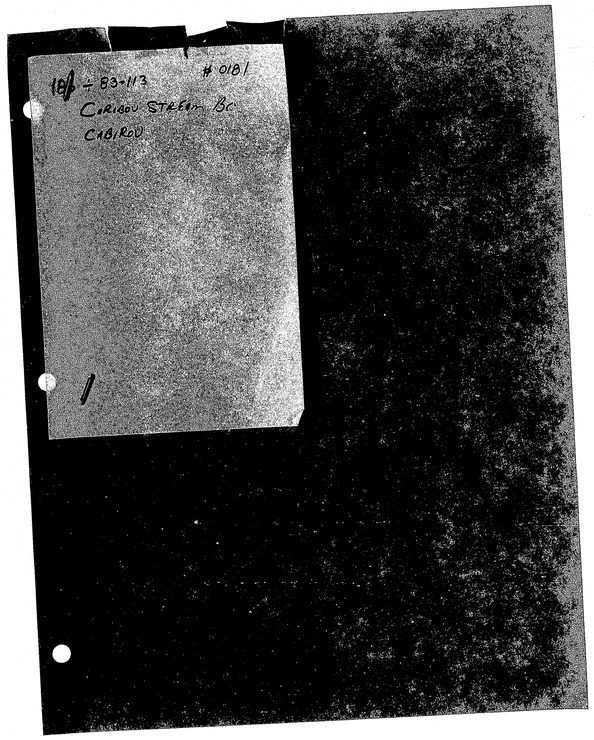
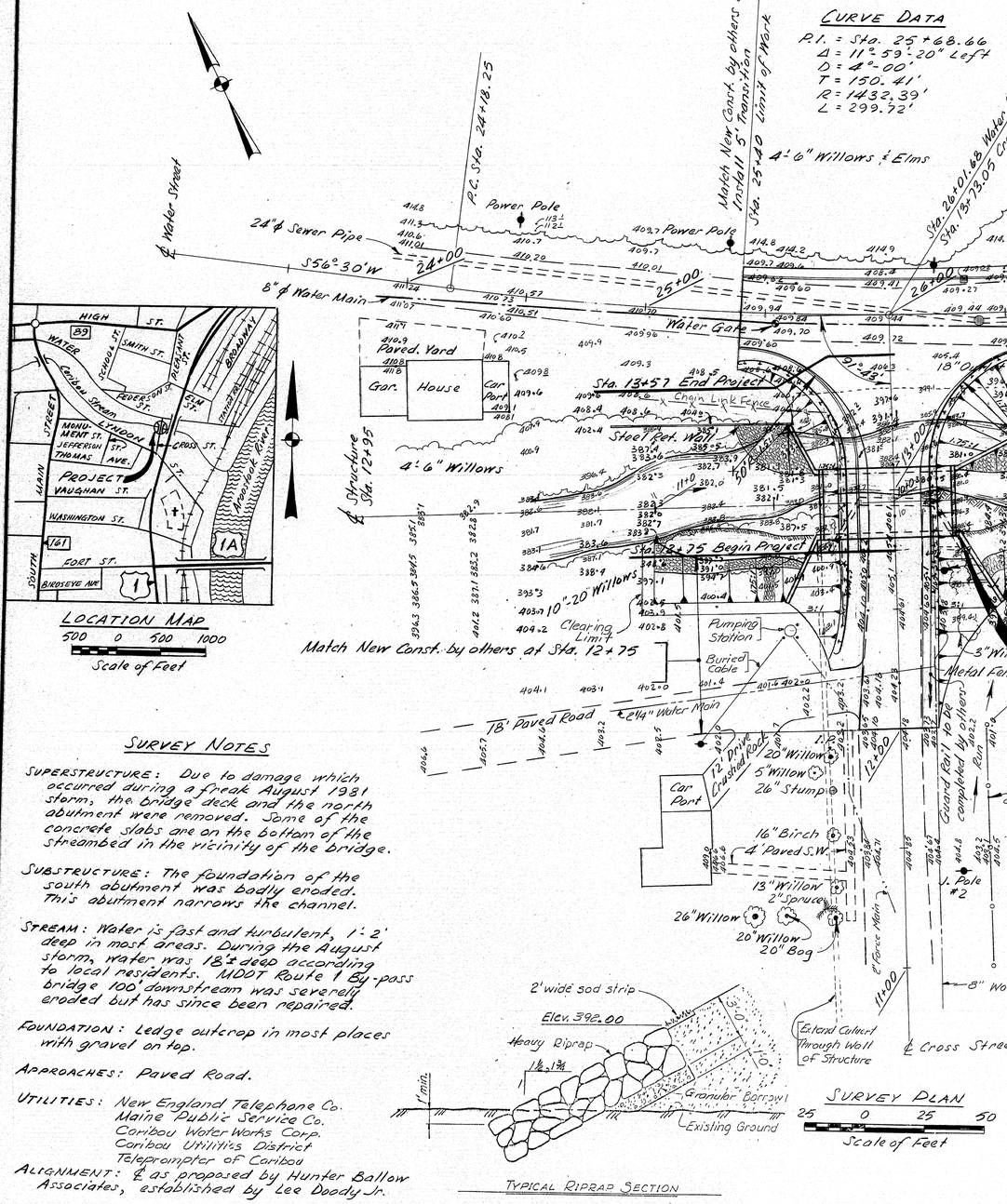

18/ - 83-113
CARIBOU STREAM BC
CARIBOU
#0181
1

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-000S(32)	1	32



LOCATION MAP

500 0 500 1000

Scale of Feet

SURVEY NOTES

SUPERSTRUCTURE: Due to damage which occurred during a freak August 1981 storm, the bridge deck and the north abutment were removed. Some of the concrete slabs are on the bottom of the streambed in the vicinity of the bridge.

SUBSTRUCTURE: The foundation of the south abutment was badly eroded. This abutment narrows the channel.

STREAM: Water is fast and turbulent, 1'-2' deep in most areas. During the August storm, water was 18'± deep according to local residents. MDOT Route 1 By-pass bridge 100' downstream was severely eroded but has since been repaired.

FOUNDATION: Ledge outcrop in most places with gravel on top.

APPROACHES: Paved Road.

UTILITIES: New England Telephone Co.
Maine Public Service Co.
Caribou Water Works Corp.
Caribou Utilities District
Teleprompter of Caribou

ALIGNMENT: ℄ as proposed by Hunter Ballow Associates, established by Lee Doody Jr.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	MEB	10-82
	CHECKED	MEB	
	REVISIONS		
	FIELD CHANGES		

Surrey Traced: BMD 10-82

G 32

BROWNING 44-132 45710

SPECIFICATIONS

DESIGN: AASHTO Standard Specifications for Highway Bridges 1977 and interims thru 1982. (Load Factor Design)
CONTRACT: State of Maine, Dept. of Transportation, Standard Specifications, Highways and Bridges, Revision of June 1981.

DESIGN LOADING

LIVE LOAD: HS 25 STRESS CYCLES: 500,000

MATERIALS

CONCRETE	Class "A"
REINFORCING STEEL	ASTM A615 Grade 60
STEEL STRUCTURAL PLATE	AASHTO M 167

BASIC DESIGN STRESSES

CONCRETE: f'_c = 3000 psi
REINFORCING STEEL: f_y = 60,000 psi
STEEL STRUCTURAL PLATE: f_y = 33,000 psi

HYDROLOGIC DATA

DESIGN AREA	50.4 sq. miles
DESIGN DISCHARGE (Q50)	3600 c.f.s.
CHECK DISCHARGE (Q100)	4300 c.f.s.
HEADWATER ELEVATION (Q50)	394.6
HEADWATER ELEVATION (Q100)	396.0
DISCHARGE VELOCITY (Q50)	12.1 f.p.s.
DISCHARGE VELOCITY (Q100)	13.9 f.p.s.

TRAFFIC DATA

AADT 1982	1980
AADT 2002	2380
DHV	262
T	5
DESIGN SPEED	25 m.p.h.

INDEX

GENERAL PLAN & INDEX	1
QUANTITIES & NOTES	2
PROFILE	3
FOUNDATION SURVEY	4
BORING DETAILS	5
ALTERNATE #1 RIGID FRAME	6-10
ALTERNATE #2 - PLATE ARCH	11-15
CROSS SECTIONS	16-25
STANDARDS	26-31
RIGHT OF WAY	32

APPROVED:
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

Jan. 25, 1983 DATE — COMMISSIONER

Jan. 25, 1983 DATE — CHIEF ENGINEER

As Built MAS 4-1-85
Bridge #0181
Field Notebook # 9037

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CARIBOU STREAM BRIDGE

CARIBOU

GENERAL PLAN

SHEET 1 OF 32 AUGUSTA, MAINE March 1983

183-83

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
	SCHEDULE A – COMMON ITEMS		
203.20	Common Excavation	380	C.Y.
203.21	Rock Excavation	40	C.Y.
206.081	Structural Earth Excavation – Abutments, Retaining Walls, etc.	1200	C.Y.
206.091	Structural Rock Excavation – Abutments, Retaining Walls, etc.	380	C.Y.
304.10	Aggregate Subbase Course – Gravel	580	C.Y.
403.07	Hot Bituminous Pavement, Grading B	120	Ton
403.08	Hot Bituminous Pavement, Grading C	100	Ton
511.071	Cofferdam – Southerly Wall	1	L.S.
511.072	Cofferdam – Northerly Wall	1	L.S.
512.08	French Drains	220	L.F.
514.06	Curing Box for Concrete Cylinders	1	Each
603.171	18 inch Corrugated Metal Pipe	4	L.F.
603.191	24 inch Corrugated Metal Pipe	6	L.F.
604.18	Adjusting Manholes and Catch Basins to Grade	1	Each
606.17	Guard Rail Type 3b – Single Rail	175	L.F.
606.22	Guard Rail Type 3b – over 15 foot radius	150	L.F.
606.265	Terminal End – Single Rail – Galvanized Steel	2	Each
606.35	Guard Rail Delineator Post	2	Each
606.36	Guard Rail, Removed and Reset	30	L.F.
609.31	Curb Type 3	275	L.F.
610.12	Portland Cement for Riprap Grout	4	BBL.
610.16	Heavy Riprap	200	C.Y.
610.18	Stone Ditch Protection	7	C.Y.
612.06	Bituminous Sealing – Black	30	S.Y.
615.07	Loam	25	C.Y.
616.08	Sodding	75	S.Y.
618.13	Seeding Method Number 1	5	Units
618.15	Temporary Seeding	4	LBS.
619.12	Mulch	15	Units
629.05	Hand Labor, Straight Time	10	M.H.
** 630.0607	Traffic Controllers	10	M.H.
631.10	Air Compressor (Including Operator)	10	Hr.
631.11	Air Tool (Including Operator)	10	Hr.
631.12	All Purpose Excavator (Including Operator)	10	Hr.
631.132	Small Bulldozer (Including Operator)	10	Hr.
631.14	Grader (Including Operator)	10	Hr.
631.15	Roller earth or base course (including operator)	10	Hr.
631.171	Truck – small (including operator)	10	Hr.
631.22	Front End Loader (including operator)	10	Hr.
637.08	Calcium Chloride	1	Ton

** Non-bid Item

JANUARY 1968

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN – DETAILED	MES	3/83
CHECKED	MES	3/83
REVISIONS	AMV	1/85
FIELD CHANGES		

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
639.19	Field Office Type B	1	Each
652.31	Type I Barricades	10	Each
652.34	Cones	10	Each
652.35	Construction Signs	400	S.F.
652.36	Maintenance of Traffic Control Devices	170	C.D.
652.38	Flagger	80	M.H.
656.50	Baled Hay, in place	10	Each
656.51	Sandbags, in place	10	Each
657.24	Seeding Pits	10	Units
659.10	Mobilization	1	L.S.
	SCHEDULE B – ALTERNATE #1		
203.24	Common Borrow	1540	C.Y.
203.25	Granular Borrow	1130	C.Y.
502.21	Structural Concrete, Abutments and Retaining Walls	263	C.Y.
502.28	Structural Concrete Rigid Frome Structures	270	C.Y.
502.56	Concrete Fill	280	C.Y.
503.12	Reinforcing Steel Fab. and Delivered	45,000	LBS.
503.13	Reinforcing Steel Placing	45,000	LBS.
	SCHEDULE C – ALTERNATE #2		
203.24	Common Borrow	1100	C.Y.
203.25	Granular Borrow	1550	C.Y.
502.21	Structural Concrete, Abutments and Retaining Walls	397	C.Y.
502.56	Concrete Fill	340	C.Y.
503.12	Reinforcing Steel Fab. and Delivered	21,100	LBS.
503.13	Reinforcing Steel Placing	21,100	LBS.
509.30	327 Inch Span, 185 Inch Rise Long Span Steel Structural Plate Arch	1	L.S.

Estimate of Lump Sum Quantities

GENERAL CONSTRUCTION NOTES

1. All utility facilities shall be adjusted by the respective utilities unless noted.
2. For easements, construction limits and right-of-way lines refer to Right-of-Way Map.
3. Place a 2' wide strip of sod on the side slopes along the top of the riprap.
4. The clearing limits as shown on the plans are approximate. The exact limits shall be established in the field by the Engineer. Payment for clearing shall be incidental to contract items.
5. Place loam, 2" deep, on slopes between Station 12+75 and Station 13+73.05 Cross Street and Station 25+40 and Station 27+00 Water Street.
6. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Engineer. Shaping and compacting of the existing subbase and layers of new subbase 6" or less thick, in areas where the Engineer directs the Contractor not to excavate to the subgrade line shown on the plans, will be paid for with appropriate equipment rental items.
7. One guardrail delineator post and one terminal end shall be installed at each guardrail end.
8. Sodded gutters shall be constructed, after paving and shoulder work is completed, where it is apparent that runoff will cause continual erosion.
9. Design and details are provided for both a Concrete Rigid Frame Structure and a Long Span Structural Plate Arch Structure. As provided in the Contract documents, the Contractor shall submit a bid for both alternates and the structure alternate to be constructed will be determined by the Department.

RIGID FRAME NOTES

1. The return ends of the southerly footing and wall of the Rigid Frame Barrel shall be placed up to the face of the structural rock excavation and wingwalls "L1" and "R1" begin thereon.
2. Wingwall "L2" and footing shall extend to the face of the existing Steel Binwall. The wingwall and footing shall be located to cover the damaged end of the binwall as directed by the Engineer.
3. Concrete in the wingwalls and all footings will be paid for under Item 502.21, Structural Concrete, Abutments and Retaining Walls. Concrete in the rigid frame barrel will be paid for under Item 502.28 Structural Concrete Rigid Frame Structures.
4. Concrete fill for the northerly footings shall be placed to Elevation 378.0. In the event ledge is below Elevation 365.0 at any section a footing design change may be required.
5. Concrete fill between the southerly footing of the Rigid Frame Barrel and the structural rock excavation, as specified on the design drawings, will be placed to Elevation 385.0. At the Contractor's option, the concrete fill may be Class A or Class B concrete placed in the dry. In either case payment will be made under Item 502.56 Concrete Fill.
6. Form a 1" V-groove at the front face of vertical contraction joints.
7. Reinforcing steel shall have 2" concrete cover unless otherwise indicated.
8. Place 4" diameter drains in the rigid frame barrel and wingwalls at 10' maximum spacing. Exact location to be determined in the field by the Engineer.
9. Cover the vertical contraction joints on the back with two layers of heavy roofing paper. Cover the contraction joints in the top slab in the same manner but without recessing the concrete. See BD127 for detail.
10. Cover expansion joints on the back with two layers of heavy roofing. See BD127 for detail.

PLATE ARCH NOTES

1. One 27'3" span, 15'5" rise Long Span Structural Plate Arch required. All plates shall be 0.188". The Plate Arch shall be either an Armco "Super-Span" or a Republic "Maxi-Span" at the Contractor's option. See Special Provision, Section 509.
2. The southerly footing shall be placed up to the structural rock excavation. Wingwall Parapets "L1" and "R1" shall be placed up to the face of the structural rock excavation and Wingwalls "L1" and "R1" begin thereon. All concrete, other than concrete fill and the concrete in the compaction wing or thrust beam, shall be paid for under Item 502.21, Structural Concrete, Abutments and Retaining Walls.
3. Guardrail posts within the limits of the structural plate structure shall be cut to length in the field, as required to clear the structure by a minimum of 6". Cut posts shall be imbedded 9" in a concrete base 2'0" square by 1'0" thick. The concrete mix shall be as approved by the Engineer. Any costs for cutting posts and constructing concrete bases will be considered incidental to guardrail items.
4. Wingwall "L2" and footing shall extend to the face of the existing Steel Binwall. The wingwall and footing shall be located to cover the damaged end of the binwall as directed by the Engineer.
5. Concrete fill for the north footings shall be placed to Elevation 378.0. In the event ledge is below Elevation 365.0 at any section a footing design change may be required.
6. Place 4" diameter drains in the footings and wingwalls at 10' maximum spacing. Exact location to be determined by the Engineer in the field.
7. Cover expansion joints on the back with two layers of heavy roofing. See BD127 for detail.
8. One unbalanced channel shall be furnished in proper lengths to make one unit 57'0" long for each plate arch footing and will extend approximately 6" beyond the ends of the 56'0" nominal length plate arch barrel.

GENERAL CONSTRUCTION NOTE

All embankment material, except as otherwise shown, placed below water elevation, shall be granular borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.

