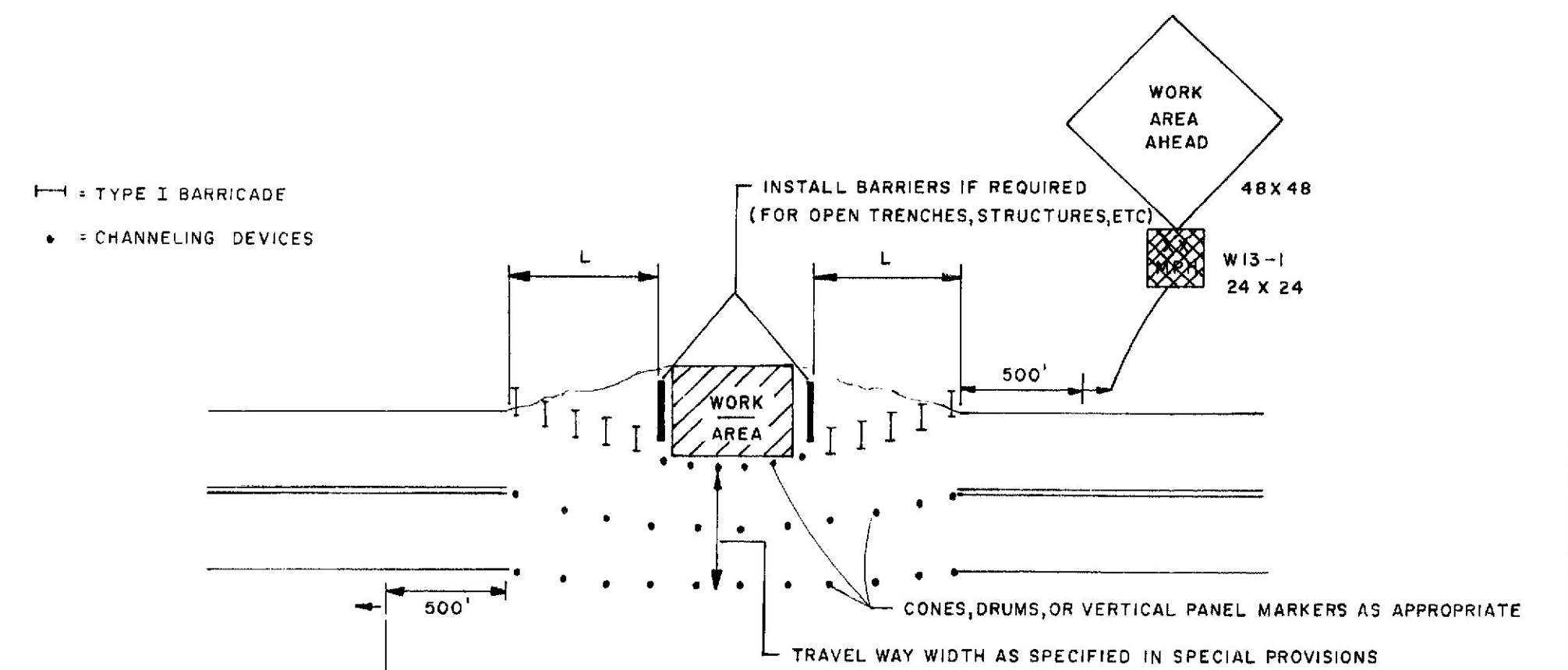
D

NOTE
W20-1 AND GS-100B OR C 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



