F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	1	41

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAYS
PORTLAND
CUMBERLAND COUNTY

REHABILITATION OF RAILINGS AND WEARING SURFACE

TUKEYS BRIDGE
OVER
BACK COVE

MAINE FEDERAL AID INTERSTATE
PROJECT NO. I-TQI-295-3(88)50
TOTAL LENGTH 0.095 MILES

CONVENTIONAL SIGNS

COUNTY LINES		TRAVELLED WAY - PROPOSED	
TOWN LINES		UNDERGROUND UTILITIES - EXISTING	
PROPERTY LINES		UNDERGROUND UTILITIES - PROPOSED	
R/W LINES - EXISTING		RAILROAD - SINGLE TRACK	
R/W LINES - NEW - ACCESS CONTROL		RAILROAD - DOUBLE TRACK	
R/W LINES - NEW - NO ACCESS CONTROL		UTILITY POLE - EXISTING	♦
CULVERT - EXISTING		UTILITY POLE - JOINT OCCUPANCY	♦J
CULVERT - PROPOSED		PROPOSED UTILITY POLE - TEMPORARY	X
CURBING - EXISTING		PROPOSED UTILITY POLE - PERMANENT	♦
CURBING - PROPOSED		TREES	hardwood softwood
TRAVELLED WAY - EXISTING		WOODS	

SPECIFICATIONS

DESIGN: AASHTO, Specifications for Highway Bridges, 1973; and Interim Specifications 1974,75,76,77.

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

DESIGN LOADING

LIVE LOAD: HS20-44, as Modified for Interstate Loading.

MATERIALS

CONCRETE: Class AA

REINFORCING STEEL: ASTM A615 Grade 60

STRUCTURAL STEEL: HIGH STRENGTH BOLTS ASTM A325
ALL OTHER ASTM A36

CONCRETE MEDIAN BARRIER CLASS AA WHITE CEMENT

BASIC ALLOWABLE STRESSES

CONCRETE: fc = 1200 psi n=10

REINFORCING STEEL: fs = 24,000 psi

STRUCTURAL STEEL: ASTM A36 fs = 20,000 psi
ASTM A325 fv = 13,500 psi

UTILITIES

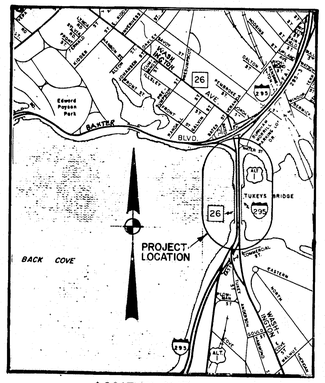
Portland Water District (Water & Sewers)
New England Tel. & Tel. Co.
Central Maine Power Co.
Northern Utilities, Inc. (Gas)

NOTE:
All utility facilities shall be adjusted by the respective utilities unless noted.

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

TRAFFIC DATA

A.D.T. 1978	= 44,490
A.D.T. 1998	= 61,810
D.H.V.	= 6181
T. (%)	= 11%
D. (%)	= 60%
V.	= 50 mph



LOCATION MAP

SCALE: FEET 500 0 500 1000 2000

INDEX OF SHEETS

NOTE:
All work contemplated under this contract shall be governed by and in conformity with the Standard Specifications (Revision of 1968) and Supplements thereto, except as modified on the Plans and in the Special Provisions.

APPROVED:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

COMMISSIONER — DATE June 12, 1978

CHIEF ENGINEER & BUREAU DIRECTOR — DATE June 12, 1978

UNITED STATES
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION 1

APPROVED:

DIVISION ADMINISTRATOR DATE

R93-401

JANUARY 1978

293-1 2080

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY INTERSTATE FUNDS	QUANTITY TQI FUNDS	TOTAL QUANTITY
202.12	Removal of Existing Structural Concrete	C.Y.	109		109
202.13	Removal of Existing Railings (Ref. by Dept)	L.F.	1585		1585
202.14	Removal of Existing Railings (Property of Contractor)	L.F.	528		528
202.201	Removing Bituminous Pavement (Including Membrane Waterproofing)	S.Y.		4222	4222
203.25	Granular Borrow	C.Y.	16		16
206.06	Str. Earth Excav. - Drainage & Minor Strs.	C.Y.	340		340
301.09	Plant Mix Bit. Base Course, Grading B	Ton	78		78
304.103	Aggregate Subbase Course - Gravel	C.Y.	95		95
403.07	Hot Bit. Pavement, Grading B	Ton	64		64
403.08	Hot Bit. Pavement, Grading C	Ton	32	485	517
403.101	Hot Bit. Pavement, Grading D (Sidewalks, Drives, Etc.)	Ton	46		46
410.161	Cover Coat Material, Sand (Leveling)	C.Y.	3		3
502.21	Struct. Conc., Abut's. & Retaining Walls	C.Y.	18		18
502.42	Structural Concrete, Roadway & Sidewalk Slabs on Steel Bridges	C.Y.	26		26
503.12	Reinforcing Steel, Fab. & Delivered	Lb.	4900		4900
503.13	Reinforcing Steel, Placing	Lb.	4900		4900
504.70	Structural Steel, Fab. & Delivered	L.S.	NEC		NEC
504.71	Structural Steel, Erection	L.S.	NEC		NEC
507.141	Aluminum Bridge Railing, Type "A"	L.F.	1062		1062
508.14	Membrane Waterproofing - epoxy penetrating sealer	S.Y.		4310	4310
514.06	Curing Box for Concrete Cylinders	Each	1		1
515.20	Protective Coating for Conc. Surfaces	SY	180		180
S26.30	Temp. Concrete Barrier (Type I)	LF	2710	500	3210
S26.31	Perm. " " " (" II)	LF	552		552
S26.32	" " " (" III)	LF	1173		1173
S26.40	Resetting Temp. Conc. Barrier (Type I)	LF	3620	1000	4620
604.18	Adjusting Manholes & Catch Basins To Grade	Each	3		3
606.17	Guard Rail Type 36 - Single Rail	LF	778		778
606.172	Guard Rail Type 36 - Single Rail Special	LF	1008		1008
606.27	Guard Rail Type 36 Circular - Greater than 15 Foot Radius	LF	97		97
606.26	Terminal Ends - Single Rail	Each	2		2
606.35	Guard Rail Delineator Posts	Each	2		2
606.364	Guard Rail, Remove, Modify and Reset, Type 36	L.F.	921		921
606.367	Replace Unusable Exist G.R. Posts	Each	10		10
606.263	Twisted End Section, Guard Rail, Type 36	Each	2		2
607.24	Remove & Reset Fence	LF	10		10
608.08	Reinforced Concrete Sidewalk	SY	25		25
609.11	Vertical Curb - Type I	L.F.	338		338
609.12	Vertical Curb Circular - Type I	L.F.	4		4
609.13	Vertical Bridge Curb - Type 1	L.F.	542		542
609.23	Terminal Curb, Type 1	Each	1		1
609.25	Curb Transition Sect. A - Type 1	Each	3		3
609.31	Curb Type 3	L.F.	40		40
609.38	Resetting Curb Type 3	L.F.	16		16
615.07	Loam	C.Y.	12		12
616.08	Sodding	S.Y.	5		5

* Undetermined locations

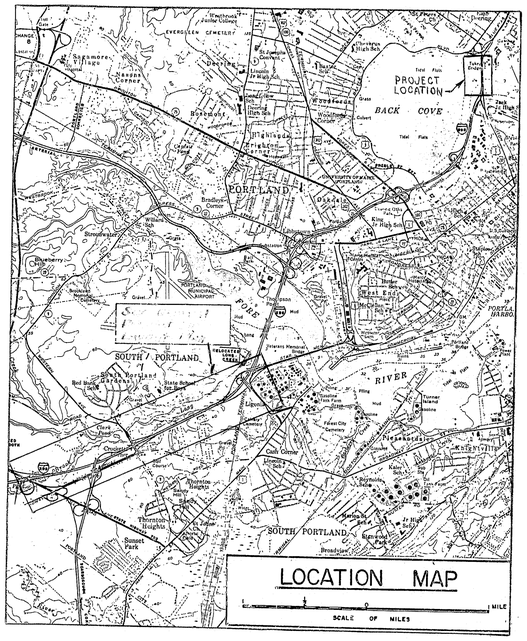
ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY INTERSTATE FUNDS	QUANTITY TQI FUNDS	TOTAL QUANTITY
615.14	Seeding, Method Number 2	Unit	2		2
618.15	Temporary Seeding	Lb.	2		2
619.12	Mulch	Unit	2		2
** 629.05	Labor, Straight Time	M. Hr.	130	70	200
** 630.0607	Traffic Officers	M. Hr.	65	35	100
*** 631.10	Air Compressor (inc. operator)	Hour	130	70	200
*** 631.11	Air Tool (inc. op.)	Hour	130	70	200
*** 631.171	Truck - small (inc. operator)	Hour	130	70	200
*** 631.22	Front End Loader (inc. op.)	Hour	10		10
*** 632.08	Warning Lights	GRP	3	2	5
634.161	Bridge & Highway Lighting (incl. wire)	L.S.	NEC		NEC
634.176	Bit. Fibre Junction Box	Each	15		15
634.184	Galv. Steel Conduit, Exposed or in Trench	L.F.	30		30
634.191	2 Inch Non-Metallic Conduit	L.F.	1400		1400
634.208	Remove and Reset Light Standards	Each	11		11
634.221	Removal of Concrete Foundations	Each	11		11
634.225	Light Standard Foundation Type A	Each	6		6
634.25	Service Pole complete w/cabinet & Controls	Each	1		1
638.01	Embedded Work in Structures	L.S.	Nec.		Nec.
639.08	Field Office, Type A	Each	0.7	0.3	1
639.12	Testing Facilities, Bit. Mixes	L.S.	.3 Nec.	.7 Nec.	Nec.
645.302	Demountable Reflectorized Delineator	Each	12		12
645.401	4" Reflectorized Plastic White Solid Line	LF	1500	1,500	3000
645.402	4" Reflectorized Plastic White Broken Line	LF	3,250	3,250	6500
645.403	4" Reflectorized Plastic Yellow Solid Line	LF	1,950	1,000	2950
645.69	Pavement Markings Removed	LF	1185	375	1560
652.25	Maintenance of Traffic	L.S.	.7 NEC.	.3 NEC	NEC.
659.10	Mobilization	L.S.	.7 NEC.	.3 NEC	NEC.
662.30	Glare foils	Ea.	250		250

Estimated Quantities for Lump Sum Items

Item No.	Description	Unit	Quantity
504.70	Structural Steel, Fab. & Delivered	Lb.	2015
504.71	Structural Steel, Erection	Lb.	2015
634.161	Bridge & Highway Lighting (inc. wire)	L.F.	2,350
638.01	Embedded Work in Structures	L.F.	545

** Non-Bid Items



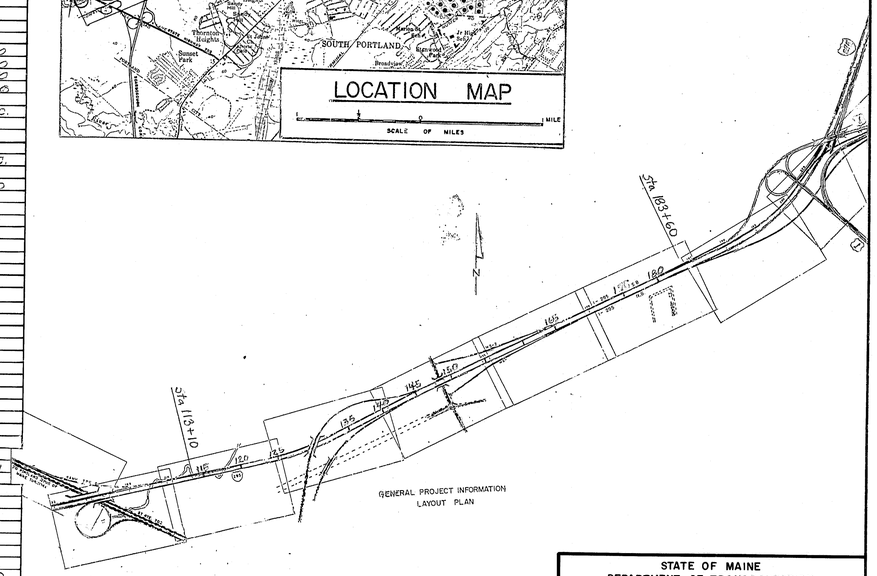
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	2	41

LOCATION OF LIGHT STANDARDS TO BE MOVED

STATION	LEFT OR RIGHT
113+10	L
116+75	R
120+60	L
125+10	R
129+15	L
163+20	R
166+90	L
171+00	R
175+20	L
179+40	R
183+60	L

See General Project Information Layout Plan for Station locations.

Pay items involved are:
Item 634.208 and
Item 634.221.



GENERAL PROJECT INFORMATION
LAYOUT PLAN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF

TUKEYS BRIDGE

OVER

BACK COVE

IN THE CITY OF

PORTLAND

CUMBERLAND COUNTY

ESTIMATE OF QUANTITIES

SHEET 2 OF 41 AUGUSTA, MAINE AUGUST 1978

R93-402

203-1 2000

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	3	41

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	CDM	JAP	10-77
CHECKED			
REVISIONS			
FIELD CHANGES			

Limit of Work Sta 145+00

West Side

New Electrical Conduit in Concrete Curb

Adjust or Replace Existing Electrical Conduit in Concrete Curb

Remove Existing Concrete Curb, Construct Structural Concrete Curb & Install Vertical Bridge Curb - Type I

Adjust Guard Rail Type 36, Single Rail

Remove Existing Aluminum Bridge Railing

Install Aluminum Bridge Railing - Type A

℄ Bearings Abutment No. 1 Sta. 152+00 BEGIN PROJECT TUKEY'S BRIDGE

℄ Bearings Abutment No. 2 Sta. 157+00 END PROJECT

500'

Remove existing Bituminous Conc. Wearing Surface & Membrane Waterproofing

Install 2" Bituminous Concrete Wearing Surface, Grading C NB&SB

Install Membrane Waterproofing NB & SB

Sta 157+42.50

Limit of Work Sta 164+75

Guard rail remove modify and reset Type 36

Install new 2" PVC electrical conduit (16" deep)

500'

Sta 151+52±

Sta 151+63.92

Sta 151+86.11

Sta 153+23.08

Sta 155+66.92

Sta 157+13.83

Sta 157+16.08

Sta 157+17.35

Remove exist. conc. End Post and construct new conc. End Post

New 2" PVC conduit

Install 40' Light Standard on a Concrete Bracket outside of Aluminum Bridge Railing

Remove & reset navigation lighting access ladders

Remove exist. conc. End Post and construct new conc. End Post.

Reset Curb Type 1

New 3" PVC conduit

I295 - NB

I295 - SB

Washington Ave. - SB

Overpass No. 1 Bridge

Washington Ave. Bridge No. 1

Baxter Blvd

Overpass No. 2 Bridge

Washington Ave. - NB

Install Curb Type 3

Adjust Catch Basin

Adjust Catch Basin See Sh. 19-9

Washington Ave. Bridge No. 2

Existing 6' Chain Link Fence

Washington Ave. - NB

Tel. MH in sidewalk

Sta 151+82.83

Install 40' Light Standard on a concrete bracket

New 2" PVC conduit

Install Service Pole & Control Cabinet

I295 - NB

Sta 145+42.33±

Sta 145+41.27

Sta 146+22.83

Sta 146+47.84

Sta 147+50±

Sta 148+10±

Sta 149+50

Sta 149+95±

Sta 150+13.42

Sta 151+52.50

Sta 151+77.50

Sta 151+83.92

Sta 151+87.25

Sta 157+02.75

Sta 157+16.08

Sta 157+22.50

Sta 157+47.50

Sta 157+17.17

Sta 160+00

Sta 161+55.33

Sta 161+56

Sta 161+69

Sta 162+00

Sta 163+79

Sta 164+42±

Regrade Median to Drain Pave Median

Remove, 6' High, Chain Link Fence

Existing Chain Link Fence

Burnham & Morrill

Install Service Pole & Control Cabinet

Install Vertical Curb Type 1 I295 - SB

Remove Raised Loam & Seeded and Granite Curb Median

Remove Stepped granite curb SB

Remove variable width raised Granite Curb & Bituminous Concrete Median

Remove 4' wide Raised Concrete Median on Bridge

Remove 4' wide Raised Granite Curb & Bituminous Concrete Median

Remove Raised Loam & Seeded and Granite Curb Median

Existing Granite curb Type 1 remains

Median

Remove existing guardrail and Reset (S.B.)

Remove Guard Rail Type E, Single Rail

Remove Guard Rail Type E, Double Rail

Install Guardrail Type 3b, N.B.

Install Concrete Median Barrier Sta. 151+00 to Sta. 158+00 Install Glare Barrier

Install Transition in Median NB & SB

Install Guard Rail Type 3b Single Rail Construct Concrete End Post

Remove Existing Aluminum Railing on the curb side of the Sidewalk

Overlay Sidewalk with Hot Bituminous Pavement - See Sheet 18

Overlay Sidewalk with Hot Bituminous Pavement

Install Guard Rail Type 3b-Single Rail Modified on the curb side of the sidewalk

Install 2" PVC electrical conduit (16" below grade)

Install Guard Rail Type 3b-Single Rail Modified on the curb side of the sidewalk

Install Aluminum Bridge Railing-Type A modified - 2 Bar with heavy duty posts on the curb side of the sidewalk

Install Terminal End - Single Rail

Construct Concrete End Post

Construct Concrete End Post

Install Guard Rail Type 3b - Circular - Greater than 15 Foot Radius Modified on the curb side of the sidewalk

Construct Reinf. Concrete Sidewalk - See Note #4.

East Side

Existing Concrete Sidewalk to remain

Construct Concrete End Post See Sheet No. 19

Sta 161+91.17

Sta 162+91.17

~ LIGHTING LEGEND ~

○ = Bituminous fiber junction box (3 req'd)

☼—□ = New 40' Light Standard, Reinforced with New Luminaire 250 V Sodium HPS

– – – = New 2" PVC conduit w/#8 wires

● = New 25' class II wood pole

〰 = New aerial feed

PLAN

0 10 20

Scale in feet

GENERAL NOTES

4. The top corners of the Concrete Median Barrier shall be a consistent shape and dimension throughout the project, a chamfer between ¼ inch and 1½ inch or a radius between ¼ inch and 1½ inches.

7. Quantities for Items 606.06 and 509.01 Concrete Median Barrier will be as indicated in Sect. 11-11 sheet 4, Sect 15-15 sheet 6, Sect B-B sheet 7, Sect. AA & BB sheet 10, Sect DD sheet 6, Sect CC sheet 7.

8. Removal of existing lighting systems is specified in the Special Provisions, Section ___ Maintenance of Traffic.

R93-403

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF

TUKEYS BRIDGE

OVER

BACK COVE

IN THE CITY OF

PORTLAND

CUMBERLAND COUNTY

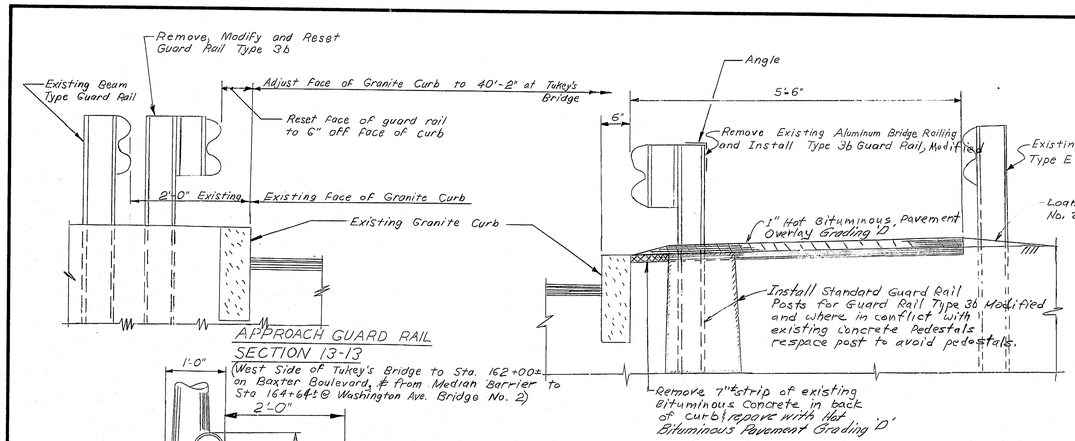
GENERAL PLAN

SHEET OF 41 AUGUSTA, MAINE AUGUST 1978

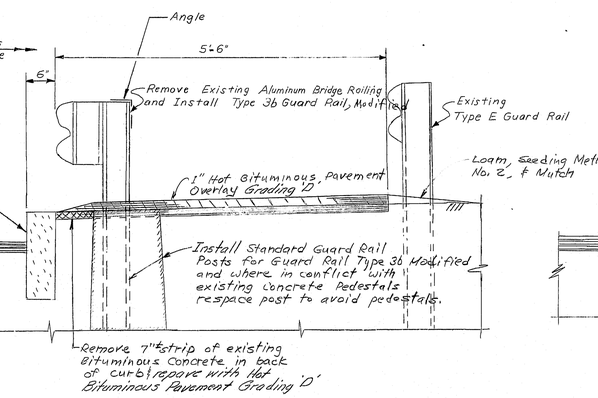
JANUARY 1968

803-1 3000

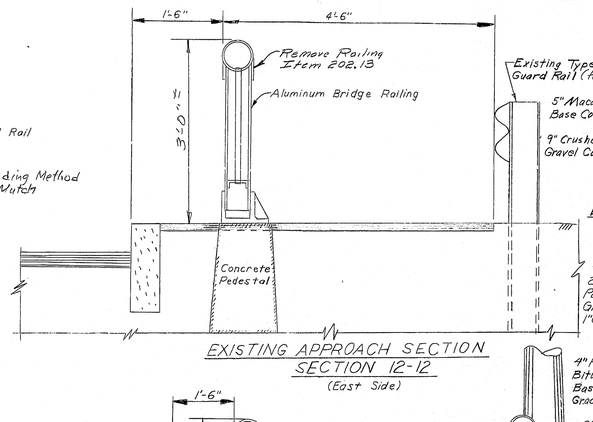
F.A.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	4	41



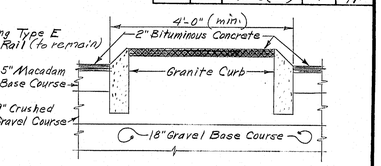
APPROACH GUARD RAIL
SECTION 13-13
(West Side of Tukey's Bridge to Sta. 162+00± on Baxter Boulevard, ± from Median Barrier to Sta 164+65±@ Washington Ave. Bridge No. 2)



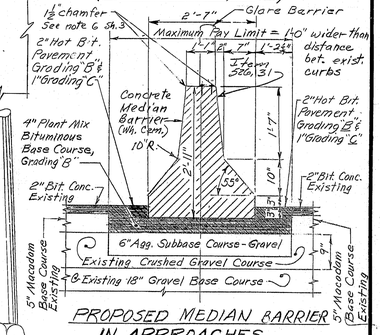
PROPOSED APPROACH SECTION
SECTION 12-12
(East Side)
(Sta. 140+45.33 to Tukey's Bridge and From Tukey's Bridge to Sta. 162+91.17)



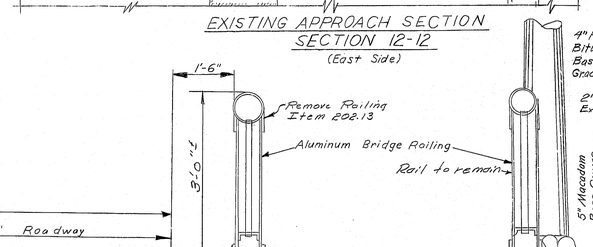
EXISTING APPROACH SECTION
SECTION 12-12
(East Side)

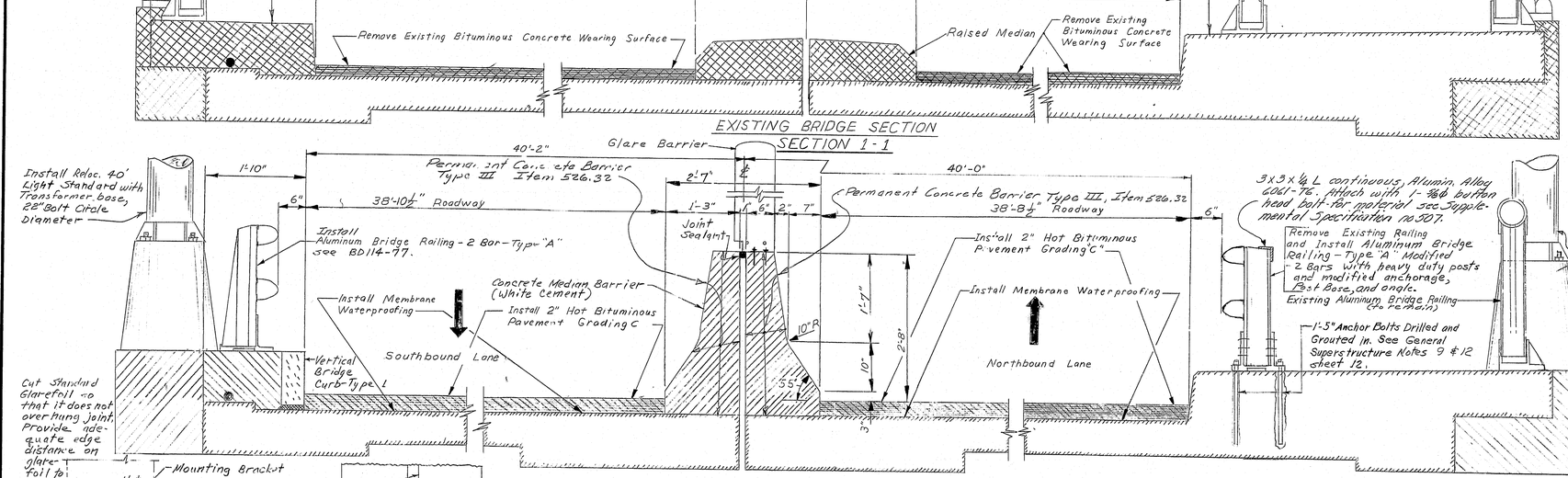


EXISTING MEDIAN IN APPROACHES
(SECTION 11-11, TYP.)

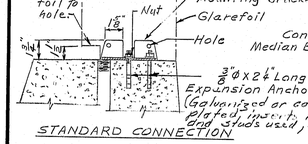


PROPOSED MEDIAN BARRIER IN APPROACHES
(SECTION 11-11, TYP.)

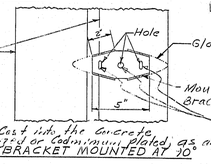




EXISTING BRIDGE SECTION
SECTION 1-1



STANDARD CONNECTION



BRACKET MOUNTED AT 30°

GLARE BARRIER DETAILS

PROPOSED BRIDGE SECTION
SECTION 1-1
(Looking North)

Note: Place anchors in center and exterior holes on Type III Barrier, place anchors in the exterior holes on Type II Barriers

NOTE
Install 3M Scotch Brand Demountable Reflectorized Delineators, Diamond Grade, 4" in 645.30(c), mounted on Glare Barriers. Delineators are to be attached to the Barriers by pop riveting it thru the Glare Barrier. Space Delineators at 100' intervals in each of NB and SB lines.

REFERENCES
For where Section 1-1 is taken see sheet 12, 13.
" " " 11-11 " " " " 5, C.
" " " 12-12 " " " " 5, 6.
" " " 13-13 " " " " 6.

Note: All Aluminum Bridge Railing Furnished and Installed shall be paid for under Item 507.141

LEGEND
- Concrete to be Removed
- Existing Concrete
- Hot Bituminous Pavement to be Removed
- New Hot Bituminous Pavement
- Existing Hot Bituminous Pavement
- New Concrete
- Granite Curb

PROJECT DESIGN ENGINEER	CDH	BY	DATE
PLANS	DESIGN - DETAILED	CDH	LAP	10-77
	CHECKED	MMS		4-78
	REVISIONS			
	FIELD CHANGES			

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF

TUKEYS BRIDGE

OVER

BACK COVE

IN THE CITY OF

PORTLAND

CUMBERLAND COUNTY

GENERAL SECTIONS

SHEET 4 OF 41 AUGUSTA, MAINE AUGUST 1978

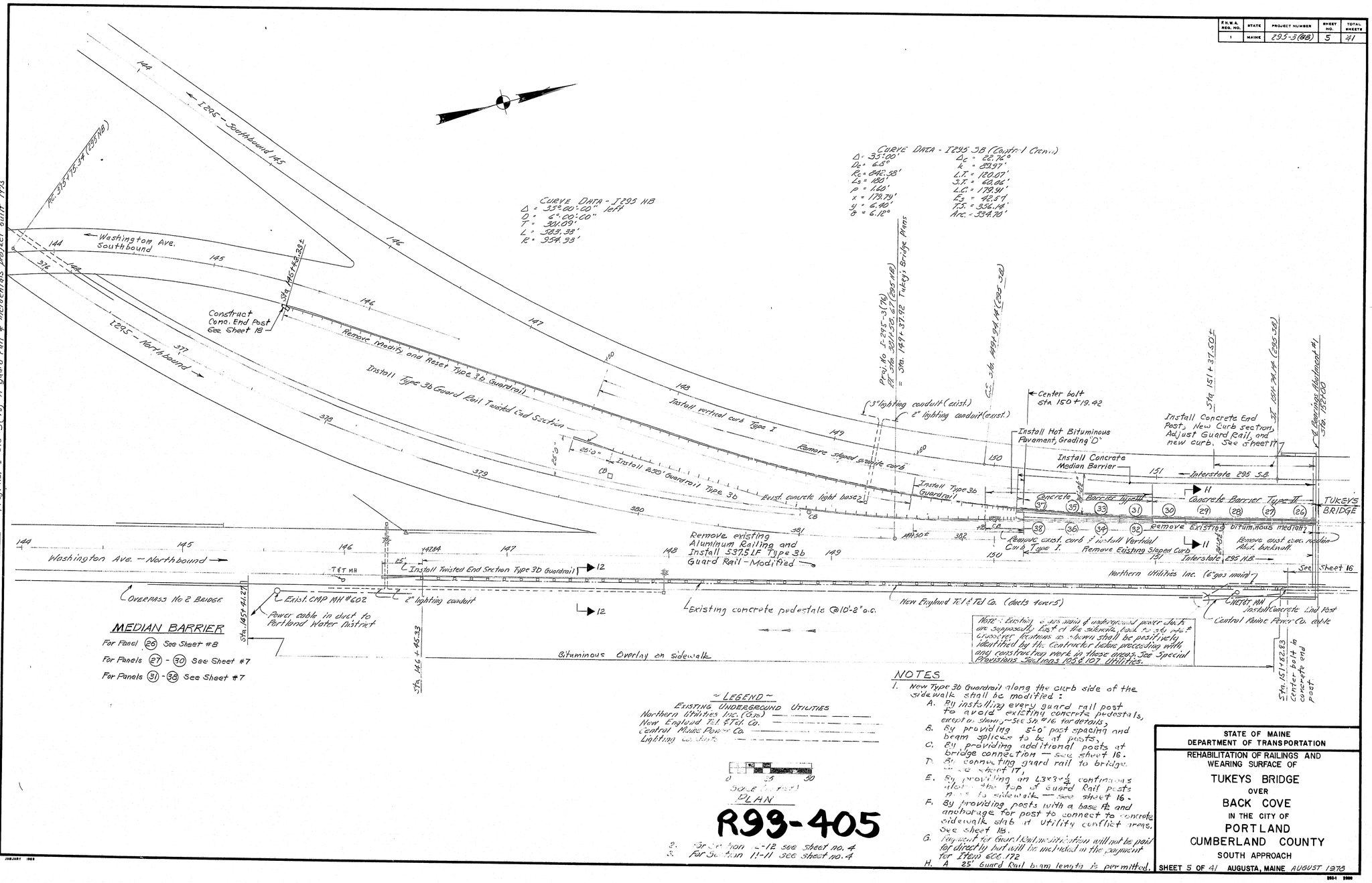
R93-404

JANUARY 1968

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(68)	5	41

References: Proj. No. I-295-3(76) A paving project built 1974
Proj. No. I-295-3(78) A guard rail & incidentals project built 1975

PROJECT DESIGN ENGINEER	CDH	BY	DATE
PLANS	DESIGN - DETAILED	CDH	4-22-75
	CHECKED	RMS	5-7-75
	REVISIONS		
	FIELD CHANGES		



Curve Data - I295 NB
Δ = 33°00'00" left
D = 6°00'00"
T = 301.09'
L = 584.38'
R = 954.93'

Curve Data - I295 SB (Construction)
Δc = 22.76°
R = 859.97'
L.T. = 170.07'
S.T. = 60.06'
L.C. = 179.91'
Es = 42.57'
T.S. = 356.14'
Arc. = 334.70'

MEDIAN BARRIER
For Panel (26) See Sheet #8
For Panels (27) - (30) See Sheet #7
For Panels (31) - (38) See Sheet #7

~ LEGEND ~
EXISTING UNDERGROUND UTILITIES
Northern Utilities Inc. (Gas)
New England Tel. & Tel. Co.
Central Maine Power Co.
Lighting conduit

0 15 30
SCALE IN FEET

PLAN

R93-405

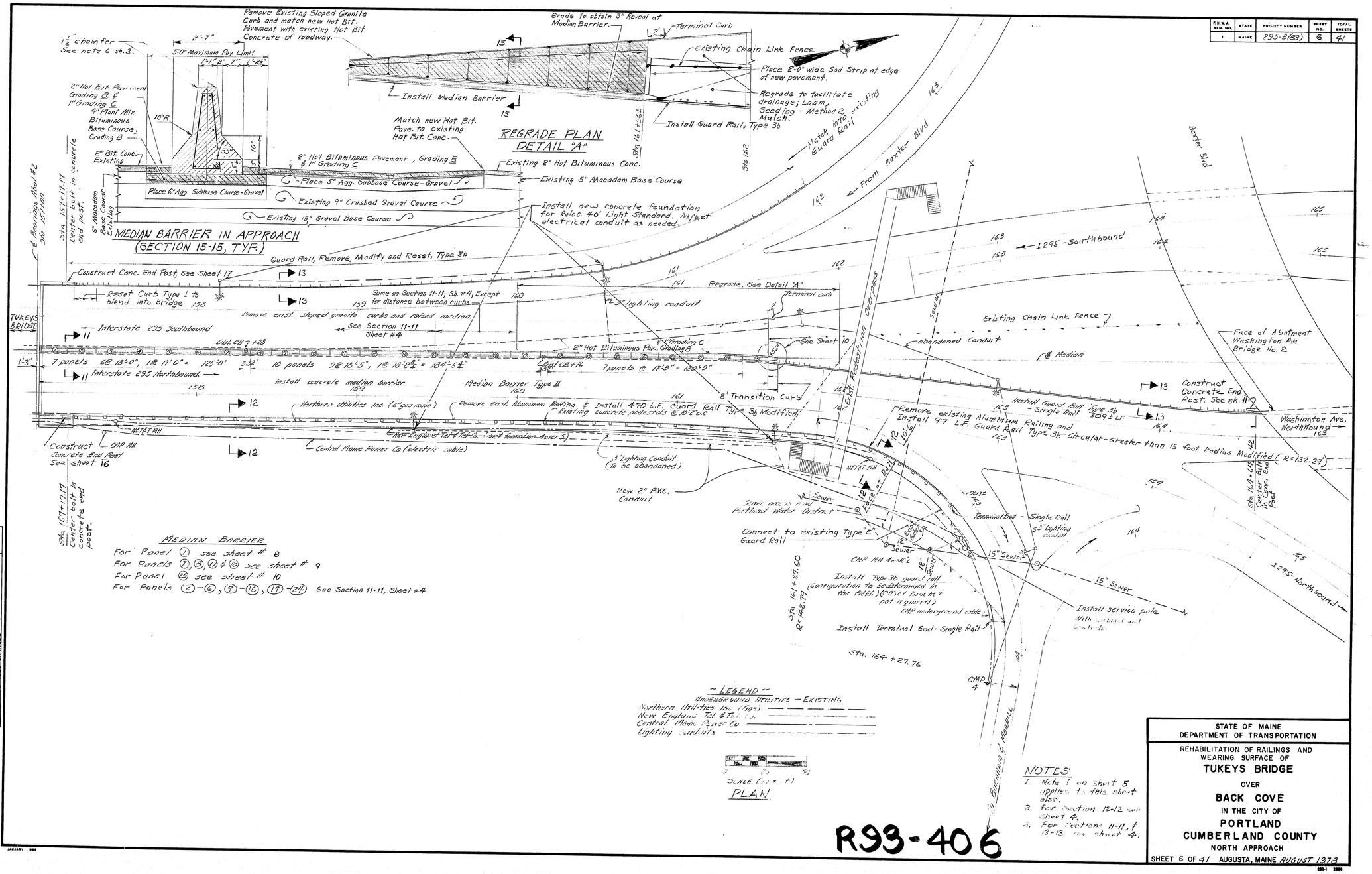
2. For Section 6-12 see sheet no. 4
3. For Section 11-11 see sheet no. 4