NOTE: ALTERNATE #1 BUILT

F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(58)	2	32

REVISED AS BUILT MAS 1-8-85

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CARIBOU STREAM BRIDGE
CARIBOU

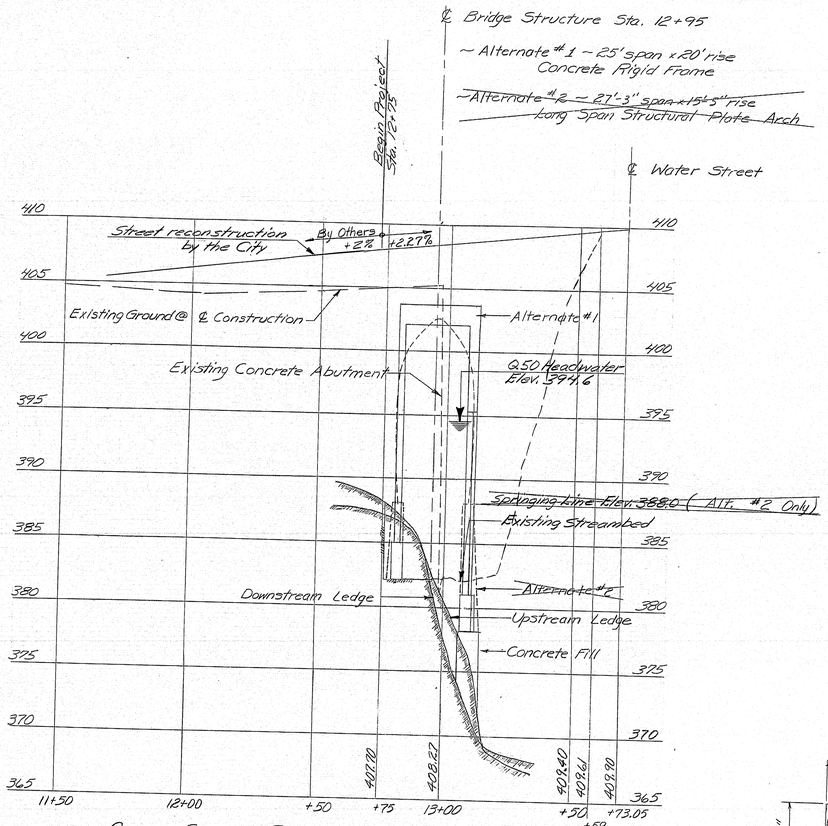
QUANTITIES & NOTES

SHEET 2 OF 32 AUGUSTA, MAINE March 1983

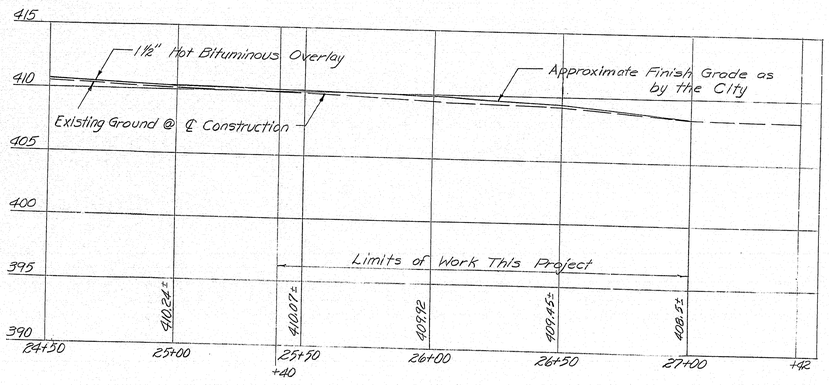
183-84

BD-1 1968

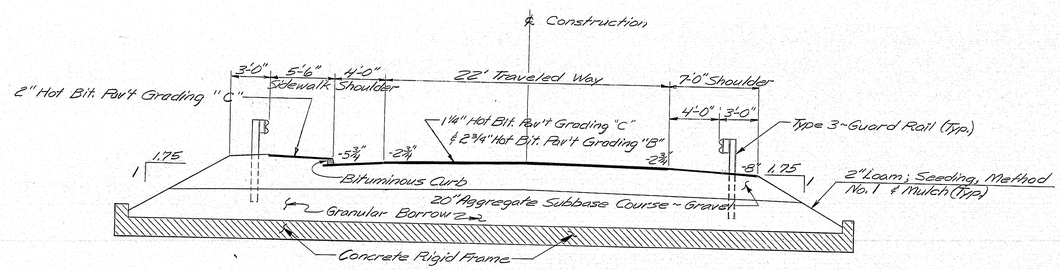
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-005(32)	3	32



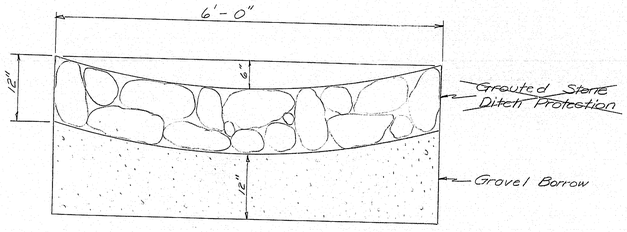
CROSS STREET PROFILE ALONG ℄ CONSTRUCTION



WATER STREET PROFILE ALONG ℄ CONSTRUCTION



SECTION AT PROPOSED BRIDGE
(ALTERNATE #1 SHOWN)



TYPICAL DOWNSPOUT DETAIL

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	MEB	7/82
CHECKED	LAW	2/83
REVISIONS		
FIELD CHANGES		

PLANS

Surveyed Plotted 12/81 EXP

BRUNING 44-132 45710

Revised As Built MAS 1-8-85
Survey Book # 9097 Bridge Code #0181

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CARIBOU STREAM BRIDGE

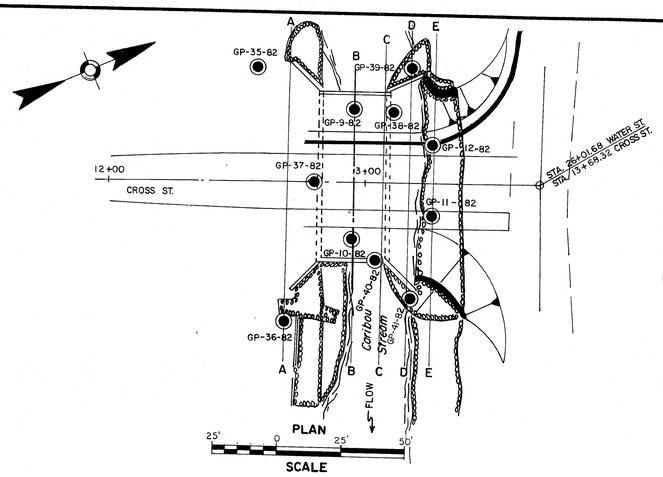
CARIBOU

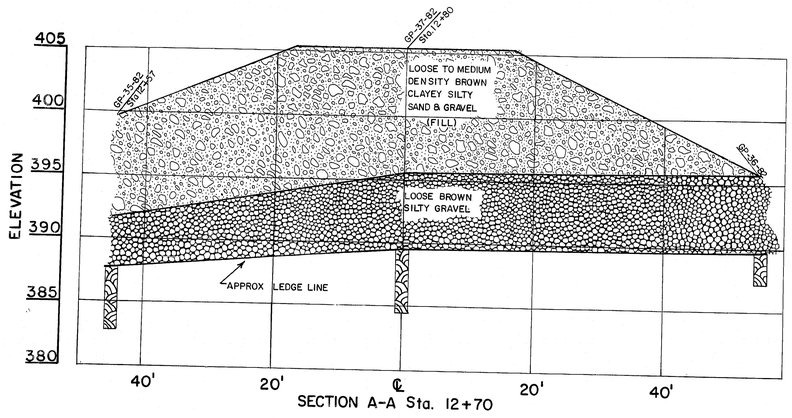
PROFILE

SHEET 3 OF 32 AUGUSTA, MAINE March 1983

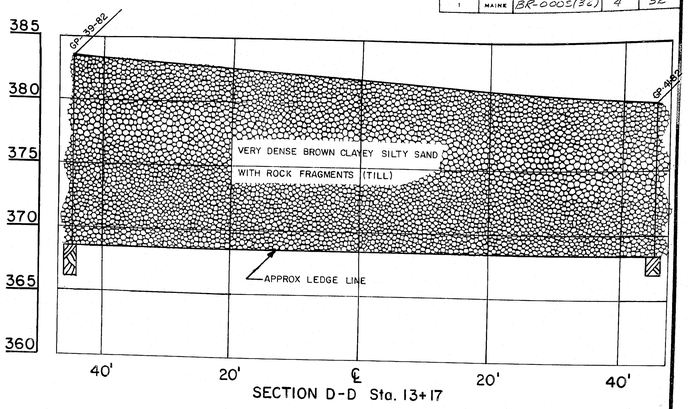
183-85

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	BR-0005(32)	4	32

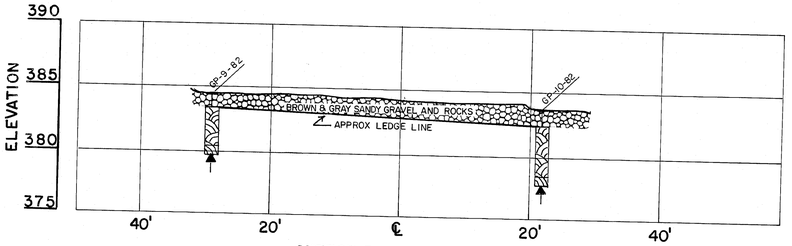




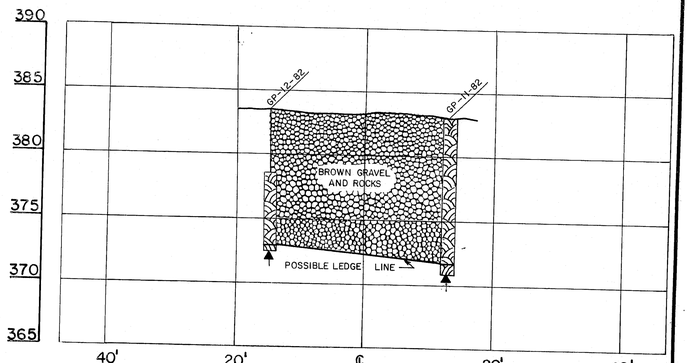
SECTION A-A Sta. 12+70



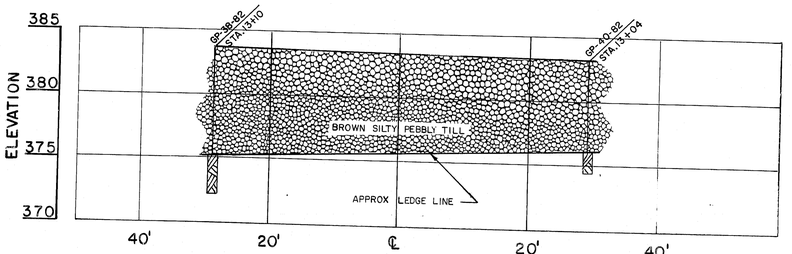
SECTION D-D Sta. 13+17



SECTION B-B Sta. 12+95

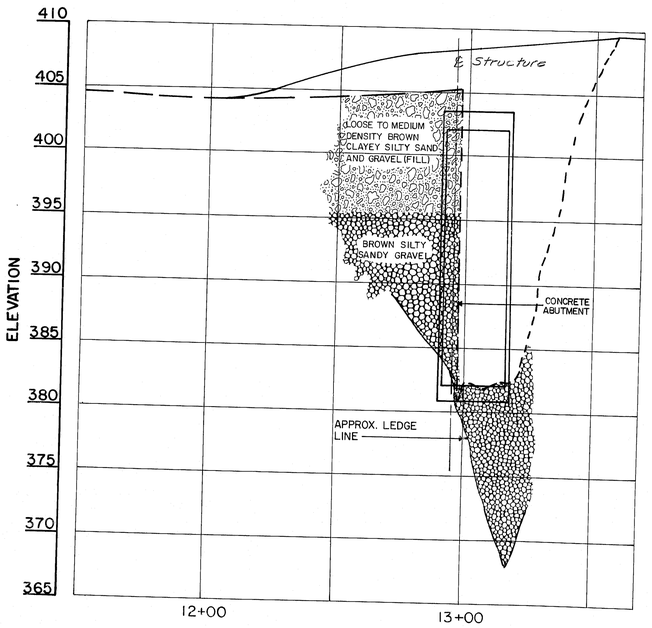


SECTION E-E Sta. 13+26



SECTION C-C Sta 13+07

TRANSVERSE SECTIONS
HORIZ. 10' 0 10' 20'
VERT. 5' 0 5' 10'
SCALE



PROFILE
HORIZ. 25' 0 25' 50'
VERT. 5' 0 5' 10'
SCALE

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

BRUNING 44-132 45710

As Built MWL 1-3-95

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CARIBOU STREAM BRIDGE
OVER
CARIBOU STREAM
IN THE TOWN OF
CARIBOU
AROOSTOOK COUNTY
FOUNDATION SURVEY
SHEET 4 OF 32 AUGUSTA, MAINE March 1983

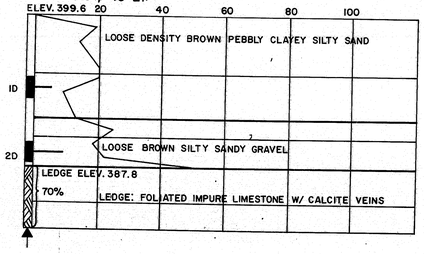
183-86

F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	5	32

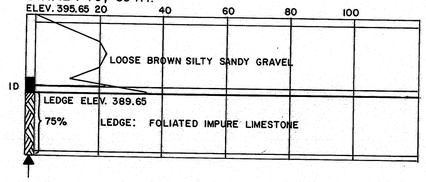
ELEVATION

405
400
395
390
385
380

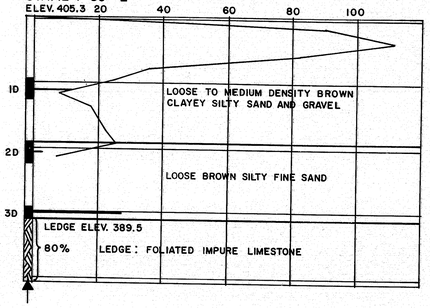
BORING GP-35-82
STA. 12+57, 45' LT.
ELEV. 399.6 20 40 60 80 100



BORING GP-36-82
STA. 12+70, 55'RT.
ELEV. 395.65 20 40 60 80 100

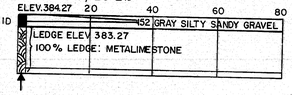


BORING GP-37-82
STA. 12 + 80 ℄
ELEV. 405.3 20 40 60 80 100

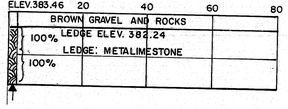


385
380
375
370

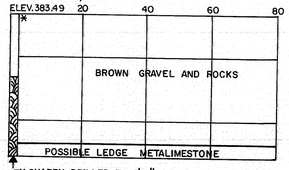
BORING GP-9-82
STA. 12+95, 29' LT.
ELEV. 384.27 20 40 60 80



BORING GP-10-82
STA. 12+95, 22' RT.
ELEV. 383.46 20 40 60 80

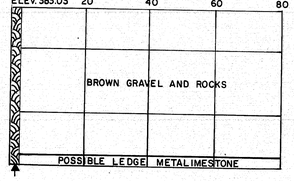


BORING GP-12-82
STA. 13+26, 15 LT.
ELEV. 383.49 20 40 60 80



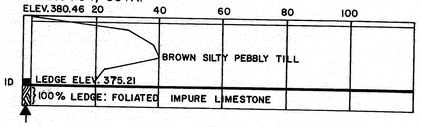
*QUARRY DRILLED TO 5'-0"

BORING GP-11-82
STA. 13+26, 13' RT.
ELEV. 383.03 20 40 60 80

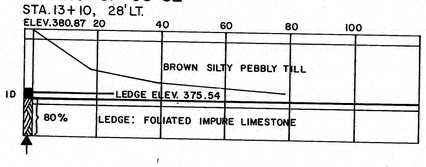


385
380
375
370
365

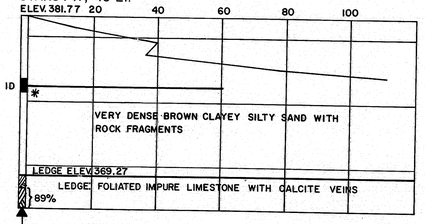
BORING GP-40-82
STA. 13+04, 30 RT.
ELEV. 380.46 20 40 60 80 100



BORING GP-38-82
STA. 13+10, 28' LT.
ELEV. 380.87 20 40 60 80 100

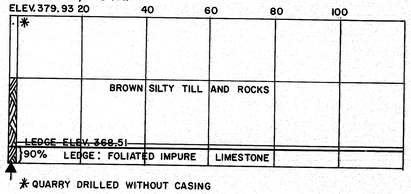


BORING GP-39-82
STA. 13+17, 45' LT.
ELEV. 381.77 20 40 60 80 100



*QUARRY DRILLED AHEAD

BORING GP-41-82
STA. 13+17, 45'RT.
ELEV. 379.93 20 40 60 80 100



*QUARRY DRILLED WITHOUT CASING

BORING NOTES

All samples and vanes are made ahead of casing

N — Number of blows required to drive extra heavy casing one foot with 400 ft. lbs. of energy per blow

Location of sample or sample attempt

1D — Number and type of dry sample
S & H Sampler #1290's

Number of blows required to drive spoon or tubing one foot with 350 ft lbs. of energy per blow

Bottom of boring (may not be bottom of soil strata)

71% Location cored by diamond bit and percent recovery of rock.

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

BRUNING 44-132-45710

As Built MAS 1-8-85

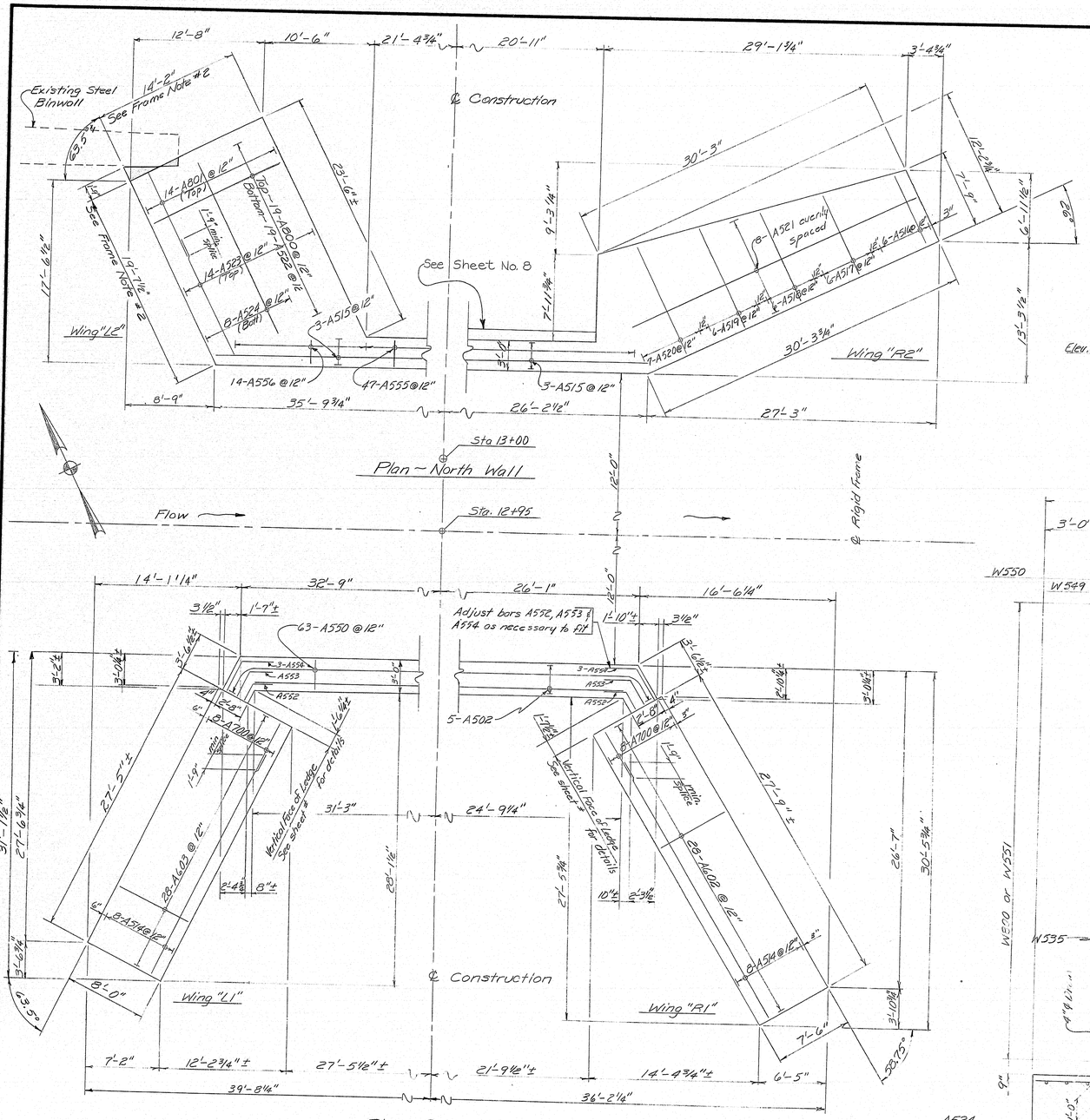
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

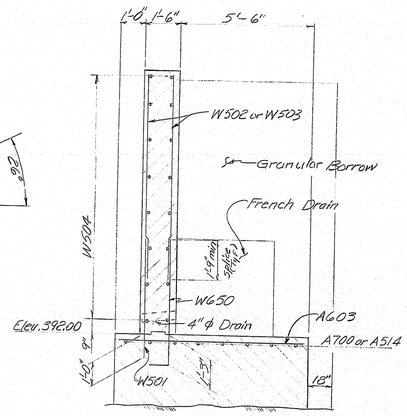
CARIBOU STREAM BRIDGE
OVER
CARIBOU STREAM
IN THE TOWN OF
CARIBOU
AROOSTOOK COUNTY