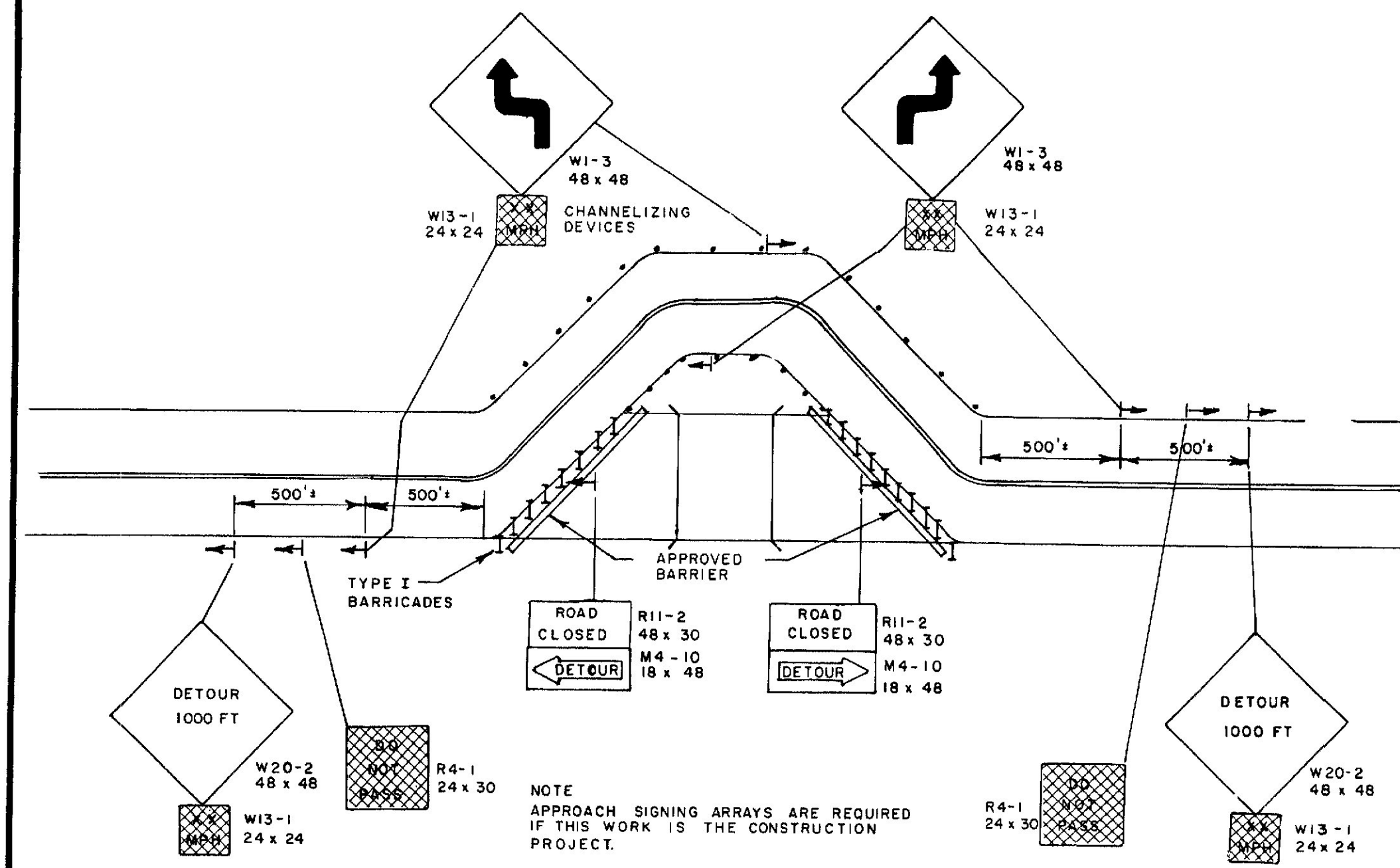
TWO WAY TRAFFIC
MAINTAINED THROUGH WORK AREA