NOTES
1. New Type 3b Guardrail along the curb side of the sidewalk shall be modified:
A. By installing every guard rail post to avoid existing concrete pedestals, except as shown, - see Sh #16 for details.
B. By providing 5'0" post spacing and beam splices to be at posts.
C. By providing additional posts at bridge connection — see sheet 16.
D. By connecting guard rail to bridge — see sheet 17.
E. By providing an L3x3x1/4 continuous along the top of guard Rail posts from to sidewalk — see sheet 16.
F. By providing posts with a base plate and anchorage for post to connect to concrete sidewalk slab at Utility conflict areas. See sheet 18.
G. Payment for Guard Rail modification will not be paid for directly but will be included in the payment for Item 606.172
H. A 25' Guard Rail beam length is permitted.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
REHABILITATION OF RAILINGS AND WEARING SURFACE OF
TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY
SOUTH APPROACH
SHEET 5 OF 41 AUGUSTA, MAINE AUGUST 1975

JANUARY 1969

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(69)	6	41



MEDIAN BARRIER

For Panel (1) see sheet # 8
For Panels (7), (8), (17) & (18) see sheet # 9
For Panel (23) see sheet # 10
For Panels (2)-(6), (9)-(16), (19)-(24) See Section 11-11, Sheet #4

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	CDH	3-8-78
CHECKED	[illegible]	8-78
REVISIONS		
FIELD CHANGES		

PLANS

LEGEND

UNDERGROUND UTILITIES - EXISTING

Northern Utilities Inc. (Gas) ——— ——— ———
New England Tel. & Tel. Co. ———————
Central Maine Power Co ———————
Lighting Conduits ———————

SCALE (1" = 40')

PLAN

NOTES

1. Note 1 on sheet 5 applies to this sheet also.
2. For Section 12-12 see sheet 4.
3. For sections 11-11, & 13-13 see sheet 4.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF

TUKEYS BRIDGE

OVER

BACK COVE

IN THE CITY OF

PORTLAND

CUMBERLAND COUNTY

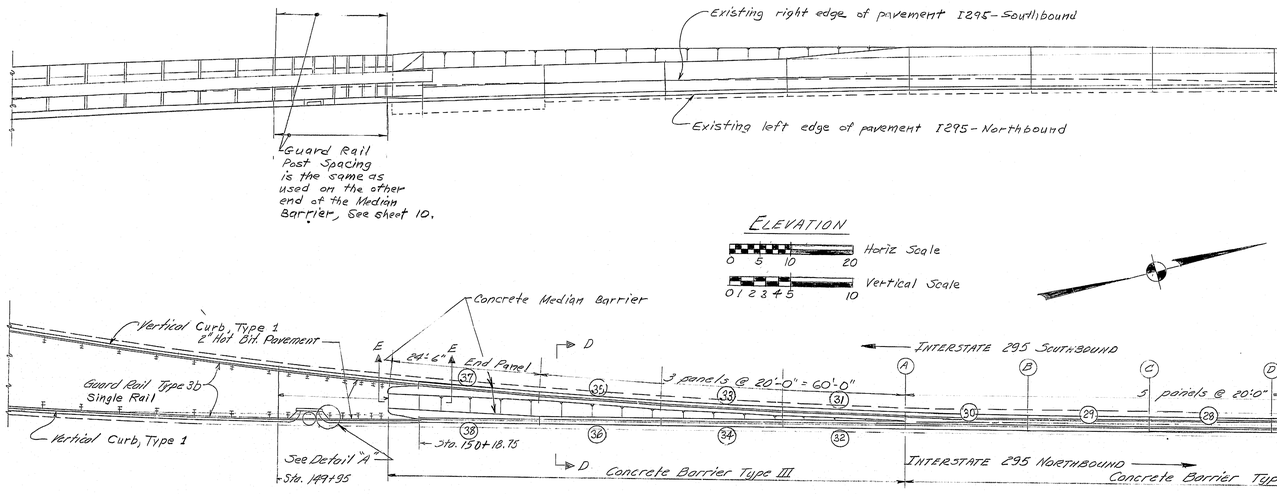
NORTH APPROACH

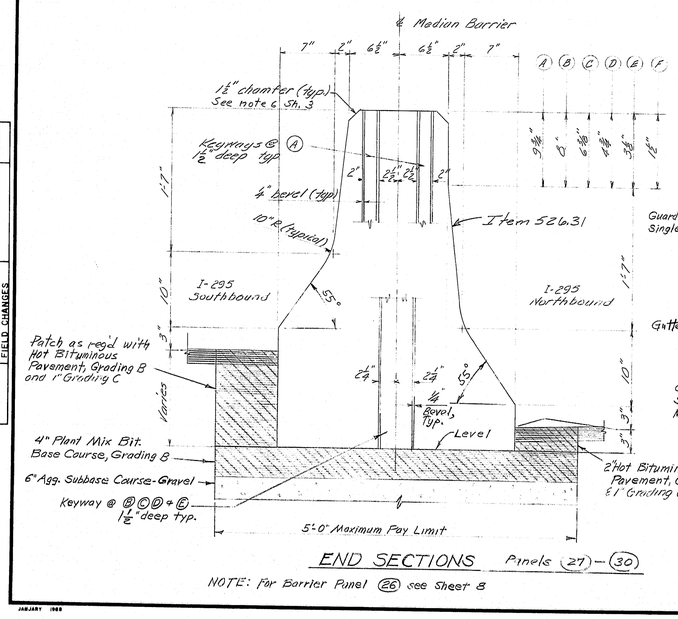
SHEET 6 OF 41 AUGUSTA, MAINE AUGUST 1978

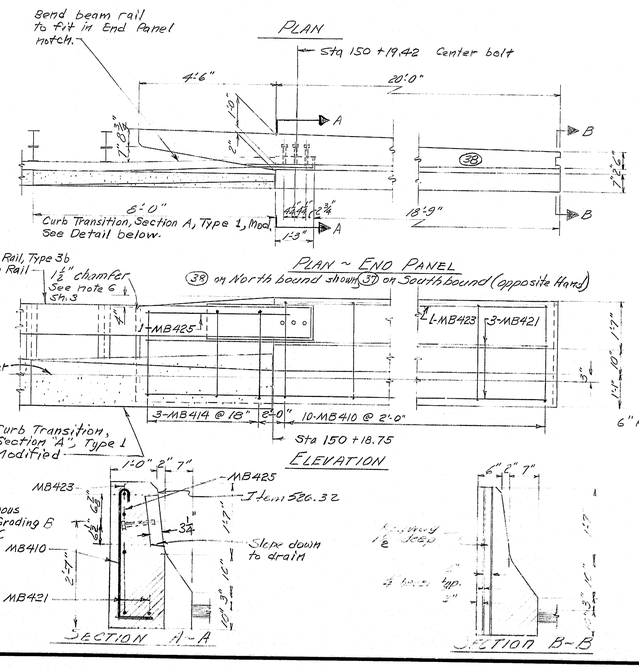
R93-406

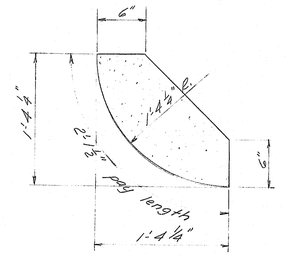
JANUARY 1968

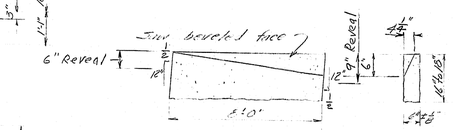
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(68)	7	41











CURB TRANSITION, SECTION A, TYPE 1 MODIFIED

Curb modified from Standard Details to Dimensions shown here.

1 as shown to be used @ Panel #38.
3 opposite hand to be used @ Panels #25, #37

REFERENCES

1. For Curb Transition & Curb see Highway Standard Details, Aug. 1969, sheet (3).
2. Reinforcing steel in (26) thru (30) is similar to Section D-D sheet 3.

PROJECT DESIGN ENGINEER CONT	BY	DATE
DESIGN - DETAILED	CAH	4/25/78
CHECKED	MWB	5/2/78
REVISIONS		
FIELD CHANGES		

PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF

TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY

MEDIAN BARRIER
SOUTH APPROACH

SHEET 7 OF 41 AUGUSTA, MAINE AUGUST 1978

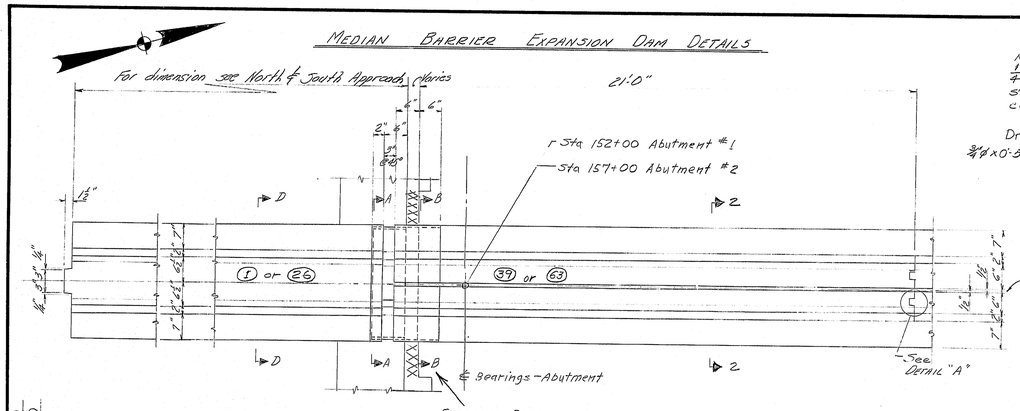
R93-407

JANUARY 1968

253-1 2000

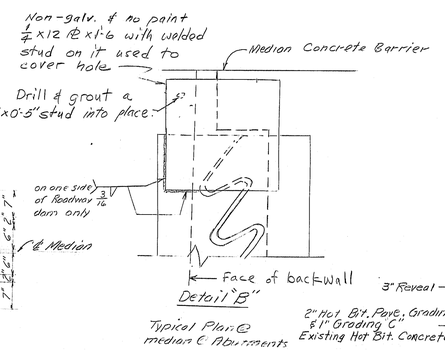
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(65)	8	41

MEDIAN BARRIER EXPANSION DAM DETAILS



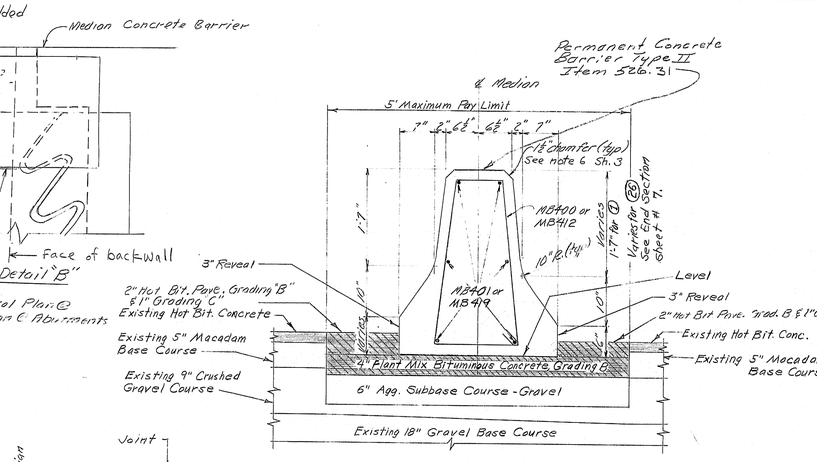
PLAN

Abutment No.1 shown Abutment No.2 (opp. hand)

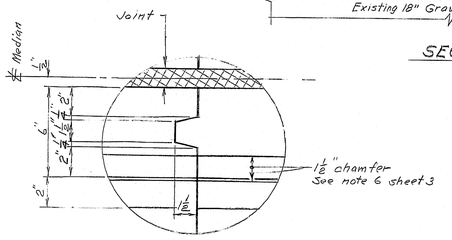


Detail "B"

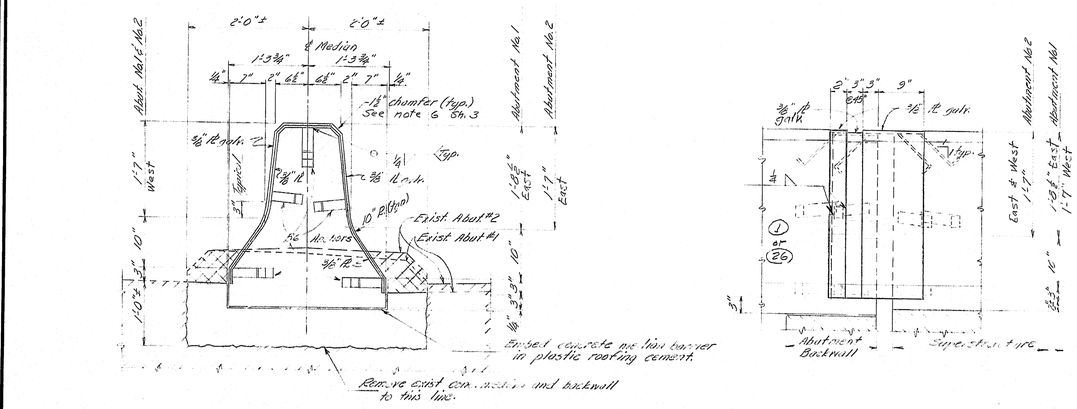
Typical Plan @ median ℄ Abutments



SECTION D-D



DETAIL "A"



ELEVATION

East side Abutment No.1
West side Abutment No.2

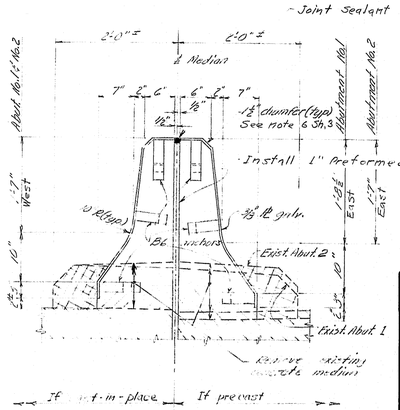
SECTION A-A

SIDE ELEVATION

(East side shown)

B6-ANCHOR DETAILS

(Typical)



SECTION B-B

NOTES

1. Expansion Dam shall be ASTM A36 steel.
2. Expansion Dam shall be hot dip galvanized after fabrication.
3. For details not shown of Expansion Dam see Type "V" Curb Expansion Dam Details of Standard Details BD 105-74.
4. For Section 2-2 see sheet 14.
5. Payment for Median Barrier Expansion Dam and ℄'s at roadway expansion dams will be made under Items 504.70 and 504.71.

PROJECT DESIGN ENGINEER: CDH		BY	DATE
PLANS	DESIGN - DETAILED	CDH	3-31-78
	CHECKED	Reeves	3-31-78
	REVISIONS	MMG	2-7-79
	FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF

TUKEYS BRIDGE

OVER

BACK COVE

IN THE CITY OF

PORTLAND

CUMBERLAND COUNTY

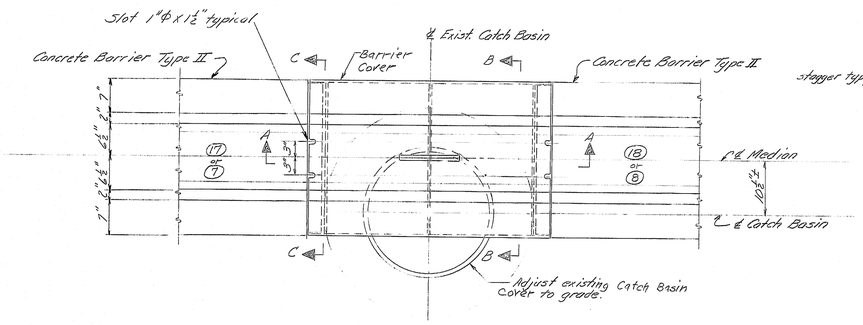
MEDIAN BARRIER EXPANSION DAM DETAILS

SHEET 8 OF 41 AUGUSTA, MAINE AUGUST 1978

JANUARY 1969

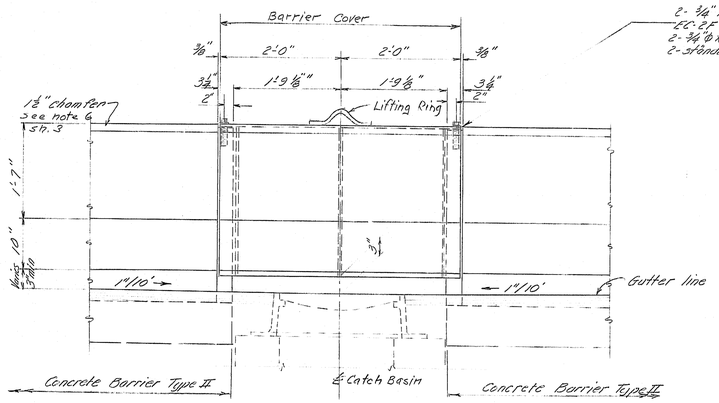
R93-408

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	9	41

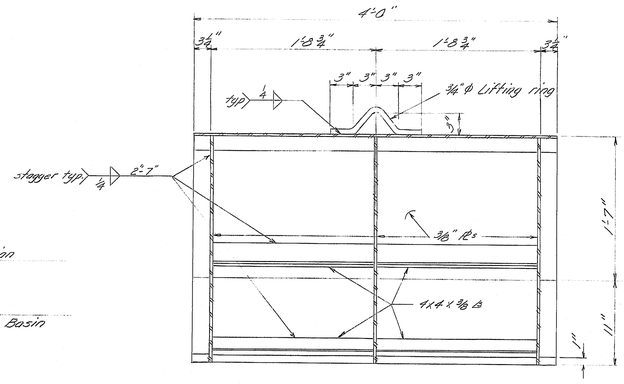


PLAN

2-Barrier Covers - required
Sta. 158+28 ℄ Sta. 160+16

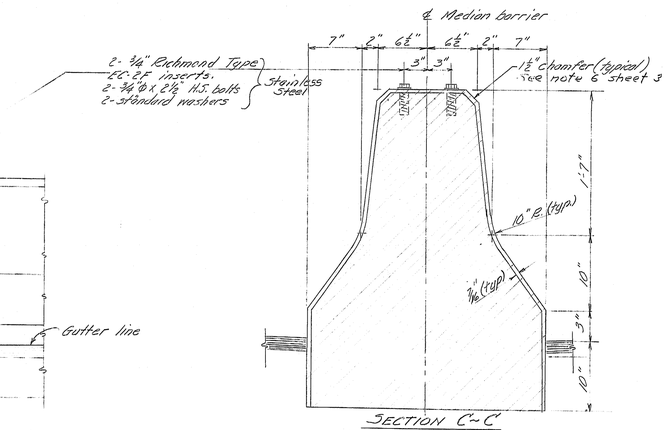


ELEVATION



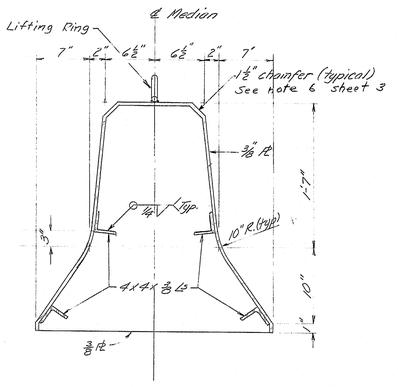
SECTION A-A

Showing structural steel Barrier Cover



SECTION C-C

showing 7/16" groove in Concrete Barrier Type II



SECTION B-B

~ NOTES ~

1. Structural Steel Barrier Covers shall be ASTM A36 steel.
2. Barrier Covers shall be hot dip galvanized after fabrication to meet specification ASTM A123.
3. Barrier Covers will be paid for under Item 504.70 & 504.71.

PROJECT DESIGN ENGINEER	CDH	BY	DATE
PLANS	DESIGN - DETAILED	C.D.H.	4/28
	CHECKED	MMG	8-27
	REVISIONS		
	FIELD CHANGES		

JANUARY 1988

R93-409

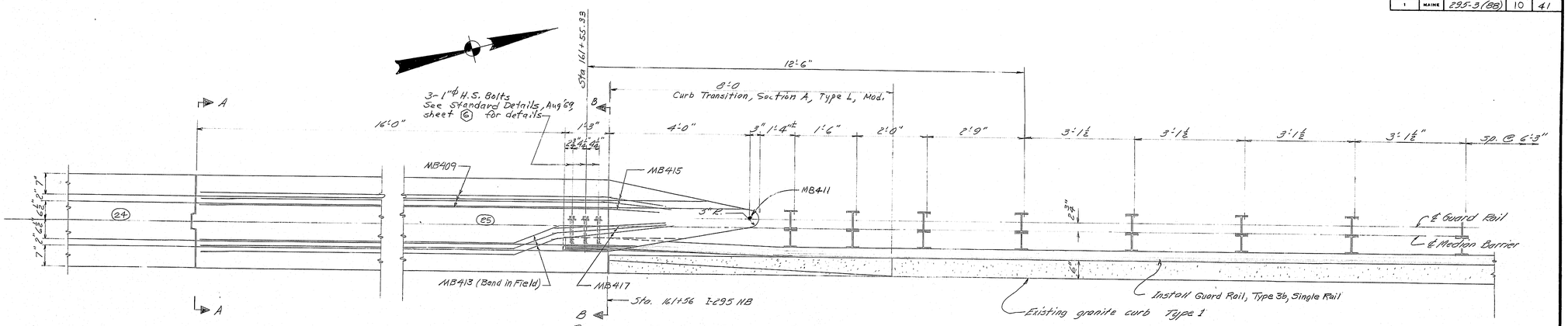
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF
TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY
MEDIAN BARRIER
CATCH BASIN COVERS

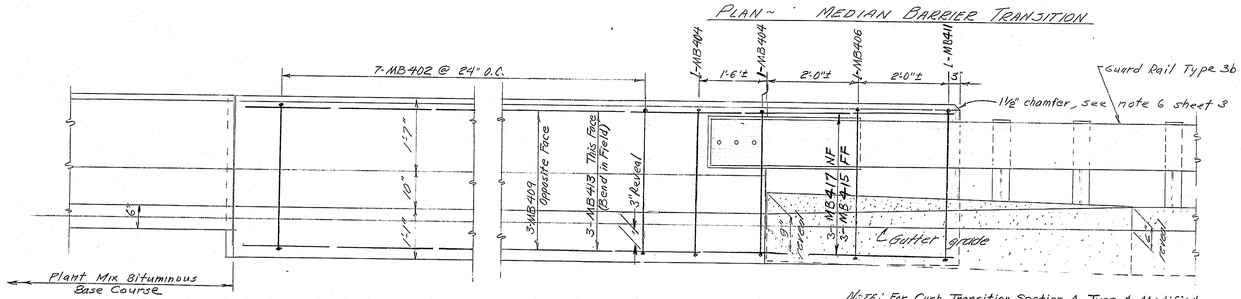
SHEET 9 OF 41 AUGUSTA, MAINE AUGUST 1978

BRS-1 2000

F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	10	41

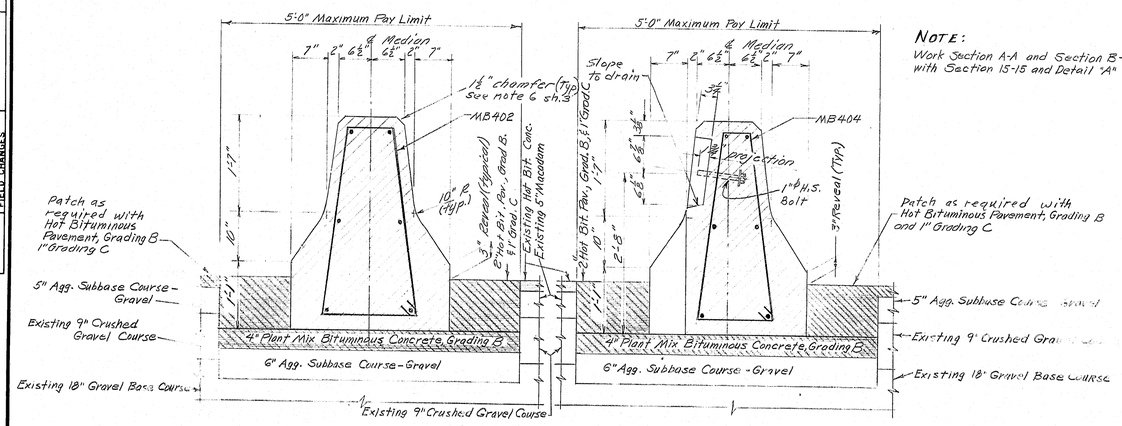


PLAN ~ MEDIAN BARRIER TRANSITION



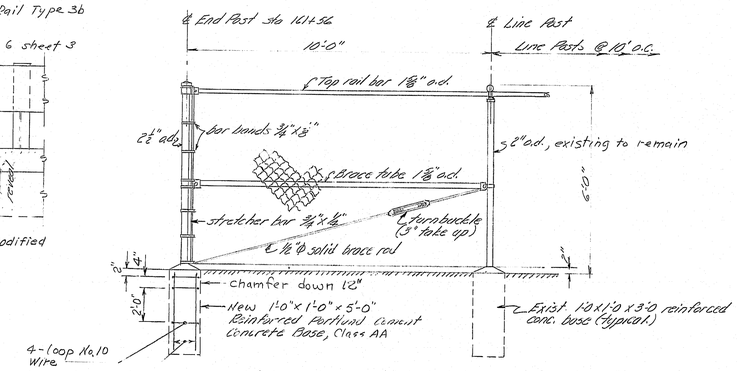
ELEVATION ~ EAST FACE

NOTE: For Curb Transition, Section A, Type 1 Modified detail see Sheet #7



SECTION A-A SECTION B-B

NOTE:
Work Section A-A and Section B-B with Section 15-15 and Detail 'A' Sheet 6.



Remove exist. chain link fence from Sta 160+06± to Sta. 161+56±. Fence removed and not reset shall become the property of the Contractor, and removal will not be paid for directly, payment shall be considered incidental to Item 607.24.

CHAIN LINK FENCE

Existing braced end panel shown to be removed and reset. Reset end post with new concrete anchorage @ Sta 161+56±. Pay Item 607.24.

PROJECT DESIGN ENGINEER	cot	BY	DATE
PLANS	DESIGN - DETAILED	cot / Bruce	8-8-78
	CHECKED	MMS	8-28
	REVISIONS		
	FIELD CHANGES		

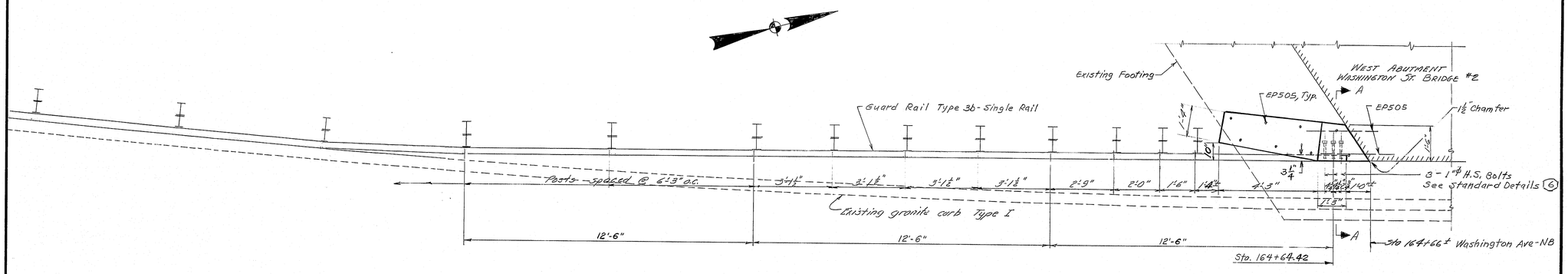
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

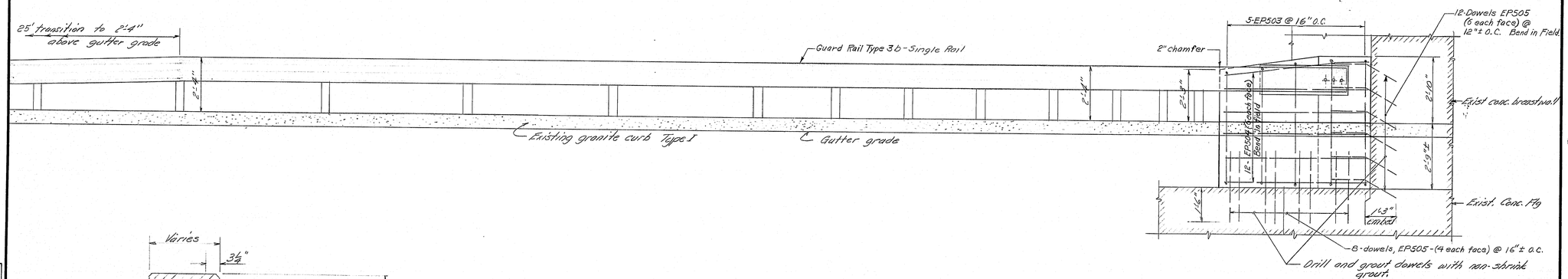
REHABILITATION OF RAILINGS AND WEARING SURFACE OF
TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY
MEDIAN BARRIER END POST
NORTH APPROACH
SHEET 10 OF 41 AUGUSTA, MAINE AUGUST 1978

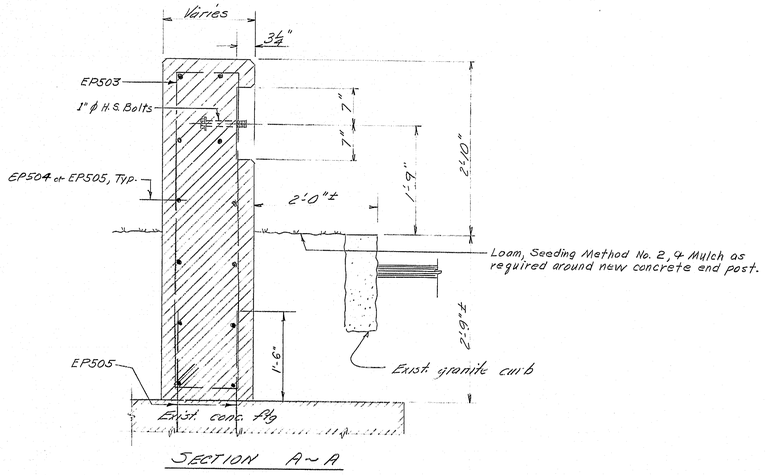
R93-410

JANUARY 1968

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	11	41







SECTION A~A

NOTES:

1. Field bending of reinforcing shall be considered incidental to Item 503.13.
2. See Standard Details sheet (6) & (9) for Guard Rail Attachment.
3. See Standard Details sheet (6) for Guard Rail Type 3b.
4. General Superstructure Notes 1, 3, 5, 8, & 11, sheet 12, apply to this sheet also.
5. Work required to make changes in direction of Guard Rail, Type 3b, both horizontally and vertically will be considered for payment as incidental to Item 606.55.

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	CDH	
CHECKED	MMG	8-78
REVISIONS		
FIELD CHANGES		

PLANS

JANUARY 1968

R93-411

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF

TUKEYS BRIDGE

OVER

BACK COVE

IN THE CITY OF

PORTLAND

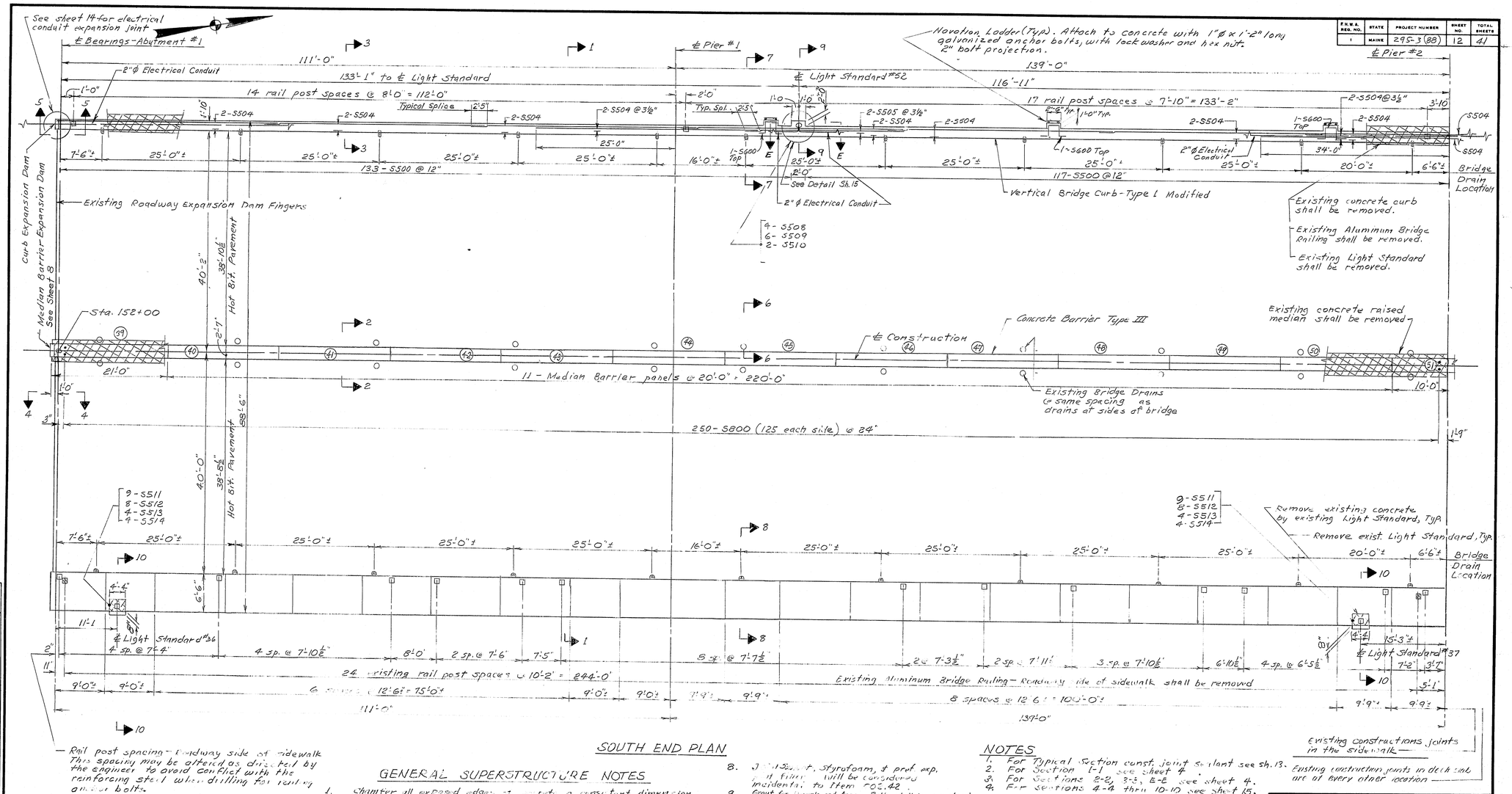
CUMBERLAND COUNTY

GUARD RAIL CONNECTION AT WASHINGTON ST. OVERPASS NO. 2

SHEET 11 OF 41 AUGUSTA, MAINE AUGUST 1978

8S-1 8906

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	12	41



PROJECT DESIGN ENGINEER - CDH	BY	DATE
PLANS DESIGN - DETAILED	CDH	4-78
CHECKED	CDH	5-78
REVISIONS		
FIELD CHANGES		

— Rail post spacing - Roadway side of sidewalk. This spacing may be altered as directed by the engineer to avoid conflict with the reinforcing steel when drilling for resin anchor bolts.