BORING DETAILS
SHEET 5 OF 32 AUGUSTA, MAINE March 1983

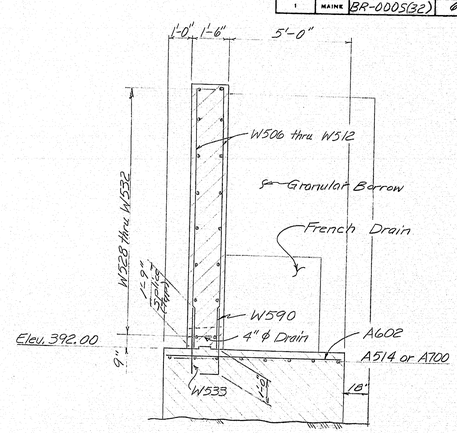
183-87

F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	6	32

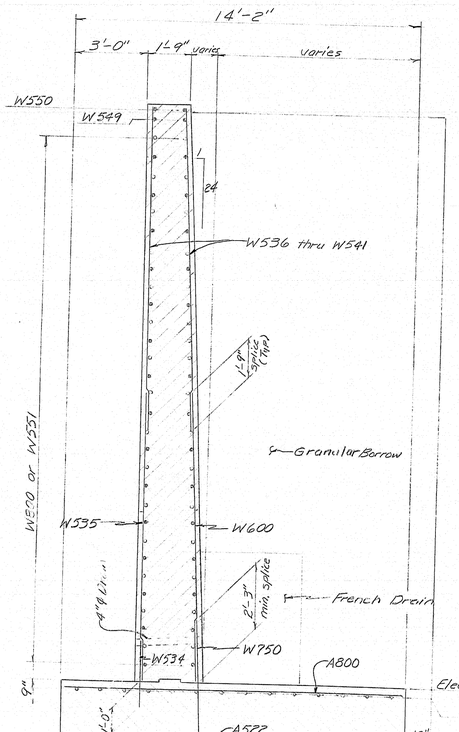




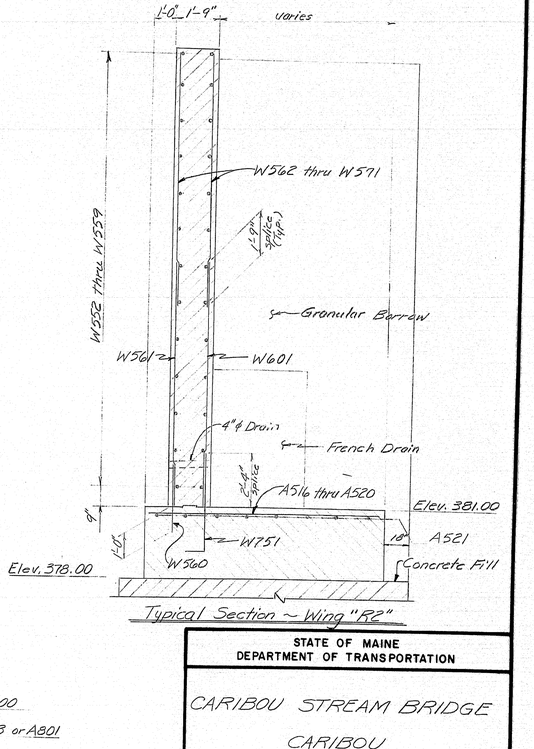
Typical Section ~ Wing "L1"



Typical Section ~ Wing "R1"



Typical Section ~ Wing "L2"



Typical Section ~ Wing "R2"

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN DETAILED	MES	10/82
	CHECKED	LAW	BAS	11/83
	REVISIONS			
	FIELD CHANGES			

BRUNING 44-132 45710

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CARIBOU STREAM BRIDGE

CARIBOU

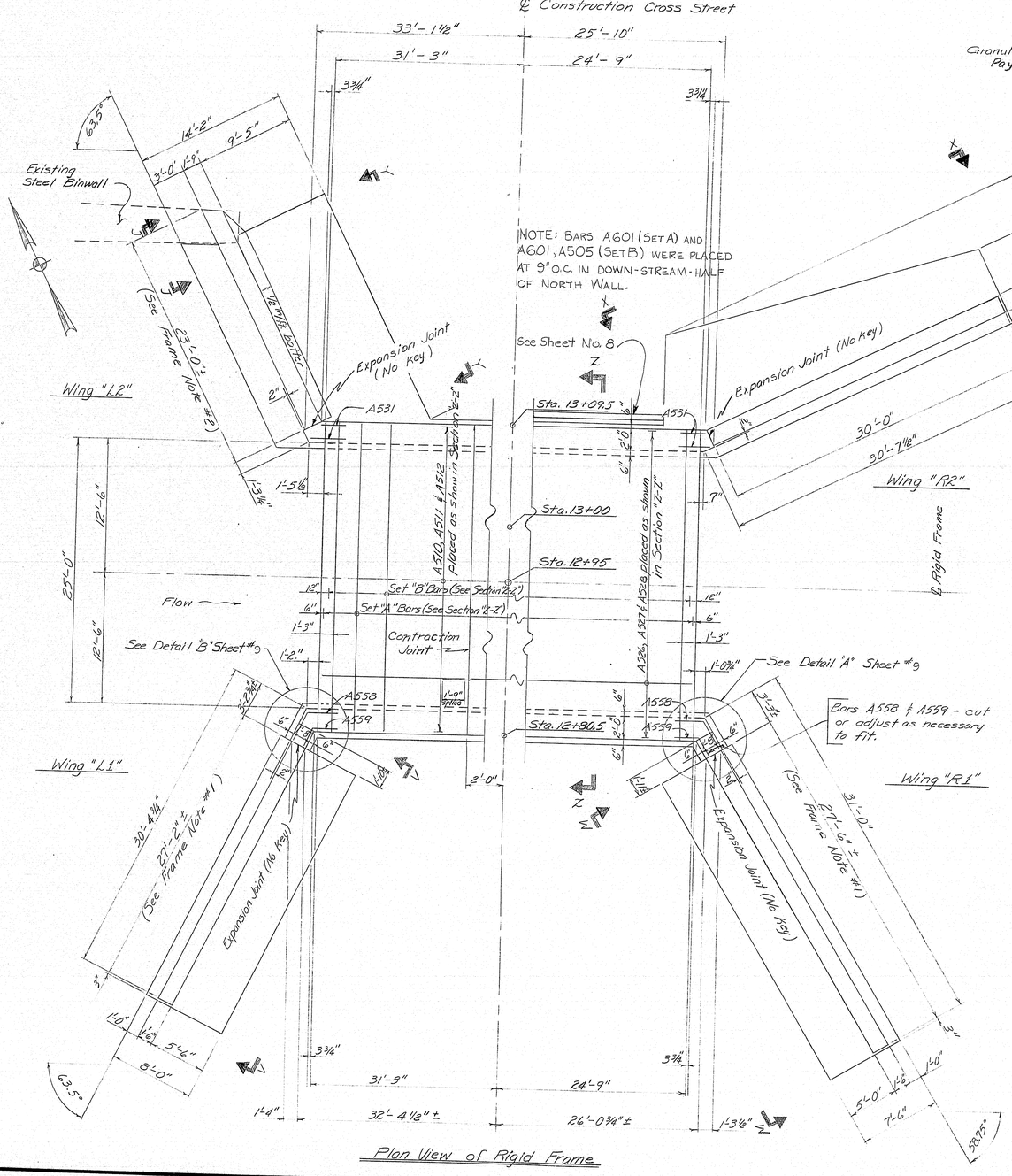
Rigid Frame Footings & Sections
ALTERNATE #1

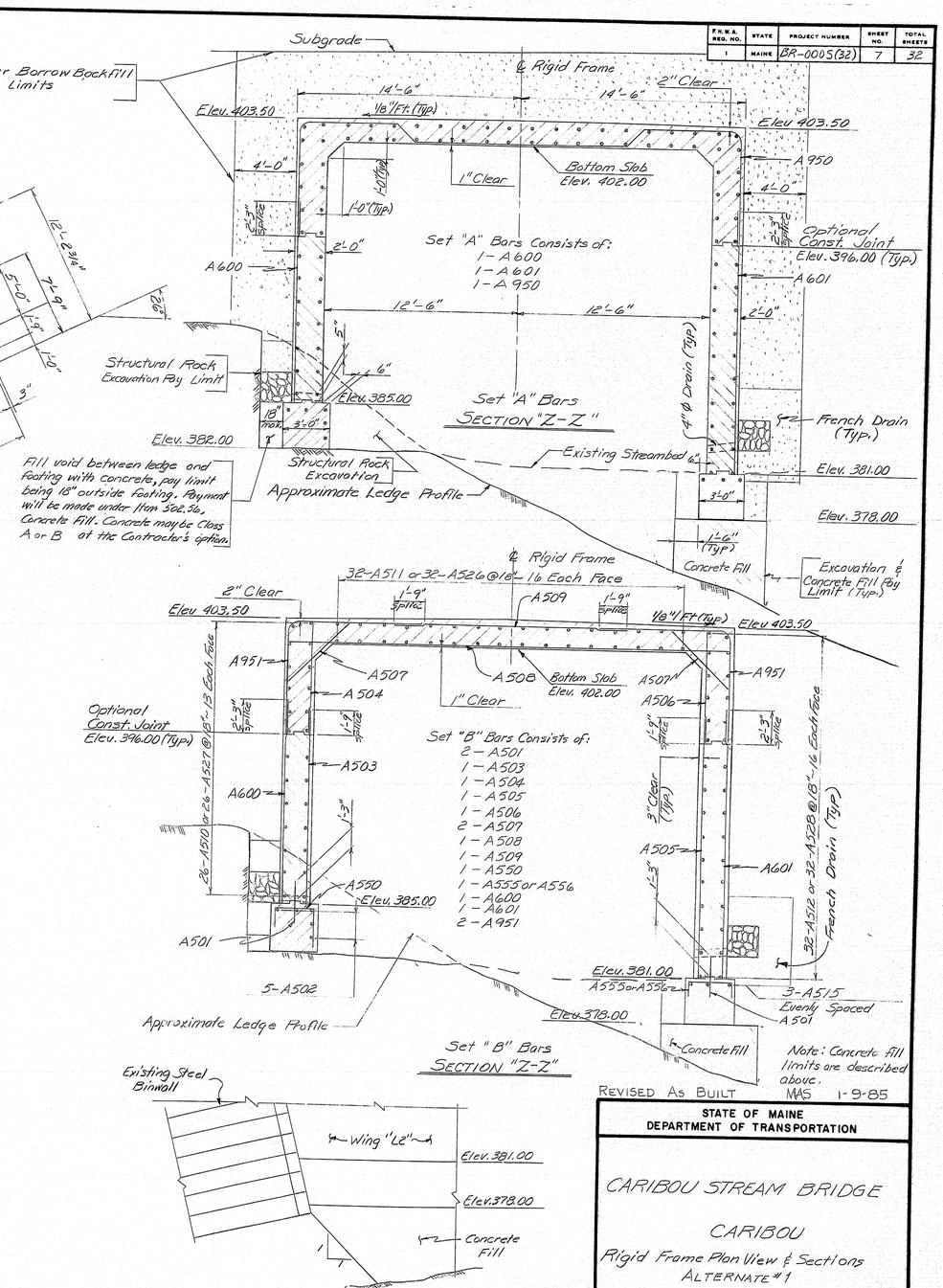
REVISED AS BUILT MAS 1-8-85

SHEET 6 OF 32 AUGUSTA, MAINE March 1983

183-88

F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	7	32





REVISED AS BUILT MAS 1-9-85

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	MEB	10/85
	CHECKED	LAW	BAS 3/87
	REVISIONS		
	FIELD CHANGES		

BRUNING 44-132 4970

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CARIBOU STREAM BRIDGE

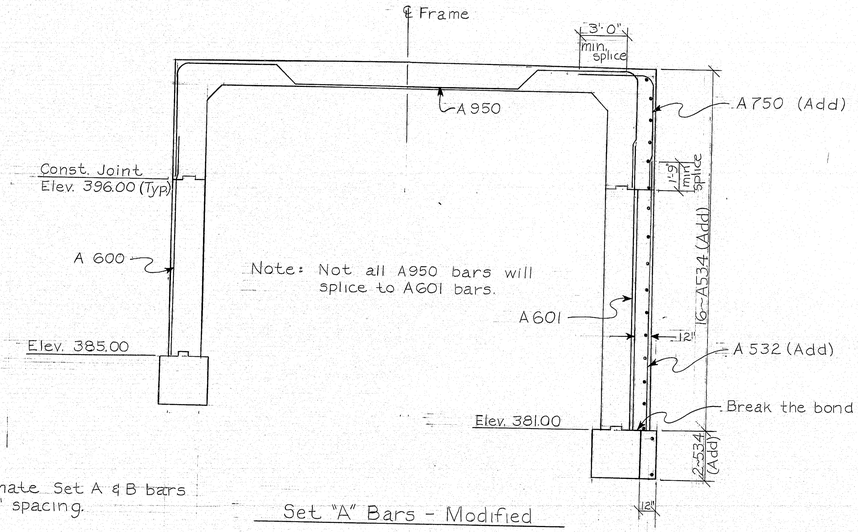
CARIBOU

Rigid Frame Plan View & Sections
ALTERNATE #1

183-89

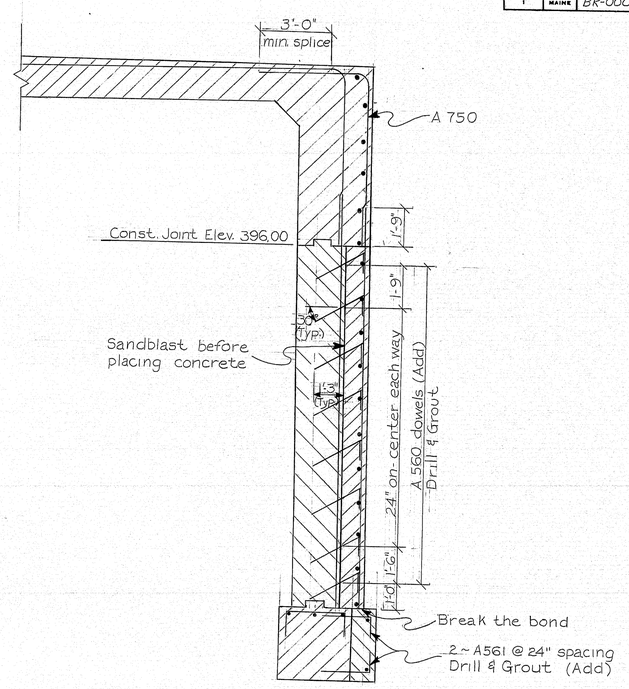
SHEET 7 OF 32 AUGUSTA, MAINE March 1988

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	8	32

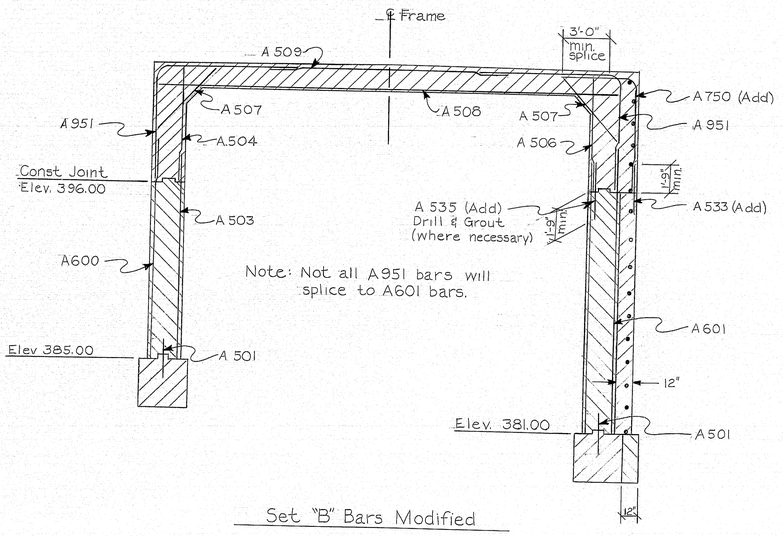


Note: Alternate Set A & B bars at 6" spacing.

Set "A" Bars - Modified



Attachment to Existing Wall Detail



Set "B" Bars Modified

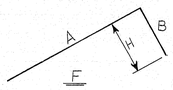
Reinforcing Steel ~ Additional

Straight Bars -

Mark	Nos.	Length	Location
A 532	27	16'-9"	North Wall
A 533	26	3'-0"	North Wall
A 534	18	26'-8"	North Wall
A 535	17	3'-6"	North Wall

Bent Bars -

Mark	Nos.	Length	Type	A	B	C	D	E	F	G	H	O	R
A 560	104	3'-2"	F	2-4"	10"						8 3/4"		
A 561	26	2'-10"	L	10"	2'-0"								
A 750	53	12'-2"	J	6'-10"	9½"	4'-6"							6"



PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES	MAS	1/8/85

JANUARY 1988

As Built MAS 1-8-85

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CARIBOU STREAM BRIDGE
CARIBOU

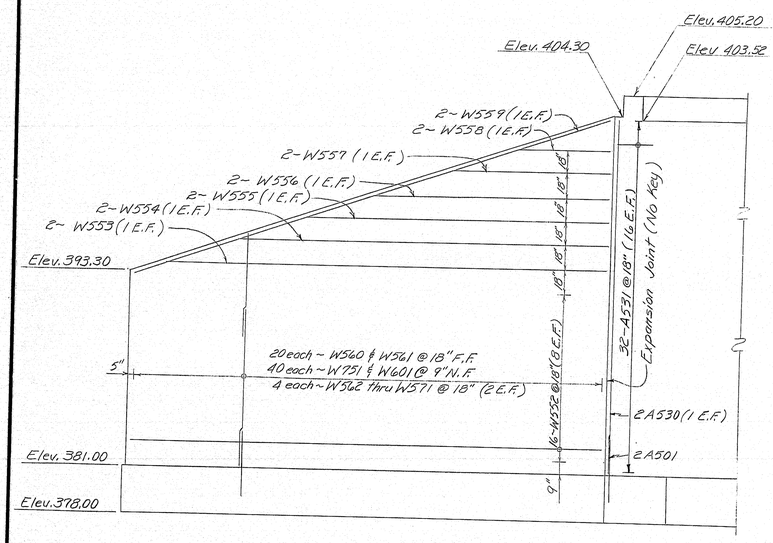
MODIFICATIONS TO DOWN-STREAM-HALF OF NORTH WALL

183-90

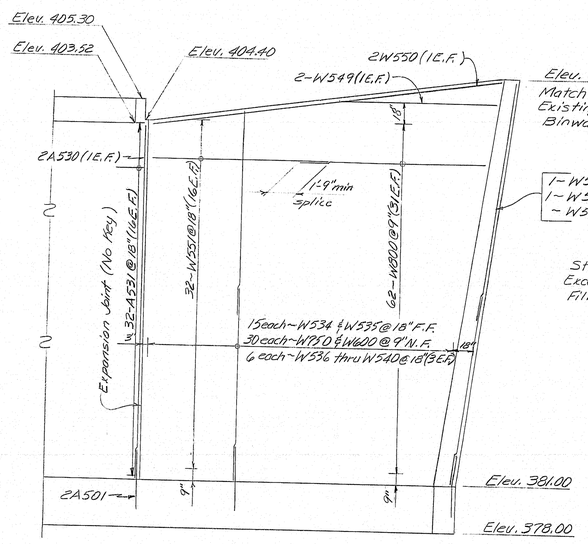
SHEET 8 OF 32 AUGUSTA, MAINE Jan. 1985

303-1 2000

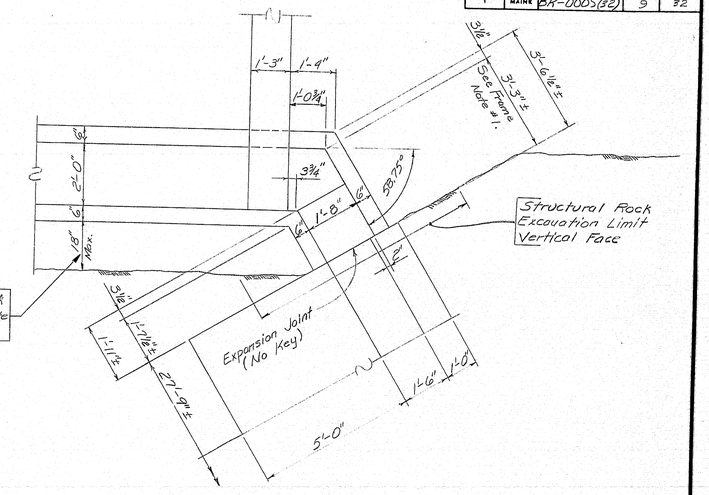
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	9	32