F

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

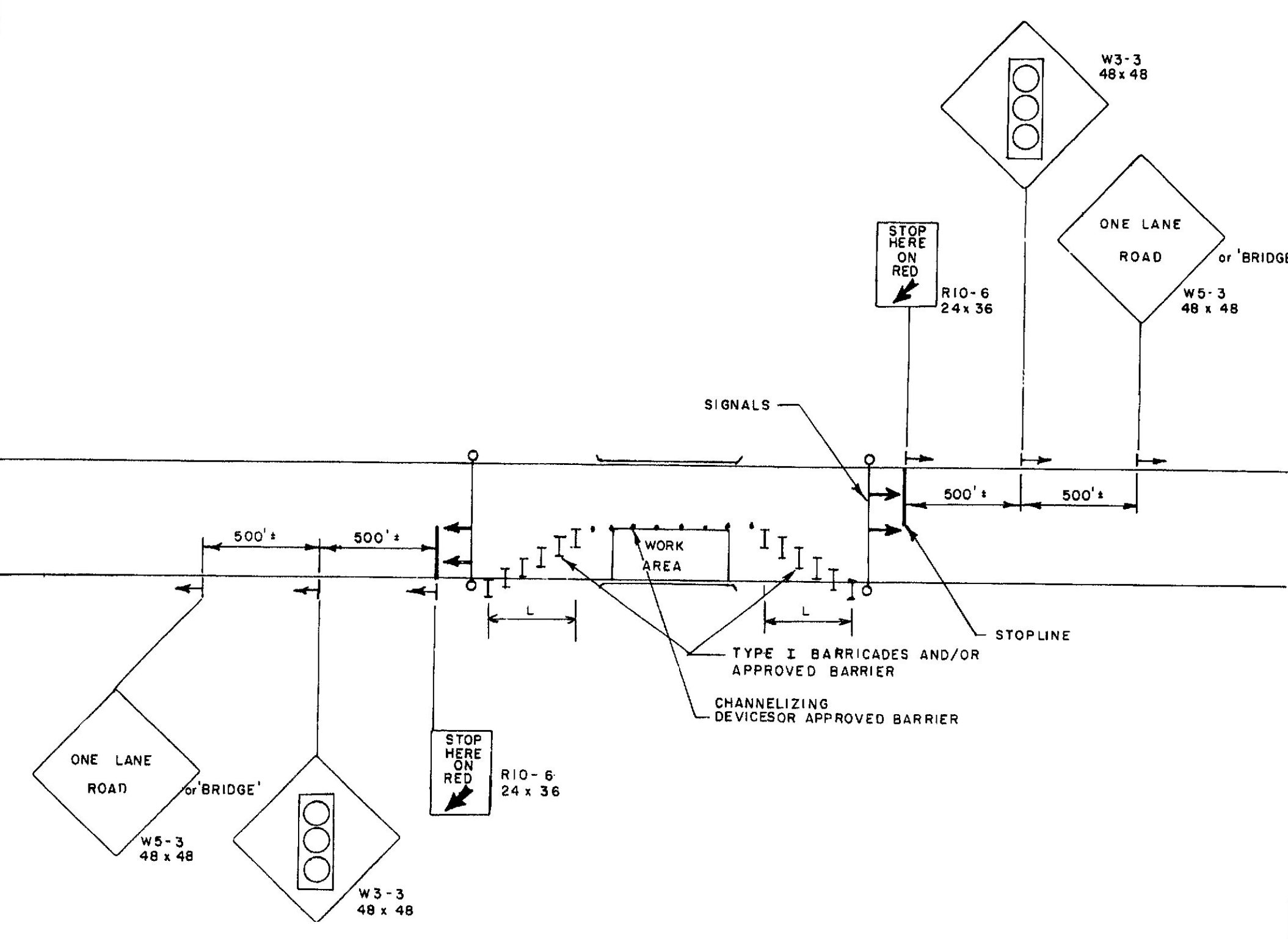
REVISIONS		STATE OF MAINE DEPARTMENT OF TRANSPORTATION	
1-28-80		MAINTENANCE OF TRAFFIC IN CONSTRUCTION ZONES	
3-4-80	PLATE "F"		
4/3/80 PF	D,E		
SHEET 2 OF 3		AUGUSTA, MAINE	
		JULY, 1979	