SOUTH END PLAN

GENERAL SUPERSTRUCTURE NOTES

1. Chamfer all exposed edges of concrete a constant dimension between ⅛ inch and ¾ inch inclusive, unless otherwise indicated. Form a ¾ inch V-groove in the fascias of the horizontal joint between the curb and the slab.
3. Reinforcing steel shall have ... unless otherwise indicated.
4. Sandblast the top of the roadway slab ... before placing Membrane Waterproofing. Protective Coating for Concrete Surfaces shall be applied to the following areas: All new concrete parapet curb, all new concrete on sidewalk side, concrete end post and new concrete left exposed in the wing areas.
6. Mortar for bedding and for joints in the ... curb shall contain an approved non-shrink additive.
7. In curb section on Sheet BD104-77, the ... Curb - Type L is modified to ... Type 4 ...
8. ... Styrofoam, ¾ pref. exp. ... will be considered incidental to Item 502.42.
9. Grout for dowels and Anc. Bolts shall be non-shrink. Grout for dowels in Conc. Mod. Barr. shall be white cement as well.
10. New Electrical Conduit shall be either polyethylene ... or Polyvinyl Chloride (PVC) ... I.M.S. ... are in place.
11. The ... interface in the ... will be in tenons with ... vertical ... to ...
12. ... the ... Type A ... end in the ... Slope ... walls ... and ... may be modified to the use of Anchor Bolts, Plate, 1'-6" long and 3" apart and post base section modified to 1-2 bolt, and no steel spacer plate is required. ... Section L-L sheet 4. ... with ... and grouting of remaining ... to ... will be considered ... detail for Item 508.

NOTES

1. For Typical Section const. joint sealant see Sh. 13.
2. For Section L-L see sheet 4.
3. For Sections B-B, D-D, E-E see sheet 4.
4. For Sections 4-4 thru 10-10 see sheet 15.

REFERENCES

For Curb Expansion Dam ... BD105-74.
For Curb Section see BD104-77.
For Aluminum Bridge Railing - Type A ... BD114-77.
For Median Barrier Expansion Dam ... sheet 8.

R93-412

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURACE OF
TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY
SOUTH END OF TUKEYS BRIDGE

SHEET 12 OF 41 AUGUSTA, MAINE AUGUST 1978

JANUARY 1968

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	13	41

℄ Pier #2 — 139'-0" — 116'-11" — ℄ Pier #3 — 111'-0" — ℄ Bearings-Abutment #2

2"ϕ Electical Conduit

17 rail post spaces @ 7'-10" = 133'-2"

℄ Light Standard #57

133'-1" to ℄ Light Standard

14 rail post spaces @ 8'-0" = 112'-0"

See sheet 14 for electrical conduit expansion joint details

S504 S504 3'-10" 2-S506 @ 3½" 2-S504 2'-5" Typ. Splice 2-S504 2-S504 @ 3½" 2-S504 2'-0" 1'-0" 1'-0" See Detail Sh. 15 2'-0" 2'-5" Typ. Splice 2-S505 @ 3½" 2-S504 2-S504 2-S504 3"ϕ Electrical Conduit 1'-0" 2-S507 1'-0" 14 14

Bridge Drain Location 6'-6"± 20'-0" 25'-0"± 25'-0"± 25'-0"± 25'-0"± 25'-0"± 16'-0"± 25'-0" 25'-0"± 25'-0"± 25'-0"± 25'-0"± 7'-6"±

116-S500 @ 12" — 133-S500 @ 12"

1'-0"

Existing concrete curb shall be removed

Existing Aluminum Bridge Railing shall be removed.

Existing Light Standard shall be removed

Vertical Bridge Curb - Type 1 Modified

2"ϕ Electrical Conduit

3"ϕ Electrical Conduit

4-S508 6-S509 2-S510

Existing Roadway Expansion Dam Fingers

Existing Concrete raised median shall be removed

Concrete Barrier Type III

℄ Construction

Existing Bridge Drains @ same spacing as drains at sides of bridge

11-Median Barrier panels @ 20'-0" = 220'-0"

Sta. 157+00

Median Barrier Expansion Dam

Curb Expansion Dam

10'-0" 21'-0"

3" 252-S800 (126 each side) @ 24" 3"

38'-6" 38'-8½" Hot Bit. Pavement 40'-0" 2'-7" Hot Bit. Pavement 40'-2"

4 1'-0" 4

Remove existing concrete by existing Light Standard

Remove existing Light Standard

9-S511 8-S512 4-S513 4-S514

Bridge Drain Location 6'-6"± 20'-0"± 25'-0"± 25'-0"± 25'-0"± 25'-0"± 16'-0"± 25'-0" 25'-0" 25'-0"± 25'-0"± 7'-6"±

3'-7" 7'-2" 4 Spaces @ 6'-5½" 6'-10½" 3 Spaces @ 7'-10½" 2 Spaces @ 7'-11½" 2 Spaces @ 7'-3½" 8 Spaces @ 7'-7½" 7'-5" 2 Spaces @ 7'-6" 8'-0" 4 Spaces @ 7'-10½" 4 Spaces @ 7'-4" 11'-1" 6'-6" 3'-4" ℄ Light Standard #38 0'-2"

5'-1" Existing Aluminum Bridge Railing - Roadway side of sidewalk shall be removed 24 existing rail post spaces @ 10'-2" = 244'-0" 11"

9'-9" 9'-9" 8 Spaces @ 12'-6"± = 100'-0"± 9'-9"± 9'-9"± 9'-0"± 9'-0"± 6 Spaces @ 12'-6"± = 75'-0"± 9'-0"± 9'-0"±

139'-0" 111'-0"

Existing constructions joints in the sidewalk

Existing constriction joints in the deck at every other Sidewalk joint.

Rail post spacing - Roadway side of sidewalk This spacing may be altered as directed by the engineer to avoid conflict with the reinforcing steel when drilling for railing anchor bolts.

NORTH END PLAN

Saw Groove in existing concrete slab to receive Joint Sealant 3/4" ℄ Const Joint 2" Hot Bit Pavement Membrane Waterproofing 3/4" 1" 2" 4" Existing Slab Existing Slab

Use this detail from curb to conc. Med. Barrier in both lanes. See Superstructure Plan for locations of existing construction joints. Pavement shall be considered incidental to Membrane Waterproofing Item #502.14.

TYPICAL SECTION

at remaining ... Slab that requires waterproofing due to cracking or otherwise as directed by the Engineer.

NOTES

1. For General Superstructure Notes see Sheet 12.
2. For References see sheet 12.
3. For Section 1-1, see sheet 4.
4. For Sections 2-2, 3-3, E-E, see sheet 14.
5. For Sections 4-4 thru 10-10, & 14-14 see sheet 15.

PROJECT DESIGN ENGINEER COH
DESIGN - DETAILED BY COH DATE 4-78
CHECKED RWG 8-78
REVISIONS
FIELD CHANGES
PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

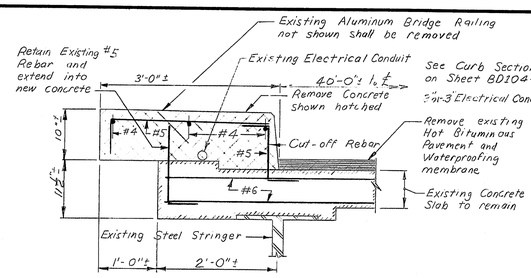
REHABILITATION OF RAILINGS AND WEARING SURFACE OF
TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY
NORTH END OF TUKEYS BRIDGE

SHEET 13 OF 41 AUGUSTA, MAINE AUGUST 1978

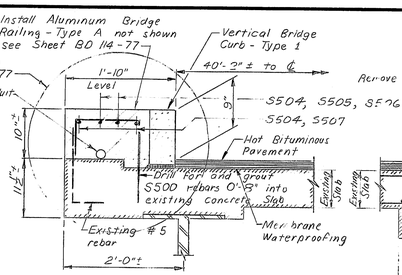
R93-413

JANUARY 1966

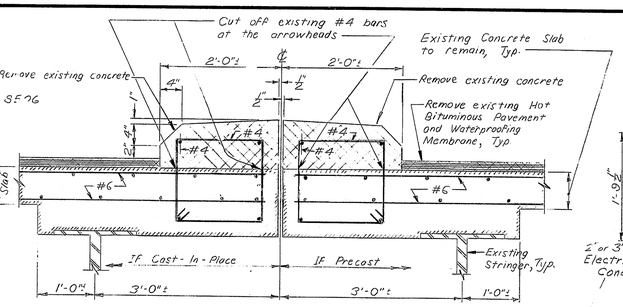
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	14	41



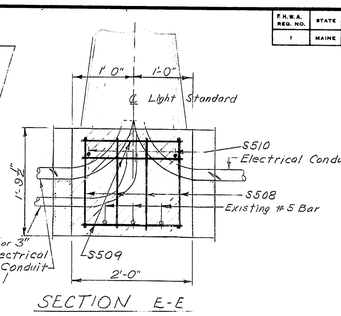
EXISTING CURB - DETAIL TO BE REMOVED
SECTION 3-3



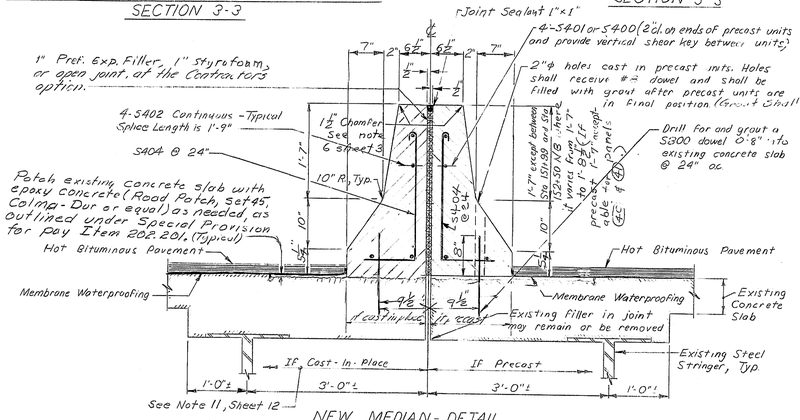
NEW CURB - DETAIL
SECTION 3-3



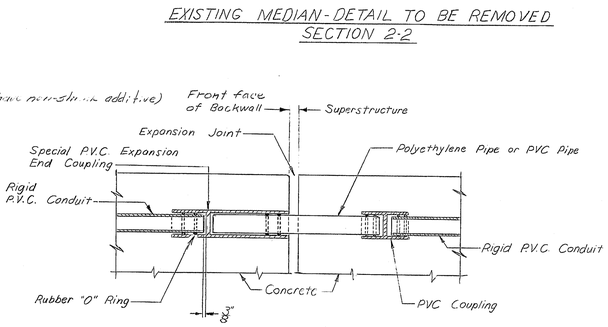
EXISTING MEDIAN - DETAIL TO BE REMOVED
SECTION 2-2



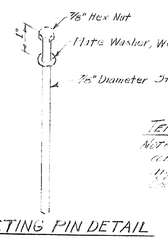
SECTION E-E
Navigation Light conduit @ Light Standard #52



NEW MEDIAN - DETAIL
SECTION 2-2



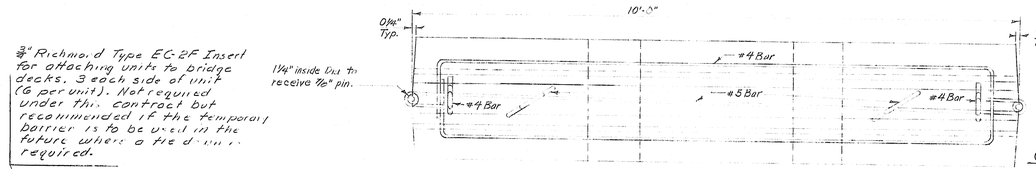
DETAIL OF EXPANSION JOINT IN ELECTRICAL CONDUIT AT ABUTMENTS



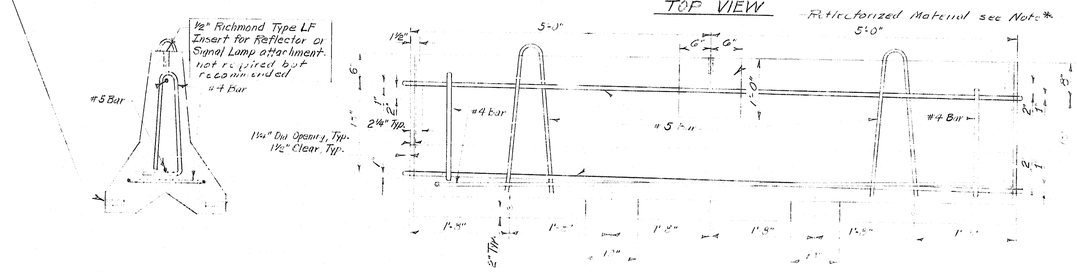
CONNECTING PIN DETAIL

TEMPORARY CONCRETE BARRIER TYPE I

NOTE: Steel reinforcing bars are not to be included in concrete parts that are used if the barrier is to be used for temporary Concrete Barrier Type I

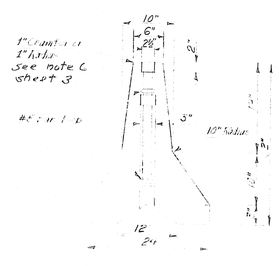


TOP VIEW



TYPICAL SECTION

TEMPORARY CONCRETE BARRIER TYPE I
ELEVATION



TYPICAL END VIEW

NOTE* Yellow Reflectorized Pavement Marking Material on every other Temporary Barrier Section. (20' spacing for Reflectorized Material). Payment to be considered incidental to Item 526.30.

NOTES
1. For where Sections 2-2, 3-3 are taken see sheets 12 & 13
2. For where Section E-E is taken see sheet 15, 12, & 13.
3. For General Superstructure Notes see sheet 12.

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	J.H. J.P.P.	5-75
CHECKED	M.M.S.	7-77
REVISIONS		
FIELD CHANGES		

PLANS

JANUARY 1968

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

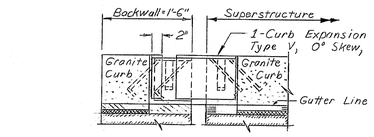
REHABILITATION OF RAILINGS AND WEARING SURFACE OF
TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY
BRIDGE DETAILS

SHEET 14 OF 41 AUGUSTA, MAINE AUGUST 1978

R93-414

BD-1 1968

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	15	41

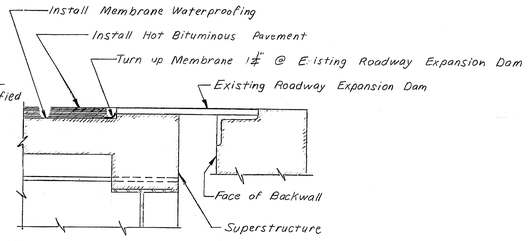


CURB EXPANSION DAM - DETAILS
SECTION 5-5

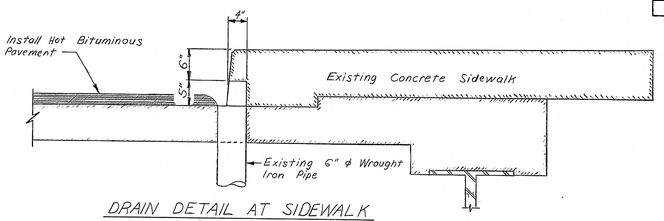
For Curb Expansion Dam See Standard Details BD105-74.
Dam is modified by chonging Curb @ to 2" wide as shown above

SECTION 14-14

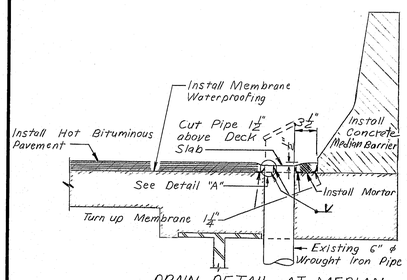
Section 14-14 is opposite hand to Section 5-5



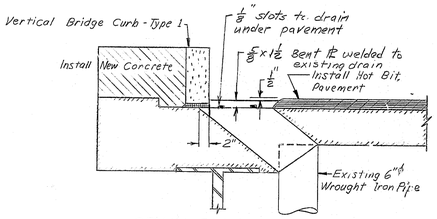
SECTION AT ABUTMENTS
SECTION 4-4



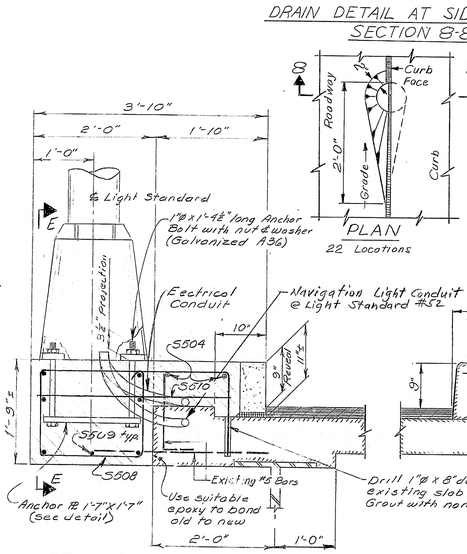
DRAIN DETAIL AT SIDEWALK
SECTION 8-8



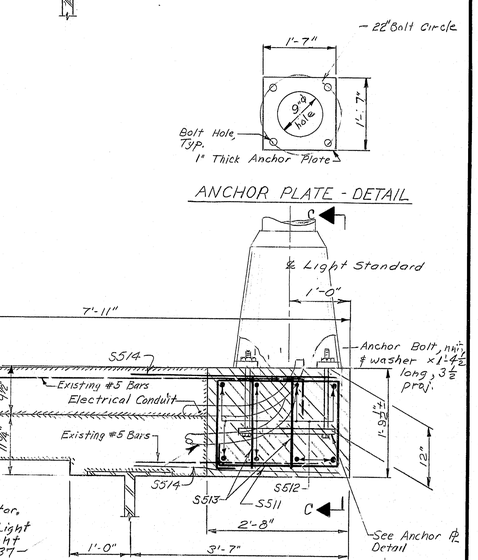
DRAIN DETAIL AT MEDIAN
SECTION 6-6



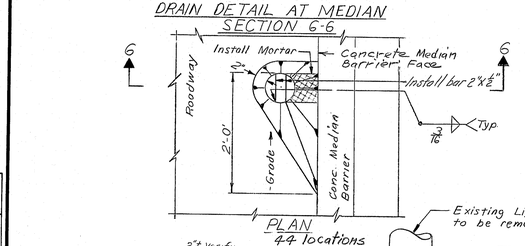
DRAIN DETAIL AT CURB
SECTION 7-7



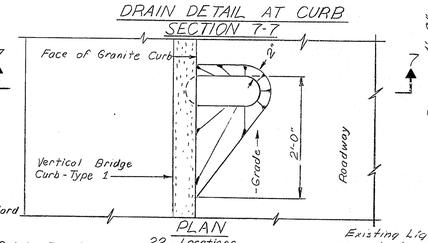
DETAIL AT LIGHT POSTS, CURB SECTION
SECTION 9-9



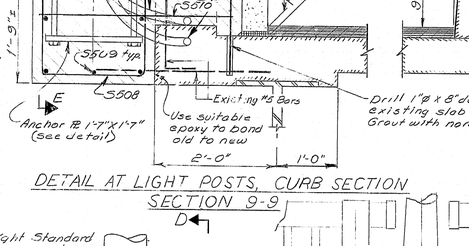
ANCHOR PLATE - DETAIL



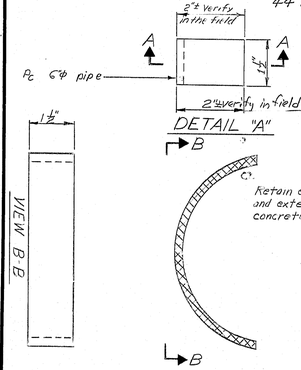
PLAN
44 locations

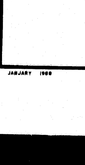


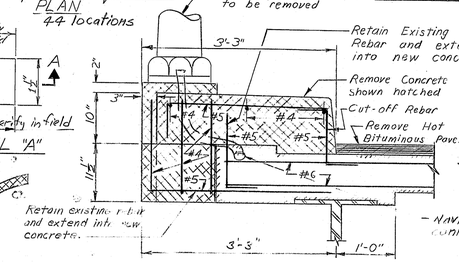
PLAN
22 Locations



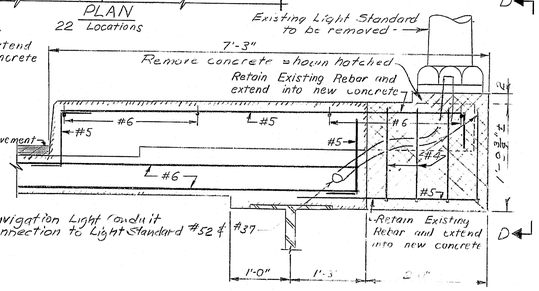
DETAIL AT LIGHT POSTS, SIDEWALK SECTION
SECTION 10-10



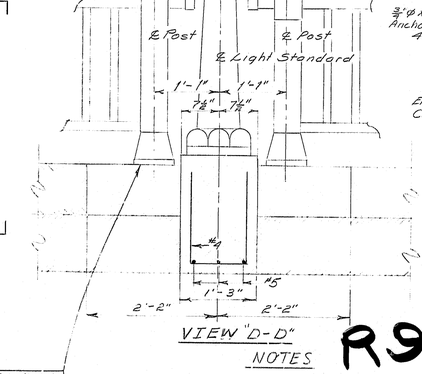




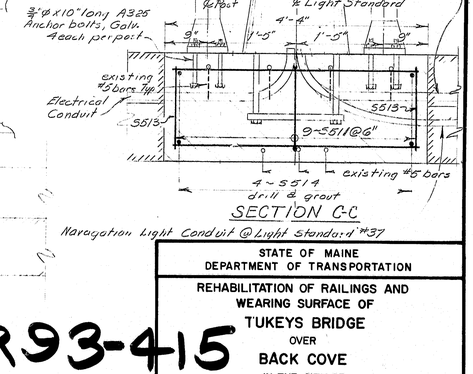
EXISTING LIGHT STANDARD AT CURB
SECTION TO BE REMOVED
SECTION 9-9



EXISTING LIGHT STANDARD AT SIDEWALK
SECTION TO BE REMOVED
SECTION 10-10



VIEW "D-D"



SECTION C-C

Navigation Light Conduit @ Light Standard #37

A Rolling Post each side of the Light Standards on the sidewalk side shall be located as shown in Section "C-C". The post flange plate shall be drilled to fit new rail post locations as directed by the Engineer in the field.

NOTES

1. For Section E-E see sheet 14.
2. For anchor Sections 4-4, 5-5, 6-6, 7-7, 8-8, 9-9 to be taken see Sheets 12 & 13.
3. For General Superstructure Notes see Sheet 12.
4. Rail Post Schedule is on Sheet 19.

PROJECT DESIGN ENGINEER: C.H.
PLANS — DESIGN - DETAILED: BY: C.H. DATE: 3-78; CHECKED: VAP 7-78; REVISIONS: MMS; FIELD CHANGES:

JANUARY 1988

R93-415

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

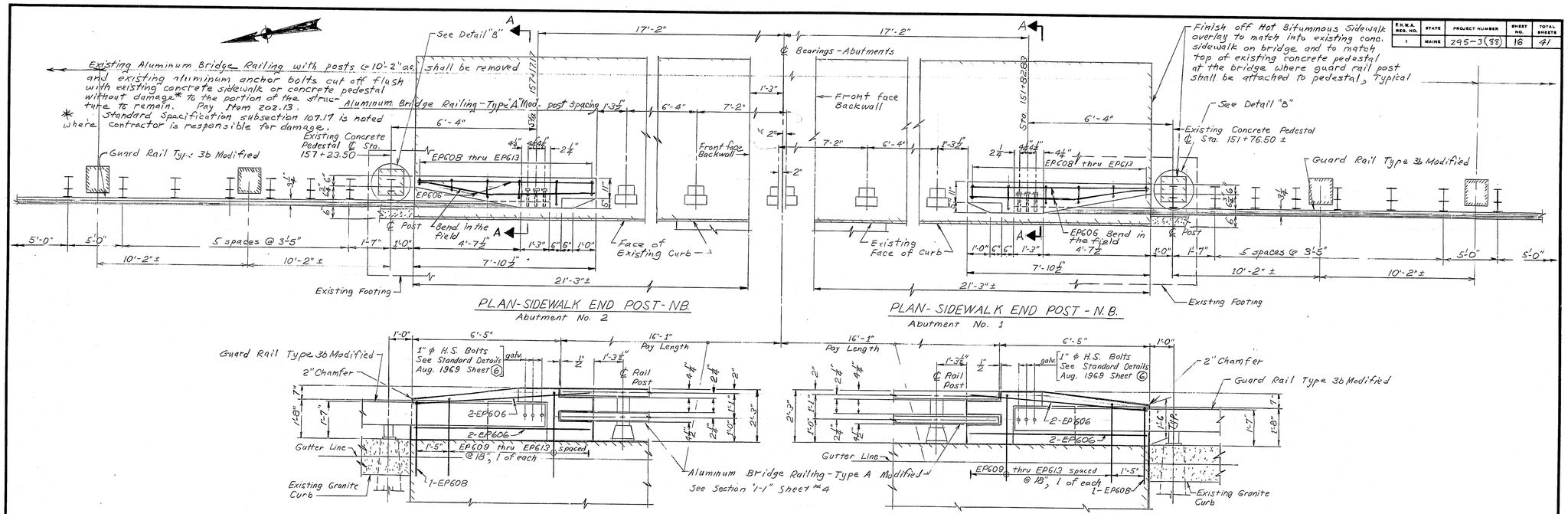
REHABILITATION OF RAILINGS AND WEARING SURFACE OF
TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY

BRIDGE DETAILS

SHEET 15 OF 41 AUGUSTA, MAINE AUGUST 1978

8-8-1 8900

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	16	41

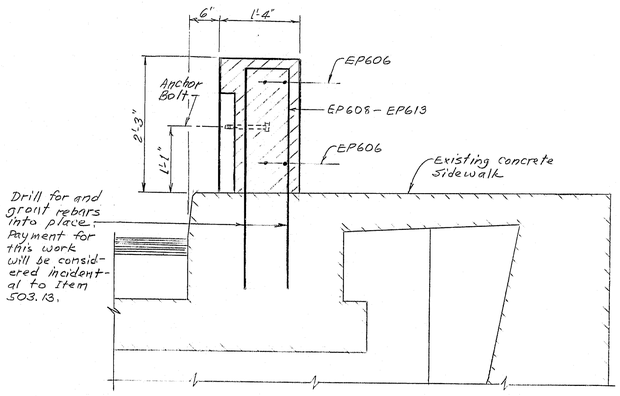


PLAN-SIDEWALK END POST-NB
Abutment No. 2

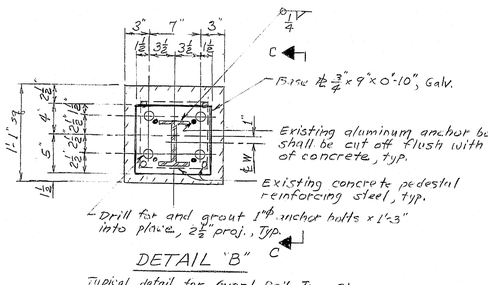
PLAN-SIDEWALK END POST-N.B.
Abutment No. 1

ELEVATION-SIDEWALK END POST-NB
Abutment No. 2

ELEVATION-SIDEWALK END POST-NB
Abutment No. 1

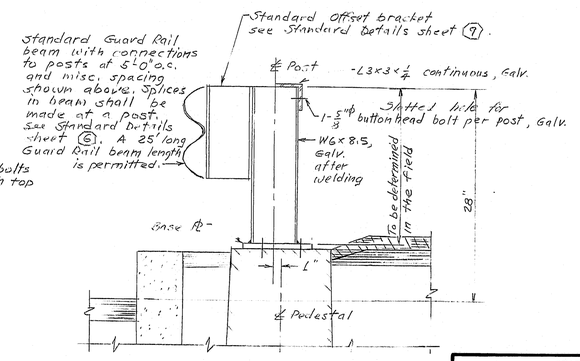


SECTION A-A



DETAIL "B"

Typical detail for Guard Rail Type 3b post welded to base ℔ which is anchor bolted to existing concrete pedestals.



SECTION C-C

NOTES

1. Provide for 2 inches of expansion at the abutments in the Aluminum Bridge Railing - Type "A".
2. Work this sheet with sheets 12 & 13.

R93-416

PROJECT DESIGN ENGINEER	BY	DATE
PLANS	DESIGN-DETAILED CDH	4-78
	CHECKED MHA	8-78
	REVISIONS	
	FIELD CHANGES	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF
TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY

BRIDGE DETAILS

SHEET 16 OF 41 AUGUSTA, MAINE AUGUST 1978

JANUARY 1968

893-1 2000

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(83)	17	41

Spacing to match holes in existing guard rail beam.

Sta 157+51.73

Remove, Modify, and Reset Guard Rail Type 3b
31'-1¼" ±

Sta 157+82.83

6'-4½"

EP600 EP606

1'-5" EP601 thru EP605 spaced @ 1'-6" (2 each)

EP606

1'-3¾"

1'-1"

1'-3½"

To match face of existing wingwall

Aluminum Bridge Railing - 2 Bar - Type "A"

½" Preformed Expansion Joint Filler to match joint below

Curb Expansion Dam

Face of Backwall

To match face of existing wingwall

Aluminum Bridge Railing - 2 Bar - Type "A"

Sta 157+12.17

Remove, Modify, and Reset Guard Rail Type 3b

5'-4"

EP606

EP600

EP601 thru EP605 spaced @ 1'-8"

1'-5"

1'-6"±

1'-4½" Post 1'-1½" Post 2'-9" Post 6'-4" Post 6'-3" Post 5'-3½" Post 3'-4" Post

6'-3"± 6'-3½"± 6'-3"± 3'-4½" 3'-4½" 2'-4½" 2'-10½" 1'-10½"±

4'-9"

1'-2"

7'-10½"

6'-4"

Post

Vertical Bridge Curb - Type 1

2'-9"

5'-9"

Vertical Bridge Curb-Type 1

1'-0"± 6'-6" 1'-3" 4'-8½" 1'-6"

7'-10½"

Post Post Post Post Post Post Post Post Sp. @ 6'-3" max.

1'-0"± 1'-6" 2'-0" 2'-9" 3'-1½" 3'-1½" 3'-1½" 3'-1½" 18'-6"

12'-6"±

12'-6"±

12'-3"

21'-3"±

21'-3"±

Remove existing curb and install 40'± new Curb Type 3 to blend into curbs on both ends.

Sta 157+37.50

PLAN - CURB SIDE
Abutment No. 1

PLAN - CURB SIDE
Abutment No. 2

Remove existing concrete end posts and remove existing Aluminum Bridge Railing

6'-4⅜"

11"±

4'-7½"

1'-3"

6'-6"

1'-0"

1" ϕ H.S. Bolts Galv. See Standard Details Aug. 1969 Sheet (5)

4½" 2½" 2"

2" Chamfer

8"

1'-7"

2-EP606

2-EP606

1-EP600

3-EP607

1'-5" EP601 thru EP605 spaced @ 1'-8" (1 each)

Vertical Bridge Curb - Type 1

2-EP607

Gutter Line

Existing Granite Curb

Existing Wing

4" 2½" 2" 1'-0" 1'-1" 2'-3" 2'-3½"

Rail Expansion Joint at Superstructure Curb Expansion Dam

Extend electrical conduit 6" beyond end of wingwall and cap for future use

Remove existing concrete wing and existing concrete curb section to this line, Replace with new concrete as indicated.

ELEVATION - CURB SIDE
Abutment No. 1

6'-3"

11"±

1" ϕ H.S. Bolts Galv. See Standard Details Aug. 1969 Sheet (5)

2" Chamfer

2'-3"

1'-10" 1'-1"

7½"

4½"

2-EP606 1-EP600

2-EP606

3-EP607

EP601 thru EP605 spaced @ 1'-8" (1 each) 1'-5"

Gutter Line

Vertical Bridge Curb - Type 1

2-EP607

Existing Wing

Remove existing concrete wing and existing concrete curb section to this line, Replace with new concrete as indicated.

Reset existing Curb Type L to blend in 16'± from 40'-2" off ℄ at bridge to existing curb at 40'-0"± off ℄.

ELEVATION - CURB SIDE
Abutment No. 2

40'-2" to ℄

2'-10"±

6"

2'-4"±

3½"

EP606

EP600-EP605

EP606

EP607

Light Conduit

#6

EP607

#5

#6

2'-3"

1'-8"

1'-1"

1'-3½"

1'-0"

2'-3½"±

Vertical Bridge Curb - Type 1

1" V-groove

See Standard Details BD 104-77, Curb Section

Bend existing rebars into new concrete

Remove existing concrete wing and existing concrete curb section to this line

Saw cut face 1" deep

#5

#6

Match face of existing concrete wing

SECTION A-A

40'-2" to ℄

2'-10"±

1'-3½"

EP607

Light Conduit

#6 #6

EP607

#6

#5

EP606

1'-0"

2'-3½"±

Vertical Bridge Curb - Type 1

See Standard Details BD 104-77, Curb Section

Bend existing rebars into new concrete

Remove existing concrete wing and existing concrete curb section to this line

Match face of existing concrete wing

Saw cut face 1" deep

SECTION B-B

40'-2" to ℄

1 V-groove

Fill with mortar

2'-10"

Vertical Bridge Curb - Type 1

9"

See Standard Details BD 104-77 Curb Section

EP607

Light Conduit

EP607

#6 or #5

#6

1'-0"

2'-3½"±

Remove existing concrete wing and existing concrete curb section to this line

Match face of existing concrete wing

Saw cut face 1"±

SECTION C-C

2'-10"±

40'-2" to ℄

Vertical Bridge Curb - Type 1

Fill between Dam and granite curb with mortar.