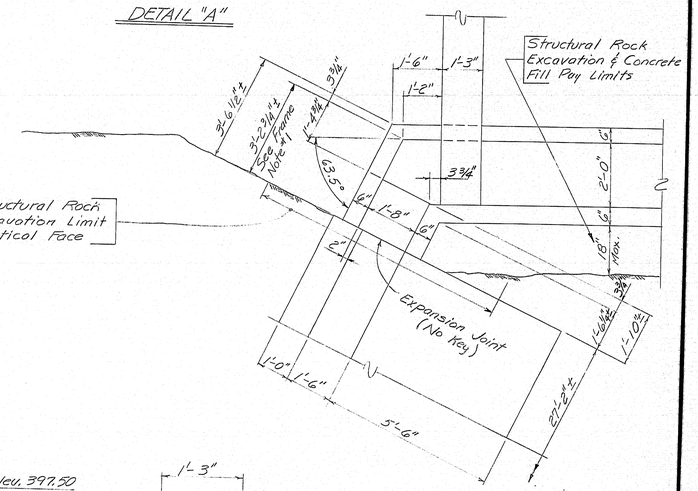
VIEW-"X-X"
Rear Elevation of Wing "R2"



VIEW-"Y-Y"
Rear Elevation of Wing "L2"

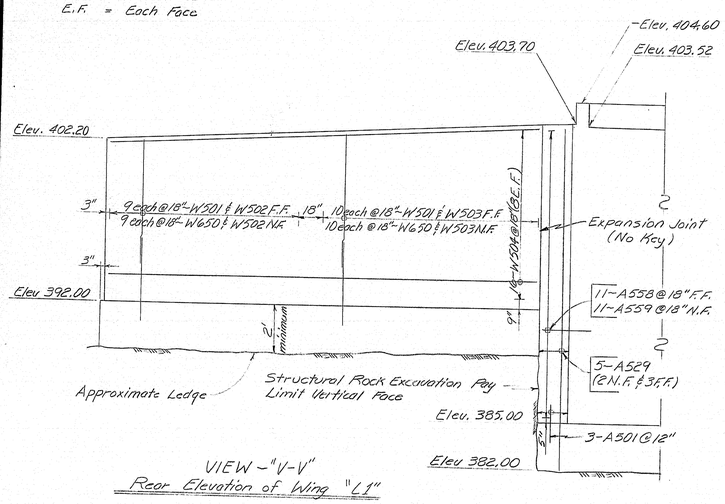


DETAIL "A"

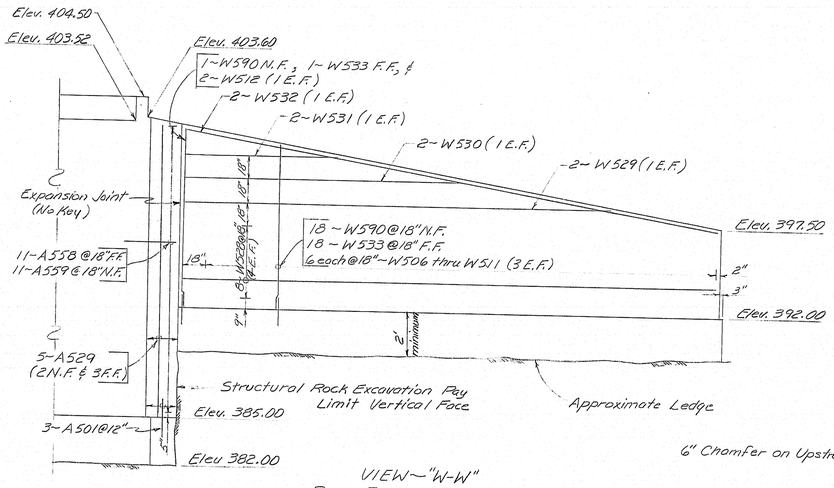


DETAIL "B"

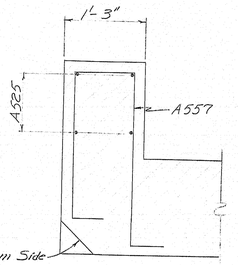
Legend
N.F. = Near Face
F.F. = For Face
E.F. = Each Face



VIEW-"V-V"
Rear Elevation of Wing "L1"



VIEW-"W-W"
Rear Elevation of Wing "R1"



HEADWALL DETAIL

As Built MAS 1-8-85

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	MES	10/82
	CHECKED	LAW	1/83
	REVISIONS	BAS	
	FIELD CHANGES		

BRUNING 44-132 45710

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CARIBOU STREAM BRIDGE

CARIBOU

RIGID FRAME ELEVATIONS & DETAILS
ALTERNATE #1

SHEET 9 OF 32 AUGUSTA, MAINE March 1983

183-91

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
	Rigid Frame		
A501	120	2'-6"	Footing Dowel
A502	5	56'-1"	South Footing
A503	55	12'-9"	South Wall
A504	55	7'-4"	" "
A505	47	16'-9"	North Wall
A506	55	7'-4"	" "
A507	110	5'-2"	Top Wall Corners
A508	55	28'-8"	Slab
A509	55	15'-0"	"
A510	26	28'-11"	South Wall
A511	32	28'-11"	Slab
A512	32	28'-11"	North Wall
A514	16	24'-2"	Footings "L1" & "R1"
A515	6	31'-11"	North Wall Footing
A516	6	7'-6"	Footing Wing "R2"
A517	6	8'-4"	
A518	6	9'-3"	
A519	6	10'-2"	
A520	7	10'-11"	
A521	8	30'-0"	
A522	19	7'-0"	Footing Wing "L2"
A523	14	13'-9"	
A524	8	20'-0"	
A525	8	28'-8"	Headwall
A526	32	28'-6"	Slab
A527	26	28'-6"	South Wall
A528	32	28'-6"	North Wall
A529	10	18'-0"	South Wall Corners
A530	4	23'-0"	North Wall Corners
A531	64	3'-0"	" " "
A600	111	13'-3"	South Wall
A601	95	17'-3"	North Wall
A602	28	7'-0"	Footing Wing "R1"
A603	28	7'-6"	Footing Wing "L1"
A700	16	5'-0"	Footing Wings "L1" & "R1"
A800	19	13'-8"	Footing Wing "L2"
A801	14	9'-0"	" " "

MARK	NO.	LENGTH	LOCATION
	Wingwall "L1"		
W501	19	5'-0"	Footing Dowel
W502	18	8'-5"	Vertical
W503	20	9'-2"	"
W504	16	26'-10"	Horizontal
	Wingwall "R1"		
W506	6	5'-4"	Vertical
W507	6	6'-3"	
W508	6	7'-3"	
W509	6	8'-2"	
W510	6	9'-1"	
W511	6	10'-0"	
W512	2	10'-11"	
W528	8	27'-2"	Horizontal
W529	2	21'-2"	
W530	2	13'-11"	
W531	2	6'-8"	
W532	2	27'-9"	
W533	19	3'-8"	Footing Dowel
	Wingwall "L2"		
W534	16	2'-9"	Footing Dowel
W535	16	12'-3"	Vertical
W536	6	13'-1"	
W537	6	13'-7"	
W538	6	14'-1"	
W539	6	14'-7"	
W540	6	15'-1"	
W541	2	15'-4"	
W549	2	11'-0"	Horizontal
W550	2	21'-11"	
W551	32	10'-1"	
W600	30	12'-3"	Vertical
W300	62	14'-4"	Horizontal

MARK	NO.	LENGTH	LOCATION
	Wingwall "R2"		
W552	16	29'-8"	Horizontal
W553	2	28'-5"	
W554	2	24'-4"	
W555	2	20'-3"	
W556	2	16'-2"	
W557	2	12'-1"	
W558	2	8'-0"	
W559	2	31'-7"	
W560	20	2'-9"	Footing Dowel
W561	20	8'-0"	Vertical
W562	4	6'-6"	
W563	4	7'-7"	
W564	4	8'-8"	
W565	4	9'-10"	
W566	4	10'-11"	
W567	4	12'-0"	
W568	4	13'-1"	
W569	4	14'-2"	
W570	4	15'-4"	
W571	4	16'-5"	
W601	40	8'-0"	Vertical

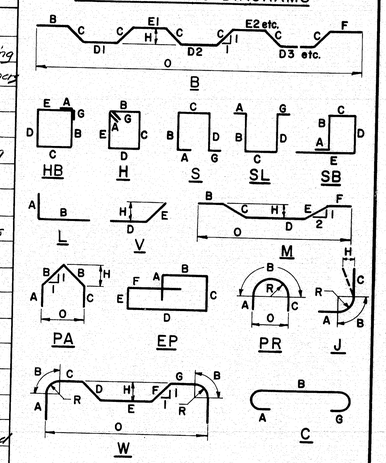
BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
					Rigid Frame									
A550	65	6'-0"	S	—	1'-0"	2'-6"	2'-6"			—				
A552	2	3'-6"	V				1'-7"	1'-11"			1'-4"			South Wall Footing
A553	2	4'-9"	V				2'-4"	2'-5"			2'-0"			South Footing Corners
A554	6	6'-0"	V				3'-1"	2'-11"			2'-8"			
A555	47	4'-6"	S	—	1'-0"	2'-6"	1'-0"			—				North Wall Footing
A556	14	3'-6"	L	1'-0"	2'-6"									" " "
A557	40	6'-9"	S	0'-6"	2'-3"	0'-10"	2'-8"			0'-6"				Headwall
A558	22	5'-5"	V				2'-6"	2'-11"			2'-6"			South Wall Corners
A559	22	4'-0"	V				2'-0"	2'-0"			1'-9"			" " "
A950	56	43'-10"	W	6'-10"	0'-9½"	5'-8"	1'-9"	13'-8"	1'-9"	5'-9"		28'-8"	0'-6"	Slab
A951	110	15'-9"	J	6'-10"	0'-9½"	8'-1"					—		0'-6"	Slab
					Wingwalls									
W590	19	4'-5"	L	0'-9"	3'-8"									Wing "R1" Footing Dowel
W650	19	6'-0"	L	0'-9"	5'-3"									Wing "L1" Footing Dowel
W750	30	5'-9"	L	0'-9"	5'-0"									Wing "L2" Footing Dowel
W751	40	4'-10"	L	0'-9"	4'-1"									Wing "R2" Footing Dowel

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	10	32

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: A.S.T.M. A 615 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 609) bar size - #6
2. Letter of Marks A, P & S locates bars of Abutments, Piers, and Superstructure parts respectively.

REVISED AS BUILT MAS 1-9-85

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CARIBOU STREAM BRIDGE
CARIBOU

RIGID FRAME
ALTERNATE #1

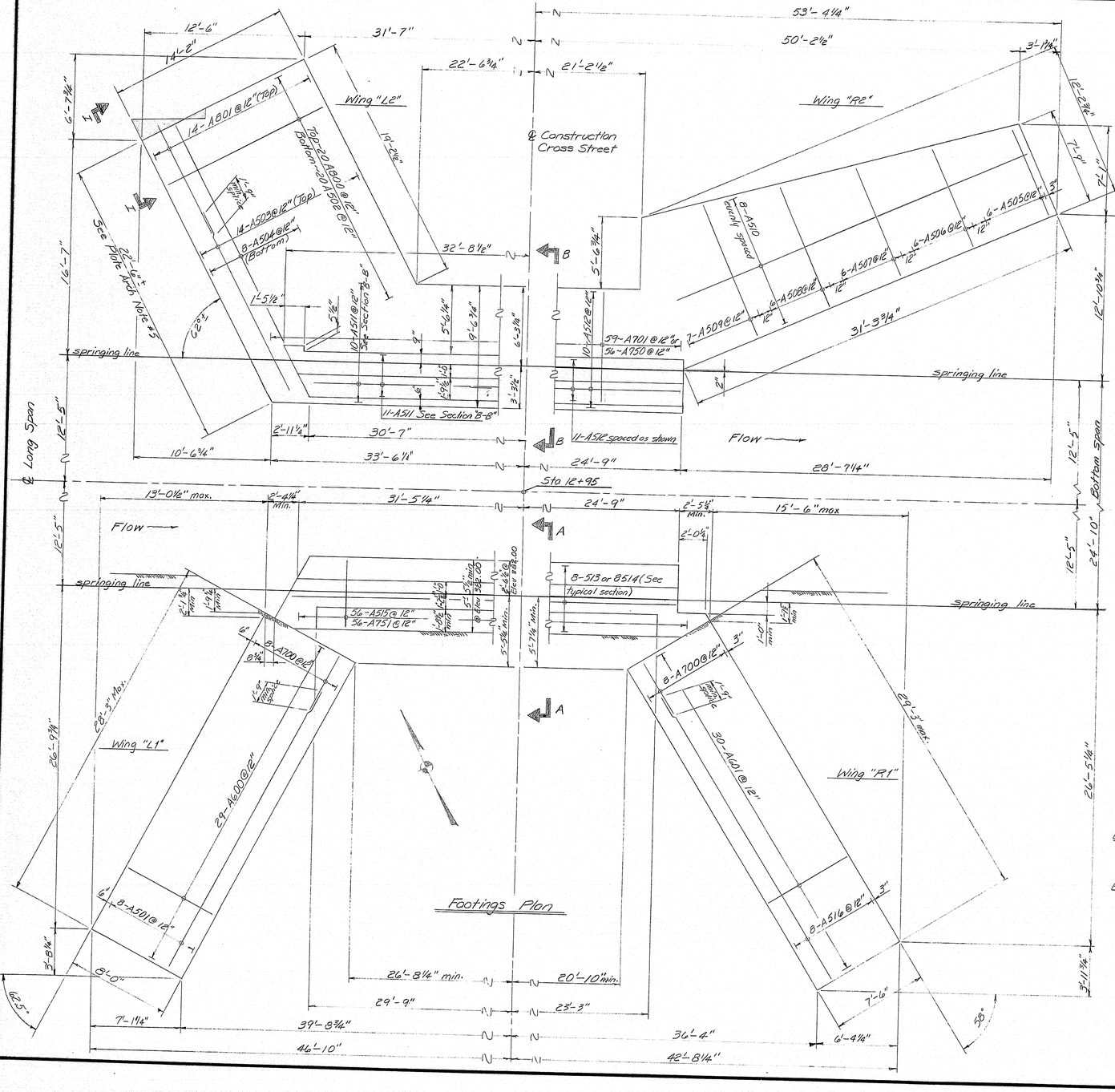
REINFORCING STEEL SCHEDULE

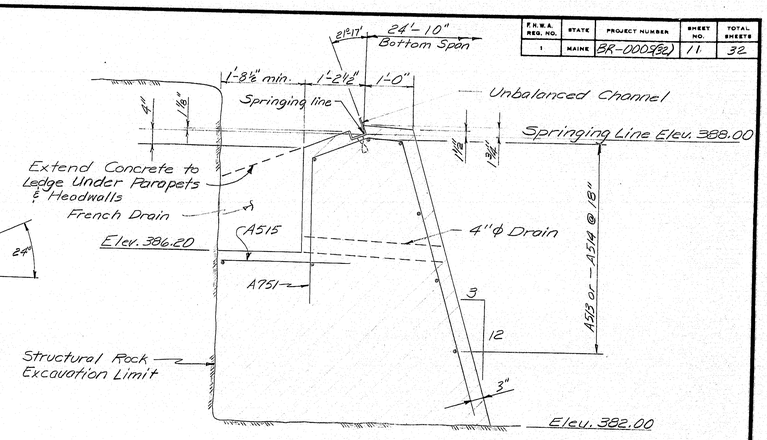
SHEET 10 OF 32 AUGUSTA, MAINE March 1983

PLANS	DESIGN - DETAIL	BY	DATE
	CHECKED	MEB	1/83
	REVISIONS	BAS	3/83
	FIELD CHANGES		

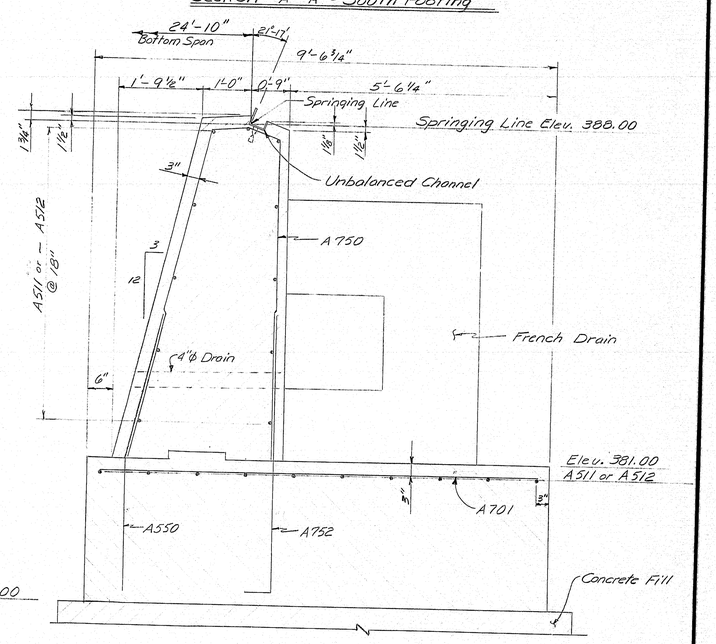
183-92

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0003(82)	11	32



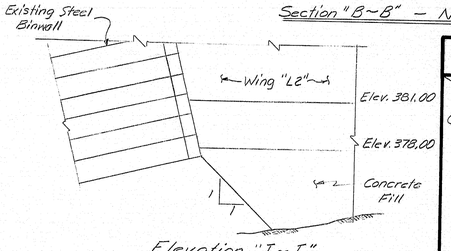


Section "A-A" - South Footing



Section "B-B" - North Footing

MAS 1-9-85
NOTE: ALTERNATE #1 BUILT



Elevation "I-I"