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



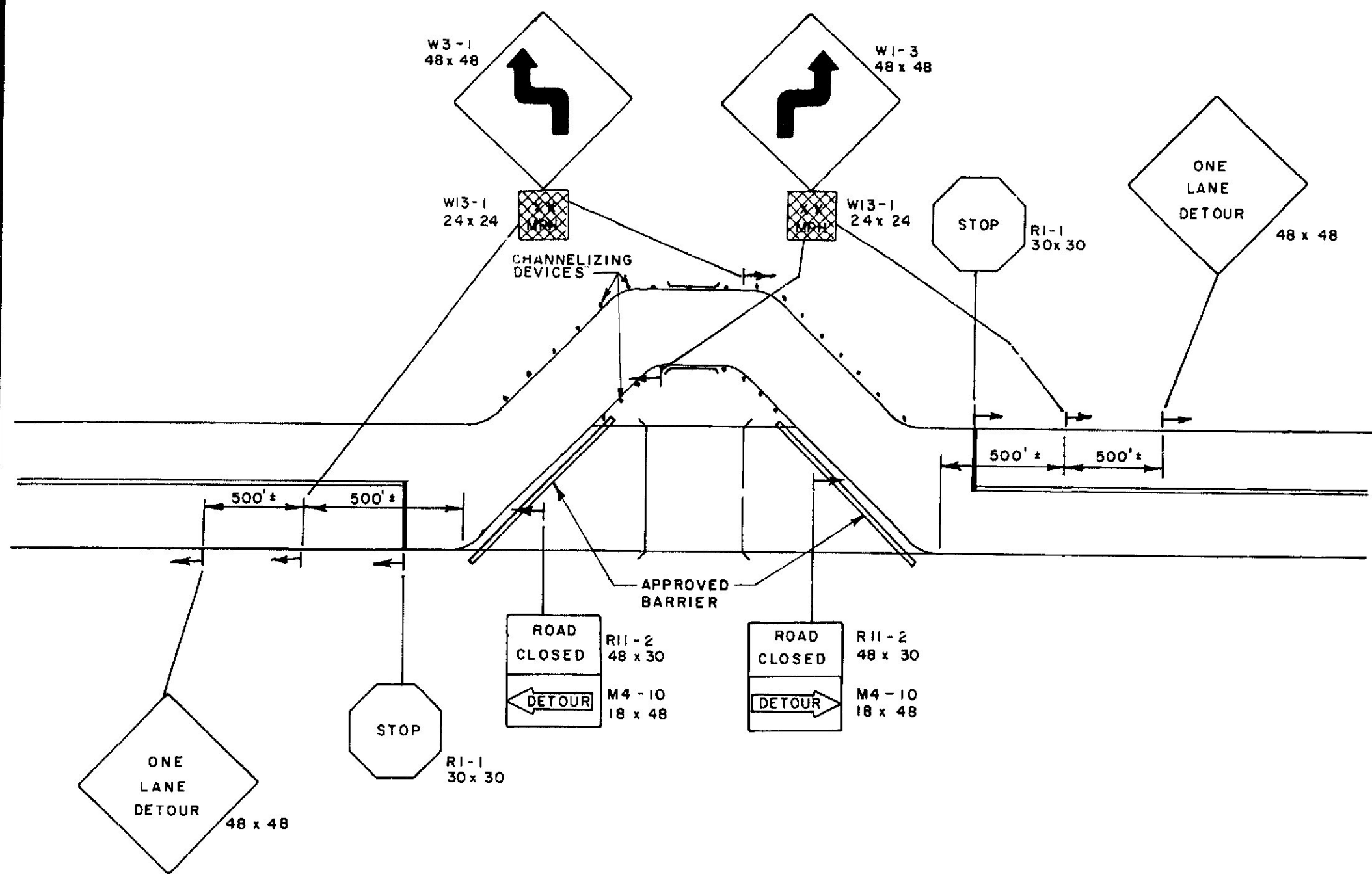
TWO WAY TWO LANE DETOUR