Existing concrete to wearing surface or existing Roadway Expansion Dam

1'-0"

2'-3½"±

EP607

1½" (Typ)

Light Conduit

EP607

#6 or #5

#6

See Standard Details BD 104-77 Curb Section

3'-1"±

Saw cut face 1"± deep

SECTION D-D

NOTE
Work this sheet with sheets 12 & 13.

R93-417

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	GDM	JAP 3/78
CHECKED		6-78
QUANTITIES		
FIELD CHANGES		

PLANS

JANUARY 1968

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

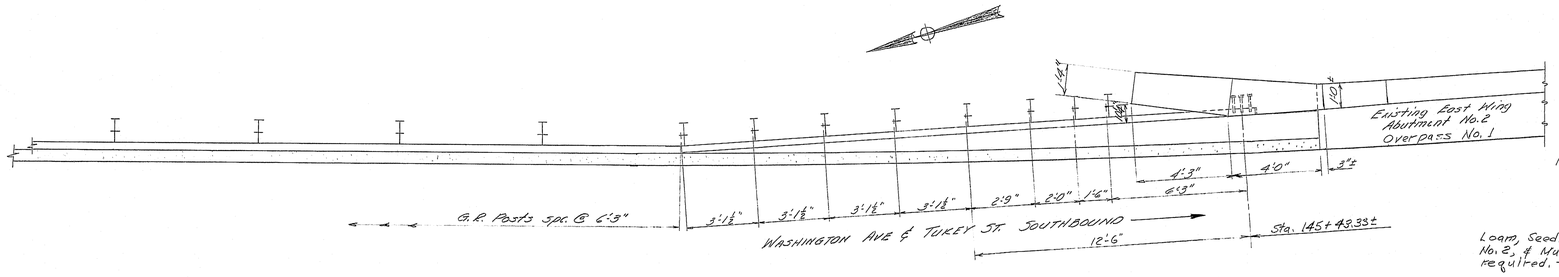
REHABILITATION OF RAILINGS AND WEARING SURFACE OF

TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY

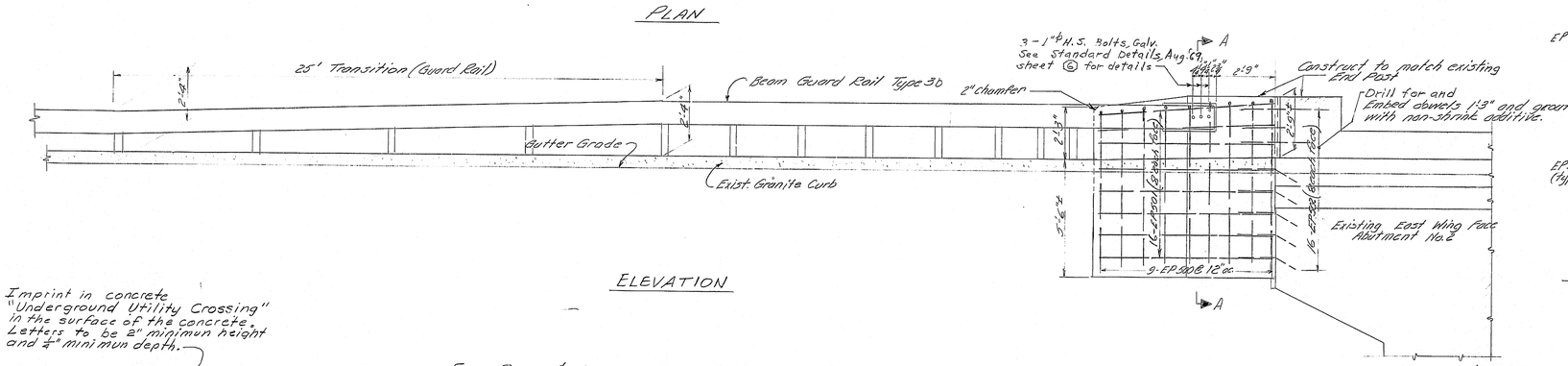
BRIDGE DETAILS

SHEET 17 OF 41 AUGUSTA, MAINE AUGUST 1978

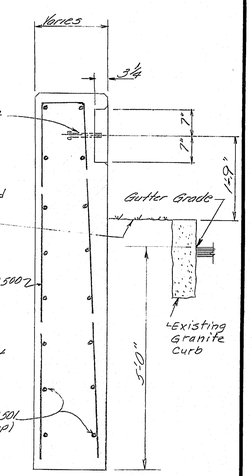
F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	18	41



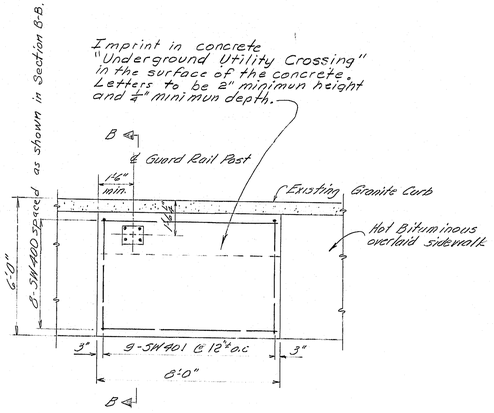
PLAN



ELEVATION

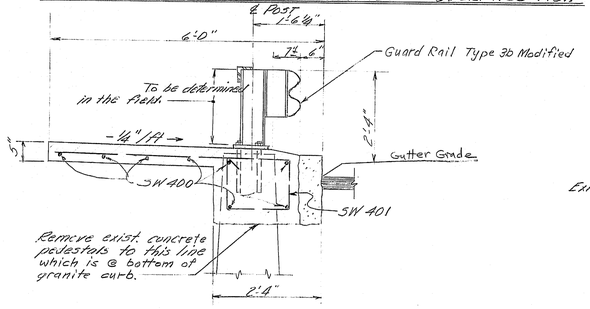


SECTION A-A

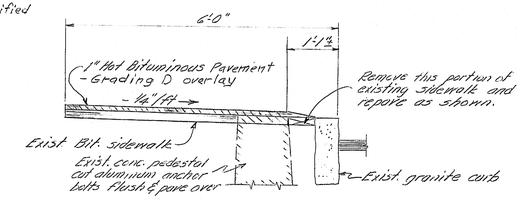


PLAN

END POST & GUARD RAIL DETAILS ~ OVERPASS NO.1



SECTION B-B



TYPICAL SECTION BITUMINOUS SIDEWALK

NOTES

1. Field bending of reinforcing will be considered incidental to Item 503.13.
2. See Standard Details, Aug'69, sh. ⑤ & ⑦ for Guard Rail Type 3b.
3. See Standard Details, Aug'69, sh. ⑥ for Guard Rail Attachment to Concrete End Post At Bridge End.
4. General Superstructure Notes 1, 3, 5, 9, #13 sheet 12 apply to this sheet also.
5. Work required to make changes in direction of Guard Rail Type 3b both horizontally and vertically will be considered incidental to Item 606.17.

NOTES~
For anchor bolt layout & Guard Post details see Sheet No. 16

CONCRETE SIDEWALK PANEL
Use where installed Guard Rail Posts conflict with underground utilities
To be paid for under Item no. 606.06

PROJECT DESIGN ENGINEER	CDH	BY	DATE
PLANS	DESIGN - DETAILED	CDH	4-72
	CHECKED	MJTA	4-72
	REVISIONS		
	FIELD CHANGES		

JANUARY 1968

R93-418

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF
TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY
-END POST OVERPASS NO.1
SIDEWALK DETAILS
SHEET 18 OF 41 AUGUSTA, MAINE AUGUST 1972

8-1-2000

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
SUPERSTRUCTURE			
S504	32	40'-0	Curb-Long.
S505	4	20'-0	Curb-Over Piers #1 & #3
S506	2	30'-0	Curb-Over Pier #2
S507	2	13'-2	Curb-Long.
S509	12	1'-8	Light Standard-Curb
S510	4	3'-1	do
S512	24	2'-7	Light Standard-Sidewalk
S513	12	1'-5	Light Standard - Sidewalk
S514	12	3'-10	Light Standard - Sidewalk
⚠ CONCRETE MEDIAN BARRIER			
MB401	6	16'-6	(1)
MB403	30	17'-6	(2) thru (6)
MB403	6	17'-6	(7)
MB405	6	18'-3	(8)
MB407	54	17'-11	(9) thru (17)
MB409	43	16'-9	(18) thru (25)
MB413	3	16'-9	(25) Bend in field
MB419	18	19'-6	(26) thru (28)
MB419	12	19'-6	(29) & (30)
MB419	24	19'-6	(31) thru (36)
MB421	6	24'-0	(37) & (38)
MB423	2	19'-3	(37) & (38)
S400	8	20'-6	(39)
S401	184	19'-6	(40) thru (62)
S400	8	20'-6	(63)
S800	500	1'-4	Superstructure
MB411	1	3'-1	(25) Vert. at Nose
MB415	3	6'-0	(25)
MB417	3	7'-0	(25)
MB425	2	4'-10	(37) & (38)

SEE NOTE ✱

MARK	NO.	LENGTH	LOCATION
END POSTS - CURB SIDE			
EP606	8	7'-6	End Posts
EP607	10	20'-11	Wing
END POSTS - SIDEWALK			
EP606	16	7'-6	End Posts
END POST AT OVERPASS NO. 1			
EP501	16	7'-6	Horizontal
EP502	16	3'-0	Dowels
END POST AT WASHINGTON ST. OVERPASS NO. 2			
EP504	12	4'-11	Horizontal
EP505	20	3'-0	Dowels
⚠ SIDEWALK PANELS			
SW400	8 ✱	7'-10	Longitudinal

MARK	NO.	LENGTH	LOCATION

⚠ Concrete Median Barrier rein. steel shall be incidental to Items 526.31 & 526.32

⚠ Sidewalk rein. steel shall be incidental to Item 608.08

BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
SUPERSTRUCTURE														
S500	499	3'-2	S	0	7	1'-0	1'-5			0				Stirrup Trans. - Curb
S508	8	9'-6	R	1'-5	3'-1	1'-5	1'-8	1'-5	5½					Stirrup at Light Standard
S511	27	8'-2	HB	6	2'-3	1'-4	2'-3	1'-4		6				Light Standard Sidewalk
END POST AT OVERPASS NO. 1														
EP500	9	15'-6	S	0	7'-4	10	7'-4			0				Vertical
END POST AT WASHINGTON ST. OVERPASS NO. 2														
EP503	5	12'-3	H	5½	1'-0	4'-8	1'-0	4'-8		5½				Vertical
⚠ SIDEWALK PANELS														
SW401	9 ✱	8'-9	R	0	5'-0	1'-0	1'-4	1'-0	4½					Transverse
NAVIGATION LADDERS														
S600	3	8'-0	SL	1'-0	2'-0	2'-0	2'-0			1'-0"				Superstructure
✓ END POSTS - CURB SIDE														
EP600	2	9'-7	H	6	1'-0"	3'-3¼	1'-0"	3'-3¼		6				End Posts
EP601	2	10'-7	H	6	1'-4"	3'-5¼	1'-4	3'-5¼		6				do
EP602	2	11'-8	H	6	1'-8¾	3'-7	1'-8¾	3'-7		6				do
EP603	2	12'-0	H	6	1'-8¾	3'-9	1'-8¾	3'-9		6				do
EP604	2	12'-6	H	6	2'-0	3'-9	2'-0	3'-9		6				do
EP605	2	11'-8	H	6	1'-7	3'-9	1'-7	3'-9		6				do
EP614	24	2'-6	V				1'-3	1'-3			1'-0			do
✓ END POSTS - SIDEWALK SIDE														
EP608	2	6'-11	S	0	3'-2½	6	3'-2½			0				End Posts
EP609	2	7'-2	S	0	3'-4	6	3'-4			0				do
EP610	2	7'-9	S	0	3'-6	8½	3'-6			0				do
EP611	2	8'-1	S	0	3'-8	8¾	3'-8			0				do
EP612	2	8'-4	S	0	3'-8	1'-0	3'-8			0				do
EP613	2	8'-0	S	0	3'-8	7¾	3'-8			0				do
⚠ CONCRETE MEDIAN BARRIER														
MB400	9	7'8	H	6	1'-2	2'-5	8	2'-5		6				PANEL #
MB400	45	7'8	H	6	1'-2	2'-5	8	2'-5		6				(1)
MB402	9	9'-2	H	6	1'-4	3'-1	8	3'-1		6				(2) thru (6)
MB402	10	9'-2	H	6	1'-4	3'-1	8	3'-1		6				(7)
MB400	80	7'-8	H	6	1'-2	2'-5	8	2'-5		6				(8)
MB402	10	9'-2	H	6	1'-4	3'-1	8	3'-1		6				(9) thru (16)
MB402	9	9'-2	H	6	1'-4	3'-1	8	3'-1		6				(17)
MB400	54	7'8	H	6	1'-2	2'-5	8	2'-5		6				(18)
MB402	7	9'-2	H	6	1'-4	3'-1	8	3'-1		6				(19) thru (24)
MB404	2	8'-8	H	6	1'-1	3'-1	5	3'-1		6				(25)
MB406	1	8'-3	H	6	8	3'-1	5	3'-1		6				(25)
MB412	30	8'-2	H	6	1'-2	2'-8	8	2'-8		6				(25)
MB402	20	9'-2	H	6	1'-4	3'-1	8	3'-1		6				(26), (27) & (28)
MB408	60	3'-10	LM	2'-6	10	6								(29) & (30)
MB410	10	4'-5	LM	3'-1	10	6								(31) thru (36)
MB414	30	3'-7	LM	2'-9	4	6								(37) & (38)
S404	22	3'-9	LM	2'-5	10	6								(37) & (38)
S404	460	3'-9	LM	2'-5	10	6								(39)
S404	22	3'-9	LM	2'-5	10	6								(40) thru (62)
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	(63) LOCATION

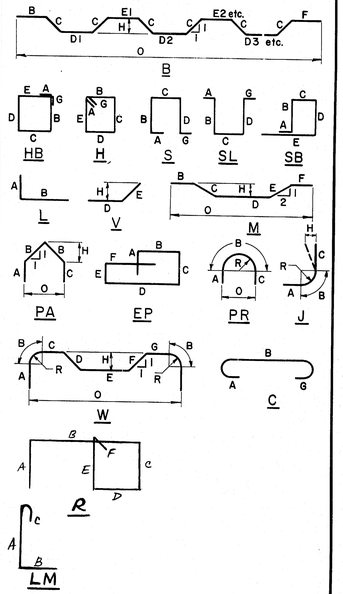
R93-419

DATE	BY	DESIGN - DETAIL	CHECKED	REVISIONS	FIELD CHANGES
6-78	CDH	CDH	MMS		
7-78	CDH				

PLANS

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	19	41

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar

Bending details and hooks shall conform to the recommendations of ACI Standard 315-65.

Reinforcing Bar: ASTM A615 Grade 60

GENERAL NOTES

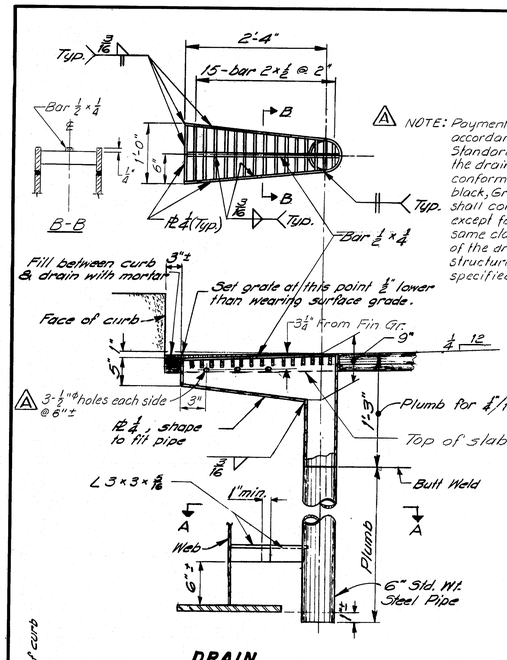
1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   Mark (A 502) bar size - #5
   Mark (P 1001) bar size - #10
   Mark (S 603) bar size - #6
2. Letter of Marks A, P & S locates bars of Abutments, Piers, and Superstructure parts respectively.
3. ✱ Quantity of bars required per sidewalk panel.
4. For precast only. If cast-in-place is used, then section lengths of 125', 184'6", 138', 184'6", and 502' of continuous #4 rebars shall be required. ⚠

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF
TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY
REINFORCING STEEL SCHEDULE

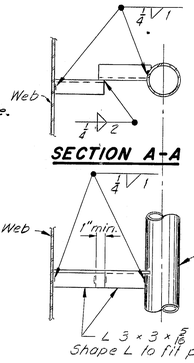
SHEET 19 OF 41 AUGUSTA, MAINE AUGUST 1978

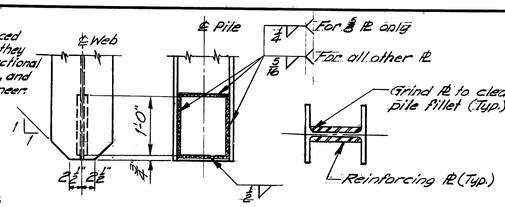
B.R.R. DIV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(89)	20	41



NOTE: Alternate pointed reinforced pile tips may be used if they have at least the cross-sectional area of the pile tip shown, and are approved by the Engineer.

NOTE: Payment for the roadway drains shall be in accordance with subsection 502.20 of the Standard Specifications. The pipe portion of the drain shall be 6" standard weight pipe conforming to the specification for ASTM A53, black, Grade B, Type E or S. All bars and plates shall conform to the specification for ASTM A36 except for the L 3×3×5/16 which shall be of the same classification as the beam web. Painting of the drains will not be required when the structural steel is unpainted, unless otherwise specified in the contract drawings.



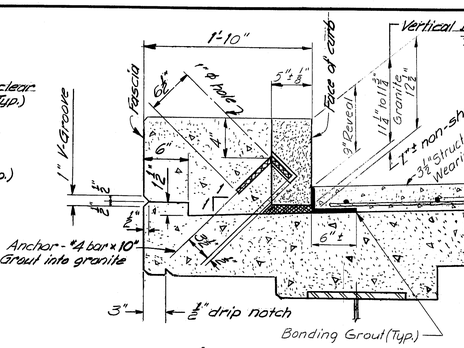


POINTED REINFORCED PILE TIP

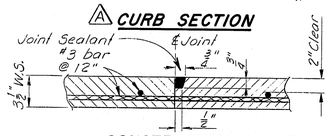
Note: Plates may be shop or field welded

STEEL HP BEARING PILES	
PILE SIZE	REINF. ℔ SIZE
HP 10 × 42	8 3/4 × 3/8 × 1'-0"
HP 10 × 57	8 3/4 × 7/8 × 1'-0"
HP 12 × 53	10 3/4 × 3/8 × 1'-0"
HP 12 × 74	10 3/4 × 7/8 × 1'-0"
HP 14 × 73	12 1/2 × 7/8 × 1'-0"
HP 14 × 89	12 1/2 × 1 × 1'-0"

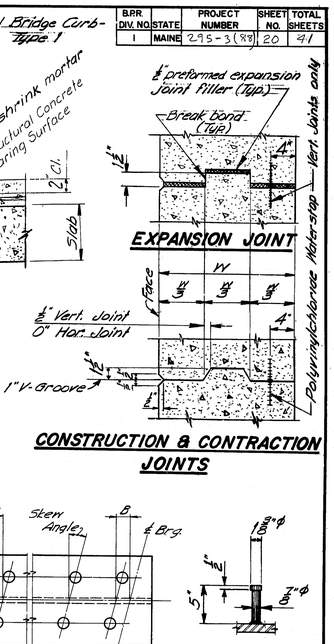
POLYVINYLCHLORIDE WATERSTOP



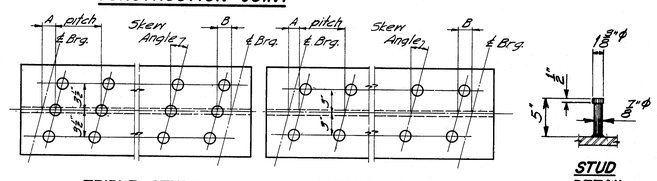
CURB SECTION



CONSTRUCTION JOINT



CONSTRUCTION & CONTRACTION JOINTS

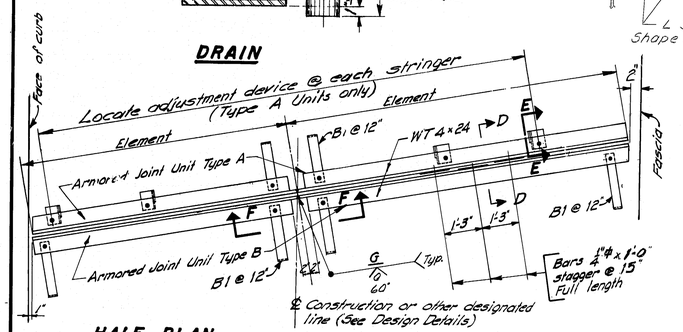


TRIPLE STUDS **DOUBLE STUDS** **STUD DETAIL**

NOTE

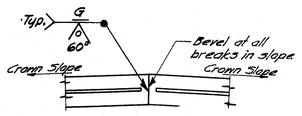
1. Studs shall be granular or solid flux filled and automatically end welded to top flange in the shop or field.
2. See the design details for Dimensions "A" & "B", stud pitch and skew angle for studs.

SHEAR CONNECTORS



DRAIN

HALF PLAN
Curb to curb



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.

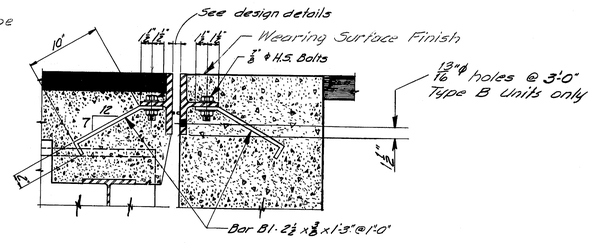
HALF PLAN
Fascia to fascia

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 (2) Type A Armored Joint Units shall be used.
2. When more elements than two (2) are required by the design details, the elements of both units shall be field welded together in the same manner as shown in Section F-F.
3. Armored Joints to be paid for as Structural Steel.
4. All structural steel shall be A36. When structural steel is specified to be unpainted, the armored joint unit will receive three coats of shop paint on exposed areas of flanges below seal retention bars.

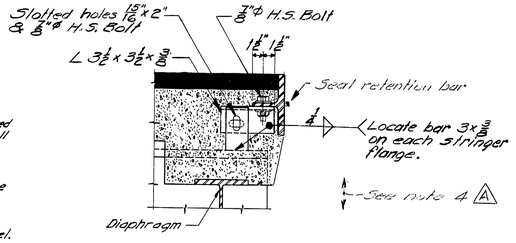
ARMORED JOINT

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



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 bar to angle with 1/2 Fillet

R93-420

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

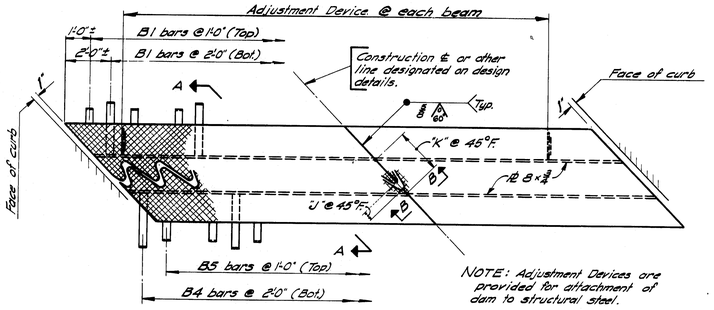
A	Added holes and note to roadway drain.	3-1-77
	Add Note 4 to Armored Joint notes.	
	Eliminate Met Fit Part.	
	Change curb and curb walls and added a concrete wearing surface.	
	REVISIONS	DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
(BD 104-77)
ARMORED JOINT, DRAIN SHEAR CONNECTORS MISC. STRUCTURAL DETAILS

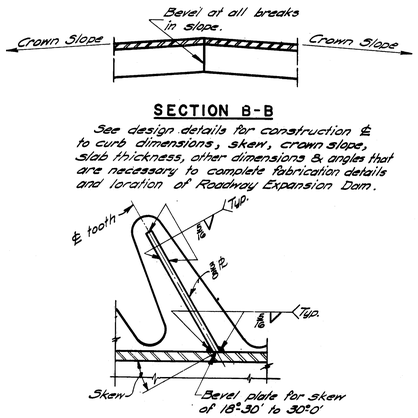
SHEET 20 OF 41 AUGUSTA, ME. FEB. 1977

B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	21	41



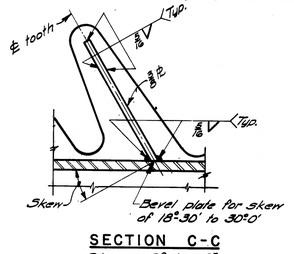
PLAN

Right skew indicated



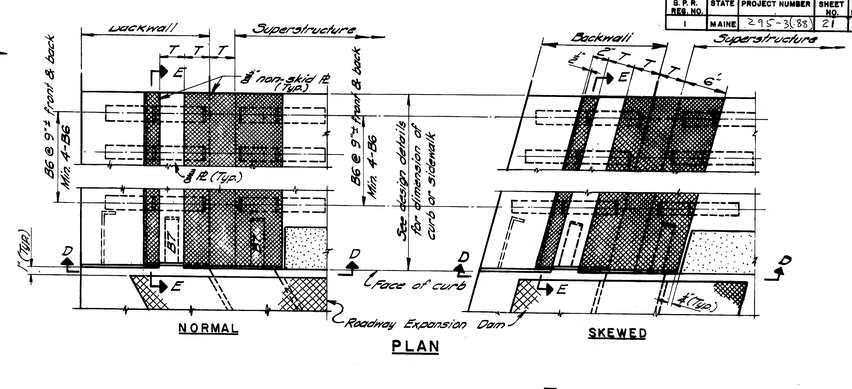
SECTION B-B

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.

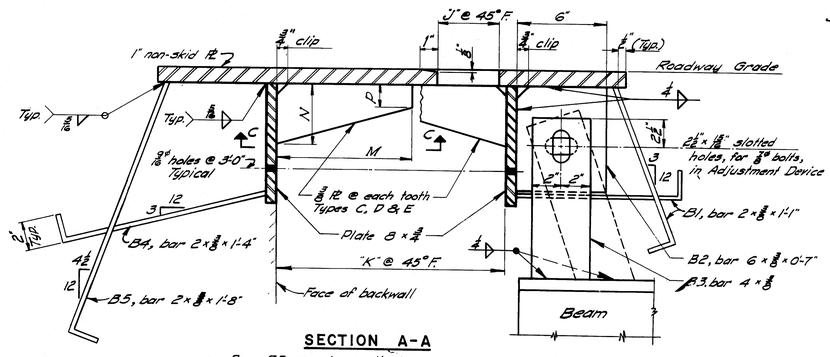


SECTION C-C

Skew ~0° to 30°-0'

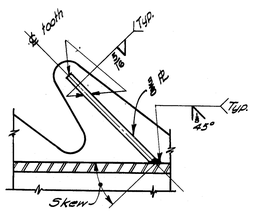


PLAN



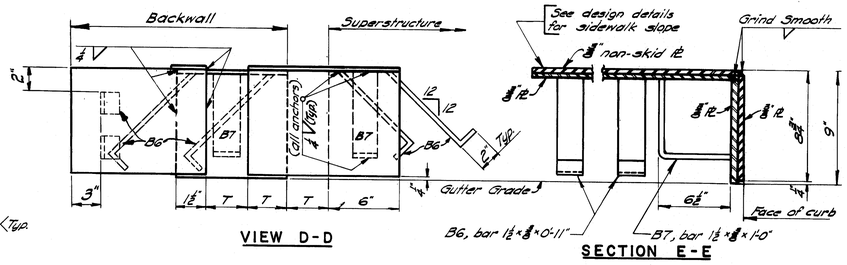
SECTION A-A

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 ¼" fillet weld.



SECTION C-C

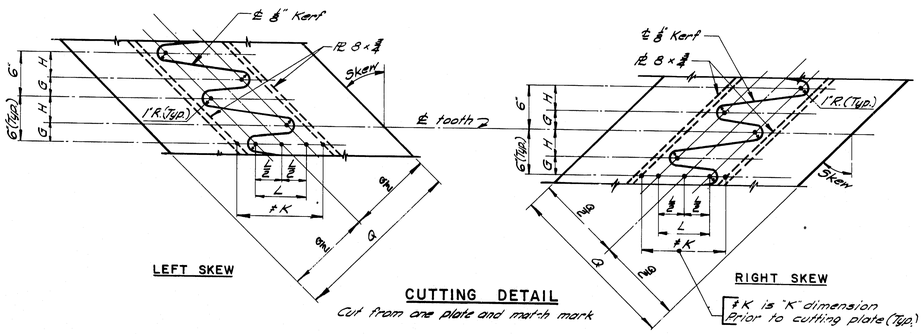
Skew over 30°



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



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"	2⅝"	—	—	—	21"
		5°-10°	7⅛"	4⅛"	2⅝"	3⅛"	9⅛"	2⅝"	—	—	—	22"
		10°-20°	8"	4⅝"	2⅝"	3⅛"	10"	2⅝"	—	—	—	22"
		20°-30°	8⅝"	5"	2⅝"	3⅛"	10⅛"	2⅝"	—	—	—	23"
		30°-40°	9⅛"	5⅛"	2⅝"	3⅛"	11⅛"	2⅝"	—	—	—	23"
		40°-50° incl.	11⅛"	6⅛"	2⅝"	3⅛"	13⅛"	2⅝"	—	—	—	23"
B	280'-440'	0°-5° incl.	9"	6"	3"	3"	12"	3⅜"	—	—	—	23"
		5°-10°	9⅛"	6⅛"	2⅝"	3⅛"	12⅛"	3⅜"	—	—	—	24"
		10°-20°	10"	6⅝"	2⅝"	3⅛"	13"	3⅜"	—	—	—	24"
		20°-30°	10⅛"	7⅛"	2⅝"	3⅛"	13⅛"	3⅜"	—	—	—	25"
		30°-40°	12"	8"	2⅝"	3⅛"	15"	3⅜"	—	—	—	25"
		40°-50° incl.	15⅛"	9⅛"	2⅝"	3⅛"	16⅛"	3⅜"	—	—	—	25"
C	440'-600'	0°-10° incl.	11⅛"	8⅛"	3"	3"	15⅛"	4⅜"	9"	4"	1⅛"	26"
		10°-20°	12"	8⅝"	2⅝"	3⅛"	16"	4⅜"	10"	4"	1⅛"	26"
		20°-30°	12⅛"	9⅛"	2⅝"	3⅛"	16⅛"	4⅜"	11"	4"	1⅛"	26"
		30°-40°	14"	10"	2⅝"	3⅛"	18"	4⅜"	11"	4"	1⅛"	26"
		40°-50° incl.	15⅛"	10⅛"	2⅝"	3⅛"	19⅛"	4⅜"	12"	4"	1⅛"	26"
D	600'-760'	0°-10° incl.	15⅛"	10⅛"	3"	3"	19⅛"	5⅜"	11"	5"	2"	30"
		10°-20°	14"	10⅛"	2⅝"	3⅛"	19"	5⅜"	12"	5"	2"	30"
		20°-30°	14⅛"	11⅛"	2⅝"	3⅛"	19⅛"	5⅜"	13"	5"	2"	30"
		30°-40°	16"	12"	2⅝"	3⅛"	21"	5⅜"	15"	5"	2"	30"
		40°-50° incl.	17⅛"	13"	2⅝"	3⅛"	22⅛"	5⅜"	15"	5"	2"	30"
E	760'-920'	0°-10° incl.	15⅛"	12⅛"	3"	3"	21⅛"	6⅝"	15"	6"	2⅛"	36"
		10°-20°	16"	12⅝"	2⅝"	3⅛"	21"	6⅝"	14"	6"	2⅛"	36"
		20°-30°	16⅛"	13⅛"	2⅝"	3⅛"	22⅛"	6⅝"	15"	6"	2⅛"	36"
		30°-40°	18"	14"	2⅝"	3⅛"	24"	6⅝"	15"	6"	2⅛"	36"
		40°-50° incl.	19⅛"	15"	2⅝"	3⅛"	25⅛"	6⅝"	17"	6"	2⅛"	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.

A.S.T.M. STEEL CLASSIFICATION

All structural steel shall be A36. When structural steel is specified to be unpainted, the expansion dam shall receive three coats of shop paint on the underside areas of exposed steel.

R93-421

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
(BD 105-74)

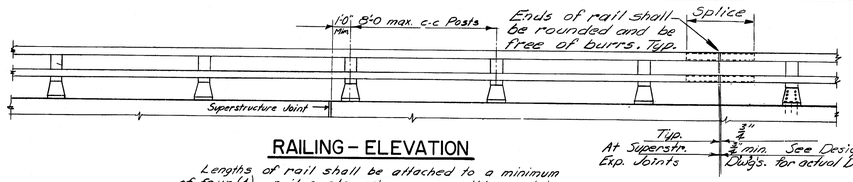
EXPANSION DAMS

A REVISED MAR. 1, 1977

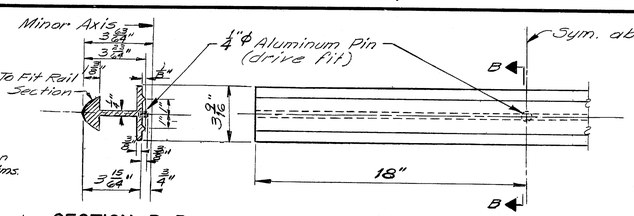
SHEET 21 OF 41 AUGUSTA, MAINE MAY 1974

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	22	41

RAILING - ELEVATION



Lengths of rail shall be attached to a minimum of four (4) rail posts wherever possible, and in any case never less than two (2). Rail posts are to be set normal to grade unless otherwise shown on the Bridge Plans.