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	MEB	2/82
	CHECKED	LAH	BAS 2/82
	REVISIONS		
	FIELD CHANGES		

BRUNING 44-132 45710

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

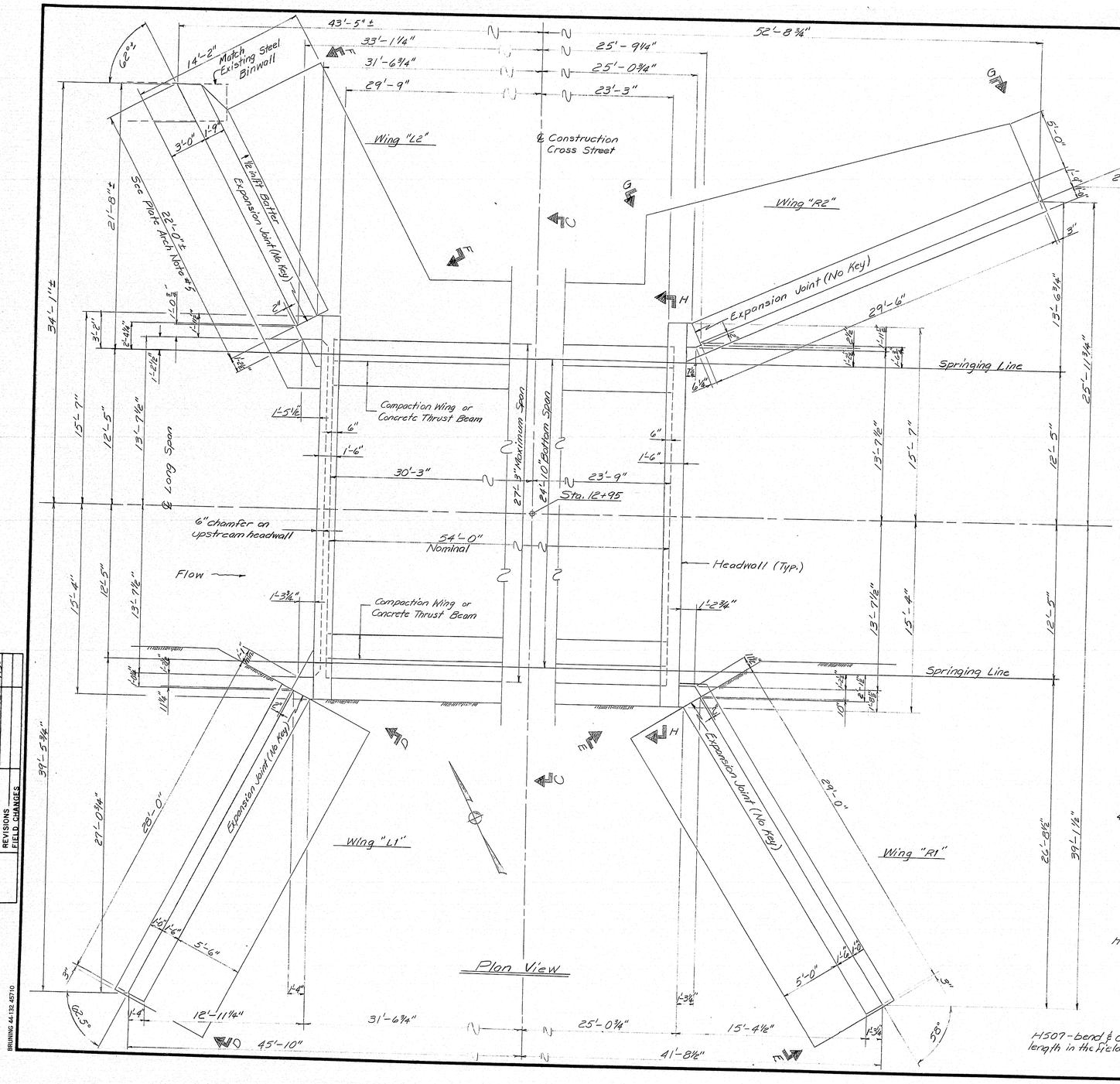
CARIBOU STREAM BRIDGE
CARIBOU

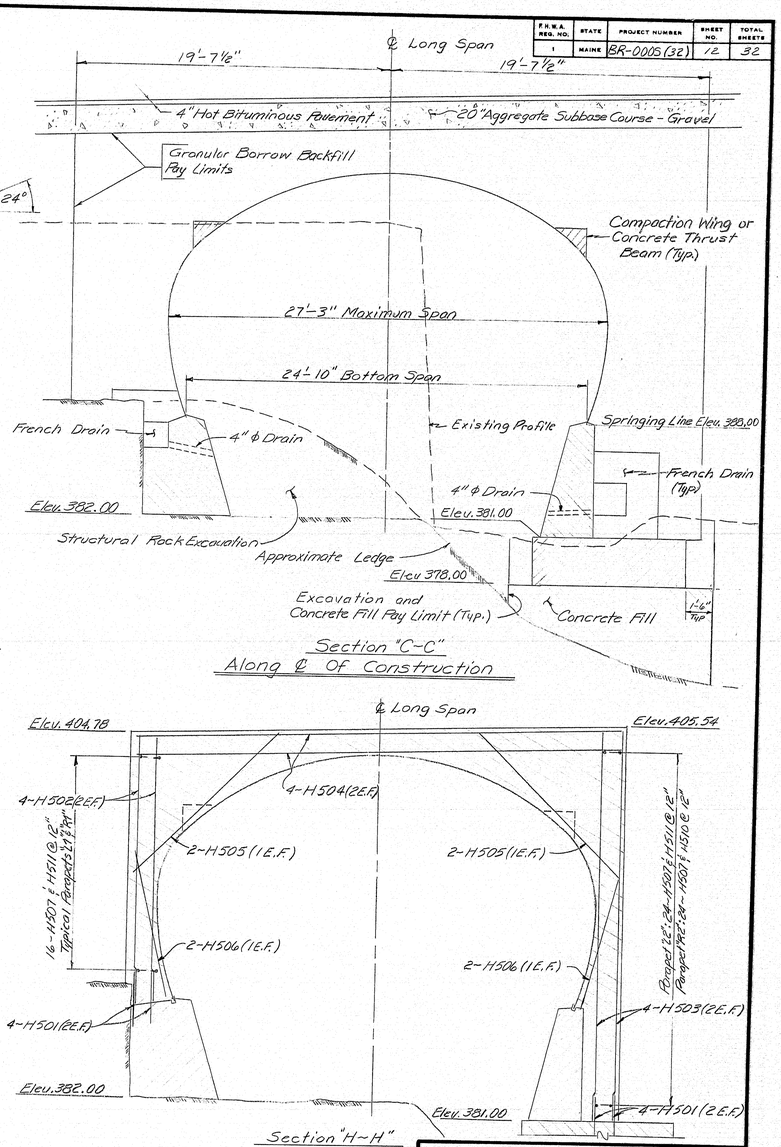
LONG SPAN FOOTING PLAN
ALTERNATE #2

SHEET 11 OF 32 AUGUSTA, MAINE March 1983

183-93

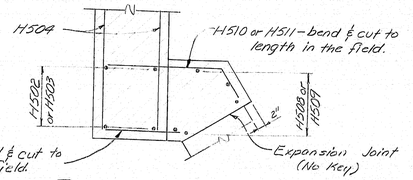
F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	12	32





Section "C-C"
Along ℄ Of Construction

Section "H-H"



Typical Parapet Detail

NOTE: ALTERNATE #1 BUILT MAS 1-9-85

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	MEB	10/22
	CHECKED	LAW	2/83
	REVISIONS	EAS	2/83
	FIELD CHANGES		

BRUNING 44-132 45710

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CARIBOU STREAM BRIDGE

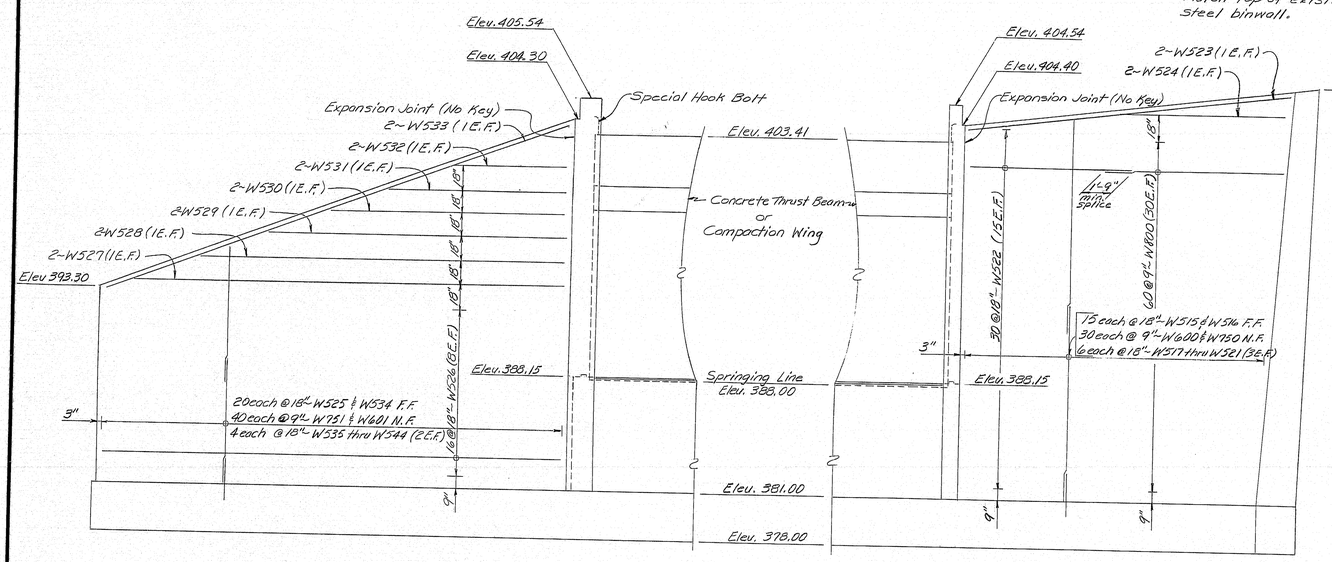
CARIBOU

LONG SPAN PLAN VIEW AND SECTIONS
ALTERNATE #2

SHEET 12 OF 32 AUGUSTA, MAINE March 1983

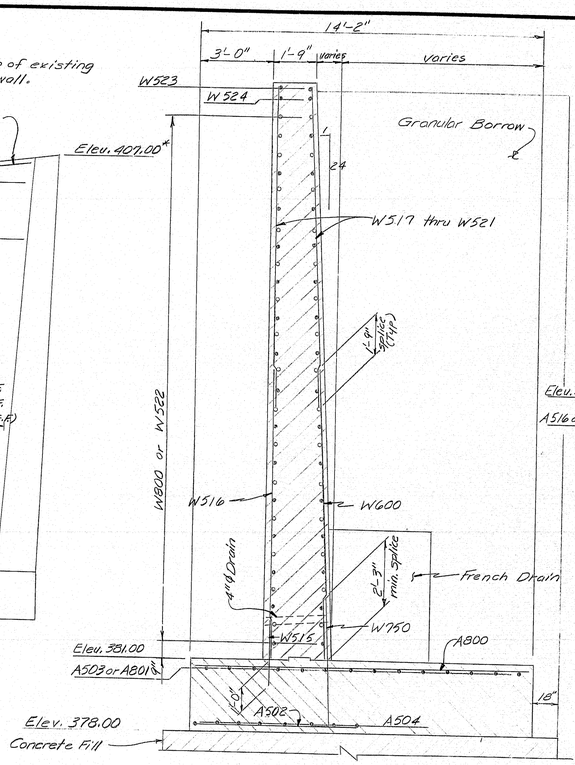
183-94

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	13	32

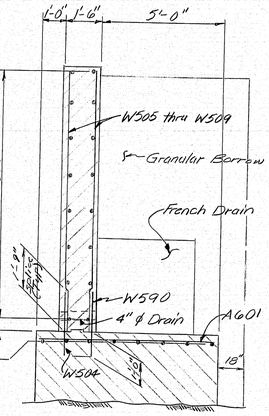


VIEW "G-G"
Rear Elevation of Wing "R2"

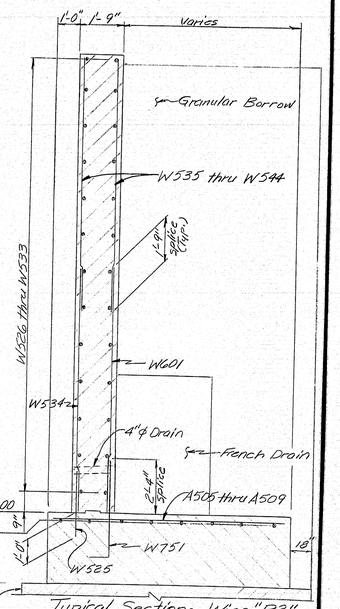
VIEW "F-F"
Rear Elevation of Wing "L2"



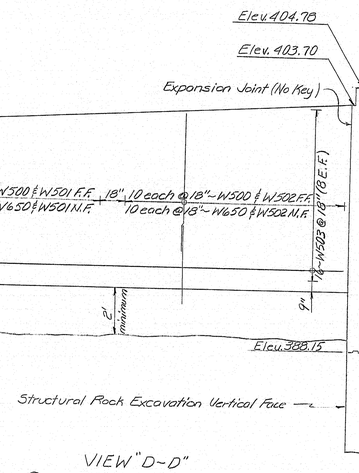
Typical Section - Wing "L2"



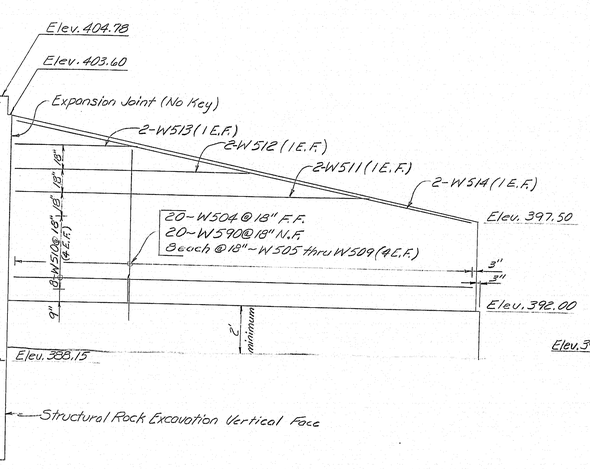
Typical Section - Wing "R1"



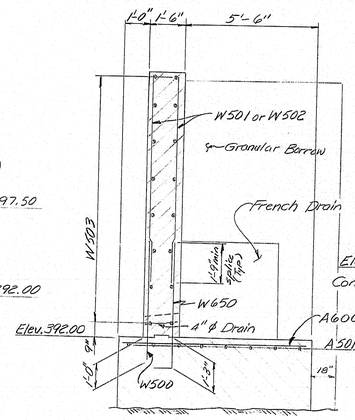
Typical Section - Wing "R2"



VIEW "D-D"
Rear Elevation Wing "L1"



VIEW "E-E"
Rear Elevation of Wing "R1"



Typical Section - Wing "L1"

MAS 1-9-85
NOTE: ALTERNATE #1 BUILT

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	MEB, MAB	12/82
CHECKED	LAW, RJS	2/83
REVISIONS		
FIELD CHANGES		

DRAWING 44-132.4570

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

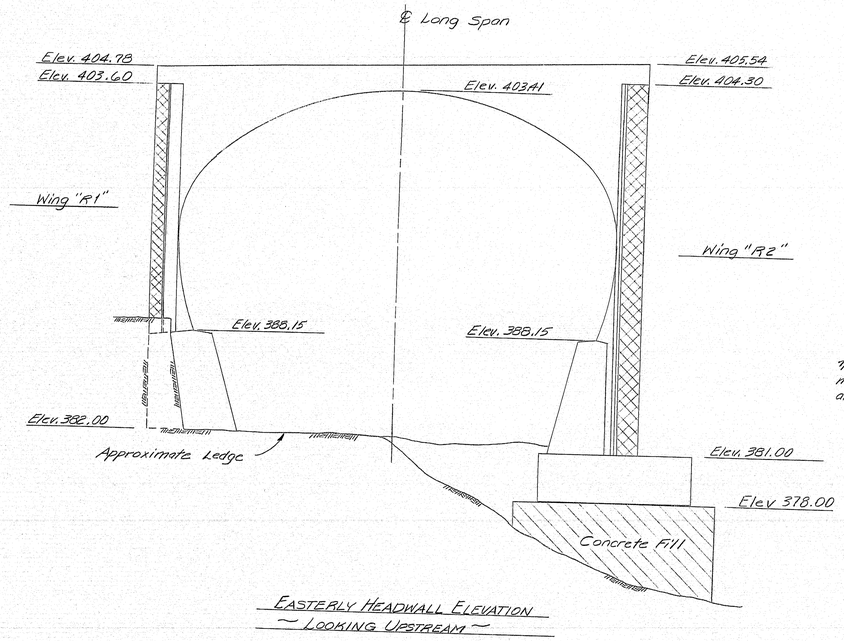
CARIBOU STREAM BRIDGE
CARIBOU

LONG SPAN ELEVATION & SECTIONS
ALTERNATE #2

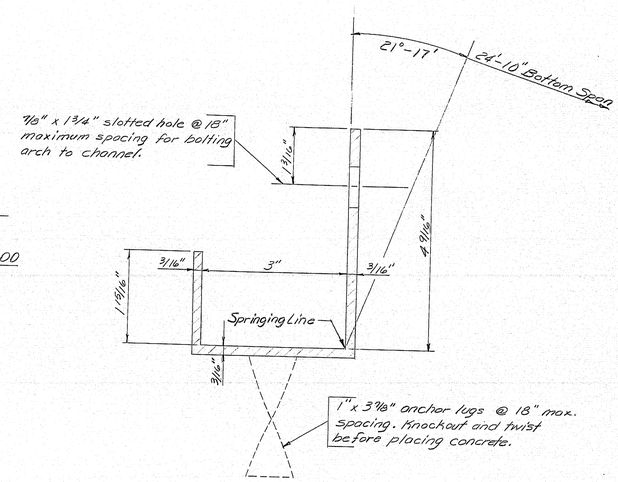
SHEET 13 OF 32 AUGUSTA, MAINE March 1983

183-95

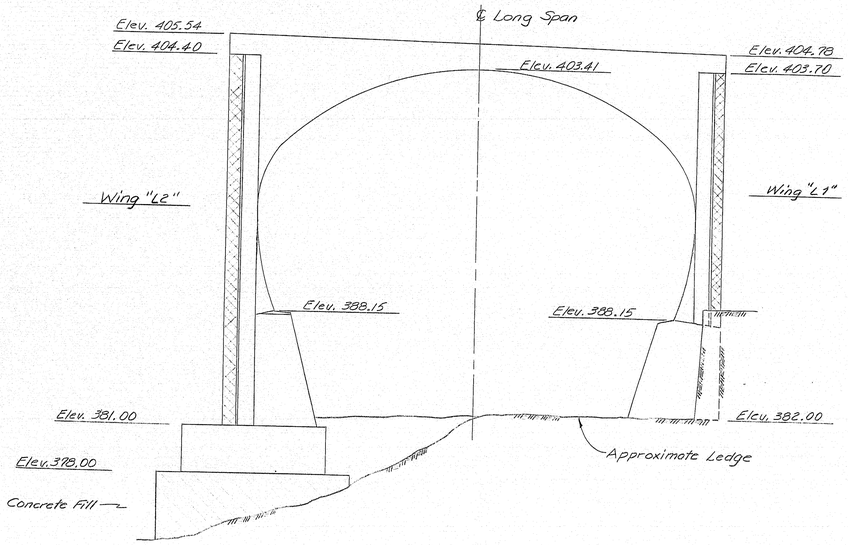
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	14	32



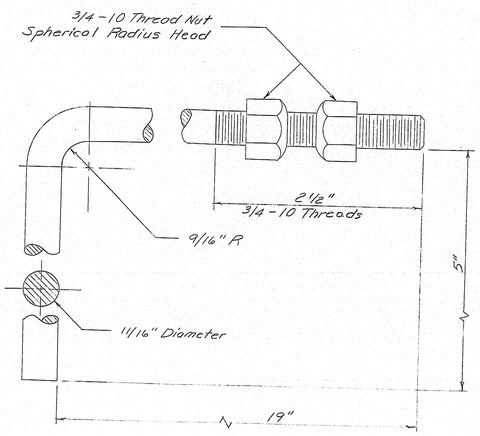
EASTERLY HEADWALL ELEVATION
~ LOOKING UPSTREAM ~



UNBALANCED CHANNEL
(Hot dipped galvanized after fabrication.)



WESTERLY HEADWALL ELEVATION
~ LOOKING DOWNSTREAM ~



SPECIAL HOOK BOLT DETAIL

HOOK BOLT NOTE

Special hook bolts will be installed about the perimeter of the Long Span Plate Arch throughout both headwalls at a maximum spacing of 18" with 2" minimum cover in the headwall.

Hook bolt material shall meet the current ASTM A-307. Threads shall be American Standard Coarse Thread Series, Class 2, Free Fit. Bolts shall be galvanized to meet current ASTM specification A-153. The galvanizing on the threaded portion shall not prevent turning the nut by hand.

Nuts shall be carbon steel hot dip galvanized to meet ASTM specification A-153. Nut threads shall be American Standard Coarse Thread series (1/64" maximum oversize), cleaned after galvanizing to provide a free running fit on the Class 2 bolt. Nuts shall be 1 1/4" across flats, 13/16" thick, curve crowned to approximately 1" radius.

