B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	1	47

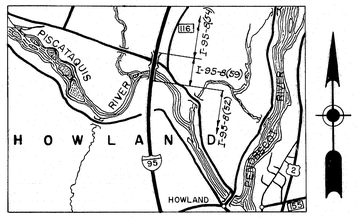
STATE OF MAINE
STATE HIGHWAY COMMISSION

INTERSTATE 95
OVER
PISCATAQUIS RIVER AND SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY

FEDERAL PROJECT NO. I-95-8(59)212
LENGTH OF PROJECT 0.272 MILES

SCALES

INTERSTATE PLAN & PROFILE — HOR. 1" = 50' VERT. 1" = 5'
X-SECTIONS — 1" = 5'
SEBOEIS ROAD PLAN & PROFILE — HOR. 1" = 50' VERT. 1" = 5'
X-SECTIONS — 1" = 5'



LOCATION MAP
APPROX. SCALE: 1" = 1 MILE

INDEX OF SHEETS

1. TITLE SHEET
2. QUANTITIES
3. LAYOUT
4. SURVEY
——PISCATAQUIS RIVER BRIDGE——
5. X-SECTIONS (SH. NO. 22, TYPICAL SECTIONS)
6. GENERAL PLAN
7. FOUNDATION SURVEY
8. ABUTMENT NO. 1
9. ABUTMENT NO. 2
10. PIER NO. 1
11. PIERS NO. 2 & 3
12. ERECTION PLAN
13. STEEL DETAILS & GENERAL NOTES
14. CROSS FRAMES
15. LATERAL SYSTEM DETAILS
16. SHEAR CONNECTORS—SPLICE—CAMBER
17. BEARING PEDESTALS
18. BLOCKING & RAIL DETAILS
19, 20. SUPERSTRUCTURE
21. REINFORCING STEEL
22–26. INTERSTATE X-SECTIONS
——SEBOEIS ROAD BRIDGE——
27. GENERAL PLAN
28. FOUNDATION SURVEY
29. ABUTMENT NO. 1
30. ABUTMENT NO. 2
31. PIER NO. 1
32. PIER NO. 2
33. STRUCTURAL STEEL
34. SUPERSTRUCTURE SLAB
35. REINFORCING STEEL & SLOPE PROTECTION
——SEBOEIS ROAD——
36–38. SURVEY PLANS
39. INTERSECTION DETAIL
40–47. X-SECTIONS (SH. NO. 47, TYPICAL SECTIONS)

STANDARD SHEETS

BRIDGE

BD101-64 BEARING PEDESTALS
BD103-64 BEAM SPLICES
BD104-64 DIAPHRAMS, ARMORED JOINTS, SHEAR CONNECTORS, DRAINS
BD105-64 EXPANSION DAMS
BD107-64 STEEL RAIL
BD108-64 ALUMINUM RAIL

HIGHWAY

SEPT. 1963
2-64
3-64
4-64

TRAFFIC

(INTERSTATE 95)		(SEBOEIS ROAD)	
A.D.T.	1964 — 1790	A.D.T.	1964 — 340
A.D.T.	1984 — 2850	A.D.T.	1984 — 540
D.H.V.	345	D.H.V.	81
T.	14%	T.	14%
D.	60%	D.	60%
V.	60MPH	V.	45MPH

APPROVED
MAINE STATE HIGHWAY COMMISSION
CHAIRMAN
CHIEF ENGINEER
Sept. 30, 1964
DATE

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
REGION 1
APPROVED
DIVISION ENGINEER — DATE

96·14

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F95-2(39)	2	47

ESTIMATE OF QUANTITIES

	ITEM	DESCRIPTION	UNIT	PISCATAQUIS RIVER BRIDGE	SEBOEIS ROAD BRIDGE	INTERSTATE ROADWAY	SEBOEIS ROAD	TOTAL
	201-5	Clearing	Acres			2.5	3.5	6.0
	201-6	Selective Clearing and Thinning	Acres			2.5		2.5
	203-9	Earth Excavation	Cu. Yds.			1300	26,500	27,800
	204-10	Structural Earth Excavation-Drainage	Cu. Yds.			50	170	220
	204-14	Structural Earth Excavation-Piers	Cu. Yds.	315	145			460
	205-9	Granular Borrow	Cu. Yds.			32,000		32,000
	205-10	Gravel Borrow	Cu. Yds.			3200		3200
△	207-10	Machine Aerating	Hrs.			25		25
	302-7	Gravel Base Course (I.R.M.)	Cu. Yds.			2240	7400	9640
△	310-6	Sprinkling	Units				120	120
△	311-6	Calcium Chloride	Tons				12	12
	401-11	Gravel Surface Course	Cu. Yds.				700	700
*	404-28	Bit Conc. Surface Course, Type "A"	Tons	195	73			268
	501-7	Road Tar	Gals.				5500	5500
	602-11	15-Inch Asphalt Coated Corr. Metal Pipe	Lin. Ft.				37	37
	602-14	24-Inch Asphalt Coated Corr. Metal Pipe	Lin. Ft.				273	273
	701-33	Portland Cem. Conc., Abuts & Ret. Wls.	Cu. Yds.	186	205			391
	701-35	Portland Cement Concrete, Piers	Cu. Yds.	490	130			620
	701-36	Portland Cem. Conc., Piers (Placed under water)	Cu. Yds.	545				545
	701-40	Port Cem. Conc. Roadway and Sid. Slabs	Cu. Yds.	580	160			740
	701-54	Portland Cement for Riprap Grout	Lbs.			50		50
	701-55	Curing Box for Concrete Cylinders	Each	1				1
	702-103.1	Structural Steel, Fab. & Del.	L.S.	L.S.				L.S.
	702-103.2	Structural Steel, Fab. & Del.	L.S.		L.S.			L.S.
	702-104.1	Structural Steel, Erection	L.S.	L.S.				L.S.
	702-104.2	Structural Steel, Erection	L.S.		L.S.			L.S.
	702-105.1	Structural Steel, Field Painting	L.S.	L.S.				L.S.
	702-105.2	Structural Steel, Field Painting	L.S.		L.S.			L.S.
	705-13	Reinforcing Steel, Delivered	Lbs.	169,000	68,000			237,000
	705-14	Reinforcing Steel, Placing	Lbs.	169,000	68000			237,000
	705-17	Shear Connectors	L.S.	L.S.				L.S.
	708-16	Steel H-Beam Piles 53 lbs. / ft	Lin. Ft.	845				845
	708-17	Steel H-Beam Piles 42 lbs. / ft.	Lin. Ft.		942			942
	803-7	Cofferdams, Pier #1	L.S.	L.S.				L.S.
	803-8	Cofferdams, Pier #2	L.S.	L.S.				L.S.
	803-9	Cofferdams, Pier #3	L.S.	L.S.				L.S.
	805-8	Bridge Rail	Lin. Ft.	1046	268			1314
*	807-9	Membrane Waterproofing	Sq. Yds.	1775	650			2425
	807-11	Epoxy Resin Surface Sealant	Sq. Yds.	100	95			195
	901-24	Vertical Bridge Curb-Type 1	Lin. Ft.	1081	295			1376
	901-37	Curb Type 4	Lin. Ft.				190	190
	906-18	Fencing-Metal Posts	Lin. Ft.			1300		1300
	907-10	Hand Laid Rip-rap	Cu. Yds.			400		400
	908-10	Loam (I.R.M.)	Cu. Yds.			430	650	1080
	909-7	Sodding	Sq. Yds.				60	60
	909-9	Jute Matting-Weave "H"	Sq. Yds.			110		110
	910-13	Seeding-Method No. 2	Units			68	160	228
	912-7	Hay Mulch	Tons			4	9	13
	913-8	Bit. Treated Stone Slope Protection	Sq. Yds.			535		535
	907-8	Plain Riprap	Cu. Yds.			20		20
	913-9	Bit. Concrete Gutter	Tons			17		17
	915-6	Right of Way Monuments	Each				10	10
	915-8	Survey Markers	Each				2	2

Estimated weight of Structural Steel including Drains
Piscataquis River Bridge = 540,000 lbs. Seboeis Road Bridge = 120,000 lbs.

△ Undetermined Location
* Not part of this contract

Computation of Granular Borrow

Earth Excavation (from Cross Sections Inc. scarifying)	27,800 C.Y.
Deduct Grubbing in cut areas	2,000
Total available Earth Excavation	25,800
Total Fill (from Cross Sections including 24" Base)	49,877
Total available earth excavation = 25,800 x 0.85 =	21,930
Total Fill minus Total available earth excavation	27,947
Granular Borrow = 27,947 x 1.15 =	32,139 C.Y.

DESIGN-
TRACE- RM, CW.
CHECK- CKB

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
IN THE TOWN OF
HOWLAND

PENOBSCOT COUNTY

QUANTITIES

SHEET 2 OF 47 AUGUSTA, MAINE OCT. 1964

96-15

0 1 2 3 4 5 INCHES

D. P. W. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-3(54)	3	47

CLEARING
Sta 2003+65 to Sta 2018+00

SELECTIVE CLEARING & THINNING
Sta 2003+65 to Sta. 2018+00

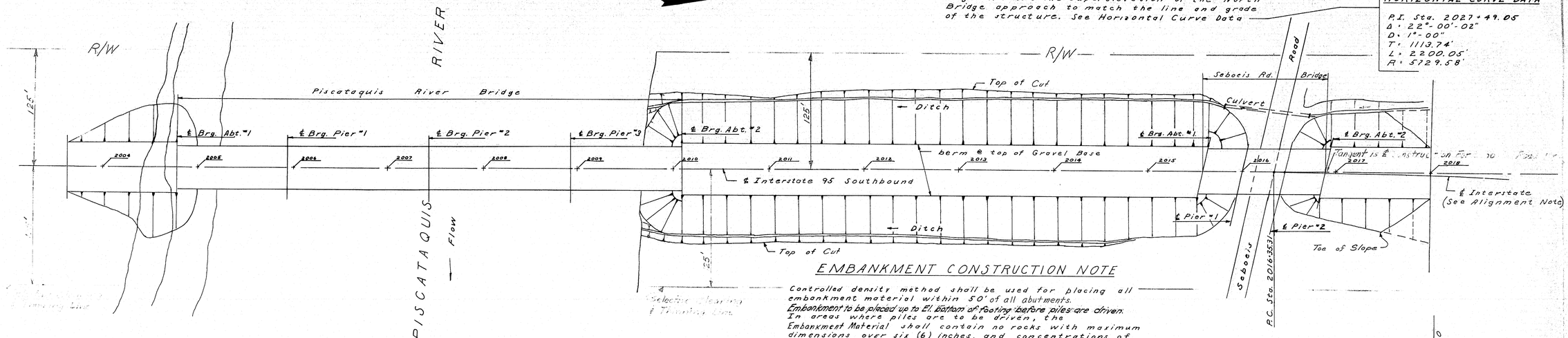
JUTE MATTING-WEAVE "H"
Sta 2016+50± to Sta. 2017+50±

ALIGNMENT NOTE

The Seboeis Road Bridge is designed for vertical and horizontal alignment ignoring the horizontal curve at the north side of the bridge. The Field Engineer is to adjust both the horizontal alignment and the superelevation of the North Bridge approach to match the line and grade of the structure. See Horizontal Curve Data

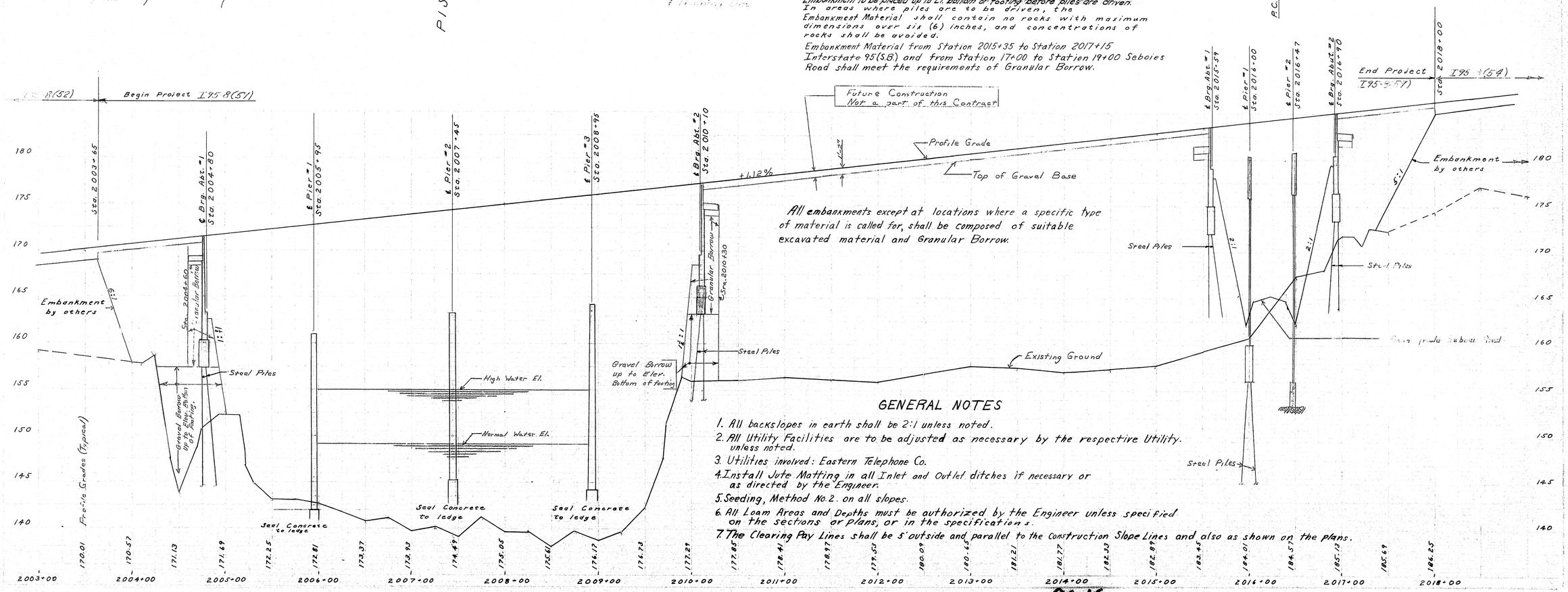
HORIZONTAL CURVE DATA

P.I. Sta. 2027+49.05
Δ = 22°-00'-02"
D = 1°-00'
T = 1113.74'
L = 2200.05'
R = 5729.58'



EMBANKMENT CONSTRUCTION NOTE

Controlled density method shall be used for placing all embankment material within 50' of all abutments.
~~Embankment to be placed up to El. Bottom of Footing before piles are driven.~~
In areas where piles are to be driven, the Embankment Material shall contain no rocks with maximum dimensions over six (6) inches, and concentrations of rocks shall be avoided.
Embankment Material from Station 2015+35 to Station 2017+15 Interstate 95(S.B.) and from Station 17+00 to Station 19+00 Seboeis Road shall meet the requirements of Granular Borrow.



All embankments except at locations where a specific type of material is called for, shall be composed of suitable excavated material and Granular Borrow.

GENERAL NOTES

1. All backslopes in earth shall be 2:1 unless noted.
2. All Utility Facilities are to be adjusted as necessary by the respective Utility. unless noted.
3. Utilities involved: Eastern Telephone Co.
4. Install Jute Matting in all Inlet and Outlet ditches if necessary or as directed by the Engineer.
5. Seeding, Method No. 2. on all slopes.
6. All Loam Areas and Depths must be authorized by the Engineer unless specified on the sections or plans, or in the specifications.
7. The Clearing Pay Lines shall be 5' outside and parallel to the Construction Slope Lines and also as shown on the plans.

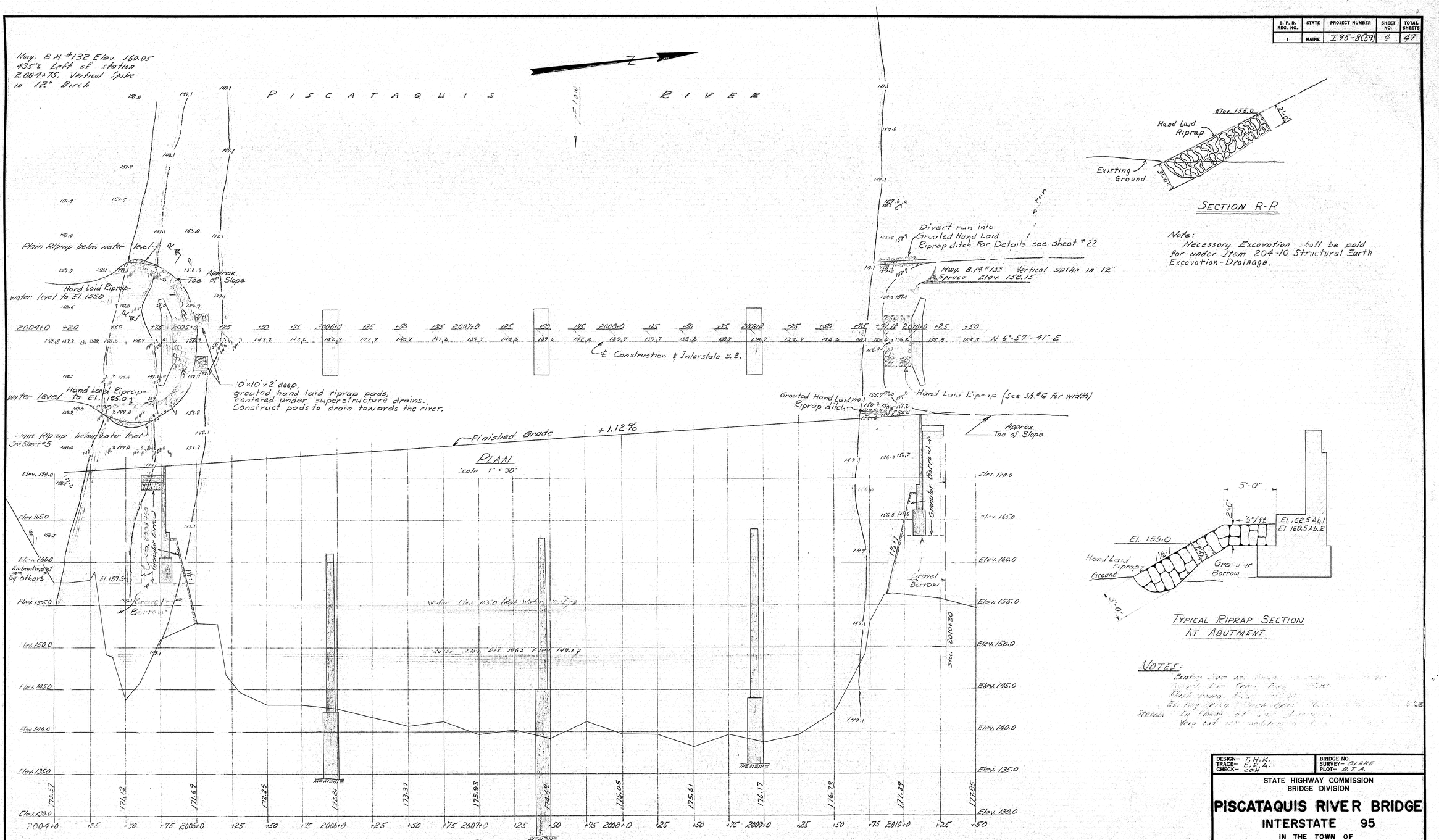
96-16

INTERSTATE 95 HOWLAND SHEET 3 OF 47

LAYOUT

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	4	47



DESIGN- T.H.K.
TRACE- E.R.A.
CHECK- EOH

BRIDGE NO.
SURVEY- BLAKE
PLOT- B.F.A.

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95

IN THE TOWN OF

HOWLAND

PENOBSCOT COUNTY

SURVEY

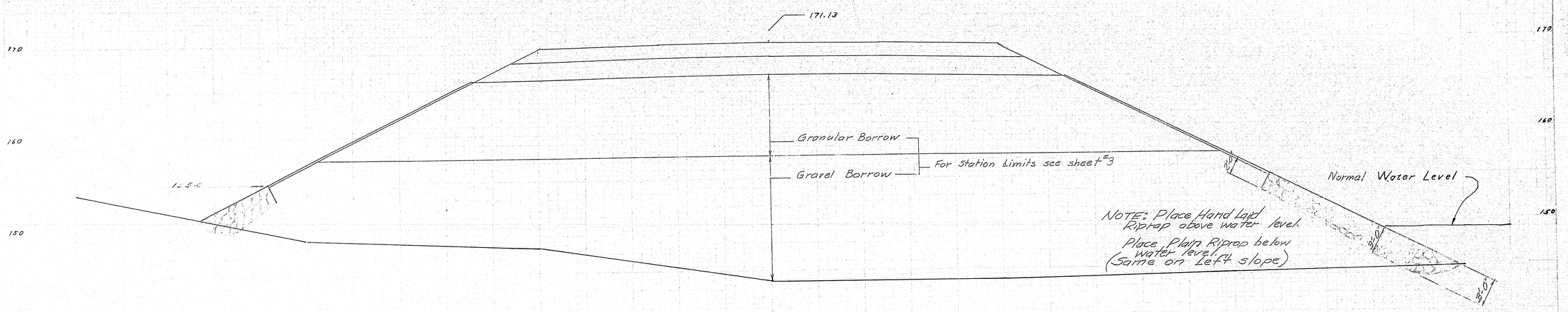
SHEET 4 OF 47 AUGUSTA, MAINE DEC. 1963

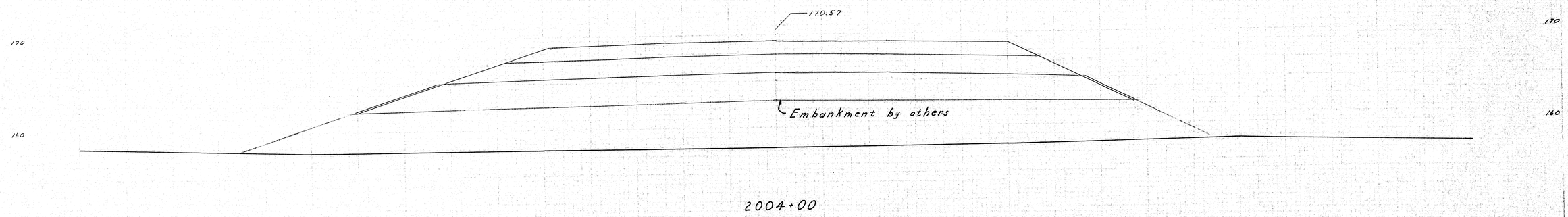
96-17

C. B. CO., NO. 44-131 39728

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	5	47





ZERO SECTION
2003+65 (Begin Project)

FOR TYPICAL INTERSTATE SECTION SEE SHEET #22.

℄ INTERSTATE

75 50 25 25 50 75

PLOT P.J.L.
CHECK Harris

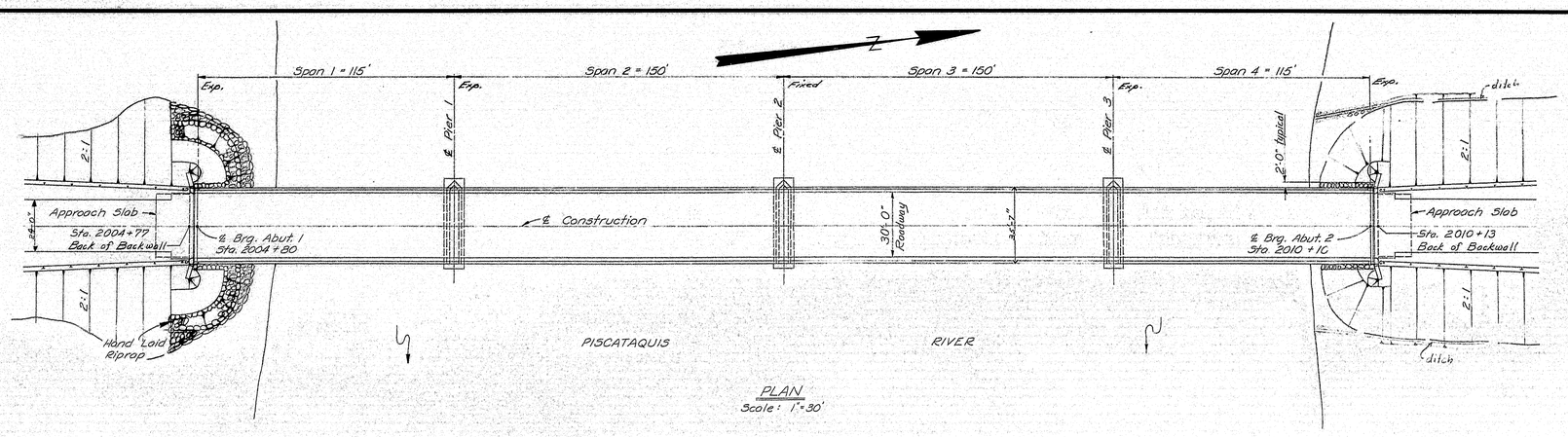
INTERSTATE 95 HOWLAND

SHEET 5 OF 47

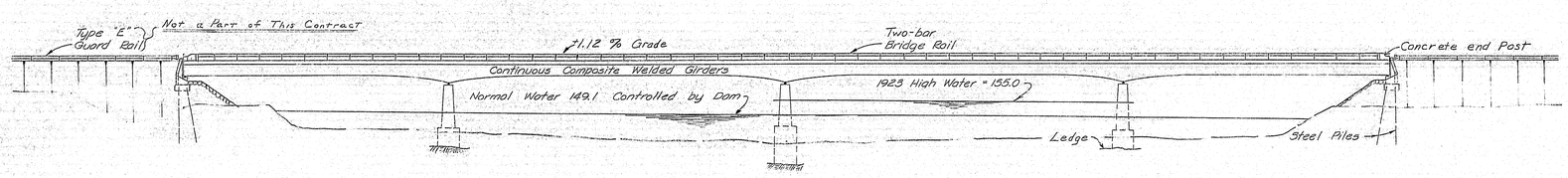
STATIONS 2003+65 → 2004+50

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	6	47



PLAN
Scale: 1" = 30'



ELEVATION
Scale: 1" = 30'

GENERAL NOTES

SPECIFICATIONS

Design: A.A.S.H.O. Standard Specifications for Highway Bridges 1961, with Interim Specifications, 1961, 1962, 1964.
Contract: State of Maine, State Highway Commission Standard Specifications for Highways and Bridges, Revision of January 1956, and Supplemental Specifications, dated February 1960.

LIVE LOADING

HS 20-44 as modified for Interstate.

ALLOWABLE STRESSES

Concrete (n=10) ~ f_c = 1200 psi.
Reinforcing Steel, Intermediate Grade ~ f_s = 20,000 psi.
Structural Steel: See Steel Details, sh. # 13.

CONCRETE CLASSIFICATION

Piers: Seals ~ Class "S"
All Other ~ Class "A"

DESIGN- T.H.K.
TRACE- D.E.T. E.E.L.
CHECK- EDH
BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

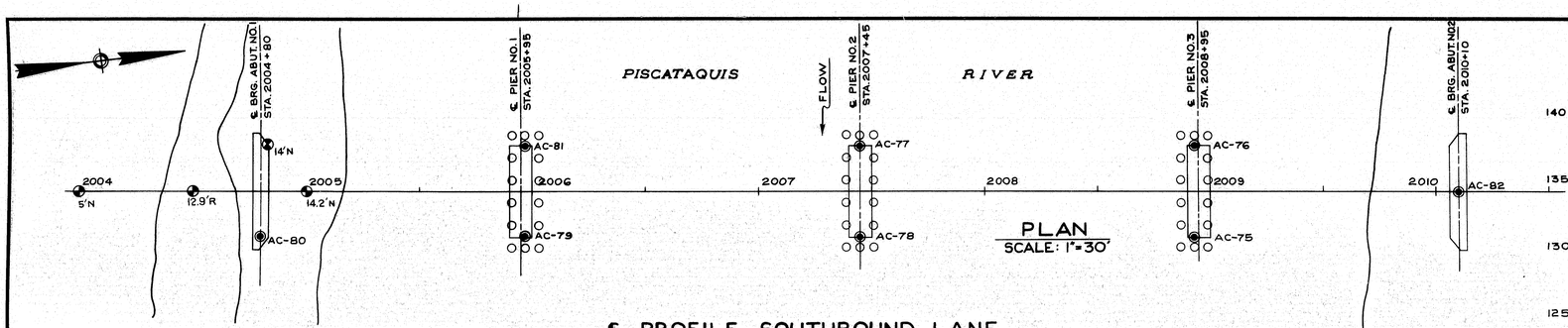
INTERSTATE 95
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
GENERAL PLAN

SHEET 6 OF 47 AUGUSTA, MAINE SEPT. 1964

C. B. CO., NO. 44-131

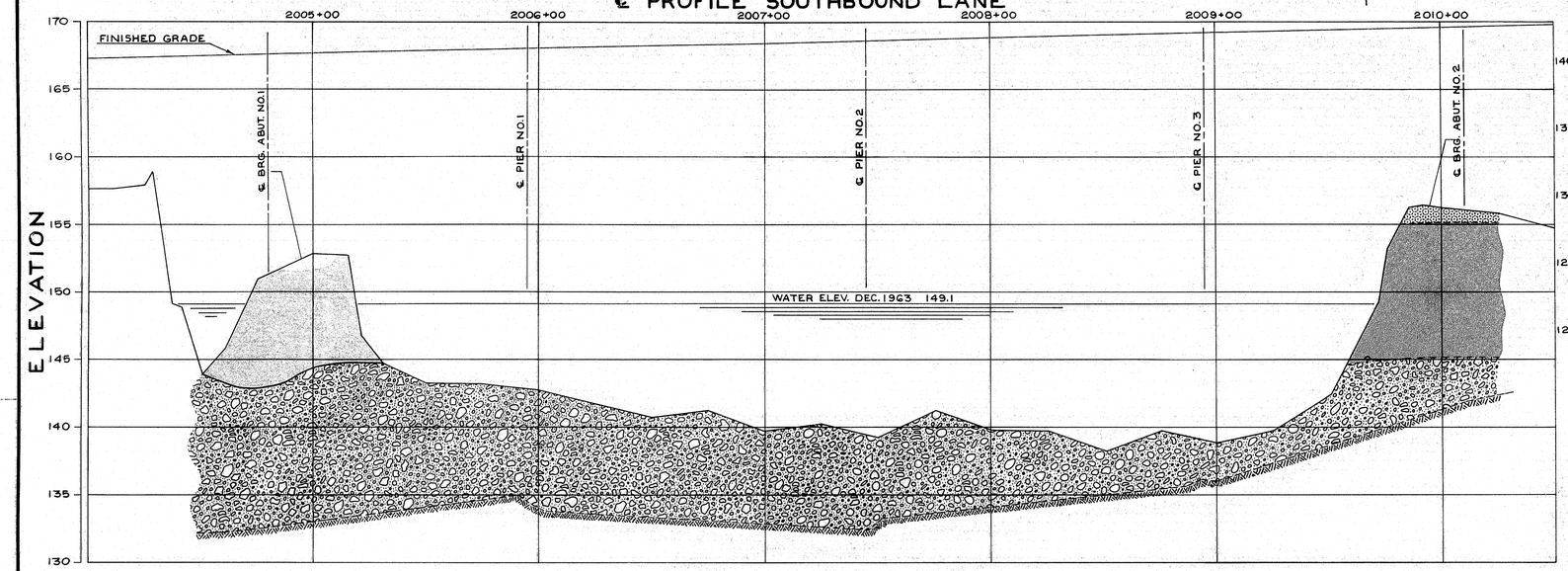
96-19

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	7	47

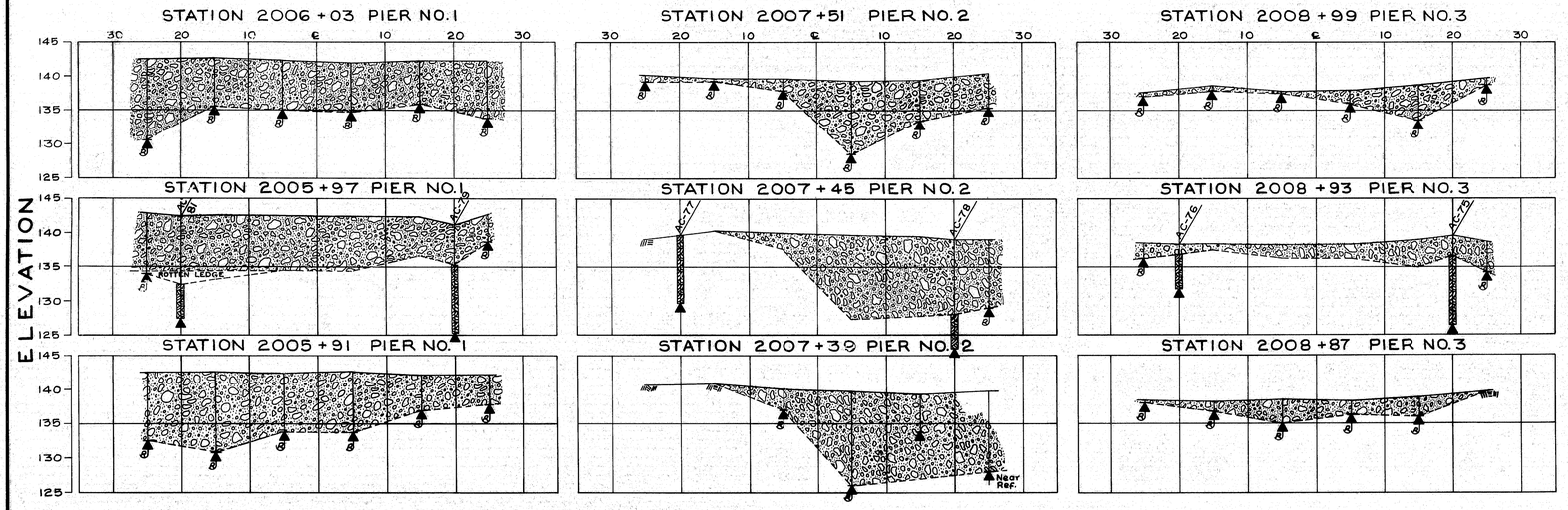


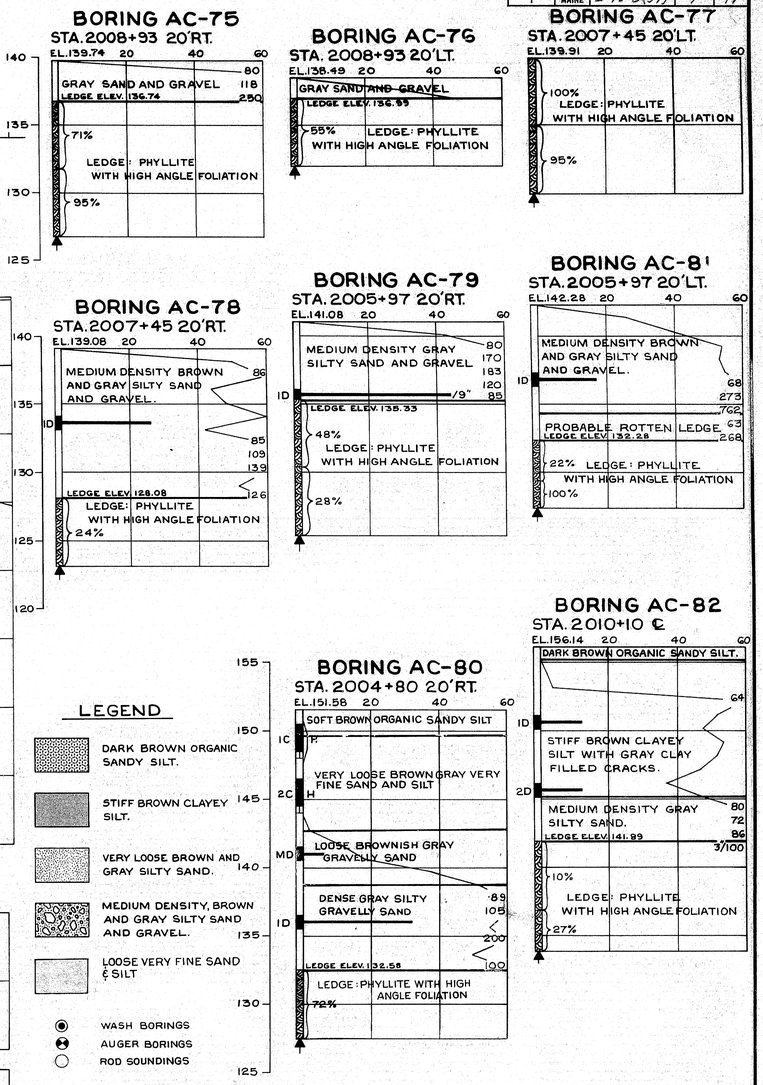
PLAN
SCALE: 1"=30'

℄ PROFILE SOUTHBOUND LANE



TRANSVERSE PROFILES





LEGEND

- DARK BROWN ORGANIC SANDY SILT.
- STIFF BROWN CLAYEY SILT.
- VERY LOOSE BROWN AND GRAY SILTY SAND.
- MEDIUM DENSITY, BROWN AND GRAY SILTY SAND AND GRAVEL.
- LOOSE VERY FINE SAND & SILT
- WASH BORINGS
- AUGER BORINGS
- ROD SOUNDINGS

BORING NOTES

- CASING SIZE 2½"
- ALL SAMPLES AND VANES ARE 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.
- NUMBER AND TYPE OF DRY SAMPLE.
- ID — S & H SAMPLER # 1290'S.
- IC — 2" O.D. 16 GA. SEAMLESS TUBING.
- MD — UNSUCCESSFUL SAMPLE ATTEMPT AND TYPE OF SAMPLER.
- NUMBER OF BLOWS REQUIRED TO DRIVE SPOON OR TUBING ONE FOOT WITH 350 FT. LBS. OF ENERGY PER BLOW.
- H — SAMPLING SPOON OR SEAMLESS TUBING DRIVEN BY STATIC WEIGHT OF DRILL RODS AND HAMMER.
- FIELD VANE TEST.
- BOTTOM OF BORING (MAY NOT BE BOTTOM OF SOIL STRATA)
- LOCATIONS CORED BY DIAMOND BIT AND PER CENT RECOVERY OF ROCK.

DESIGN— TRACE— CHECK— } SOILS DIVISION

BRIDGE NO. SURVEY— PLOT—

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

FOUNDATION SURVEY

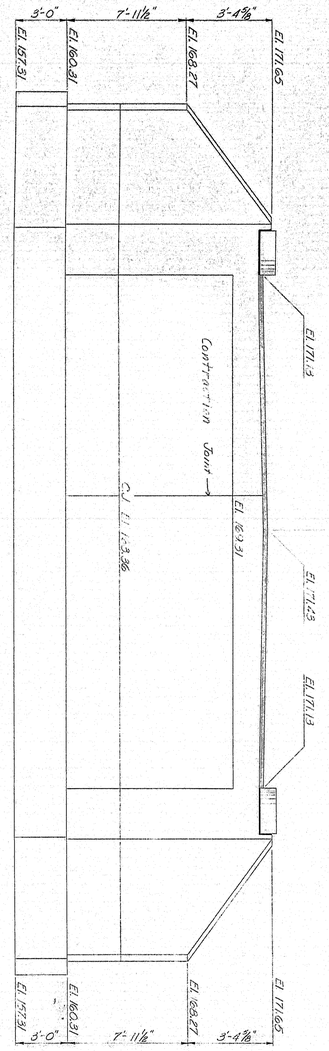
SHEET 7 OF 47 AUGUSTA, MAINE SEPT. 1964

96-20

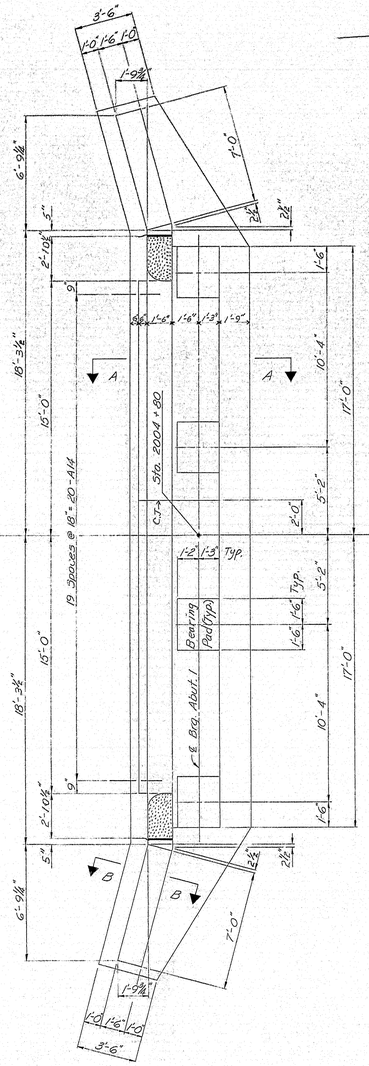
C. B. CO., NO. 44-131 58765

0 1 2 3 4 5 INCHES

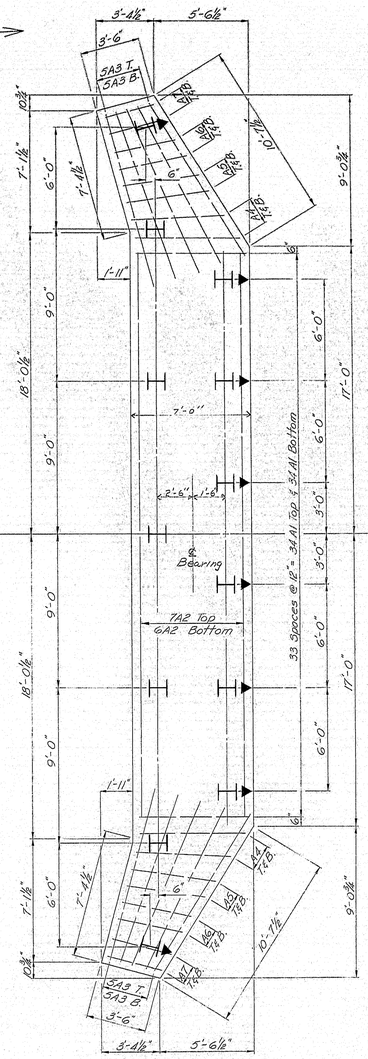
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-B(59)	8	47



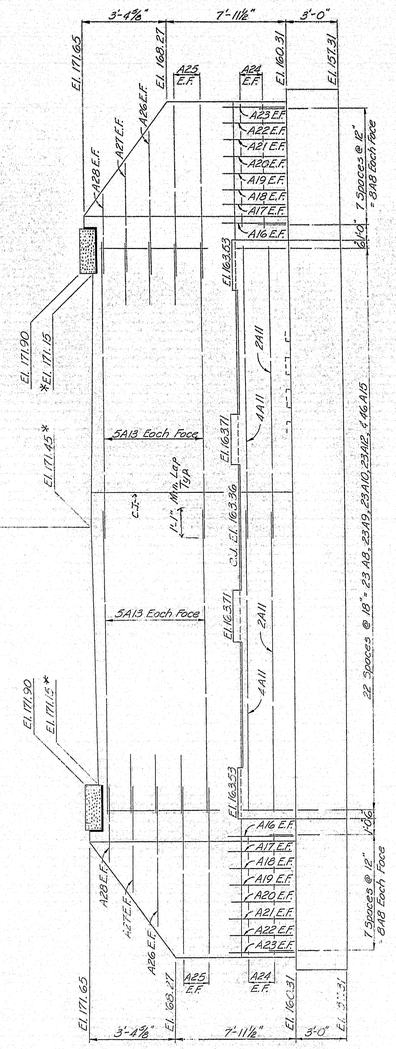
REAR ELEVATION



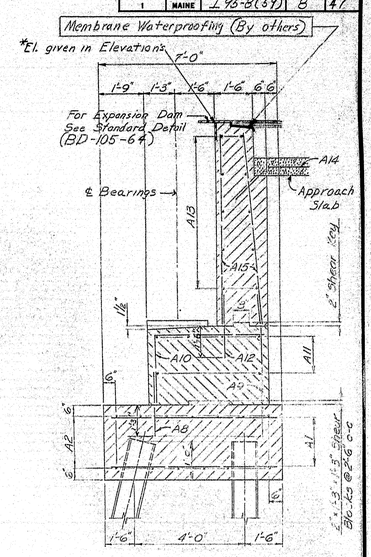
PLAN



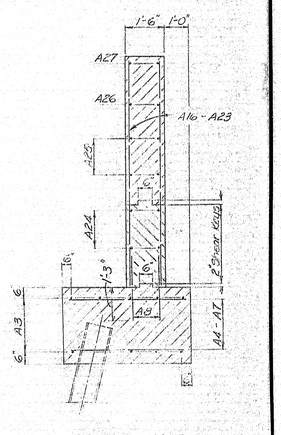
FOOTING & PILE PLAN



FRONT ELEVATION



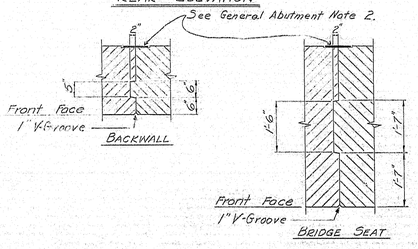
SECTION A-A



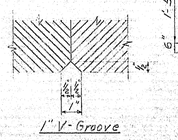
SECTION B-B

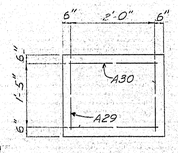
Remove forms A25, A26, A27, and A28 in field to suit.

REAR ELEVATION



CONTRACTION JOINT SHEAR KEYS





BEARING PAD

PILE NOTES

1. Abutment piles to be 12 BP53 piles driven to ledge or practical refusal. Allowable load 46 tons per pile. Batter front row 3:1 ft. as indicated by arrows.
2. 13 Piles required per abutment. Estimated lengths:
   Abutment #1 = 35'
   Abutment #2 = 30'

7. Vertical Bridge Curb on the abutment backwalls shall be placed in position at the same time or after the the curb is place on the superstructure. Set to grade.
8. E.F. = Each Face

GENERAL ABUTMENT NOTES

1. Paint bridge seat, face of backwall, and down to 1'-0" below top of riprap on face and ends of breastwalls with Gray Epoxy Resin Surface Sealant.
2. Cover the back side of contruction joints with two layers of heavy roofing 10" wide bonded to concrete and to each other with a suitable grade of roofing cement. Recess area to be covered ¼" Coat surface of joint with asphalt paint to break bond.
3. For placing of borrow and riprap at abutments see sheet 3 & 4
4. Reinforcing cover 3" unless noted.
5. For vertical bridge curb details see sheet #19
6. For "Approach Slab" and "Guard Rail Detail" see sheet 9

DESIGN + DET. E.E.L.	BRIDGE NO.
TRACE–	SURVEY–
CHECK– CDH	PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

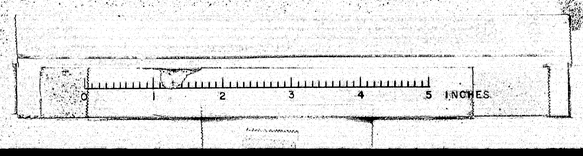
PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
ABUTMENT 1

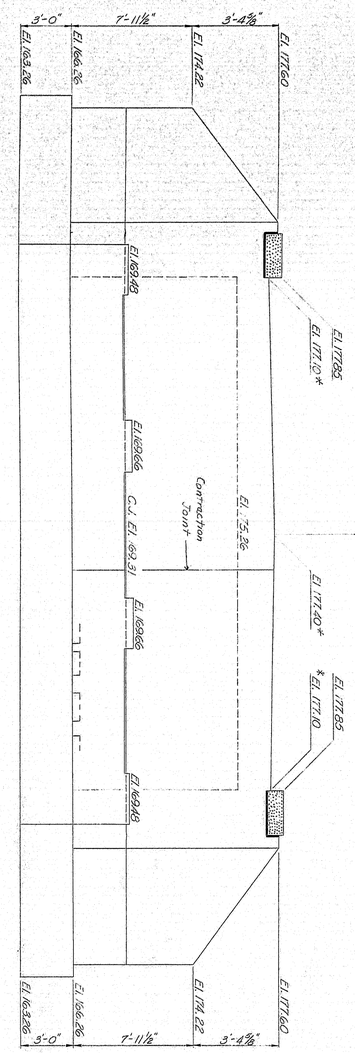
SHEET 8 OF 47 AUGUSTA, MAINE SEPT. 1964

96·21

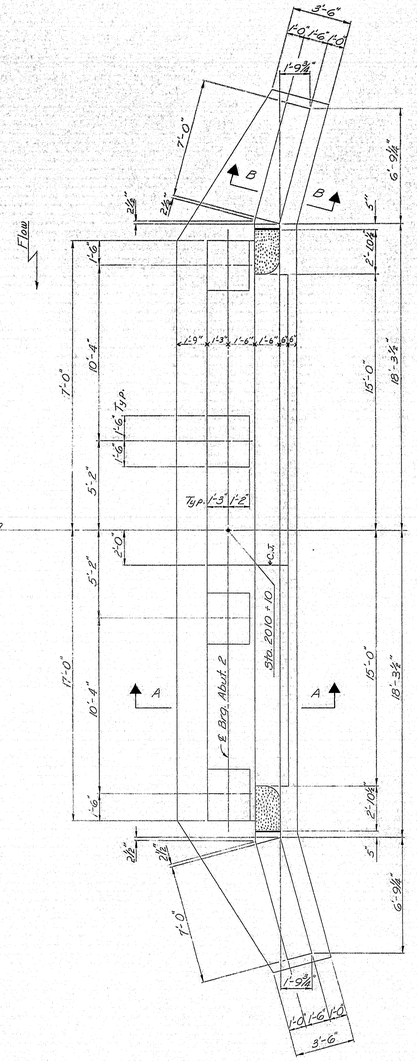
C. R. CO., NO. 44-131 26798



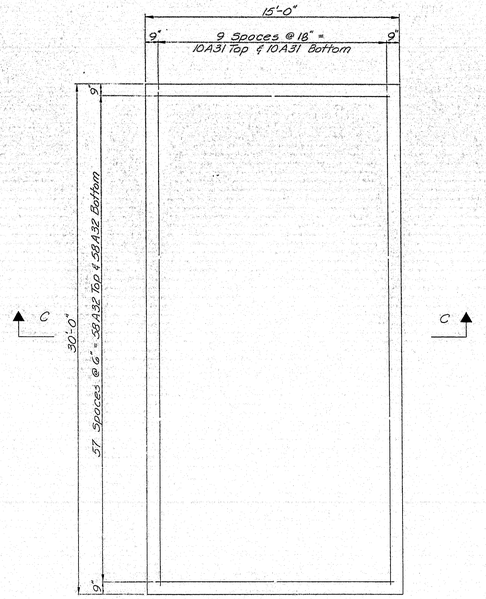
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I95-8(59)	9	47



FRONT ELEVATION

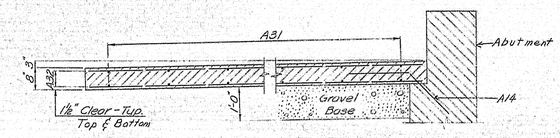


PLAN

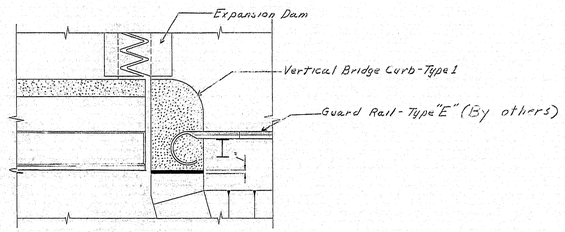


APPROACH SLAB

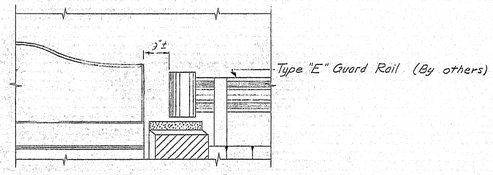
Approach slab concrete to be paid for under contract item 701-33 "Portland Cement Concrete, Abutments and Retaining Walls."



SECTION C-C



GUARD RAIL DETAIL



ELEVATION

NOTES

1. For "Sections A-A & B-B" see sheet #8
2. For reinforcing steel see sheet #21
3. For "Footing & Pile Plan" see sheet #8
4. For "General Abutment Notes" and details see sheet #8

DESIGN+ DET. E. E. L.	BRIDGE NO.
TRACE-	SURVEY-
CHECK- CDH	PLOT-

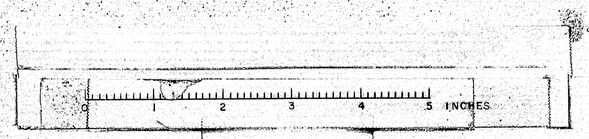
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

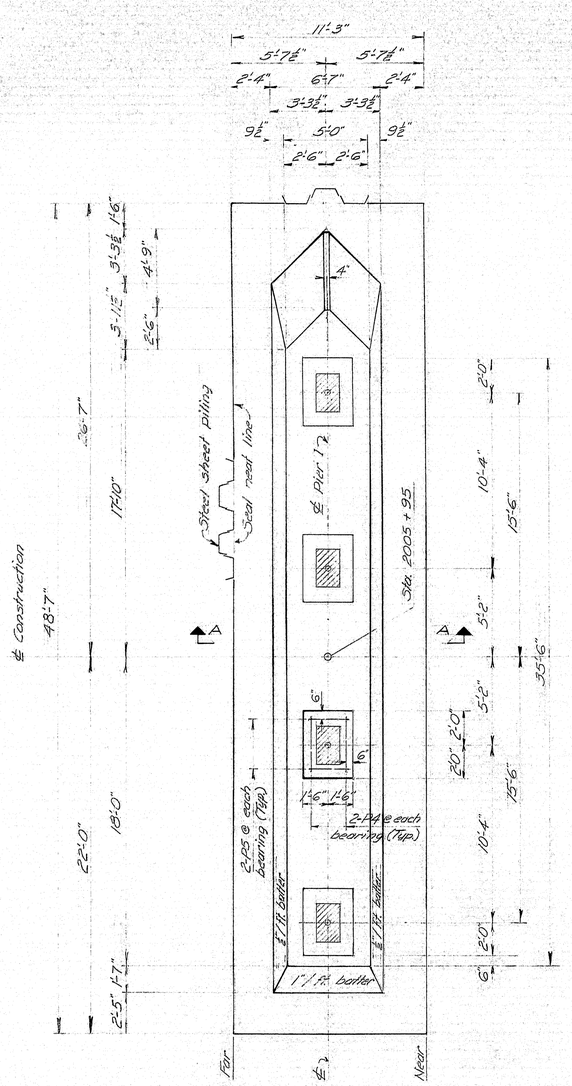
INTERSTATE 95
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
ABUTMENT 2

SHEET 9 OF 47 AUGUSTA, MAINE SEPT. 1964

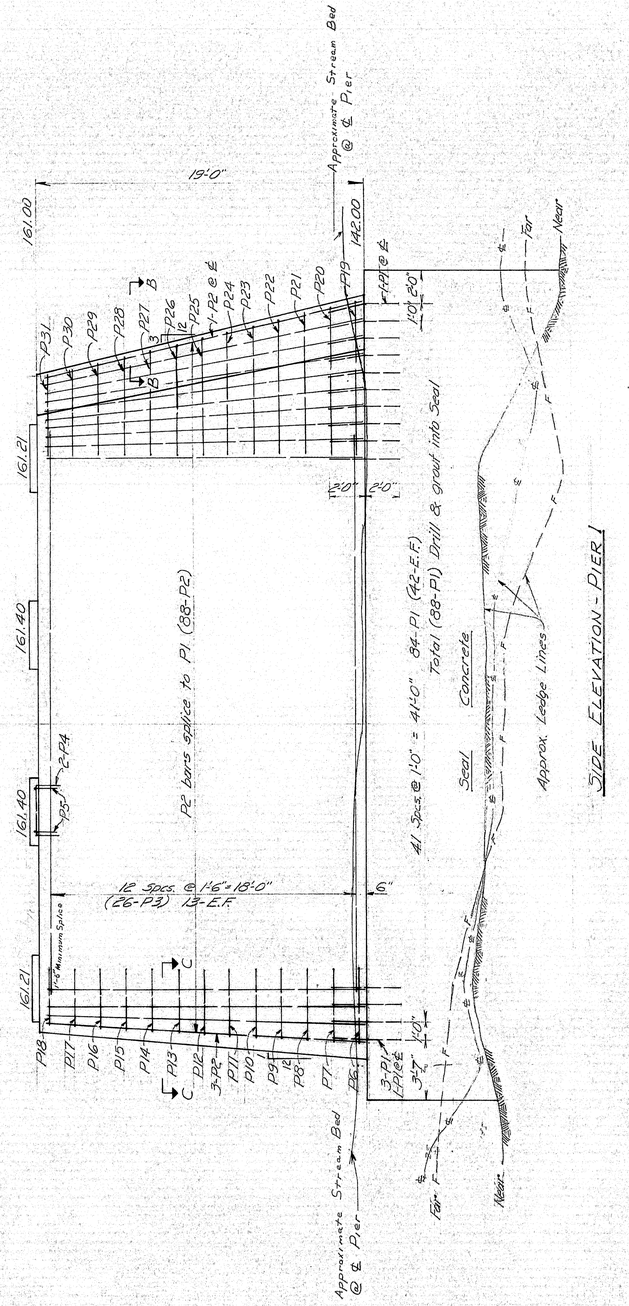
96-22



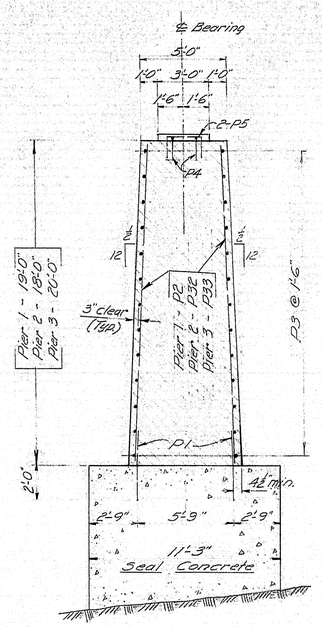
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	10	47



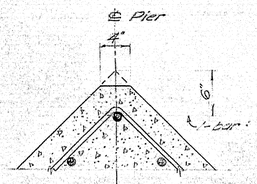
PLAN - PIER 1



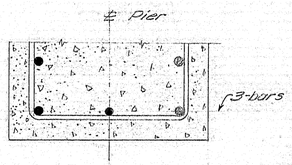
SIDE ELEVATION - PIER 1



SECTION A-A



SECTION B-B



SECTION C-C

GENERAL NOTES

Pier Design based on a 1'-0" thickness of ice applied at Elev. 153.0, and a stream velocity of 10 ft. per second.

Reinforcing Steel to have a minimum 3" cover unless otherwise noted.

Payment for drilling for and grouting of P1 bars into Seal, shall be considered incidental to Item 705-14, Reinforcing Steel, Placing.

Seal Concrete is intended to be placed under water and to be paid for under Item 701-36. Seals may be unwatered when water elevation outside cofferdam is not in excess of Elev. 152.0

Seal dimensions are predicated on use of MP-116, DP-2, I-27 or equivalent steel sheet piling with standard rolled corners. Pay dimensions for Seal Concrete shall be neat dimensions plus 10"

Maximum Pooling pressure = 7 tons per square foot.

DESIGN- T.H.K.
TRACE+ DETAIL - G.M.C.
CHECK- CDH

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95

IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

PIER 1

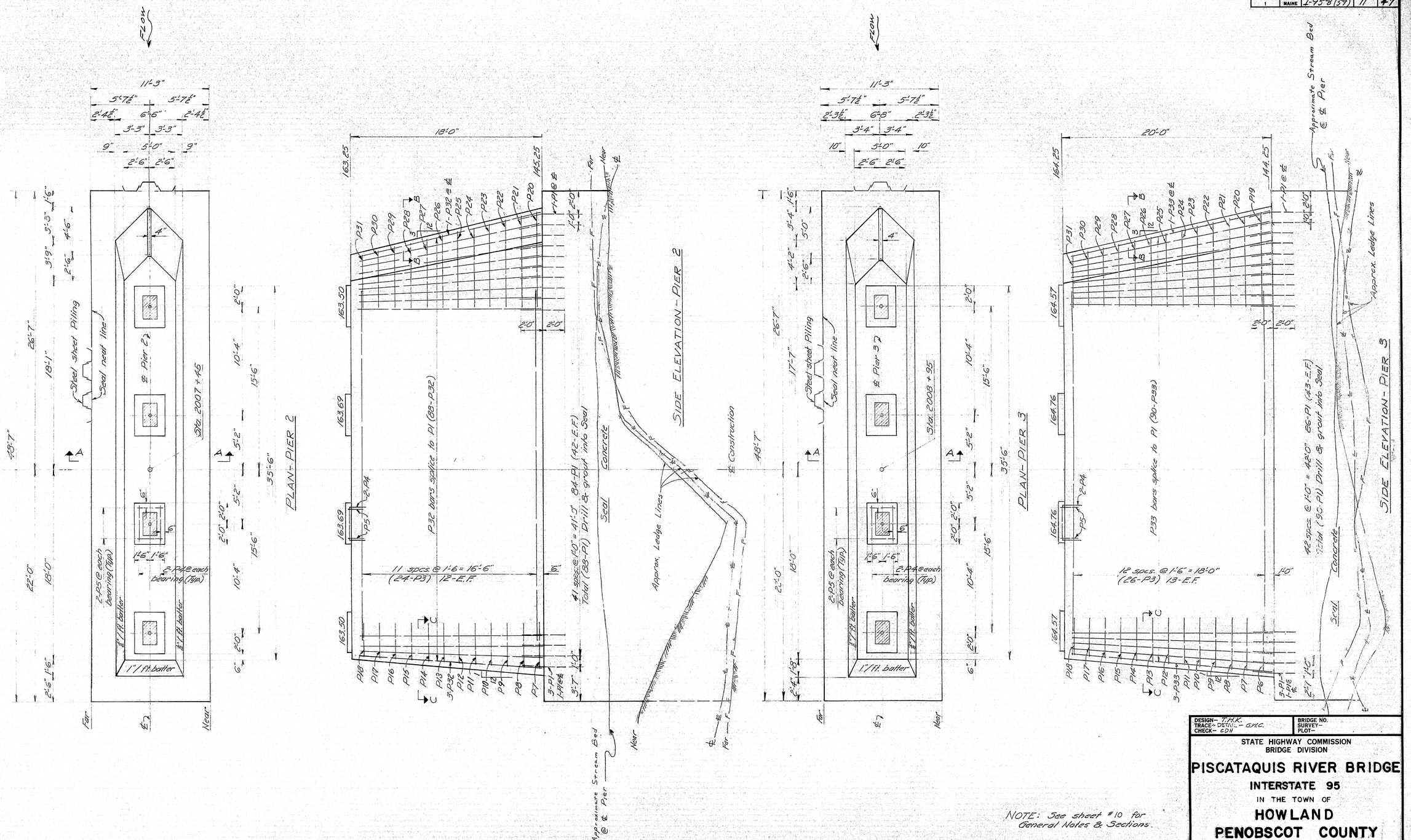
SHEET 10 OF 47 AUGUSTA, MAINE SEPT. 1964

96-23

C. D. CO., NO. 44-131

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	11	47



NOTE: See sheet #10 for General Notes & Sections.

DESIGN- T.H.K.
TRACE- DETAIL - G.H.C.
CHECK- CDH

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95

IN THE TOWN OF

HOWLAND

PENOBSCOT COUNTY

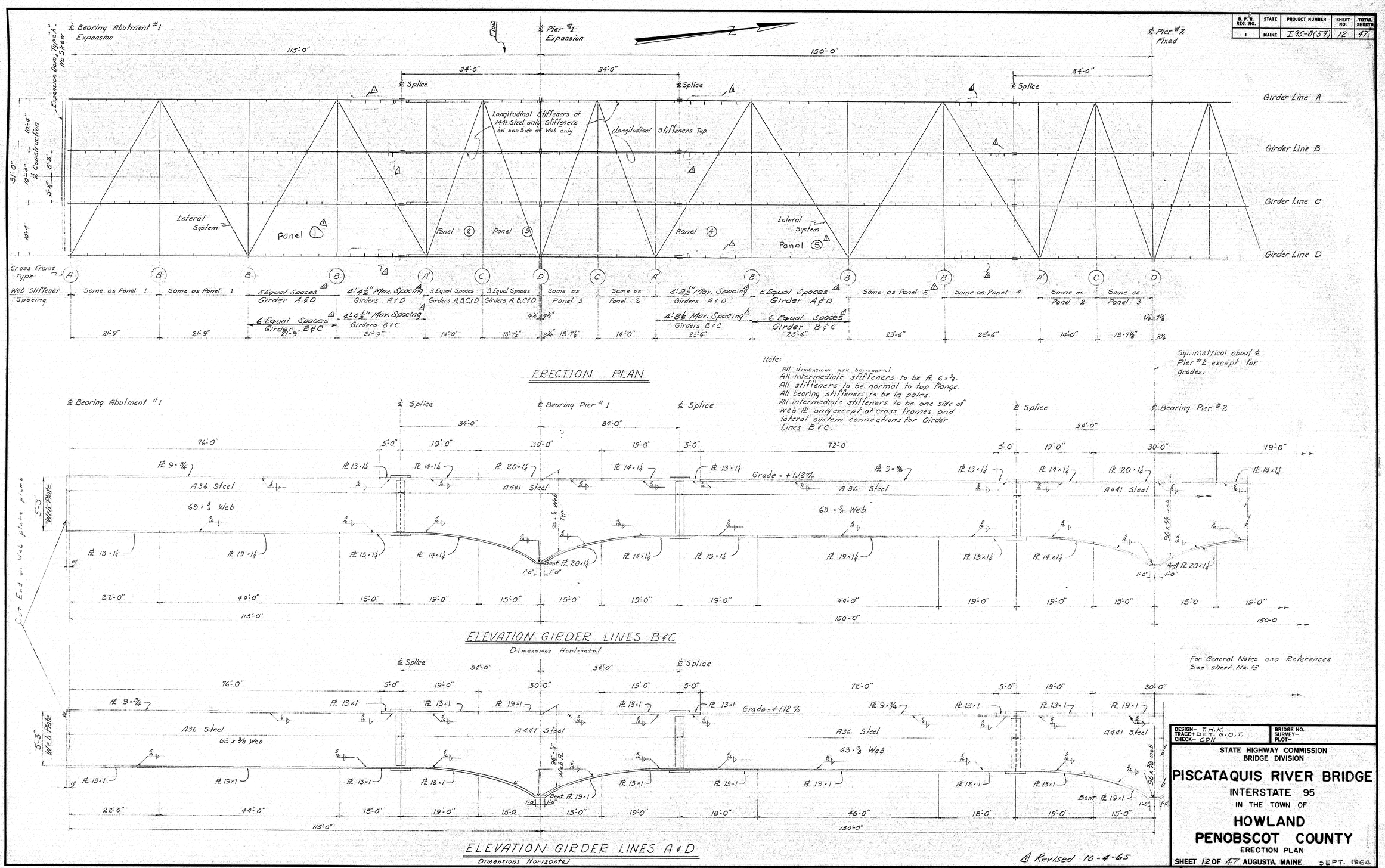
PIERS 2 & 3

SHEET 11 OF 47 AUGUSTA, MAINE SEPT. 1964

96-24

C. B. CO., NO. 44-131

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	12	47



ERECTION PLAN

Note:
All dimensions are horizontal
All intermediate stiffeners to be PL 6 × ⅜.
All stiffeners to be normal to top flange.
All bearing stiffeners to be in pairs.
All intermediate stiffeners to be one side of web PL only except at cross frames and lateral system connections for Girder Lines B & C.

Symmetrical about ℄ Pier #2 except for grades.

ELEVATION GIRDER LINES B & C
Dimensions Horizontal

For General Notes and References See sheet No. 13

ELEVATION GIRDER LINES A & D
Dimensions Horizontal

△ Revised 10-4-65

DESIGN– T.H.K.
TRACE+ DET. G.O.T.
CHECK– CDH
BRIDGE NO.
SURVEY–
PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

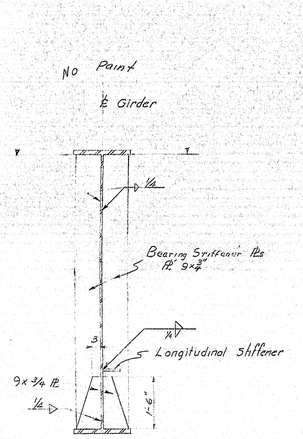
INTERSTATE 95
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
ERECTION PLAN

SHEET 12 OF 47 AUGUSTA, MAINE SEPT. 1964

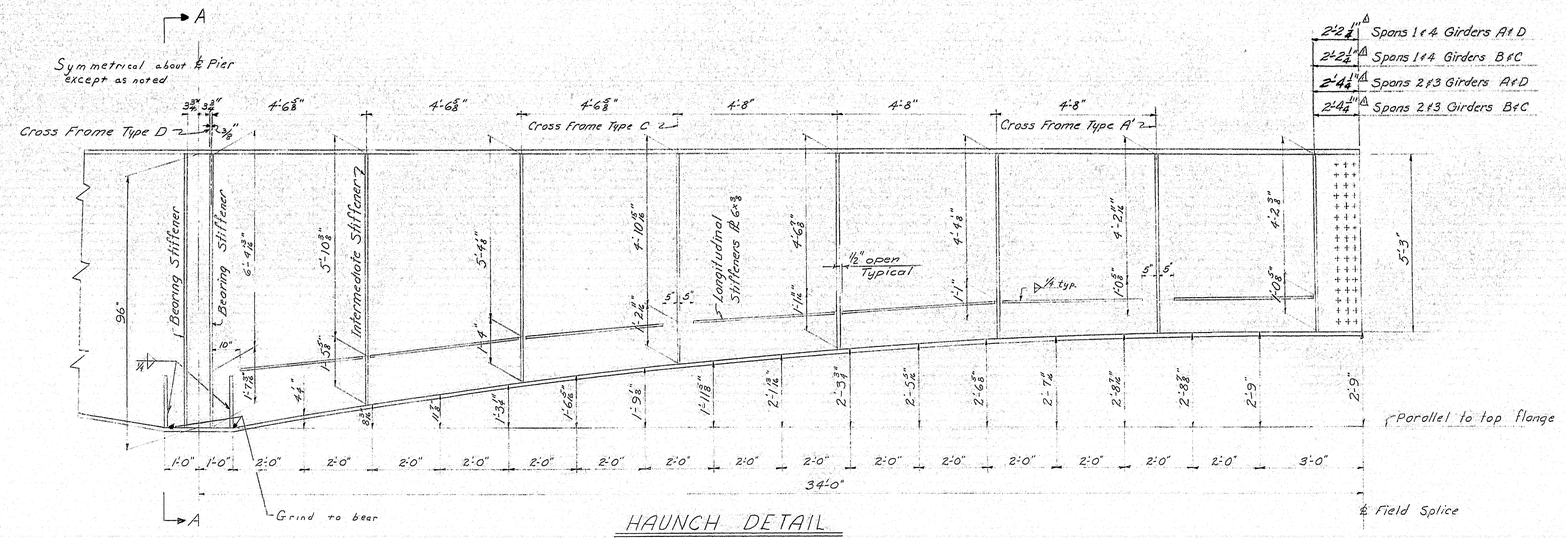
96-25

C. B. CO., NO. 44-131

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I95-8(59)	13	47

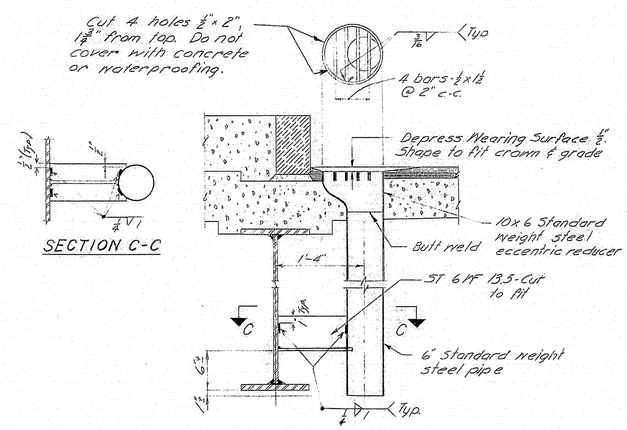


SECTION A-A



HAUNCH DETAIL

Typical All Girders
Dimensions Horizontal



SECTION C-C

DRAIN

Drains to be paid for as Structural Steel
34-Required for Piscataquis River Bridge.

GENERAL NOTES

GIRDER FABRICATION

1. Flanges are to be butt welded in accordance with details this sheet and the specifications, and inspected in conformance with the specifications prior to being fillet welded to the web plates.
2. The Steel Fabricator at his option may fabricate the web plates with butt welds with the following limitations:
   a) A maximum of two (2) transverse welds in the positive moment 63 x 3/8 web plates per girder per span.
   b) A maximum of one (1) transverse weld each side of the ℄ of bearing at a maximum distance of 12'-0" from the ℄ of bearing and one (1) longitudinal weld in the negative moment 96 x 3/8 web plates per girder per section between field splices.
3. If butt welds are used to fabricate the web plates they shall be made and inspected in conformance with the specifications before the web plates are fillet welded to the flange plates. The location and detail of butt welds in the webs shall be subject to approval by the Engineer.

minimum
C.L.P.
2-22-64

SPECIFICATIONS

Design:
The American Association of State Highway Officials Standard Specifications for Highway Bridges, 1961 with Interim Specifications 1961, 1962, 1964

Fabrication & Erection:
State of Maine, State Highway Commission, Standard Specifications Highways and Bridges, Revision of January 1956 and Supplemental Specifications Feb., 1960 and as modified by Contract Specifications

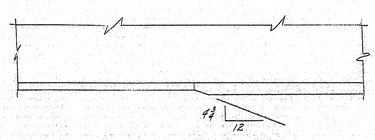
Welding:
Standard Specifications for Welded Highway and Railway Bridges, American Welding Society, AWS D2.0, 1963, as modified by contract specifications.

DESIGN

Loading: HS 20-44 as modified for Interstate Highways.
Allowable Stresses: Structural Steel, A36 - f_s = 20,000 psi
Structural Steel, A441 - f_s = 24,000 psi

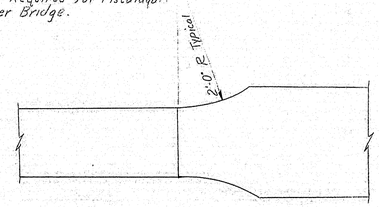
A.S.T.M. STEEL CLASSIFICATION

Girders: A36 or A441 as shown on Erection Plan Sheet No. 12
All Stiffeners: A36
Field Splices: A36.
H.S. Bolts: A325.
Pedestals: A36., except pins
Anchor Bolts: A7, A36 or A307.
All other A36 unless otherwise noted.
Pedestal pins: A235 Class C1 or A108
Grade 1016 to 1030 incl. with minimum Rockwell Scale "B" hardness of 80



FLANGE BUTT WELD @ THICKNESS CHANGE

Note:
"Single Vee Butt Weld" to be used when when either plate is 1" or less in thickness. Structural Steel Fabricator to furnish details. Note also applies to View B-B.



FLANGE BUTT WELD @ WIDTH CHANGE

REFERENCES

Erection Plan:	Sheet No. 12
Steel Details & General Notes:	Sheet No. 13
Shear Connector - Splice & Camber:	Sheet No. 16
Cross Frames Details:	Sheet No. 14
Lateral System Details:	Sheet No. 15
Bearing Pedestal Details:	Sheet No. 17
Expansion Dams See Standard	Sheet BD 105-C4

Detail at ends of Longitudinal Stiffeners
REVISED 11-19-64

△1 Revised 10-4-65

DESIGN- T.H.K.
TRACE+ JET. G.O.T.
CHECK- CDH
BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

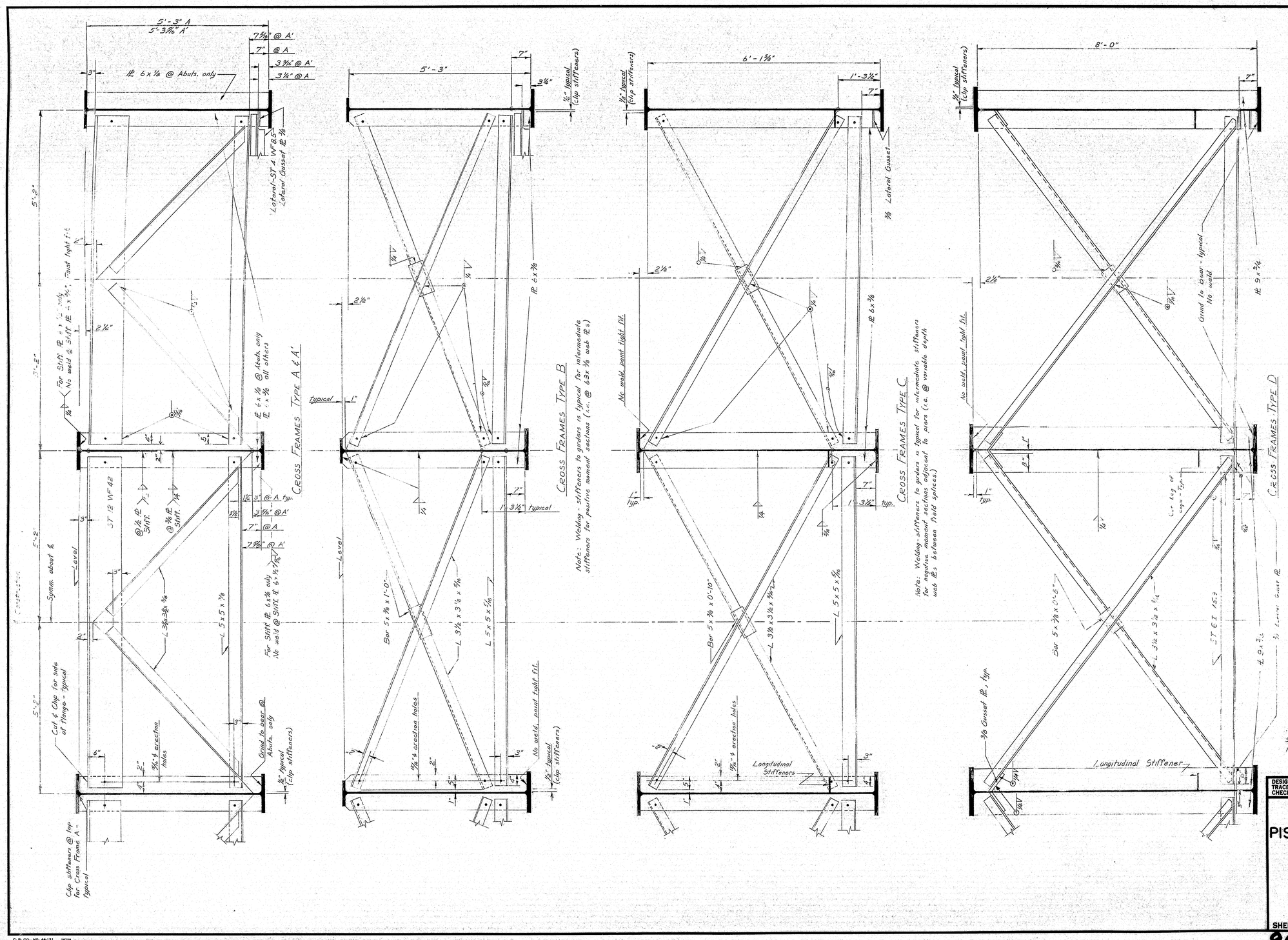
STEEL DETAILS & GENERAL NOTES

SHEET 13 OF 47 AUGUSTA, MAINE SEPT. 1964

96-26

C. B. CO., NO. 44-131

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-3(37)	14	47



DESIGN- T.H.K. DET. G.D.T. BRIDGE NO.
TRACE- E.R.A. SURVEY-
CHECK- EDH PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95

~~IN THE TOWN~~ OF

HOWLAND

PENOBSCOT COUNTY

CROSS FRAMES

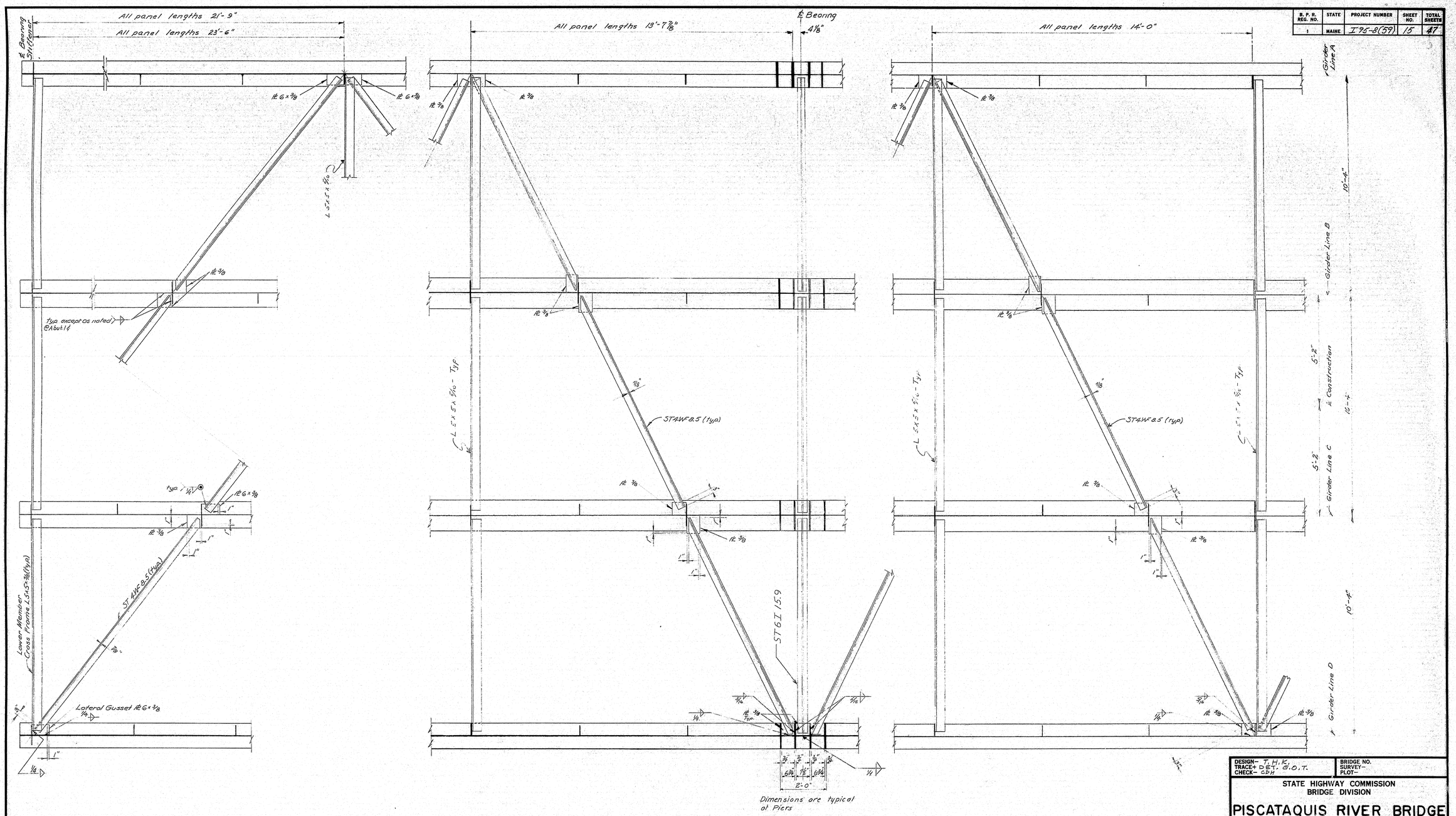
SHEET 14 OF 47 AUGUSTA, MAINE SEPT. 1964

96-27

C. B. CO., NO. 44-131 28728

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	15	47



LATERAL SYSTEM DETAILS

Dimensions Horizontal

DESIGN- T.H.K.
TRACE+ DET. G.O.T.
CHECK- CDH

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

LATERAL SYSTEM DETAILS

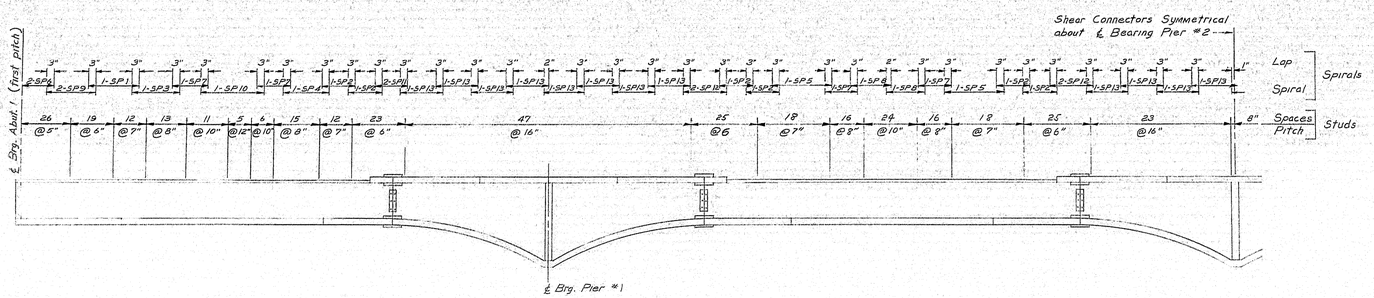
SHEET 15 OF 47 AUGUSTA, MAINE SEPT 1964

96-28

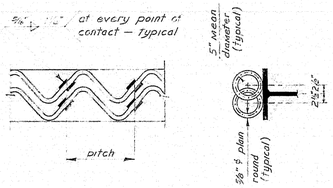
C. B. CO., NO. 44-131 28728

0 1 2 3 4 5 INCHES

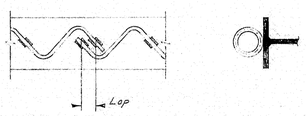
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8 (59)	16	47



SHEAR CONNECTOR LAYOUT
All Girders

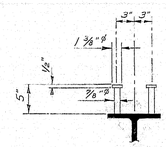


DOUBLE SPIRALS
Indicated by "2" in layout



SINGLE SPIRALS
Indicated by "1" in layout

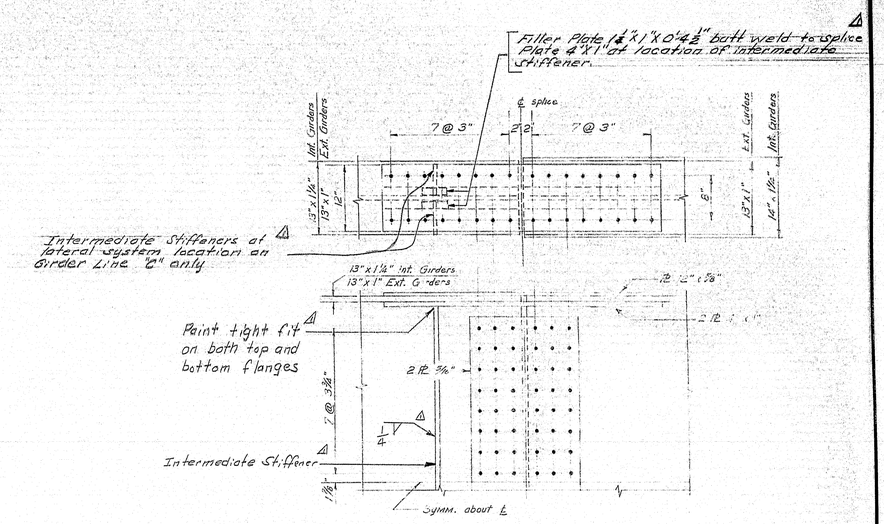
SPIRAL TABLE				
Spiral	Number	Spaces	Pitch	Length
SP1	8	29	4"	9'-8"
SP2	48	18	4"	6'-0"
SP3	8	22	5"	9'-2"
SP4	8	21	5"	8'-9"
SP5	16	28	5"	11'-8"
SP6	16	14	6"	7'-0"
SP7	32	12	6"	6'-0"
SP8	16	13	7"	7'-7"
SP9	16	16	7"	9'-4"
SP10	8	22	7"	12'-10"
SP11	16	10	7"	5'-10"
SP12	32	14	7"	8'-2"
SP13	96	6	16"	8'-0"



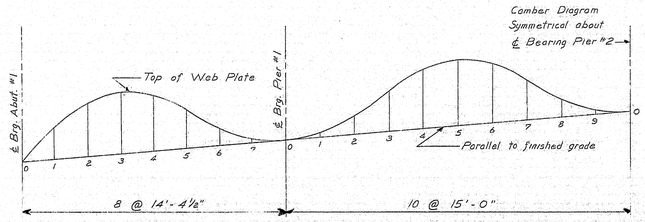
STUD DETAIL
2 Studs @ each pitch
5,936 Required

NOTE:
1. Pitch and transverse spacing may be revised slightly at girder field splices to clear H.S. Bolts.
2. Spiral reinforcing or studs may be used at the option of the contractor.
3. If studs are used they shall be granular or solid filled and automatically end welded to the top flange in the shop or field.
4. Studs are a patented product. If the contractor elects to use them, he shall pay the royalty, and payment to the contractor will be included in the lump sum price for Shear Connectors.