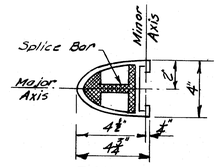
SECTION B-B

SPLICE BAR

Alternate splice bars may be substituted if approved by the Engineer

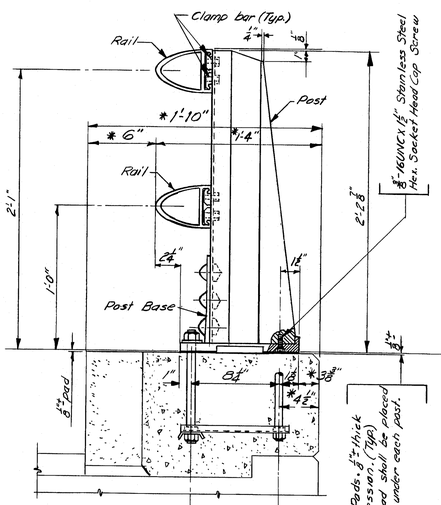
DESIGN SPECIFICATIONS

AASHTO Standard Specifications for Highway Bridges 1973, and Interims 1974, '75, '76, '77



RAIL SECTION

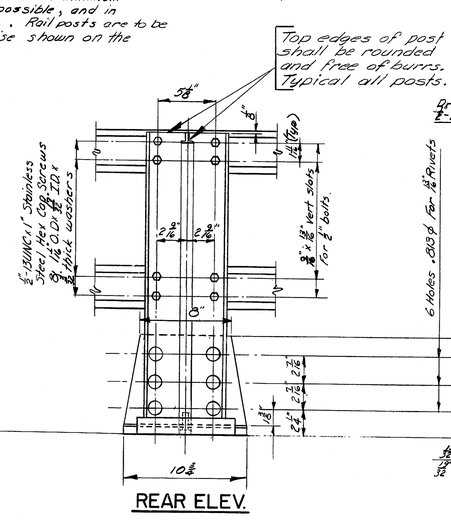
See "Rail Detail"



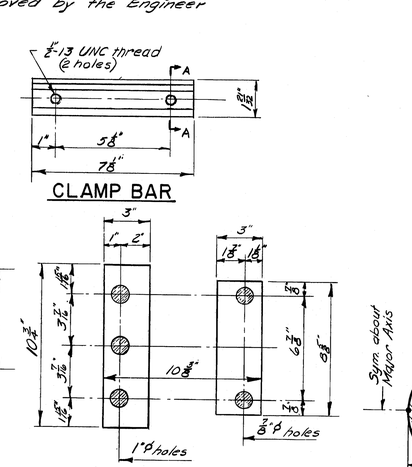
BRIDGE RAILING

(Assembly)

* Preferable minimum dimensions. For actual dimensions see Bridge Plan.



REAR ELEV.

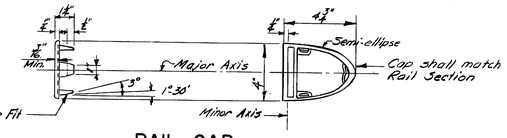


POST BASE SECTION

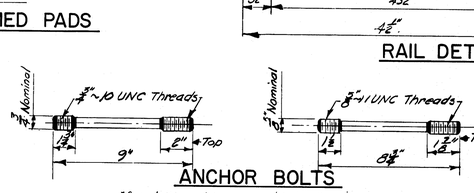
CLAMP BAR

PREFORMED PADS

RAIL DETAIL

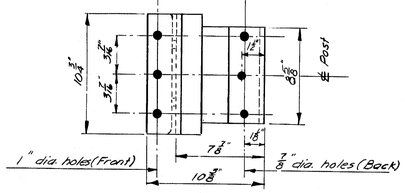


RAIL CAP



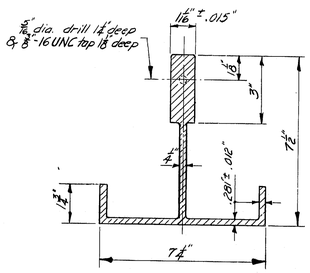
ANCHOR BOLTS

If cut threads are used, body diameter shall be not less than nominal diameter. If rolled threads are used, body diameter shall be not less than root diameter of the threads.

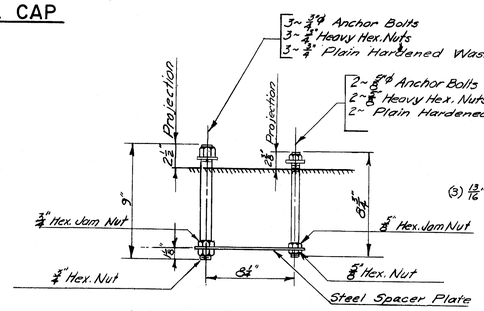


POST BASE

(Bottom View)

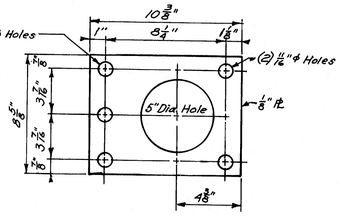


POST SECTION



RAIL POST ANCHORAGE

(Assembly)



STEEL SPACER PLATE

(For Anchorage)

R93-422

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
(BD 114-77)

ALUMINUM BRIDGE RAILING
2 - BAR (SEMI-ELLIPSE)
TYPE "A"

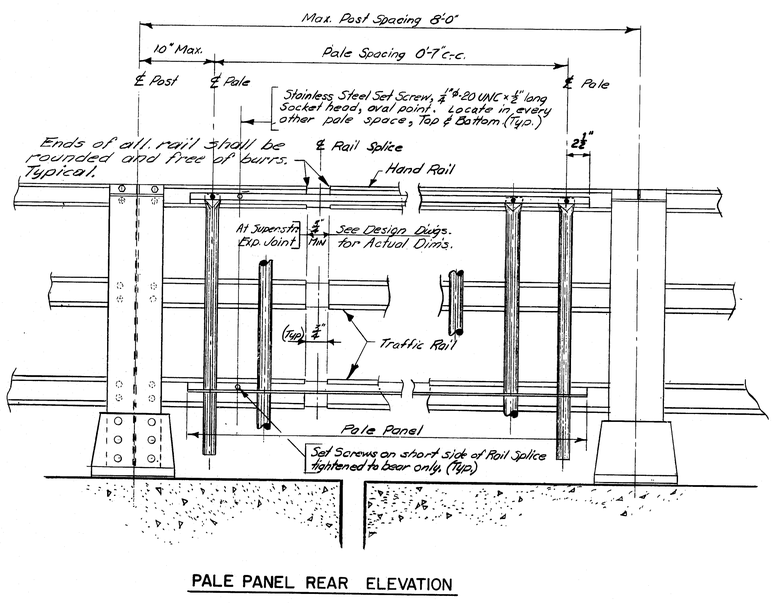
SHEET 22 OF 41 AUGUSTA, MAINE DEC. 1977

PLANS	DATE	BY
DESIGN - DETAILED	Jan 1977	K. Leach
CHECKED		M. Patterson
REVISIONS		
FIELD CHANGES		

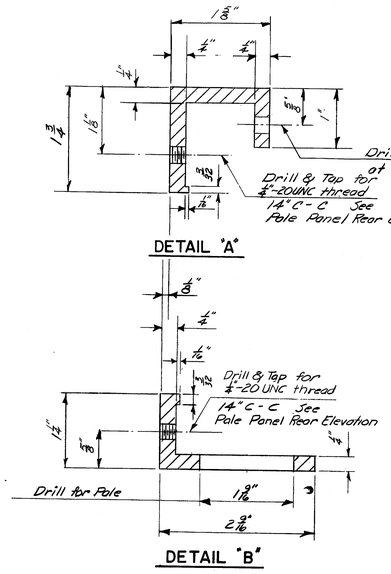
JANUARY 1968

2053-2060

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	23	41

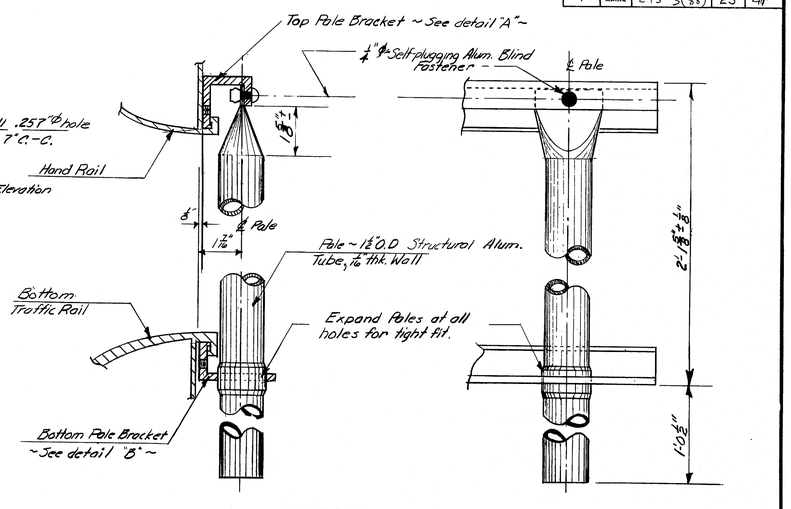


PALE PANEL REAR ELEVATION



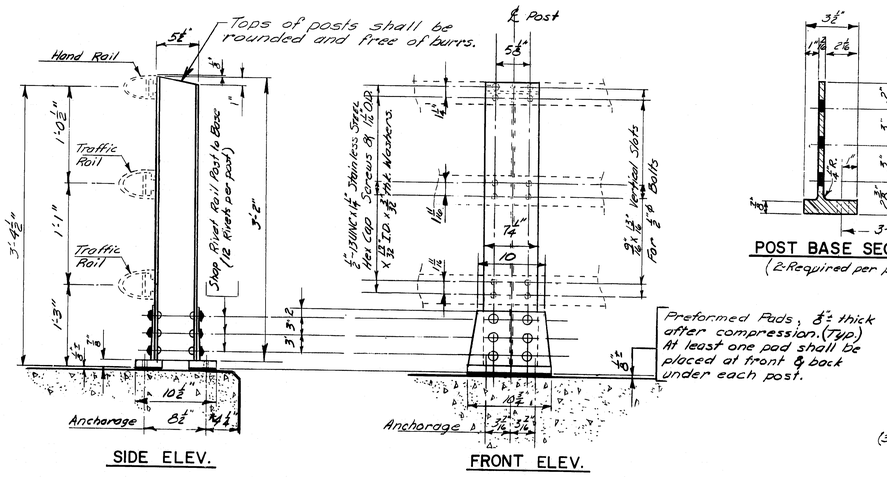
DETAIL "A"

DETAIL "B"



PALE PANEL DETAILS

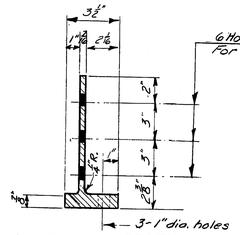
PALE PANEL



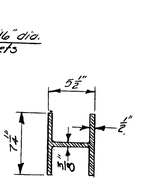
SIDE ELEV.

RAIL POST

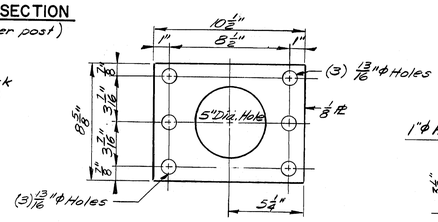
* Preferable minimum dimension. For actual dimension - See Bridge Plans.



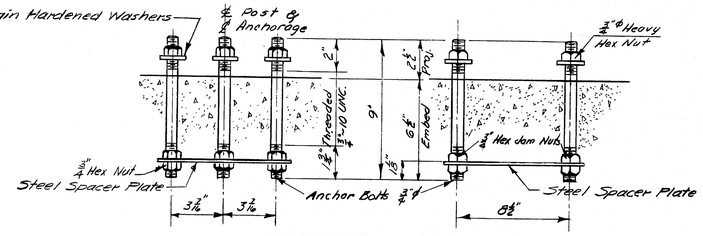
POST BASE SECTION
(2 Required per post)



RAIL POST SECTION

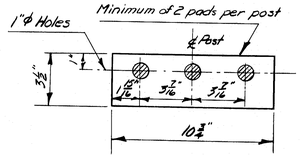


STEEL SPACER PLATE
(For Anchorage)



RAIL POST ANCHORAGE

If cut threads are used, body diameter shall be not less than nominal diameter. If rolled threads are used, body diameter shall be not less than the root diameter of the threads.



PREFORMED PAD

HEAVY DUTY POST (3-BAR RAILING)

R93-423

PLANS	BY	DATE
DESIGN - DETAILED	K.L. Lewis	Jan. 1981
CHECKED	M. Peterson	March 1981
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
(SHEET BD115-77 SHALL ACCOMPANY THIS SHEET)

STANDARD DETAILS
(BD 116-77)

ALUMINUM BRIDGE RAILING

PALE PANEL & HEAVY DUTY POST

SHEET 23 OF 41 AUGUSTA, MAINE DEC. 1977

JANUARY 1980

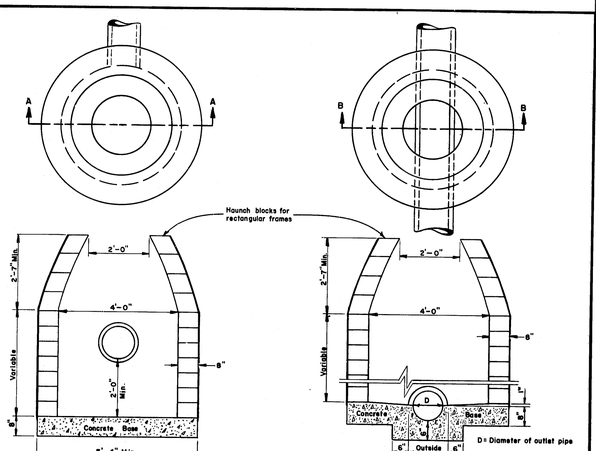
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	24	41

GENERAL NOTES — ALL CATCH BASINS AND MANHOLES

1. Any Catch Basin in excess of 8' in depth shall, if directed be provided with steps similar to those detailed for Manholes.
2. Frames, Grates & Covers shall be considered as part of the structure, and no separate payment shall be made.

GENERAL NOTES — PRECAST CATCH BASINS AND MANHOLES

1. Drain holes in precast sumps to be not over 3" in diameter, and shall be plugged with mortar when constructed.
2. All precast sections of less than 8" wall thickness shall have tongue and groove joints.
3. Cone and Ring sections wall thickness min. 4", max. 8"
4. Minimun wall thickness of sump may be 4" as specified in A.S.T.M. C-478, however, if concrete blocks are used around the inlet and outlet pipes, the wall thickness of sump shall be 8".
5. Wall around inlet and outlet pipes may be built of 8" concrete blocks or a precast ring with an opening 2" larger than the outside diameter of the pipe may be used.
6. Lift Holes shall be provided.



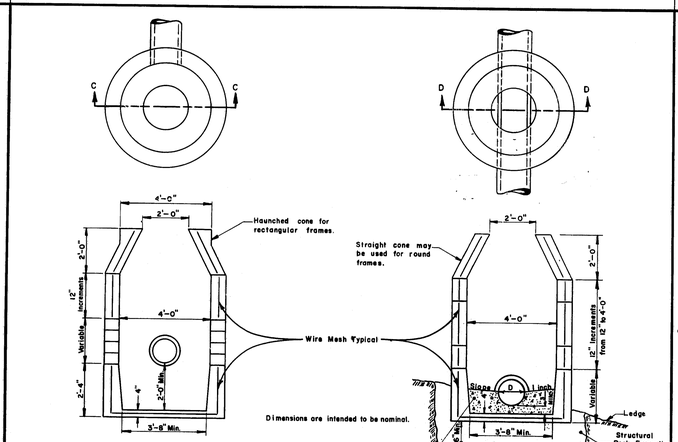
SECTION A-A
SHAPE "1"

SECTION B-B
SHAPE "2"

Dimensions are intended to be nominal.

CATCH BASINS (Concrete Blocks or Bricks)

A



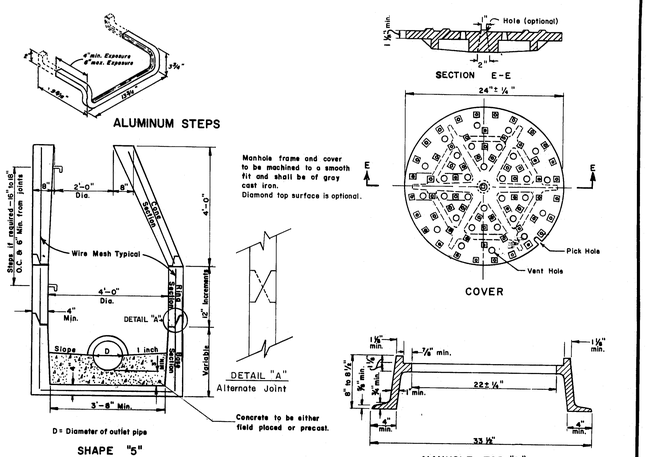
SECTION C-C
SHAPE "3"

SECTION D-D
SHAPE "4"

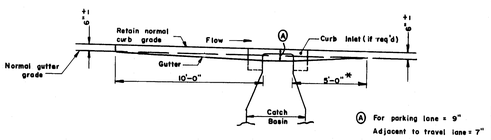
Dimensions are intended to be nominal.

CATCH BASINS (Precast Units)

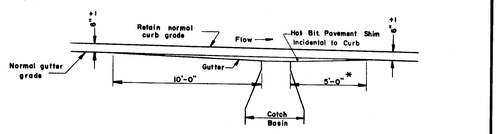
B



C



AT CURB INLETS



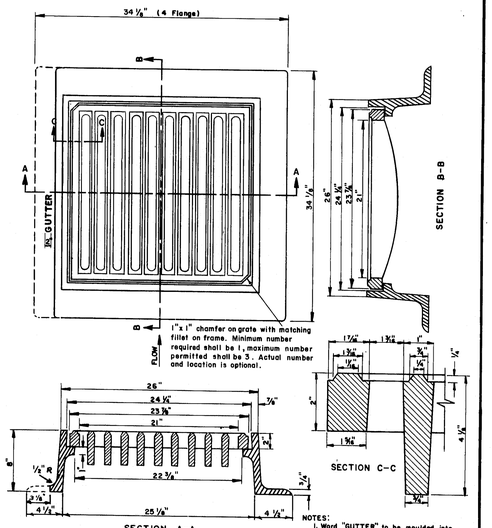
AT CURB WITHOUT INLET STONES

* If at bottom of sag, this dimension to be 10'-0"

NOTE: PARALLEL BAR GRATES SHALL BE INSTALLED ON A LEVEL GRADIENT. CASCADE GRATES SHALL BE INSTALLED ON GRADIENT OF THE GUTTER. THE GRATES SHALL BE DEPRESSED 3" BELOW THE NORMAL GUTTER GRADE UNLESS THIS DEPRESSION INTERFERES WITH TRAFFIC. DIMENSIONS ARE INTENDED TO BE NOMINAL.

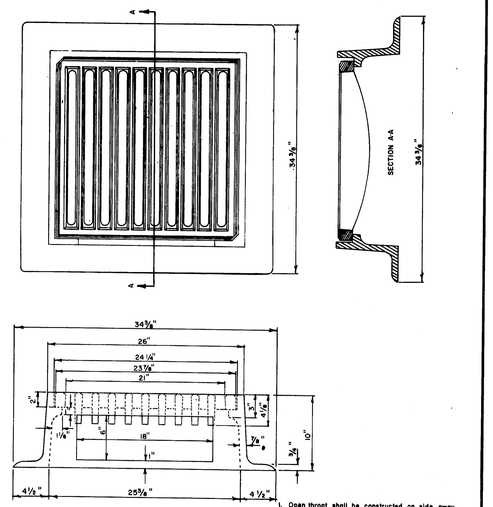
GUTTER GRADE TRANSITION AT CATCH BASIN

D



TYPE "A" & "B" CATCH BASIN TOPS
(PARALLEL BAR GRATES)

E



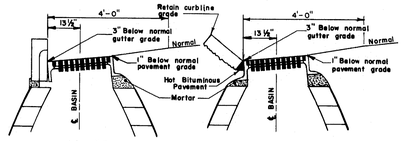
TYPE "C" CATCH BASIN TOPS

F

STRUCTURE	TOP				SHAPE				
CATCH BASIN	A	B	C	D	1	2	3	4	5
Type A-1	X				X		X		
Type A-2	X					X		X	
Type B-1		X			X		X		
Type B-2		X				X		X	
Type C-1			X		X		X		
Type C-2			X			X		X	
MANHOLE				X		X		X	X

TABLE OF CATCH BASIN TYPES
(COMBINATION OF TOPS AND SHAPES)

For Type "E" & Type "F" C.B. See Sheet No. 3



Dimension are intended to be nominal.

CATCH BASIN TOP INSTALLATION

G

REVISIONS	
CATCH BASINS TOPS A, B & C	10-21-69
PLATE 'E'	4-21-71
PLATE 'D & E'	8-26-75
PLATE C	10-14-75

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

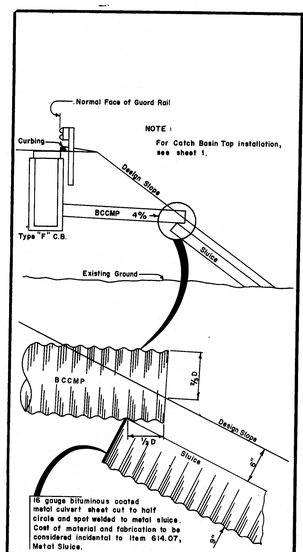
STANDARD DETAILS

CATCH BASINS AND MANHOLES

AUG. 1969 (1)

R93-424

F.H. W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	25	41

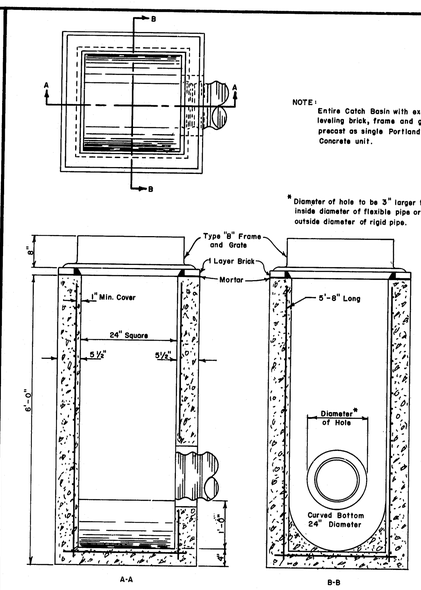


NOTE: For Catch Basin Top installation, see sheet 1.

TYPE "F" CATCH BASIN WITH OUTLET PIPE (SLUICE OPTIONAL)

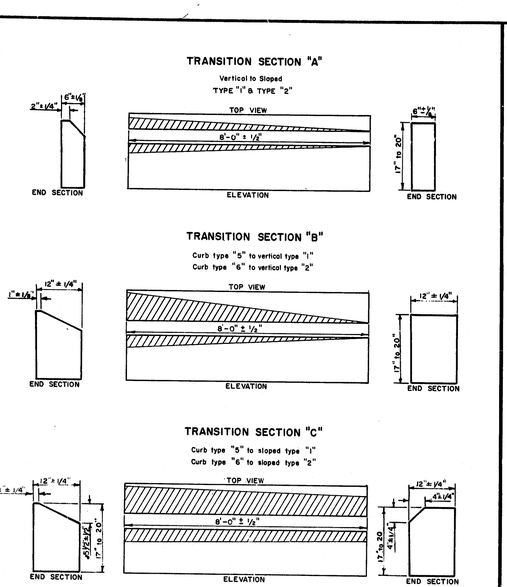
(SEE SHEET NO. 2 FOR STANDARD SLUICE DRAWING)

3-A



CATCH BASIN TYPE "F"

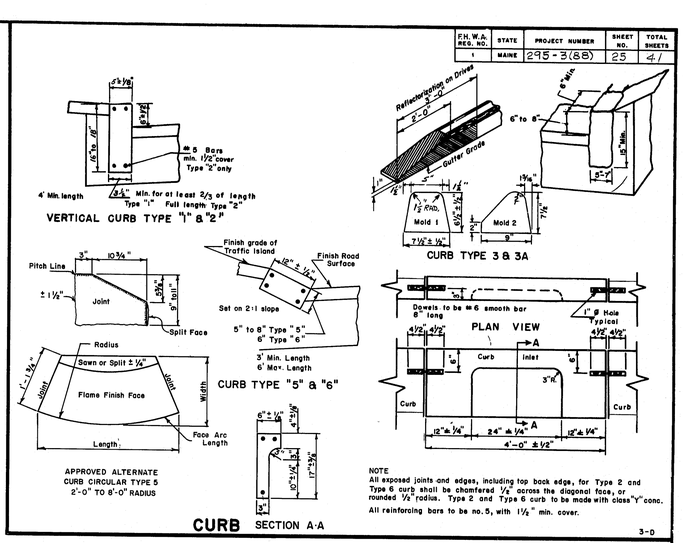
3-B



CURB TRANSITION

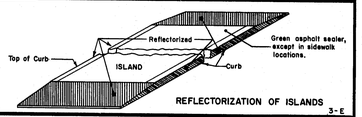
NOTE - TYPE 2 CURB
Precast concrete curb to be made with class "Y" concrete.
All reinf. bars to be #5, 1½" min. cover.

3-C



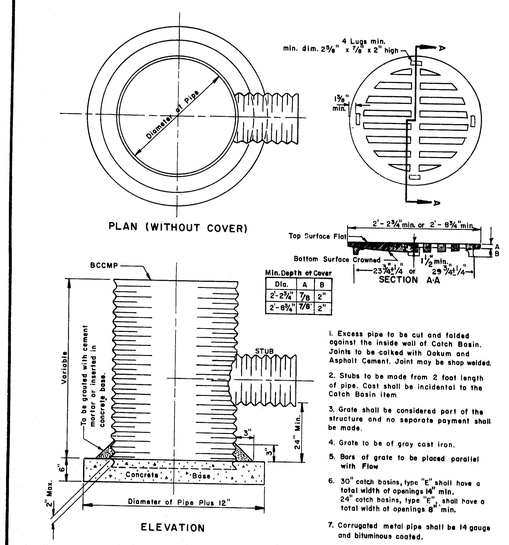
CURB SECTION A-A

3-D



REFLECTORIZATION OF ISLANDS

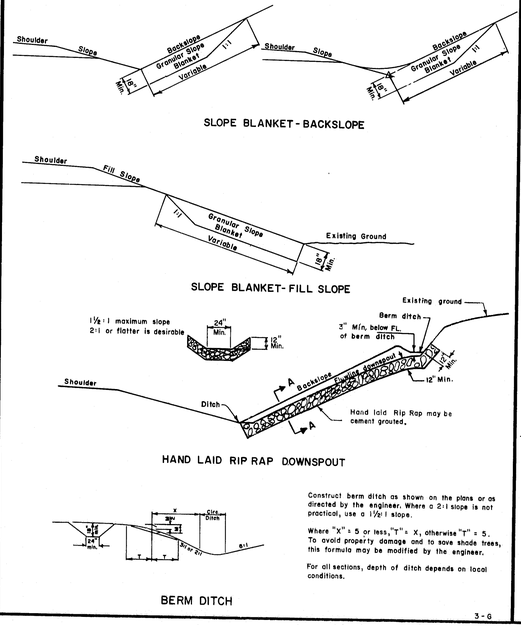
3-E



1. Excess pipe to be cut and folded against the inside wall of Catch Basin. Joints to be caulked with Oakum and Asphalt Cement. Joint may be shop welded.
2. Stubs to be made from 2 foot length of pipe. Cost shall be incidental to the Catch Basin item
3. Grate shall be considered part of the structure and no separate payment shall be made.
4. Grate to be of gray cast iron.
5. Bars of grate to be placed parallel with Flow
6. 30" catch basins, type "E" shall have a total width of openings 14" min. 24" catch basins, type "E" shall have a total width of openings 8" min.
7. Corrugated metal pipe shall be 14 gauge and bituminous coated.

CATCH BASIN TYPE "E"

3-F

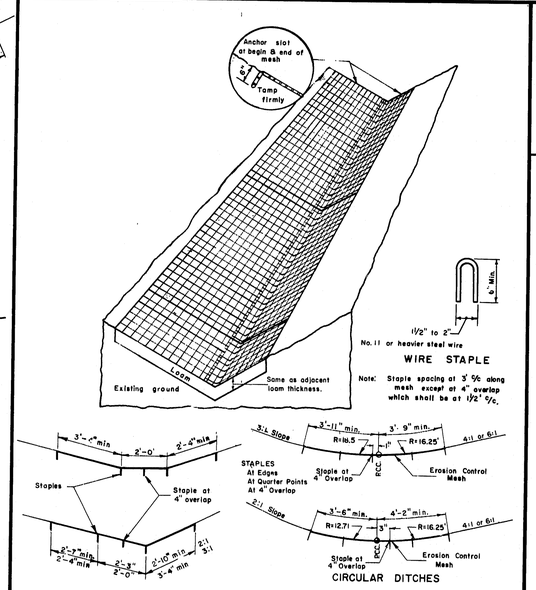


Construct berm ditch as shown on the plans or as directed by the engineer. Where a 2:1 slope is not practical, use a 1½:1 slope.

Where "X" = 5 or less, "T" = X, otherwise "T" = 5. To avoid property damage and to save shade trees, this formula may be modified by the engineer.

For all sections, depth of ditch depends on local conditions.

3-G

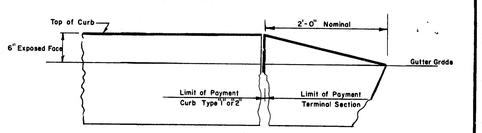


EROSION CONTROL MESH

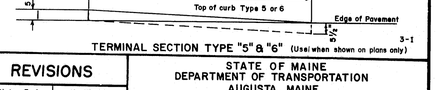
CURB TYPES (1 & 2), (5 & 6) ON CURVES			
RADIUS OF CURVE	LENGTH	PAID FOR AS	STONE IS CUT OR CAST
0' To 60' Incl.	4' Min.	Circular	Arc To Fit Curve
Over 60' To 160'	4' To 6'	Straight	Straight Pieces
0' To 8' Incl.	2' Min	Circular	To Fit Curve
Over 8' To 30' Incl.	12' Min. Chord	Circular	Straight Pieces, Radial Ends
Over 30' And Under 160'	2' To 3'	Straight	Straight Pieces
160' And Over	3' To 6'	Straight	Straight Pieces

3-J

TERMINAL CURB SECTION



TERMINAL SECTION TYPE "1" & "2"



TERMINAL SECTION TYPE "5" & "6" (Used when shown on plans only)

3-I

REVISIONS	
Plate 3-G	12-23-69
Plate 3-F	5-27-70
Plate 3J	7-15-70
PLATE 3G	3-4-71
PLATE 3H	8-8-73
PLATE 3H	6-26-75
PLATE D	8-8-75
PLATE D-1	11-24-75

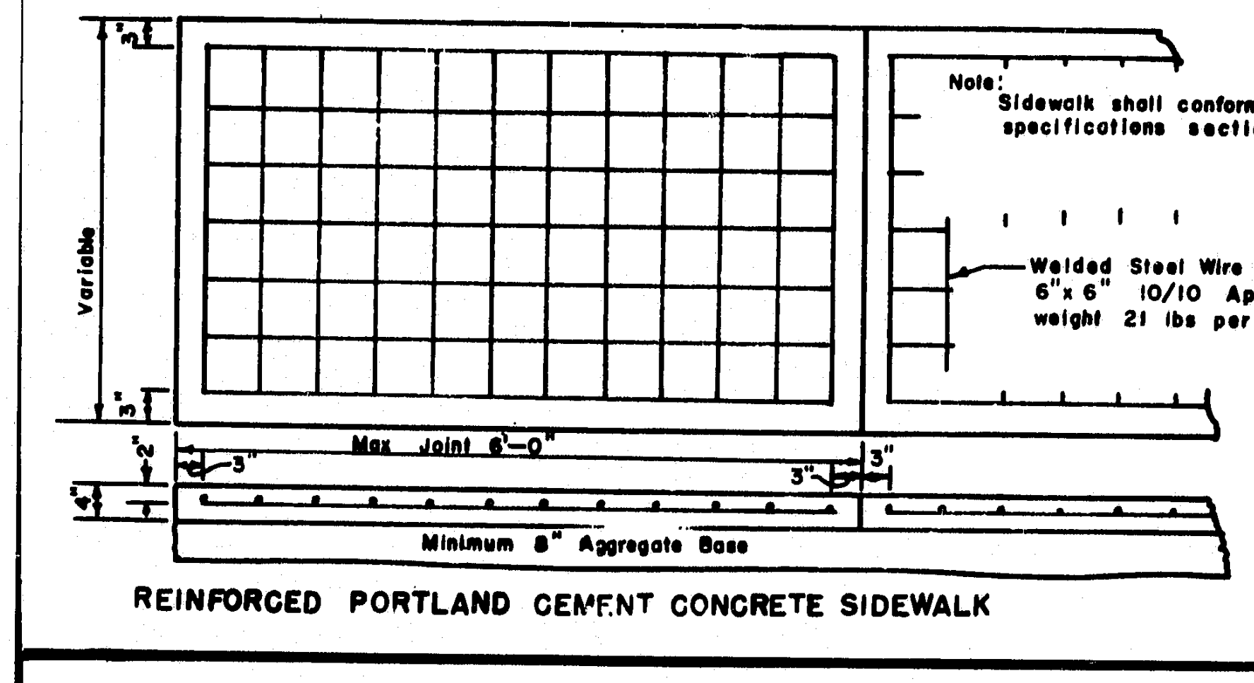
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

STANDARD DETAILS

CURB, DITCHES AND SLOPES, AND CATCH BASINS TYPE "E"

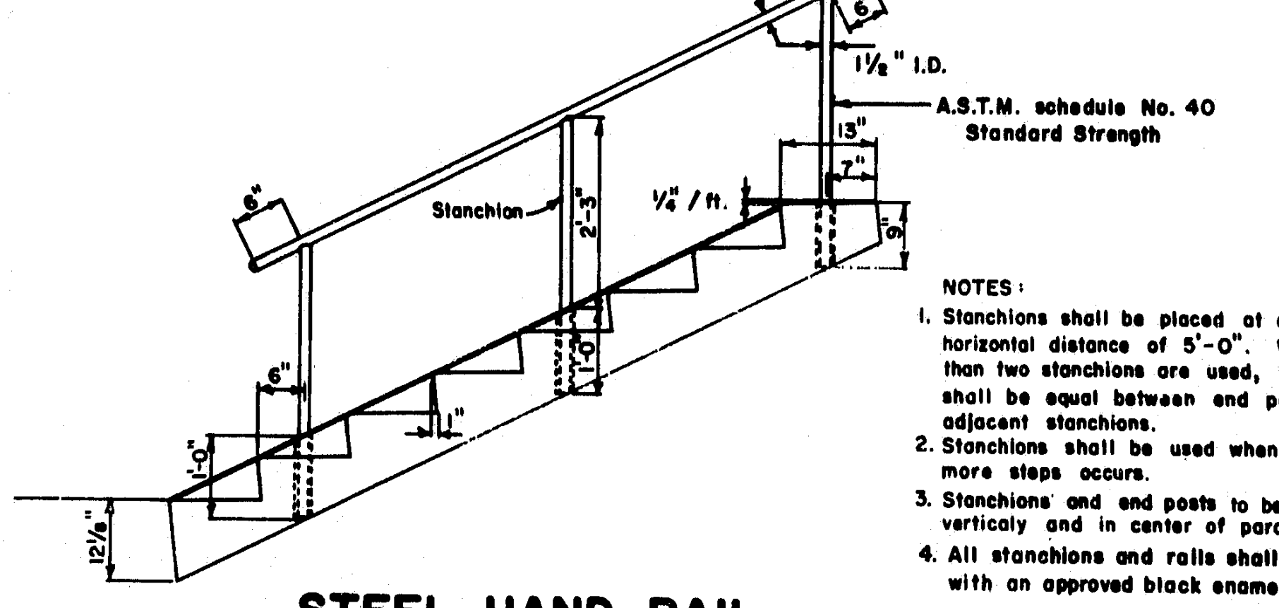
AUG. 1969 (3)

R93-425



Note:
Sidewalk shall conform to standard specifications section 608

REINFORCED PORTLAND CEMENT CONCRETE SIDEWALK

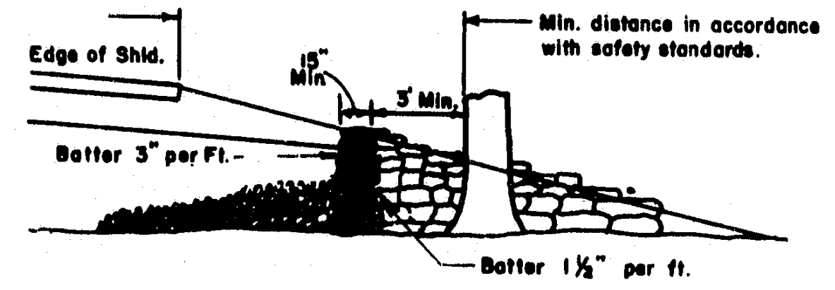


NOTES:
1. Stanchions shall be placed at a maximum horizontal distance of 5'-0". When more than two stanchions are used, spacing shall be equal between end posts and adjacent stanchions.
2. Stanchions shall be used when seven or more steps occurs.
3. Stanchions and end posts to be placed verticaly and in center of parapet wall
4. All stanchions and rails shall be coated with an approved black enamel paint.