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	MES	1/83
CHECKED	LAW	3/83
REVISIONS		
FIELD CHANGES		

PLANS

JANUARY 1988

NOTE: ALTERNATE #1 BUILT MAS 1-9-85

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CARIBOU STREAM BRIDGE
CARIBOU

LONG SPAN ELEVATIONS & DETAILS
ALTERNATE #2

SHEET 14 OF 32 AUGUSTA, MAINE March 1983

183-96

803-1 2000

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
		Long Span Footings	
A501	8	24'-8"	Footing "L1"
A502	20	7'-0"	Footing "L2"
A503	14	16'-5"	↓
A504	14	20'-0"	↓
A505	6	7'-6"	Footing "R2"
A506	6	8'-4"	↓
A507	6	9'-3"	↓
A508	6	10'-1"	↓
A509	7	10'-11"	↓
A510	8	30'-0"	↓
A511	21	25'-0"	North Wall Footing
A512	21	33'-9"	" " "
A513	8	25'-0"	South Wall Footing
A514	8	33'-4"	↓
A515	56	2'-9"	↓
A516	8	25'-8"	Footing "R1"
A600	29	7'-6"	Footing "L1"
A601	30	7'-0"	Footing "R1"
A700	16	5'-0"	Footings "L1" & "R1"
A701	59	9'-2"	North Footing
A800	20	13'-10"	Footing "L2"
A801	14	9'-0"	" "

MARK	NO.	LENGTH	LOCATION
		Wingwall "L1"	
W500	19	5'-0"	Footing Dowel
W501	18	8'-5"	Vertical
W502	20	9'-2"	"
W503	16	27'-8"	Horizontal
		Wingwall "R1"	
W504	20	3'-8"	Footing Dowel
W505	8	5'-4"	Vertical
W506	8	6'-7"	↓
W507	8	7'-10"	↓
W508	8	9'-2"	↓
W509	8	10'-5"	↓
W510	8	28'-8"	Horizontal
W511	2	22'-9"	↓
W512	2	15'-7"	↓
W513	2	8'-5"	↓
W514	2	29'-1"	↓
		Wingwall "L2"	
W515	15	2'-9"	Footing Dowel
W516	15	12'-3"	Vertical
W517	6	13'-1"	↓
W518	6	13'-8"	↓
W519	6	14'-2"	↓
W520	6	14'-9"	↓
W521	6	15'-4"	↓
W522	30	9'-3"	Horizontal
W523	2	20'-10"	↓
W524	2	16'-5"	↓
W600	30	12'-3"	Vertical
W800	60	19'-0"	Horizontal

MARK	NO.	LENGTH	LOCATION
		Wingwall "R2"	
W525	20	2'-9"	Footing Dowel
W526	16	29'-2"	Horizontal
W527	2	27'-11"	↓
W528	2	23'-11"	↓
W529	2	19'-11"	↓
W530	2	15'-11"	↓
W531	2	11'-11"	↓
W532	2	7'-10"	↓
W533	2	31'-1"	↓
W534	20	8'-0"	Vertical
W535	4	6'-6"	↓
W536	4	7'-7"	↓
W537	4	8'-8"	↓
W538	4	9'-10"	↓
W539	4	10'-11"	↓
W540	4	12'-0"	↓
W541	4	13'-1"	↓
W542	4	14'-2"	↓
W543	4	15'-4"	↓
W544	4	16'-5"	↓
W601	40	8'-0"	Vertical
		Headwalls	
H501	16	2'-9"	Dowel
H502	8	16'-5"	Vertical
H503	8	24'-3"	"
H504	8	30'-5"	Horizontal
H505	8	12'-0"	Cornered
H506	8	8'-0"	"
H507	80	3'-6"	All Parapets
H508	10	15'-3"	Parapets "L1" & "R1"
H509	10	16'-0"	Parapets "L2" & "R2"
H510	24	2'-0"	Parapet "R2"
H511	56	5'-0"	Parapets "L1", "R1" & "L2"

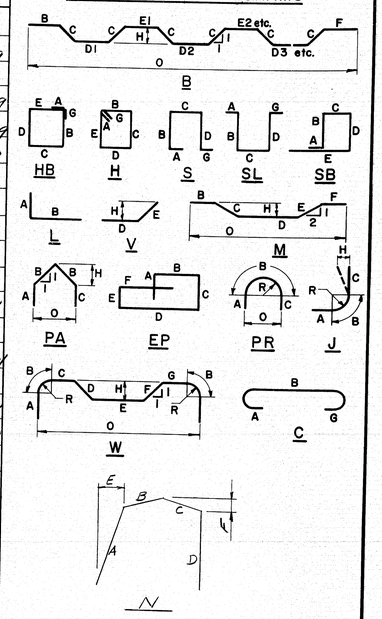
BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
				Long Span Footings										
A550	56	5'-9"	V				2'-9"	3'-0"			0'-9"			North Wall Footing
A750	56	14'-10"	N	7'-0"	0'-9"	0'-7"	6'-6"	1'-9"	0'-3"					North Wall Footing
A751	56	12'-10"	N	5'-6"	0'-9"	1'-1"	5'-6"	1'-5"	0'-6"					South Wall Footing
A752	56	6'-5"	L	0'-9"	5'-8"									North Wall Footing
				Wingwalls										
W590	20	4'-5"	L	0'-9"	3'-8"									Wing "R1" Ftg. Dowel
W650	19	6'-0"	L	0'-9"	5'-3"									Wing "L1" Ftg. Dowel
W750	30	5'-9"	L	0'-9"	5'-0"									Wing "L2" Ftg. Dowel
W751	40	4'-10"	L	0'-9"	4'-1"									Wing "R2" Ftg. Dowel

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	15	32

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 609) bar size - #6
2. Letter of Marks A, P & S locates bars of Abutments, Piers, and Superstructure parts respectively.

NOTE: ALTERNATE #1 BUILT MAS 1-9-85

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CARIBOU STREAM BRIDGE
CARIBOU

LONG SPAN STRUCTURAL PLATE ARCH
ALTERNATE #2

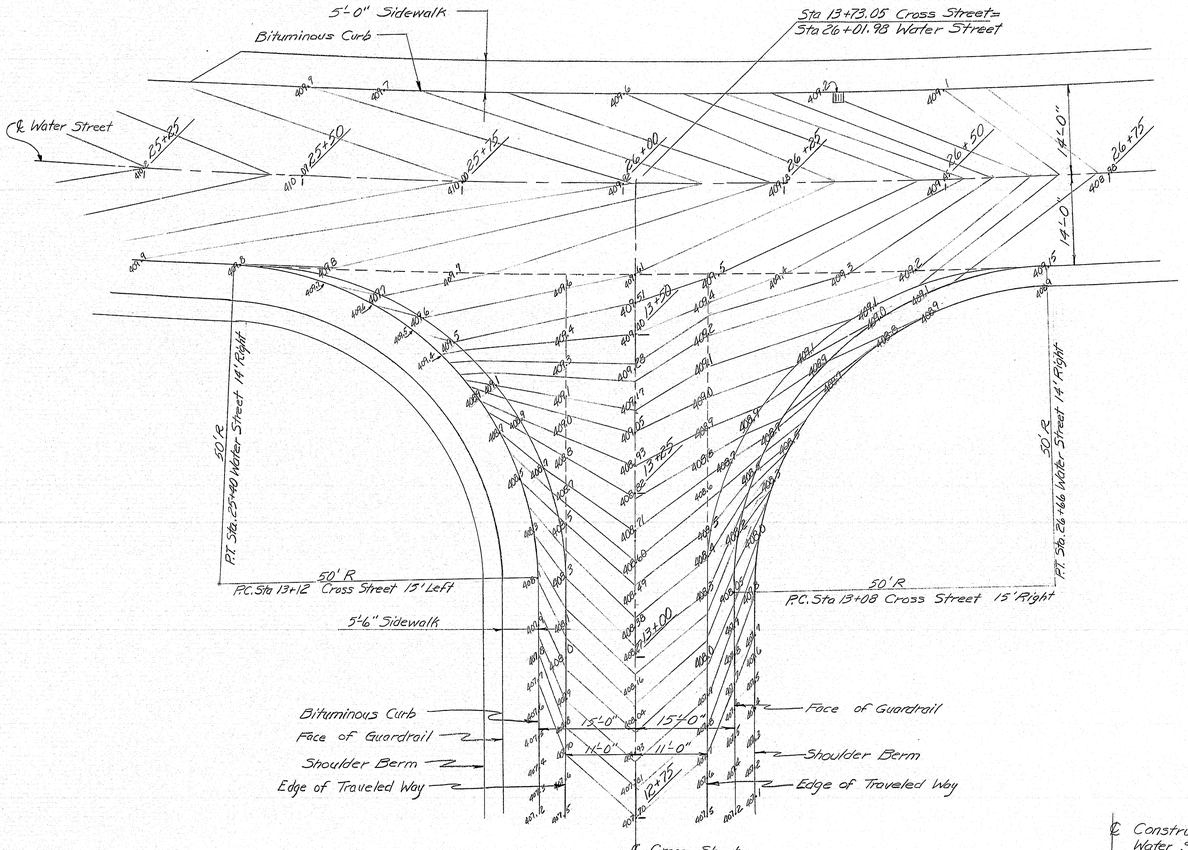
REINFORCING STEEL SCHEDULE

SHEET 15 OF 32 AUGUSTA, MAINE March 1985

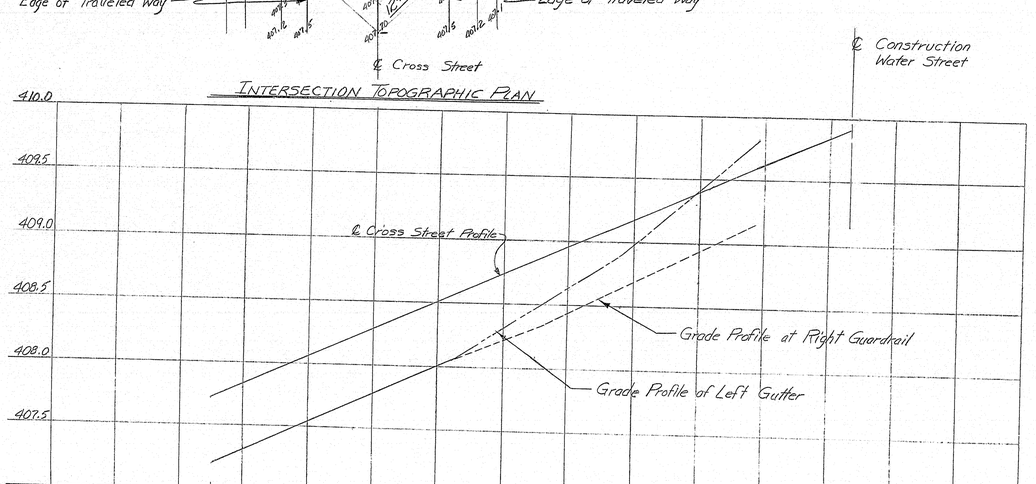
183-97

PLANS	DESIGN - DETAIL	CHECKED	REVISIONS	FIELD CHANGES
BY	MEB	MEB	BAS	
DATE	1/83		3/83	

F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	16	32



INTERSECTION TOPOGRAPHIC PLAN



INTERSECTION DRAINAGE PROFILE

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	MEB	MEB 2/82
CHECKED		
REVISIONS		
FIELD CHANGES		

PLANS

BRUNING 44-132 45710

AS BUILT MAS 1-8-85

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CARIBOU STREAM BRIDGE

CARIBOU

INTERSECTION PLAN

183-98

SHEET 16 OF 32 AUGUSTA, MAINE March 1983

F.A. RTE.	SEQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
	1	NAME	BR-0005(82)	17	32

183-69

REVISED AS BUILT MS 1-9-85 CROSS STREET

TYPICAL SECTION – CROSS STREET
Sta 12+75 to 13+62

GUARD RAIL NOTES

Install Terminal end section and delineator post @ Sta. 12+42 ± Rt. Water St.

Install 12.5 L.F. Type 3b guardrail on culvert 30' radius from Sta. 25+54 ± Rt. Water St. to Sta 25+42 ± Rt Water St.

Install 50 L.F. Type 3b guard rail circular 44.5' radius from Sta 13+12 ± L.T. Cross St to Sta 25+54 ± Rt Water St.

Install 62.5 L.F. Type 3b guard rail from Sta. 12+49 ± Lt to Sta. 13+12 ± Lt. Cross St.

Install 12.5 L.F. Type 3b guard rail circular 93' radius from Sta. 12+49 ± Lt to Sta. 12+49 ± Lt. Cross St.

Install Terminal end section and delineator post at Sta. 12+37 ± Lt. Cross St.

GUARD RAIL NOTES

Install 325 ± L.F. Type 3b guard rail from Sta. 26+66 ± Rt. Water St. to Sta. 27+05 ± Rt. Water St. Approx. end section and 2 Terminal end sections will be required. Sta. 27+30 ± Rt. to be directed by the Engineer.

Install 75.0 L.F. Type 3b guard rail from Sta. 12+38 ± Rt. to Sta. 12+08 ± Rt. Cross St.

Install 75.0 L.F. Type 3b guard rail collector 28' radius from Sta. 13+02 ± Rt. Cross St. to Sta. 12+48 ± Rt Water St.

ORIGINAL SURVEY		BY	DATE
	SURVEYED	G. FOWLER, MIE	11/81
	PLOTTED	MEB	1/82
NOTE BOOK	TSHR.-ALT.		
	AREAS		
NO.	AREAS CHECKED		

FINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TSHR.-ALT.		
	AREAS		
NO.	AREAS CHECKED		

C:\,4AW 2-83

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	18	32

FINAL SURVEY	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK	MATERIAL		
NO.	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY G. Fongemie	DATE 11/81
	PLOTTED	MEB	3/82
NOTE BOOK	MATERIAL	MEB	3/82
NO.	AREAS		
	AREAS CHECKED		

CK LAND 2-83

Wing "RT"

Wing "LT"

13+10

12+47.7 (Ahead)

12+77 (Back)

12+90

183-100

AS BUILT MAS 1-9-85 CROSS STREET

F.A. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0003(62)	19	32

183-101

AS BUILT MAS 1-9-85 CROSS SHEET

13+20

Utility Pole #2

Guardrail Cross Sections See (Control Plan (typ.)

White Ash

Remove Trees

13+30

(Steel Retaining Wall Left)

13+38

(Top Existing Ripraps)

13+50

13+57

(Top of Bank)

13+73.05

(Profile of Water Stream)

ORIGINAL SURVEY		BY	DATE
SURVEYED	Ca. FOR GEMAP		11/81
PLOTTED			4/82
TEMPLATE			4/82
AREAS			
NOTE BOOK			
AREAS CHECKED			
NO.			

FINAL SURVEY		BY	DATE
SURVEYED			
PLOTTED			
TEMPLATE			
AREAS			
NOTE BOOK			
AREAS CHECKED			
NO.			

CK L.A.W. 8-83

183-102

REVISED AS BUILT MP 1.9-85 WATER STREET

F.H.W.A. REGS. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	NAME	BR-0005(28)	20	32

TYPICAL SECTION- Water Street Overlay

Typical with Sidewalk

Typical without Sidewalk

Existing edge of pavement

Existing edge of Pavement

Match existing

Milling varies

Loam, Mulch & Seed- Method #1 (Typ)

Type 3B Guardrail (Typ)

Bituminous Curb (Typ)

1½" Hot Bituminous Pavement Overlay Grading 'C'

4" Hot Bituminous Pavement Grading 'B'

2" Hot Bituminous Pavement

20" Aggregate Subbase Course-Gravel

10" Aggregate Subbase Course-Gravel

Existing Steel Sheetpile

Existing Steel Sheetpile

Existing Steel Sheetpile

Type 3B Guardrail Reverse Direction See Cross Street Sections

Site 25+40 limit of work- The project materials new Construction by others

25+00

25+50

25+62 (Back)

℄ Construction

14'-0"

14'-0"

ORIGINAL SURVEY
NOTE BOOK 9097
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

BY G. Eggemeier DATE 4/12

C.K. LAW 2-83

FINAL SURVEY
SURVEYED
PLOTTED
NOTE BOOK
TEMPLATE
AREAS
AREAS CHECKED

BY DATE

REVISED AS BUILT MS 1-9-85 WATER STREET

183-103

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	C.J. FORBES	1982
NO.	TEMPLATE		
	AREAS CHECKED		

C.K. LAW 2-83

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS CHECKED		

P.W.M.A. RES. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	21	32

Edge of Stream

Wing "A2"

Edge of Stream

Top Existing Ramp (Typical)

℄ Paddle Cross Street

End Reject
Sta. 13+52 Cross Street

Sta. 13+50
℄ Construction Cross Street

Edge of Stream

Wing "A2"

Edge of Stream

Match Existing Grade at the Top of Ramps

18" Culvert

Extend Culvert

6' Riprap Downspout

Edge of Stream

Sta. 27+00
Limit of Work Sta. 27+00
Match Existing Section

SMH

Catch Basin Left
Sta. 13+33
26.4 LT

Flyash Up

26.4 LT

22.6 RT

22.6 RT

22.6 RT

F. H. W. A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	22	32

FINAL SURVEY
SURVEYED BY
PLOTTED DATE
TRACED BY
NOTE BOOK PAGE
AREAS CHECKED
NO.

ORIGINAL SURVEY
SURVEYED BY
PLOTTED DATE 9-82
TRACED BY JAZB
NOTE BOOK PAGE
AREAS CHECKED
NO.

Traced: DMD 10-82
Ck. LAW 2-83

E. Water Street

Concrete Fill

Boring GP-40-82
Sta. 9+20 30 Rt.
Ledge Elev. 375.2±

16'-6" Typical cut Section

* Do not excavate ledge where removal will be less than 1/2 C.Y. per linear foot of channel outside of the structure's barrel. Excavation of ledge in the channel will be paid for under Item 203.21, Rock Excavation.

9+71

Boring GP-39-82
Sta. 9+25 55 Lt.
Ledge Elev. 369.6±

1.25:1

Approximate Ledge Profile

9+50

Boring GP-41-82
Sta. 9+55 45 Lt.
Ledge Elev. 368.6±

Note: Backfill the streambank to match the existing channel with material excavated for the new bank facing.

9+25
Limit of Work
Match Existing Section

Top of Existing Riprap (Typical)

9+00

5'-0"
5'-0"

188-104

Caribou Stream Bridge, Caribou: Stream X-Sects.
AS BUILT MAS 1-9-85

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	23	32

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK	TEMPLATE	
NO.	AREAS	
	AREAS CHECKED	

Traced: DMD 10-82
CC LAW 2-83

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED	MEB	5-82
NOTE BOOK	TEMPLATE	
NO.	AREAS	
	AREAS CHECKED	

Caribou Stream Bridge, Caribou: Stream X-Sects.
REVISED AS BUILT MAS 1-9-85

183-105

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	24	32

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
AREAS CHECKED		
NO.		

Traced: DMD 10-82
CK'D AW 2-83

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
AREAS CHECKED		
NO.		

Steel Retaining Wall

Steel Retaining Wall

Steel Retaining Wall

Concrete Fill

Boring GP-32-82
Sta. 10+45 45 Lt.
Ledge Elev. 396.27

Boring GP-32-82
Sta. 10+35 45 Lt.
395 Ledge Elev. 389.8

Boring GP-32-82
Sta. 10+50 45 Lt.
Ledge Elev. 389.8

Concrete Fill

Approximate Ledge (Typical)

10+40 (Ahead)

10+40 (Back)

℄ Structure

10+35

10+50

1.25:1

1.25:1

2:1

163-106

5'-0"

Caribou Stream Bridge, Caribou: Stream X-Sects.
As BUILT MA 1-9-85

F.A.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(28)	25	32

Caribou Stream Bridge, Caribou: Stream X-Sects
AS BUILT NAD 1983-85

LOT-E01

Limit of Work
Match Existing Section - Left Side

℄ Structure

11+00

11+25

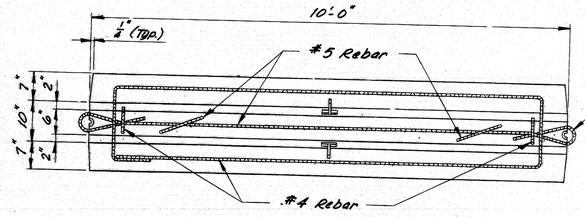
11+50

ORIGINAL SURVEY	SURVEYED		BY	DATE
	PLOTTED			
NOTE BOOK	TABULATE		MEB	9-82
	AREAS			
NO	AREAS CHECKED			

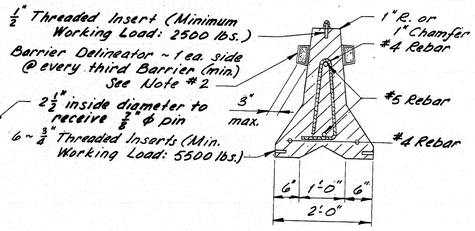
Traced: GMD 10-82
CK LAW 2-83

FINAL SURVEY	SURVEYED		BY	DATE
	PLOTTED			
NOTE BOOK	TABULATE			
	AREAS			
NO	AREAS CHECKED			

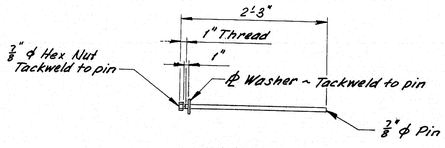
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	26	32



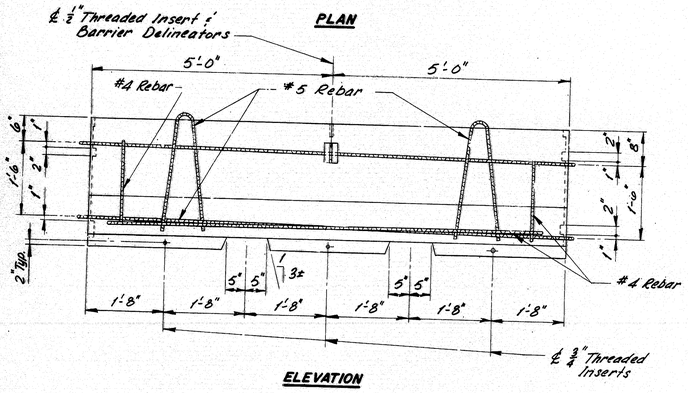
PLAN



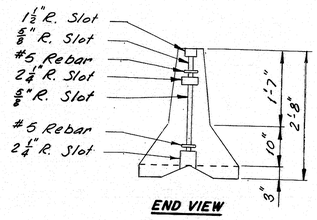
TYPICAL SECTION



CONNECTING PIN



ELEVATION

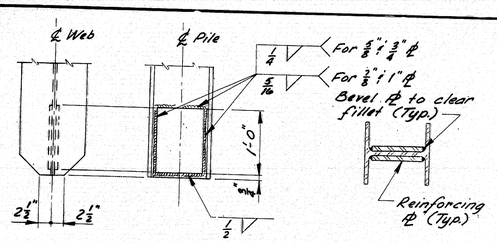


END VIEW

NOTES:

1. The reinforcing steel, end connections, lifting arrangement, and sizes and locations of hold-down inserts are advisory only. It shall be the Contractor's responsibility to provide adequate reinforcing, end connections, lifting points, and hold-down arrangements.
2. Barrier Delineators shall be bi-directional with a minimum effective reflex area of 8.0 square inches as approved by the Engineer. The Reflector shall preferably be of Methyl Methacrylate, and the Housing of Acrylonitrile Butadiene Styrene.

