



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Inspection Report for
B-03-017

USH 53 NB over AA
Jun 08,2017



Type	Prior	Frequency (mos)	Performed
Routine	06-25-15	24	X
Interim	10-12-12	0	
SIA Review	06-13-13	48	X

Latitude 45°15'26.29"N
Longitude 91°36'40.98"W

Owner STATE HIGHWAY DEPT
Maintainer STATE HIGHWAY DEPT

Time Log

Hours	Minutes
1	0

Team members

wjk

Name	Number	Signature	Date
Inspector Kovalski, William J	8007	<i>William J Kovalski</i> E-signed by Bill(dotwjk)	09-08-17

BRIDGE INSPECTION REPORT
Wisconsin Department of Transportation
DT2007 2003 s.84.17 Wis. Stats.

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Identification & Location

Feature On: USH 53 NB	Section Town Range: S16 T32N R10W	Structure Number: B-03-017
Feature Under: AA	County: BARRON	
Location 4.4M N JCT CTH M TO E	Municipality: DOVRE	Structure Name:

Geometry

measurements in feet, except where noted

Approach Roadway Width: 40	Bridge Roadway Width: 40.0	Total Length: 151.5
Approach Pavement Width: 24	Deck Width: 43.0	Deck Area (sq ft): 6514

Traffic

	Lanes	ADT	ADT year	Traffic Pattern
On	2	5550	2014	ONE WAY TRAFFIC
Under	2	270	2000	TWO WAY TRAFFIC

Capacity

Load Rating

Inventory rating: HS26	Overburden depth (in): 0.0	Last rating date: 08-07-13	Controlling: INTERIOR DECK GIRDER Negative Moment
Operating rating: HS37	Deck surface material: CONCRETE	Re-rate for capacity (Y/N):	Control location: SPAN 1
Posting:	Re-rate notes:		

Hydraulic

Classification

Scour Critical Code(113): (N) NO WATERWAY	Q100 (ft3/sec): 0	
High water elevation (ft): 0.0	Velocity (ft/sec): 0.0	Sufficiency #: 99.7

Span(s)

Span #	Material	Configuration	Depth (in)	Length (ft)	Main
1	CONT PREST CONC	DECK GIRDER	45	40.0	
2	CONT PREST CONC	DECK GIRDER	45	67.0	Y
3	CONT PREST CONC	DECK GIRDER	45	40.0	

Expansion joint(s)

Temperature:

File:	New:
-------	------

Clearance

Item	File Measurement (ft)	File Date	New Measurement (ft)
Highway Min Vertical Under Cardinal	14.97	06-Jul-2015	
Highway Min Vertical Under Non-Cardinal			
Horizontal Under Cardinal	50.8		
Horizontal Under Non-Cardinal			
Highway Min Vertical On Cardinal			
Horizontal On Cardinal			

Construction History

Year	Work Performed	FOS id
1991	NEW DECK	1190-16-71
1972	NEW STRUCTURE	1196-06-76

Maintenance Items

Item	Priority	Recommended by	Status	Status change
Deck - Surface Repair Spalls	HIGH	Kurtz, William G (8008)	IDENTIFIED	07/02/15
Repair SPL in Wearing Surface (10SF).				
Approach - Repair Approaches	HIGH	Kurtz, William G (8008)	IDENTIFIED	07/02/15
Repair N & S APPR.				
Substructure - Other Work	MEDIUM	Kurtz, William G (8008)	IDENTIFIED	07/02/15
Seal columns.				
Substructure - Repair Abutment / Wings	MEDIUM	Kurtz, William G (8008)	IDENTIFIED	07/02/15
Repair SPL on ABUTs (3SF).				
Misc - Wash Bridge	LOW	Kurtz, William G (8008)	IDENTIFIED	07/02/15
Power wash structure to remove swallow nests.				

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Structure No.: **B-03-017**

Elements

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State			
						1	2	3	4
X	12		Reinforced Concrete Deck-Coated Reinforcing	SF	6,515	6,391	124	0	0
		1130	Cracking (RC) See 2015 notes.	SF		0	124	0	0
	8000		Wearing Surface (Bare) Scaled shoulder east side	SF	6,515	6,375	130	10	0
		3210	Debonding/Spall/Patched Area/Pothole S JT SPL CS3 10SF. DELAM CS2 65SF.	SF		0	65	10	0
		3220	Crack (Wearing Surface) CRK CS2 65SF.	SF		6,375	65	0	0
X	109		Prestressed Concrete Open Girder	LF	606	606	0	0	0
X	205		Reinforced Concrete Column	EA	6	6	0	0	0
X	215		Reinforced Concrete Abutment	LF	98	90	5	3	0
			Discoloration but no cracks. S abut. wet with flowing water. Settlement 18" S abut. Crack at SE wing dry 2011 Wet S abut ; Dry N abut 2013. S ABUT WET.						
		1080	Delamination - Spall - Patched Area S ABUT W SPL CS3 1LF G2 SPL CS2 1LF E SPL CS3 1LF. N ABUT G2 SPL CS3 1LF.	LF		0	1	3	0
		1130	Cracking (RC) S ABUT C/L BAY2 CRK CS2 1LF. N ABUT G1 CRK CS2 1LF G2 CRK CS2 1LF G3 CRK CS2 1LF.	LF		0	4	0	0
X	234		Reinforced Concrete Cap	LF	91	91	0	0	0
X	300		Strip Seal Expansion Joint	LF	52	52	0	0	0
X	311		Moveable Bearing	EA	12	8	4	0	0
			Exterior bearings have some rust.						
		1000	Corrosion N abutment med rust.	EA		8	4	0	0
X	331		Reinforced Concrete Bridge Rail	LF	341	296	45	0	0
		1130	Cracking (RC) 6/25/2015 W RAIL CRK CS2 15LF. 6/25/2015 E RAIL CRK CS2 30LF.	LF		0	45	0	0
X	8400		Integral Wingwall	EA	4	3	1	0	0
		8902	Wall Movement SW WWALL 1/2" OUT 0" DOWN.	EA		0	1	0	0

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Structure No.: **B-03-017**

Assessments

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State			
						1	2	3	4
X	9001		Drainage - Approach	EA	4	4	0	0	0
X	9030		Signs - Object Markers	EA	2	2	0	0	0
X	9043		Slope Protection- Crushed Aggregate with Bit. 6/25/2015 GOOD CONDITION.	EA	2	2	0	0	0
X	9168		Concrete Diaphragm Diaphragm over P2 N side Bay 1-2 spall corner	EA	15	14	1	0	0
X	9322		Approach Roadway - Concrete (non-structural) Some cracking and settlement filled w asphalt.	EA	2	0	2	0	0

NBI Ratings

	File	New
Deck	7	7
Superstructure	7	7
Substructure	7	7
Culvert	N	N
Channel	N	N
Waterway	N	N

Structure Specific Notes

OLD: Overall, condition of stucture is VG. North abutment bearings require cleaning/painting. (99) Spalling on inside shoulder, southhalf of deck. structure is in very good overall condition.
(01) Structure is in very good condition. Deck has extensive surface cracks and should be sealed. Joints at Approach slabs should be sealed with flowable joint sealer. There is a washout behind NE wingwall that needs to be repaired.

Inspection Specific Notes

OLD: CTH AA under has new asplatic surface resulting in a new clearance measurement October 12" 2012.

Inspector Site-Specific Safety Considerations

Structure Inspection Procedures

Walk-thru

Special Requirements

Chk Hours Cost Comments

Routine
Document Comment/Description
Pier 2 - deck cracking



Routine
Document Comment/Description

North approach and joint.



STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-03-017
USH 53 NB over AA

LOCATION

(3) Municipality:
 (16) Latitude(° ' "):
 (17) Longitude(° ' "):

DOVRE
45°15'26.29"N
91°36'40.98"W

TRAFFIC SERVICE

(28A) Lanes On:
 (28B) Lanes Under:
 (102) Traffic Pattern On:
 (102) Traffic Pattern Under:
 (19) Detour Length(mi):

2
2
-NO TRAFFIC <input checked="" type="checkbox"/> ONE WAY TRAFFIC -TWO WAY TRAFFIC
-NO TRAFFIC -ONE WAY TRAFFIC <input checked="" type="checkbox"/> TWO WAY TRAFFIC
1

GEOMETRY

(49) Structure Length(ft):
 (50) Sidewalk Width(ft):
 (50) Curb Width(ft):
 (52) Culvert Barrel Length(ft):
 (34) Skew:
 (51) Bridge Roadway Width(ft):
 (52) Deck Width(ft):
 Right Wingwall Length(ft):
 Left Wingwall Length(ft):
 (32) Approach Roadway Width(ft):
 (47) Minimum Horizontal(ft):
 (55) Minimum Right Lateral(ft):
 (56) Minimum Left Lateral(ft):

151.5	
Left: 0.0	Right: 0.0
3.0	
Angle(°): 37	Direction: -RIGHT FORWARD <input checked="" type="checkbox"/> LEFT FORWARD
Cardinal	Non-Cardinal
40.0	40.0
43.0	43.0
40	0
Cardinal Under Clearance	Non-Cardinal Under Clearance
50.8	
14.4	
14.4	

RAILING APPRAISAL

(36A) Bridge Rail Adequacy:
 (36B) Transition Adequacy:
 (36C) Approach Guardrail Adequacy:
 (36D) Guardrail Termination Adequacy:
 Outer Rail:

-SUB-STANDARD X-STANDARD -NOT APPLICABLE		
-SUB-STANDARD X-STANDARD -NOT APPLICABLE		
-SUB-STANDARD X-STANDARD -NOT APPLICABLE		
-SUB-STANDARD X-STANDARD -NOT APPLICABLE		
Left	Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
		SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
X	X	OTHER(99) (Please specify) Left: NJ SLOPING PARAPET(61) Right: NJ SLOPING PARAPET(61)
		CONT GUARD RAIL
		NO APP GRDRL
		NO ATTACHMENT
5		22 MM(7/8") BOLT (Please enter quantity)
		25 MM(1") BOLT (Please enter quantity)
		OTHER (Please specify)
X		(01) ENERGY ABSORBING TERMINAL/EAT
		(02) TURN DOWN
		(99) OTHER (Please specify)

Transition Type:

Approach Attachment Rail Note:
 Guardrail Termination Type:

Guardrail Termination Note:

ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:

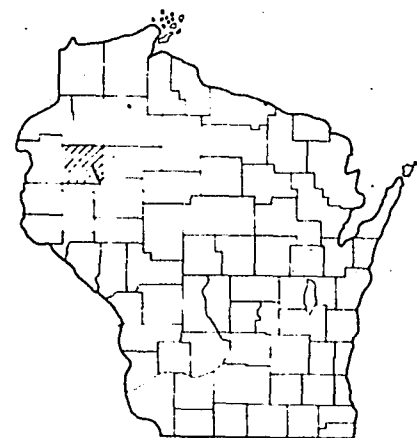
	3 Intolerable- Substantial speed reduction
	6 Fair- Minor speed reduction
X	8 Good- No speed reduction

AS BUILT

Sheet Number	Total Sheets
1	296

Index of Sheets

Sheet No. 1	Title
Sheet No. 2-2.10	Typical Cross Sections
Sheet No. 3-3.2	Estimate of Quantities
Sheet No. 3A-31	Miscellaneous Quantities
Sheet No. 4-4.6	Right of Way Plat
Sheet No. 5-26	Plan and Profile Sta. 0 + 18.72 to Sta.
Sheet No. 27-27.15	Standard Details
Sheet No. 28-107	Drainage Structures
Sheet No. 108-296	Cross Sections



Design Designation

CONTROL OF ACCESS = FULL	
A.D.T. 1980	= 5300
A.D.T. 2000	= 8400
D.H.V.	= 1260
D.	= 50-50
TRUCKS	= 11.3% ADT
V.	= 80 M.P.H.

Conventional Signs

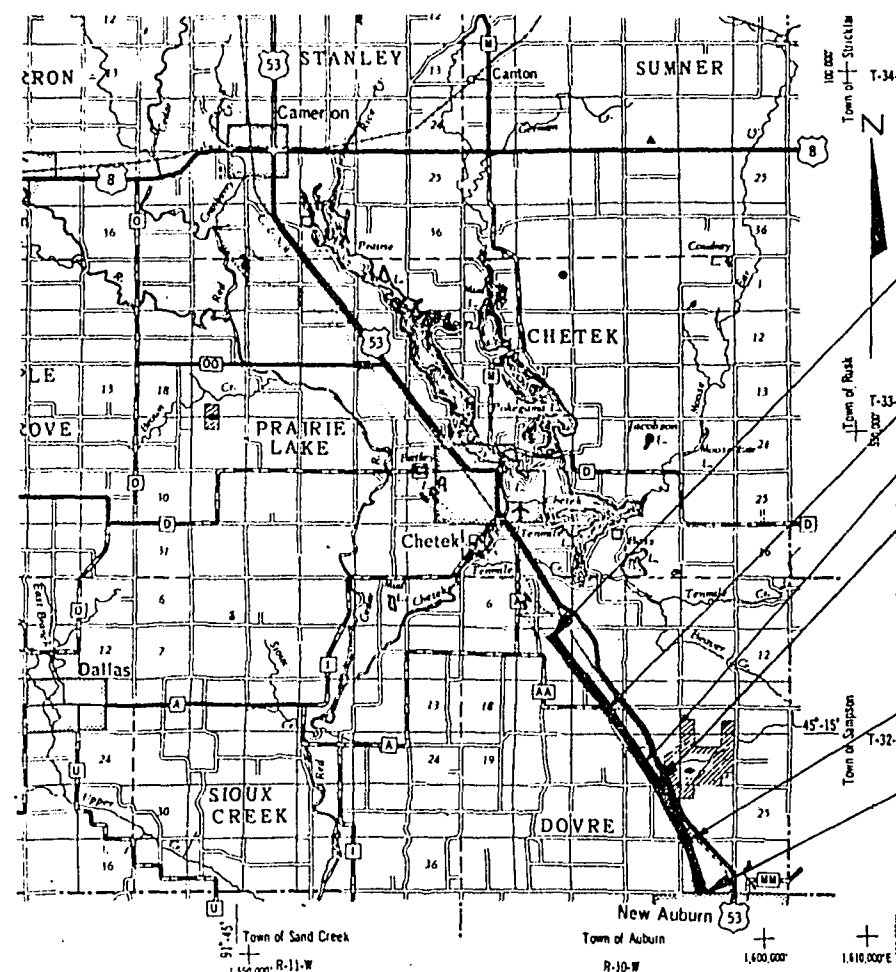
State Line	---
County Line	---
Township or Range Line	---
Section Line	---
New Right of Way Line	---
Present Right of Way Line	---
Wire Fence	{ Woven Barbed }
Lot Line	---
Corporate or City Limits	---
Property Line	---
Traveled Way or P.E.	---
Railroads	---
Base or Survey Line	---

Culverts in Place	---
Culverts Required	---
Drop Inlet	---
Power Pole	---
Telephone or Telegraph Pole	---
Right of Way Markers	---
Reference Stake for Hubs Only	---
Marsh	---
Hedge	---
Trees	---
Ground Elevation	Datum Line 73.9
Grade Elevation	Datum Line 76.15

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLAN AND PROFILE OF PROPOSED NEW AUBURN - U.S.H. 8 ROAD So. Co. LINE-C.T.H. "A" U.S.H. 53 BARRON COUNTY

FEDERAL IDENTIFICATION NUMBER	FEDERAL PROJECT DESIGNATION
1196-6-72	EMP F08-4(36)

Scales
Plan 1 in. = 100 ft.
Profile Hor. 1 in. = 100 ft. Vert. 1 in. = 10 ft.
Cross Sections Hor. 1 in. = 10 ft. Vert. 1 in. = 10 ft.



END PROJECT 1196-6-76 / EMP F08-4(36)

STA. 290+00 N.B. R.
* N = 40,942.678
* E = 2,066,583.314
APPROX. 1200' S. 8° 14' 30" W. OF N.E. COR., SEC. 8, T-32-N, R-10-W

B-3-16 AND B-3-17

PROJECT 1196-6-72

B-3-32 AND B-3-33
PROJECT 1196-6-72

END PROJECT 1196-6-71 (CONTRACT 1) BEGIN PROJECT 1196-6-76 (CONTRACT 3)

STA. 120+50 N.B. R.
* N = 26,859.460
* E = 2,075,115.519
APPROX. 400' S. 8° 31' 75" W. OF THE S.W. 1/4 SEC. 27
T 33 N, R 10 W

B-3-14 AND B-3-15

PROJECT 1196-6-72

BEGIN PROJECT 1196-6-71 / EMP F08-4(36)

STA. 0+18.72 N.B. R.
* N = 20,432.168
* E = 2,079,997.887
428.12' W. OF THE S. 1/4 COR., SEC. 35,
T 32 N, R 10 W

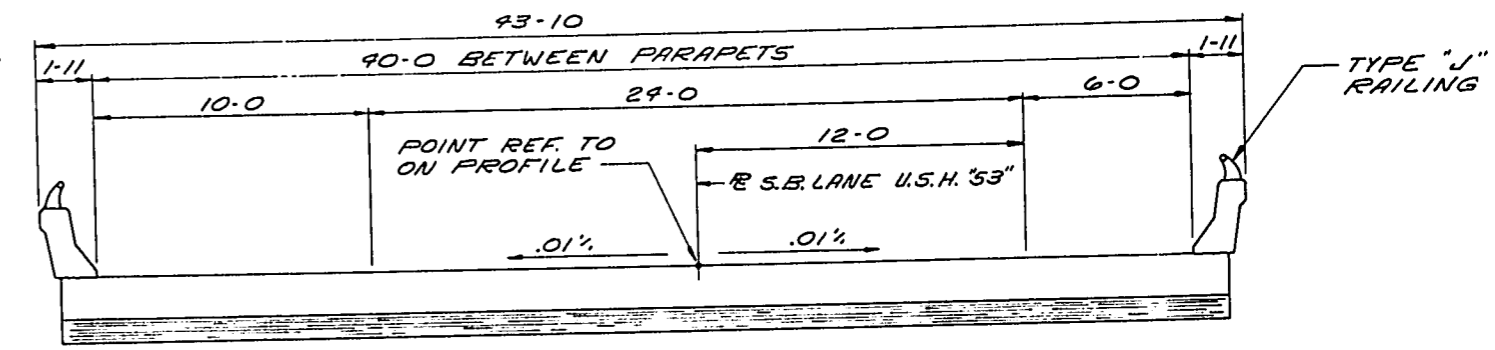
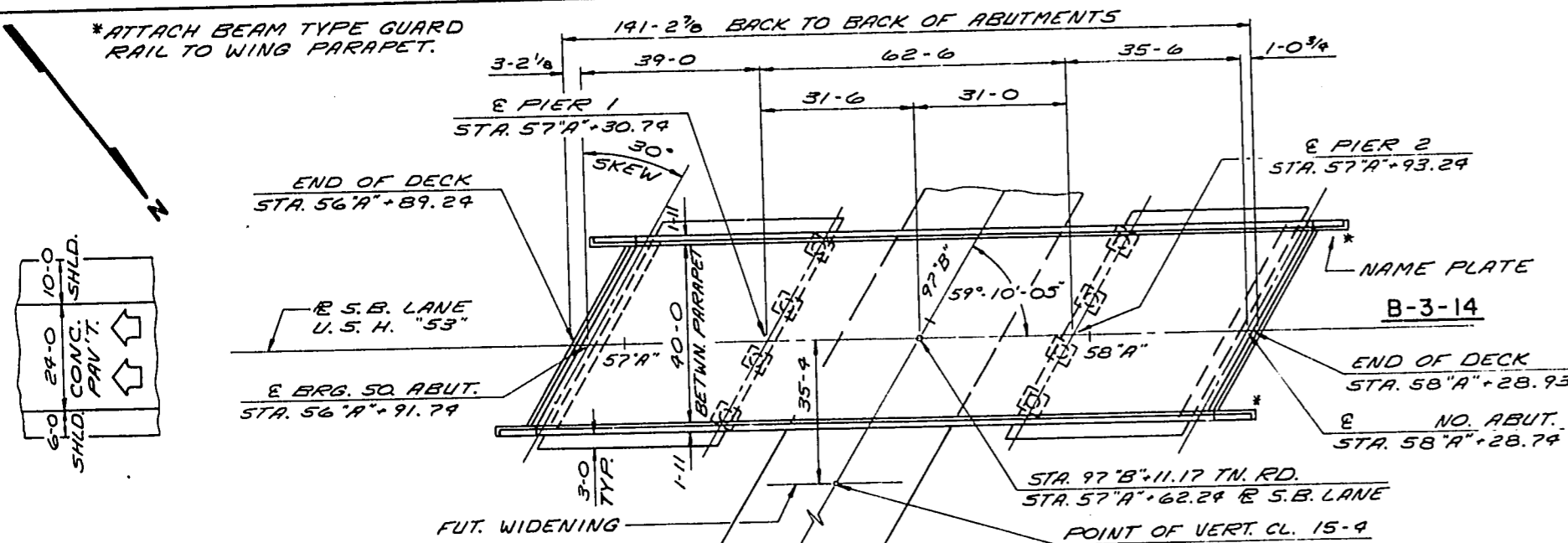
CONTROL OF ACCESS
WITHIN THE LIMITS OF THE PROJECT WHERE
CONTROL OF ACCESS IS SHOWN THUS, TTTT
NO ACCESS IS PERMITTED TO U.S.H. 53
TRAFFIC LANES EXCEPT BY RAMPS AT
INTERCHANGES.

* CENTRAL ZONE COORDINATES

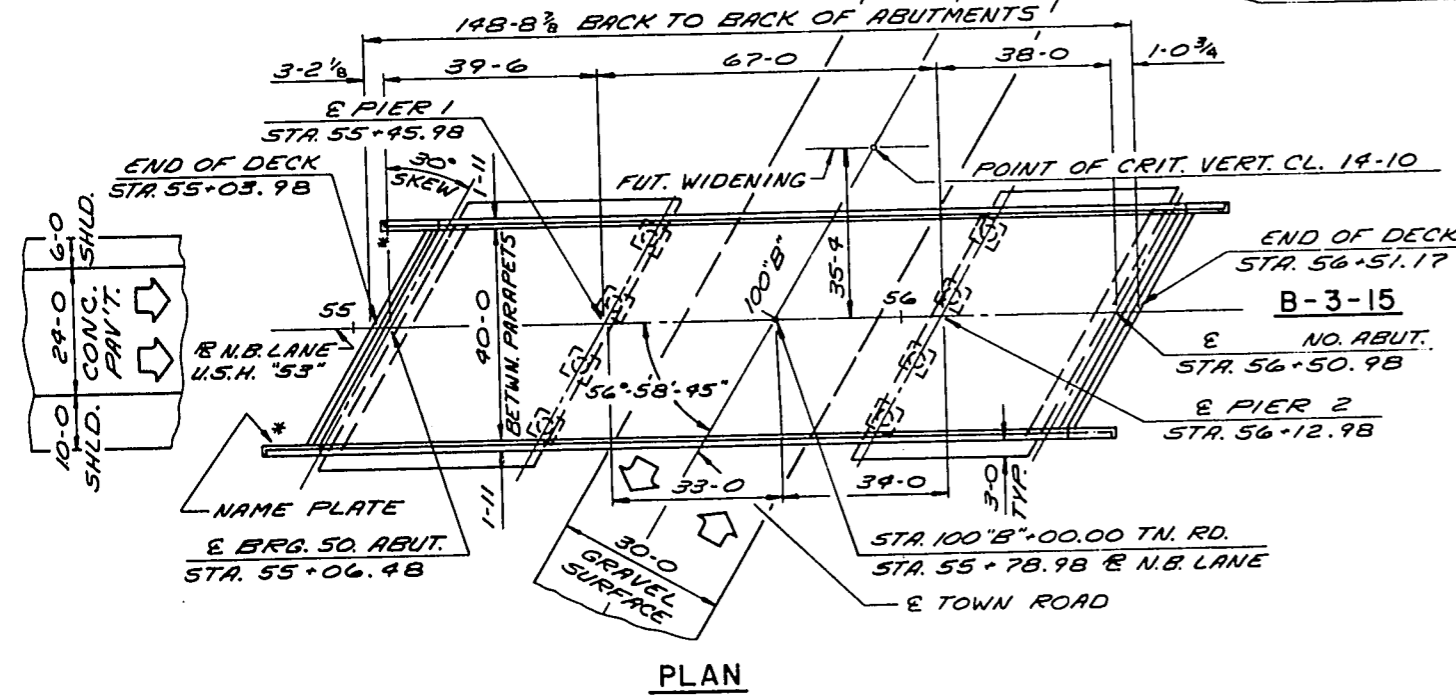
Layout	
Scale	MILES
0	1 2
Net Length of Centerline	= 2.278 Mi. Contract 1
" " " "	= 3.211 " " 3
TOTAL	" " " " = 5.489 " " "

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	
Surveyor DIST. # 8	Note Book
District Computer N.B.	M.O. Checker L.L.J.
District Checker B.J.F.	Correct
Correct:	
Date 11/26/71	T.R. Kinsley District Engineer
Recommended for Approval:	
Date 12/6/71	J.C. Henned Chief Design Engineer
Approved:	
Date 12/7/71	W.J. Burmeister State Highway Engineer
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION BUREAU OF PUBLIC ROADS	
Approved:	
Date	Project Engineer

EMP F08-4(36)



CROSS SECTION THRU ROADWAY
3 SPAN HAUNCHED SLAB (LOOKING NORTH)



DESIGN DATA

LIVE LOAD: HS 20

ALLOWABLE DESIGN STRESSES:

CONCRETE MASONRY, GRADE "AA" $f_c = 1,900$ P.S.I.

BAR STEEL REINFORCEMENT $f_s = 20,000$ P.S.I.

FOUNDATION DATA:

ABUTMENTS AND PIERS TO BE SUPPORTED ON CAST-IN-PLACE CONCRETE PILING 10 3/4" ϕ . DRIVE TO A MIN. BRG. VALUE OF 20 T/PILE, 55-0 EST. LENGTH AT SOUTH ABUT., 20 T/PILE, 55-0 EST. LENGTH AT NORTH ABUT., AND 55 T/PILE, 55-0 EST. LENGTH AT THE PIERS.

TRAFFIC VOLUME:

U.S.H. "53" _____

D.H.V. _____ 5300 (1980)

R.D.S. _____ 80 M.P.H.

TOWN ROAD _____

A.D.T. _____ 100 (2000)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

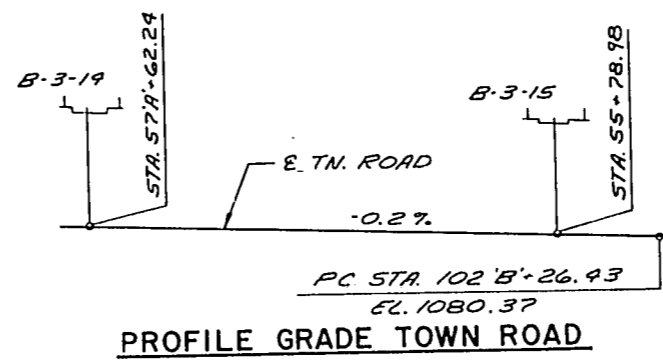
THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING, CRUSHED AGGREGATE TO THE EXTENT SHOWN ON THIS SHEET AND IN THE ABUTMENT DETAILS.

THE FINISHED GRADED SECTION WAS USED AS THE UPPER LIMITS OF EXCAVATION FOR COMPUTATION OF EXCAVATION AT THE PIERS.

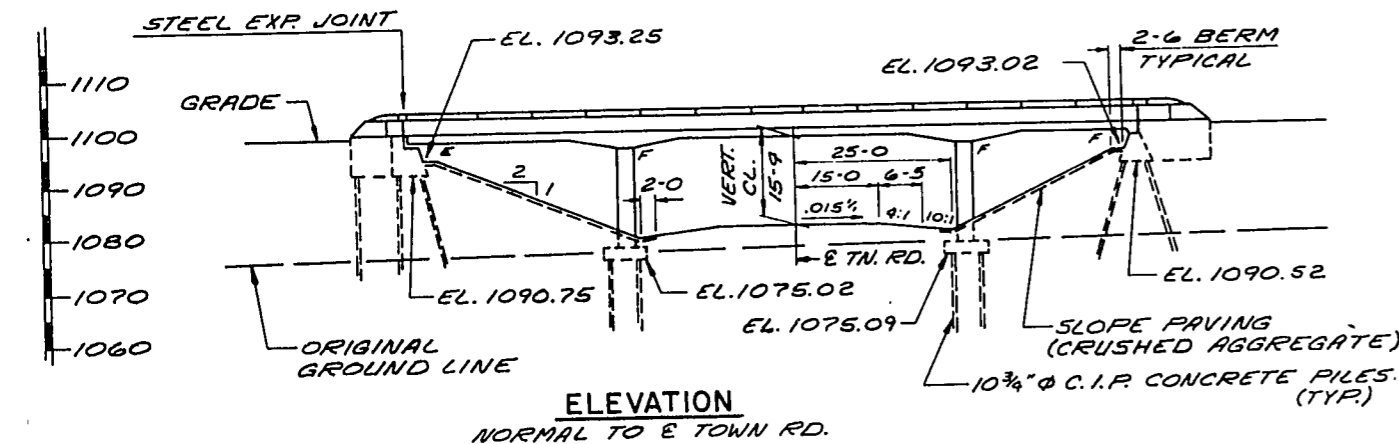
FOR UPPER LIMITS OF EXCAVATION AT THE ABUTMENTS SEE SHEETS NO. 3 & 4.

PILING AT ABUTMENTS SHALL BE PREBORED THRU FILL TO THE ORIGINAL GROUND LINE.



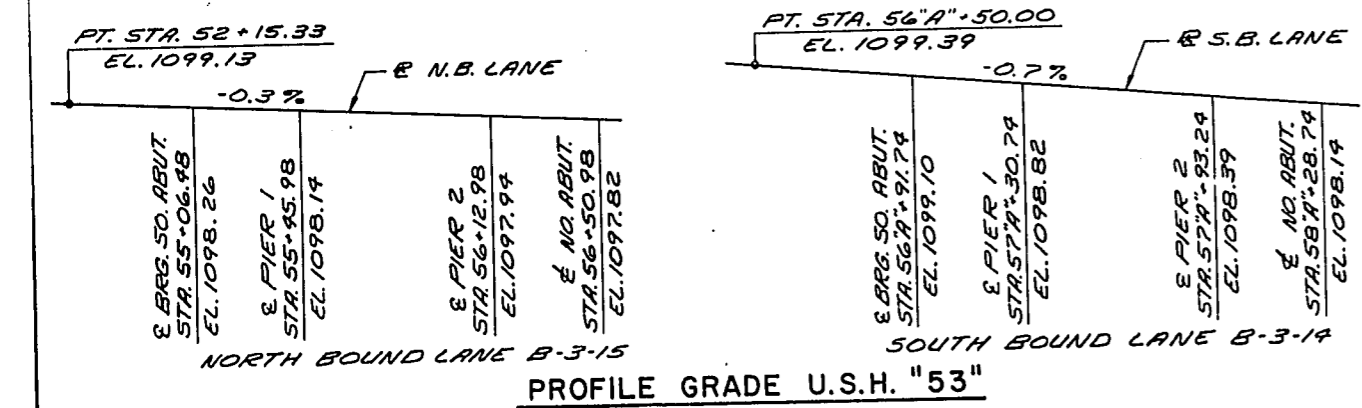
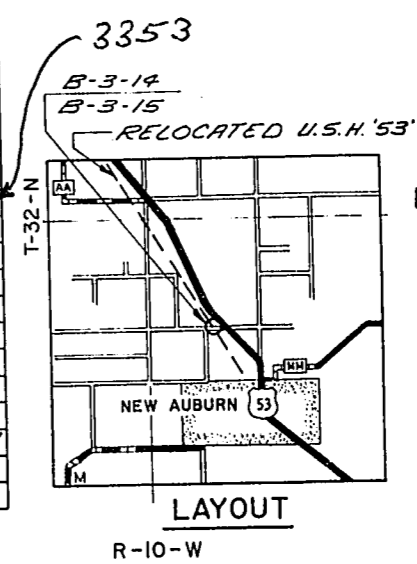
LIST OF DRAWINGS

1. GENERAL PLAN	X46260
2. SUBSURFACE EXPLORATION	X46261
3. SOUTH ABUTMENT	X46262
4. NORTH ABUTMENT	X46263
5. PIERS	X46264
6. SUPERSTRUCTURE	X46265
7. SUPERSTRUCTURE	X46266
8. EXPANSION JOINT & BEARING DETAILS	X46267
9. SLOPED FACE PARAPET "A"	X46268
10. TUBULAR RAILING TYPE "J"	X46269



TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	S. ABUT.	PIER 1	PIER 2	N. ABUT.	SUPER.	TOTAL
EXCAVATION FOR STRUCTURE	C.Y.	90	132	100	90	—	312
CONCRETE MASONRY	C.Y.	66	63	47	43	445	664
BAR STEEL REINFORCEMENT	L.B.	3060	10105	8885	2180	103090	127320
STRUCTURAL CARBON STEEL	L.B.	—	—	—	—	3970	3970
STRUCTURAL LOW ALLOY STEEL	L.B.	—	—	—	—	1100	1100
LUBRICATED BRONZE PLATES	L.B.	—	—	—	—	77	77
BEARING PADS	S.F.	604	1411	765	573	7	7
CAST-IN-PLACE CONC. PILING DEL. & DR. 10 3/4" ϕ	L.F.	888	1540	888	446	—	4070
PREBORING, CAST-IN-PLACE CONC. PILING 10 3/4" ϕ	L.F.	252	—	—	295	—	497
TUBULAR RAILING, TYPE "J"	L.F.	—	—	—	—	302	302
SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	247	—	—	229	—	476
NON-BID ITEMS							
1/8" ALUMINUM OR ZINC PLATE	S.F.	—	—	—	—	40	40
FILLER	SIZE	—	1/4"	1/4"	—	1/2"	1/4" 1/2"
POLYVINYL CHLORIDE WATERSTOP	L.F.	—	—	—	—	46	46



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-3-14

U.S.H. "53" OVER TOWN ROAD

County BARRON City Village

Design Spec. A.A.S.H.O. 69 Load HS 20 Const. Spec. 1969

Designed By R.T.B. Design Checked F.P.R. Drawn By D.J.A. Plan Checked J.H.G.

Approved W.A. Kline Chief Bridge Engineer Date 11-17-71

GENERAL PLAN SHEET 1 OF 10 X46260

PROJECT ID 1196-6-71	SHEET NUMBER 29	TOTAL SHEETS 296
FEDERAL PROJECT DESIGNATION EMP FOB-4(36)		

ABBREVIATIONS
 F — Fine M — Medium C — Coarse
 Ws — Weathered So — Sound

MATERIAL SYMBOLS
 Topsoil Silt Sandstone
 Sand Peat Limestone
 Gravel Clay Igneous Rock

LEGEND OF PROBING
 95/6 = 95 Blows for 6"
 Penetration
 Probing taken with a
 350# wt.
 Falling 18" on a 2"
 O. D. Point.
 Probing No.
 Sta.
 Elevation
 7 Average Blows Per Foot
 Refusal 95/6

LEGEND OF BORING
 Boring No.
 Sta.
 Elev.
 Unconfined Strength — 7.7
 Blows Per Ft. Using 140# Wt. Falling 30"
 Wash Sample
 Shelby Tube — S.T.
 Ground Water Elevation
 No Ground Water Observed Above This Elevation
 Sandy Gravel
 F.
 Boulders or Cobbles
 Sand
 Silty Clay
 So
 Limestone

Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O. D. x 1.4" I. D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

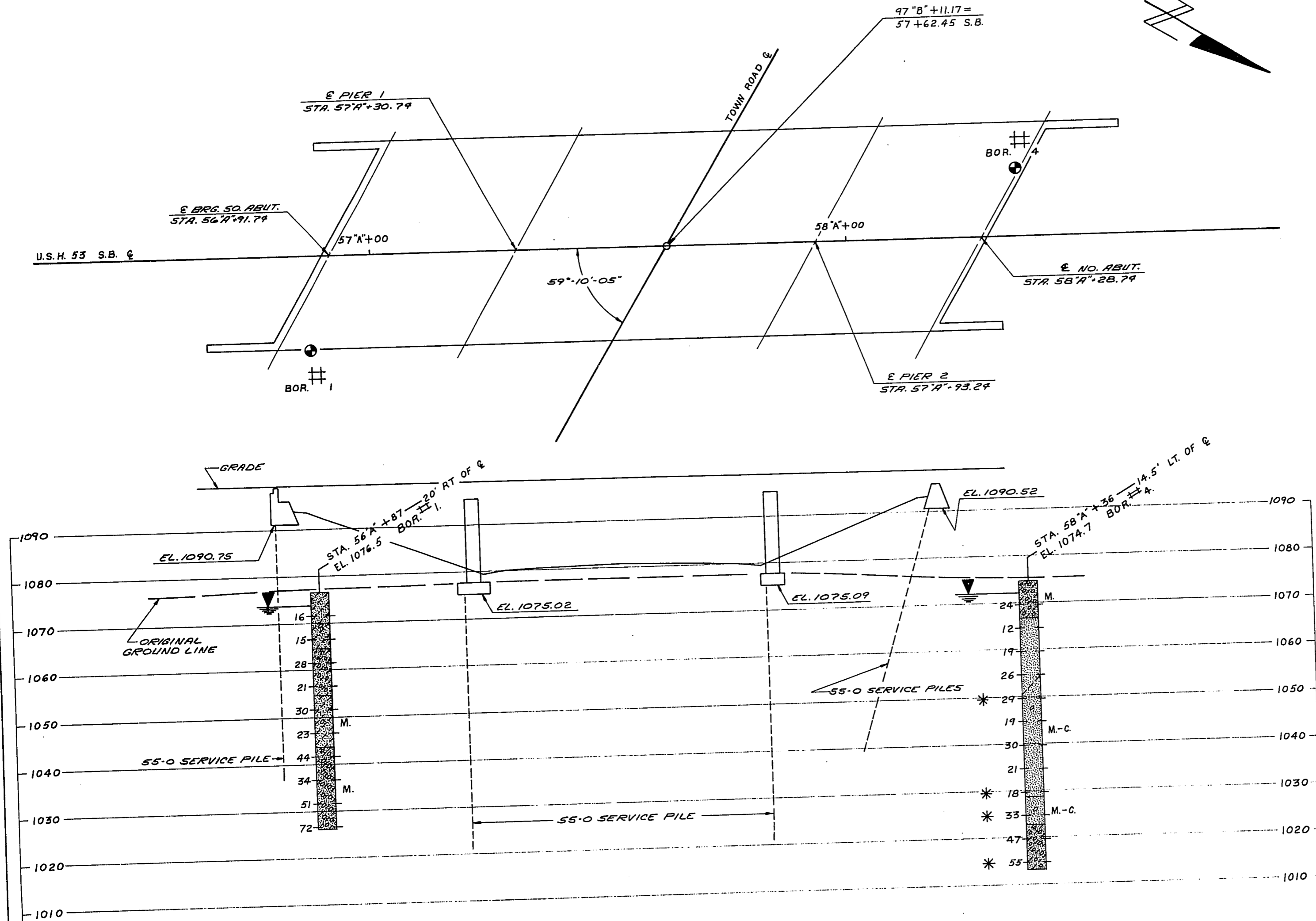
No.	Date	By
-----	------	----

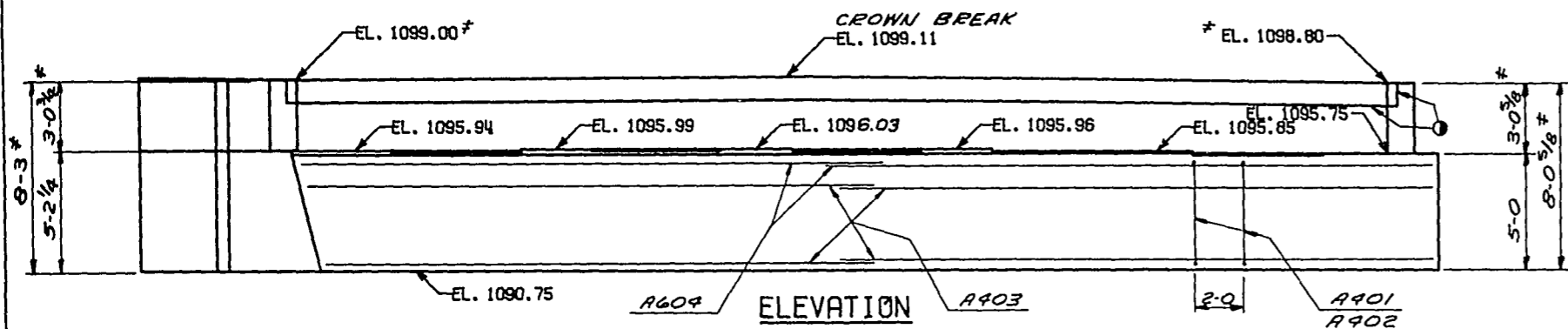
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

STRUCTURE **B-3-14**

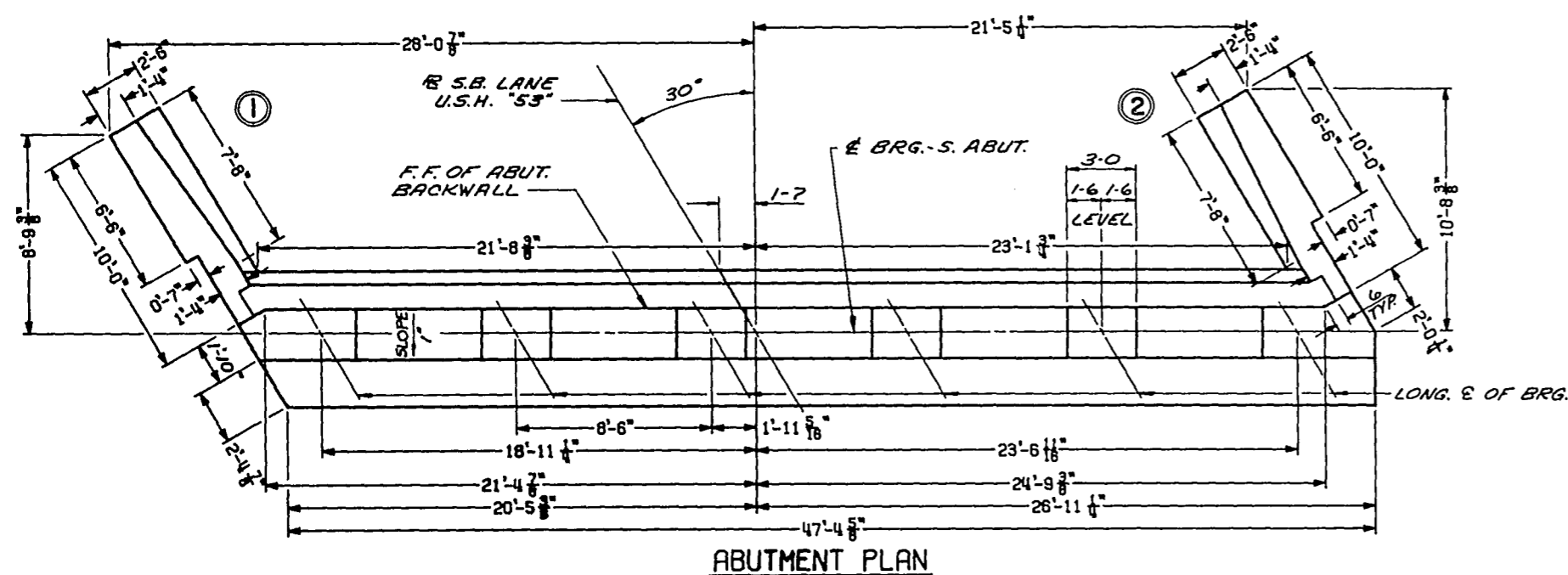
1969 D.J.A. J.H.G.

SUBSURFACE EXPLORATION SHEET 2 OF 10
 X46261

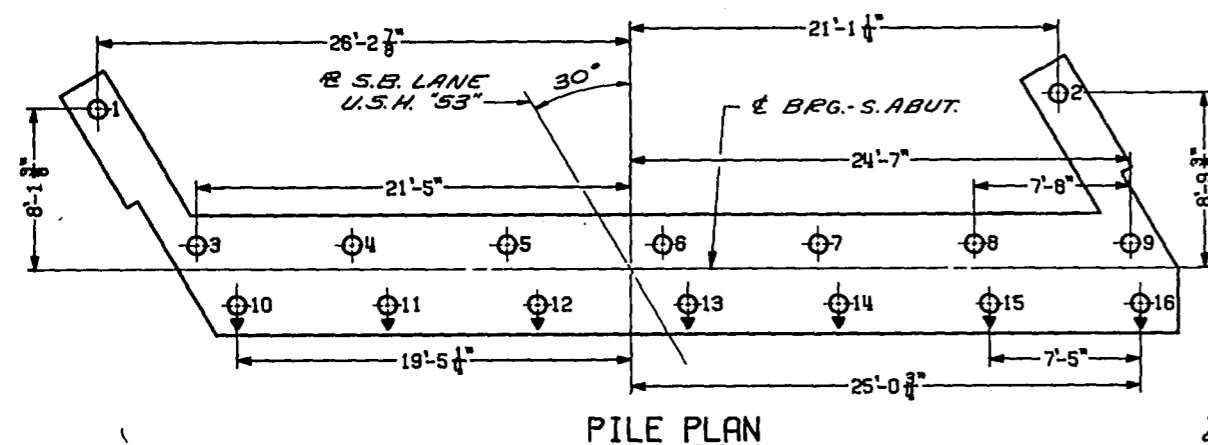




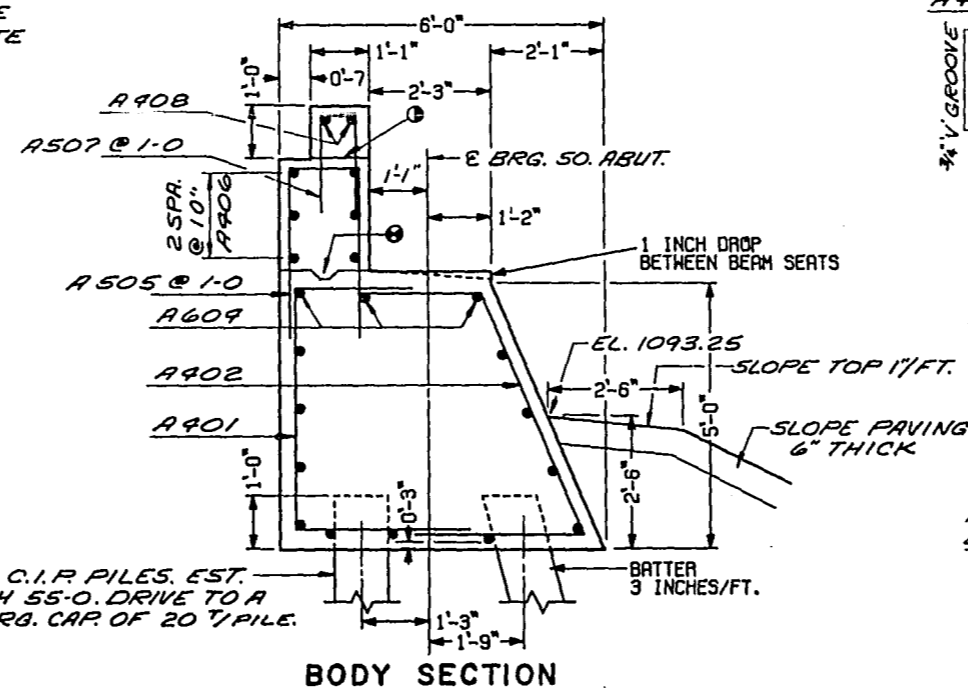
* ELEVATIONS AND DIMENSIONS
ARE MEASURED AT FF BACKWALL.



① CONSTRUCTION JOINT-POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF LEVEL AND LEAVE ROUGH.

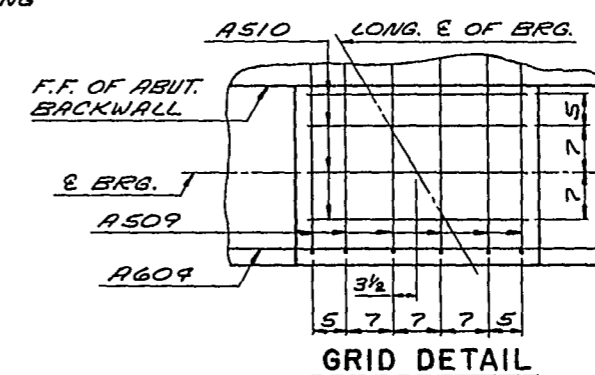
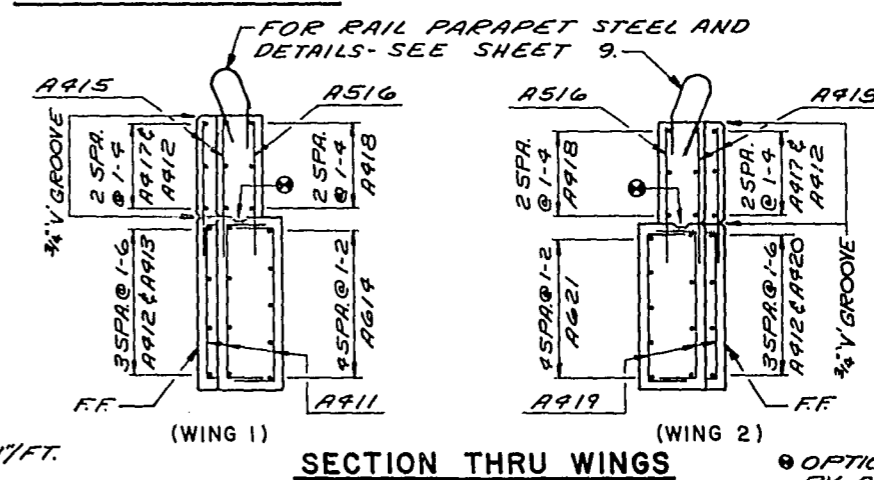
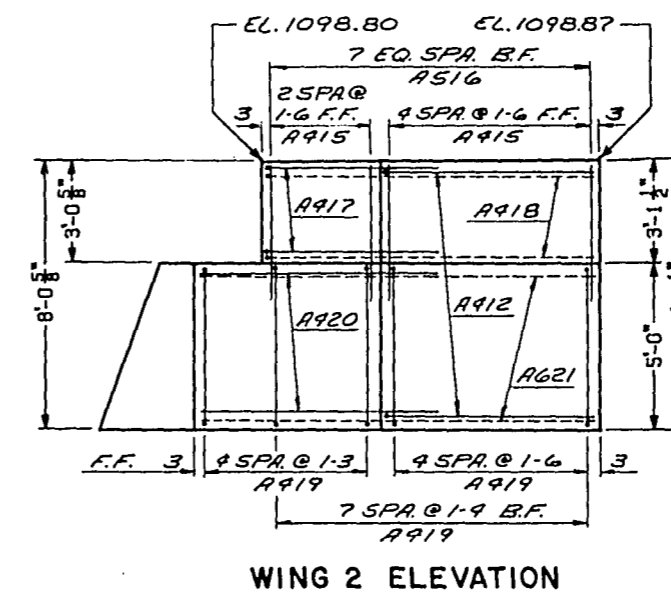
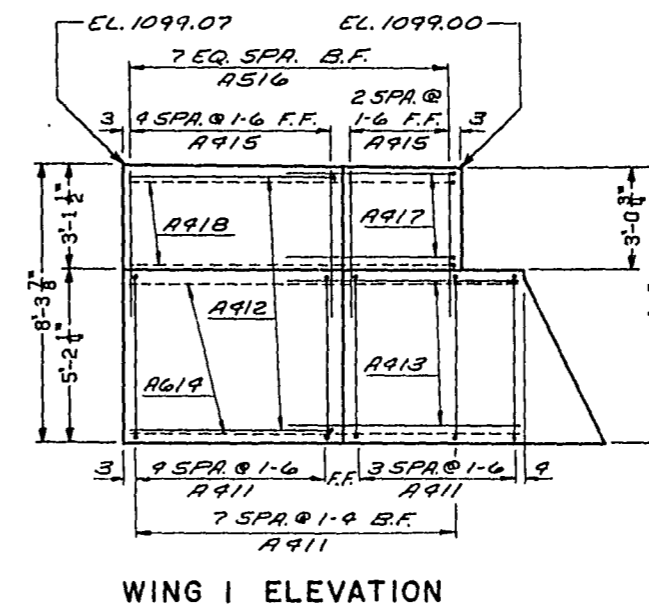


⊕ INDICATES BATTERED
PILING - BATTER PILING 3"
PER FOOT IN DIRECTION SHOWN.



10 3/4" ϕ C.I.P. PILES, EST. —
LENGTH 55'-0". DRIVE TO A
MIN. BRG. CAP. OF 20 T/PILE.

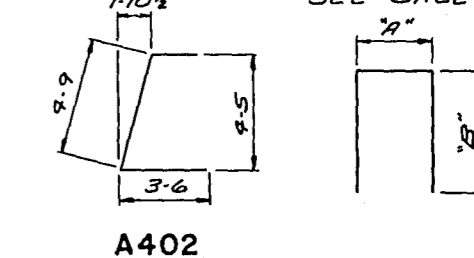
ALL HORIZONTAL BARS IN ABUTMENT BODY ARE
A403 BARS UNLESS SHOWN OR NOTED OTHERWISE.
FILL TO EL. 1092.75 BEFORE DRIVING PILING.
UPPER LIMIT FOR "EXCAVATION FOR STRUCTURES"
SHALL NOT EXCEED THIS ELEVATION.



BILL OF BARS

[illegible]

* A408-NO LAP FOR RAIL PARAPET BARS,
1-10½ SEE SHEET 9.



BAR #	DIM. "A"	DIM. "B"
A401	4-5	3-6
A505	1-4	3-4
A507	9	2-3
A411	4-9	1-6
A419	4-7	1-6

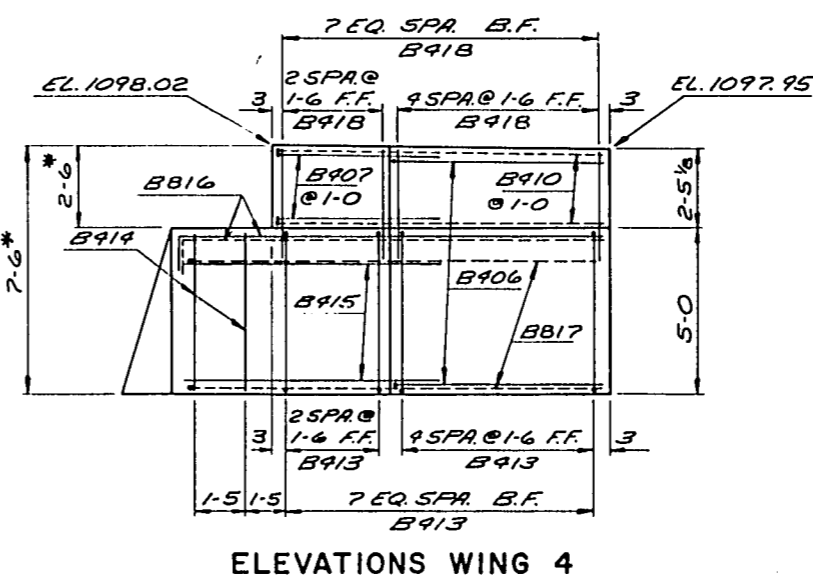
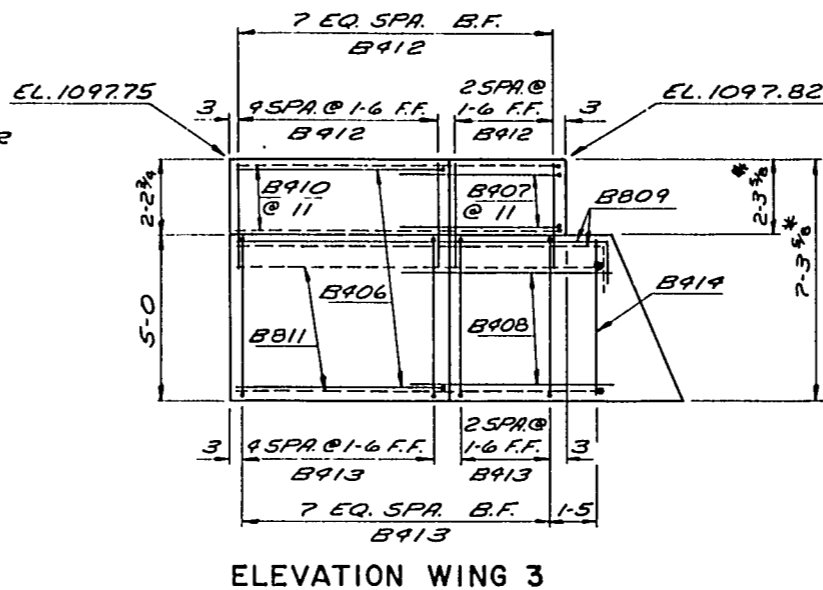
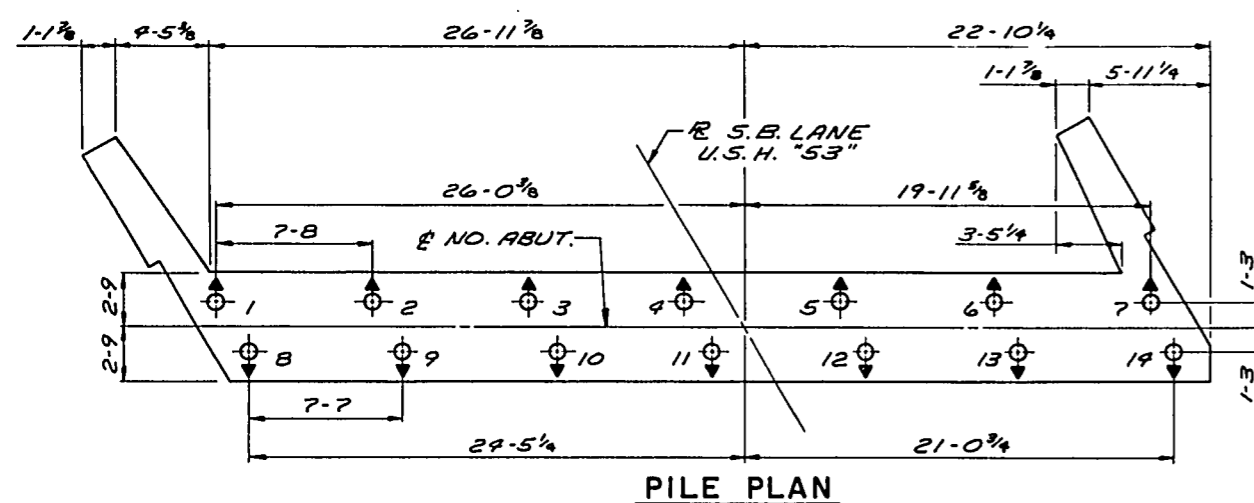
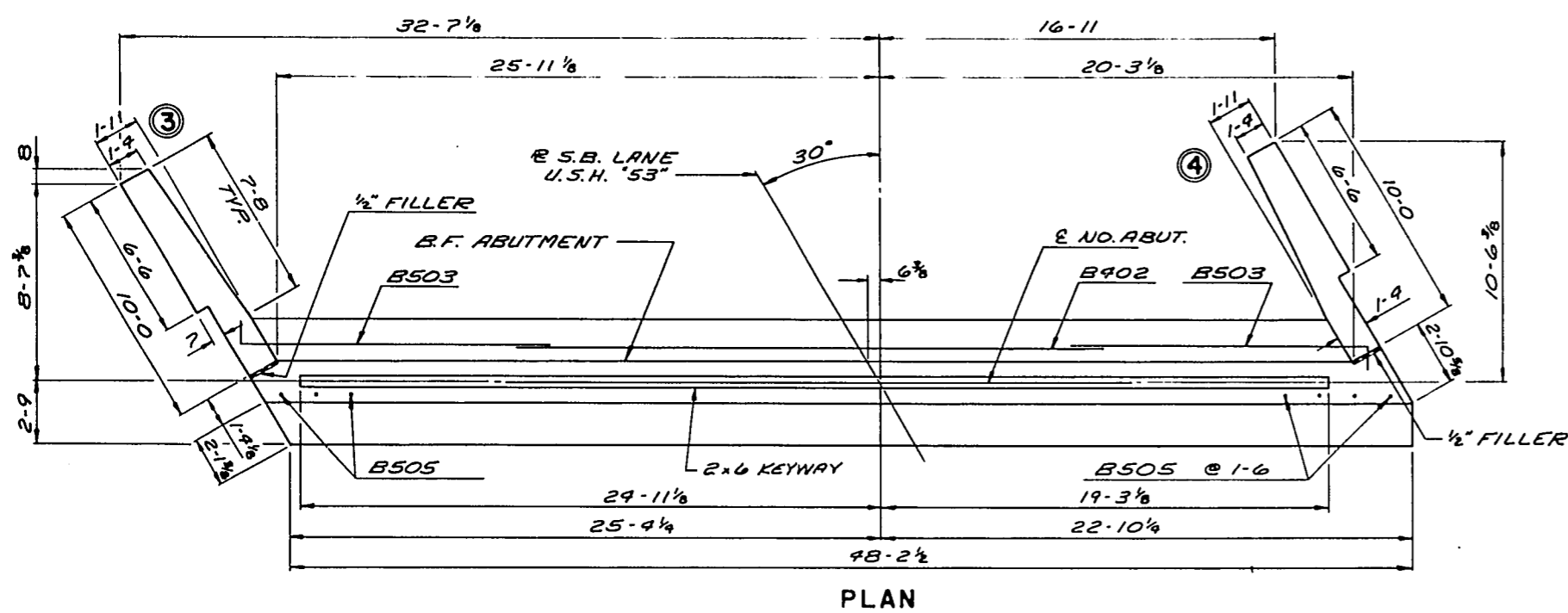
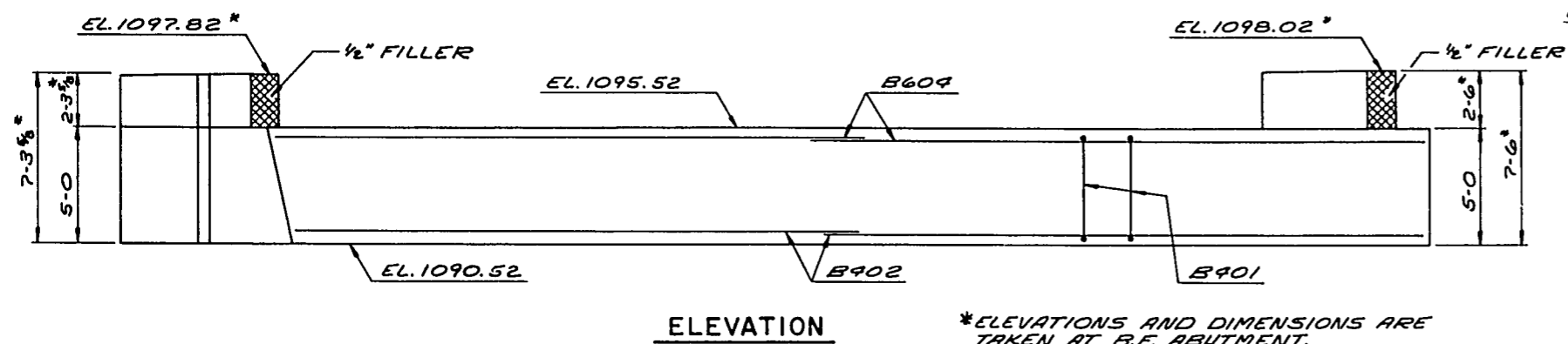
1-0	A509
1-5	A412
1-0	A417

⑨ OPTIONAL KEYED CONST. JOINT FORMED BY A SURFACED BEVELED 2"x6.

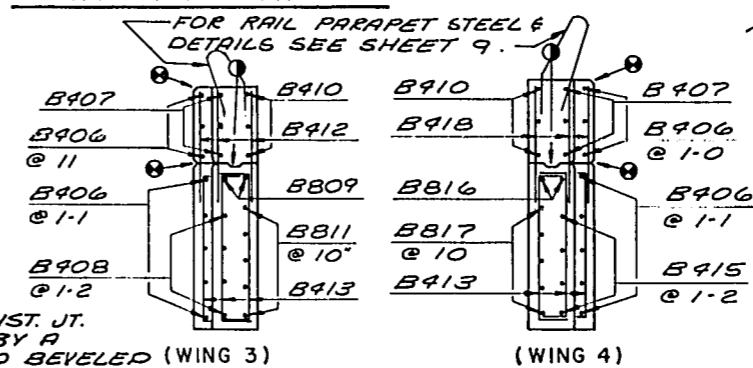
FOR PILE SPLICE DETAIL SEE SHEET 4.

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-14			
Const. Spec.	1969	Drawn By	D.T.A.
		Plans Checked	J.H.G.
SOUTH ABUTMENT		SHEET 3 OF 10	
		X 46262	

NOTE: SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. PLACE SEALER 1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.