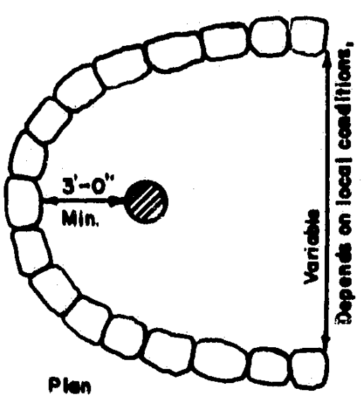
STEEL HAND RAIL

5-A

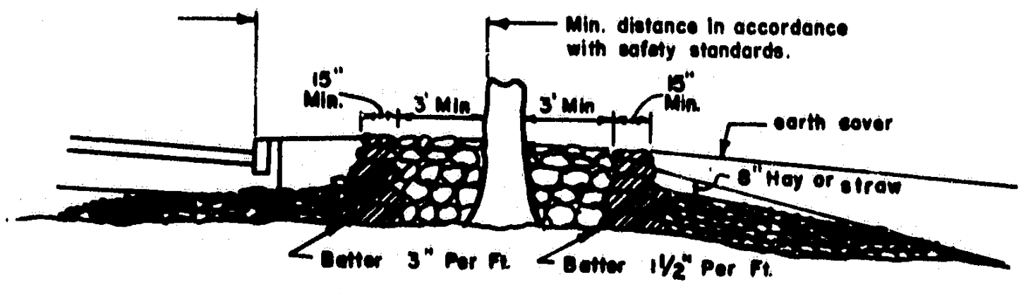
TREE WELLS

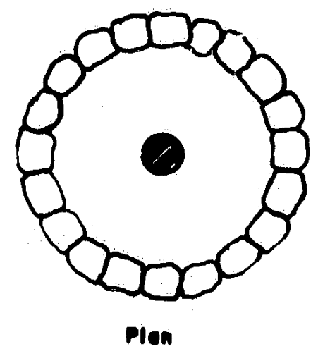


NOTES:
1. Selected ledge excavation, crushed stone or other porous material shall be used to fill around the old ground area of the tree from the tree well to the perimeter of the branches.
2. An 8" layer of hay or straw to prevent infiltration of fines shall be placed over the rock fill except in areas under the roadway and shoulders.
3. If drainage away from the tree well is necessary, underdrain outlet pipe shall be used, and will be paid for under item 605.10.



Plan



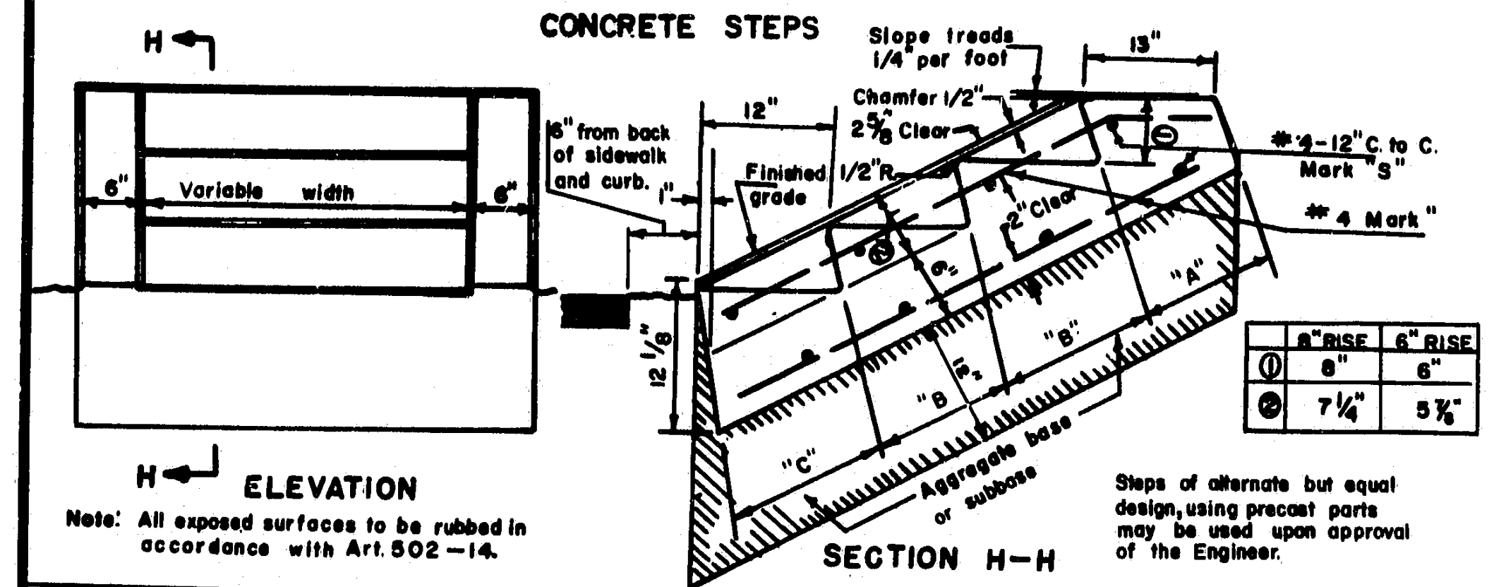


Plan

To be paid for under item
610.09 Hand laid riprap.
605.10 6" Underdrain Outlet

5-E

CONCRETE STEPS



	8" RISE	6" RISE
①	8"	6"
②	7¼"	5⅞"

Note: All exposed surfaces to be rubbed in accordance with Art. 502-14.

Steps of alternate but equal design, using precast parts may be used upon approval of the Engineer.

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

CONCRETE CLASS "A"

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

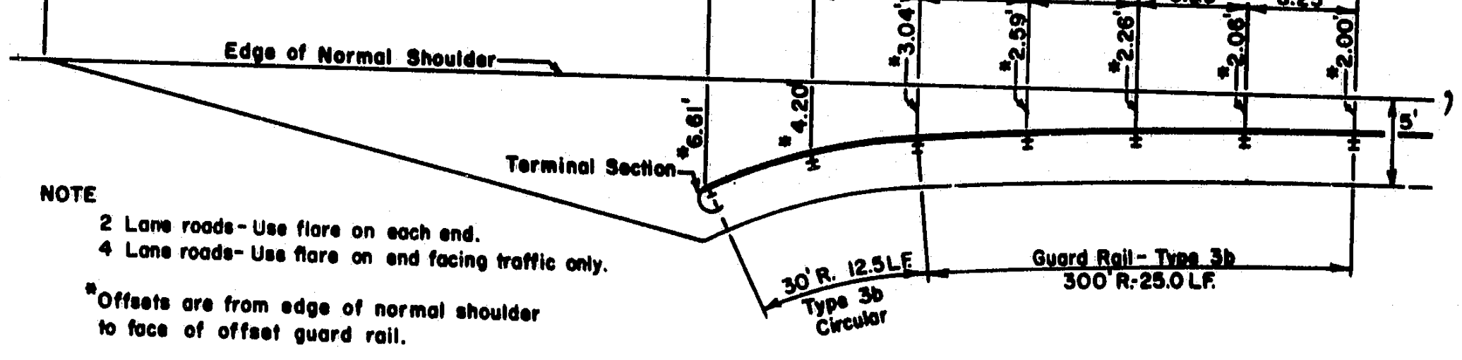
8" RISE – 12" TREAD (1½:1) SLOPE

REINFORCING STEEL

Mark	Size	Number	Length (Each)
R	# 4 .668 lbs. per ft.	2 Each parapet 1 Each ft. of width	11" For "A" +14½" 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

CONCRETE CLASS "A"

Section	Steps per ft of width	Parapet each wall
"A" Header	.035 cu. yds.	.018 cu. yds.
"B" Each inter. step	.035 cu. yds.	.024 cu. yds.
"C" Footer	.035 cu. yds.	.024 cu. yds.



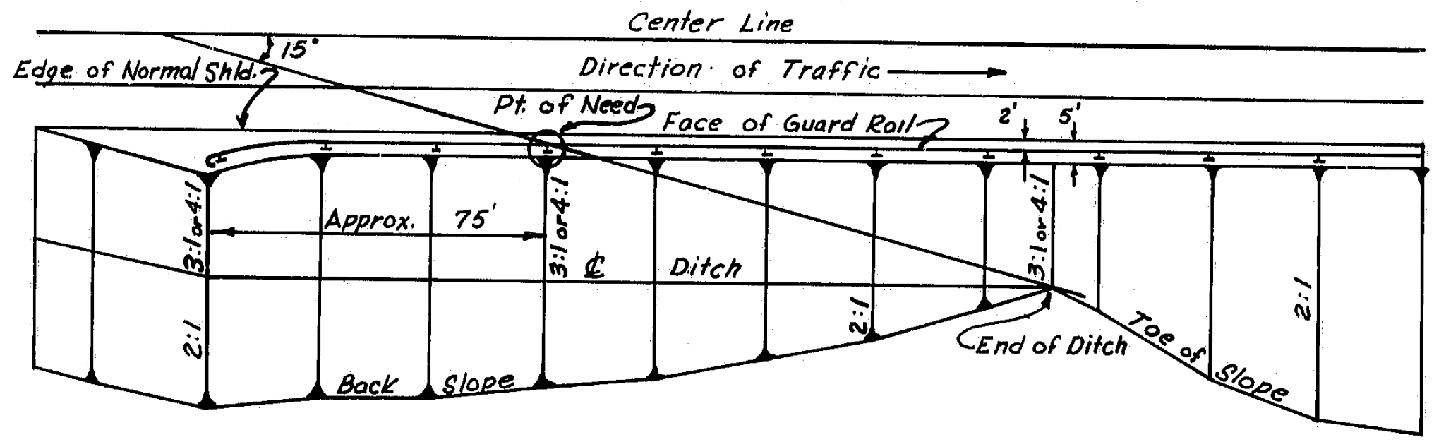
NOTE
2 Lane roads - Use flare on each end.
4 Lane roads - Use flare on end facing traffic only.

*Offsets are from edge of normal shoulder to face of offset guard rail.

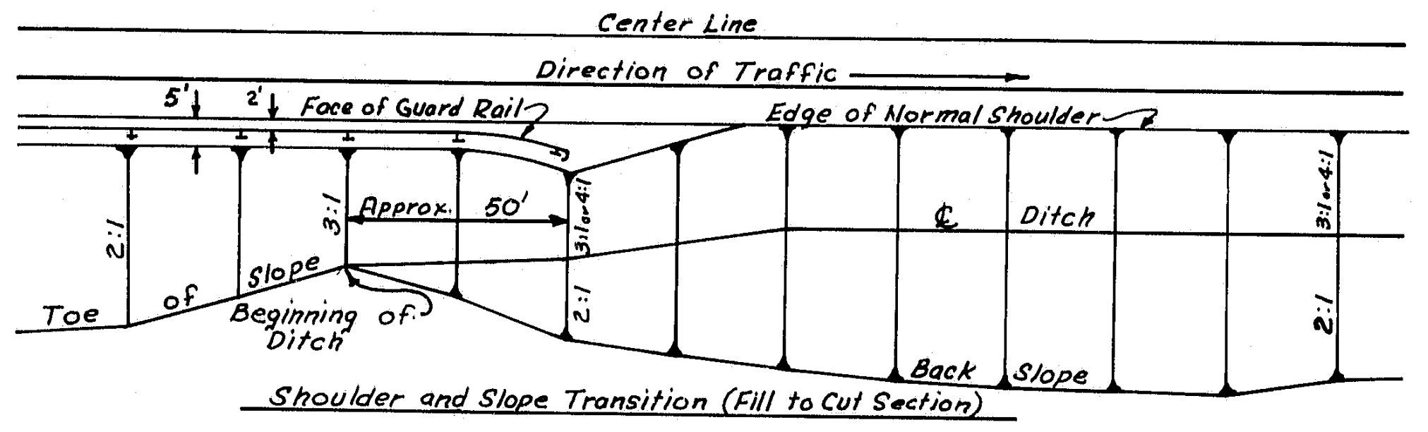
GUARD RAIL END TRANSITION

5-B

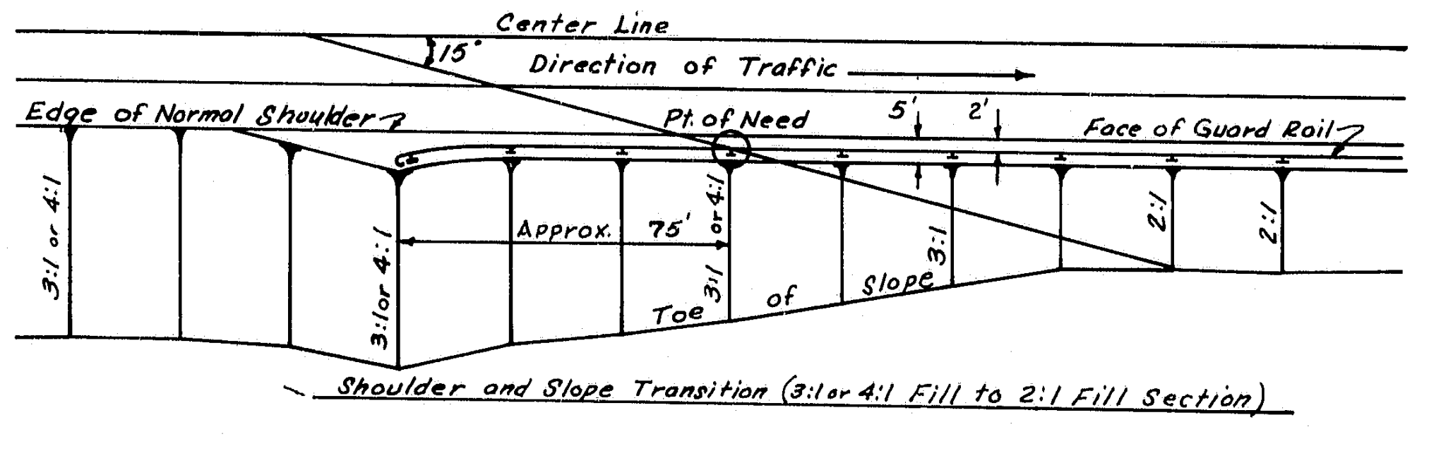
GUARD RAIL END SLOPE TRANSITIONS



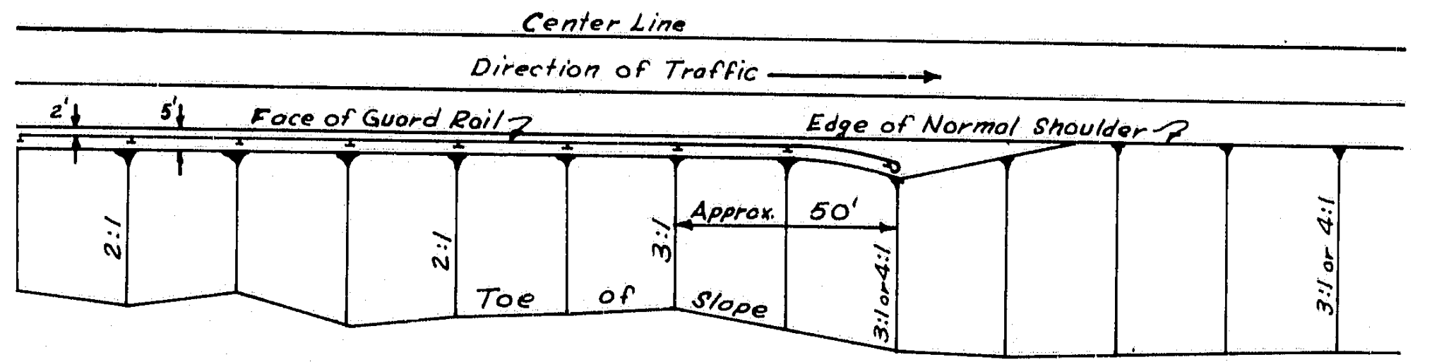
Shoulder and Slope Transition (Cut to Fill Section)



Shoulder and Slope Transition (Fill to Cut Section)



Shoulder and Slope Transition (3:1 or 4:1 Fill to 2:1 Fill Section)

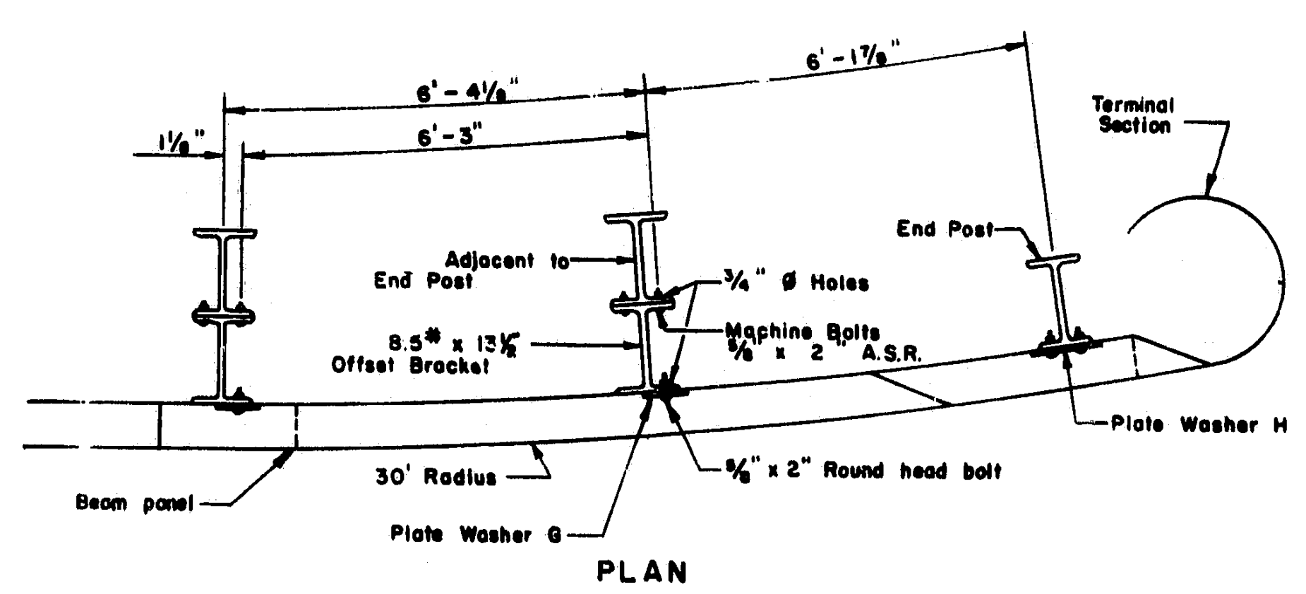


Shoulder and Slope Transition (2:1 Fill To 3:1 or 4:1 Fill Section)

NOTE:
The Transitions are a design guide only.
These slope Transitions shall be used with Beam Type Guard Rail.

5-F

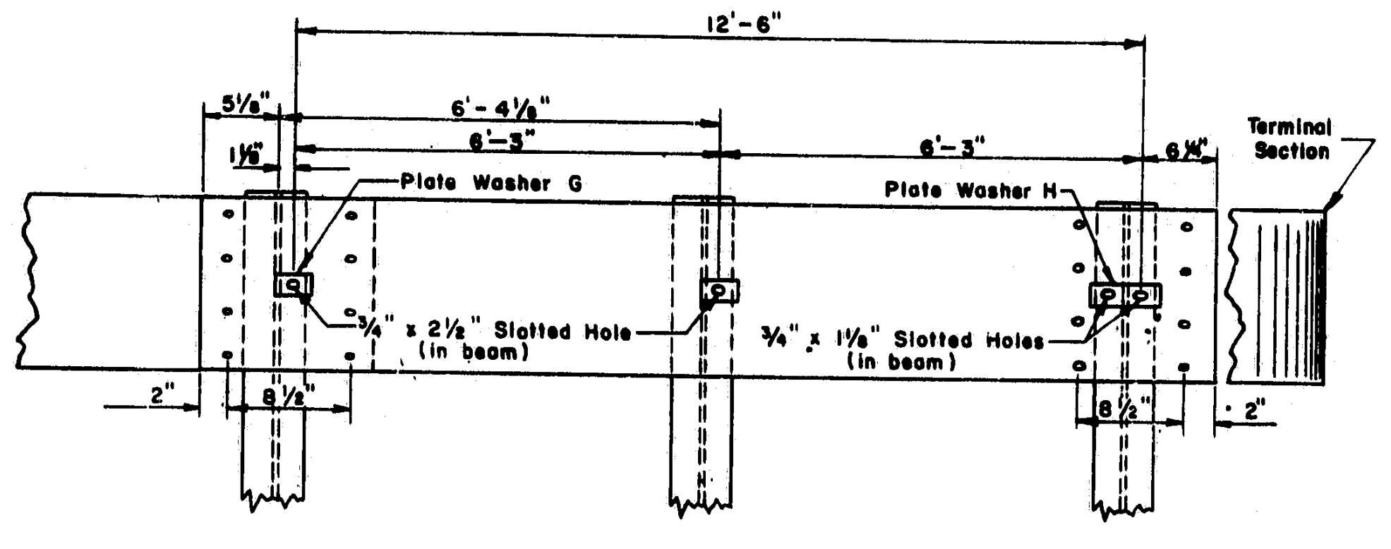
END BEAM ASSEMBLY - SPACING OF POSTS
GUARD RAIL TYPE 3a and 3b



PLAN

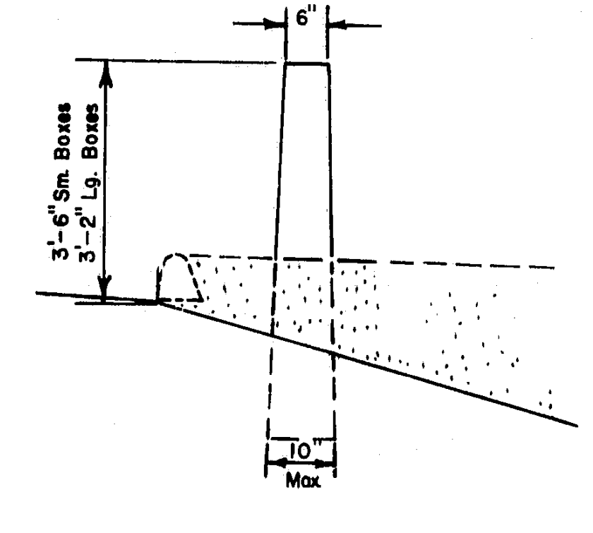
To be used in all locations except on the end away from traffic on 4 lane divided.

NOTE:
Offset Bracket shall be installed on all posts, except end post.

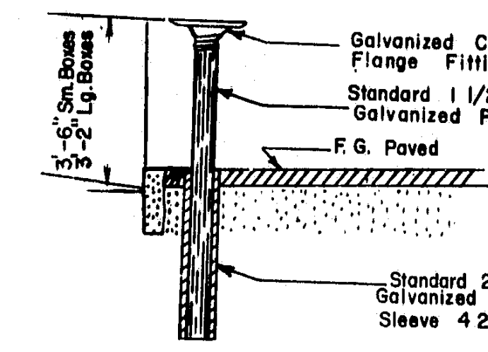


ELEVATION

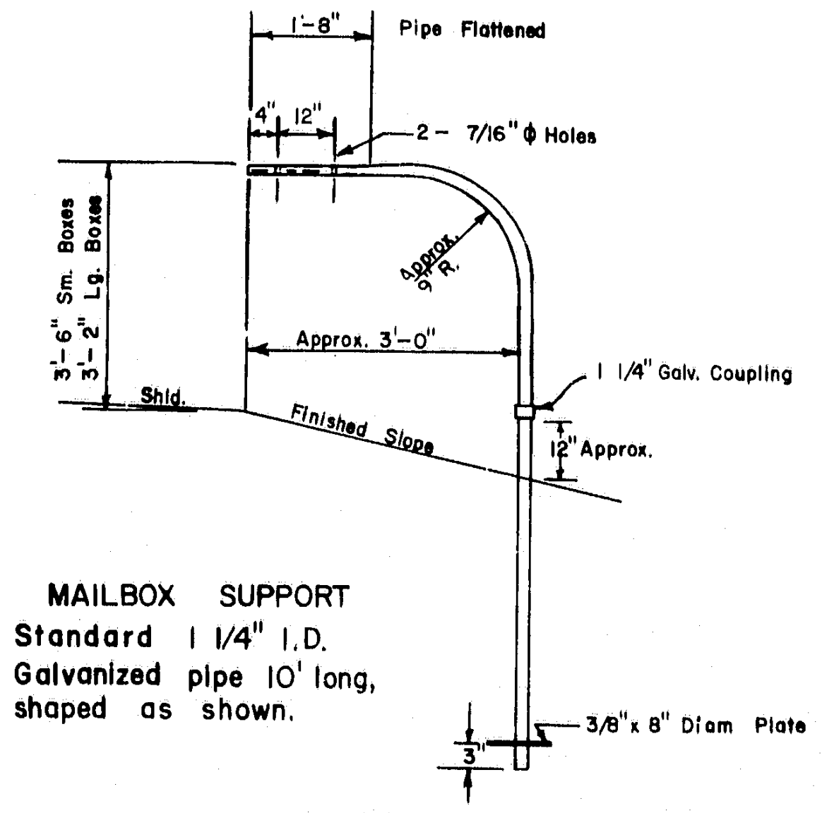
5-C



WOOD POST
(Single Post – Type Ia,)



STEEL PIPE POST
(Single post – Type Ic.)

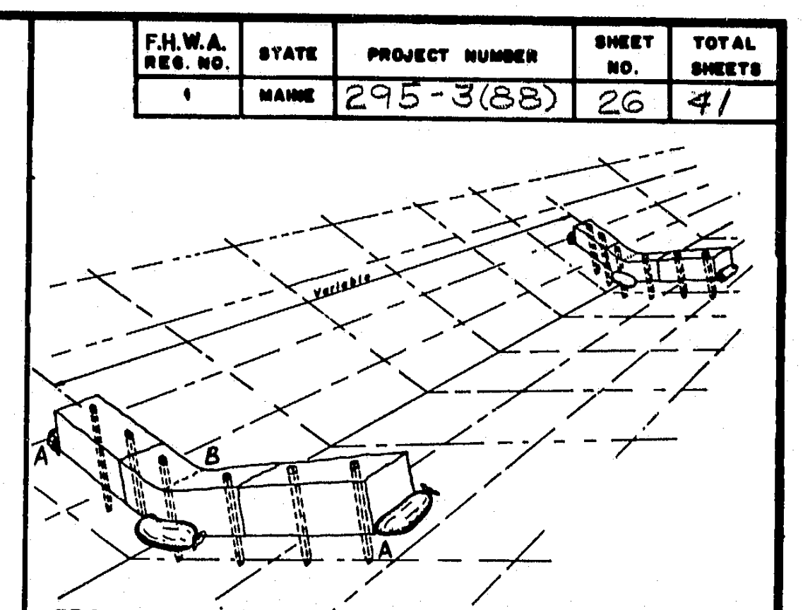


MAILBOX SUPPORT
Standard 1 1/4" I.D.
Galvanized pipe 10' long,
shaped as shown.

SUPPORTS FOR MAILBOXES

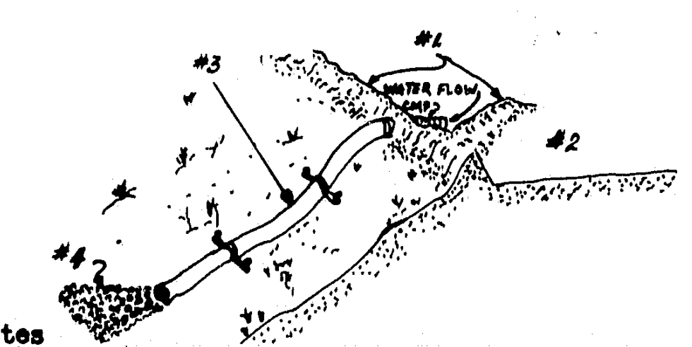
5G

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	26	41



EROSION CHECK TO BE OF BALES OF HAY SECURED TO THE GROUND WITH 2-4' LONG GRADE STAKES FOR EACH BALE. SAND BAG AS REQUIRED. PLACE SUFFICIENT BALES TO ESTABLISH ELEVATIONS AT 'A' AT LEAST 6 INCHES ABOVE OVERFLOW AT 'B'.

EROSION CHECK for DITCH



Notes
1. Temporary berms approx. 24"± wide x 12"± high (Compacted with wheel or track)
2. Crescent shaped berm, length as required to contain surface drainage & direct into end section.
3. Collapsible pipe or equal.
4. Discharge in drainage ditch, on stabilized area or on dumped stone as designated by Engineer.

TEMPORARY BERM and SLOPE DRAIN

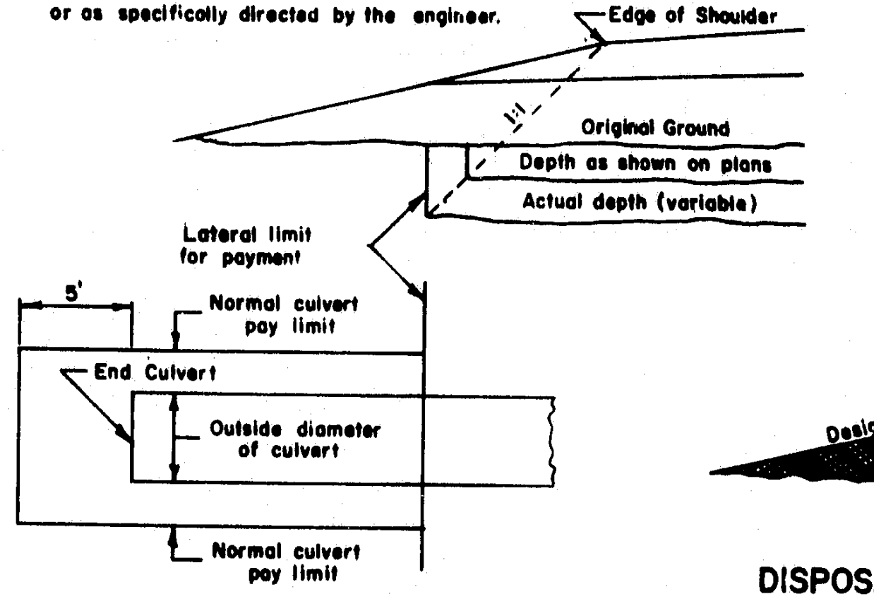
TEMPORARY EROSION CONTROL

5-D

MUCK EXCAVATION

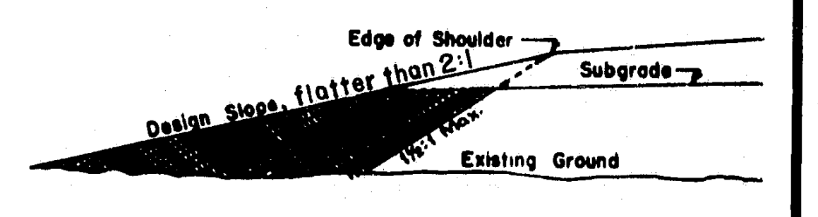
PAYMENT LIMITS

NOTE:
When muck is excavated to a depth greater or less than what is shown on the plans, the vertical limits for payment shall be determined as shown or as specifically directed by the engineer.

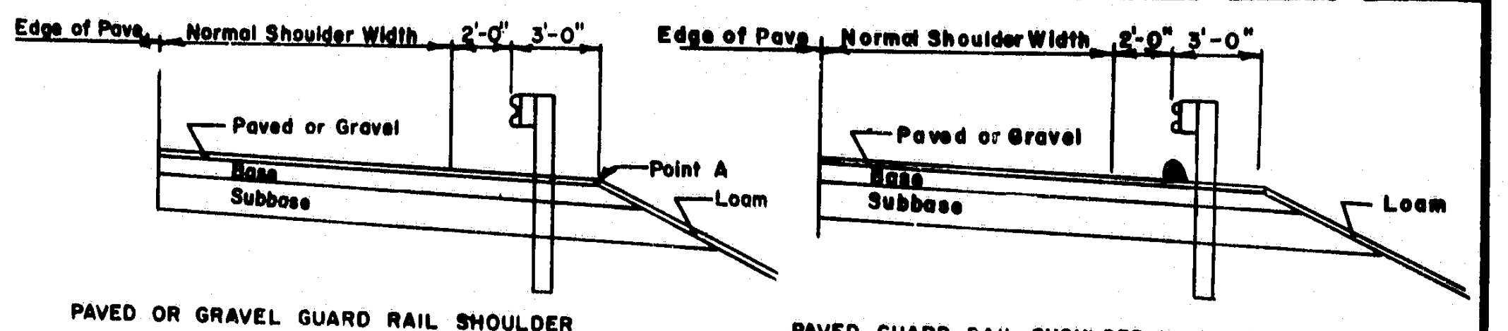


CULVERT EXCAVATION LIMITS IN MUCK AREAS
PLAN VIEW

When directed by the engineer, waste material shall be used in this area, except that waste shall not be placed in fills designed with slopes of 2:1 or less. No additional payment will be made for this work.