A



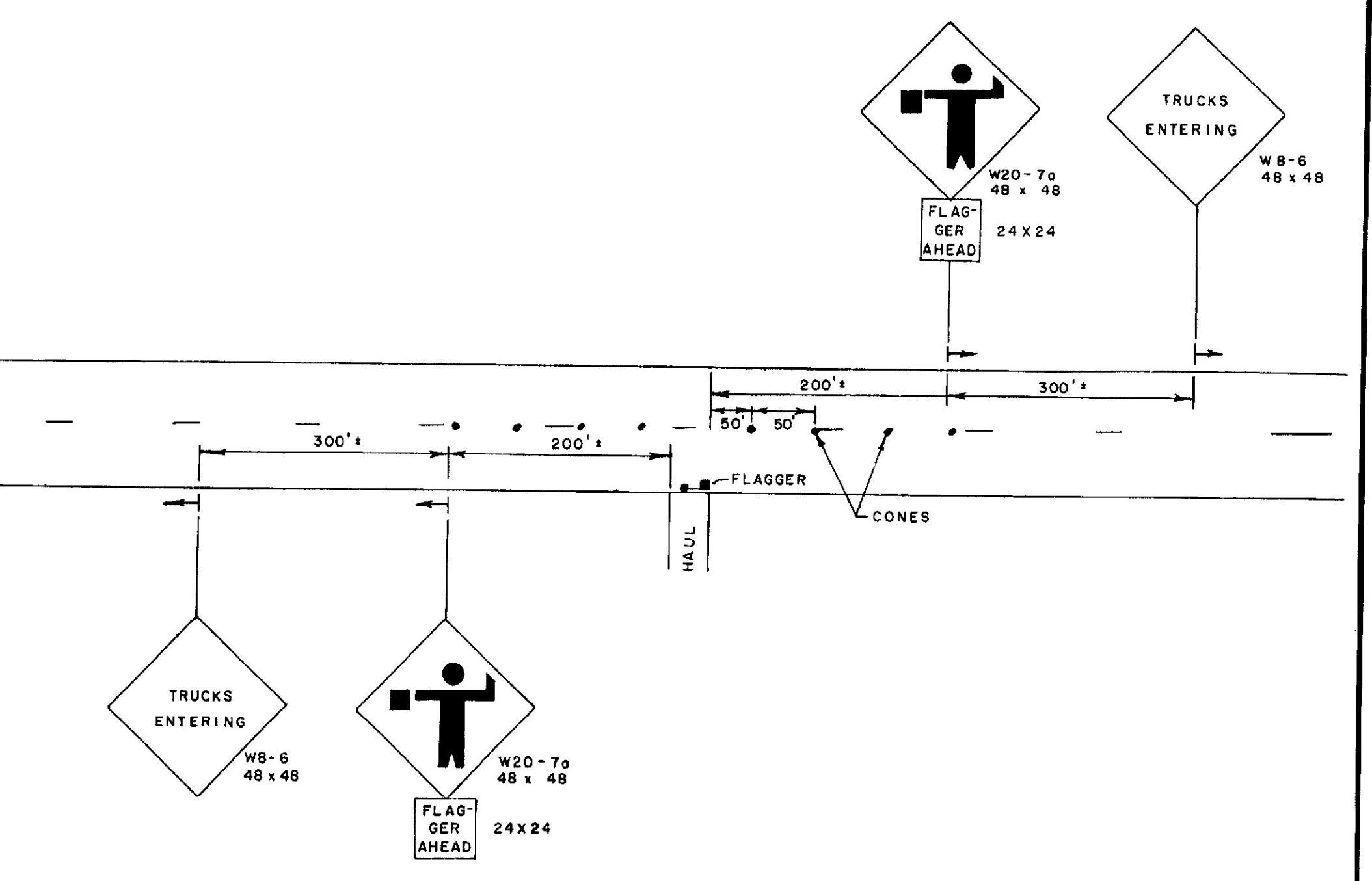
TWO WAY TRAFFIC LANE CLOSURE WITH TEMPORARY TRAFFIC SIGNALS