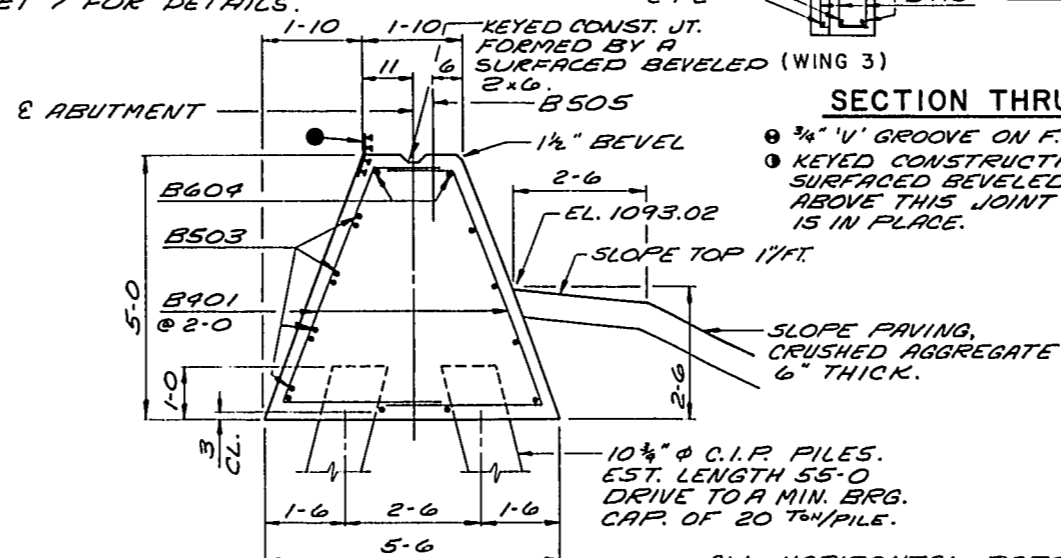


ELEVATIONS WING 4



SECTION THRU WINGS

- 1/4" V' GROOVE ON F.F. WINGWALL.
- KEYED CONSTRUCTION JOINT FORMED BY A SURFACED BEVELED 2x6. POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE.



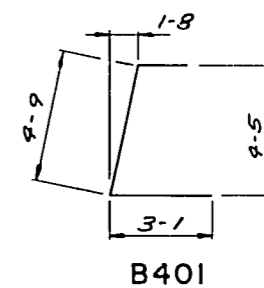
SECTION THRU ABUTMENT

ALL HORIZONTAL BARS IN ABUTMENT BODY ARE B402 BARS UNLESS SHOWN OR NOTED OTHERWISE. FILL TO EL. 1092.52 BEFORE DRIVING PILING. UPPER LIMIT FOR EXCAVATION FOR STRUCTURES SHALL NOT EXCEED THIS ELEVATION.

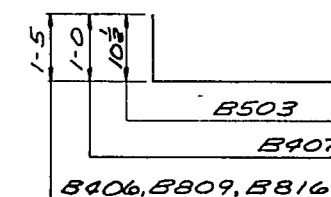
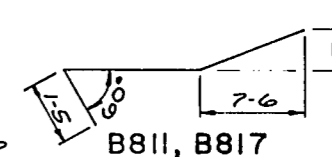
BILL OF BARS

BAR NO.	NO. REQ'D	LENGTH	BENT	1820 #	
				LOCATION	
B401	50	9-0	X	BODY - VERTICAL	
B402	16	25-6		" - HORIZONTAL	
B503	8	14-0	X	" - " "	
B604	4	25-11		" - " " TOP	
B505	33	2-6		" - DOWEL	
B406	16	7-6	X	WINGS 3 & 4 - HORIZONTAL F.F.	
B407	6	5-11	X	" 3#4 - " F.F.	
B408	4	6-4		" 3 - " F.F.	
B809	2	12-2	X	" 3 - " B.F. & F.F.	
B410	6	10-8	X	" 3#4 - " B.F.	
B811	5	13-0	X	" 3 - " B.F.	
B412	16	3-3		" 3 - VERTICAL F.F. & B.F.	
B413	32	6-5	X	" 3#4 - " F.F. & B.F.	
B414	3	4-7		" 3#4 - " F.F.	
B415	4	7-8		" 4 - HORIZONTAL F.F.	
B816	2	13-8	X	" 4 - " B.F. & F.F.	
B817	5	13-0	X	" 4 - " B.F.	
B418	16	3-6		" 4 - VERTICAL F.F. & B.F.	

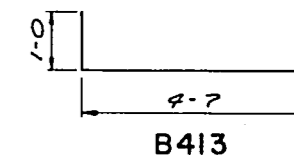
FOR RAIL PARAPET BARS, SEE SHEET 9.



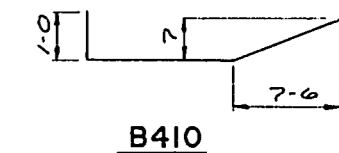
B401

B503
B407
B406, B809, B816

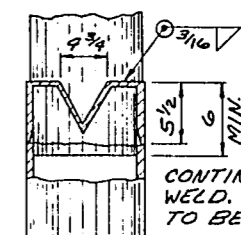
B811, B817



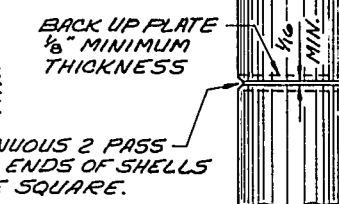
B413



B410



FLUTED PILE



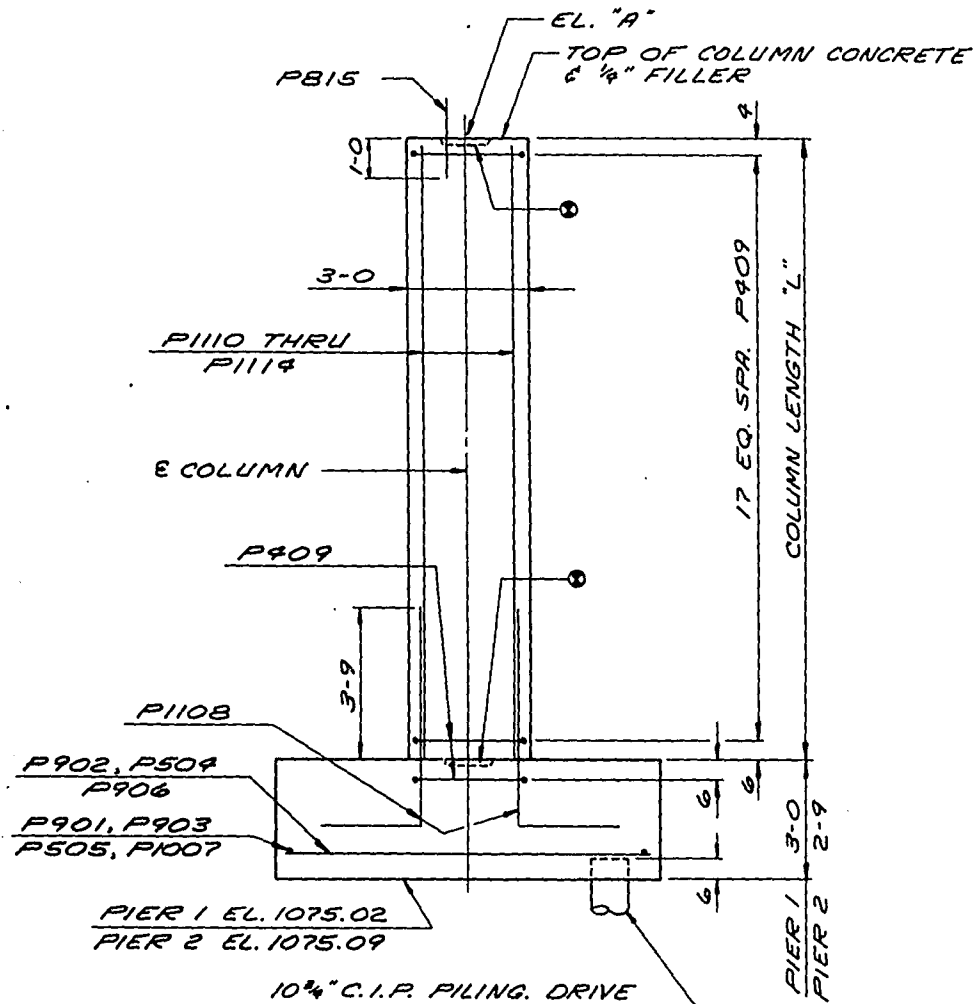
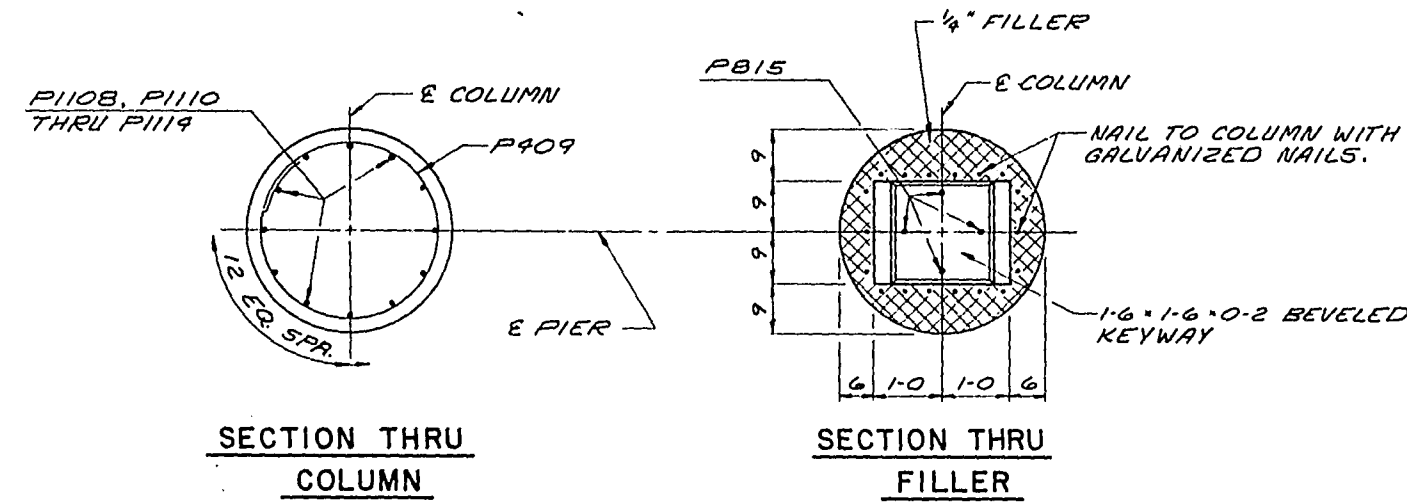
PIPE PILE

PILE SPLICE DETAIL

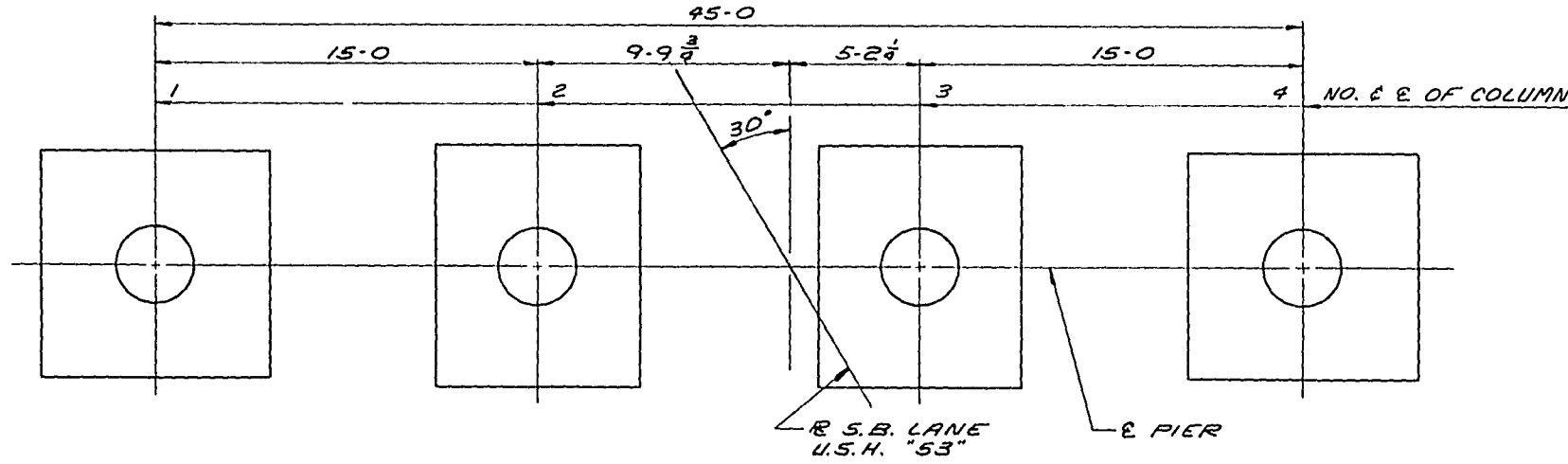
No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-14			
Const. Spec. 1969	Drawn By D. J. A.	Plant Checked J. H. G.	
NORTH ABUTMENT			SHEET 4 OF 10
			X46263

BILL OF BARS

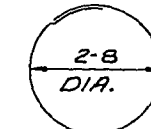
BAR NO.	NO. REQ'D	LENGTH	BENT	18,990#	LOCATION
P901	32	10-6			EXTERIOR FOOTINGS - PIER 1
P902	20	9-6			" " " " 1
P903	32	11-0			INTERIOR " " " 1
P504	24	7-6			" " " " 1
P505	18	7-0			EXTERIOR " " " 2
P906	38	8-0			EXT. & INT. " " " 2
P1007	22	9-0			INTERIOR " " " 2
P1108	96	7-6	X		FOOTING & COLUMN - DOWELS
P409	152	9-5	X		COLUMN - TIES
P1110	24	17-9			PIER 1, COL. 1 & PIER 2, COL. 3 - VERT.
P1111	24	17-6			" 1, " 2 & " 1, " 4 - "
P1112	24	17-3			" 2, " 2 & " 2, " 4 - "
P1113	12	17-7			" 1, " 3 - VERTICAL
P1114	12	17-1			" 2, " 1 - "
P815	32	2-0			COLUMN & SLAB - DOWELS



TYPICAL COLUMN ELEVATION



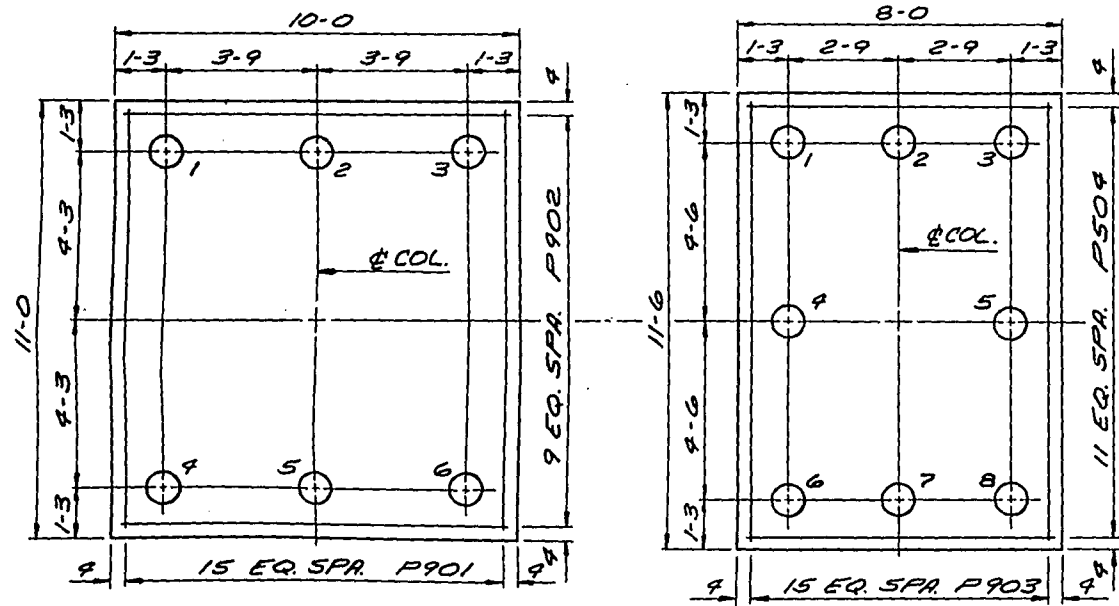
PIER PLAN



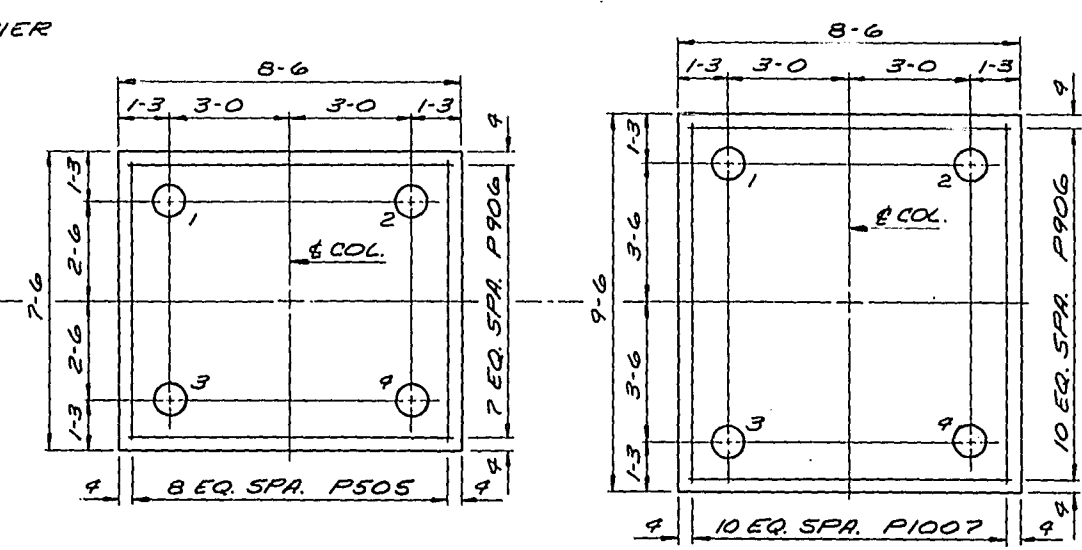
ELEVATION AND COLUMN LENGTH

		ELEV. "A"	LENGTH "L"
PIER 1	COLUMN 1	1095.52	17-6
	" 2	1095.71	17-8 1/4
	" 3	1095.80	17-9 1/2
	" 4	1095.72	17-8 1/2
PIER 2	" 1	1095.09	17-3
	" 2	1095.27	17-5 1/2
	" 3	1095.36	17-6 1/4
	" 4	1095.28	17-5 1/4

NOTES:
 TOP OF COLUMN ELEVATIONS (EL. "A") AND COLUMN LENGTH "L" ARE MEASURED AT E PIER AND E COLUMN.
 SLOPE TOP OF COLUMN TO MATCH SLOPE OF SUPERSTRUCTURE.
 CONSTRUCTION JOINT KEY FORMED BY A SURFACED BEVELED 1-6 x 1-6 x 0-2.
 P815 BARS MAY BE PLACED AFTER COLUMN CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.
 FOR PILE SPLICE DETAIL SEE SHEET 4.

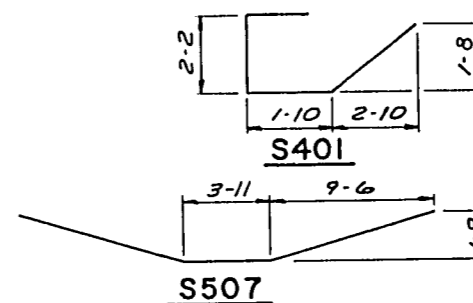


TYPICAL FOOTING PLAN - PIER 1



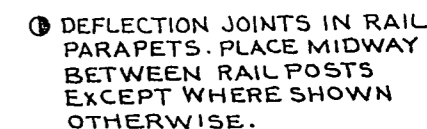
TYPICAL FOOTING PLAN - PIER 2

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-14			
Const. Spec. 1969	Drawn By D.J.R.	Plans Checked J.H.G.	
PIERS			SHEET 5 OF 10
			X46264



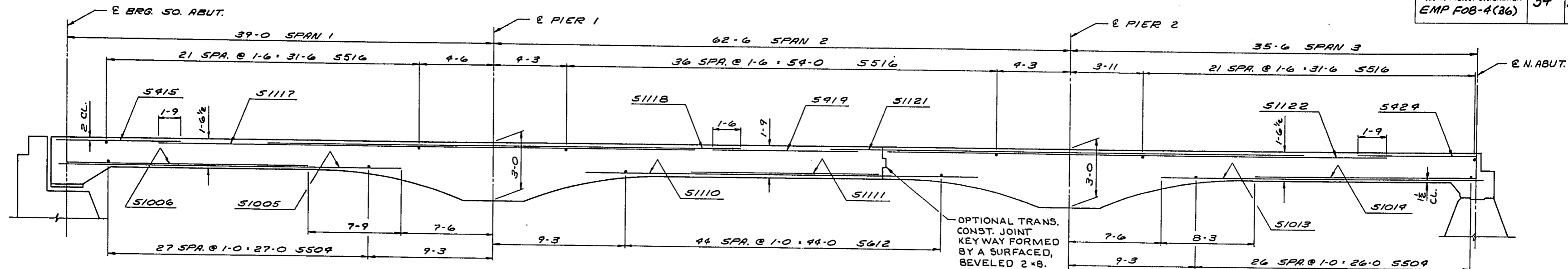
BAR NO.	NO. REQ'D	LENGTH	BENT	38,850*
				LOCATION
5401	64	8-7	X	SLAB @ SO. ABUT. HAUNCH
5402	29	6-8	X	" @ " " "
5703	3	98-10		" @ " " " -TRANS.
5504	67	48-10		" SPAN 1 & 3 - TRANS.
51005	44	32-0		" " 1 - LONG.
51006	27	23-9		" " 1 - "
5507	86	23-2	X	" @ PIER HAUNCH
5908	20	98-10		" @ " " - TRANS.
5409	180	7-8	X	" STIRRUP - SPAN 2
51110	55	49-3		" SPAN 2 - LONG.
51111	36	33-9		" " 2 - "
5612	45	98-10		" " 2 - TRANS.
51013	43	28-6		" " 3 - LONG.
51014	28	19-9		" " 3 - LONG.
5415	29	12-3		" " 1 - "
5516	94	98-10		" " 1, 2, & 3 - TRANS.
51117	42	42-6		" OVER PIER 1 - LONG.
51118	43	38-0		" " 1 - "
5419	24	24-6		" SPAN 2 - LONG.
5820	18	27-6		" EDGE SPAN 2 - LONG.
51121	40	38-6		" OVER PIER 2 - LONG
51122	39	45-6		" " " 2 - "
5923	28	48-10		" @ PIER HAUNCH - TRANS.
5424	29	5-0		" SPAN 3 - LONG.
5525	43	4-1	X	" @ NO. ABUT. HAUNCH
5526	43	3-0	X	" @ " " "
5527	43	2-10	X	" @ " " "

SPAN 2

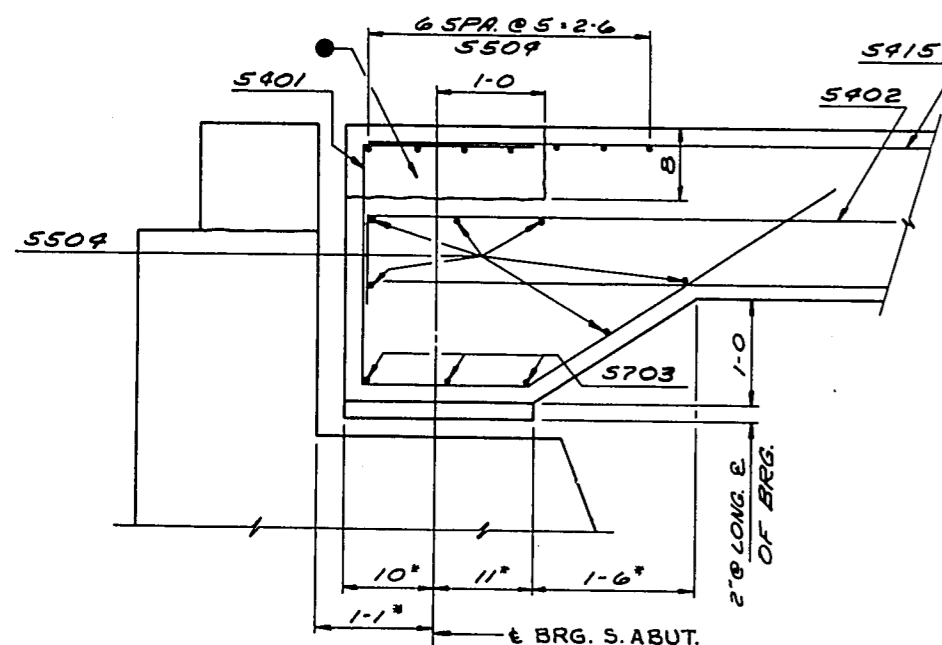


RAIL POST AND DEFL. JOINT
SPACING SAME FOR BOTH SIDES.

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-14			
Const. Spec.	1969	Drawn By	D. J. A. Plans Checked
SUPERSTRUCTURE		SHEET 6 OF 1 X46265	

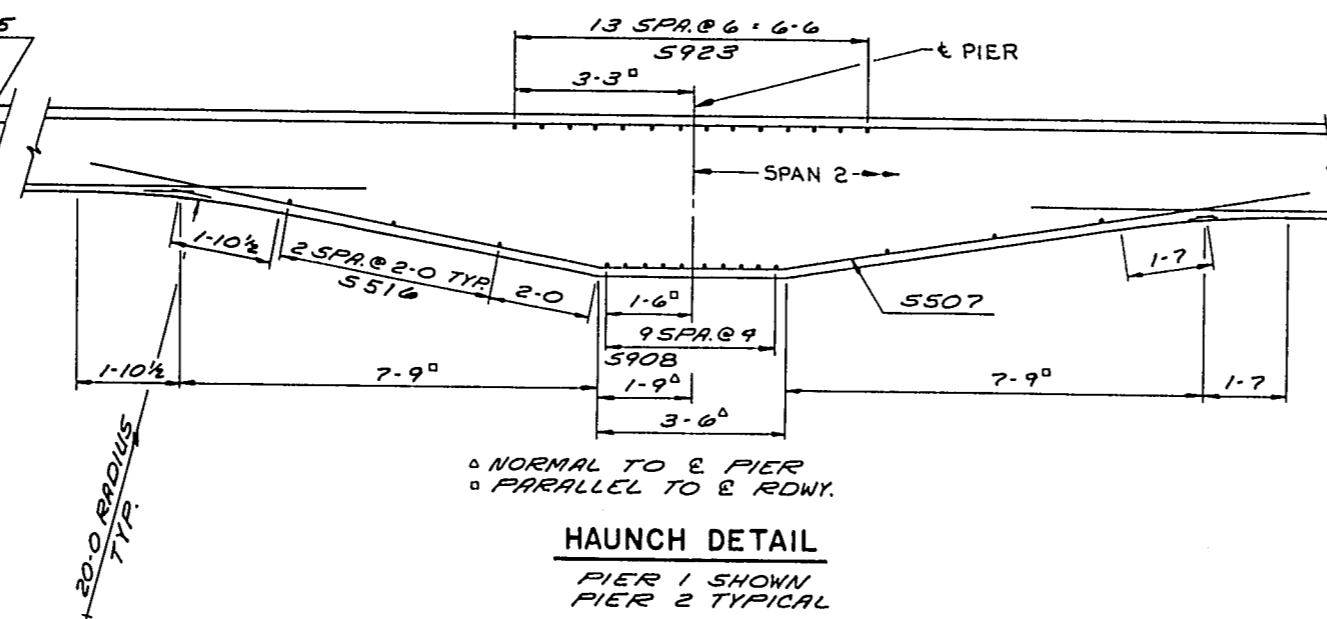


LONGITUDINAL SECTION



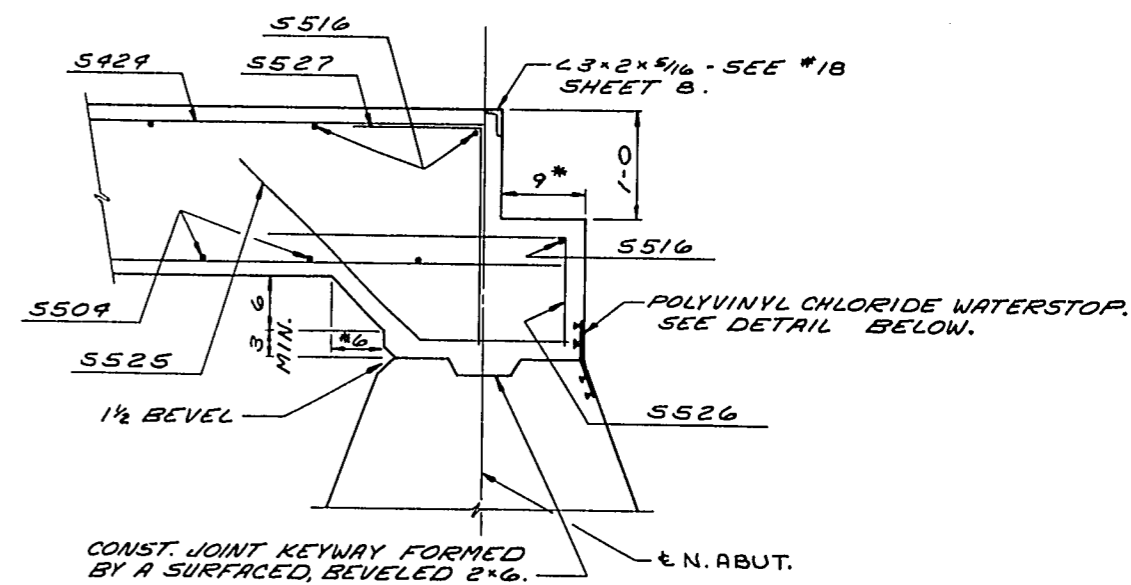
DETAIL AT SOUTH ABUT.

*NORMAL TO E ABUT.

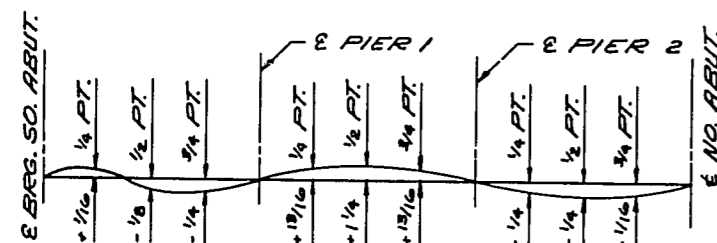


HAUNCH DETAIL

PIER 1 SHOWN
PIER 2 TYPICAL



DETAIL AT NORTH ABUT.

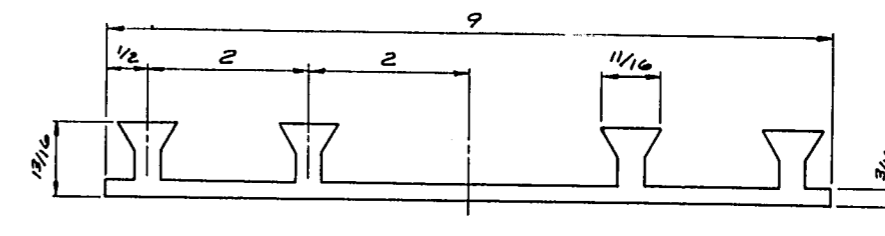


CAMBER DIAGRAM

DEADLOAD DEFLECTION IS 0.4 x CAMBER SHOWN. CAMBER DOES NOT INCLUDE AN ALLOWANCE FOR FORM SETTLEMENT.

NOTES

ALTERNATE TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROX. 3'-0" CENTERS. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROX. 4'-0" CENTERS. ALL SLAB THICKNESS DIMENSIONS ARE MIN. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+). PARAPETS ARE TO BE POURED AFTER FALSEWORK HAS BEEN RELEASED. CONCRETE IN THIS AREA SHALL BE PLACED AFTER SUPERSTRUCTURE IS POURED & EXP. JOINT HAS BEEN SET. REMOVE FORMS FROM END OF SLAB BEFORE MAKING THIS POUR. DO NOT REMOVE FALSEWORK WHICH IS SUPPORTING THE DECK. JOINT MAY BE OMITTED WITH THE APPROVAL OF THE ENGINEER.



POLYVINYL CHLORIDE WATERSTOP

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-14			
Const. 1969	Drawn By D.J.A.	Plans Checked J.H.G.	
SUPERSTRUCTURE			SHEET 7 OF 10
			X46266

1196-6-71	SHEET	TOTAL
EMP F08-4(36)	35	296

BEARING NOTES

ALL MATERIAL EXCLUDING ANCHOR BOLTS, PINTLES, NUTS, STUDS, WASHERS SHALL BE MADE OF A588 STEEL. PINTLES SHALL BE MADE OF A449 STEEL.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS. MACHINE FINISH THE BOTTOM SURFACE ONLY OF PLATES SHOWN TO BE FINISHED.

ALL MATERIAL EXCLUDING BRONZE PLATES & BEARING PADS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL LOW ALLOY STEEL."

ALL ANCHOR BOLTS TO BE 1 1/4" x 1-3 LONG, SET FLUSH AND CAULK WITH LEAD TO THE TOP OF PLATE 'C'. EXCESS LENGTH MAY BE FURNISHED, THREADED FOR SETTING AND THEN CUT OFF FLUSH.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR PINTLES IN PLATE 'C' FOR DRIVING FIT.

PROVIDE 1/8" THICK BEARING PAD SAME SIZE AS PLATE 'C' FOR EACH BEARING.

ALL BEARINGS ARE SYMMETRICAL.

LEGEND

- WT 6 x 39.5 x ROADWAY WIDTH. WELDMENT MAY BE USED. SEE DETAIL A.
- 2 L 7 x 9 x 7/16 x RDWY. WIDTH LONG DIMENSION OF 7/16 x 1 1/2" SLOTTED HOLE TO BE PARALLEL TO DIRECTION OF MOVEMENT.
3. BAR 1 1/2 x 3/4 x RDWY. WIDTH. WELD TO L#2 WITH 2 LINES OF 1/4 FILLET WELD, 20° G.
4. 3/4" FLAT HEAD CAP SCREW x 2 3/4" LONG WITH SQ. NUT AT 4-0 CENTERS. GREASE FOR EASY REMOVAL. 1 3/16 x 1 1/2" SLOTTED HOLE IN L#2.
5. L 2 1/2 x 2 x 1/4 x RDWY. WIDTH. 3/16" CONTINUOUS FIELD WELD TO WT #1. 2 1/2" LEG VERT.
6. 3/4" x 6 LG. ROD & NUT. THREAD 3". TACK WELD NUT TO L#10.
7. VENT HOLES, 1 3/16" AT 2-0 CTRS. IN WT#1 AND L#2 AND 3-0 CTRS. IN 1B.
8. 5/8" STUDS x 6 3/8" LONG. WELD TO WT#1 AT 6" ALTERNATE CENTERS.
9. 5/8" STUDS x 6 3/8" LONG. WELD TO L#2 AT 9" ALTERNATE CENTERS.
10. L 3 x 2 1/2 x 3/8 x 3" LONG AT 3-0 CENTERS. WELD TO L#2 AND WT #1 PROVIDE 1 1/16" HOLES IN 2 1/2" LEG FOR RODS #6 AND #11.
11. 3/4" ROD x 9 LONG & NUT. THREAD 3". TACK WELD NUT TO L#10.
12. 1/2 x 1/2 x 1/4 LONG KEEPER BAR ONE PER #4 BOLT PLACE BAR WITH LONG DIMENSION PARALLEL TO & OF RDWY. 1/8" CLEAR FROM #4 SQUARE NUT AND WELD BAR AT SIDE FACING AWAY FROM NUT WITH 3/16 FILLET WELD 1 1/4" LONG TO L#2.
13. R 1 1/2 x 3/8 - FIELD WELD TO WT #1.
14. R 8/16 x 3/8 - WELD TO R#15 WITH ONE LINE OF 1/4 MAX. FILLET WELD, N.S. & F.S.
15. R 1 3/4 x 3/8 - FIELD WELD TO BAR #3.
16. 5/8" STUDS x 6 3/8" LONG. WELD TO R#13 AND #14.
17. BLOCK AND BOLT FOR SHIPMENT WITH PIPE SLEEVE AND 1/2" BOLT. PROVIDE 3/16" HOLES AT 3-0 CENTERS IN WT #1 AND L#2 FOR BOLT.
18. L 3 x 2 x 5/16 x RDWY. WIDTH. ONE WELDED FIELD SPLICE WILL BE PERMITTED. SEE DETAIL #19. ONE L REQ'D @ EACH ABUT.
19. 3/8" STUDS x 4" LONG. WELD TO L18 AT 6" ALTERNATE CENTERS.
20. R 7/4 x 1/4 x RDWY. WIDTH. 3/16" CONTINUOUS FIELD WELD TO L#2.

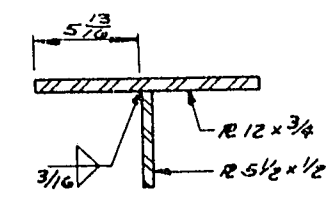
EXPANSION JOINT NOTES

EXPANSION JOINT SHALL BE BUILT TO CONFORM TO ROADWAY CROWN AND GRADE.

AFTER CONCRETE HAS SET THE JOINT OPENING SHALL BE THOROUGHLY CLEANED AND BOLTS #4 REMOVED AND THE HOLE FILLED WITH HOT POURED ELASTIC JOINT SEALER.

APPLY 1/16" COAT OF BITUMASTIC TO METAL SURFACES FORMING JOINT AND FILL OPENING WITH HOT POURED ELASTIC JOINT SEALER.

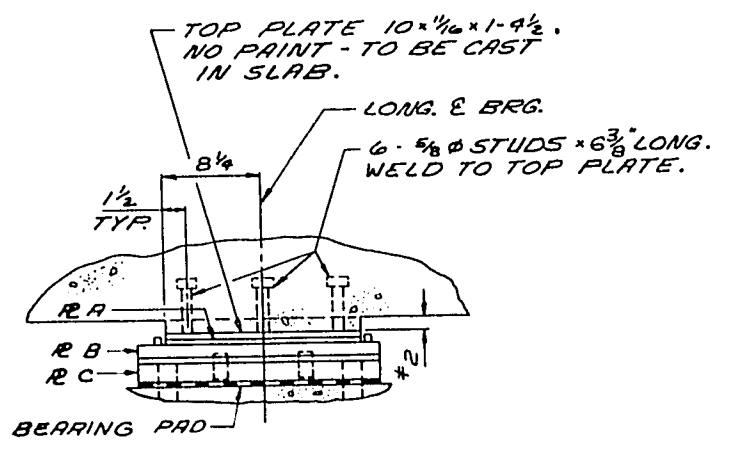
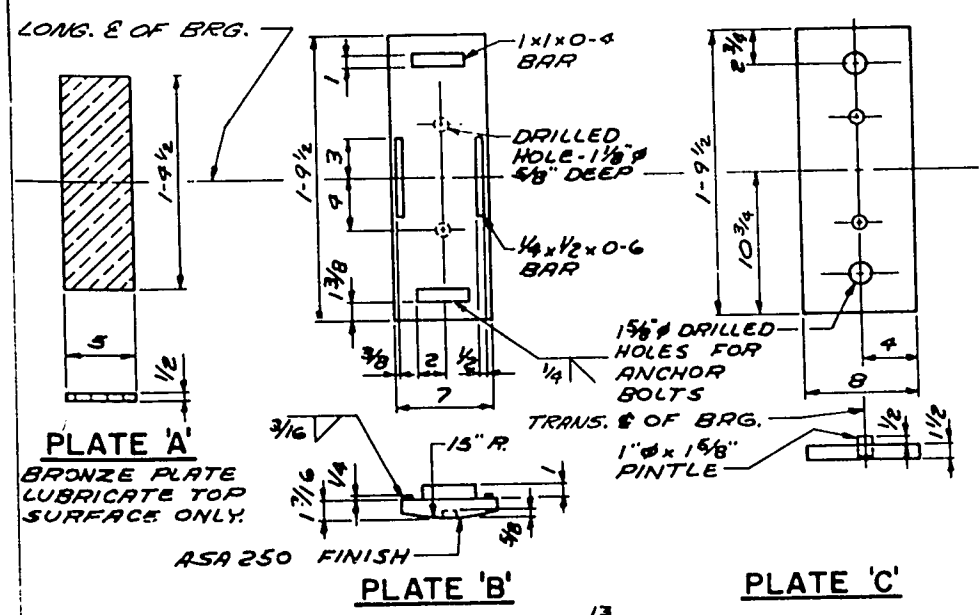
ALL MATERIAL SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL CARBON STEEL."



DETAIL A

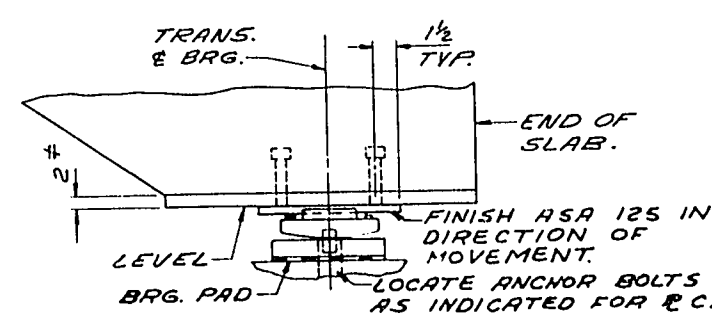
WELDMENT OPTION FOR 1

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-14			
Comp. Spec.	1969	Drawn By D.J.A.	Plans Checked J.H.G.
EXPANSION JOINT & BEARING DETAILS			SHEET 8 OF X46267

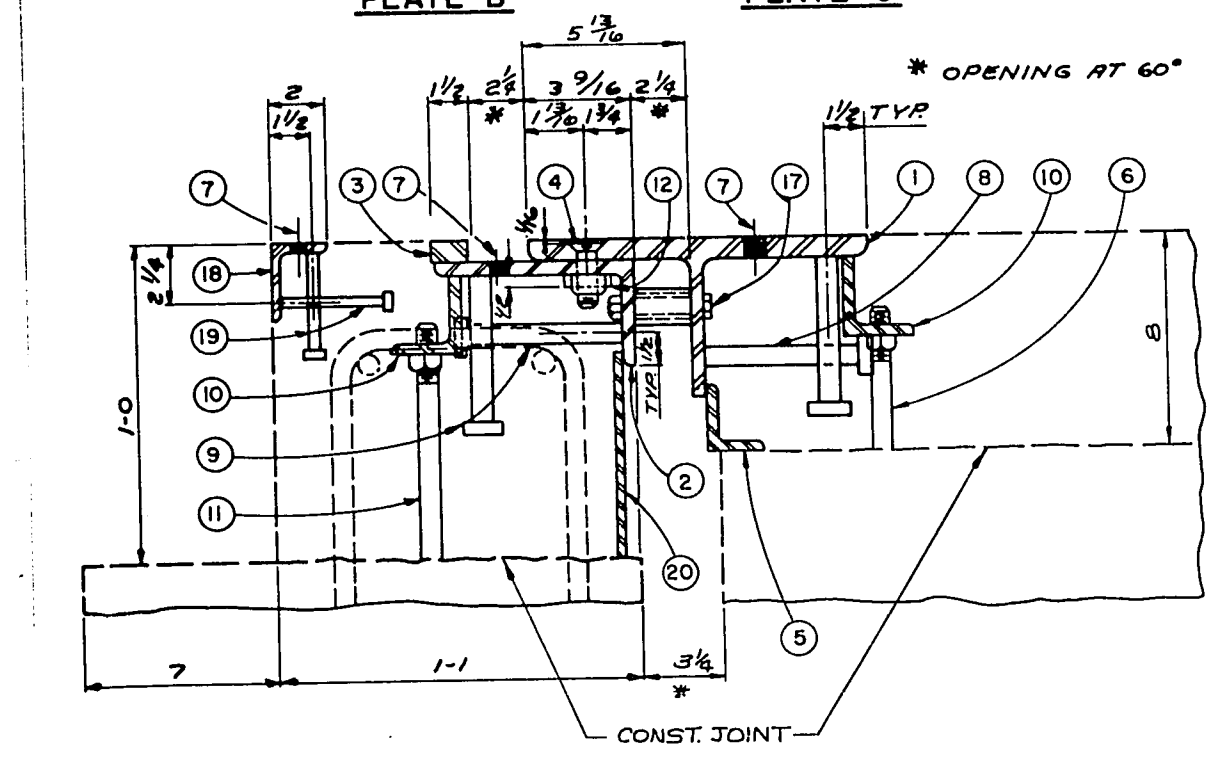


BEARING ELEVATION BEARING DETAILS

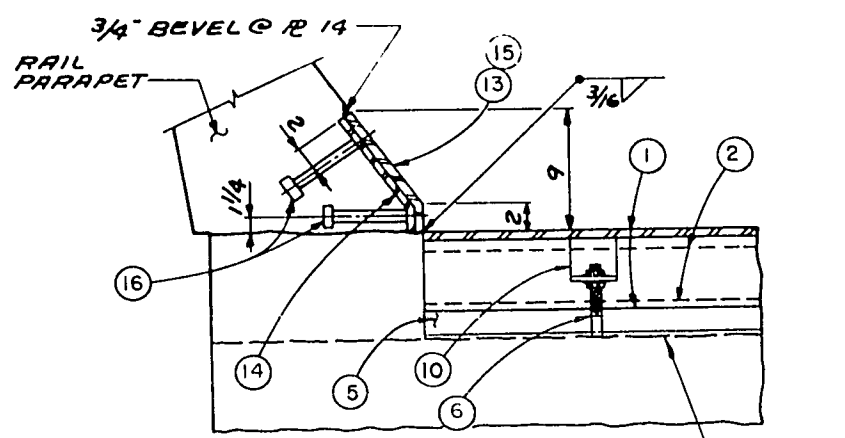
* @ LONG. & OF BRG.



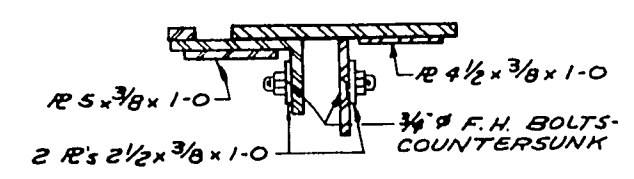
BEARING ASSEMBLY



TRANSVERSE SECTION THRU JOINT



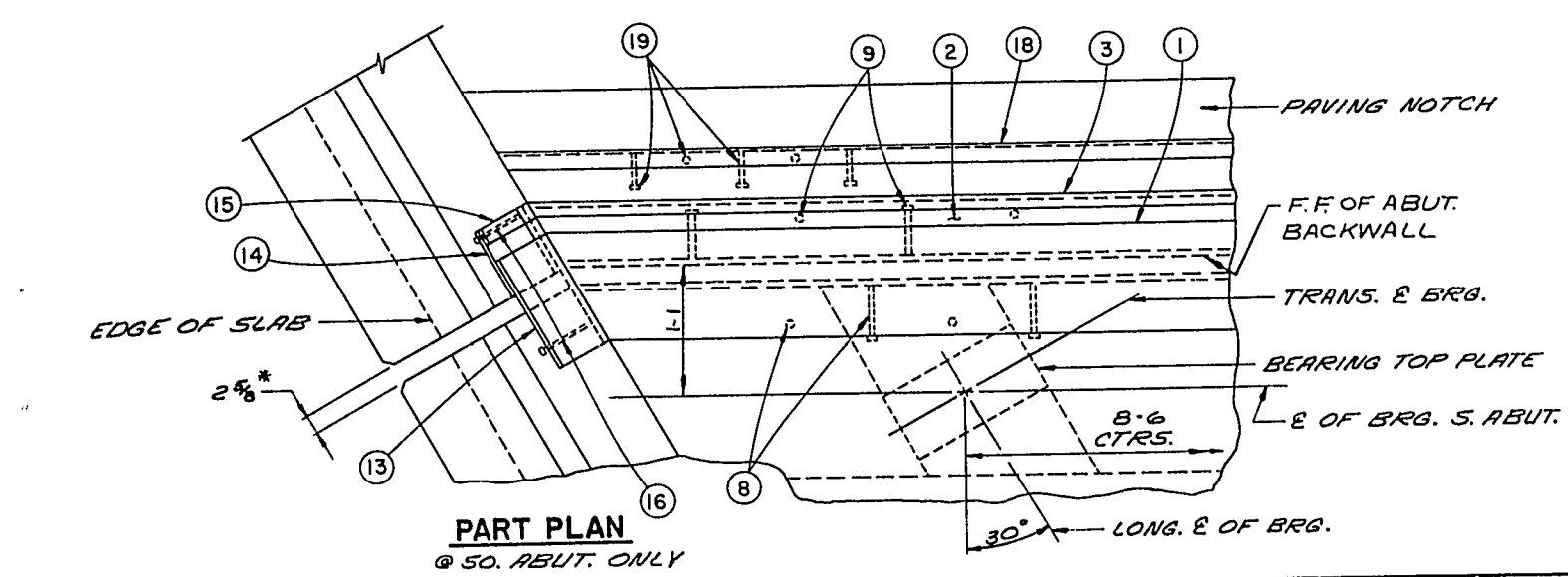
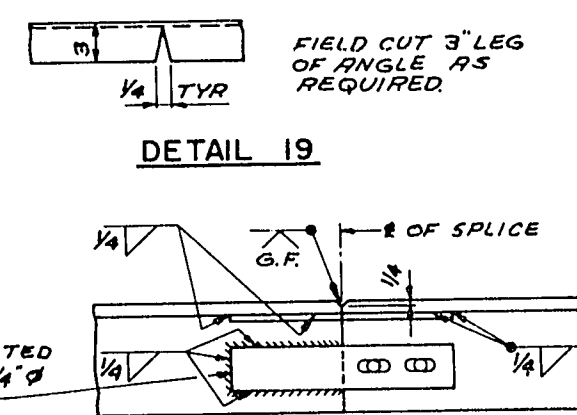
SECTION THRU JOINT AT CURB



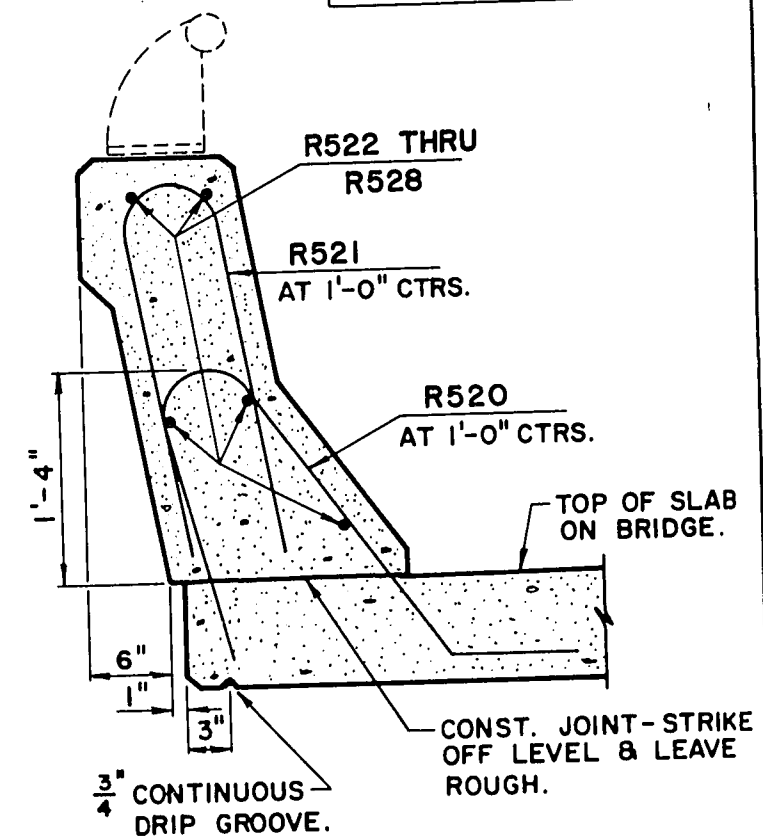
SECTION THRU SPLICE

OPTIONAL FIELD SPLICE DETAIL

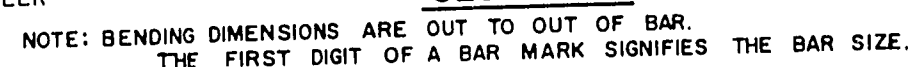
ONE SPLICE SHALL BE PERMITTED IN JOINT.



PART PLAN @ 50. ABUT. ONLY



SECTION C



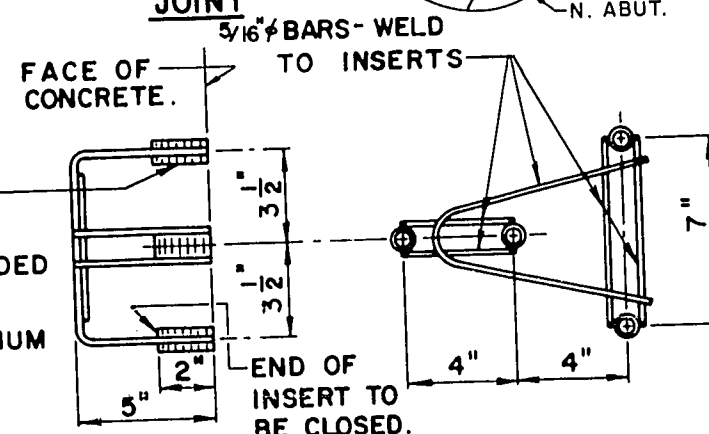
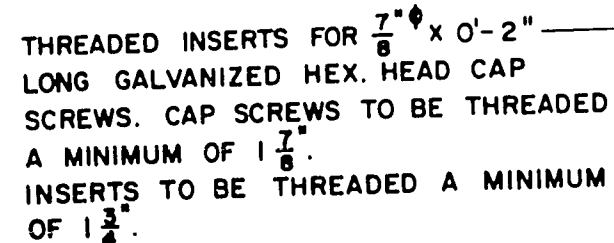
RAIL PARAPET
BILL OF BARS

BILL OF MATERIALS					
MARK	NO. REQ'D.	LENGTH	BENT	LOCATION	
R501	8	6-10	X	WINGS THRU 4	
R502	8	4-5		"	" 4
R503	4	9-8	X	"	" 4
R504	16	5-0	X	"	" 4
R505	16	5-10	X	"	" 4
R506	12	5-2	X	"	THRU 4
R507	4	4-2	X	"	" 4
R508	8	4-10	X	"	" 4
R509	16	3-3	X	"	" 4
R510	20	5-10	X	"	" 4
R511	16	5-6		"	" 4
R520	278	4-9	X	SLAB & RAIL PARAPET	
R521	278	5-0	X	RAIL PARAPET	
R522	20	6-3		"	"
R523	10	24-0		"	"
R524	10	17-8		"	"
R525	10	25-8		"	"
R526	10	19-1		"	"
R527	10	15-8		"	"
R528	10	21-2		"	"

NOTES

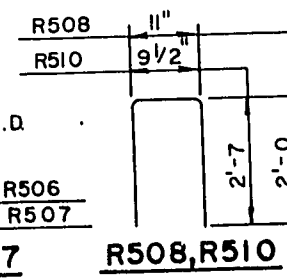
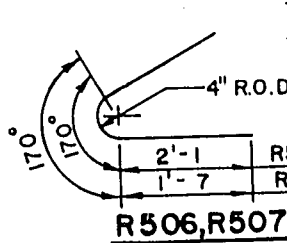
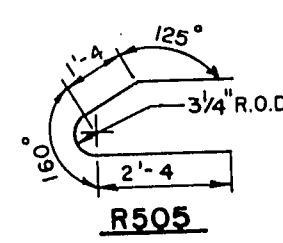
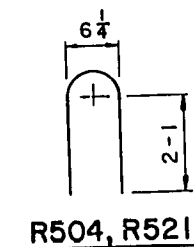
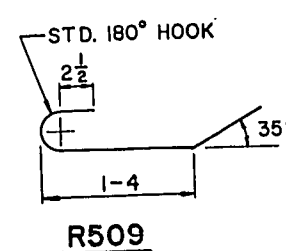
WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF $\frac{1}{8}$ ZINC OR ALUMINUM PLATE CUT AS SHOWN IN SECTION "D" BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH BITUMINOUS PAINT AND PLATE SEPARATORS MAY BE OMITTED.

WORK THIS SHEET WITH SHEET TITLED
"TUBULAR RAILING, TYPE 'J'".



DETAIL OF ANCHOR ASSEMBLY FOR
BEAM TYPE GUARD RAIL

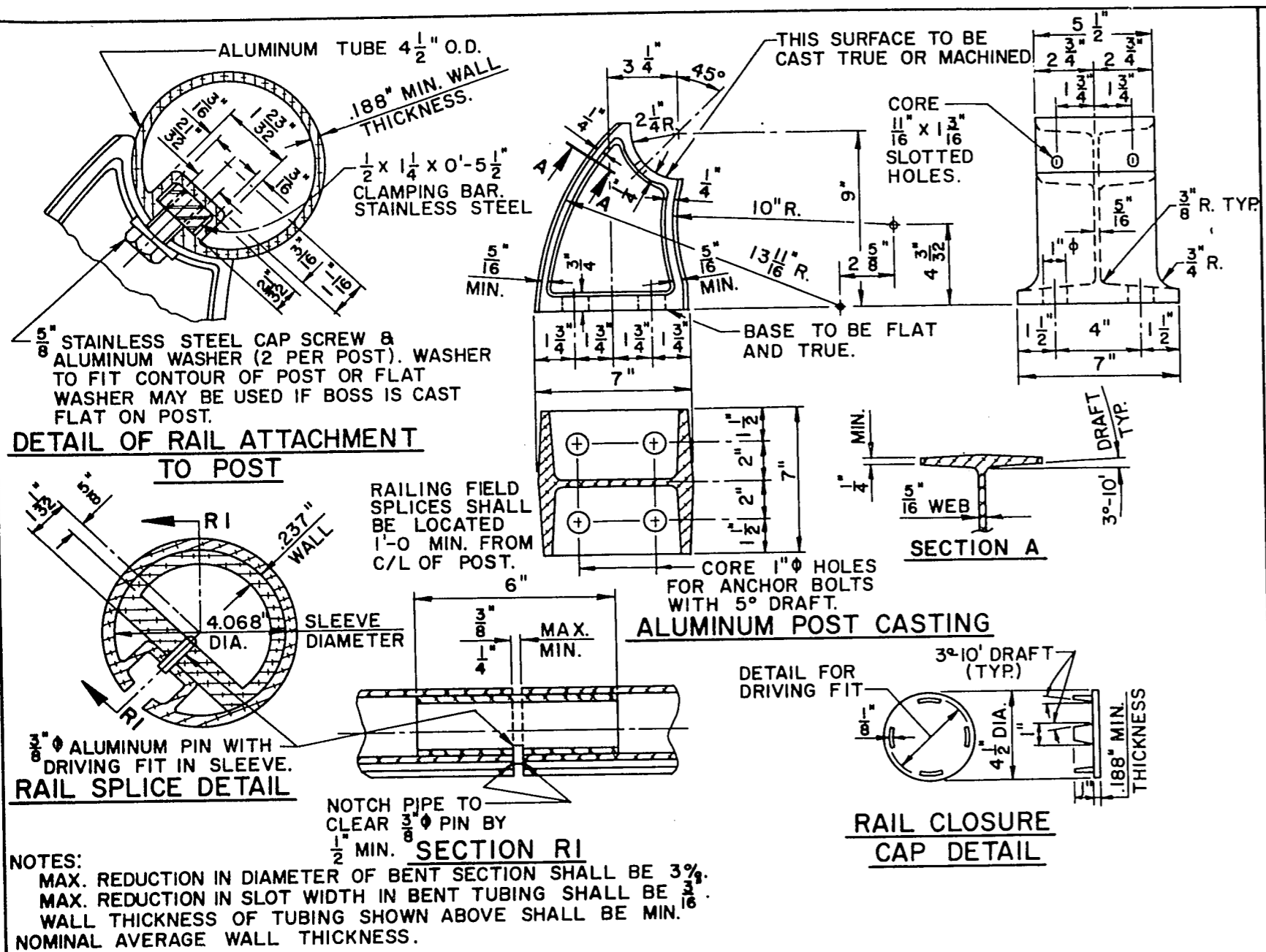
ANCHOR ASSEMBLY SHALL BE PAID
FOR AT THE UNIT PRICE BID FOR
STRUCTURAL CARBON STEEL.



R501, R503

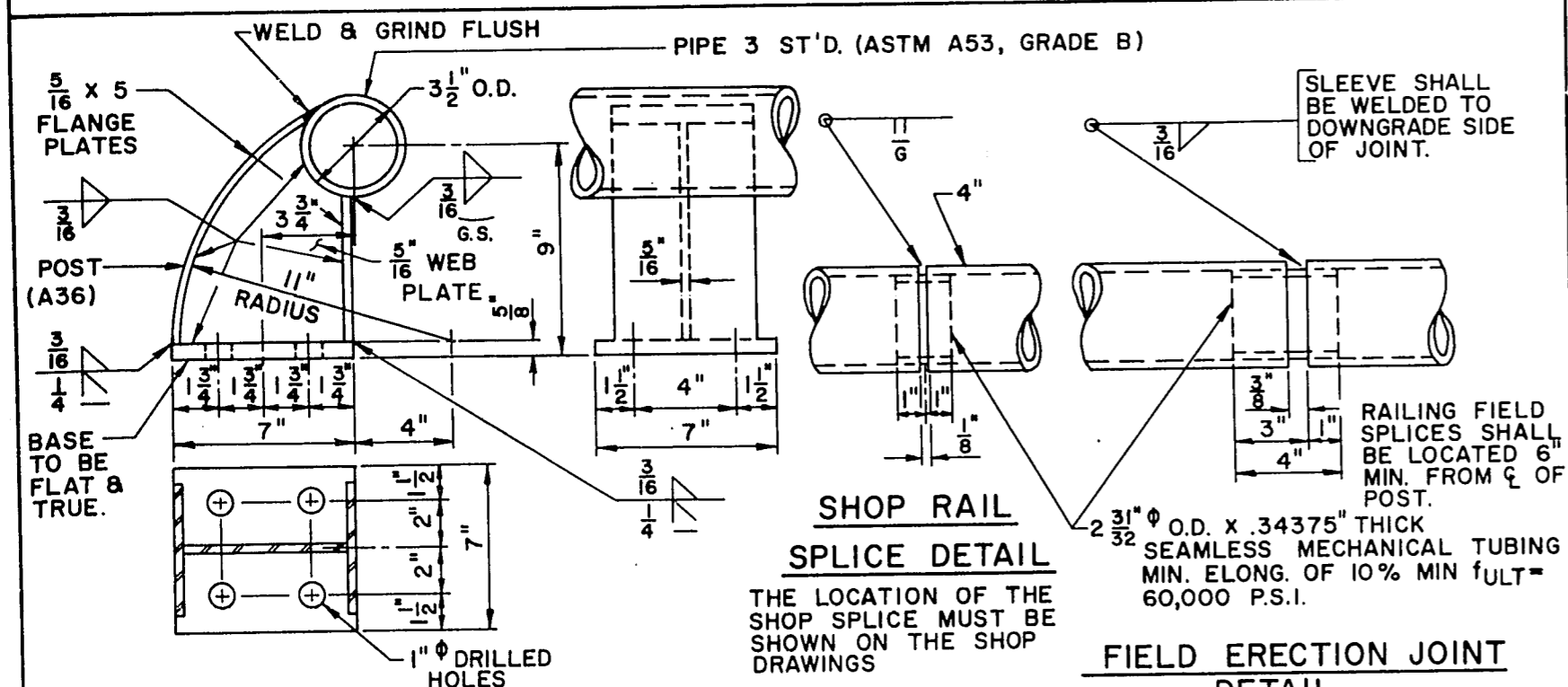
R520

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-14			
Const. Spec.	1969	Drawn By	D. J. R.
		Plans Checked	J. H. G.
SLOPED FACE PARAPET "A"		SHEET 9 OF 10	
		X 46268	



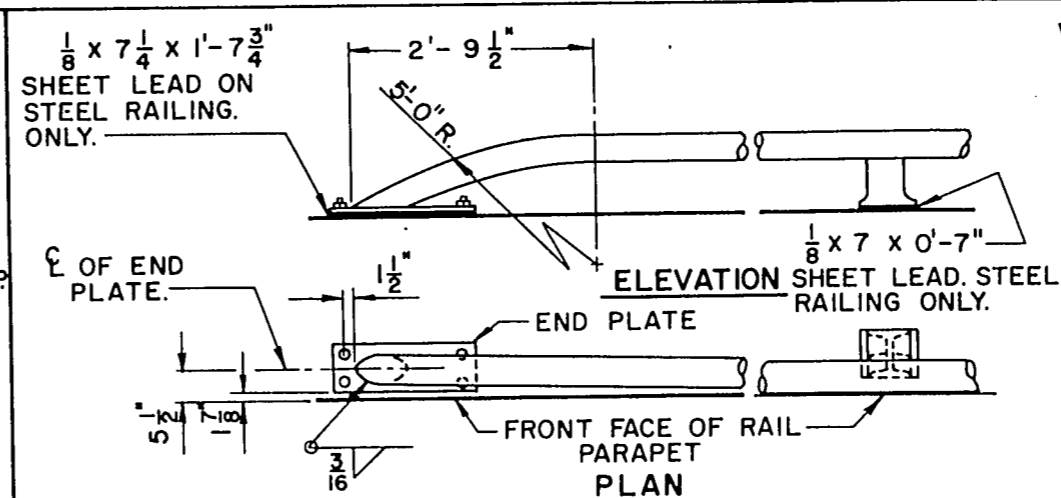
NOTES:

NOTES:
MAX. REDUCTION IN DIAMETER OF BENT SECTION SHALL BE 3%.
MAX. REDUCTION IN SLOT WIDTH IN BENT TUBING SHALL BE $\frac{3}{16}$.
WALL THICKNESS OF TUBING SHOWN ABOVE SHALL BE MIN.
NOMINAL AVERAGE WALL THICKNESS.