DISPOSAL OF WASTE MATERIALS



PAVED OR GRAVEL GUARD RAIL SHOULDER

PAVED GUARD RAIL SHOULDER WITH CURB

Point A = Normal Slope Break

LOCATION OF GUARD RAIL

5-H

PLATE H	11-3-77

R93-426

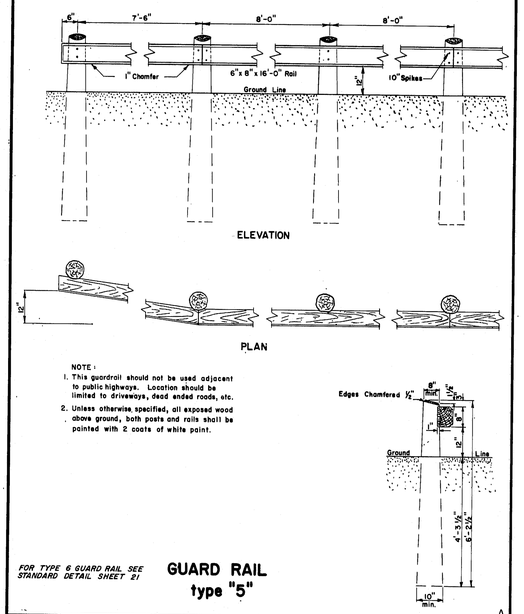
REVISIONS	
Plate 5-A	12-24-69
PLATE 5B	1-27-71
PLATE 5 H	5-12-71
PLATE 5 B	1-19-72
PLATE 5G	6-7-72
PLATE 5D	6-7-72
PLATE 5D+C	10-22-74
PLATE A,B,F,H	3-18-75
PLATE 5 H	6-26-75
PLATE G	10-14-75

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

STANDARD DETAILS

GUARD RAIL, MUCK EXCAVATION
CONCRETE STEPS & SIDEWALK
GUYING TREES
TREE WELLS, EROSION CONTROL,
MAILBOX SUPPORTS.

AUG. 1969 ⟨5⟩

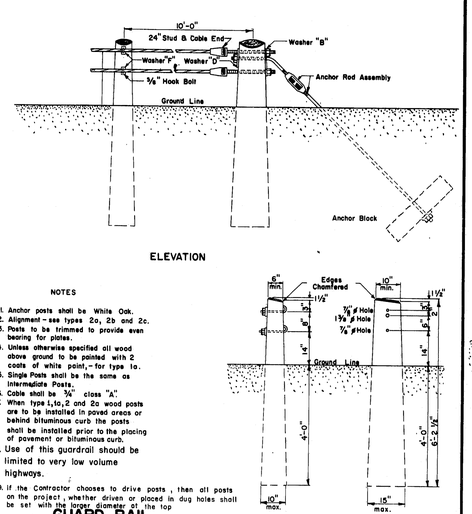


NOTE :
1. This guardrail should not be used adjacent to public highways. Location should be limited to driveways, dead ended roads, etc.
2. Unless otherwise specified, all exposed wood above ground, both posts and rails shall be painted with 2 coats of white paint.

FOR TYPE 6 GUARD RAIL SEE STANDARD DETAIL SHEET 21

GUARD RAIL type "5"

A



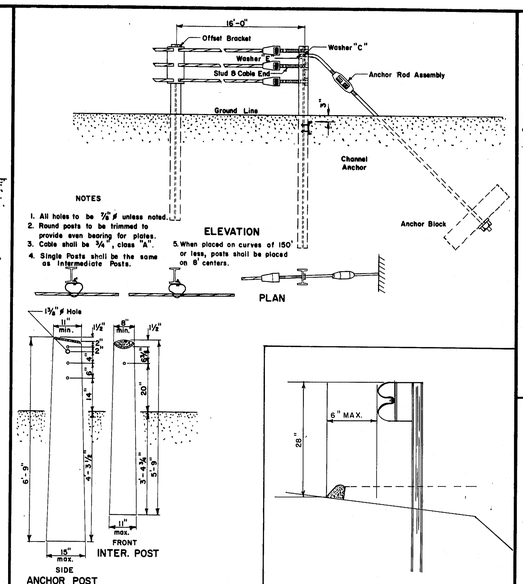
NOTES
1. Anchor posts shall be White Oak.
2. Alignment - see types 2a, 2b and 2c.
3. Posts to be trimmed to provide even bearing for plates.
4. Unless otherwise specified all wood above ground to be painted with 2 coats of white paint, - for type 1a.
5. Single Posts shall be the same as Intermediate Posts.
6. Cable shall be ¾" class "A".
7. When type 1, 1a, 2 and 2a wood posts are to be installed in paved areas or behind bituminous curb the posts shall be installed prior to the placing of pavement or bituminous curb.
8. Use of this guardrail should be limited to very low volume highways.
9. If the Contractor chooses to drive posts, then all posts on the project, whether driven or placed in dug holes shall be set with the larger diameter at the top

GUARD RAIL type "1a"-"1b"

INTERMEDIATE POST

ANCHOR POST

B



NOTES
1. All holes to be ⅞" ø unless noted.
2. Round posts to be trimmed to provide even bearing for plates.
3. Cable shall be ¾", class "A".
4. Single Posts shall be the same as Intermediate Posts.
5. When placed on curves of 150' or less, posts shall be placed on 8' centers.

INTER. POST

ANCHOR POST TYPE "2a"

GUARD RAIL type "2a"

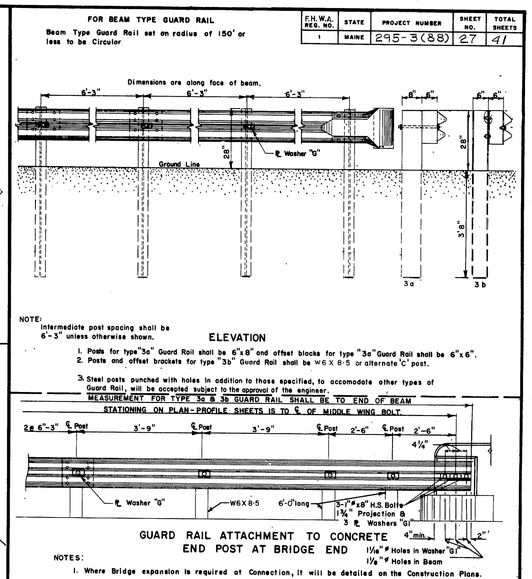
GUARD RAIL AT CURB SECTION

C

FOR BEAM TYPE GUARD RAIL

Beam Type Guard Rail set on radius of 150' or less to be Circular

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	27	41

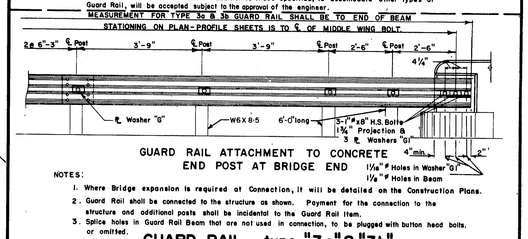


NOTE:
Intermediate post spacing shall be 6'-3" unless otherwise shown.

1. Posts for type "3a" Guard Rail shall be 6"x8" and offset blocks for type "3a" Guard Rail shall be 6"x6".
2. Posts and offset brackets for type "3b" Guard Rail shall be W6 X 8·5 or alternate "C" post.
3. Steel posts punched with holes in addition to those specified, to accomodate other types of Guard Rail, will be accepted subject to the approval of the engineer.

MEASUREMENT FOR TYPE 3a & 3b GUARD RAIL SHALL BE TO END OF BEAM

STATIONING ON PLAN-PROFILE SHEETS IS TO ℄ OF MIDDLE WING BOLT



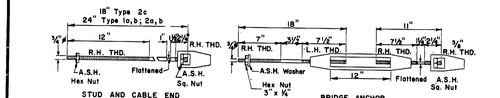
GUARD RAIL ATTACHMENT TO CONCRETE END POST AT BRIDGE END

1⅛" ø Holes in Washer "G"
1¼" ø Holes in Beam

NOTES:
1. Where Bridge expansion is required at Connection, it will be detailed on the Construction Plans.
2. Guard Rail shall be connected to the structure as shown. Payment for the connection to the structure and additional posts shall be incidental to the Guard Rail item.
3. Splice holes in Guard Rail Beam that are not used in connection, to be plugged with button head bolts, or omitted.

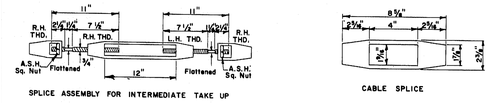
GUARD RAIL type "3a" & "3b"

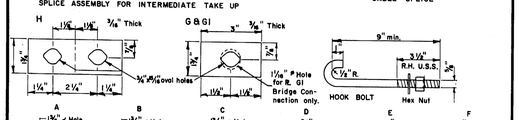
D



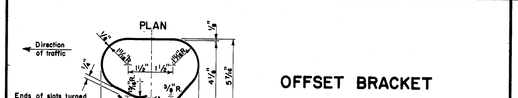
NOTES
1. Other designs may be used subject to the engineers approval.
2. All turnbuckles shall be installed midway of the threaded portion of each rod.

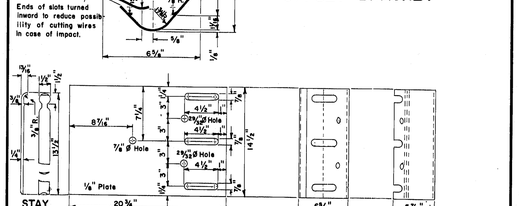
STANDARD FITTINGS

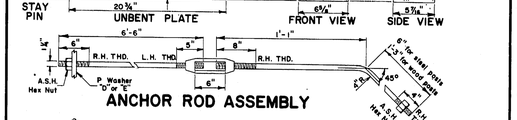




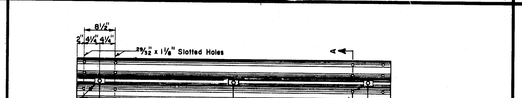
E

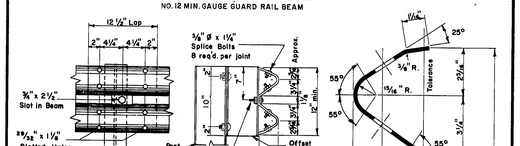




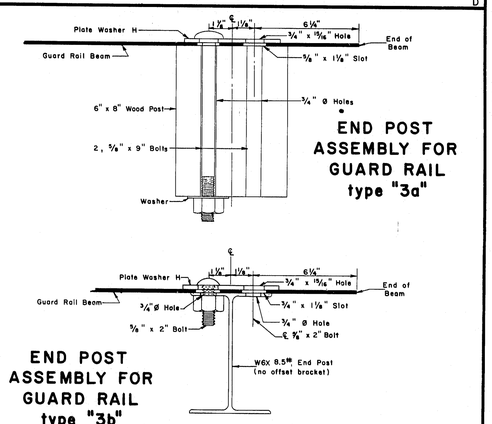


F





G



H

REVISIONS	
PLATE 'D'	11-22-71
— 11 —	2-17-72
PLATES C, D, G, H	10-22-74
PLATE 'C'	10-14-75
PLATE 'D'	8-17-76

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

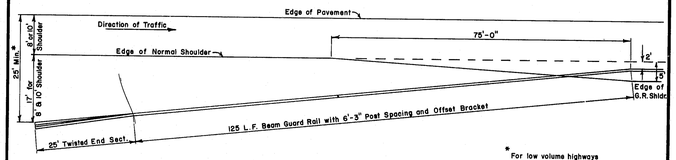
STANDARD DETAILS

GUARD RAILS, ANCHOR ASSEMBLIES, PLATE WASHERS and STANDARD FITTINGS

AUG. 1969 (6)

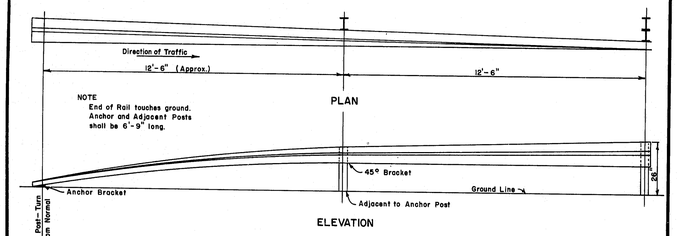
R-93-427

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-368)	28	41



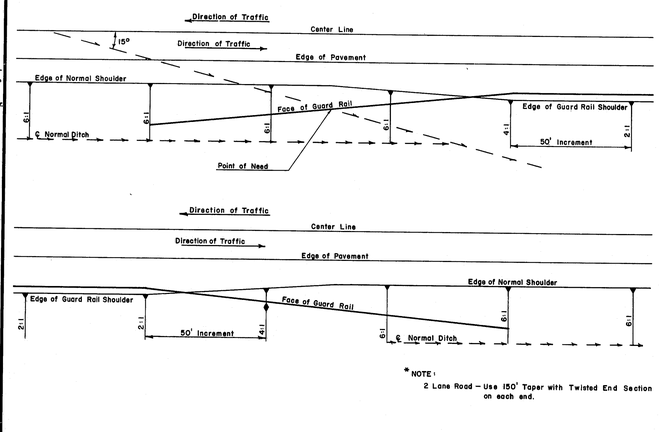
* For low volume highways flare will not be required.

BEAM GUARD RAIL END TREATMENT



TWISTED END SECTION

9-A

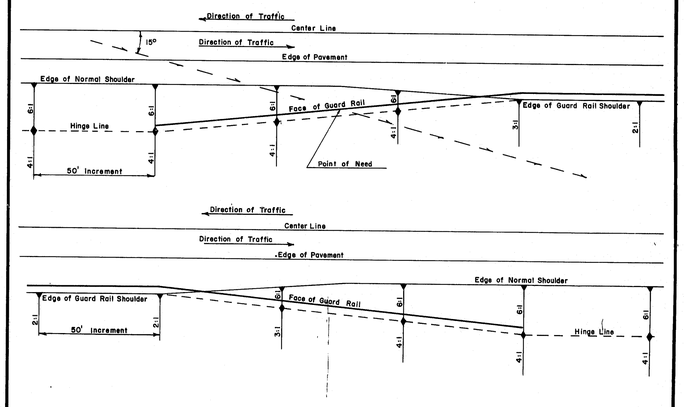


* NOTE:
2 Lane Road – Use 150' Taper with Twisted End Section on each end.

CUT TO FILL *

BEAM GUARD RAIL PLACEMENT AND SLOPE TRANSITION

9-B

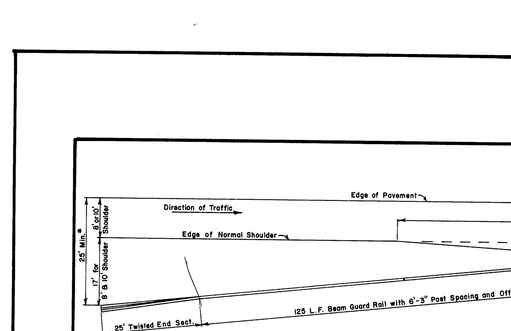


LOW FILL TO HIGH FILL*

BEAM GUARD RAIL PLACEMENT AND SLOPE TRANSITION

9-C

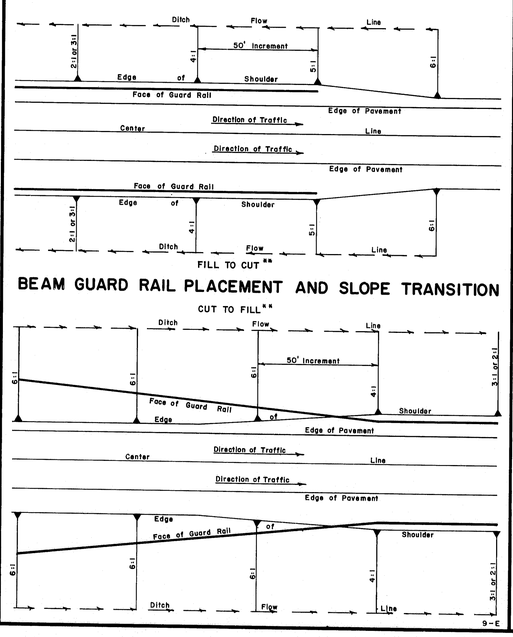
45° BRACKET



ANCHOR BRACKET

TWISTED END SECTION ANCHOR DETAIL

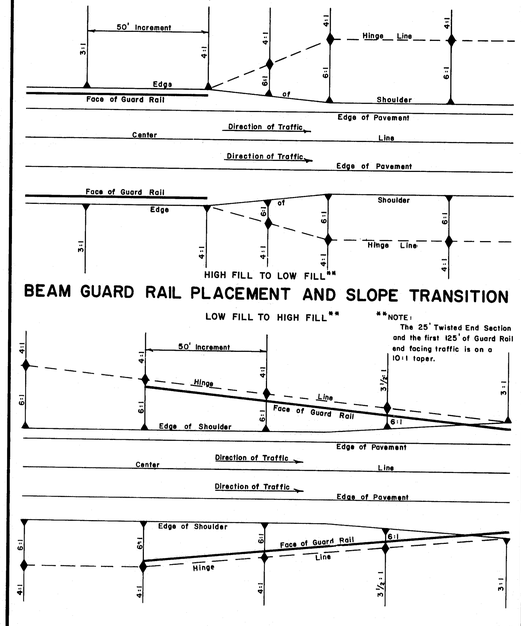
9-D



FILL TO CUT **

BEAM GUARD RAIL PLACEMENT AND SLOPE TRANSITION

9-E

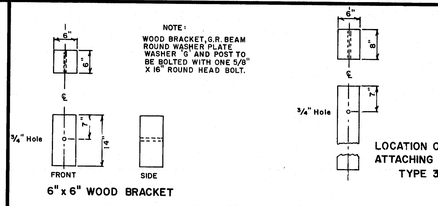


HIGH FILL TO LOW FILL**

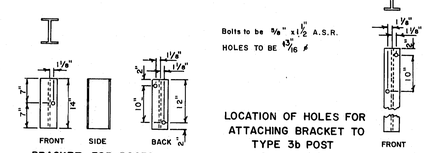
BEAM GUARD RAIL PLACEMENT AND SLOPE TRANSITION

9-F

** NOTE:
The 25' Twisted End Section and the first 125' of Guard Rail end facing traffic is on a 10:1 taper.



OFFSET BRACKET FOR TYPE 3a GUARD RAIL POST



OFFSET BRACKET FOR TYPE 3b GUARD RAIL POST

9-G

REVISIONS	
Added Plates 9E & 9F	NOV. 1969
PLATE 9G	12-20-71
PLATE 9G	1-19-72
PLATE 9G	10-22-74
PLATE D	10-14-75

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

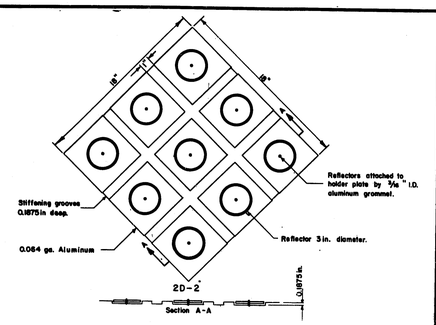
STANDARD DETAILS

BEAM GUARD RAIL END TREATMENT

R93-428

AUG. 1969

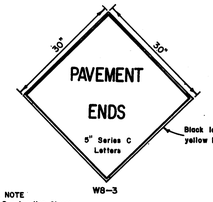
9



HAZARD MARKER

NOTE

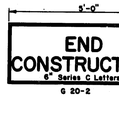
SIGNING IN AN AREA WHERE BLASTING IS NECESSARY SHALL BE PLACED AS OUTLINED IN THE "MANUAL", AND THE PRECAUTIONS OF SUBSECTION 107.12 OF THE STANDARD SPECIFICATIONS SHALL BE OBSERVED.

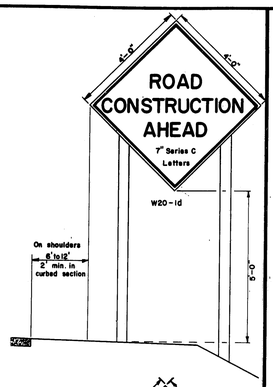


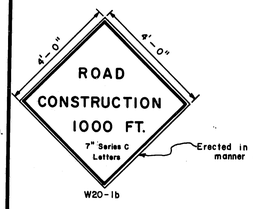
GENERAL NOTE
Construction Signs

I. Sign Borders: All signs shall have borders conforming to the sizes and spacing as shown below:
a. 30"x30" Sign - 3/4" Border, 1/2" Space from sign edge.
b. 2' x 5' Sign - 3/4" Border, 3/8" Space from sign edge.
c. 3' x 4' Sign - 3/4" Border, 1/2" Space from sign edge.
d. 4' x 4' Sign - 1 1/4" Border, 3/4" Space from sign edge.

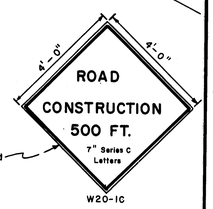
A







Erected in the same manner as W20-id



CONSTRUCTION SIGNS

B

GENERAL NOTES - BARRICADES

1. Unless otherwise designated, sign designation letters shall refer to the "Manual of Uniform Traffic Control Devices for Street and Highways," published by the U. S. Department of Transportation, Federal Highway Administration, 1971.

2. White stripes shall be of silver reflective sheeting bonded to 0.019 minimum gauge aluminum, 16 minimum gauge galvanized steel, or 1/4" plywood. Individual white sheets may be attached to an orange reflectorized background to form the orange and white stripes. At the Contractor's option the reflective sheeting and backing may extend the full width of the barricade with an opaque film or paint applied to form the stripes.

3. All signs shall be of reflective sheeting on 5/8" thick plywood. The plywood shall conform to subsection 712.25, Standard Specifications, June 1968.

4. Pressure sensitive reflective sheeting will be an acceptable alternate to the reflective sheeting required by Standard Specifications.

NOTES - PORTABLE BARRICADES

1. Lumber sizes for portable barricades shall be 2" x 8" except posts which shall be 4" x 4" (nominal sizes).

2. The detour sign shall be an oversized M4-10 sign with a demountable "DETOUR" message which shall be made of screened reflective sheeting on 1/4" plywood, masonite, sheet steel or sheet aluminum.

3. Hazard markers shall be attached to the barricade with a bolt assembly of steel cadmium plated 5/16" bolt, lock washer and vandal resistant nuts.

4. When two W1-6 signs are required, R11-2, R11-3, or R11-4 signs shall be omitted.

5. Flashing lights housings shall be mounted to permit rotating in a vertical axis to allow for adjustment to face oncoming traffic.

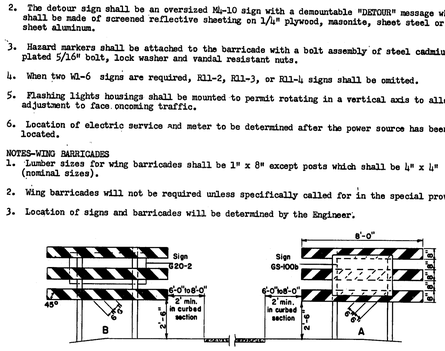
6. Location of electric service and meter to be determined after the power source has been located.

NOTES-WING BARRICADES

1. Lumber sizes for wing barricades shall be 1" x 8" except posts which shall be 4" x 4" (nominal sizes).

2. Wing barricades will not be required unless specifically called for in the special provisions.

3. Location of signs and barricades will be determined by the Engineer.

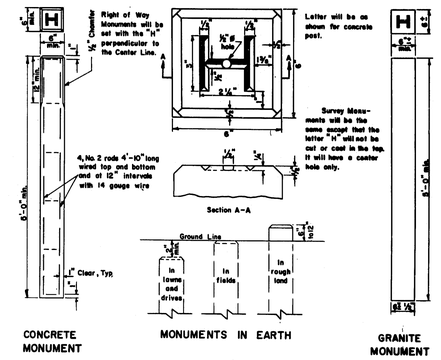


WING BARRICADES

C

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	29	41

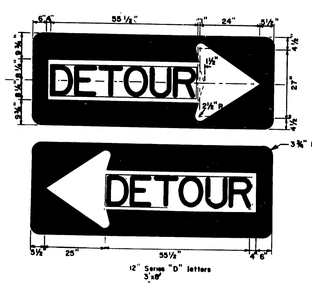
RIGHT OF WAY & SURVEY MONUMENTS



3/8" in diam. bronze rod. Min. length 12". 1/4" Hole in center of top 1/4" deep.

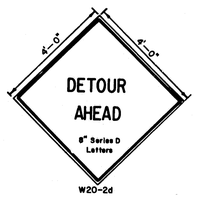
BRONZE PIN MARKERS

D



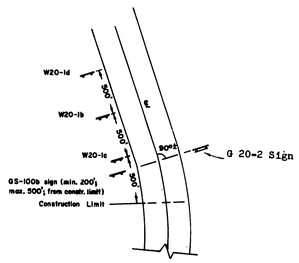
Detachable DETOUR message shall have 1" clearance from letters to edge on all sides.

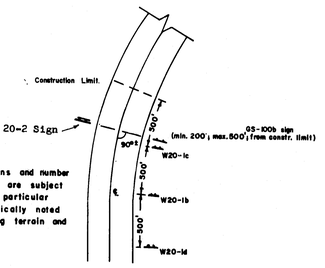
DETOUR SIGN
M 4-(L)



E

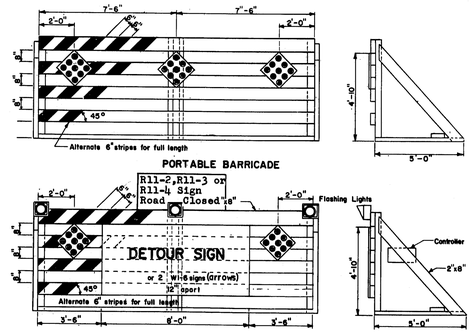
STANDARD SIGN LOCATIONS





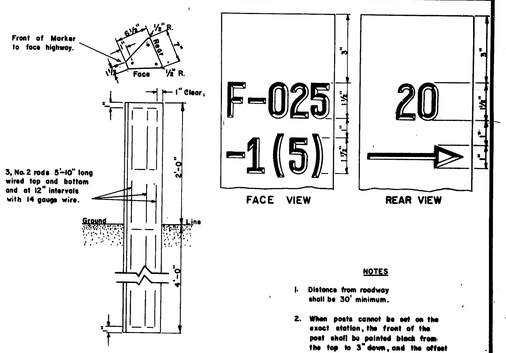
NOTE:
Standard locations and number of signs required are subject to variation on particular projects if specifically noted due to surrounding terrain and land use.

F



BARRICADES

G



NOTES

1. Distance from roadway shall be 30' minimum.
2. When posts cannot be set on the exact station, the front of the post shall be painted black from the top to 3" down, and the offset distance marked on rear with an arrow pointing in direction of beginning or end of project.
3. All markings to be 1/4" deep and 3/16" wide.

PROJECT MARKERS

H

REVISION	
PLATE B	12-21-70
PLATES D, G & F&G	12-15-71
PLATE C	10-12-72
PLATES C&G	3-25-76

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

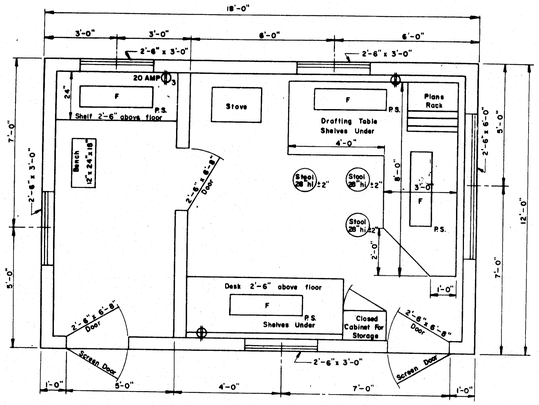
BARRICADES
WARNING SIGNS
MONUMENTS
PROJECT MARKERS

AUG. 1969

R93-429

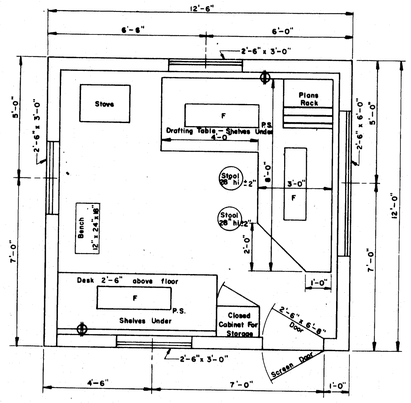
11

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(68)	30	41



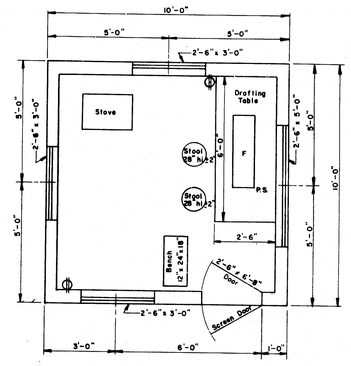
FLOOR PLAN
TYPE "A"

A



FLOOR PLAN
TYPE "B"

B

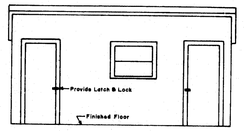


FLOOR PLAN
TYPE "C"

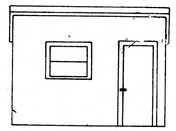
C

GENERAL NOTES

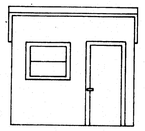
1. Drafting table shall be 3'-4" high at front edge and placed 2" from studs to allow prints to hang down behind table when in use.
2. Shelves under desk shall be constructed to received 11½" x 14" x 25" transfiles.
3. Windows shall be double hung.
4. Stovepipe shall not be in direct contact with combustible material ; the pipe shall be surrounded with at least 6" of fireproof material.
5. Continuous 110 volt 60 cycle electric service shall be supplied.
6. The engineer may rearrange the items shown on the plan views during construction of the field office.
7. FURNISHINGS TO BE SUPPLIED :
   - 2 Straight back chairs for types A and B
   - 1 Bench for types A, B & C
   - 3 Stool for type A
   - 2 Stools for types B & C
8. SYMBOLS :
   - F — Florescent lights (2 light , rapid start 48" strips and 40 watt bulbs.)
   - P.S. — Pull switch
   - Duplex wall outlet — 15 amp unless otherwise noted.
   - $\oplus_3$ Triplex Wall Outlet
9. For the Type "A" Field Office one clean 55 gal. drum shall be supplied , installed on a suitable rack and equipped with a spigot suitable for drawing off water. The drum shall be furished with water at all times.



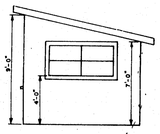
FRONT ELEVATION
TYPE "A"



FRONT ELEVATION
TYPE "B"



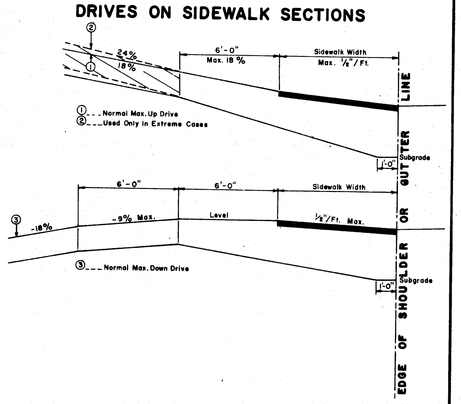
FRONT ELEVATION
TYPE "C"



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

F

DRIVES ON SIDEWALK SECTIONS

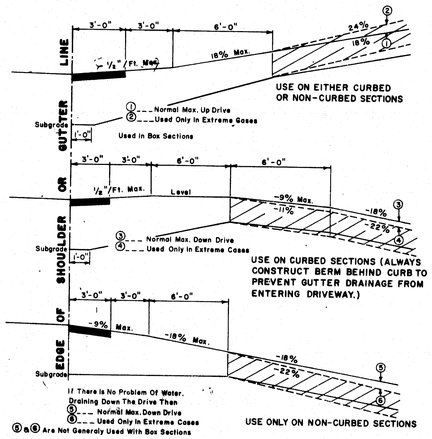


GENERAL NOTES
1. The sidewalk width shall be paved in all cases.
2. All residential or commercial drives 10% and over shall be paved.

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

D

DRIVES ON NON-SIDEWALK SECTIONS



②a⑥ Are Not Generaly Used With Box Sections

GENERAL NOTES
1. The first 5' shown as pavement shall be paved only when abutting a paved area.
2. All residential or commercial drives 10% and over shall be paved.