B



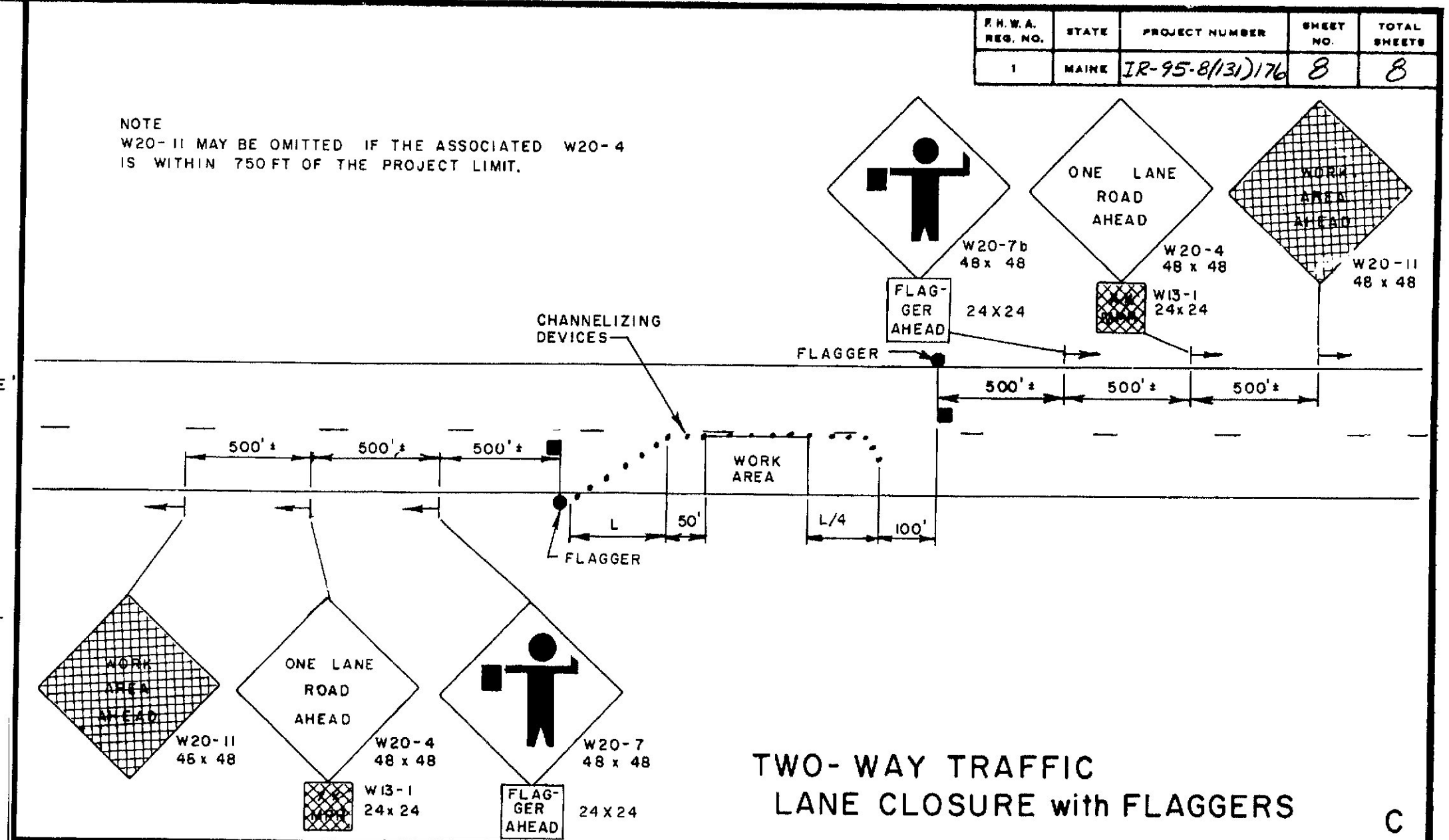
ONE WAY DETOUR

E



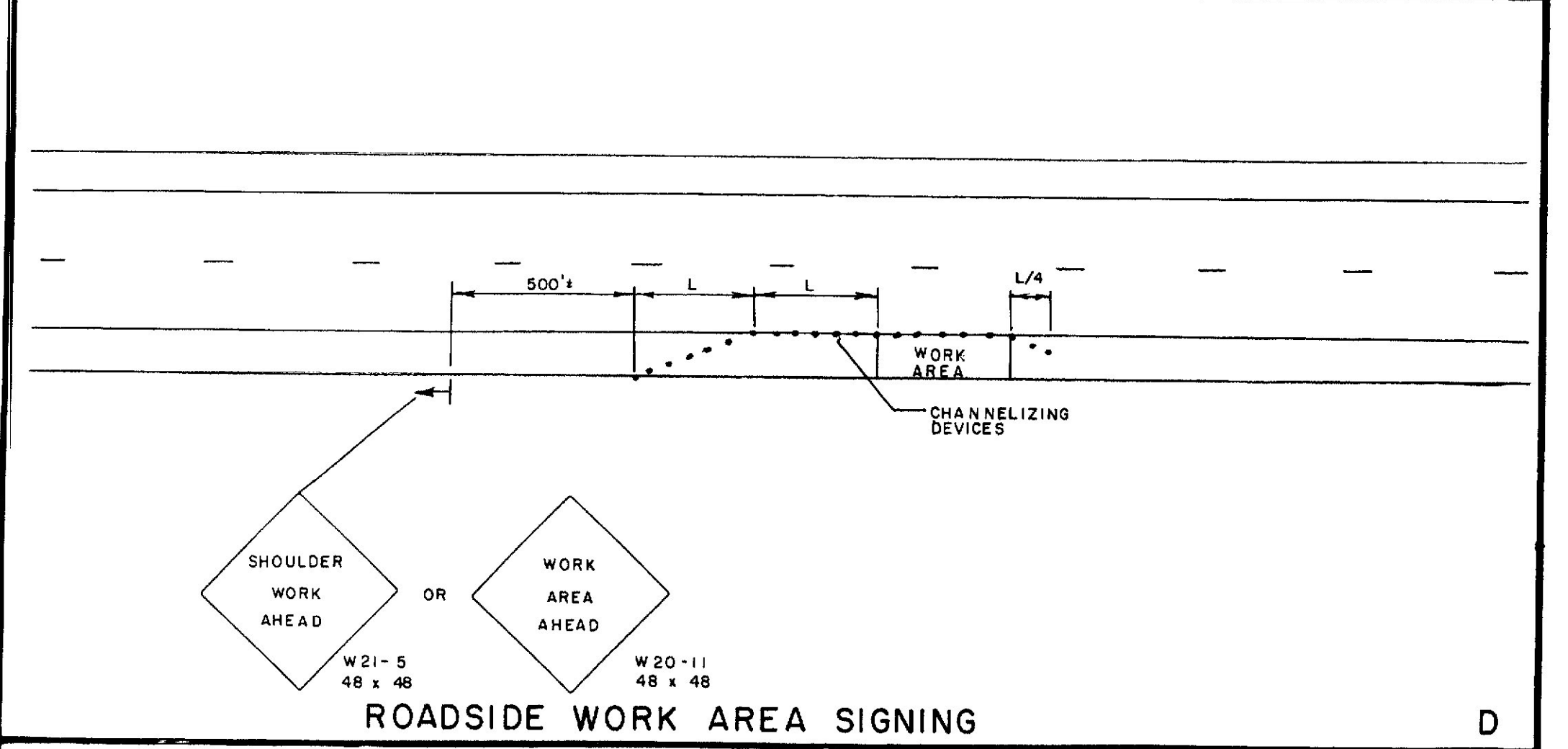