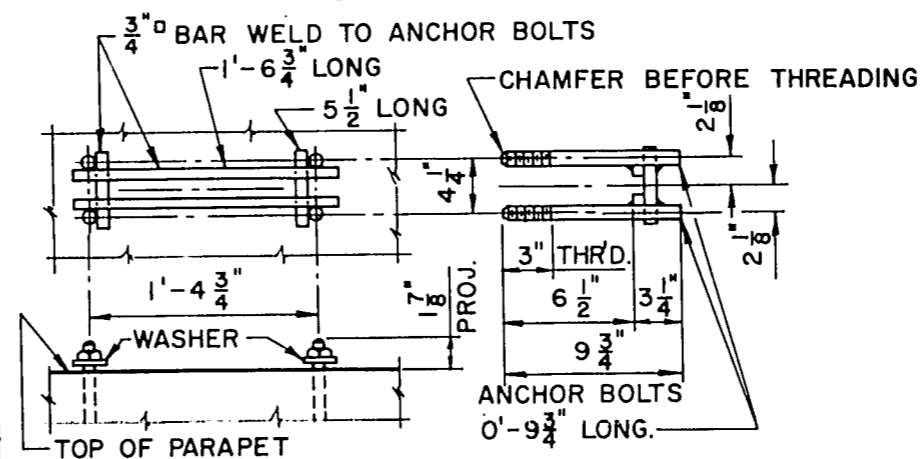
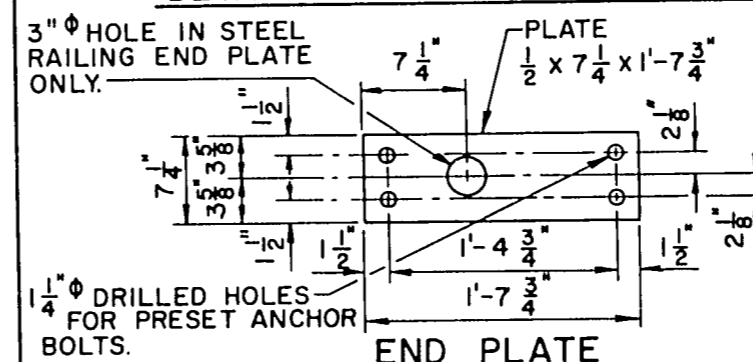


STEEL POST DETAILS

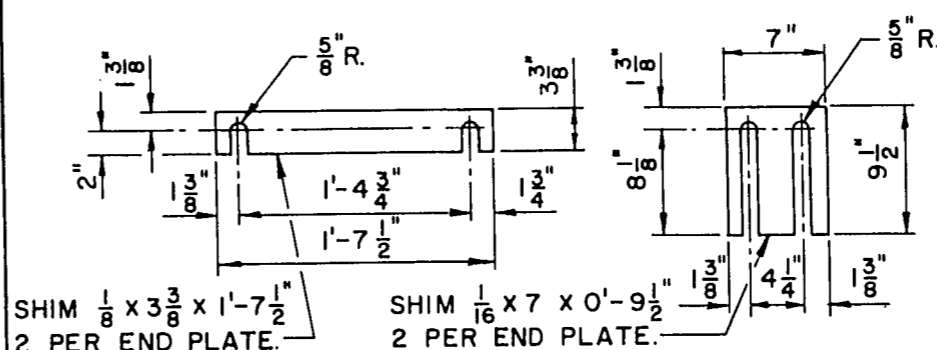
NOTE: GALVANIZE ENTIRE RAILING AFTER FABRICATION INCLUDING SHIMS.



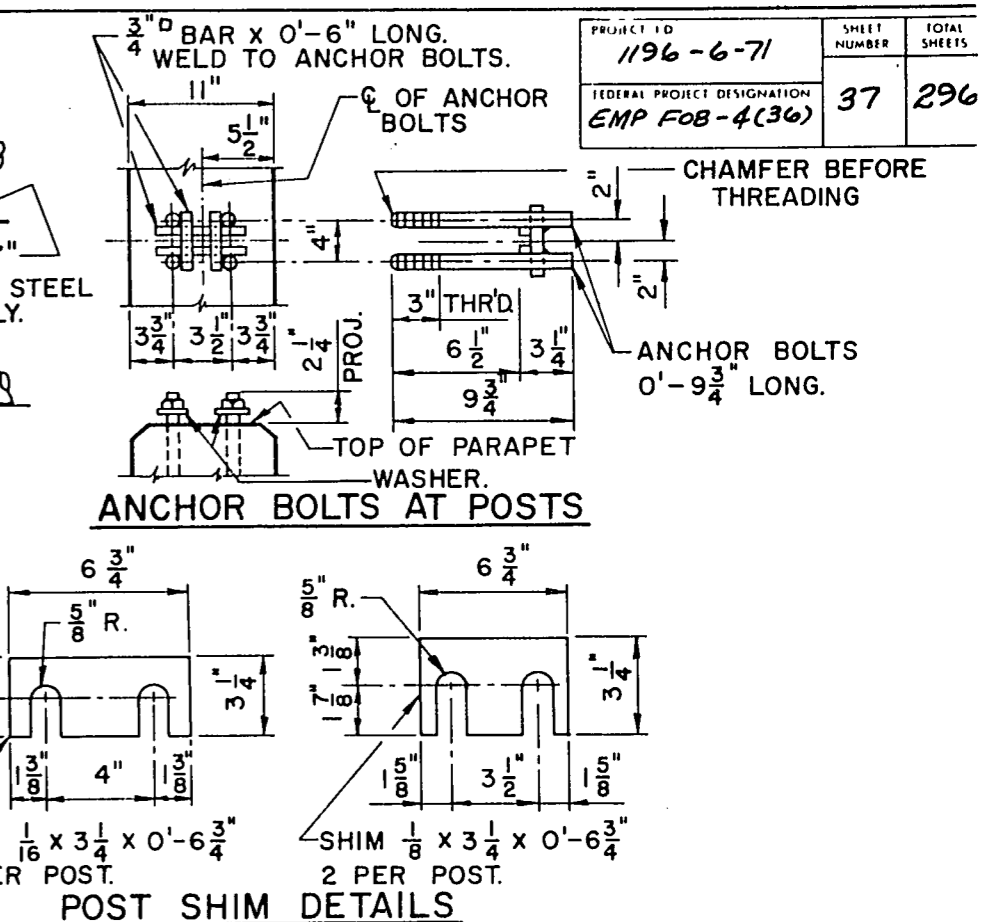
DETAIL OF RAIL BEND AT ABUTMENTS



ANCHOR BOLTS AT END PLATE

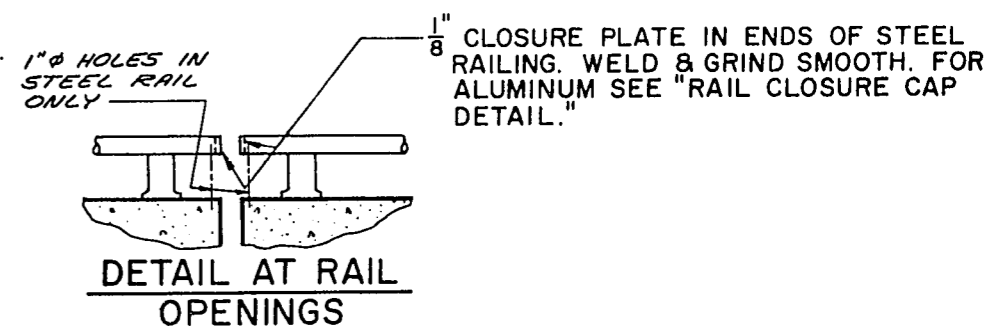


END PLATE SHIM DETAILS

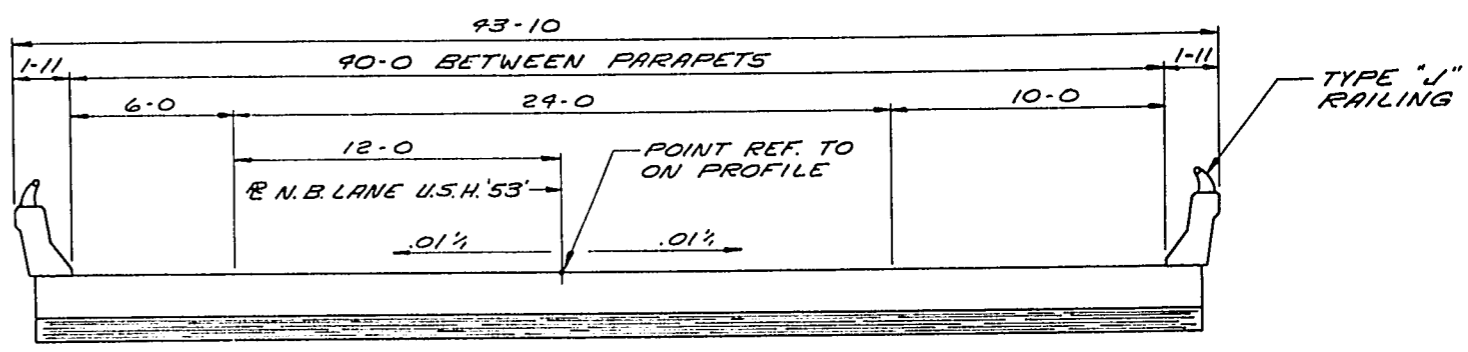
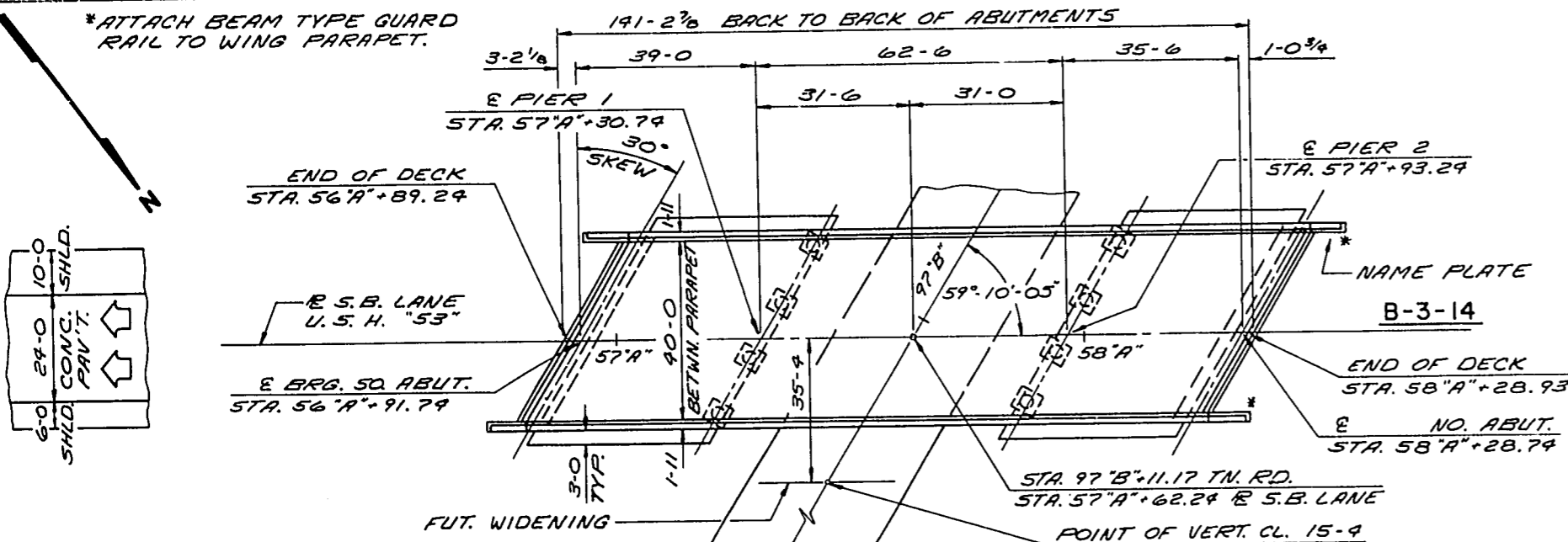


GENERAL NOTES

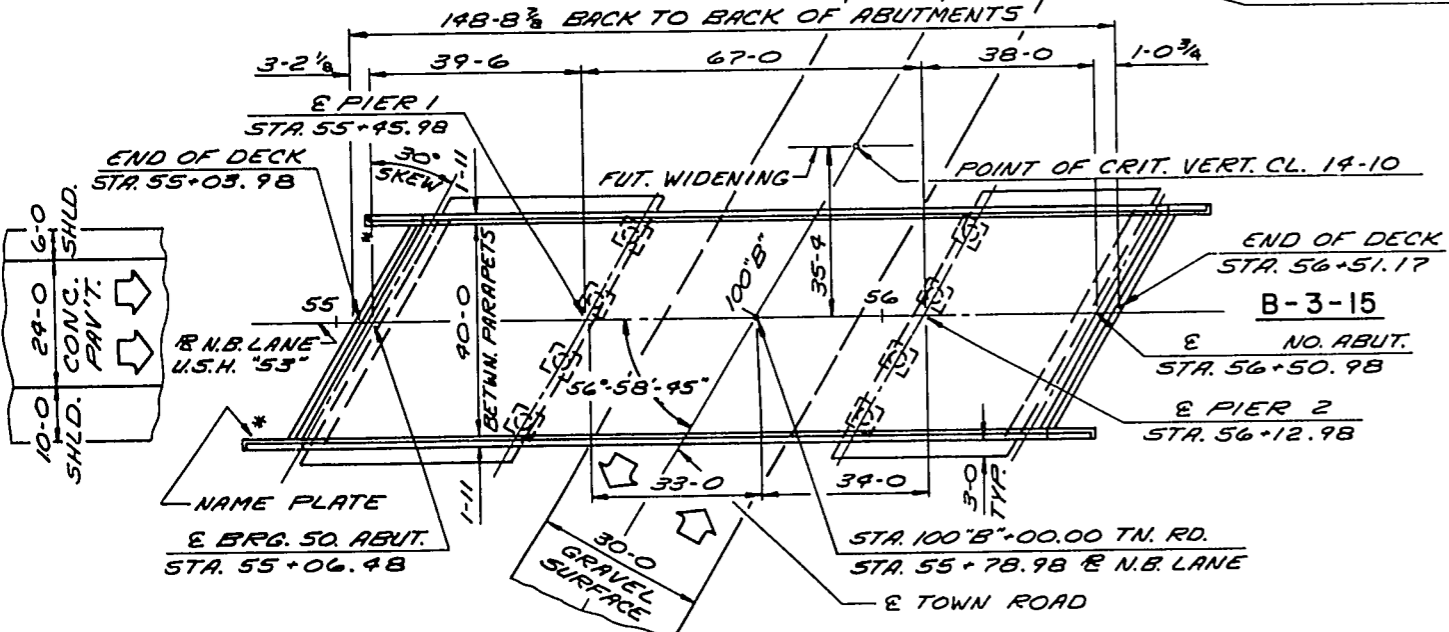
BID ITEM SHALL BE TUBULAR RAILING, TYPE 'J'.
ALL POST SPACINGS ARE TAKEN HORIZONTALLY ALONG
C/L OF ANCHOR BOLTS.
RAILING SHALL BE FABRICATED IN TWO OR THREE PANEL
LENGTHS.
SHIMS CONFORMING TO SAME MATERIAL AS POSTS SHALL
BE USED UNDER POSTS AND END PLATES WHERE REQ'D FOR
ALIGNMENT.
RAIL POSTS SHALL BE SET NORMAL TO GRADE.
THE SHANK AND ROOT OF THREAD DIAMETER FOR ANCHOR
BOLTS SHALL BE A MIN. OF 0.62 INCHES.
ANCHOR BOLTS, NUTS & WASHERS FOR ALUMINUM RAILING
SHALL BE STAINLESS STEEL.
ANCHOR BOLTS, NUTS & WASHERS FOR STEEL RAILING
SHALL BE EITHER STAINLESS STEEL OR ASTM A307. IF A307
IS USED ELECTRO-GALVANIZE NUTS, WASHERS & TOP 3 1/2"
OF ANCHOR BOLTS.
SHIMS SHALL CONFORM TO SAME MATERIAL AS POSTS.



No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-14			
Const. Spec	1969	Drawn By	Plans Checked
		D. J. A.	J. H. G.
TUBULAR RAILING TYPE 'J'		SHEET 10 OF 11	
		X 46269	



CROSS SECTION THRU ROADWAY
3 SPAN HAUNCHED SLAB (LOOKING NORTH)



DESIGN DATA

LIVE LOAD: HS 20

ALLOWABLE DESIGN STRESSES:

CONCRETE MASONRY, GRADE "AA" — f_c : 1,900 P.S.I.

BAR STEEL REINFORCEMENT — f_s : 20,000 P.S.I.

FOUNDATION DATA:

ABUTMENTS AND PIERS TO BE SUPPORTED ON CAST-IN-PLACE CONCRETE PILING 10 3/4" ϕ . DRIVE TO A MIN. BRG. VALUE OF 20 T/PILE, 55-0 EST. LENGTH AT SOUTH ABUT., 20 T/PILE, 55-0 EST. LENGTH AT NORTH ABUT., AND 55 T/PILE, 55-0 EST. LENGTH AT THE PIERS.

TRAFFIC VOLUME:

U.S.H. "53" — 5300 (1980)

D.H.V. — 80 M.P.H.

R.D.S. — 80 M.P.H.

TOWN ROAD

A.D.T. — 100 (2000)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

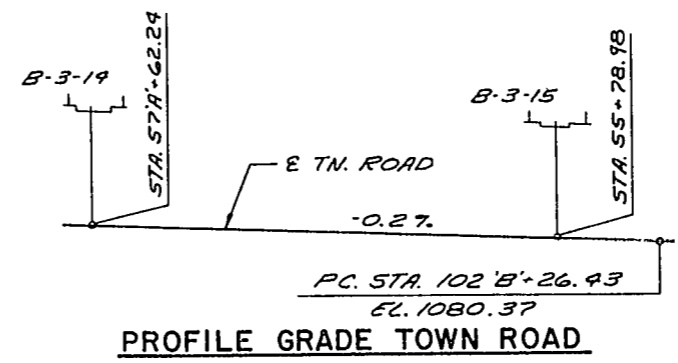
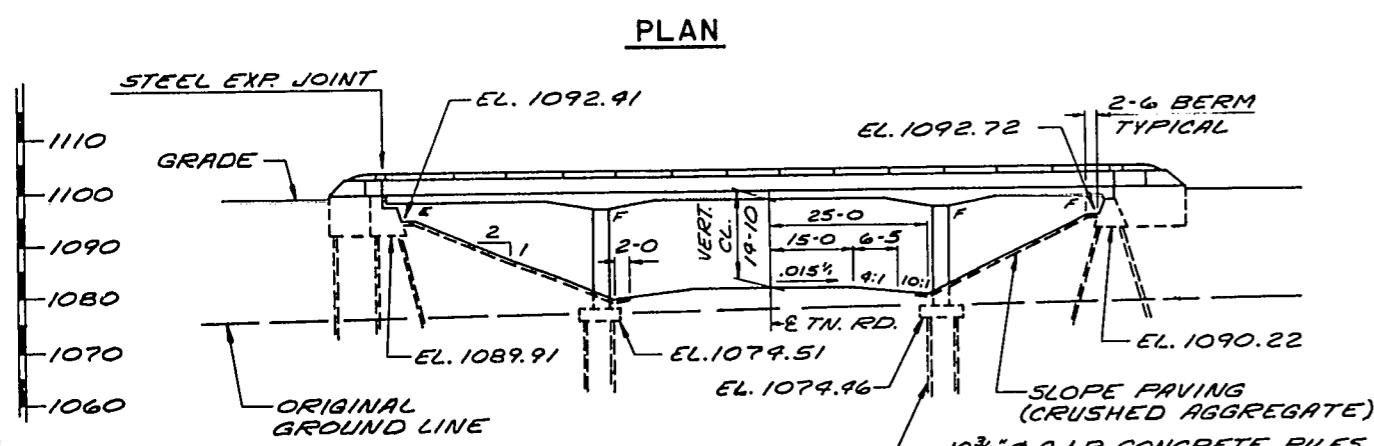
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING, CRUSHED AGGREGATE TO THE EXTENT SHOWN ON THIS SHEET AND IN THE ABUTMENT DETAILS.

THE FINISHED GRADED SECTION WAS USED AS THE UPPER LIMITS OF EXCAVATION FOR COMPUTATION OF EXCAVATION AT THE PIERS.

FOR UPPER LIMITS OF EXCAVATION AT THE ABUTMENTS SEE SHEETS NO. 3 & 4.

PILING AT ABUTMENTS SHALL BE PREBORED THRU FILL TO THE ORIGINAL GROUND LINE.

A concrete overlay was placed on the deck from \pm Sta 55+44 to \pm Sta 56+11.

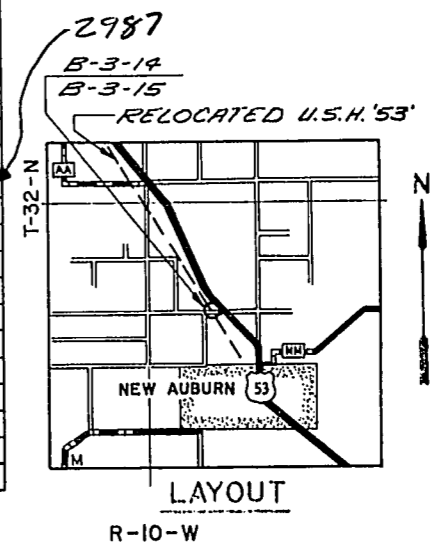
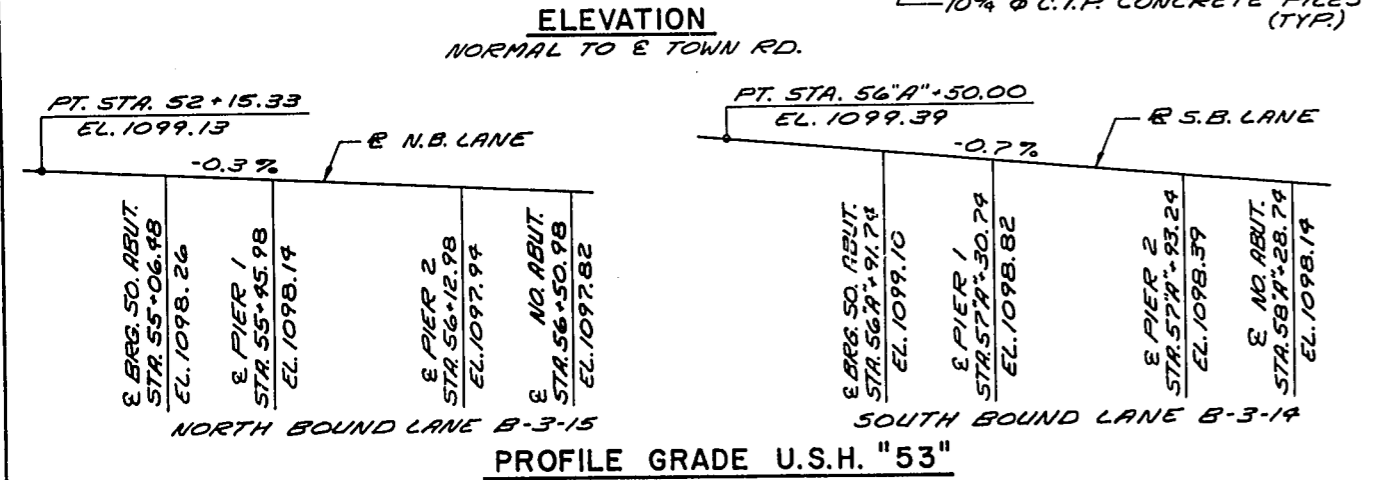


LIST OF DRAWINGS

1. GENERAL PLAN	X46270
2. SUBSURFACE EXPLORATION	X46271
3. SOUTH ABUTMENT	X46272
4. NORTH ABUTMENT	X46273
5. PIERS	X46274
6. SUPERSTRUCTURE	X46275
7. SUPERSTRUCTURE	X46276
8. EXPANSION JOINT & BEARING DETAILS	X46277
9. SLOPED FACE PARAPET "A"	X46278
10. TUBULAR RAILING TYPE "J"	X46279

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	S. ABUT.	PIER 1	PIER 2	N. ABUT.	SUPER.	TOTAL
EXCAVATION FOR STRUCTURE	C.Y.	92	150	130	40	—	362
CONCRETE MASONRY	C.Y.	66	63	48	43	495	715
BAR STEEL REINFORCEMENT	LB.	3080	10,015	8885	2180	113,750	137,910
STRUCTURAL CARBON STEEL	LB.	—	—	—	—	3970	3970
STRUCTURAL LOW ALLOY STEEL	LB.	—	—	—	—	1100	1100
LUBRICATED BRONZE PLATES	LB.	—	—	—	—	77	77
BEARING PADS	S.F.	52.6	1041	882	538	7	7
CAST-IN-PLACE CONC. PILING DEL. & DR. 10 3/4" ϕ	L.F.	986	1440	960	190	—	4576
PREBORING, CAST-IN-PLACE CONC. PILING 10 3/4" ϕ	L.F.	255	—	—	242	—	497
TUBULAR RAILING, TYPE "J"	L.F.	—	—	—	—	317	317
SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	257	—	—	257	—	514
NON-BID ITEMS							
1/8" ALUMINUM OR ZINC PLATE	S.F.	—	—	—	—	40	40
FILLER	SIZE	—	—	—	—	1/8"	1/8", 1/2"
POLYVINYL CHLORIDE WATERSTOP	L.F.	—	—	—	—	46	46



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-3-15
U.S.H. "53" OVER TOWN ROAD

County: BARRON

Design Spec: A.A.S.H.O. 69

Designed By: R.T.B. Checked: F.P.R.

Approved: W.A. Kline, Chief Bridge Engineer

11-17-71

GENERAL PLAN

SHEET 1 OF 10

X46270

PROJECT NO. 1196-6-71	SHEET NUMBER 39	TOTAL SHEETS 296
FEDERAL PROJECT DESIGNATION EMP FOB-4(36)		

ABBREVIATIONS		
F — Fine	M — Medium	C — Coarse
Ws — Weathered	So — Sound	

MATERIAL SYMBOLS		
Topsoil	Silt	Sandstone
Sand	Peat	Limestone
Gravel	Clay	Igneous Rock

LEGEND OF PROBING

95/6=95 Blows for 6" Penetration Probing taken with a 350# wt. Falling 18" on a 2" O. D. Point.	Probing No. Sta. Elevation 7 Average Blows Per Foot Refusal 95/6
--	--

LEGEND OF BORING

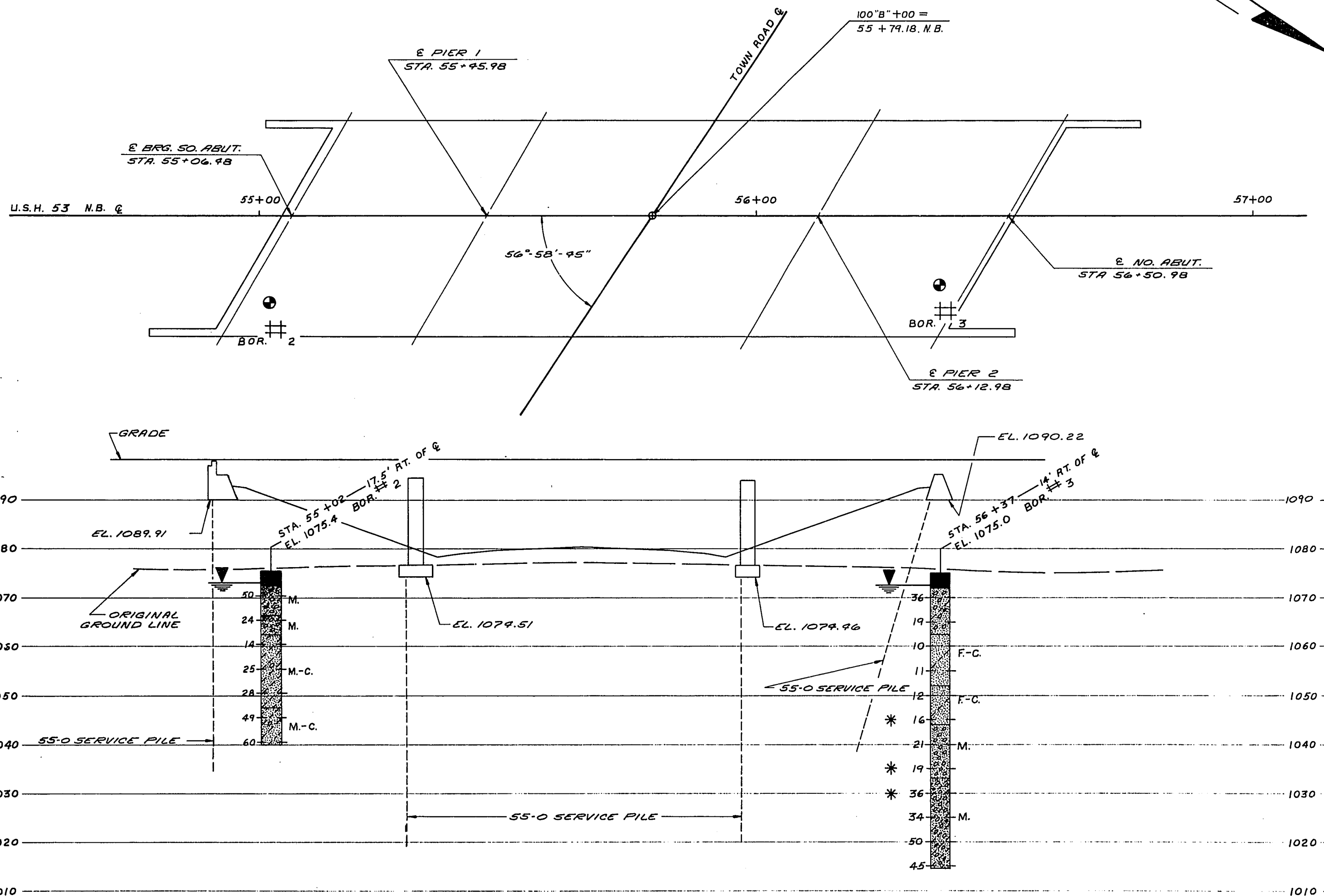
Unconfined Strength	7.7	7	*	Sandy Gravel
Blows Per Ft. Using 140# Wt. Falling 30"				F.
Wash Sample				Boulders or Cobbles
Shelby Tube	S. T.			Sand
Ground Water Elevation				Silty Clay
No Ground Water Observed Above This Elevation				So
				Limestone

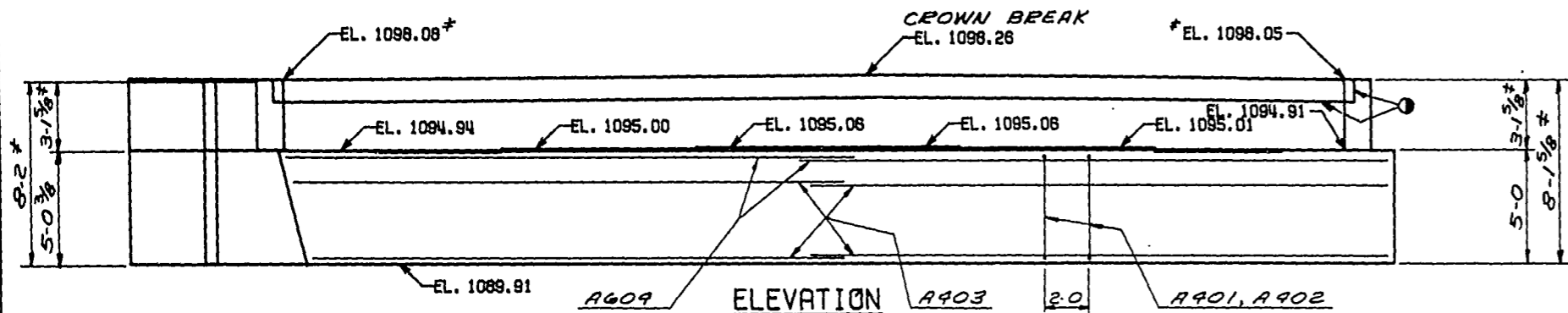
Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O. D. x 1.4" I. D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

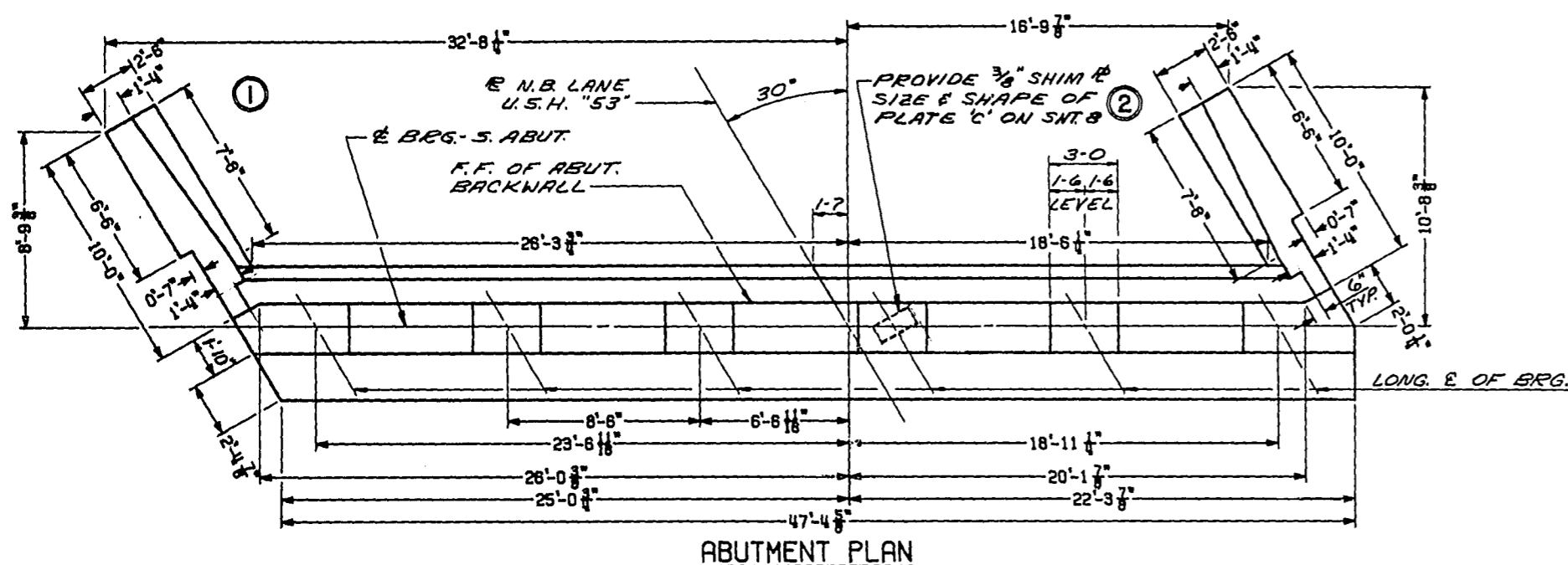
To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

No.	Date	Revised	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-15			
1969	D.T.A.	J.H.G.	
SUBSURFACE EXPLORATION			SHEET 2 OF 10 X 46271

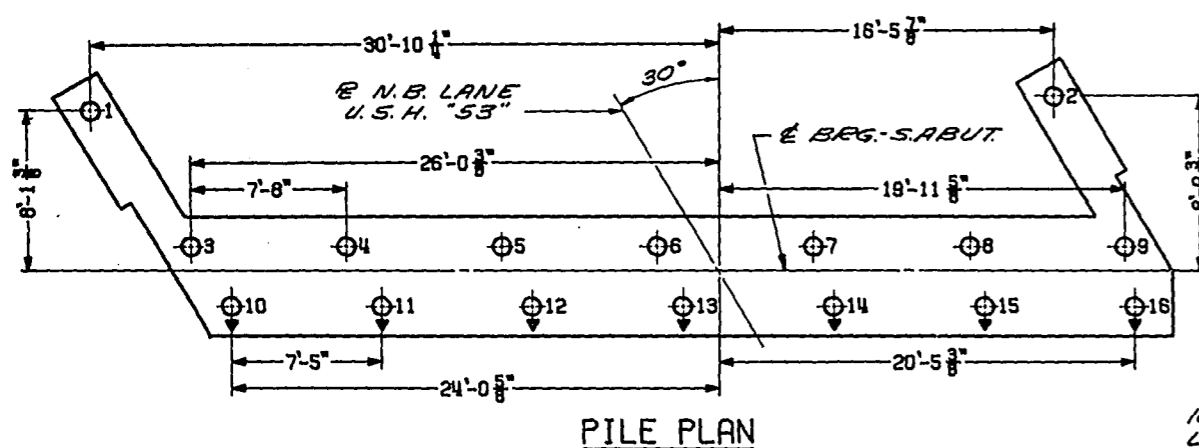




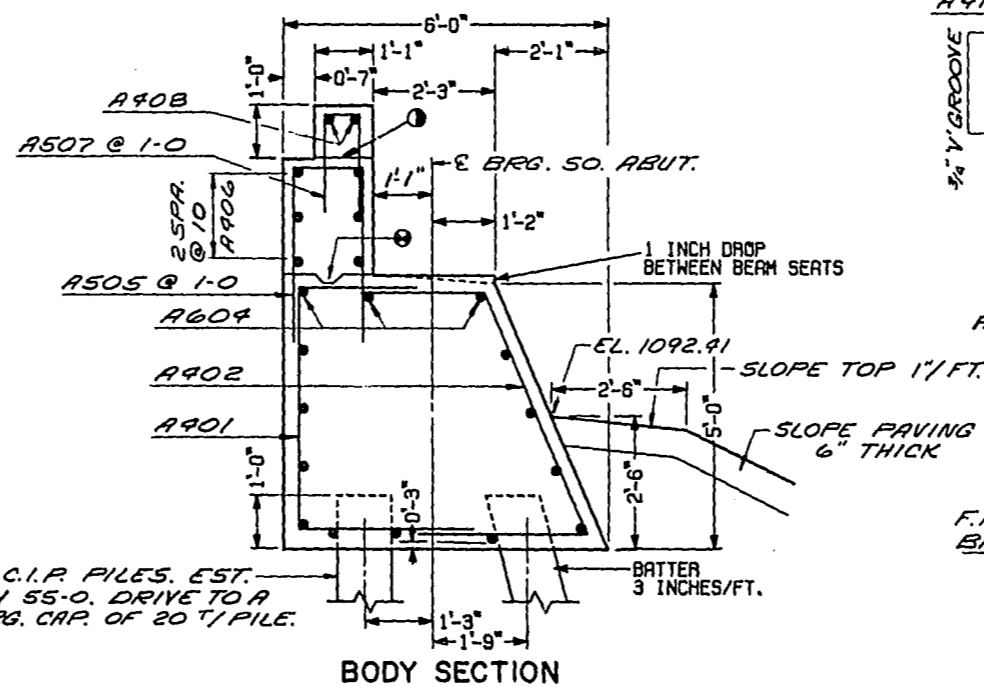
*ELEVATIONS AND DIMENSIONS ARE MEASURED AT F.F. BACKWALL.



① CONSTRUCTION JOINT. POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

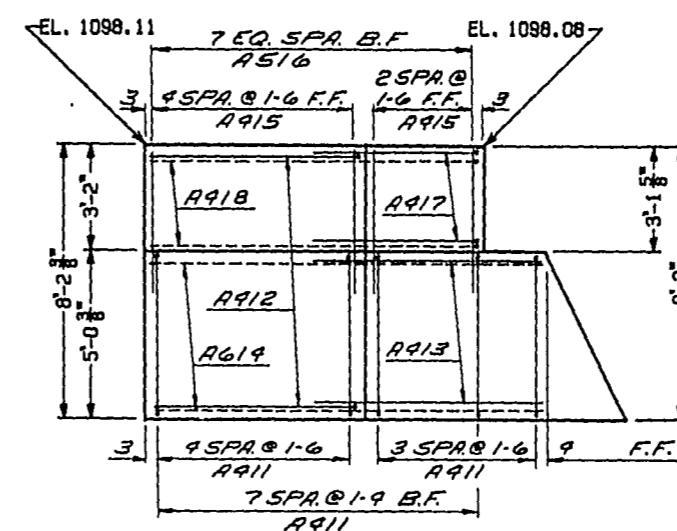


INDICATES BATTERED
PILING - BATTER PILING 3"
PER FOOT IN DIRECTION SHOWN

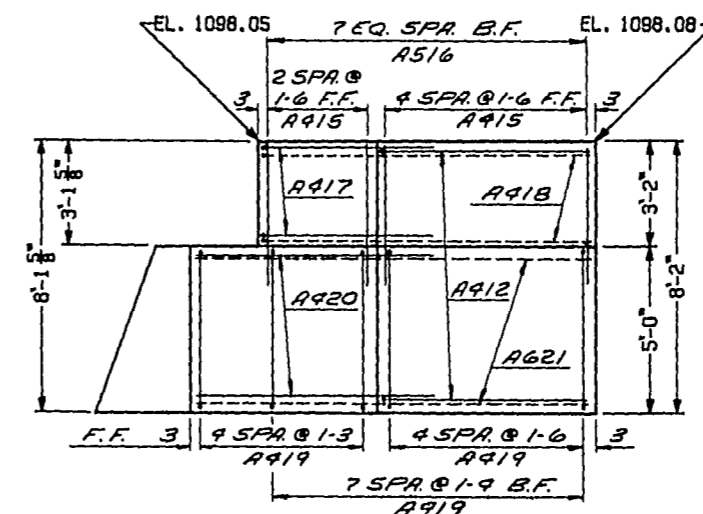


10 3/4" Ø C.I.P. PILES. EST. —
LENGTH 55'-0". DRIVE TO A
MIN. BRG. CAP. OF 20 T/PILE

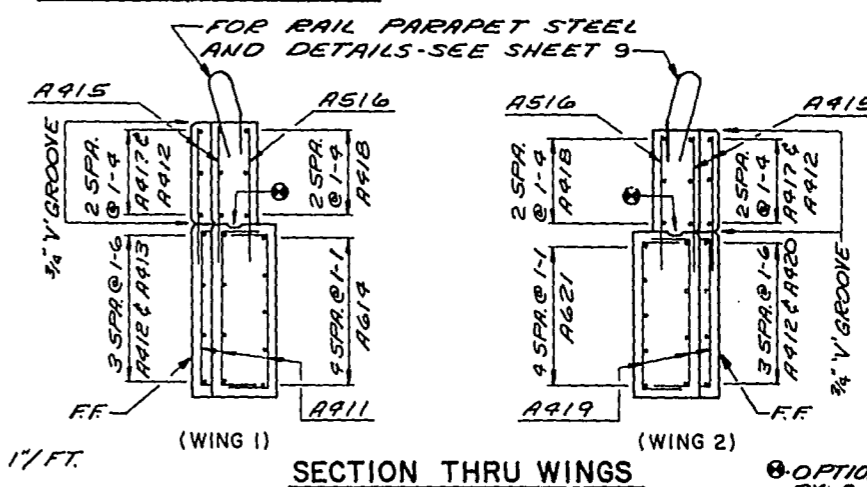
ALL HORIZONTAL BARS IN ABUTMENT BODY ARE
A403 BARS UNLESS SHOWN OR NOTED OTHERWISE.
FILL TO EL. 1091.91 BEFORE DRIVING PILING. UPPER
LIMIT FOR "EXCAVATION FOR STRUCTURES" SHALL
NOT EXCEED THIS ELEVATION.



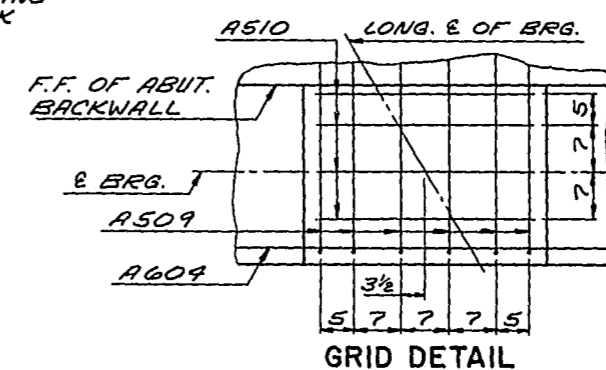
WING I ELEVATION



WING 2 ELEVATION



SECTION THRU WINGS

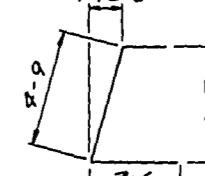


GRID DETAIL

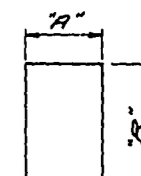
[illegible]

* A408- NO LAP FOR RAIL PARAPET BARS,
1-10% SEE SHEET 9

BAR #	DIM. "A"	DIM. "B"
A401	4-5	3-6
A505	1-9	3-5
A507	9	2-3
A411	4-7	1-6
A419	4-7	1-6



A402



1-0	A509
1-5	A412
1-0	A417



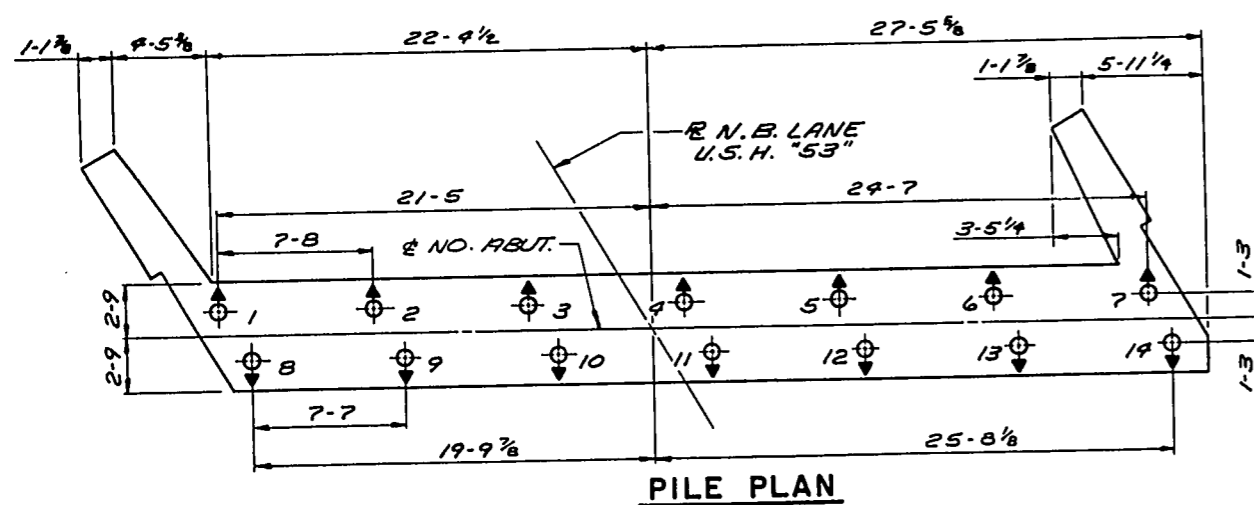
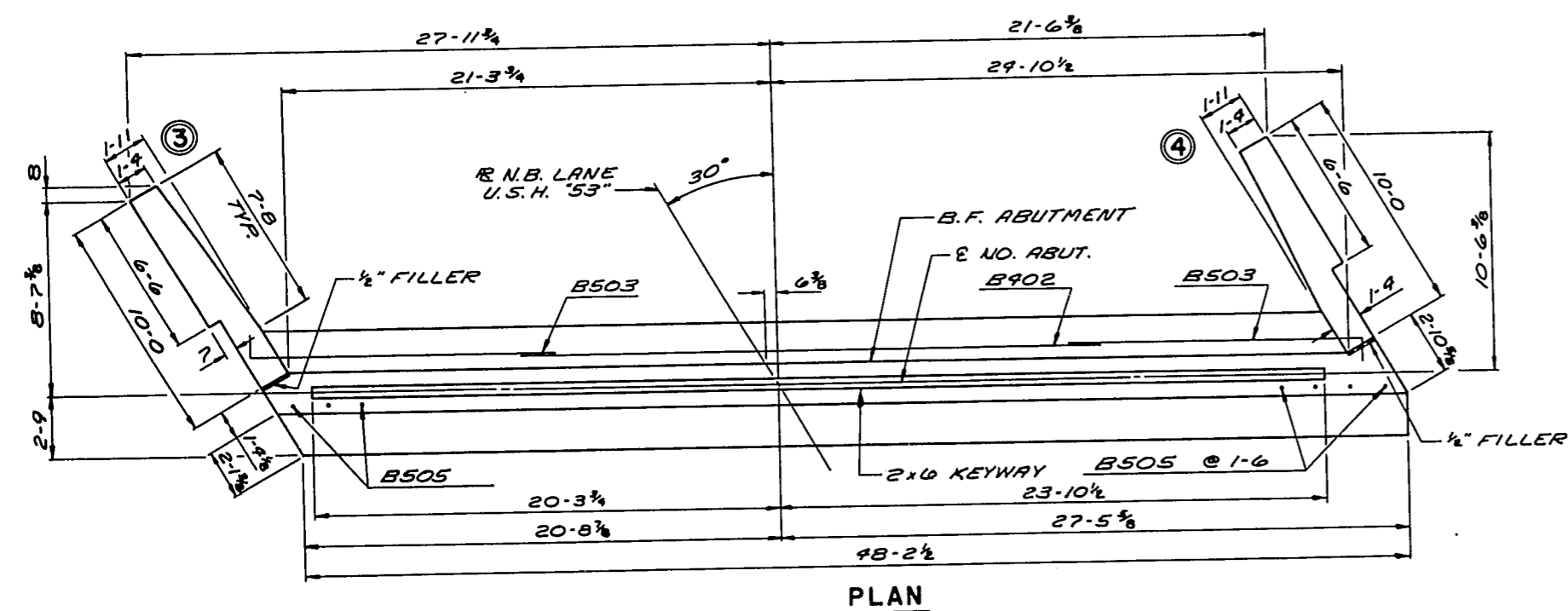
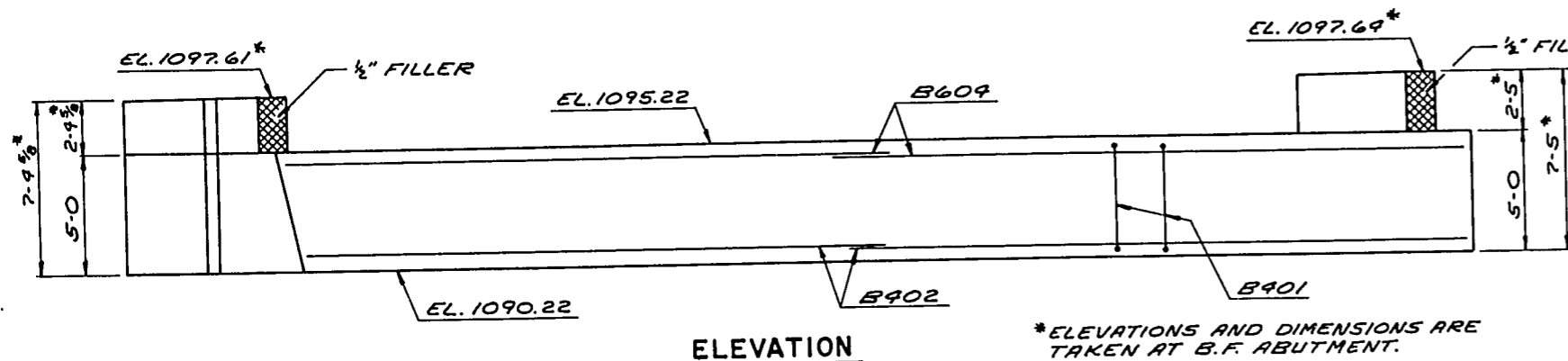
A418

8. OPTIONAL KEYED CONST. JOINT FORMED BY A SURFACED BEVELED 2x6.

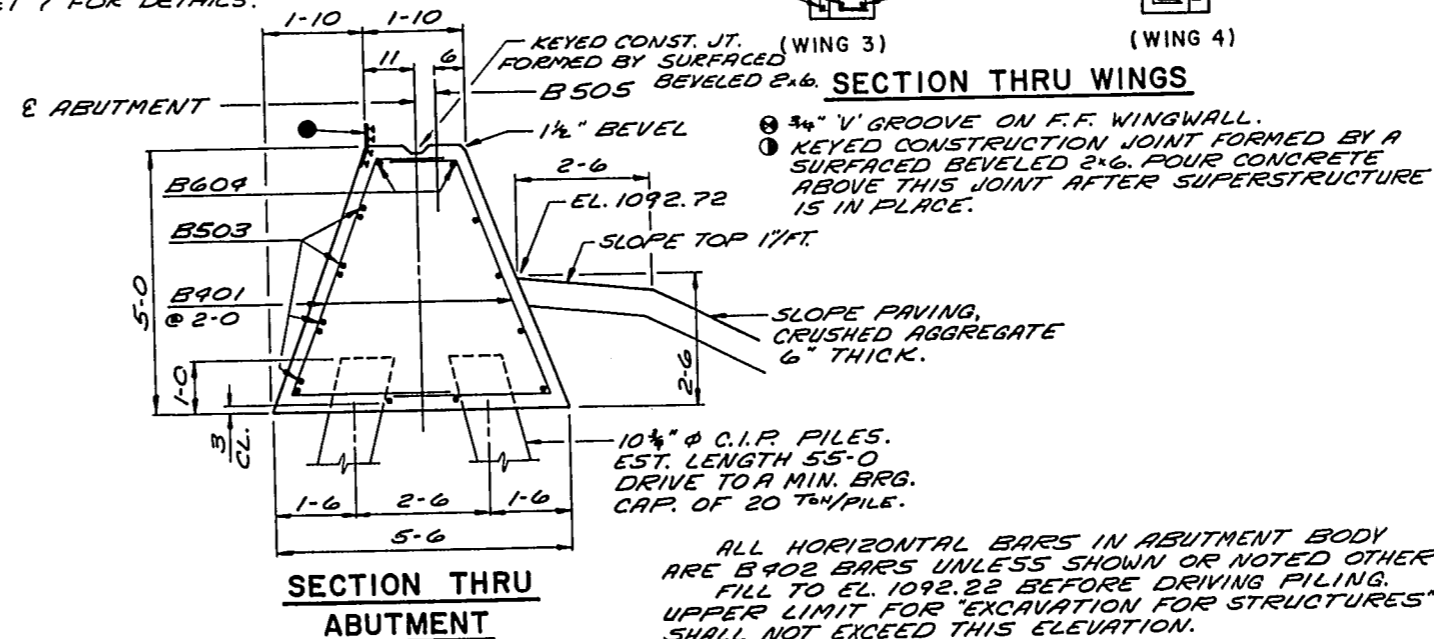
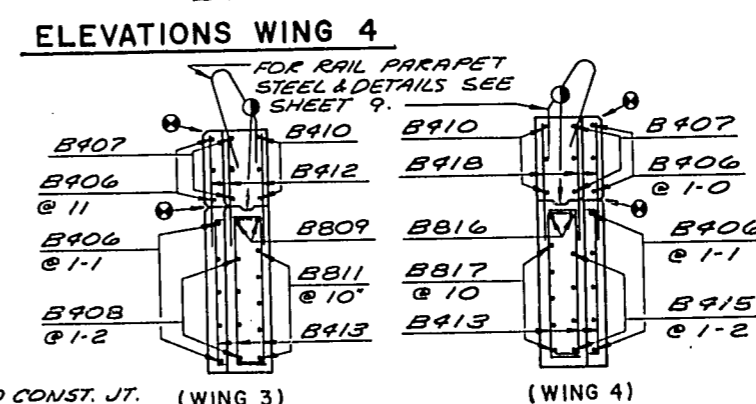
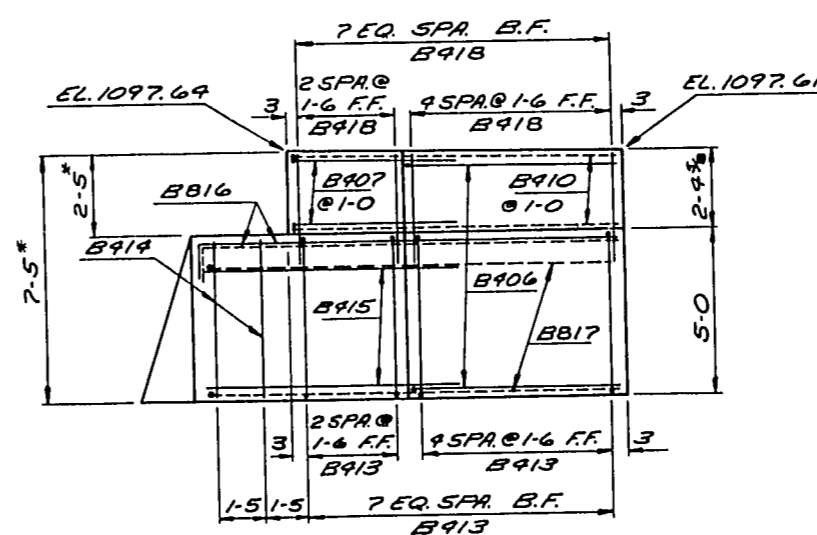
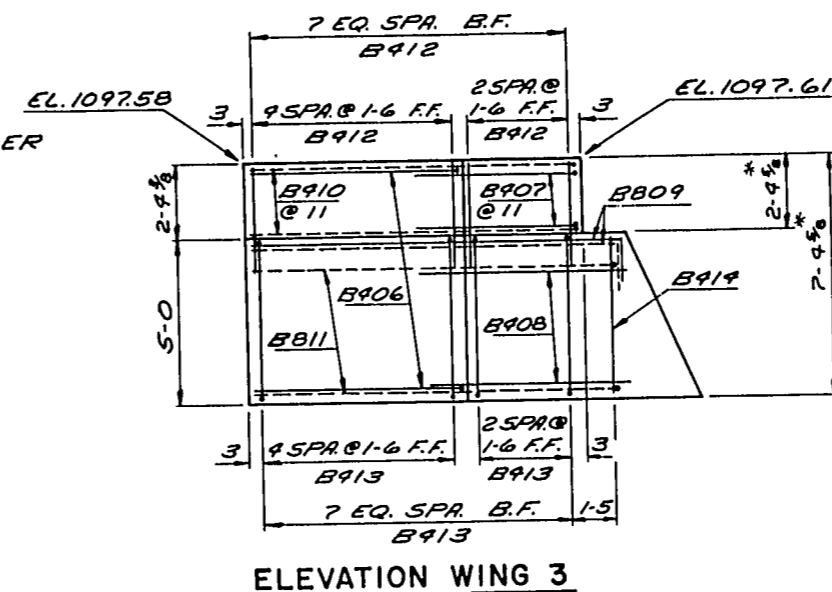
FOR PILE SPLICE DETAIL SEE SHT. 4.

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-15			
Const. Spec.	1969	Drawn By	J. H. G.
SOUTH ABUTMENT		SHEET 3 OF 10	
		X 46272	

NOTE: SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. PLACE SEALER 1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE



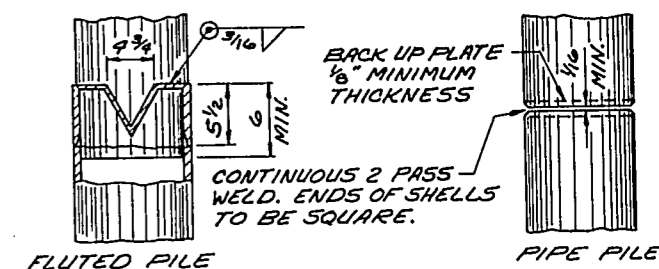
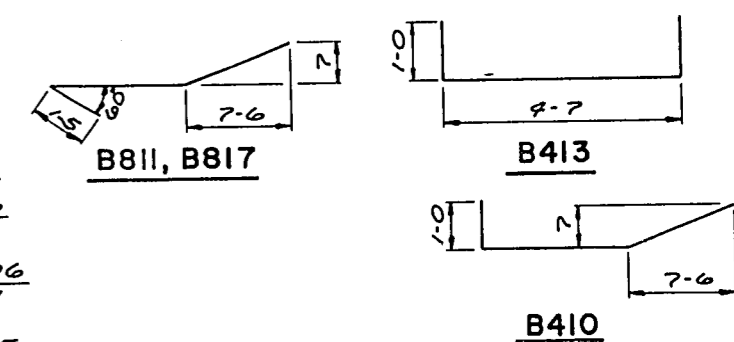
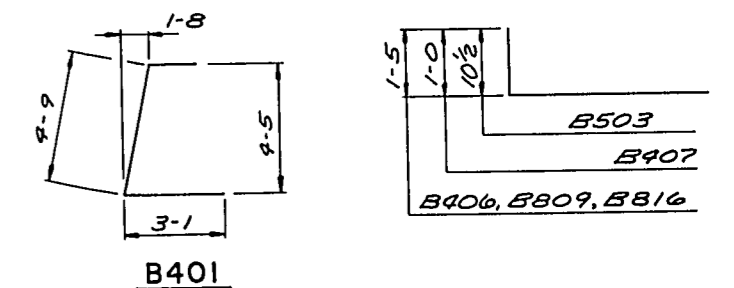
INDICATES BATTERED
PILING - BATTER PILING 3"
PER FOOT IN DIRECTION SHOWN.



ALL HORIZONTAL BARS IN ABUTMENT BODY
ARE B402 BARS UNLESS SHOWN OR NOTED OTHERWISE.
FILL TO EL. 1092.22 BEFORE DRIVING PILING.
UPPER LIMIT FOR "EXCAVATION FOR STRUCTURES"
SHALL NOT EXCEED THIS ELEVATION.

BILL OF BARS					CMP FCB-7(30)	
BAR NO.	NO. REQ'D	LENGTH	BENT	1820 #		
				LOCATION		
B901	50	9'-0	X	BODY - VERTICAL		
B902	16	25'-6		" - HORIZONTAL		
B503	8	14'-0	X	" - "		
B604	9	25'-11		" - " TOP		
B505	33	2'-6		" - DOWEL		
B906	16	7'-6	X	WINGS 3 & 4 - HORIZONTAL F.F.		
B907	6	5'-11	X	" 3 & 4 - " F.F.		
B408	9	6'-4		" 3 - " F.F.		
B809	2	12'-2	X	" 3 - " BF & F.F.		
B910	6	10'-8	X	" 3 & 4 - " B.F.		
B811	5	13'-0	X	" 3 - " B.F.		
B412	16	3'-9		" 3 - VERTICAL F.F. & B.F.		
B913	32	6'-5	X	" 3 & 4 - " F.F. & B.F.		
B914	3	9'-7		" 3 & 4 - " F.F.		
B915	9	7'-8		" 4 - HORIZONTAL F.F.		
B816	2	13'-8	X	" 4 - " B.F. & F.F.		
B817	5	13'-0	X	" 4 - " B.F.		
B918	16	3'-5		" 4 - VERTICAL F.F. & B.F.		

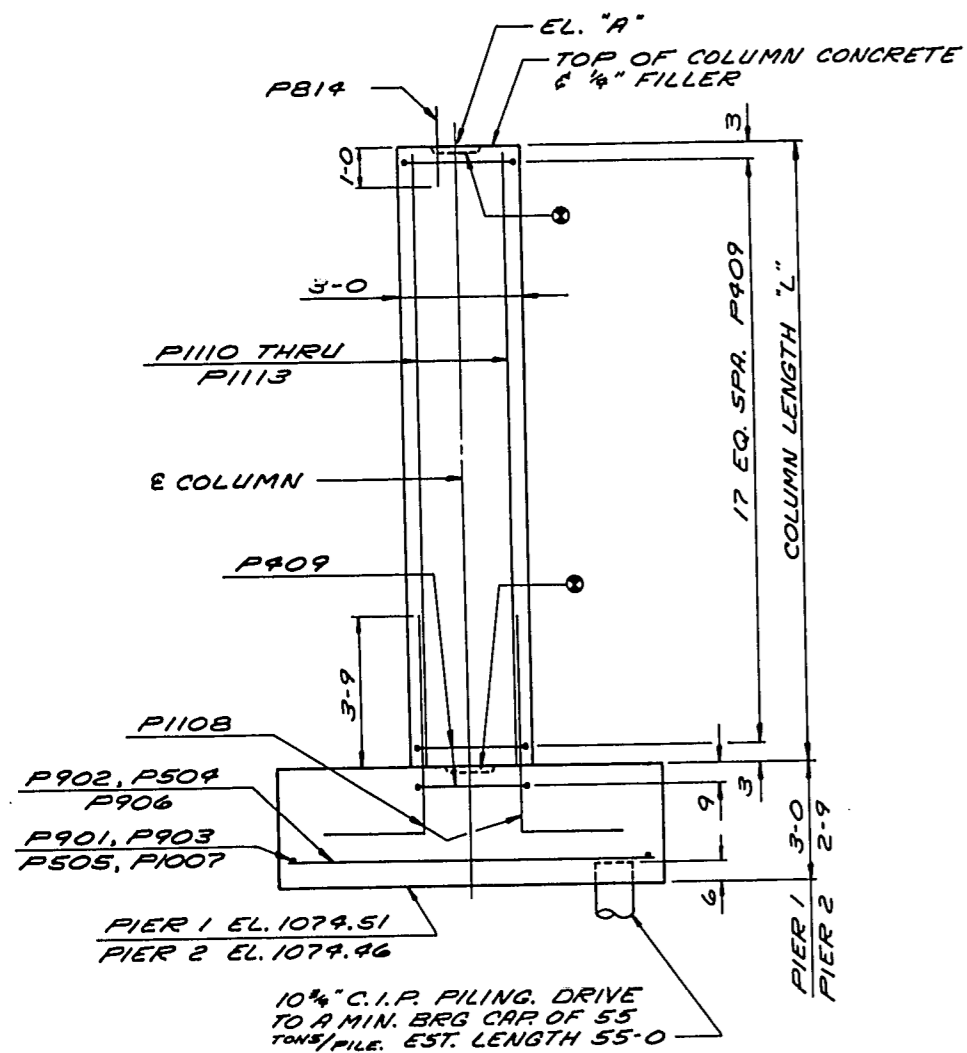
FOR RAIL PARAPET BARS, SEE SHEET 9.