SHEAR CONNECTOR DETAILS



TYPICAL GIRDER FIELD SPLICE
7/8" ϕ H. S. Bolts; 15/16" ϕ holes



CAMBER DIAGRAM
All Girders

Span	Point	Camber
℄ Brg. Abut. #1	0	0
	1	5/16"
	2	1 3/16"
	3	1 13/16"
	4	1 15/16"
	5	1 7/8"
	6	1 1/2"
	7	1 1/8"
℄ Brg. Pier #1	0	0
	1	1/8"
	2	3/16"
	3	1 3/16"
	4	1 3/8"
	5	1 15/16"
	6	1 3/4"
	7	1 9/16"
	8	3/16"
	9	1/8"
℄ Brg. Pier #2	0	0

△ Revised 10-4-65

DESIGN- T.H.K.
TRACE- D.E.T. E.R.A.
CHECK- C.D.H.
BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

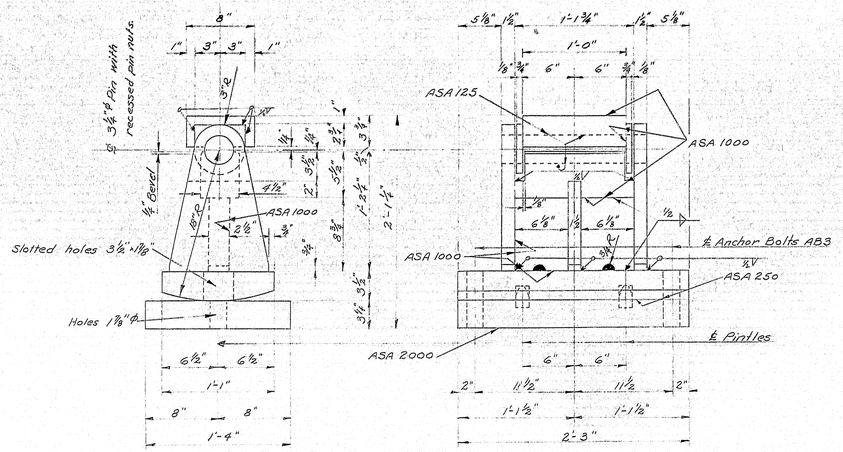
SHEAR CONNECTOR-SPLICE-CAMBER

SHEET 16 OF 47 AUGUSTA, MAINE SEPT. 1964

96-29

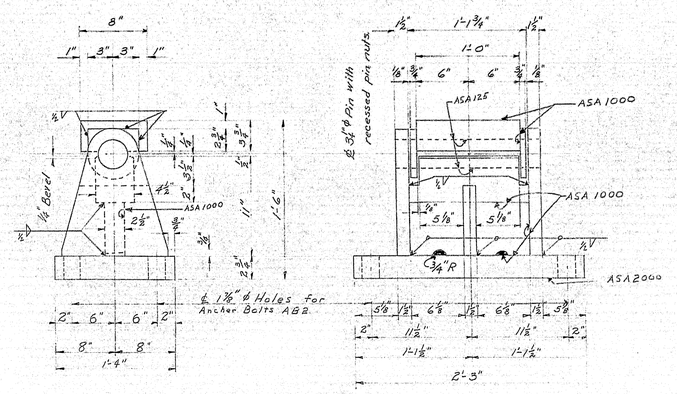
C. B. CO., NO. 44-131 59750

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-B (59)	17	47



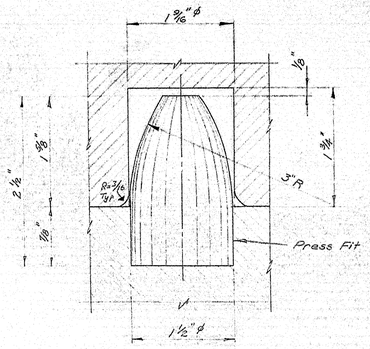
EXPANSION PEDESTAL

Piers 1 & 3 only
8 Required

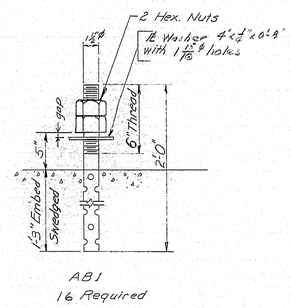


FIXED PEDESTAL

Pier 2 only
4 Required



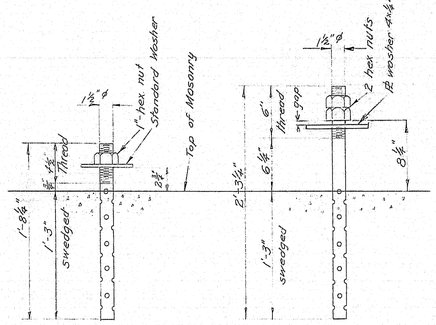
PINTLE DETAIL



AB1
16 Required

ANCHOR BOLTS

Abutments 1 & 2

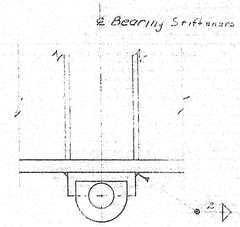


AB2
16 Required

AB3
16 Required

ANCHOR BOLTS

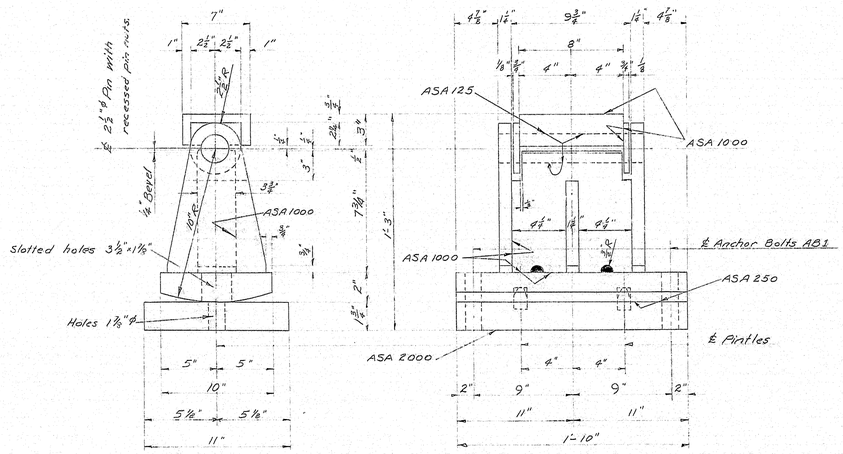
Piers



TYPICAL WELDING DETAIL

Sole ℄ to Girder

Note: Set Rockers plumb at 45° F.



EXPANSION PEDESTAL

Abutment 1 & 2

8 Required

Welding Similar to Pedestal above

NOTE: At the location of bearing pedestals the concrete bridge seats shall be dressed one inch larger all around than size of masonry plates and to exact elevations shown on plans. If the dressed areas are below the surface of the surrounding bridge seat a small channel shall be cut to the edge of the bridge seat for drainage where required by the Engineer. Channels shall have a min. width of 2", and min. slope of ½ inch per foot. No separate payment for this work will be made as it shall be considered incidental to contract items. Place reinforcing steel to clear anchor bolts.

DESIGN- T.H.K. TRACE- DET. G.O.T. CHECK- CDH	BRIDGE NO. SURVEY- PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

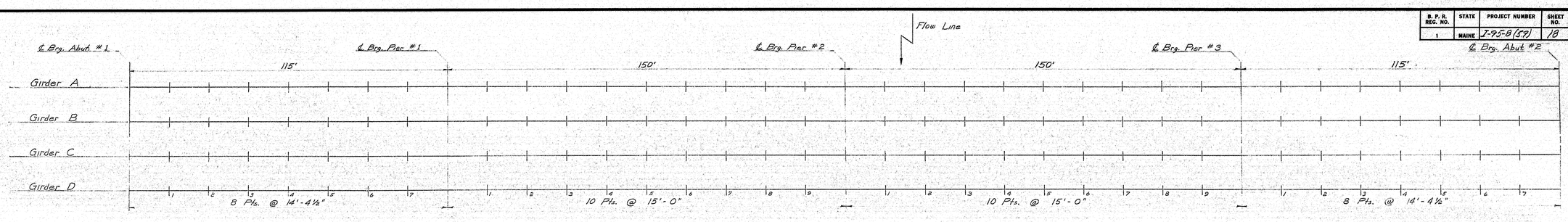
BEARING PEDESTALS

SHEET 17 OF 47 AUGUSTA, MAINE SEPT 1964

96-30

C. B. CO., NO. 44-131

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(57)	18	47

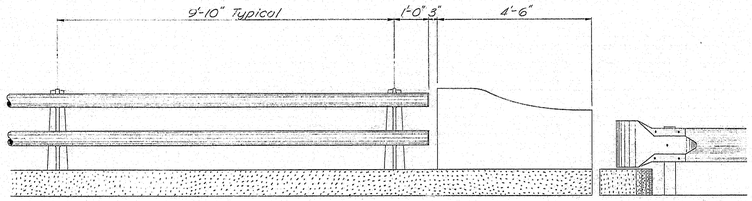


BLOCKING PLAN

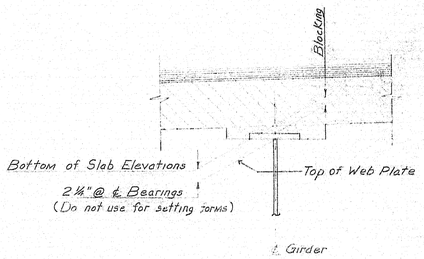
BOTTOM OF SLAB ELEVATIONS

Girders	℄ Brg. Abut. 1	1	2	3	4	5	6	7	℄ Brg. Pier 1	1	2	3	4	5	6	7	8	9	℄ Brg. Pier 2	1	2	3	4	5	6	7	8	9	℄ Brg. Pier 3	1	2	3	4	5	6	7	℄ Brg. Abut. 2
A & D	170.30	170.53	170.73	170.91	171.06	171.19	171.31	171.44	171.59	171.77	171.99	172.20	172.42	172.60	172.76	172.88	172.99	173.11	173.27	173.45	173.67	173.88	174.10	174.28	174.44	174.56	174.67	174.79	174.95	175.12	175.31	175.51	175.70	175.89	176.03	176.15	176.24
B & C	170.51	170.74	170.94	171.12	171.26	171.39	171.52	171.65	171.80	171.98	172.19	172.41	172.63	172.81	172.96	173.08	~~173.20~~ 173.20	173.32	173.48	173.66	173.87	174.09	174.31	174.49	174.65	174.76	174.88	175.00	175.16	175.33	175.52	175.72	175.91	176.09	176.23	176.35	176.44

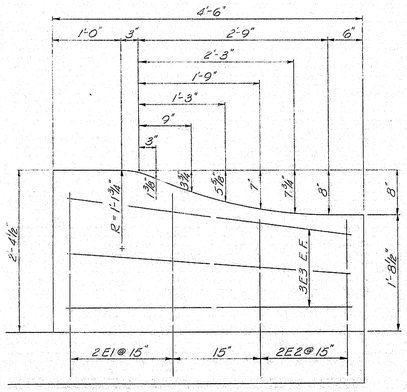
Note:
To compensate for dead load deflections, as well as possible irregularities in girders, set the bottom of slab elevations at the points indicated before any of the slab forms are started. Bottom of slab grades for blocking shall be set after shear connectors are welded to the top flange.



RAIL & END POST



BLOCKING DETAIL



END POST

Note- Payment for concrete in End Rail Posts to be made under Item 701-40, Portland Cement Concrete, Roadway and Sidewalk Slabs on Steel Bridges.

DESIGN- T.H.K. TRACE+DET. E.R.A & E.E.L. CHECK- CDH	BRIDGE NO. SURVEY- PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

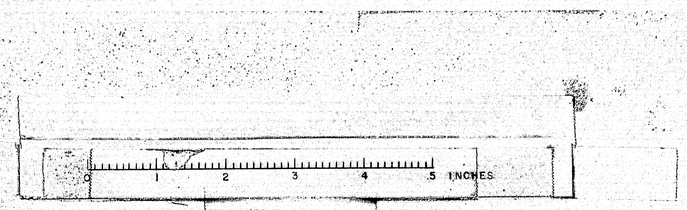
HOWLAND
PENOBSCOT COUNTY

BLOCKING & RAIL DETAILS

SHEET 18 OF 47 AUGUSTA, MAINE SEPT. 1964

96-31

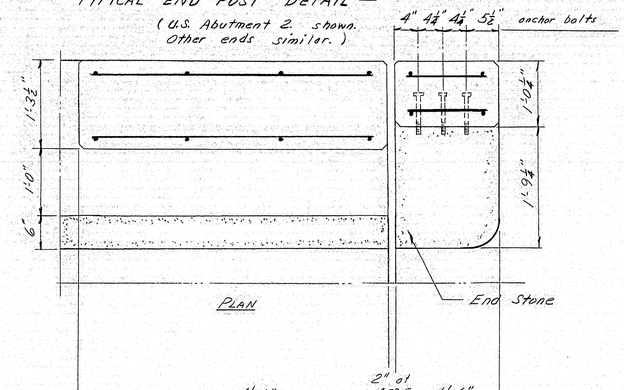
C. B. CO., NO. 44-131 26726



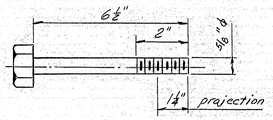
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-B(59)	18A	47

— TYPICAL END POST DETAIL —

(U.S. Abutment 2. shown. Other ends similar.)

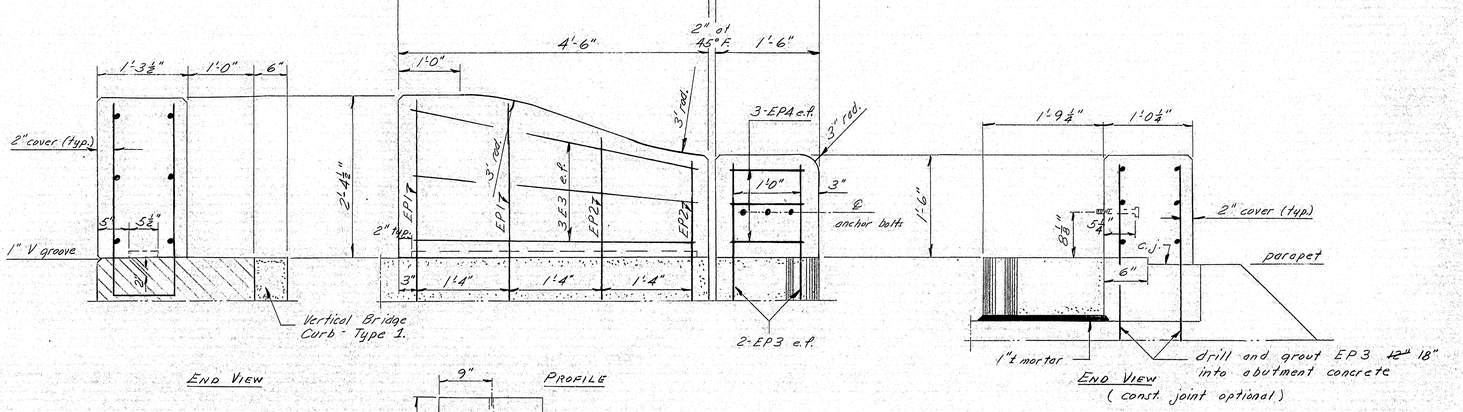


PLAN



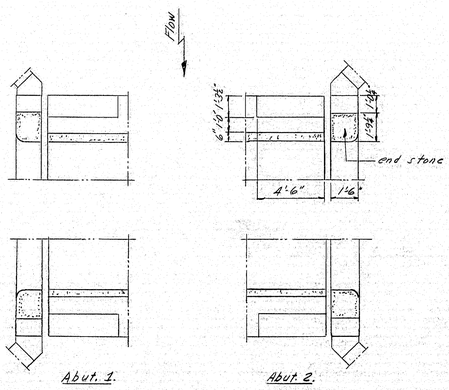
Anchor Bolt

Bolt to be furnished with hex. head, nut, and washer. All parts galvanized.



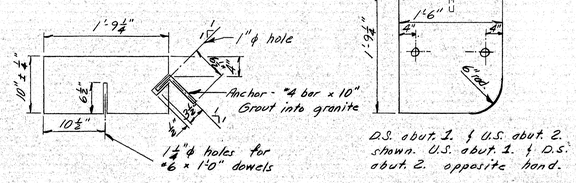
END VIEW

END VIEW (const. joint optional)



Abut. 1. Abut. 2.

Scope of Work



PROFILE

D.S. abut. 1. & U.S. abut. 2. shown. U.S. abut. 1. & D.S. abut. 2. opposite hand.

Vertical Bridge Curb - Type 1. - End Stone

Drill 1¼" φ holes 6" deep into existing abutment concrete. Grout #6 x 1'-0" dowels into granite before setting granite on abutment.

— Additional Materials Required —

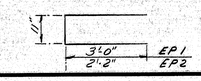
Concrete Class "A" - 0.50 c.y.

Reinforcing Steel:

Bent Bars	EP1	#5	6'-11"	8 req'd.
	EP2	#5	5'-3"	8 req'd.
Straight Bars	EP3	~~#5~~ #7	~~3'-3"~~ 3'-9"	16 req'd.
	EP4	#4	1'-0"	24 req'd.

Anchor Bolts 12 req'd.

End Stone (Vert. Br. Curb - Type 1.) 4 req'd.
(complete with anchor - dowels)



DESIGN— Mollicone	BRIDGE NO.
TRACE—	SURVEY—
CHECK— J.H. Whitten	PLOT—

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE
INTERSTATE 95

IN THE TOWN OF

HOWLAND

PENOBSCOT COUNTY

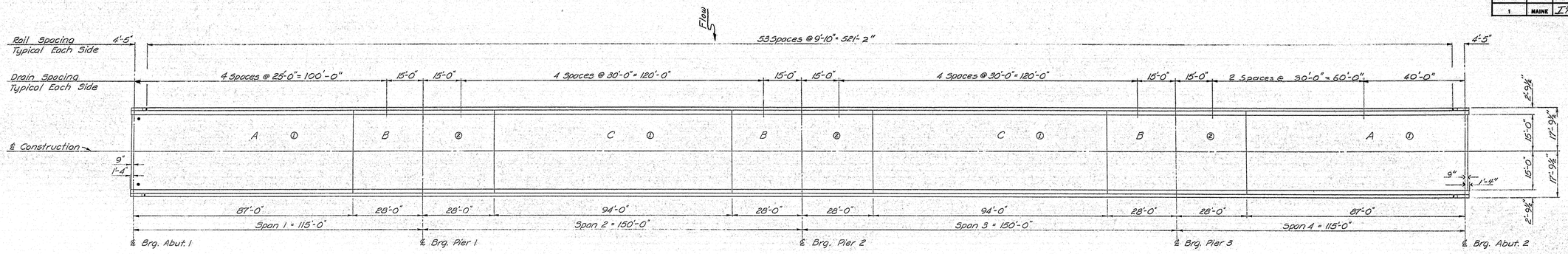
END POST REVISIONS

SHEET 18A OF 47 AUGUSTA, MAINE MARCH 1966

96-32

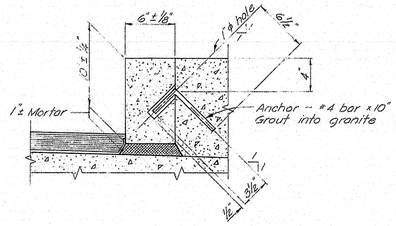
0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I95-8 (59)	19	47

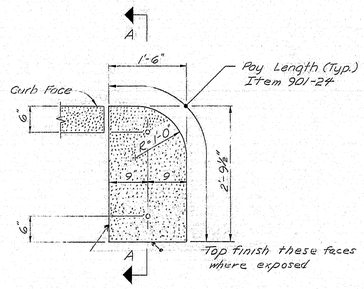


LAYOUT PLAN

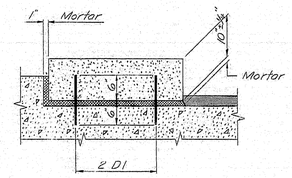
Place all slabs marked ① before placing slabs marked ②.



TYPICAL SECTION



PLAN



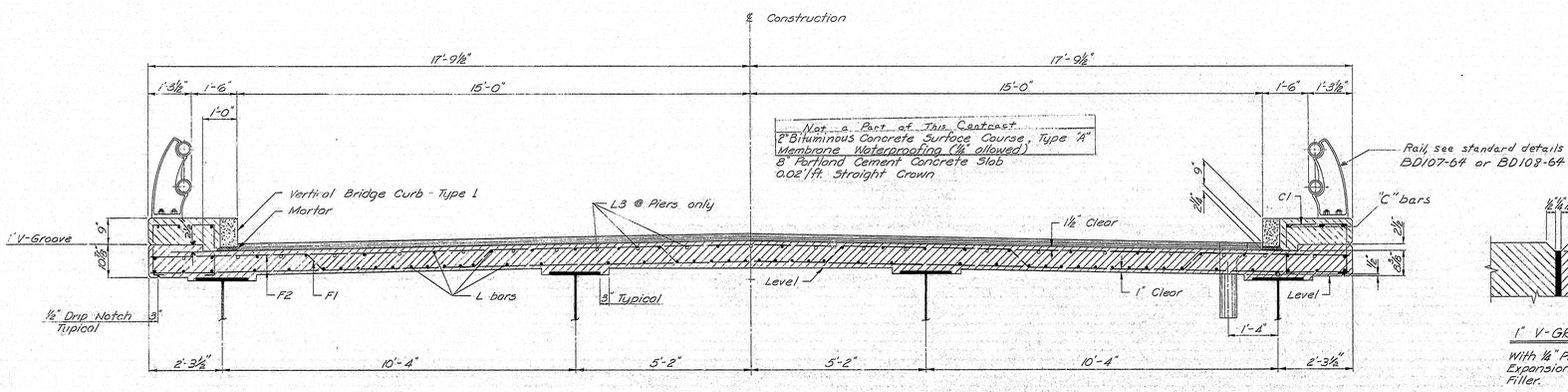
SECTION A-A

Grout D1 bars into 1¼" ϕ holes in stone prior to setting stone on backwall. Drill 1¼" holes in backwall to suit D1 bars. Payment for drilling and grouting of D1 bars to be included in the price for Item 705-14, Reinforcing Steel, Placing.

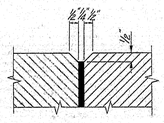
VERTICAL BRIDGE CURB ~ TYPE 1

SLAB NOTES

1. At contraction joints over ℄ of bearings of piers use ¼" preformed expansion joint filler for granite curb and concrete curb. At all other contraction joints in curbs break the bond between concrete surfaces by coating the contact areas with a suitable grade of asphalt paint. Joints in granite curb are to be provided at every contraction joint in concrete curb.
2. Form a 1" V-Groove on outside face of curb and slab at each contraction joint.
3. At points indicated by symbol * on "Layout Plan" provide a 1" ϕ plastic tube drain extending through slab to 2" below bottom of slab. Place in order for drip to clear bridge seats. Do not cover with membrane waterproofing. Payment to be incidental to Item 701-40 Portland Cement Concrete Roadway and Sidewalk Slabs on Steel Bridges. (2-Required)
4. No work other than form work utilizing hand tools will be permitted on slab for a period of seven days following placing of slab.
5. For details of slabs A, B & C see Sh. #20.

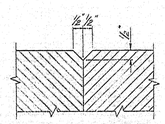


TYPICAL TRANSVERSE SECTION



1" V-GROOVE

With ¼" Preformed Expansion Joint Filler.



1" V-GROOVE

Without ¼" Preformed Expansion Joint Filler.

DESIGN- T.H.K.
TRACE+ DET. E.E.L.
CHECK- CDH

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

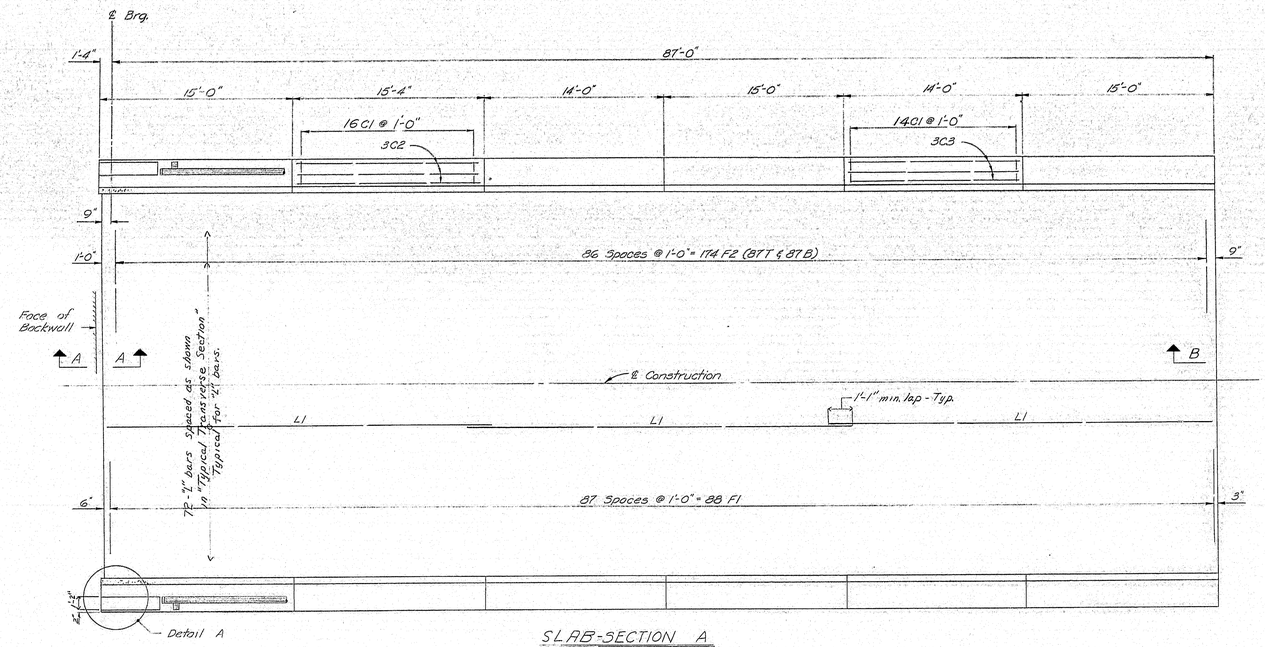
SUPERSTRUCTURE

SHEET 19 OF 47 AUGUSTA, MAINE SEPT 1964

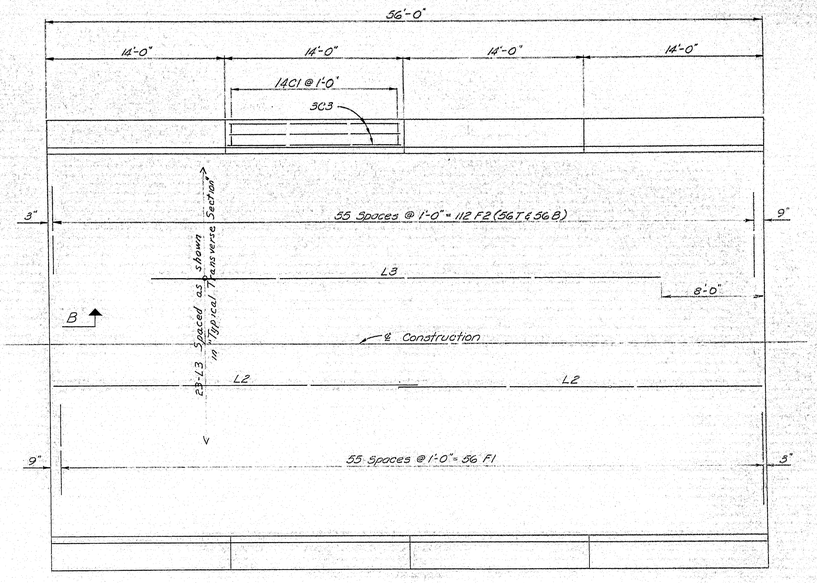
96-33

C. B. CO., NO. 44-131

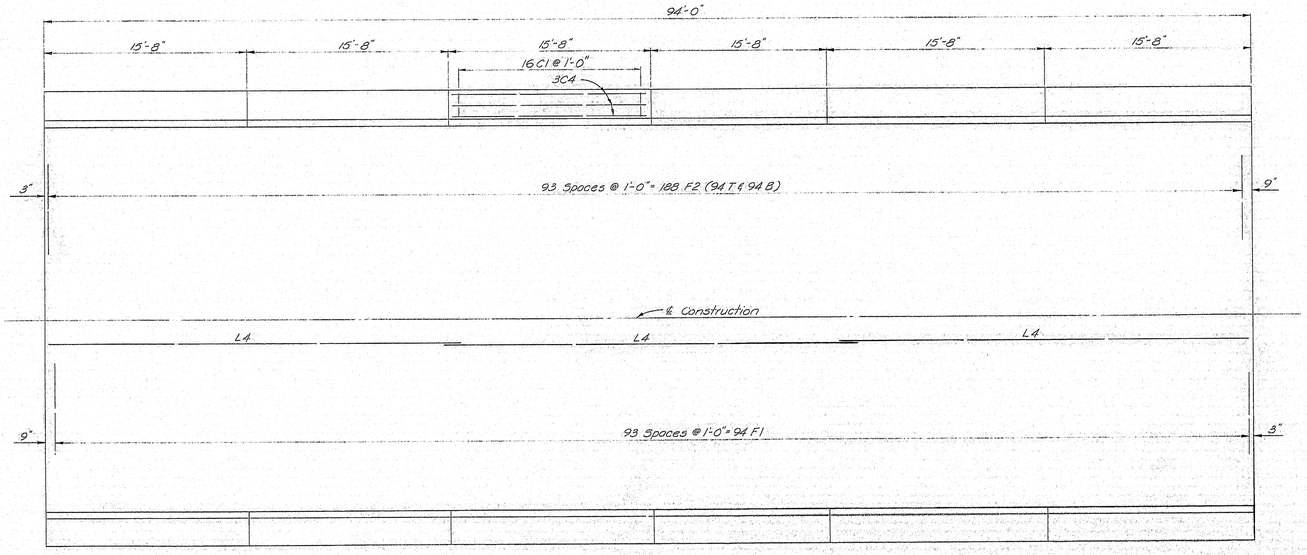
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(57)	20	47



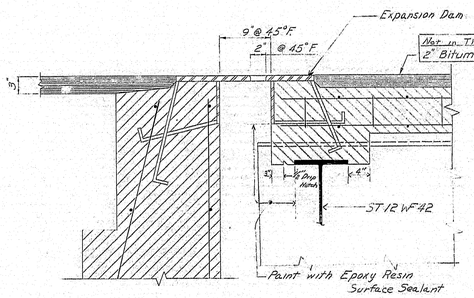
SLAB-SECTION A



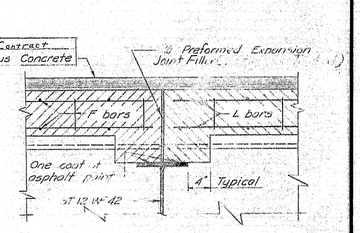
SLAB-SECTION B



SLAB-SECTION C

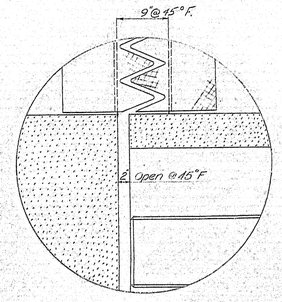


SECTION A-A



SECTION B-B

At joints in concrete and granite curbs over piers 1, 2, & 3 and at slab construction joints, use ½" preformed expansion joint filler. At all other joints, break the bond between concrete surfaces with a coat of asphalt paint.



DETAIL A

Note: For location of Slab A, B & C see Sh #19.

DESIGN- T.H.K. TRACE- DBT, E.E.L. CHECK- CDH	BRIDGE NO. SURVEY- PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

SUPERSTRUCTURE

SHEET 20 OF 47 AUGUSTA, MAINE SEPT 1964

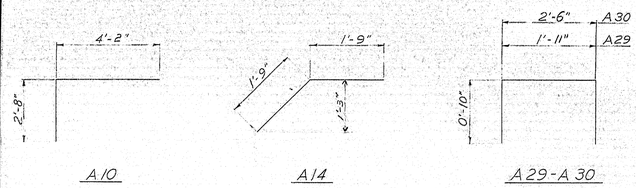
96-34

C. S. CO., NO. 44-131 28789

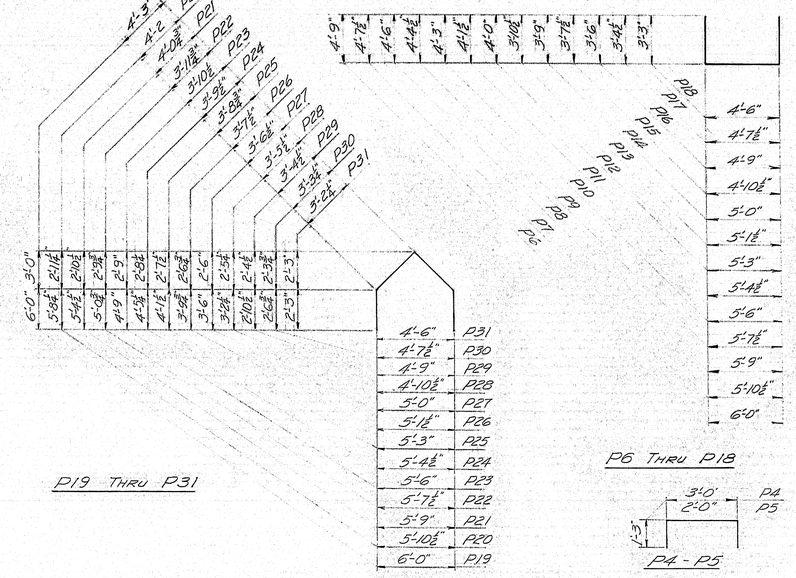
0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	21	47

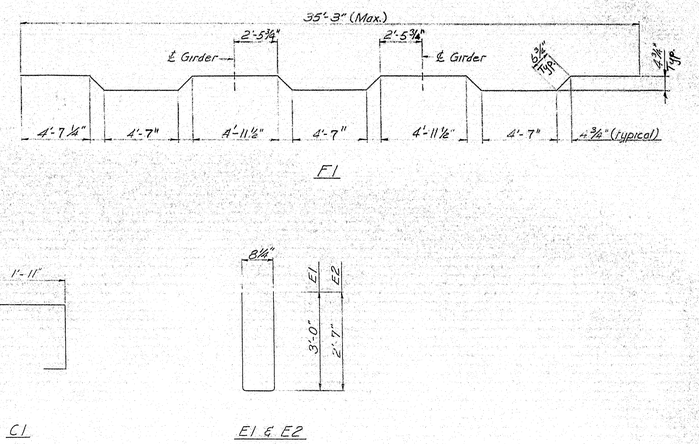
ABUTMENT STEEL



PIER STEEL



SUPERSTRUCTURE STEEL



BENT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
A10	#5	46	6'-10"	Bridge Seat
A14	#6	40	3'-6"	Backwall
A29	#4	16	3'-7"	Bearing Pads
A30	#4	16	4'-2"	" "

STRAIGHT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
A1	#6	136	6'-6"	Footing
A2	#6	26	34'-0"	"
A3	#6	40	10'-6"	"
A4	#6	16	5'-6"	"
A5	#6	16	4'-6"	"
A6	#6	16	4'-0"	"
A7	#6	16	3'-0"	"
A8	#6	110	2'-6"	"
A9	#5	46	5'-9"	"
A11	#5	24	17'-6"	Bridge Seat
A12	#5	46	3'-0"	" "
A13	#4	40	17'-2"	Backwall
A15	#5	92	7'-6"	"
A16	#6	8	11'-0"	Wing
A17	#6	8	10'-8"	"
A18	#6	8	10'-2"	"
A19	#6	8	9'-8"	"
A20	#6	8	9'-2"	"
A21	#6	8	8'-8"	"
A22	#6	8	8'-2"	"
A23	#6	8	7'-8"	"
A24	#5	16	9'-0"	"
A25	#5	16	10'-0"	"
A26	#5	8	9'-3"	"
A27	#5	8	7'-3"	"
A28	#5	8	5'-3"	"
A31	#4	40	29'-6"	Approach Slab
A32	#5	232	14'-6"	" "

} Bend in field

DET. E.E.L.

BENT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
P4	#5	24	5'-6"	Bearing Pads
P5	#5	24	4'-6"	" "
P6	#5	2	15'-6"	Shaft - Pier 1 & 3
P7	#5	3	15'-1"	" - Pier 1,2 & 3
P8	#5	3	14'-9"	" "
P9	#5	3	14'-4"	" "
P10	#5	3	14'-0"	" "
P11	#5	3	13'-7"	" "
P12	#5	3	13'-3"	" "
P13	#5	3	12'-10"	" "
P14	#5	3	12'-6"	" "
P15	#5	3	12'-1"	" "
P16	#5	3	11'-9"	" "
P17	#5	3	11'-4"	" "
P18	#5	3	11'-0"	" "
P19	#5	2	20'-6"	" - Pier 1 & 3
P20	#5	3	19'-8"	" - Pier 1,2 & 3
P21	#5	3	18'-10"	" "
P22	#5	3	18'-0"	" "
P23	#5	3	17'-3"	" "
P24	#5	3	16'-6"	" "
P25	#5	3	15'-8"	" "
P26	#5	3	14'-10"	" "
P27	#5	3	14'-1"	" "
P28	#5	3	13'-3"	" "
P29	#5	3	12'-6"	" "
P30	#5	3	11'-8"	" "
P31	#5	3	10'-10"	" "

STRAIGHT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
P1	#7	266	4'-0"	Footing
P2	#7	88	18'-6"	Shaft
P3	#5	76	33'-0"	"
P32	#7	88	17'-6"	"
P33	#7	90	19'-6"	"

DET. G.M.C.

BENT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
F1	#6	532	36'-3"	Slabs
C1	#5	1088	6'-1"	Curbs
E1	#5	8	6'-9"	End Posts
E2	#5	8	5'-11"	" "

STRAIGHT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
F2	#6	1060	35'-3"	Slabs
L1	#5	132	[illegible]	"
L2	#5	432	28'-5	"
L3	#5	49	40'-0"	"
L4	#5	432	32'-0"	"
C2	#5	48	12'-9"	Curbs
C3	#5	96	13'-8"	"
C4	#5	72	15'-4"	"
D1	#6	8	[illegible]'-0"	Curb Dowels
E3	#4	24	4'-2	End Post

DET. E.E.L.

NOTE: Dimensions to ℄ bars. Reinforcing steel to be of Intermediate Grade.

DESIGN- J.H.K.
TRACE- E.B.A., DET. AS SHOWN
CHECK- E.D.H.

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

REINFORCING STEEL

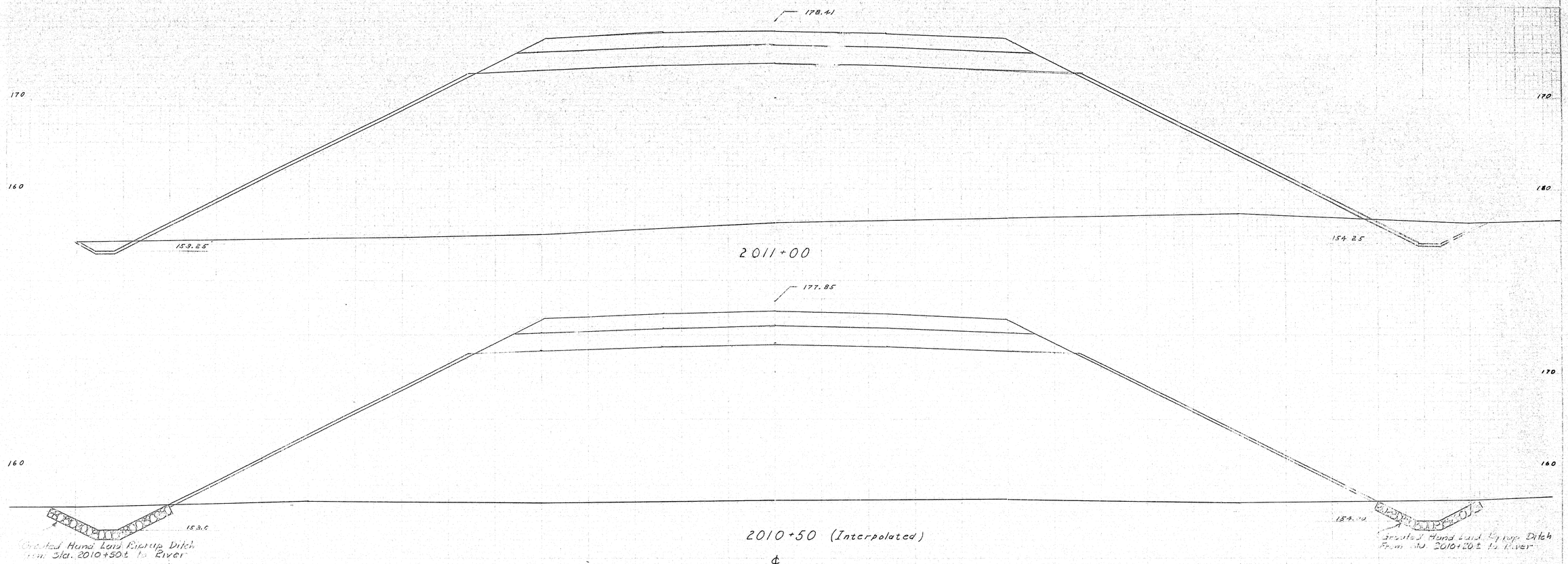
SHEET 21 OF 47 AUGUSTA, MAINE SEPT. 1964

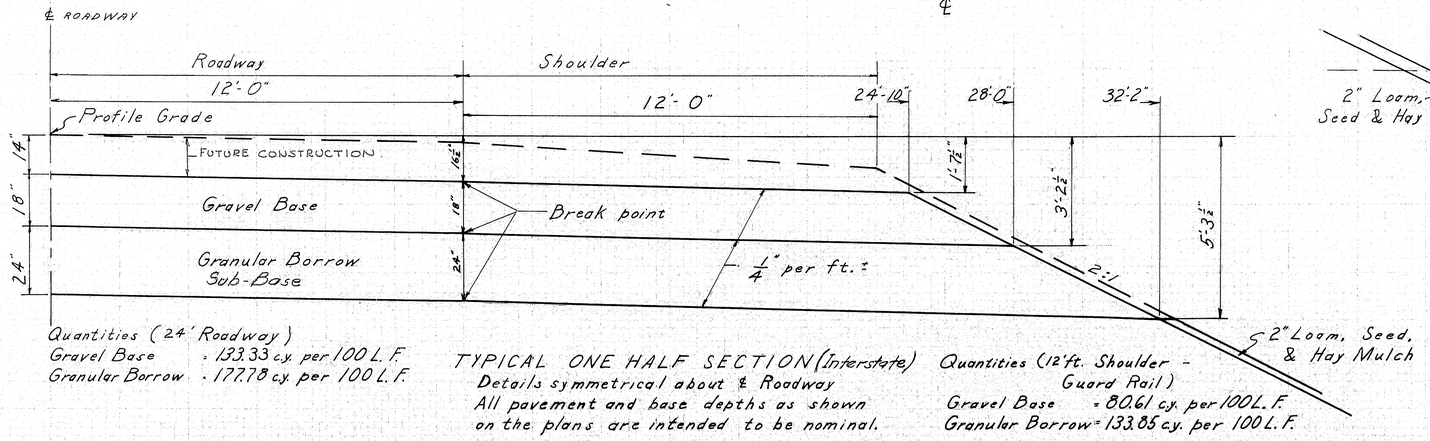
96-35

C. S. CO., NO. 44-131 28788

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8 (59)	22	47

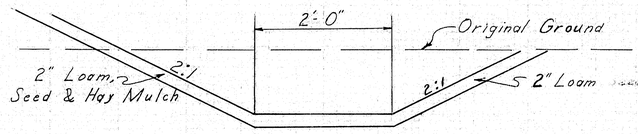




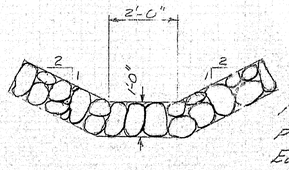
Quantities (24' Roadway)
Gravel Base = 133.33 c.y. per 100 L.F.
Granular Borrow = 177.78 c.y. per 100 L.F.

TYPICAL ONE HALF SECTION (Interstate)
Details symmetrical about ℄ Roadway
All pavement and base depths as shown on the plans are intended to be nominal.

Quantities (12' ft. Shoulder - Guard Rail)
Gravel Base = 80.61 c.y. per 100 L.F.
Granular Borrow = 133.85 c.y. per 100 L.F.



TYPICAL DITCH



Necessary excavation to be paid for under Item 203.09 Earth Excavation.

TYPICAL GROUTED HAND LAID RIPRAP DITCH

PLOT P.J.L.
CHECK Harris

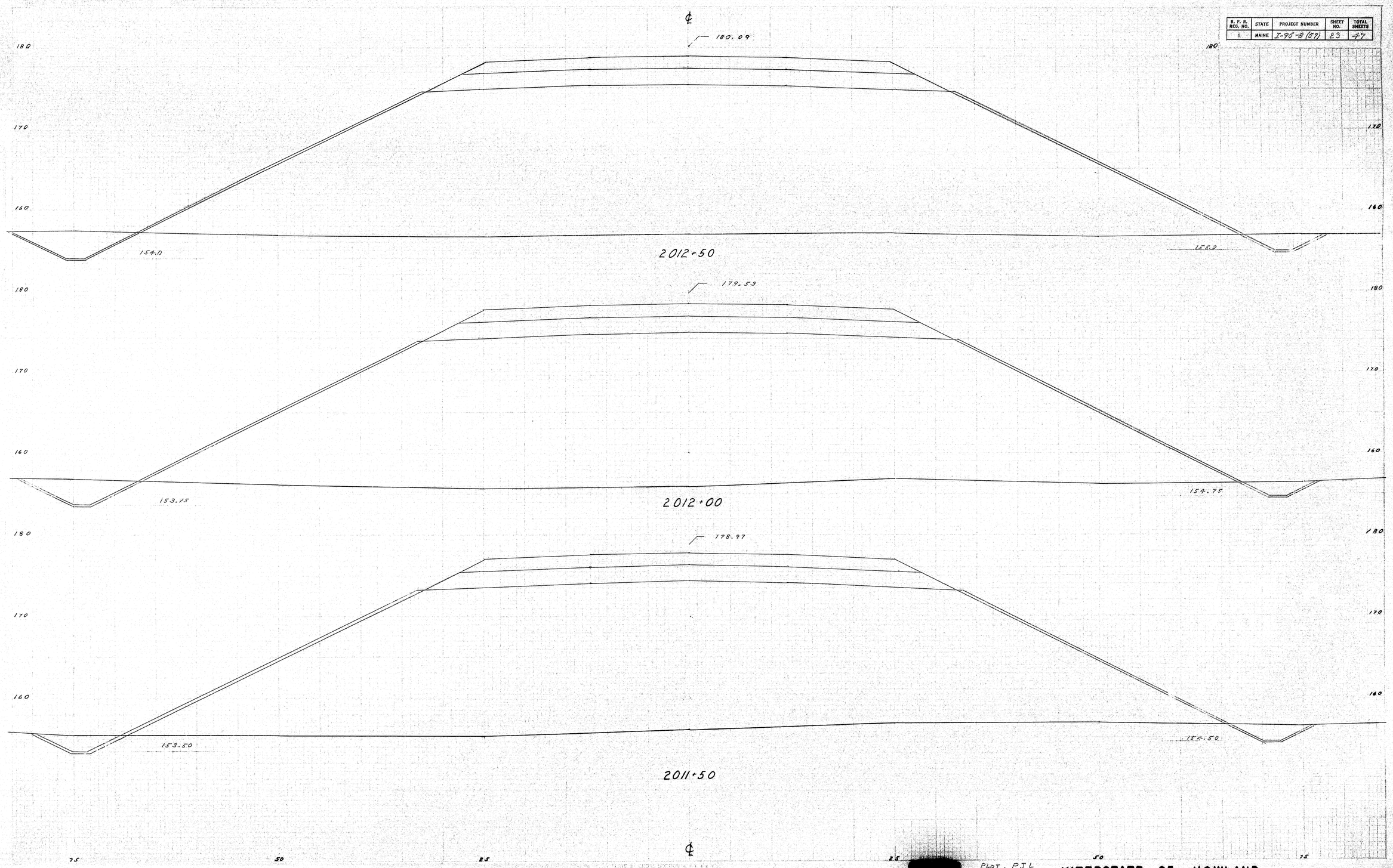
INTERSTATE 95 HOWLAND

SHEET 22 OF 47

TYPICAL SECTIONS & STATIONS 2010+50 → 2011+00

INCHES 0 1 2 3 4 5

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1.	MAINE	I-95-8(69)	23	47



STATIONS 2011+50 → 2012+50

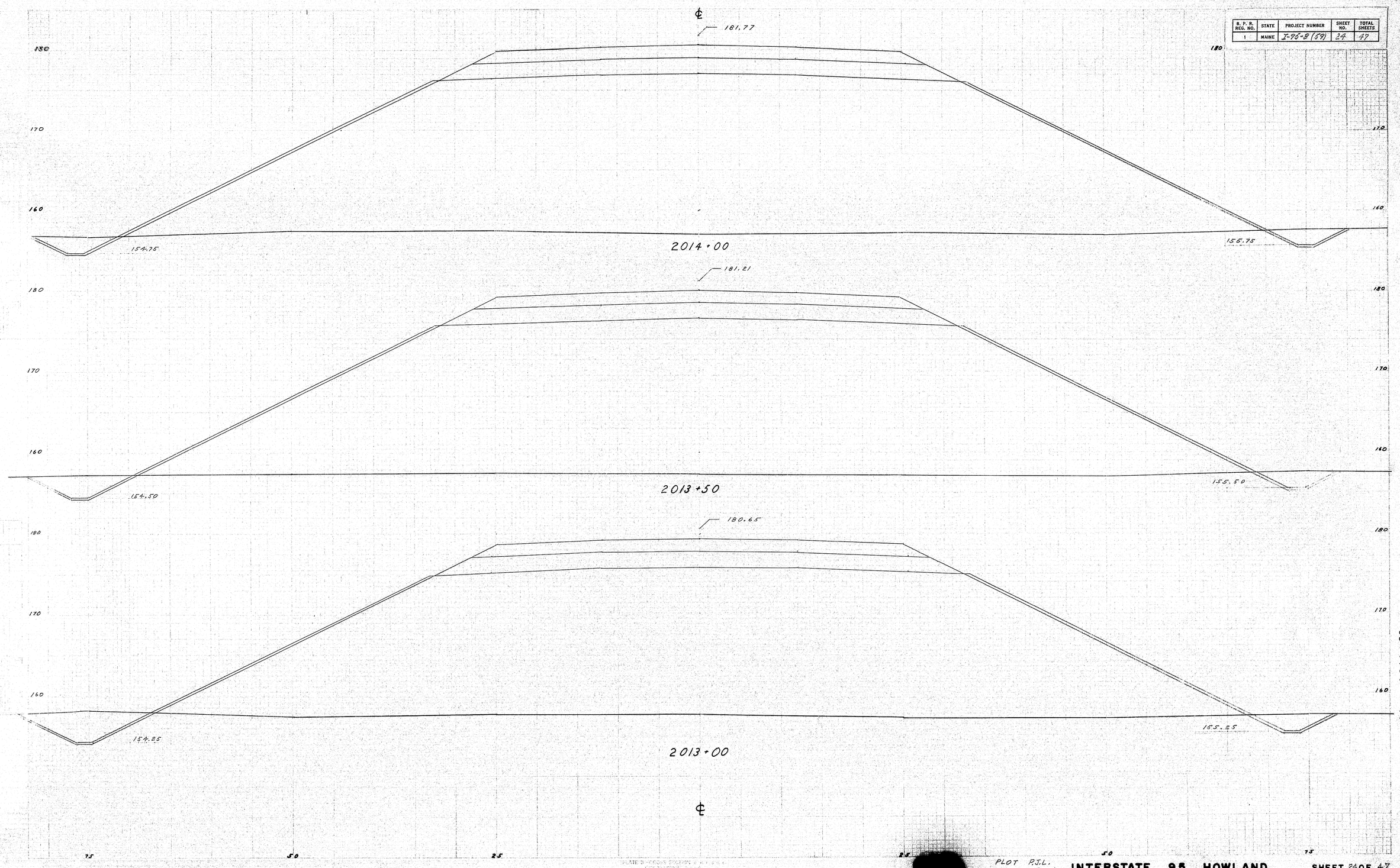
PLOT, PJL
CHECK, Harris

INTERSTATE 95 HOWLAND

SHEET 23 OF 47

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	24	47



STATIONS 2013+00 → 2014+00

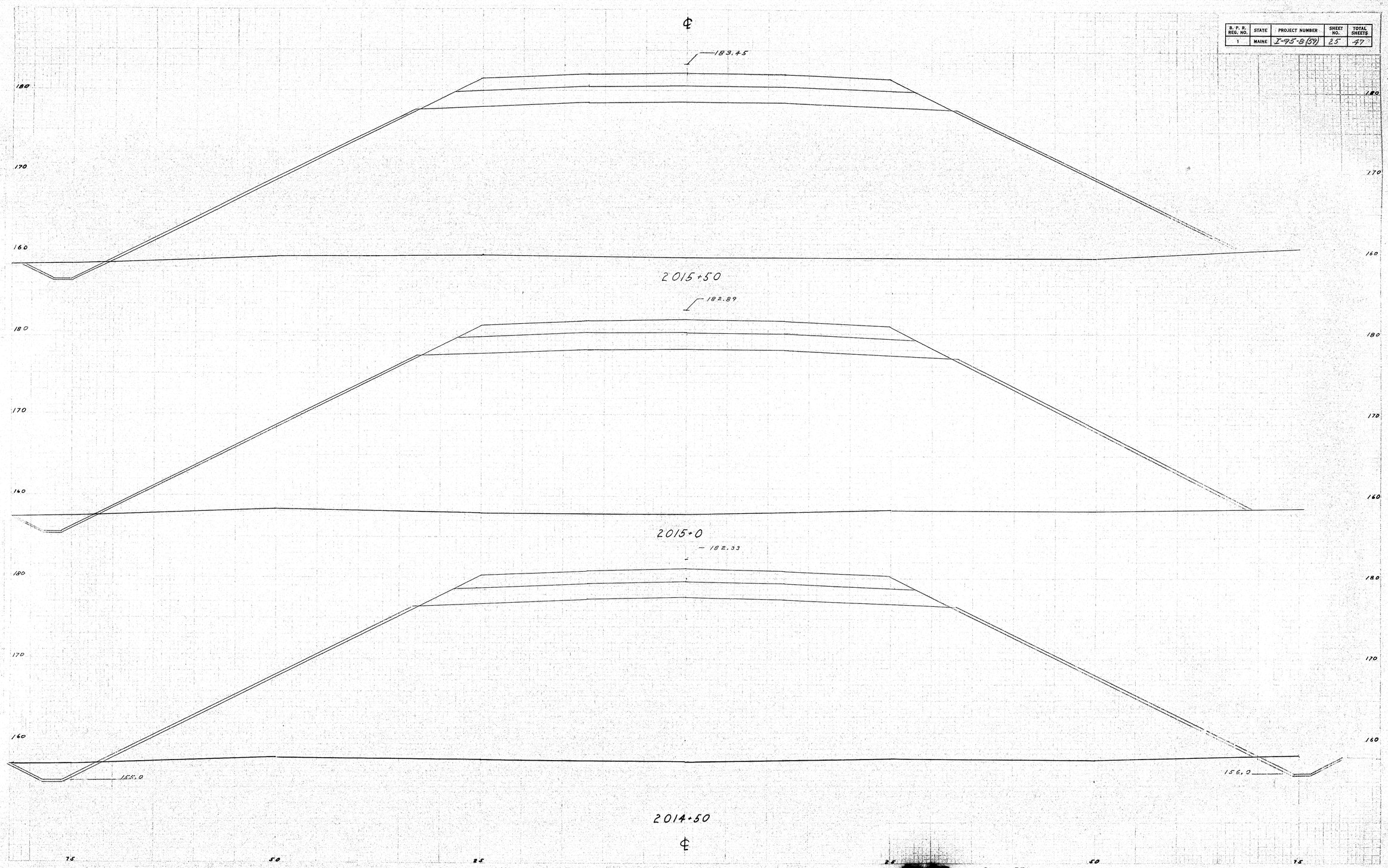
PLOT P.J.L.
CHECK Harris

INTERSTATE 95 HOWLAND

SHEET 24 OF 47

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(57)	25	47



PLOT P.J.L.
CHECK Harris

INTERSTATE 95 HOWLAND

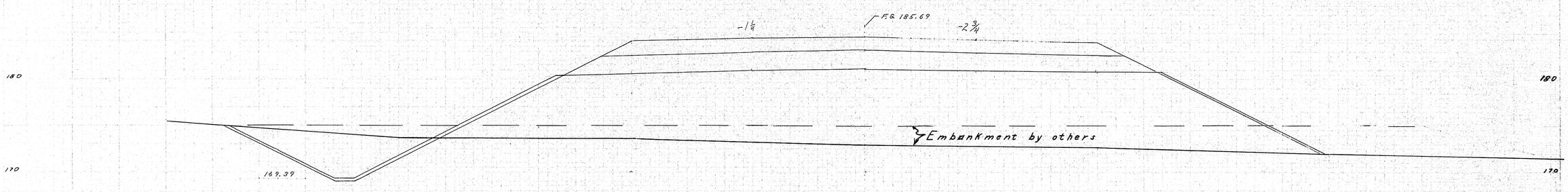
SHEET 25 OF 47

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(57)	26	47

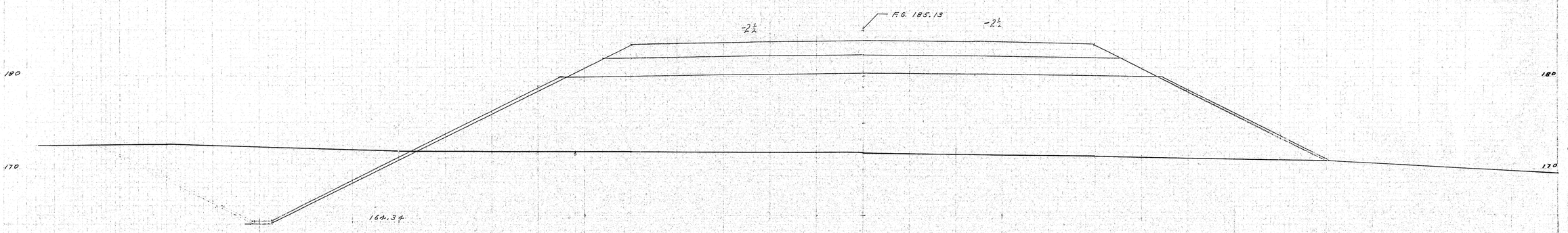
℄

ZERO SECTION
2018+00 (End Project)



2017+50

Use Jute Matting
From Sta 2017+50 ±
to Sta 2016+50 ±



2017+00
℄

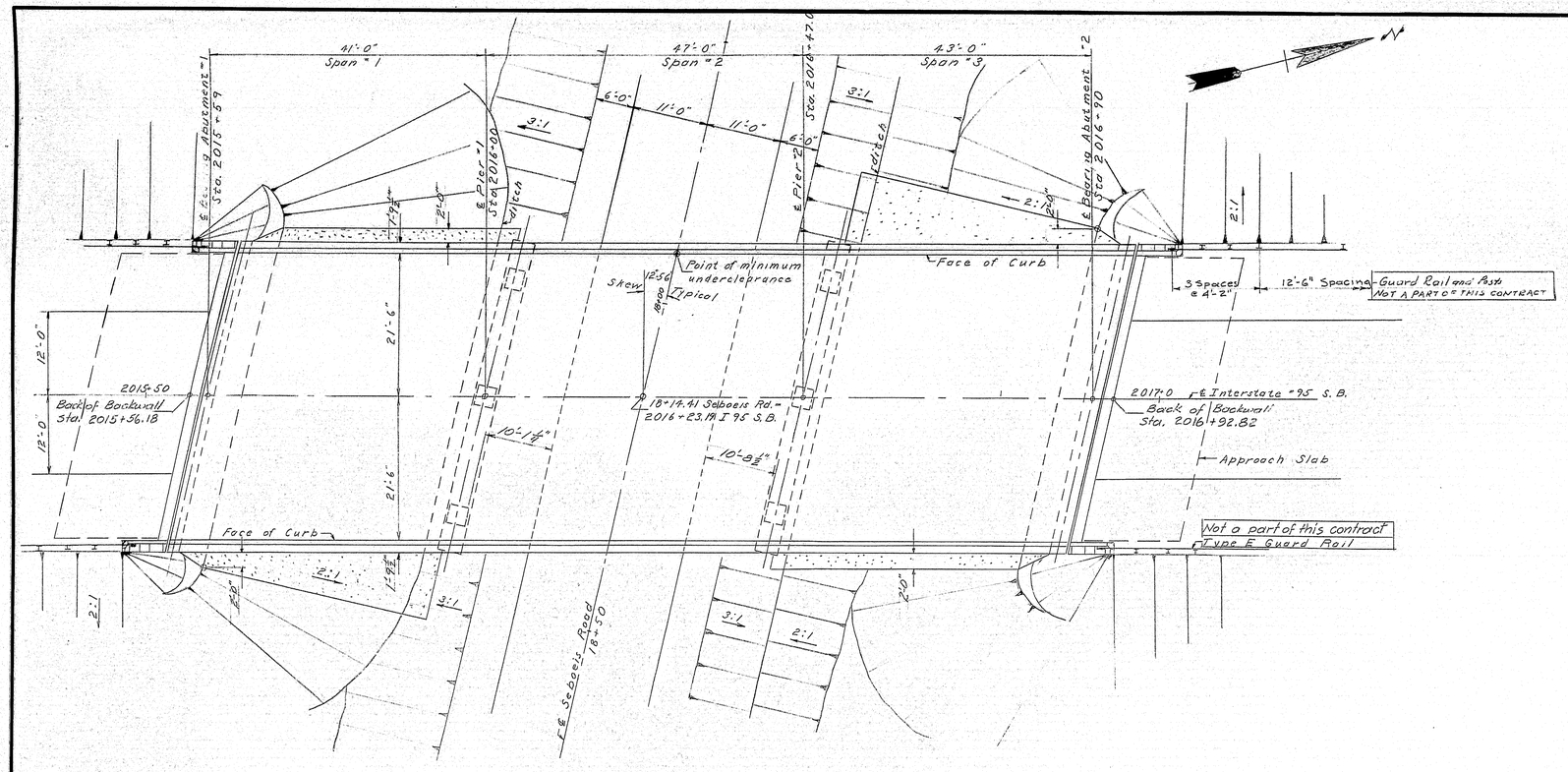
STATIONS 2017+00 → 2018+00

PLOT P.J.L.
CHECK Harris

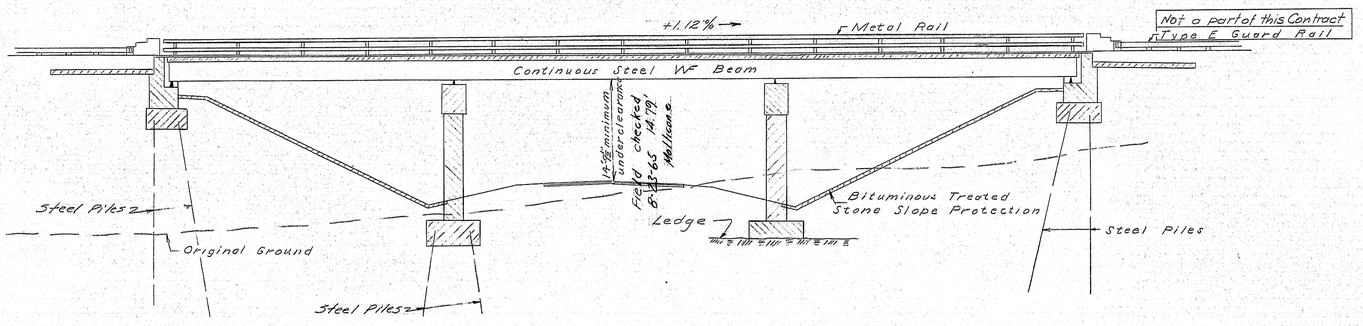
INTERSTATE 95 HOWLAND SHEET 26 OF 47

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	27	47



PLAN
Scale 1" = 10'



SECTION ON ℄ INTERSTATE
Scale 1" = 10'

CONCRETE CLASSIFICATION

All concrete shall be Class "A"

ALLOWABLE STRESSES

Concrete - f_c = 1200 p.s.i., n = 10
Reinforcing Steel, Intermediate Grade - f_s = 20,000 p.s.i.
Structural Steel, A36 - f_s = 20,000 p.s.i.
Point Bearing Steel Piles - f_s = 6,000 p.s.i.

SPECIFICATIONS

Design: AASHO Standard Specifications for Highway Bridges 1961 with Interim Specifications 1961, 1962, 1963, 1964.
Construction: State of Maine, State Highway Commission, Standard Specs, Highways and Bridges Revision of January 1956 and Supplemental Specifications February 1960.
Loading: HS 20-44 Modified for Interstate

DESIGN- T.H.K.
TRACE- DET. D.L.G
CHECK- Harris

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY

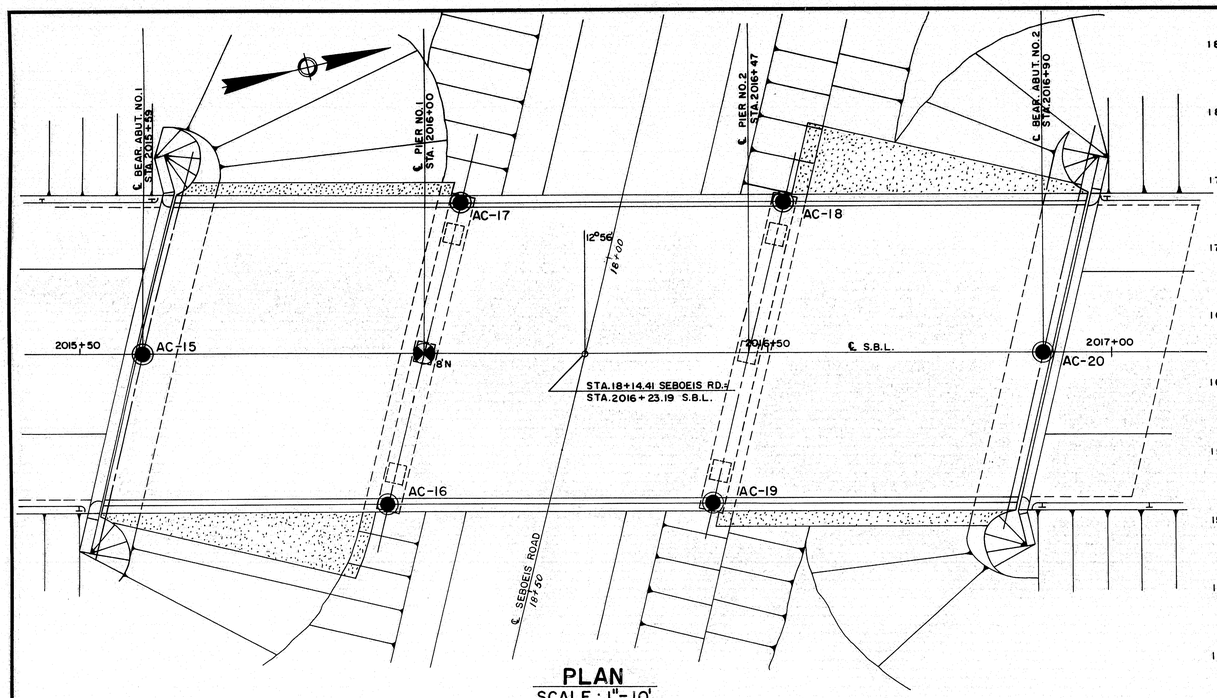
GENERAL PLAN & ELEVATION

SHEET 27 OF 47 AUGUSTA, MAINE SEPT. 1964

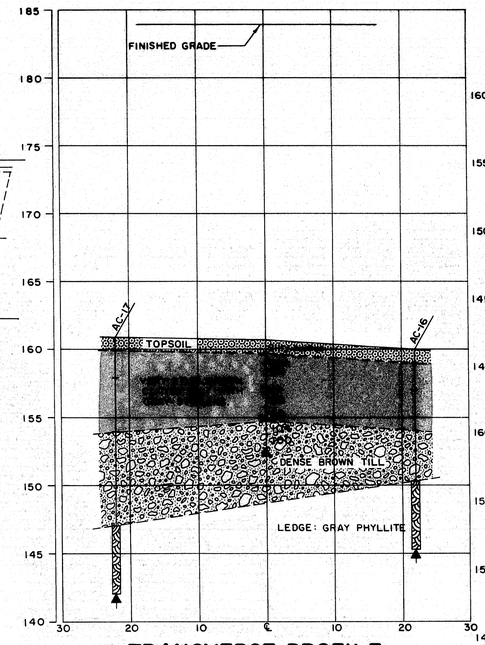
96-41

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	28	47

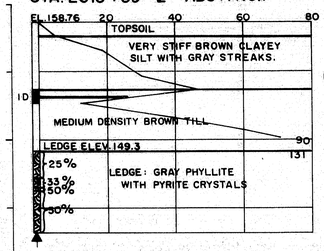


PLAN
SCALE : 1" = 10'

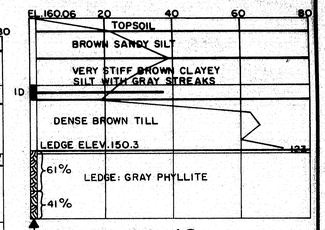


TRANSVERSE PROFILE
STA. 2016+00 PIER NO. 1

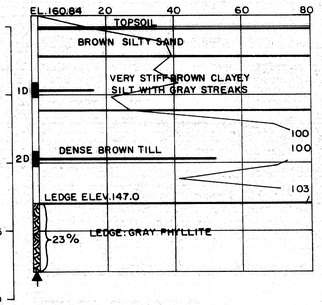
BORING AC-15
STA. 2015+59 ℄ ABUT. NO. 1



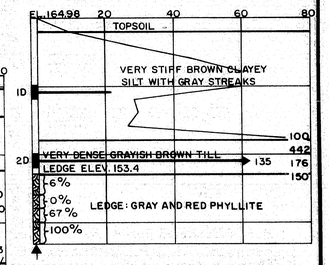
BORING AC-16
STA. 2015+95 22' RT. PIER NO. 1



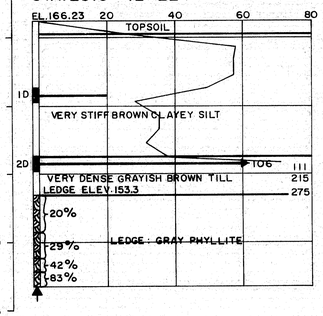
BORING AC-17
STA. 2016+05 22' LT. PIER NO. 1



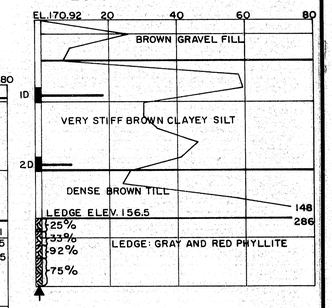
BORING AC-18
STA. 2016+52 22' LT. PIER NO. 2



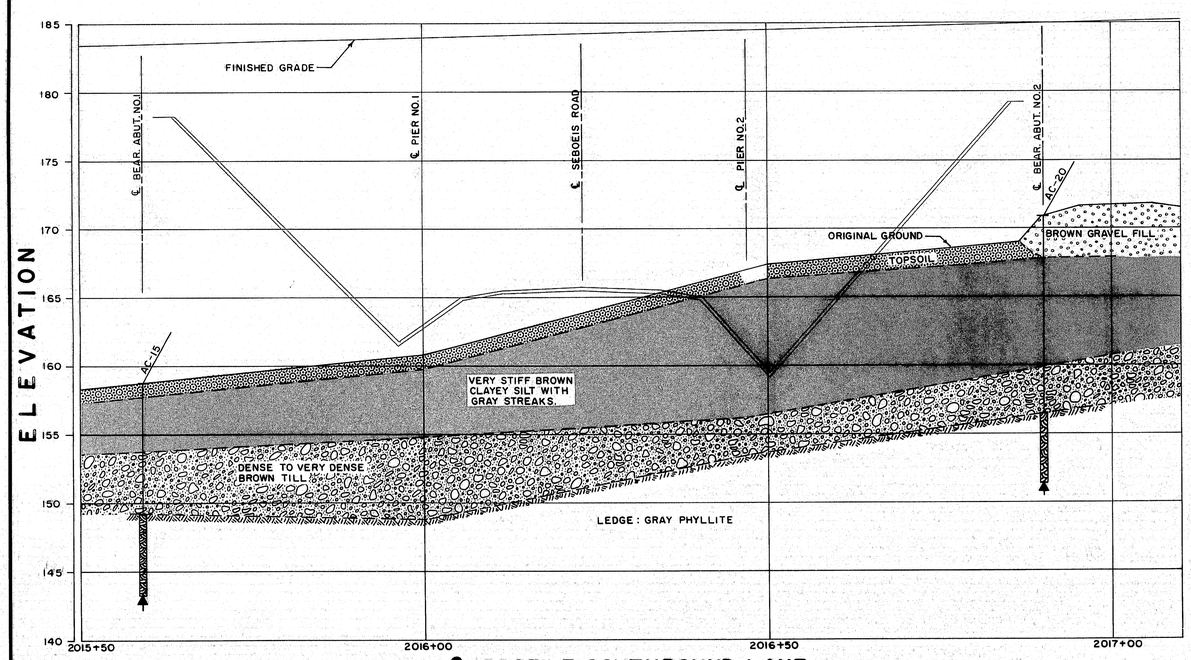
BORING AC-19
STA. 2016+42 22 RT. PIER NO. 2



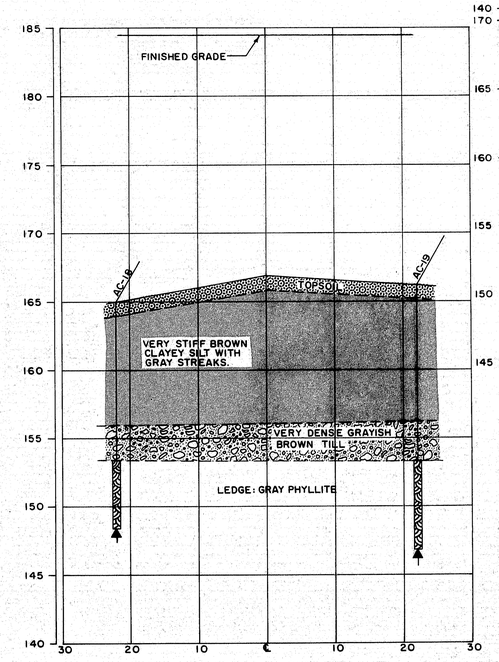
BORING AC-20
STA. 2016+90 ℄ ABUT. NO. 2



Note:
The till is a mixture of gravel, silt and sand.
The phyllite ledge has a high angle foliation and calcite veins.



℄ PROFILE SOUTHBOUND LANE



TRANSVERSE PROFILE
STA. 2016+47 PIER NO. 2

BORING NOTES

Casing size 2 1/2"
All samples are 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.
Number and type of dry sample.
ID S & H Sampler No. 1290's
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)
Locations cored by diamond bit and per cent recovery of rock.