TEMPORARY CONCRETE BARRIER - TYPE 1

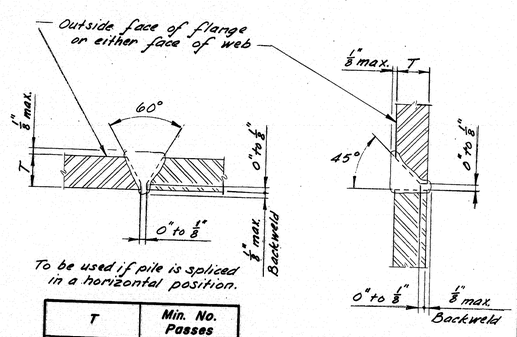


Pile Size	Reinf. ℄ Size
HP 10 x 42	8 3/4" x 5/8" x 1'-0"
HP 10 x 57	8 3/4" x 7/8" x 1'-0"
HP 12 x 53	10 3/4" x 5/8" x 1'-0"
HP 12 x 63	10 3/4" x 3/4" x 1'-0"
HP 12 x 74	10 3/4" x 7/8" x 1'-0"
HP 14 x 73	12 1/4" x 1/2" x 1'-0"
HP 14 x 89	12 1/4" x 1" x 1'-0"

NOTES:

1. 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.
2. Plates may be shop or field welded.
3. Use Manual Shielded Metal-Arc Process and 6010, 6011, or 6012 electrodes, unless a different process has been approved by the Engineer.
4. Electrodes shall be dry when used, in accordance with the provisions of A.W.S. Spec. D1.1, as amended by AASHTO.

POINTED REINFORCED PILE TIP

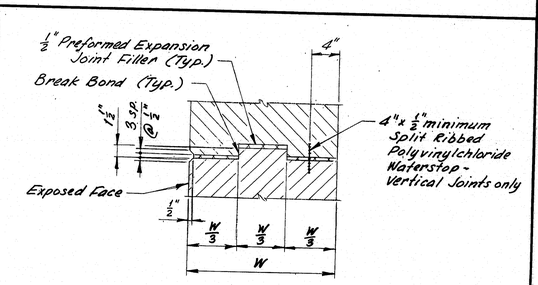


T	Min. No. Passes
7/16	3
1/2 > 7/8 > 5/8	4
11/16 > 13/16	5

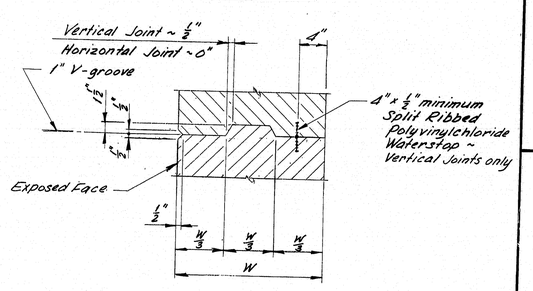
NOTES:

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

PILE SPLICE

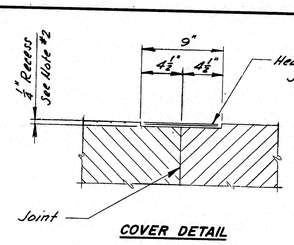


EXPANSION JOINT



CONSTRUCTION OR CONTRACTION JOINTS

CONCRETE JOINTS



COVER DETAIL

NOTES:

1. Where called for, cover horizontal and vertical construction, contraction, or expansion joints with two (2) 9" wide layers of heavy roofing felt. Coat the concrete and back of each layer as applied with plastic roofing cement.
2. Recess the covered area 1/4" unless otherwise indicated on Design Drawings.

CONCRETE JOINT COVER

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

BRUNING 44-132 45710

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

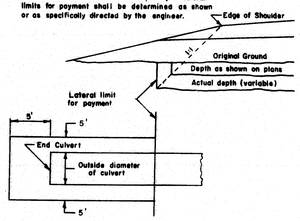
STANDARD DETAILS
(BD 127-81)

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

183-108

SHEET 26 OF 32 AUGUSTA, MAINE JUNE 1981

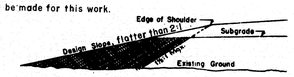
NOTE:
When muck is excavated to a depth greater or less than what is shown on the plans, the lateral limits for payment shall be determined as shown or as specifically directed by the engineer.



Excavation for pipe culverts in grubbing and muck areas. Pay Earth Excav. or Muck Excav. as designated.

MUCK EXCAVATION PAY LIMITS

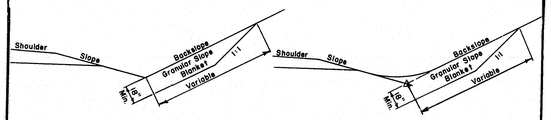
When directed by the engineer, waste material shall be used in this area, except that waste shall not be placed in fills designed with slopes of 2:1 or less. No additional payment will be made for this work.



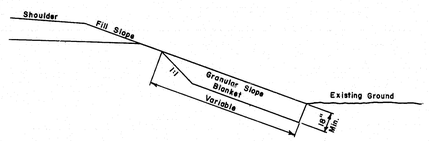
DISPOSAL OF WASTE MATERIALS
(Waste Storage Area)

MUCK EXCAVATION AND WASTE DISPOSAL
SPECIFICATION SECTION 203

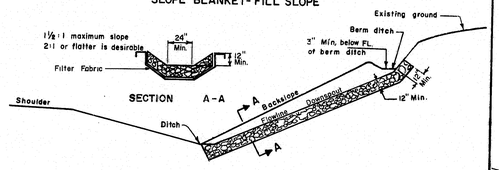
A



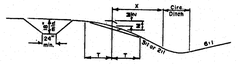
SLOPE BLANKET - BACKSLOPE



SLOPE BLANKET - FILL SLOPE



HAND LAID RIP RAP DOWNSPOUT



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.

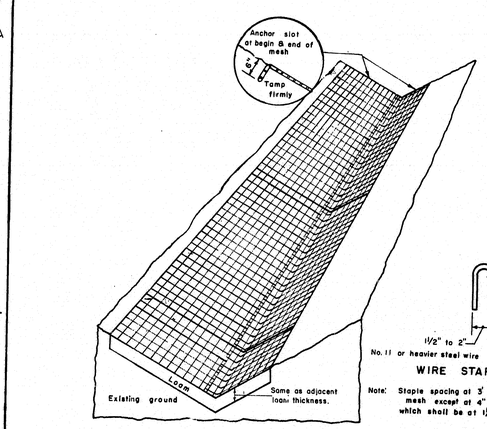
Where "X" = 5 or less, "T" = X, otherwise "T" = 5. To avoid property damage and to save shade trees, this formula may be modified by the engineer.

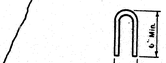
For all sections, depth of ditch depends on local conditions.

BERM DITCH
SPECIFICATION SECTIONS 203 & 616

DITCHES AND SLOPES

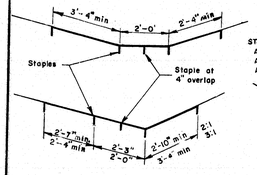
B

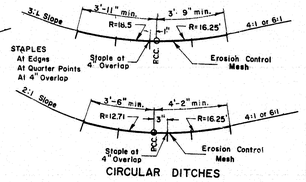




WIRE STAPLE

Note: Staple spacing at 3' ℄ along mesh except at 4" overlap which shall be at 1½' ℄.



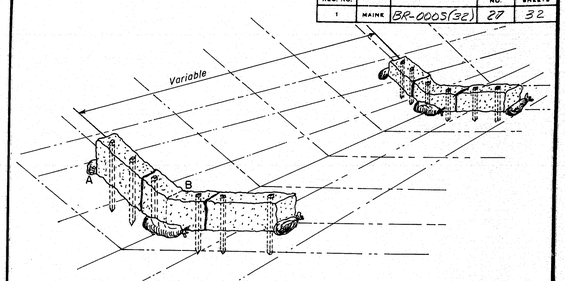


CIRCULAR DITCHES

EROSION CONTROL MESH
SPECIFICATION SECTION 617

C

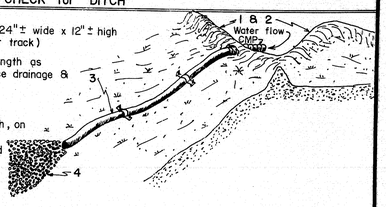
F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	27	32



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 indicated by Engineer.



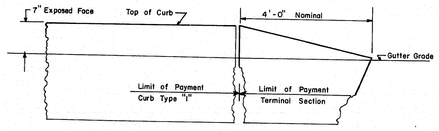
TEMPORARY BERM and SLOPE DRAIN

TEMPORARY EROSION CONTROL
SPECIFICATION SECTION 656

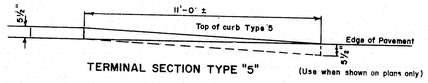
D

CURB TYPES 1 & 5 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

TERMINAL CURB SECTION



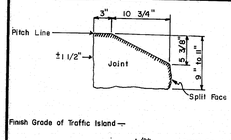
TERMINAL SECTION TYPE "1"



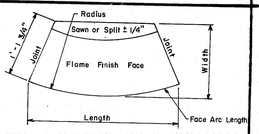
TERMINAL SECTION TYPE "5" (Use when shown on plans only)

SPECIFICATION SECTION 609

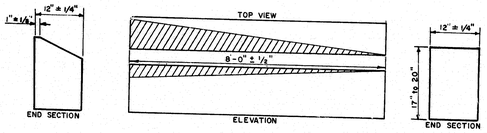
E



CURB TYPE "5"



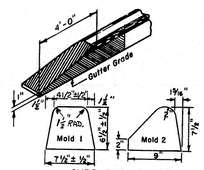
Approved Alternate Circular Curb
Type 5
2'-0" to 8'-0" Radius



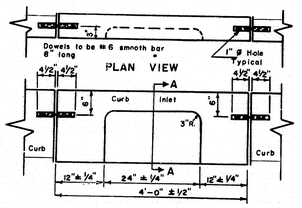
TRANSITION SECTION "C"
Curb type "5" to sloped type "1"

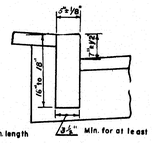
CURB TRANSITION
SPECIFICATION SECTION 609

F

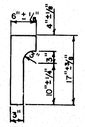


CURB TYPE 3 & 3A





VERTICAL CURB TYPE "1" & "2"

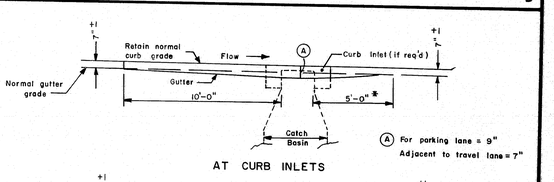


SECTION A-A

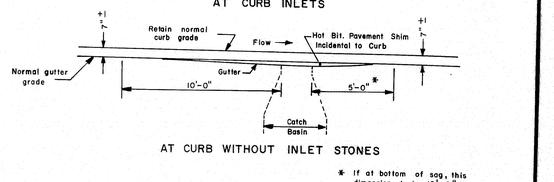
SPECIFICATION SECTION 609

CURB

G



AT CURB INLETS



AT CURB WITHOUT INLET STONES

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

NOTE: Cascade grates shall be installed on gradient of the gutter. The grates shall be depressed 2" below the normal gutter grade unless this depression interferes with traffic. Parallel bar grates shall be installed on a level gradient. Dimensions are intended to be nominal.

GUTTER GRADE TRANSITION AT CATCH BASIN

H

REVISIONS Description	APPROVED Me. DOT	APPROVED FHWA
Original Plan	Nov. 1980	Sept. 10, 1981
Added Plate H	Mar. 1981	
Revised Plate A	Dec. 1981	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
CURB, DITCHES AND SLOPES
EROSION CONTROL
MUCK EXCAVATION AND
WASTE DISPOSAL

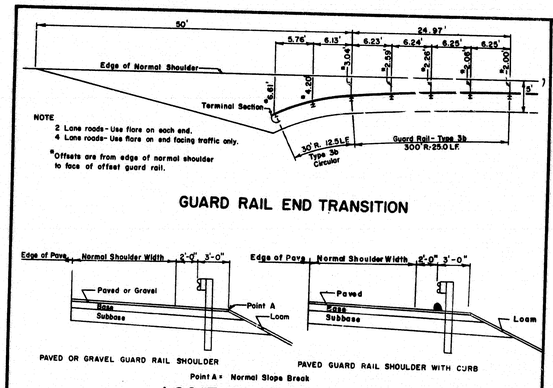
183-109 AUGUSTA, MAINE

4

JANUARY 1988

203-1 2000

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	28	32



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

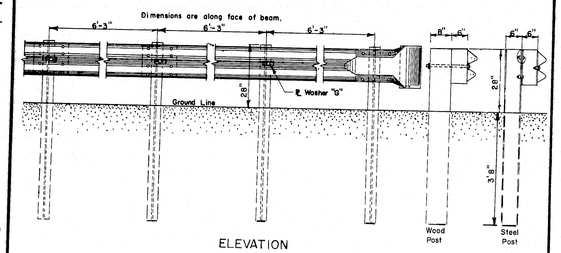
PAVED OR GRAVEL GUARD RAIL SHOULDER

PAVED GUARD RAIL SHOULDER WITH CURB

Point A = Normal Slope Break

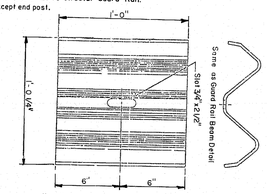
LOCATION OF GUARD RAIL

A



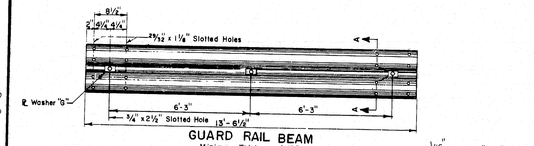
ELEVATION

1. Intermediate post spacing shall be 6'-3" unless otherwise shown.
2. Wood posts for Guard Rail shall be 6"x8" and offset blocks for type "3a" Guard Rail shall be 6"x6".
3. Steel posts and offset brackets for Guard Rail shall be W6X8.5 or W6x9.0.
4. 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.
5. "W" Beam Back up Plates shall be placed behind rail elments at intermediate steel posts (non splice posts)
6. Beam Type Guard Rail set on radius of 150' or less shall be Circular Guard Rail.
7. Offset Bracket shall be installed on all posts, except end post.

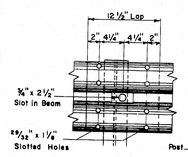


"W" Beam Backup Plate
RE-4-76
For use at steel post only See Note 5 above

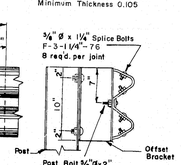
B



GUARD RAIL BEAM
Minimum Thickness 0.105

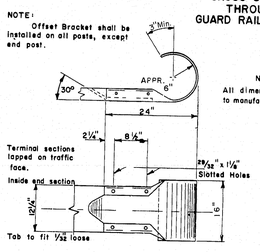


GUARD RAIL SPLICE AT POST



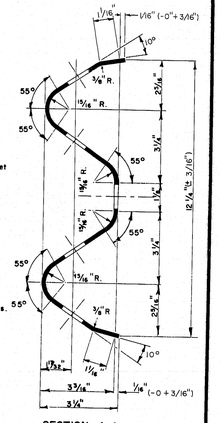
CROSS SECTION THROUGH GUARD RAIL SPLICE

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



GUARD RAIL - TERMINAL END SECTION
RE-6-79

NOTE
All dimensions subject to manufacturing tolerances.

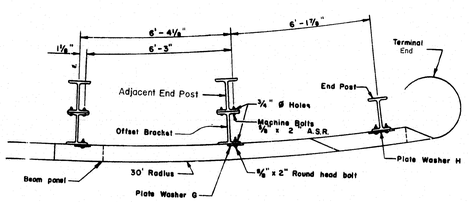


SECTION A-A

GUARD RAIL BEAM DETAIL
RE-3-73

C

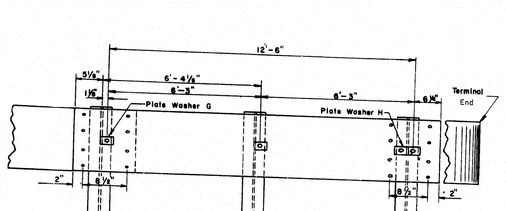
D



PLAN

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

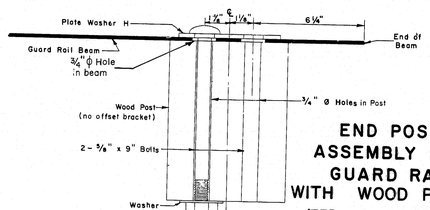
NOTE:
Offset Bracket shall be installed on all posts, except end post.



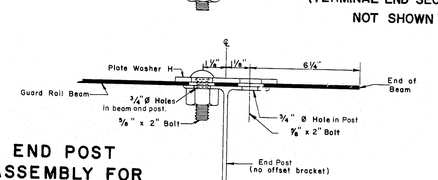
ELEVATION

END BEAM ASSEMBLY - SPACING OF POSTS GUARD RAIL TYPE 3

E

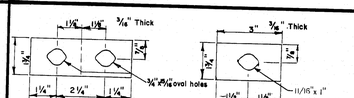


END POST ASSEMBLY FOR GUARD RAIL WITH WOOD POSTS
(TERMINAL END SECTION NOT SHOWN)



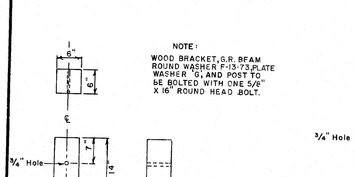
END POST ASSEMBLY FOR GUARD RAIL WITH STEEL POSTS
(TERMINAL END SECTION NOT SHOWN)

F



℄ Washer H

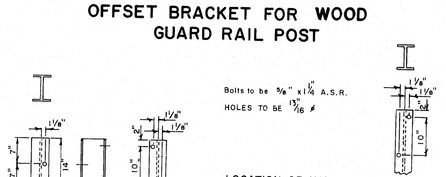
℄ Washer G F-12-73



WOOD BRACKET

LOCATION OF HOLE FOR ATTACHING BRACKET TO WOOD POST

OFFSET BRACKET FOR WOOD GUARD RAIL POST



BRACKET FOR POSTS

LOCATION OF HOLES FOR ATTACHING BRACKET TO STEEL POST

OFFSET BRACKET AND PLATE WASHERS FOR STEEL GUARD RAIL POST

G

NOTE: Identification letters and numbers on drawings refer to the standard detail drawings shown in "A Guide to Standardized Highway Barrier Rail Hardware" by AASHTO - AGC - ARTBA Joint Cooperative Committee.