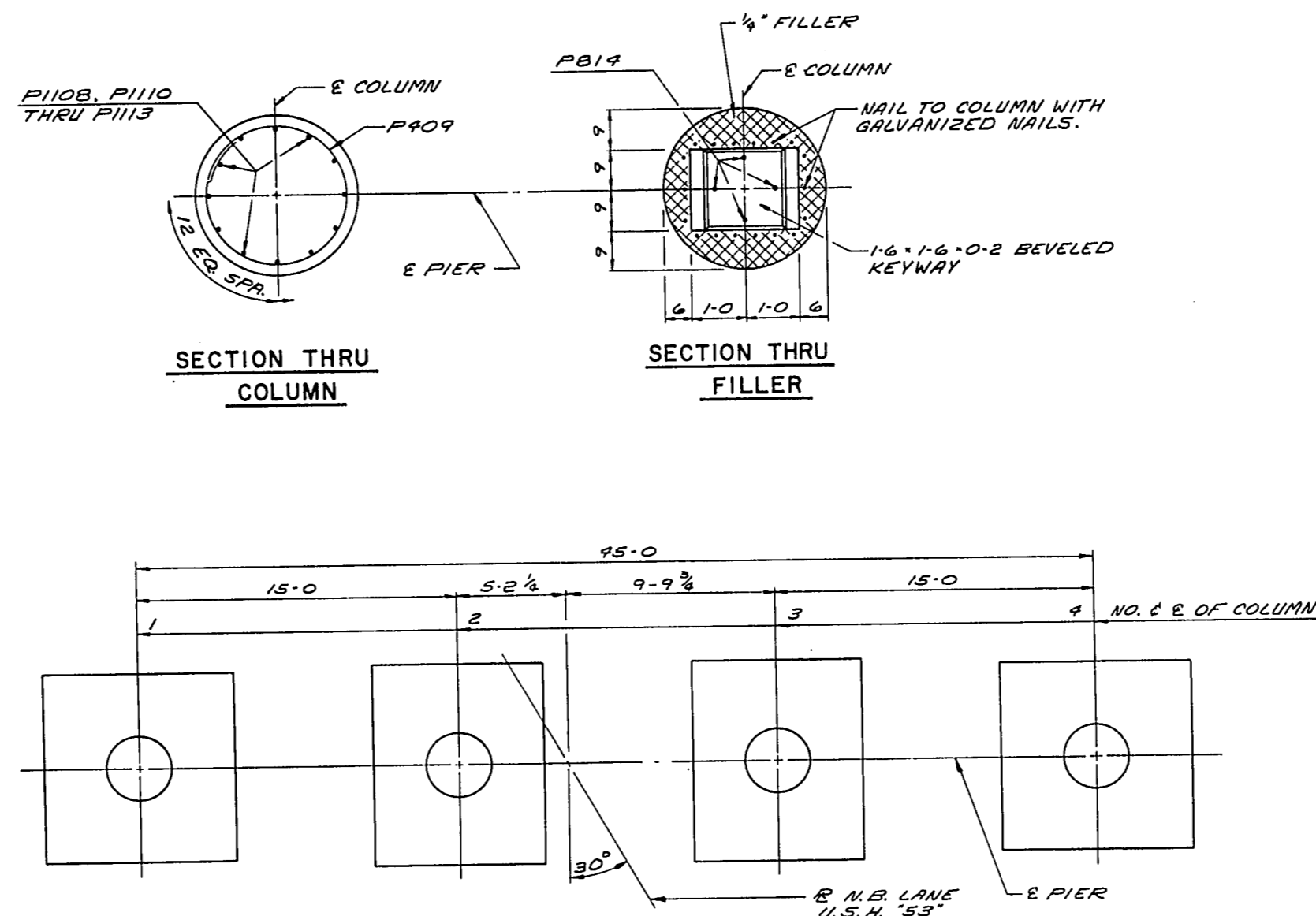
No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-15			
Const. Spec.	1969	Drawn By	<i>D. J. A.</i>
		Plans Checked	<i>J. H. G.</i>
NORTH ABUTMENT		SHEET 4 OF 10	
		X 46273	

BILL OF BARS

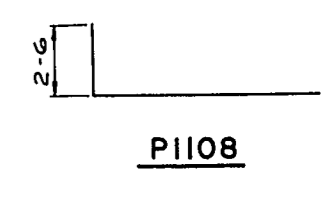
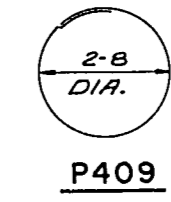
BAR NO.	NO. REQ'D	LENGTH	BENT	18,900 [#]
LOCATION				
P901	32	10-6		EXTERIOR FOOTINGS - PIER 1
P902	20	9-6		" " " " 1
P903	32	11-0		INTERIOR " " " " 1
P904	28	7-6		" " " " 1
P905	18	7-0		EXTERIOR " " " " 2
P906	38	8-0		EXT. & INT. " " " " 2
P1007	22	9-0		INTERIOR " " " " 2
P1108	96	7-6	X	FOOTING & COLUMN - DOWELS
P909	152	9-5	X	COLUMN - TIES
P1110	24	17-1		PIER 1, COLUMN 1 & 4 - VERTICAL
P1111	48	17-2		PIER 1, COL. 2 & 3, PIER 2, COL. 1 & 4 - VERT.
P1112	12	17-9		PIER 2, COLUMN 2 - VERTICAL
P1113	12	17-3		" 2, " 3 - "
P814	32	2-0		COLUMN & SLAB - DOWELS



TYPICAL COLUMN ELEVATION



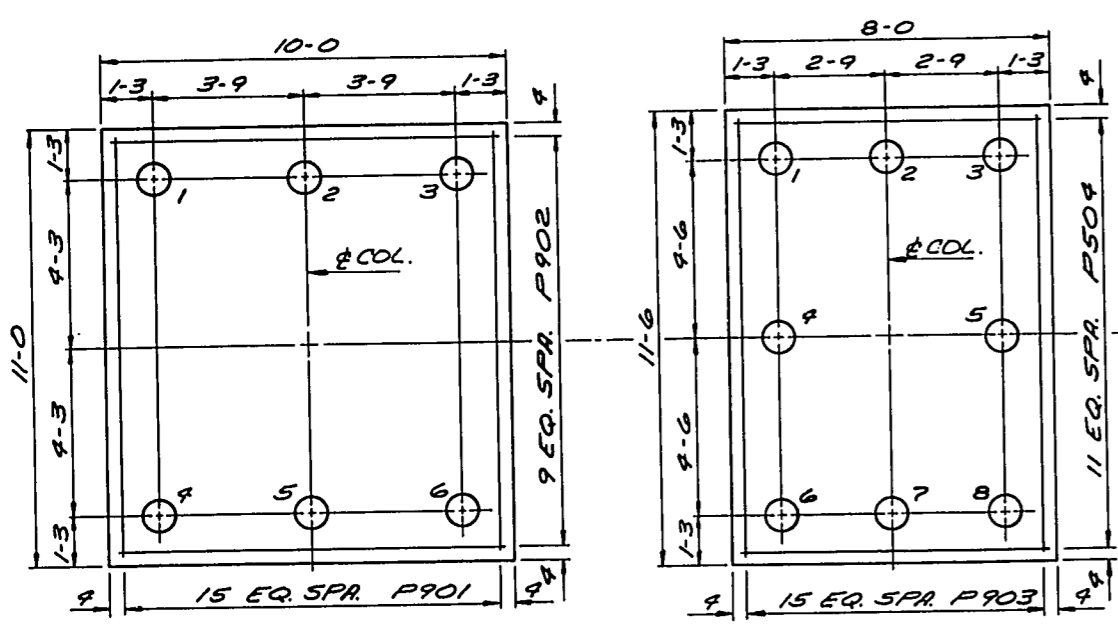
PIER PLAN



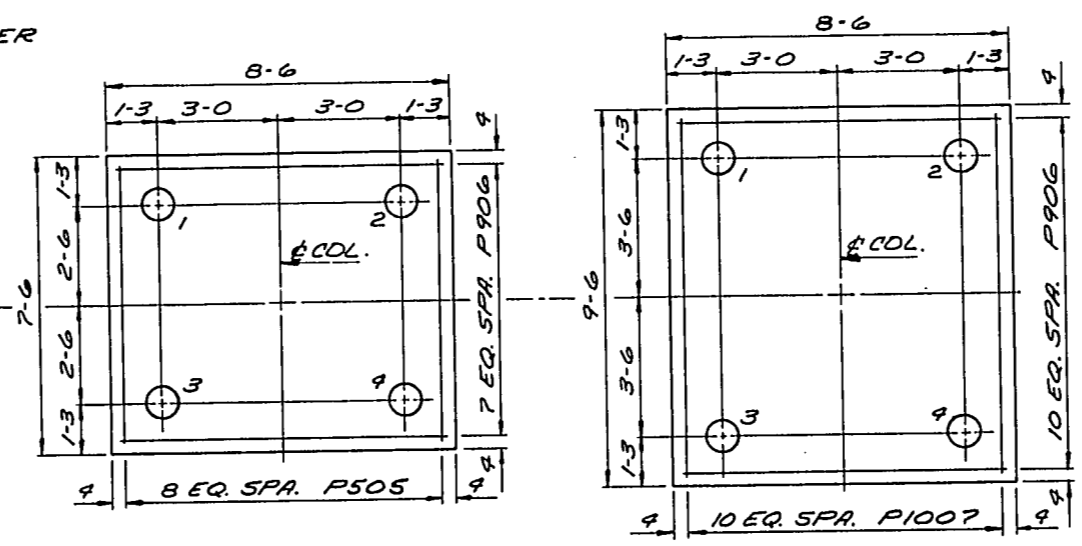
ELEVATION AND COLUMN LENGTH

		ELEV. "A"	LENGTH "L"
PIER 1	COLUMN 1	1094.76	17-3
	" 2	1094.92	17-4 3/8
	" 3	1094.90	17-4 3/8
	" 4	1094.79	17-3 3/8
PIER 2	" 1	1094.56	17-4 1/4
	" 2	1094.71	17-6
	" 3	1094.70	17-5 3/8
	" 4	1094.59	17-4 1/2

NOTES:
 TOP OF COLUMN ELEVATIONS (EL. "A") AND COLUMN LENGTH "L" ARE MEASURED AT E PIER AND E COLUMN.
 SLOPE TOP OF COLUMN TO MATCH SLOPE OF SUPERSTRUCTURE.
 CONSTRUCTION JOINT KEY FORMED BY A SURFACED BEVELED 1-6 x 1-6 x 0-2.
 P814 BARS MAY BE PLACED AFTER COLUMN CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.
 FOR PILE SPLICE DETAIL SEE SHEET 4.

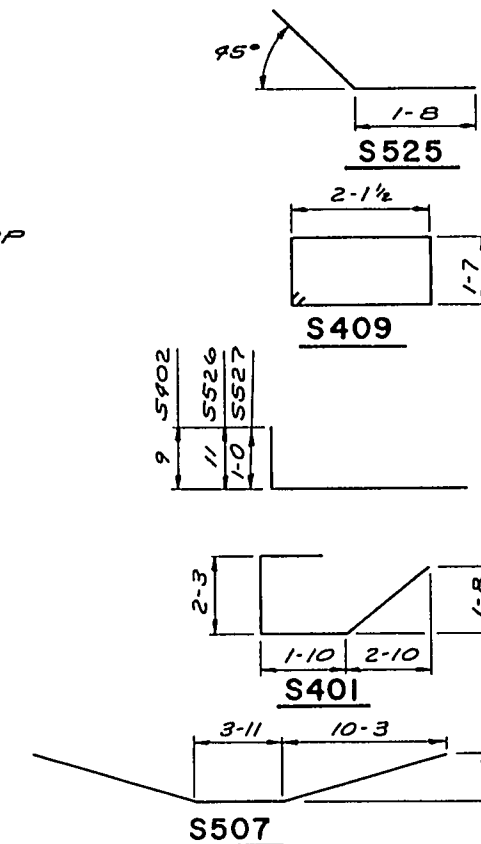


TYPICAL FOOTING PLAN - PIER 1



TYPICAL FOOTING PLAN - PIER 2

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-15			
Const. Spec. 1969	Drawn By D.J.A.	Plans Checked J.H.G.	
PIERS			SHEET 5 OF 10
			X46274



BILL OF BARS				EMP F08-4(36)	
BAR NO.	NO. REQ'D	LENGTH	BENT	LOCATION	
				109,280 #	
5401	64	8-8	X	SLAB @ SO. ABUT. HAUNCH	
5402	29	6-8	X	" @ " "	" "
5703	3	48-10		" @ " "	" " -TRANS.
5504	69	48-10		" SPAN 1 & 3 - TRANS.	
51005	40	32-0		" "	" 1 - LONG.
51006	27	23-6		" "	" 1 - "
5507	86	29-8	X	" @ PIER HAUNCH	
5908	20	48-10		" @ " "	" - TRANS.
5409	189	7-11	X	" STIRRUP - SPAN 2	
51110	66	52-0		" SPAN 2 - LONG.	
51111	41	36-3		" " 2 - "	
5712	48	48-10		" " 2 - TRANS.	
5913	52	30-3		" " 3 - LONG.	
5914	37	21-3		" " 3 - "	
5915	29	9-6		" " 1 - "	
5516	98	48-10		" " 1, 2, & 3 - TRANS.	
51117	92	46-3		" OVER PIER 1 - LONG.	
51118	43	39-6		" " 1 - "	
5919	29	28-6		" SPAN 2 - LONG.	
5820	18	31-6		" EDGE SPAN 2 - LONG.	
51121	43	39-6		" OVER PIER 2 - LONG	
51122	42	47-3		" " 2 - "	
5923	28	48-10		" @ PIER HAUNCH - TRANS.	
5924	29	6-6		" SPAN 3 - LONG.	
5525	43	4-1	X	" @ NO. ABUT. HAUNCH	
5526	43	3-0	X	" @ " "	" "
5527	43	2-11	X	" @ " "	" "

SKEW ANGLE 30°

RAIL POST SPACING 1-1
F.F. BACKWALL

E BRG. SO. ABUT. 59-6
E PIER 1 67-0
E PIER 2 38-0
E NO. ABUT. 11-1½

B.F. ABUT.

RAIL PARAPET BARS

TOP BAR STEEL REINFORCEMENT

E N.B. LANE U.S.H. "53"

BOTTOM BAR STEEL REINF.

PAVING NOTCH

OPT. TRANSVERSE CONST. JOINT

INDICATES DEFLECTED RAIL PARAPET PL. RAIL POSTS OR RS

STRUCTURE

No.	Date
STATE OF DEPARTMENT DIVISION	
STRUCTURE	
Const.	1920

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-15			
Const. Spec.	1969	Drawn By	Plans Checked
		D.J.A.	J.H.G.
SUPERSTRUCTURE		SHEET 6 OF	
		X46275	

1196-6-71	SHEET NUMBER	TOTAL SHEETS
EMP F08-4(36)	45	296

BEARING NOTES

ALL MATERIAL EXCLUDING ANCHOR BOLTS, PINTLES, NUTS, STUDS & WASHERS SHALL BE MADE OF A588 STEEL. PINTLES SHALL BE MADE OF A999 STEEL.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS. MACHINE FINISH THE BOTTOM SURFACE ONLY OF PLATES SHOWN TO BE FINISHED.

ALL MATERIAL EXCLUDING BRONZE PLATES, BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL LOW ALLOY STEEL."

ALL ANCHOR BOLTS TO BE 1 1/4" DIA. x 1-3" LONG, SET FLUSH AND CAULK WITH LEAD TO THE TOP OF PLATE 'C'. EXCESS LENGTH MAY BE FURNISHED, THREADED FOR SETTING AND THEN CUT OFF FLUSH.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR PINTLES IN PLATE 'C' FOR DRIVING FIT.

PROVIDE 1/8" THICK BEARING PAD SAME SIZE AS PLATE 'C' FOR EACH BEARING.

ALL BEARINGS ARE SYMMETRICAL.

LEGEND

- WT 6 x 39.5 x ROADWAY WIDTH. WELDMENT MAY BE USED. SEE DETAIL "A".
- 2 1/2 x 1/4 x 1/4 x RDWY. WIDTH. LONG DIMENSION OF 1/16" x 1 1/2" SLOTTED HOLE TO BE PARALLEL TO DIRECTION OF MOVEMENT.
- BAR 1 1/2 x 3/4 x RDWY. WIDTH. WELD TO L#2 WITH 2 LINES OF 1/4" FILLET WELD, 20° G.
- 1/4" FLAT HEAD CAP SCREW x 2 3/4" LONG WITH SQ. NUT AT 4-0 CENTERS. GREASE FOR EASY REMOVAL. 1/16" x 1 1/2" SLOTTED HOLE IN L#2. 1/16" HOLE C/SK 1/4" DEEP IN WT #1.
- 2 1/2 x 2 x 1/4 x RDWY. WIDTH. 3/16" CONTINUOUS FIELD WELD TO WT #1. 2 1/2" LEG VERT.
- 3/4" DIA. x 6" LONG ROD. NUT. THREAD 3" TACK WELD NUT TO L#10.
- VENT HOLES, 1/16" DIA. AT 2-0 CTRS. IN WT #1 AND L#2 AND 3-0 CTRS. IN 1/8".
- 5/8" DIA. STUDS x 6 3/8" LONG. WELD TO WT #1 AT 6" ALTERNATE CENTERS.
- 5/8" DIA. STUDS x 6 3/8" LONG. WELD TO L#2 AT 9" ALTERNATE CENTERS.
- 2 1/2 x 1/4 x 1/4 x RDWY. WIDTH. WELD TO L#2 AND WT #1 PROVIDE 1/16" HOLES IN 2 1/2" LEG FOR RODS #6 AND #11.
- 1/4" ROD x 9" LONG. NUT. THREAD 3" TACK WELD NUT TO L#10.
- 1/4" x 1/2" x 1/4" LONG KEEPER BAR. ONE PER #4 BOLT PLACE BAR WITH LONG DIMENSION PARALLEL TO 1/2" OF RDWY. 1/8" CLEAR FROM #4 SQUARE NUT AND WELD BAR AT SIDE FACING AWAY FROM NUT WITH 1/16" FILLET WELD 1 1/4" LONG TO L#2.
- 1/4" x 1/4" x 3/8" FIELD WELD TO WT #1.
- 1/4" x 1/4" x 3/8" WELD TO R#15 WITH ONE LINE OF 1/4" MAX. FILLET WELD, N.S. & F.S.
- 1/4" x 1/4" x 3/8" FIELD WELD TO BAR #3.
- 1/4" x 1/4" x 3/8" STUDS x 6 3/8" LONG. WELD TO R#15 #13 AND #14.
- BLOCK AND BOLT FOR SHIPMENT WITH PIPE SLEEVE AND 1/2" DIA. BOLT. PROVIDE 1/16" HOLES AT 3-0 CENTERS IN WT #1 AND L#2 FOR BOLT.
- 2 1/2 x 1/4 x 1/4 x RDWY. WIDTH. ONE WELDED FIELD SPLICE WILL BE PERMITTED. SEE DETAIL #19. ONE L#2 REQD. @ EACH ABUT.
- 1/4" x 1/4" x 3/8" STUDS x 4" LONG. WELD TO L#18 AT 6" ALTERNATE CENTERS.
- 1/4" x 1/4" x 3/8" STUDS x 4" LONG. WELD TO L#18 AT 6" ALTERNATE CENTERS.
- 1/4" x 1/4" x 3/8" STUDS x 4" LONG. WELD TO L#18 AT 6" ALTERNATE CENTERS.

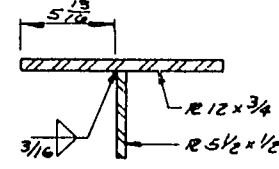
EXPANSION JOINT NOTES

EXPANSION JOINT SHALL BE BUILT TO CONFORM TO ROADWAY CROWN AND GRADE.

AFTER CONCRETE HAS SET THE JOINT OPENING SHALL BE THOROUGHLY CLEANED AND BOLTS #4 REMOVED AND THE HOLES FILLED WITH HOT POURED ELASTIC JOINT SEALER.

APPLY 1/16" COAT OF BITUMASTIC TO METAL SURFACES FORMING JOINT AND FILL OPENING WITH HOT POURED ELASTIC JOINT SEALER.

ALL MATERIAL SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL CARBON STEEL."



DETAIL A

WELDMENT OPTION FOR 1

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-15			
Const. Spec. 1969	Drawn By D.J.A.	Plans Checked J.H.G.	
EXPANSION JOINT 8 BEARING DETAILS			SHEET 8 OF 10 X46277

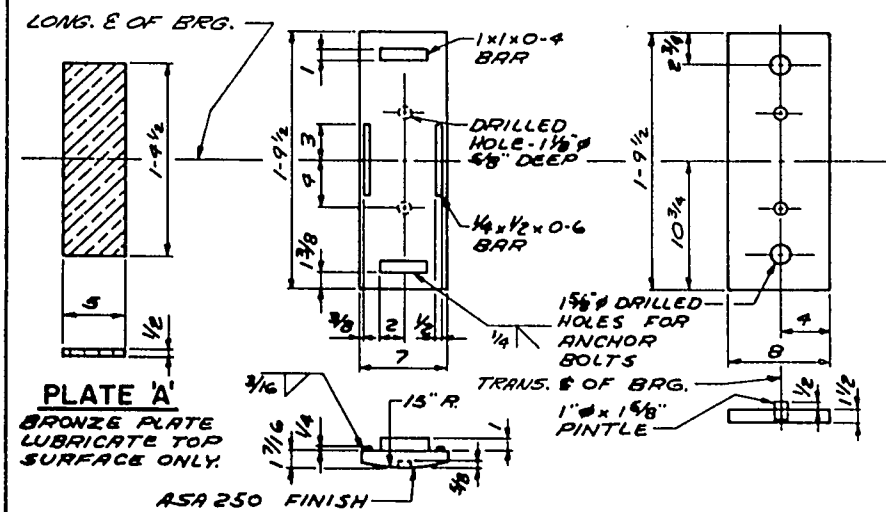


PLATE A

BRONZE PLATE LUBRICATE TOP SURFACE ONLY.

ASA 250 FINISH

PLATE B

TRANS. E OF BRG.

PLATE C

1 1/2\"/>

CONST. JOINT

TRANSVERSE SECTION THRU JOINT

CONST. JOINT

CONST. JOINT

CONST. JOINT

CONST. JOINT

CONST. JOINT

CONST. JOINT

CONST. JOINT

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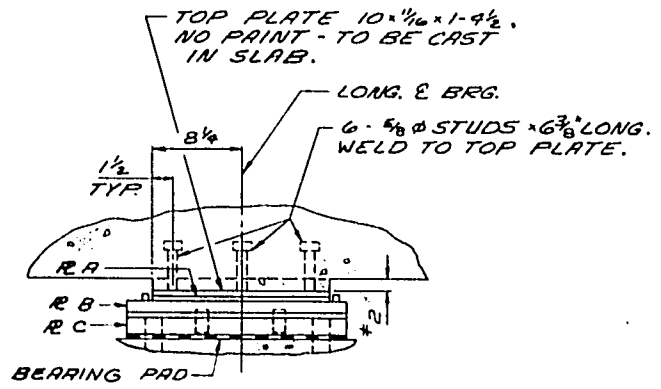
CONST. JOINT

CONST. JOINT

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CONST. JOINT

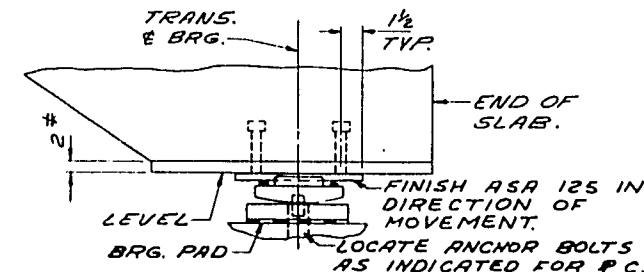
CONST. JOINT



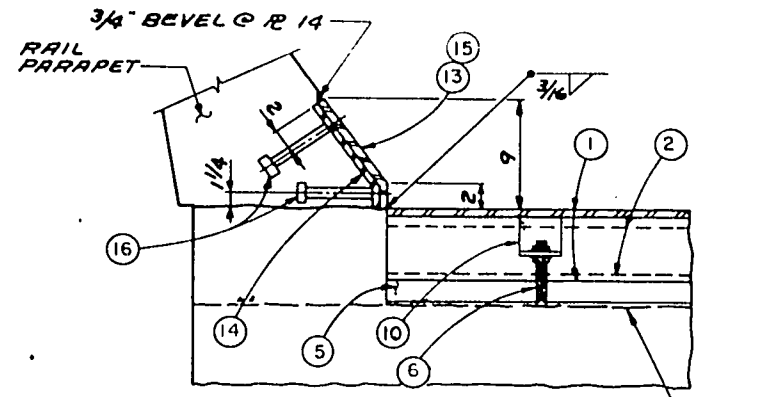
BEARING ELEVATION

BEARING DETAILS

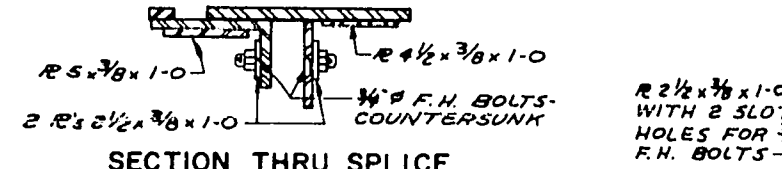
* @ LONG. E OF BRG.



BEARING ASSEMBLY



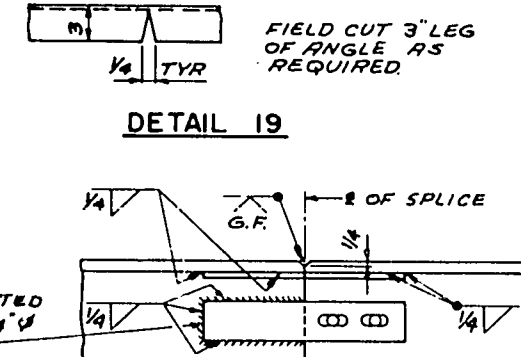
SECTION THRU JOINT AT CURB



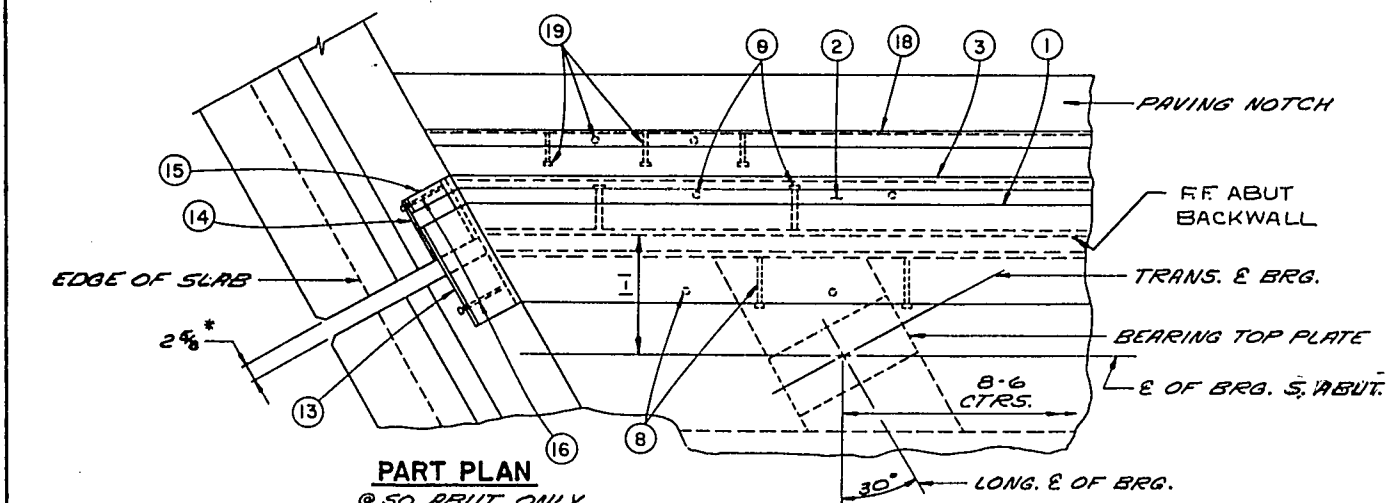
SECTION THRU SPLICE

OPTIONAL FIELD SPLICE DETAIL

ONE SPLICE SHALL BE PERMITTED IN JOINT.

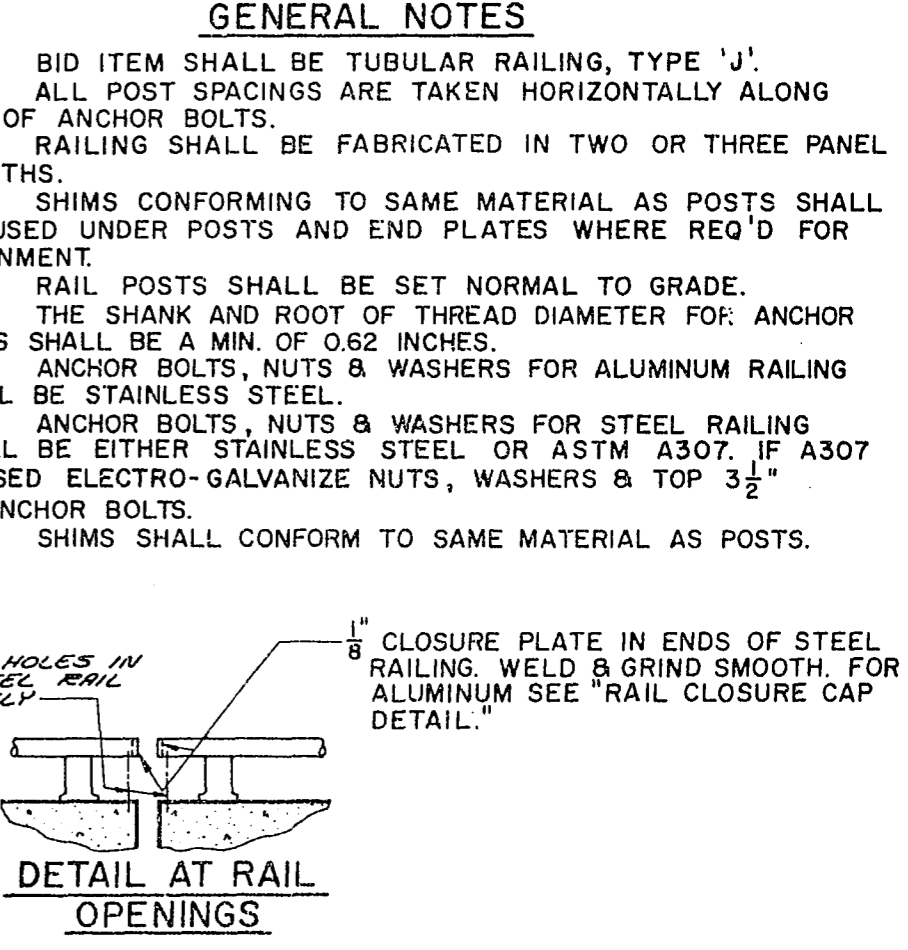
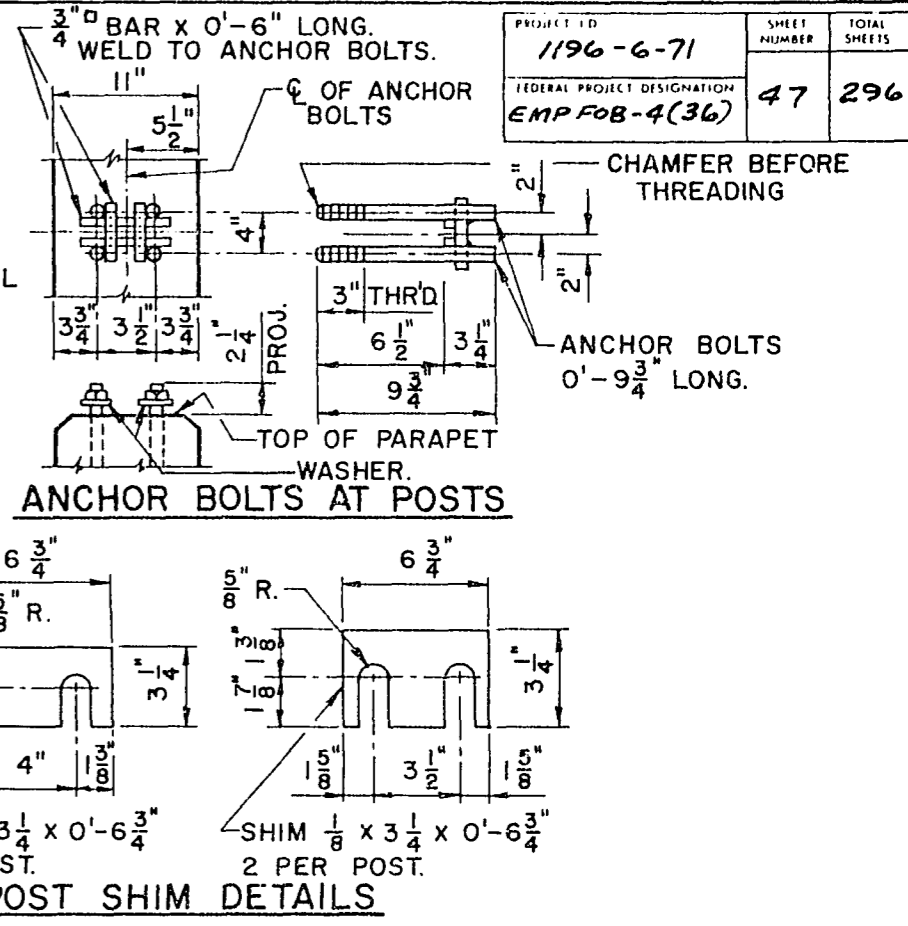
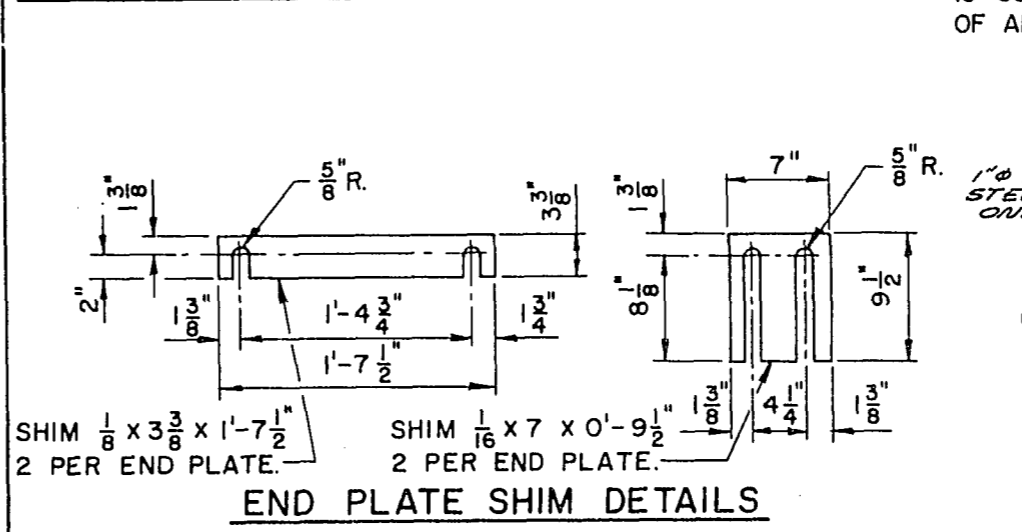
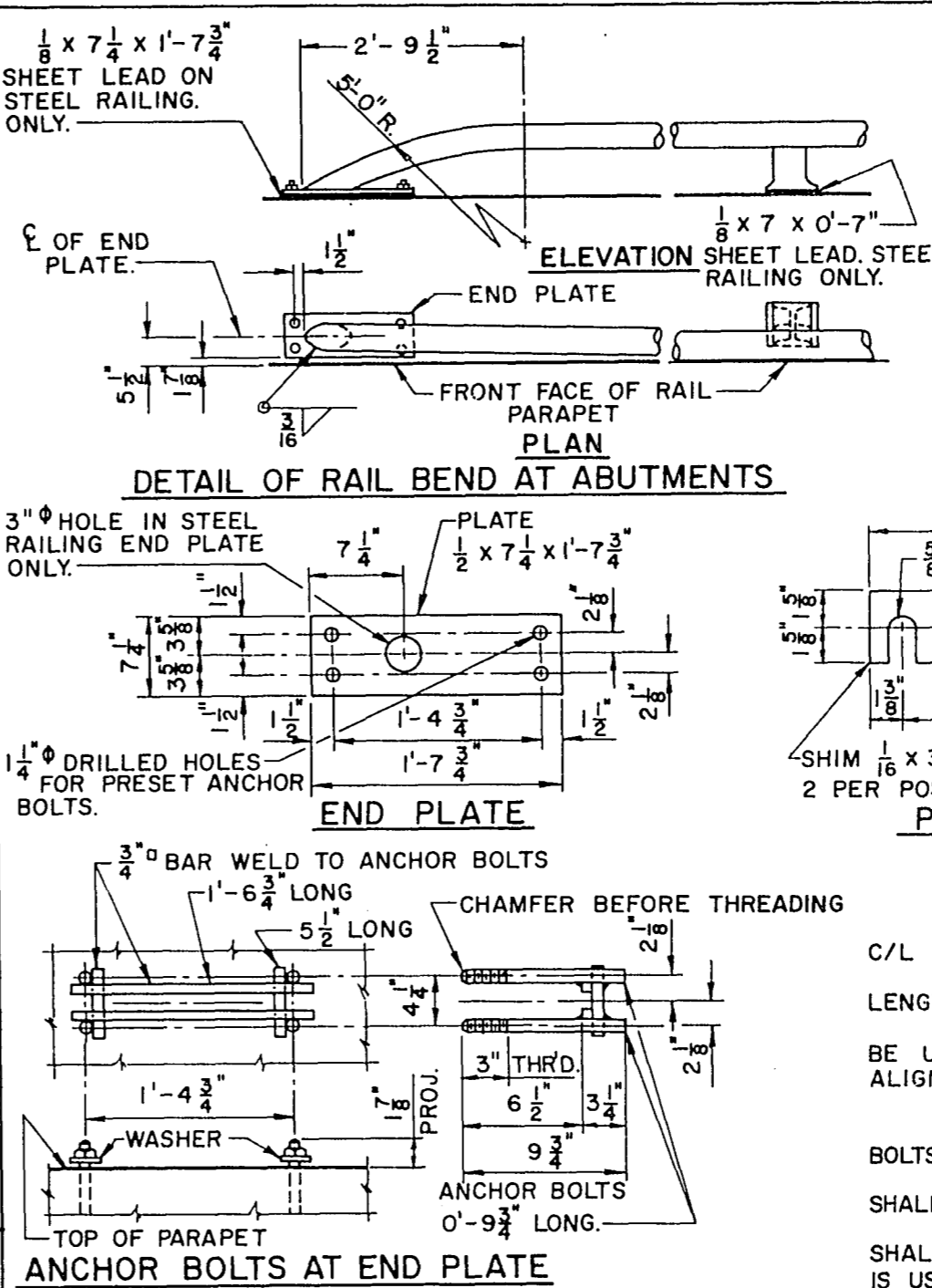
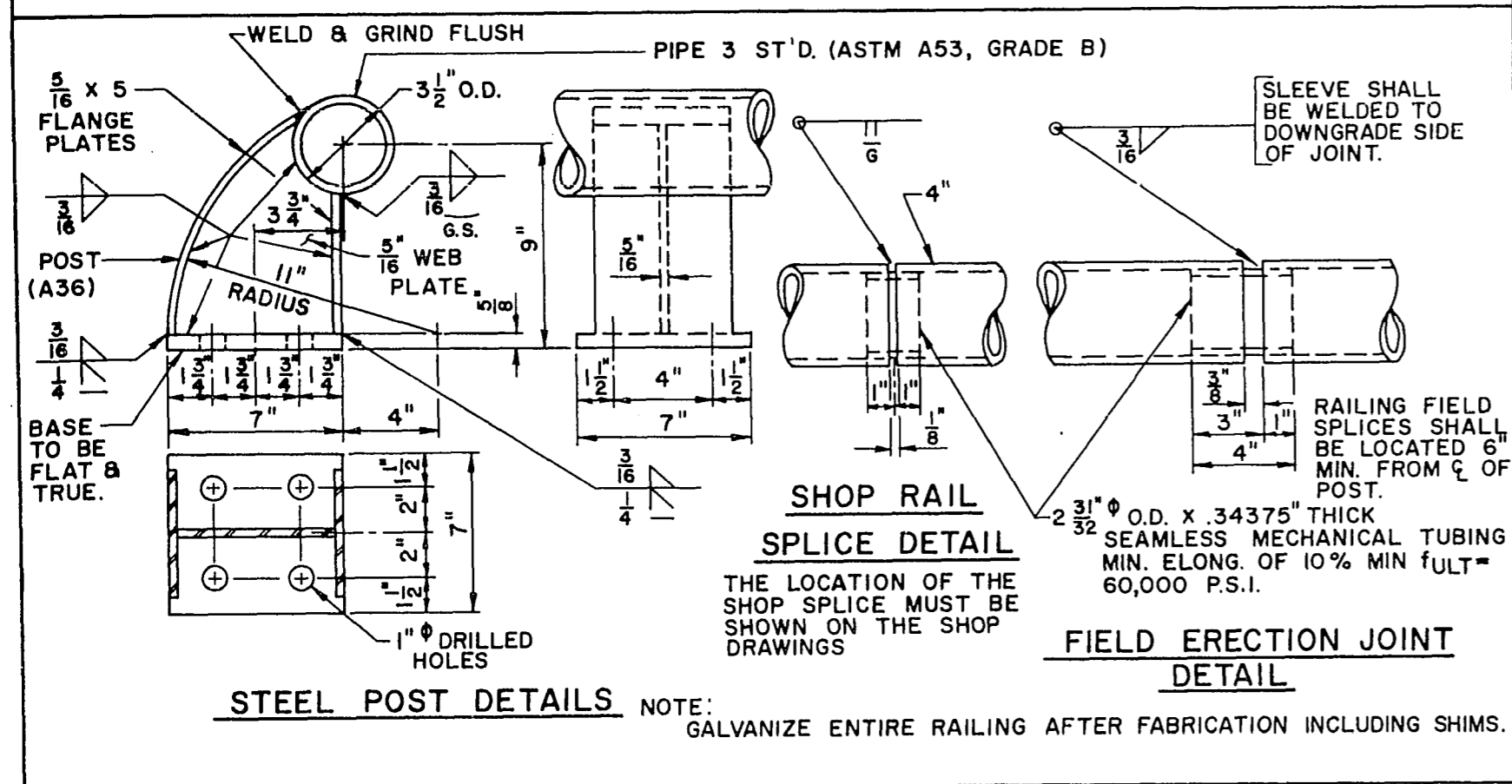
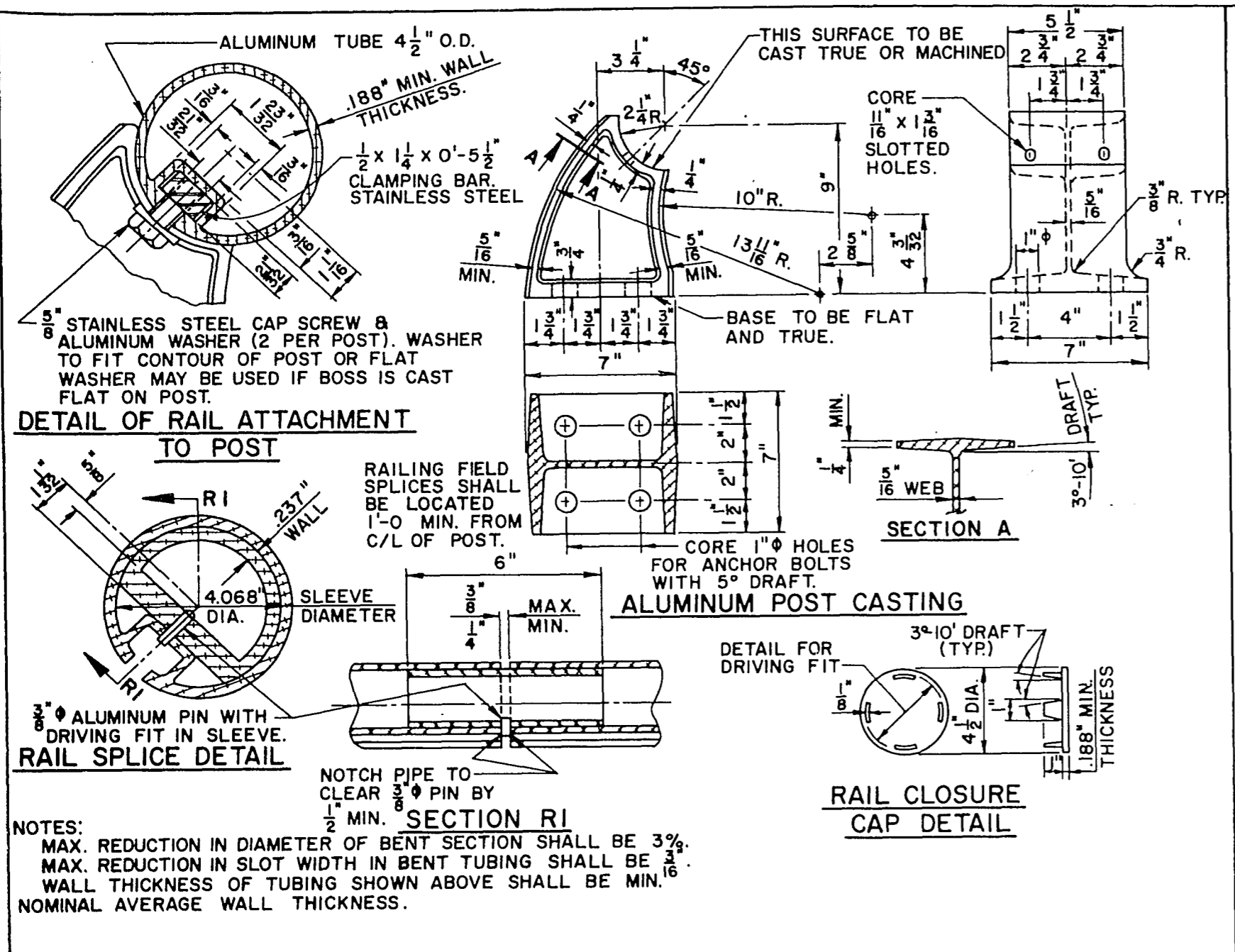


DETAIL 19



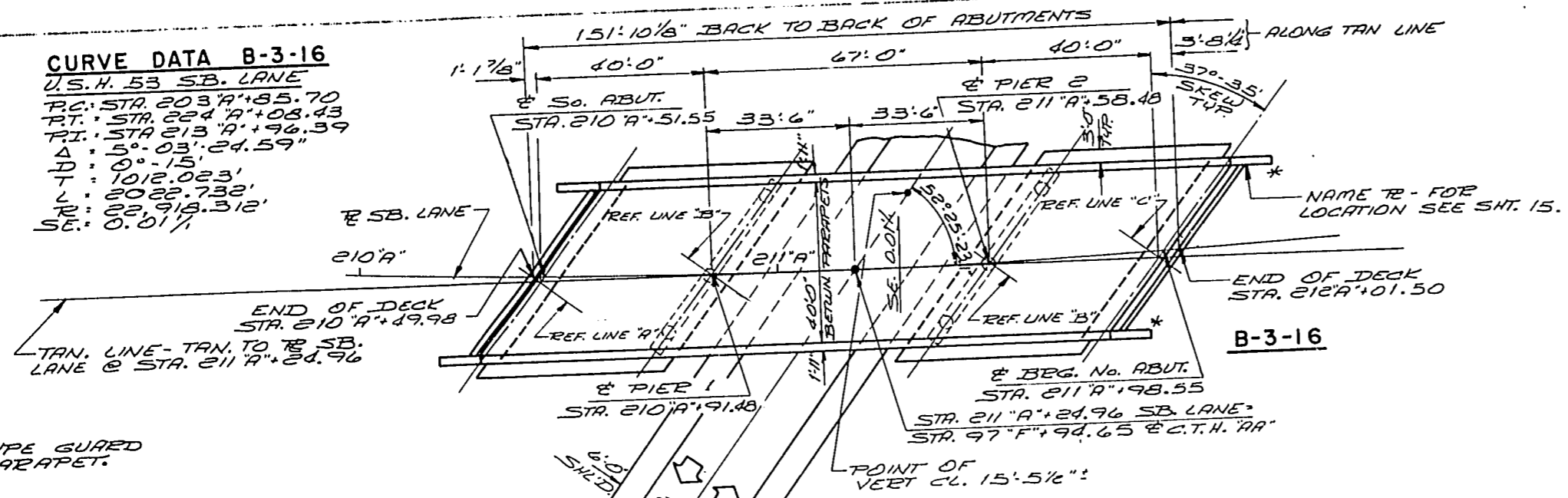
PART PLAN

@ SO. ABUT. ONLY



No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-15			
Const. Spec. 1969	Drawn By D.J.A.	Plans Checked J.H.G.	
TUBULAR RAILING TYPE 'J'			SHEET 10 OF 10 X 46279

CURVE DATA B-3-16
 U.S.H. 53 SB. LANE
 P.C. STA. 203+85.70
 P.T. STA. 224+08.43
 P.I. STA. 213+96.39
 Δ = 5° 03' 24.59"
 D = 6° 15'
 T = 1012.023'
 L = 2022.732'
 E = 22° 15' 31.2"
 SE = 0.017



DESIGN DATA

LIVELOAD: HS-20
 ALLOWABLE DESIGN STRESSES:
 CONCRETE MASONRY - GRADE "AA" - SLAB $f_c = 1,200$ P.S.I.
 ALL OTHER $f_c = 1,400$ P.S.I.
 BAR STEEL REINFORCEMENT $f_s = 20,000$ P.S.I.
 STRUCTURAL CARBON STEEL $f_s = 20,000$ P.S.I.
 PRESTRESSED GIRDERS $f_c = 6,000$ P.S.I.
 CONCRETE MASONRY STRANDS - 1/2" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA:
 SUPPORT ABUTMENTS ON HP 10.42 STEEL "H" PILES. EST. 25' 0" LONG, & DRIVEN TO A MIN. BEG. VALUE OF 55T/PILE.
 SUPPORT PIERS ON SPREAD FOOTINGS WITH A MINIMUM ALLOWABLE BEG. PRESSURE OF 2 1/2 T/SQ. FT.

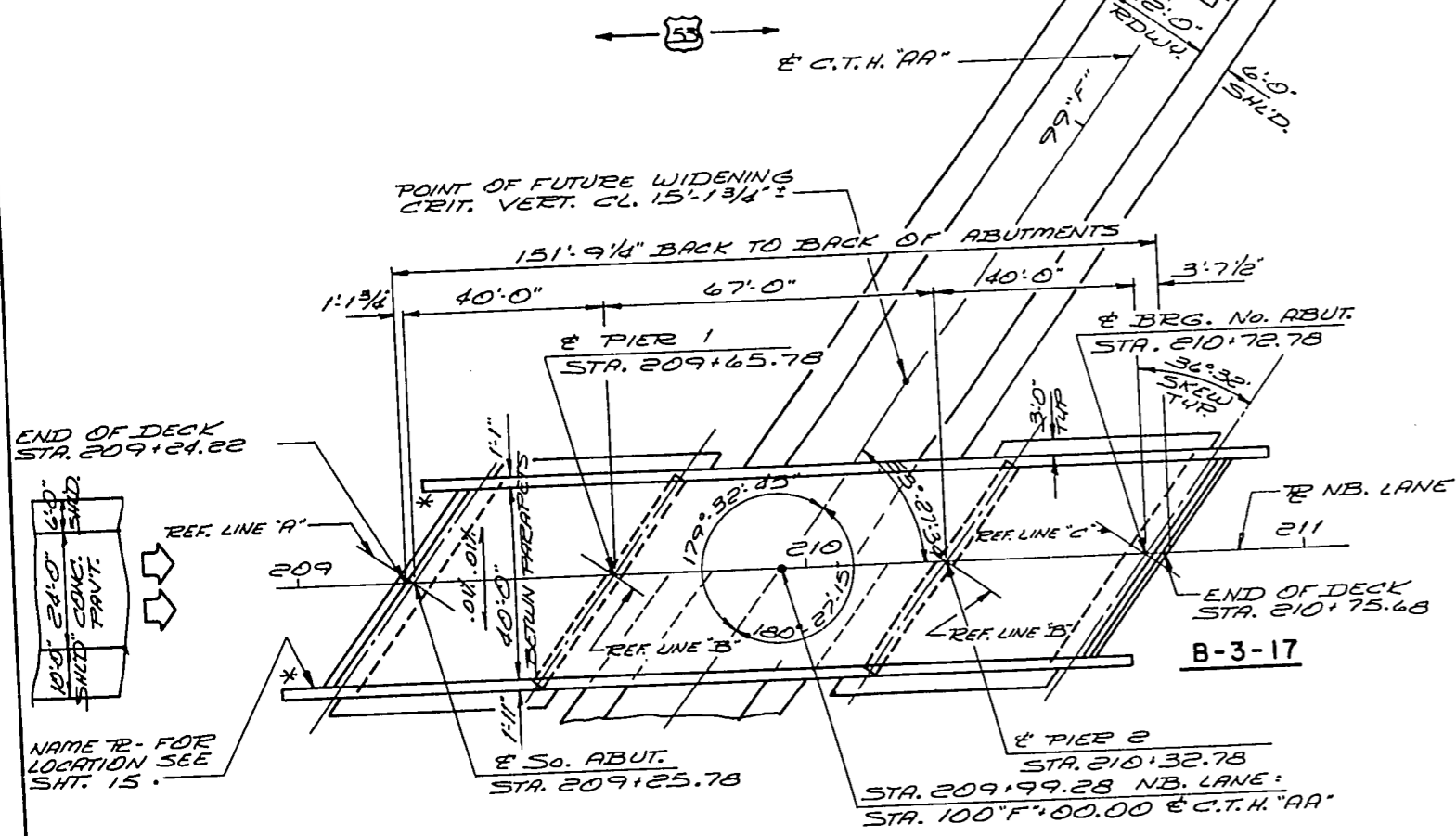
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
 ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH & TRUE.
 THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING, CRUSHED AGGREGATE TO THE EXTENT SHOWN ON THIS SHT. & IN THE ABUTMENT DETAILS.
 THE FINISHED GRADED SECTION WAS USED AS THE UPPER LIMITS OF EXCAVATION FOR COMPUTATION OF EXCAVATION QUANTITIES AT THE PIERS.
 THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" FOR THE ABUTMENTS SHALL BE THE BOTTOM OF THE SLOPE PROTECTION & THE QUANTITIES WERE COMPUTED FROM THIS LINE.
 FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.O. DESIGNATION M153 OR M213.

LIST OF DRAWINGS

- | | |
|--------------------------------|--------|
| 1. GENERAL PLAN | X46161 |
| 2. GENERAL PLAN | X46162 |
| 3. SUBSURFACE EXPLORATION | X46163 |
| 4. SOUTH ABUTMENT | X46164 |
| 5. SOUTH ABUTMENT DETAILS | X46165 |
| 6. NORTH ABUTMENT | X46166 |
| 7. NORTH ABUTMENT DETAILS | X46167 |
| 8. PIERS | X46168 |
| 9. SUPERSTRUCTURE | X46169 |
| 10. SUPERSTRUCTURE | X46170 |
| 11. SUPERSTRUCTURE | X46171 |
| 12. PRESTRESSED GIRDER DETAILS | X46172 |
| 13. BEARING DETAILS | X46173 |
| 14. EXPANSION JOINT | X46174 |
| 15. SLOPED FACE PARAPET "A" | X46175 |
| 16. TUBULAR RAILING TYPE "I" | X46176 |

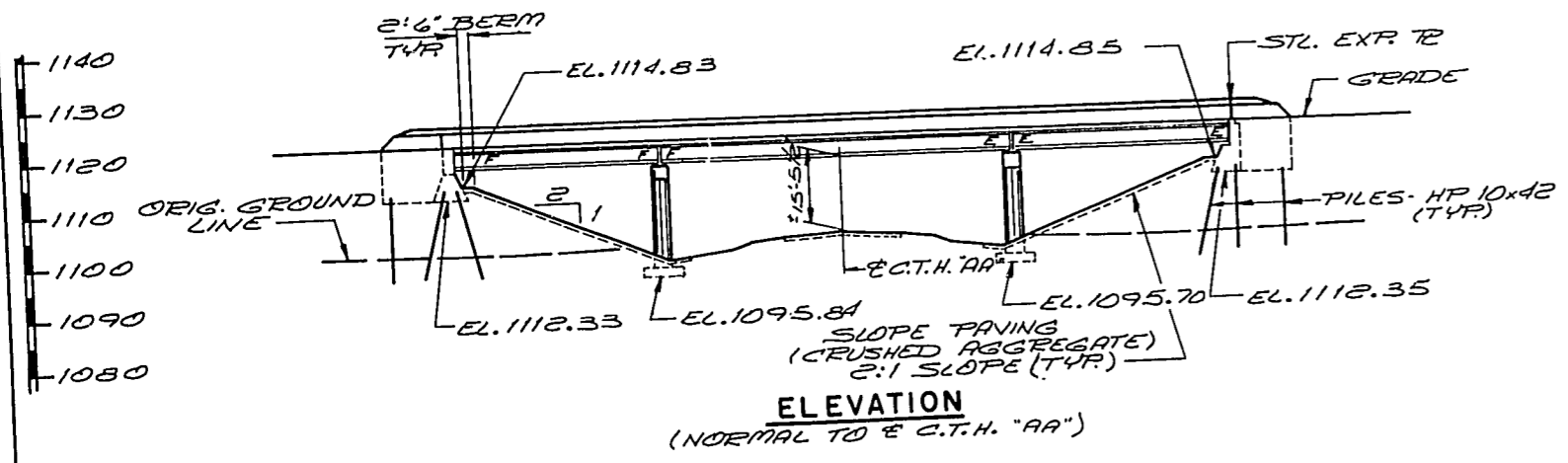
* ATTACH BEAM TYPE GUARD RAIL TO WING PARAPET.