HAUL ROADS

F



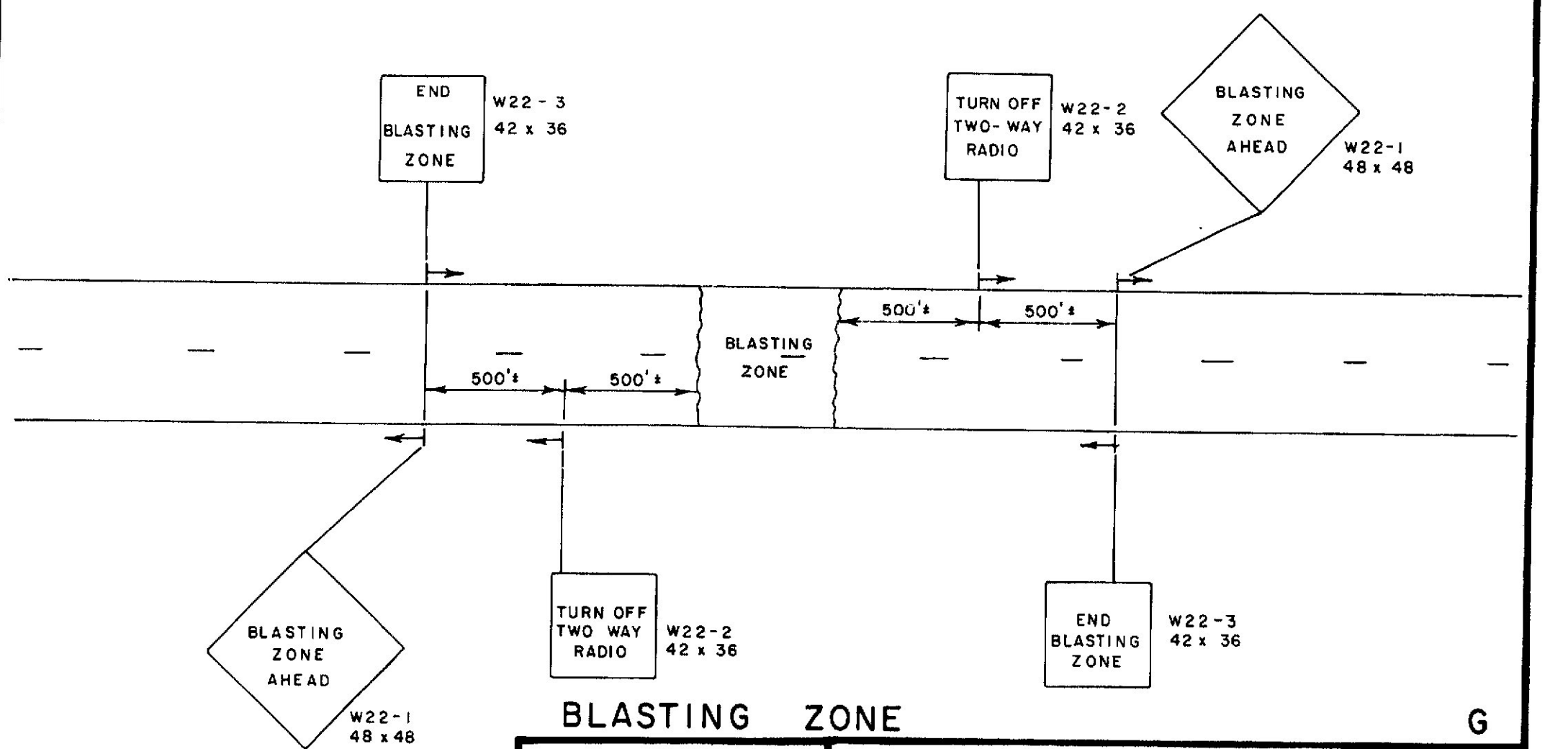
TWO-WAY TRAFFIC LANE CLOSURE WITH FLAGGERS

C



ROADSIDE WORK AREA SIGNING

D



BLASTING ZONE

G

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