H

REVISIONS Description	APPROVAL Me. DOT	APPROVAL FHWA
Original Plan	Nov. 1980	
Guard Rail Beam Det. B,C	Jan. 1981	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS

TYPE 3 GUARD RAIL

183-110

SPECIFICATION SECTION 606

AUGUSTA, MAINE

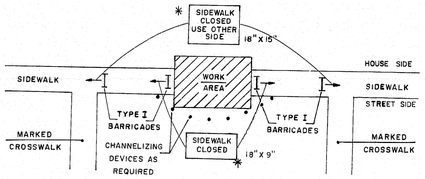
6

JANUARY 1980

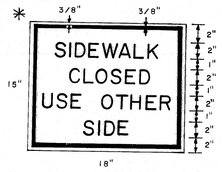
803-1 8000

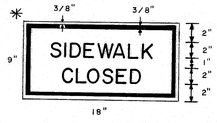
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	29	32

* NON-REFLECTORIZED WHITE BACKGROUND, BLACK TEXT AND BORDER-2" SERIES 'C' UPPER CASE LETTERS



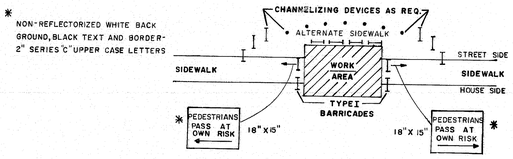
SIDEWALK CLOSURE
WITHOUT ALTERNATE SIDEWALK



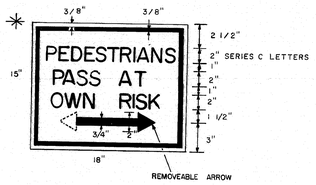


A

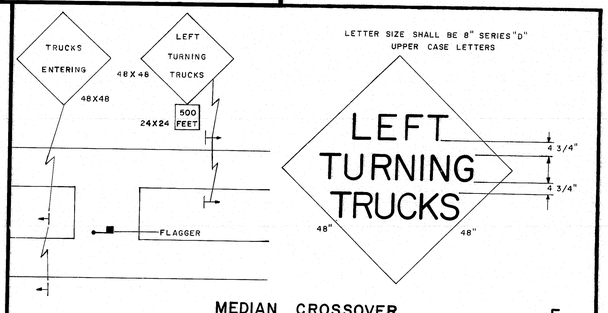
* NON-REFLECTORIZED WHITE BACKGROUND, BLACK TEXT AND BORDER-2" SERIES 'C' UPPER CASE LETTERS



SIDEWALK CLOSURE
WITH ALTERNATE SIDEWALK



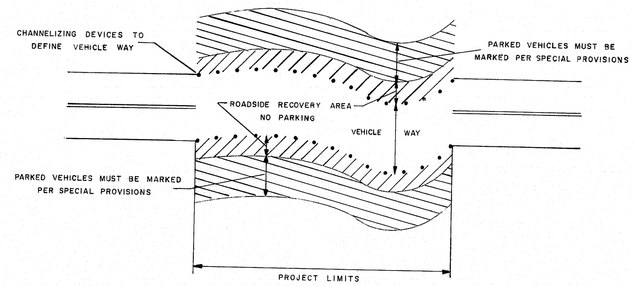
B



MEDIAN CROSSOVER

E

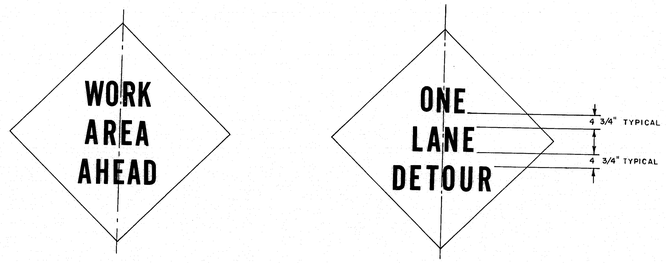
ALL DIMENSIONS AND OTHER REQUIREMENTS AS SPECIFIED IN THE SPECIAL PROVISIONS



ROADSIDE RECOVERY AREA

C

CONSTRUCTION WARNING SIGN DETAIL



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

D

GENERAL NOTES

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

   If S is equal to or less than 40 MPH
   $L = (W \times S \times S) / 60$

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

   Where:

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

   Taper lengths shall be rounded to the nearest five feet.

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

6. The maximum longitudinal spacing of channelizing devices shall conform to the following:
   (a) 50 feet through work areas
   (b) A distance in tapers equal to the numerical value of the operating speed, i.e., 45 MPH - 45 feet
   (c) In all areas not covered above maximum spacing shall be as follows:

Radius of curve	Spacing
50' to 300'	25'
301' to 700'	50'
701' to 1000'	75'
over 1000	5 times the operating speed

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

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

   Where:

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

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

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

REVISIONS		
3-4-80	GENERAL NOTES	
4/3/80 PF	A,B,C,GN	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC IN CONSTRUCTION ZONES

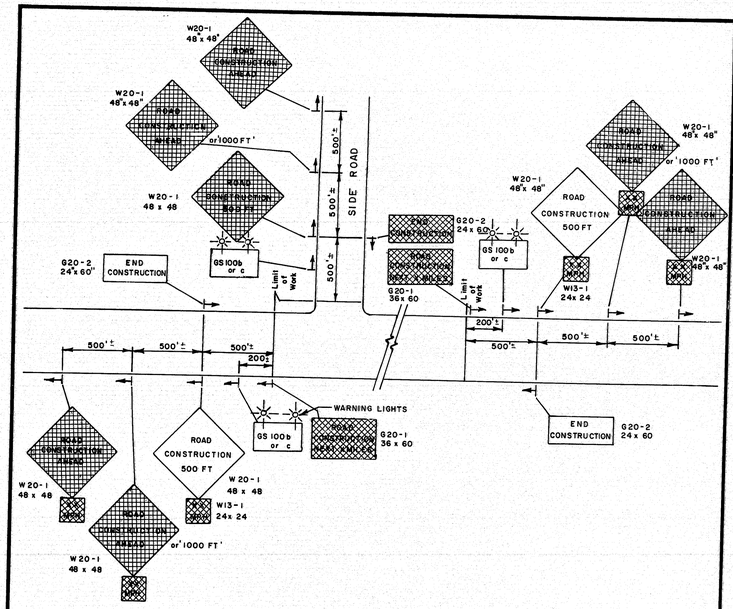
183-111

SHEET 1 OF 3 AUGUSTA, MAINE

JANUARY 1968

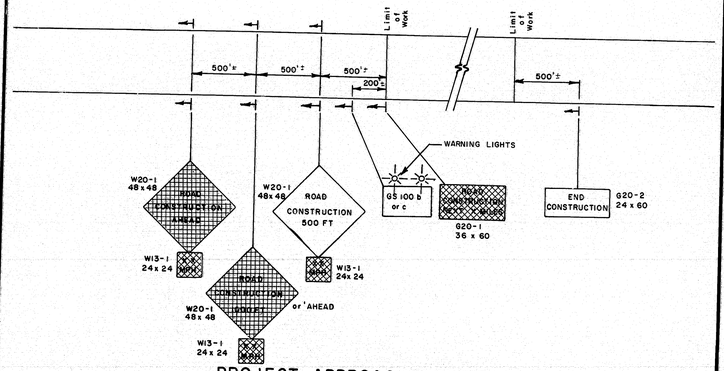
3834 3800

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0003(32)	30	32



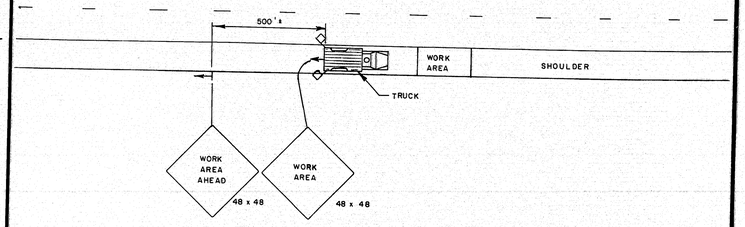
PROJECT APPROACH SIGNING
Two Way Traffic

A



PROJECT APPROACH SIGNING
Expressway

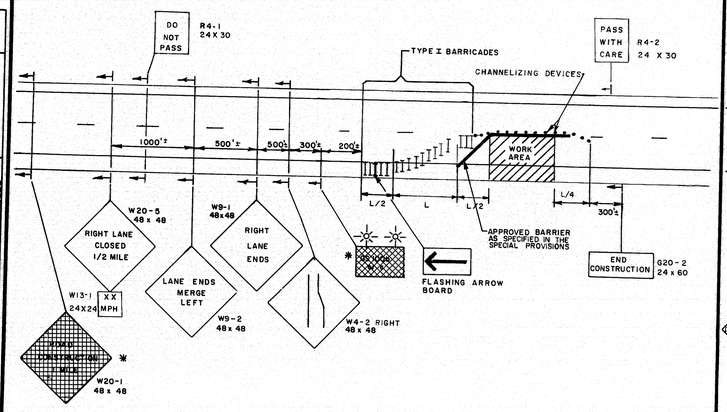
B



SHOULDER WORK - MOBILE

C

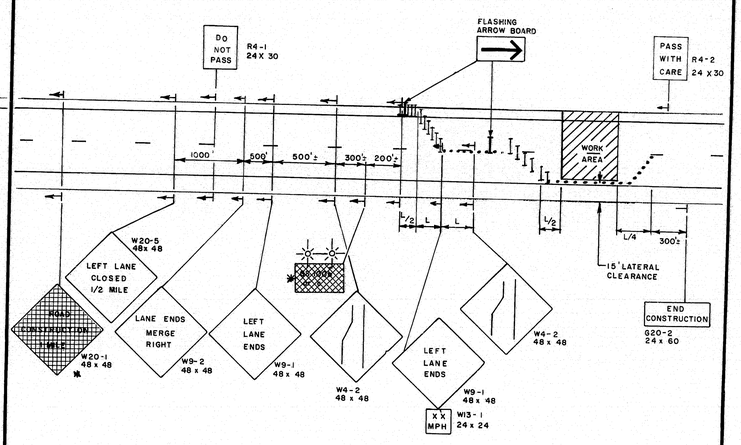
NOTE
* OMIT W20-1 AND GS-100 C OR B IF LANE CLOSURE SIGNING ARRAY IS WITHIN PROJECT LIMITS.
ALTER PAVEMENT MARKINGS AS REQUIRED. MAINTAIN 15 FT LATERAL CLEARANCE.
USE SIMILAR SIGNING FOR LEFT LANE CLOSURE.



EXPRESSWAY LANE CLOSURE

D

NOTE
W20-1 AND GS-100B OR C SHALL BE USED ONLY WHEN THE CLOSURE IS THE ACTUAL CONSTRUCTION PROJECT AND NOT A PART THEREOF.
ALTER PAVEMENT MARKINGS AS NECESSARY.
USE SIMILAR SIGNING FOR RIGHT LANE CLOSURE.



TWO LANE CLOSURE - UTILIZING RIGHT SHOULDER

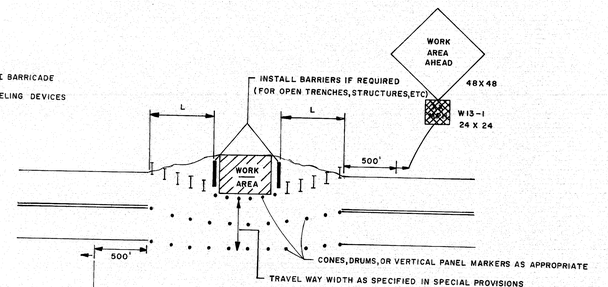
E

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

JANUARY 1968

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

= TYPE I BARRICADE
* = CHANNELING DEVICES



TWO WAY TRAFFIC
MAINTAINED THROUGH WORK AREA

F

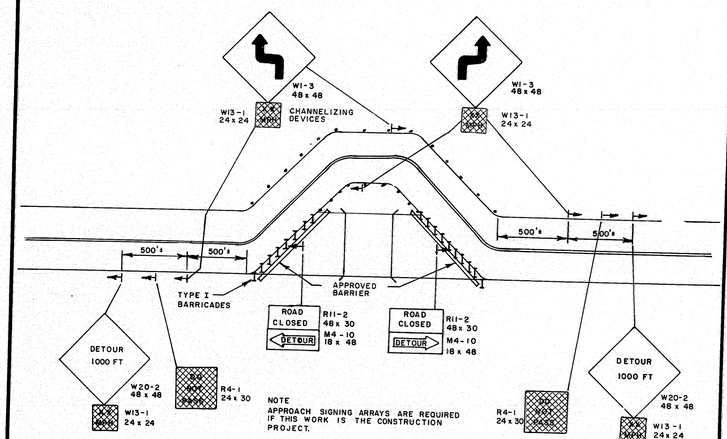
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MAINTENANCE
OF
TRAFFIC
IN CONSTRUCTION ZONES

183-112

SHEET 2 OF 3 AUGUSTA, MAINE JULY, 1979

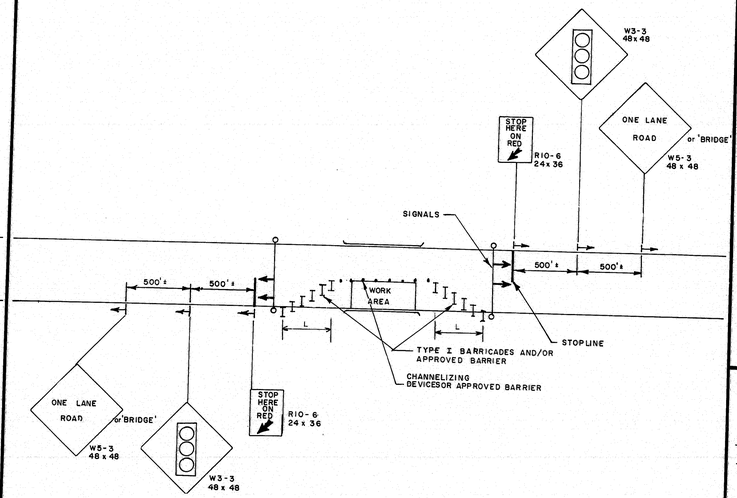
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-0005(32)	31	32



NOTE
APPROACH SIGNING ARRAYS ARE REQUIRED IF THIS WORK IS THE CONSTRUCTION PROJECT.

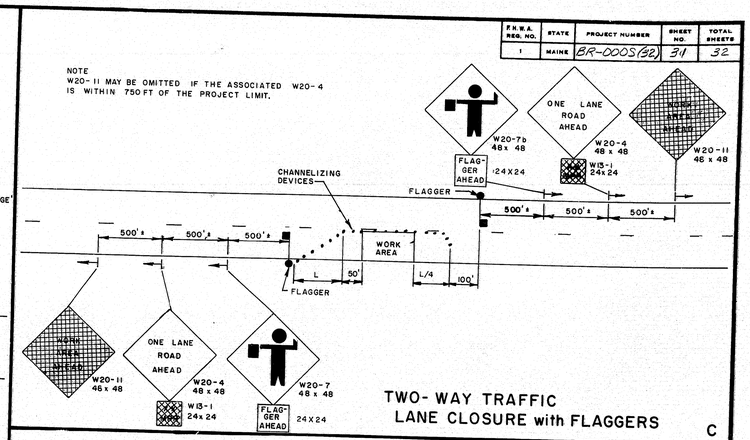
TWO WAY TWO LANE DETOUR

A



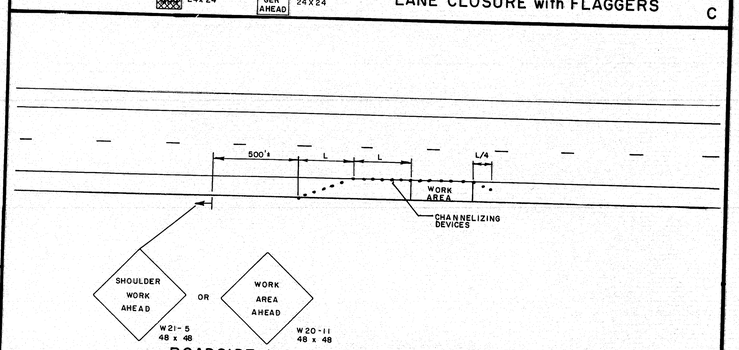
TWO WAY TRAFFIC
LANE CLOSURE
WITH TEMPORARY TRAFFIC SIGNALS

B



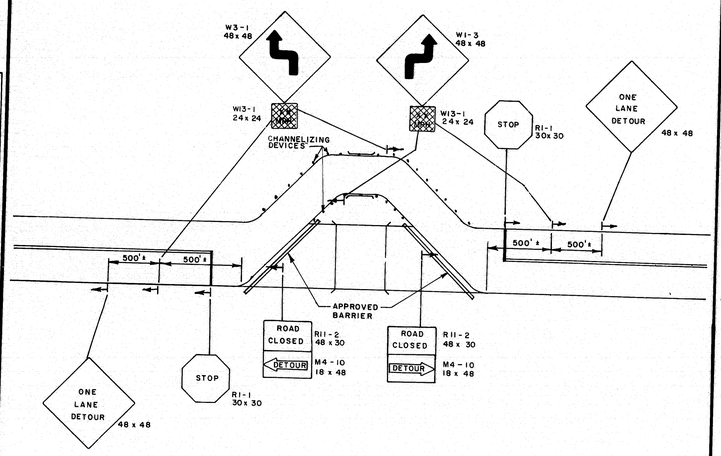
TWO- WAY TRAFFIC
LANE CLOSURE with FLAGGERS

C



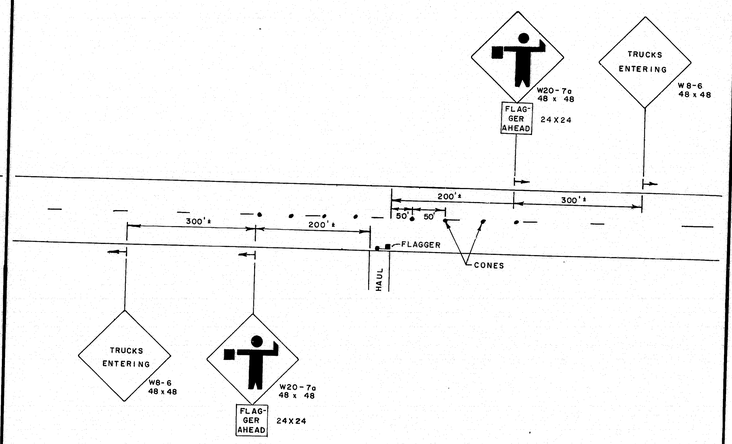
ROADSIDE WORK AREA SIGNING

D



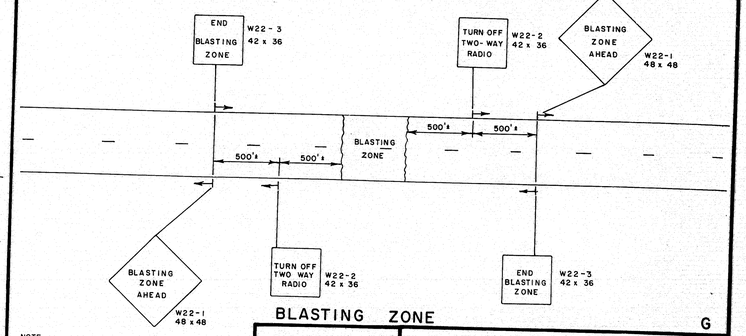
ONE WAY DETOUR

E



HAUL ROADS

F



BLASTING ZONE

G

NOTE
SIMILAR SIGN SEQUENCE SHALL BE ERECTED ON ALL SIDE ROADS WITHIN 1000FT OF THE BLASTING ZONE.

REVISIONS	
4/3/80 PF	B,C,D

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MAINTENANCE
OF
TRAFFIC
IN CONSTRUCTION ZONES

183-113

SHEET 3 OF 3 AUGUSTA, MAINE JULY, 1979

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

JANUARY 1968