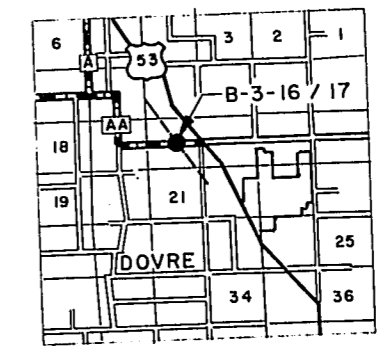
TRAFFIC VOLUME

U.S.H. 53
 A.D.T. = 5300 (1980)
 C.T.H. "AA"
 A.D.T. = 250 (1980)

PLAN
 (3 SPAN PRESTRESSED GIRDER)



ELEVATION
 (NORMAL TO C.T.H. "AA")



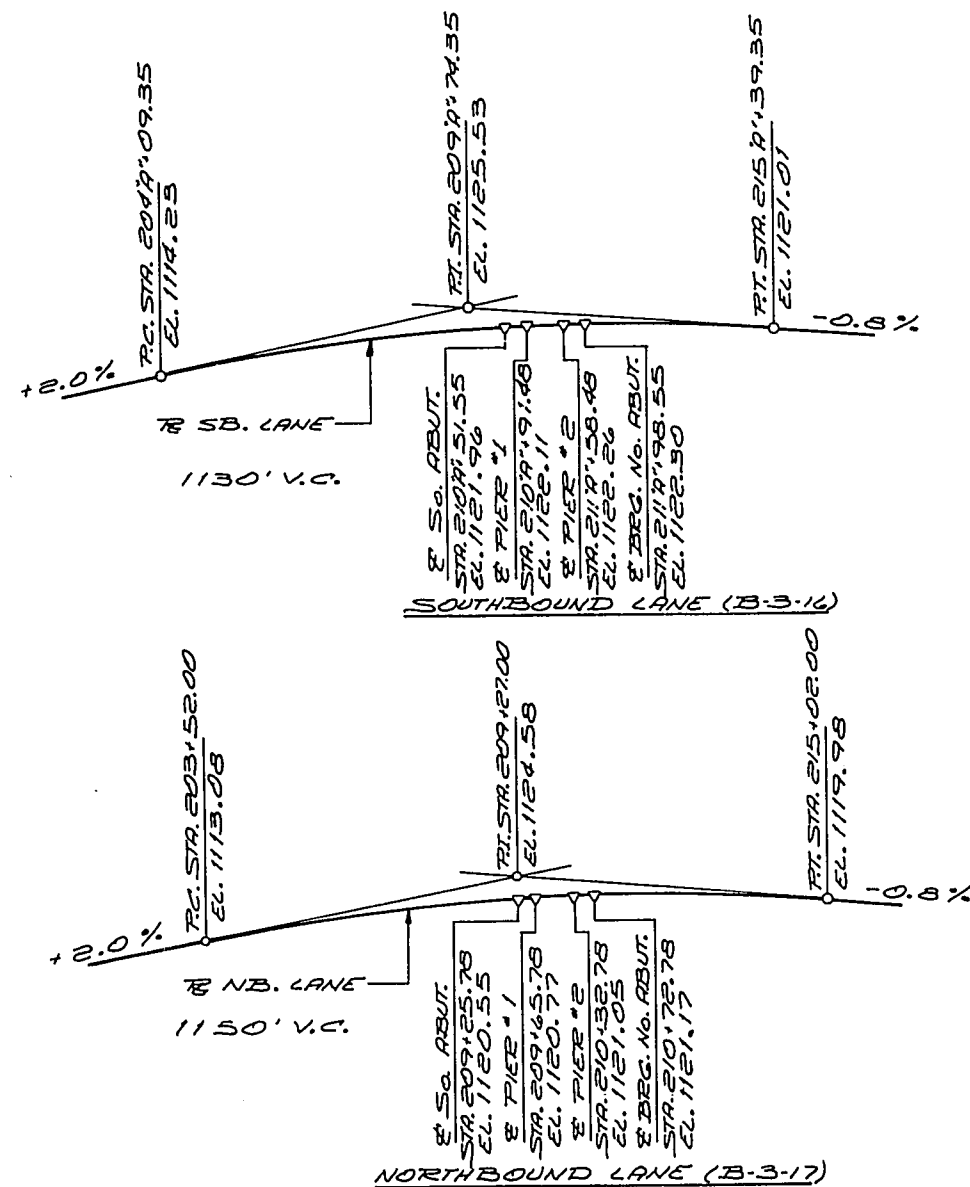
LAYOUT

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-16			
U.S.H. 53 OVER C.T.H. "AA"			
County	BARRON	City	DOVRE
Design Spec.	A.A.S.H.O. 1969	Load	HS-20
Designed	G.H.A.	Checked	R.L.P.
By		Drawn	BUDD
Planned		Checked	G.H.A.
Approved <i>W.A. Klein</i> Chief Bridge Engineer			Date 11-17-71
GENERAL PLAN			SHEET 1 OF 16
			X46161

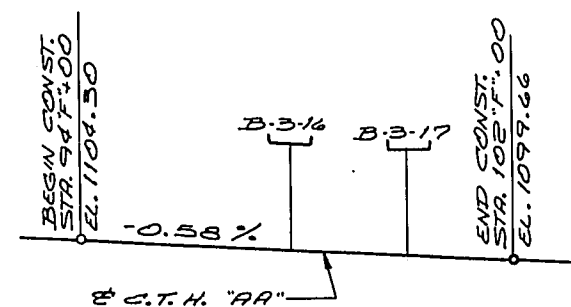
TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	SO. ABUT.	PIER 1	PIER 2	NO. ABUT.	TOTAL
EXCAVATION FOR STRUCTURES	C.Y.	—	45	150	150	50	395
CONCRETE MASONRY	C.Y.	266.4	60.0	69.3	69.3	92.0	557.0
PRESTRESSED GIRDERS, I TYPE 45"	L.F.	590	—	13,590	13,590	—	590
BAR STEEL REINFORCEMENT	LBS.	41,090	2,700	32,179	32,179	3,730	99,778
STRUCTURAL CARBON STEEL	LBS.	3,780	—	—	—	—	3,780
STRUCTURAL LOW ALLOY STEEL	LBS.	2,070	—	—	—	—	2,070
LUBRICATED BRONZE PLATES	LBS.	190	—	—	—	—	190
BEARING PADS	S.F.	17	—	—	—	—	17
BEARING PADS, ELASTOMERIC	S.F.	19	—	—	—	—	19
STEEL PILING, DELIVERED & DRIVEN HP 10 x 42	L.F.	—	403	—	—	391	794
TUBULAR RAILING, TYPE "T"	L.F.	332	—	—	—	—	332
SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	—	255	—	—	256	511
NON-BID ITEMS							
ALUMINUM OR ZINC PLATE	S.F.	35	—	—	—	—	35
POLYVINYL CHLORIDE WATERSTOP	L.F.	—	55	—	—	59	114
FILLER	SIZE	—	—	—	—	—	1/4" 1/2" 3/4" 1"

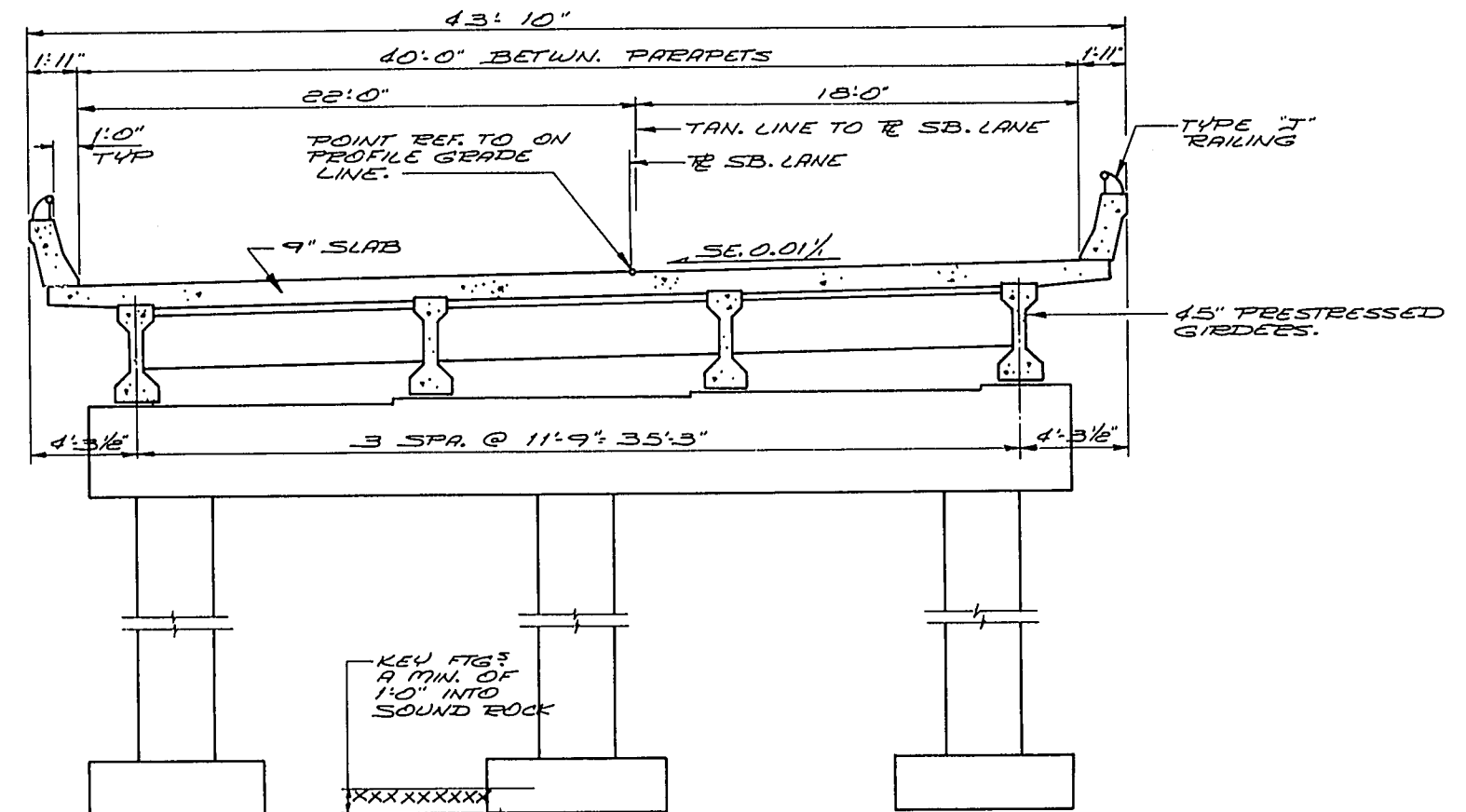
94,700

BAR STEEL QUANTITY WAS
DOUBLED ON THE PLAN

PROFILE GRADES U.S.H. 53



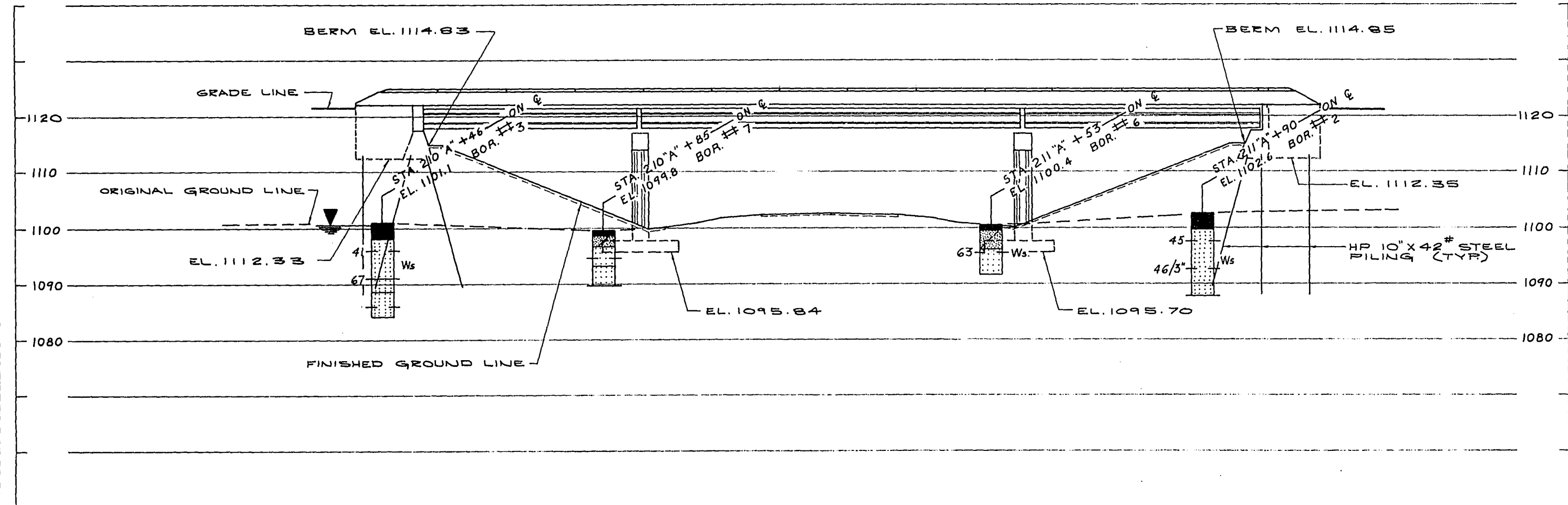
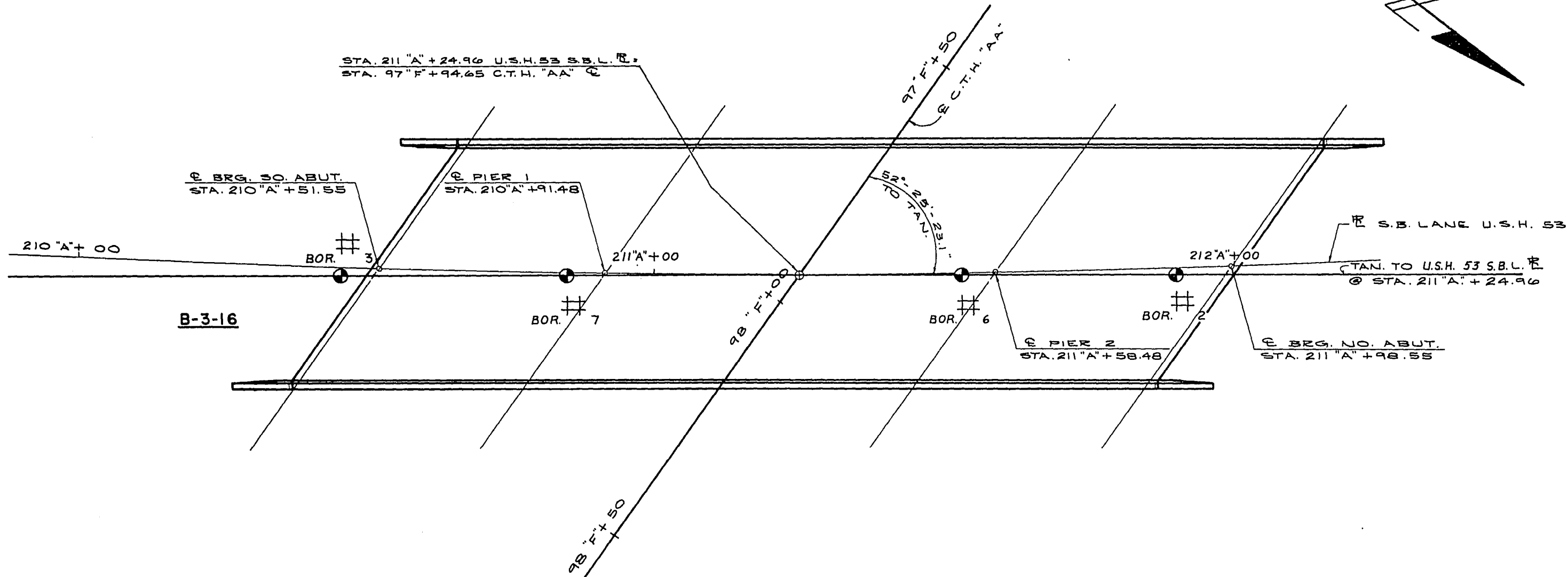
PROFILE GRADE C.T.H. "AA"



CROSS SECTION THRU ROADWAY LOOKING NORTHWEST

PROJECT ID	1196-6-76	SHEET NUMBER	49	TOTAL SHEETS	296
FEDERAL PROJECT DESIGNATION	EMP F08-4(36)				

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-16			
Const. Spec. 1969	Drawn By BUDD	Plans Checked G.H.A.	
GENERAL PLAN			SHEET 2 OF 16
			X 46162



ABBREVIATIONS
F --- Fine M --- Medium C --- Coarse
Ws --- Weathered So --- Sound

MATERIAL SYMBOLS
Topsoil Silt Sandstone
Sand Peat Limestone
Gravel Clay Igneous Rock

LEGEND OF PROBING
Probing No.
Sta.
Elevation
95/6=95 Blows for 6"
Penetration
Probing taken with a
350# wt.
Falling 18" on a 2"
O. D. Point.
7 Average Blows Per Foot
Refusal 95.6

LEGEND OF BORING
Boring No.
Sta.
Elev.
Unconfined Strength 7.7
Blows Per Ft. Using 140# Wt. Falling 30"
Wash Sample
Shelby Tube S. T.
Ground Water Elevation
No Ground Water Observed Above This Elevation
Sandy Gravel
Boulders or Cobbles
Sand
Silty Clay
So
Limestone

Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O. D. x 1.4" I. D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

No.	Date	Revision	By
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

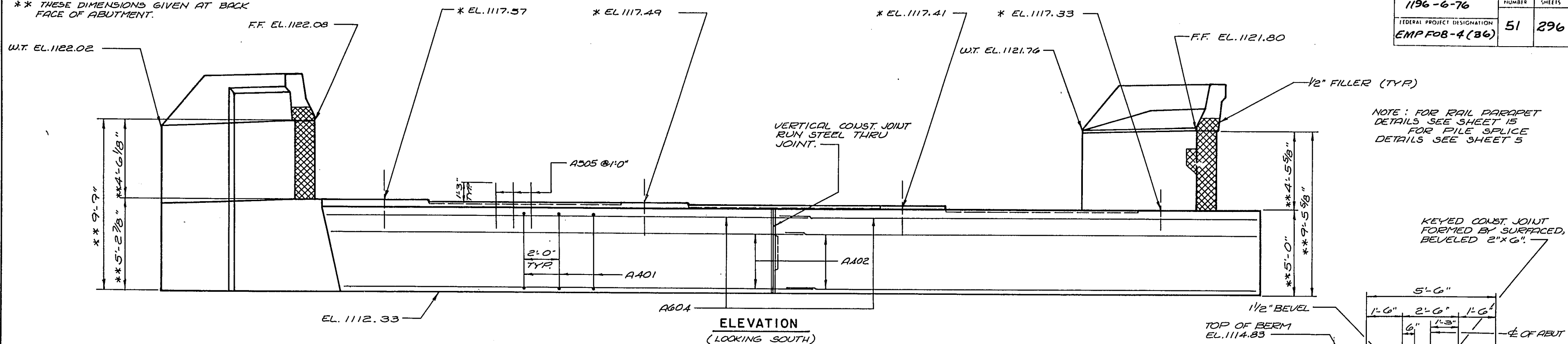
STRUCTURE B-3-16

Const. Spec. 1969 Drawn By D.C.M.T.L. Plans Checked G.H.A.

SUBSURFACE EXPLORATION
SHEET 3 OF 16
X 46163

* THESE ELEVATIONS GIVEN AT $\frac{1}{2}$ OF ABUTMENT
 ** THESE DIMENSIONS GIVEN AT BACK
 FACE OF ABUTMENT.

PROJECT NO.	1196-6-76	SHEET NUMBER	51	TOTAL SHEETS	296
FEDERAL PROJECT DESIGNATION	EMP F08-4 (36)				



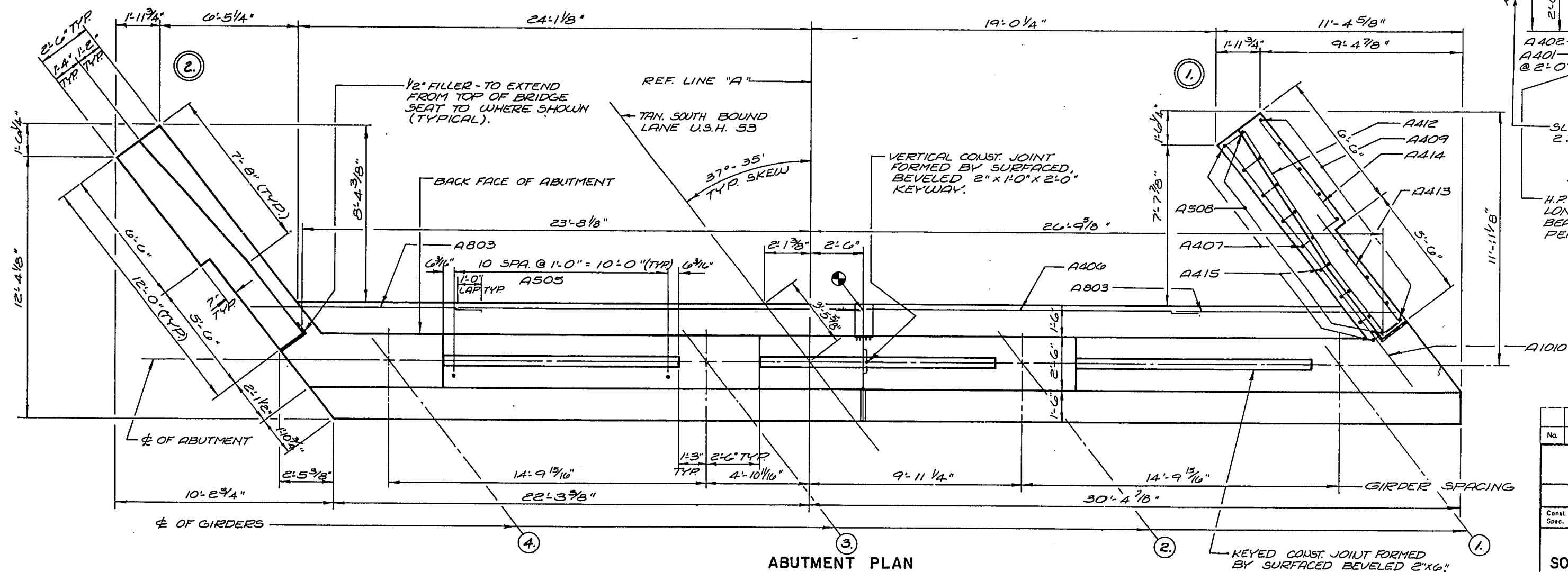
SEAL JOINT WITH CONTRACTION
 TYPE POLYVINYL CHLORIDE WATERSTOP -
 TO EXTEND FROM BOTTOM TO TOP OF
 ABUT. FLUSH WITH FACE OF CONCRETE.
 FOR DETAIL SEE SHEET 5

NOTE: HORIZ. WATERSTOP TO BE RUN
 FULL LENGTH. VERTICAL WATERSTOP
 TO BE CUT.

SEAL JOINT WITH CONTRACTION
 TYPE POLYVINYL CHLORIDE
 WATERSTOP - TO EXTEND FULL
 LENGTH BETWEEN WINGS.
 FOR DETAIL SEE SHEET 5

NOTE: SPACE A401 BARS TO
 MISS PILING.

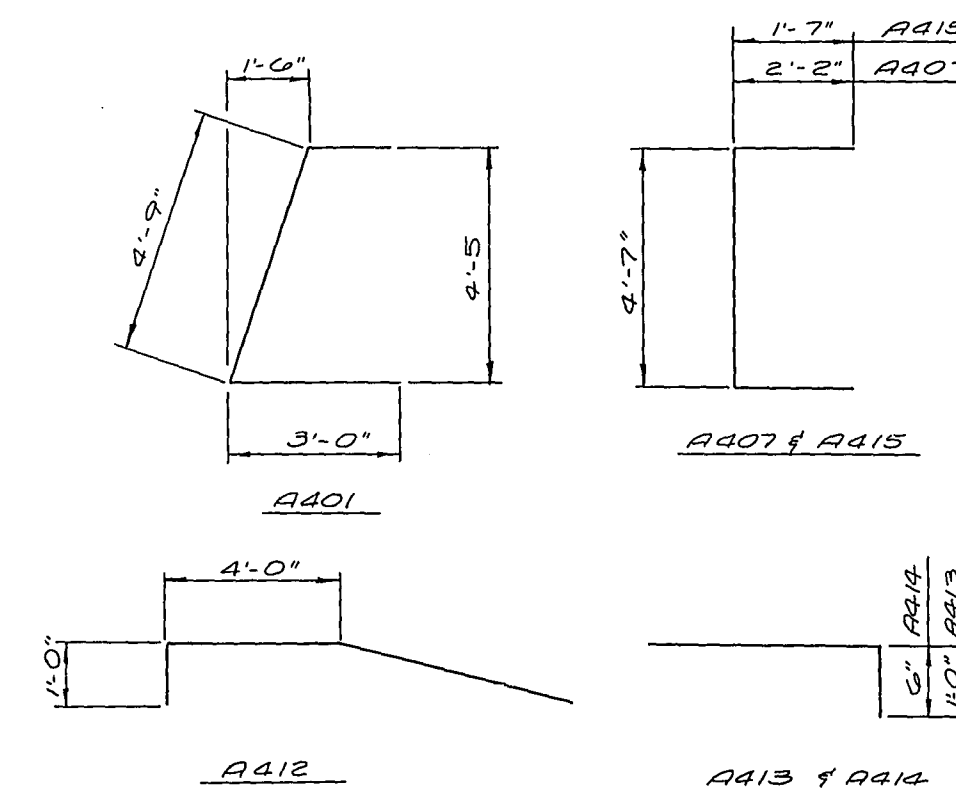
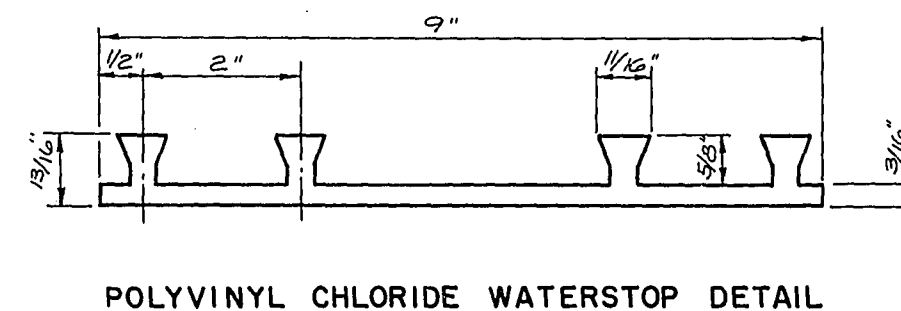
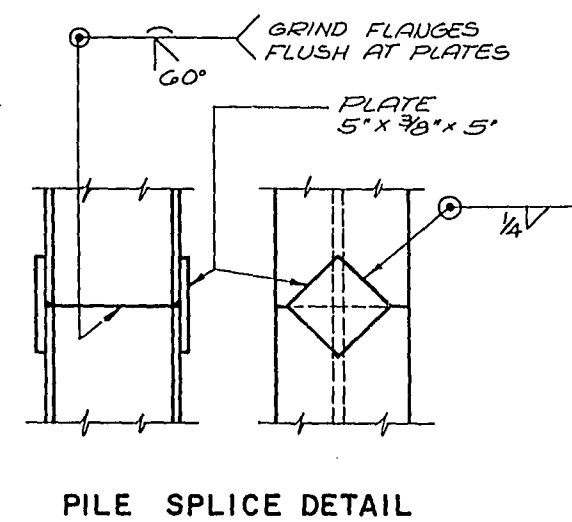
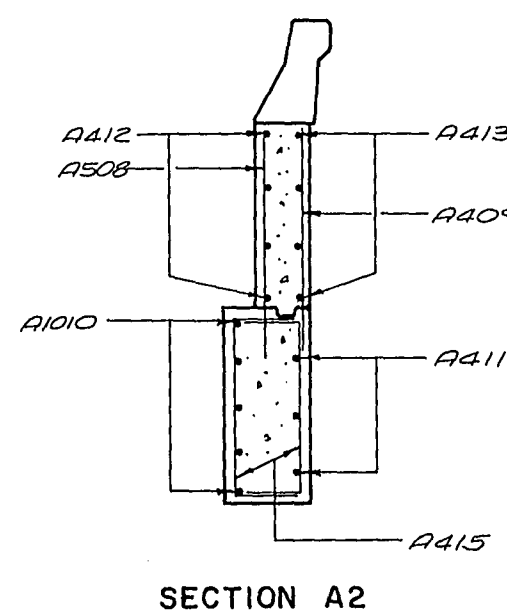
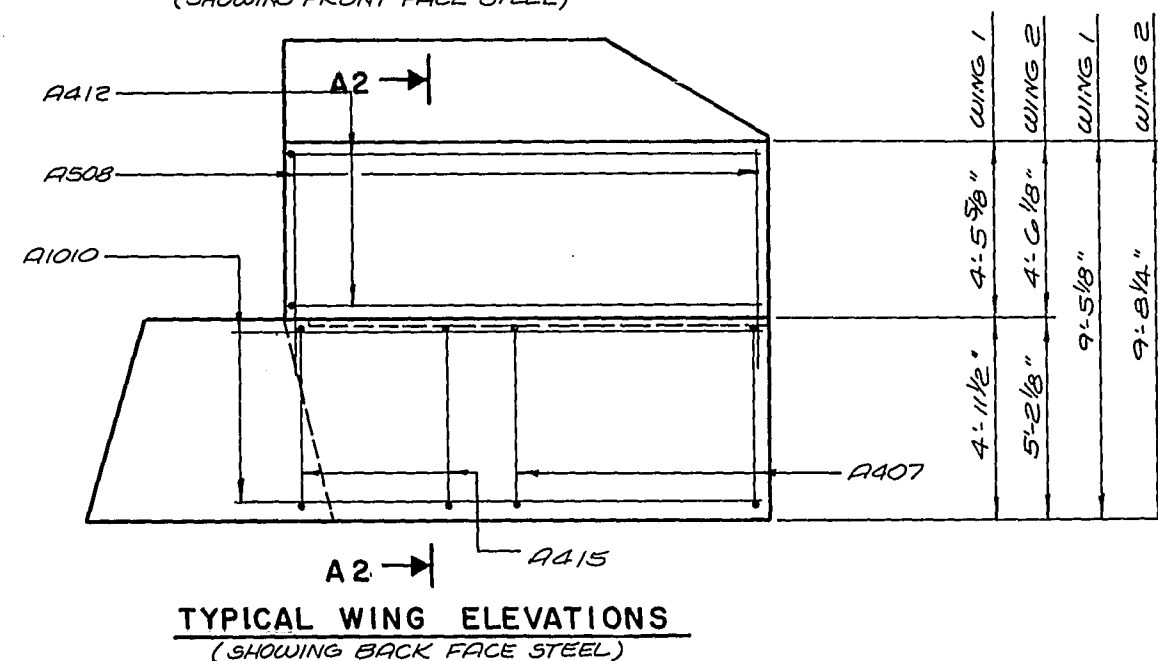
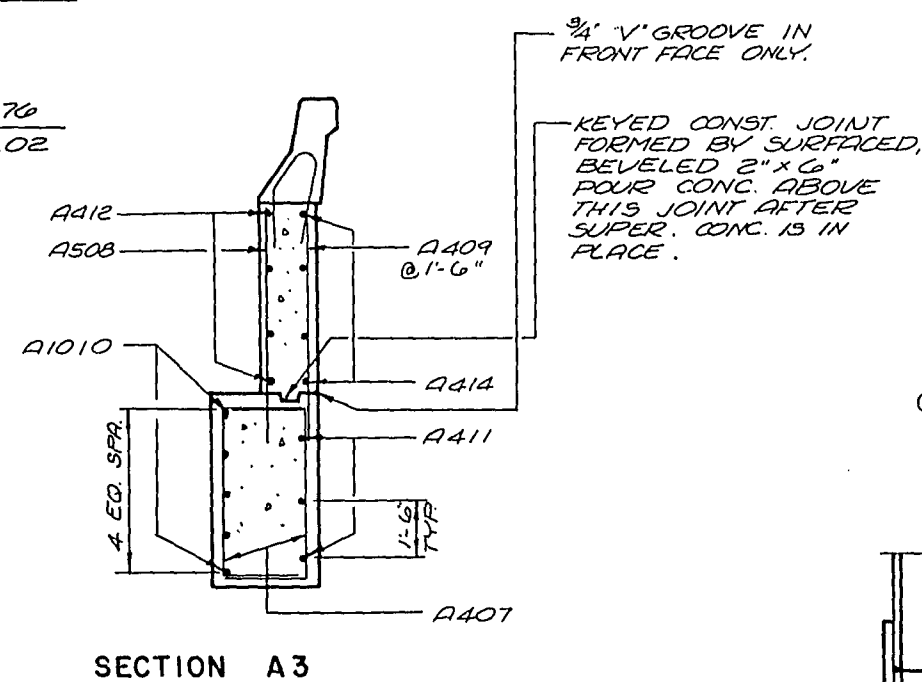
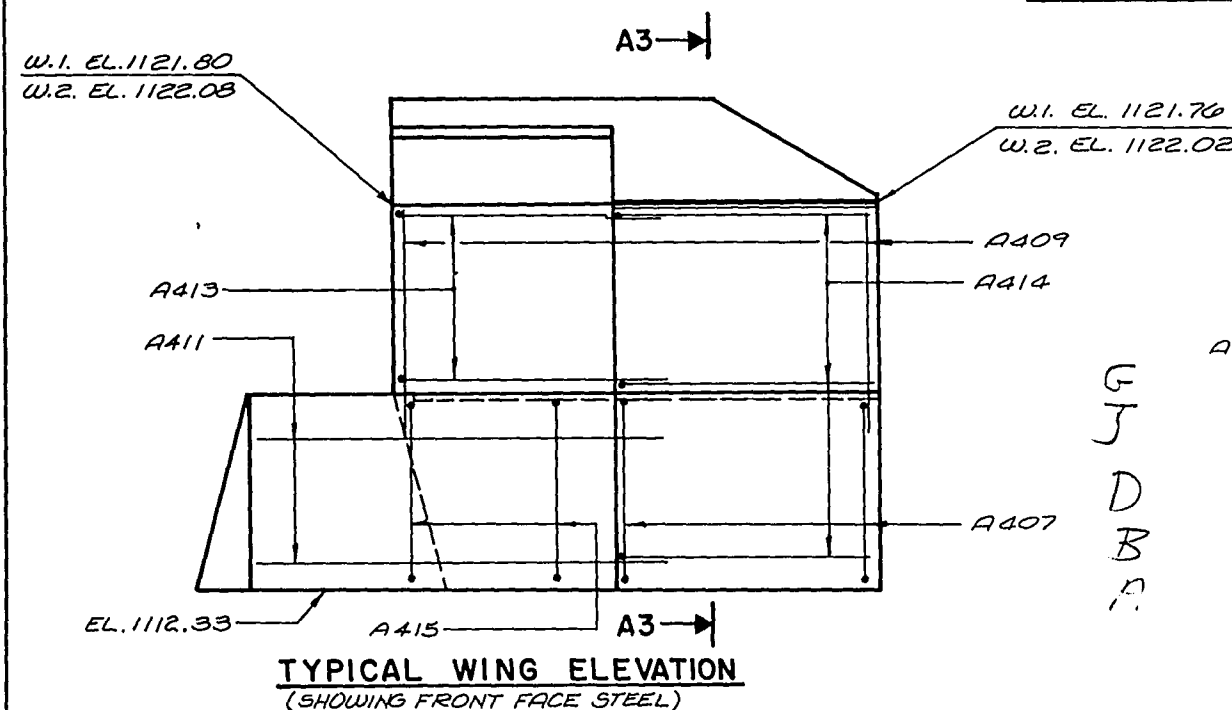
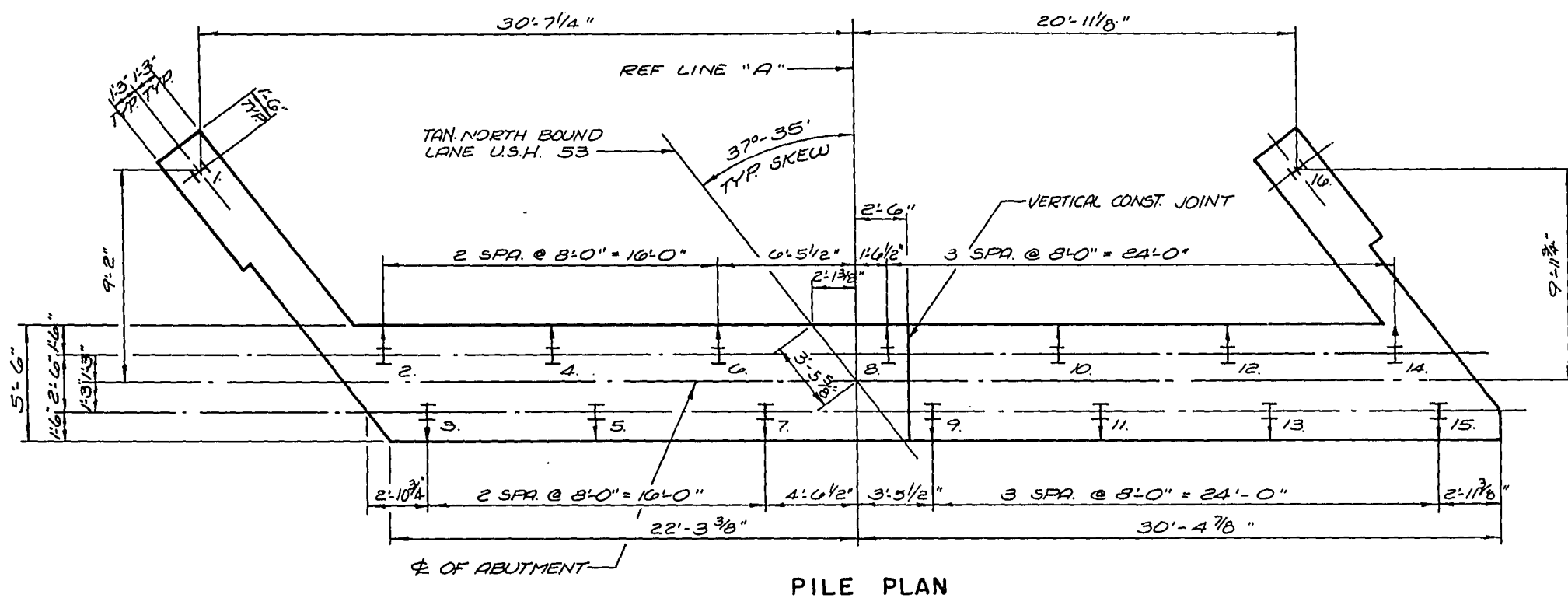
SEAL ALL EXPOSED HORIZONTAL AND
 VERTICAL SURFACES OF 1/2" FILLER
 WITH NON-STAINING GRAY NON-
 BITUMINOUS JOINT SEALER (1" DEEP
 AND HOLD 1/8" BELOW SURFACE
 OF CONCRETE).



NOTE : DIMENSIONS IN BENDING DETAILS ARE
OUT TO OUT.

THE FIRST DIGIT OF A THREE DIGIT BAR
MARK AND THE FIRST TWO DIGITS OF A FOUR
DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS

[illegible]

No.	Date	Revision		By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS				
STRUCTURE B-3-16				
Const. Spec.	1969	Drawn By	A. G.	Plans Checked G. H. A.
SOUTH ABUTMENT DETAILS			SHEET 5 OF 16 X 46165	

F.F. EL. 1122.08

- EL. 1117.35 *

-EL. 1117.46 *

-EL 1117.58 *

EL. 1117.69 *

WT. EL. 1122.48

- F.F. EL. 1122.47

- CONST. JOINT- FOUR CONC.
ABOVE THIS JOINT AFTER
SUPER. CONC. IS IN PLACE
STRIKE OFF & LEAVE ROUGH.

VERTICAL CONST. JOINT
RUN BAR STEEL
THRU JOINT

✓ $\frac{9}{4}$ " "V" GROOVE
FRONT FACE ONLY.

NOTE : FOR RAIL PARAPET DETAILS
SEE SHEET 15
FOR PILE SPLICE DETAILS
SEE SHEET 5

CONST. JOINT- STRIKE OFF AND LEAVE
ROUGH. POUR CONCRETE ABOVE THIS
JOINT AFTER SUPERSTRUCTURE
IS IN PLACE.

L 3" x 2" x 5/16" FOR
DETAIL SEE SHEET 1A-

ELEVATION
(LOOKING NORTH)

¢ OF BEARING

KEYED CONST. JOINT FORMED
BY SURFACED, BEVELED
2" X 6" _____

TOP OF BERM EL. 1114.85
SLOPE 1"/FT.
SLOPE PAVING
CRUSHED AGGREGATE—

SEAL ALL EXPOSED HORIZONTAL
AND VERTICAL SURFACES OF 1/2"
FILLER WITH NON-STAINING
GRAY NON-BITUMINOUS JOINT
SEALER (1" DEEP AND HOLD 1/8"
BELOW SURFACE OF CONCRETE.)

SEAL JOINT WITH CONTRACTION TYPE
POLYVINYL CHLORIDE WATERSTOP-TO
EXTEND FROM BOTTOM TO TOP OF ABUT.
FLUSH WITH FACE OF CONCRETE. FOR
DETAIL SEE SHEET 5

NOTE : HORIZ. WATERSTOP TO BE RUN FULL LENGTH. VERTICAL WATERSTOP TO BE CUT.

① SEAL JOINT WITH CONTRACTION TYPE POLYVINYL CHLORIDE WATERSTOP, TO EXTEND FULL LENGTH BETWEEN WINGS. FOR DETAIL SEE SHEET 5

NOTE : SPACE CA06 & CA05
BARS TO MISS PILING.

SECTION THRU BODY

— H.P. 10X42 STEEL PILES EST. 25'-0"
LONG AND DRIVEN TO A MIN. BEARING
CAPACITY OF 55 TONS PER PILE.

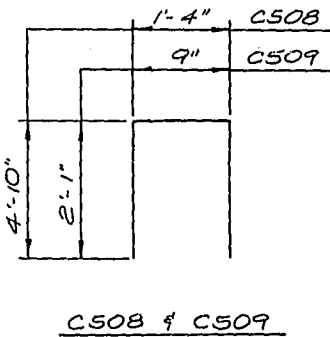
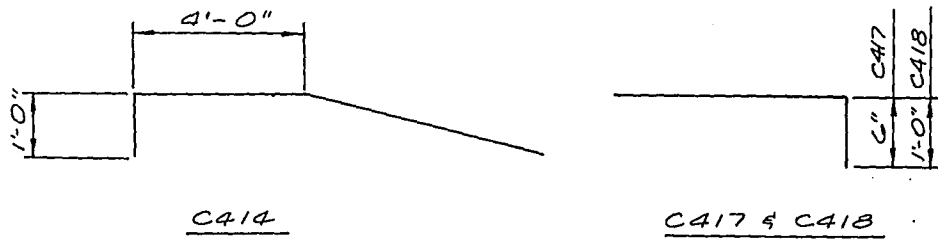
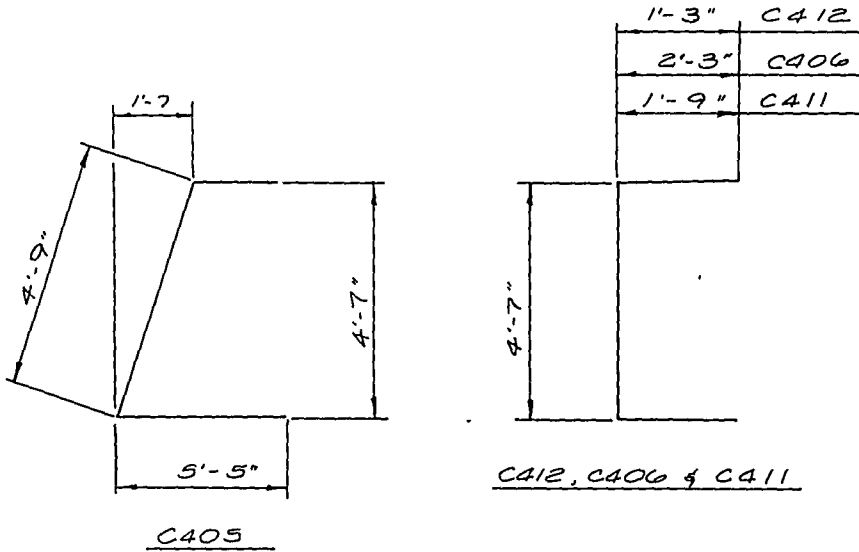
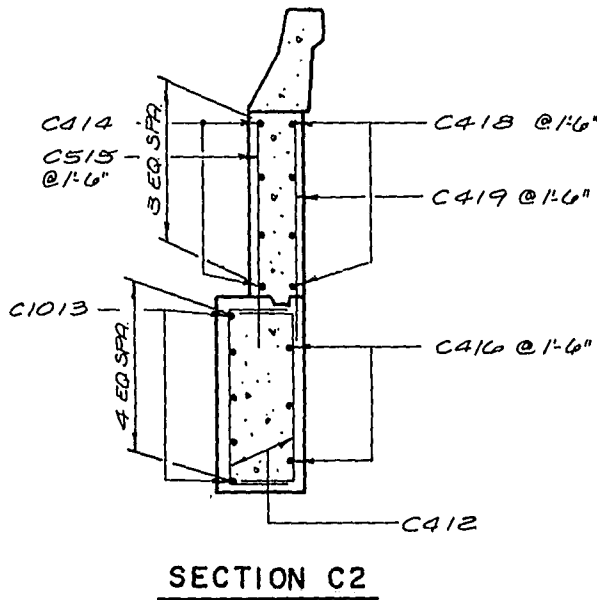
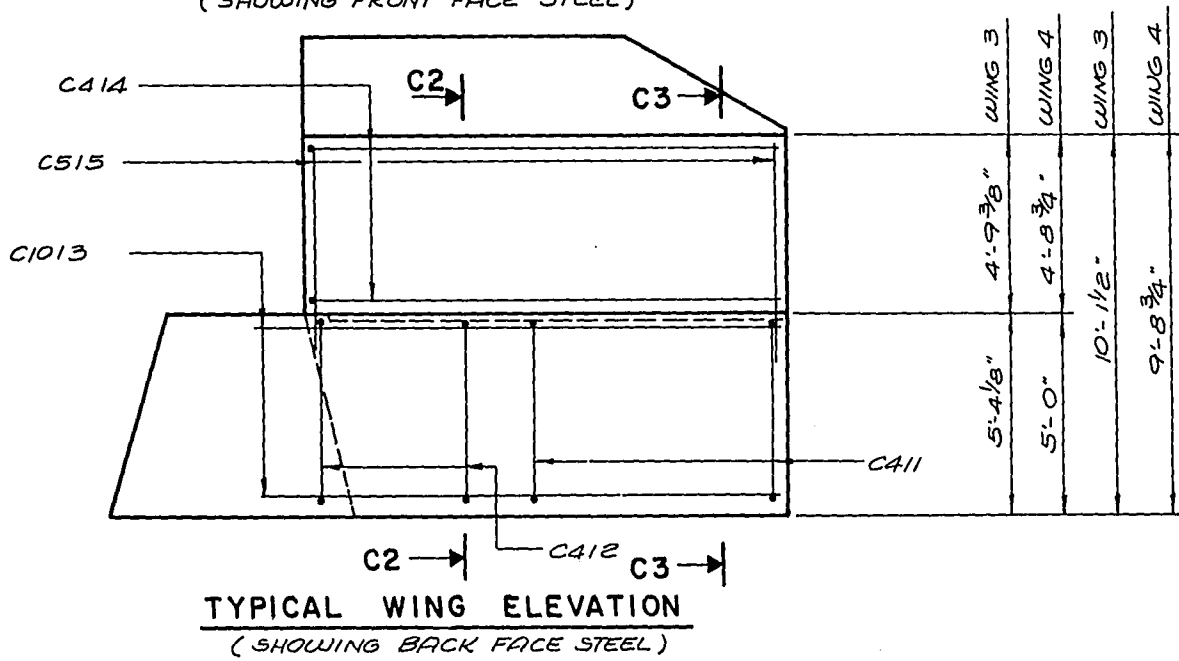
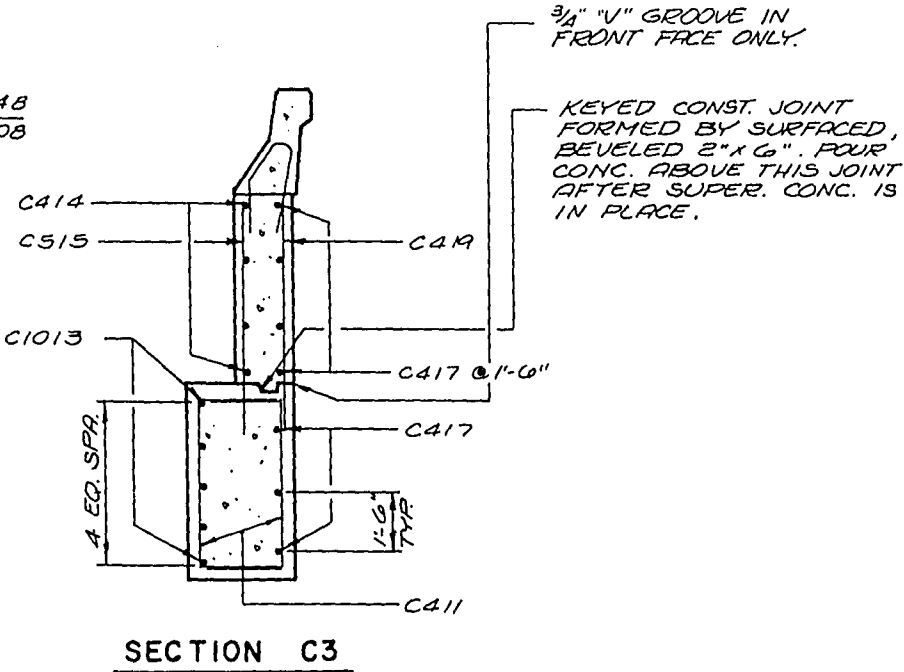
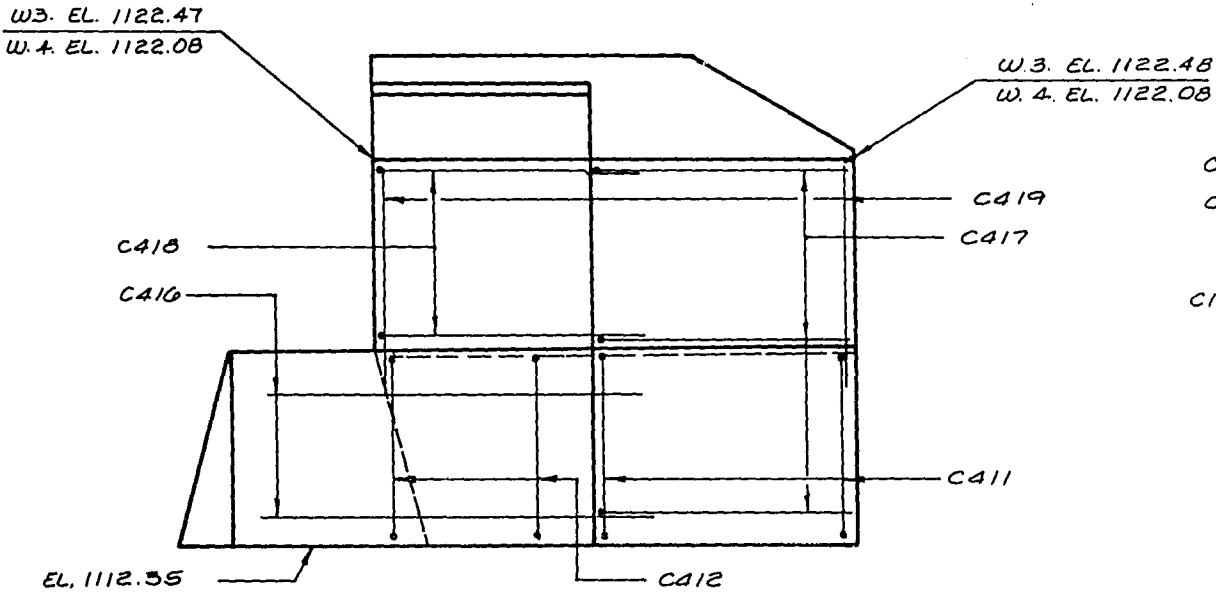
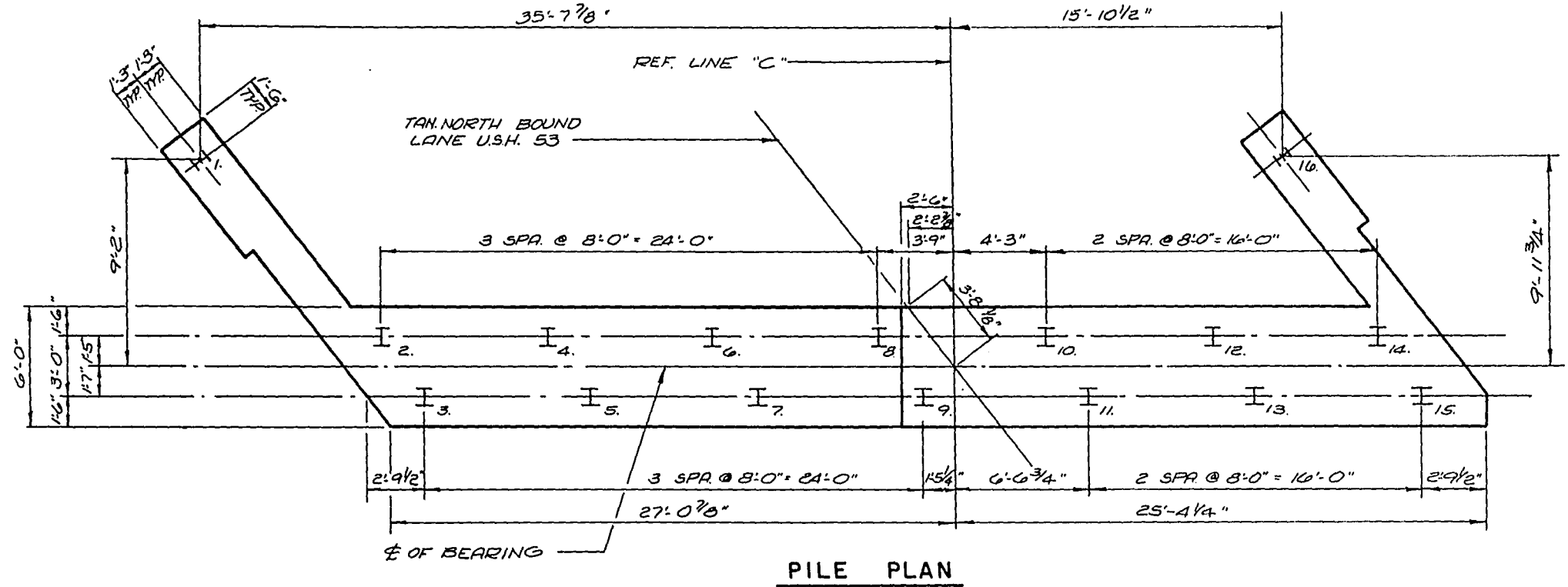
No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B - 3-16			
Const. Spec.	1969	Drawn By A. G.	Plans Checked G. H. A.
NORTH ABUTMENT		SHEET 6 OF 16	
		X 46166	

ABUTMENT PLAN

NOTE : DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.
THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS

MARK	NO REQ	LENGTH	BENT	LOCATION
C401	14	27'-0"		BODY HORIZ.
C602	4	10'-0"		" " B.F.
C403	4	19'-0"		" " "
C604	6	27'-0"		" " "
C405	27	13'-0"	X	" STIRRUPS
C406	27	9'-0"	X	" " "
C407	12	28'-0"		BACKWALL HORIZ.
C508	51	10'-10"	X	" " VERT.
C509	51	4'-8"	X	PAVING NOTCH
C410	12	8'-3"		" " HORIZ.
C411	20	7'-11"	X	WING STIRRUPS
C412	16	6'-11"		" " "
C1013	10	14'-3"		WING HORIZ. B.F.
C414	8	12'-5"	X	" " "
C515	18	5'-10"		" VERT "
C416	6	8'-0"		" HORIZ. F.F.
C417	14	6'-9"	X	" " "
C418	8	7'-5"	X	" " "
C419	18	5'-7"		" VERT. "



No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-16			
Const. Spec.	1969	Drawn By	A. G.
		Plans Checked	G. H. A.
NORTH ABUTMENT DETAILS		SHEET 7 OF 16 X 46167	

* ELEVATIONS ARE GIVEN AT P OF PIERS.

* EL. 1117.42
* EL. 1117.28

* EL. 1117.51
* EL. 1117.39

* EL. 1117.60
* EL. 1117.49

* EL. 1117.68 PIER 1
* EL. 1117.60 PIER 2

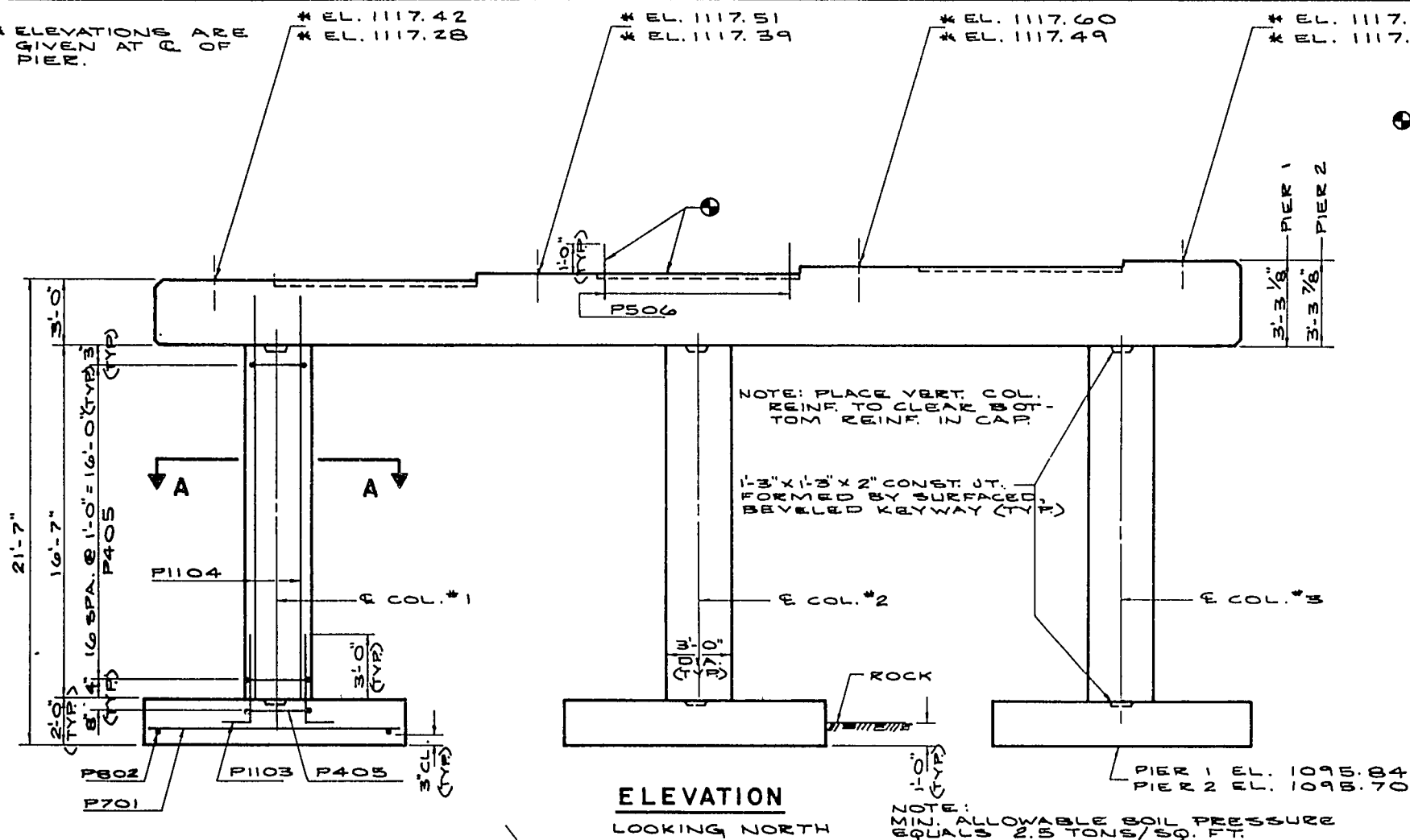
NOTE: BARS LISTED ARE COMBINED TOTAL FOR PIER 1 & PIER 2.

PROJECT ID	SHEET NUMBER	TOTAL SHEETS
1196-6-76	55	296
FEDERAL PROJECT DESIGNATION EMP FOB-4(36)		

BILL OF BARS

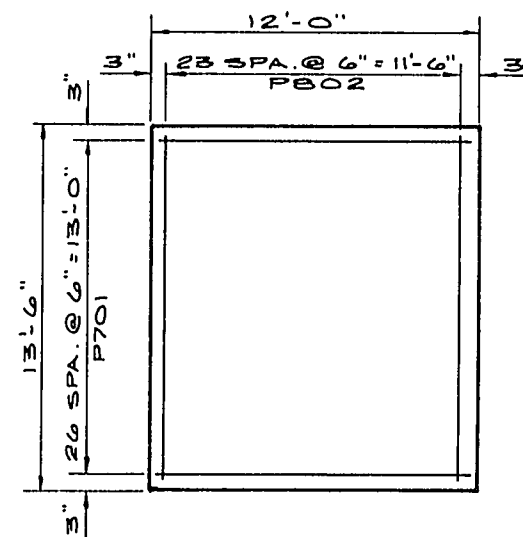
MARK	NO. REQ'D	LENGTH	BENT	BUND.	LOCATION
P701	162	11-6			FOOTING
P802	144	13-0			"
P1103	72	6-5	X		" & COLUMN-DOWEL
P1104	72	19-1			COLUMN
P405	108	9-5	X		" - HOOPS
P506	27	2-6			CAP-TOP-VEET.
P407	16	4-9			" - BOTTOM-ENDS
P1008	8	38-0			" - "
P1009	16	18-6			" - "
P510	8	25-6			" - CENTER
P1111	4	12-0		X	" - TOP
P1112	12	56-2	X	X	" - "
P513	32	10-7	X		" - STIRRUP-DOUBLE
P514	64	12-5	X		" - " - SINGLE

ALL BENDING DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST DIGIT OF A THREE DIGIT BAR MARK
THE FIRST TWO DIGITS OF A FOUR DIGIT BAR
MARK SIGNIFIES THE BAR SIZE.



ELEVATION
LOOKING NORTH

NOTE: MIN. ALLOWABLE SOIL PRESSURE
EQUALS 2.5 TONS/SQ. FT.



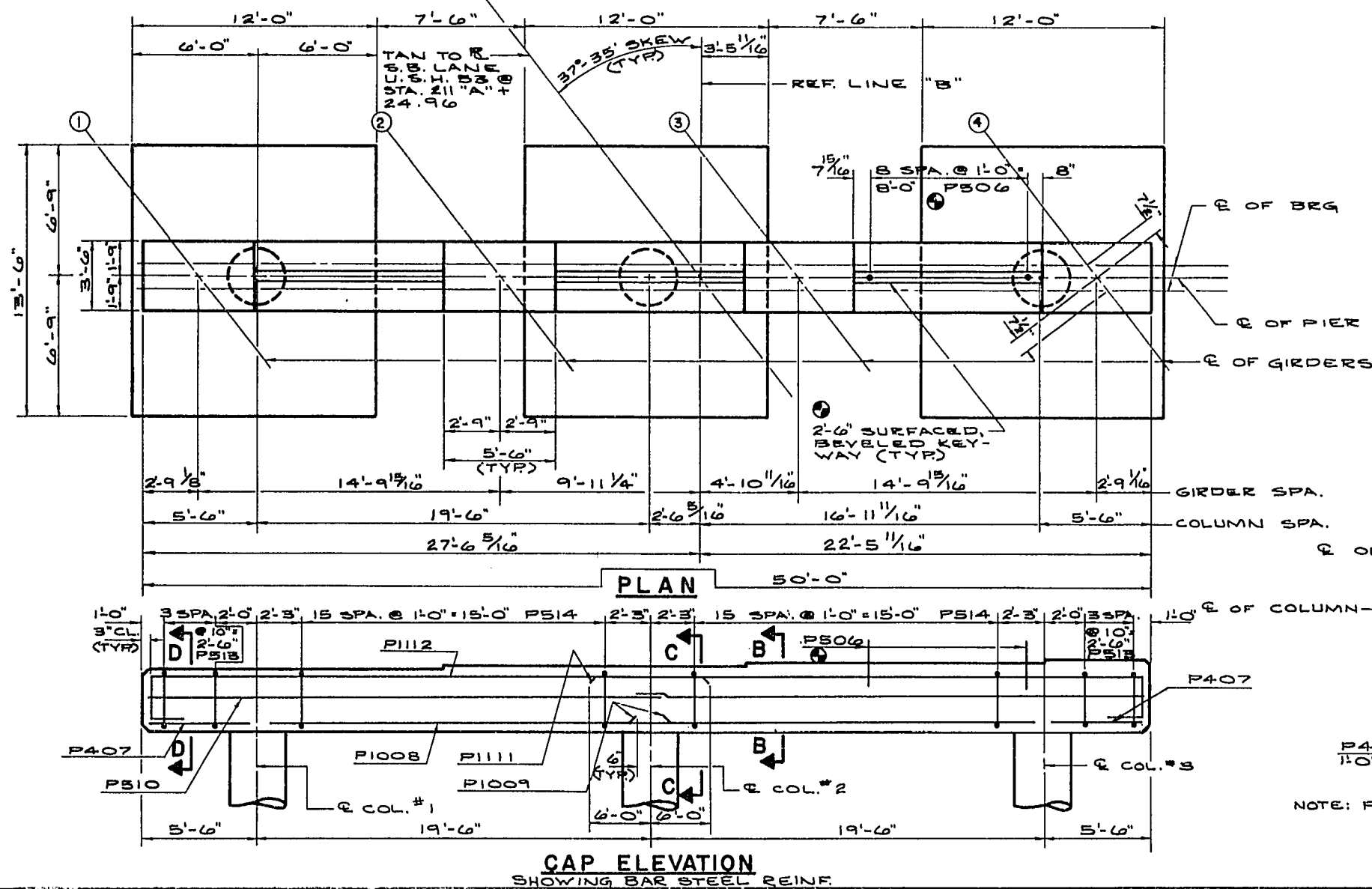
TYP. FOOTING PLAN

WIRE BARS TOGETHER
@ 2'-0\"/>

BUNDLING DETAIL

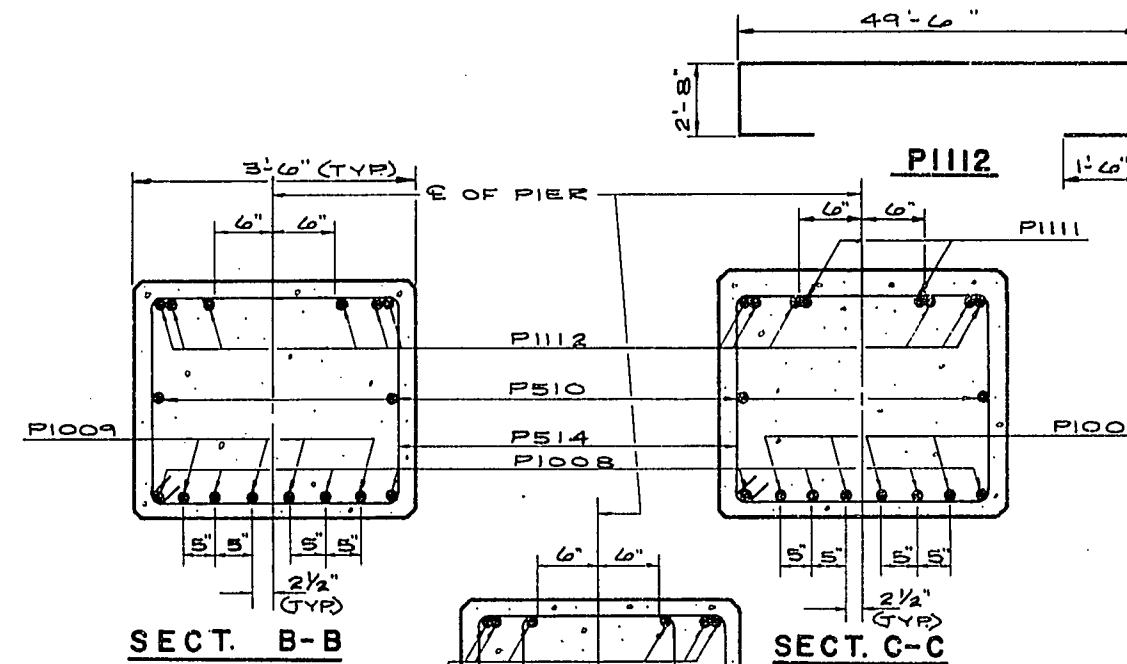


P 405



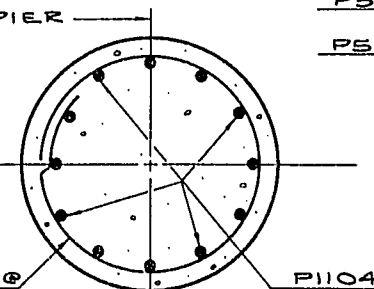
PLAN

CAP ELEVATION
SHOWING BAR STEEL REINF.



SECT. B-B

SECT. C-C

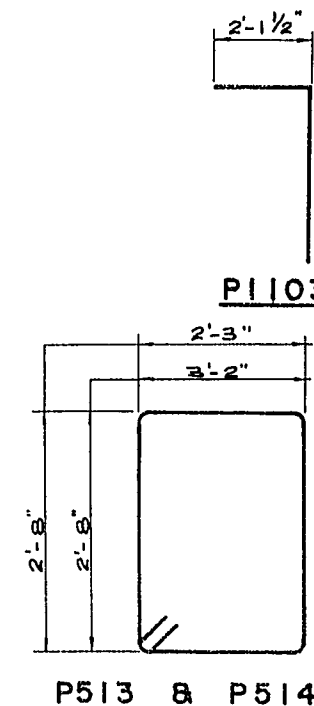


SECT. A-A

NOTE: P1104 BARS ARE EQUALLY SPACED.

ESTIMATED CONCRETE MASONRY

	PIER 1	PIER 2
FOOTINGS	36.0 C.Y.	36.0 C.Y.
COLUMNS	13.1 C.Y.	13.1 C.Y.
PIER CAP	20.2 C.Y.	20.2 C.Y.
TOTAL	69.3 C.Y.	69.3 C.Y.