DESIGN– TRACE– CHECK– } Soils Division
BRIDGE NO. SURVEY– PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
FOUNDATION SURVEY

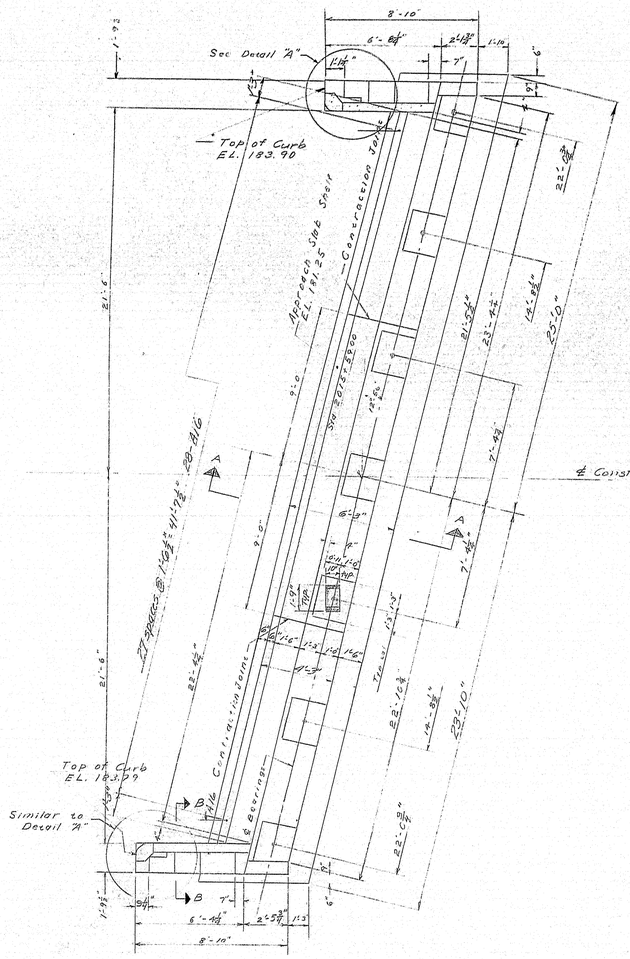
SHEET 28 OF 47 AUGUSTA, MAINE

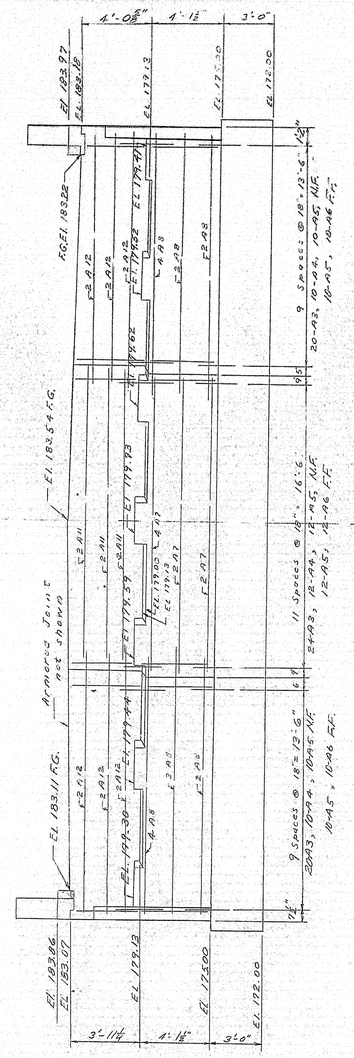
96·42

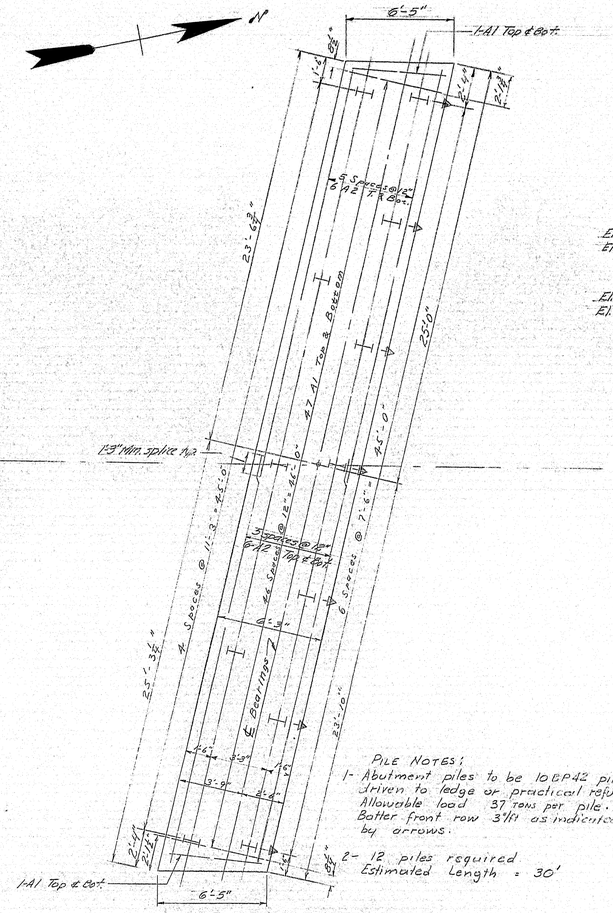
C. B. CO., NO. 44-131 39788

0 1 2 3 4 5 INCHES

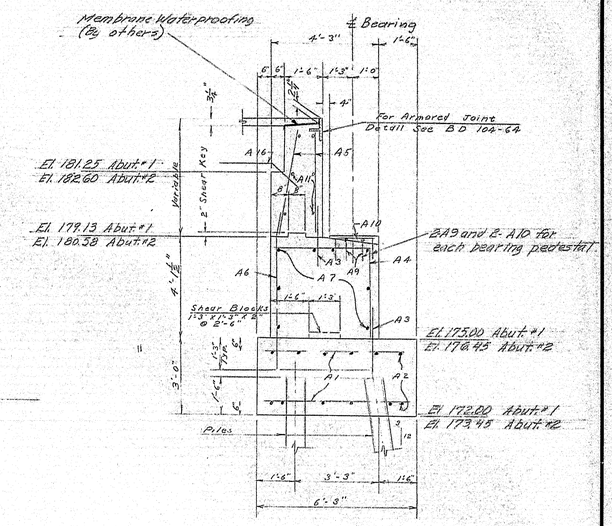
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	29	47







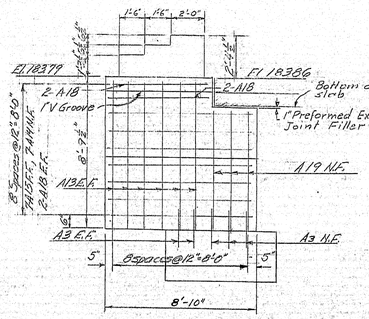
PILE NOTES:
1- Abutment piles to be 10BP42 piles driven to ledge or practical refusal. Allowable load 37 tons per pile. Batter front row 3:1 ft as indicated by arrows.
2- 12 piles required
Estimated Length = 30'



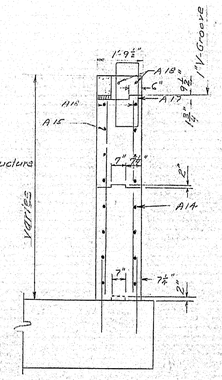
GENERAL ABUTMENT NOTES

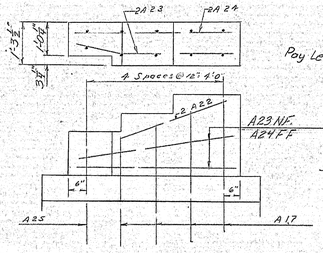
1. Paint bridge seat, face of backwall, and 1'-0" below top of slope paving on face of breastwall with Grey Epoxy Resin Surface Sealant.
2. Cover the back side of contraction joints with two layers of heavy roofing 10" wide bonded to concrete and to each other with a suitable grade of roofing cement. Recess area to be covered ¼". Coat surface of joint with asphalt paint to break bond.
3. Reinforcing cover 3" unless noted.
4. Backwalls and Wingwalls are to be built after Structural Steel has been erected and bottom of slab elevations established.
5. Bush bearing areas to exact elevations shown and 1" larger all around than dimensions of bearing plates.

N. F. = Near Face
F. F. = Far Face
E. F. = Each Face
F. G. = Finished Grade.



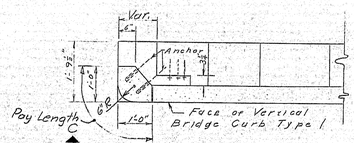
Reinforcing Steel typical for all wings

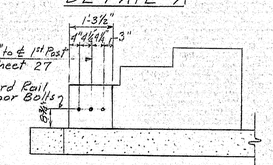




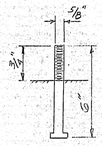
Payment for concrete in post to be made under Item 701-33, "Portland Cement Concrete, Abutments and Ret. Walls."

END POST DETAIL





All Vertical Bridge Curb Type 1 to be paid for under Item 901-24



ANCHOR BOLT (Structural Steel)

3 Required each end post.
Galvanized with nut & washer

Guard Rail anchor bolts shall be furnished and installed under this contract. Payment to be incidental to contract items.

Splice holes in Guard Rail beam shall be plugged with galvanized button head bolts
NOT A PART OF THIS CONTRACT.

DESIGN- T.H.K.
TRACE- DET. D.L.G.
CHECK- A.P.P.

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
ABUTMENT #1

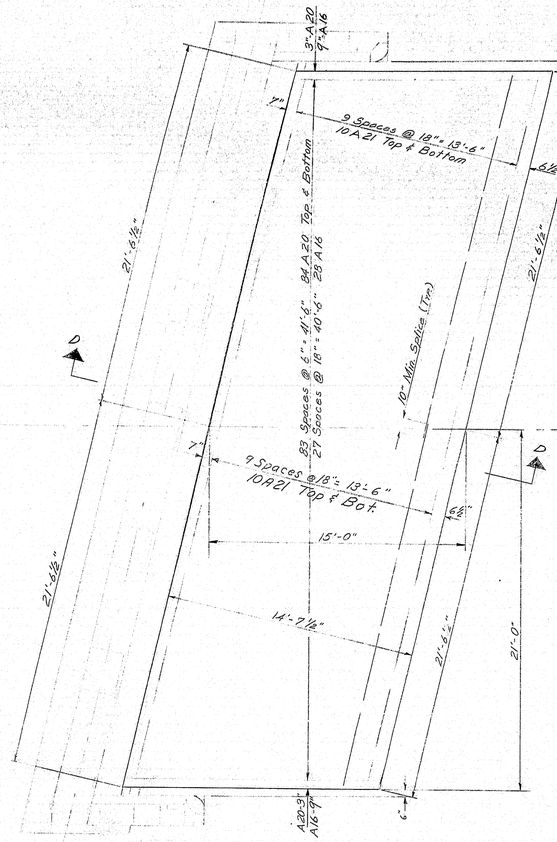
SHEET 29 OF 47 AUGUSTA, MAINE SEPT 1964

96-43

0 1 2 3 4 5 INCHES

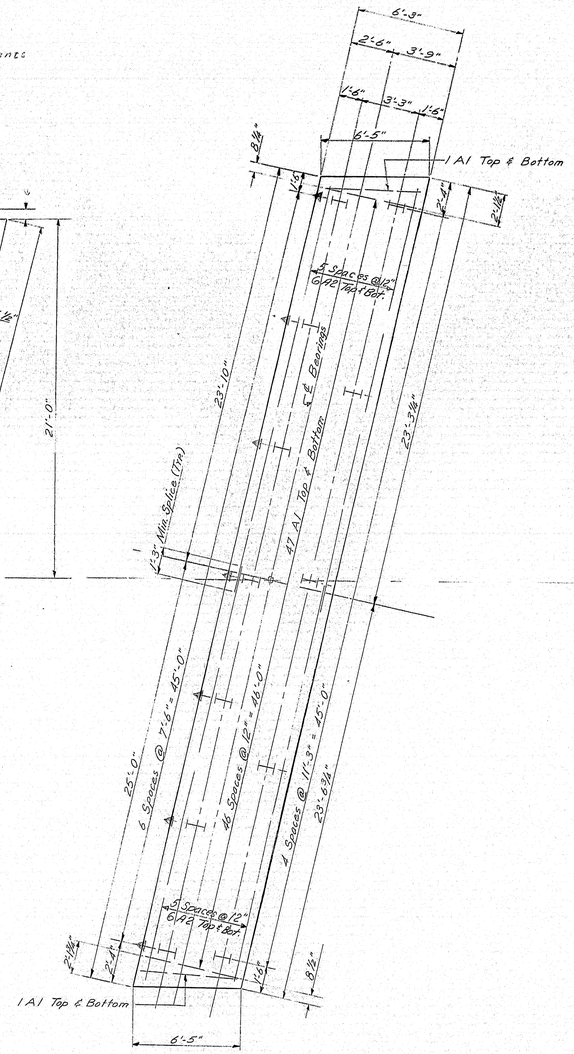
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-B(59)	30	47

NOTE: Approach Slab concrete to be paid for under Item 701-33 Portland Cement Concrete Abutments and Retaining Walls.

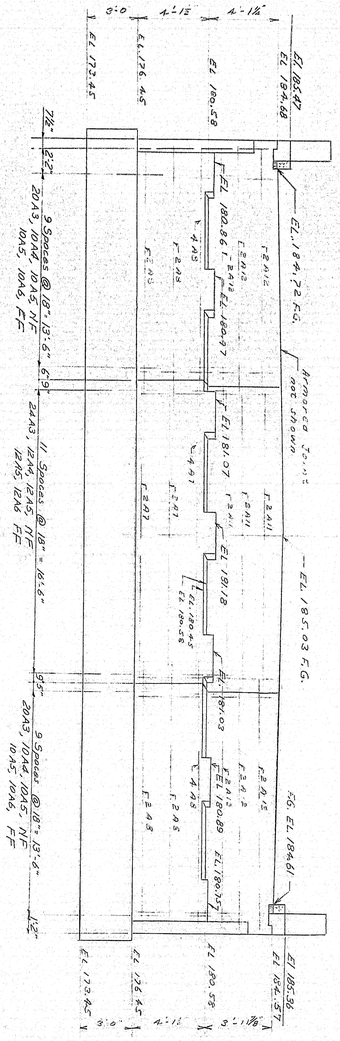


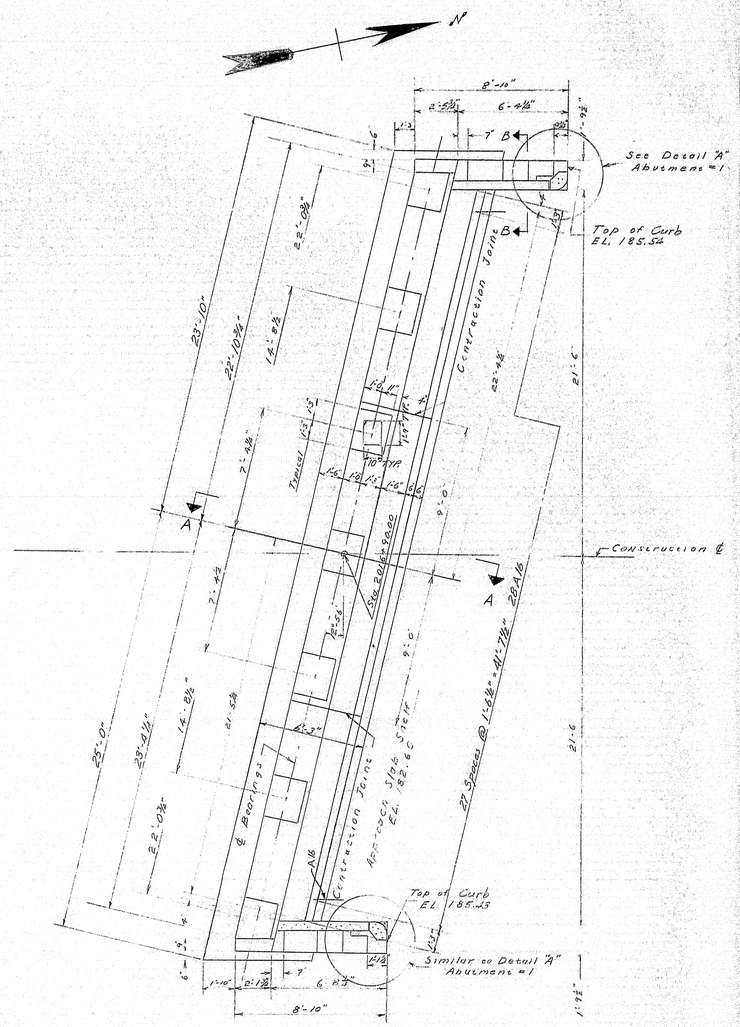
APPROACH SLAB

Abutment #2 shown ~ Abutment #1 similar



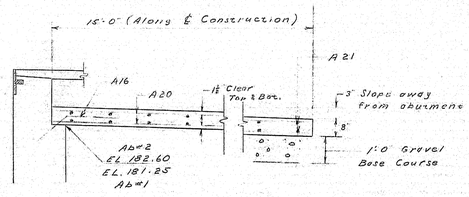
PILE AND FOOTING PLAN





PLAN

For Wingwall reinforcement, Section A-A, B-B, Detail "A" and End Post Detail: see sheet 29



SECTION D-D

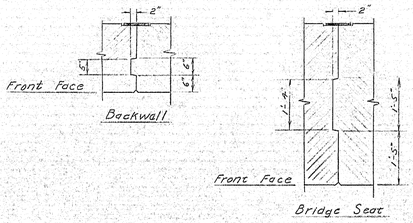
PILE NOTES

1. Abutment piles to be 10 BP 42 piles driven to ledge or practical refusal. Allowable load 37 tons per pile. Batter front row 3/ft. as indicated by arrows.

2. 12 piles required
Estimated length = 24'

GENERAL ABUTMENT NOTES

SEE SHEET 29



CONTRACTION JOINT SHEAR KEY

- TYPICAL BOTH ABUTMENTS -

DESIGN- T.H.K.
TRACE- DET. D.L.G.
CHECK- A.B.P.

BRIDGE NO.
SURVEY-
PLOT-

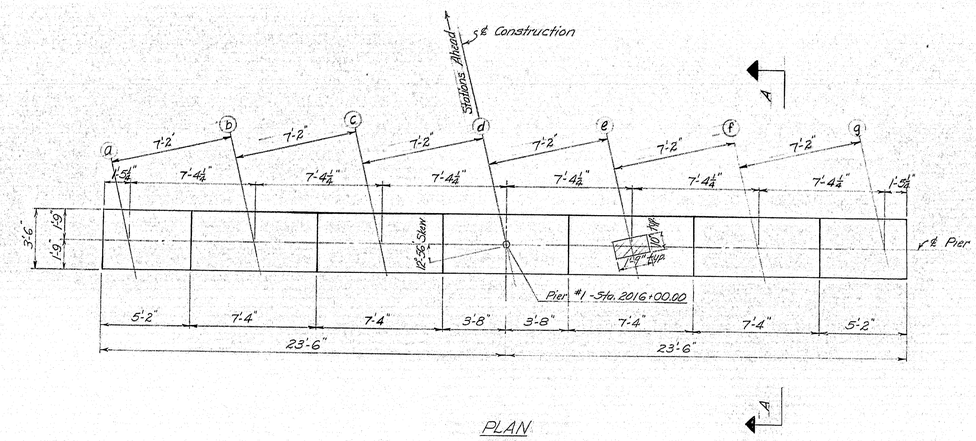
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
ABUTMENT #2

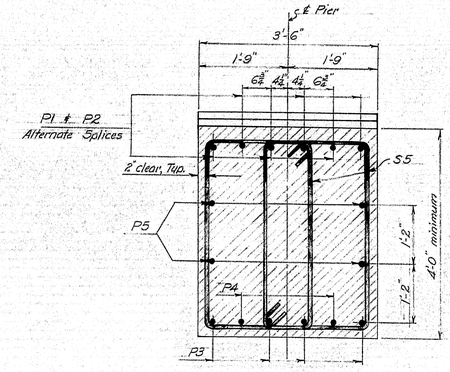
SHEET 30 OF 46 AUGUSTA, MAINE SEPT. 1964

96-44

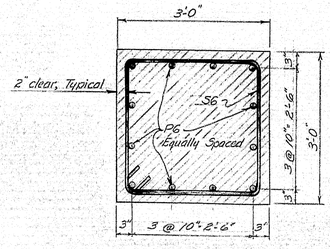
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(39)	31	47



PLAN

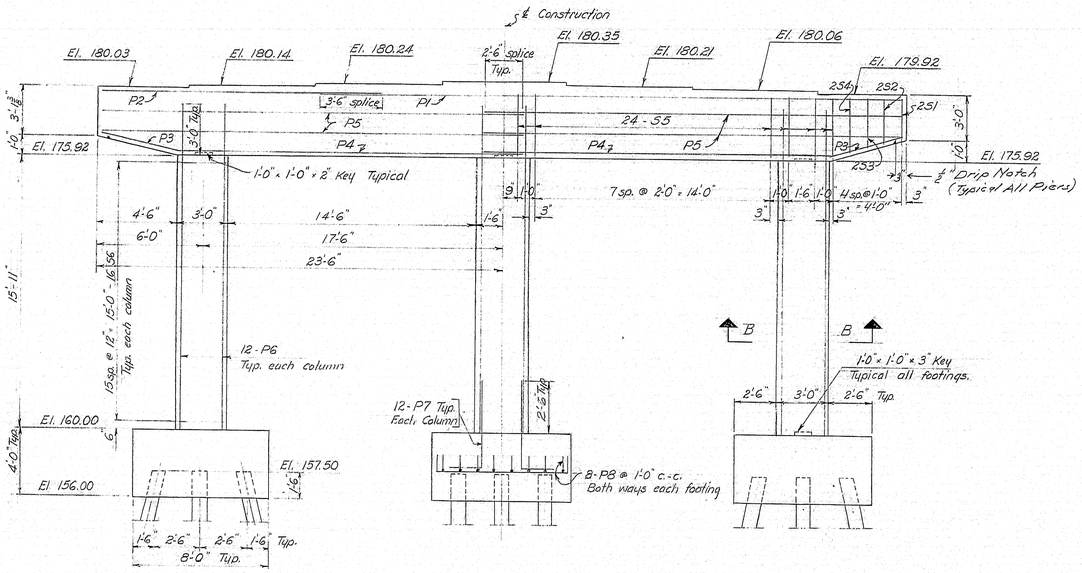


SECTION A-A



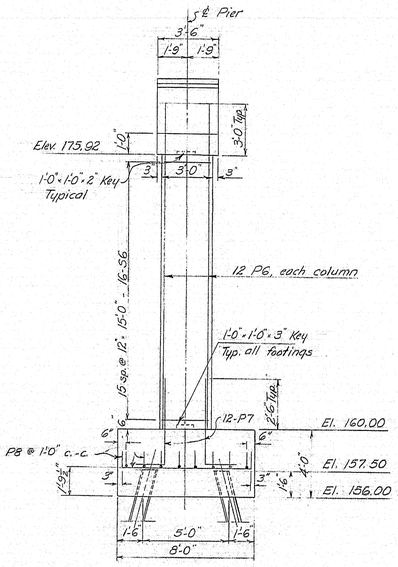
SECTION B-B

NOTE: Alternate location of splices Bar P1 to Bar P2.

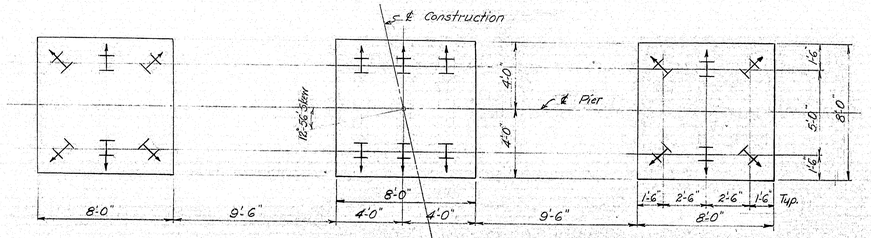


SIDE ELEVATION

Pier symmetrical about ℄ Construction except as noted.



END ELEVATION



PILE PLAN

PIER NOTES:
1. Bush bearing areas to exact elevations shown 1" larger all around than dimensions of bearing plates.
2. Place reinforcing steel in cap to clear anchor bolts.
3. Chamfer all exposed edges of concrete ½".

PILE NOTES:
1. Piles to be 10BP42, 18 required.
2. Maximum pile load = 37 tons.
3. Piles to be driven to ledge or practical refusal.
4. Estimated pile length = 15'.
5. All piles to be battered 2½" in direction indicated thus: ⊢⊣→.

DESIGN– T.H.K.
TRACE– F. Foster
CHECK– A.B.P.

BRIDGE NO.
SURVEY–
PLOT–

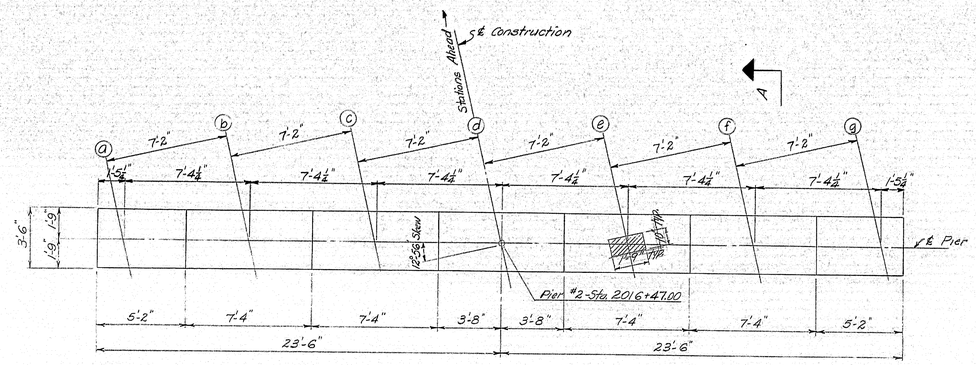
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
PIER NO. 1

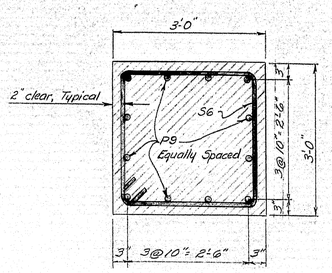
SHEET 31 OF 47 AUGUSTA, MAINE SEPT. 1964

96-45

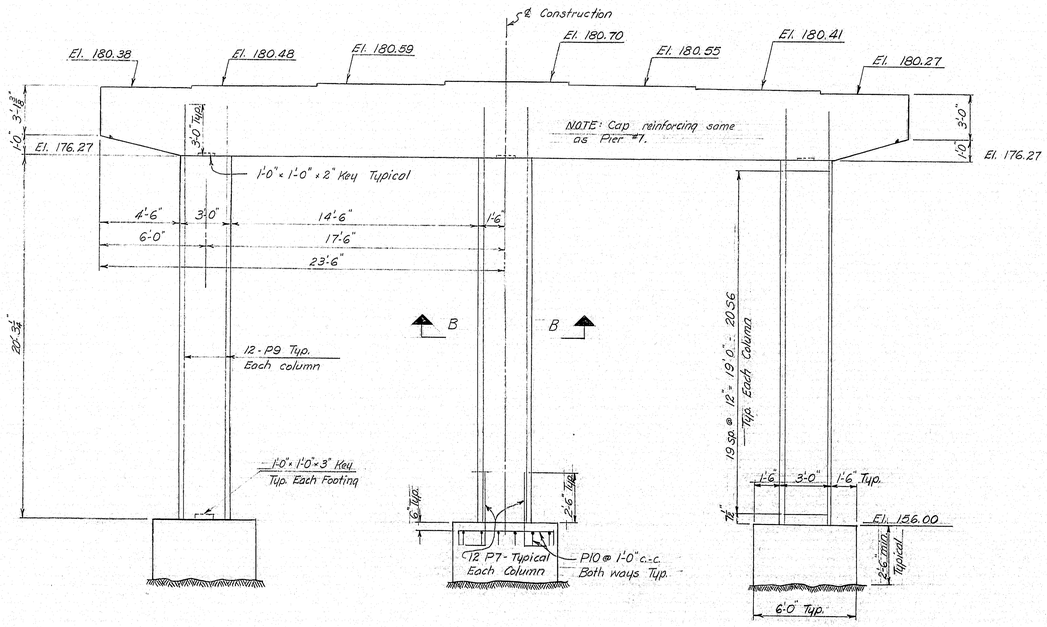
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(69)	32	47



PLAN

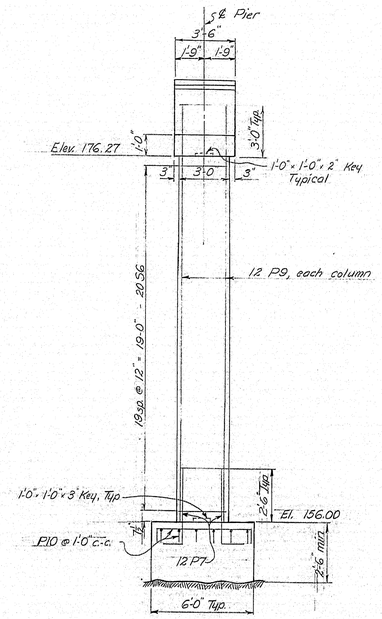


SECTION B-B



SIDE ELEVATION

Pier symmetrical about ℄ Construction except as noted.



END ELEVATION

NOTES:

1. For Pier Notes and Section A-A see Sh. 31.
2. For cap reinforcement see Sh. 31.
3. Maximum footing pressure = 8.5 tons/ft².
4. The elevation of the top of the footing may be raised to maintain the minimum depth of 2'-6" above the existing ledge surface.

DESIGN- T.H.K. TRACE- F. Foster CHECK- H.B.P. PLOT-	BRIDGE NO. SURVEY-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

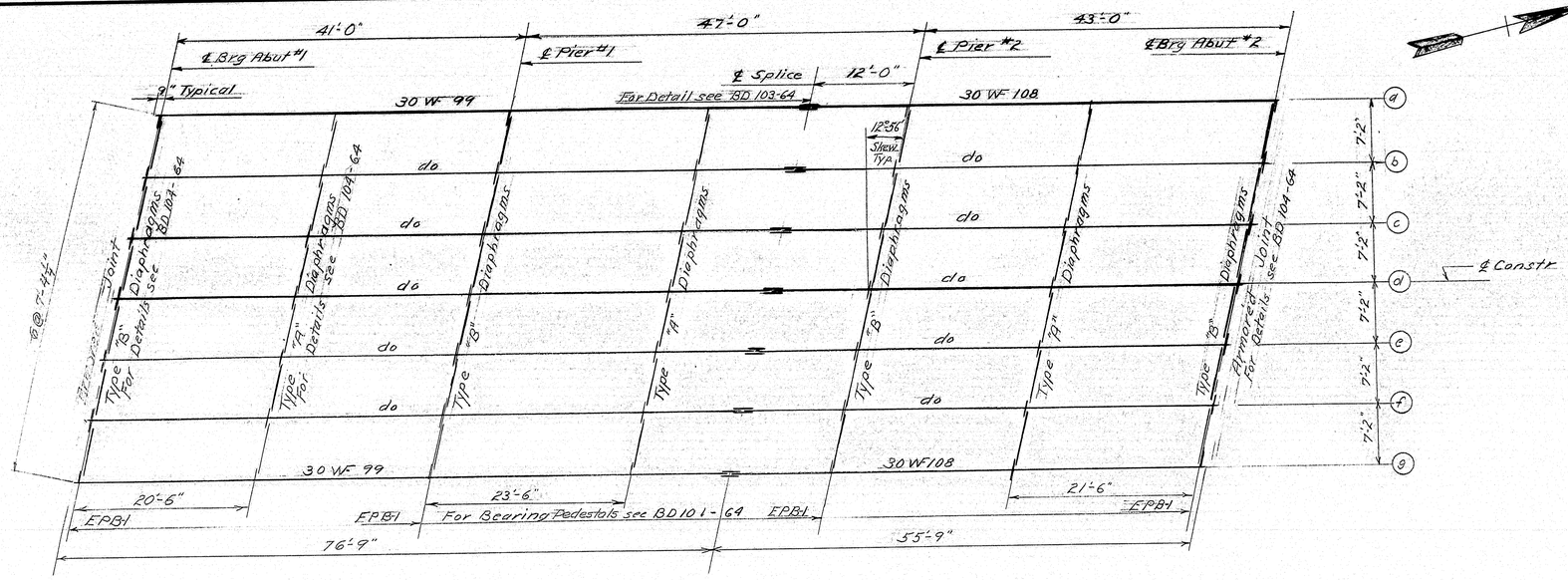
INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
PIER NO. 2

SHEET 32 OF 47 AUGUSTA, MAINE SEPT 1964

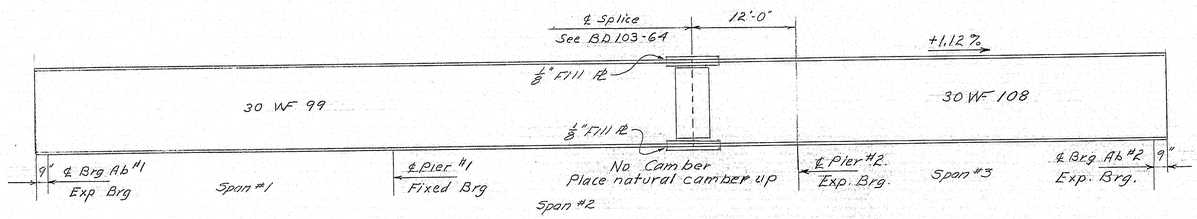
96-46

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(39)	33	47



ERECTION DIAGRAM



TYPICAL GIRDER ELEVATION

SPECIFICATIONS

Fabrication and Erection: State of Maine, State Highway Comm. Standard Specifications Highways and Bridges, Revision of January 1956 and Supplements, Feb. 1960.

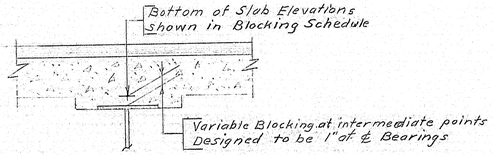
Design and Detail: A.A.S.H.O. Standard Specifications of 1961 and Interim Specifications 1961, 1962, 1963 & 1964.

Materials: Beams shall conform to A.S.T.M. designation A-36. Other members shall conform to A.S.T.M. designation A-36, unless otherwise [illegible] Details.

BLOCKING SCHEDULE

Beam Line	℄ Brg Abut #1	Span One 1/4 Point	Span One 1/2 Point	Span One 3/4 Point	℄ Pier #1	Span Two 1/4 Point	Span Two 1/2 Point	Span Two 3/4 Point	℄ Pier #2	Span Three 1/4 Point	Span Three 1/2 Point	Span Three 3/4 Point	℄ Brg Abut #2
"a"	182.46	182.59	182.71	182.82	182.92	183.06	183.19	183.32	183.45	183.58	183.71	183.83	183.93
"b"	182.57	182.70	182.81	182.92	183.03	183.16	183.30	183.43	183.55	183.69	183.82	183.93	184.04
"c"	182.67	182.80	182.92	183.03	183.13	183.27	183.41	183.53	183.66	183.79	183.92	184.04	184.14
"d"	182.78	182.91	183.03	183.13	183.24	183.38	183.51	183.64	183.77	183.90	184.03	184.14	184.25
"e"	182.64	182.77	182.88	182.99	183.10	183.23	183.37	183.50	183.62	183.75	183.88	184.00	184.10
"f"	182.49	182.62	182.74	182.85	182.95	183.09	183.23	183.35	183.48	183.61	183.74	183.86	183.96
"g"	182.35	182.48	182.60	182.71	182.81	182.95	183.08	183.21	183.34	183.47	183.60	183.71	183.82

Note:- In order to compensate for dead load deflections and normal irregularities in the beams produced in the rolling process, set the blocking to bottom of slab elevation, in table above, at points indicated, before any of the slab forms are started.



BLOCKING DETAIL

8 drains required, see Standard Detail BD 104-64 and sheet 34

DESIGN- THK DETAIL- PJL
TRACE-
CHECK- A.B.P.

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

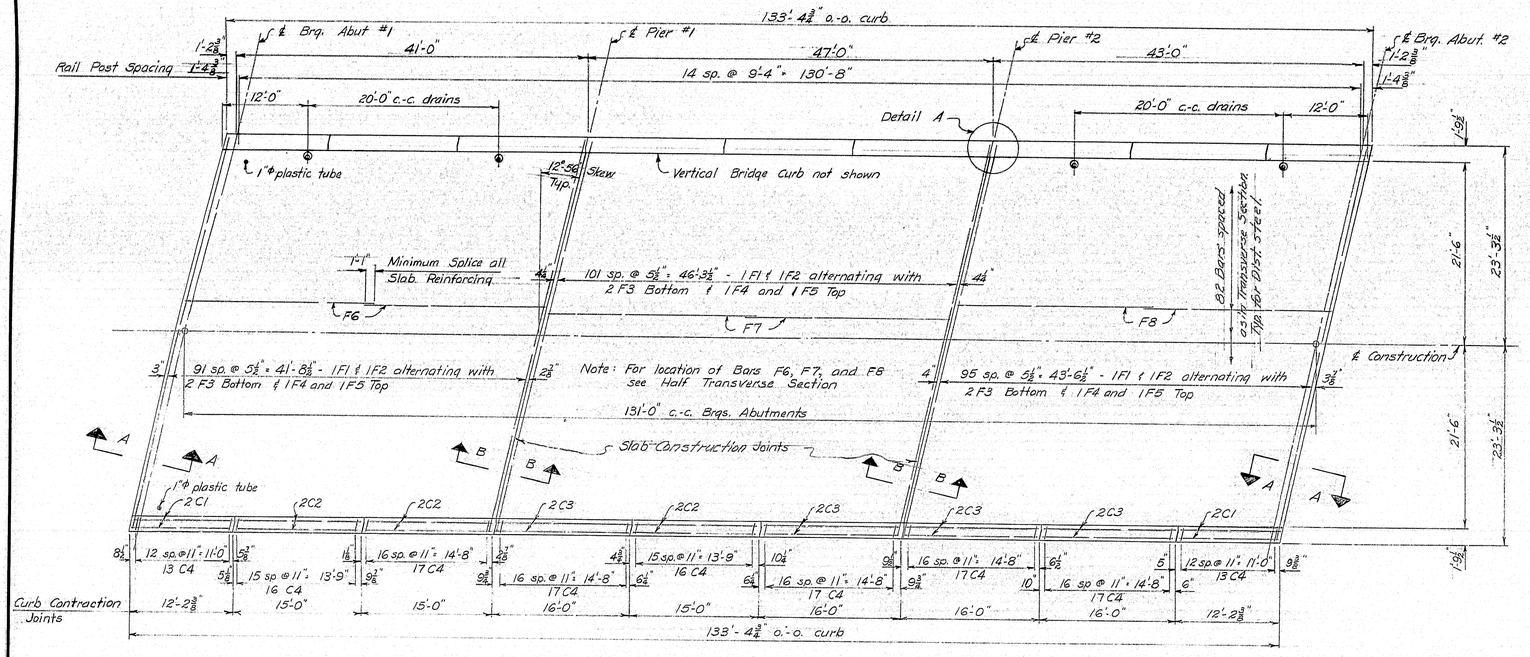
INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
STRUCTURAL STEEL

SHEET 33 OF 47 AUGUSTA, MAINE SEPT. 1964

96-47

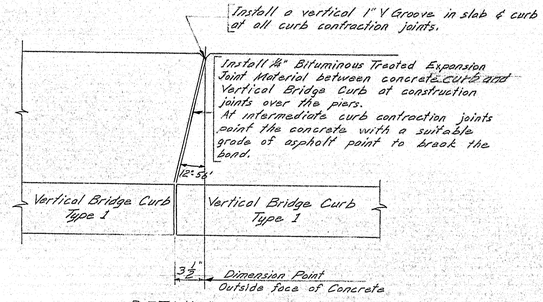
C. S. CO., NO. 44-131 38728

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	34	47



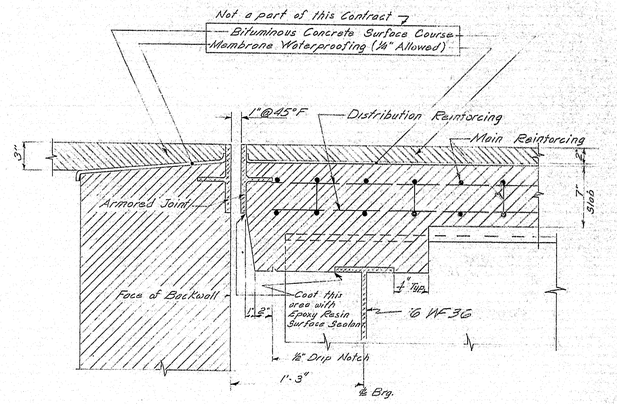
PLAN

Spacing of Rail Posts, Curb Contraction Joints, Curb Reinforcing Steel, and Drains typical both sides of ℄.

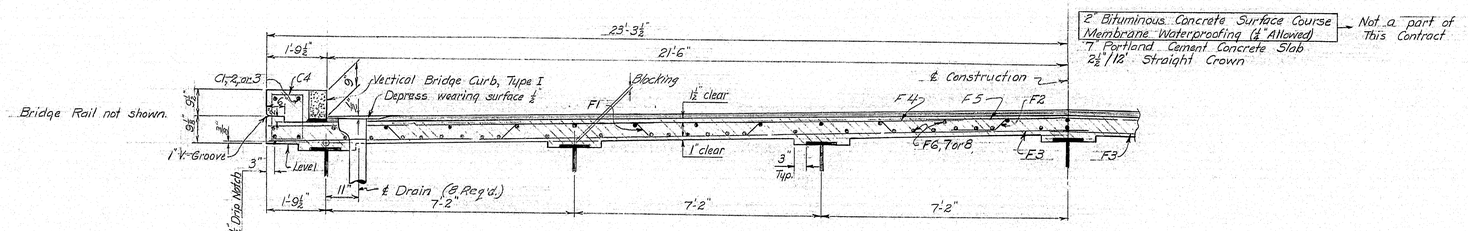


DETAIL "A"

Typical all Curb Joints



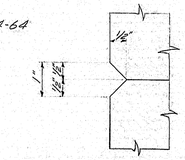
SECTION A-A



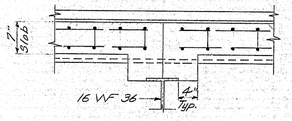
HALF TRANSVERSE SECTION

Structure symmetrical about ℄ Construction

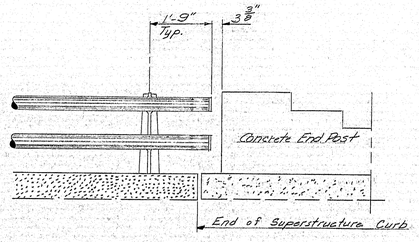
See Standard Detail Sheet BD 107-64 or Standard Detail Sheet BD 108-64 for 2 Bar Bridge Rail and Anchor Bolt Detail and Location.
See Standard Detail Sheet BD 104-64 for Drain Detail.



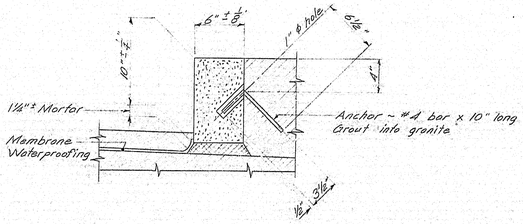
1" V-GROOVE



SECTION B-B



END POST DETAIL



VERTICAL BRIDGE CURB

TYPE I.

Shown with 2" Bituminous Concrete and 1/4" allowed for Membrane Waterproofing.

Provide two 1" φ plastic tube drains as shown on plan. Tube to extend 2" below bottom of slab. Tubes to be placed so that drip clears bridge seat. Do not cover top with membrane waterproofing. Payment to be incidental to Item 701-40, Portland Cement Concrete Roadway and Sidewalk Slabs on Steel Bridges.

DESIGN- THK
TRACE- DET. F.S.F & E.R.A.
CHECK- R.B.R.

BRIDGE NO.
SURVEY-
PLOT-

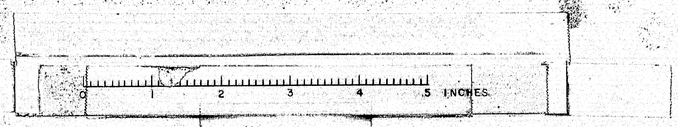
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY

SUPERSTRUCTURE SLAB

SHEET 34 OF 47 AUGUSTA, MAINE SEPT. 1964

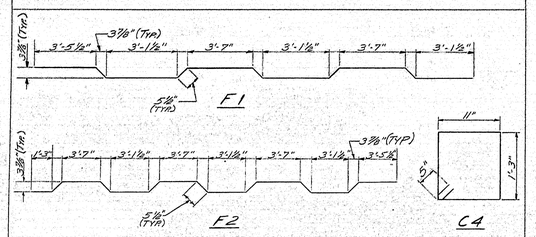
96-48



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(69)	35	47

REINFORCING STEEL SCHEDULE

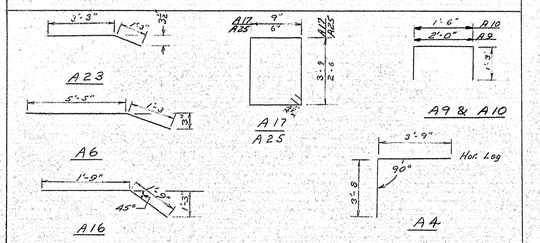
SUPERSTRUCTURE



Mark	Size	Number	Length	Location
BENT BARS				
C4	#5	286	5'-2"	Curbs -
F1	#5	145	22'-4"	Slab - Main Steel
F2	#5	145	28'-0"	Slab " "
STRAIGHT BARS				
C1	#5	8	11'-10"	Curb
C2	#5	12	14'-8"	Curb
C3	#5	16	15'-8"	Curb
F3	#5	290	24'-4"	Slab - Main Steel
F4	#5	145	20'-7"	" " "
F5	#5	145	28'-0"	" " "
F6	#5	164	21'-6"	Slab Distribution Steel
F7	#5	164	23'-11"	" " "
F8	#5	164	22'-6"	" " "

DET. F.F.

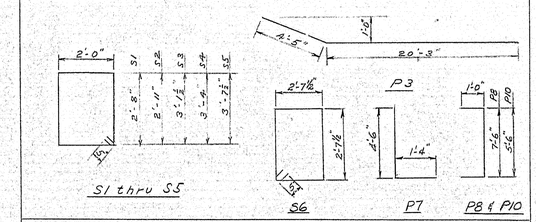
ABUTMENTS 1 & 2



Mark	Size	Number	Length	Location
BENT BARS				
A4	#5	64	7'-5"	Bridge Seat
A6	#5	64	6'-8"	↕
A9	#4	28	4'-6"	
A10	#4	28	4'-0"	Bridge Seat
A16	#6	56	3'-6"	Backwall - Approach Slab
A17	#4	16	9'-9"	Wing wall - End post
A23	#4	8	4'-6"	End post
A25	#4	4	6'-9"	Wingwall - End post
STRAIGHT BARS				
A1	#6	196	5'-9"	Footing
A2	#6	48	24'-10"	Footing - Spliced
A3	#5	156	2'-6"	Dowels
A5	#5	128	3'-5"	Backwall
A7	#5	16	11'-4"	Bridge Seat
A8	#5	32	16'-6"	Bridge Seat
A11	#4	12	17'-4"	Backwall
A12	#4	24	16'-6"	Backwall
A13	#5	48	8'-6"	Wing wall
A14	#5	28	8'-6"	↕
A15	#6	28	8'-6"	
A18	#4	16	6'-0"	
A19	#5	12	7'-0"	Wing wall
A20	#6	336	14'-6"	Approach Slab
A21	#4	80	21'-10"	Approach Slab - Spliced
A22	#4	8	3'-3"	End Post
A24	#4	8	4'-6"	End Post

DET. D.L.

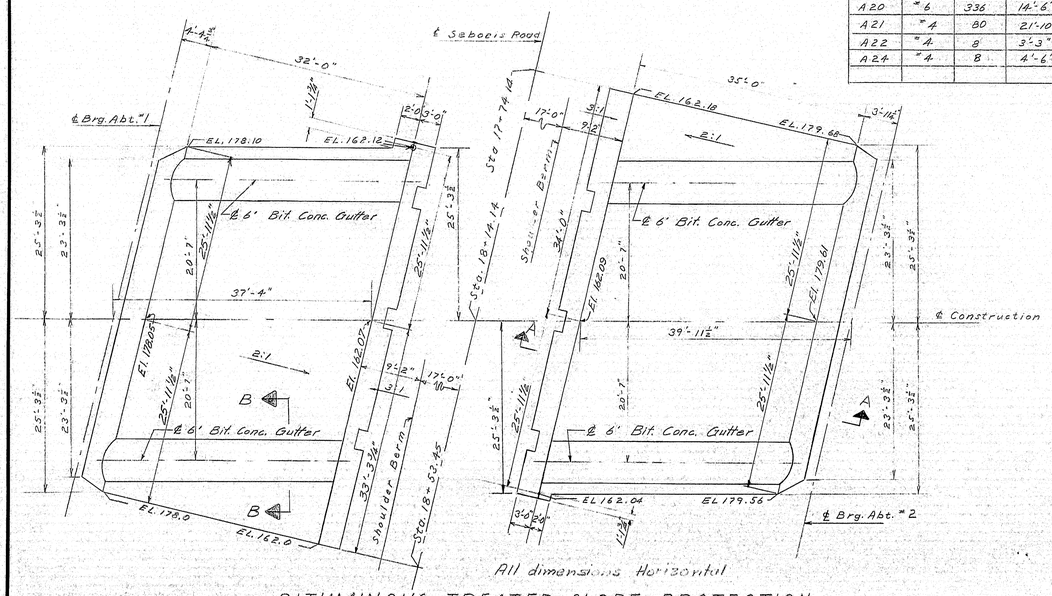
PIERS 1 & 2



Mark	Size	Number	Length	Location
BENT BARS				
P3	#9	16	24'-8"	Bottom - Cap
S1	#5	8	10'-2"	Cap Stirrups
S2	#5	8	10'-8"	↕
S3	#5	8	11'-1"	
S4	#5	8	11'-6"	
S5	#5	96	12'-1"	Cap Stirrups
S6	#4	108	11'-4"	Column Stirrups
P7	#9	72	5'-10"	Footings
P8	#8	48	9'-6"	Footings - Pier #1
P10	#6	36	7'-6"	Footings Pier #2
Straight Curve				
P1	#9	12	33'-10"	Top - Cap
P2	#9	12	16'-4"	Top - Cap
P4	#9	8	20'-3"	Bottom - Cap
P5	#6	16	24'-6"	Sides - Cap
P6	#9	36	18'-11"	Columns - Pier #1
P9	#9	36	23'-3"	Columns - Pier #2

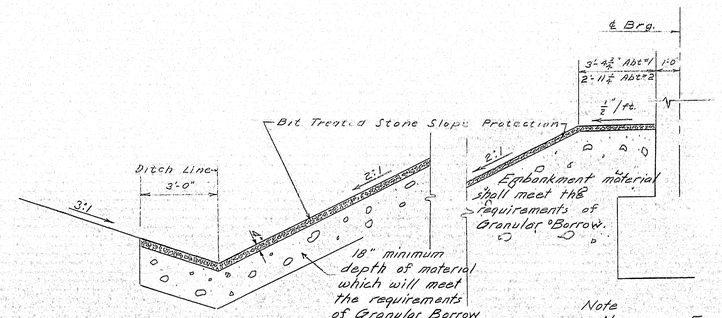
Det. - F. Foster

NOTES:
1. All reinforcing steel to be Intermediate Grade.
2. All dimensions to ℄ bars.



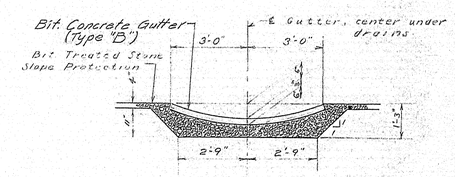
BITUMINOUS TREATED SLOPE PROTECTION

DET. P.L.



SECTION A-A

Note
Necessary Excavation shall be paid for under Item 203-9, Earth Excavation.
Do not excavate for 18" depth under Bituminous Treated Slope Protection if existing material is suitable.



SECTION B-B

Note: Payment for Bit. Treated Stone Slope Protection placed beneath the gutter shall be made at the contract unit price for Item 913-8 "Bit. Treated Stone Slope Protection", per square yard.

DESIGN- T.H.K
TRACE- DET. AS SHOWN
CHECK- A.B.P.
BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
REINFORCING STEEL

SHEET 35 OF 47 AUGUSTA, MAINE SEPT. 1964

96-49

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	36	47

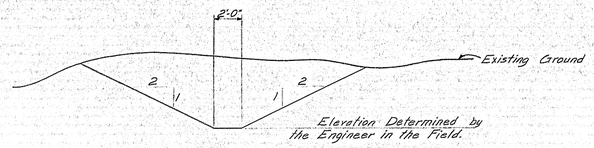
R/W Monuments

Sta.	Lt.	Rt.
2+00.00	50.00'	50.00'
16+75.09	50.00'	
16+97.64		50.00'
21+66.86	50.00'	
22+05.91		50.00'
24+00.00	50.00'	50.00'
P.T. 24+54.31	50.00'	50.00'

Survey Markers

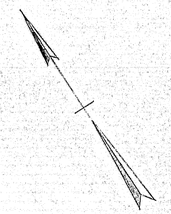
Sta.	Lt.	Rt.
P.C. 20+01.98	50.00'	50.00'

Utility Symbols
- Existing Pole
- Temporary Pole
- Permanent Pole
- Temporary Line
- Permanent Line



TYPICAL DITCH SECTION
FOR REPLACING EXISTING CULVERTS @ STA. 21+25± & STA. 24+50±

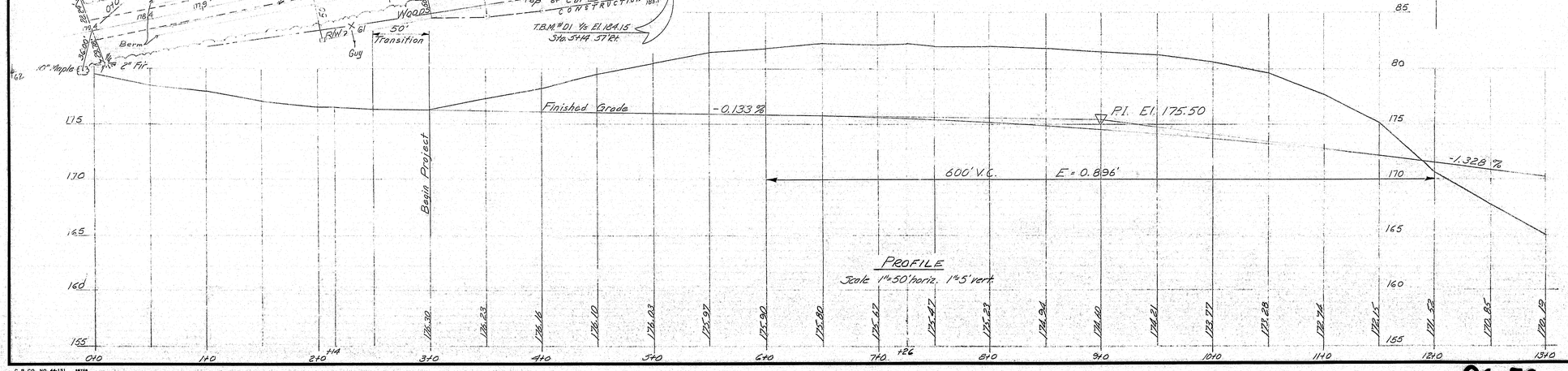
Necessary excavation to be paid for under Item 204-10, Structural Earth Excavation-Drainage.



Existing tar pavement to be removed & area is to be loamed (2" loam) and seeded (Method #2) Sta. 13+0± to Sta. 25+0±.
Pavement removal to be paid per cubic yard under Item 203-9 Earth Excavation.

PLAN
Scale 1" = 50'

Note: The Clearing Pay Lines shall be 5 feet outside and parallel to the construction slope lines, and also as shown on the plans.



PROFILE
Scale 1" = 50' horiz. 1" = 5' vert.

DESIGN-	BRIDGE NO.
TRACE- Harris	SURVEY- Highway
CHECK- W.H.Y. (Line & Grade)	PLOT- Sh. Bornes

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
SURVEY

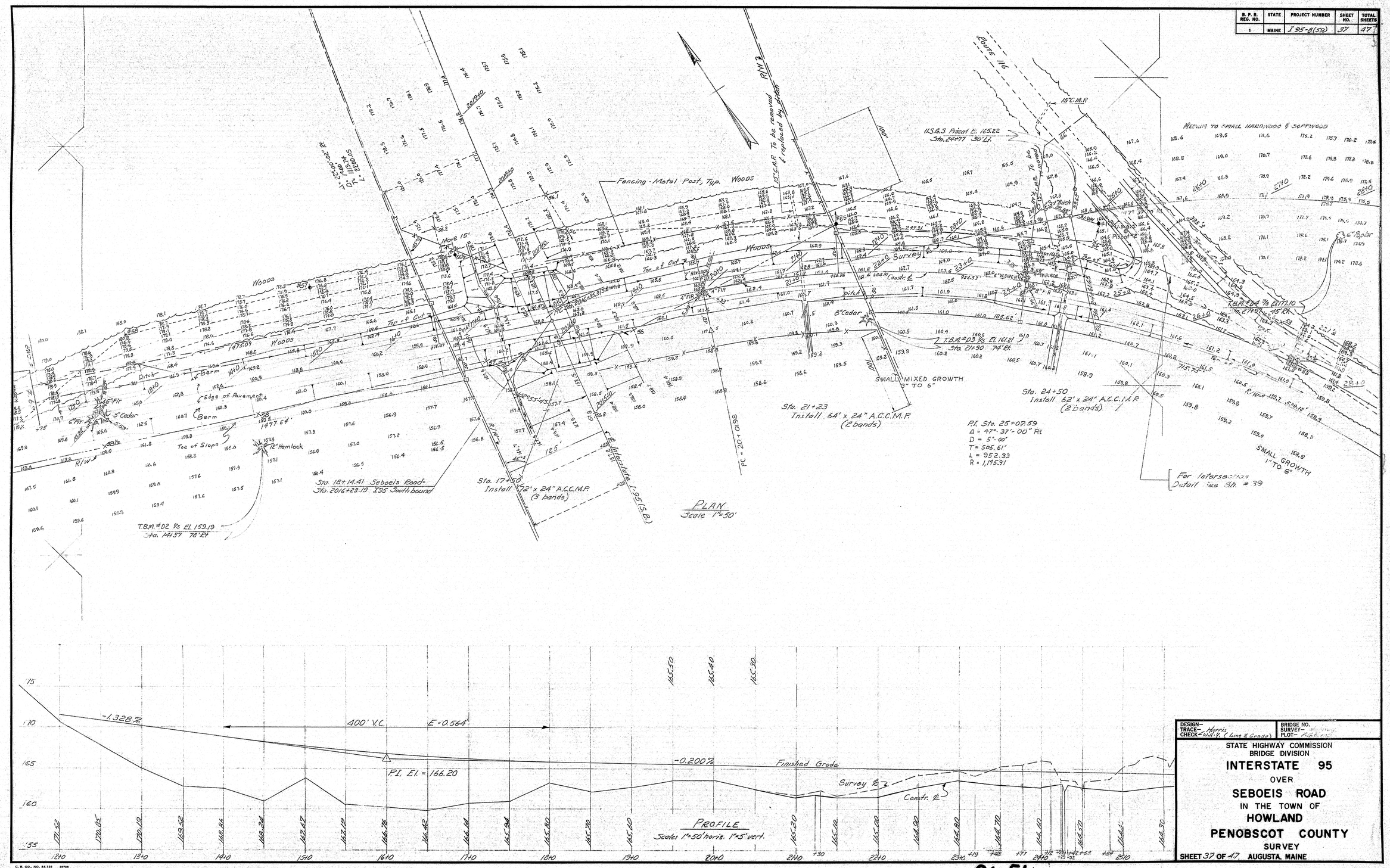
SHEET 36 OF 47 AUGUSTA, MAINE

96-50

Seboeis Road - Howland - Survey Sh #1

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	37	47



DESIGN–
TRACE– Harris
CHECK– Wilt, Y. (Line & Grade)

BRIDGE NO.
SURVEY–
PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

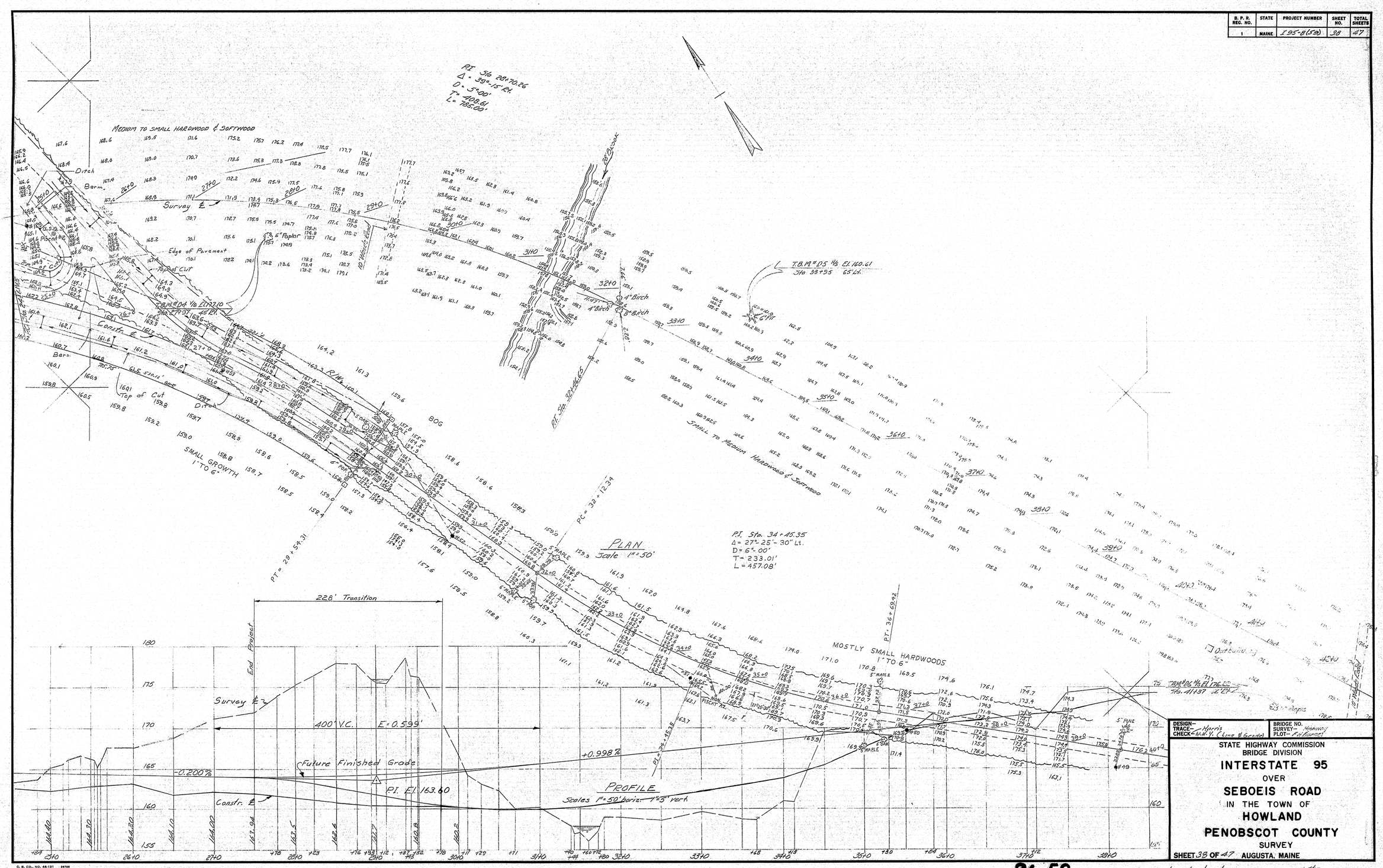
INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
SURVEY

SHEET 37 OF 47 AUGUSTA, MAINE

96-51

Seboeis Road Howland Survey Sh #2

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	38	47



DESIGN–	BRIDGE NO.
TRACE– Harris	SURVEY– Highway
CHECK– W.H.Y. (Line & Grade)	PLOT– Fit Burnet

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
SURVEY

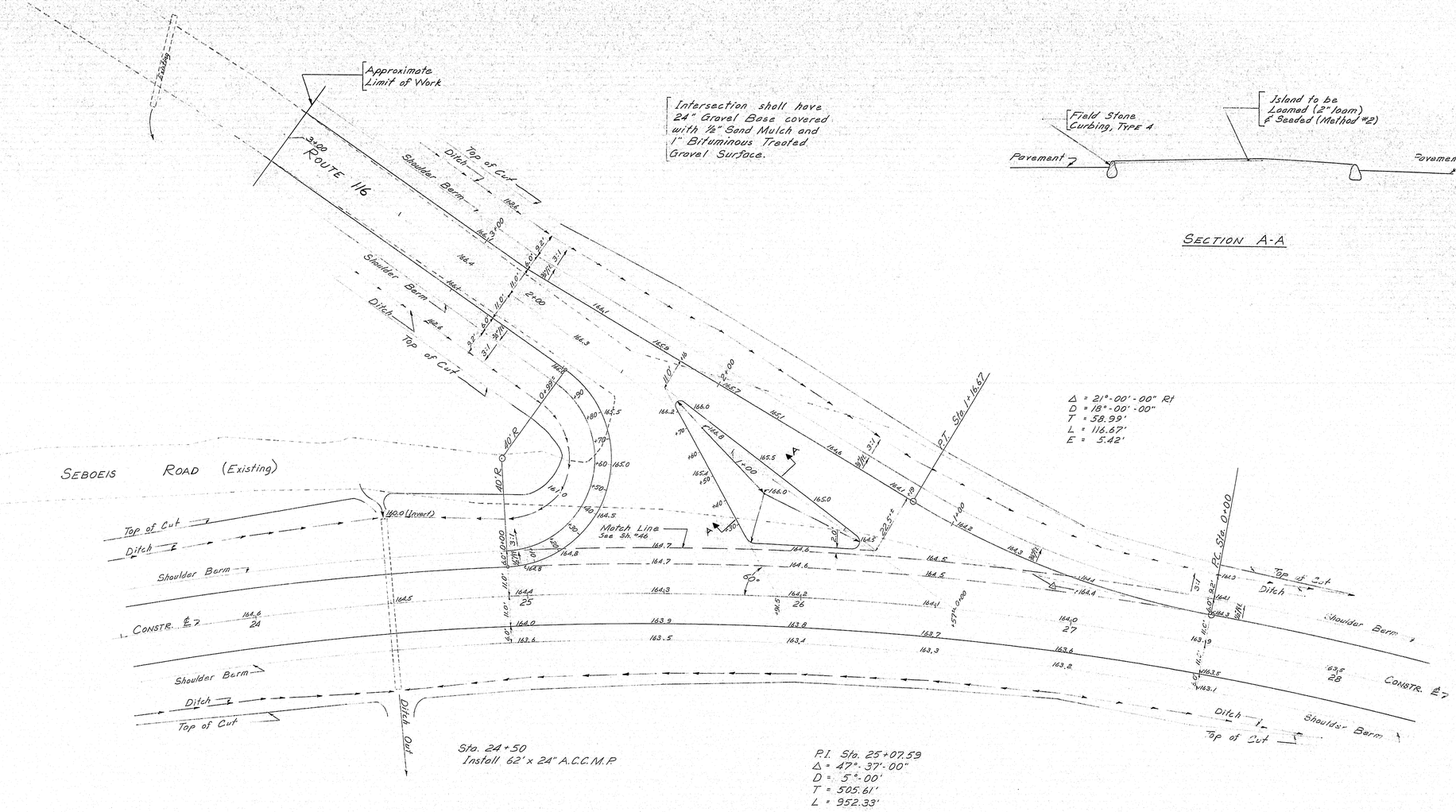
SHEET 38 OF 47 AUGUSTA, MAINE

96-52

Seboeis Road Howland Survey St. #3

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-B(59)	39	47



SECTION A-A

INTERSECTION DETAIL

SCALE: 1" = 20'

Note: Elevations shown are Finished Grades.

DESIGN– E.R.A. TRACE– CHECK– Harris	BRIDGE NO. SURVEY– PLOT–

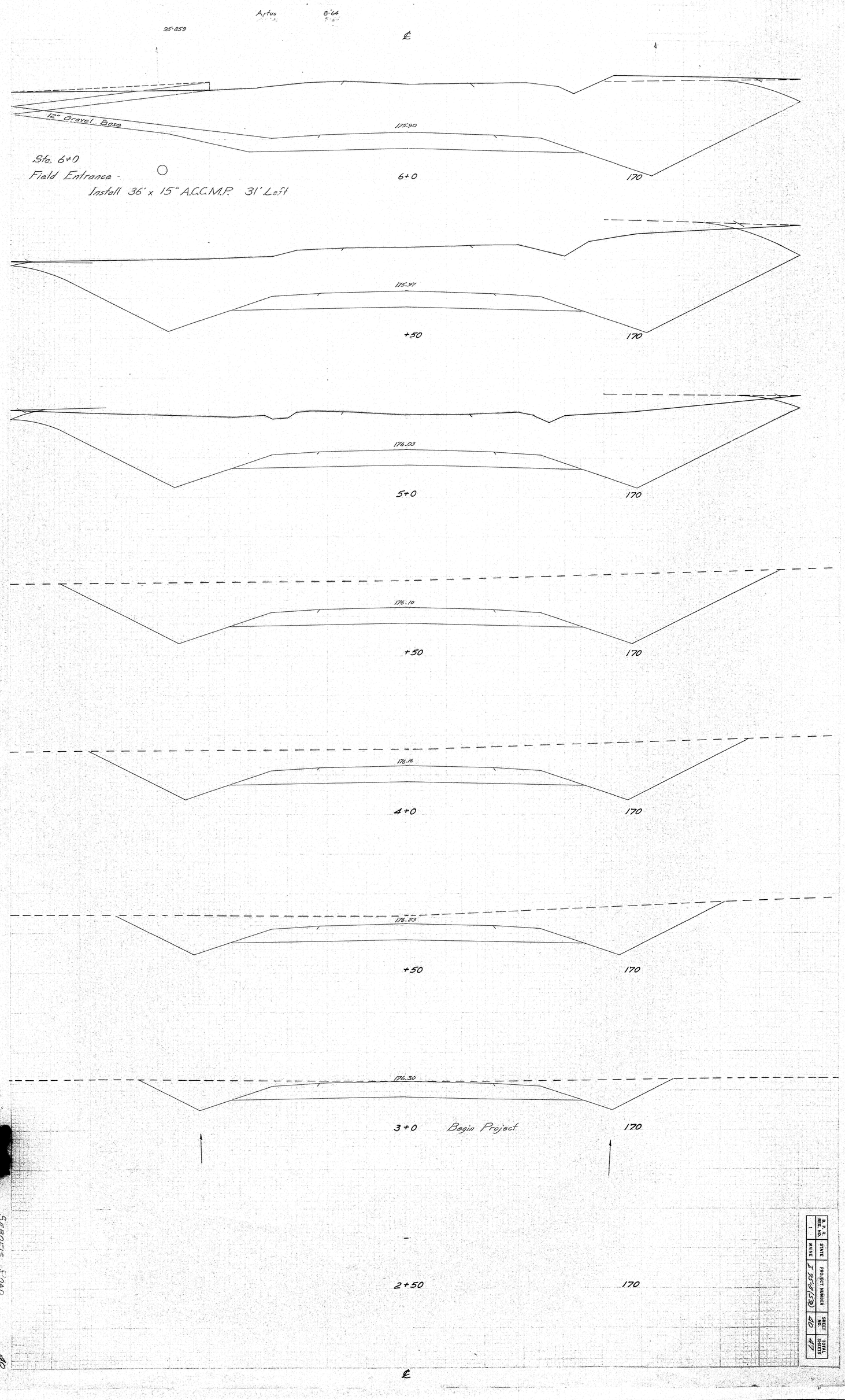
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
INTERSECTION DETAIL

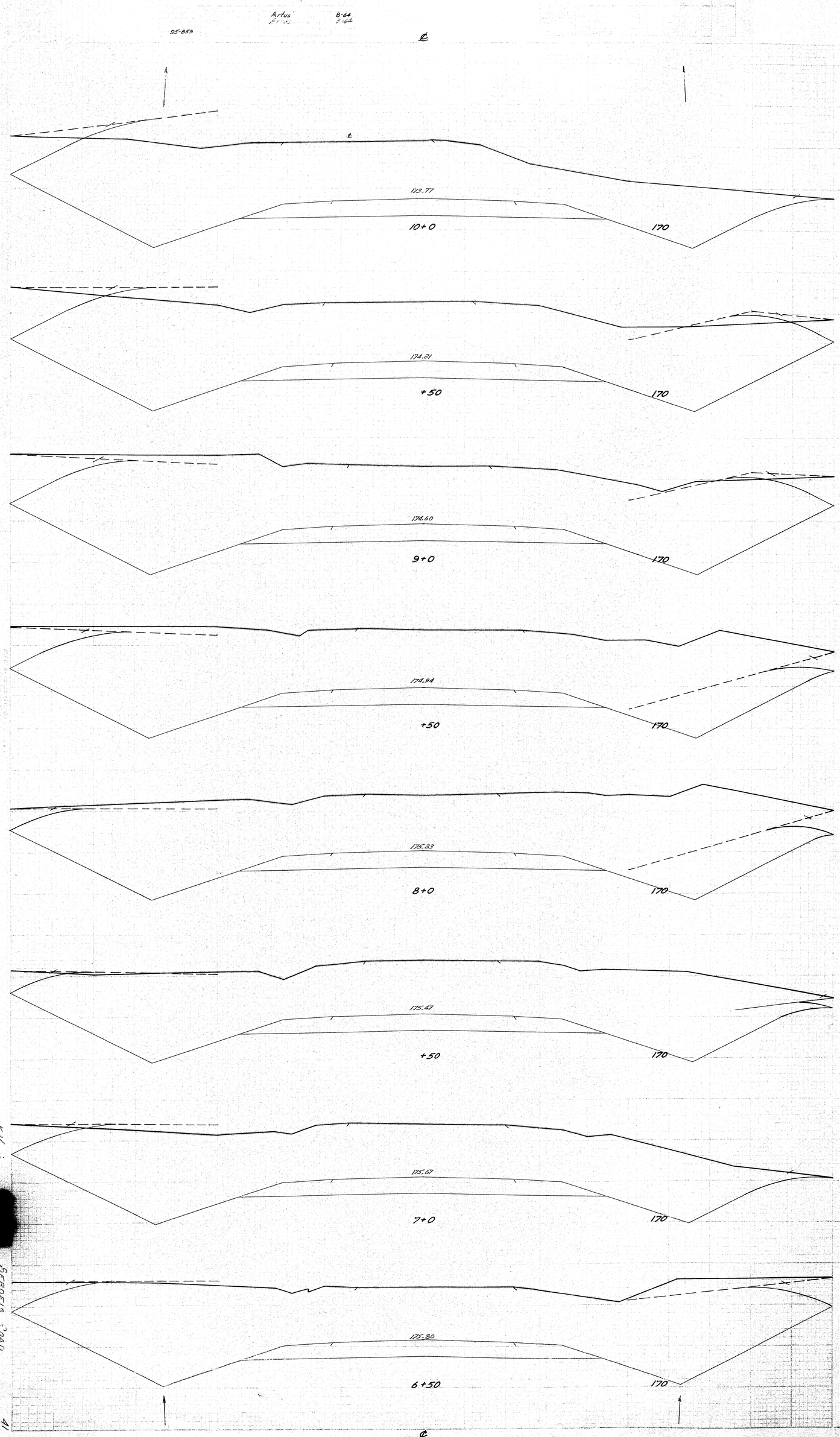
SHEET 39 OF 46 AUGUSTA, MAINE

96-53

0 1 2 3 4 5 INCHES



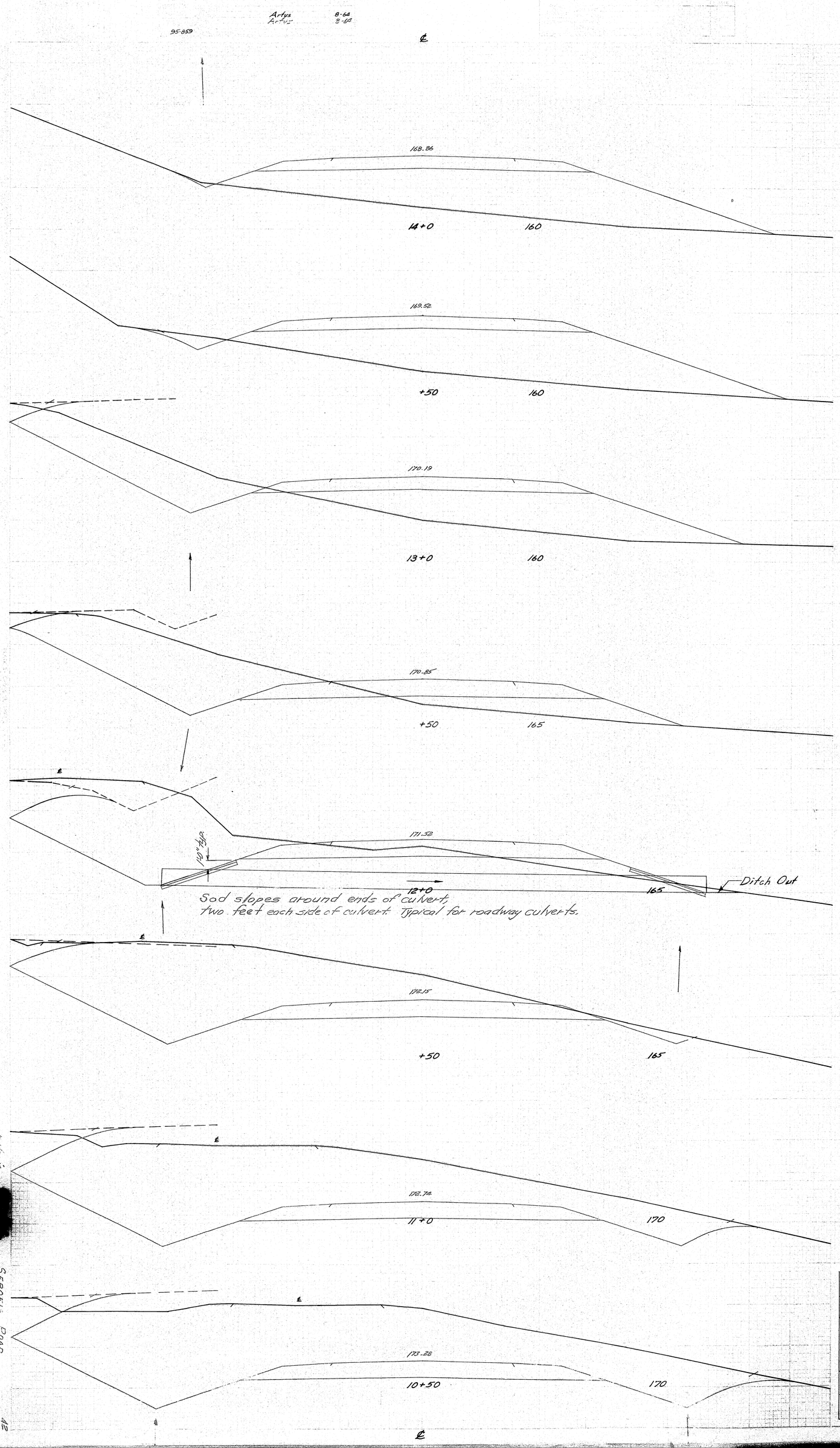
Artus
8-'64
95-859
℄
12" Gravel Base
175.90
Sta. 6+0
Field Entrance -
Install 36' x 15" A.C.C.M.P. 31' Left
6+0
170
175.97
+50
170
176.03
5+0
170
176.10
+50
170
176.16
4+0
170
176.23
+50
170
176.30
3+0
Begin Project
170
2+50
170
℄
B. P. R. REG. NO.
1
STATE
MAINE
PROJECT NUMBER
I 95-8(59)
SHEET NO.
40
TOTAL SHEETS
47
SEBOEIS ROAD
40



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8 (59)	41	47

SEBOEIS ROAD

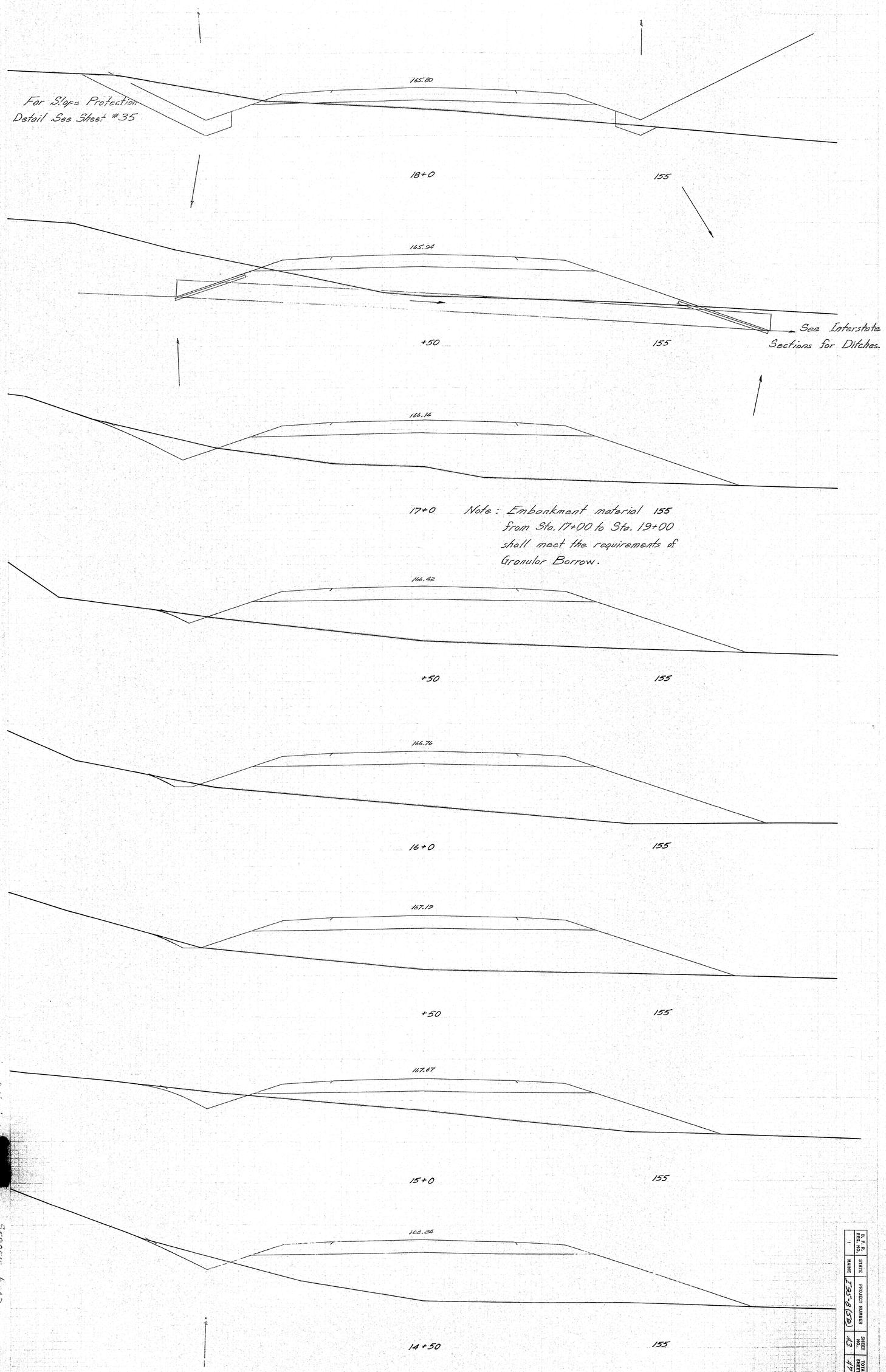
41



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	42	47

SEBOEIS ROAD

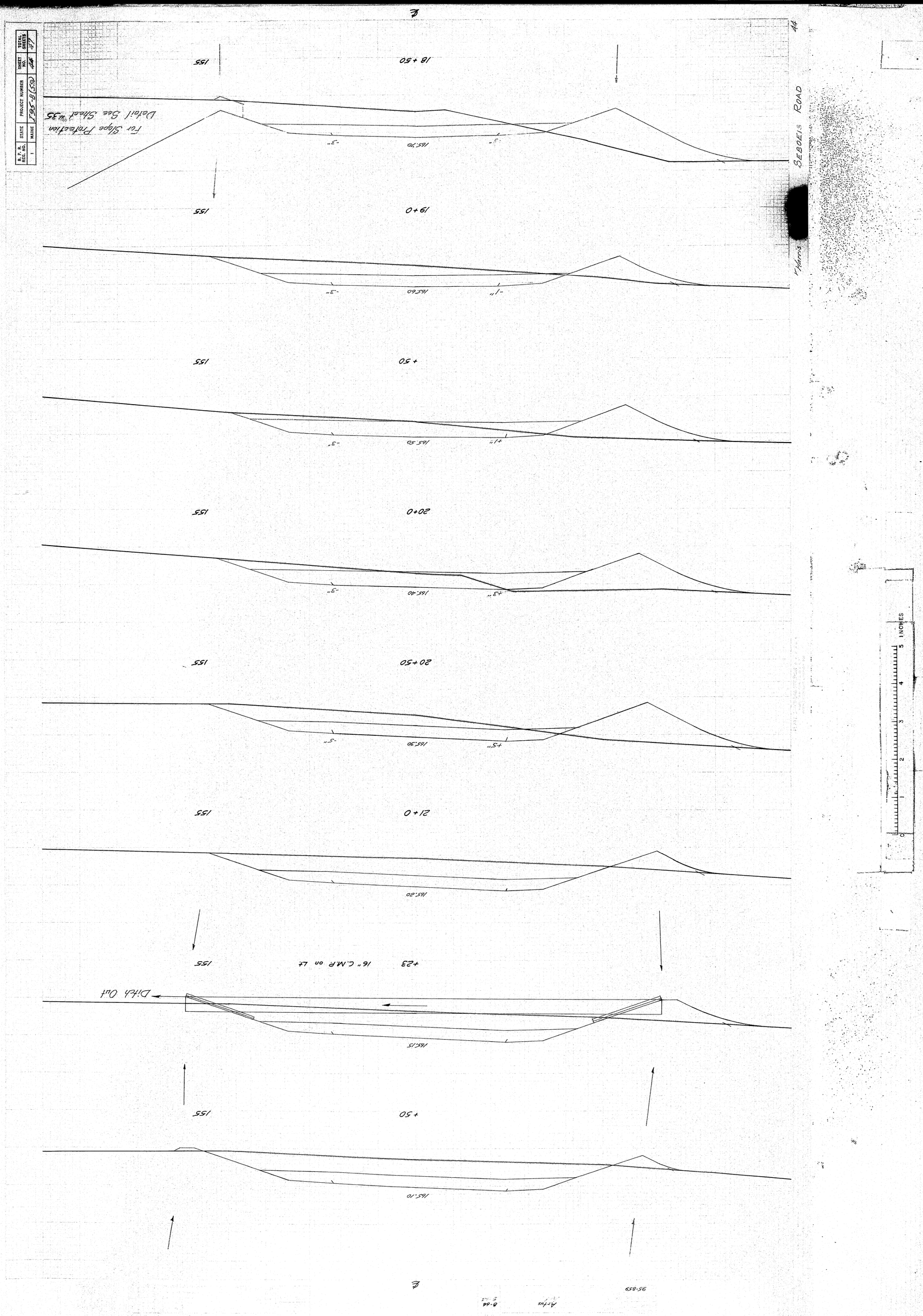
42



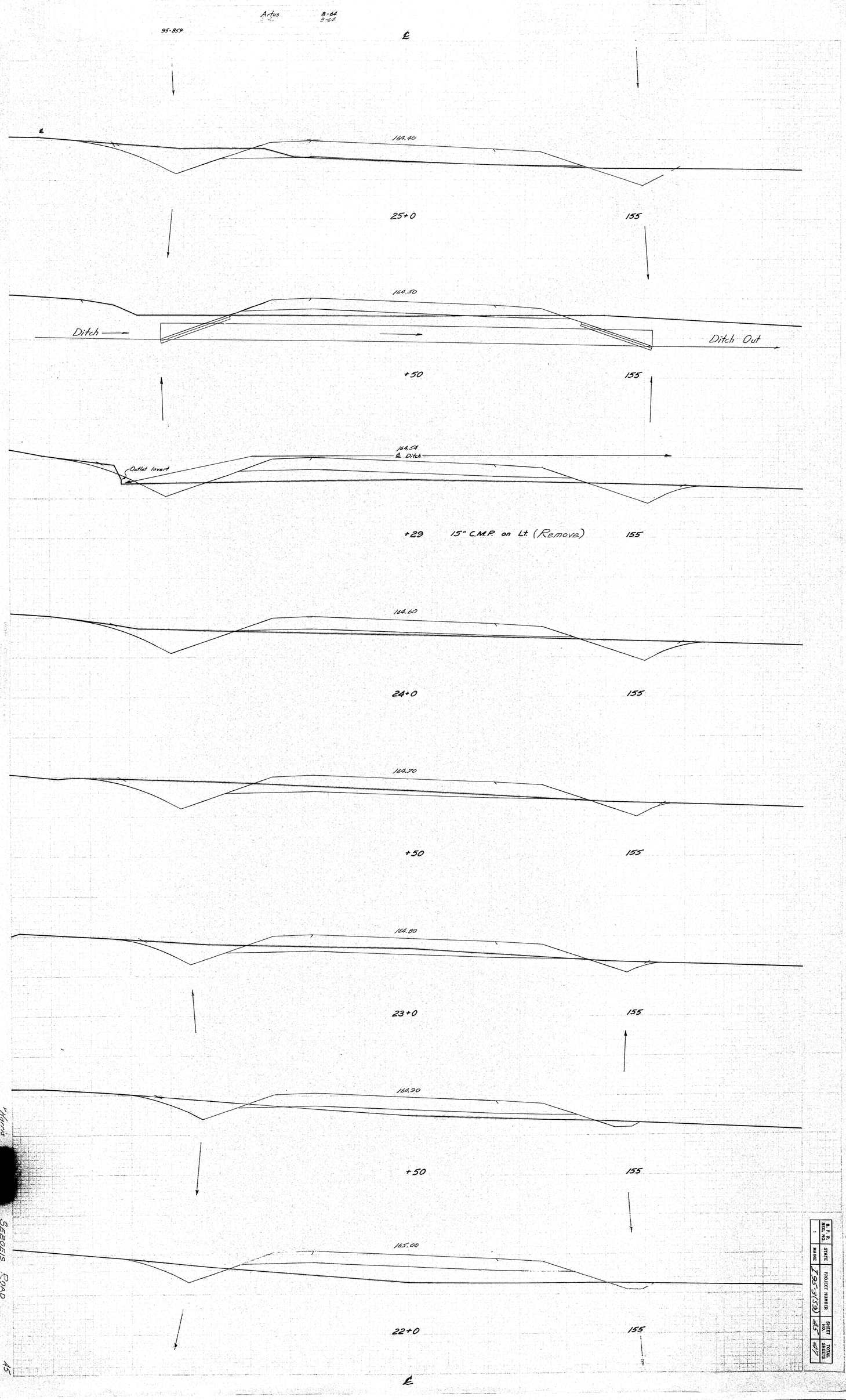
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	43	47

SEBOEIS ROAD

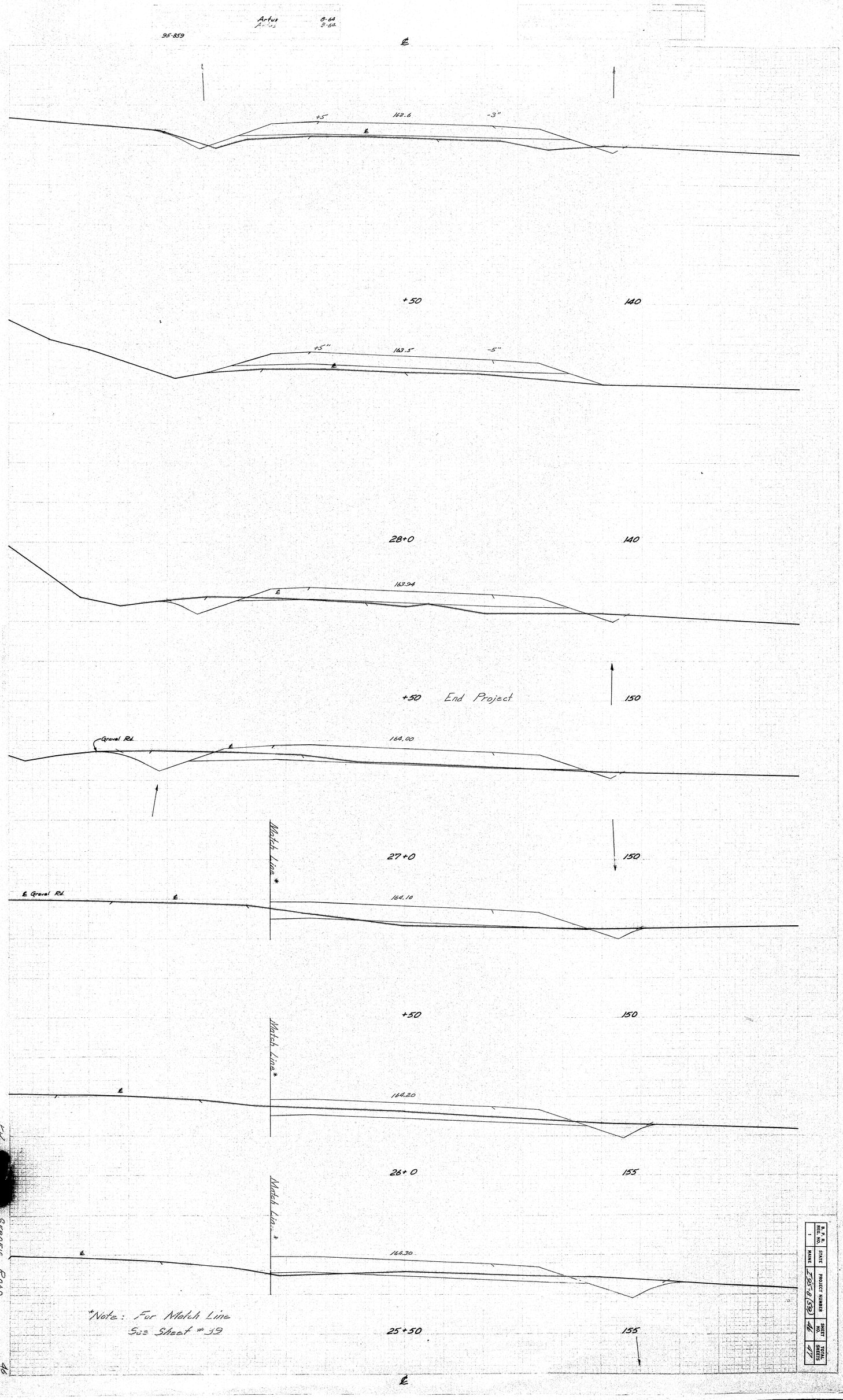
43



B. P. R. REG. NO. 1
STATE MAINE
PROJECT NUMBER I-95-8(559)
SHEET NO. 44
TOTAL SHEETS 47
For Slope Protection
Detail See Sheet #35
18+50
155
165.70
-3"
19+0
155
165.60
-1"
+50
155
165.50
+1"
20+0
155
165.40
+3"
20+50
155
165.30
+5"
21+0
155
165.20
+23
16" C.M.P. on Lt
155
Ditch Out
165.15
+50
155
165.10
SEBOEIS ROAD
Harris
44
INCHES
95-859



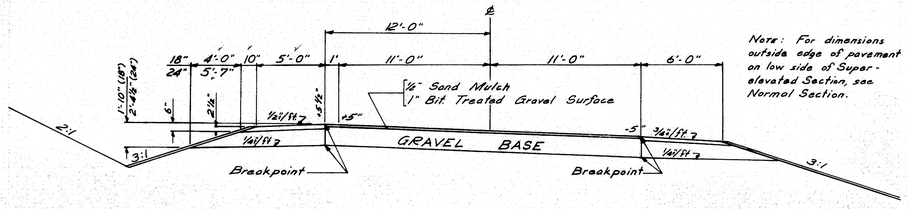
Artus
8-64
8-64
95-859
℄
164.40
25+0
155
164.50
Ditch
Ditch Out
+50
155
164.54
℄ Ditch
Outlet Invert
+29
15" C.M.P. on Lt. (Remove)
155
164.60
24+0
155
164.70
+50
155
164.80
23+0
155
164.90
+50
155
165.00
22+0
155
℄
Harris
SEBOEIS ROAD
45
B. P. R. REG. NO.
1
STATE
MAINE
PROJECT NUMBER
I 95-3(59)
SHEET NO.
45
TOTAL SHEETS
47



SEBOEIS ROAD

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I95-8(59)	46	47

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	47	47



Note: For dimensions outside edge of pavement on low side of Super-elevated Section, see Normal Section.