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

E

REVISIONS	
PLATE 'D' & 'E'	3-16-73

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

STANDARD DETAILS

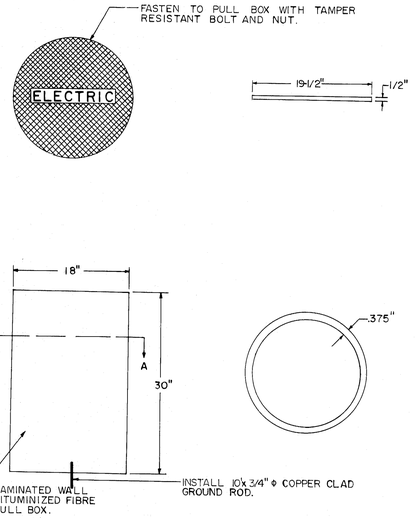
DRIVEWAY DETAILS
FIELD OFFICES
TESTING LABORATORY

AUG. 1969

(12)

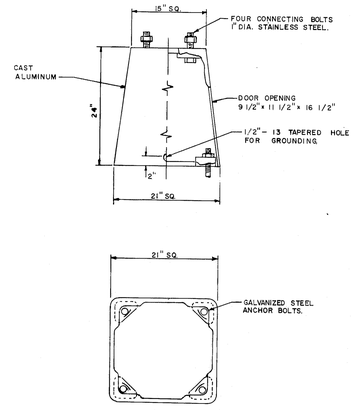
R93-430

R. F. A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	31	41



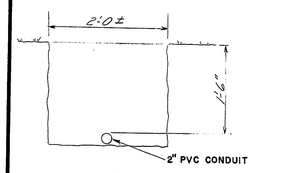
634.176

BITUMINIZED FIBRE JUNC. BOX WITH CAST IRON COVER



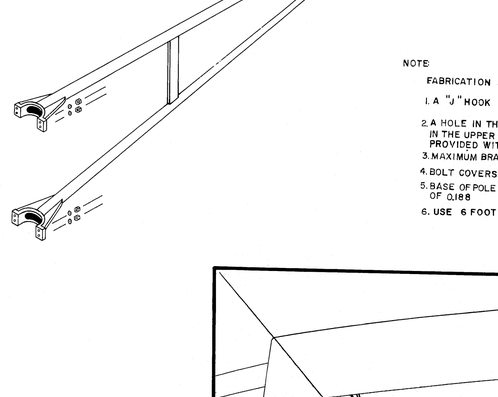
CAST ALUMINUM TRANSFORMER BASE

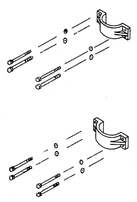
634.214



UNDERGROUND CONDUIT

634.06

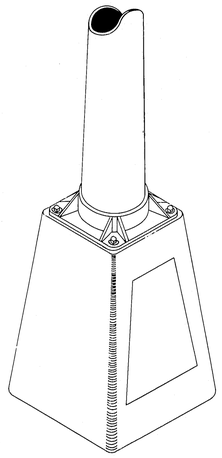




NOTE

FABRICATION SHALL INCLUDE –

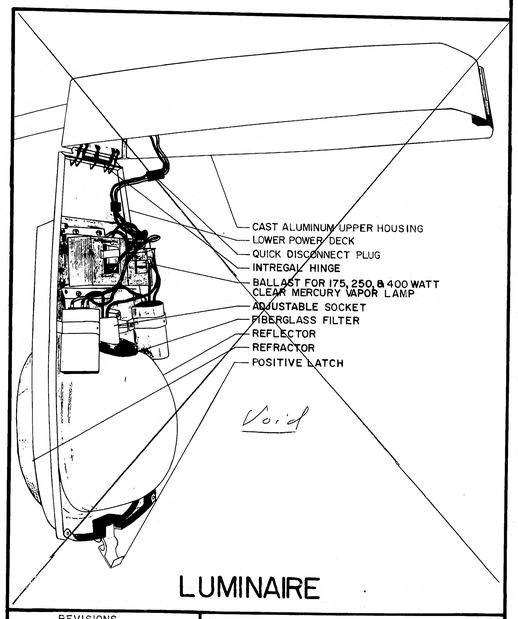
1. A "J" HOOK FOR INTERNAL WIRING.
2. A HOLE IN THE SHAFT TO MATCH THE WIRING APERTURE IN THE UPPER ARM BRACKET. THE HOLE SHALL BE PROVIDED WITH A RUBBER GROMMET.
3. MAXIMUM BRACKET RISE 3"/FT.
4. BOLT COVERS NOT SHOWN.
5. BASE OF POLE TO BE 10" DIA. WITH MIN. WALL THICKNESS OF 0.188
6. USE 6 FOOT BRACKET



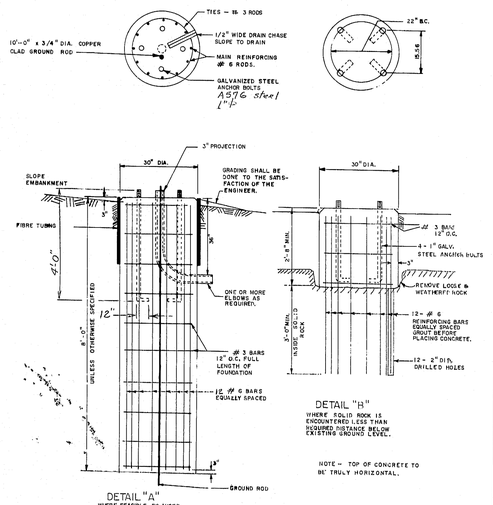
5 LIGHT STANDARDS
LOCATED ON BRIDGE SPANS

LIGHT STANDARD 40 FOOT MOUNTING HEIGHT

634.214

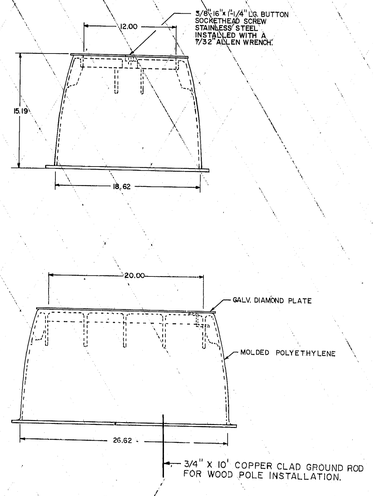


LUMINAIRE



634.225

CONCRETE FOUNDATION FOR 40 FOOT POLES



POLYETHYLENE JUNCTION BOX

634.175

PLANS	DESIGN – DETAILED	BY	DATE
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

JANUARY 1969

REVISIONS	
DATE	NAME

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS

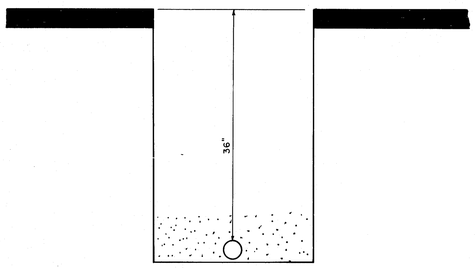
LIGHTING

R93-431

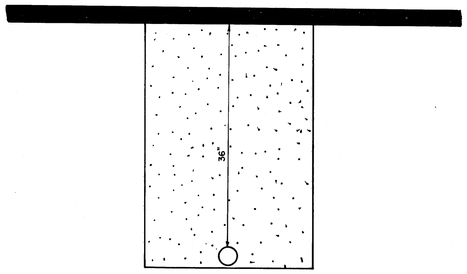
SHEET 31 OF 41 AUGUSTA, MAINE AUGUST 1978

203-1 2080

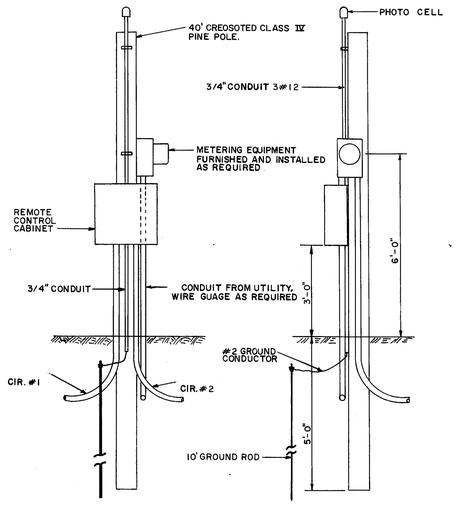
R. F. P. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	32	41



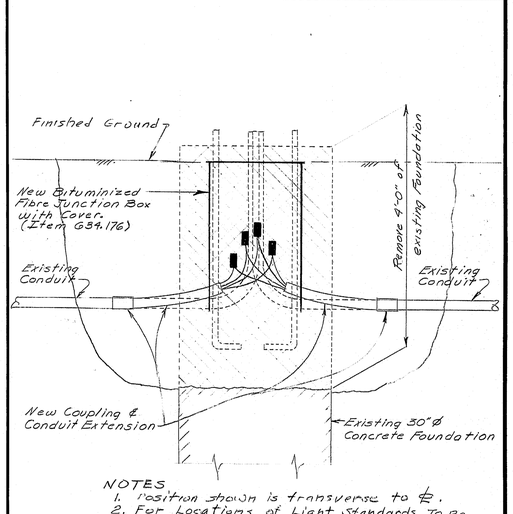
UNDER PAVEMENT DUCT
634.



METALLIC CONDUIT - JACKED
634.

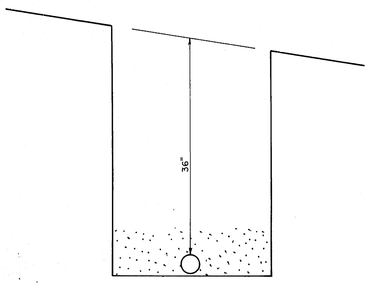


SERVICE POLE
634.250

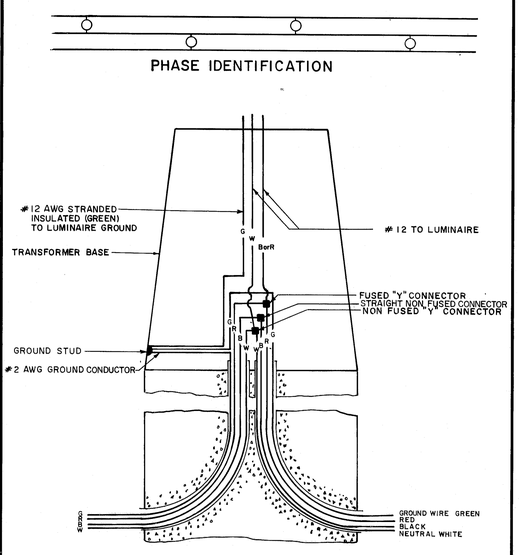


NOTES
1. Position shown is transverse to ℄.
2. For Locations of Light Standards To Be Moved which is also locations of Concrete Foundations to be removed see sheet 2.

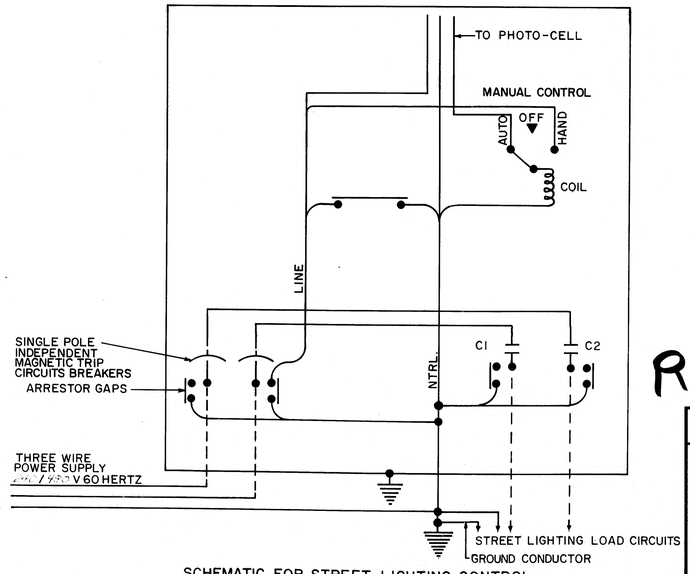
REMOVAL OF CONCRETE FOUNDATIONS
ITEM NO. 634.221



TRENCHING FOR NON-METALLIC CONDUIT
634.



WIRING FOR TRANSFORMER BASE



SCHEMATIC FOR STREET LIGHTING CONTROL

PLANS	DATE	BY
DESIGN - DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

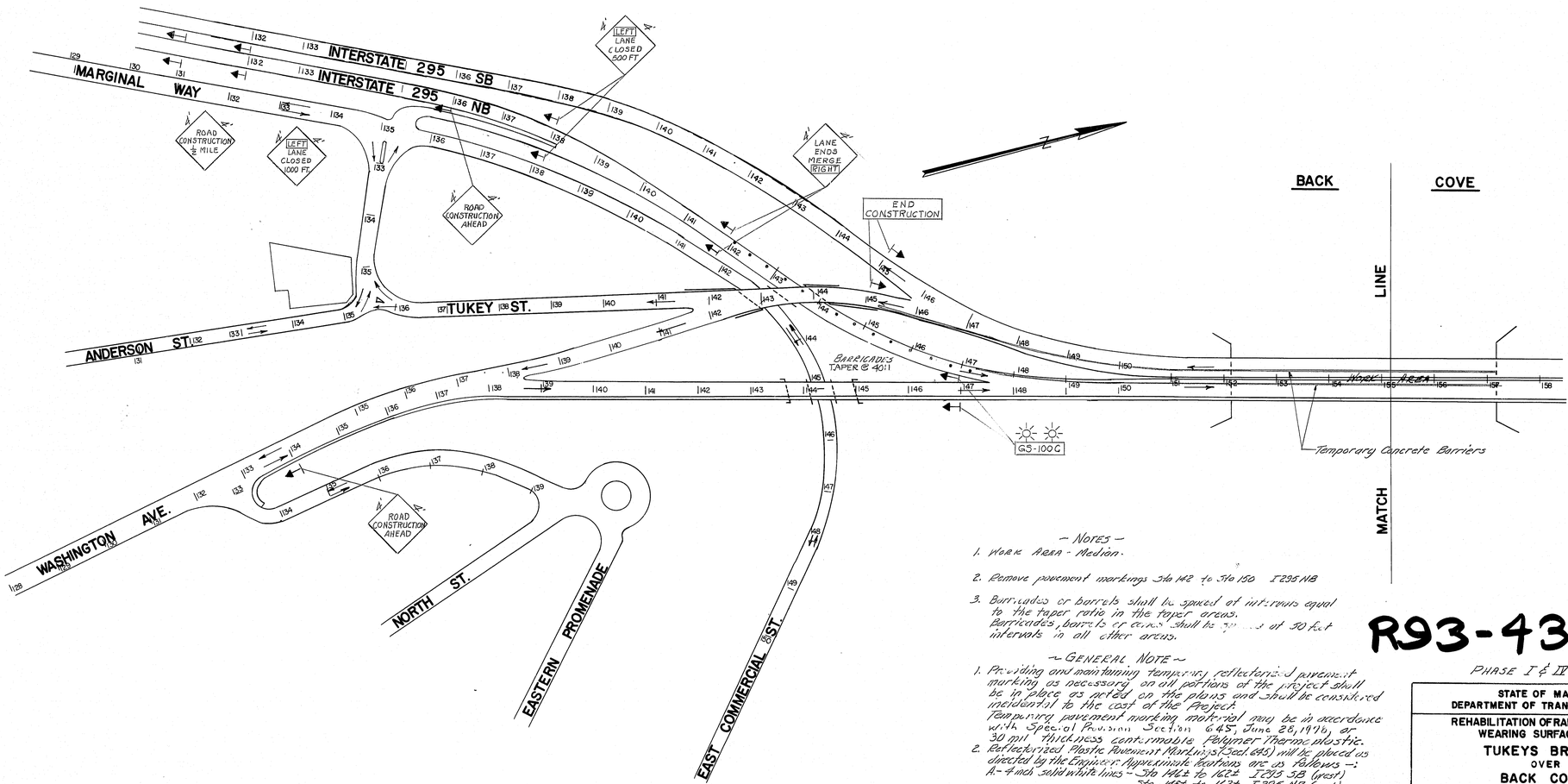
R93-432

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
LIGHTING

SHEET 32 OF 41 AUGUSTA, MAINE AUGUST 1978

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	33	41



DESIGN - CON
DETAIL - Flowers
CHECK Transportation
TOTAL 6-28 6-79

C. B. CO. NO. 3738 40619

— NOTES —

1. Work Area - Median.
2. Remove pavement markings Sta 142 to Sta 150 I295 NB
3. Barricades or barrels shall be spaced at intervals equal to the taper ratio in the taper areas. Barricades, barrels or cones shall be spaced at 50 foot intervals in all other areas.

— GENERAL NOTE —

1. Providing and maintaining temporary reflectorized pavement marking as necessary on all portions of the project shall be in place as noted on the plans and shall be considered incidental to the cost of the Project. Temporary pavement marking material may be in accordance with Special Provision Section 645, June 28, 1976, or 30 mil thickness contrimable Polymer Thermoplastic.
2. Reflectorized Plastic Pavement Markings (Sect 685) will be placed as directed by the Engineer. Approximate locations are as follows —:
   A - 4 inch solid white lines - Sta 146± to 162± I295 SB (west)
   Sta 145± to 162± I295 NB (east)
   B - 4 inch broken white lines - Sta 147± to 169± I295 & Washington Ave SB (west)
   Sta 147± to 169 ± I295 SB (west)
   Sta 142± to 163± I295 NB (west)
   Sta 145± to 163± I295 NB (east)
   C. - 4 inch solid yellow lines - Sta 145± to 161± I295 SB (east)
   Sta 148 ± to 162± I295 NB (west)

R93-433

PHASE I & IV

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF

TUKEYS BRIDGE

OVER

BACK COVE

IN THE CITY OF

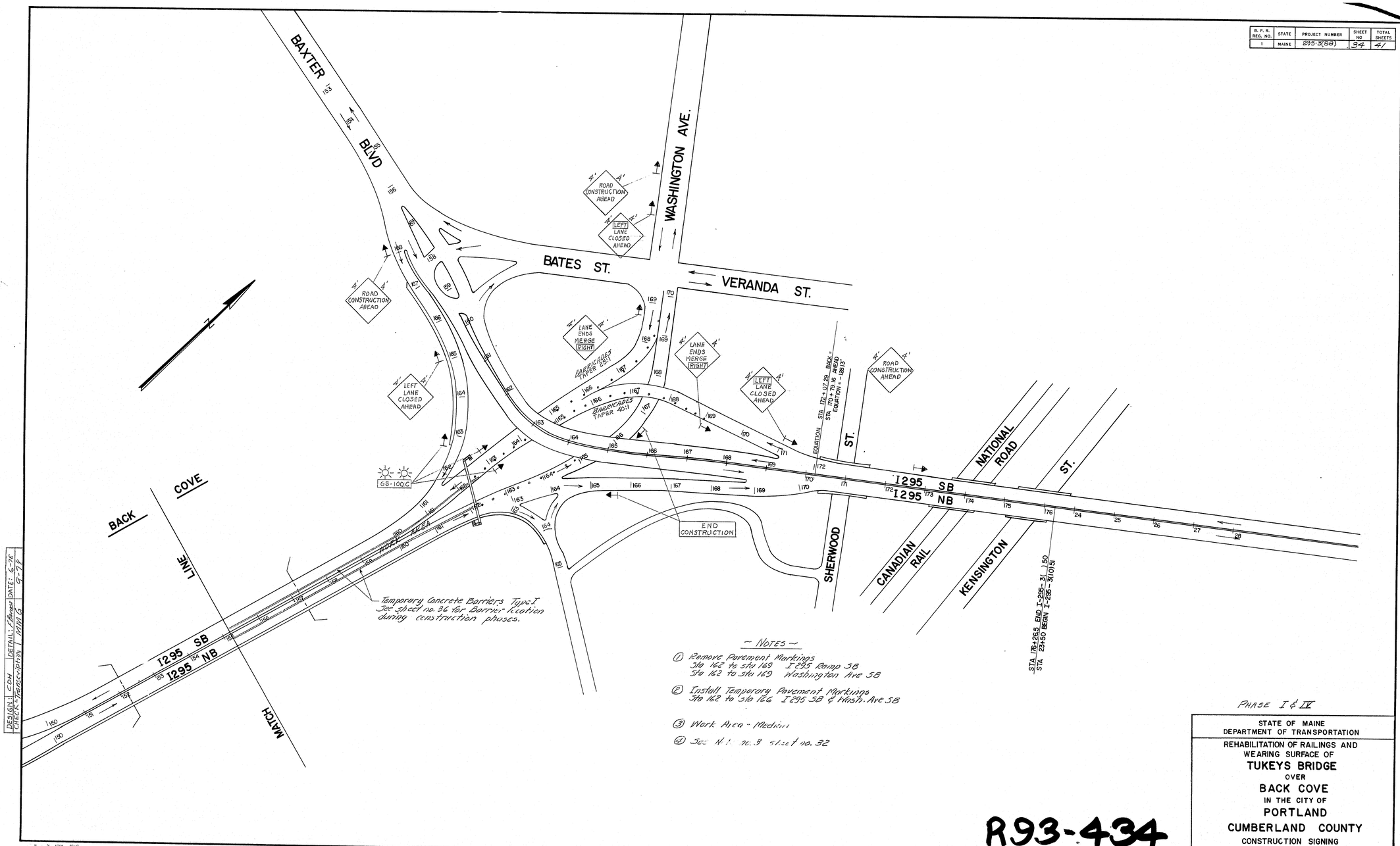
PORTLAND

CUMBERLAND COUNTY

CONSTRUCTION SIGNING

SHEET 33 OF 41 AUGUSTA, MAINE AUGUST 1978

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	295-3(68)	34	41



DESIGN: EDH | DETAIL: Flood | DATE: 6-78
CHECK: JAMES DION | MMG | 9-78

— NOTES —

① Remove Pavement Markings
Sta 162 to Sta 169 I295 Ramp SB
Sta 162 to Sta 169 Washington Ave SB

② Install Temporary Pavement Markings
Sta 162 to Sta 166 I295 SB & Wash. Ave SB

③ Work Area - Median

④ See Note no. 3 sheet no. 32

PHASE I & IV

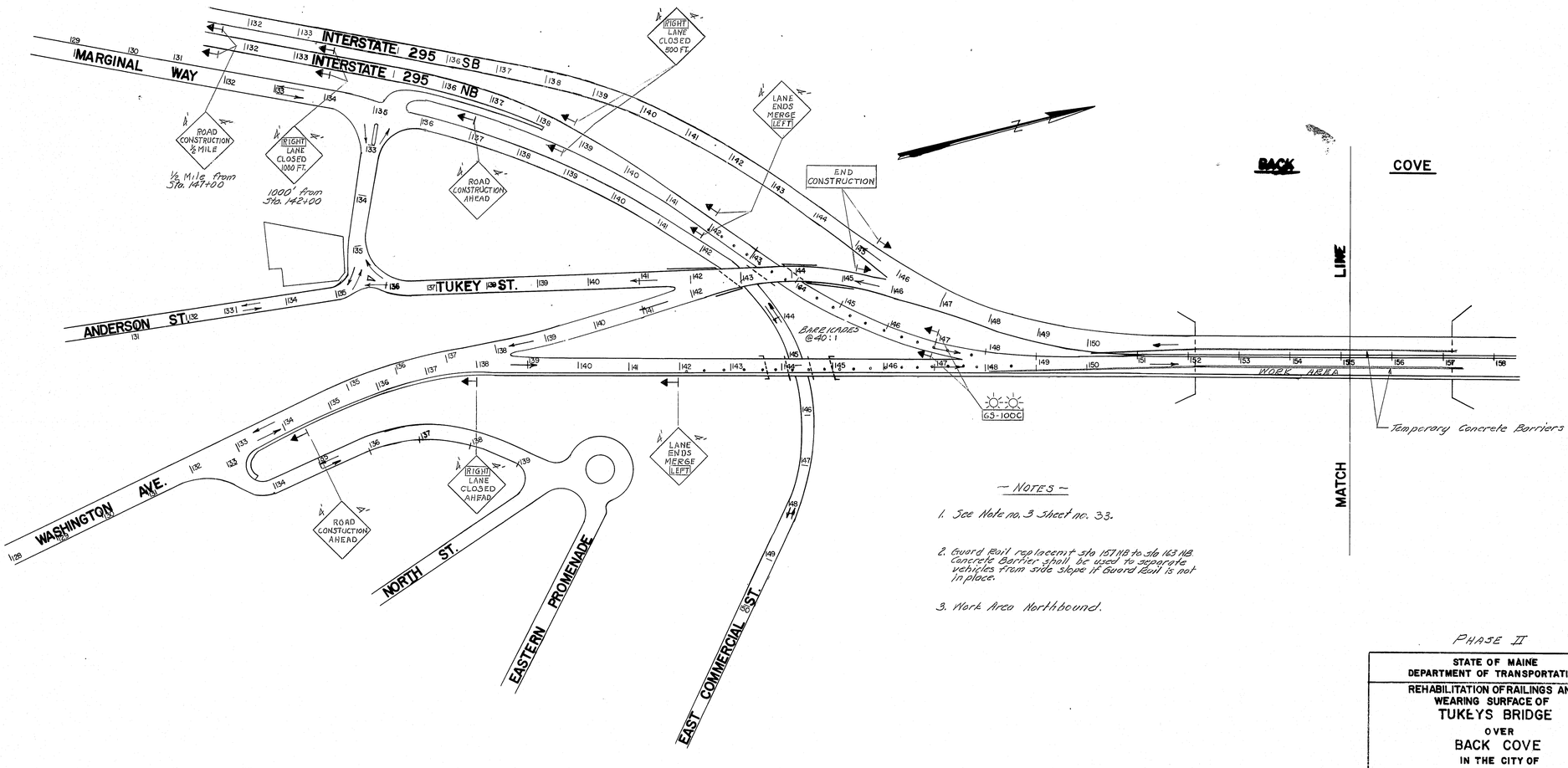
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF
TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY
CONSTRUCTION SIGNING

SHEET 34 OF 41 AUGUSTA, MAINE AUGUST 1978

R93-434

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(58)	35	41



— NOTES —

1. See Note no. 3 Sheet no. 33.
2. Guard Rail replacement Sta 157+18 to Sta 163+18. Concrete Barrier shall be used to separate vehicles from side slope if Guard Rail is not in place.
3. Work Area Northbound.

DESIGN - C.M.K.	DETAIL - F. Bond	6-78
CHECK - Malcolm	INSPECTION	9-78

PHASE II

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF
TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY
CONSTRUCTION SIGNING

SHEET 35 OF 41 AUGUSTA, MAINE AUGUST 1978

R93-435

C.B.CO. No. 3758 40-19

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	36	41

BAXTER BLVD

WASHINGTON AVE.

BATES ST.

VERANDA ST.

ROAD CONSTRUCTION AHEAD 4' 4'

220'±

RIGHT LANE CLOSED AHEAD 4' 4'

220'±

ROAD CONSTRUCTION AHEAD 4' 4'

LANE ENDS MERGE LEFT 4' 4'

RIGHT LANE CLOSED AHEAD 4' 4'

LANE ENDS MERGE LEFT 4' 4'

RIGHT LANE CLOSED AHEAD 4' 4'

BARRICADES Taper 25:1

BARRICADES TAPER 40:1

STA 172+07.29 BACK
STA 170+79.16 AHEAD
EQUATION = 128.13'

EQUATION

ROAD CONSTRUCTION AHEAD 4' 4'

65-100C

END CONSTRUCTION

I295 SB

I295 NB

NATIONAL ROAD

ST.

SHERWOOD

CANADIAN RAIL

KENSINGTON

STA 176+26.5 END T-295-3 150
STA 23+50 BEGIN T-295-3 (101.5)

BACK COVE

LINE

MATCH

WORK AREA

Temporary Concrete Barriers

DESIGN- CDH DETAIL- Edbraas DATE- 6-78
CHECK- Transcadm WMTC DATE- 9-78

-NOTES-

1. Remove Pavement Markings.
   Sta 160± to Sta 142 I295, Ramp SB.
   Sta 160± to Sta 142 Washington Ave. SB.

2. Install Temporary Pavement Markings.
   Sta 151± to Sta 180± Tukeys Bridge.

3. Work Area - Southbound Lane.
   [illegible] lane closed.

4 [illegible] Sht no. 5 Sht no. 33

PHASE III

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

REHABILITATION OF RAILINGS AND WEARING SURFACE OF

TUKEYS BRIDGE

OVER

BACK COVE

IN THE CITY OF

PORTLAND

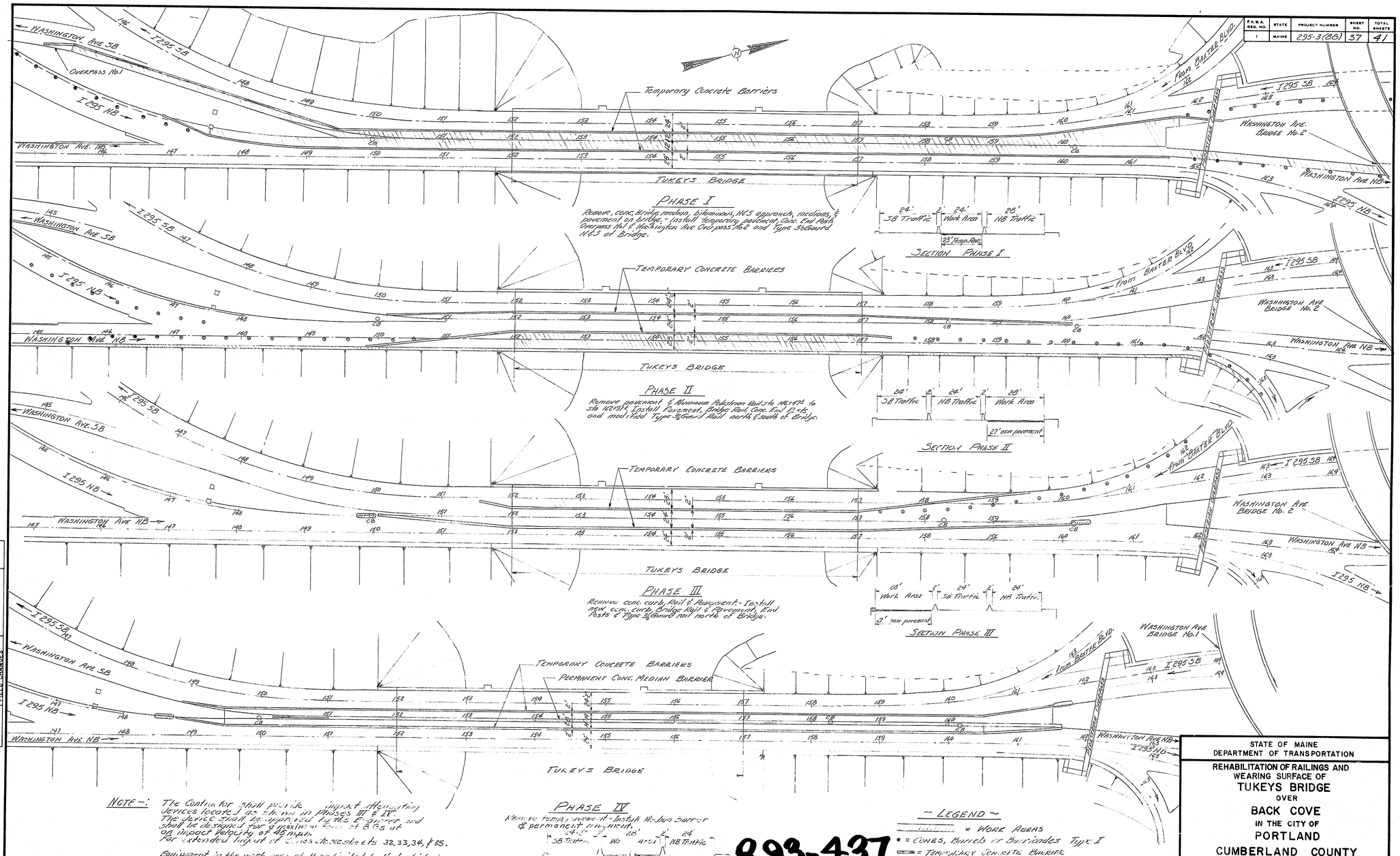
CUMBERLAND COUNTY

CONSTRUCTION SIGNING

SHEET 36 OF 41 AUGUSTA, MAINE AUGUST 1978

R93-436

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	295-3(88)	37	41



NOTE -: The Contractor shall provide impact attenuating devices (crash cushions) as shown in Phases III & IV. The device shall be approved by the Engineer and shall be designed for a maximum speed of 60 mph on impact velocity of 40 mph. For extended height of Cones see sheets 32, 33, 34, & 35.

Equipment in the work area shall be limited to that which is essential for the performance of the work.

R93-437

PROJECT DESIGN ENGINEER CDM

PLANS	BY	DATE
DESIGN DETAILED	CDM	6-87
CHECKED	J. Bruce	6-87
REVISIONS	MMC	8-87
FIELD CHANGES		

JANUARY 1988

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

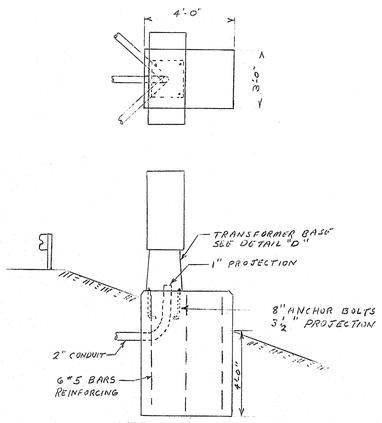
REHABILITATION OF RAILINGS AND WEARING SURFACE OF
TUKEYS BRIDGE
OVER
BACK COVE
IN THE CITY OF
PORTLAND
CUMBERLAND COUNTY

WORK AREA TRAFFIC CONTROL

SHEET 37 OF 41 AUGUSTA, MAINE AUGUST 1, 1988

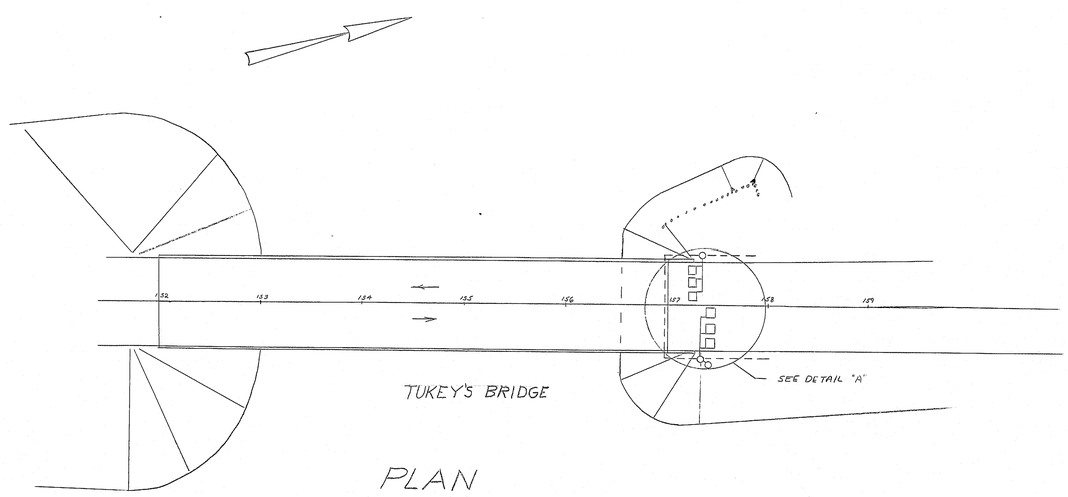
303-1 2000

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	TOI-295-X(6t)	42	



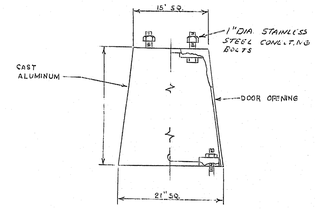
CONTROLLER CABINET FOUNDATION

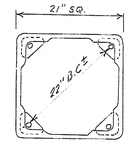
DETAIL "C"



TUKEY'S BRIDGE

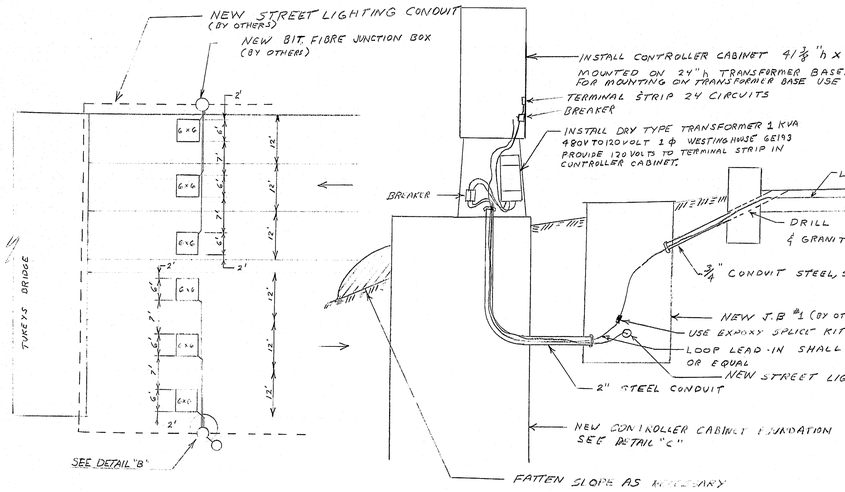
PLAN



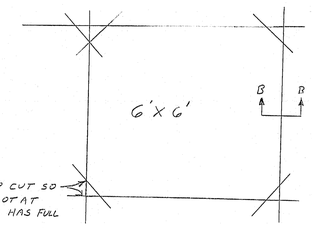


TRANSFORMER BASE

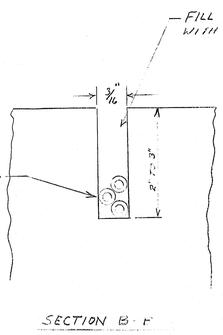
DETAIL "D"



DETAIL "A"



SLOT PLAN



SECTION B-B

NOTES:

1. Pull Loop Lead-in Conductors In With New Street Light Wiring
2. All Loops Are To Be In Parallel
3. Remove All Debris From The Slot Before Installing Loop Wires
4. Loop Detector Equipment Installed By Others
5. Fuse Primary Side Of Transformer With 30A Double Pole Breaker, Fuse Secondary Side For 20 Amps Use Single Pole Breaker. The 2 Amp Single Pole Breaker Shall Be Installed In Controller Cabinet
6. Power Source Will Tie In With Street Lighting Circuit. Use NO. 10 THWN Str. Use Epoxy Splice Kits.

R93-438

PROJECT DESIGN ENGINEER	BY	DATE
PLANS	DESIGN - DETAILED	E.ANG
	CHECKED	TRAFFIC
	REVISIONS	4-22-71
	FIELD CHANGES	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PORTLAND URBAN TRAFFIC RECORDER

MULTIPLE INDUCTIVE LOOP

TUKEY'S BRIDGE

EXTRA WORK ORDER

SHEET OF AUGUSTA, MAINE

JANUARY 1969