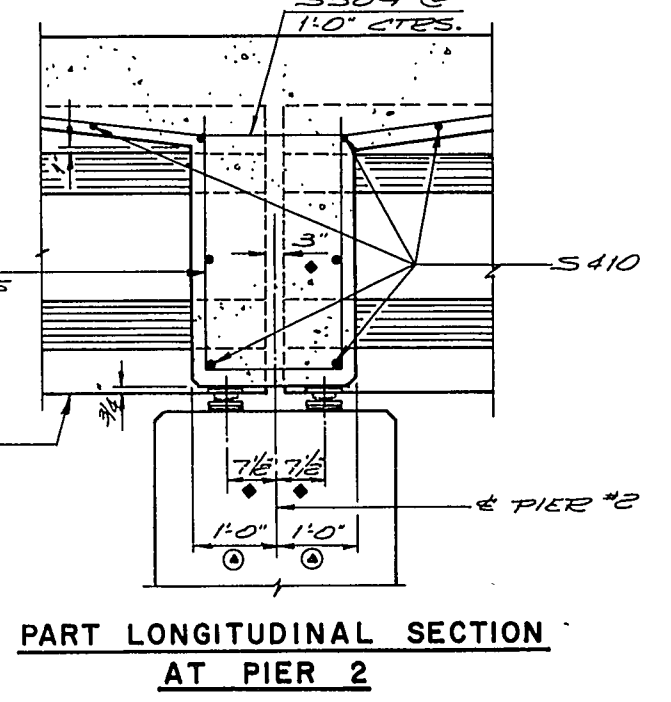
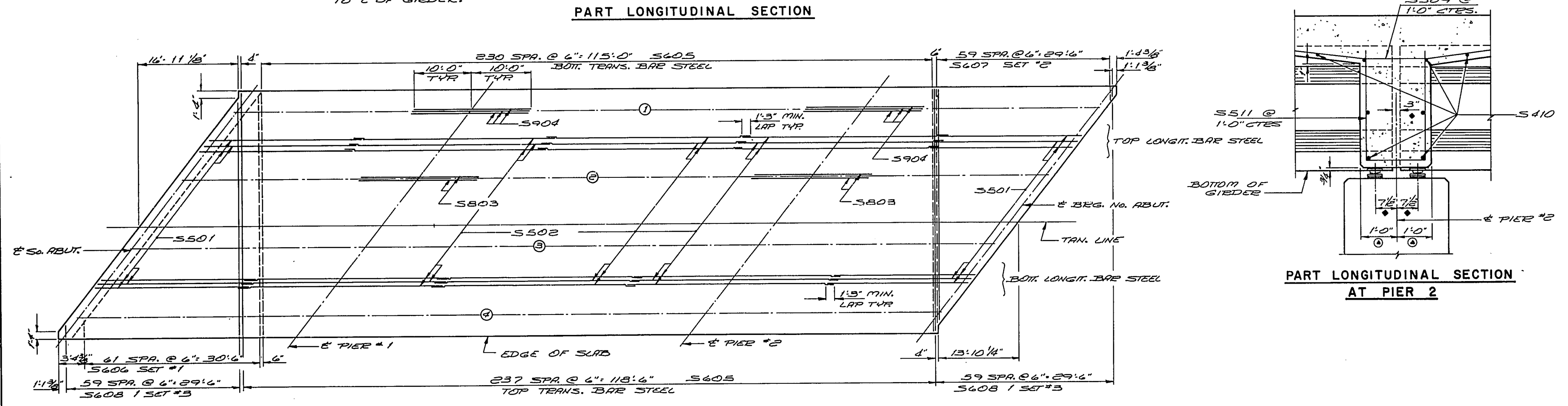
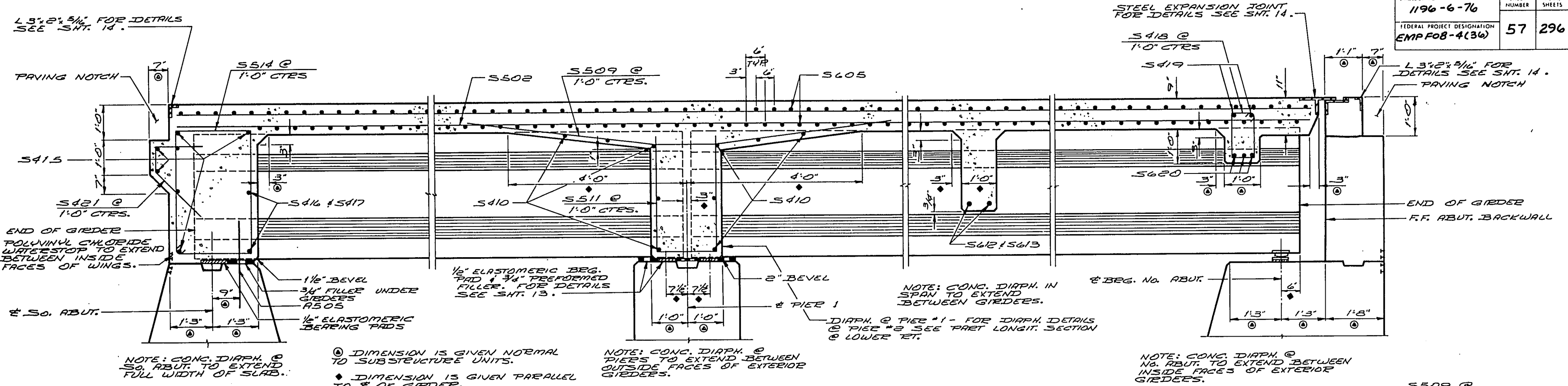


P513 & P514

No.	Date	Revision	By

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	
STRUCTURE B-3-16	
Const. 1969 Spec. By TLA	Plans Checked GHA
PIERS	
SHEET 8 OF 16 X46168	

PROJECT ID 1196-6-76	SHEET NUMBER 57	TOTAL SHEETS 296
FEDERAL PROJECT DESIGNATION EMP F08-4(36)		

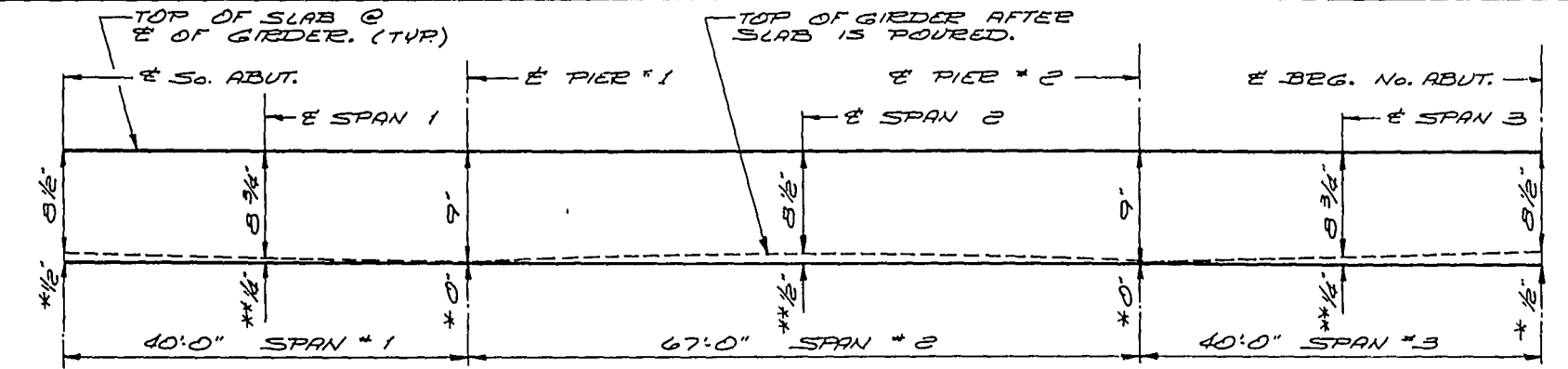


No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-16			
Const. Spec. 1969	Drawn By BUDD	Plans Checked G. H. A.	
SUPERSTRUCTURE			SHEET 10 OF 16
			X 4 6 1 7 0

BILL OF BARS

DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST DIGIT OF A 3 DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

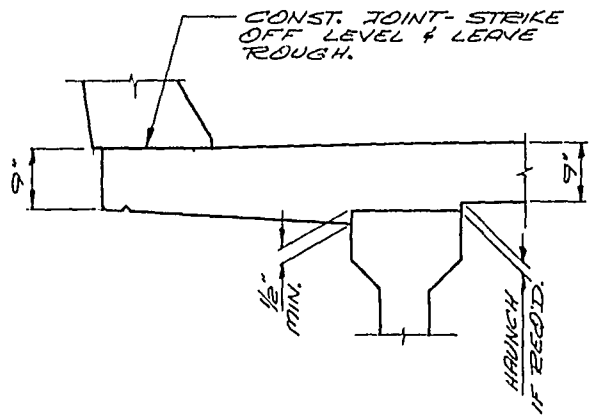
MARK	No. REQ'D.	LENGTH	BENT	CUT, DIR.	LOCATION	
S501	174	24.9			SLAB TOP & BOT.	LONGIT.
S502	261	35.0			" " "	"
S803	8	20.0			" " C PIER GIRD. 2 & 3	"
S904	12	20.0			" " " " 1 & 4	"
S605	469	42.4			" " & BOT.	TRANS.
S606	31	43.9	X		" BOT. SET 1	"
S607	30	42.10	X		" " " 2	"
S608	60	42.3	X		" TOP " 3	"
S509	66	10.10	X		" HAUNCH @ PIER	LONGIT.
S410	60	12.3			" " " "	TRANS.
S511	66	9.9	X		" " " "	"
S612	18	10.10			DIAPH. @ MID SPAN	"
S613	36	2.0			" " " " THREAD, ONE	"
S514	36	14.0	X		" " SO. ABUT.	"
S415	14	27.3			" " " "	"
S416	6	12.2			" " " "	"
S417	4	3.1			" " " "	"
S418	33	4.2	X		" " NO. "	"
S419	6	14.9			" " " "	"
S620	9	13.3			" " " "	"
S421	51	3.11	X		PAVING NOTCH	"
S322	12	3.2	X		PILASTER @ PIER	"
S423	8	4.4	X		" " "	VERT.
S424	8	3.4	X		" " "	"
S525	20	17.6			RAIL PARAPET	HORIZ.
S526	20	23.0			" " "	"
S527	20	21.9			" " "	"
S528	10	22.5			" " "	"
S529	298	5.0	X		" " "	VERT.
S530	298	4.9	X		" " "	"



* IF VARIATIONS IN PRESTRESS CAMBER & OTHER CONST. DISCREPANCIES ARE OF SUCH A MAGNITUDE THAT THE MAXIMUM ALLOWABLE IMBEDMENT AS NOTED ABOVE SHALL BE EXCEEDED THESE DIMENSIONS SHALL BE REVISED. THE 1/2" IMBEDMENT & THE PLAN SLAB THICKNESS SHALL BE HELD WHILE THE GRADE LINE WILL BE REVISED.

** TO COMPENSATE FOR VARIATIONS IN PRESTRESS CAMBER & OTHER MINOR CONST. DISCREPANCIES THE EMBEDMENT AT THE E OF THE SPAN MAY BE VARIED WITH A MAXIMUM OF 1/2" ALLOWABLE IMBEDMENT & THE SLAB HELD TO PLAN THICKNESS.

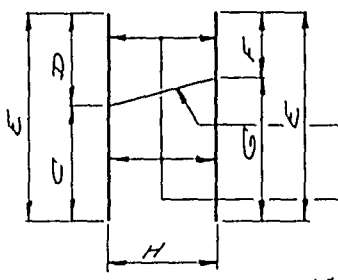
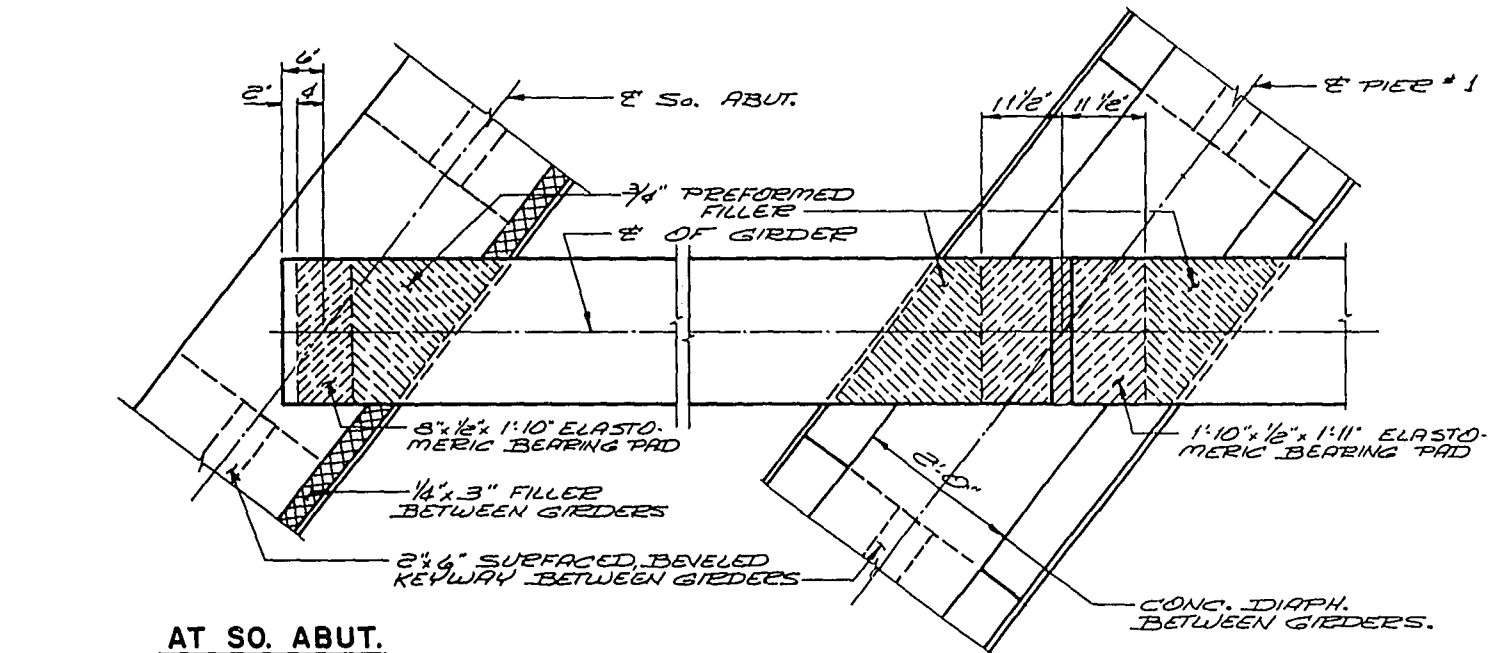
SLAB FORMING DIAGRAM



SLAB DETAIL AT EXTERIOR GIRDER

"H" IS NUMBER OF BARS REQ'D BEFORE CUTTING

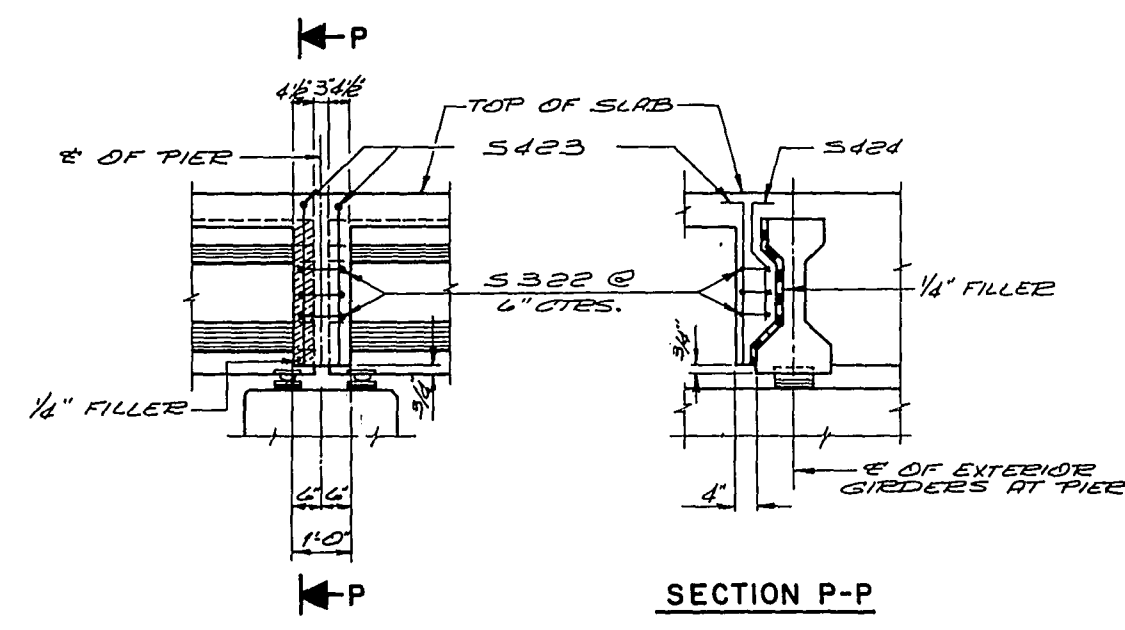
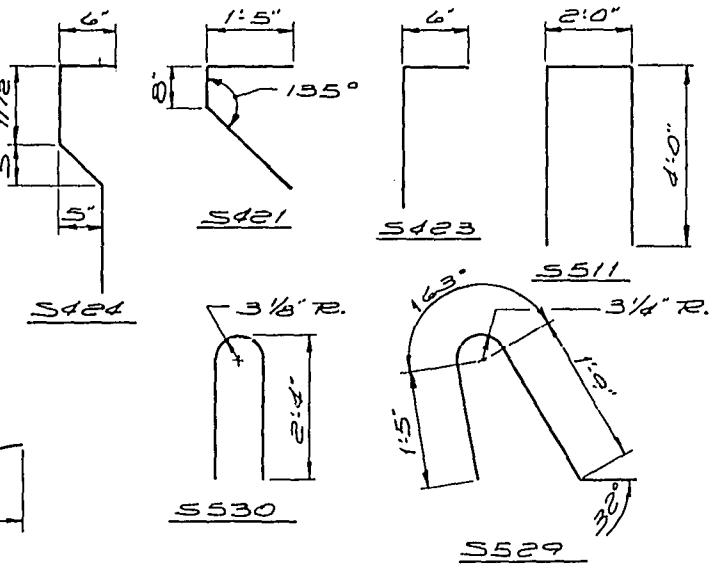
MARK	SET No.	C	D	E	F	G	H	SETS REQ'D.
S606	SET 1	21.11	21.6	43.9	2.0	41.9	31	1 SET 1
S607	" 2	21.1	21.9	42.10	2.3	40.7	30	" 2
S608	" 3	20.10	21.5	42.3	1.11	40.4	30	" 3



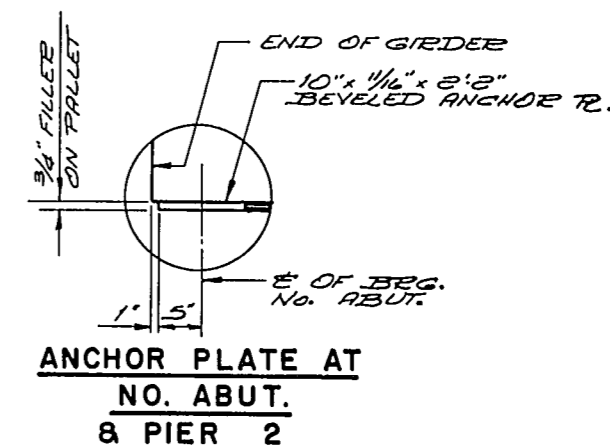
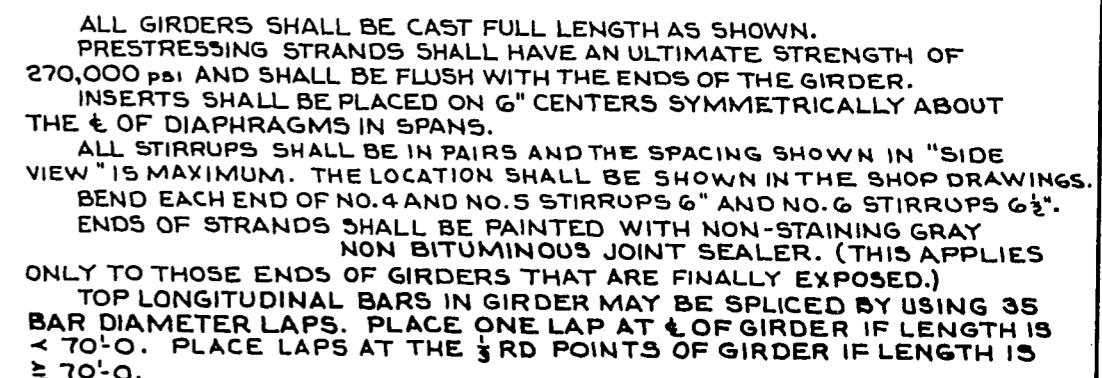
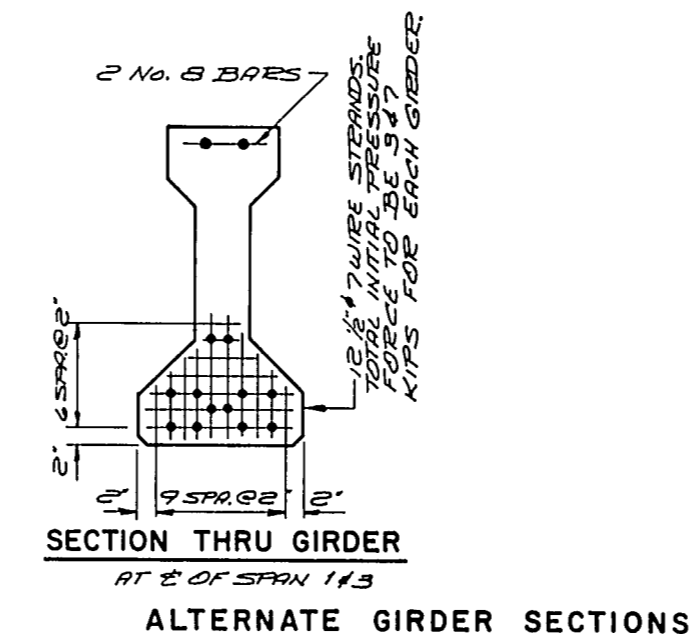
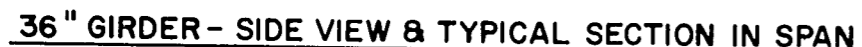
MARK & CUT ALL BARS ALONG THIS LINE. MAKE ALL CUTS NORMAL TO BAR AXIS.

CUT BUNDLE & MARK MARK WITH BAR No. & SET No.

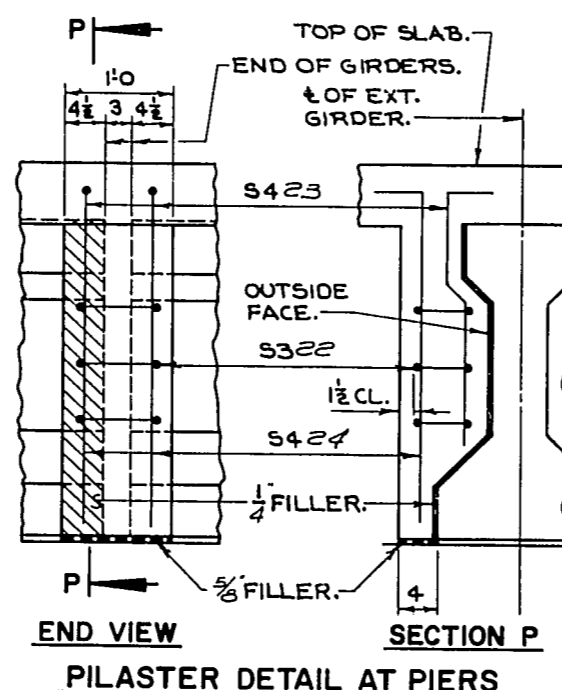
MARK	"J"	"K"
S514	2'-8 1/2"	3'-11"
S418	8"	1'-2"
S322	8"	8"



PILASTER DETAILS AT PIER



		'A'	'B'		'C'
			MAX.	MIN.	
SPANS	1 & 3	29"	16"	13"	3"
	2	32"	14 3/4"	11 3/4"	5"
	ALT. 2	35"	12 3/4"	11 3/4"	4"



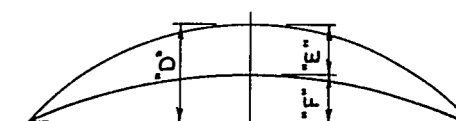
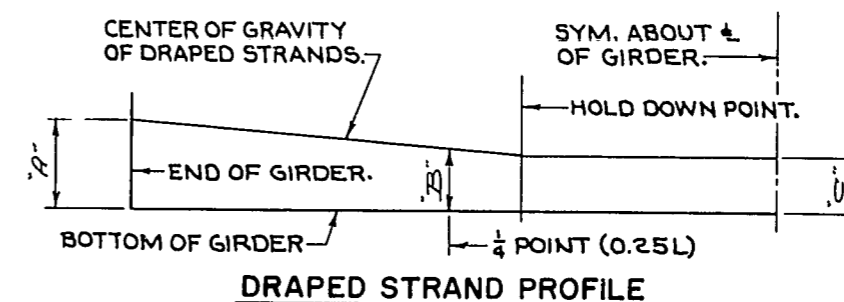
3'-0"

NO. 4 BAR AT TOP OF GIRDER.

NO. 4 BAR AT BOTTOM OF GIRDER.

7/2

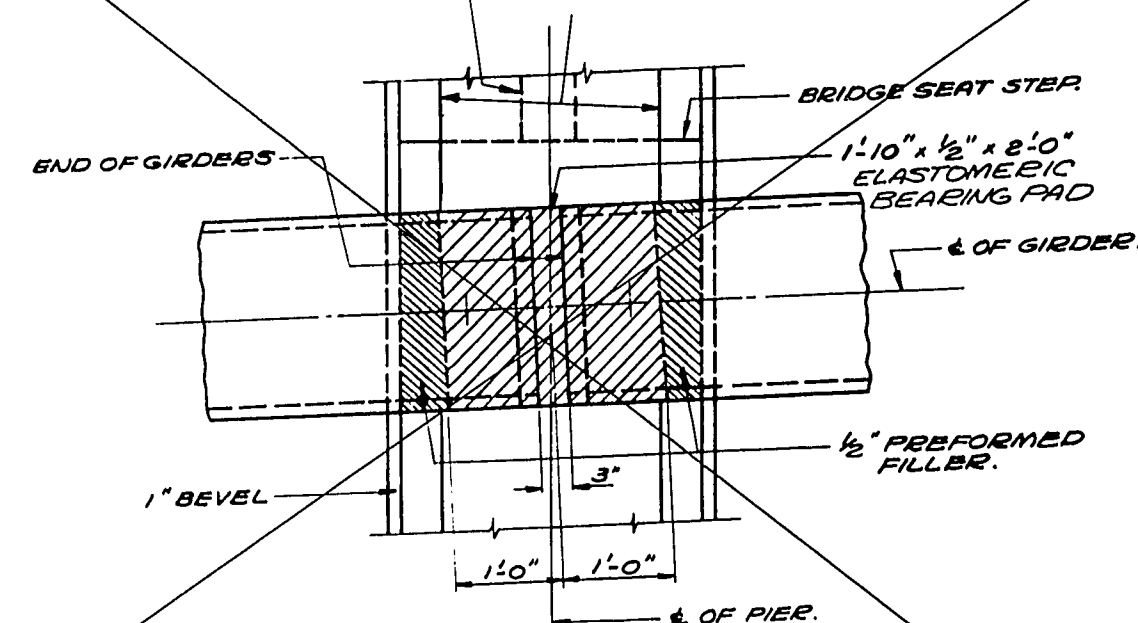
TOP VIEW OF GIRDER ENDS



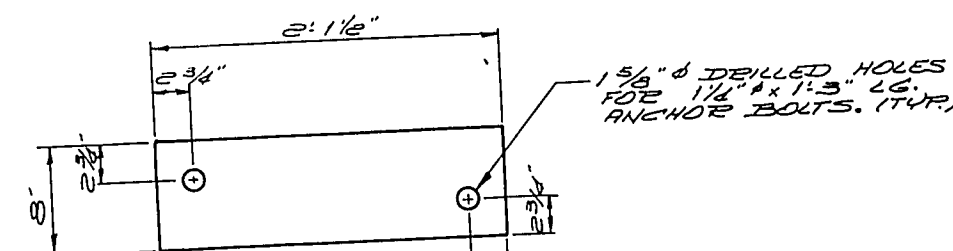
DATA SHOWN IS THEORETICAL
AND MAY VARY WITH CONCRETE
STRENGTH, VARIABLE PRESTRESS
CONDITIONS AND PRESTRESS LOSSES.

GIRDER DATA				
GIRDER SIZE REQUIRED			45" ALTERNATE	
SPANS		14.3	2	14.3
GIRDER LENGTH "L" REQUIRED		40'-4 1/2"	66'-9"	40'-4 1/2"
f'ci (psi)*	DRAPED PATTERN	4,800	5,000	4,800
	SPREAD PATTERN	4,800	5,000	4,800
DEFLECTION DATA **	PRESTRESS CAMBER "D"	1/4"	1 5/8"	1/4"
	DEAD LOAD DEFLECTION "E"	1/8"	1"	1/8"
	RESIDUAL CAMBER "F"	1/8"	5/8"	1/8"
USE DIAPHRAGM INSERT DETAIL TYPE "C"				

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE 8-3-16			
Const. Spec.	1969	Drawn By	BUDD
		Plans Checked	G.H.A.
PRESTRESSED GIRDER DETAILS		SHEET 12 OF 16 X 46172	



BEARING PAD DETAIL
AT PIER



PLAN VIEW OF MASONRY PLATE
(SHOWING ANCHOR BOLT HOLES)

NOTES

NOTES

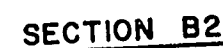
ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL SURFACES MARKED & SHALL BE MACHINE FINISHED, BY AN AUTOMATIC PROCESS.

ALL MATERIAL EXCEPT ANCHOR BOLTS SHALL BE MADE OF A242 STEEL WITH A CORROSIVE RESISTANCE OF 4 OR MORE TIMES THAT OF A36 STEEL.

ALL BEARING MATERIAL EXCEPT BRONZE PLATES, BEARING PADS, AND ANCHOR PLATES SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL LOW ALLOY STEEL."

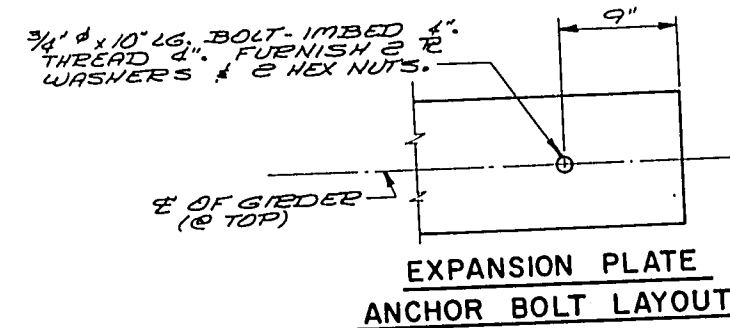
ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.



FIXED BEARING

FIXED BEARING
6 REQ'D. AT NORTH ABUT.

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-16			
Const. Spec.	1969	Drawn By BUDD	Plans Checked G. H. A.
BEARING DETAILS			SHEET 13 OF 16 X 46173



EXPANSION PLATE
ANCHOR BOLT LAYOUT

LEGEND

1. WT 6 x 3¹/₂ x RDWY. WIDTH. WELDMENT MAY BE USED. SEE DETAIL.
2. L 7" x 4" x 3¹/₈" x RDWY. WIDTH. LONG DIM. OF 1¹/₂" x 1¹/₂" SLOTTED HOLE TO BE PARALLEL TO DIRECTION OF MS. EX. FWT
3. BAR 1¹/₂" x 3¹/₄" x RDWY. WIDTH WELD TO L #2 WITH 2 LINES OF 1¹/₂" FILLET WELD, 2 @ 6.
4. L 3¹/₂" x 3" x 3¹/₈" PROVIDE 1¹/₈" Ø HOLE IN 3¹/₂" LEG FOR 3¹/₄" Ø x 0'-10" BOLT. FILLET WELD TO FLANGE & WEB OF LUT #1 NEAR SIDE & FAR SIDE.
5. 3¹/₈" Ø FLAT HEAD CAP SCREW x 0'-2" LONG WITH SQ. NUT. AT 4'-0" CTES. GREASE FOR EASY REMOVAL. 1¹/₂" x 1¹/₂" x 1¹/₈" KEEPER BAR WELD TO L #2 TO SEP SQ. NUT FROM TUBING. 1¹/₂" x 1¹/₂" SLOTTED HOLE IN L #2. 1¹/₈" Ø HOLE C'SK 7¹/₈" DEEP IN LUT #1. MAKE SLOT IN L #2 PARALLEL TO DIRECTION OF MOVEMENT.
6. 1¹/₈" Ø VENT HOLES AT 2'-0" CENTERS ON WT #1 AND L #2.
7. 3¹/₈" Ø STUDS x 0'-6³/₈" LONG AT 6" ALTERNATE CTES. BETWEEN GIRDERS. WELD TO LUT #1.
8. 3¹/₈" Ø STUDS x 0'-6³/₈" LONG AT 9" ALTERNATE CTES. WELD TO L #2.
9. L 3" x 2¹/₂" x 3¹/₈" x 0'-3" LONG AT 3'-0" CTES. WELD TO L #2. PROVIDE 1¹/₂" Ø HOLE IN 2¹/₂" LEG FOR ROD #13.
10. 3¹/₄" Ø ROD x 0'-9" LONG AND NUT. TACK WELD NUT TO L #12. THREAD 3".
11. PLATE 3¹/₈" x 6" x 3¹/₈".
12. PLATE 3¹/₈" x 6" x 15¹/₈". FIELD WELD TO WT #1.
13. B-JE 1¹/₂" x 3¹/₈" x 6". WELD TO BAR #14 WITH TWO LINES OF 3¹/₁₆" FILLET WELD. FIELD WELD TO BAR #4.
14. 3¹/₈" Ø STUDS x 0'-6³/₈" LONG. WELD TO LUT #1, #14 AND #15.
15. BLOCK AND BOLT FOR SHIPMENT WITH PIPE SLEEVE AND 1¹/₂" Ø BOLT. PROVIDE 9¹/₁₆" Ø HOLES @ 3'-0" CTES. IN WT #1 AND L #2 FOR 1¹/₂" Ø BOLT.

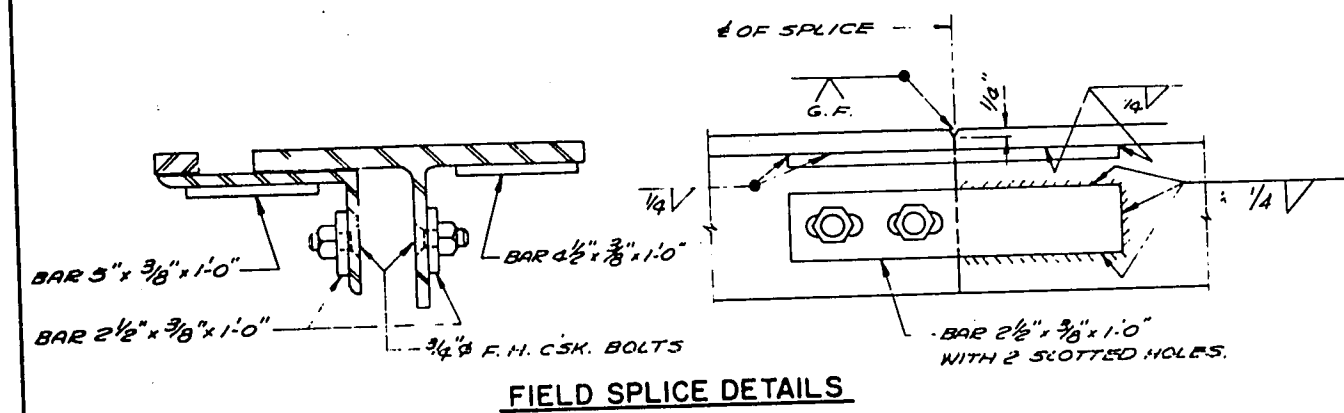
NOTES

NOTES :

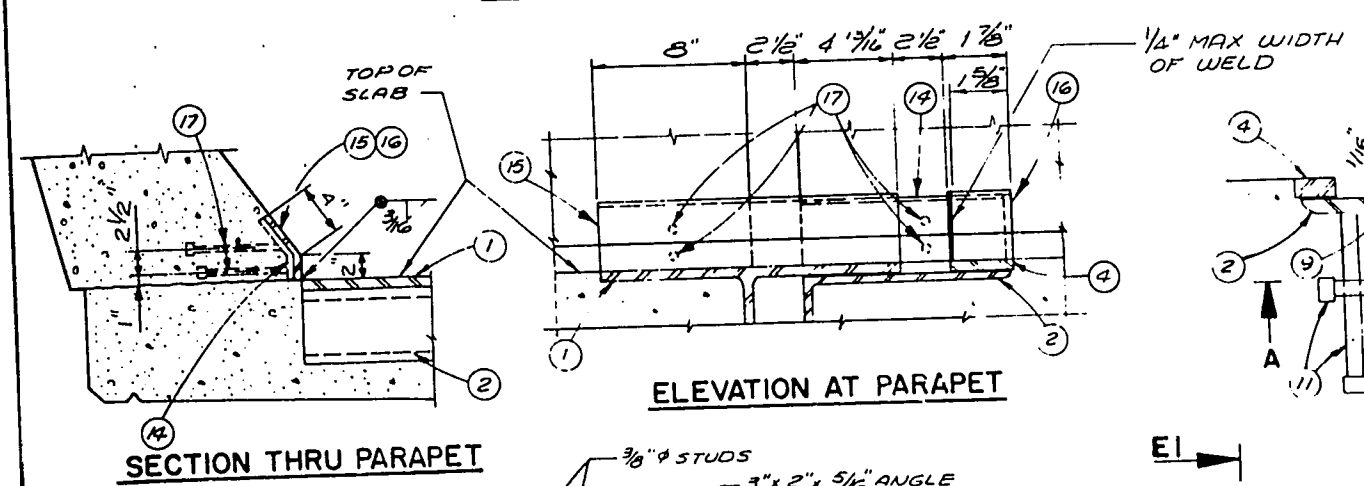
EXPANSION JOINT SHALL BE BUILT TO CONFORM TO ROADWAY CROWN AND GRADE.
ALL MATERIAL IN EXPANSION JOINT SHALL BE PAID FOR AS STRUCTURAL CARBON STEEL.
AFTER CONCRETE HAS SET.

1. THE JOINT OPENING SHALL BE THOROUGHLY CLEANED.
2. REMOVE 6" TO 8".
3. APPLY 2" OF BITUMASTIC TO VERTICAL METAL SURFACES FORMING THE JOINT.
4. FILL OPENING AND HOLES FOR BOLT NO. 3 WITH HOT POURED ELASTIC TYPE JOINT SEALER CONFORMING TO A.S.T.M. D.1190.

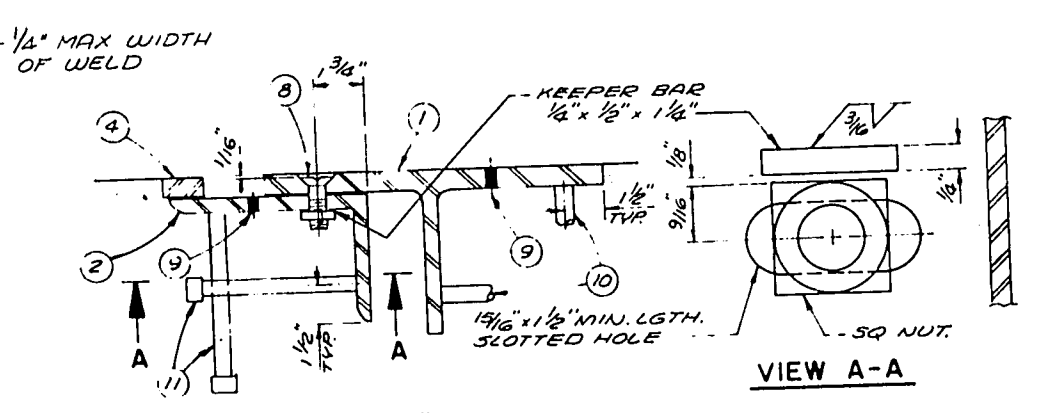
ONE FIELD SPLICE SHALL BE PERMITTED.



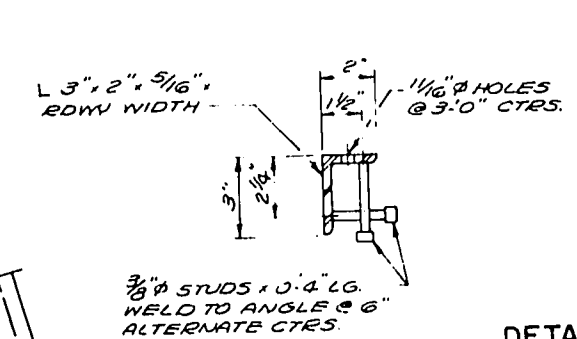
FIELD SPLICE DETAILS



ELEVATION AT PARAPET

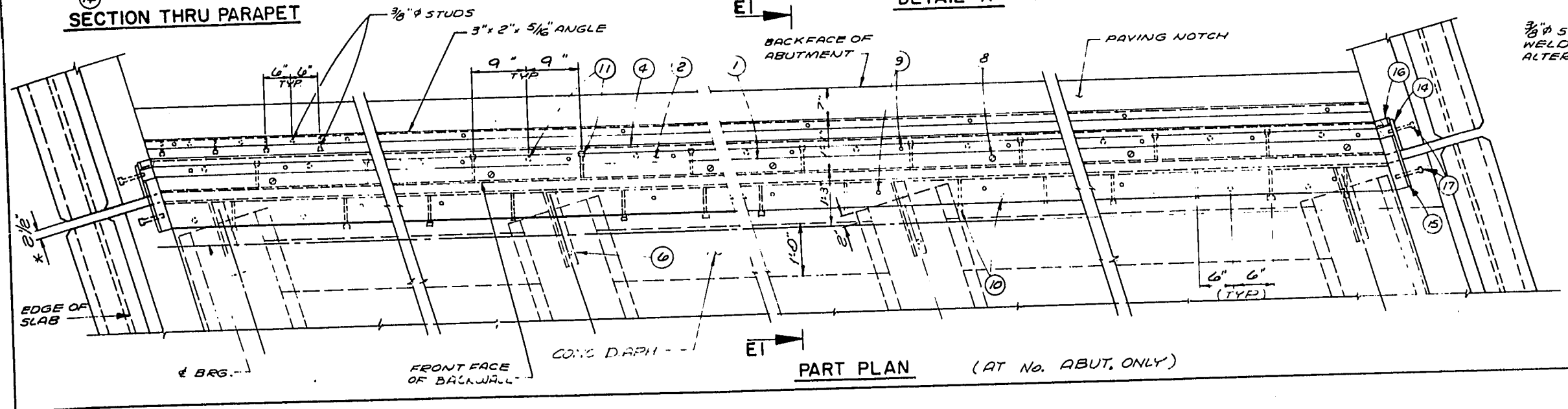


DETAIL "A"



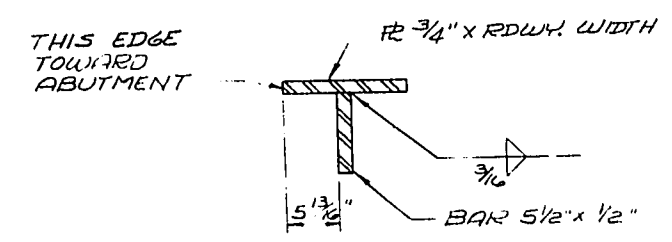
DETAIL "B"

NOTE: ONE FIELD SPlice SHALL BE PERMITTED IN ANGLES.
ANGLE AND STUDS SHALL BE PAID FOR AS STRUCTURAL CARBON STEEL.



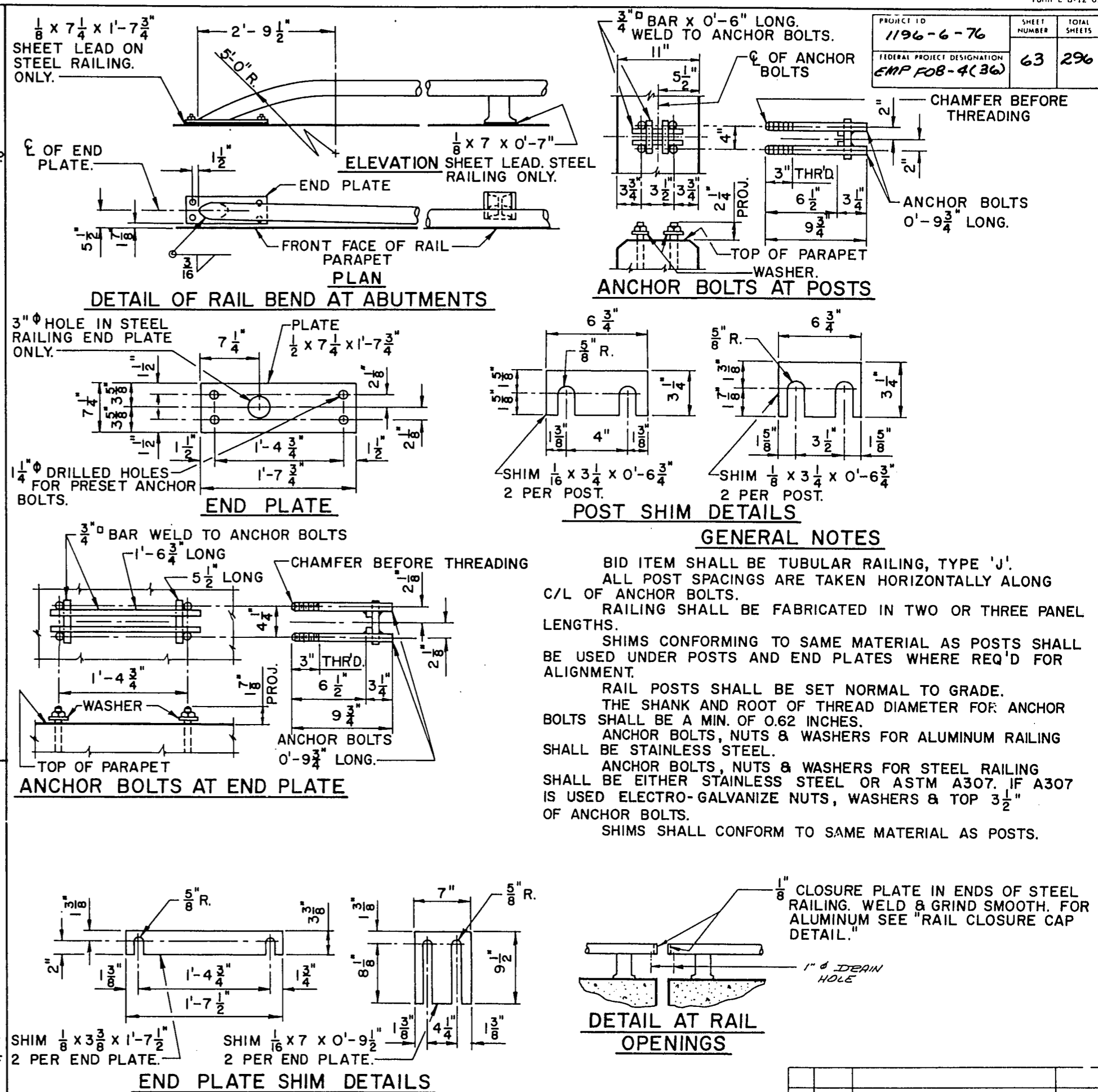
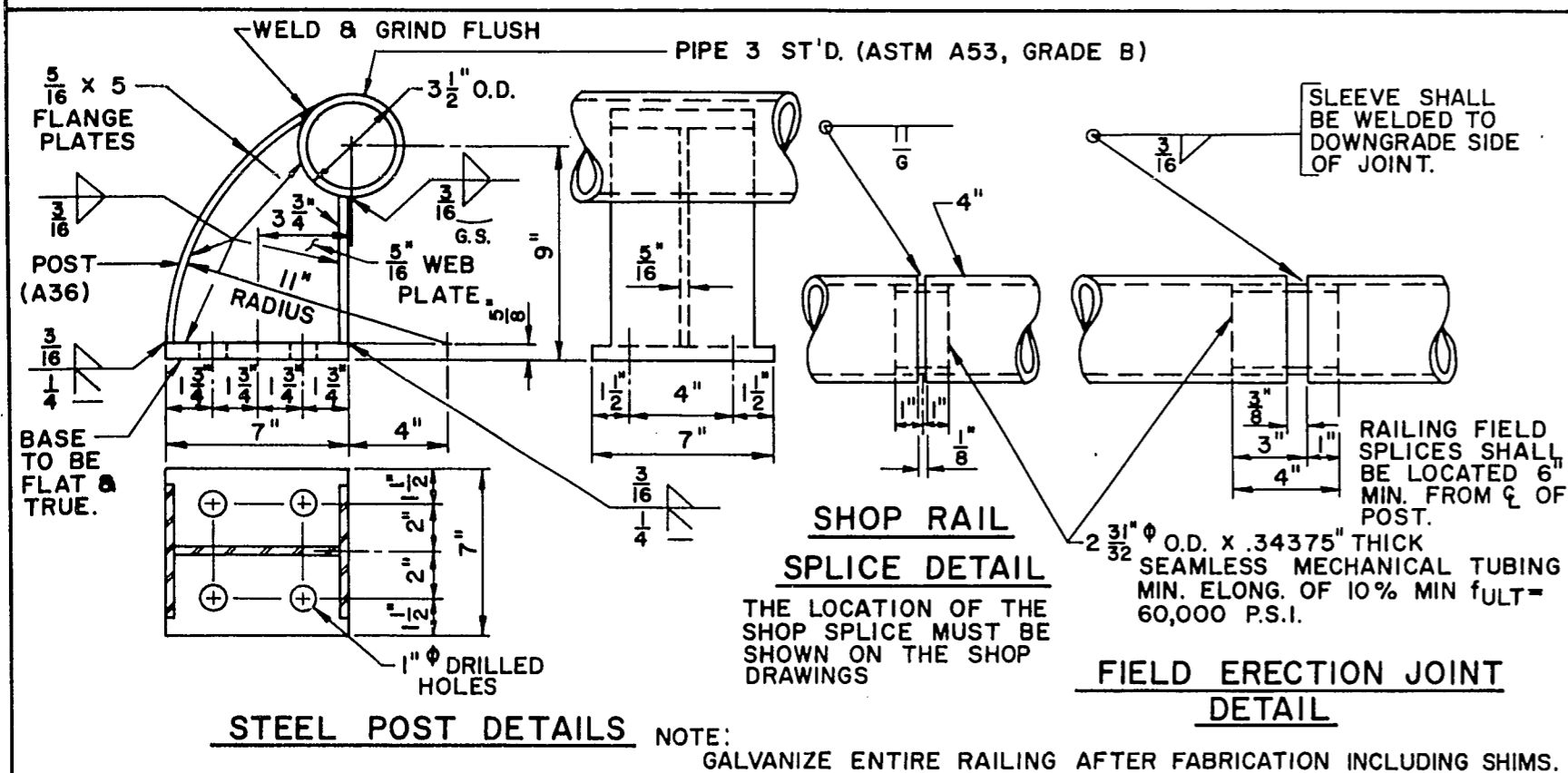
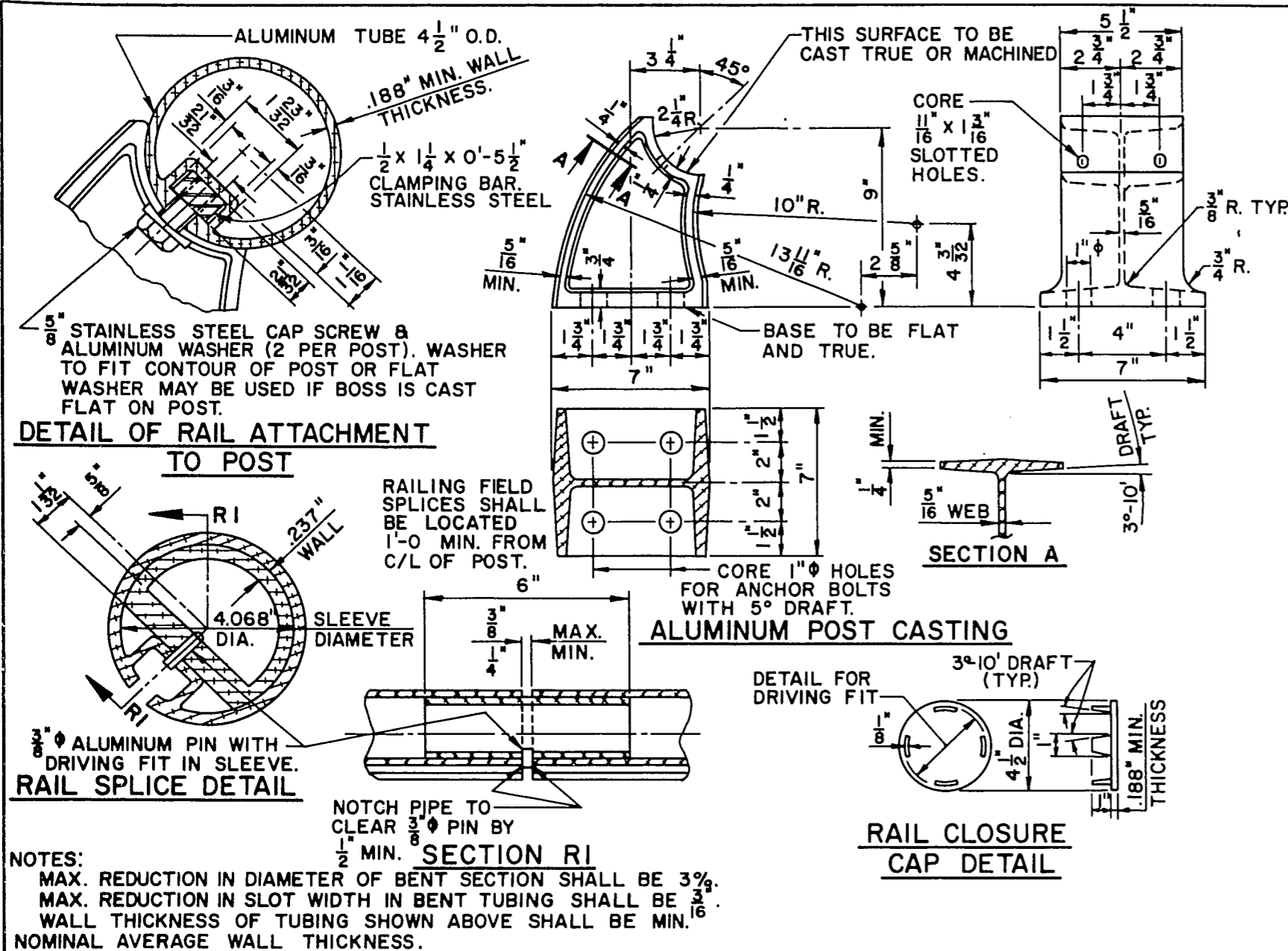
PART PLAN

(AT No. ABUT. ONLY)

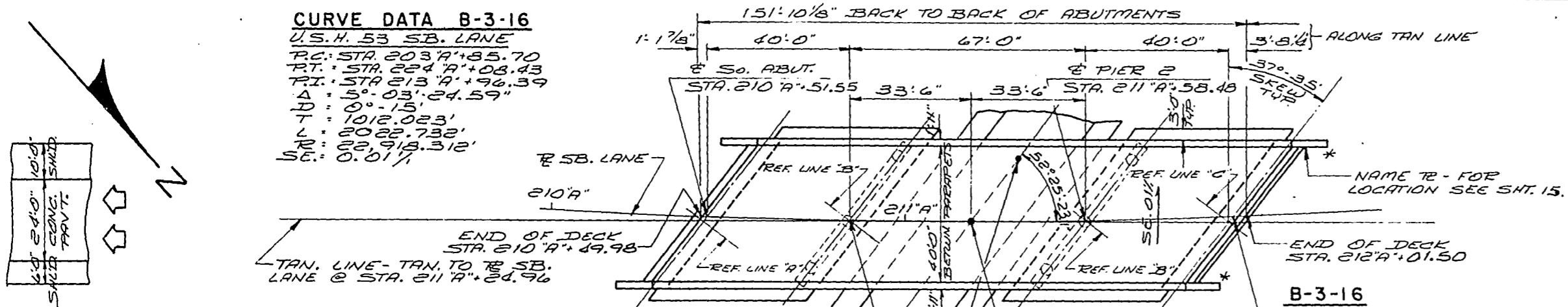


WELDMENT OPTION FOR WT NO. 1

No.	Date	Revision			By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS					
STRUCTURE B-3-16					
Const Spec	1969	Drawn By	BUDD	Plans Checked	G. H. A.
EXPANSION JOINT				SHEET 14 OF 11	
				X 46174	



No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-16			
Const. Spec. 1969	Drawn By BUDD	Plans Checked G. H. A.	
TUBULAR RAILING TYPE 'J'			SHEET 16 OF 16 X 46176



PROJECT ID	1196-6-76	SHEET NUMBER	64	TOTAL SHEETS	296
FEDERAL PROJECT DESIGNATION	EMP F08-4(36)				

DESIGN DATA

LIVELOAD: HS-20
 ALLOWABLE DESIGN STRESSES:
 CONCRETE MASONRY - GRADE "AA" - SLAB - $f_c = 1,200$ P.S.I.
 ALL OTHER - $f_c = 1,400$ P.S.I.
 BAR STEEL REINFORCEMENT - $f_s = 20,000$ P.S.I.
 STRUCTURAL CARBON STEEL - $f_s = 20,000$ P.S.I.
 PRESTRESSED GIRDERS - $f_s = 20,000$ P.S.I.
 CONCRETE MASONRY STRANDS - 1/2" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA:
 SUPPORT ABUTMENTS ON HP 10x42 STEEL "H" PILES. EST. 25' 0" LONG, & DRIVEN TO A MIN. BEG. VALUE OF 55T/PILE.
 SUPPORT PIERS ON SPREAD FOOTINGS WITH A MINIMUM ALLOWABLE BEG. PRESSURE OF 2 1/2 T/SQ. FT.

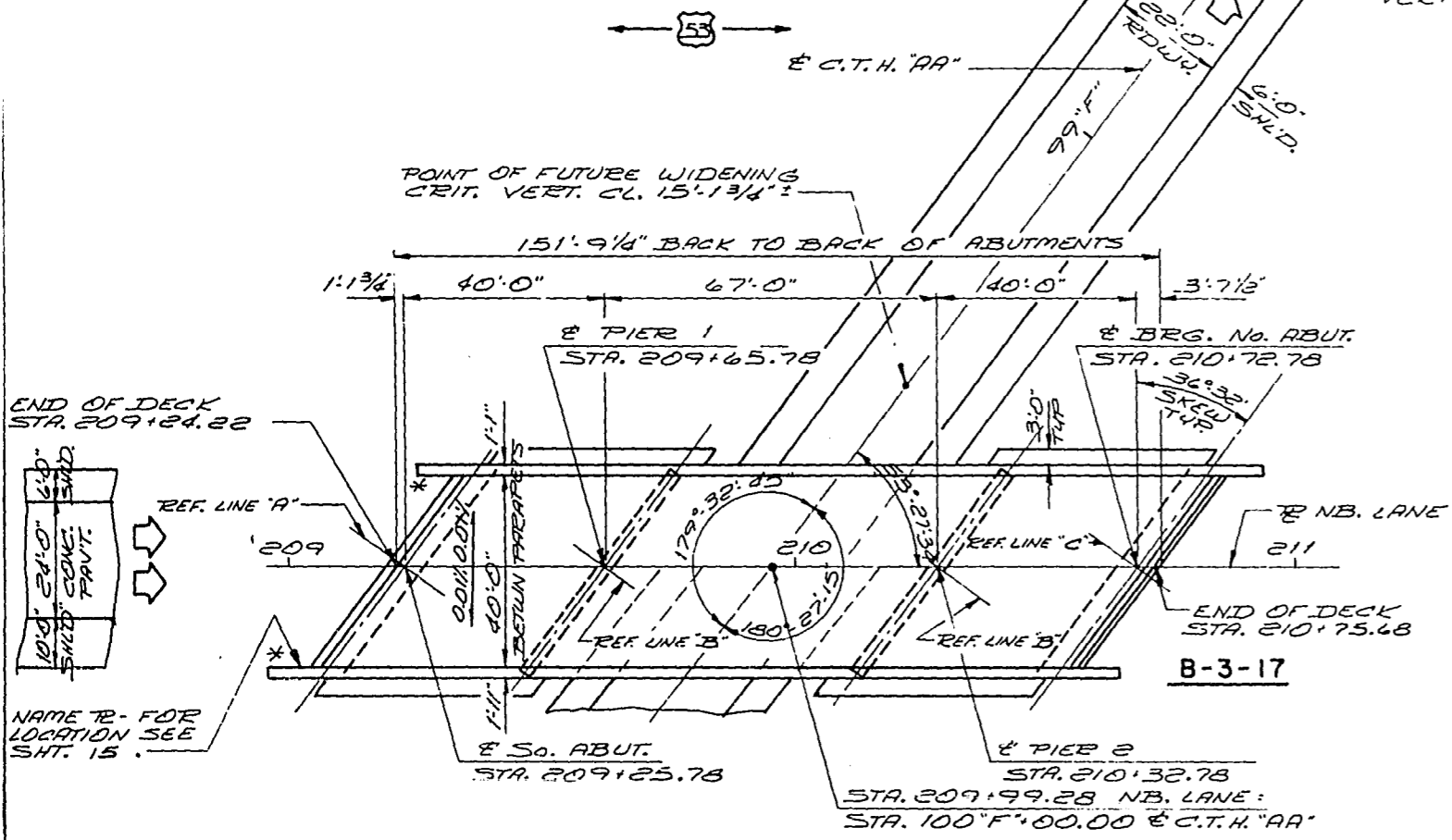
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
 ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH & TRUE.
 THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING, CRUSHED AGGREGATE TO THE EXTENT SHOWN ON THIS SHT. & IN THE ABUTMENT DETAILS.
 THE FINISHED GRADED SECTION WAS USED AS THE UPPER LIMITS OF EXCAVATION FOR COMPUTATION OF EXCAVATION QUANTITIES AT THE PIERS.
 THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" FOR THE ABUTMENTS SHALL BE THE BOTTOM OF THE SLOPE PROTECTION & THE QUANTITIES WERE COMPUTED FROM THIS LINE.
 FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.O. DESIGNATION M153 OR M213.

LIST OF DRAWINGS

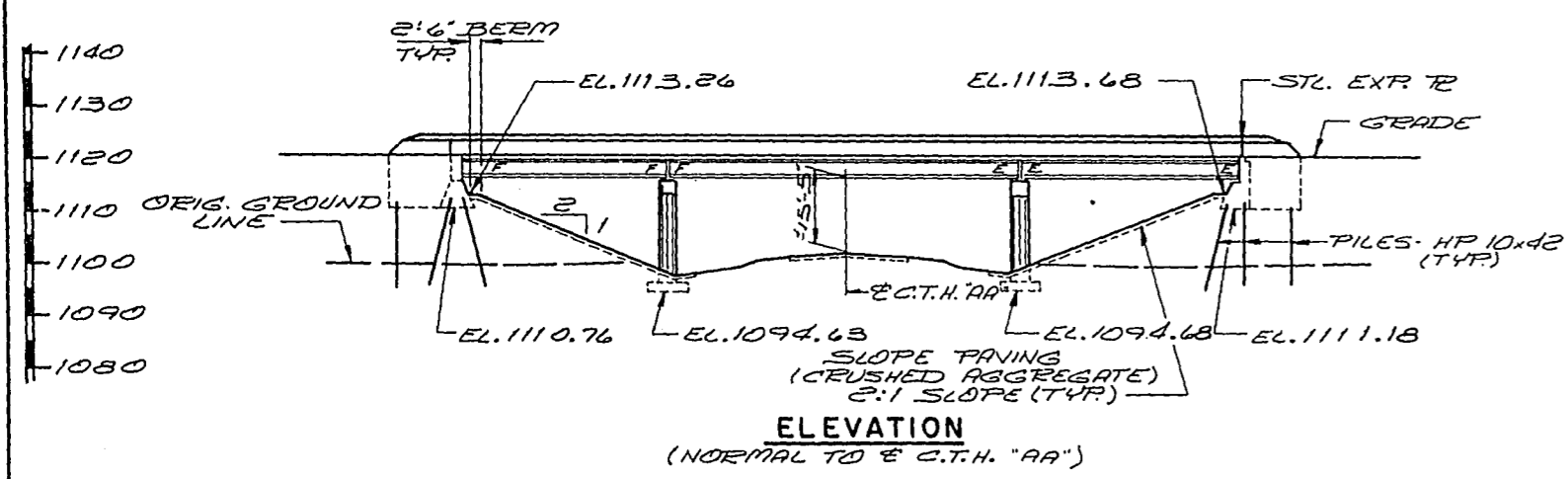
1. GENERAL PLAN	X46177
2. GENERAL PLAN	X46178
3. SUBSURFACE EXPLORATION	X46179
4. SOUTH ABUTMENT	X46180
5. SOUTH ABUTMENT DETAILS	X46181
6. NORTH ABUTMENT	X46182
7. NORTH ABUTMENT DETAILS	X46183
8. PIERS	X46184
9. SUPERSTRUCTURE	X46185
10. SUPERSTRUCTURE	X46186
11. SUPERSTRUCTURE	X46187
12. PRESTRESSED GIRDER DETAILS	X46188
13. BEARING DETAILS	X46189
14. EXPANSION JOINT	X46190
15. SLOPE FACE PARAPET "A"	X46191
16. TUBULAR RAILING TYPE "T"	X46192

* ATTACH BEAM TYPE GUARD RAIL TO WING PARAPET.