SUPERELEVATED SECTION

18" Gravel Base in Fill Sections
24" Gravel Base in Cut Sections

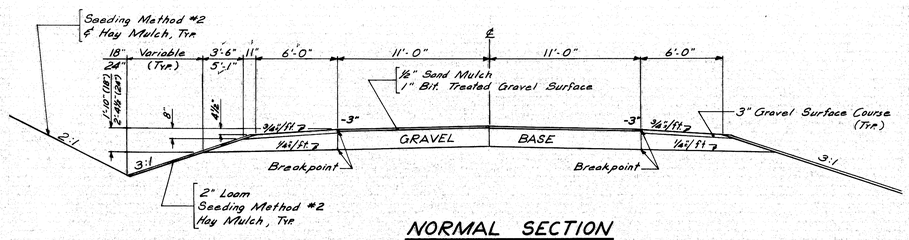
5 FT. SHOULDER

18" Gravel Base = 37.59 C.Y. Per 100 L.F.
24" Gravel Base = 57.31 C.Y. Per 100 L.F.

23 FT. ROADWAY

18" Gravel Base = 127.78 C.Y. Per 100 L.F.
24" Gravel Base = 170.37 C.Y. Per 100 L.F.

SEBOEIS ROAD



NORMAL SECTION

18" Gravel Base in Fill Sections
24" Gravel Base in Cut Sections

***6 FT. SHOULDER**

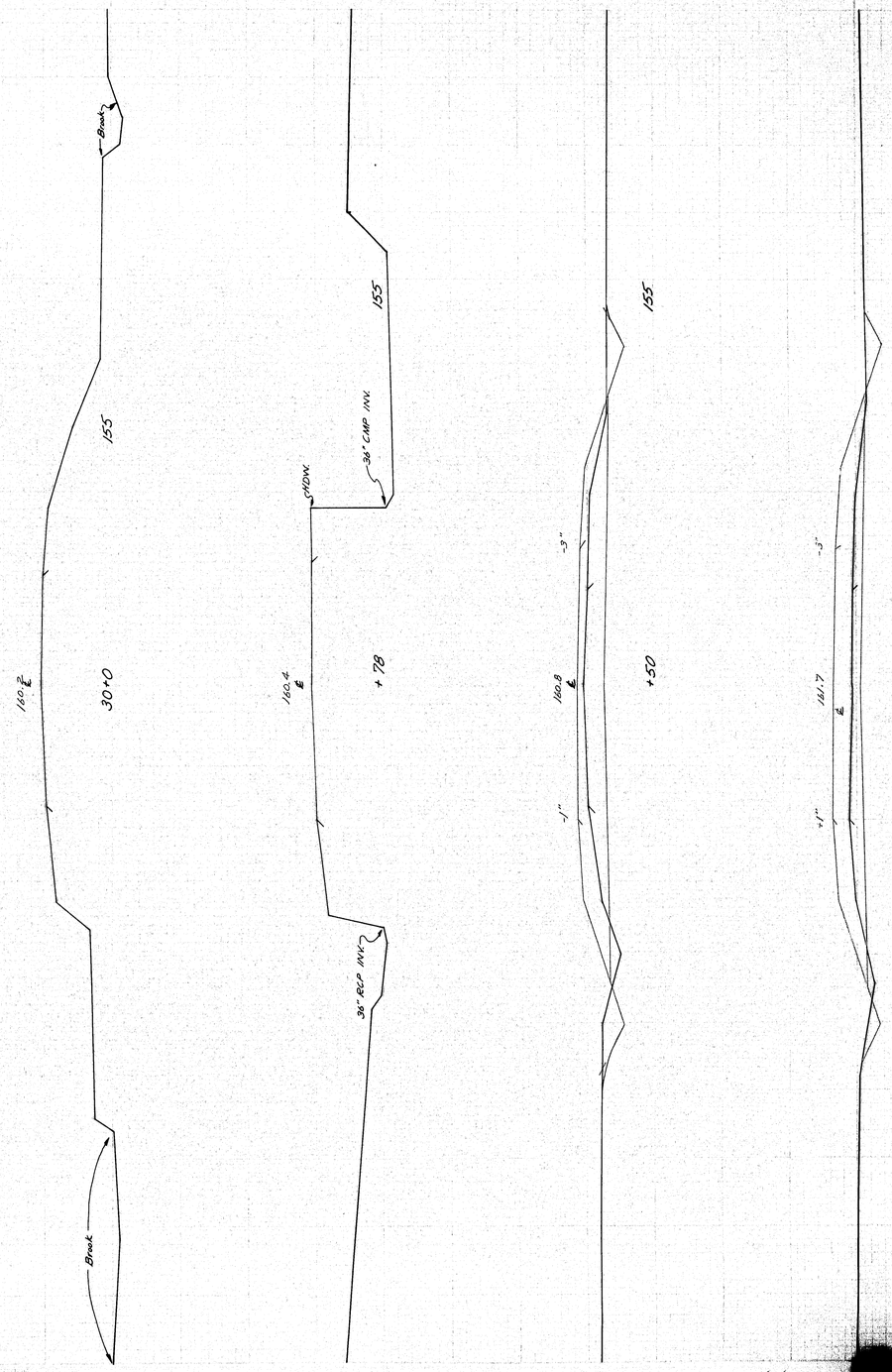
18" Gravel Base = 38.77 C.Y. Per 100 L.F.
24" Gravel Base = 59.63 C.Y. Per 100 L.F.

22 FT. ROADWAY

18" Gravel Base = 122.22 C.Y. Per 100 L.F.
24" Gravel Base = 162.96 C.Y. Per 100 L.F.

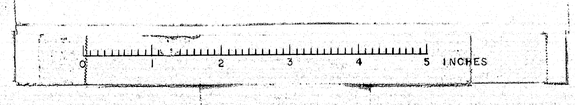
* Note: These quantities the same for 6' shoulder on low side of superelevated section.

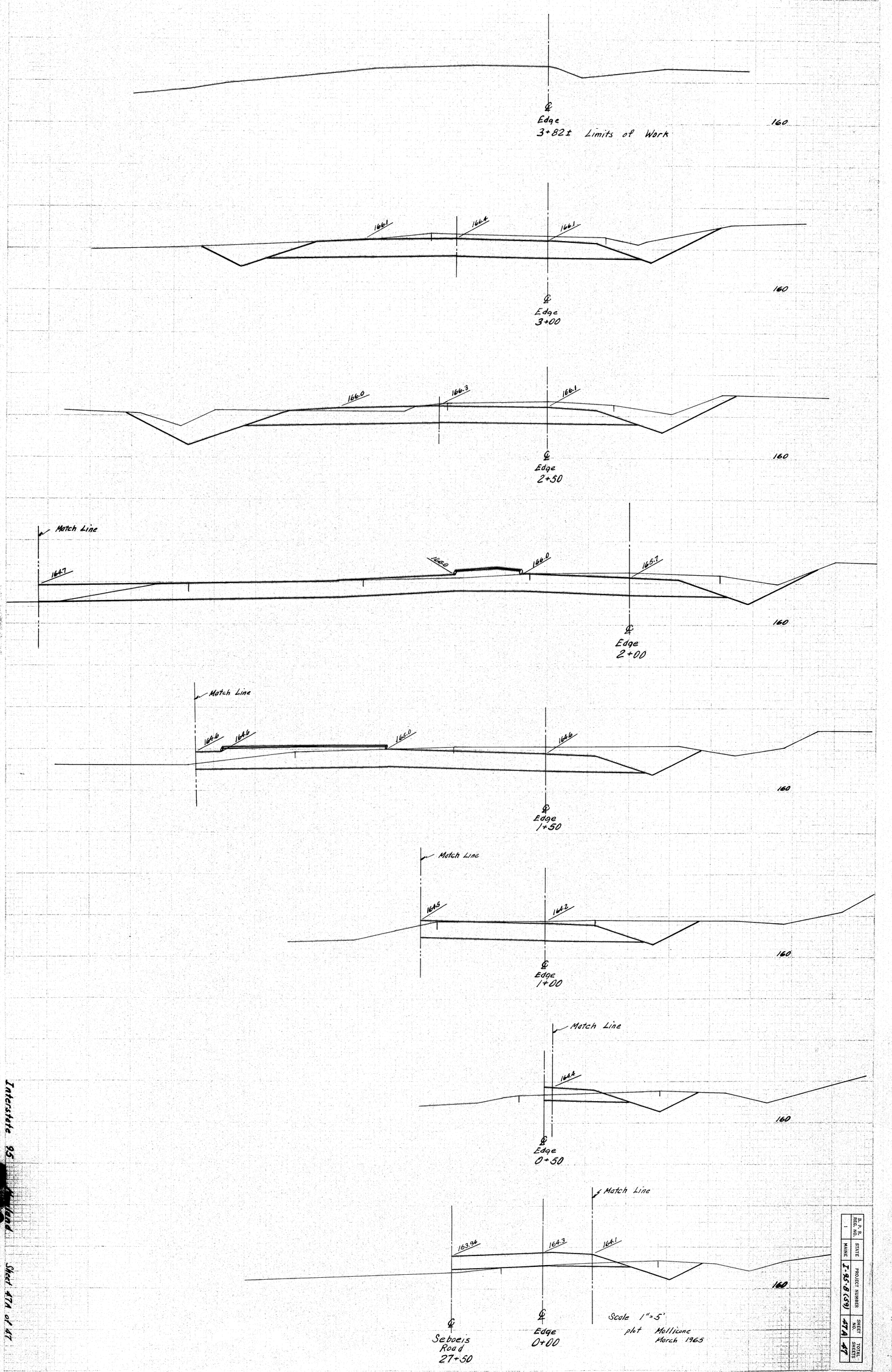
SEBOEIS ROAD



Harris [redacted] SEBOEIS ROAD

47

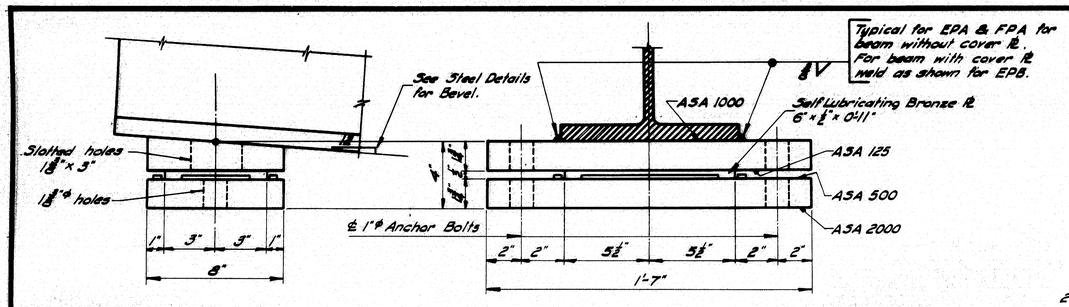




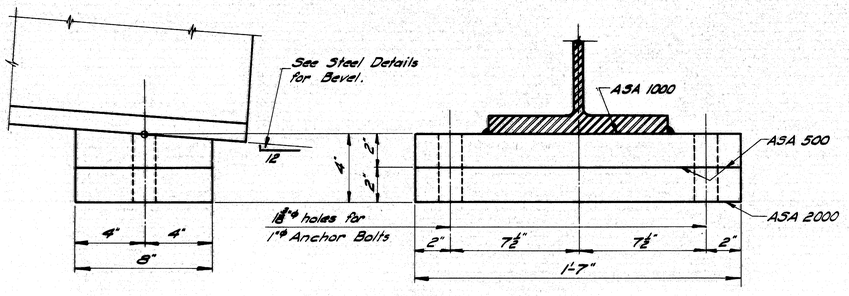
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-3 (39)	47A	47

Interstate 95 Maine Sheet 47A of 47

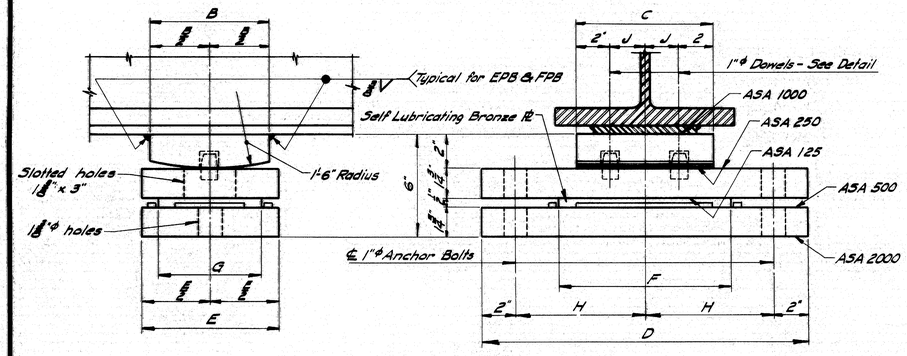
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



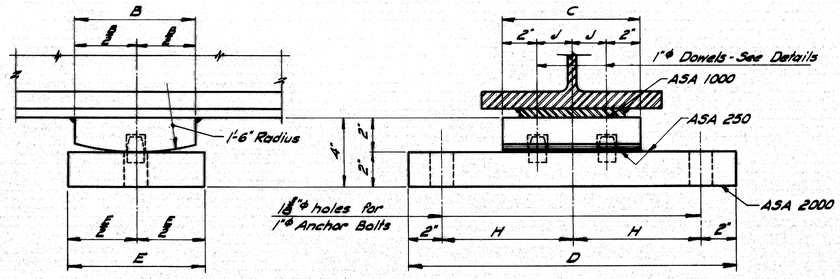
EXPANSION PEDESTAL - EPA



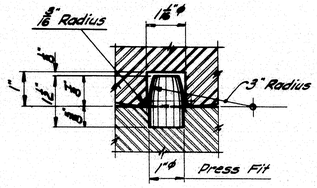
FIXED PEDESTAL - FPA



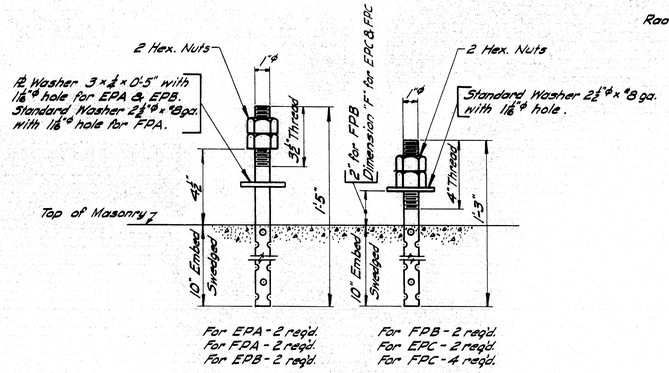
EXPANSION PEDESTAL - EPB



FIXED PEDESTAL - FPB



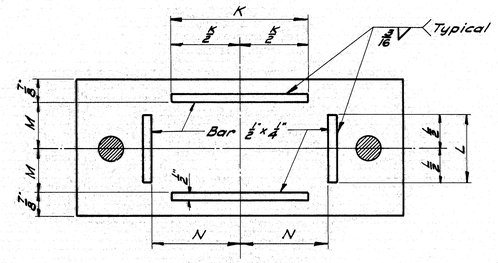
DOWEL DETAIL



For EPA - 2 reqd.
For FPA - 2 reqd.
For EPB - 2 reqd.

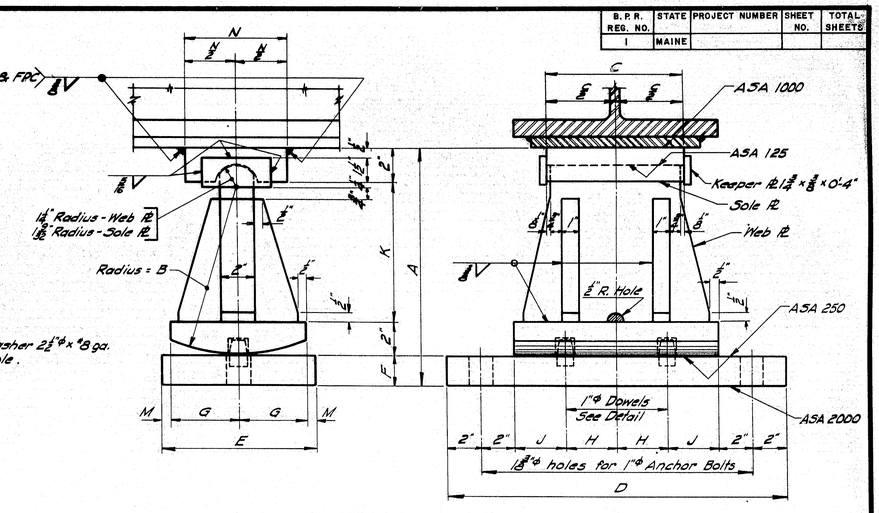
For FPB - 2 reqd.
For EPC - 2 reqd.
For FPC - 4 reqd.

ANCHOR BOLT DETAIL

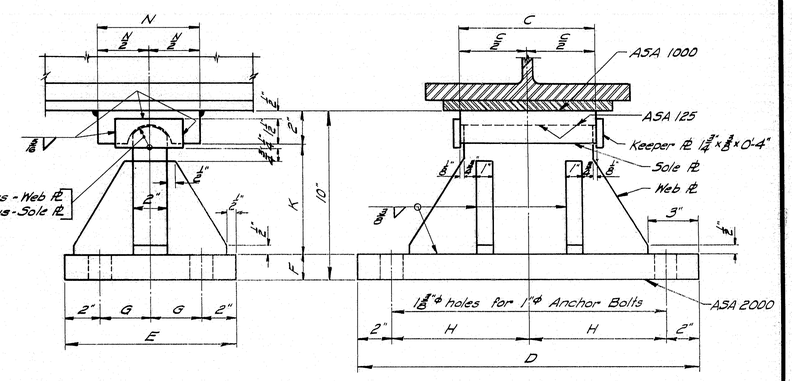


For EPA & EPB

MASONRY PLATE



EXPANSION PEDESTAL - EPC



FIXED PEDESTAL - FPC

NOTE: At the location of bearing pedestals the concrete bridge seats shall be dressed one inch larger all around than size of masonry plates and to exact elevations shown on the plans. If dressed areas are below the surface of the surrounding bridge seat a small channel shall be cut to the edge of the bridge seat for drainage where required by the Engineer. Channels shall have a min. width of 2" and min. slope of 1/2 inch per foot. No separate payment for this work will be made as it shall be considered incidental to contract items.

PEDESTALS — ALLOWABLE LOADS & DIMENSIONS

Pedestal	Load	A	B	C	D	E	F	G	H	J	K	L	M	N
EPA	132 K	—	—	—	—	—	—	—	—	—	8"	4"	3 1/2"	5 5/8"
FPA	150 K	—	—	—	—	—	—	—	—	—	—	—	—	—
EPB-1	120 K	—	6"	8"	1'-7"	8"	10"	6"	7 1/2"	2"	8"	4"	3 1/8"	5 5/8"
EPB-2	165 K	—	7"	10"	1'-8"	9"	1'-0"	7"	8"	3"	10"	5"	3 3/8"	6 5/8"
EPB-3	224 K	—	8"	1'-1"	2'-0"	10"	1'-4"	7"	10"	4 1/2"	1'-2"	5"	3 3/8"	8 5/8"
FPB-1	120 K	—	6"	8"	1'-7"	8"	—	—	7 1/2"	2"	—	—	—	—
FPB-2	165 K	—	7"	10"	1'-8"	9"	—	—	8"	3"	—	—	—	—
FPB-3	224 K	—	8"	1'-2"	2'-0"	10"	—	—	10"	5"	—	—	—	—
EPC-1	70 K	9 3/4"	6"	8"	1'-8"	8"	1 1/2"	3 1/2"	3"	3"	4 1/2"	—	1/2"	6"
EPC-2	100 K	11 3/4"	8"	8"	1'-8"	8"	1 1/2"	3 1/2"	3"	3"	6 1/2"	—	1/2"	6"
EPC-3	130 K	1'-2"	10"	8"	1'-9"	9"	1 3/4"	4"	3"	3"	8 1/2"	—	1/2"	7"
EPC-4	160 K	1'-2"	10"	8"	1'-10"	9"	1 3/4"	4"	4"	3"	8 1/2"	—	1/2"	7"
EPC-5	190 K	1'-2 1/4"	10"	9"	2'-0"	10"	2"	4 1/2"	5"	3"	8 1/2"	—	1/2"	8"
EPC-6	220 K	1'-4 1/2"	1'-0"	10"	2'-0"	1'-0"	2 1/4"	5"	5"	3"	10 1/2"	—	1"	8"
EPC-7	250 K	1'-4 1/2"	1'-0"	1'-0"	2'-2"	1'-0"	2 1/4"	5"	5"	4"	10 1/2"	—	1"	8"
FPC-1	100 K	—	—	8"	1'-8"	9"	1 1/2"	2 1/2"	8"	—	6 1/2"	—	—	6"
FPC-2	160 K	—	—	8"	1'-8"	10"	1 1/2"	3"	8"	—	6 1/2"	—	—	7"
FPC-3	190 K	—	—	9"	2'-0"	10"	1 1/2"	3"	10"	—	6 1/2"	—	—	8"
FPC-4	220 K	—	—	10"	2'-0"	1'-0"	1 3/4"	4"	10"	—	6 1/2"	—	—	8"
FPC-5	250 K	—	—	1'-0"	2'-0"	1'-0"	2"	4"	10"	—	6"	—	—	8"

DESIGN SPECIFICATIONS

A.A.S.H.O., Standard Specifications for Highway Bridges, 1961, with Interim Specifications, 1961 & 1962

A.S.T.M. STEEL CLASSIFICATION

Anchor Bolts - A7, A36, or A307
All other - A36.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

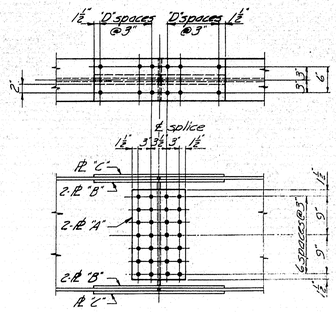
(BD 101 - 64)

BEARING PEDESTALS

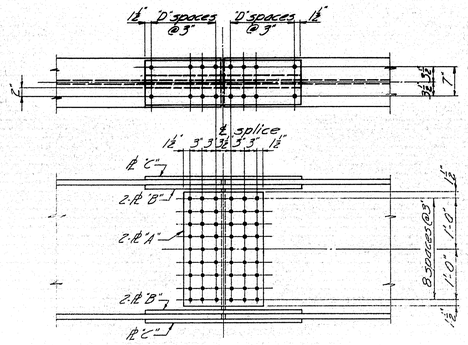
JANUARY 1964

96-63

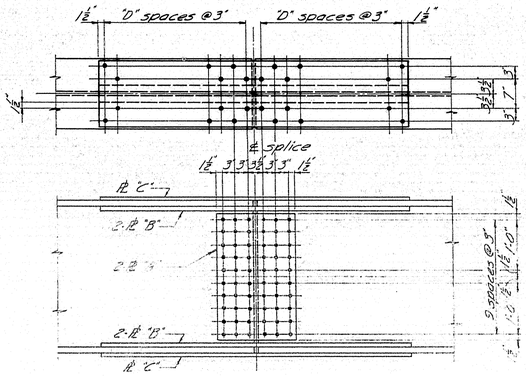
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEET
1	MAINE			



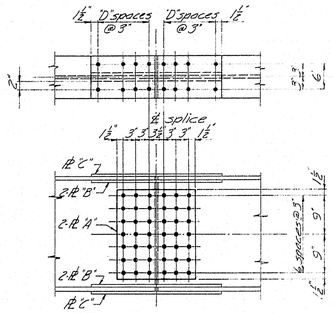
27 WF 84



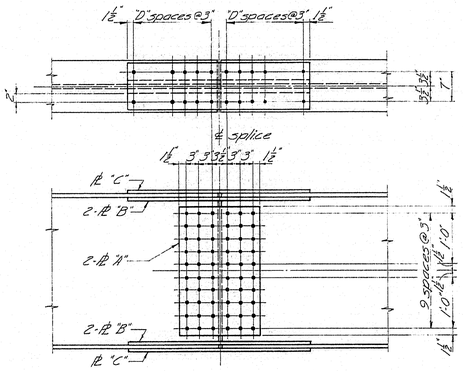
33 WF 118, 130, 141, 152



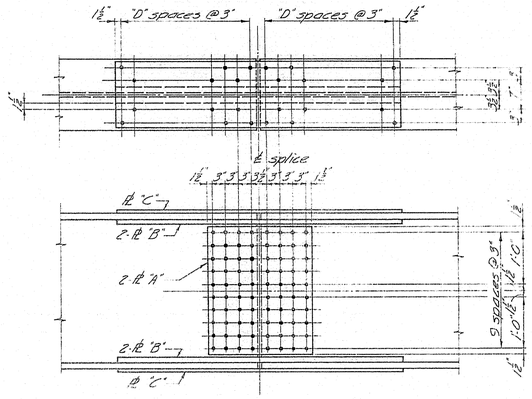
36 WF 245, 280



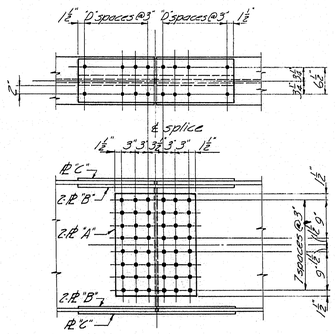
27 WF 94, 102, 114



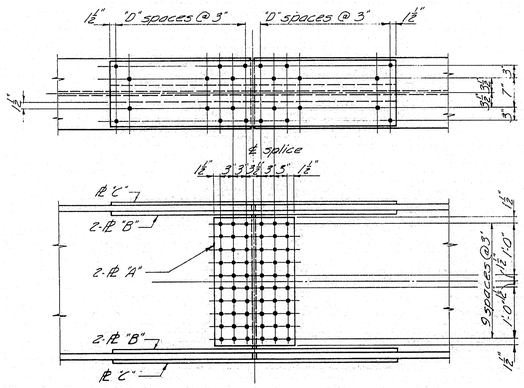
36 WF 135, 150, 160, 170, 182, 194



36 WF 300



30 WF 99, 108, 116, 124, 132



36 WF 230, 260

SPLICE DESIGN, PLATES AND FLANGE HOLES

BEAM	BEND. M.	SHEAR	PLATE "A"	PLATE "B"	PLATE "C"	"D"
27 WF 84	3070 K'	111 K	12⅝ x ½	4 x 7/16	10 x ⅜	3
27 WF 94	3520 K'	119 K	18⅝ x 9/16	4 x ½	10 x ⅜	3
27 WF 102	3862 K'	126 K	18⅝ x 9/16	4 x 9/16	10 x 7/16	4
27 WF 114	4341 K'	140 K	18⅝ x ⅝	4 x ⅝	10 x ½	4
30 WF 99	3921 K'	139 K	18⅝ x ½	4 x ½	10 x ⅜	3
30 WF 108	4360 K'	147 K	18⅝ x 9/16	4 x 9/16	10 x 7/16	4
30 WF 116	4780 K'	152 K	18⅝ x 9/16	4 x ⅝	10 x 7/16	4
30 WF 124	5170 K'	159 K	18⅝ x 9/16	4 x 9/16	10 x ½	4
30 WF 132	5539 K'	164 K	18⅝ x ⅝	4 x ⅝	10 x 9/16	5
33 WF 118	5287 K'	164 K	[illegible]	4 x 9/16	11 x 9/16	4
33 WF 130	5978 K'	173 K	[illegible]	4 x ⅝	11 x 9/16	5
33 WF 141	6604 K'	181 K	18⅝ x 9/16	4 x 11/16	11 x ½	5
33 WF 152	7193 K'	191 K	18⅝ x 9/16	4 x ⅝	11 x 9/16	6
36 WF 135	6473 K'	191 K	18⅝ x ½	4 x 11/16	11 x 9/16	4
36 WF 150	7436 K'	200 K	18⅝ x ½	4 x 13/16	11 x ½	5
36 WF 160	8005 K'	212 K	18⅝ x 9/16	4 x ⅝	11 x 9/16	6
36 WF 170	8574 K'	221 K	18⅝ x 9/16	4 x 15/16	11 x ⅝	6
36 WF 182	9204 K'	237 K	18⅝ x 9/16	4 x 15/16	11 x 11/16	7
36 WF 194	9838 K'	253 K	18⅝ x ⅝	4 x 1	11 x ½	8
36 WF 230	12574 K'	247 K	18⅝ x 9/16	6 x 1	16 x ⅝	10
36 WF 245	13441 K'	260 K	18⅝ x 9/16	6 x 1	16 x 9/16	11
36 WF 260	14330 K'	276 K	18⅝ x ⅝	6 x 1 1/16	16 x ⅝	12
36 WF 280	15551 K'	291 K	18⅝ x ¾	6 x 1 1/16	16 x 9/16	13
36 WF 300	16678 K'	312 K	18⅝ x ¾	6 x 1 1/8	16 x ⅝	14

GENERAL NOTES

1. Splice connections to be made with ⅝ ϕ high tensile strength bolts. Holes to be 11/16" ϕ.

2. The design bending moment is 90% of the net resisting moment of the beam with an allowable stress of 20,000 p.s.i. The design shear is 75% of the shear strength of the gross section of the web with an allowable stress of 12,000 p.s.i.

3. If beams of different sizes are to be spliced, use splice details shown for the smaller of the beams being spliced unless otherwise directed by design details. See design details for filler thickness. Place fillers to limits of splice plates only, with no extensions.

4. See design details for slopes of beams in order to correctly fabricate bevels at the splices.

A.S.T.M. STEEL CLASSIFICATION

High Tensile Strength Bolts A-325
Splice Plates A-36

DESIGN SPECIFICATIONS

AASHO Standard Specifications for Highway Bridges, 1961 with Interim Specifications, 1961 & 1962

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

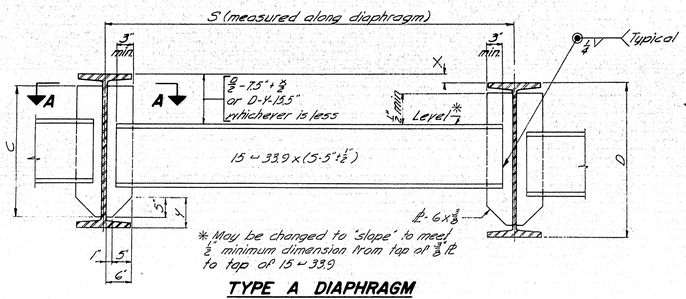
(BD 103-64)

BEAM SPLICES

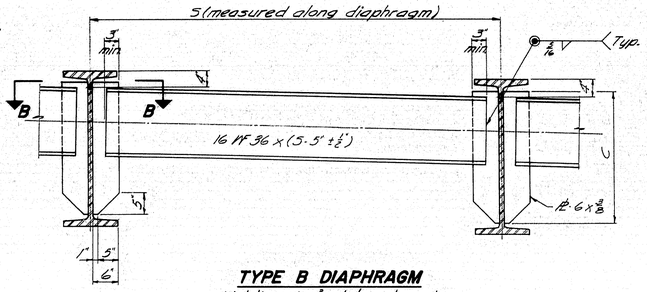
JANUARY 1964

96-64

B.P.R. DIV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

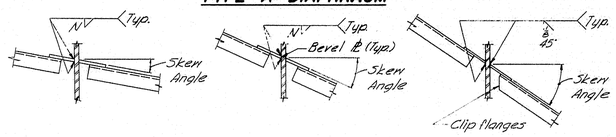


TYPE A DIAPHRAGM



TYPE B DIAPHRAGM

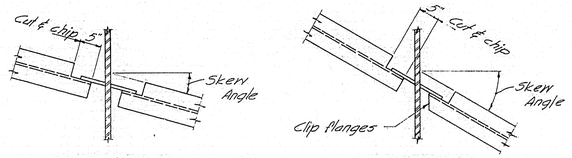
Welding 6 x 3/8 plates to web same as for Type A Diaphragm.



SECTION A-A
Skew Angle 0° to 18°-30'

SECTION A-A
Skew Angle over 18°-30' to 30°-00'

SECTION A-A
Skew Angle over 30°-00'



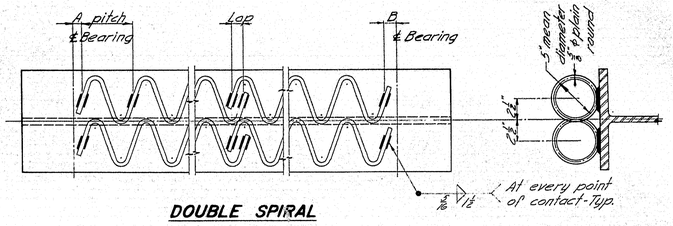
SECTION B-B
Skew Angle 0° to 25°-00'

SECTION B-B
Skew Angle over 25°-00'

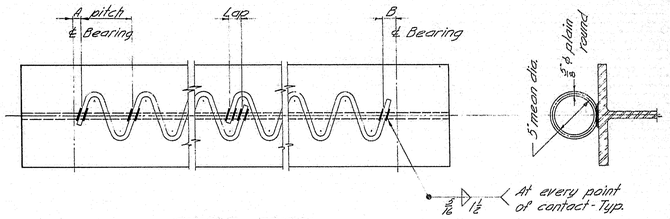
NOTE
See design details for diaphragm type, location and skew.

FILLET WELD SIZE "N" & DIMENSION "C" FOR DIAPHRAGM PLATES		
BEAM	C	N
27 WF 84 to 114 incl.	1'-11"	1/4"
30 WF 99 to 132 incl.	2'-2"	1/4"
33 WF 118 to 152 incl.	2'-5"	1/4"
36 WF 135 to 194 incl.	2'-7"	1/4"
36 WF 230 to 300 incl.	2'-6"	5/16"

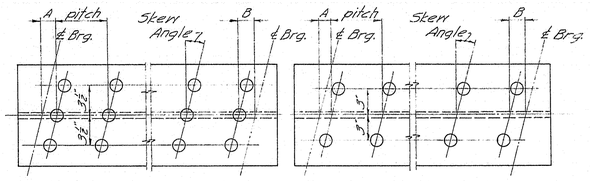
DIAPHRAGMS



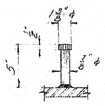
DOUBLE SPIRAL



SINGLE SPIRAL



TRIPLE STUDS **DOUBLE STUDS**

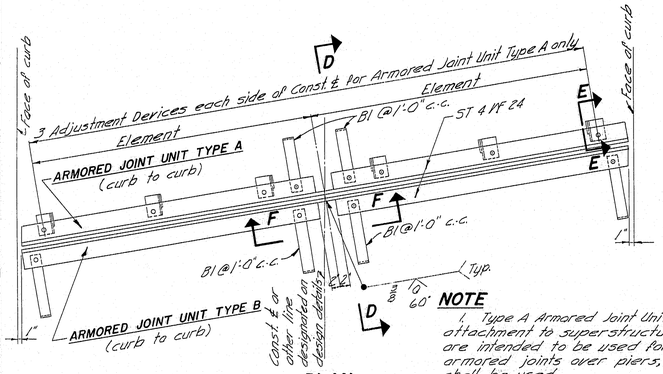


STUD DETAIL

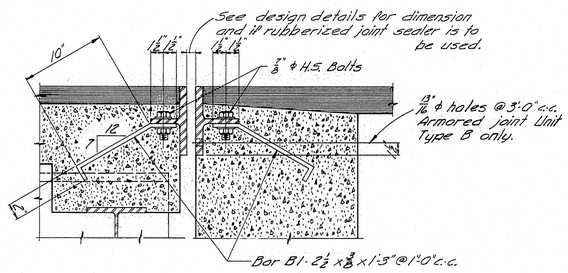
NOTE

1. Spiral reinforcing or studs may be used at the option of the Contractor.
2. If studs are used they shall be granular or solid flux filled and automatically end welded to the top flange in the shop or field.
3. Studs are a patented product. If the Contractor elects to use them, he shall pay the royalty and payment to the contractor will be included in the lump sum price for Shear Connectors.
4. See the design details for Dimensions "A" and "B", spiral and stud pitch and Skew Angle for Studs.

SHEAR CONNECTORS

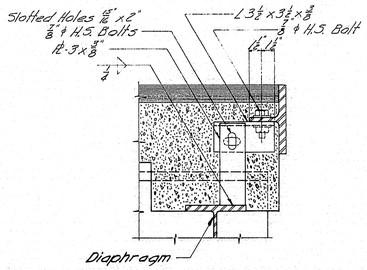


PLAN

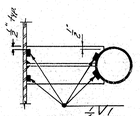


ARMORED JOINT UNIT TYPE A — ARMORED JOINT UNIT TYPE B

SECTION D-D



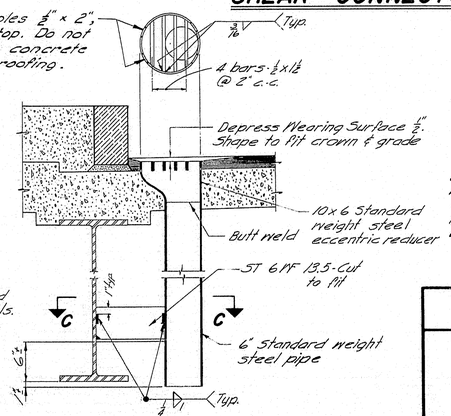
SECTION E-E
Showing Adjustment Device Armored Joint Unit Type A only - After Unit is in final position weld 3/8 PL to angle with 1/4" fillet



SECTION C-C

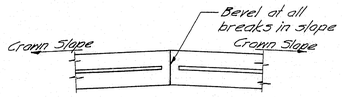
NOTE

1. Drain may be rotated 180°. See design details.
2. See design details for location and number of drains and beam size to which it is connected.
3. Drains to be paid for as structural steel.



DRAIN

Revised Nov. 1964, Welding Drain Support.



SECTION F-F

Note: See design details for Constr. ℄ to curb dimensions, skew, crown slope, slab thickness, other dimensions necessary to complete the fabrication details, and location.

NOTE

1. Type A Armored Joint Units are intended to be used for attachment to superstructures. Type B Armored Joint Units are intended to be used for attachment to abutments. At armored joints over piers, two Type A Armored Joint Units shall be used.
2. If rubberized joint sealer is called for on the design details the area to which it is to be bonded shall not be painted and it shall be supported on non-bituminous material. At the Contractor's option the supporting material may be left in place or be removed. If the supporting material is left in place, it shall be compressible in accordance with specification AASHO M 153-54. In either case bond between the supporting material and the rubberized joint sealer shall be prevented by a 1" minimum thickness of Poly-urethane foam.
3. If more elements than the two shown in the "Plan" are required by the design details, there shall be three adjustment devices for each element for Armored Joint Unit Type A and the elements of both units shall be field welded together in the same manner as shown in the "Plan".
4. Armored Joints to be paid for as Structural Steel.

ARMORED JOINT

An armored joint consists of two armored joint units. See note 1.

GENERAL NOTE

Use only those items called for on design details. In case of conflict between these Standard Details and the design details, the requirements of the design details shall be followed.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

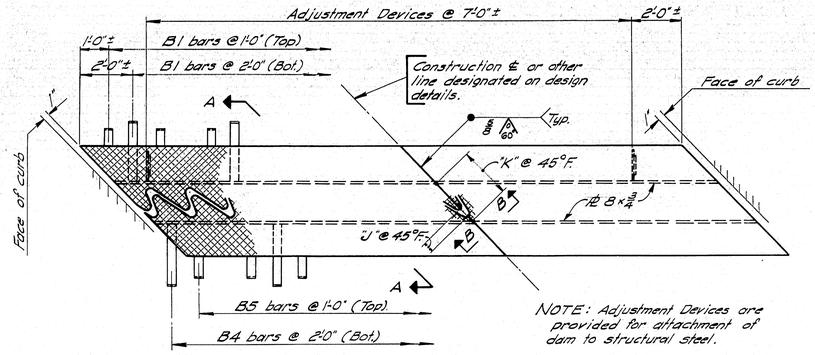
(BD 104-64)

DIAPHRAGMS, ARMORED JOINT, SHEAR CONNECTORS, DRAIN

JANUARY 1964

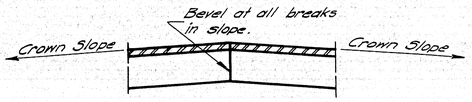
96-65

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



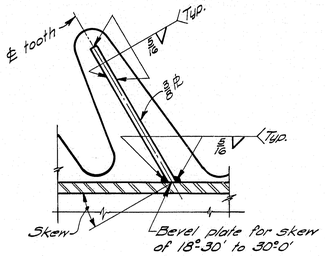
PLAN

Right skew indicated



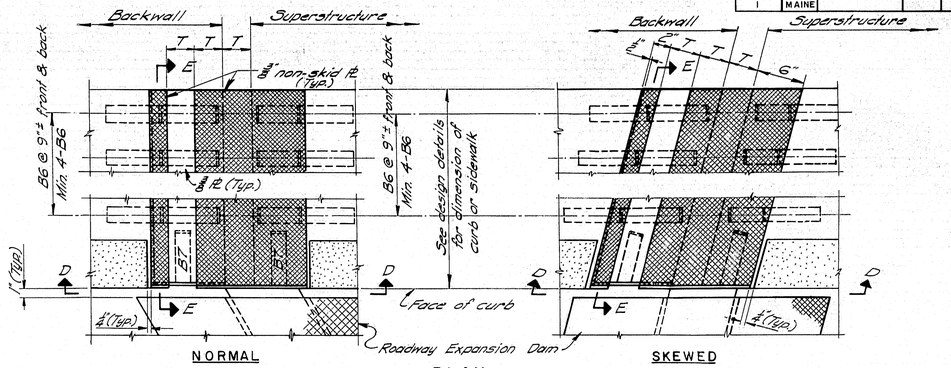
SECTION B-B

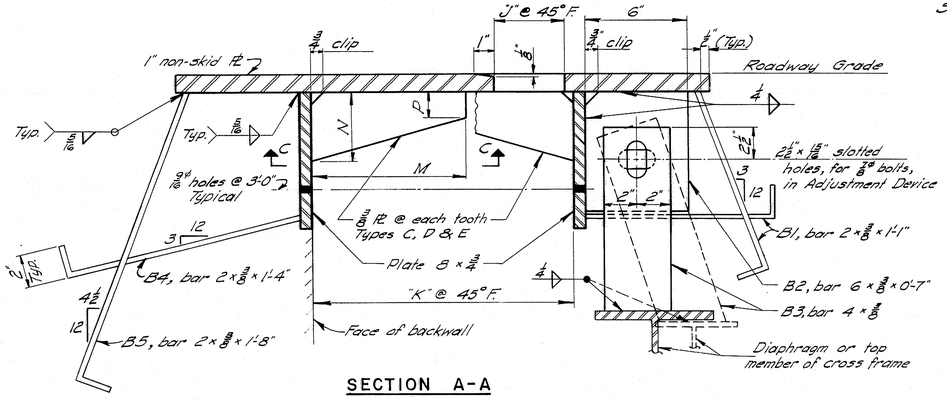
See design details for construction ℄ to curb dimensions, skew, crown slope, slab thickness, other dimensions & angles that are necessary to complete fabrication details and location of Roadway Expansion Dam.



SECTION C-C

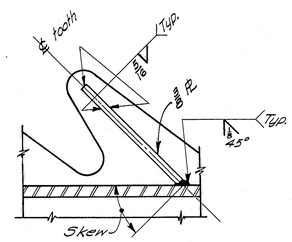
Skew ~0° to 30°-0'





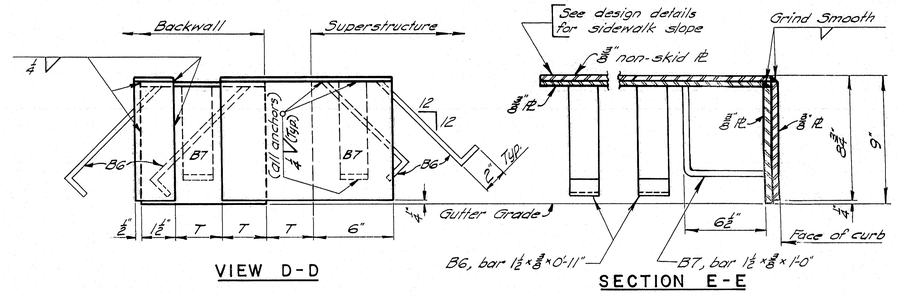
SECTION A-A

Bar B3 may be vertical or inclined as indicated, depending on design conditions.
After Adjustment Device is in final position weld bars B2 to B3 with 1/4" fillet weld.



SECTION C-C

Skew over 30°

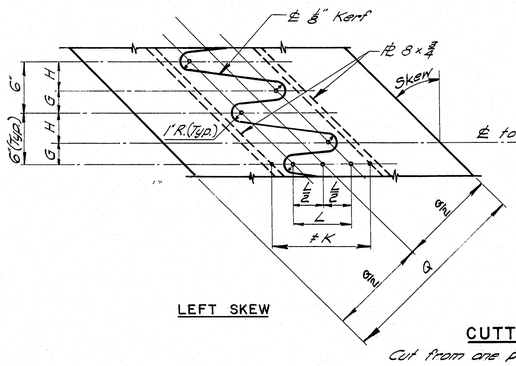


VIEW D-D

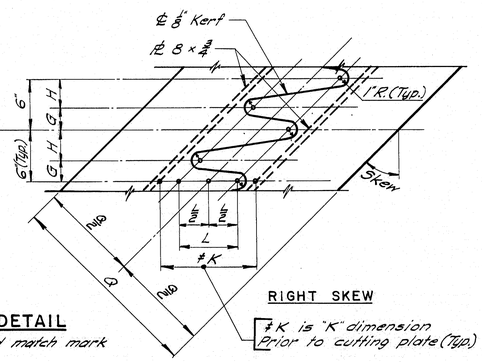
SECTION E-E

TYPE	V	W	X	Y	Z
Exp. Length	100'-280'	280'-440'	440'-600'	600'-760'	760'-920'
T	3"	4"	5"	6"	7"

CURB AND SIDEWALK EXPANSION DAM – DETAILS



LEFT SKEW



RIGHT SKEW

≠K is "K" dimension prior to cutting plate (Typ.)

CUTTING DETAIL

Cut from one plate and match mark

ROADWAY EXPANSION DAM – DETAILS

TABLE OF DIMENSIONS

Type	Exp. Length	Skew	≠K	L	G	H	K@45°	J@45°	M	N	P	Q
A	100'-280'	0°-5° incl.	7"	4"	3"	3"	9"	2 5/8"	—	—	—	21"
		5°-10°	7 1/4"	4 1/4"	2 7/8"	3 1/8"	9 1/4"	2 5/8"	—	—	—	22"
		10°-20°	8"	4 3/8"	2 7/8"	3 1/8"	10"	2 5/8"	—	—	—	22"
		20°-30°	8 3/8"	5 1/4"	2 7/8"	3 1/4"	10 3/8"	2 5/8"	—	—	—	23"
		30°-40°	9 3/8"	5 3/4"	2 7/8"	3 3/8"	11 3/8"	2 5/8"	—	—	—	23"
		40°-50° incl.	11 1/4"	6 1/2"	2 7/8"	3 3/8"	13 1/4"	2 5/8"	—	—	—	23"
B	280'-440'	0°-5° incl.	9"	6"	3"	3"	12"	3 1/8"	—	—	—	23"
		5°-10°	9 1/4"	6 1/4"	2 7/8"	3 1/8"	12 1/4"	3 1/8"	—	—	—	24"
		10°-20°	10"	6 3/8"	2 7/8"	3 1/8"	13"	3 1/8"	—	—	—	24"
		20°-30°	10 3/8"	7 1/4"	2 7/8"	3 1/4"	13 3/8"	3 1/8"	—	—	—	25"
		30°-40°	12"	8"	2 7/8"	3 1/4"	15"	3 1/8"	—	—	—	25"
		40°-50° incl.	13 1/2"	8 3/4"	2 7/8"	3 1/8"	16 1/2"	3 1/8"	—	—	—	25"
C	440'-600'	0°-10° incl.	11 1/4"	8 1/4"	3"	3"	15 1/4"	4 1/8"	9"	4"	1 1/2"	26"
		10°-20°	12"	8 3/8"	2 7/8"	3 1/8"	16"	4 1/8"	10"	4"	1 1/2"	26"
		20°-30°	12 3/4"	9 1/4"	2 7/8"	3 1/8"	16 3/4"	4 1/8"	11"	4"	1 1/2"	26"
		30°-40°	14"	10"	2 7/8"	3 1/4"	18"	4 1/8"	11"	4"	1 1/2"	26"
		40°-50° incl.	15 1/2"	10 3/4"	2 7/8"	3 1/2"	19 1/2"	4 1/8"	12"	4"	1 1/2"	26"
D	600'-760'	0°-10° incl.	13 1/4"	10 1/4"	3"	3"	18 1/4"	5 1/8"	11"	5"	2"	30"
		10°-20°	14"	10 3/8"	2 7/8"	3 1/8"	19"	5 1/8"	12"	5"	2"	30"
		20°-30°	14 3/4"	11 1/4"	2 7/8"	3 1/8"	19 3/4"	5 1/8"	13"	5"	2"	30"
		30°-40°	16"	12"	2 7/8"	3 1/8"	21"	5 1/8"	13"	5"	2"	30"
		40°-50° incl.	17 3/4"	13"	2 7/8"	3 1/4"	22 3/4"	5 1/8"	15"	5"	2"	30"
E	760'-920'	0°-10° incl.	15 1/4"	12 1/4"	3"	3"	21 1/4"	6 1/8"	13"	6"	2 1/2"	36"
		10°-20°	16"	12 3/8"	2 7/8"	3 1/8"	22"	6 1/8"	14"	6"	2 1/2"	36"
		20°-30°	16 3/4"	13 1/4"	2 7/8"	3 1/8"	22 3/4"	6 1/8"	15"	6"	2 1/2"	36"
		30°-40°	18"	14"	2 7/8"	3 1/2"	24"	6 1/8"	15"	6"	2 1/2"	36"
		40°-50° incl.	19 3/4"	15"	2 7/8"	3 3/4"	25 3/4"	6 1/8"	17"	6"	2 1/2"	36"

GENERAL NOTES

Expansion Dams to be paid for as Structural Steel.
If there is conflict between this Standard Detail and the design details, the requirements of the design details shall be followed.

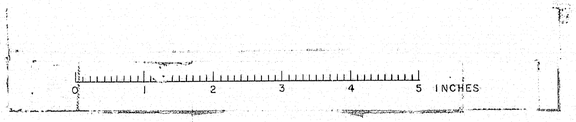
Steel Classification: A.S.T.M. A36

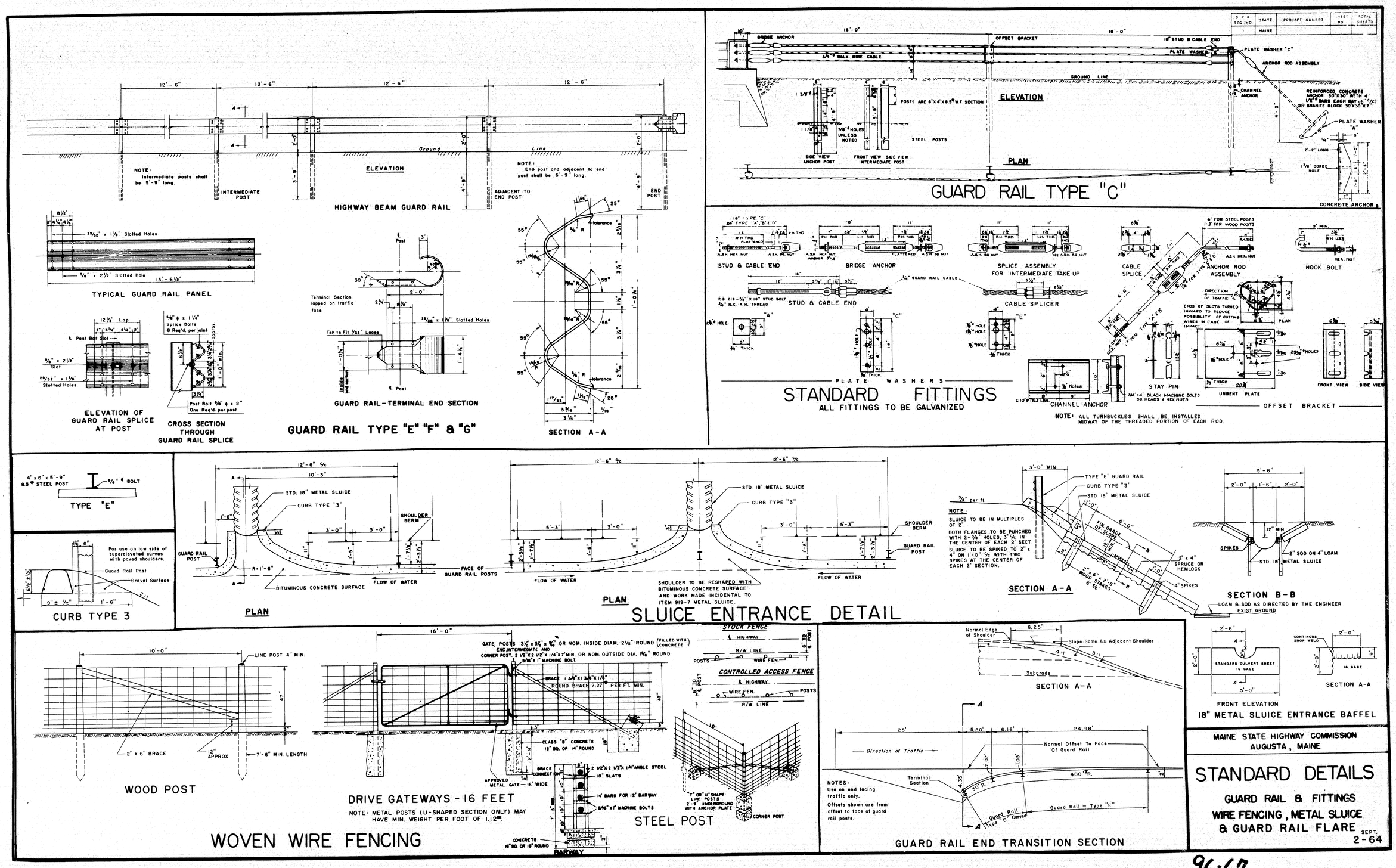
MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS
(BD 105 – 64)

EXPANSION DAMS

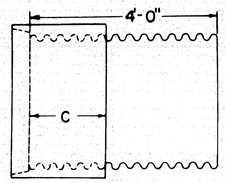
APRIL 1964




HIGHWAY BEAM GUARD RAIL
ELEVATION
NOTE: Intermediate posts shall be 5'-9" long.
INTERMEDIATE POST
NOTE: End post and adjacent to end post shall be 6'-9" long.
ADJACENT TO END POST
END POST
TYPICAL GUARD RAIL PANEL
ELEVATION OF GUARD RAIL SPLICE AT POST
CROSS SECTION THROUGH GUARD RAIL SPLICE
GUARD RAIL-TERMINAL END SECTION
GUARD RAIL TYPE "E" "F" & "G"
SECTION A-A
GUARD RAIL TYPE "C"
PLAN
STEEL POSTS
STANDARD FITTINGS
ALL FITTINGS TO BE GALVANIZED
STUD & CABLE END
BRIDGE ANCHOR
SPLICE ASSEMBLY FOR INTERMEDIATE TAKE UP
CABLE SPLICE
ANCHOR ROD ASSEMBLY
HOOK BOLT
CABLE SPLICER
STAY PIN
CHANNEL ANCHOR
UNBENT PLATE
OFFSET BRACKET
PLATE WASHERS
NOTE: ALL TURNBUCKLES SHALL BE INSTALLED MIDWAY OF THE THREADED PORTION OF EACH ROD.
TYPE "E"
CURB TYPE 3
SLUICE ENTRANCE DETAIL
STD. 18" METAL SLUICE
CURB TYPE "3"
SHOULDER BERM
GUARD RAIL POST
FLOW OF WATER
BITUMINOUS CONCRETE SURFACE
FACE OF GUARD RAIL POSTS
SECTION B-B
WOOD POST
DRIVE GATEWAYS - 16 FEET
WOVEN WIRE FENCING
STEEL POST
STOCK FENCE
CONTROLLED ACCESS FENCE
GUARD RAIL END TRANSITION SECTION
FRONT ELEVATION
18" METAL SLUICE ENTRANCE BAFFEL
MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE
STANDARD DETAILS
GUARD RAIL & FITTINGS
WIRE FENCING, METAL SLUICE
& GUARD RAIL FLARE
SEPT. 2-64
96-67

S.P.R. RDB. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	MAINE			

PIPE CONNECTIONS

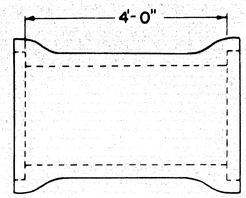


GROOVE END COMBINATION

For 24" to 72", inclusive, diameter connection between concrete and metal pipe

"C" = 17" min. for sizes 30" to 48" incl.
"C" = 23" min. for sizes over 48"

Asphalt coated corrugated metal pipe shall conform to the latest standard specifications

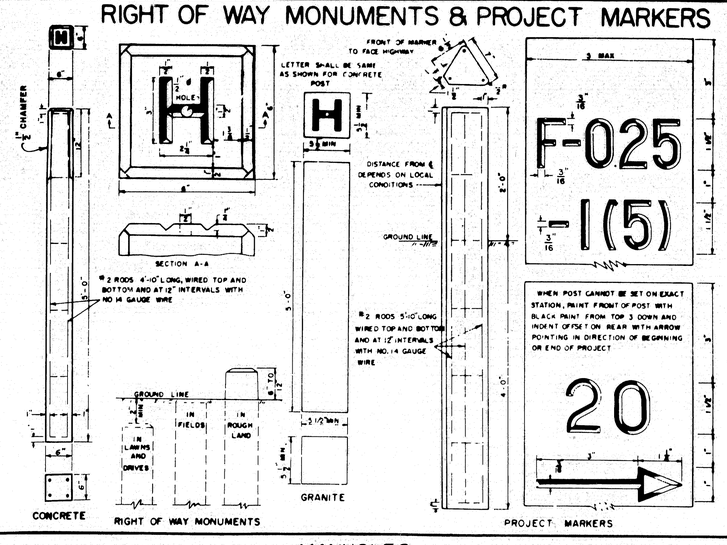


REINFORCED CONCRETE PIPE CONNECTOR DOUBLE BELL

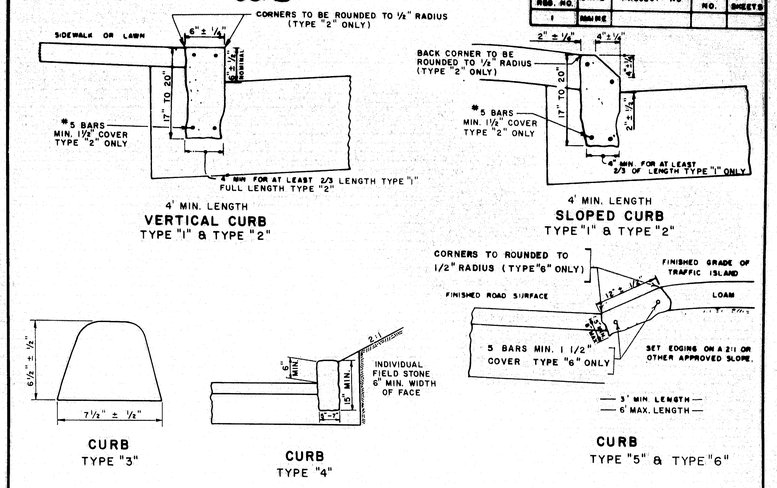
For 12" to 18", inclusive, diameter connection between concrete and metal pipe

Reinforced concrete pipe shall conform to the latest standard specifications

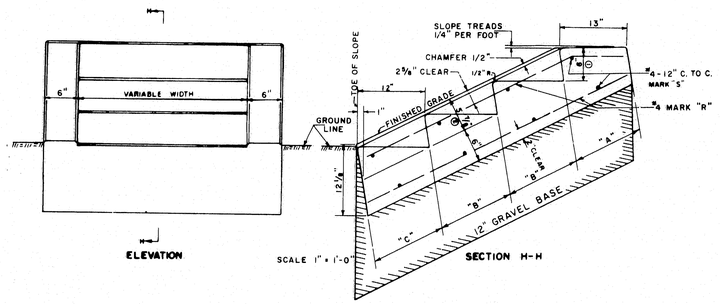
RIGHT OF WAY MONUMENTS & PROJECT MARKERS



CURB



CONCRETE STEPS



CONCRETE CLASS "A"		
SECTION	STEPS PER FT. OF WIDTH	PARAPET EACH WALL
"A" HEADER	.030 CU. YDS.	.015 CU. YDS.
"B" EA. INTER ST.	.030 CU. YDS.	.020 CU. YDS.
"C" FOOTER	.030 CU. YDS.	.020 CU. YDS.

6" RISE - 12" TREAD (2:1 SLOPE)

REINFORCING STEEL			
MARK	SIZE	NUMBER	LENGTH (EACH)
R	#4 .668 LBS. PER FT.	2 EACH PARAPET 1 EACH FT. OF WIDTH	11" FOR "A" +13.4 FOR EACH "B" +12" FOR "C"
S	#4 .668 LBS. PER FT.	2 FOR "A" 2 FOR EACH "B" 2 FOR "C"	4" EACH PARAPET +12" PER FT. OF WIDTH

PAY ITEMS

ITEM NO.	DESCRIPTION
204-10	Struct. earth excav. - drain.
204-11	Struct. rocks excav. - drain.
302-14	Gravel for foundations
705-13	Reinforcing steel, delivered
705-14	Reinforcing steel, placed
904-11	Reinforced concrete steps

NOTE:
To determine the quantity of *"Structural Excavation"* for payment refer to the *"Standard Specifications"* section 204-6D, structural earth and rock excavation-abutments and retaining wall or piers.

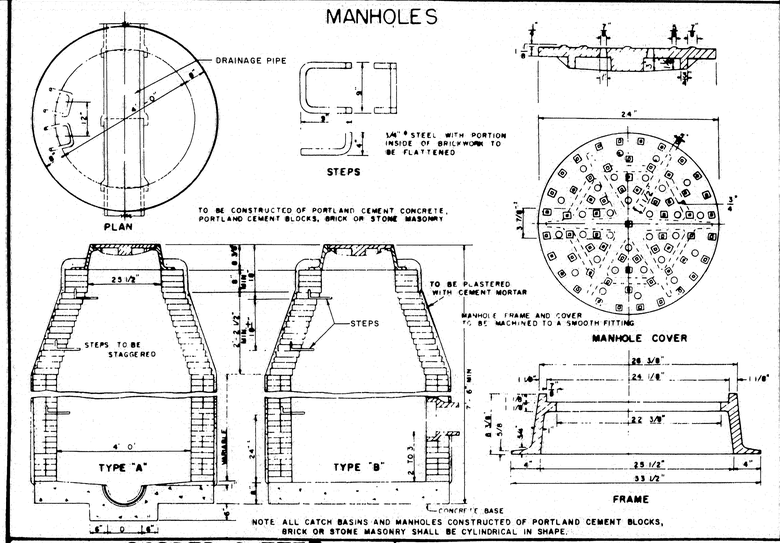
CONCRETE CLASS "A"		
SECTION	STEPS PER FT. OF WIDTH	PARAPET EACH WALL
"A" HEADER	.035 CU. YDS.	.018 CU. YDS.
"B" EA. INTER ST.	.035 CU. YDS.	.024 CU. YDS.
"C" FOOTER	.035 CU. YDS.	.024 CU. YDS.

8" RISE - 12" TREAD (1 1/2:1 SLOPE)

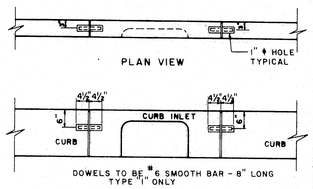
REINFORCING STEEL			
MARK	SIZE	NUMBER	LENGTH (EACH)
R	#4 .668 LBS. PER FT.	2 EACH PARAPET 1 EACH FT. OF WIDTH	11" FOR "A" +14 1/2" FOR EACH "B" +12" FOR "C"
S	#4 .668 LBS. PER FT.	2 FOR "A" 2 FOR EACH "B" 2 FOR "C"	4" EACH PARAPET +12" PER FT. OF WIDTH

① = 8"
② = 7 1/4"

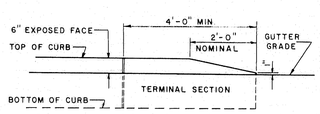
MANHOLES



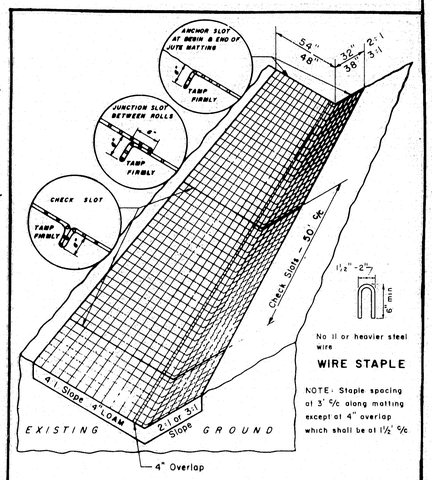
NOTE: ALL CATCH BASINS AND MANHOLES CONSTRUCTED OF PORTLAND CEMENT BLOCKS, BRICK OR STONE MASONRY SHALL BE CYLINDRICAL IN SHAPE.



DOWEL DETAIL AT CATCH BASIN
CURB INLET TYPE "1" & TYPE "2"

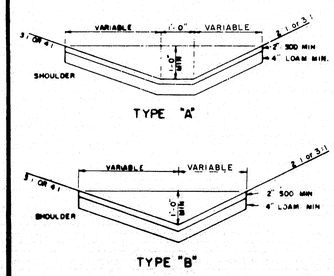


TERMINAL SECTION
TYPE "1" & TYPE "2"

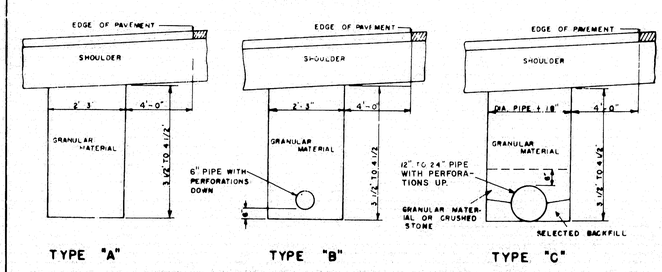


JUTE MATTING - DITCH SECTION

SODDED GUTTER



UNDERDRAIN



NOTE: IF FIELD CONDITIONS WARRANT, THE ENGINEER MAY CHANGE THE DIMENSIONS DETAILED ABOVE.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

MISCELLANEOUS ITEMS

SEPT. 3-64

96-68

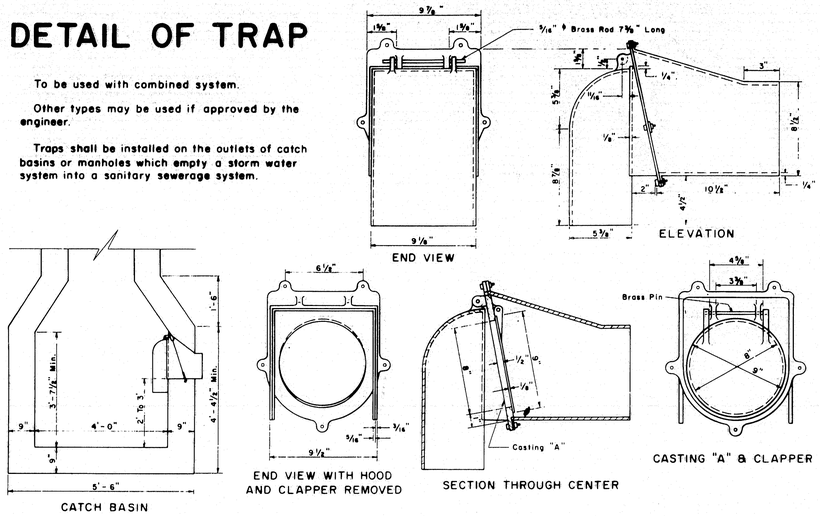
B P R REGION NO.	STATE	FEDERAL AID PROJECT NO	SHEET NO	TOTAL SHEETS
1	MAINE			

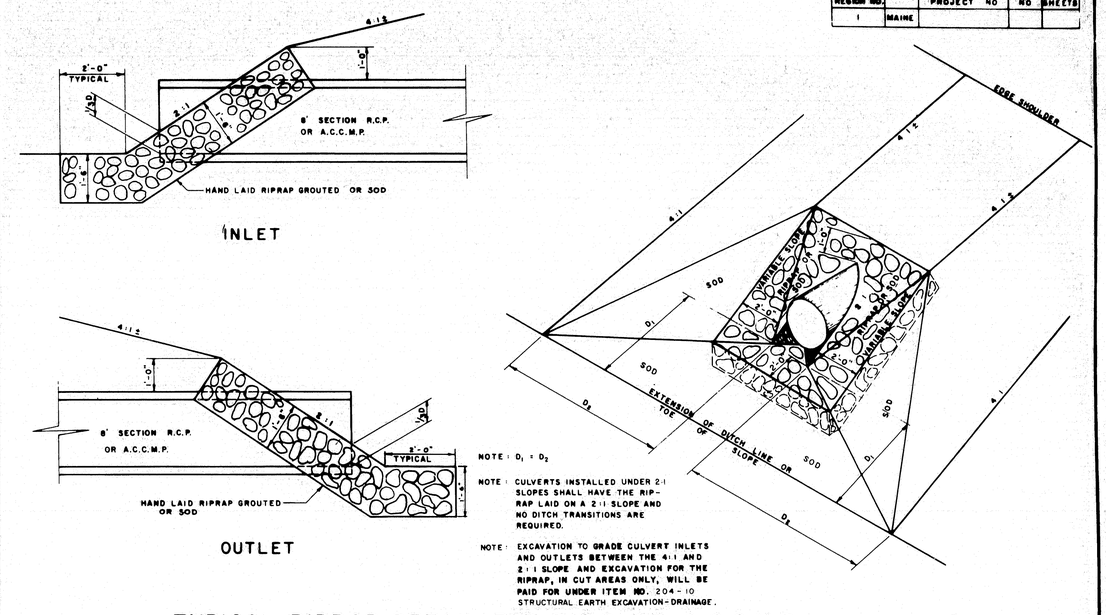
DETAIL OF TRAP

To be used with combined system.

Other types may be used if approved by the engineer.

Traps shall be installed on the outlets of catch basins or manholes which empty a storm water system into a sanitary sewerage system.



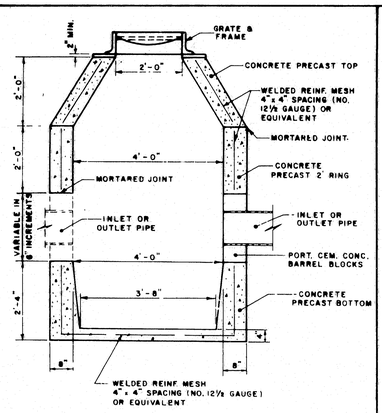


NOTE: $D_1 = D_2$

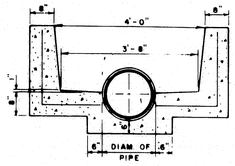
NOTE: CULVERTS INSTALLED UNDER 2:1 SLOPES SHALL HAVE THE RIPRAP LAID ON A 2:1 SLOPE AND NO DITCH TRANSITIONS ARE REQUIRED.

NOTE: EXCAVATION TO GRADE CULVERT INLETS AND OUTLETS BETWEEN THE 4:1 AND 2:1 SLOPE AND EXCAVATION FOR THE RIPRAP, IN CUT AREAS ONLY, WILL BE PAID FOR UNDER ITEM NO. 204-10 STRUCTURAL EARTH EXCAVATION-DRAINAGE.

TYPICAL RIPRAP DETAIL FOR R.C.P. OR A.C.C.M.P.