PLAN

(3 SPAN PRESTRESSED GIRDER)

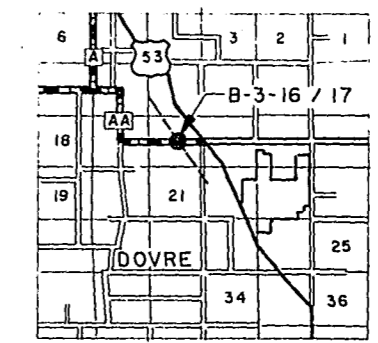


ELEVATION

(NORMAL TO E C.T.H. "AA")

TRAFFIC VOLUME

U.S.H. 53
 A.D.T. 5300 (1980)
 C.T.H. "AA"
 A.D.T. 250 (1980)



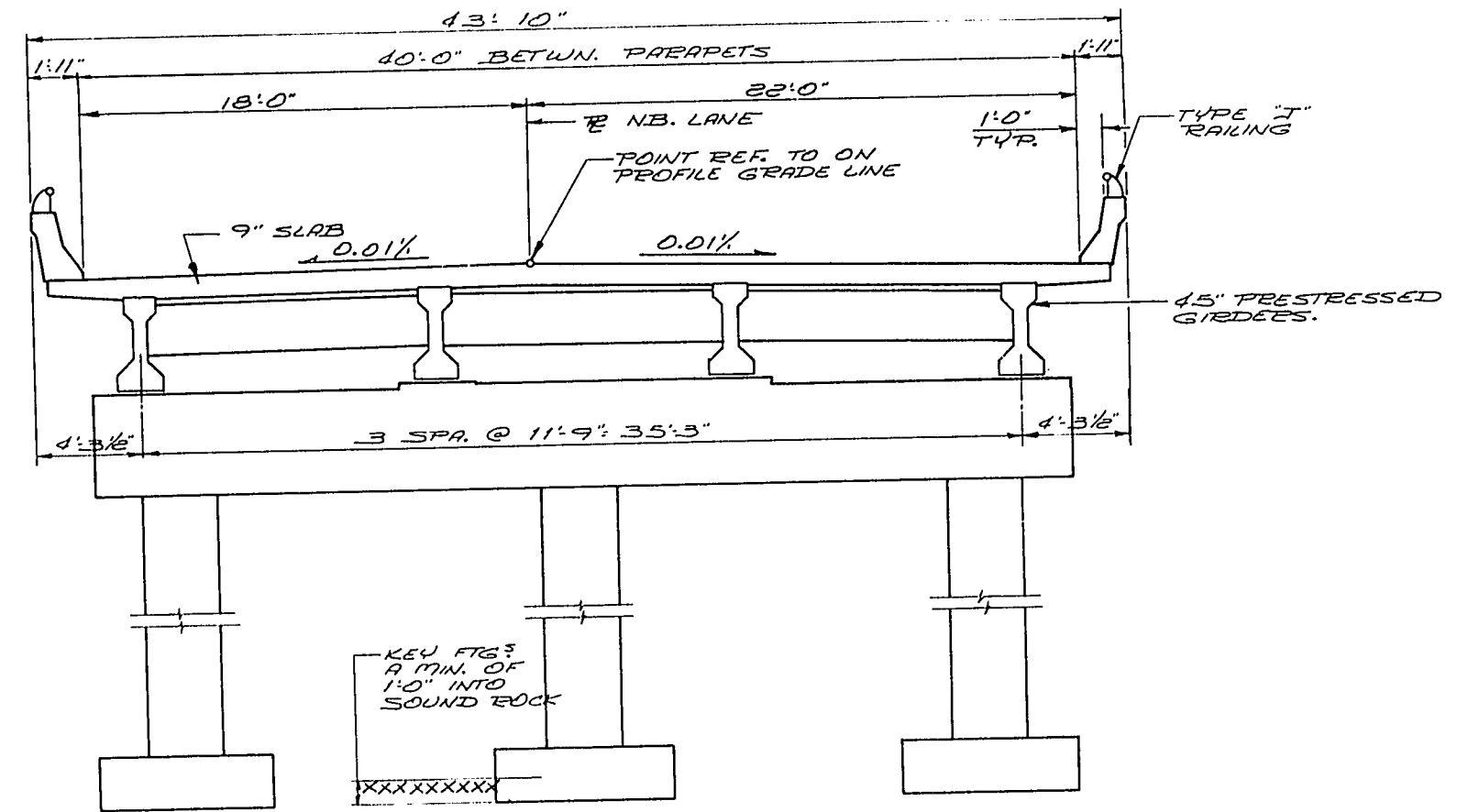
LAYOUT

No	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-17			
U.S.H. 53 OVER C.T.H. "AA"			
County	BARRON	City	Village TN. DOVRE
Design Spec.	A.A.S.H.O. 1969	Load	HS-20
Designed By	G.H.A.	Design Checked	R.L.P.
Drawn By	BUDD	Plans Checked	G.H.A.
Approved	W.A. Kline	Date	11-17-71
Chief Bridge Engineer			
GENERAL PLAN		SHEET 1 OF 16	
		X46177	

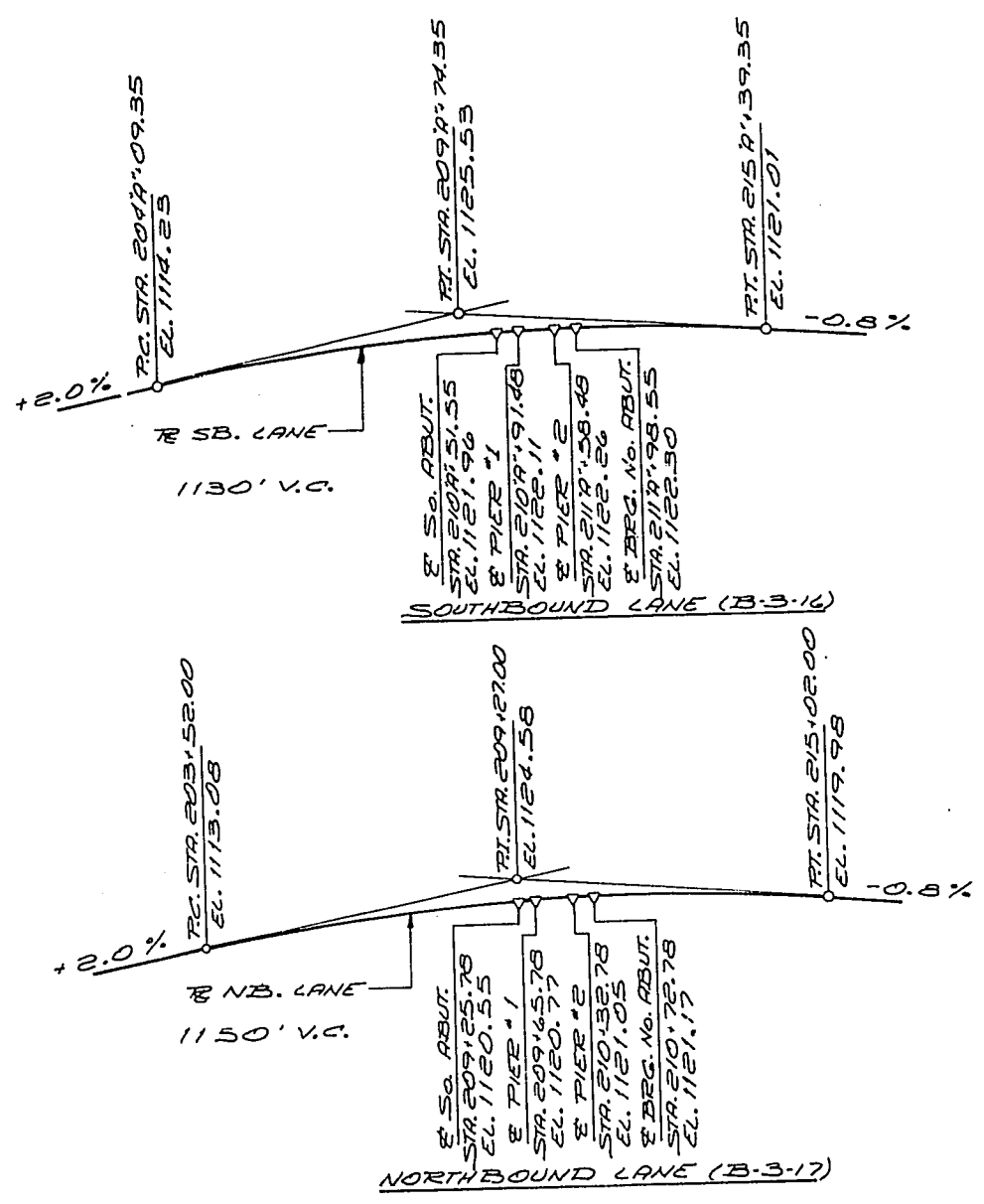
TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER	SO. ABUT.	PIER 1	PIER 2	NO. ABUT.	TOTAL
EXCAVATION FOR STRUCTURES	C.Y.	—	45	150	150	50	395
CONCRETE MASONRY	C.Y.	265.8	60.0	69.1	69.1	92.0	556.0
PRESTRESSED GIRDERS, I TYPE 45"	L.F.	590	—	13,590	13,590	—	590
BAR STEEL REINFORCEMENT	LBS.	61,120	2,700	27,100	27,100	3,730	121,050
STRUCTURAL CARBON STEEL	LBS.	3,780	—	—	—	—	3,780
STRUCTURAL LOW ALLOY STEEL	LBS.	2,070	—	—	—	—	2,070
LUBRICATED BRONZE PLATES	LBS.	190	—	—	—	—	190
BEARING PADS	S.F.	17	—	—	—	—	17
BEARING PADS, ELASTOMERIC	S.F.	19	—	—	—	—	19
STEEL PILING, DELIVERED & DRIVEN HP 10 x 42	L.F.	—	410	—	—	395	805
TUBULAR RAILING, TYPE "T"	L.F.	332	—	—	—	—	332
SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	—	253	—	—	255	508
NON-BID ITEMS							35
ALUMINUM OR ZINC PLATE	S.F.	35	—	—	—	—	112
POLYVINYL CHLORIDE WATERSTOP	L.F.	—	55	—	—	59	114
FILLER	SIZE	—	—	—	—	—	18' 1/2" x 3/4"

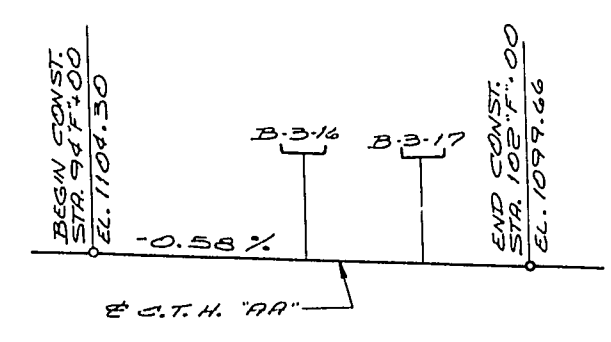
94730



CROSS SECTION THRU ROADWAY LOOKING NORTHWEST



PROFILE GRADES U.S.H. 53



PROFILE GRADE C.T.H. "AA"

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-17			
Const. Spec.	1969	Drawn By	BUDD
Plants	Checked	G.H.A.	
GENERAL PLAN			SHEET 2 OF 16
			X46178

ABBREVIATIONS		
F — Fine	M — Medium	C — Coarse
Ws — Weathered	So — Sound	

MATERIAL SYMBOLS		
Topsoil	Silt	Sandstone
Sand	Peat	Limestone
Gravel	Clay	Igneous Rock

LEGEND OF PROBING

95/6=95 Blows for 6" Penetration
Probing taken with a 350# wt. Falling 18" on a 2" O. D. Point.

Probing No.
Sta.
Elevation
7 Average Blows Per Foot
Refusal 95/6

LEGEND OF BORING

Boring No.
Sta.
Elev.

Unconfined Strength 7.7
Blows Per Ft. Using 140# Wt. Falling 30"
Wash Sample
Shelby Tube — S. T.

Ground Water Elevation
No Ground Water Observed Above This Elevation

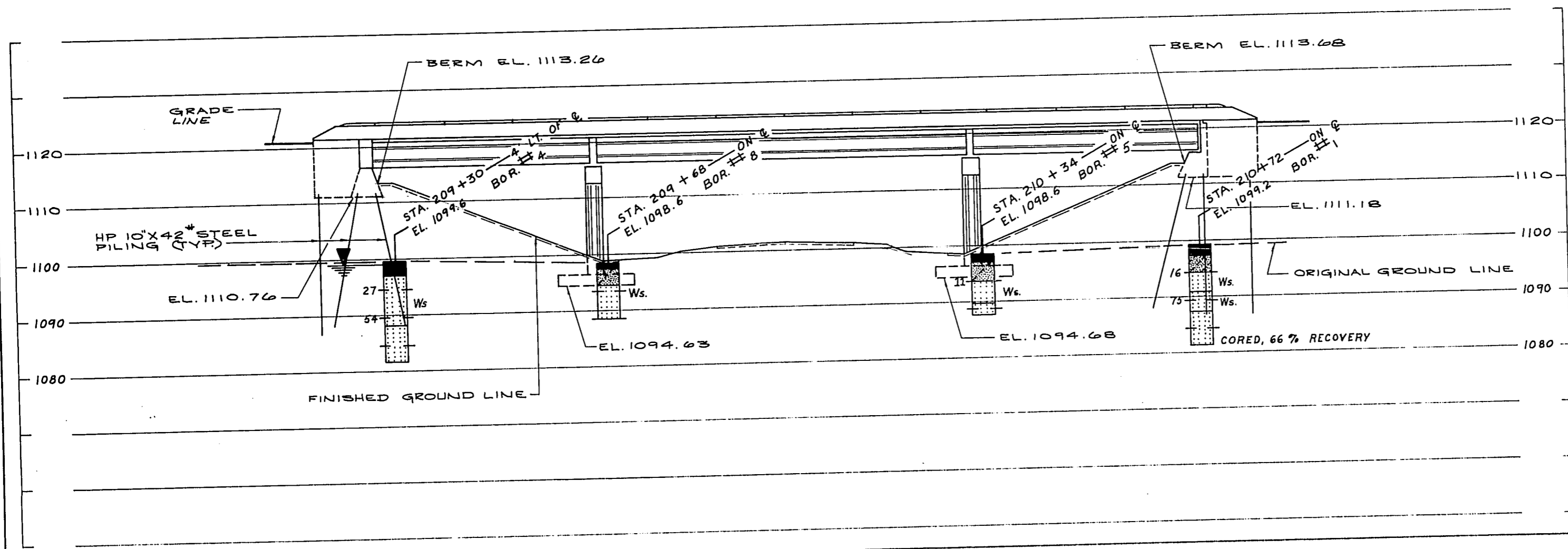
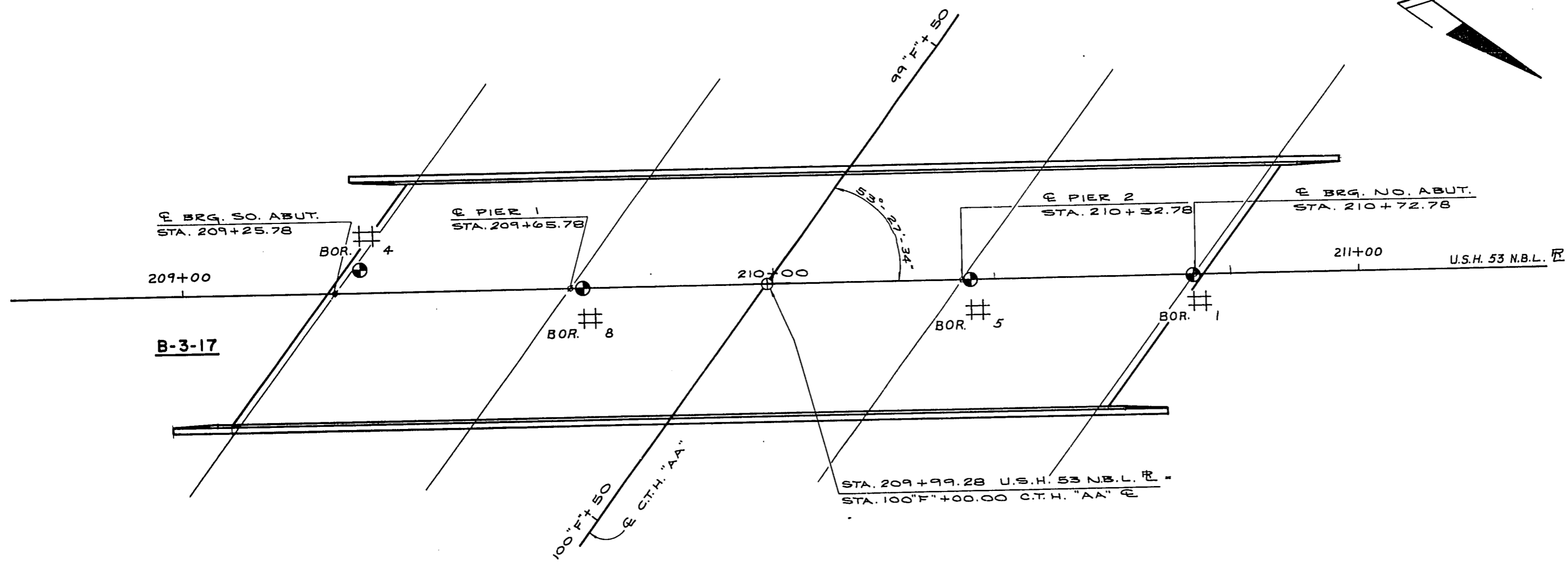
Sandy Gravel
F.
Boulders or Cobbles
Sand
Silty Clay
So
Limestone

Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O. D. x 1.4" I. D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

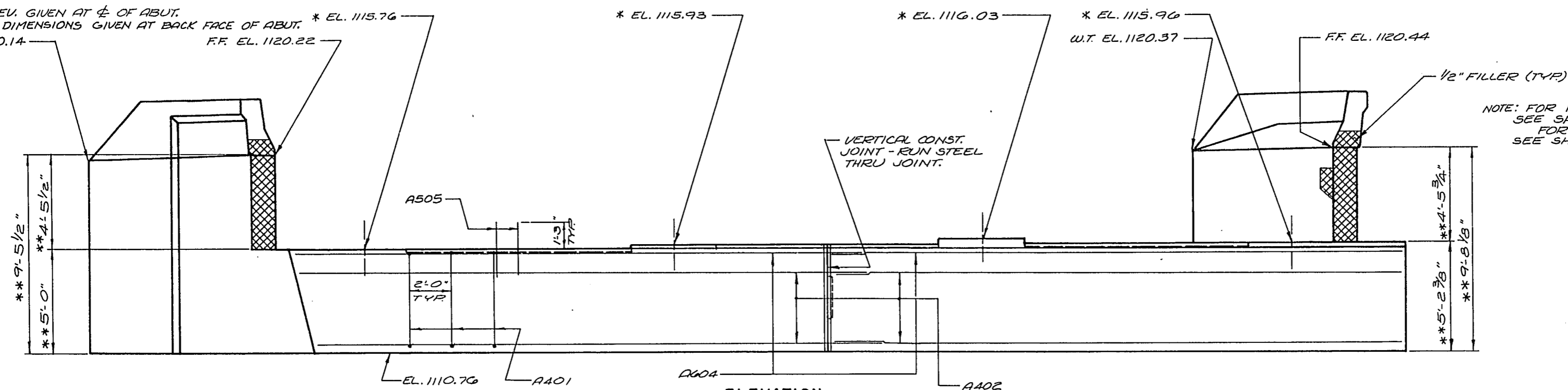
No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-17			
Const. Sec.	1969	Drawn By D.C.M.T.A.	Plans Checked G.H.A.
SUBSURFACE EXPLORATION			SHEET 3 OF 16 X46179



* THESE ELEV. GIVEN AT ϕ OF ABUT.
 ** THESE DIMENSIONS GIVEN AT BACK FACE OF ABUT. * EL. 1115.76
 W.T. EL. 1120.14 — F.F. EL. 1120.22 —

PROJECT ID 1196-6-76	SHEET NUMBER	TOTAL SHEETS
FEDERAL PROJECT DESIGNATION EMP F08-4(36)	67	296

NOTE: FOR RAIL PARAPET DETAILS
SEE SHEET 15
FOR PILE SPLICE DETAILS
SEE SHEET 5



ELEVATION
(LOOKING SOUTH)

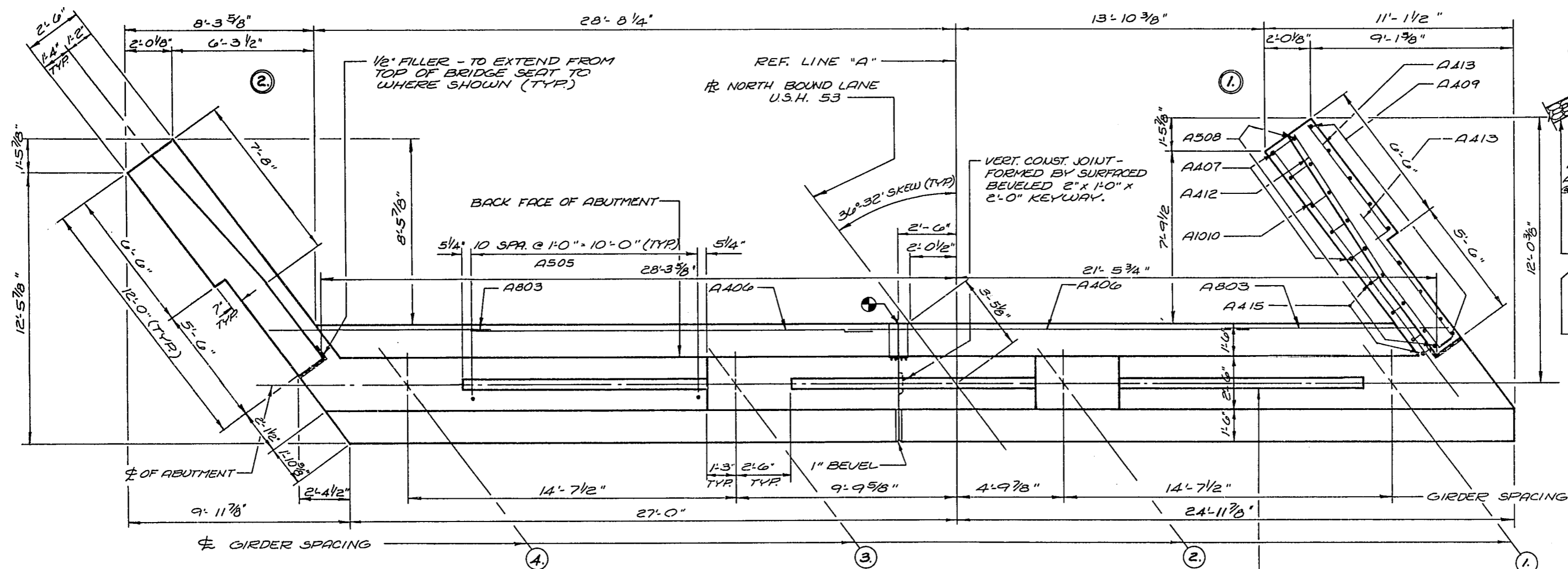
SEAL JOINT WITH CONTRACTION TYPE
POLYVINYL CHLORIDE WATERSTOP - TO
EXTEND FROM BOTTOM TO TOP OF ABUT.
FLUSH WITH FACE OF CONCRETE. FOR
DETAIL SEE SHEET 5

NOTE: HORIZ. WATERSTOP TO BE RUN FULL LENGTH. VERTICAL WATERSTOP TO BE CUT.

① SEAL JOINT WITH CONTRACTION
TYPE POLYVINYL CHLORIDE
WATERSTOP - TO EXTEND FULL
LENGTH BETWEEN WINGS. FOR
DETAIL SEE SHEET 5

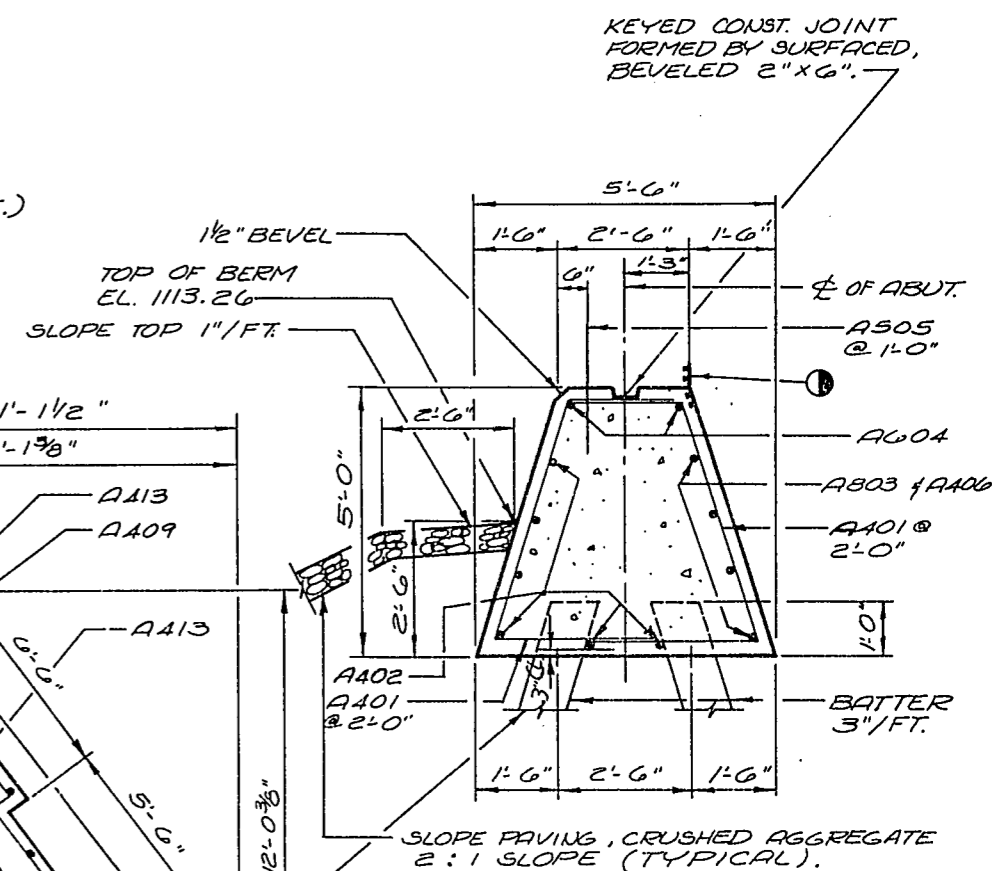
NOTE : SPACE A401 BARS
TO MISS PILING.

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.)



ABUTMENT PLAN

KEYED CONST. JOINT FORMED
BY SURFACED, BEVELED 2"x6"



SECTION THRU BODY

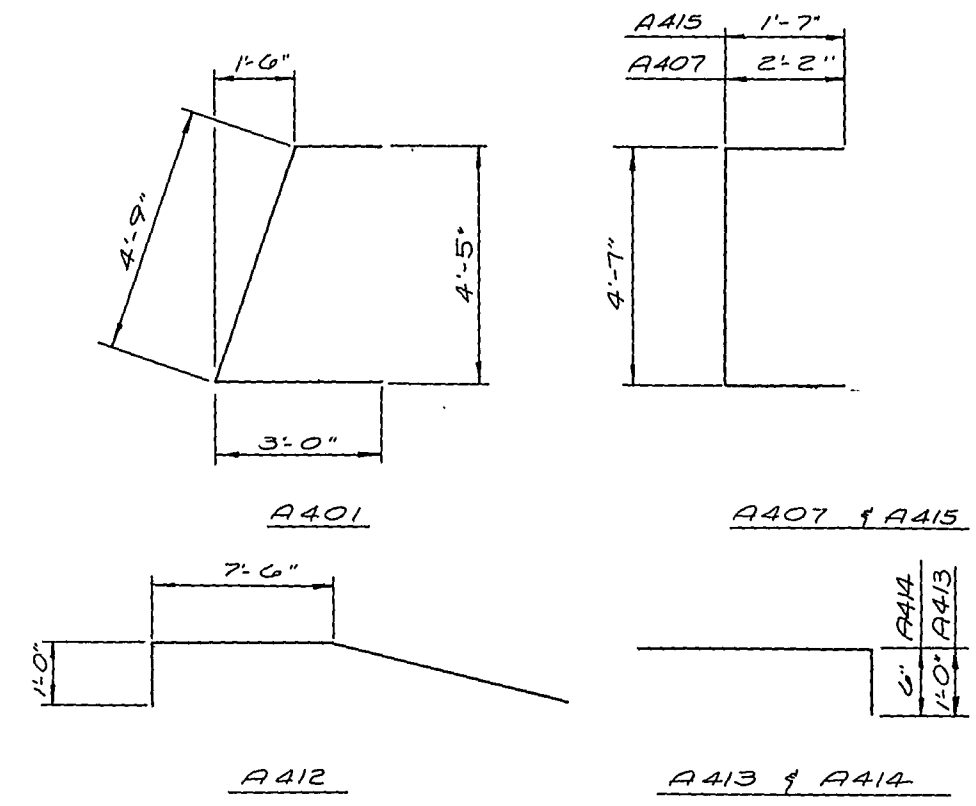
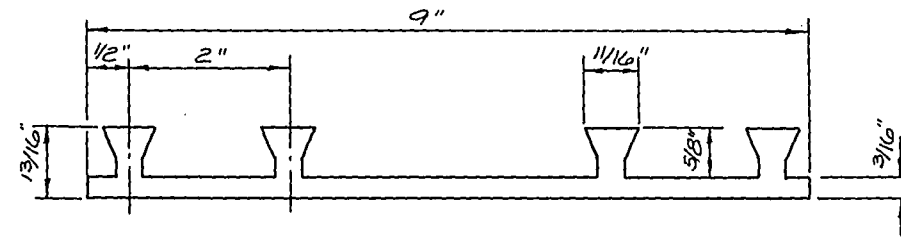
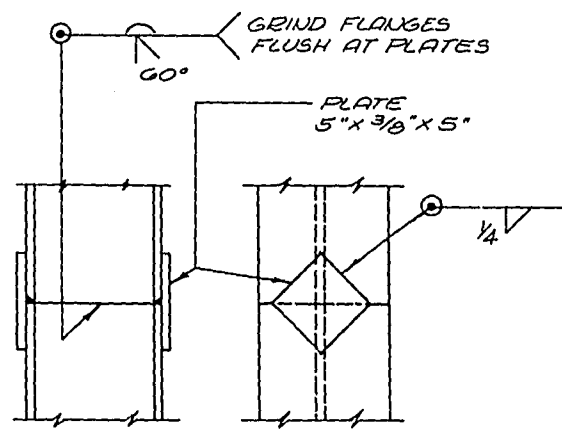
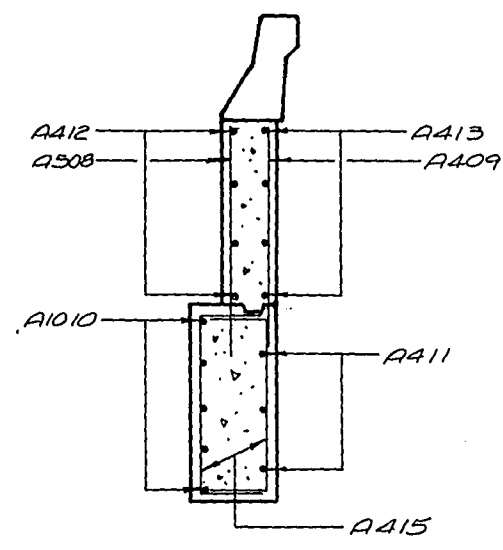
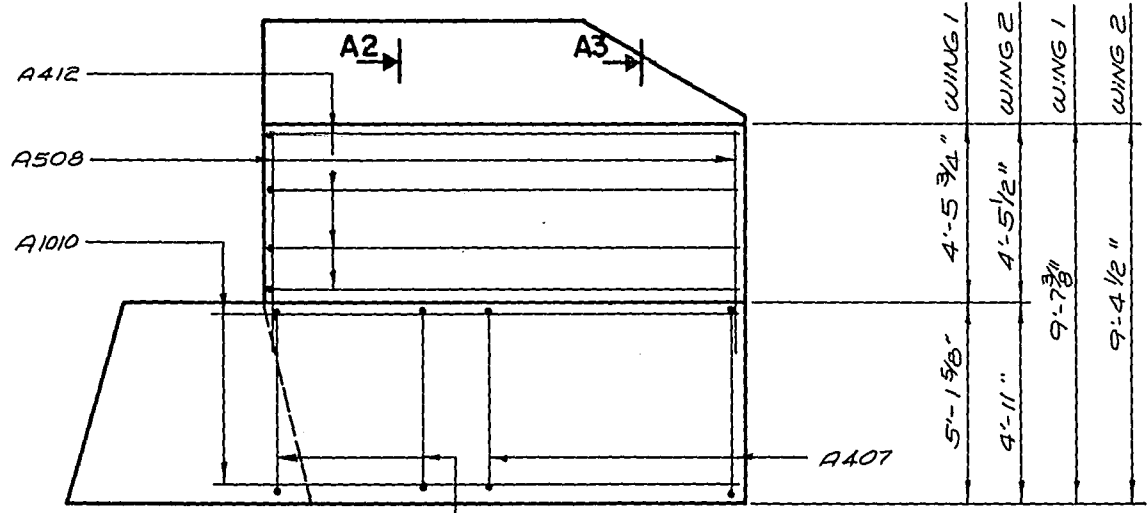
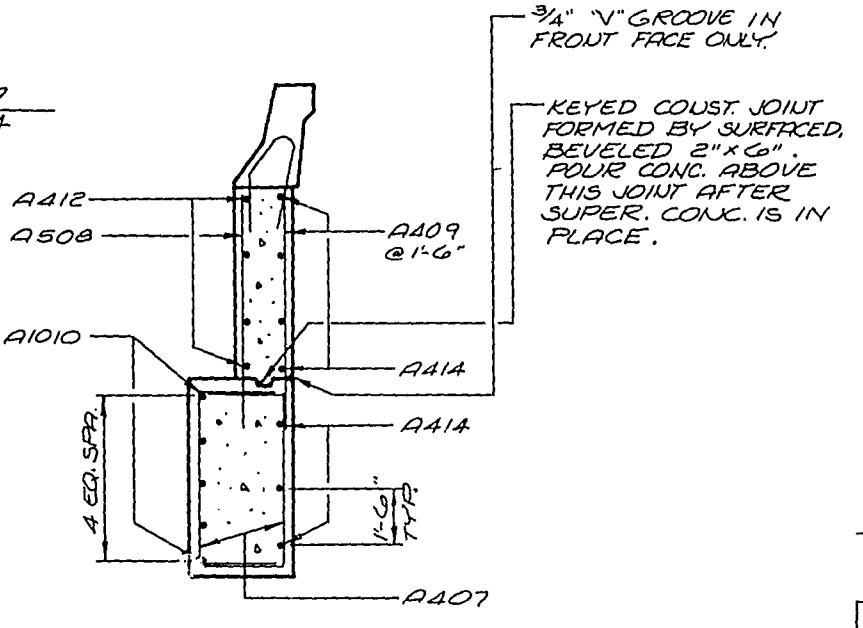
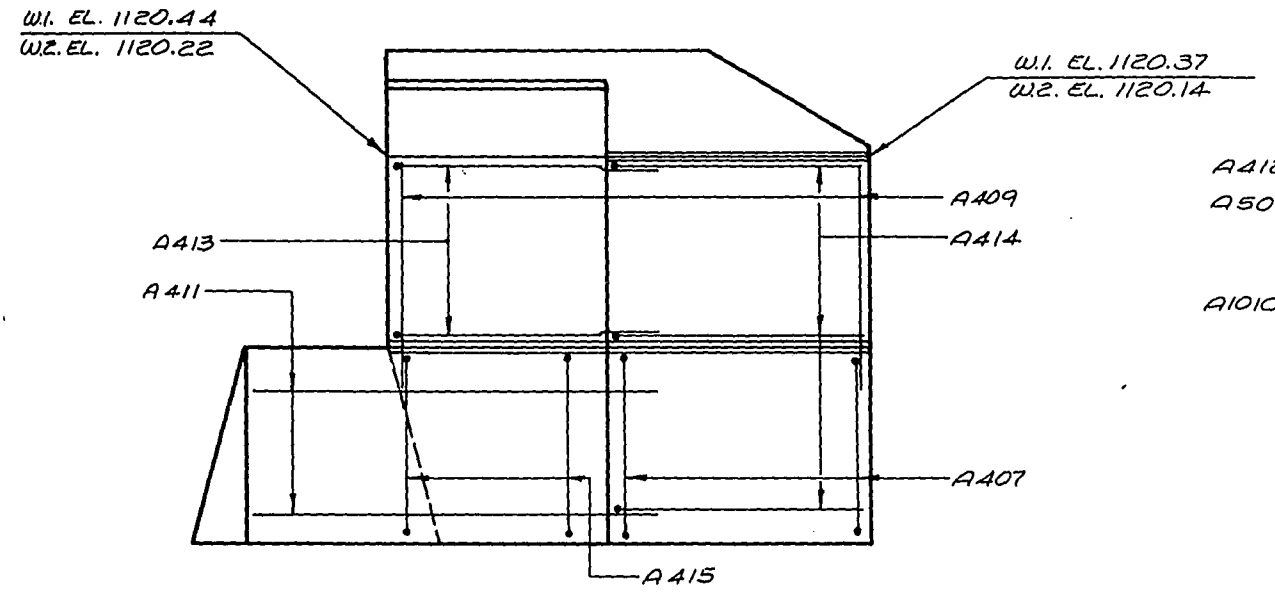
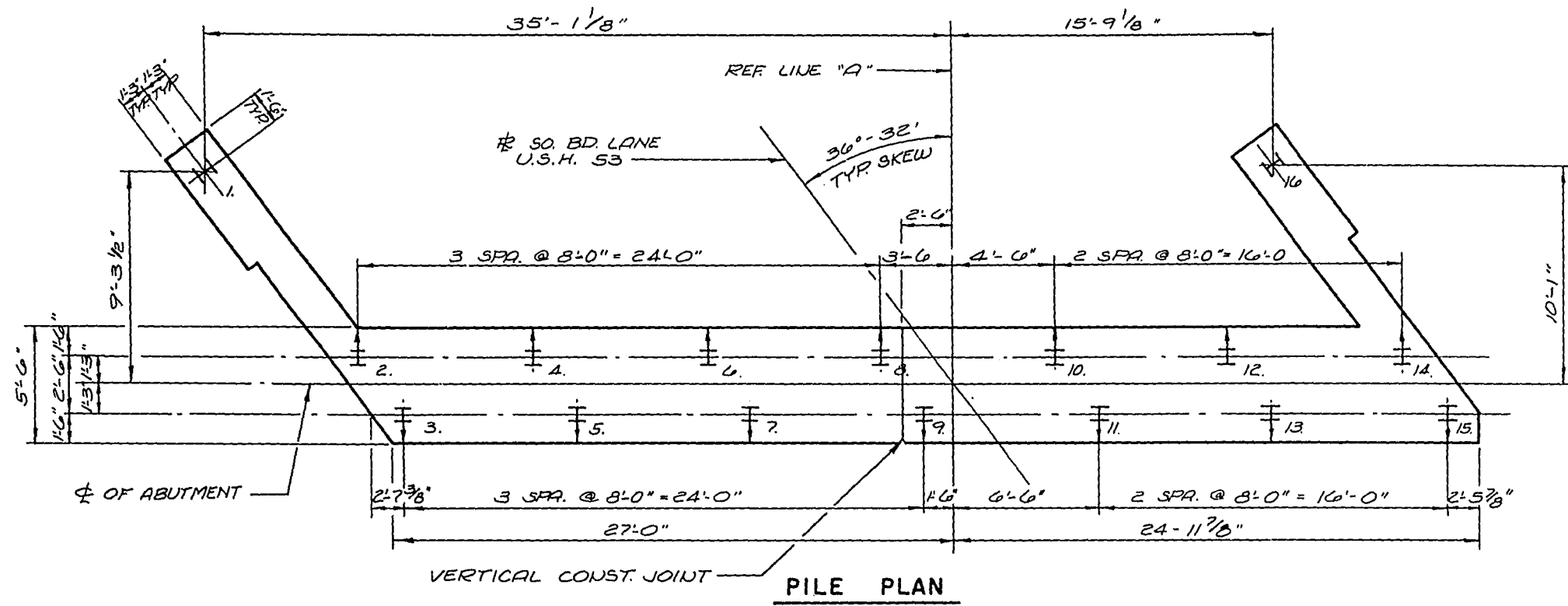
—H.P. 10x42 STEEL PILES EST. 25'-0" LONG
AND DRIVEN TO A MIN. BRG. CAPACITY
OF 55 TONS PER PILE.

No.	Date	Revision		By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS				
STRUCTURE B-3-17				
Const. Spec.	1969	Drawn By	A.G.	Plans Checked G.H.A.
SOUTH ABUTMENT			SHEET 4 OF 16	
			X 46180	

NOTE: DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.
THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
A401	54	9'-0"	X	ABUT. BODY STIRRUPS
A402	12	27'-3"		" " " " " " " " " "
A403	8	10'-0"		" " " " " " " " " "
A404	4	27'-0"		" " " " " " " " " "
A505	33	2'-6"		" " " " " " " " " "
A406	8	18'-6"		" " " " " " " " " "
A407	20	8'-9"	X	WING STIRRUPS FF & BF
A508	18	5'-9"		" " " " " " " " " "
A409	18	5'-6"		" " " " " " " " " "
A410	10	14'-3"		" " " " " " " " " "
A411	6	8'-9"		" " " " " " " " " "
A412	8	12'-5"	X	" " " " " " " " " "
A413	8	7'-6"	X	" " " " " " " " " "
A414	8	6'-7"	X	" " " " " " " " " "
A415	10	7'-7"	X	" " " " " " " " " "



* THESE ELEV. GIVEN AT $\frac{1}{2}$ OF ABUT.
* * THESE DIMENSIONS TAKEN AT FRONT FACE OF PARAPET
W.T. EL. 1121.05 * F.F. EL. 110

* EL. 1116.28

* EL. 1116.38

* EL. 1116.32

* EL. 11/6.18

- F.F. EL. 1120.91

- 3/4" "V" GROOVE
FRONT FACE ONLY.

NOTE: FOR RAIL PARAPET DETAILS
SEE SHEET 15
FOR PILE SPLICE DETAIL
SEE SHEET 5

L 3"x2"x⁵/₁₆" FOR
DETAIL SEE SHEET 1A

—CONST. JOINT - STRIKE OFF AND
LEAVE ROUGH. POUR CONCRETE
ABOVE THIS JOINT AFTER SUPER-
STRUCTURE IS IN PLACE.

1'-10" 1'-3" 1'-3" 1'-1" 7"

♀ OF BEARING

KEYED CONST. JOINT FORMED
BY SURFACED, BEVELED
3" x 1"

TOP OF BERM EL. 1113.68
SLOPE 1"/FT. —————
SLOPE PAVING
CRUSHED AGGREGATE

SECTION THRU BODY

—H.P. 10X42 STEEL PILES EST. 25'-0"
LONG AND DRIVEN TO A MIN. BEARING
CAPACITY OF 55 TONS PER PILE.

ELEVATION
(LOOKING NORTH)

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.)

SEAL JOINT WITH CONTRACTION TYPE
POLYVINYL CHLORIDE WATERSTOP - TO
EXTEND FROM BOTTOM TO TOP OF ABUT.
FLUSH WITH FACE OF CONCRETE. FOR
DETAIL SEE SHEET 5

NOTE: HORIZ. WATERSTOP TO BE RUN FULL LENGTH. VERTICAL WATERSTOP TO BE CUT.

① SEAL JOINT WITH CONTRACTION TYPE POLYVINYL CHLORIDE WATER-STOP. TO EXTEND FULL LENGTH BETWEEN WINGS. FOR DETAIL SEE SHEET 5

NOTE : SPACE C405 & C406
BARS TO MISS PILING.

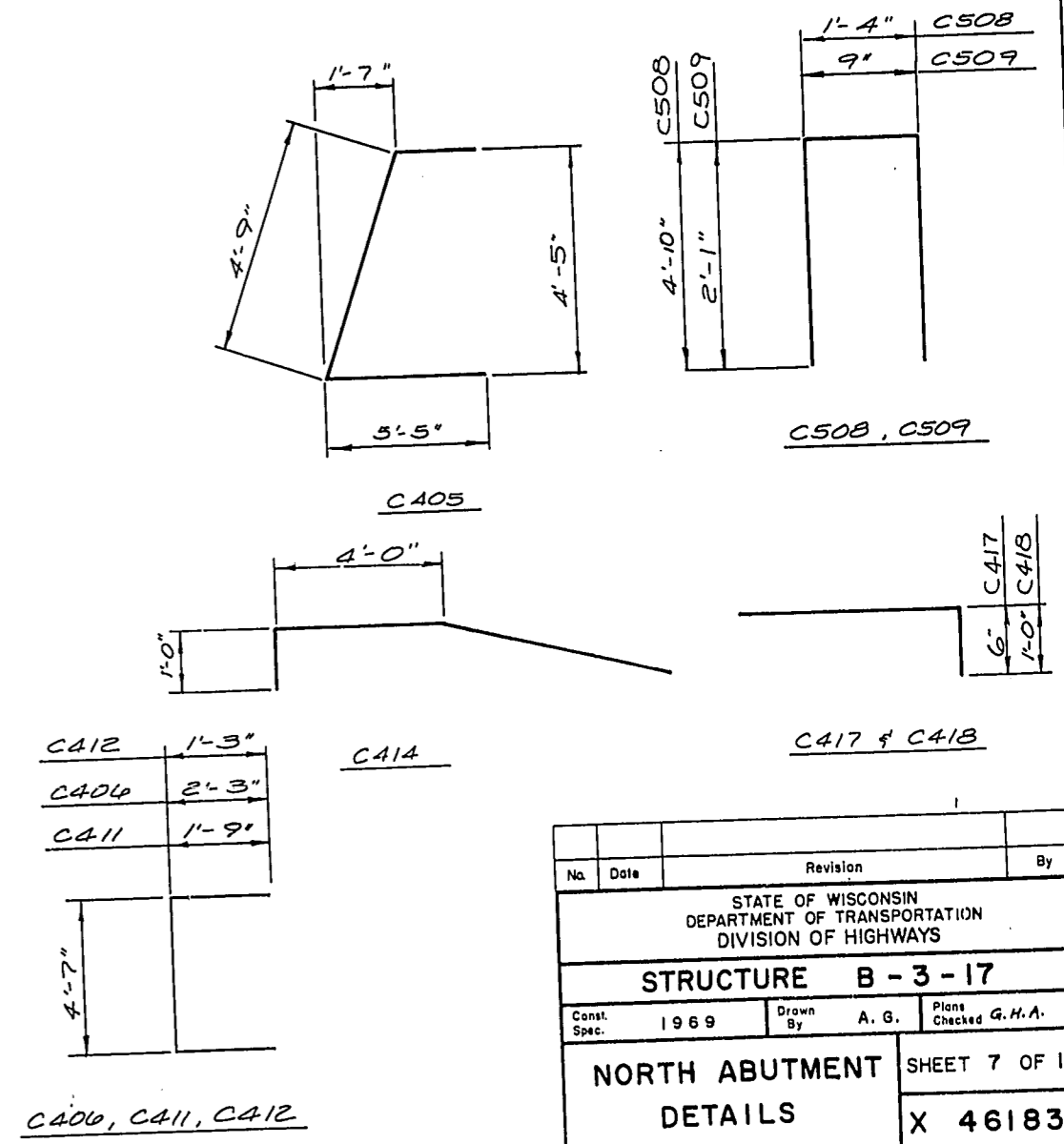
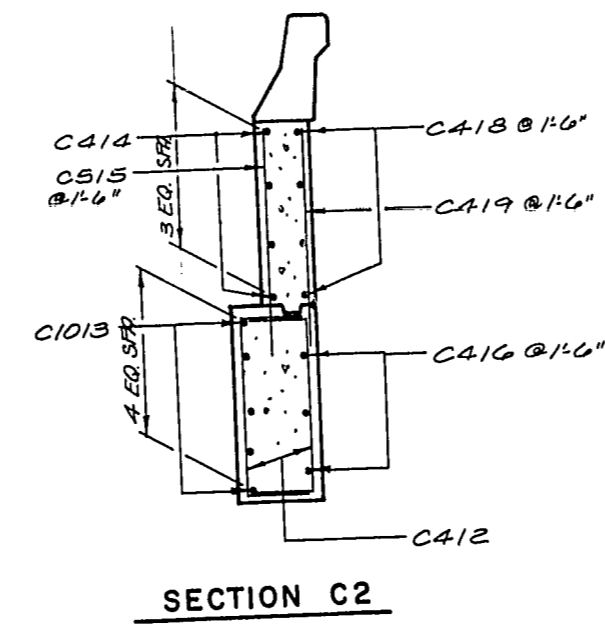
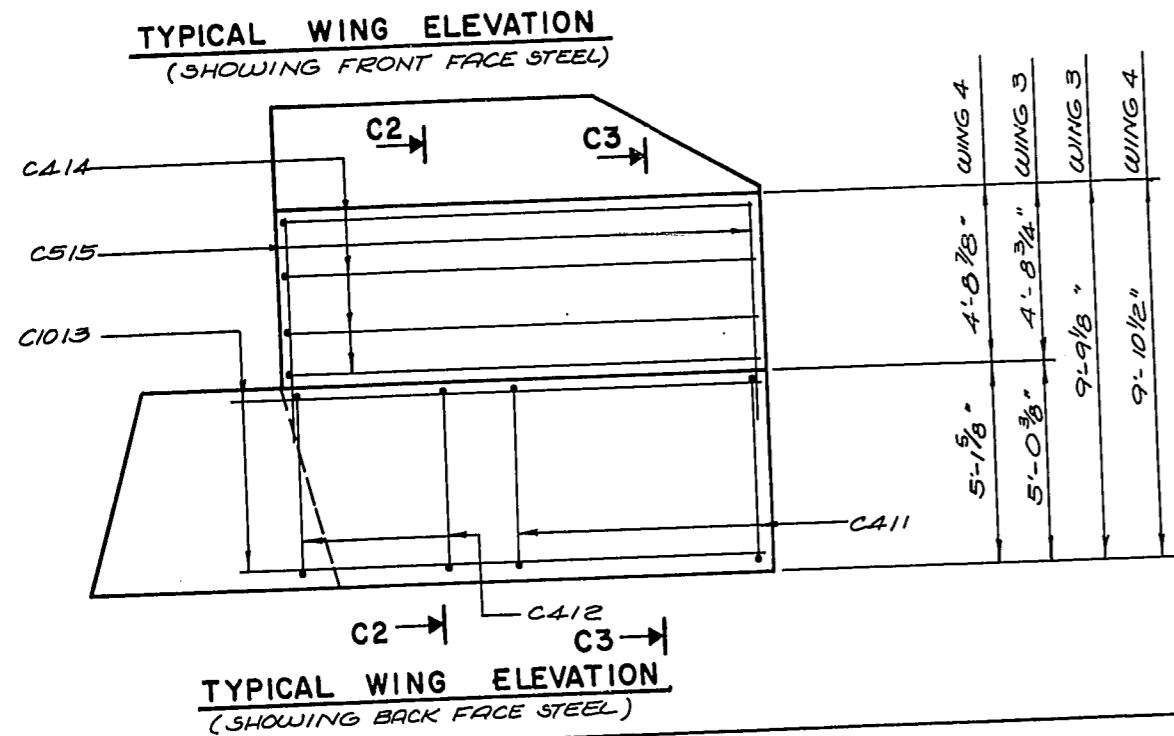
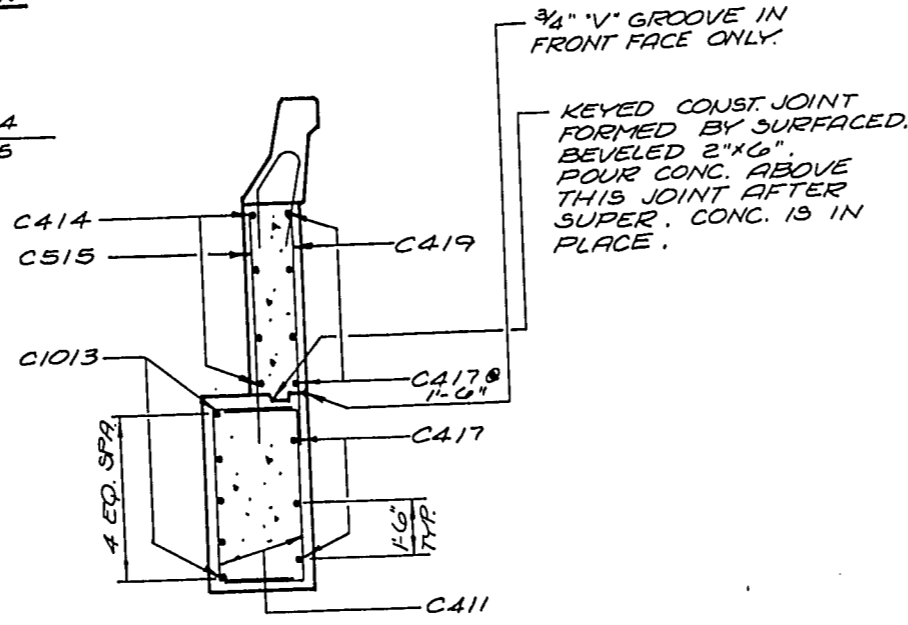
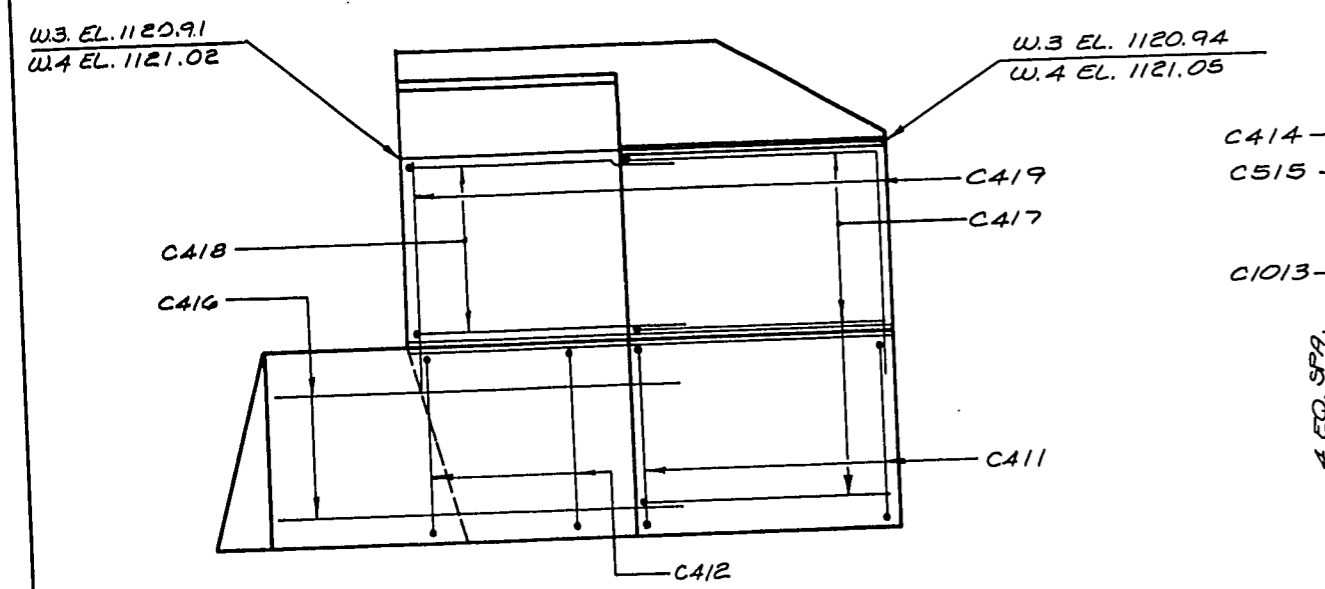
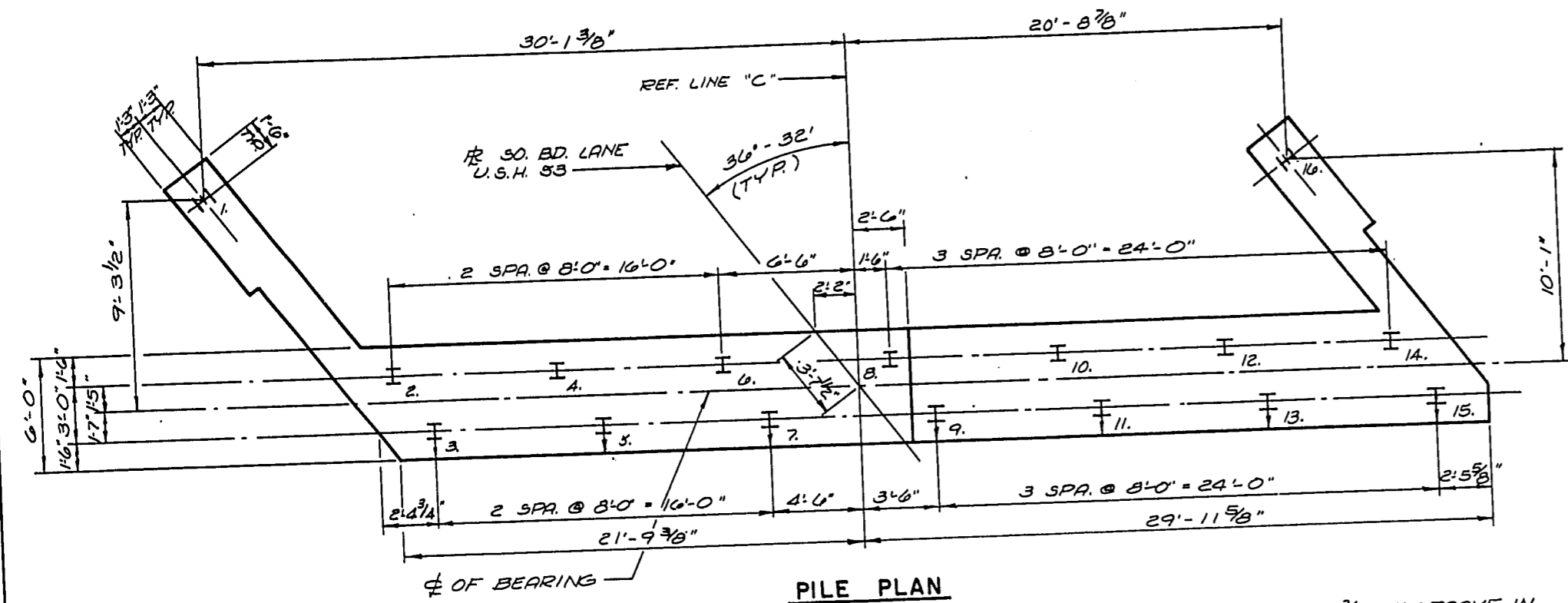
ABUTMENT PLAN

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B - 3 - 17			
Const. Spec.	1969	Drawn By	A. G. Plans Checked G. H. A.
NORTH ABUTMENT		SHEET 6 OF 16	
		X 46182	

NOTE: DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS

MARK	NO. REQ'D	LENGTH	BENT	LOCATION
C401	14	27-6		BODY HORIZ.
C402	4	10-0		" "
C403	4	19-0		" "
C404	6	27-0		" "
C405	27	13-0	X	" STIRRUPS
C406	27	9-0	X	" "
C407	12	28-0		BACKWALL HORIZ.
C508	51	10-10	X	" STIRRUPS
C509	51	4-8	X	PAVING BLOCK
C410	12	8-3		" "
C411	20	7-11	X	WING STIRRUPS
C412	10	6-11	X	" "
C1013	10	14-3		" HORIZ. B.F.
C414	8	12-5	X	" "
C515	18	5-10		" VERT. "
C416	6	8-6		" HORIZ. F.F.
C417	14	6-9	X	" "
C418	8	7-5	X	" "
C419	18	5-7		" VERT. "

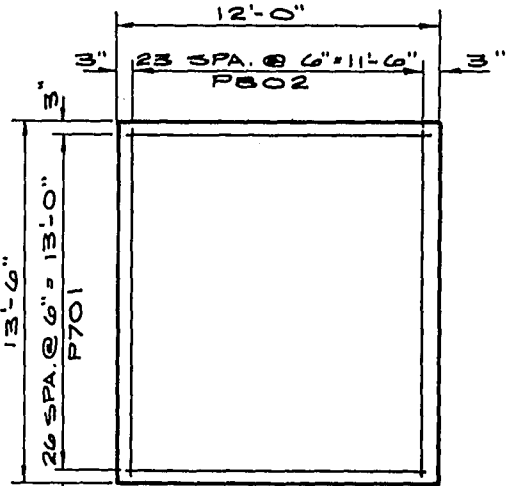


No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-17			
Const. Spec.	1969	Drawn By A. G.	Plans Checked G. H. A.
NORTH ABUTMENT DETAILS			SHEET 7 OF 16
			X 46183

* EL. 1115.96 PIER 1
* EL. 1116.01 PIER 2

PROJECT ID 1196-6-76	SHEET NUMBER	TOTAL SHEETS
FEDERAL PROJECT DESIGNATION EMP F08-4(36)	71	296

④ - KEYWAY & DOWELS SHOWN FOR PIER 1 ONLY. PROG BARS MAY BE PLACED IMMEDIATELY AFTER CONCRETE IS POURED.



TYP. FOOTING PLAN

MARK	NO. REQ'D	LENGTH	BENT	BUND.	LOCATION
P701	162	11-6			FOOTING
P802	144	13-0			"
P1103	72	6-5	X		" & COLUMN-DOWEL
P1104	72	19-1			COLUMN
P405	108	9-5	X		" - HOOPS
P506	27	2-6			CAP - TOP-VERT. ①
P407	16	4-9			" - BOTTOM - ENDS
P1008	8	38-0			" - "
P1009	16	18-6			" - "
P510	8	25-6			" - CENTER
P1111	4	12-0		X	" - TOP
P1112	12	56-2	X	X	" - "
P513	32	10-7	X		" - STIRRUP - DOUBLE
P514	64	12-5	X		" - " - SINGLE

ALL BENDING DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST DIGIT OF A THREE DIGIT BAR MARK
& THE FIRST TWO DIGITS OF A FOUR DIGIT BAR
MARK SIGNIFIES THE BAR GAGE.

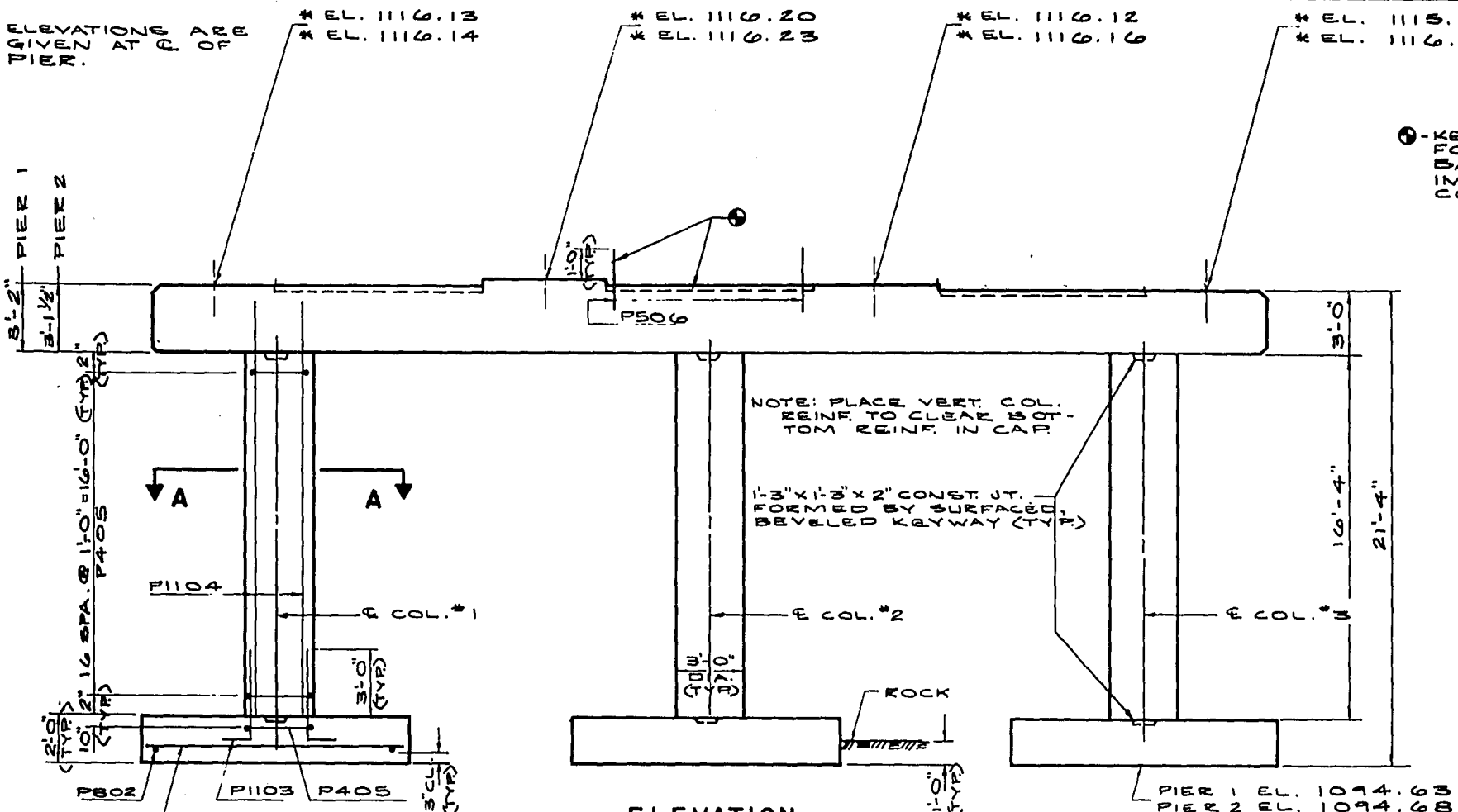


WIRE BARS TOGETHER
@ 2'-0" CTRS.