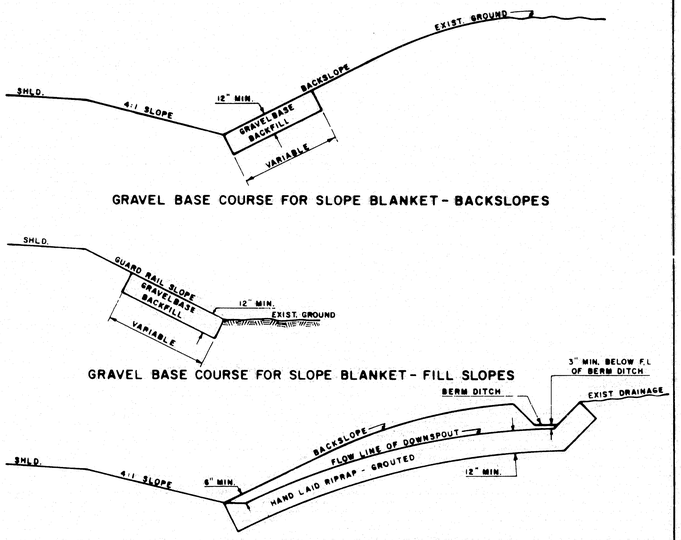


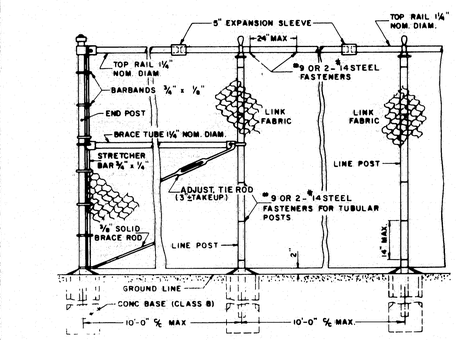
PRECAST PORTLAND CEMENT CONCRETE CATCH BASINS TYPES C, F, H & I - MANHOLE TYPE B



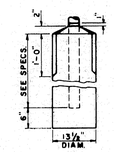
PRECAST PORTLAND CEMENT CONCRETE CATCH BASIN TYPE G MANHOLE TYPE A

NOTE:
THE THREE SECTIONS DETAILED BELOW SHALL BE USED WHEN DIRECTED BY THE ENGINEER OR AS SHOWN ON THE PLANS





PORTLAND CEMENT CONCRETE (CLASS B)

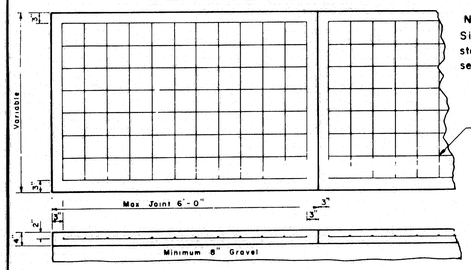


NOTE
ROUND BASES MAY BE SUBSTITUTED FOR THE SQUARE BASES SHOWN BY USING FIBRE TUBULAR FORMS. SUBSTITUTIONS SHALL BE AS FOLLOWS 13½" I.D. ROUND FOR 12" SQUARE OR 15" SQUARE

LINE, GATE AND END POST BASE

" CHAIN LINK FENCE

REINFORCED PORTLAND CEMENT CONCRETE SIDEWALK



NOTE
Sidewalk shall conform to standard specifications section 904.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

DETAIL OF TRAP, REINFORCED PORTLAND CEMENT CONCRETE SIDEWALK, CHAIN LINK FENCE, TYPICAL RIPRAP DETAIL & PRECAST CATCH BASINS & MANHOLES

SEPT. 4-64

96-69

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	1	47

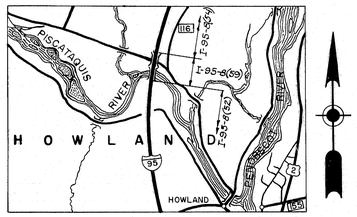
STATE OF MAINE
STATE HIGHWAY COMMISSION

INTERSTATE 95
OVER
PISCATAQUIS RIVER AND SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY

FEDERAL PROJECT NO. I-95-8(59)212
LENGTH OF PROJECT 0.272 MILES

SCALES

INTERSTATE PLAN & PROFILE — HOR. 1" = 50' VERT. 1" = 5'
X-SECTIONS — 1" = 5'
SEBOEIS ROAD PLAN & PROFILE — HOR. 1" = 50' VERT. 1" = 5'
X-SECTIONS — 1" = 5'



LOCATION MAP
APPROX. SCALE: 1" = 1 MILE

INDEX OF SHEETS

1. TITLE SHEET
2. QUANTITIES
3. LAYOUT
4. SURVEY
——PISCATAQUIS RIVER BRIDGE——
5. X-SECTIONS (SH. NO. 22, TYPICAL SECTIONS)
6. GENERAL PLAN
7. FOUNDATION SURVEY
8. ABUTMENT NO. 1
9. ABUTMENT NO. 2
10. PIER NO. 1
11. PIERS NO. 2 & 3
12. ERECTION PLAN
13. STEEL DETAILS & GENERAL NOTES
14. CROSS FRAMES
15. LATERAL SYSTEM DETAILS
16. SHEAR CONNECTORS—SPLICE—CAMBER
17. BEARING PEDESTALS
18. BLOCKING & RAIL DETAILS
19, 20. SUPERSTRUCTURE
21. REINFORCING STEEL
22–26. INTERSTATE X-SECTIONS
——SEBOEIS ROAD BRIDGE——
27. GENERAL PLAN
28. FOUNDATION SURVEY
29. ABUTMENT NO. 1
30. ABUTMENT NO. 2
31. PIER NO. 1
32. PIER NO. 2
33. STRUCTURAL STEEL
34. SUPERSTRUCTURE SLAB
35. REINFORCING STEEL & SLOPE PROTECTION
——SEBOEIS ROAD——
36–38. SURVEY PLANS
39. INTERSECTION DETAIL
40–47. X-SECTIONS (SH. NO. 47, TYPICAL SECTIONS)

STANDARD SHEETS

BRIDGE

BD101-64 BEARING PEDESTALS
BD103-64 BEAM SPLICES
BD104-64 DIAPHRAMS, ARMORED JOINTS, SHEAR CONNECTORS, DRAINS
BD105-64 EXPANSION DAMS
BD107-64 STEEL RAIL
BD108-64 ALUMINUM RAIL

HIGHWAY

SEPT. 1963
2-64
3-64
4-64

TRAFFIC

(INTERSTATE 95)		(SEBOEIS ROAD)	
A.D.T.	1964 — 1790	A.D.T.	1964 — 340
A.D.T.	1984 — 2850	A.D.T.	1984 — 540
D.H.V.	345	D.H.V.	81
T.	14%	T.	14%
D.	60%	D.	60%
V.	60MPH	V.	45MPH

APPROVED
MAINE STATE HIGHWAY COMMISSION
CHAIRMAN
CHIEF ENGINEER
Sept. 30, 1964
DATE

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
REGION 1
APPROVED
DIVISION ENGINEER — DATE

96·14

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F95-2(39)	2	47

ESTIMATE OF QUANTITIES

	ITEM	DESCRIPTION	UNIT	PISCATAQUIS RIVER BRIDGE	SEBOEIS ROAD BRIDGE	INTERSTATE ROADWAY	SEBOEIS ROAD	TOTAL
	201-5	Clearing	Acres			2.5	3.5	6.0
	201-6	Selective Clearing and Thinning	Acres			2.5		2.5
	203-9	Earth Excavation	Cu. Yds.			1300	26,500	27,800
	204-10	Structural Earth Excavation-Drainage	Cu. Yds.			50	170	220
	204-14	Structural Earth Excavation-Piers	Cu. Yds.	315	145			460
	205-9	Granular Borrow	Cu. Yds.			32,000		32,000
	205-10	Gravel Borrow	Cu. Yds.			3200		3200
△	207-10	Machine Aerating	Hrs.			25		25
	302-7	Gravel Base Course (I.R.M.)	Cu. Yds.			2240	7400	9640
△	310-6	Sprinkling	Units				120	120
△	311-6	Calcium Chloride	Tons				12	12
	401-11	Gravel Surface Course	Cu. Yds.				700	700
*	404-28	Bit Conc. Surface Course, Type "A"	Tons	195	73			268
	501-7	Road Tar	Gals.				5500	5500
	602-11	15-Inch Asphalt Coated Corr. Metal Pipe	Lin. Ft.				37	37
	602-14	24-Inch Asphalt Coated Corr. Metal Pipe	Lin. Ft.				273	273
	701-33	Portland Cem. Conc., Abuts & Ret. Wls.	Cu. Yds.	186	205			391
	701-35	Portland Cement Concrete, Piers	Cu. Yds.	490	130			620
	701-36	Portland Cem. Conc., Piers (Placed under water)	Cu. Yds.	545				545
	701-40	Port Cem. Conc. Roadway and Sid. Slabs	Cu. Yds.	580	160			740
	701-54	Portland Cement for Riprap Grout	Lbs.			50		50
	701-55	Curing Box for Concrete Cylinders	Each	1				1
	702-103.1	Structural Steel, Fab. & Del.	L.S.	L.S.				L.S.
	702-103.2	Structural Steel, Fab. & Del.	L.S.		L.S.			L.S.
	702-104.1	Structural Steel, Erection	L.S.	L.S.				L.S.
	702-104.2	Structural Steel, Erection	L.S.		L.S.			L.S.
	702-105.1	Structural Steel, Field Painting	L.S.	L.S.				L.S.
	702-105.2	Structural Steel, Field Painting	L.S.		L.S.			L.S.
	705-13	Reinforcing Steel, Delivered	Lbs.	169,000	68,000			237,000
	705-14	Reinforcing Steel, Placing	Lbs.	169,000	68000			237,000
	705-17	Shear Connectors	L.S.	L.S.				L.S.
	708-16	Steel H-Beam Piles 53 lbs. / ft	Lin. Ft.	845				845
	708-17	Steel H-Beam Piles 42 lbs. / ft.	Lin. Ft.		942			942
	803-7	Cofferdams, Pier #1	L.S.	L.S.				L.S.
	803-8	Cofferdams, Pier #2	L.S.	L.S.				L.S.
	803-9	Cofferdams, Pier #3	L.S.	L.S.				L.S.
	805-8	Bridge Rail	Lin. Ft.	1046	268			1314
*	807-9	Membrane Waterproofing	Sq. Yds.	1775	650			2425
	807-11	Epoxy Resin Surface Sealant	Sq. Yds.	100	95			195
	901-24	Vertical Bridge Curb-Type 1	Lin. Ft.	1081	295			1376
	901-37	Curb Type 4	Lin. Ft.				190	190
	906-18	Fencing-Metal Posts	Lin. Ft.			1300		1300
	907-10	Hand Laid Rip-rap	Cu. Yds.			400		400
	908-10	Loam (I.R.M.)	Cu. Yds.			430	650	1080
	909-7	Sodding	Sq. Yds.				60	60
	909-9	Jute Matting-Weave "H"	Sq. Yds.			110		110
	910-13	Seeding-Method No. 2	Units			68	160	228
	912-7	Hay Mulch	Tons			4	9	13
	913-8	Bit. Treated Stone Slope Protection	Sq. Yds.			535		535
	907-8	Plain Riprap	Cu. Yds.			20		20
	913-9	Bit. Concrete Gutter	Tons			17		17
	915-6	Right of Way Monuments	Each				10	10
	915-8	Survey Markers	Each				2	2

Estimated weight of Structural Steel including Drains
Piscataquis River Bridge = 540,000 lbs. Seboeis Road Bridge = 120,000 lbs.

△ Undetermined Location
* Not part of this contract

Computation of Granular Borrow

Earth Excavation (from Cross Sections Inc. scarifying)	27,800 C.Y.
Deduct Grubbing in cut areas	2,000
Total available Earth Excavation	25,800
Total Fill (from Cross Sections including 24" Base)	49,877
Total available earth excavation = 25,800 x 0.85 =	21,930
Total Fill minus Total available earth excavation	27,947
Granular Borrow = 27,947 x 1.15 =	32,139 C.Y.

DESIGN-
TRACE- RM, CW.
CHECK- CKB

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
IN THE TOWN OF
HOWLAND

PENOBSCOT COUNTY

QUANTITIES

SHEET 2 OF 47 AUGUSTA, MAINE OCT. 1964

96-15

0 1 2 3 4 5 INCHES

D. P. W. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-3(54)	3	47

CLEARING
Sta 2003+65 to Sta 2018+00

SELECTIVE CLEARING & THINNING
Sta 2003+65 to Sta. 2018+00

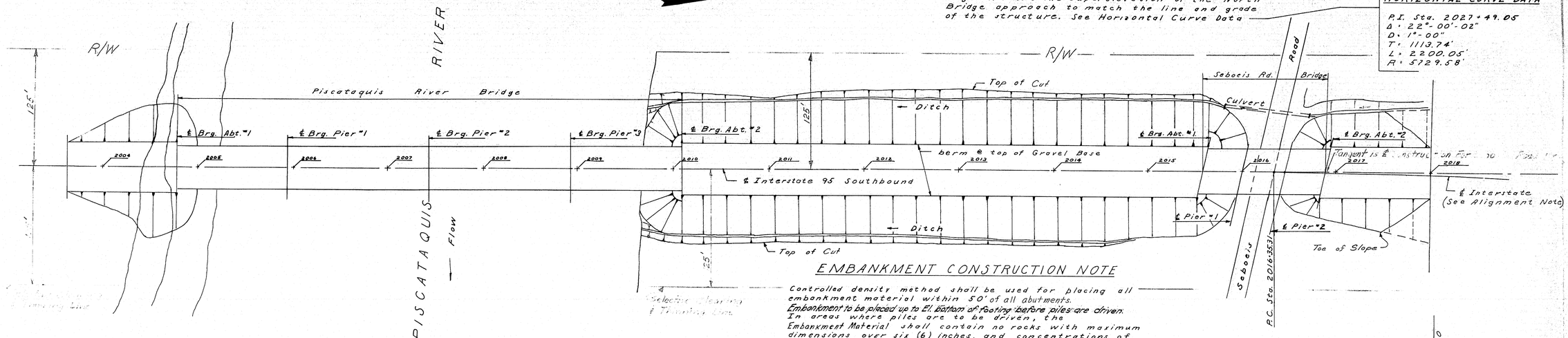
JUTE MATTING-WEAVE "H"
Sta 2016+50± to Sta. 2017+50±

ALIGNMENT NOTE

The Seboeis Road Bridge is designed for vertical and horizontal alignment ignoring the horizontal curve at the north side of the bridge. The Field Engineer is to adjust both the horizontal alignment and the superelevation of the North Bridge approach to match the line and grade of the structure. See Horizontal Curve Data

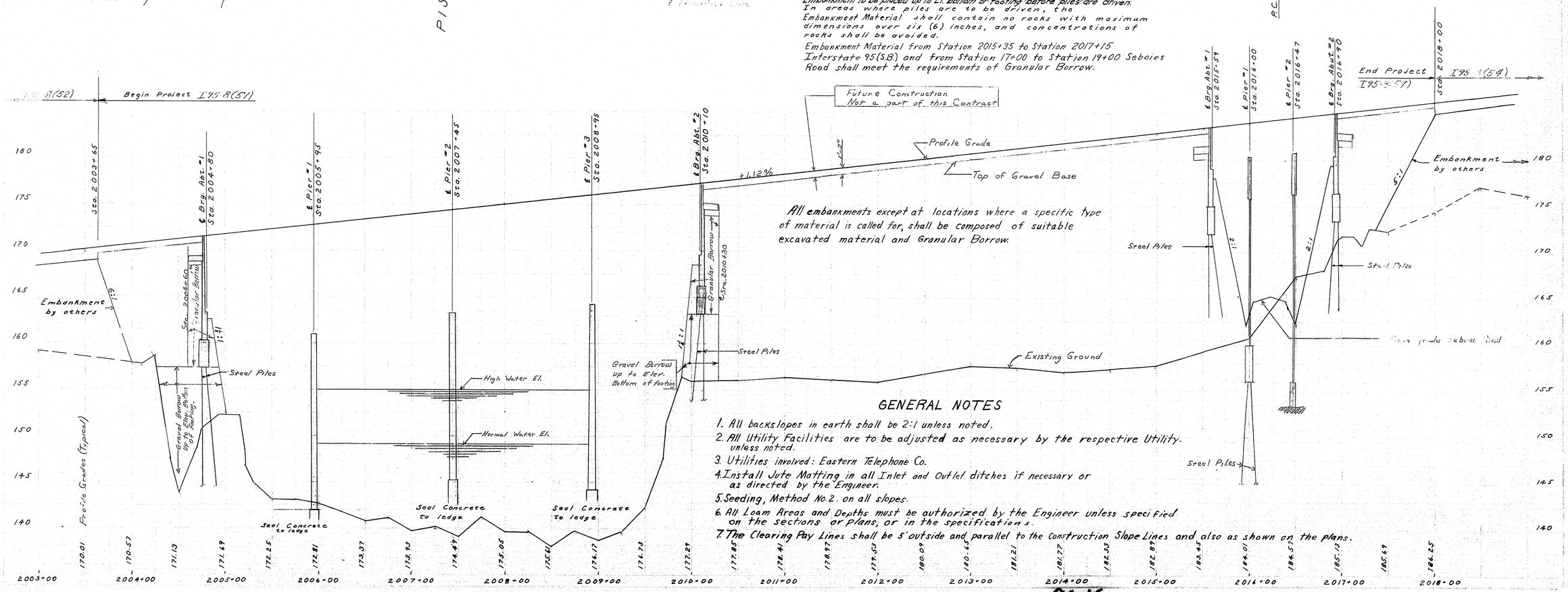
HORIZONTAL CURVE DATA

P.I. Sta. 2027+49.05
Δ = 22°-00'-02"
D = 1°-00'
T = 1113.74'
L = 2200.05'
R = 5729.58'



EMBANKMENT CONSTRUCTION NOTE

Controlled density method shall be used for placing all embankment material within 50' of all abutments.
~~Embankment to be placed up to El. Bottom of Footing before piles are driven.~~
In areas where piles are to be driven, the Embankment Material shall contain no rocks with maximum dimensions over six (6) inches, and concentrations of rocks shall be avoided.
Embankment Material from Station 2015+35 to Station 2017+15 Interstate 95(S.B.) and from Station 17+00 to Station 19+00 Seboeis Road shall meet the requirements of Granular Borrow.



All embankments except at locations where a specific type of material is called for, shall be composed of suitable excavated material and Granular Borrow.

GENERAL NOTES

1. All backslopes in earth shall be 2:1 unless noted.
2. All Utility Facilities are to be adjusted as necessary by the respective Utility. unless noted.
3. Utilities involved: Eastern Telephone Co.
4. Install Jute Matting in all Inlet and Outlet ditches if necessary or as directed by the Engineer.
5. Seeding, Method No. 2. on all slopes.
6. All Loam Areas and Depths must be authorized by the Engineer unless specified on the sections or plans, or in the specifications.
7. The Clearing Pay Lines shall be 5' outside and parallel to the Construction Slope Lines and also as shown on the plans.

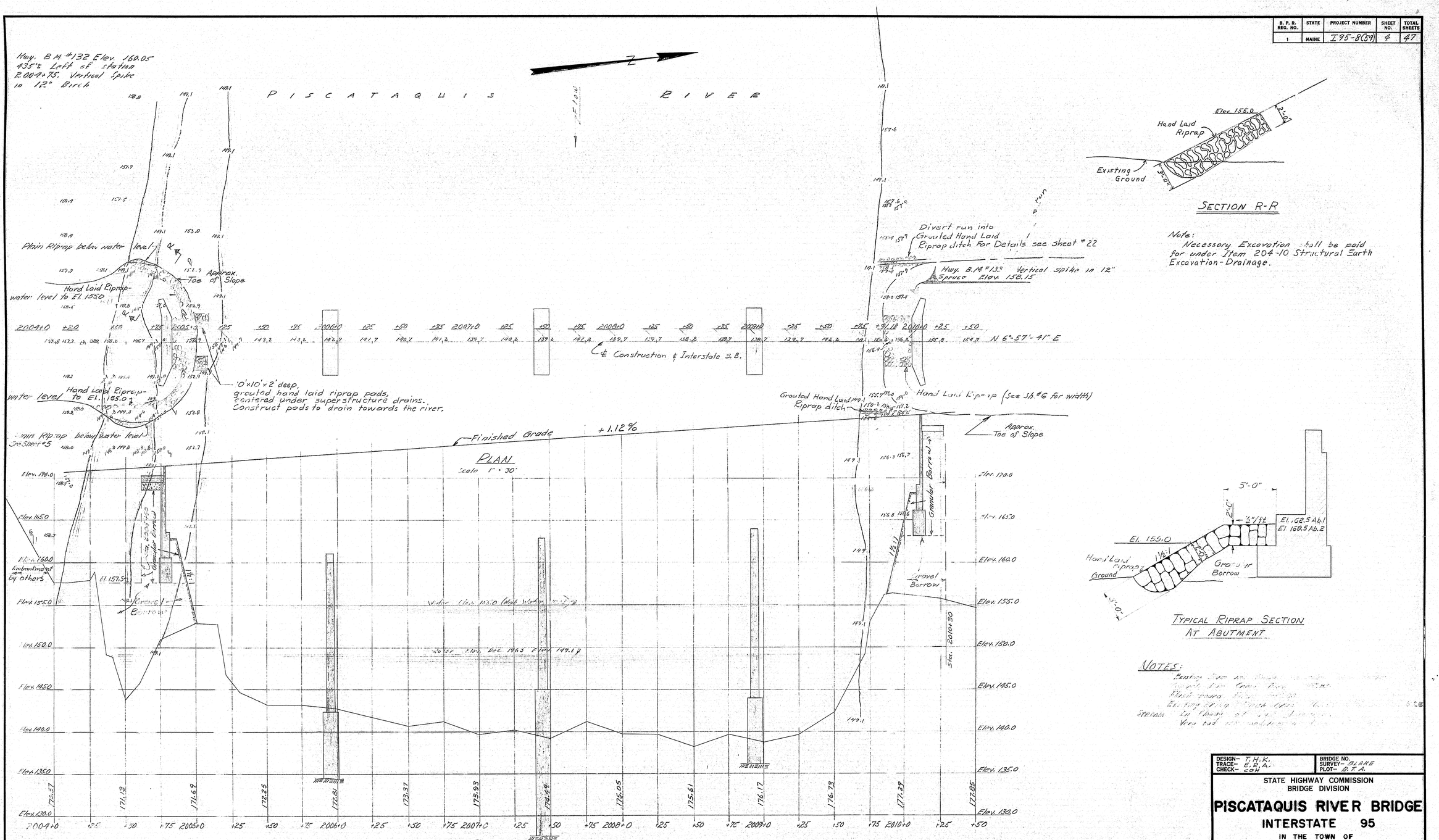
96-16

INTERSTATE 95 HOWLAND SHEET 3 OF 47

LAYOUT

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	4	47



DESIGN- T.H.K.
TRACE- E.R.A.
CHECK- EOH

BRIDGE NO.
SURVEY- BLAKE
PLOT- B.F.A.

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95

IN THE TOWN OF

HOWLAND

PENOBSCOT COUNTY

SURVEY

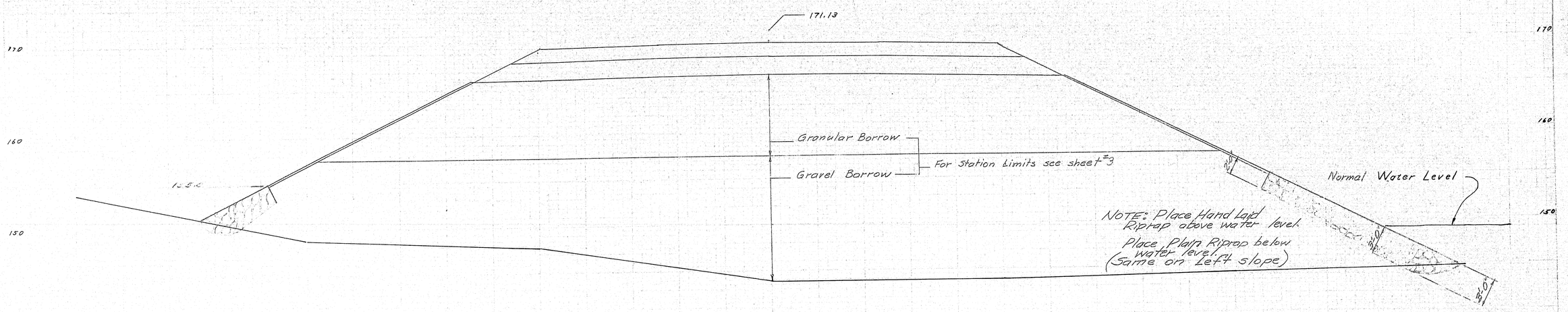
SHEET 4 OF 47 AUGUSTA, MAINE DEC. 1963

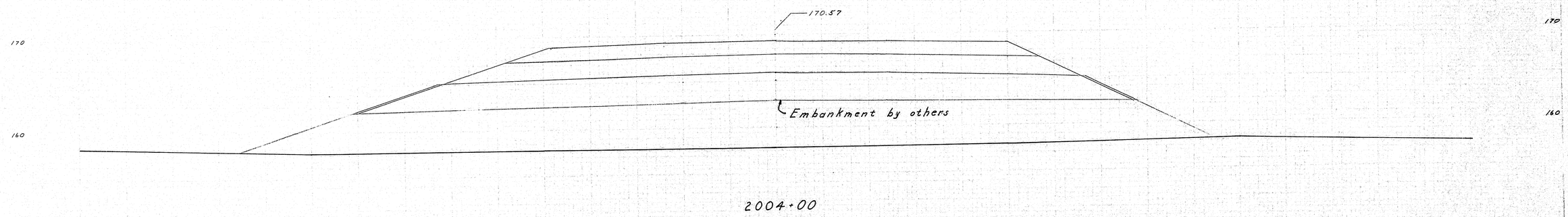
96-17

C. B. CO., NO. 44-131 39728

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	5	47





ZERO SECTION
2003+65 (Begin Project)

FOR TYPICAL INTERSTATE SECTION SEE SHEET #22.

℄ INTERSTATE

75 50 25 25 50 75

PLOT P.J.L.
CHECK Harris

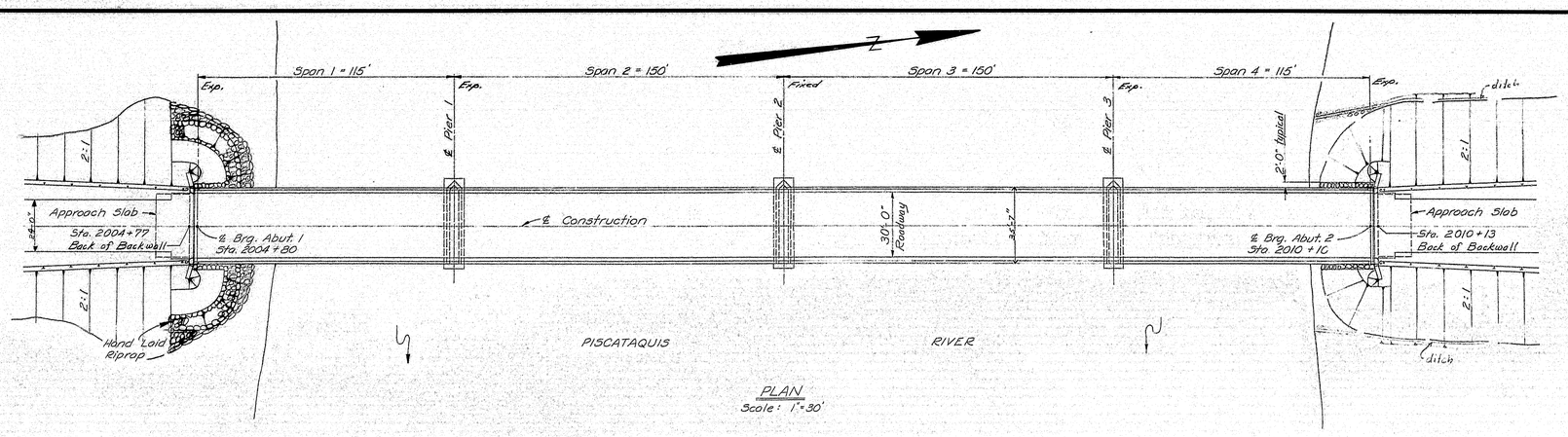
INTERSTATE 95 HOWLAND

SHEET 5 OF 47

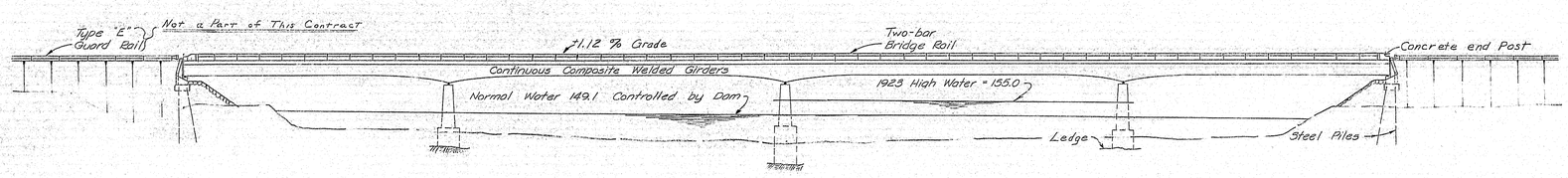
STATIONS 2003+65 → 2004+50

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	6	47



PLAN
Scale: 1" = 30'



ELEVATION
Scale: 1" = 30'

GENERAL NOTES

SPECIFICATIONS

Design: A.A.S.H.O. Standard Specifications for Highway Bridges 1961, with Interim Specifications, 1961, 1962, 1964.
Contract: State of Maine, State Highway Commission Standard Specifications for Highways and Bridges, Revision of January 1956, and Supplemental Specifications, dated February 1960.

LIVE LOADING

HS 20-44 as modified for Interstate.

ALLOWABLE STRESSES

Concrete (n=10) ~ f_c = 1200 psi.
Reinforcing Steel, Intermediate Grade ~ f_s = 20,000 psi.
Structural Steel: See Steel Details, sh. # 13.

CONCRETE CLASSIFICATION

Piers: Seals ~ Class "S"
All Other ~ Class "A"

DESIGN- T.H.K.
TRACE- D.E.T. E.E.L.
CHECK- EDH
BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

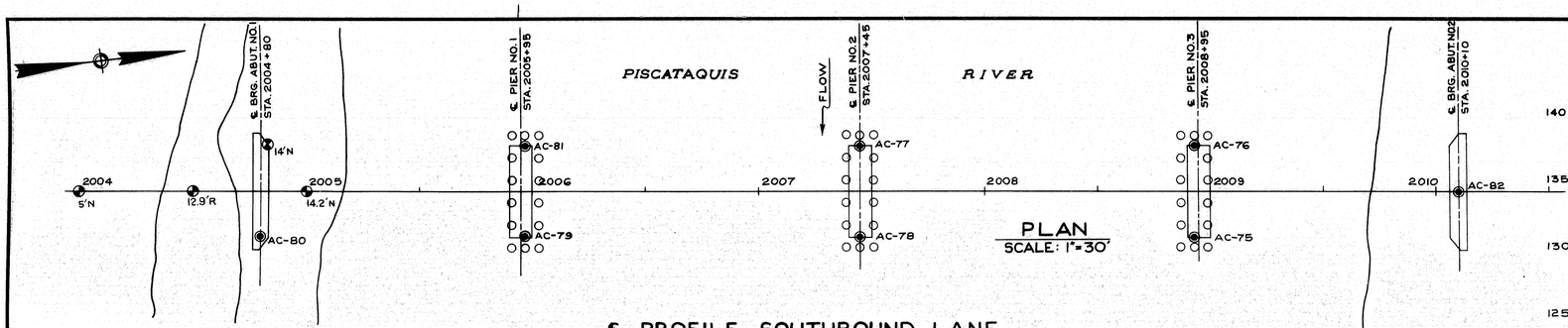
INTERSTATE 95
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
GENERAL PLAN

SHEET 6 OF 47 AUGUSTA, MAINE SEPT. 1964

C. B. CO., NO. 44-131

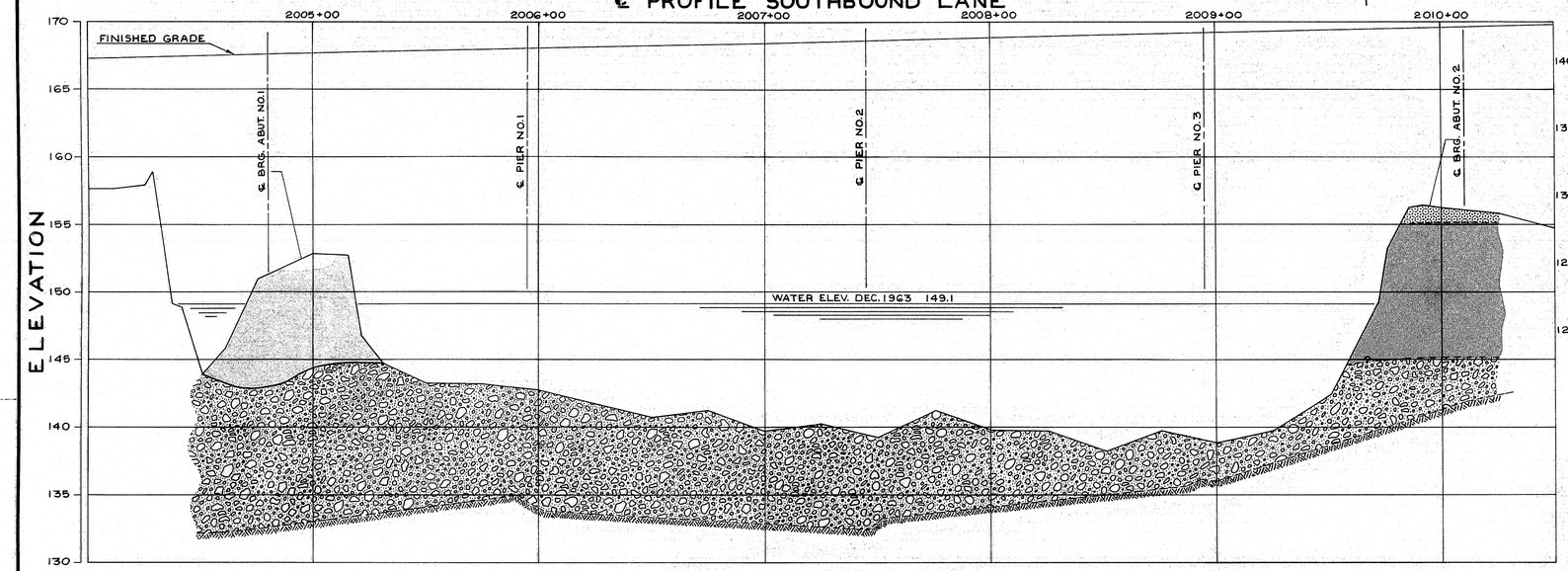
96-19

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	7	47

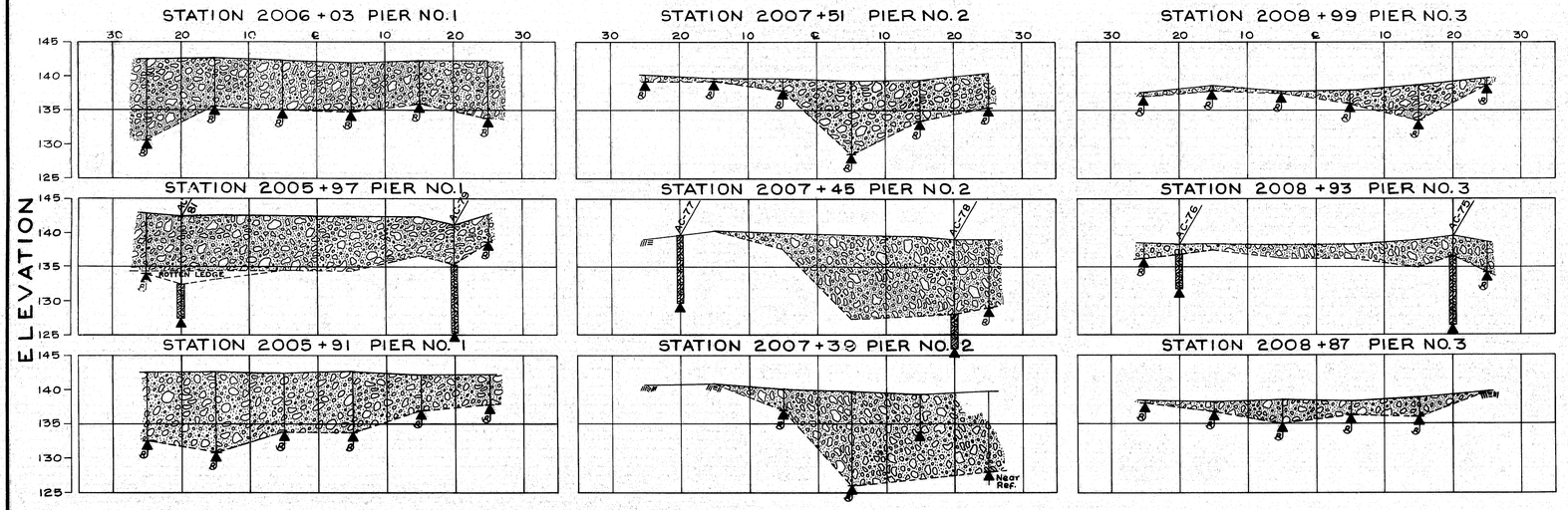


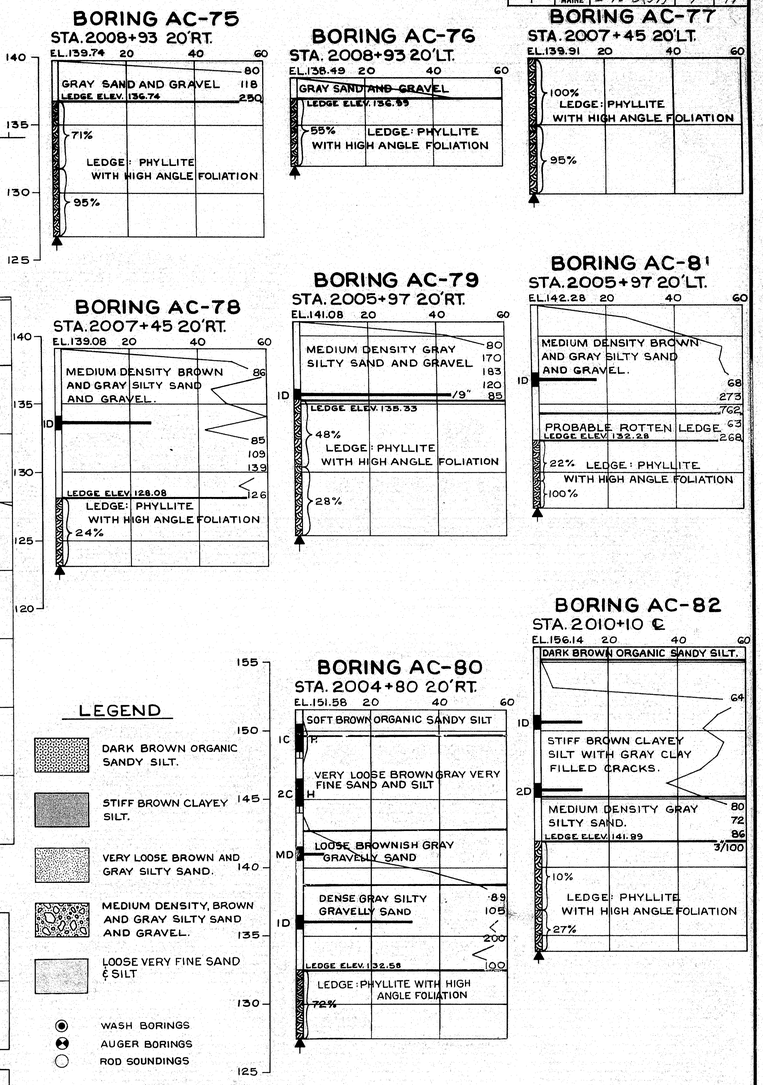
PLAN
SCALE: 1"=30'

℄ PROFILE SOUTHBOUND LANE



TRANSVERSE PROFILES





LEGEND

- DARK BROWN ORGANIC SANDY SILT.
- STIFF BROWN CLAYEY SILT.
- VERY LOOSE BROWN AND GRAY SILTY SAND.
- MEDIUM DENSITY, BROWN AND GRAY SILTY SAND AND GRAVEL.
- LOOSE VERY FINE SAND & SILT
- WASH BORINGS
- AUGER BORINGS
- ROD SOUNDINGS

BORING NOTES

- CASING SIZE 2½"
- ALL SAMPLES AND VANES ARE 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.
- NUMBER AND TYPE OF DRY SAMPLE.
- ID — S & H SAMPLER # 1290'S.
- IC — 2" O.D. 16 GA. SEAMLESS TUBING.
- MD — UNSUCCESSFUL SAMPLE ATTEMPT AND TYPE OF SAMPLER.
- NUMBER OF BLOWS REQUIRED TO DRIVE SPOON OR TUBING ONE FOOT WITH 350 FT. LBS. OF ENERGY PER BLOW.
- H — SAMPLING SPOON OR SEAMLESS TUBING DRIVEN BY STATIC WEIGHT OF DRILL RODS AND HAMMER.
- FIELD VANE TEST.
- BOTTOM OF BORING (MAY NOT BE BOTTOM OF SOIL STRATA)
- LOCATIONS CORED BY DIAMOND BIT AND PER CENT RECOVERY OF ROCK.

DESIGN— TRACE— CHECK— } SOILS DIVISION

BRIDGE NO. SURVEY— PLOT—

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

FOUNDATION SURVEY

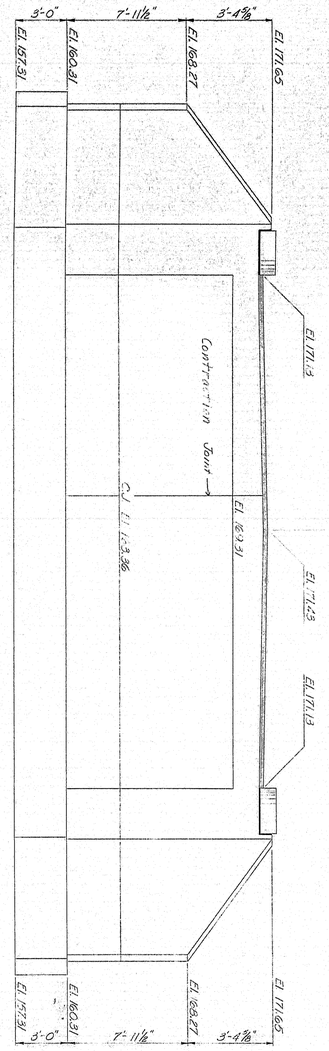
SHEET 7 OF 47 AUGUSTA, MAINE SEPT. 1964

96-20

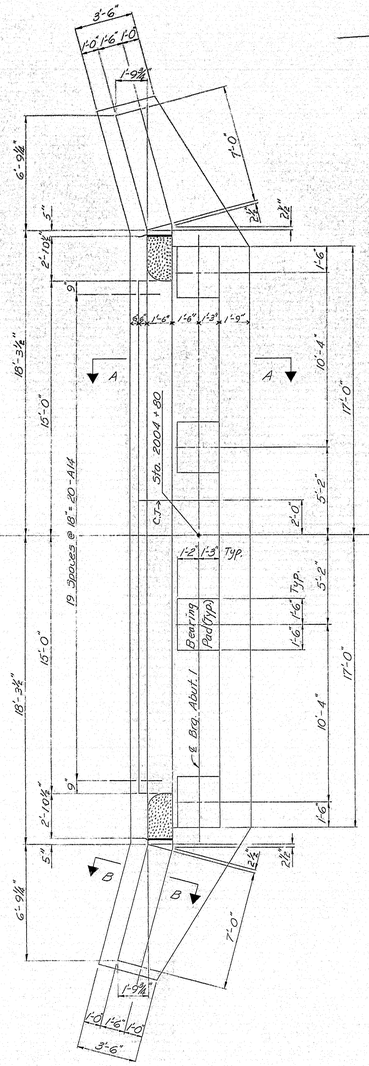
C. B. CO., NO. 44-131 58765

0 1 2 3 4 5 INCHES

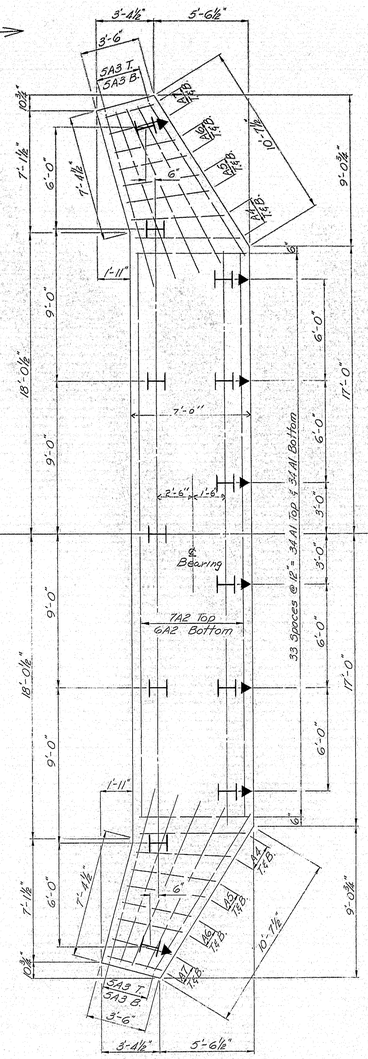
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-B(59)	8	47



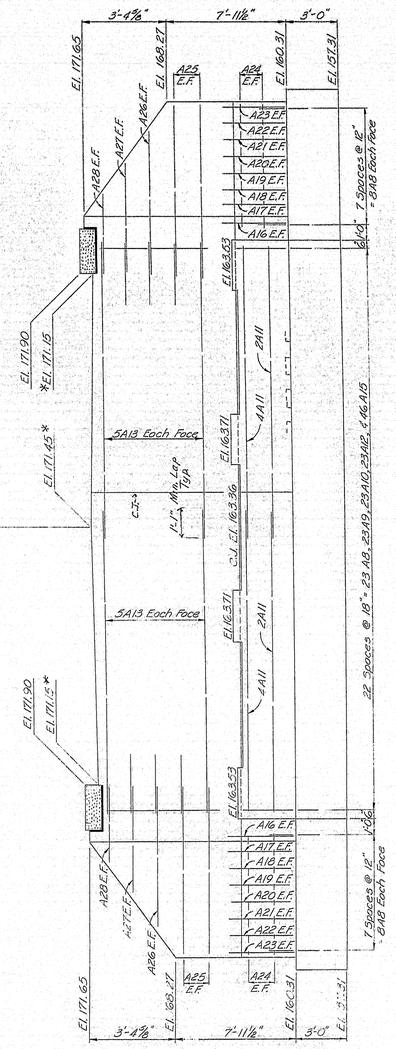
REAR ELEVATION



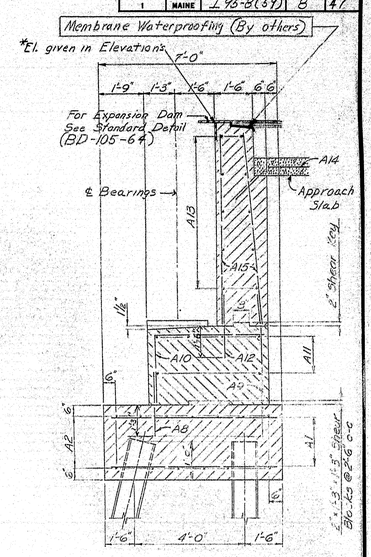
PLAN



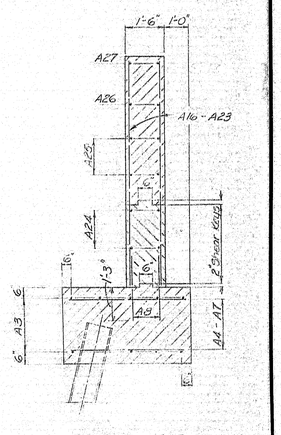
FOOTING & PILE PLAN



FRONT ELEVATION



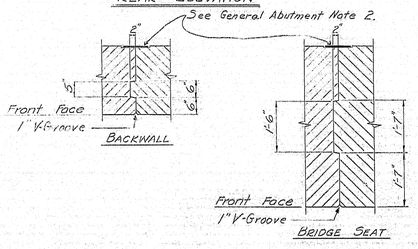
SECTION A-A



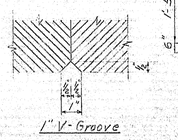
SECTION B-B

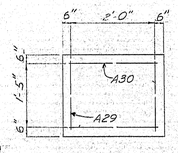
Remove forms A25, A26, A27, and A28 in field to suit.

REAR ELEVATION



CONTRACTION JOINT SHEAR KEYS





BEARING PAD

PILE NOTES

1. Abutment piles to be 12 BP53 piles driven to ledge or practical refusal. Allowable load 46 tons per pile. Batter front row 3:1 ft. as indicated by arrows.
2. 13 Piles required per abutment. Estimated lengths:
   Abutment #1 = 35'
   Abutment #2 = 30'

7. Vertical Bridge Curb on the abutment backwalls shall be placed in position at the same time or after the the curb is place on the superstructure. Set to grade.
8. E.F. = Each Face

GENERAL ABUTMENT NOTES

1. Paint bridge seat, face of backwall, and down to 1'-0" below top of riprap on face and ends of breastwalls with Gray Epoxy Resin Surface Sealant.
2. Cover the back side of contruction joints with two layers of heavy roofing 10" wide bonded to concrete and to each other with a suitable grade of roofing cement. Recess area to be covered ¼" Coat surface of joint with asphalt paint to break bond.
3. For placing of borrow and riprap at abutments see sheet 3 & 4
4. Reinforcing cover 3" unless noted.
5. For vertical bridge curb details see sheet #19
6. For "Approach Slab" and "Guard Rail Detail" see sheet 9

DESIGN + DET. E.E.L.	BRIDGE NO.
TRACE–	SURVEY–
CHECK– CDH	PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

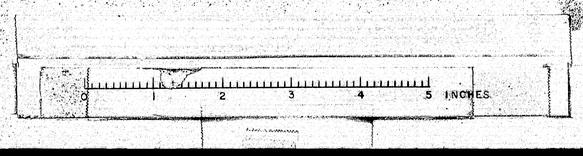
PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
ABUTMENT 1

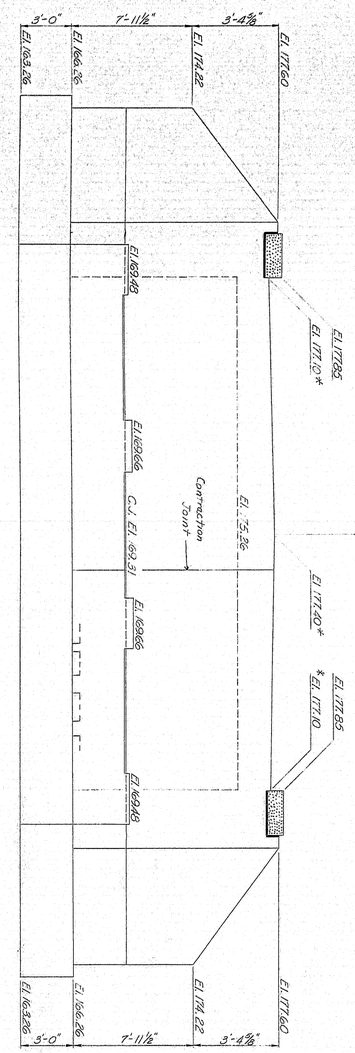
SHEET 8 OF 47 AUGUSTA, MAINE SEPT. 1964

96·21

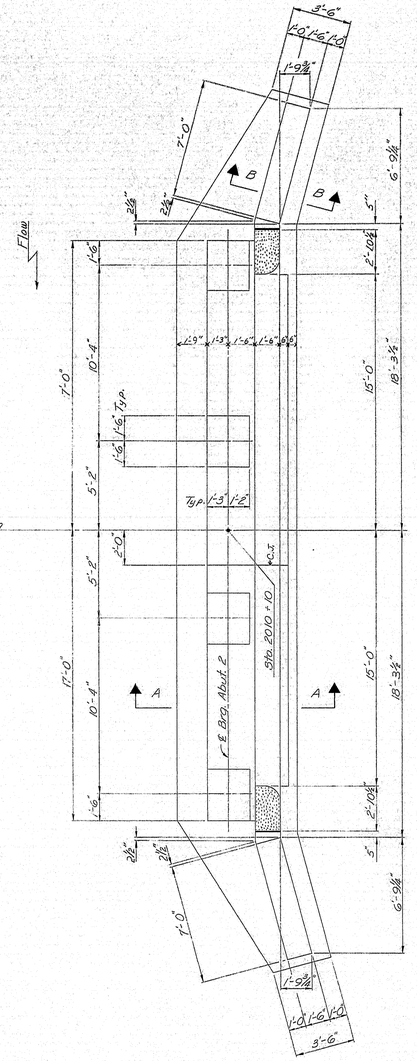
C. R. CO., NO. 44-131 26798



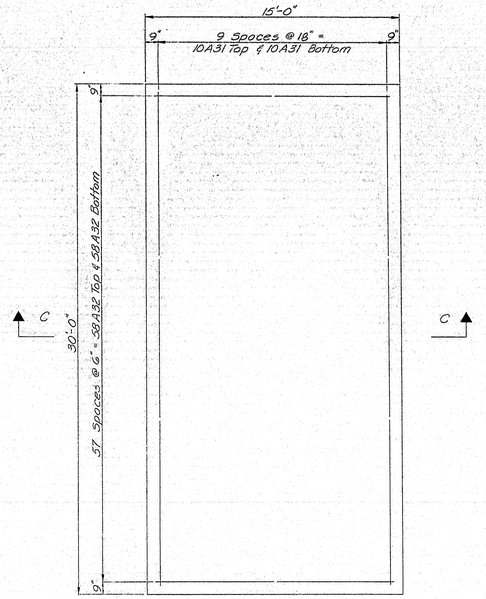
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I95-8(59)	9	47



FRONT ELEVATION

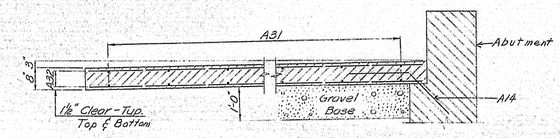


PLAN

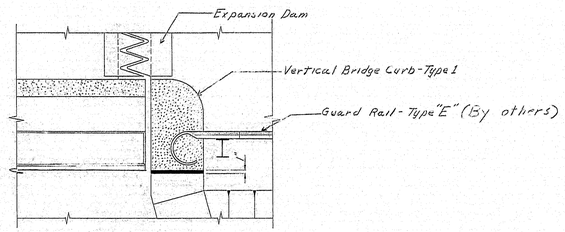


APPROACH SLAB

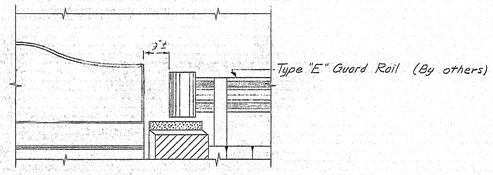
Approach slab concrete to be paid for under contract item 701-33 "Portland Cement Concrete, Abutments and Retaining Walls."



SECTION C-C



GUARD RAIL DETAIL



ELEVATION

NOTES

1. For "Sections A-A & B-B" see sheet #8
2. For reinforcing steel see sheet #21
3. For "Footing & Pile Plan" see sheet #8
4. For "General Abutment Notes" and details see sheet #8

DESIGN+ DET. E. E. L.	BRIDGE NO.
TRACE-	SURVEY-
CHECK- CDH	PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

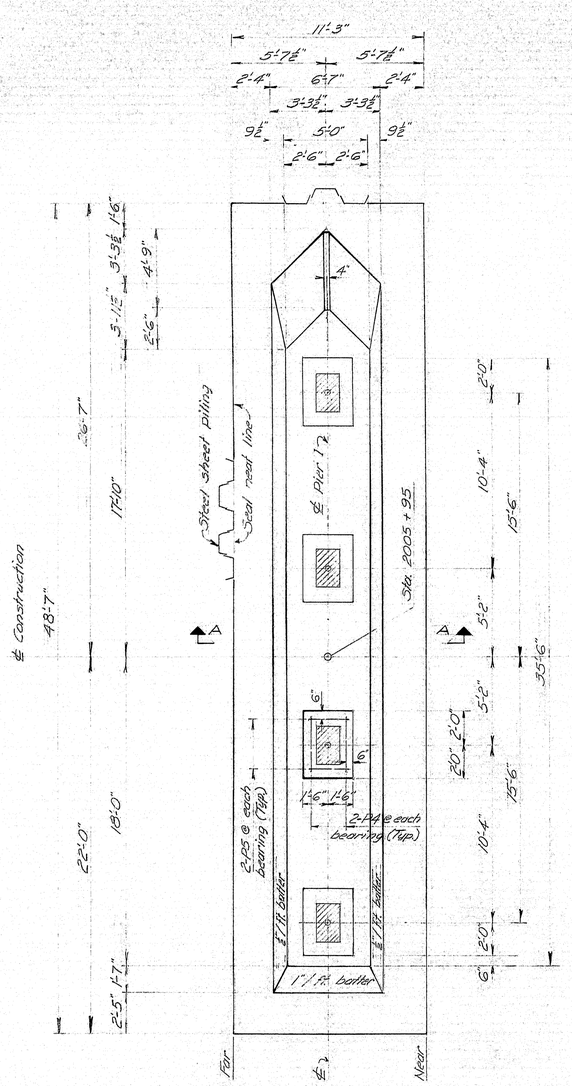
INTERSTATE 95
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
ABUTMENT 2

SHEET 9 OF 47 AUGUSTA, MAINE SEPT. 1964

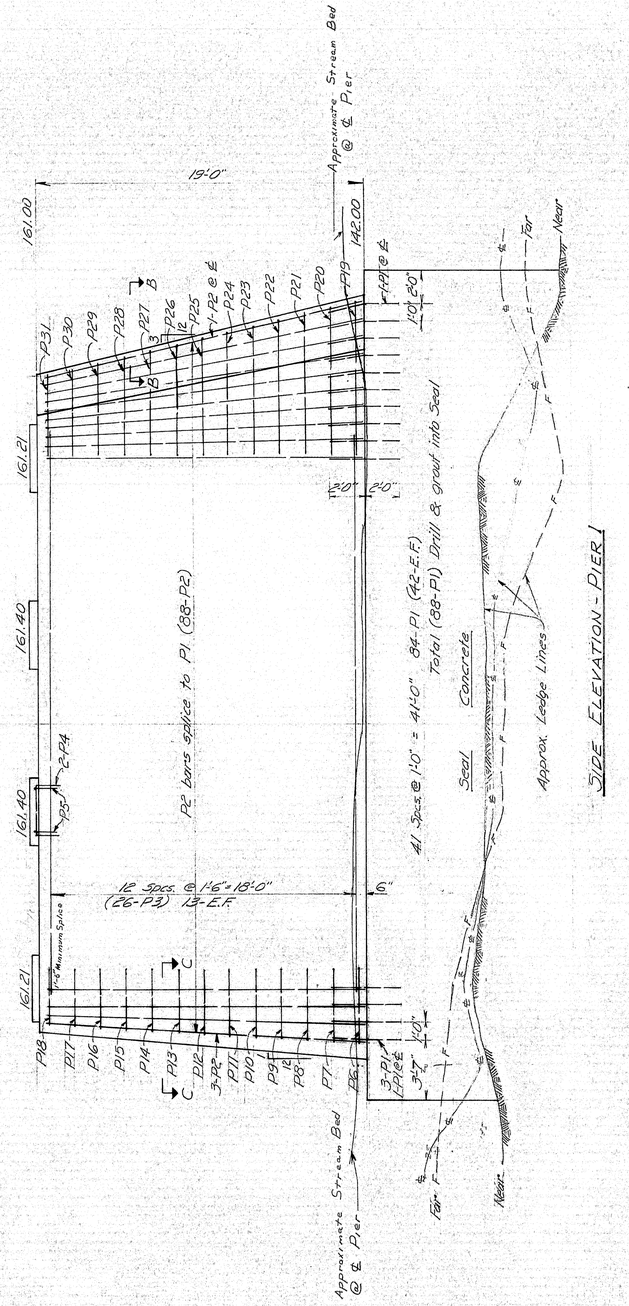
96-22

C. B. CO., NO. 44-131

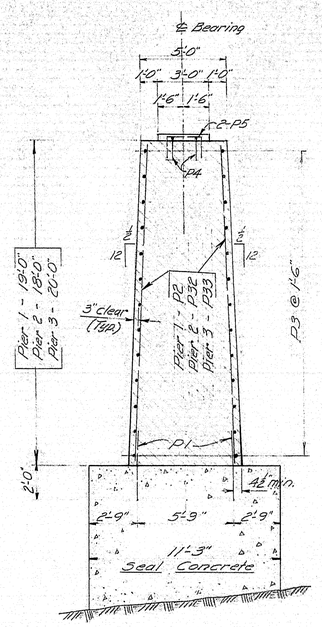
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	10	47



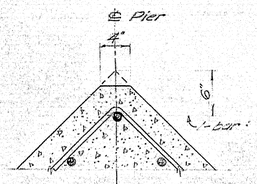
PLAN - PIER 1



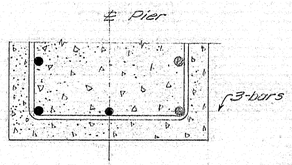
SIDE ELEVATION - PIER 1



SECTION A-A



SECTION B-B



SECTION C-C

GENERAL NOTES

Pier Design based on a 1'-0" thickness of ice applied at Elev. 153.0, and a stream velocity of 10 ft. per second.

Reinforcing Steel to have a minimum 3" cover unless otherwise noted.

Payment for drilling for and grouting of P1 bars into Seal, shall be considered incidental to Item 705-14, Reinforcing Steel, Placing.

Seal Concrete is intended to be placed under water and to be paid for under Item 701-36. Seals may be unwatered when water elevation outside cofferdam is not in excess of Elev. 152.0

Seal dimensions are predicated on use of MP-116, DP-2, I-27 or equivalent steel sheet piling with standard rolled corners. Pay dimensions for Seal Concrete shall be neat dimensions plus 10"

Maximum Pooling pressure = 7 tons per square foot.

DESIGN- T.H.K.
TRACE+ DETAIL - G.M.C.
CHECK- CDH

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95

IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

PIER 1

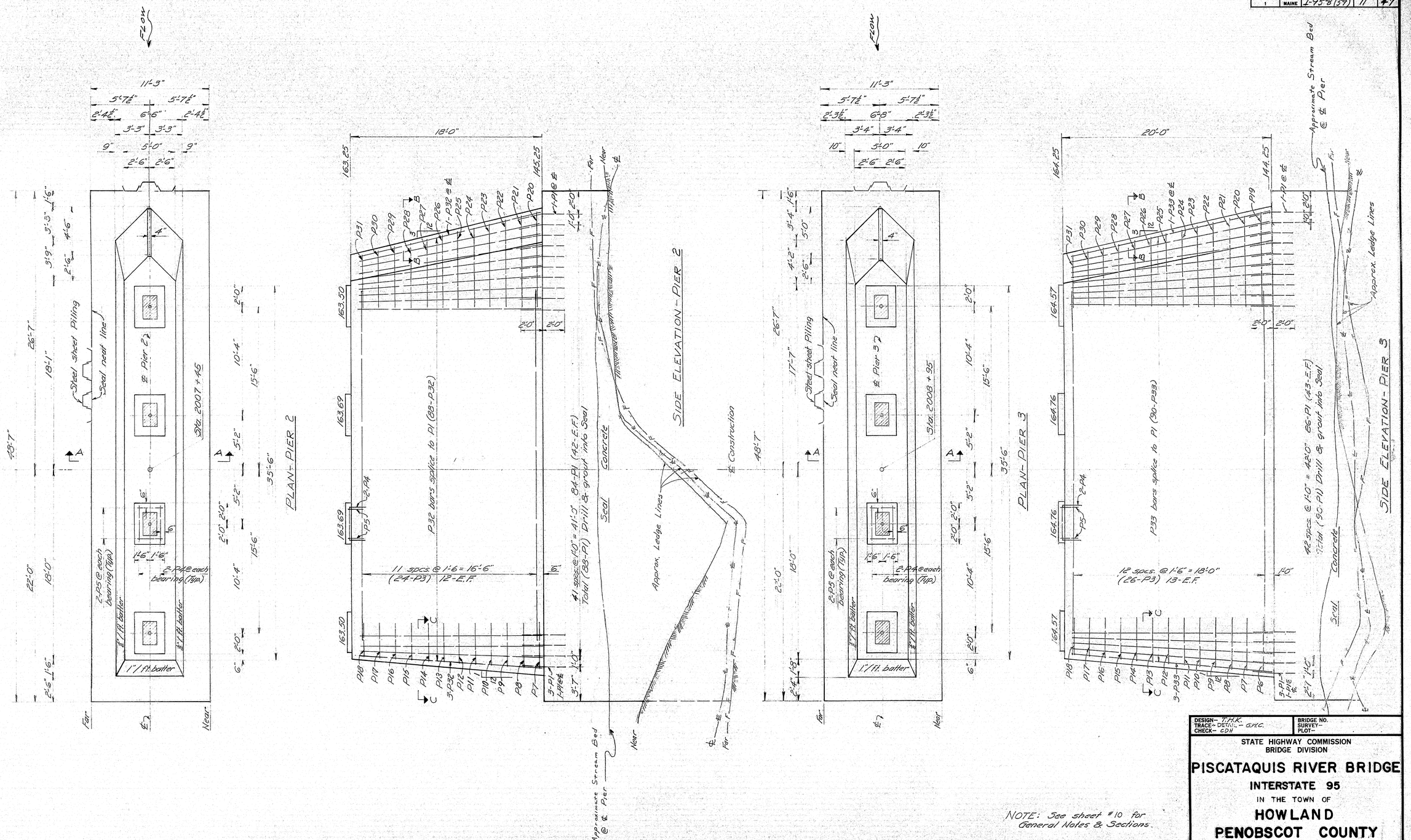
SHEET 10 OF 47 AUGUSTA, MAINE SEPT. 1964

96-23

C. D. CO., NO. 44-131

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	11	47



NOTE: See sheet #10 for General Notes & Sections.

DESIGN- T.H.K.
TRACE- DETAIL - G.H.C.
CHECK- CDH

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95

IN THE TOWN OF

HOWLAND

PENOBSCOT COUNTY

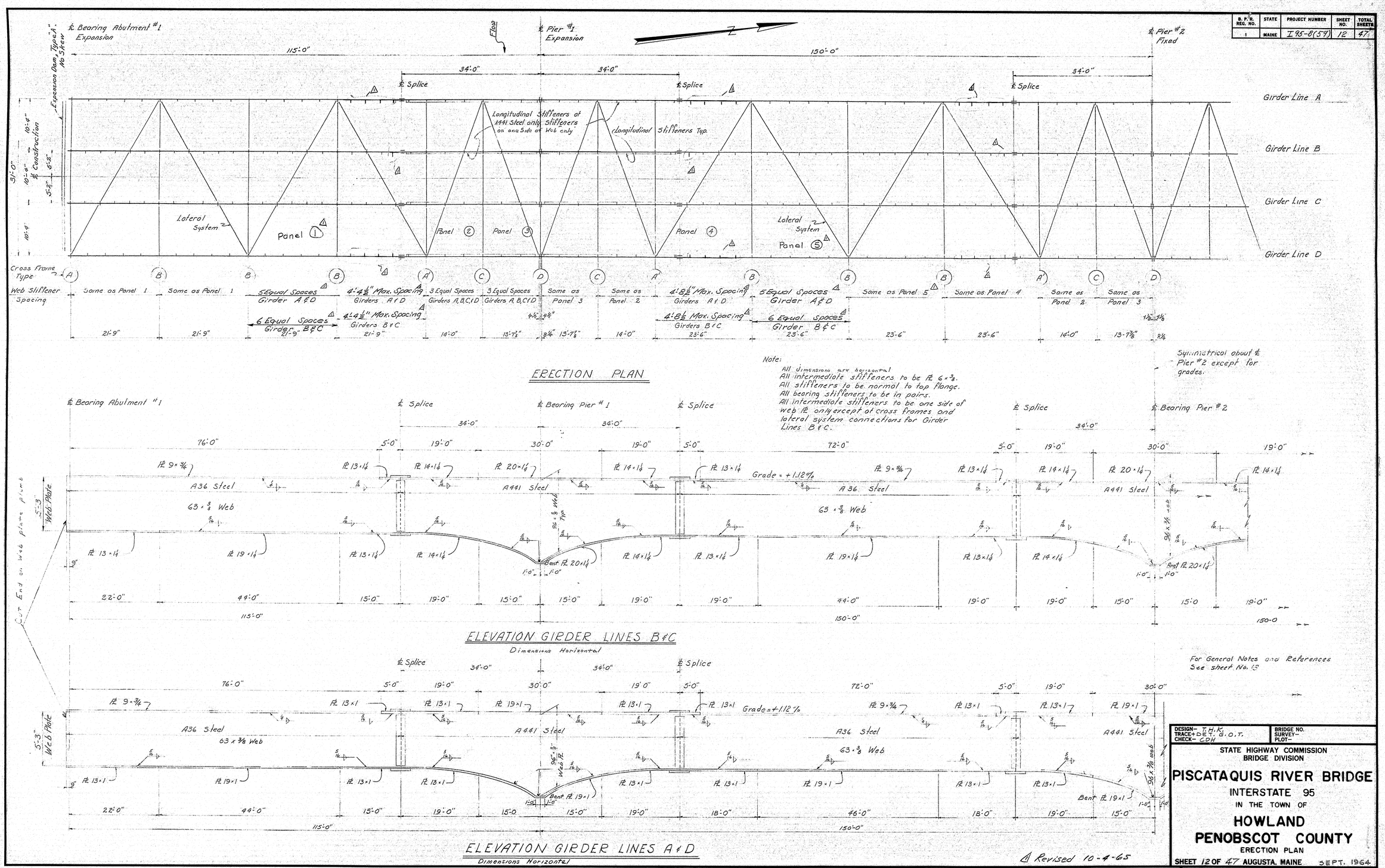
PIERS 2 & 3

SHEET 11 OF 47 AUGUSTA, MAINE SEPT. 1964

96-24

C. B. CO., NO. 44-131

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	12	47



ERECTION PLAN

Note:
All dimensions are horizontal
All intermediate stiffeners to be PL 6 × ⅜.
All stiffeners to be normal to top flange.
All bearing stiffeners to be in pairs.
All intermediate stiffeners to be one side of web PL only except at cross frames and lateral system connections for Girder Lines B & C.

Symmetrical about ℄ Pier #2 except for grades.

ELEVATION GIRDER LINES B & C

Dimensions Horizontal

For General Notes and References See sheet No. 13

ELEVATION GIRDER LINES A & D

Dimensions Horizontal

Revised 10-4-65

DESIGN– T.H.K.
TRACE+ DET. G.O.T.
CHECK– CDH

BRIDGE NO.
SURVEY–
PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

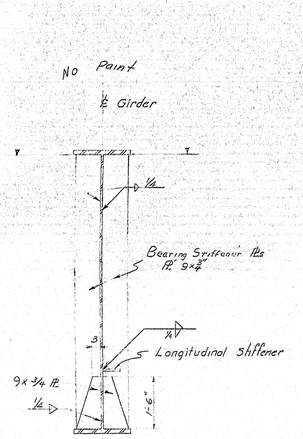
INTERSTATE 95
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
ERECTION PLAN

SHEET 12 OF 47 AUGUSTA, MAINE SEPT. 1964

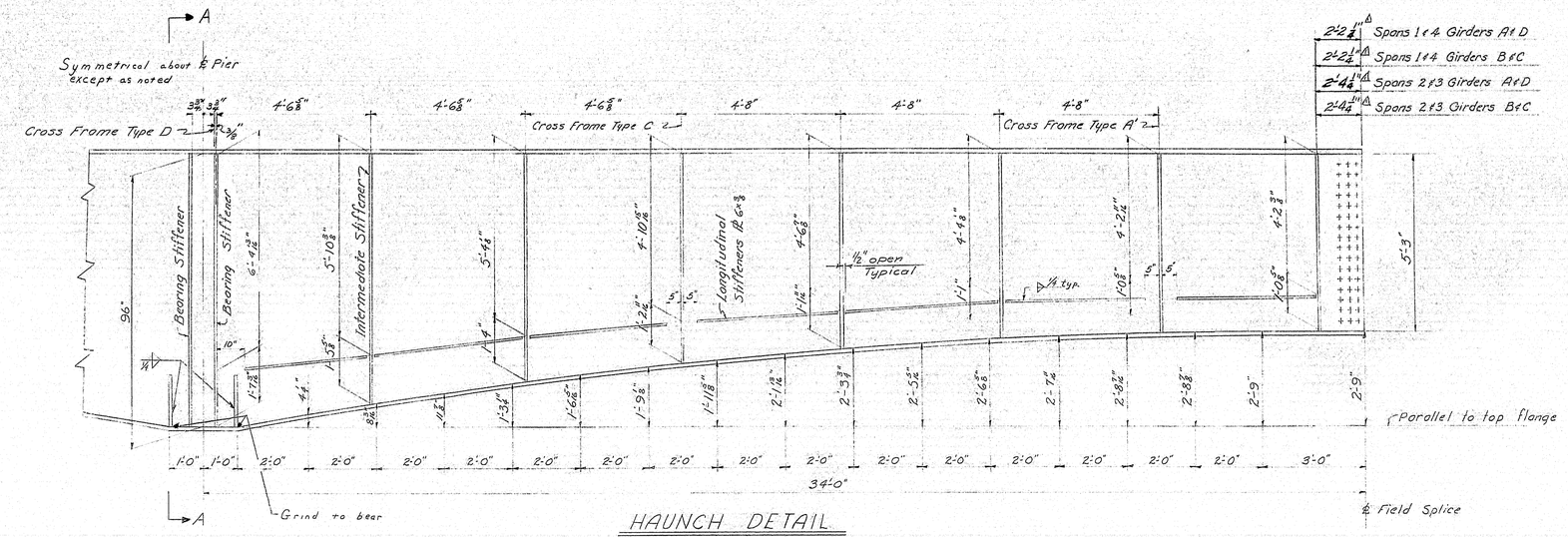
96-25

C. B. CO., NO. 44-131

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I95-8(59)	13	47

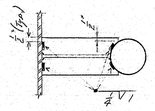


SECTION A-A

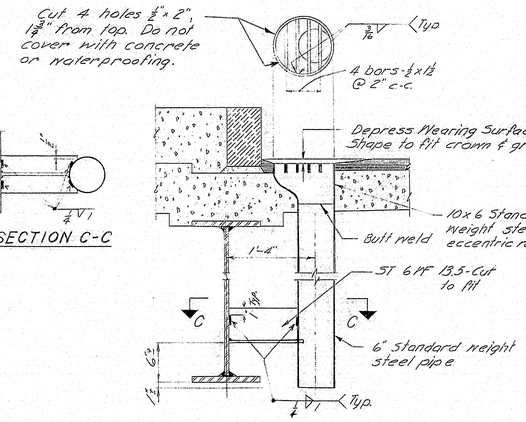


HAUNCH DETAIL

Typical All Girders
Dimensions Horizontal



SECTION C-C



DRAIN

Drains to be paid for as Structural Steel
34-Required for Piscataquis River Bridge.

GENERAL NOTES

GIRDER FABRICATION

1. Flanges are to be butt welded in accordance with details this sheet and the specifications, and inspected in conformance with the specifications prior to being fillet welded to the web plates.
2. The Steel Fabricator at his option may fabricate the web plates with butt welds with the following limitations:
   a) A maximum of two (2) transverse welds in the positive moment 63 x 3/8 web plates per girder per span.
   b) A maximum of one (1) transverse weld each side of the ℄ of bearing at a maximum distance of 12'-0" from the ℄ of bearing and one (1) longitudinal weld in the negative moment 96 x 3/8 web plates per girder per section between field splices.
3. If butt welds are used to fabricate the web plates they shall be made and inspected in conformance with the specifications before the web plates are fillet welded to the flange plates. The location and detail of butt welds in the webs shall be subject to approval by the Engineer.

minimum
C.L.P.
2-22-64

SPECIFICATIONS

Design:
The American Association of State Highway Officials Standard Specifications for Highway Bridges, 1961 with Interim Specifications 1961, 1962, 1964

Fabrication & Erection:
State of Maine, State Highway Commission, Standard Specifications Highways and Bridges, Revision of January 1956 and Supplemental Specifications Feb., 1960 and as modified by Contract Specifications

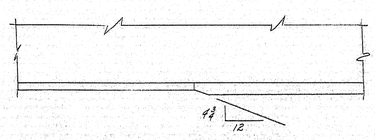
Welding:
Standard Specifications for Welded Highway and Railway Bridges, American Welding Society, AWS D2.0, 1963, as modified by contract specifications.

DESIGN

Loading: HS 20-44 as modified for Interstate Highways.
Allowable Stresses: Structural Steel, A36 - f_s = 20,000 psi
Structural Steel, A441 - f_s = 24,000 psi

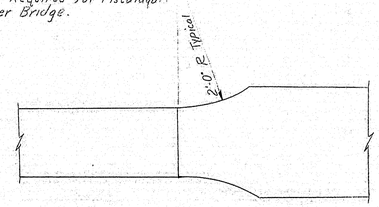
A.S.T.M. STEEL CLASSIFICATION

Girders: A36 or A441 as shown on Erection Plan Sheet No. 12
All Stiffeners: A36
Field Splices: A36.
H.S. Bolts: A325.
Pedestals: A36., except pins
Anchor Bolts: A7, A36 or A307.
All other A36 unless otherwise noted.
Pedestal pins: A235 Class C1 or A108
Grade 1016 to 1030 incl. with minimum Rockwell Scale "B" hardness of 80



FLANGE BUTT WELD @ THICKNESS CHANGE

Note:
"Single Vee Butt Weld" to be used when when either plate is 1" or less in thickness. Structural Steel Fabricator to furnish details. Note also applies to View B-B.



FLANGE BUTT WELD @ WIDTH CHANGE

REFERENCES

Erection Plan:	Sheet No. 12
Steel Details & General Notes:	Sheet No. 13
Shear Connector - Splice & Camber:	Sheet No. 16
Cross Frames Details:	Sheet No. 14
Lateral System Details:	Sheet No. 15
Bearing Pedestal Details:	Sheet No. 17
Expansion Dams See Standard	Sheet BD 105-C4

Detail at ends of Longitudinal Stiffeners
REVISED 11-19-64

△1 Revised 10-4-65

DESIGN- T.H.K.
TRACE+ JET. G.O.T.
CHECK- CDH
BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

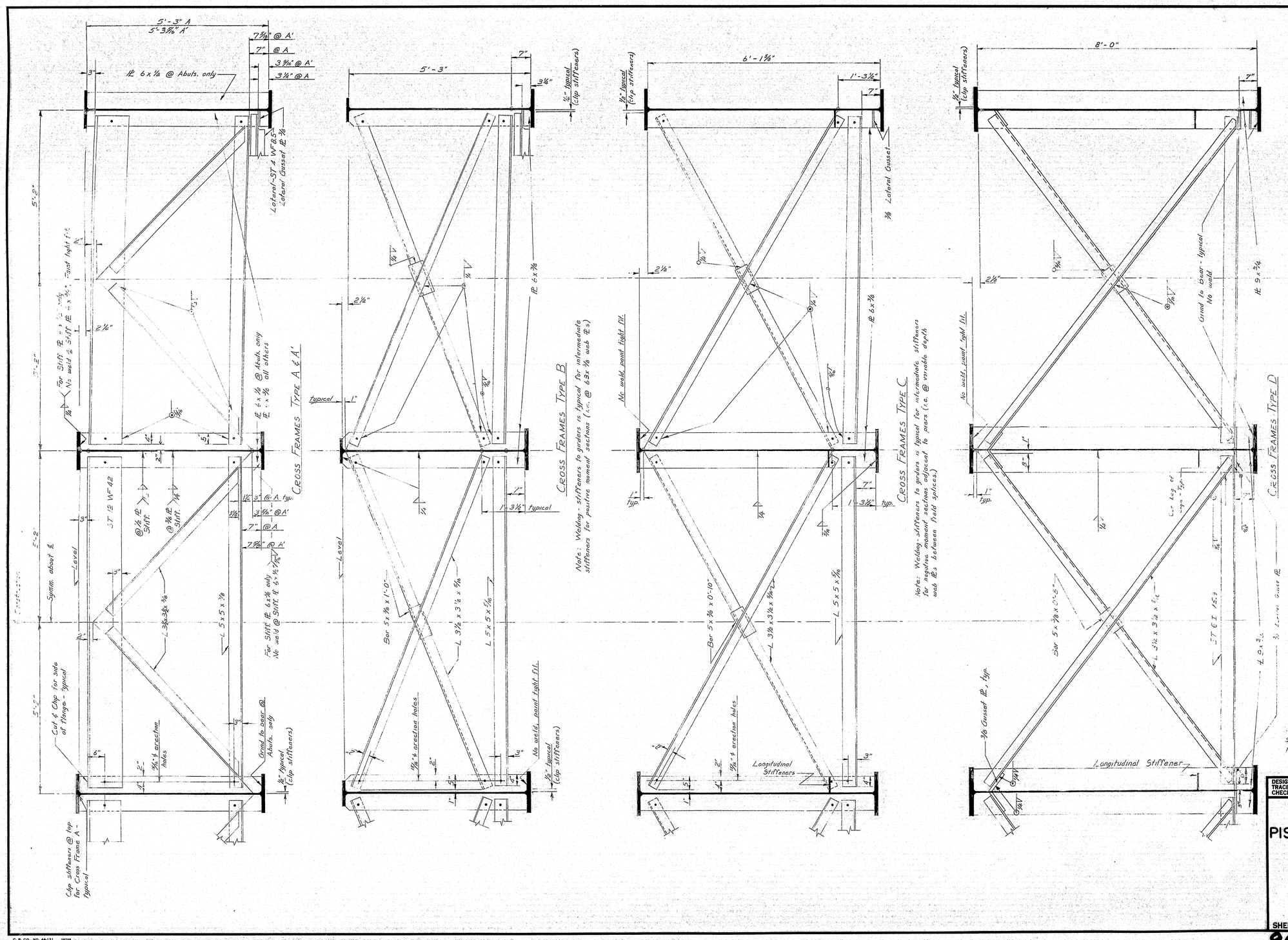
INTERSTATE 95
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
STEEL DETAILS & GENERAL NOTES

SHEET 13 OF 47 AUGUSTA, MAINE SEPT. 1964

96-26

C. B. CO., NO. 44-131

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-3(37)	14	47



DESIGN- T.H.K. DET. G.D.T. BRIDGE NO.
TRACE- E.R.A. SURVEY-
CHECK- EDH PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95

~~IN THE TOWN~~ OF

HOWLAND

PENOBSCOT COUNTY

CROSS FRAMES

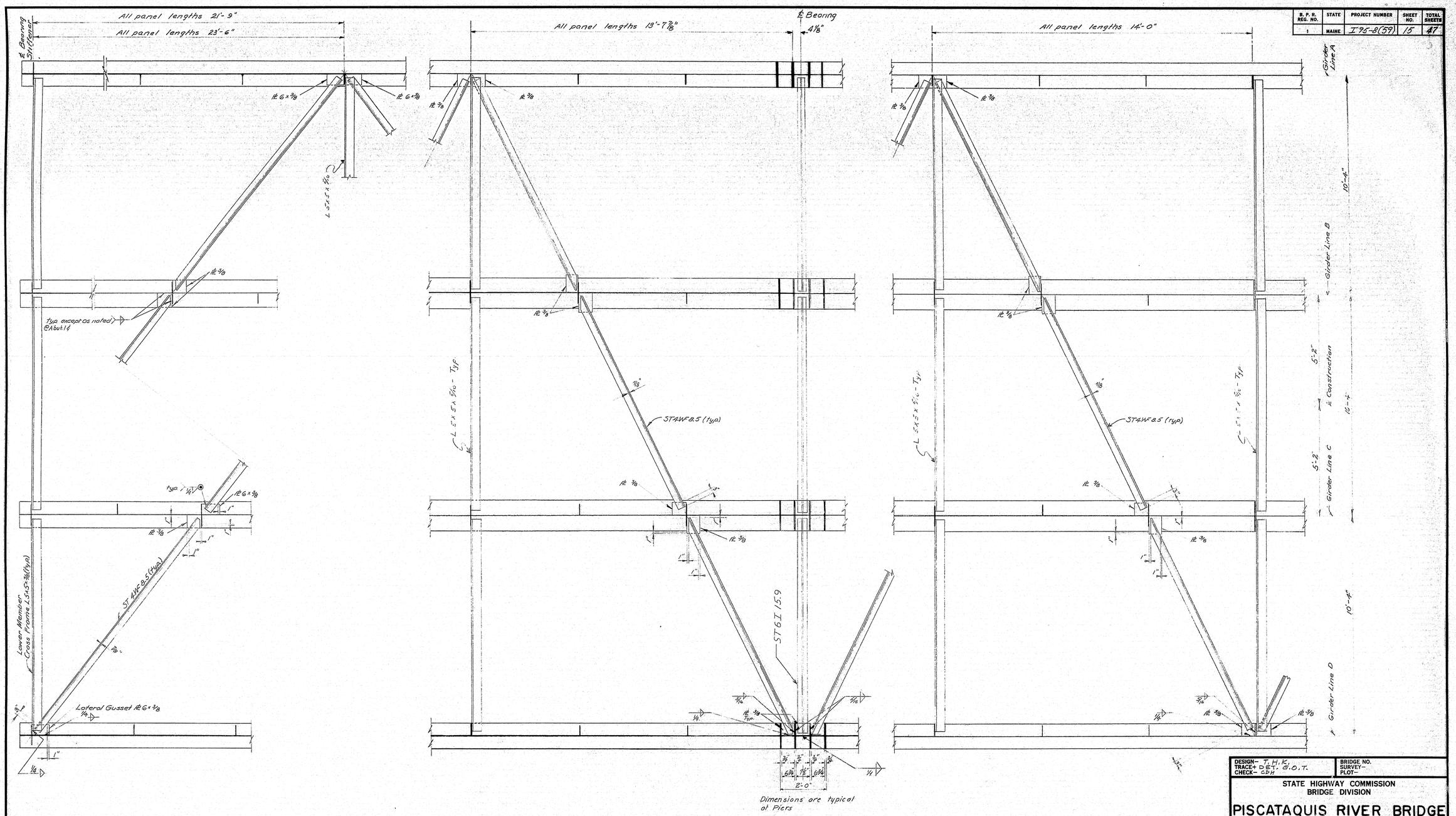
SHEET 14 OF 47 AUGUSTA, MAINE SEPT. 1964

96-27

C. B. CO., NO. 44-131 28728

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	15	47



LATERAL SYSTEM DETAILS

Dimensions Horizontal

DESIGN- T.H.K.
TRACE+ DET. G.O.T.
CHECK- CDH

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

LATERAL SYSTEM DETAILS

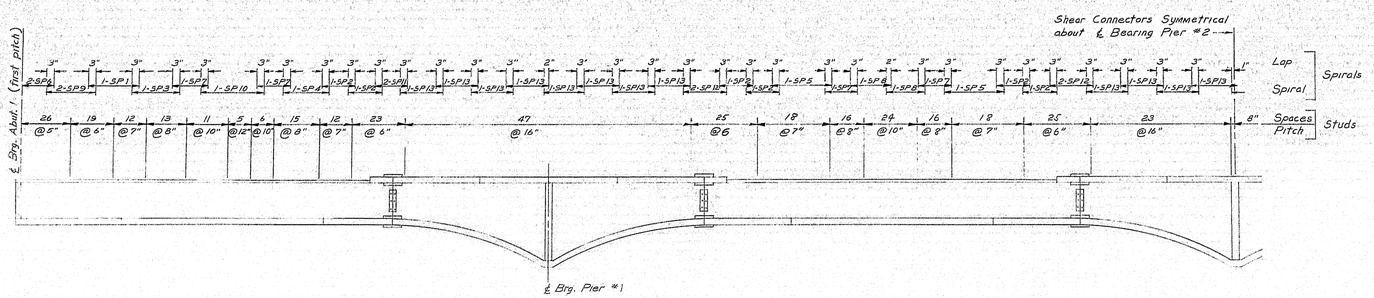
SHEET 15 OF 47 AUGUSTA, MAINE SEPT 1964

96-28

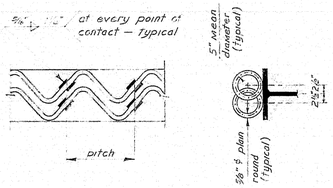
C. B. CO., NO. 44-131 28728

0 1 2 3 4 5 INCHES

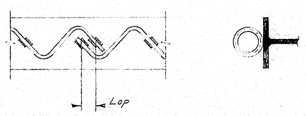
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8 (59)	16	47



SHEAR CONNECTOR LAYOUT
All Girders

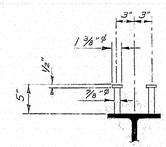


DOUBLE SPIRALS
Indicated by "2" in layout



SINGLE SPIRALS
Indicated by "1" in layout

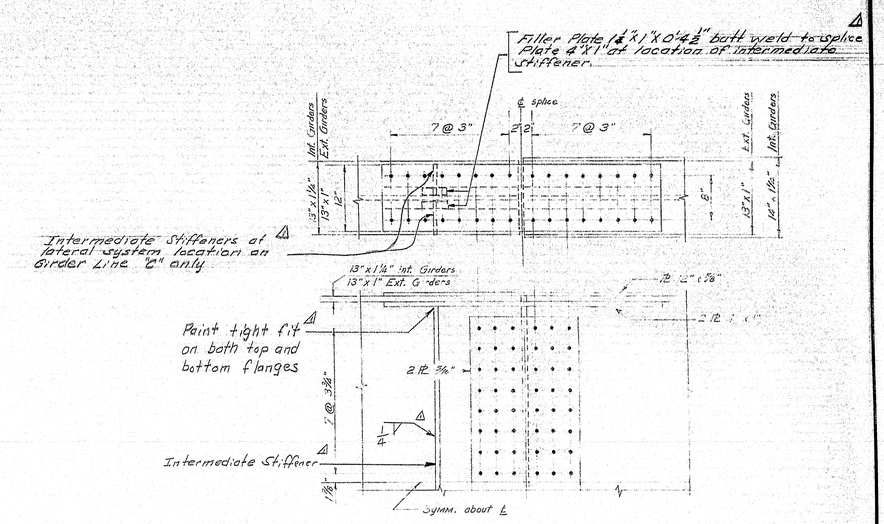
SPIRAL TABLE				
Spiral	Number	Spaces	Pitch	Length
SP1	8	29	4"	9'-8"
SP2	48	18	4"	6'-0"
SP3	8	22	5"	9'-2"
SP4	8	21	5"	8'-9"
SP5	16	28	5"	11'-8"
SP6	16	14	6"	7'-0"
SP7	32	12	6"	6'-0"
SP8	16	13	7"	7'-7"
SP9	16	16	7"	9'-4"
SP10	8	22	7"	12'-10"
SP11	16	10	7"	5'-10"
SP12	32	14	7"	8'-2"
SP13	96	6	16"	8'-0"



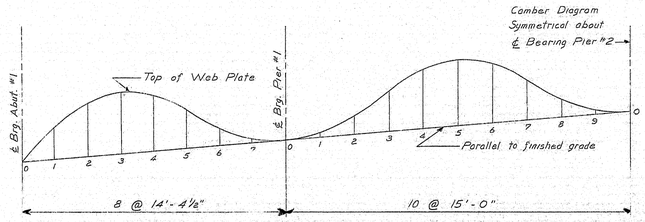
STUD DETAIL
2 Studs @ each pitch
5,936 Required

NOTE:
1. Pitch and transverse spacing may be revised slightly at girder field splices to clear H.S. Bolts.
2. Spiral reinforcing or studs may be used at the option of the contractor.
3. If studs are used they shall be granular or solid filled and automatically end welded to the top flange in the shop or field.
4. Studs are a patented product. If the contractor elects to use them, he shall pay the royalty, and payment to the contractor will be included in the lump sum price for Shear Connectors.

SHEAR CONNECTOR DETAILS



TYPICAL GIRDER FIELD SPLICE
7/8" ϕ H. S. Bolts; 15/16" ϕ holes



CAMBER DIAGRAM
All Girders

Span	Point	Camber
℄ Brg. Abut. #1	0	0
	1	5/16"
	2	1 3/16"
	3	1 13/16"
	4	1 15/16"
	5	1 7/8"
	6	1 1/2"
	7	1 1/8"
℄ Brg. Pier #1	0	0
	1	1/8"
	2	3/16"
	3	1 3/16"
	4	1 3/8"
	5	1 15/16"
	6	1 3/4"
	7	1 9/16"
	8	3/16"
	9	1/8"
℄ Brg. Pier #2	0	0

△ Revised 10-4-65

DESIGN- T.H.K.
TRACE- D.E.T. E.R.A.
CHECK- C.D.H.
BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

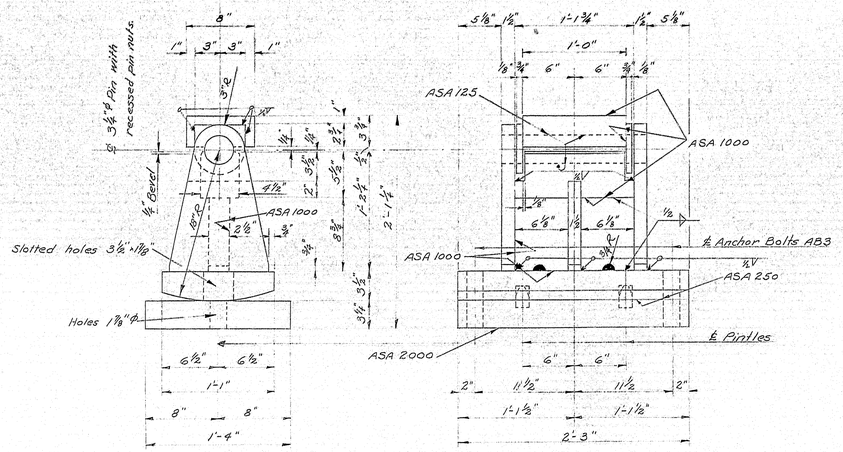
SHEAR CONNECTOR-SPLICE-CAMBER

SHEET 16 OF 47 AUGUSTA, MAINE SEPT. 1964

96-29

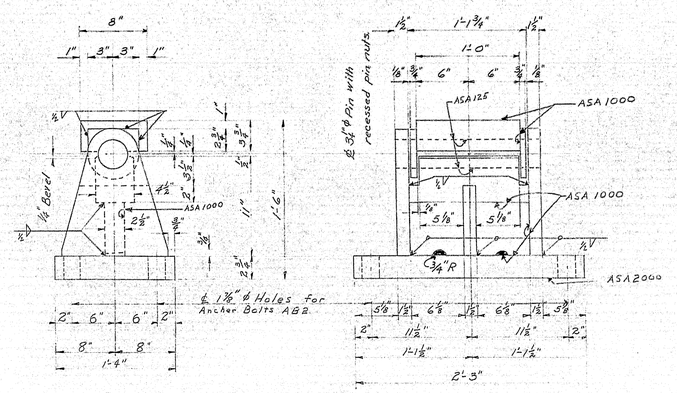
C. B. CO., NO. 44-131 59750

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-B (59)	17	47



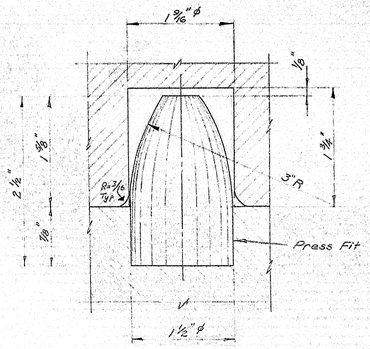
EXPANSION PEDESTAL

Piers 1 & 3 only
8 Required

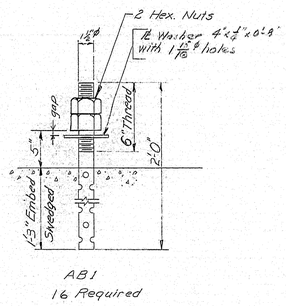


FIXED PEDESTAL

Pier 2 only
4 Required



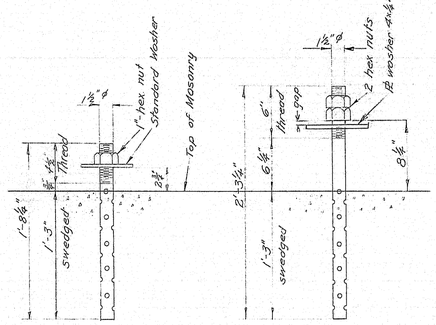
PINTLE DETAIL



AB1
16 Required

ANCHOR BOLTS

Abutments 1 & 2

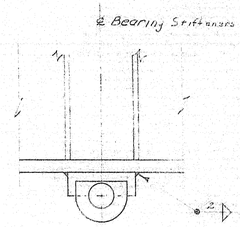


AB2
16 Required

AB3
16 Required

ANCHOR BOLTS

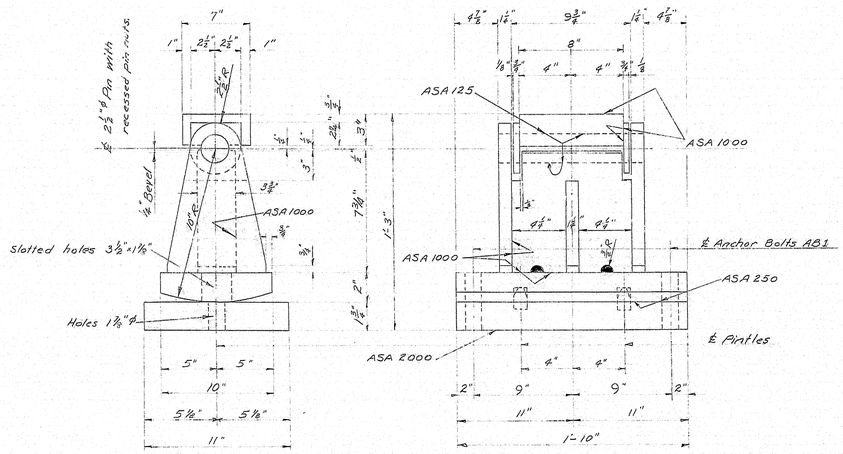
Piers



TYPICAL WELDING DETAIL

Sole ℄ to Girder

Note: Set Rockers plumb at 45° F.



EXPANSION PEDESTAL

Abutment 1 & 2

8 Required

Welding Similar to Pedestal above

NOTE: At the location of bearing pedestals the concrete bridge seats shall be dressed one inch larger all around than size of masonry plates and to exact elevations shown on plans. If the dressed areas are below the surface of the surrounding bridge seat a small channel shall be cut to the edge of the bridge seat for drainage where required by the Engineer. Channels shall have a min. width of 2", and min. slope of ½ inch per foot. No separate payment for this work will be made as it shall be considered incidental to contract items. Place reinforcing steel to clear anchor bolts.

DESIGN- T.H.K. TRACE- DET. G.O.T. CHECK- CDH	BRIDGE NO. SURVEY- PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

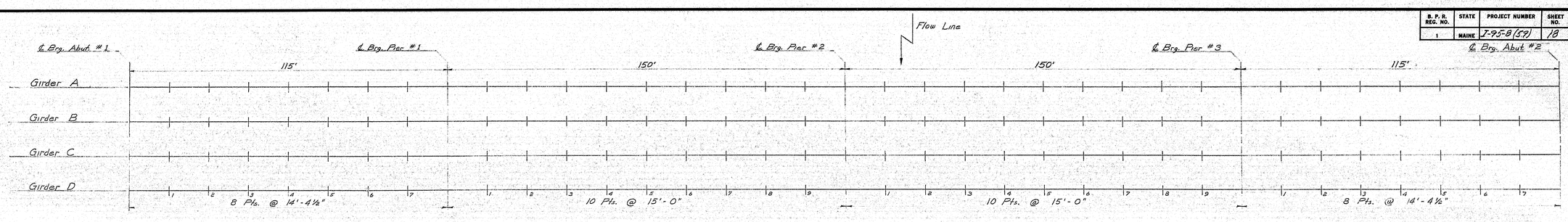
BEARING PEDESTALS

SHEET 17 OF 47 AUGUSTA, MAINE SEPT 1964

96-30

C. B. CO., NO. 44-131

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(57)	18	47

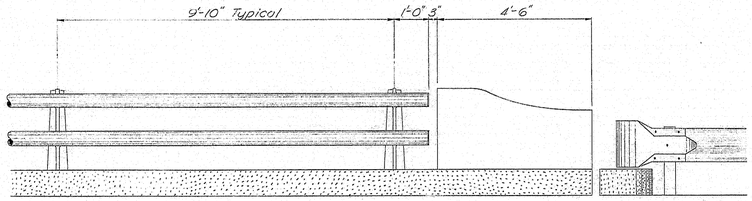


BLOCKING PLAN

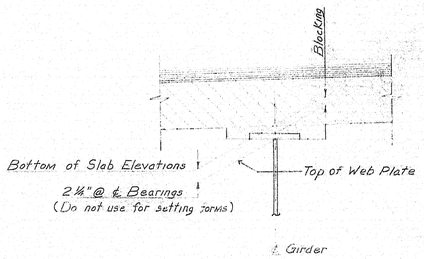
BOTTOM OF SLAB ELEVATIONS

Girders	℄ Brg. Abut. 1	1	2	3	4	5	6	7	℄ Brg. Pier 1	1	2	3	4	5	6	7	8	9	℄ Brg. Pier 2	1	2	3	4	5	6	7	8	9	℄ Brg. Pier 3	1	2	3	4	5	6	7	℄ Brg. Abut. 2
A & D	170.30	170.53	170.73	170.91	171.06	171.19	171.31	171.44	171.59	171.77	171.99	172.20	172.42	172.60	172.76	172.88	172.99	173.11	173.27	173.45	173.67	173.88	174.10	174.28	174.44	174.56	174.67	174.79	174.95	175.12	175.31	175.51	175.70	175.89	176.03	176.15	176.24
B & C	170.51	170.74	170.94	171.12	171.26	171.39	171.52	171.65	171.80	171.98	172.19	172.41	172.63	172.81	172.96	173.08	~~173.20~~ 173.20	173.32	173.48	173.66	173.87	174.09	174.31	174.49	174.65	174.76	174.88	175.00	175.16	175.33	175.52	175.72	175.91	176.09	176.23	176.35	176.44

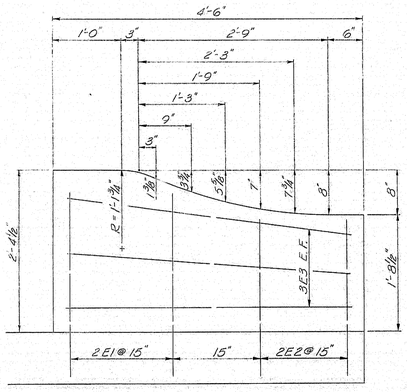
Note:
To compensate for dead load deflections, as well as possible irregularities in girders, set the bottom of slab elevations at the points indicated before any of the slab forms are started. Bottom of slab grades for blocking shall be set after shear connectors are welded to the top flange.



RAIL & END POST



BLOCKING DETAIL



END POST

Note- Payment for concrete in End Rail Posts to be made under Item 701-40, Portland Cement Concrete, Roadway and Sidewalk Slabs on Steel Bridges.

DESIGN- T.H.K. TRACE+DET. E.R.A & E.E.L. CHECK- CDH	BRIDGE NO. SURVEY- PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

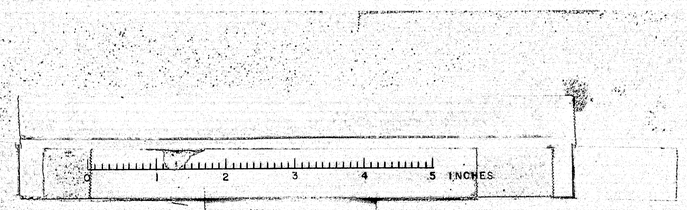
HOWLAND
PENOBSCOT COUNTY

BLOCKING & RAIL DETAILS

SHEET 18 OF 47 AUGUSTA, MAINE SEPT. 1964

96-31

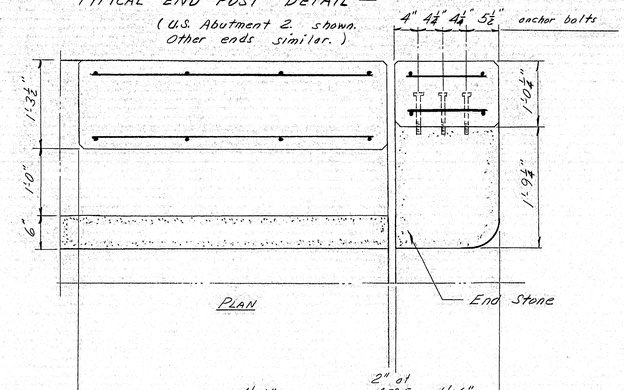
C. B. CO., NO. 44-131 26726



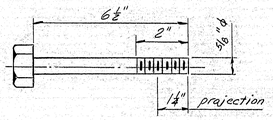
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-B(59)	18A	47

— TYPICAL END POST DETAIL —

(U.S. Abutment 2. shown. Other ends similar.)

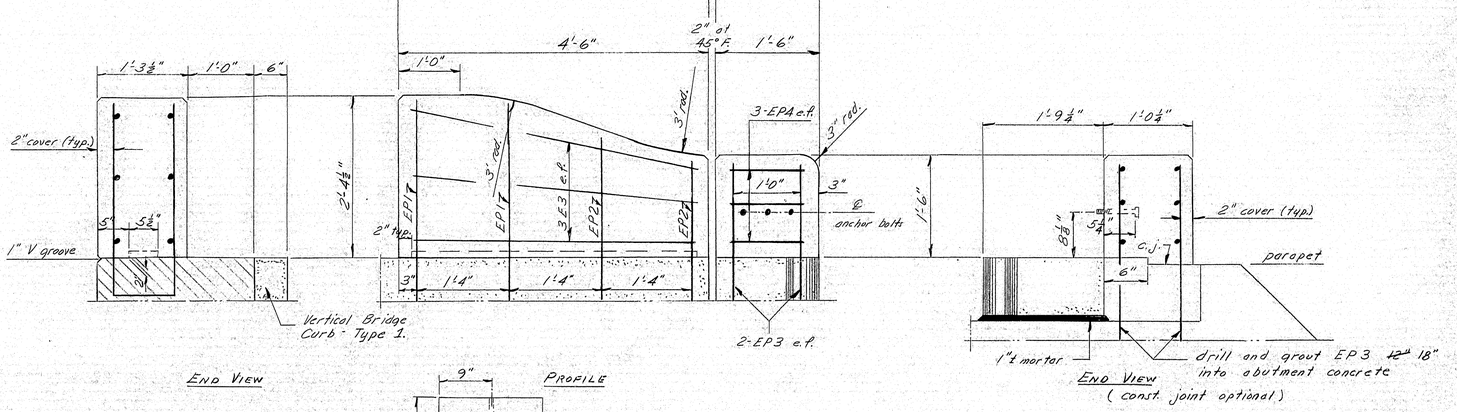


PLAN



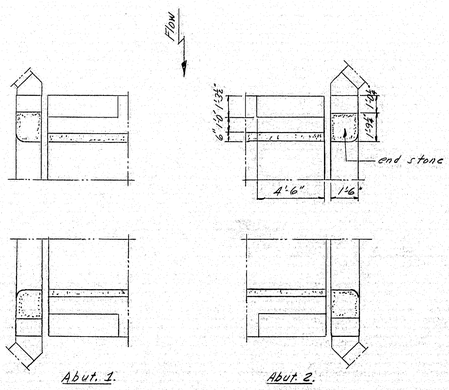
Anchor Bolt

Bolt to be furnished with hex. head, nut, and washer. All parts galvanized.



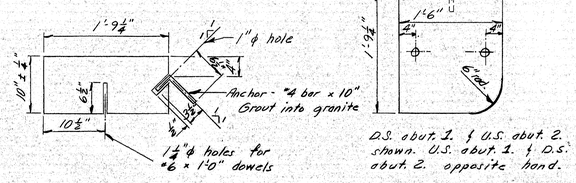
END VIEW

END VIEW (const. joint optional)



Abut. 1. Abut. 2.

Scope of Work



PROFILE

D.S. abut. 1. & U.S. abut. 2. shown. U.S. abut. 1. & D.S. abut. 2. opposite hand.

Vertical Bridge Curb - Type 1. - End Stone

Drill 1¼" ϕ holes 6" deep into existing abutment concrete. Grout #6 x 1'-0" dowels into granite before setting granite on abutment.

— Additional Materials Required —

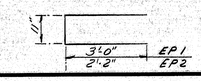
Concrete Class "A" - 0.50 c.y.

Reinforcing Steel:

Bent Bars	EP1	#5	6'-11"	8 req'd.
	EP2	#5	5'-3"	8 req'd.
Straight Bars	EP3	~~#5~~ #7	~~3'-3"~~ 3'-9"	16 req'd.
	EP4	#4	1'-0"	24 req'd.

Anchor Bolts 12 req'd.

End Stone (Vert. Br. Curb - Type 1.) 4 req'd.
(complete with anchor - dowels)



DESIGN— Mollicone	BRIDGE NO.
TRACE—	SURVEY—
CHECK— J.H. Whitten	PLOT—

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE
INTERSTATE 95

IN THE TOWN OF

HOWLAND

PENOBSCOT COUNTY

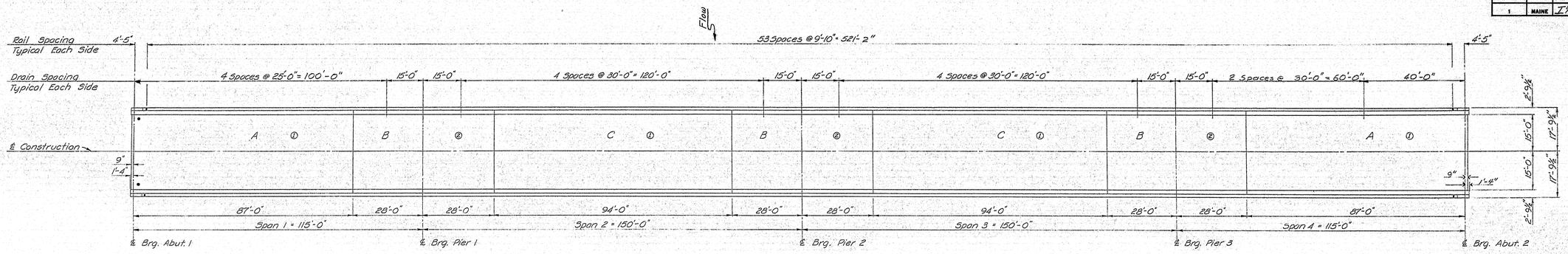
END POST REVISIONS

SHEET 18A OF 47 AUGUSTA, MAINE MARCH 1966

96-32

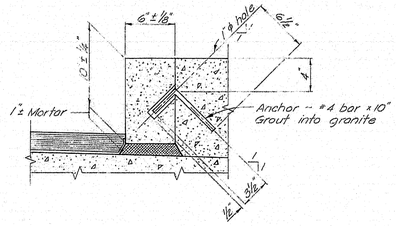
0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I95-8 (59)	19	47

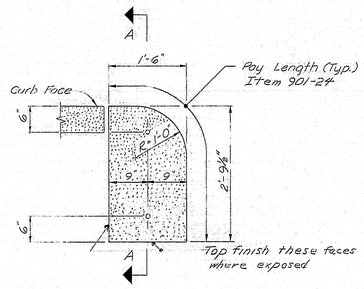


LAYOUT PLAN

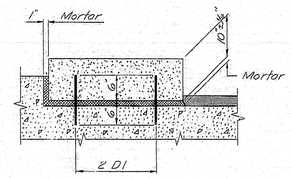
Place all slabs marked ① before placing slabs marked ②.



TYPICAL SECTION



PLAN



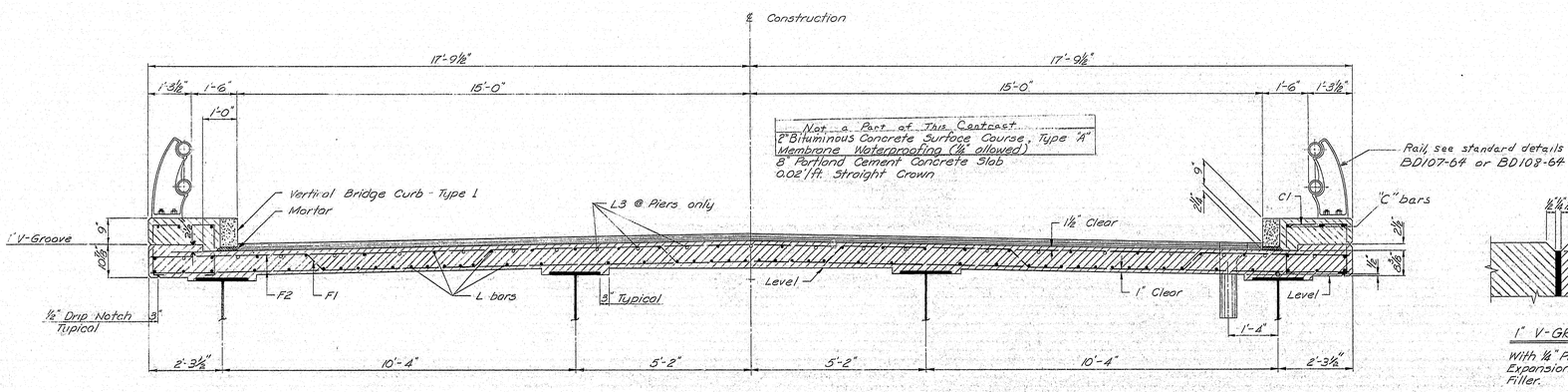
SECTION A-A

Grout D1 bars into 1¼" ϕ holes in stone prior to setting stone on backwall. Drill 1¼" holes in backwall to suit D1 bars. Payment for drilling and grouting of D1 bars to be included in the price for Item 705-14, Reinforcing Steel, Placing.

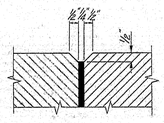
VERTICAL BRIDGE CURB ~ TYPE 1

SLAB NOTES

1. At contraction joints over ℄ of bearings of piers use ¼" preformed expansion joint filler for granite curb and concrete curb. At all other contraction joints in curbs break the bond between concrete surfaces by coating the contact areas with a suitable grade of asphalt paint. Joints in granite curb are to be provided at every contraction joint in concrete curb.
2. Form a 1" V-Groove on outside face of curb and slab at each contraction joint.
3. At points indicated by symbol * on "Layout Plan" provide a 1" ϕ plastic tube drain extending through slab to 2" below bottom of slab. Place in order for drip to clear bridge seats. Do not cover with membrane waterproofing. Payment to be incidental to Item 701-40 Portland Cement Concrete Roadway and Sidewalk Slabs on Steel Bridges. (2-Required)
4. No work other than form work utilizing hand tools will be permitted on slab for a period of seven days following placing of slab.
5. For details of slabs A, B & C see Sh. #20.

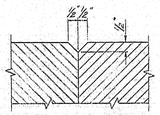


TYPICAL TRANSVERSE SECTION



1" V-GROOVE

With ¼" Preformed Expansion Joint Filler.



1" V-GROOVE

Without ¼" Preformed Expansion Joint Filler.

DESIGN- T.H.K.
TRACE+ DET. E.E.L.
CHECK- CDH

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

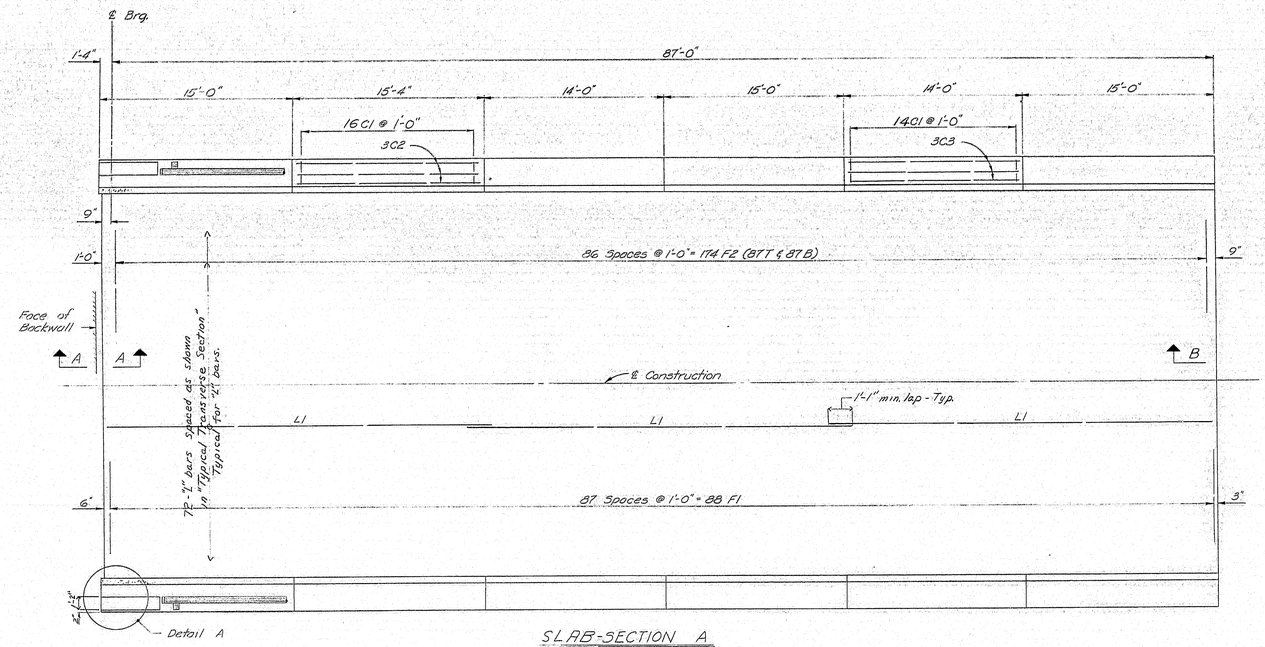
SUPERSTRUCTURE

SHEET 19 OF 47 AUGUSTA, MAINE SEPT 1964

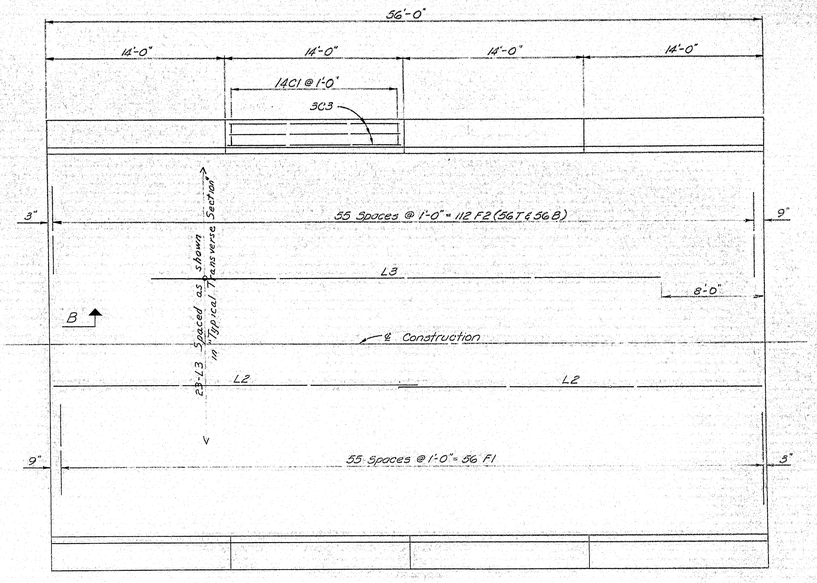
96-33

C. B. CO., NO. 44-131

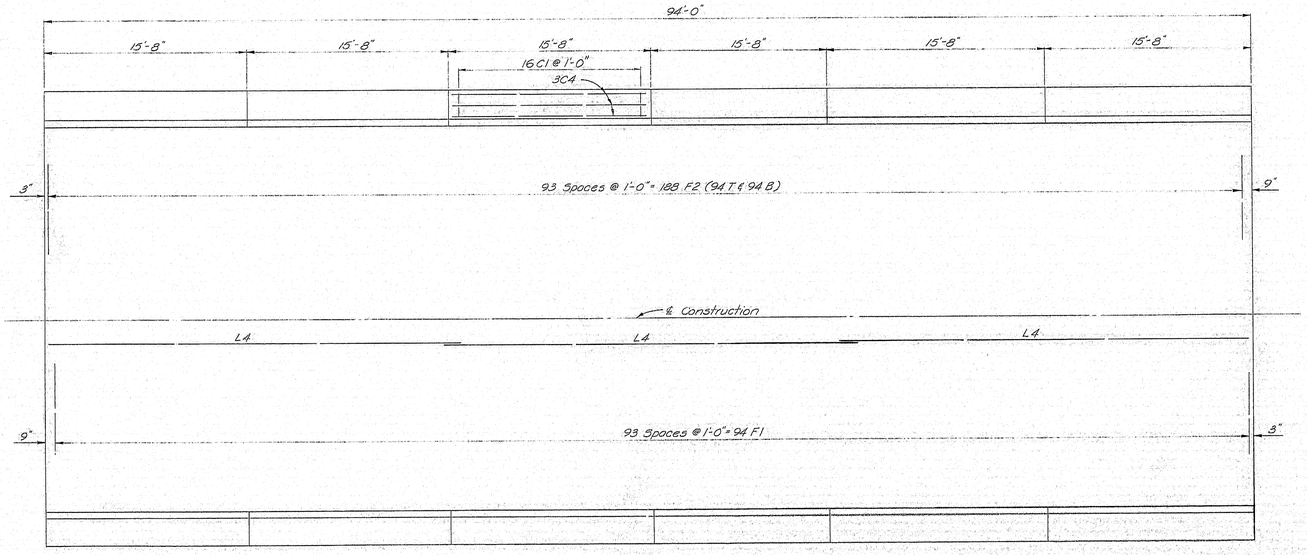
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(57)	20	47



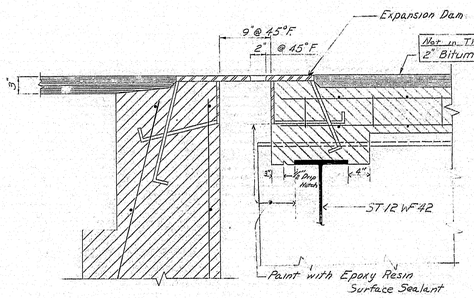
SLAB-SECTION A



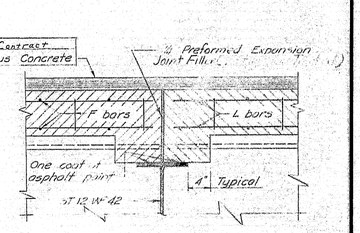
SLAB-SECTION B



SLAB-SECTION C

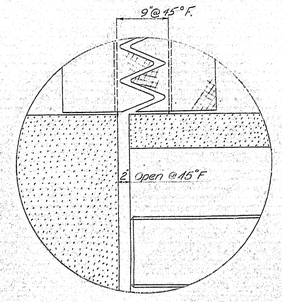


SECTION A-A



SECTION B-B

At joints in concrete and granite curbs over piers 1, 2, & 3 and at slab construction joints, use ½" preformed expansion joint filler. At all other joints, break the bond between concrete surfaces with a coat of asphalt paint.



DETAIL A

Note: For location of Slab A, B & C see Sh #19.

DESIGN- T.H.K. TRACE- DBT, E.E.L. CHECK- CDH	BRIDGE NO. SURVEY- PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

SUPERSTRUCTURE

SHEET 20 OF 47 AUGUSTA, MAINE SEPT 1964

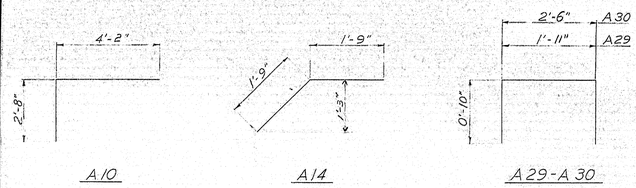
96-34

C. S. CO., NO. 44-131 28789

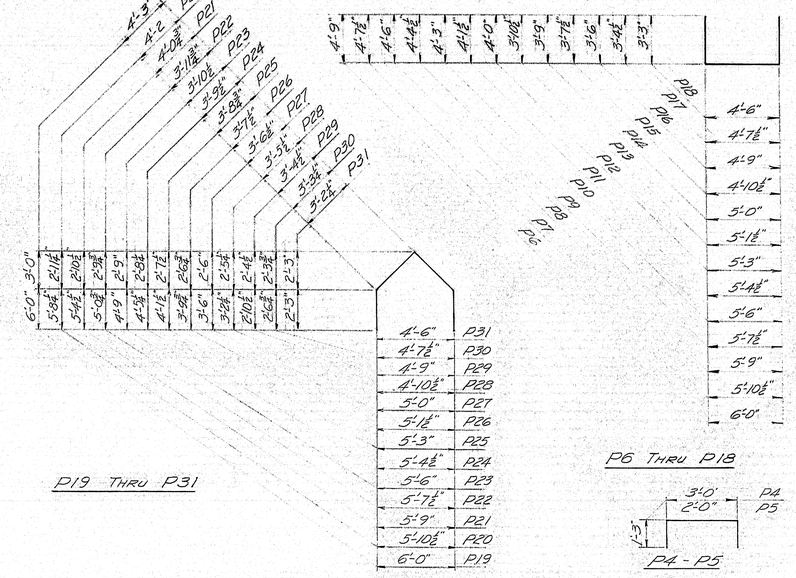
0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	21	47

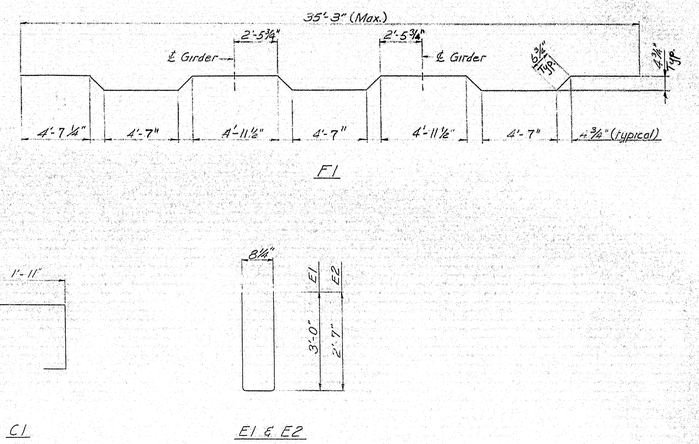
ABUTMENT STEEL



PIER STEEL



SUPERSTRUCTURE STEEL



BENT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
A10	#5	46	6'-10"	Bridge Seat
A14	#6	40	3'-6"	Backwall
A29	#4	16	3'-7"	Bearing Pads
A30	#4	16	4'-2"	" "

STRAIGHT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
A1	#6	136	6'-6"	Footing
A2	#6	26	34'-0"	"
A3	#6	40	10'-6"	"
A4	#6	16	5'-6"	"
A5	#6	16	4'-6"	"
A6	#6	16	4'-0"	"
A7	#6	16	3'-0"	"
A8	#6	110	2'-6"	"
A9	#5	46	5'-9"	"
A11	#5	24	17'-6"	Bridge Seat
A12	#5	46	3'-0"	" "
A13	#4	40	17'-2"	Backwall
A15	#5	92	7'-6"	"
A16	#6	8	11'-0"	Wing
A17	#6	8	10'-8"	"
A18	#6	8	10'-2"	"
A19	#6	8	9'-8"	"
A20	#6	8	9'-2"	"
A21	#6	8	8'-8"	"
A22	#6	8	8'-2"	"
A23	#6	8	7'-8"	"
A24	#5	16	9'-0"	"
A25	#5	16	10'-0"	"
A26	#5	8	9'-3"	"
A27	#5	8	7'-3"	"
A28	#5	8	5'-3"	"
A31	#4	40	29'-6"	Approach Slab
A32	#5	232	14'-6"	" "

} Bend in field

DET. E.E.L.

BENT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
P4	#5	24	5'-6"	Bearing Pads
P5	#5	24	4'-6"	" "
P6	#5	2	15'-6"	Shaft - Pier 1 & 3
P7	#5	3	15'-1"	" - Pier 1,2 & 3
P8	#5	3	14'-9"	" "
P9	#5	3	14'-4"	" "
P10	#5	3	14'-0"	" "
P11	#5	3	13'-7"	" "
P12	#5	3	13'-3"	" "
P13	#5	3	12'-10"	" "
P14	#5	3	12'-6"	" "
P15	#5	3	12'-1"	" "
P16	#5	3	11'-9"	" "
P17	#5	3	11'-4"	" "
P18	#5	3	11'-0"	" "
P19	#5	2	20'-6"	" - Pier 1 & 3
P20	#5	3	19'-8"	" - Pier 1,2 & 3
P21	#5	3	18'-10"	" "
P22	#5	3	18'-0"	" "
P23	#5	3	17'-3"	" "
P24	#5	3	16'-6"	" "
P25	#5	3	15'-8"	" "
P26	#5	3	14'-10"	" "
P27	#5	3	14'-1"	" "
P28	#5	3	13'-3"	" "
P29	#5	3	12'-6"	" "
P30	#5	3	11'-8"	" "
P31	#5	3	10'-10"	" "

STRAIGHT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
P1	#7	266	4'-0"	Footing
P2	#7	88	18'-6"	Shaft
P3	#5	76	33'-0"	"
P32	#7	88	17'-6"	"
P33	#7	90	19'-6"	"

DET. G.M.C.

BENT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
F1	#6	532	36'-3"	Slabs
C1	#5	1088	6'-1"	Curbs
E1	#5	8	6'-9"	End Posts
E2	#5	8	5'-11"	" "

STRAIGHT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
F2	#6	1060	35'-3"	Slabs
L1	#5	132	[illegible]	"
L2	#5	432	28'-5	"
L3	#5	49	40'-0"	"
L4	#5	432	32'-0"	"
C2	#5	48	12'-9"	Curbs
C3	#5	96	13'-8"	"
C4	#5	72	15'-4"	"
D1	#6	8	[illegible]'-0"	Curb Dowels
E3	#4	24	4'-2	End Post

DET. E.E.L.

NOTE: Dimensions to ℄ bars. Reinforcing steel to be of Intermediate Grade.

DESIGN- J.H.K.
TRACE- E.B.A., DET. AS SHOWN
CHECK- E.D.H.

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

PISCATAQUIS RIVER BRIDGE

INTERSTATE 95
IN THE TOWN OF

HOWLAND
PENOBSCOT COUNTY

REINFORCING STEEL

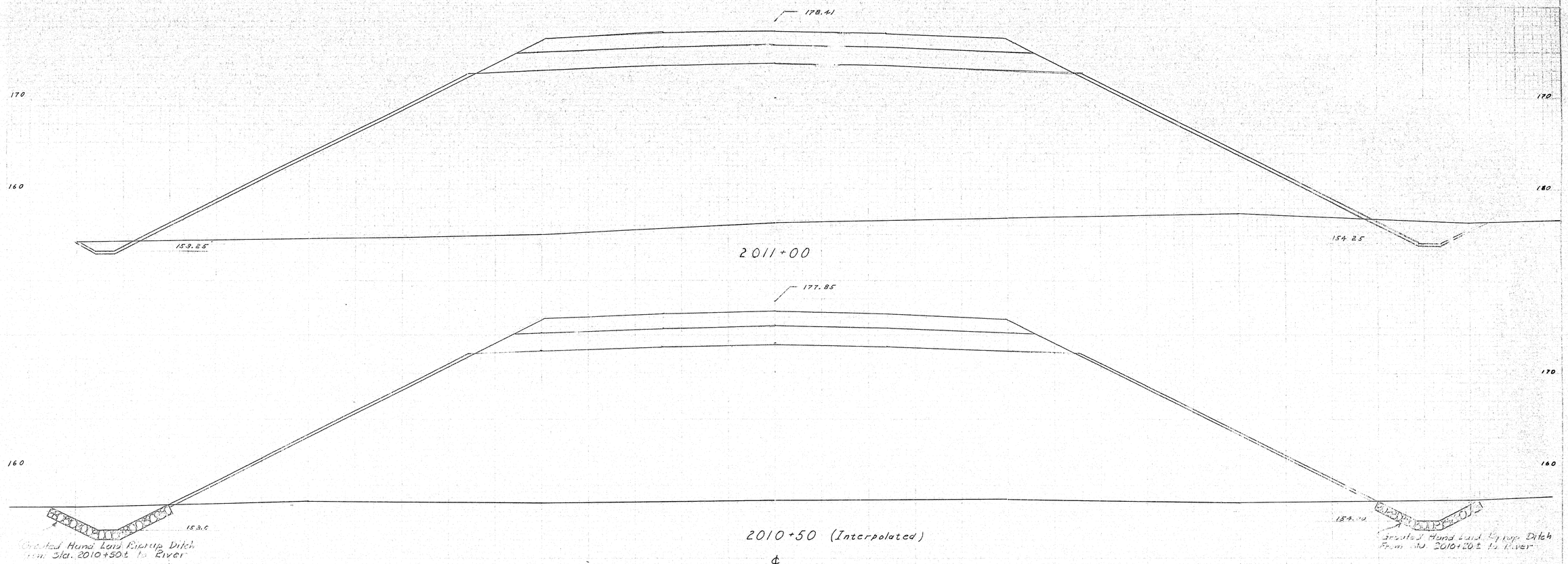
SHEET 21 OF 47 AUGUSTA, MAINE SEPT. 1964

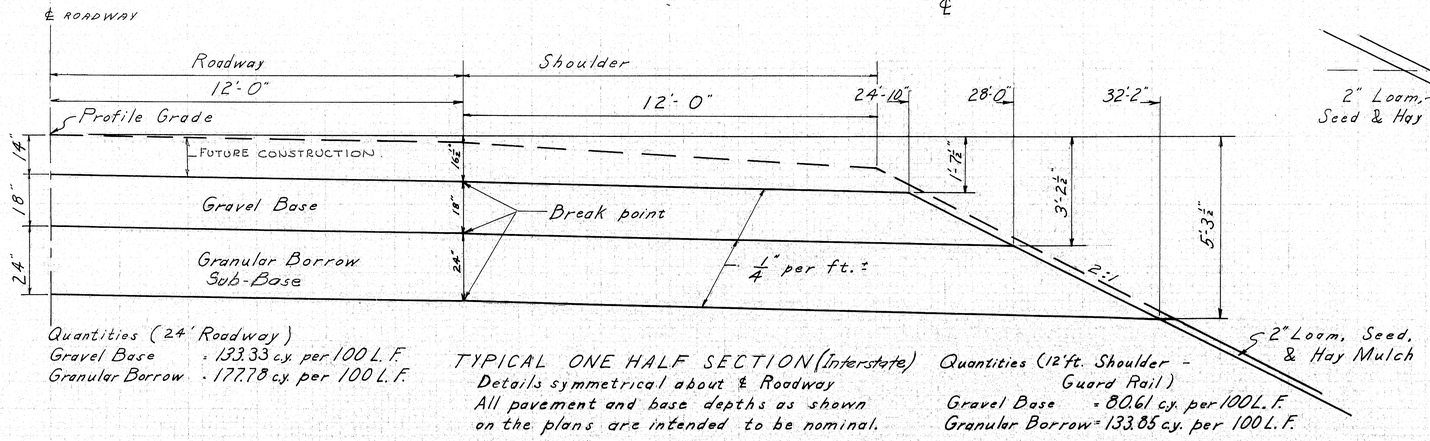
96-35

C. S. CO., NO. 44-131 28788

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8 (59)	22	47

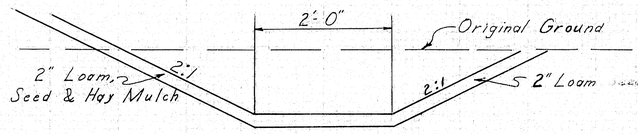




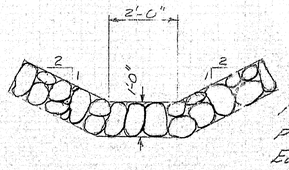
Quantities (24' Roadway)
Gravel Base = 133.33 c.y. per 100 L.F.
Granular Borrow = 177.78 c.y. per 100 L.F.

TYPICAL ONE HALF SECTION (Interstate)
Details symmetrical about ℄ Roadway
All pavement and base depths as shown on the plans are intended to be nominal.

Quantities (12' ft. Shoulder - Guard Rail)
Gravel Base = 80.61 c.y. per 100 L.F.
Granular Borrow = 133.85 c.y. per 100 L.F.



TYPICAL DITCH



Necessary excavation to be paid for under Item 203.09 Earth Excavation.

TYPICAL GROUTED HAND LAID RIPRAP DITCH

PLOT P.J.L.
CHECK Harris

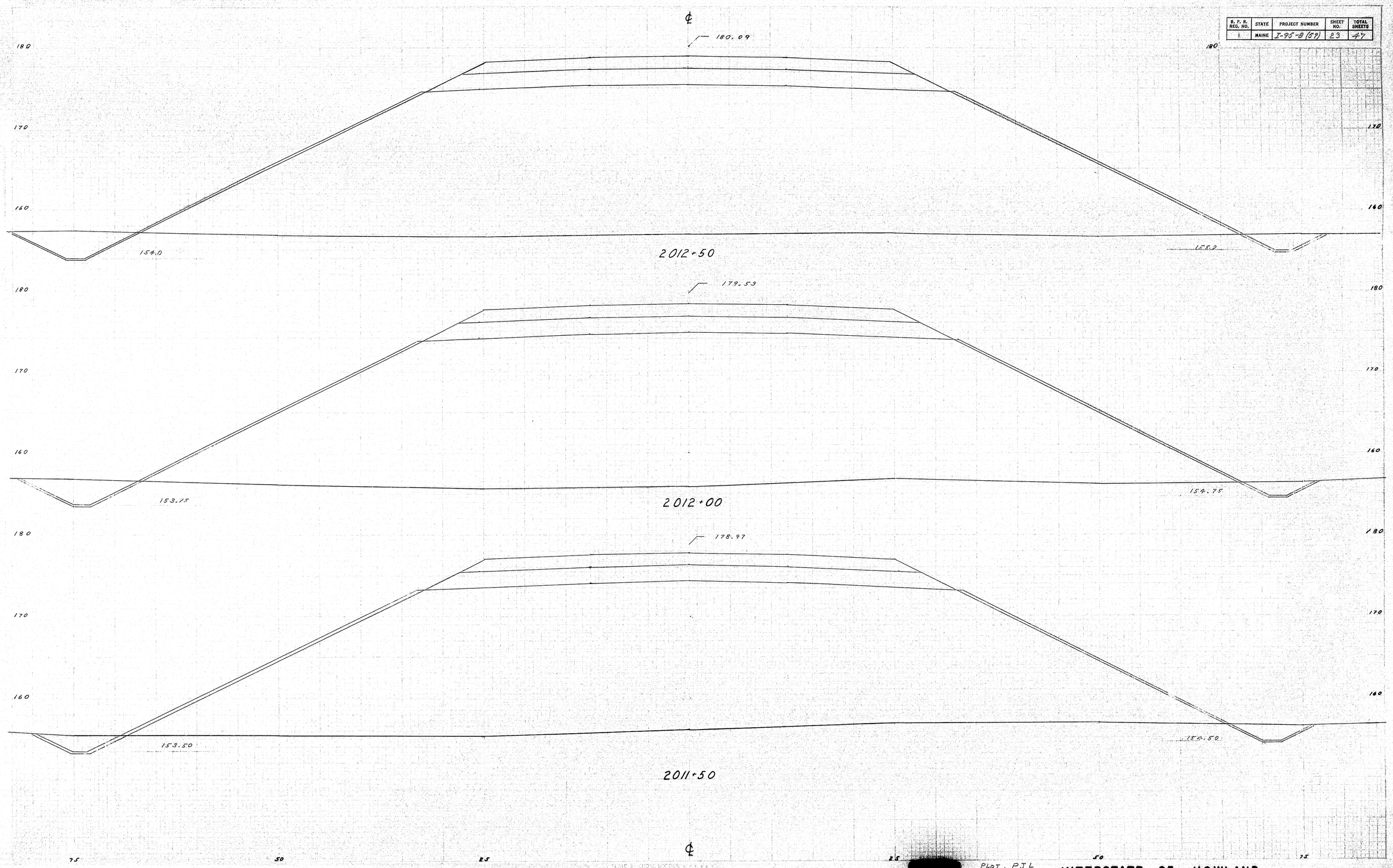
INTERSTATE 95 HOWLAND

SHEET 22 OF 47

TYPICAL SECTIONS & STATIONS 2010+50 → 2011+00

INCHES 0 1 2 3 4 5

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1.	MAINE	I-95-8(69)	23	47



STATIONS 2011+50 → 2012+50

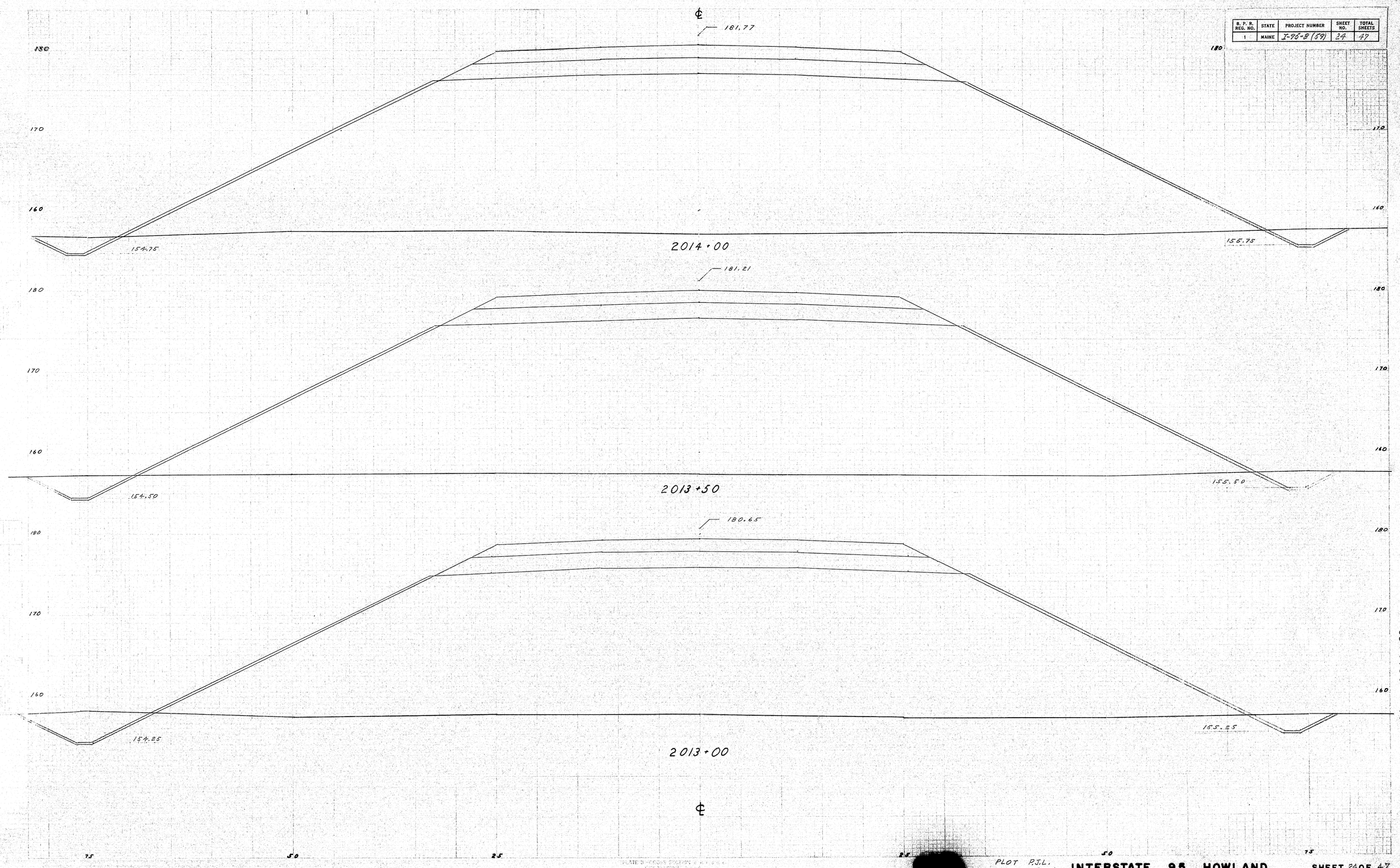
PLOT, PJL
CHECK, Harris

INTERSTATE 95 HOWLAND

SHEET 23 OF 47

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	24	47



STATIONS 2013+00 → 2014+00

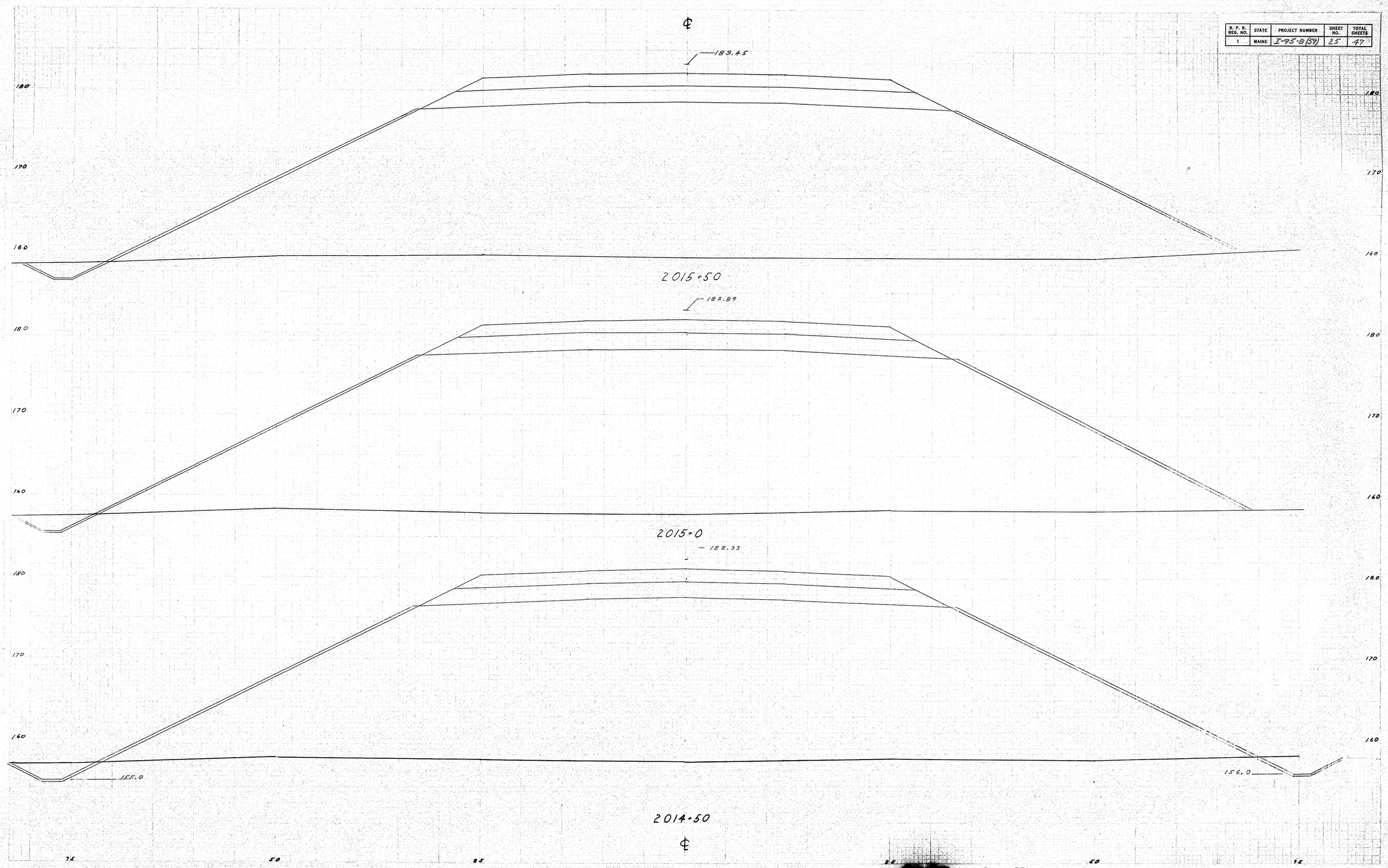
PLOT P.J.L.
CHECK Harris

INTERSTATE 95 HOWLAND

SHEET 24 OF 47

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(57)	25	47



PLOT P.J.L.
CHECK Harris

INTERSTATE 95 HOWLAND

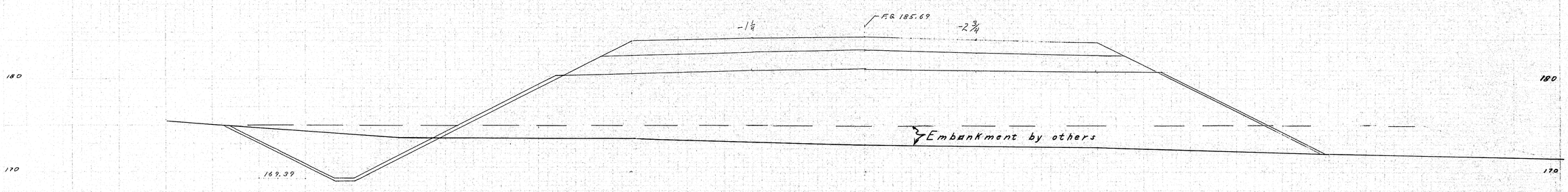
SHEET 25 OF 47

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(57)	26	47

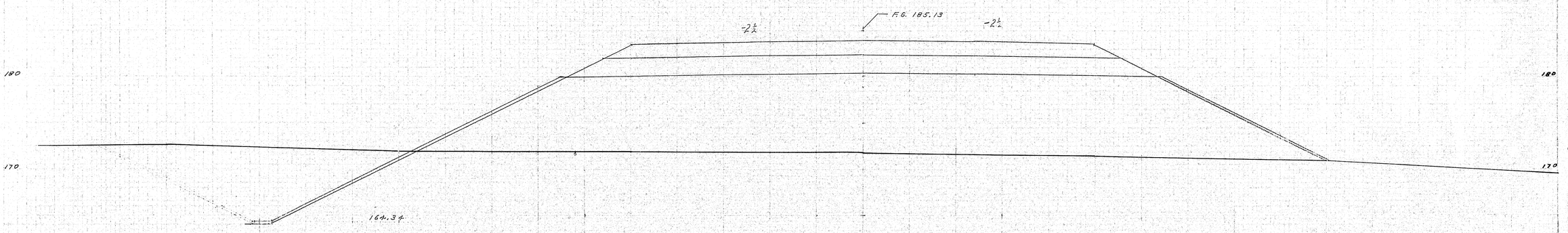
℄

ZERO SECTION
2018+00 (End Project)



2017+50

Use Jute Matting
From Sta 2017+50 ±
to Sta 2016+50 ±



2017+00
℄

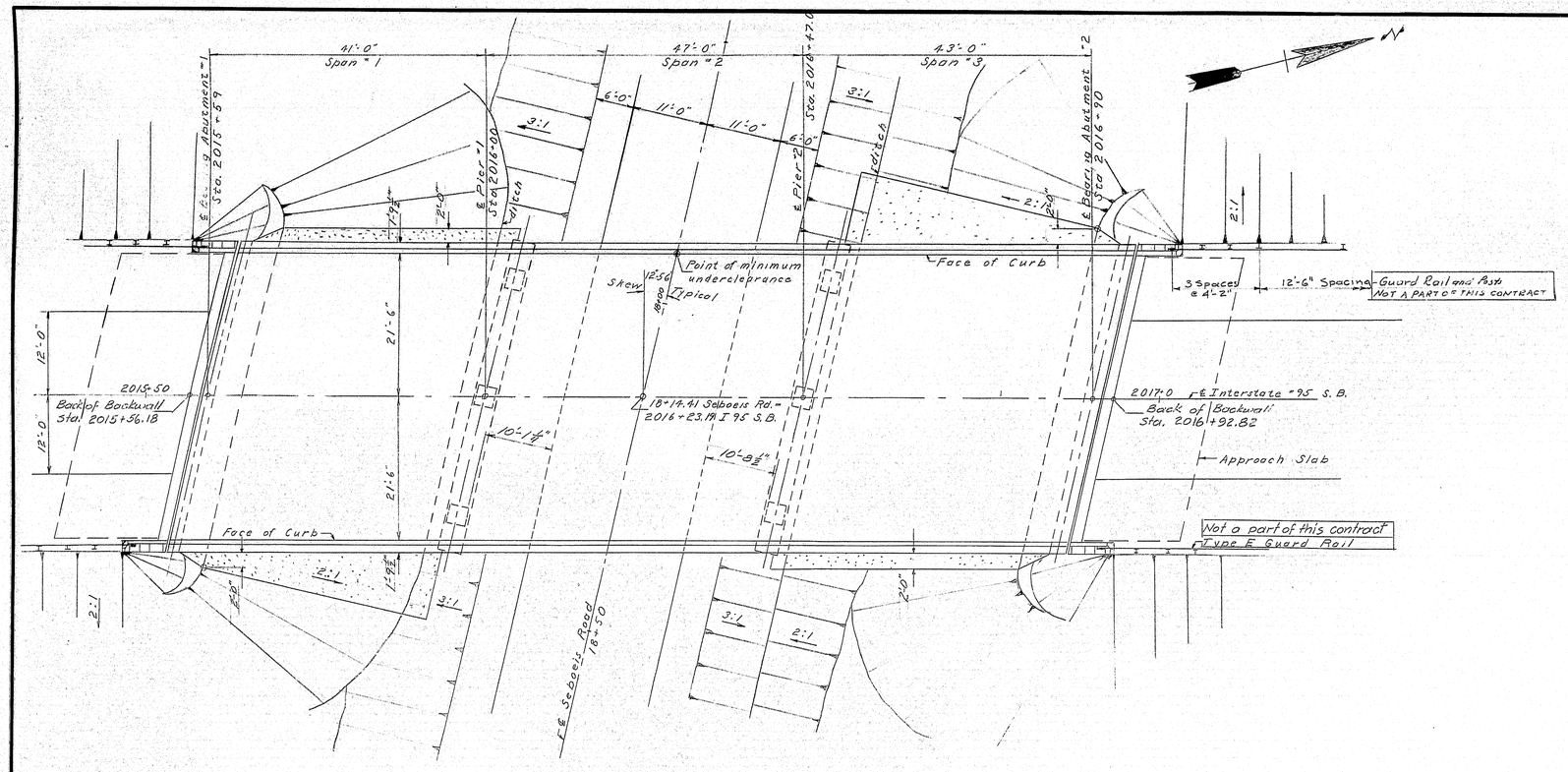
STATIONS 2017+00 → 2018+00

PLOT P.J.L.
CHECK Harris

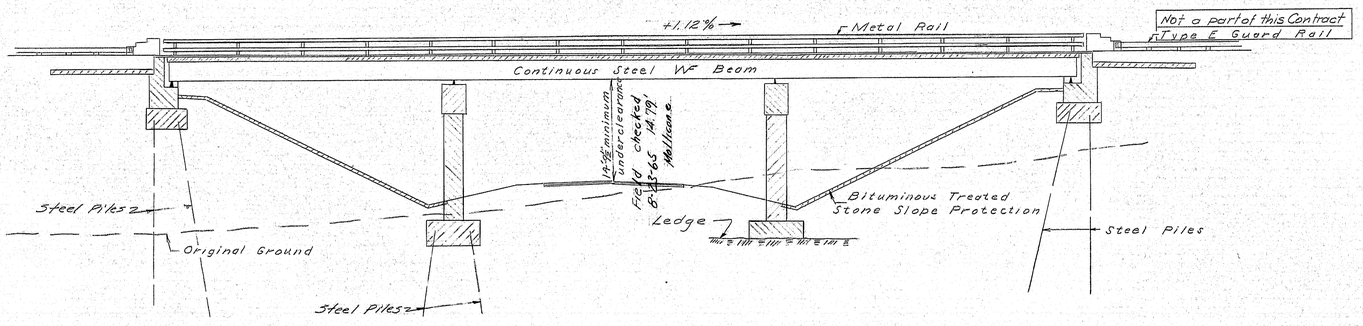
INTERSTATE 95 HOWLAND SHEET 26 OF 47

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	27	47



PLAN
Scale 1" = 10'



SECTION ON ℄ INTERSTATE
Scale 1" = 10'

CONCRETE CLASSIFICATION

All concrete shall be Class "A"

ALLOWABLE STRESSES

Concrete - f_c = 1200 p.s.i., n = 10
Reinforcing Steel, Intermediate Grade - f_s = 20,000 p.s.i.
Structural Steel, A36 - f_s = 20,000 p.s.i.
Point Bearing Steel Piles - f_s = 6,000 p.s.i.

SPECIFICATIONS

Design: AASHO Standard Specifications for Highway Bridges 1961 with Interim Specifications 1961, 1962, 1963, 1964.
Construction: State of Maine, State Highway Commission, Standard Specs, Highways and Bridges Revision of January 1956 and Supplemental Specifications February 1960.
Loading: HS 20-44 Modified for Interstate

DESIGN- T.H.K.
TRACE- DET. D.L.G
CHECK- Harris

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY

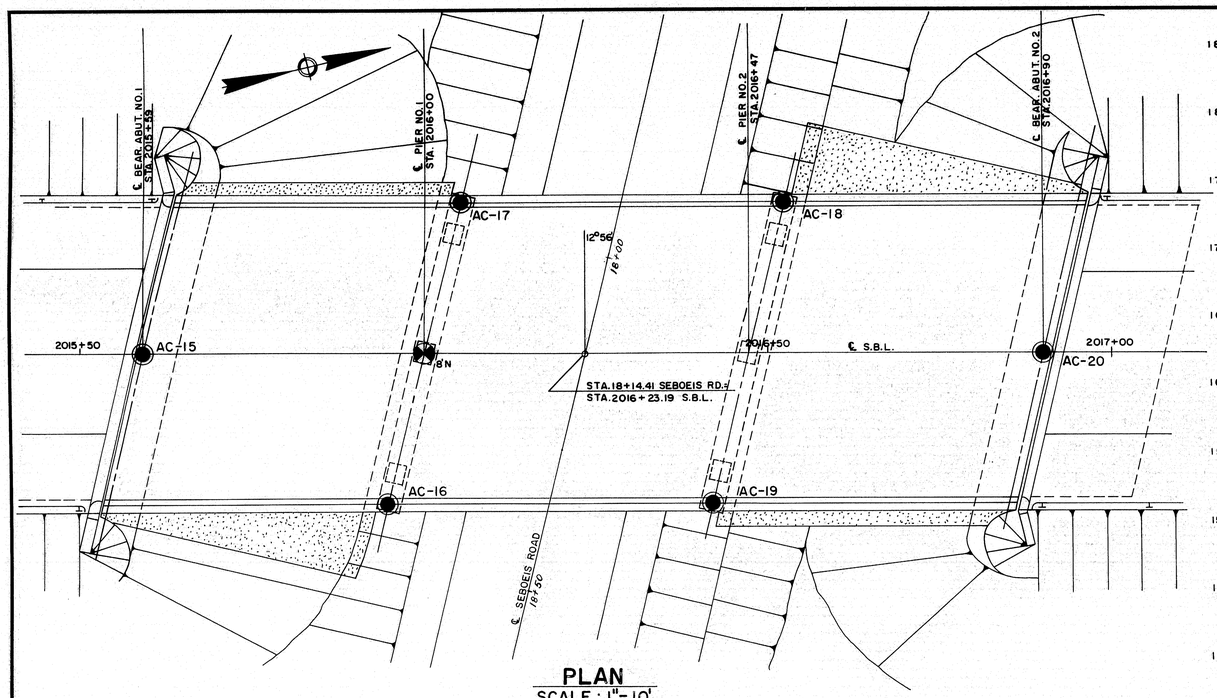
GENERAL PLAN & ELEVATION

SHEET 27 OF 47 AUGUSTA, MAINE SEPT. 1964

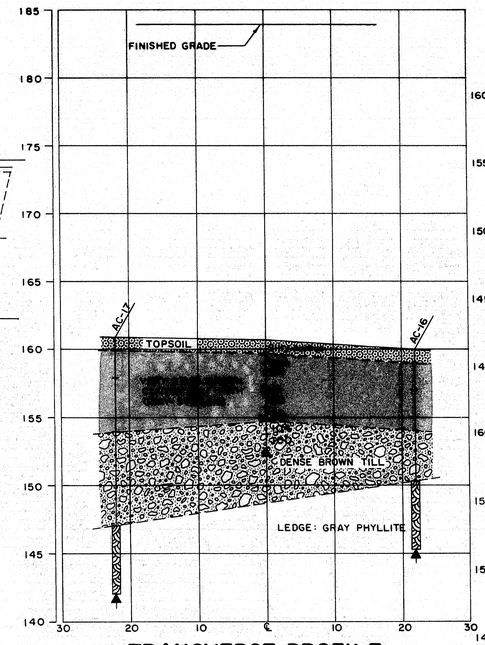
96-41

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	28	47

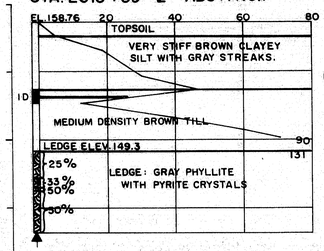


PLAN
SCALE : 1" = 10'

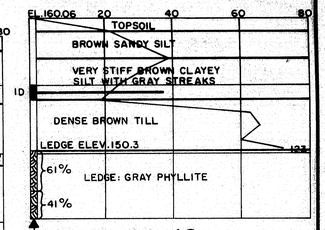


TRANSVERSE PROFILE
STA. 2016+00 PIER NO. 1

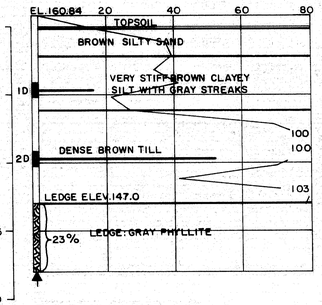
BORING AC-15
STA. 2015+59 ℄ ABUT. NO. 1



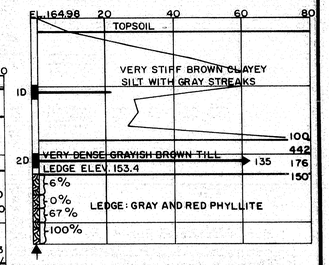
BORING AC-16
STA. 2015+95 22' RT. PIER NO. 1



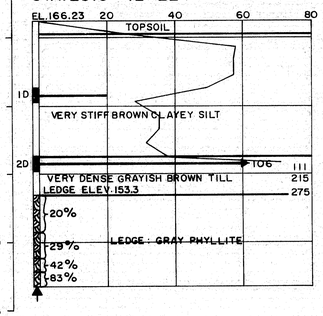
BORING AC-17
STA. 2016+05 22' LT. PIER NO. 1



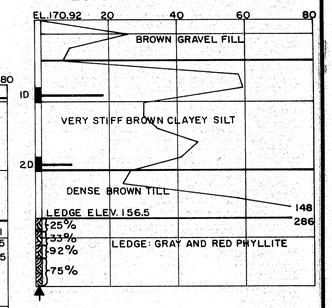
BORING AC-18
STA. 2016+52 22' LT. PIER NO. 2



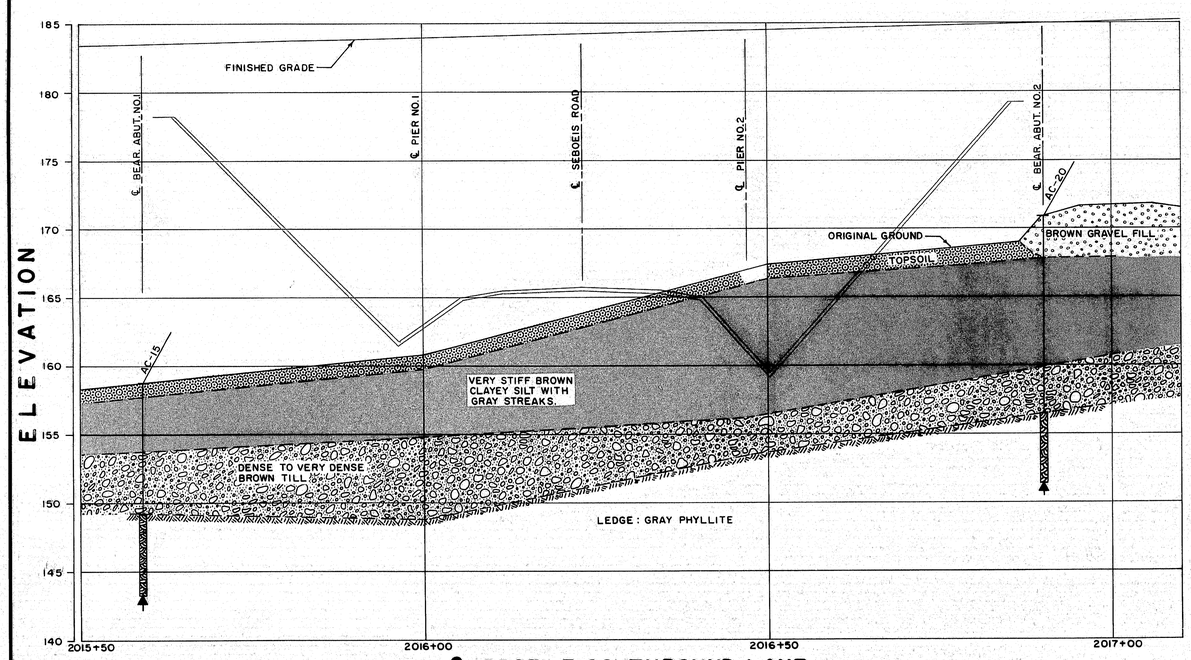
BORING AC-19
STA. 2016+42 22 RT. PIER NO. 2



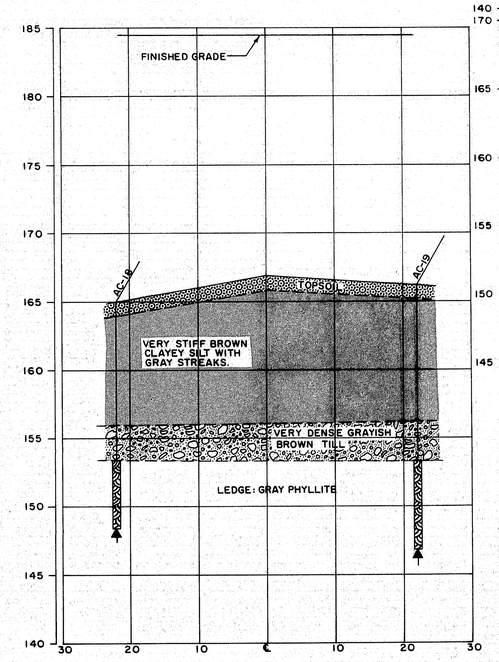
BORING AC-20
STA. 2016+90 ℄ ABUT. NO. 2



Note:
The till is a mixture of gravel, silt and sand.
The phyllite ledge has a high angle foliation and calcite veins.



℄ PROFILE SOUTHBOUND LANE



TRANSVERSE PROFILE
STA. 2016+47 PIER NO. 2

BORING NOTES

Casing size 2 1/2"
All samples are 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.
Number and type of dry sample.
ID S & H Sampler No. 1290's
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)
Locations cored by diamond bit and per cent recovery of rock.

DESIGN– TRACE– CHECK– } Soils Division
BRIDGE NO. SURVEY– PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
FOUNDATION SURVEY

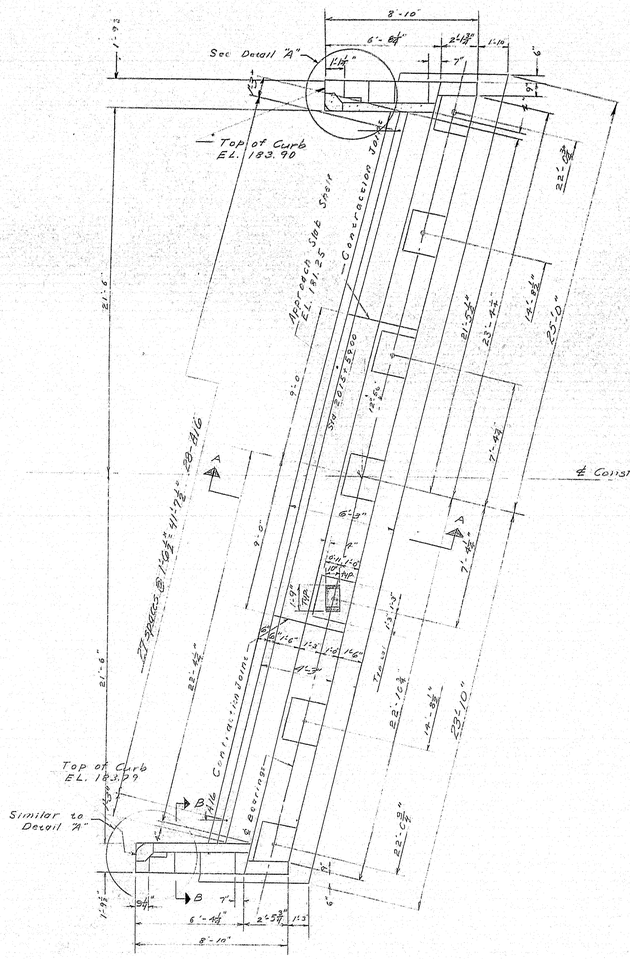
SHEET 28 OF 47 AUGUSTA, MAINE

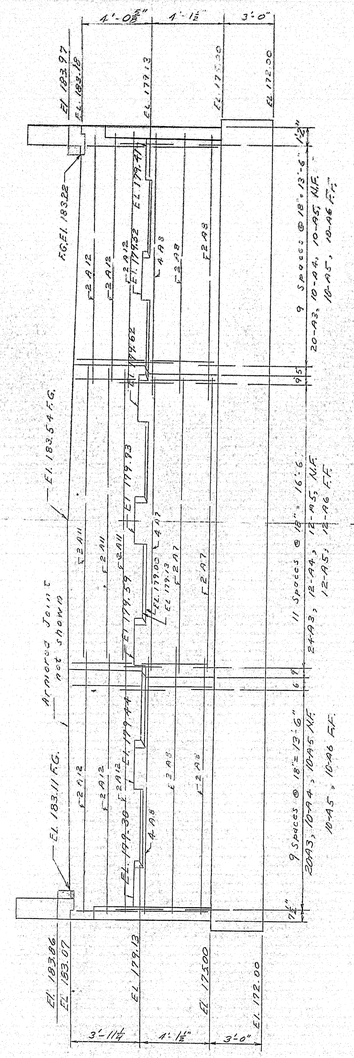
96·42

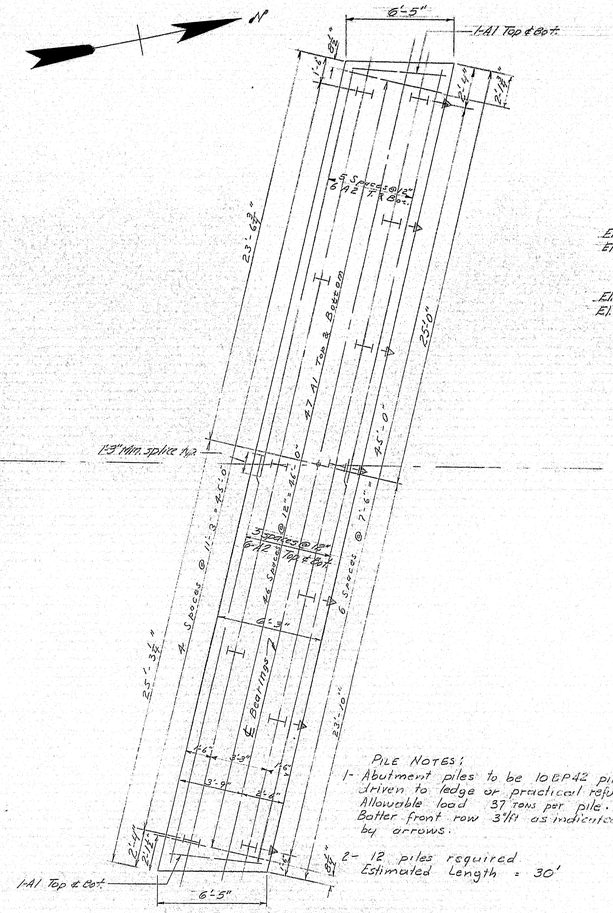
C. B. CO., NO. 44-131 39788

0 1 2 3 4 5 INCHES

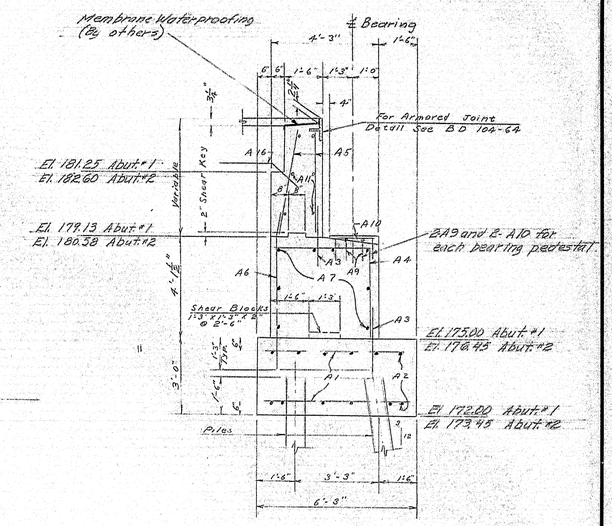
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	29	47







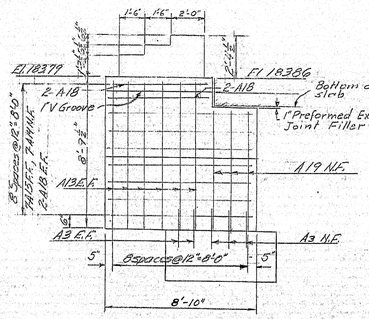
PILE NOTES:
1- Abutment piles to be 10BP42 piles driven to ledge or practical refusal. Allowable load 37 tons per pile. Batter front row 3:1 ft as indicated by arrows.
2- 12 piles required
Estimated Length = 30'



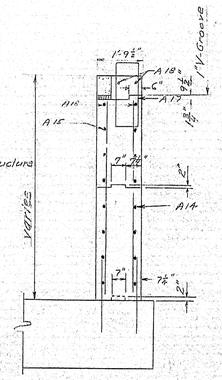
GENERAL ABUTMENT NOTES

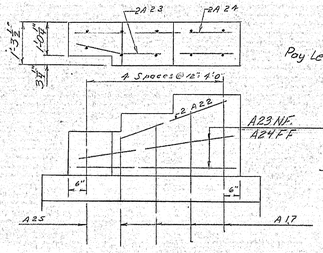
1. Paint bridge seat, face of backwall, and 1'-0" below top of slope paving on face of breastwall with Grey Epoxy Resin Surface Sealant.
2. Cover the back side of contraction joints with two layers of heavy roofing 10" wide bonded to concrete and to each other with a suitable grade of roofing cement. Recess area to be covered ¼". Coat surface of joint with asphalt paint to break bond.
3. Reinforcing cover 3" unless noted.
4. Backwalls and Wingwalls are to be built after Structural Steel has been erected and bottom of slab elevations established.
5. Bush bearing areas to exact elevations shown and 1" larger all around than dimensions of bearing plates.

N. F. = Near Face
F. F. = Far Face
E. F. = Each Face
F. G. = Finished Grade.



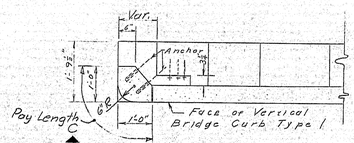
Reinforcing Steel typical for all wings

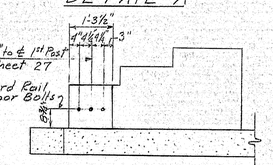




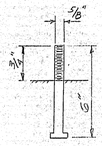
Payment for concrete in post to be made under Item 701-33, "Portland Cement Concrete, Abutments and Ret. Walls."

END POST DETAIL





All Vertical Bridge Curb Type 1 to be paid for under Item 901-24



ANCHOR BOLT (Structural Steel)

3 Required each end post.
Galvanized with nut & washer

Guard Rail anchor bolts shall be furnished and installed under this contract. Payment to be incidental to contract items.

Splice holes in Guard Rail beam shall be plugged with galvanized button head bolts
NOT A PART OF THIS CONTRACT.

DESIGN- T.H.K.
TRACE- DET. D.L.G.
CHECK- A.P.P.

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
ABUTMENT #1

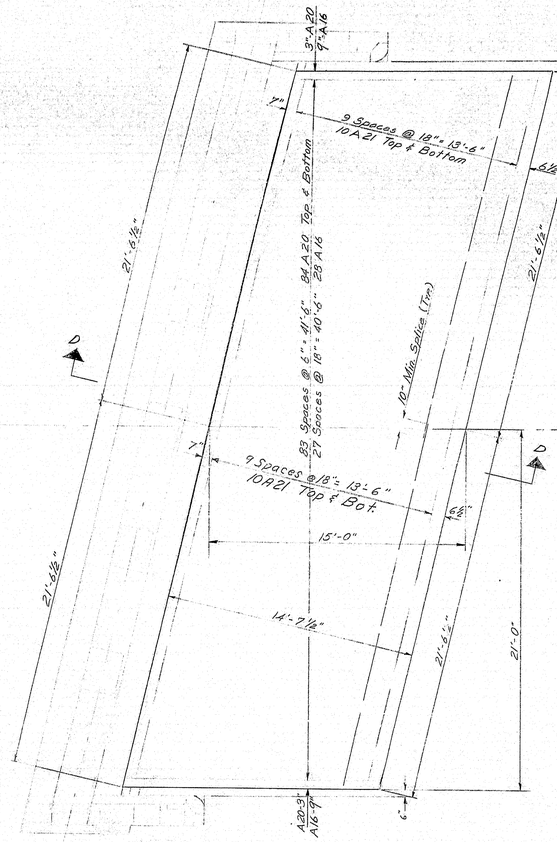
SHEET 29 OF 47 AUGUSTA, MAINE SEPT 1964

96-43

0 1 2 3 4 5 INCHES

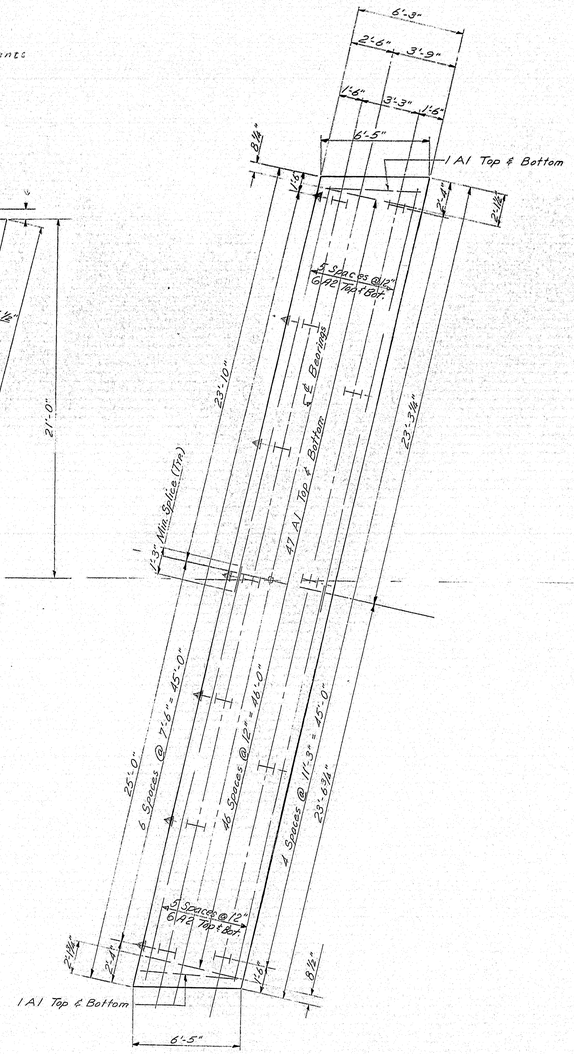
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-B(59)	30	47

NOTE: Approach Slab concrete to be paid for under Item 701-33 Portland Cement Concrete Abutments and Retaining Walls.

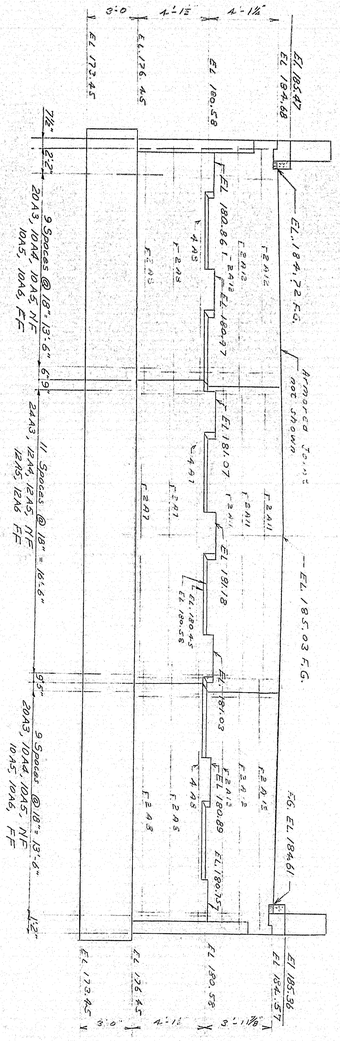


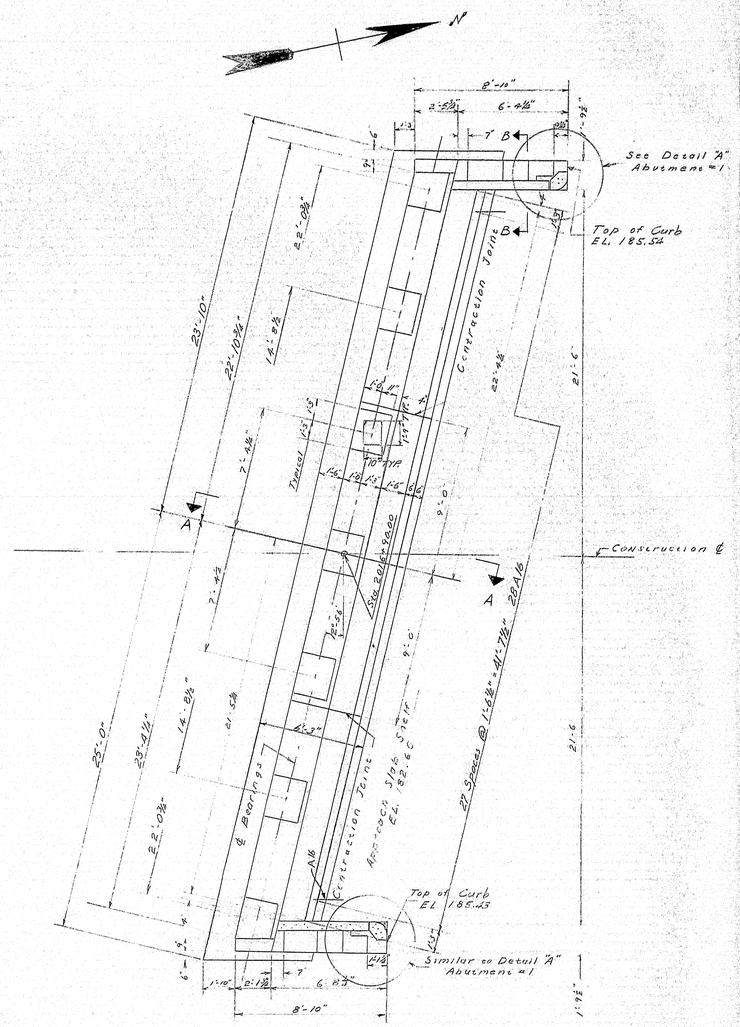
APPROACH SLAB

Abutment #2 shown ~ Abutment #1 similar



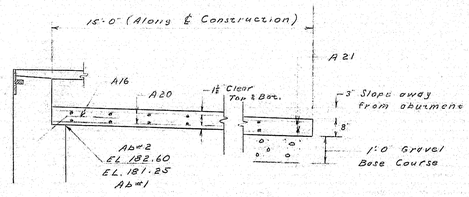
PILE AND FOOTING PLAN





PLAN

For Wingwall reinforcement, Section A-A, B-B, Detail "A" and End Post Detail: see sheet 29



SECTION D-D

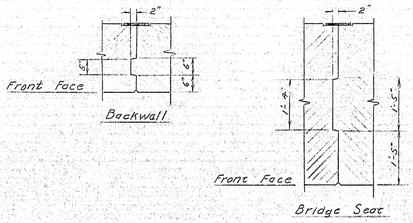
PILE NOTES

1. Abutment piles to be 10 BP 42 piles driven to ledge or practical refusal. Allowable load 37 tons per pile. Batter front row 3/ft. as indicated by arrows.

2. 12 piles required
Estimated length = 24'

GENERAL ABUTMENT NOTES

SEE SHEET 29



CONTRACTION JOINT SHEAR KEY

- TYPICAL BOTH ABUTMENTS -

DESIGN- T.H.K.
TRACE- DET. D.L.G.
CHECK- A.B.P.

BRIDGE NO.
SURVEY-
PLOT-

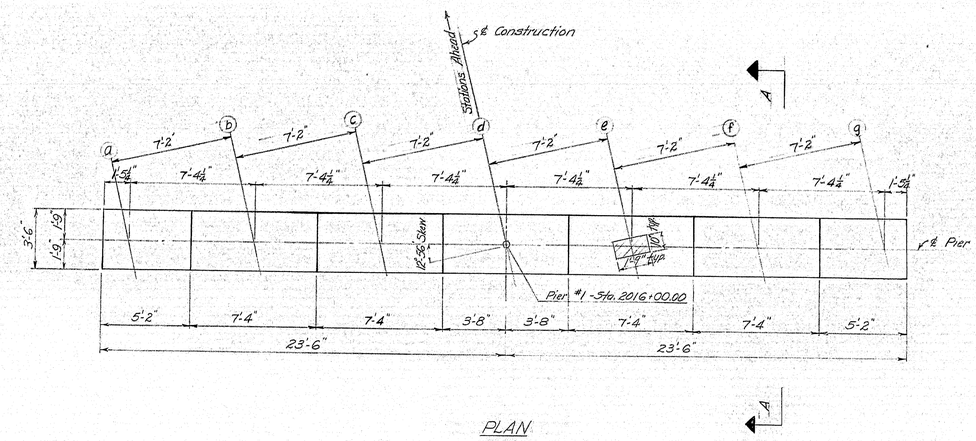
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
ABUTMENT #2

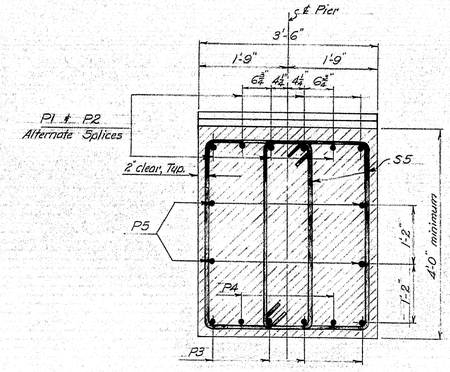
SHEET 30 OF 46 AUGUSTA, MAINE SEPT. 1964

96-44

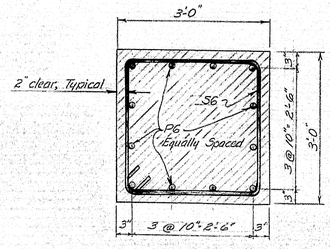
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(39)	31	47



PLAN

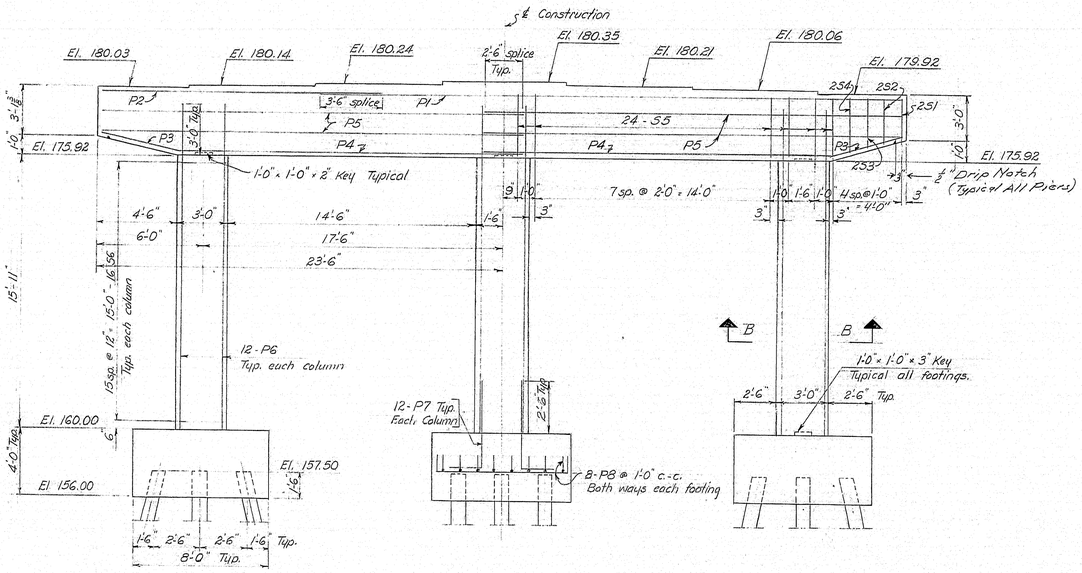


SECTION A-A



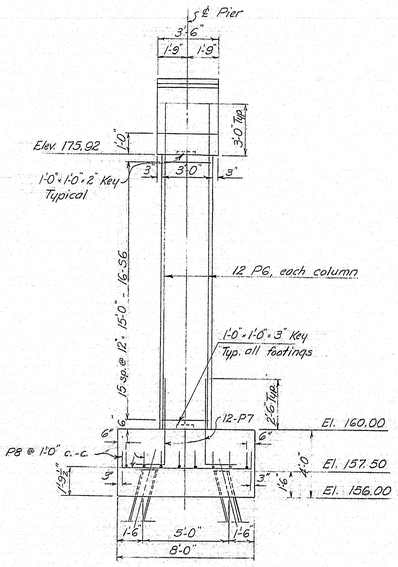
SECTION B-B

NOTE: Alternate location of splices Bar P1 to Bar P2.

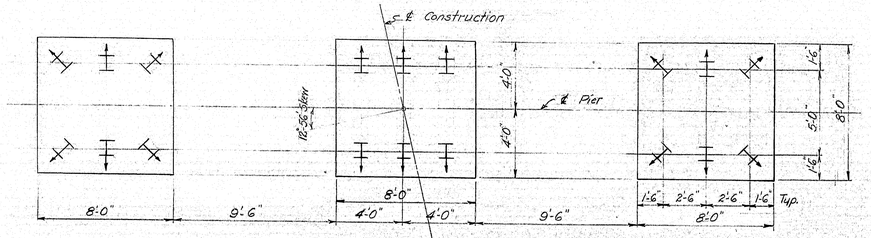


SIDE ELEVATION

Pier symmetrical about ℄ Construction except as noted.



END ELEVATION



PILE PLAN

PIER NOTES:
1. Bush bearing areas to exact elevations shown 1" larger all around than dimensions of bearing plates.
2. Place reinforcing steel in cap to clear anchor bolts.
3. Chamfer all exposed edges of concrete ½".

PILE NOTES:
1. Piles to be 10BP42, 18 required.
2. Maximum pile load = 37 tons.
3. Piles to be driven to ledge or practical refusal.
4. Estimated pile length = 15'.
5. All piles to be battered 2½" in direction indicated thus: ⊢⊣→.

DESIGN– T.H.K.
TRACE– F. Foster
CHECK– A.B.P.

BRIDGE NO.
SURVEY–
PLOT–

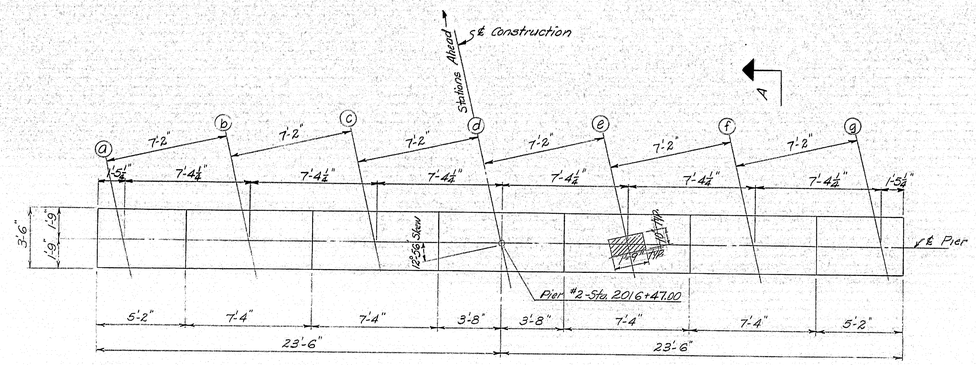
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
PIER NO. 1

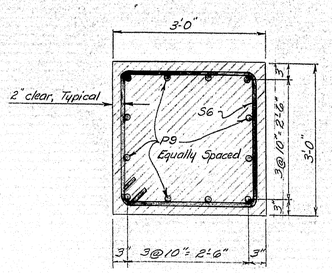
SHEET 31 OF 47 AUGUSTA, MAINE SEPT. 1964

96-45

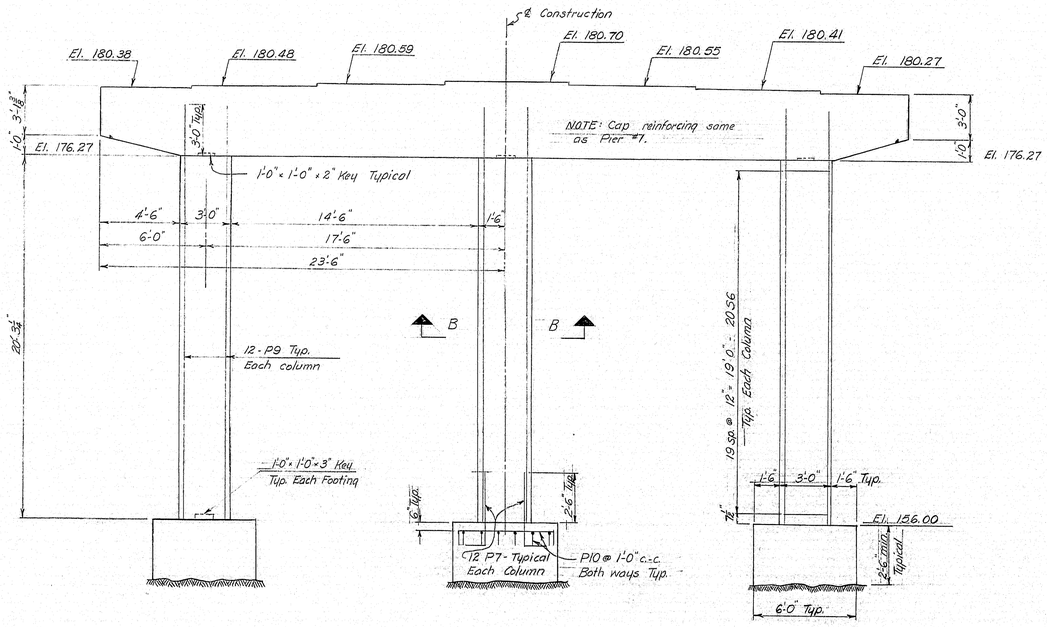
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(69)	32	47



PLAN

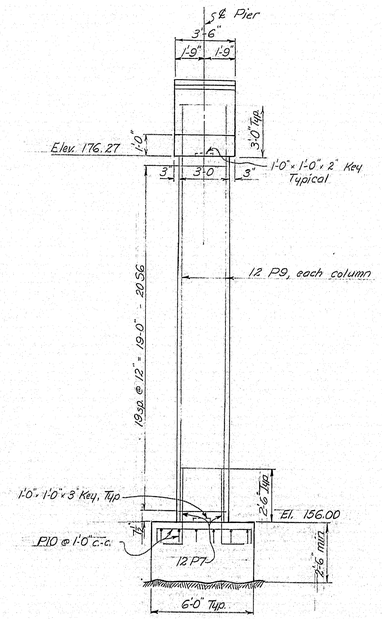


SECTION B-B



SIDE ELEVATION

Pier symmetrical about ℄ Construction except as noted.



END ELEVATION

NOTES:

1. For Pier Notes and Section A-A see Sh. 31.
2. For cap reinforcement see Sh. 31.
3. Maximum footing pressure = 8.5 tons/ft².
4. The elevation of the top of the footing may be raised to maintain the minimum depth of 2'-6" above the existing ledge surface.

DESIGN- T.H.K. TRACE- F. Foster CHECK- H.B.P. PLOT-	BRIDGE NO. SURVEY-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

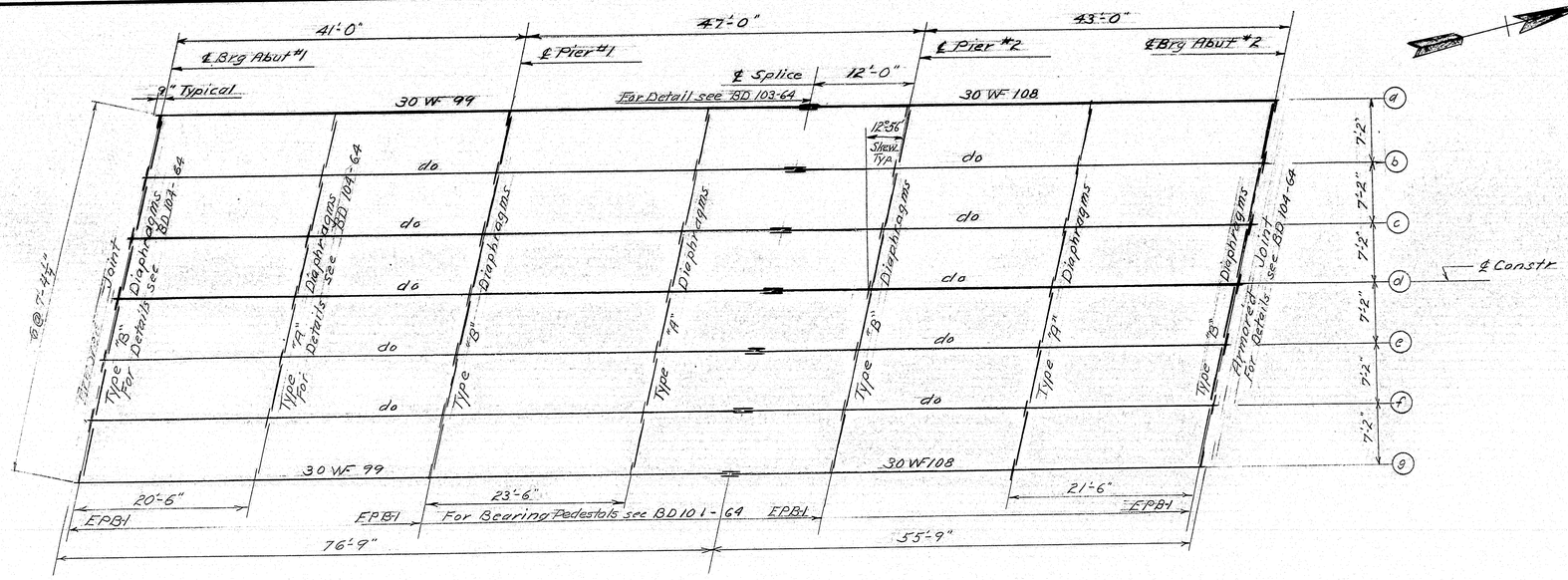
INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
PIER NO. 2

SHEET 32 OF 47 AUGUSTA, MAINE SEPT 1964

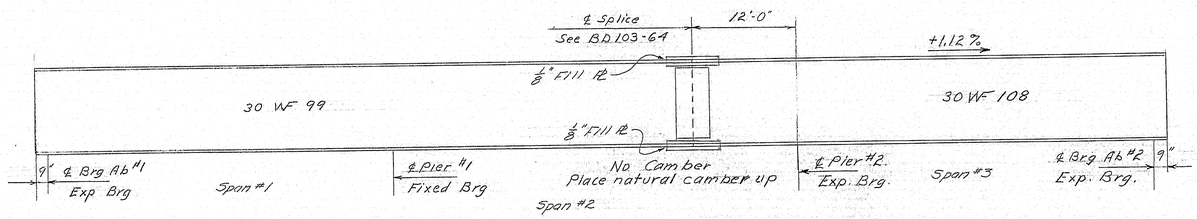
96-46

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(39)	33	47



ERECTION DIAGRAM



TYPICAL GIRDER ELEVATION

SPECIFICATIONS

Fabrication and Erection: State of Maine, State Highway Comm. Standard Specifications Highways and Bridges, Revision of January 1956 and Supplements, Feb. 1960.

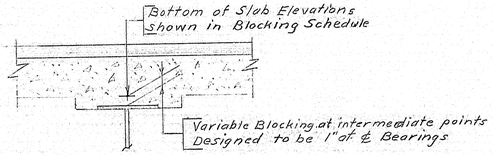
Design and Detail: A.A.S.H.O. Standard Specifications of 1961 and Interim Specifications 1961, 1962, 1963 & 1964.

Materials: Beams shall conform to A.S.T.M. designation A-36. Other members shall conform to A.S.T.M. designation A-36, unless otherwise [illegible] Details.

BLOCKING SCHEDULE

Beam Line	℄ Brg Abut #1	Span One 1/4 Point	Span One 1/2 Point	Span One 3/4 Point	℄ Pier #1	Span Two 1/4 Point	Span Two 1/2 Point	Span Two 3/4 Point	℄ Pier #2	Span Three 1/4 Point	Span Three 1/2 Point	Span Three 3/4 Point	℄ Brg Abut #2
"a"	182.46	182.59	182.71	182.82	182.92	183.06	183.19	183.32	183.45	183.58	183.71	183.83	183.93
"b"	182.57	182.70	182.81	182.92	183.03	183.16	183.30	183.43	183.55	183.69	183.82	183.93	184.04
"c"	182.67	182.80	182.92	183.03	183.13	183.27	183.41	183.53	183.66	183.79	183.92	184.04	184.14
"d"	182.78	182.91	183.03	183.13	183.24	183.38	183.51	183.64	183.77	183.90	184.03	184.14	184.25
"e"	182.64	182.77	182.88	182.99	183.10	183.23	183.37	183.50	183.62	183.75	183.88	184.00	184.10
"f"	182.49	182.62	182.74	182.85	182.95	183.09	183.23	183.35	183.48	183.61	183.74	183.86	183.96
"g"	182.35	182.48	182.60	182.71	182.81	182.95	183.08	183.21	183.34	183.47	183.60	183.71	183.82

Note:- In order to compensate for dead load deflections and normal irregularities in the beams produced in the rolling process, set the blocking to bottom of slab elevation, in table above, at points indicated, before any of the slab forms are started.



BLOCKING DETAIL

8 drains required, see Standard Detail BD 104-64 and sheet 34

DESIGN- THK DETAIL- PJL
TRACE-
CHECK- A.B.P.

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

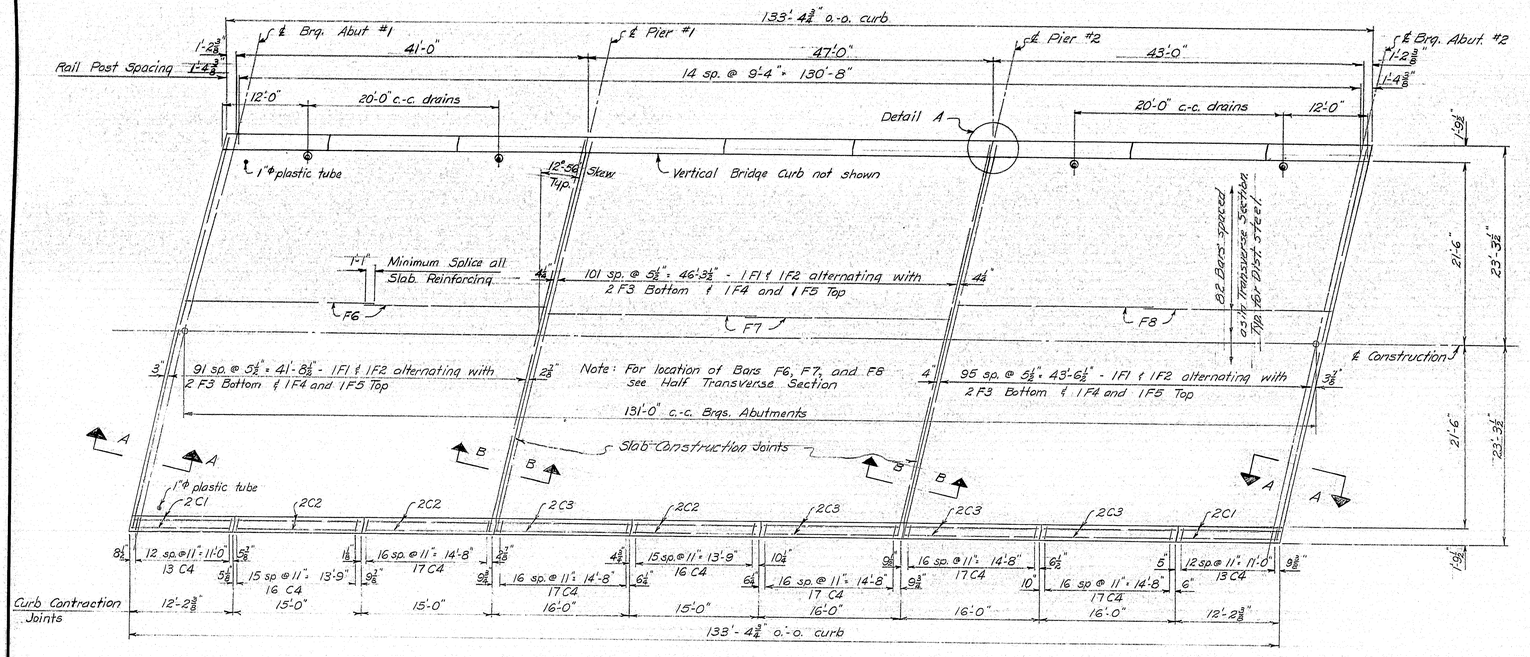
INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
STRUCTURAL STEEL

SHEET 33 OF 47 AUGUSTA, MAINE SEPT. 1964

96-47

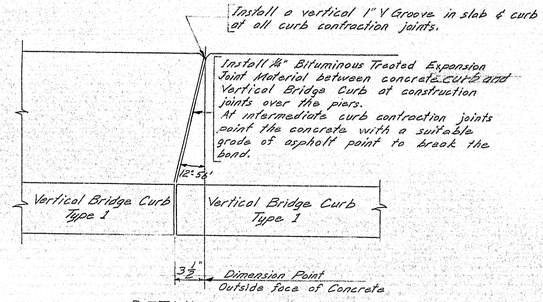
C. S. CO., NO. 44-131 38728

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(59)	34	47



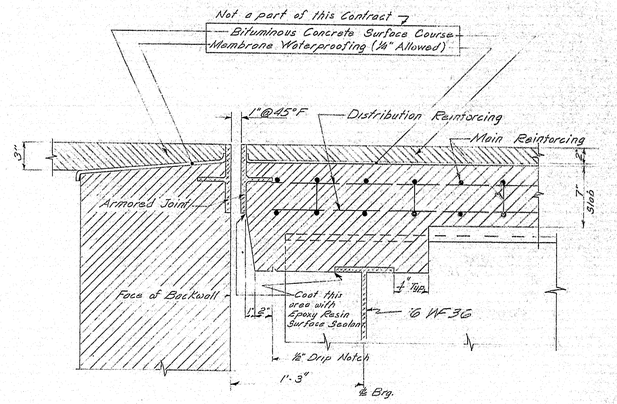
PLAN

Spacing of Rail Posts, Curb Contraction Joints, Curb Reinforcing Steel, and Drains typical both sides of ℄.

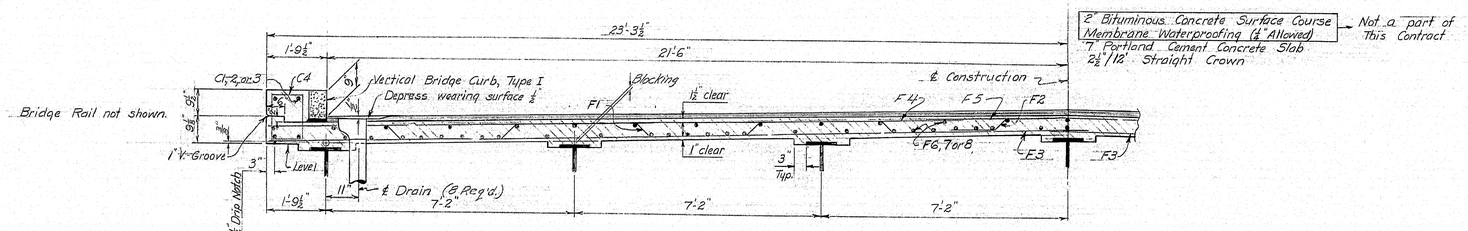


DETAIL "A"

Typical all Curb Joints



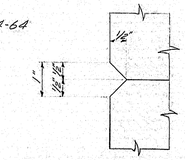
SECTION A-A



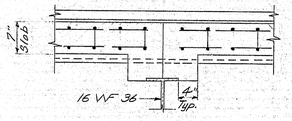
HALF TRANSVERSE SECTION

Structure symmetrical about ℄ Construction

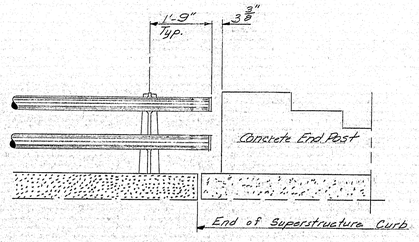
See Standard Detail Sheet BD 107-64 or Standard Detail Sheet BD 108-64 for 2 Bar Bridge Rail and Anchor Bolt Detail and Location.
See Standard Detail Sheet BD 104-64 for Drain Detail.



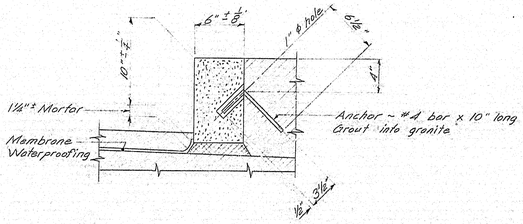
1" V-GROOVE



SECTION B-B



END POST DETAIL



VERTICAL BRIDGE CURB

TYPE I.

Shown with 2" Bituminous Concrete and 1/4" allowed for Membrane Waterproofing.

Provide two 1" φ plastic tube drains as shown on plan. Tube to extend 2" below bottom of slab. Tubes to be placed so that drip clears bridge seat. Do not cover top with membrane waterproofing. Payment to be incidental to Item 701-40, Portland Cement Concrete Roadway and Sidewalk Slabs on Steel Bridges.

DESIGN- THK
TRACE- DET. F.S.F & E.R.A.
CHECK- R.B.R.

BRIDGE NO.
SURVEY-
PLOT-

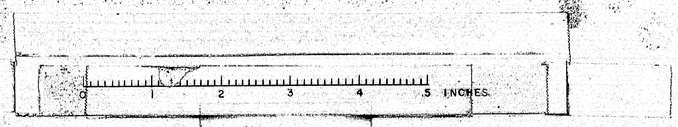
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY

SUPERSTRUCTURE SLAB

SHEET 34 OF 47 AUGUSTA, MAINE SEPT. 1964

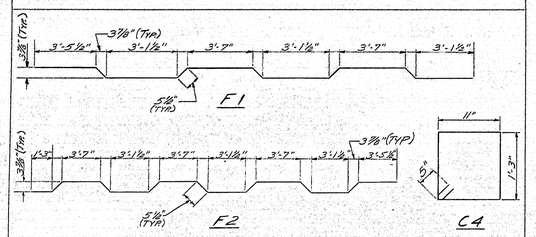
96-48



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(69)	35	47

REINFORCING STEEL SCHEDULE

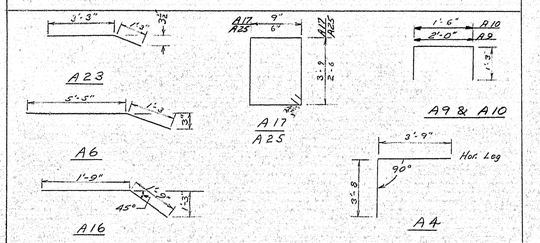
SUPERSTRUCTURE



Mark	Size	Number	Length	Location
BENT BARS				
C4	#5	286	5'-2"	Curbs -
F1	#5	145	22'-4"	Slab - Main Steel
F2	#5	145	28'-0"	Slab " "
STRAIGHT BARS				
C1	#5	8	11'-10"	Curb
C2	#5	12	14'-8"	Curb
C3	#5	16	15'-8"	Curb
F3	#5	290	24'-4"	Slab - Main Steel
F4	#5	145	20'-7"	" " "
F5	#5	145	28'-0"	" " "
F6	#5	164	21'-6"	Slab Distribution Steel
F7	#5	164	23'-11"	" " "
F8	#5	164	22'-6"	" " "

DET. F.F.

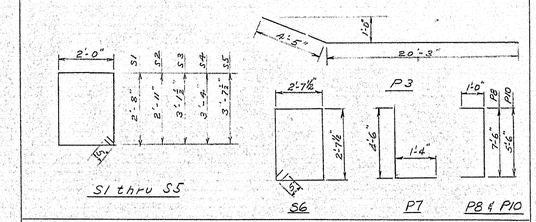
ABUTMENTS 1 & 2



Mark	Size	Number	Length	Location
BENT BARS				
A4	#5	64	7'-5"	Bridge Seat
A6	#5	64	6'-8"	↕
A9	#4	28	4'-6"	
A10	#4	28	4'-0"	Bridge Seat
A16	#6	56	3'-6"	Backwall - Approach Slab
A17	#4	16	9'-9"	Wing wall - End post
A23	#4	8	4'-6"	End post
A25	#4	4	6'-9"	Wingwall - End post
STRAIGHT BARS				
A1	#6	196	5'-9"	Footing
A2	#6	48	24'-10"	Footing - Spliced
A3	#5	156	2'-6"	Dowels
A5	#5	128	3'-5"	Backwall
A7	#5	16	11'-4"	Bridge Seat
A8	#5	32	16'-6"	Bridge Seat
A11	#4	12	17'-4"	Backwall
A12	#4	24	16'-6"	Backwall
A13	#5	48	8'-6"	Wing wall
A14	#5	28	8'-6"	↕
A15	#6	28	8'-6"	
A18	#4	16	6'-0"	
A19	#5	12	7'-0"	Wing wall
A20	#6	336	14'-6"	Approach Slab
A21	#4	80	21'-10"	Approach Slab - Spliced
A22	#4	8	3'-3"	End Post
A24	#4	8	4'-6"	End Post

DET. D.L.

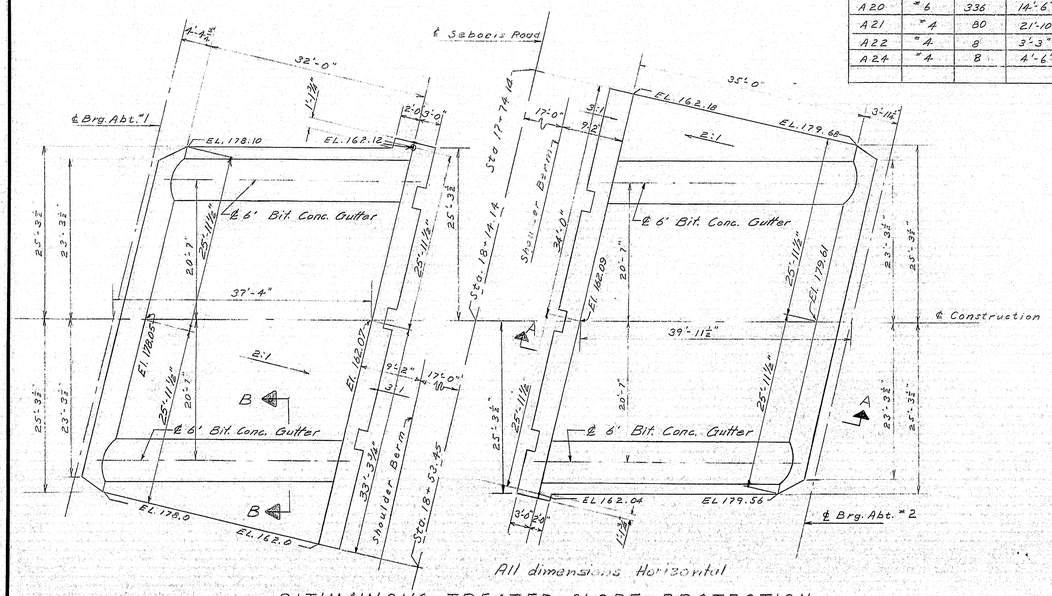
PIERS 1 & 2



Mark	Size	Number	Length	Location
BENT BARS				
P3	#9	16	24'-8"	Bottom - Cap
S1	#5	8	10'-2"	Cap Stirrups
S2	#5	8	10'-8"	↕
S3	#5	8	11'-1"	
S4	#5	8	11'-6"	
S5	#5	96	12'-1"	Cap Stirrups
S6	#4	108	11'-4"	Column Stirrups
P7	#9	72	5'-10"	Footings
P8	#8	48	9'-6"	Footings - Pier #1
P10	#6	36	7'-6"	Footings Pier #2
Straight Curve				
P1	#9	12	33'-10"	Top - Cap
P2	#9	12	16'-4"	Top - Cap
P4	#9	8	20'-3"	Bottom - Cap
P5	#6	16	24'-6"	Sides - Cap
P6	#9	36	18'-11"	Columns - Pier #1
P9	#9	36	23'-3"	Columns - Pier #2

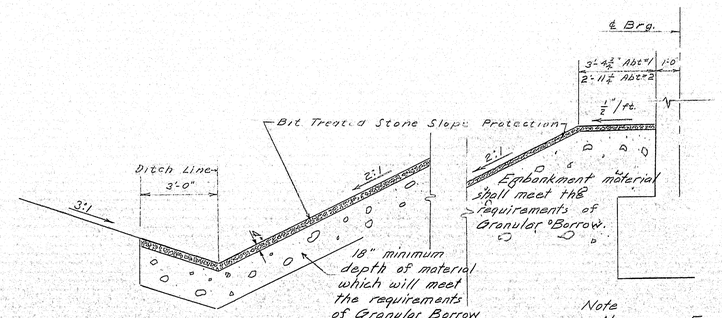
Det. - F. Foster

NOTES:
1. All reinforcing steel to be Intermediate Grade.
2. All dimensions to ℄ bars.



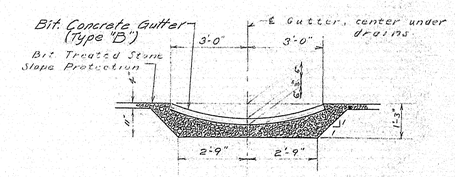
BITUMINOUS TREATED SLOPE PROTECTION

DET. P.L.



SECTION A-A

Note
Necessary Excavation shall be paid for under Item 203-9, Earth Excavation.
Do not excavate for 18" depth under Bituminous Treated Slope Protection if existing material is suitable.



SECTION B-B

Note: Payment for Bit. Treated Stone Slope Protection placed beneath the gutter shall be made at the contract unit price for Item 913-8 "Bit. Treated Stone Slope Protection", per square yard.

DESIGN- T.H.K
TRACE- DET. AS SHOWN
CHECK- A.B.P.
BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
REINFORCING STEEL

SHEET 35 OF 47 AUGUSTA, MAINE SEPT. 1964

96-49

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	36	47

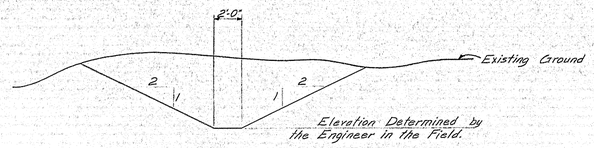
R/W Monuments

Sta.	Lt.	Rt.
2+00.00	50.00'	50.00'
16+75.09	50.00'	
16+97.64		50.00'
21+66.86	50.00'	
22+05.91		50.00'
24+00.00	50.00'	50.00'
P.T. 24+54.31	50.00'	50.00'

Survey Markers

Sta.	Lt.	Rt.
P.C. 20+01.98	50.00'	50.00'

Utility Symbols
- Existing Pole
- Temporary Pole
- Permanent Pole
- Temporary Line
- Permanent Line



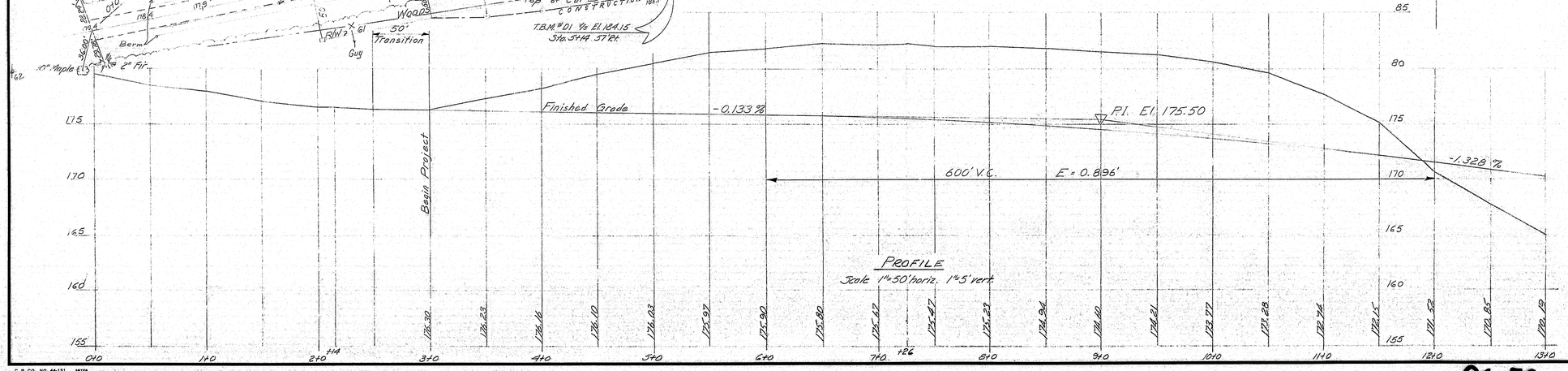
TYPICAL DITCH SECTION
FOR REPLACING EXISTING CULVERTS @ STA. 21+25± & STA. 24+50±

Necessary excavation to be paid for under Item 204-10, Structural Earth Excavation-Drainage.

Existing tar pavement to be removed & area is to be loamed (2" loam) and seeded (Method #2) Sta. 13+0± to Sta. 25+0±.
Pavement removal to be paid per cubic yard under Item 203-9 Earth Excavation.

PLAN
Scale 1" = 50'

Note: The Clearing Pay Lines shall be 5 feet outside and parallel to the construction slope lines, and also as shown on the plans.



PROFILE
Scale 1" = 50' horiz. 1" = 5' vert.

DESIGN–	BRIDGE NO.
TRACE– Harris	SURVEY– Highway
CHECK– W.H.Y. (Line & Grade)	PLOT– Sh. Bornes

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
SURVEY

SHEET 36 OF 47 AUGUSTA, MAINE

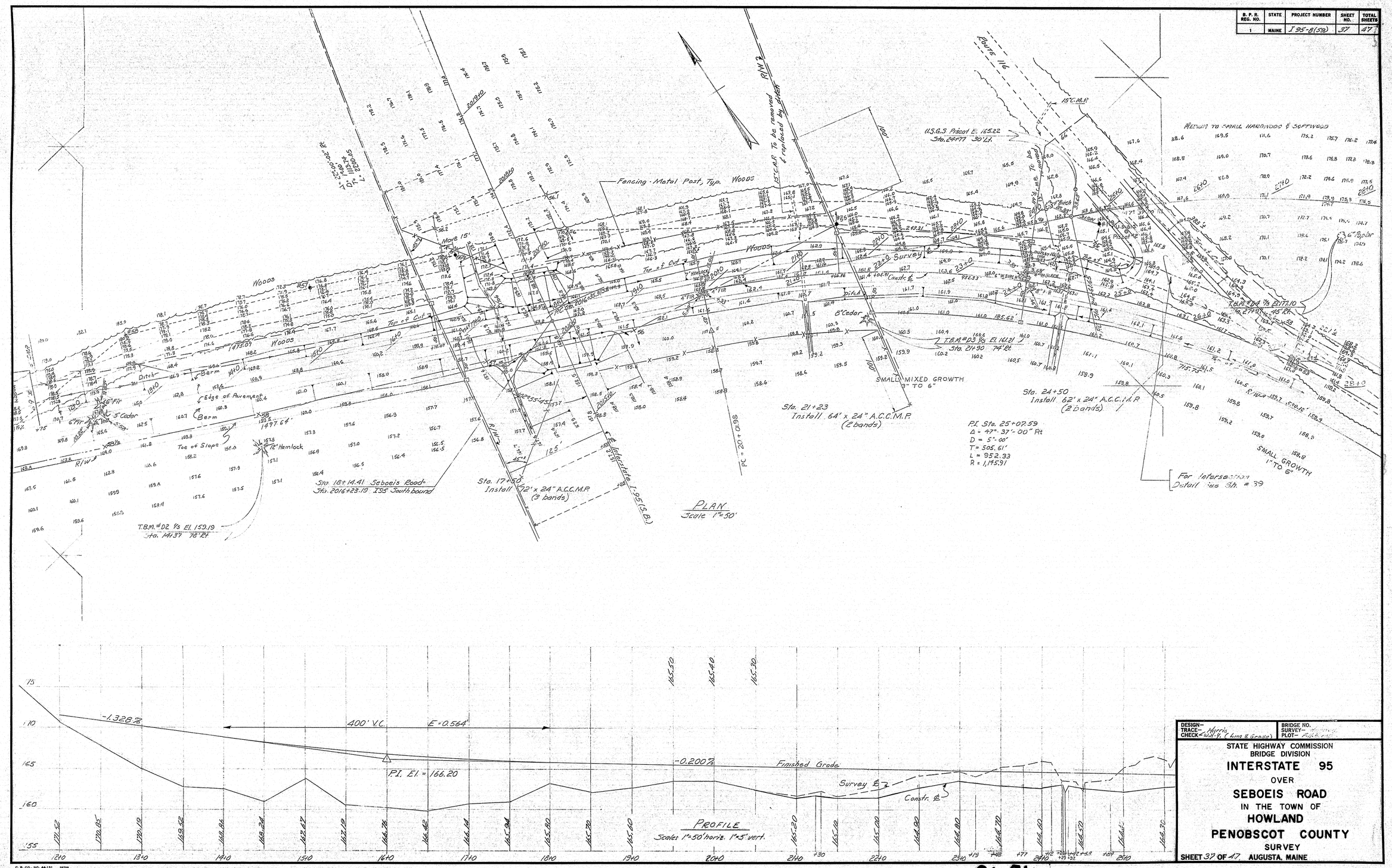
C. B. CO., NO. 44-131

96-50

Seboeis Road - Howland - Survey Sh #1

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	37	47



DESIGN– TRACE– CHECK– Harris Wilt. (Line & Grade)	BRIDGE NO. SURVEY– PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

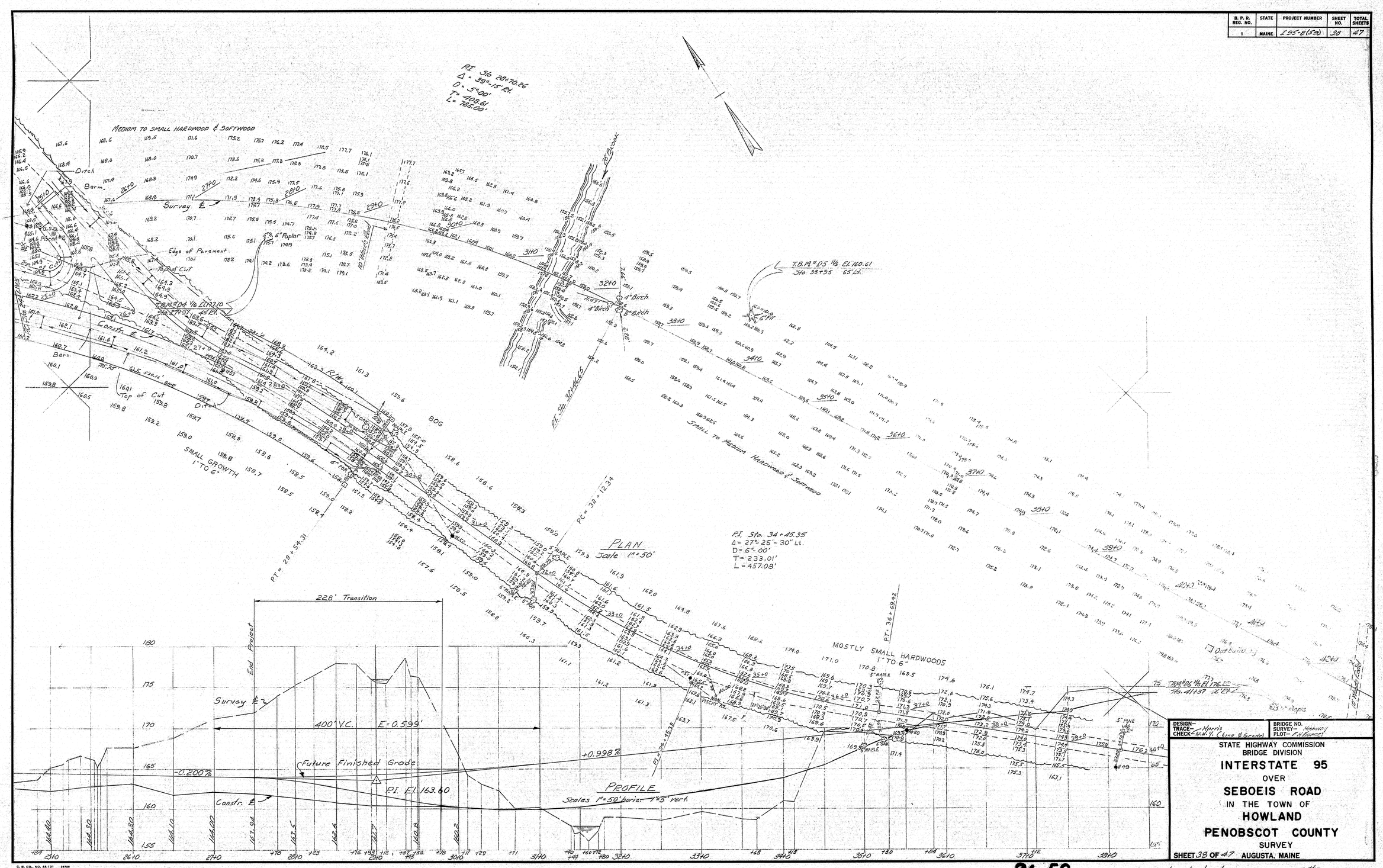
INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
SURVEY

SHEET 37 OF 47 AUGUSTA, MAINE

96-51

Seboeis Road Howland Survey Sh #2

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	38	47



DESIGN– TRACE– Harris
CHECK– W.H.Y. (Line & Grade)
BRIDGE NO.
SURVEY– Highway
PLOT– Fit Barnes

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

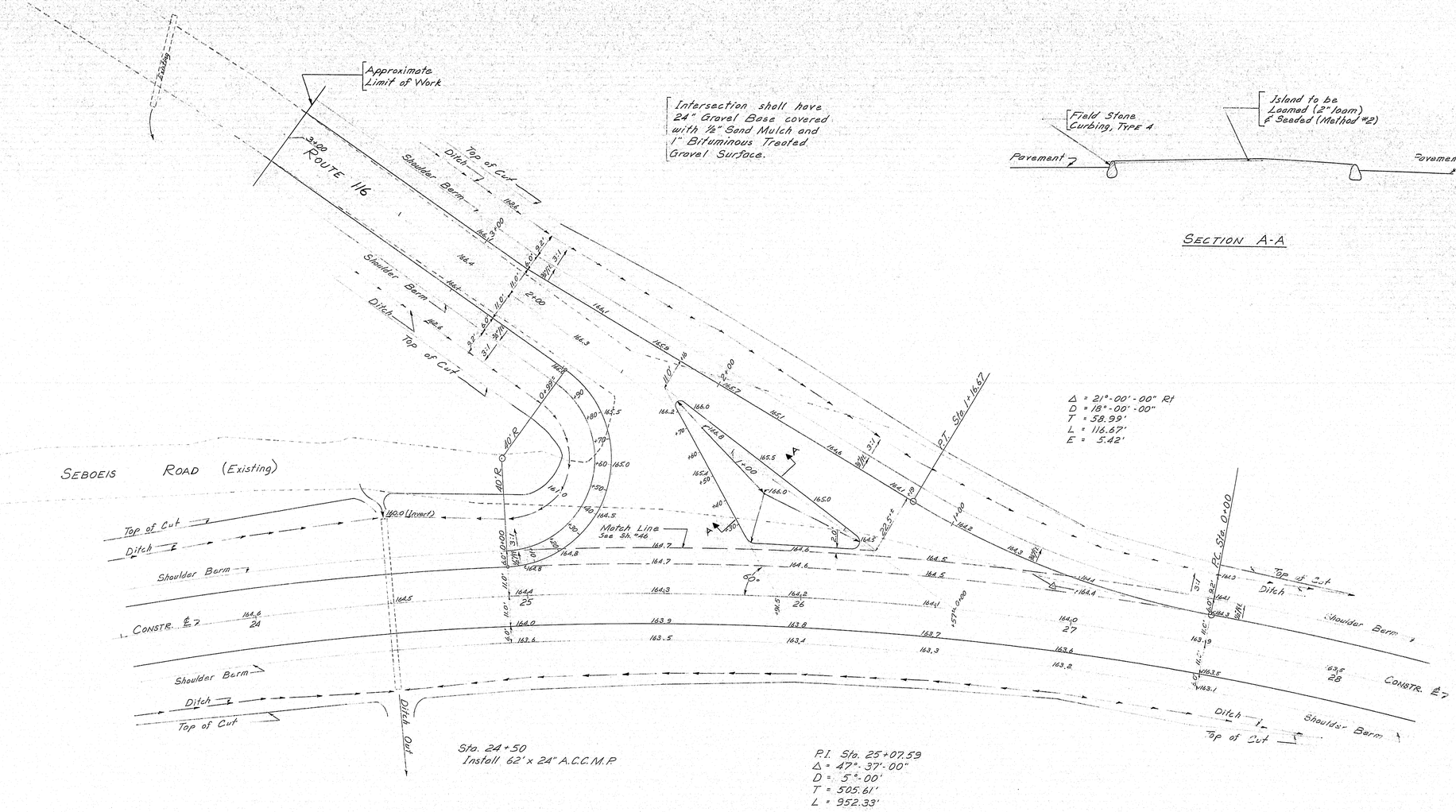
INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
SURVEY

SHEET 38 OF 47 AUGUSTA, MAINE

96-52 Seboeis Road Howland Survey St. #3

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-B(59)	39	47



SECTION A-A

INTERSECTION DETAIL

SCALE: 1" = 20'

Note: Elevations shown are Finished Grades.

DESIGN– E.R.A. TRACE– CHECK– Harris	BRIDGE NO. SURVEY– PLOT–

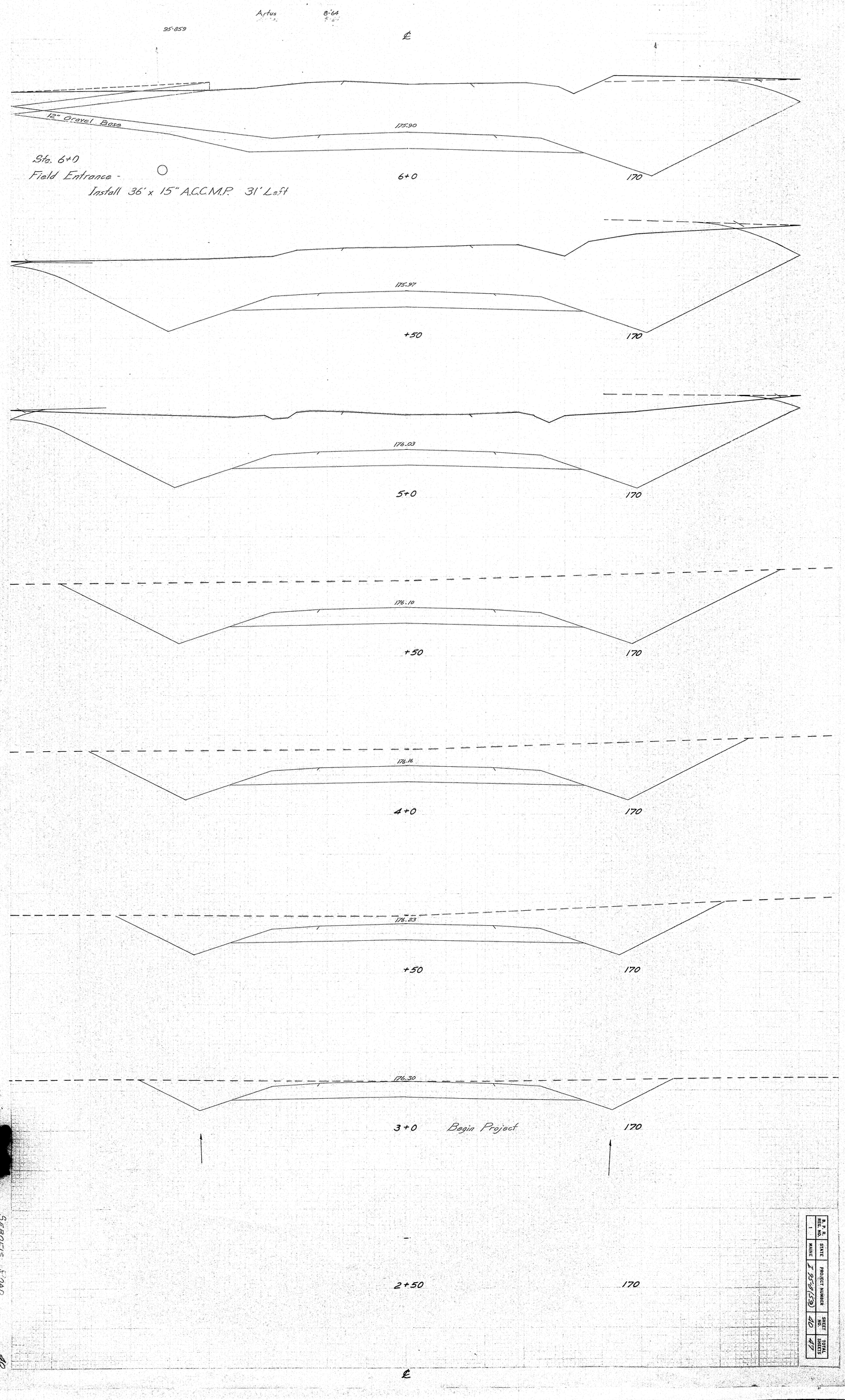
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

INTERSTATE 95
OVER
SEBOEIS ROAD
IN THE TOWN OF
HOWLAND
PENOBSCOT COUNTY
INTERSECTION DETAIL

SHEET 39 OF 46 AUGUSTA, MAINE

96-53

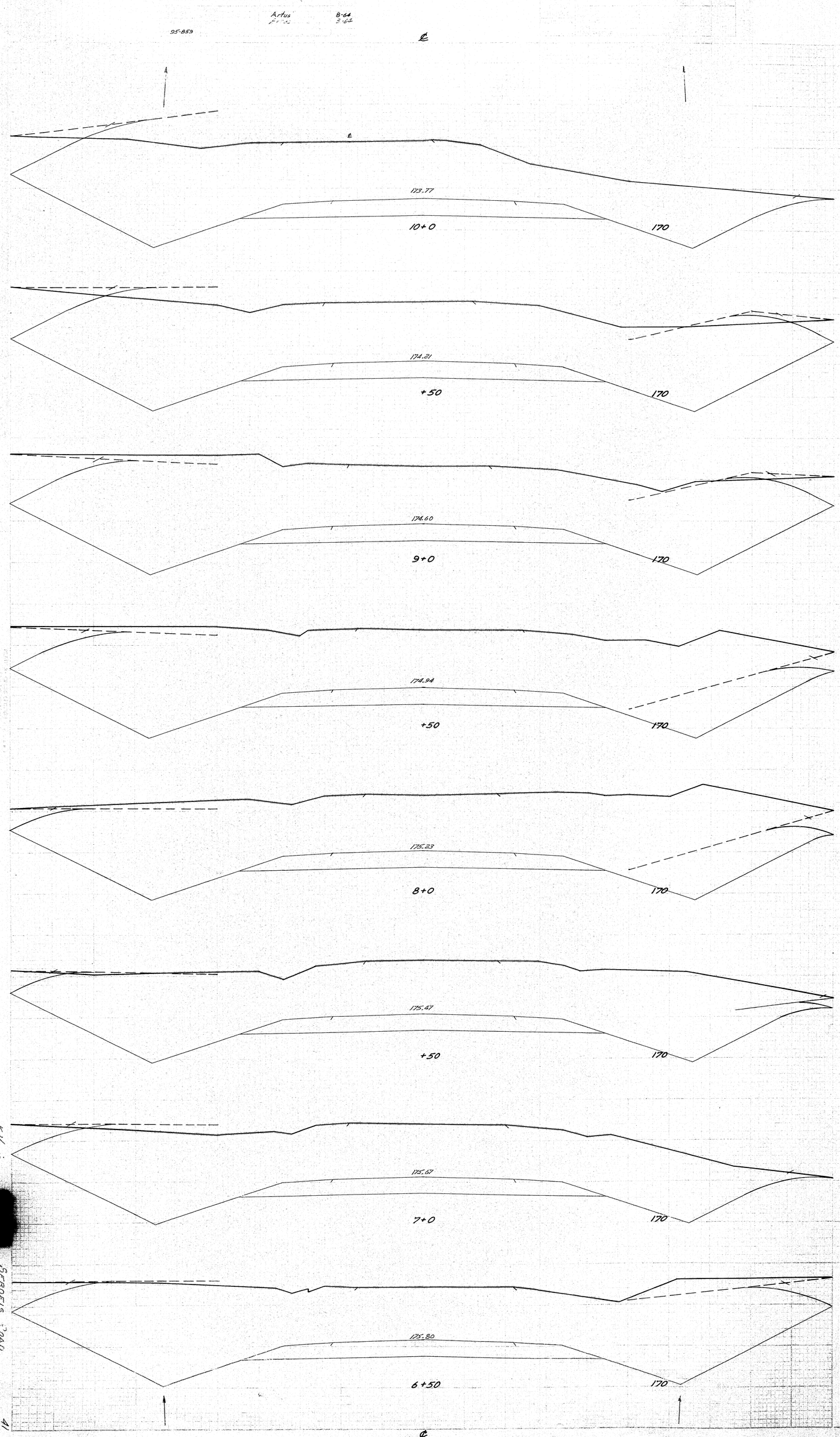
0 1 2 3 4 5 INCHES



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	40	47

SEBOEIS ROAD

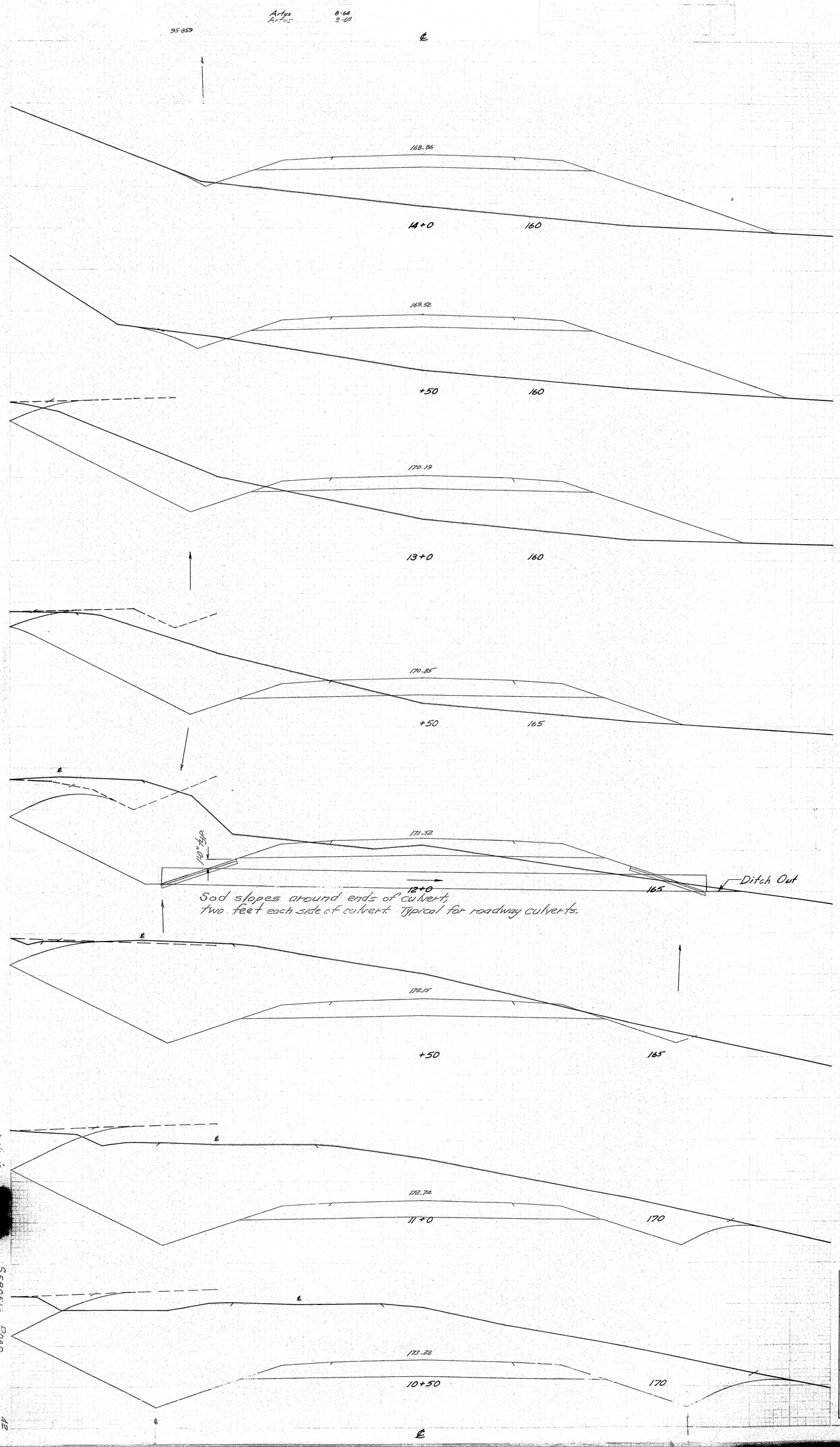
40



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8 (59)	41	47

SEBOEIS ROAD

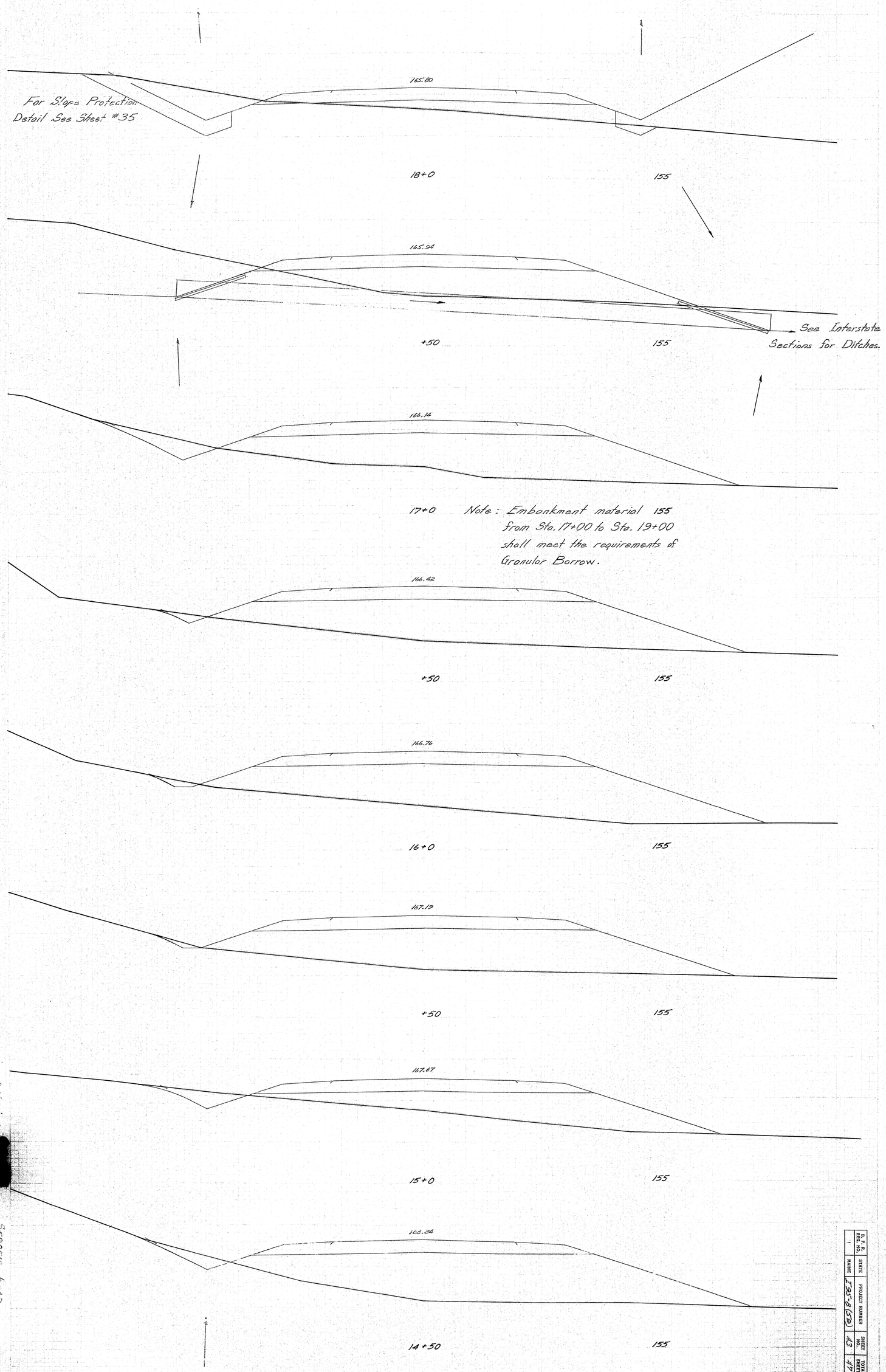
41



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	42	47

SEBOEIS ROAD

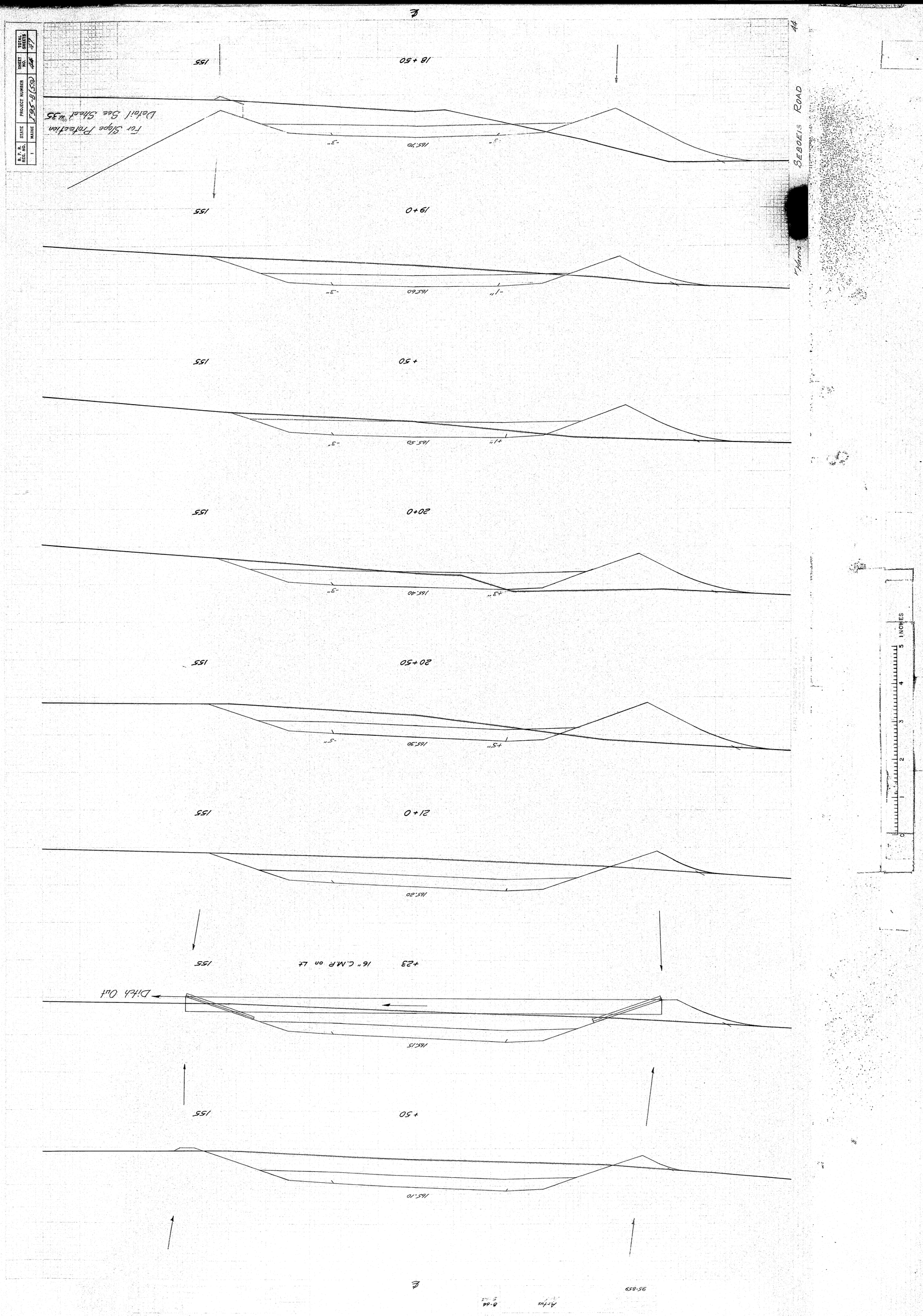
42



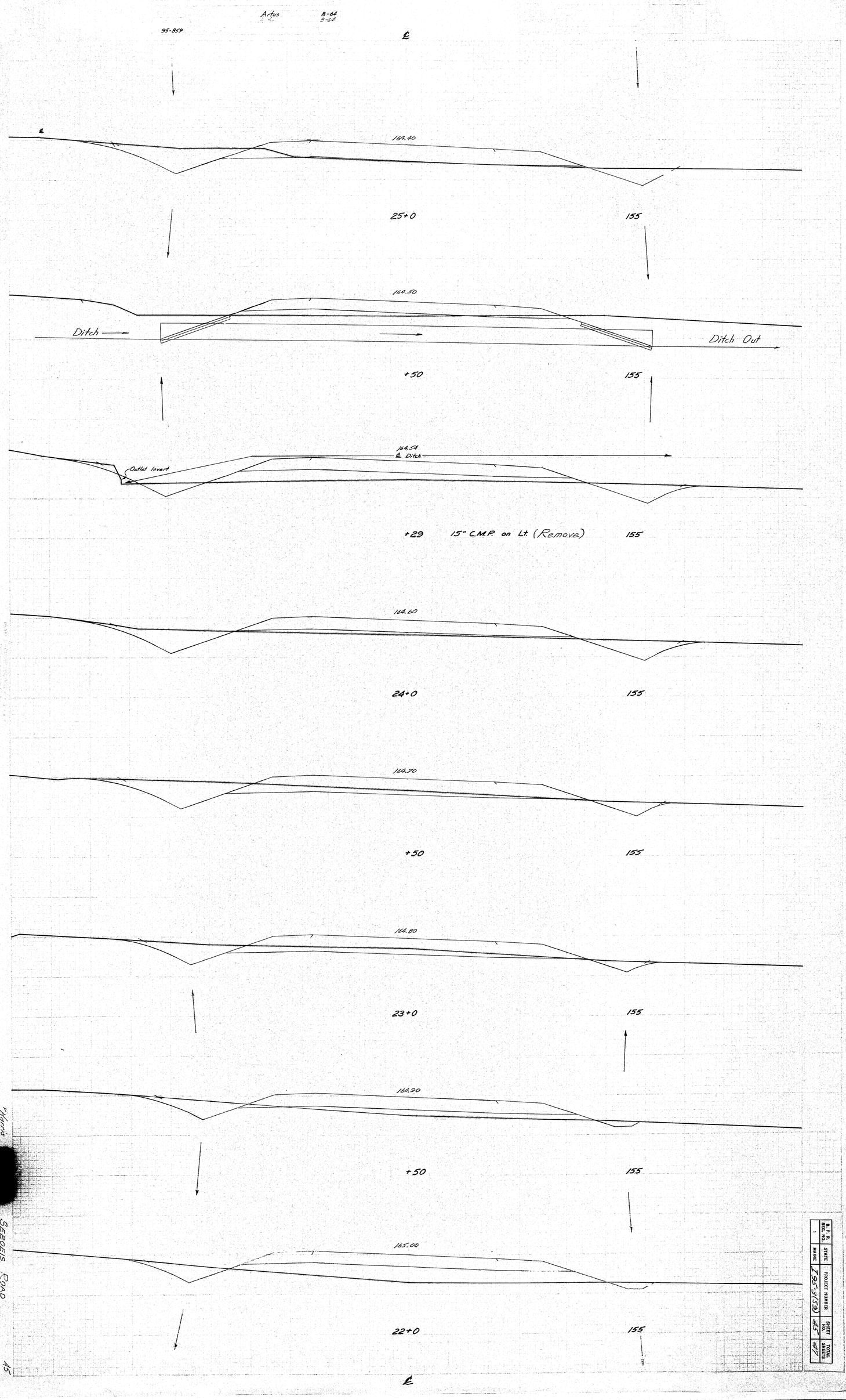
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	43	47

SEBOEIS ROAD

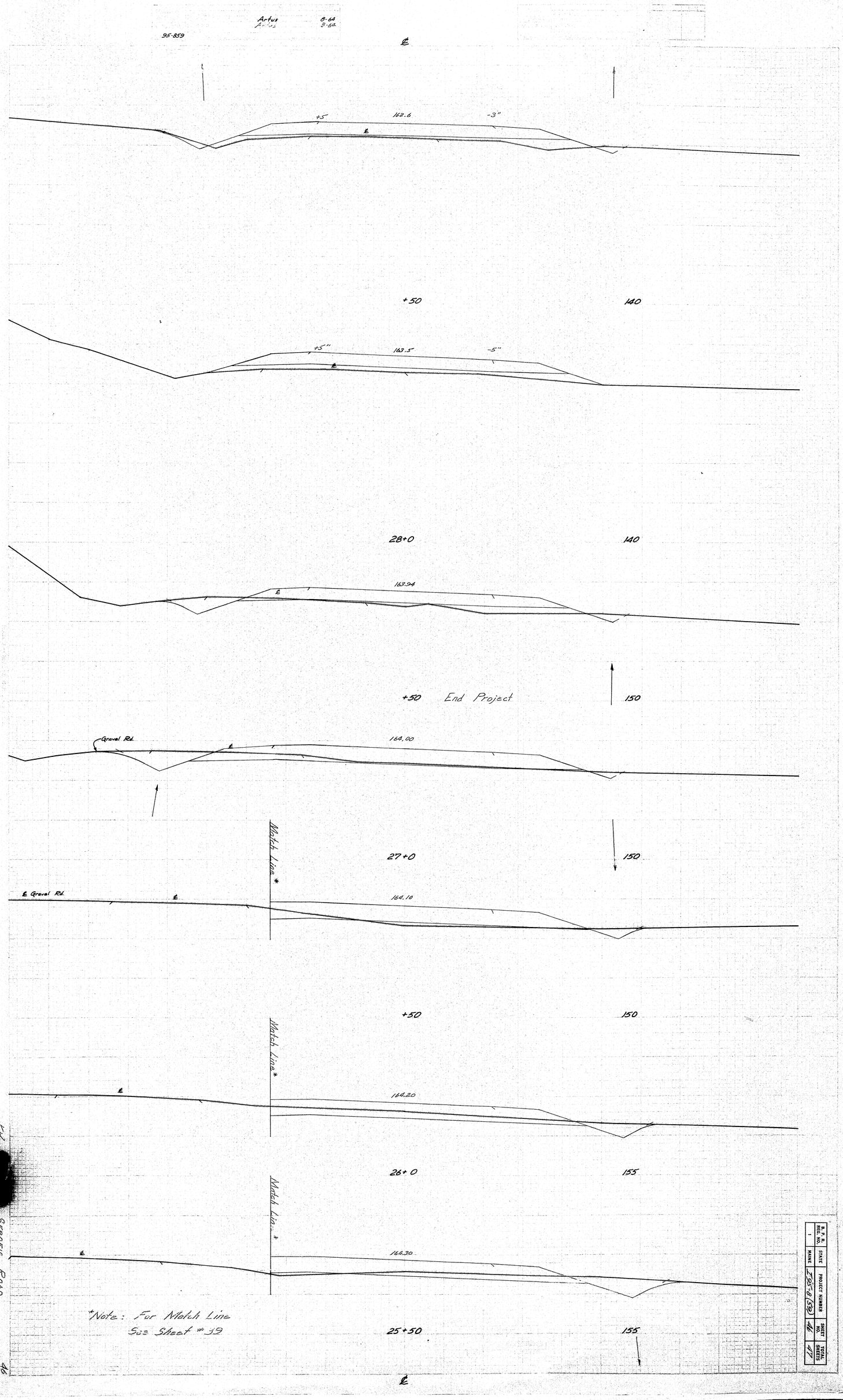
43



B. P. R. REG. NO. 1
STATE MAINE
PROJECT NUMBER I-95-8(559)
SHEET NO. 44
TOTAL SHEETS 47
For Slope Protection
Detail See Sheet #35
18+50
155
165.70
-3"
19+0
155
165.60
-1"
+50
155
165.50
+1"
20+0
155
165.40
+3"
20+50
155
165.30
+5"
21+0
155
165.20
+23
16" C.M.P. on Lt
155
Ditch Out
165.15
+50
155
165.10
SEBOEIS ROAD
Harris
44
INCHES
95-859



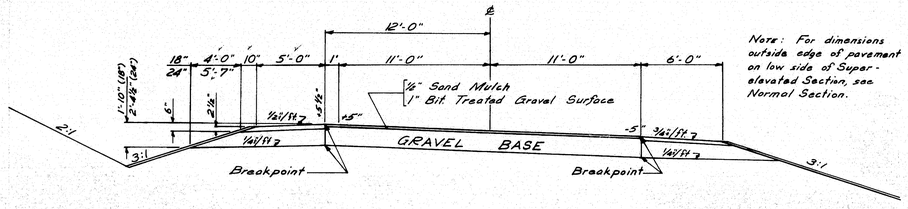
Artus
8-64
8-64
95-859
℄
164.40
25+0
155
164.50
Ditch
Ditch Out
+50
155
164.54
℄ Ditch
Outlet Invert
+29
15" C.M.P. on Lt. (Remove)
155
164.60
24+0
155
164.70
+50
155
164.80
23+0
155
164.90
+50
155
165.00
22+0
155
℄
Harris
SEBOEIS ROAD
45
B. P. R. REG. NO.
1
STATE
MAINE
PROJECT NUMBER
I 95-3(59)
SHEET NO.
45
TOTAL SHEETS
47



SEBOEIS ROAD

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I95-8(59)	46	47

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I 95-8(59)	47	47



Note: For dimensions outside edge of pavement on low side of Super-elevated Section, see Normal Section.

SUPERELEVATED SECTION

18" Gravel Base in Fill Sections
24" Gravel Base in Cut Sections

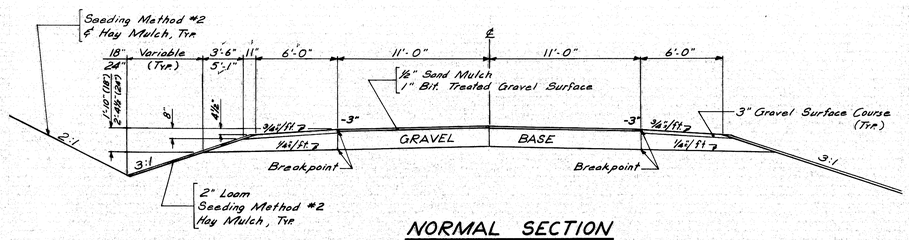
5 FT. SHOULDER

18" Gravel Base = 37.59 C.Y. Per 100 L.F.
24" Gravel Base = 57.31 C.Y. Per 100 L.F.

23 FT. ROADWAY

18" Gravel Base = 127.78 C.Y. Per 100 L.F.
24" Gravel Base = 170.37 C.Y. Per 100 L.F.

SEBOEIS ROAD



NORMAL SECTION

18" Gravel Base in Fill Sections
24" Gravel Base in Cut Sections

***6 FT. SHOULDER**

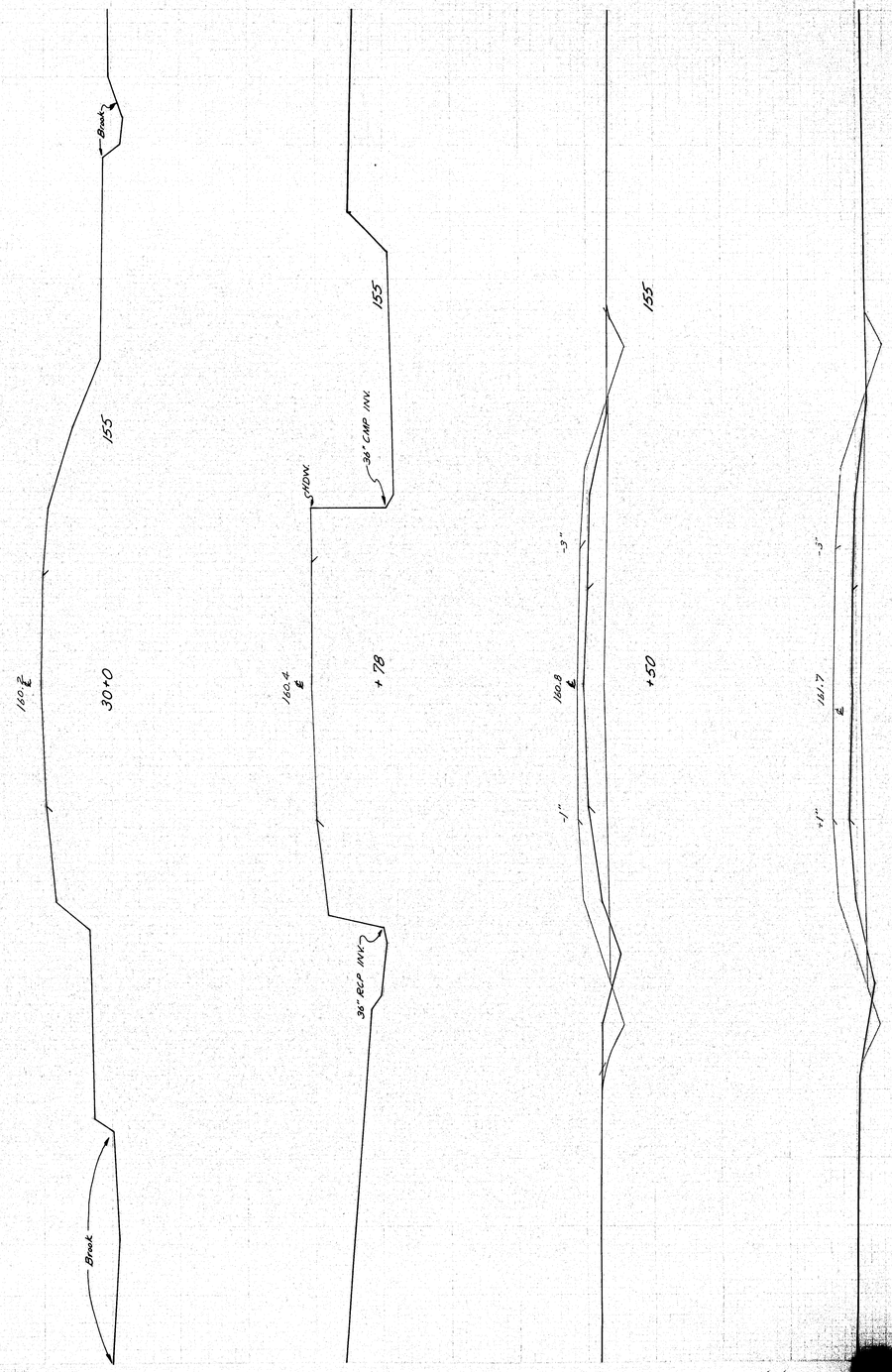
18" Gravel Base = 38.77 C.Y. Per 100 L.F.
24" Gravel Base = 59.63 C.Y. Per 100 L.F.

22 FT. ROADWAY

18" Gravel Base = 122.22 C.Y. Per 100 L.F.
24" Gravel Base = 162.96 C.Y. Per 100 L.F.

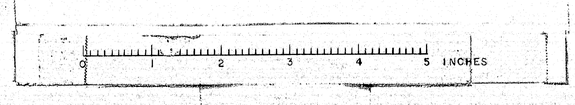
* Note: These quantities the same for 6' shoulder on low side of superelevated section.

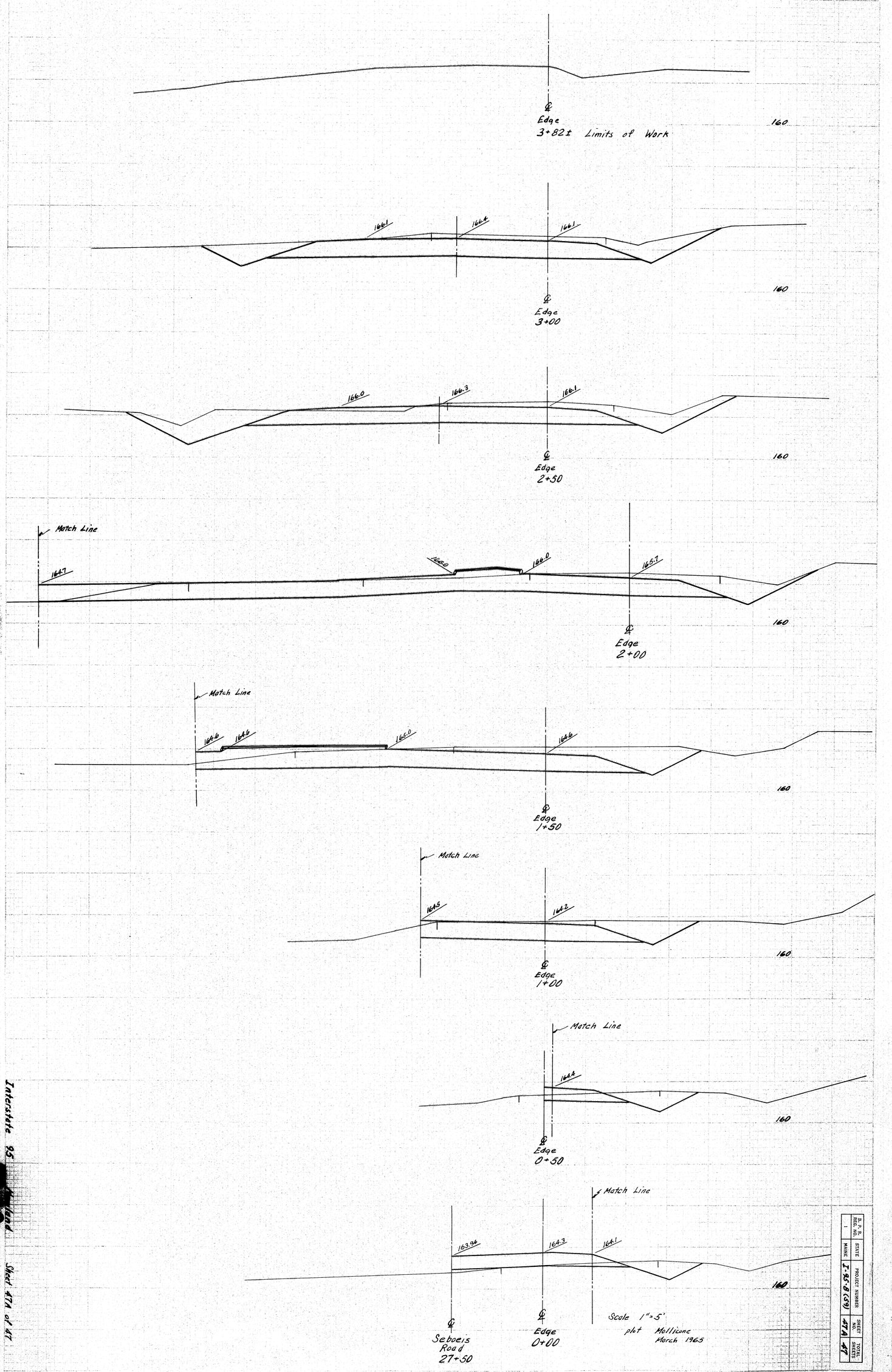
SEBOEIS ROAD



Harris [redacted] SEBOEIS ROAD

47

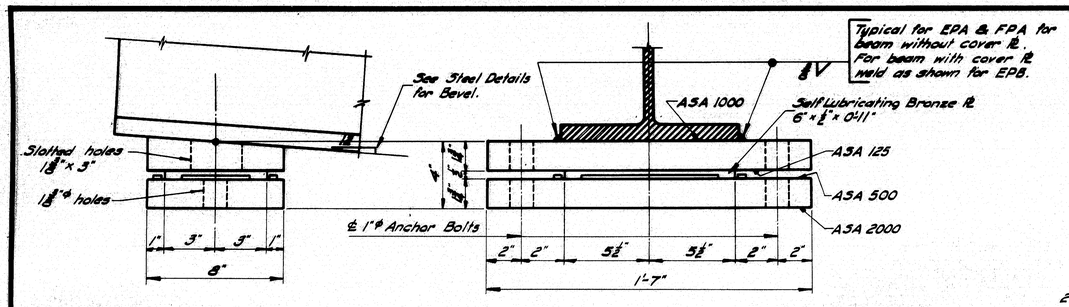




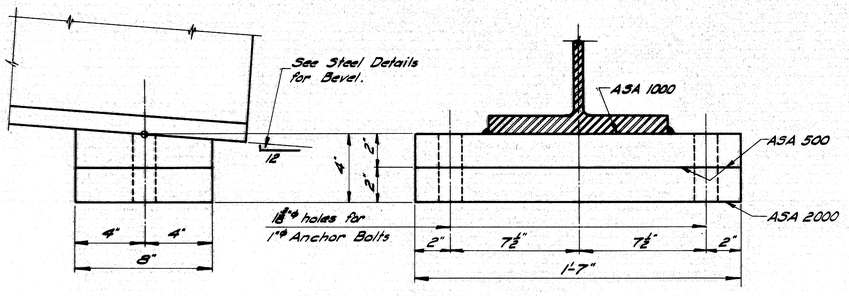
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-3 (39)	47A	47

Interstate 95 Maine Sheet 47A of 47

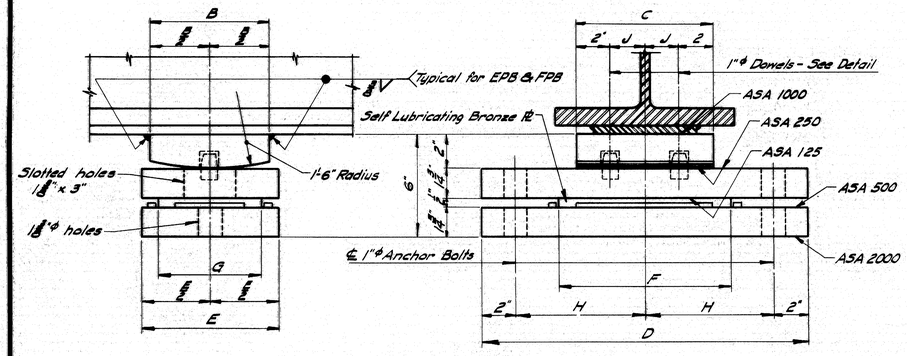
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



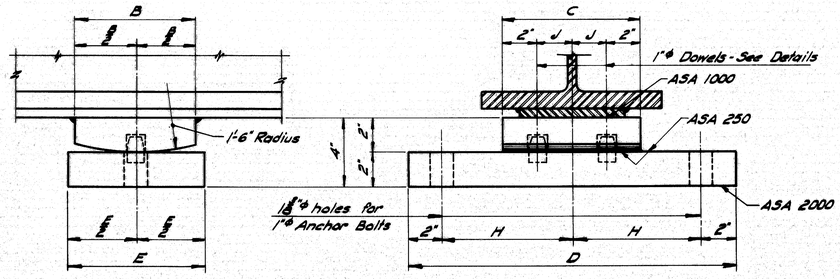
EXPANSION PEDESTAL - EPA



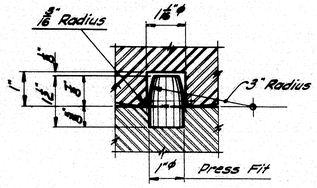
FIXED PEDESTAL - FPA



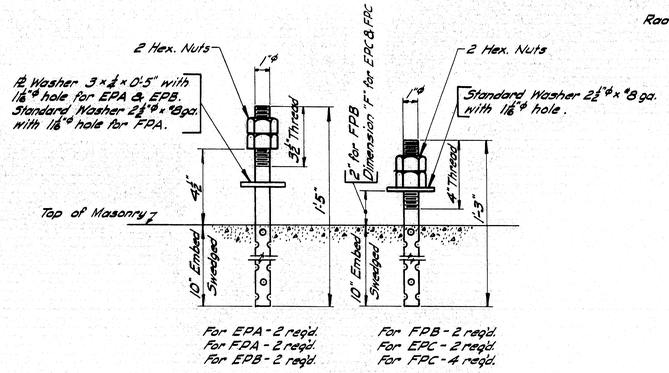
EXPANSION PEDESTAL - EPB



FIXED PEDESTAL - FPB



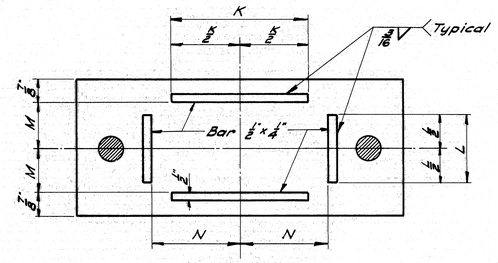
DOWEL DETAIL



For EPA - 2 reqd.
For FPA - 2 reqd.
For EPB - 2 reqd.

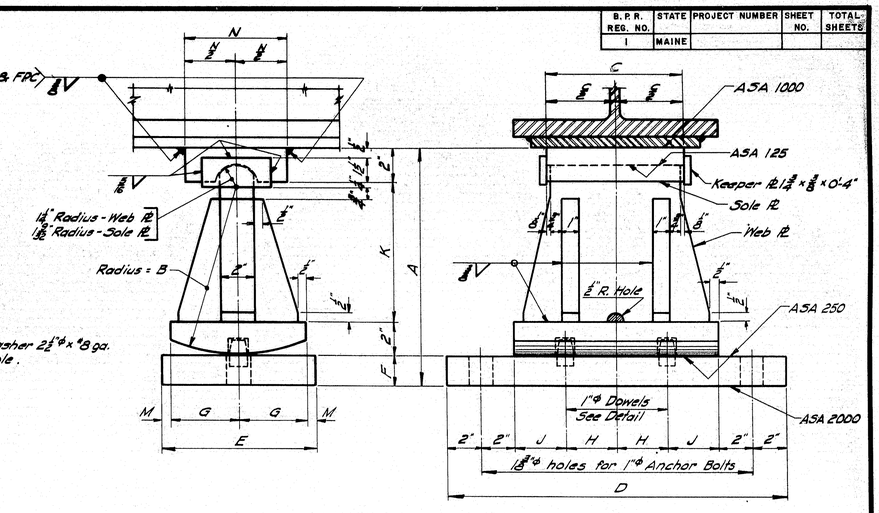
For FPB - 2 reqd.
For EPC - 2 reqd.
For FPC - 4 reqd.

ANCHOR BOLT DETAIL

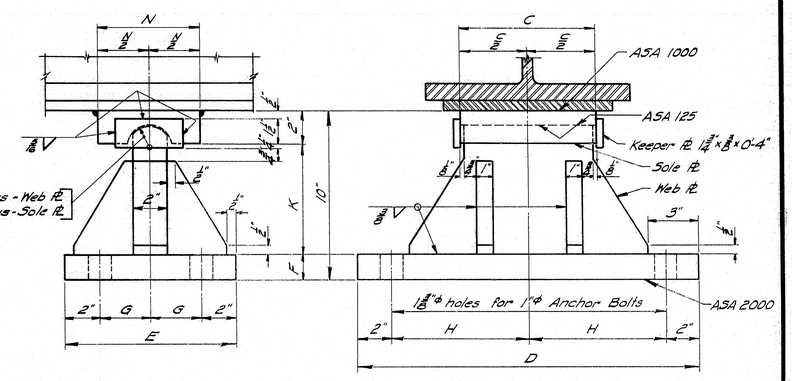


For EPA & EPB

MASONRY PLATE



EXPANSION PEDESTAL - EPC



FIXED PEDESTAL - FPC

NOTE: At the location of bearing pedestals the concrete bridge seats shall be dressed one inch larger all around than size of masonry plates and to exact elevations shown on the plans. If dressed areas are below the surface of the surrounding bridge seat a small channel shall be cut to the edge of the bridge seat for drainage where required by the Engineer. Channels shall have a min. width of 2" and min. slope of 1/2 inch per foot. No separate payment for this work will be made as it shall be considered incidental to contract items.

PEDESTALS — ALLOWABLE LOADS & DIMENSIONS

Pedestal	Load	A	B	C	D	E	F	G	H	J	K	L	M	N
EPA	132 K	—	—	—	—	—	—	—	—	—	8"	4"	3 1/2"	5 5/8"
FPA	150 K	—	—	—	—	—	—	—	—	—	—	—	—	—
EPB-1	120 K	—	6"	8"	1'-7"	8"	10"	6"	7 1/2"	2"	8"	4"	3 1/8"	5 5/8"
EPB-2	165 K	—	7"	10"	1'-8"	9"	1'-0"	7"	8"	3"	10"	5"	3 3/8"	6 5/8"
EPB-3	224 K	—	8"	1'-1"	2'-0"	10"	1'-4"	7"	10"	4 1/2"	1'-2"	5"	3 3/8"	8 5/8"
FPB-1	120 K	—	6"	8"	1'-7"	8"	—	—	7 1/2"	2"	—	—	—	—
FPB-2	165 K	—	7"	10"	1'-8"	9"	—	—	8"	3"	—	—	—	—
FPB-3	224 K	—	8"	1'-2"	2'-0"	10"	—	—	10"	5"	—	—	—	—
EPC-1	70 K	9 3/4"	6"	8"	1'-8"	8"	1 1/2"	3 1/2"	3"	3"	4 1/2"	—	1/2"	6"
EPC-2	100 K	11 3/4"	8"	8"	1'-8"	8"	1 1/2"	3 1/2"	3"	3"	6 1/2"	—	1/2"	6"
EPC-3	130 K	1'-2"	10"	8"	1'-9"	9"	1 3/4"	4"	3"	3"	8 1/2"	—	1/2"	7"
EPC-4	160 K	1'-2"	10"	8"	1'-10"	9"	1 3/4"	4"	4"	3"	8 1/2"	—	1/2"	7"
EPC-5	190 K	1'-2 1/4"	10"	9"	2'-0"	10"	2"	4 1/2"	5"	3"	8 1/2"	—	1/2"	8"
EPC-6	220 K	1'-4 1/2"	1'-0"	10"	2'-0"	1'-0"	2 1/4"	5"	5"	3"	10 1/2"	—	1"	8"
EPC-7	250 K	1'-4 1/2"	1'-0"	1'-0"	2'-2"	1'-0"	2 1/4"	5"	5"	4"	10 1/2"	—	1"	8"
FPC-1	100 K	—	—	8"	1'-8"	9"	1 1/2"	2 1/2"	8"	—	6 1/2"	—	—	6"
FPC-2	160 K	—	—	8"	1'-8"	10"	1 1/2"	3"	8"	—	6 1/2"	—	—	7"
FPC-3	190 K	—	—	9"	2'-0"	10"	1 1/2"	3"	10"	—	6 1/2"	—	—	8"
FPC-4	220 K	—	—	10"	2'-0"	1'-0"	1 3/4"	4"	10"	—	6 1/2"	—	—	8"
FPC-5	250 K	—	—	1'-0"	2'-0"	1'-0"	2"	4"	10"	—	6"	—	—	8"

DESIGN SPECIFICATIONS

A.A.S.H.O., Standard Specifications for Highway Bridges, 1961, with Interim Specifications, 1961 & 1962

A.S.T.M. STEEL CLASSIFICATION

Anchor Bolts - A7, A36, or A307
All other - A36.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

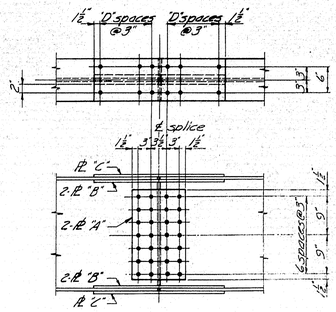
(BD 101 - 64)

BEARING PEDESTALS

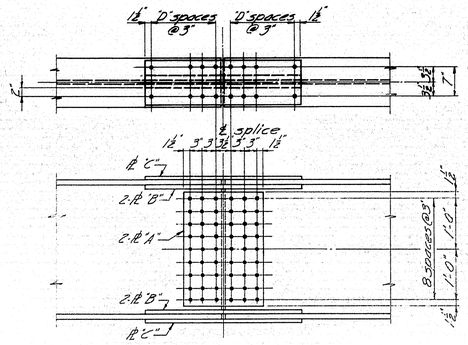
JANUARY 1964

96-63

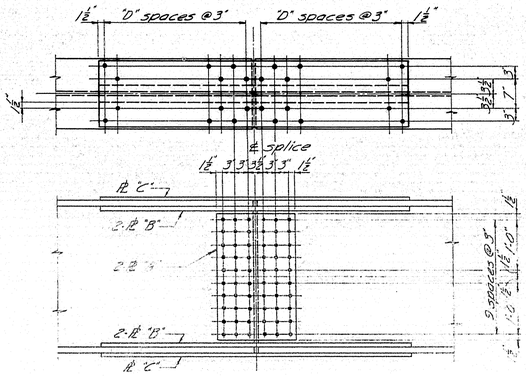
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEET
1	MAINE			



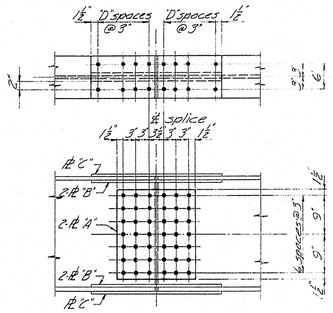
27 WF 84



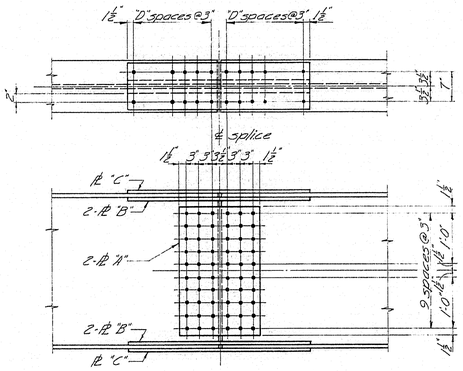
33 WF 118, 130, 141, 152



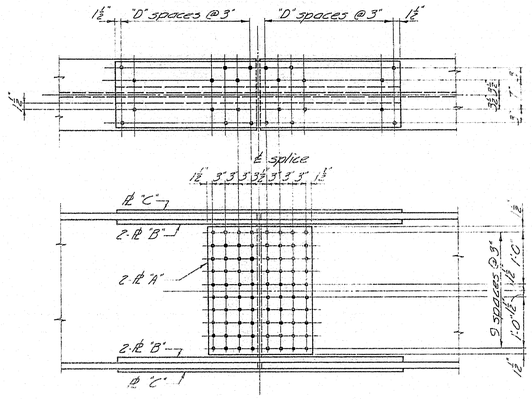
36 WF 245, 280



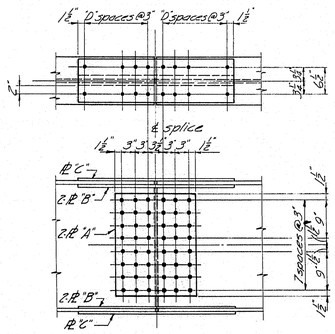
27 WF 94, 102, 114



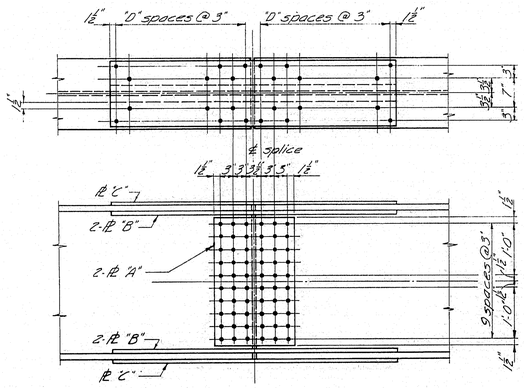
36 WF 135, 150, 160, 170, 182, 194



36 WF 300



30 WF 99, 108, 116, 124, 132



36 WF 230, 260

SPLICE DESIGN, PLATES AND FLANGE HOLES

BEAM	BEND. M.	SHEAR	PLATE "A"	PLATE "B"	PLATE "C"	"D"
27 WF 84	3070 K'	111 K	12⅝ x ½	4 x 7/16	10 x ⅜	3
27 WF 94	3520 K'	119 K	18⅝ x 9/16	4 x ½	10 x ⅜	3
27 WF 102	3862 K'	126 K	18⅝ x 9/16	4 x 9/16	10 x 7/16	4
27 WF 114	4341 K'	140 K	18⅝ x ⅝	4 x ⅝	10 x ½	4
30 WF 99	3921 K'	139 K	18⅝ x ½	4 x ½	10 x ⅜	3
30 WF 108	4360 K'	147 K	18⅝ x 9/16	4 x 9/16	10 x 7/16	4
30 WF 116	4780 K'	152 K	18⅝ x 9/16	4 x ⅝	10 x 7/16	4
30 WF 124	5170 K'	159 K	18⅝ x 9/16	4 x 9/16	10 x ½	4
30 WF 132	5539 K'	164 K	18⅝ x ⅝	4 x ⅝	10 x 9/16	5
33 WF 118	5287 K'	164 K	[illegible]	4 x 9/16	11 x 9/16	4
33 WF 130	5978 K'	173 K	[illegible]	4 x ⅝	11 x 9/16	5
33 WF 141	6604 K'	181 K	18⅝ x 9/16	4 x 11/16	11 x ½	5
33 WF 152	7193 K'	191 K	18⅝ x 9/16	4 x ⅝	11 x 9/16	6
36 WF 135	6473 K'	191 K	18⅝ x ½	4 x 11/16	11 x 9/16	4
36 WF 150	7436 K'	200 K	18⅝ x ½	4 x 13/16	11 x ½	5
36 WF 160	8005 K'	212 K	18⅝ x 9/16	4 x ⅝	11 x 9/16	6
36 WF 170	8574 K'	221 K	18⅝ x 9/16	4 x 15/16	11 x ⅝	6
36 WF 182	9204 K'	237 K	18⅝ x 9/16	4 x 15/16	11 x 11/16	7
36 WF 194	9838 K'	253 K	18⅝ x ⅝	4 x 1	11 x ½	8
36 WF 230	12574 K'	247 K	18⅝ x 9/16	6 x 1	16 x ⅝	10
36 WF 245	13441 K'	260 K	18⅝ x 9/16	6 x 1	16 x 9/16	11
36 WF 260	14330 K'	276 K	18⅝ x ⅝	6 x 1 1/16	16 x ⅝	12
36 WF 280	15551 K'	291 K	18⅝ x ¾	6 x 1 1/16	16 x 9/16	13
36 WF 300	16678 K'	312 K	18⅝ x ¾	6 x 1 1/8	16 x ⅝	14

GENERAL NOTES

1. Splice connections to be made with ⅝ ϕ high tensile strength bolts. Holes to be 11/16" ϕ.

2. The design bending moment is 90% of the net resisting moment of the beam with an allowable stress of 20,000 p.s.i. The design shear is 75% of the shear strength of the gross section of the web with an allowable stress of 12,000 p.s.i.

3. If beams of different sizes are to be spliced, use splice details shown for the smaller of the beams being spliced unless otherwise directed by design details. See design details for filler thickness. Place fillers to limits of splice plates only, with no extensions.

4. See design details for slopes of beams in order to correctly fabricate bevels at the splices.

A.S.T.M. STEEL CLASSIFICATION

High Tensile Strength Bolts A-325
Splice Plates A-36

DESIGN SPECIFICATIONS

AASHO Standard Specifications for Highway Bridges, 1961 with Interim Specifications, 1961 & 1962

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

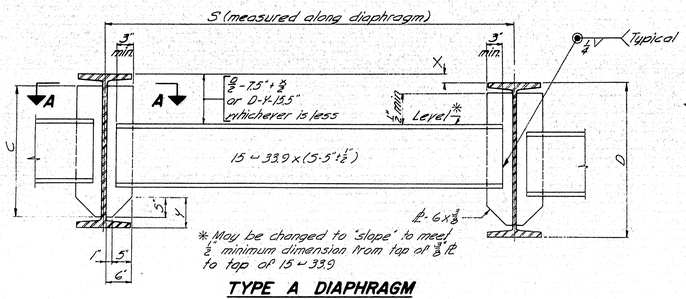
(BD 103-64)

BEAM SPLICES

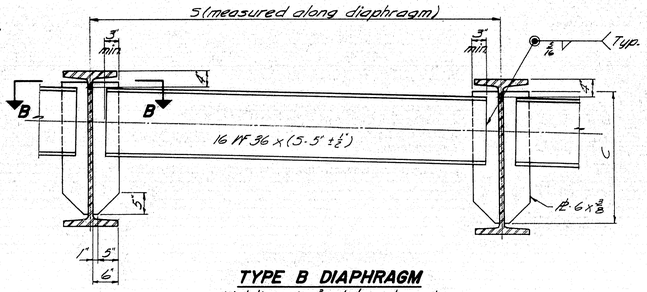
JANUARY 1964

96-64

B.P.R. DIV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

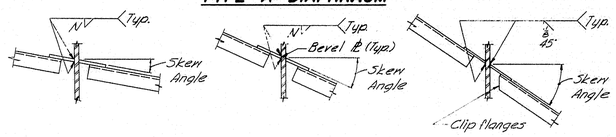


TYPE A DIAPHRAGM



TYPE B DIAPHRAGM

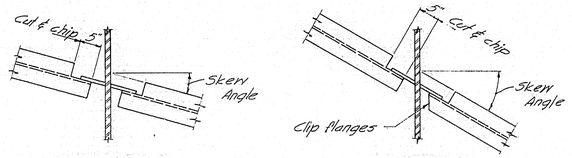
Welding 6 x 3/8 plates to web same as for Type A Diaphragm.



SECTION A-A
Skew Angle 0° to 18°-30'

SECTION A-A
Skew Angle over 18°-30' to 30°-00'

SECTION A-A
Skew Angle over 30°-00'



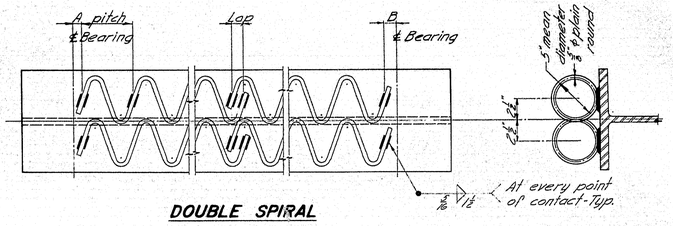
SECTION B-B
Skew Angle 0° to 25°-00'

SECTION B-B
Skew Angle over 25°-00'

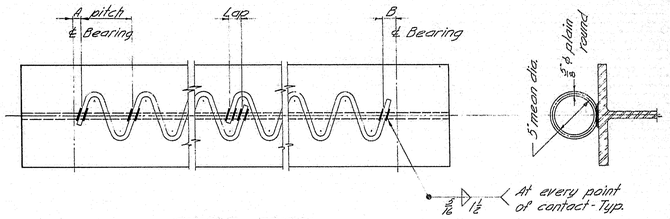
NOTE
See design details for diaphragm type, location and skew.

FILLET WELD SIZE "N" & DIMENSION "C" FOR DIAPHRAGM PLATES		
BEAM	C	N
27 WF 84 to 114 incl.	1'-11"	1/4"
30 WF 99 to 132 incl.	2'-2"	1/4"
33 WF 118 to 152 incl.	2'-5"	1/4"
36 WF 135 to 194 incl.	2'-7"	1/4"
36 WF 230 to 300 incl.	2'-6"	5/16"

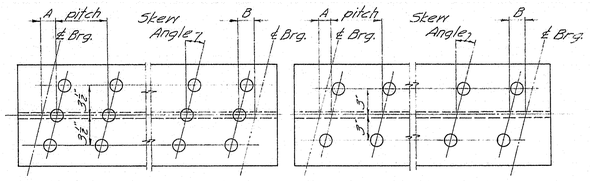
DIAPHRAGMS



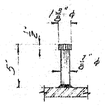
DOUBLE SPIRAL



SINGLE SPIRAL



TRIPLE STUDS **DOUBLE STUDS**

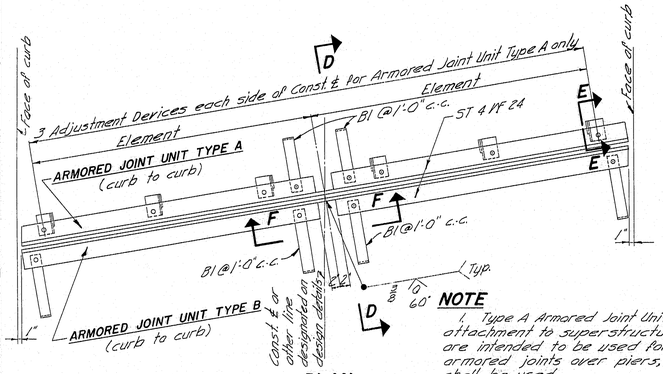


STUD DETAIL

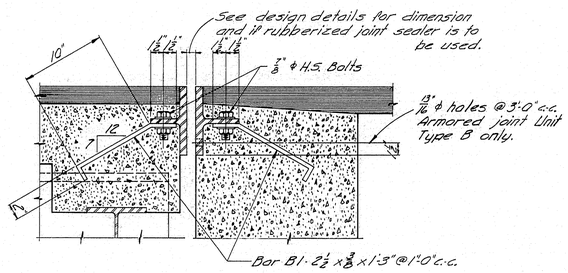
NOTE

1. Spiral reinforcing or studs may be used at the option of the Contractor.
2. If studs are used they shall be granular or solid flux filled and automatically end welded to the top flange in the shop or field.
3. Studs are a patented product. If the Contractor elects to use them, he shall pay the royalty and payment to the contractor will be included in the lump sum price for Shear Connectors.
4. See the design details for Dimensions "A" and "B", spiral and stud pitch and Skew Angle for Studs.

SHEAR CONNECTORS

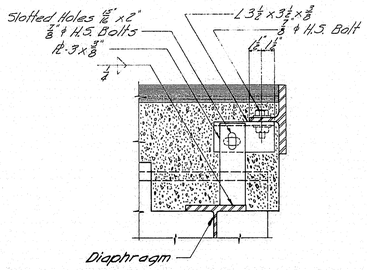


PLAN

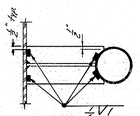


ARMORED JOINT UNIT TYPE A — ARMORED JOINT UNIT TYPE B

SECTION D-D



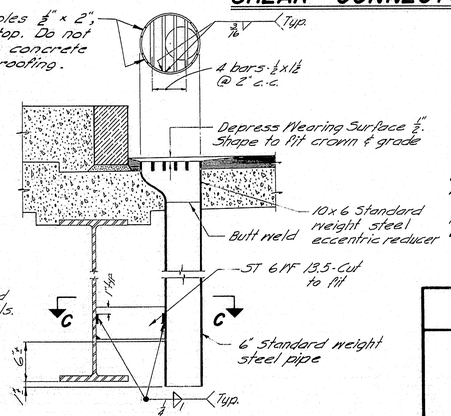
SECTION E-E
Showing Adjustment Device Armored Joint Unit Type A only - After Unit is in final position weld 3/8 PL to angle with 1/4" fillet



SECTION C-C

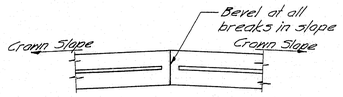
NOTE

1. Drain may be rotated 180°. See design details.
2. See design details for location and number of drains and beam size to which it is connected.
3. Drains to be paid for as structural steel.



DRAIN

Revised Nov. 1964, Welding Drain Support.



SECTION F-F

Note: See design details for Constr. ℄ to curb dimensions, skew, crown slope, slab thickness, other dimensions necessary to complete the fabrication details, and location.

NOTE

1. Type A Armored Joint Units are intended to be used for attachment to superstructures. Type B Armored Joint Units are intended to be used for attachment to abutments. At armored joints over piers, two Type A Armored Joint Units shall be used.
2. If rubberized joint sealer is called for on the design details the area to which it is to be bonded shall not be painted and it shall be supported on non-bituminous material. At the Contractor's option the supporting material may be left in place or be removed. If the supporting material is left in place, it shall be compressible in accordance with specification AASHO M 153-54. In either case bond between the supporting material and the rubberized joint sealer shall be prevented by a 1" minimum thickness of Poly-urethane foam.
3. If more elements than the two shown in the "Plan" are required by the design details, there shall be three adjustment devices for each element for Armored Joint Unit Type A and the elements of both units shall be field welded together in the same manner as shown in the "Plan".
4. Armored Joints to be paid for as Structural Steel.

ARMORED JOINT

An armored joint consists of two armored joint units. See note 1.

GENERAL NOTE

Use only those items called for on design details. In case of conflict between these Standard Details and the design details, the requirements of the design details shall be followed.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

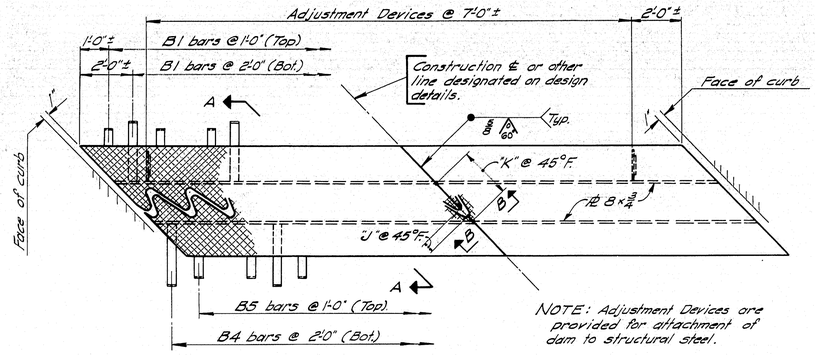
(BD 104-64)

DIAPHRAGMS, ARMORED JOINT, SHEAR CONNECTORS, DRAIN

JANUARY 1964

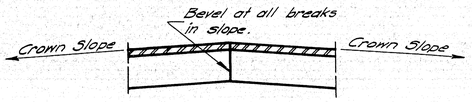
96-65

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



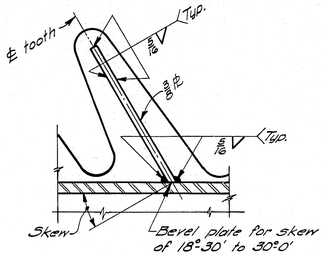
PLAN

Right skew indicated



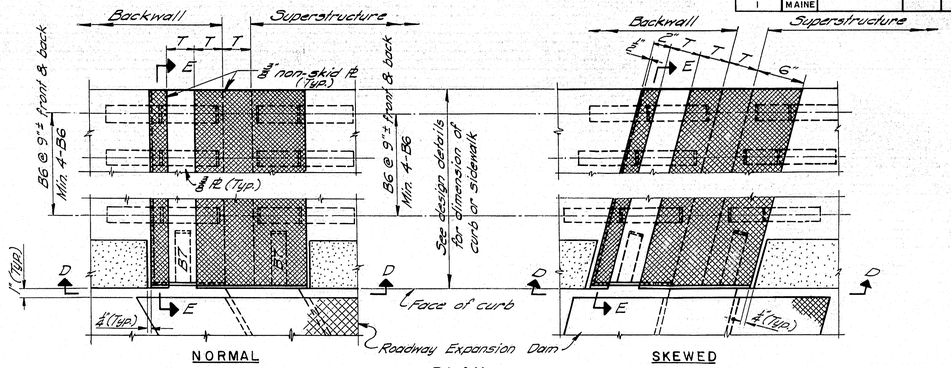
SECTION B-B

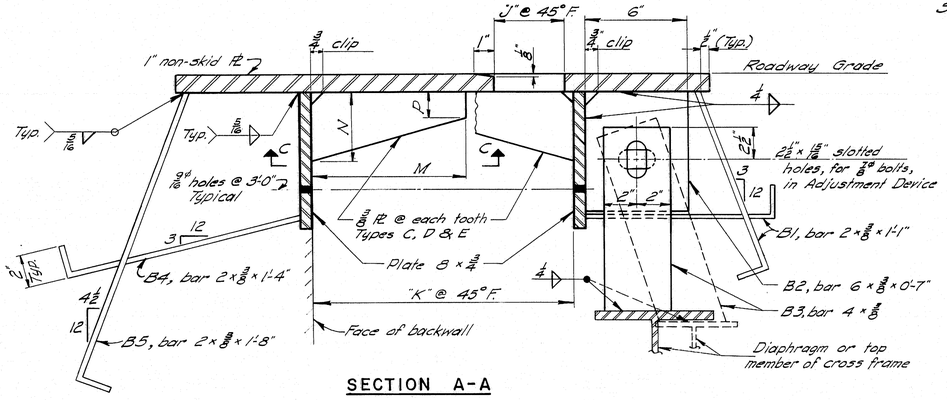
See design details for construction ℄ to curb dimensions, skew, crown slope, slab thickness, other dimensions & angles that are necessary to complete fabrication details and location of Roadway Expansion Dam.



SECTION C-C

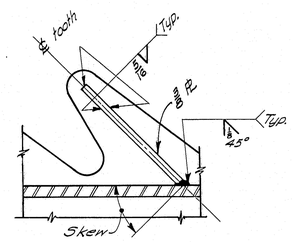
Skew ~0° to 30°-0'





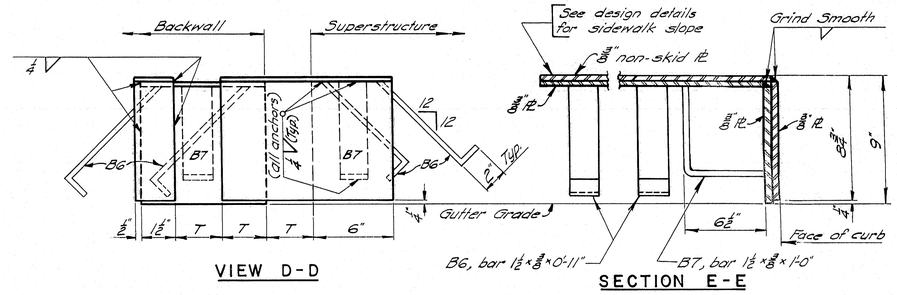
SECTION A-A

Bar B3 may be vertical or inclined as indicated, depending on design conditions.
After Adjustment Device is in final position weld bars B2 to B3 with 1/4" fillet weld.



SECTION C-C

Skew over 30°

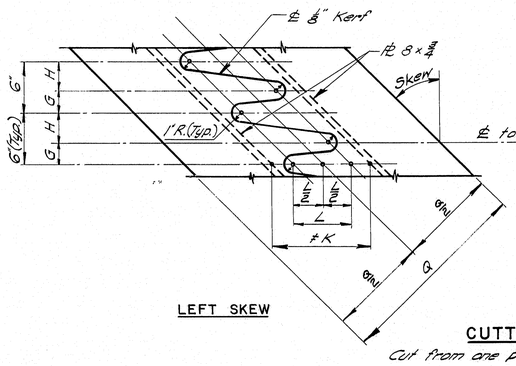


VIEW D-D

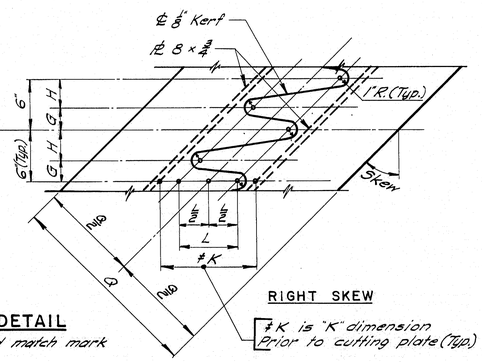
SECTION E-E

TYPE	V	W	X	Y	Z
Exp. Length	100'-280'	280'-440'	440'-600'	600'-760'	760'-920'
T	3"	4"	5"	6"	7"

CURB AND SIDEWALK EXPANSION DAM – DETAILS



LEFT SKEW



RIGHT SKEW

≠K is "K" dimension prior to cutting plate (Typ.)

CUTTING DETAIL

Cut from one plate and match mark

ROADWAY EXPANSION DAM – DETAILS

TABLE OF DIMENSIONS

Type	Exp. Length	Skew	≠K	L	G	H	K@45°	J@45°	M	N	P	Q
A	100'-280'	0°-5° incl.	7"	4"	3"	3"	9"	2 5/8"	—	—	—	21"
		5°-10°	7 1/4"	4 1/4"	2 7/8"	3 1/8"	9 1/4"	2 5/8"	—	—	—	22"
		10°-20°	8"	4 3/8"	2 7/8"	3 1/8"	10"	2 5/8"	—	—	—	22"
		20°-30°	8 3/8"	5 1/4"	2 7/8"	3 1/4"	10 3/8"	2 5/8"	—	—	—	23"
		30°-40°	9 3/8"	5 3/4"	2 7/8"	3 3/8"	11 3/8"	2 5/8"	—	—	—	23"
		40°-50° incl.	11 1/4"	6 1/2"	2 7/8"	3 3/8"	13 1/4"	2 5/8"	—	—	—	23"
B	280'-440'	0°-5° incl.	9"	6"	3"	3"	12"	3 1/8"	—	—	—	23"
		5°-10°	9 1/4"	6 1/4"	2 7/8"	3 1/8"	12 1/4"	3 1/8"	—	—	—	24"
		10°-20°	10"	6 3/8"	2 7/8"	3 1/8"	13"	3 1/8"	—	—	—	24"
		20°-30°	10 3/8"	7 1/4"	2 7/8"	3 1/4"	13 3/8"	3 1/8"	—	—	—	25"
		30°-40°	12"	8"	2 7/8"	3 1/4"	15"	3 1/8"	—	—	—	25"
		40°-50° incl.	13 1/2"	8 3/4"	2 7/8"	3 1/8"	16 1/2"	3 1/8"	—	—	—	25"
C	440'-600'	0°-10° incl.	11 1/4"	8 1/4"	3"	3"	15 1/4"	4 1/8"	9"	4"	1 1/2"	26"
		10°-20°	12"	8 3/8"	2 7/8"	3 1/8"	16"	4 1/8"	10"	4"	1 1/2"	26"
		20°-30°	12 3/4"	9 1/4"	2 7/8"	3 1/8"	16 3/4"	4 1/8"	11"	4"	1 1/2"	26"
		30°-40°	14"	10"	2 7/8"	3 1/4"	18"	4 1/8"	11"	4"	1 1/2"	26"
		40°-50° incl.	15 1/2"	10 3/4"	2 7/8"	3 1/2"	19 1/2"	4 1/8"	12"	4"	1 1/2"	26"
D	600'-760'	0°-10° incl.	13 1/4"	10 1/4"	3"	3"	18 1/4"	5 1/8"	11"	5"	2"	30"
		10°-20°	14"	10 3/8"	2 7/8"	3 1/8"	19"	5 1/8"	12"	5"	2"	30"
		20°-30°	14 3/4"	11 1/4"	2 7/8"	3 1/8"	19 3/4"	5 1/8"	13"	5"	2"	30"
		30°-40°	16"	12"	2 7/8"	3 1/8"	21"	5 1/8"	13"	5"	2"	30"
		40°-50° incl.	17 3/4"	13"	2 7/8"	3 1/4"	22 3/4"	5 1/8"	15"	5"	2"	30"
E	760'-920'	0°-10° incl.	15 1/4"	12 1/4"	3"	3"	21 1/4"	6 1/8"	13"	6"	2 1/2"	36"
		10°-20°	16"	12 3/8"	2 7/8"	3 1/8"	22"	6 1/8"	14"	6"	2 1/2"	36"
		20°-30°	16 3/4"	13 1/4"	2 7/8"	3 1/8"	22 3/4"	6 1/8"	15"	6"	2 1/2"	36"
		30°-40°	18"	14"	2 7/8"	3 1/2"	24"	6 1/8"	15"	6"	2 1/2"	36"
		40°-50° incl.	19 3/4"	15"	2 7/8"	3 3/4"	25 3/4"	6 1/8"	17"	6"	2 1/2"	36"

GENERAL NOTES

Expansion Dams to be paid for as Structural Steel.
If there is conflict between this Standard Detail and the design details, the requirements of the design details shall be followed.

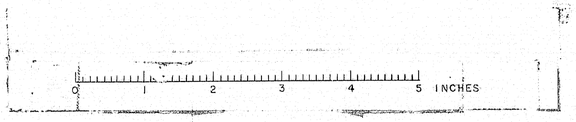
Steel Classification: A.S.T.M. A36

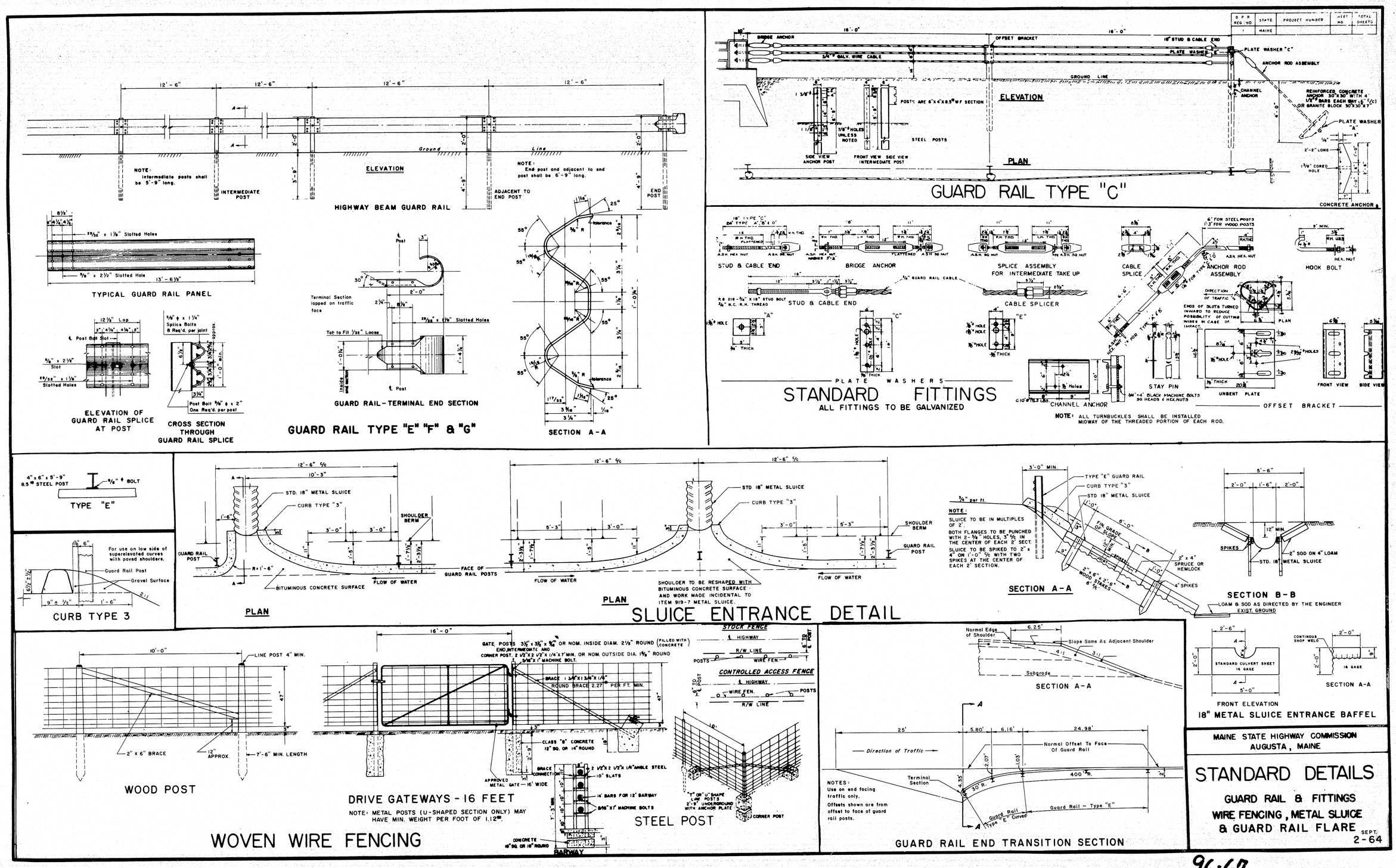
MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS
(BD 105 – 64)

EXPANSION DAMS

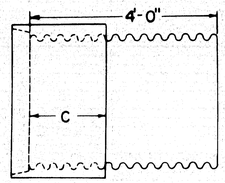
APRIL 1964




HIGHWAY BEAM GUARD RAIL
ELEVATION
NOTE: Intermediate posts shall be 5'-9" long.
INTERMEDIATE POST
NOTE: End post and adjacent to end post shall be 6'-9" long.
ADJACENT TO END POST
END POST
TYPICAL GUARD RAIL PANEL
ELEVATION OF GUARD RAIL SPLICE AT POST
CROSS SECTION THROUGH GUARD RAIL SPLICE
GUARD RAIL-TERMINAL END SECTION
GUARD RAIL TYPE "E" "F" & "G"
SECTION A-A
GUARD RAIL TYPE "C"
PLAN
STEEL POSTS
STANDARD FITTINGS
ALL FITTINGS TO BE GALVANIZED
STUD & CABLE END
BRIDGE ANCHOR
SPLICE ASSEMBLY FOR INTERMEDIATE TAKE UP
CABLE SPLICE
ANCHOR ROD ASSEMBLY
HOOK BOLT
CABLE SPLICER
STAY PIN
CHANNEL ANCHOR
UNBENT PLATE
OFFSET BRACKET
PLATE WASHERS
NOTE: ALL TURNBUCKLES SHALL BE INSTALLED MIDWAY OF THE THREADED PORTION OF EACH ROD.
TYPE "E"
CURB TYPE 3
SLUICE ENTRANCE DETAIL
STD. 18" METAL SLUICE
CURB TYPE "3"
SHOULDER BERM
GUARD RAIL POST
FLOW OF WATER
BITUMINOUS CONCRETE SURFACE
FACE OF GUARD RAIL POSTS
SECTION B-B
WOOD POST
DRIVE GATEWAYS - 16 FEET
WOVEN WIRE FENCING
STEEL POST
STOCK FENCE
CONTROLLED ACCESS FENCE
GUARD RAIL END TRANSITION SECTION
FRONT ELEVATION
18" METAL SLUICE ENTRANCE BAFFEL
MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE
STANDARD DETAILS
GUARD RAIL & FITTINGS
WIRE FENCING, METAL SLUICE
& GUARD RAIL FLARE
SEPT. 2-64
96-67

S.P.R. RDB. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	MAINE			

PIPE CONNECTIONS

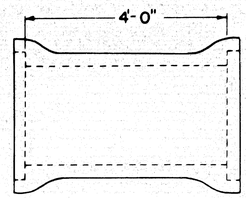


GROOVE END COMBINATION

For 24" to 72", inclusive, diameter connection between concrete and metal pipe

"C" = 17" min. for sizes 30" to 48" incl.
"C" = 23" min. for sizes over 48"

Asphalt coated corrugated metal pipe shall conform to the latest standard specifications

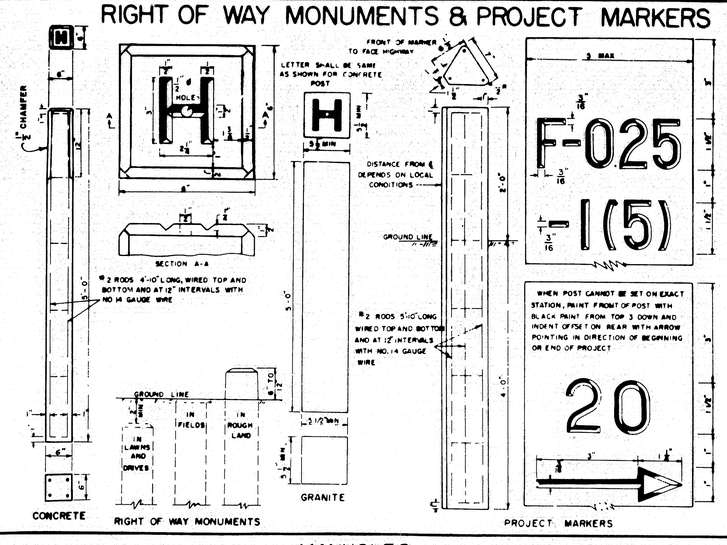


REINFORCED CONCRETE PIPE CONNECTOR DOUBLE BELL

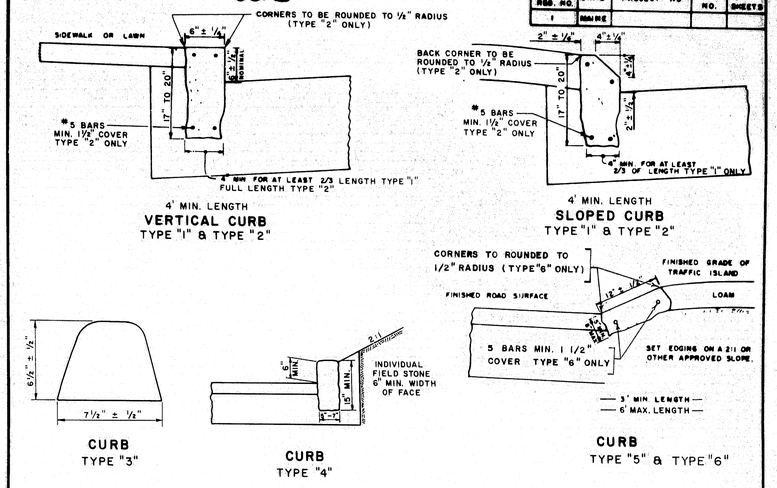
For 12" to 18", inclusive, diameter connection between concrete and metal pipe

Reinforced concrete pipe shall conform to the latest standard specifications

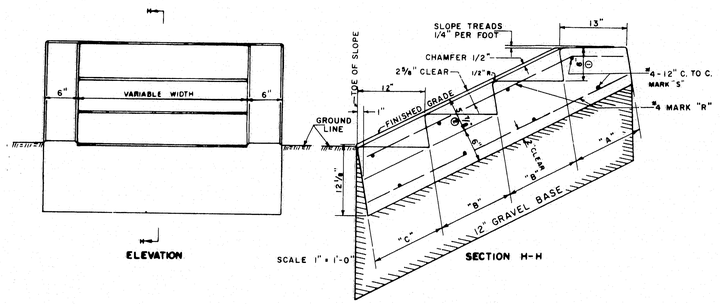
RIGHT OF WAY MONUMENTS & PROJECT MARKERS



CURB



CONCRETE STEPS



CONCRETE CLASS "A"		
SECTION	STEPS PER FT. OF WIDTH	PARAPET EACH WALL
"A" HEADER	.030 CU. YDS.	.015 CU. YDS.
"B" EA. INTER ST.	.030 CU. YDS.	.020 CU. YDS.
"C" FOOTER	.030 CU. YDS.	.020 CU. YDS.

6" RISE - 12" TREAD (2:1 SLOPE)

REINFORCING STEEL			
MARK	SIZE	NUMBER	LENGTH (EACH)
R	#4 .668 LBS. PER FT.	2 EACH PARAPET 1 EACH FT. OF WIDTH	11" FOR "A" +13.4 FOR EACH "B" +12" FOR "C"
S	#4 .668 LBS. PER FT.	2 FOR "A" 2 FOR EACH "B" 2 FOR "C"	4" EACH PARAPET +12" PER FT. OF WIDTH

PAY ITEMS

ITEM NO.	DESCRIPTION
204-10	Struct. earth excav. - drain.
204-11	Struct. rocks excav. - drain.
302-14	Gravel for foundations
705-13	Reinforcing steel, delivered
705-14	Reinforcing steel, placed
904-11	Reinforced concrete steps

NOTE:
To determine the quantity of *"Structural Excavation"* for payment refer to the *"Standard Specifications"* section 204-6D, structural earth and rock excavation-abutments and retaining wall or piers.

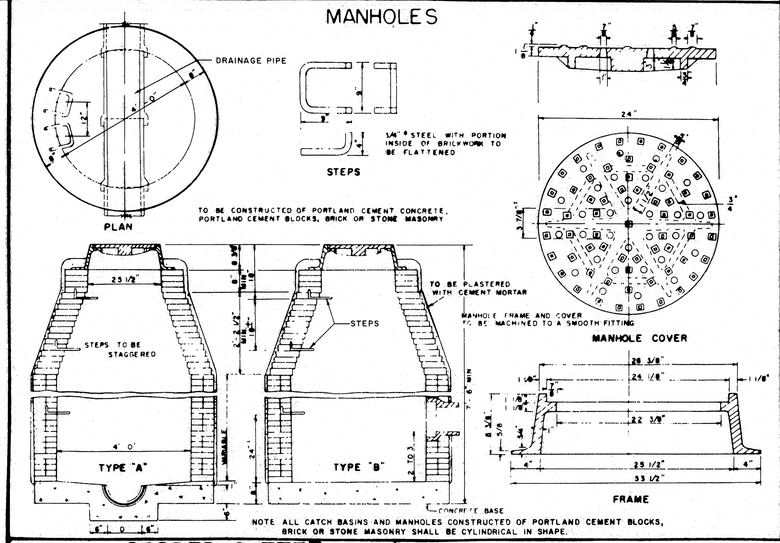
CONCRETE CLASS "A"		
SECTION	STEPS PER FT. OF WIDTH	PARAPET EACH WALL
"A" HEADER	.035 CU. YDS.	.018 CU. YDS.
"B" EA. INTER ST.	.035 CU. YDS.	.024 CU. YDS.
"C" FOOTER	.035 CU. YDS.	.024 CU. YDS.

8" RISE - 12" TREAD (1 1/2:1 SLOPE)

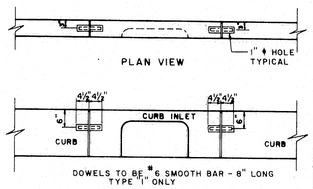
REINFORCING STEEL			
MARK	SIZE	NUMBER	LENGTH (EACH)
R	#4 .668 LBS. PER FT.	2 EACH PARAPET 1 EACH FT. OF WIDTH	11" FOR "A" +14 1/2" FOR EACH "B" +12" FOR "C"
S	#4 .668 LBS. PER FT.	2 FOR "A" 2 FOR EACH "B" 2 FOR "C"	4" EACH PARAPET +12" PER FT. OF WIDTH

① = 8"
② = 7 1/4"

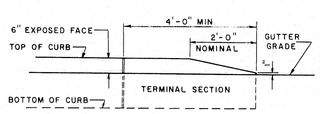
MANHOLES



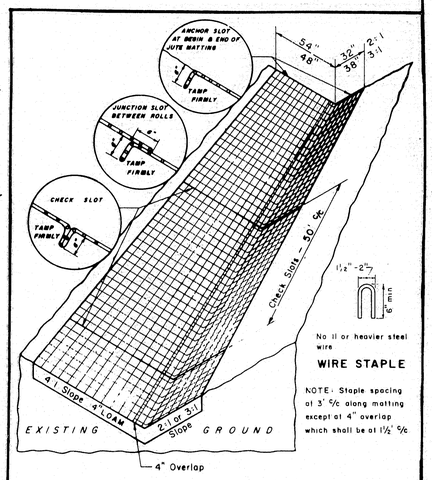
NOTE: ALL CATCH BASINS AND MANHOLES CONSTRUCTED OF PORTLAND CEMENT BLOCKS, BRICK OR STONE MASONRY SHALL BE CYLINDRICAL IN SHAPE.



DOWEL DETAIL AT CATCH BASIN
CURB INLET TYPE "1" & TYPE "2"

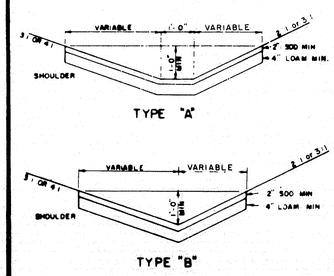


TERMINAL SECTION
TYPE "1" & TYPE "2"

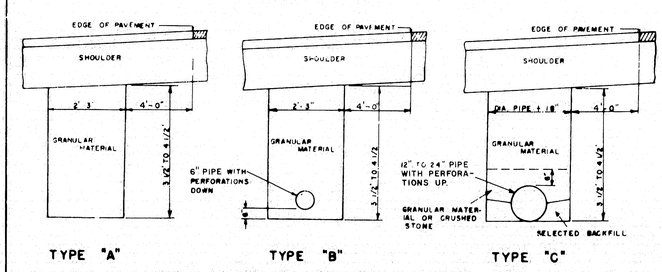


JUTE MATTING - DITCH SECTION

SODDED GUTTER



UNDERDRAIN



NOTE: IF FIELD CONDITIONS WARRANT, THE ENGINEER MAY CHANGE THE DIMENSIONS DETAILED ABOVE.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

MISCELLANEOUS ITEMS

SEPT. 3-64

96-68

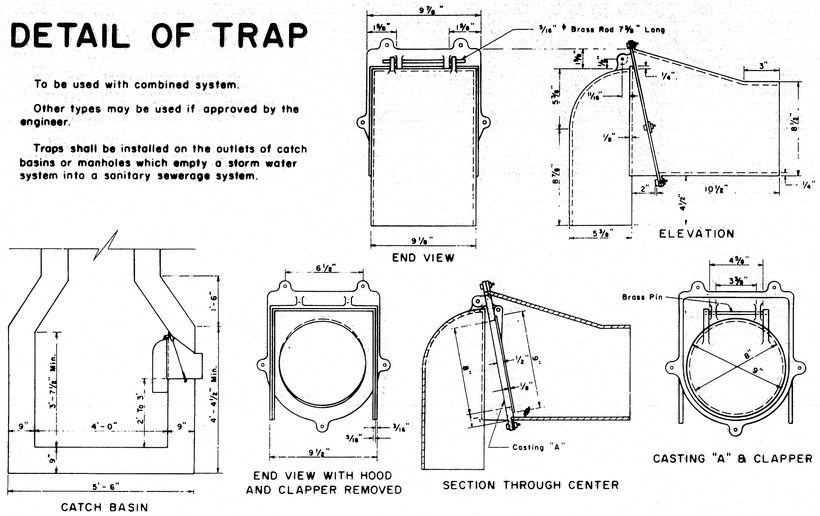
B P R REGION NO.	STATE	FEDERAL AID PROJECT NO	SHEET NO	TOTAL SHEETS
1	MAINE			

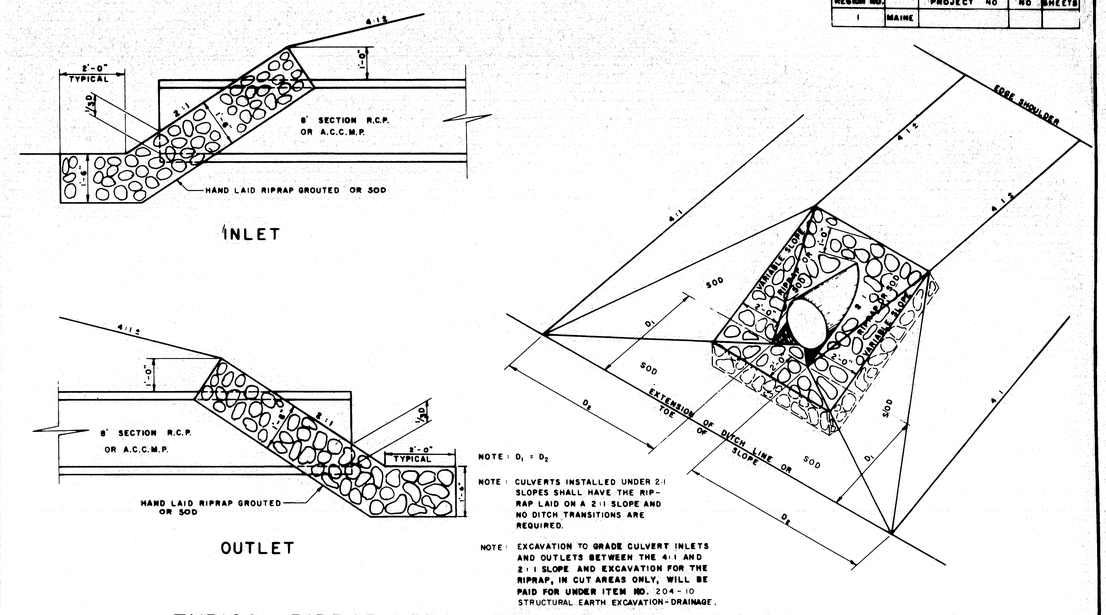
DETAIL OF TRAP

To be used with combined system.

Other types may be used if approved by the engineer.

Traps shall be installed on the outlets of catch basins or manholes which empty a storm water system into a sanitary sewerage system.



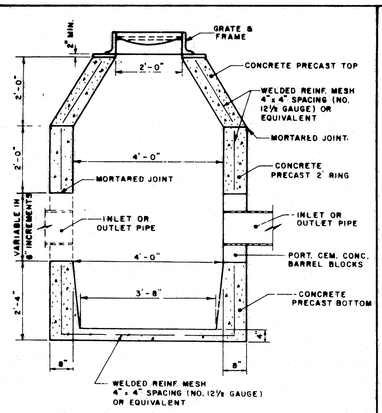


NOTE: $D_1 = D_2$

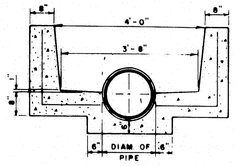
NOTE: CULVERTS INSTALLED UNDER 2:1 SLOPES SHALL HAVE THE RIPRAP LAID ON A 2:1 SLOPE AND NO DITCH TRANSITIONS ARE REQUIRED.

NOTE: EXCAVATION TO GRADE CULVERT INLETS AND OUTLETS BETWEEN THE 4:1 AND 2:1 SLOPE AND EXCAVATION FOR THE RIPRAP, IN CUT AREAS ONLY, WILL BE PAID FOR UNDER ITEM NO. 204-10 STRUCTURAL EARTH EXCAVATION-DRAINAGE.

TYPICAL RIPRAP DETAIL FOR R.C.P. OR A.C.C.M.P.

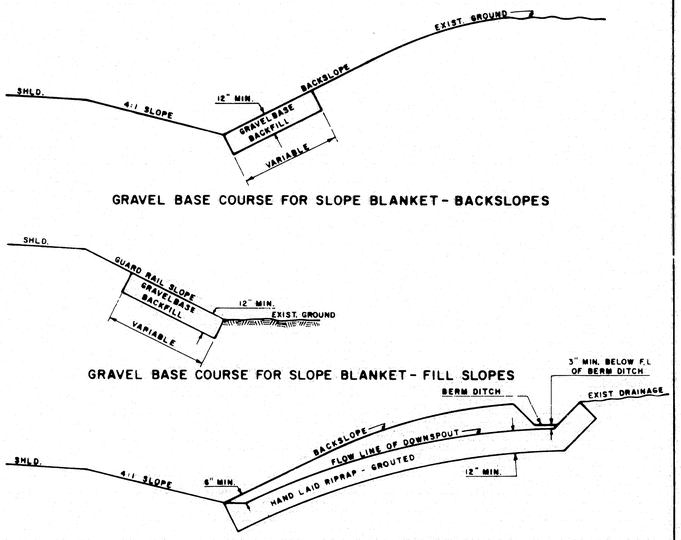


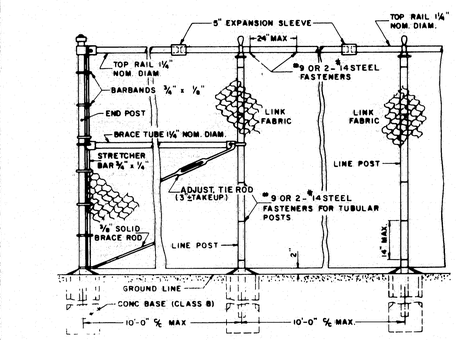
PRECAST PORTLAND CEMENT CONCRETE CATCH BASINS TYPES C, F, H & I - MANHOLE TYPE B



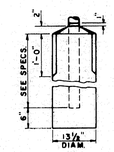
PRECAST PORTLAND CEMENT CONCRETE CATCH BASIN TYPE G MANHOLE TYPE A

NOTE:
THE THREE SECTIONS DETAILED BELOW SHALL BE USED WHEN DIRECTED BY THE ENGINEER OR AS SHOWN ON THE PLANS





PORTLAND CEMENT CONCRETE (CLASS B)

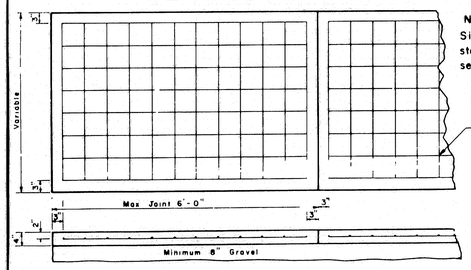


NOTE
ROUND BASES MAY BE SUBSTITUTED FOR THE SQUARE BASES SHOWN BY USING FIBRE TUBULAR FORMS. SUBSTITUTIONS SHALL BE AS FOLLOWS 13½" I.D. ROUND FOR 12" SQUARE OR 15" SQUARE

LINE, GATE AND END POST BASE

" CHAIN LINK FENCE

REINFORCED PORTLAND CEMENT CONCRETE SIDEWALK



NOTE
Sidewalk shall conform to standard specifications section 904.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

DETAIL OF TRAP, REINFORCED PORTLAND CEMENT CONCRETE SIDEWALK, CHAIN LINK FENCE, TYPICAL RIPRAP DETAIL & PRECAST CATCH BASINS & MANHOLES

SEPT. 4-64

96-69