BUNDLING DETAIL

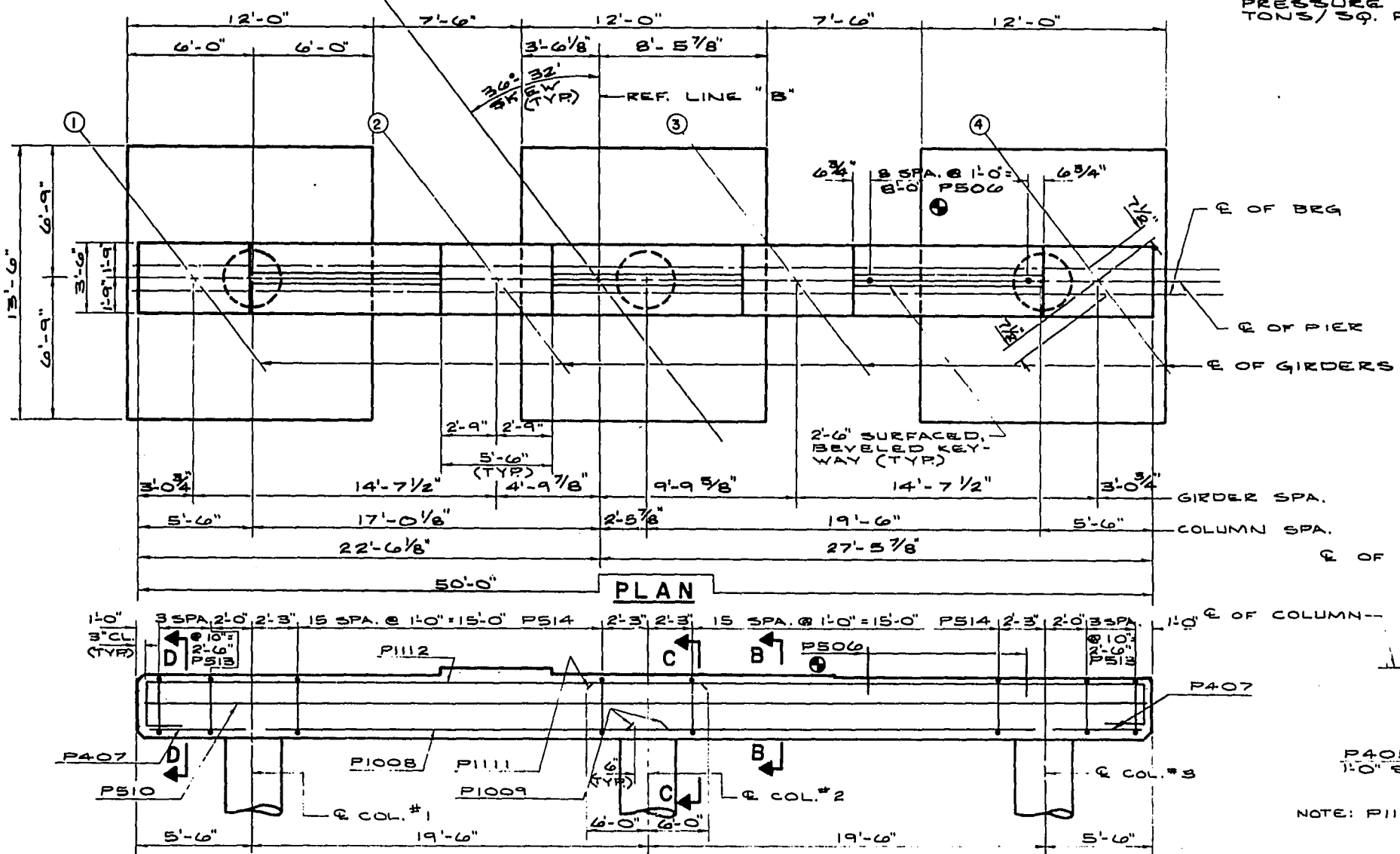


P 405

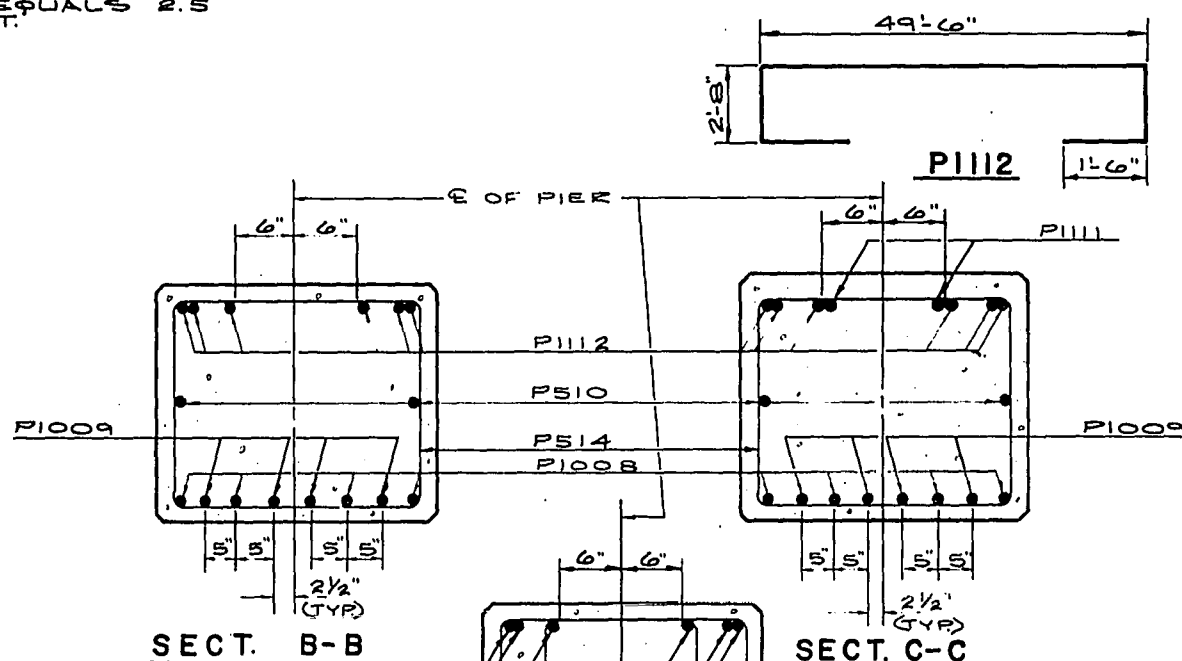


ELEVATION

NOTE: MIN. ALLOWABLE SOIL
PRESSURE EQUALS 2.51
TONS/SQ FT

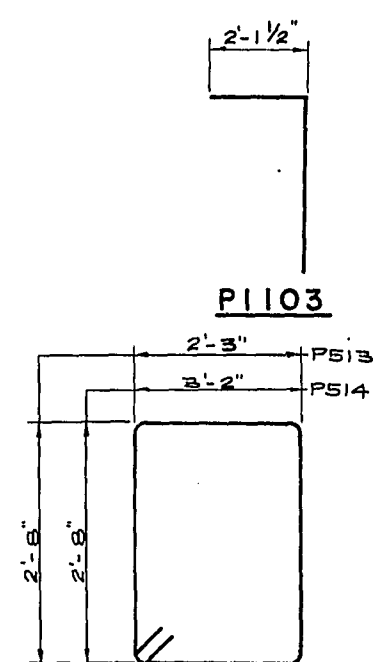


CAP ELEVATION
SHOWING BAR STEEL REINF.

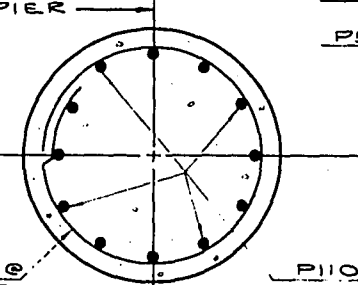


SECT. B-E

11 (GYP)
SECT. C-C



P513 & P514



SECT. A-A

NOTE: P1104 BARS ARE EQUALLY SPACED

SECT. D-D
ESTIMATED CONCRETE MASONRY

FOOTINGS	36.0	C.Y.	36.0	C.Y.
COLUMNS	12.9	C.Y.	12.9	C.Y.
PIER CAP.	20.2	C.Y.	20.2	C.Y.
TOTAL	69.1	C.Y.	69.1	C.Y.

No.	Date	Revision		By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS				
STRUCTURE B-3-17				
Const Spec	1969	Drawn By	TLA	Plans Checked
PIERS			SHEET 8 OF 16	
			X46184	

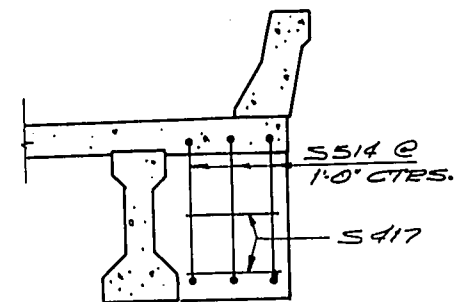
PROJECT ID	1196-6-76	SHEET NUMBER	72	TOTAL SHEETS	296
FEDERAL PROJECT DESIGNATION	EMP FOB-4(36)				

PLAN

BOTTOM TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS ON OR ADJACENT TO EACH GIRDER & BY INDIVIDUAL BAR CHAIRS AT 3'-0" CTRS. APPROX. THE 15 FT. BETWEEN GIRDERS.

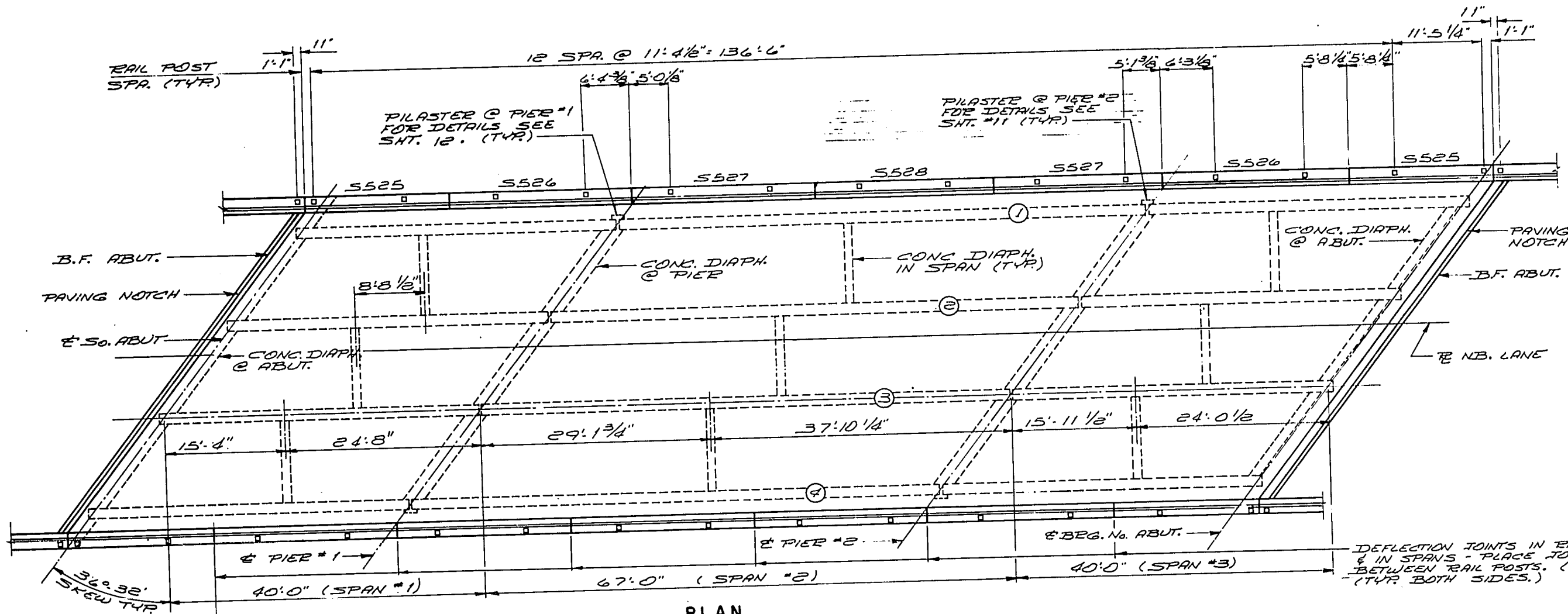
TOP LONGITUDINAL BAR STEEL SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROX. 4'-0" CTRS. THE 2" HEIGHT OF RAIL PREARPET IS TO BE MAINTAINED AT ALL POINTS OF BEARING.

THE CONC. IN ANY SPAN SHALL BE PLACED WITHIN 4 HRS. OF THE TIME THAT CONC. WAS PLACED OVER AN ADJACENT PIER.



CONC. DIAPH. AT SO. ABUT.

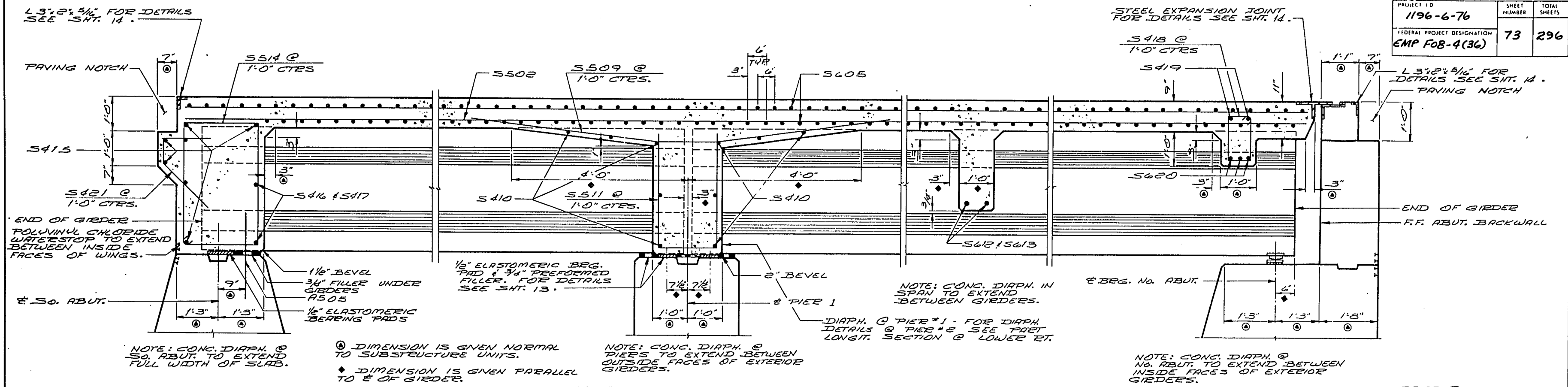
CROSS SECTION THUR ROADWAY
(AT RT L³ TO REFERENCE LINE LOOKING NORTHWEST)



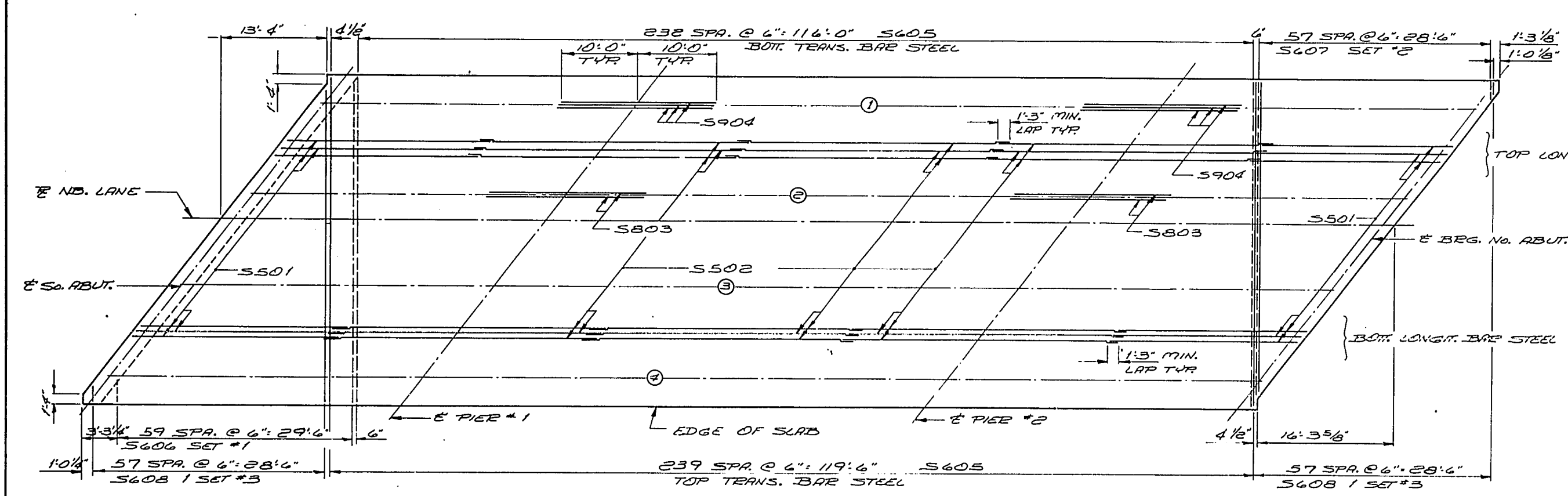
PLAN

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-17			
Const. Spec. 1969	Drawn By BUDD	Plans Checked G.H.A.	
SUPERSTRUCTURE			SHEET 9 OF 16
			X 46184

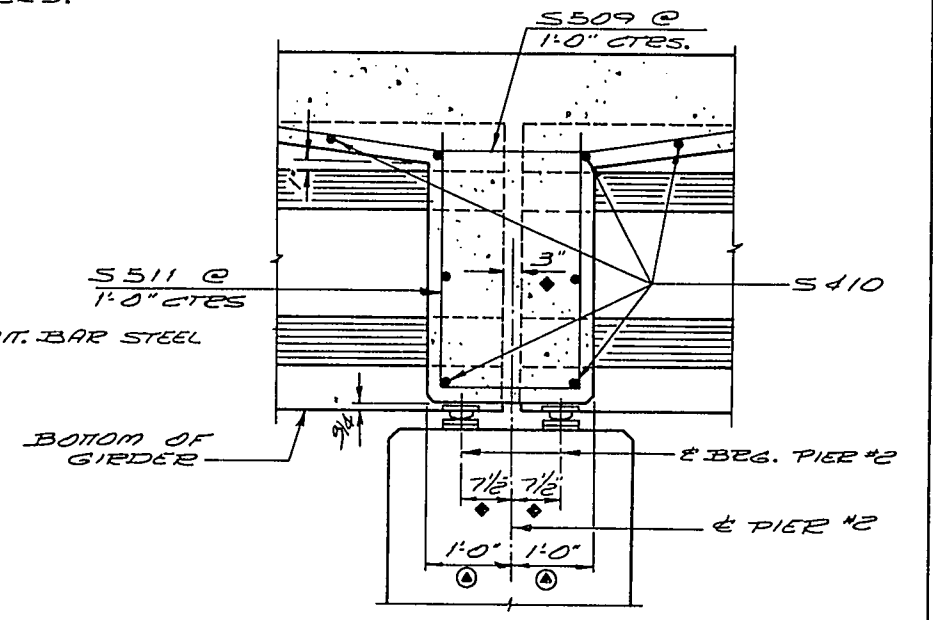
PROJECT ID 1196-6-76	SHEET NUMBER 73	TOTAL SHEETS 296
FEDERAL PROJECT DESIGNATION EMP F08-4(36)		



PART LONGITUDINAL SECTION



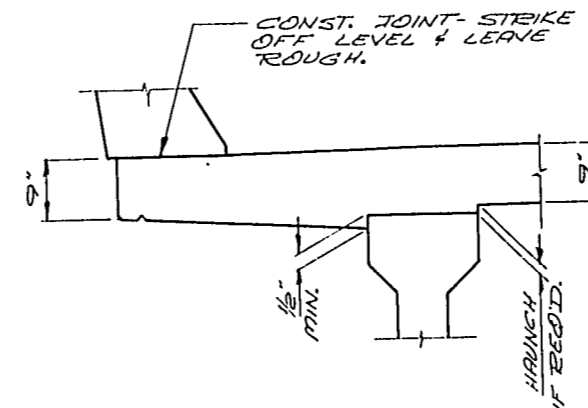
PLAN SHOWING BAR STEEL REINFORCEMENT



PART LONGITUDINAL SECTION AT PIER 2

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-17			
Const Spec 1969	Drawn By BUDD	Plans Checked G. H. A.	
SUPERSTRUCTURE			SHEET 10 OF 16
			X 46185

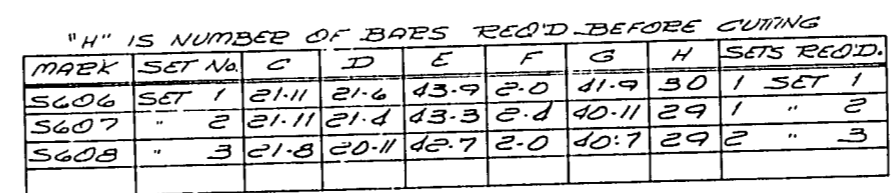
BASE SIZE				LOCATION	
MARK	No. RECORD.	LENGTH	BENT	CUT. DIA.	
S501	174	24.9			SLAB TOP & BOT.
S502	261	35.0			" " " "
S803	8	20.0			" " C PIER GIRD. 2'3
S904	12	20.0			" " " " 1'4
S605	473	12.4			" " f BOT.
S606	30	43.9		X	" BOT. SET 1
S607	29	13.3		X	" " " 2
S608	58	12.7		X	" TOP " 3
S509	66	10.10	X		" BRUNCH @ PIER
S410	60	12.3			" " " "
S511	66	9.9	X		" " " "
S612	18	10.10			DIAPH. @ MID SPAN
S613	36	2.0			" " " " TIEBARS ONE
S514	36	14.0	X		" " So. ABUT.
S415	14	26.10			" " " "
S416	6	12.2			" " " "
S417	4	3.0			" " " "
S418	33	4.2	X		" " NO.
S419	6	14.7			" " " "
S620	9	13.3			" " " "
S421	50	3.11	X		PAVING NOTCH
S322	12	3.0	X		PILASTER @ PIER
S423	8	4.4	X		" " " "
S424	8	3.4	X		" " " "
S525	20	17.6			RAIL PARAPET
S526	20	23.0			" " " "
S527	20	21.9			" " " "
S528	10	22.5			" " " "
S529	298	5.0	X		" " " "
S530	298	4.9	X		" " " "



SLAB DETAIL AT EXTERIOR GIRDER

** TO COMPENSATE FOR VARIATIONS IN PRESTRESS CAMBER & OTHER MINOR CONST. DISCREPANCIES THE EMBEDMENT AT THE E OF THE SPAN MAY BE VARIED WITH A MINIMUM OF 1/8" ALLOWABLE IMBEDMENT & THE SLAB HELD TO PLAN THICKNESS.

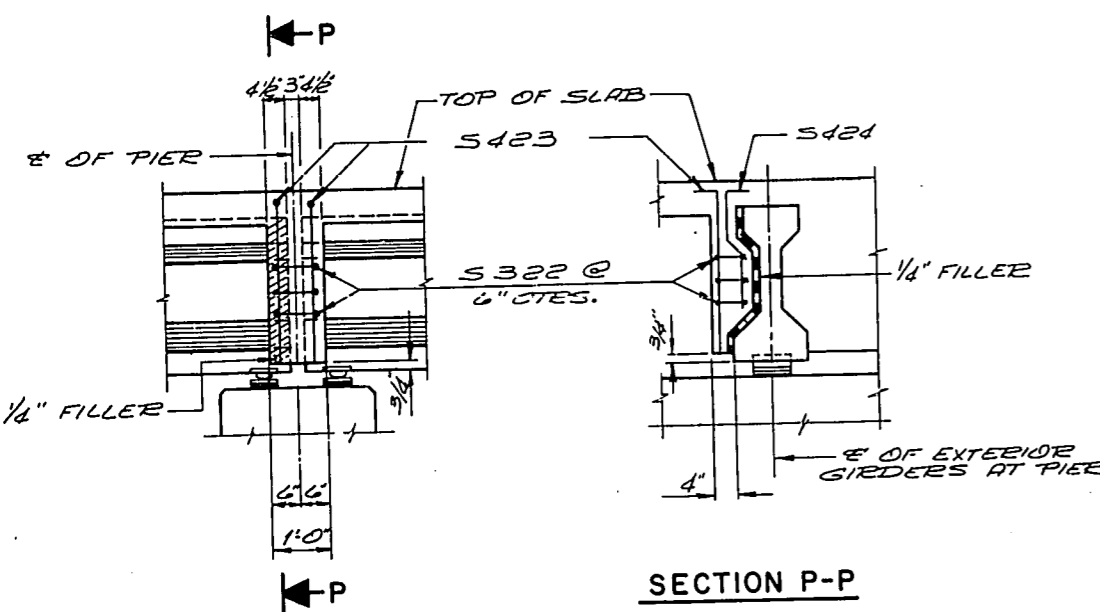
SLAB FORMING DIAGRAM



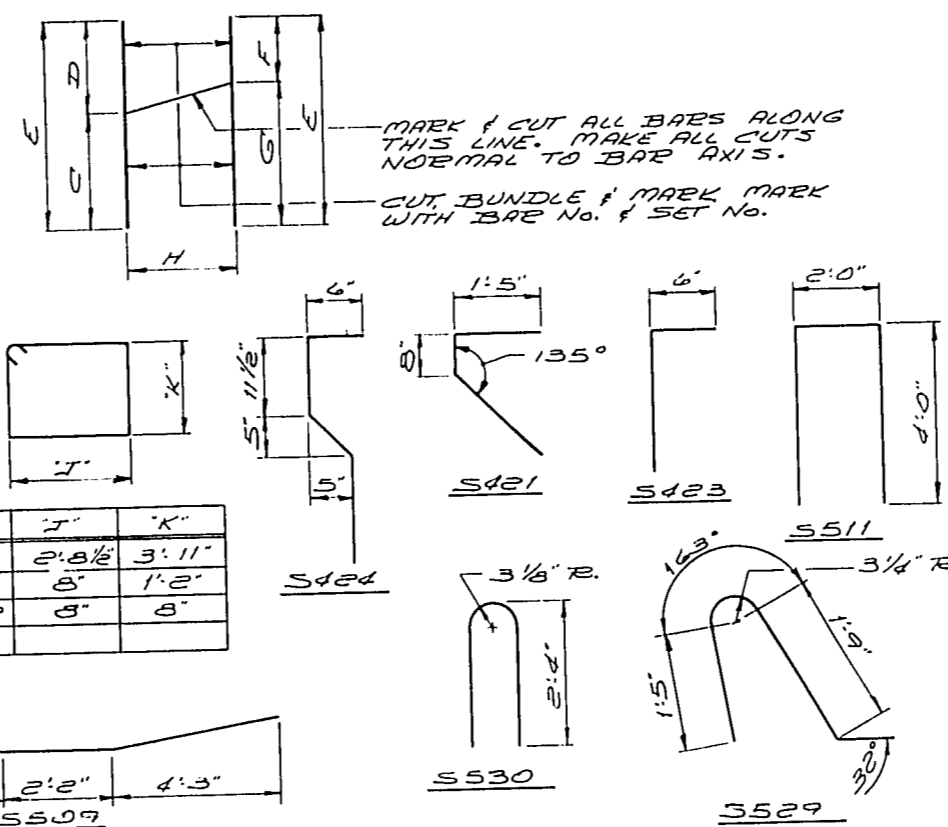
AT SO. ABUT.

AT PIER 1

ELASTOMERIC BEARING PAD DETAILS



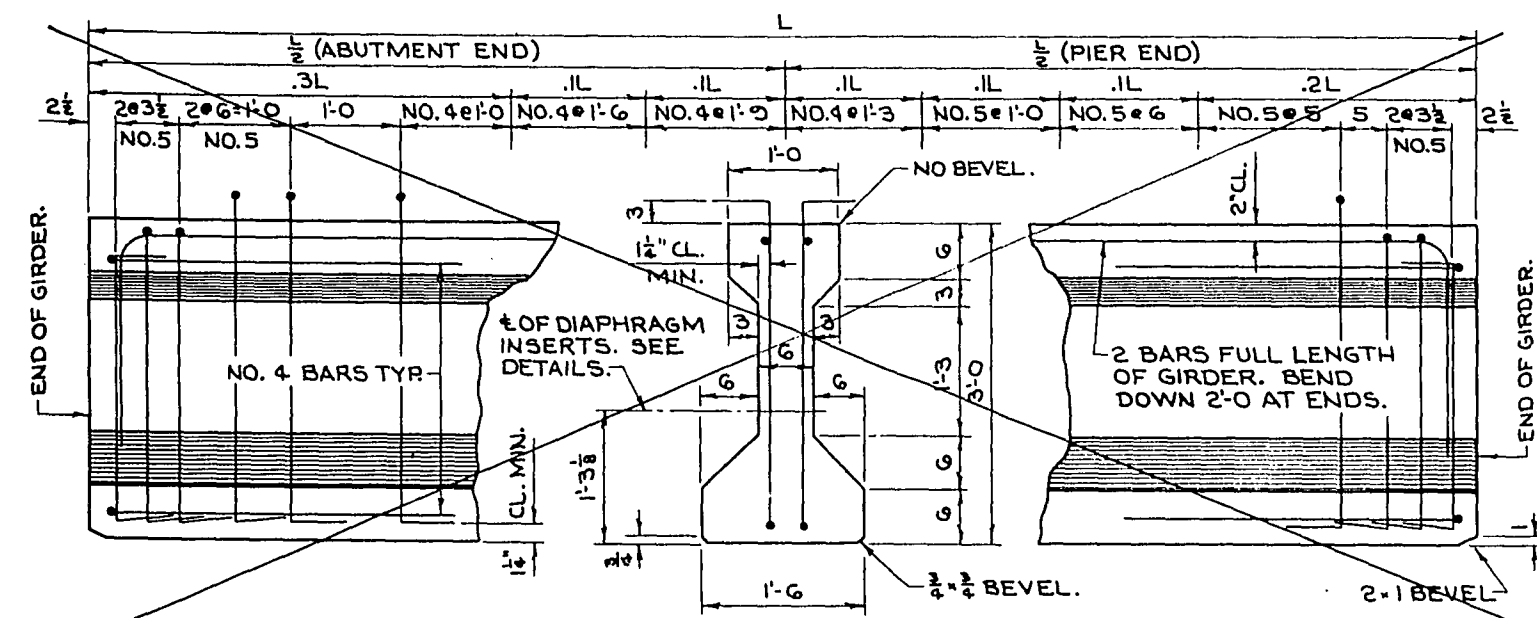
PILASTER DETAILS AT PIER



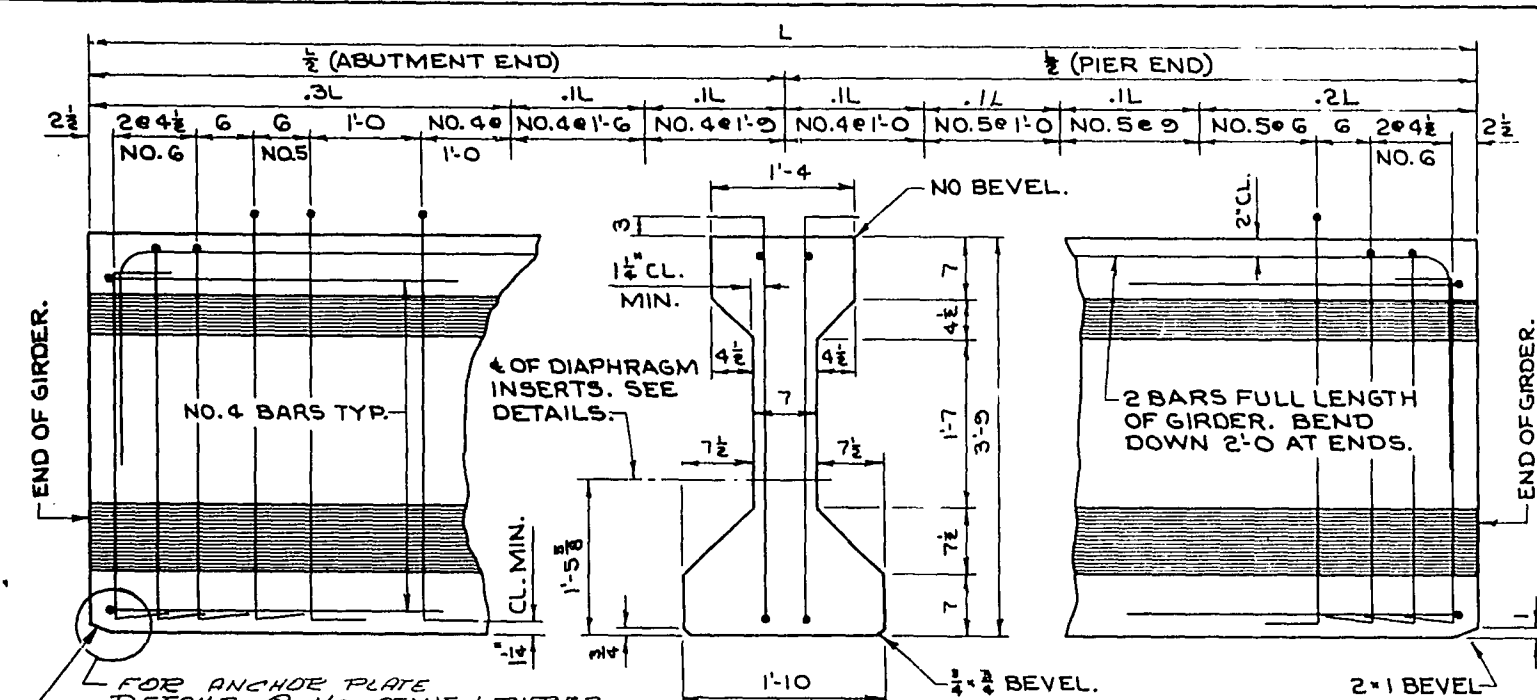
MARK	"J"	"K"
5514	2' 8 1/2"	3' 11"
5418	8"	1' 2"
5322	8"	8"

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-17			
Const. Spec.	1969	Drawn By	BUDD
		Plans Checked	G.H.A.
SUPERSTRUCTURE		SHEET 11 OF 16	
		X46187	

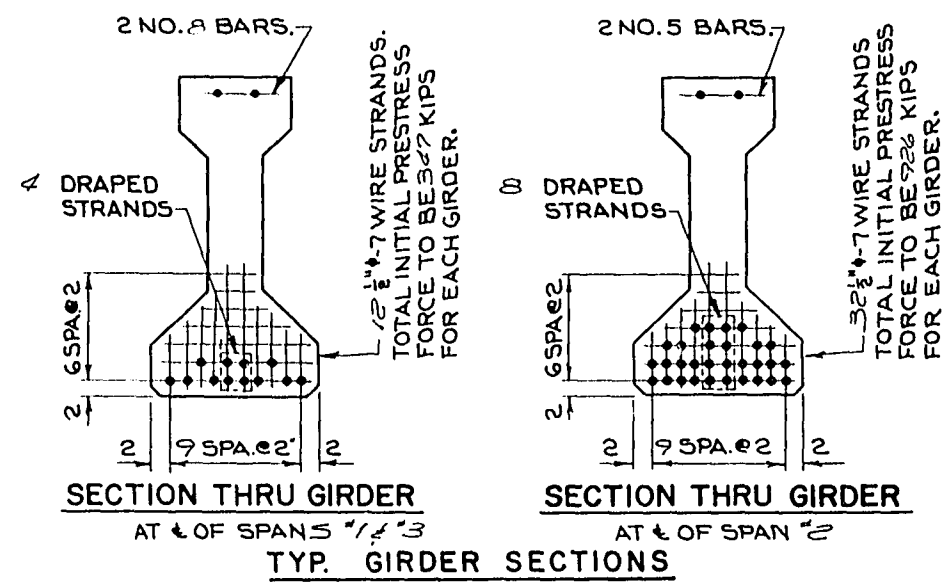
B. P. R. Division	Project	Sheet Number	Total Sheets
4	1196-6-76 EMP FOR 4036	75	296



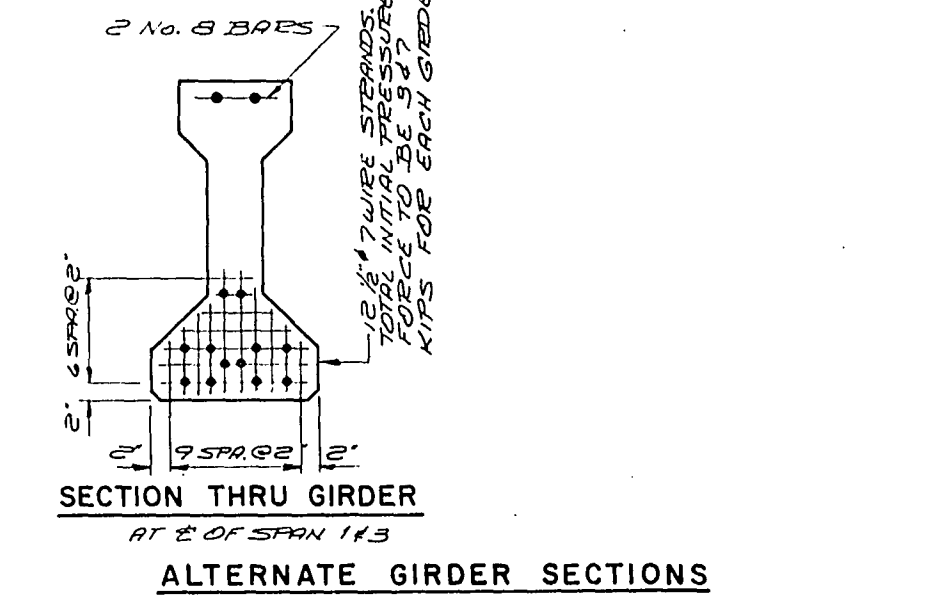
36" GIRDER - SIDE VIEW & TYPICAL SECTION IN SPAN



45" GIRDER - SIDE VIEW & TYPICAL SECTION IN SPAN



TYP. GIRDER SECTIONS

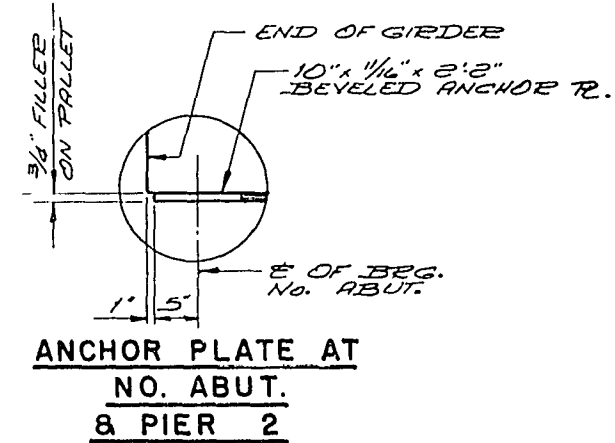


ALTERNATE GIRDER SECTIONS

NOTES

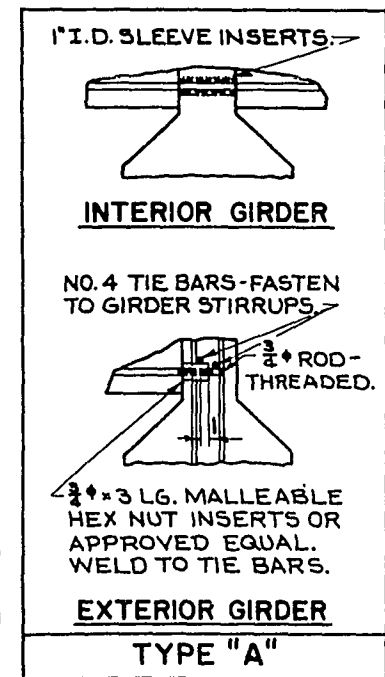
TOP OF GIRDERS TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO THE SLAB.
THE GIRDER MANUFACTURER SHALL PROVIDE A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.
PRESTRESSING STRANDS SHALL HAVE AN ULTIMATE STRENGTH OF 270,000 psi AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.
INSERTS SHALL BE PLACED ON 6" CENTERS SYMMETRICALLY ABOUT THE 1/2 OF DIAPHRAGMS IN SPANS.
ALL STIRRUPS SHALL BE IN PAIRS AND THE SPACING SHOWN IN "SIDE VIEW" IS MAXIMUM. THE LOCATION SHALL BE SHOWN IN THE SHOP DRAWINGS.
BEND EACH END OF NO. 4 AND NO. 5 STIRRUPS 6" AND NO. 6 STIRRUPS 6 1/2".
ENDS OF STRANDS SHALL BE PAINTED WITH NON-STAINING GRAY NON BITUMINOUS JOINT SEALER. (THIS APPLIES ONLY TO THOSE ENDS OF GIRDERS THAT ARE FINALLY EXPOSED.)
TOP LONGITUDINAL BARS IN GIRDER MAY BE SPLICED BY USING 3S BAR DIAMETER LAPS. PLACE ONE LAP AT 1/4 OF GIRDER IF LENGTH IS 1 TO 10'. PLACE LAPS AT THE 1/3 RD POINTS OF GIRDER IF LENGTH IS 10 TO 100'.

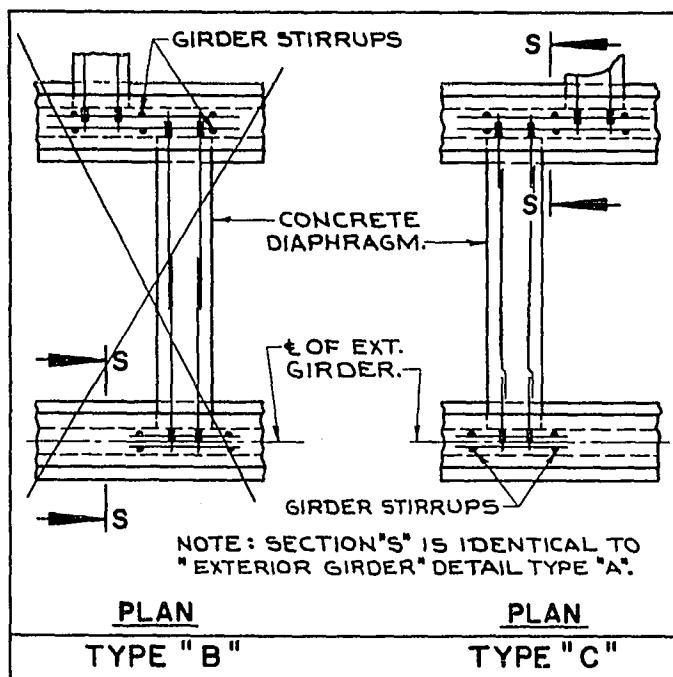


ANCHOR PLATE AT NO. ABUT. & PIER 2

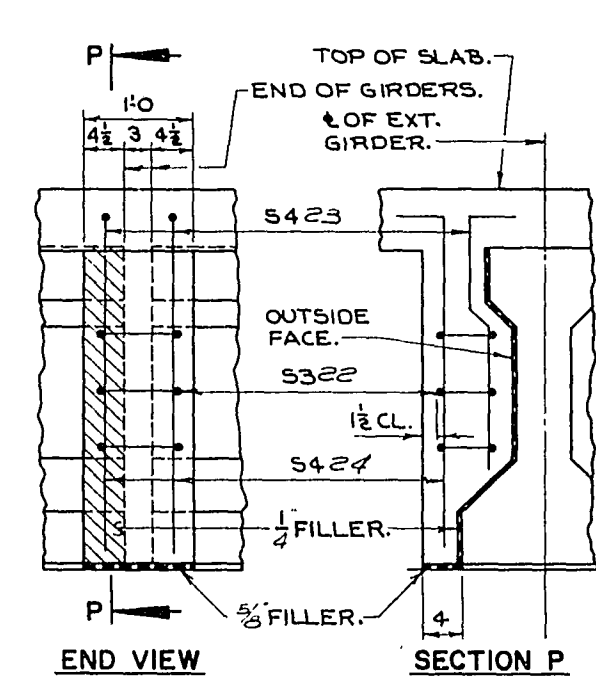
	A"	B"	C"
	MAX.	MIN.	
SPANS	1 & 3	2	1 & 3
	29"	16"	13"
	32"	14 3/4"	11 3/4"
	35"	14 3/4"	11 3/4"



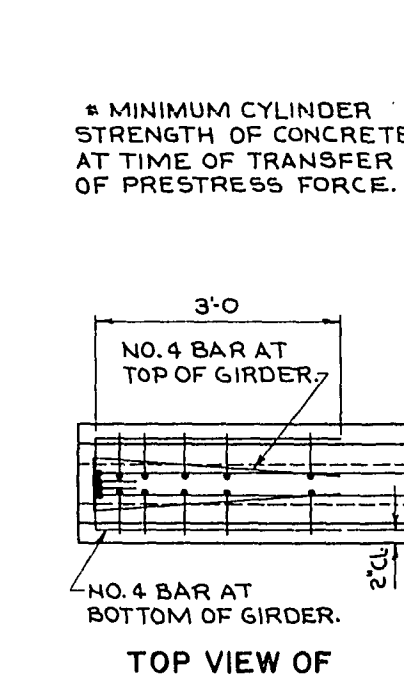
INTERIOR GIRDER



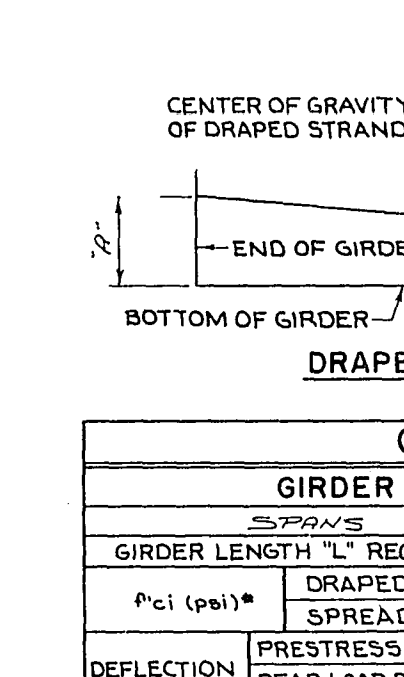
EXTERIOR GIRDER



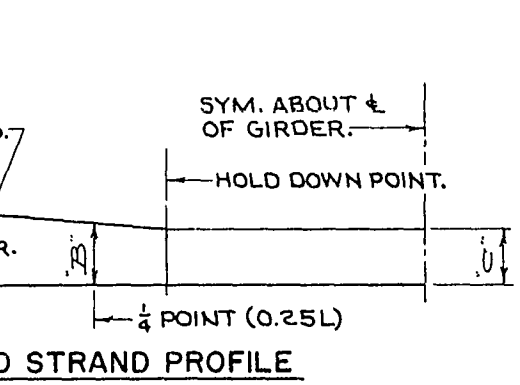
DIAPHRAGM INSERT DETAILS



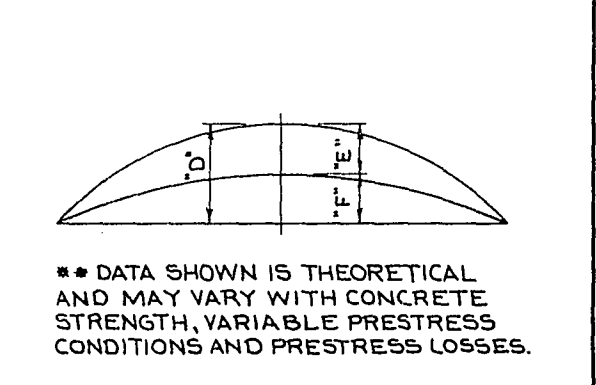
SECTION P



TOP VIEW OF GIRDER ENDS



DRAPED STRAND PROFILE

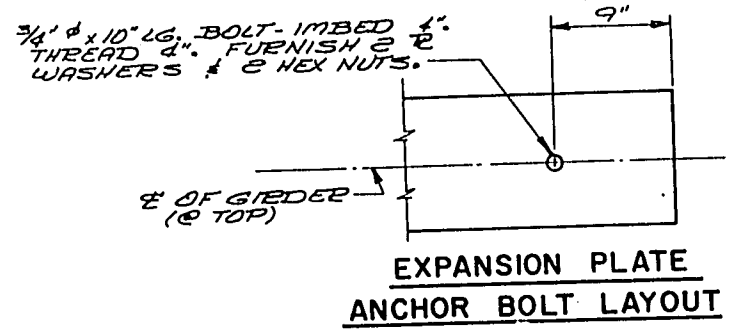
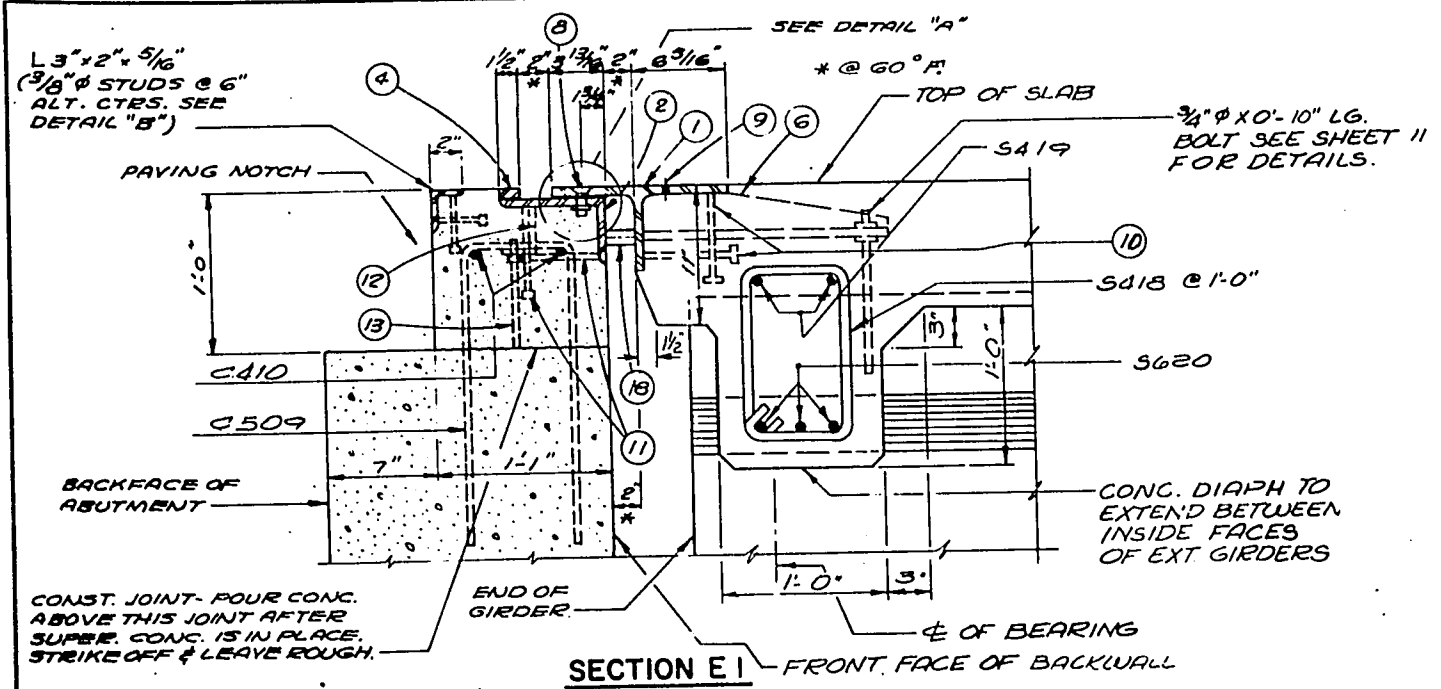


DIAPHRAGM INSERT DETAILS

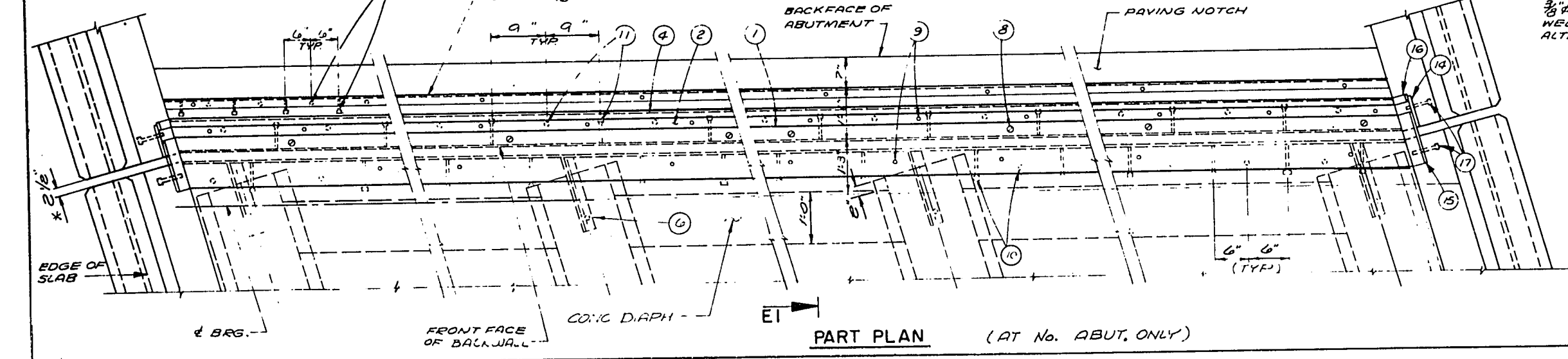
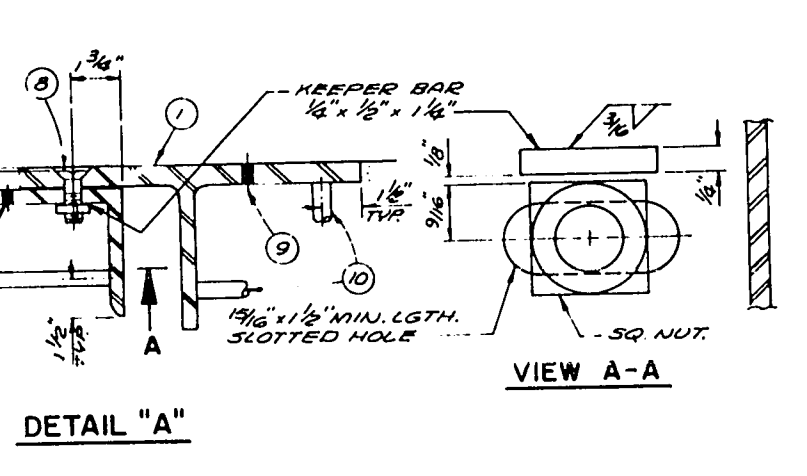
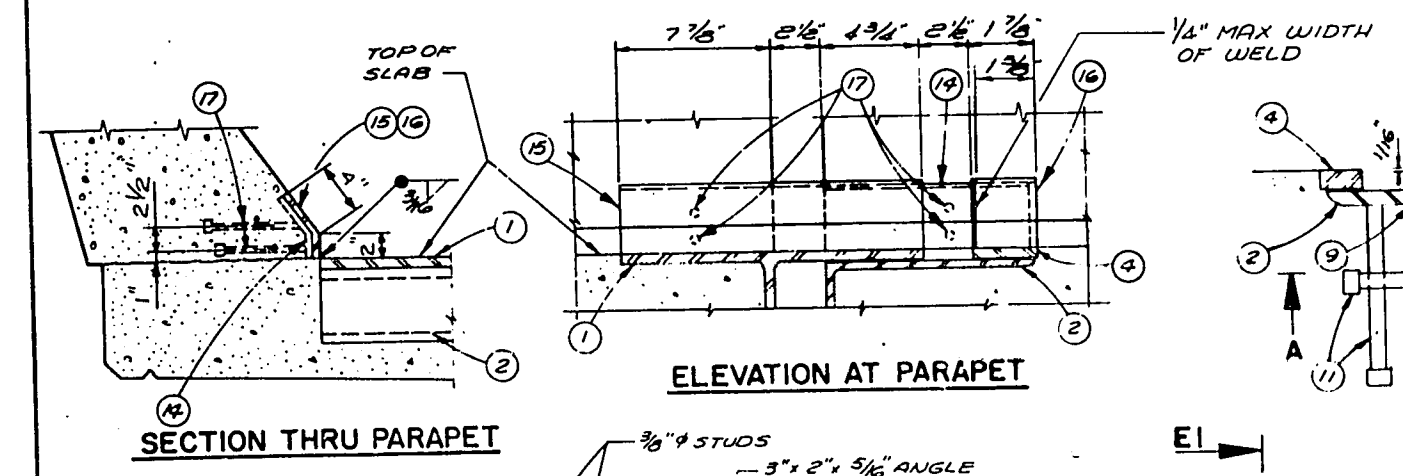
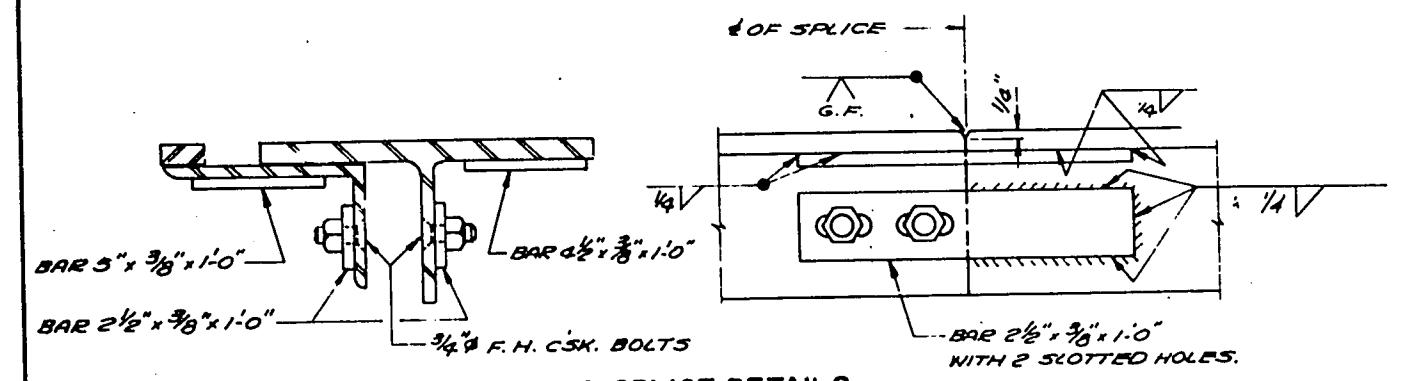
GIRDER DATA			
GIRDER SIZE REQUIRED 45"			
SPANS	1 & 3	2	1 & 3
GIRDER LENGTH "L" REQUIRED	40'-4 1/2"	66'-9"	40'-4 1/2"
DRAPED PATTERN	4,800	5,000	4,800
SPREAD PATTERN	4,800	5,000	4,800
DEFLECTION DATA **			
PRESTRESS CAMBER "D"	1/4"	1 3/8"	1/4"
DEAD LOAD DEFLECTION "E"	1/8"	1"	1/8"
RESIDUAL CAMBER "F"	1/8"	5/8"	1/8"
USE DIAPHRAGM INSERT DETAIL TYPE "C"			

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STRUCTURE B-3-17			
Const. Spec.	1969	Drawn By	GUDD
PRESTRESSED GIRDER DETAILS		Plans Checked	G.H.A.
		SHEET 12 OF 16	
		X 46188	

PROJECT ID 1196-6-76	SHEET NUMBER 77	TOTAL SHEETS 296
FEDERAL PROJECT DESIGNATION EMP F08-4 (36)		

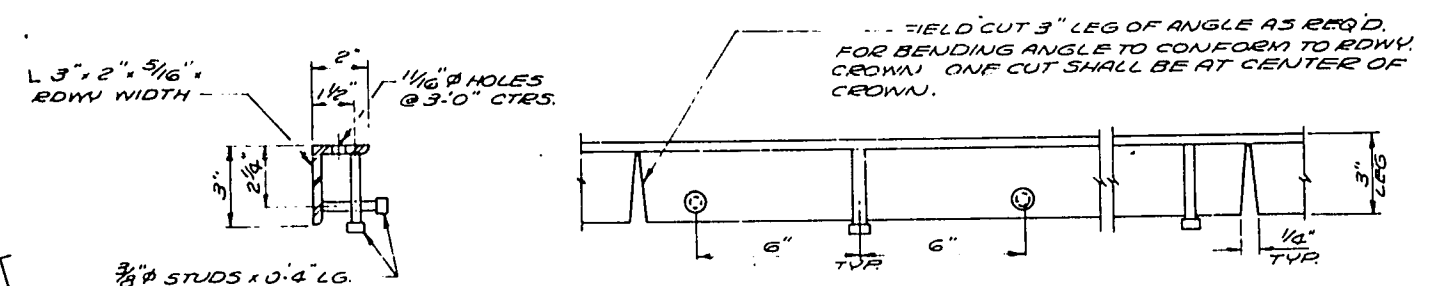


- LEGEND**
- WT 6 x 39.5 x RDWY. WIDTH. WELDMENT MAY BE USED. SEE DETAIL.
 - L 7' x 4' x 1/16\"/>
 4. BAR 1 1/2 x 3/4 x RDWY. WIDTH. WELD TO L #2 WITH 2 LINES OF 1/4\"/>
 6. L 3 1/2 x 3 x 3/8\"/>
 8. 3/4\"/>
 9. 1 1/2\"/>
 10. 3/8\"/>
 11. 3/8\"/>
 12. L 3' x 2 1/2' x 3/8\"/>
 13. 3/4\"/>
 14. PLATE 3/8 x 6 x 8 1/4\"/>
 15. PLATE 3/8 x 6 x 15 1/8\"/>
 16. BAR 1 1/2 x 3/4 x 6\"/>
 17. 3/8\"/>
 18. BLOCK AND BOLT FOR SHIPMENT WITH PIPE SLEEVE AND 1/2\"/>



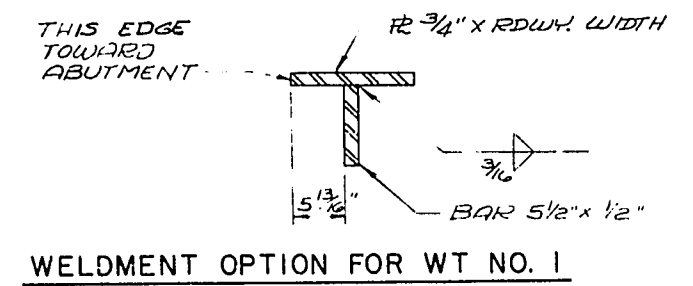
- NOTES**
- EXPANSION JOINT SHALL BE BUILT TO CONFORM TO ROADWAY CROWN AND GRADE. ALL MATERIAL IN EXPANSION JOINT SHALL BE PAID FOR AS STRUCTURAL CARBON STEEL. AFTER CONCRETE HAS SET:
1. THE JOINT OPENING SHALL BE THOROUGHLY CLEANED.
 2. REMOVE BOLTS NO. 8.
 3. APPLY 1/16\"/>
 4. FILL OPENING AND HOLES FOR BOLT NO. 8 WITH HOT POURED ELASTIC TYPE JOINT SEALER CONFORMING TO A.S.T.M. D 1190.

ONE FIELD SPLICE SHALL BE PERMITTED.

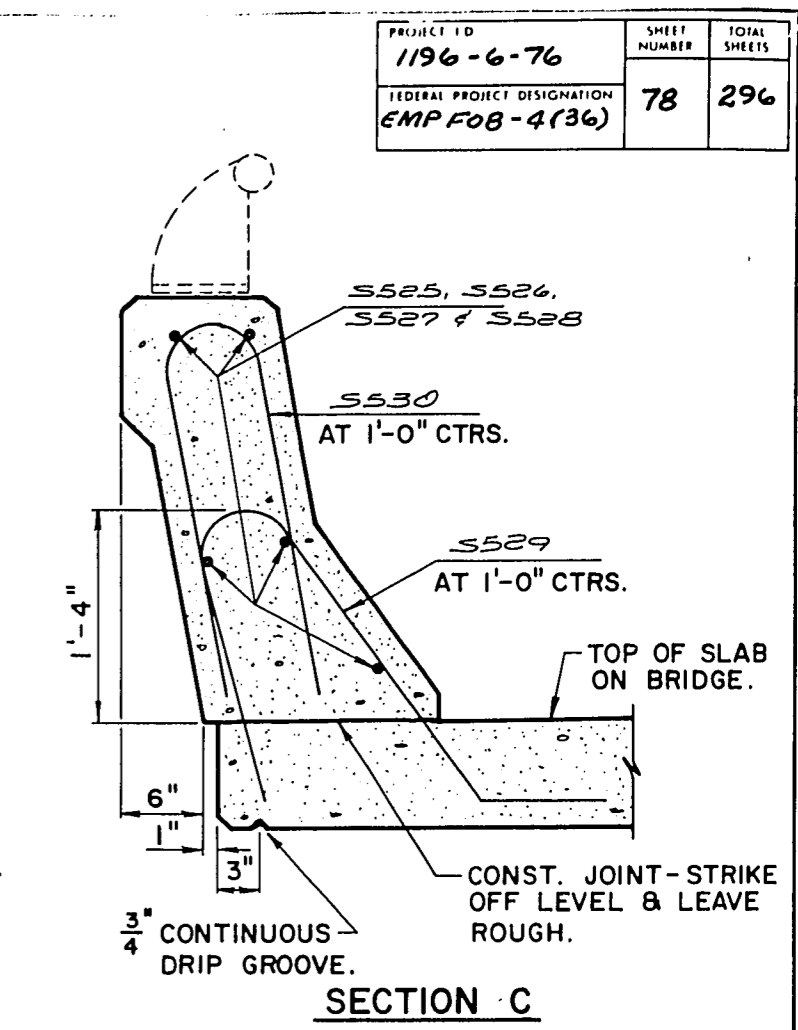
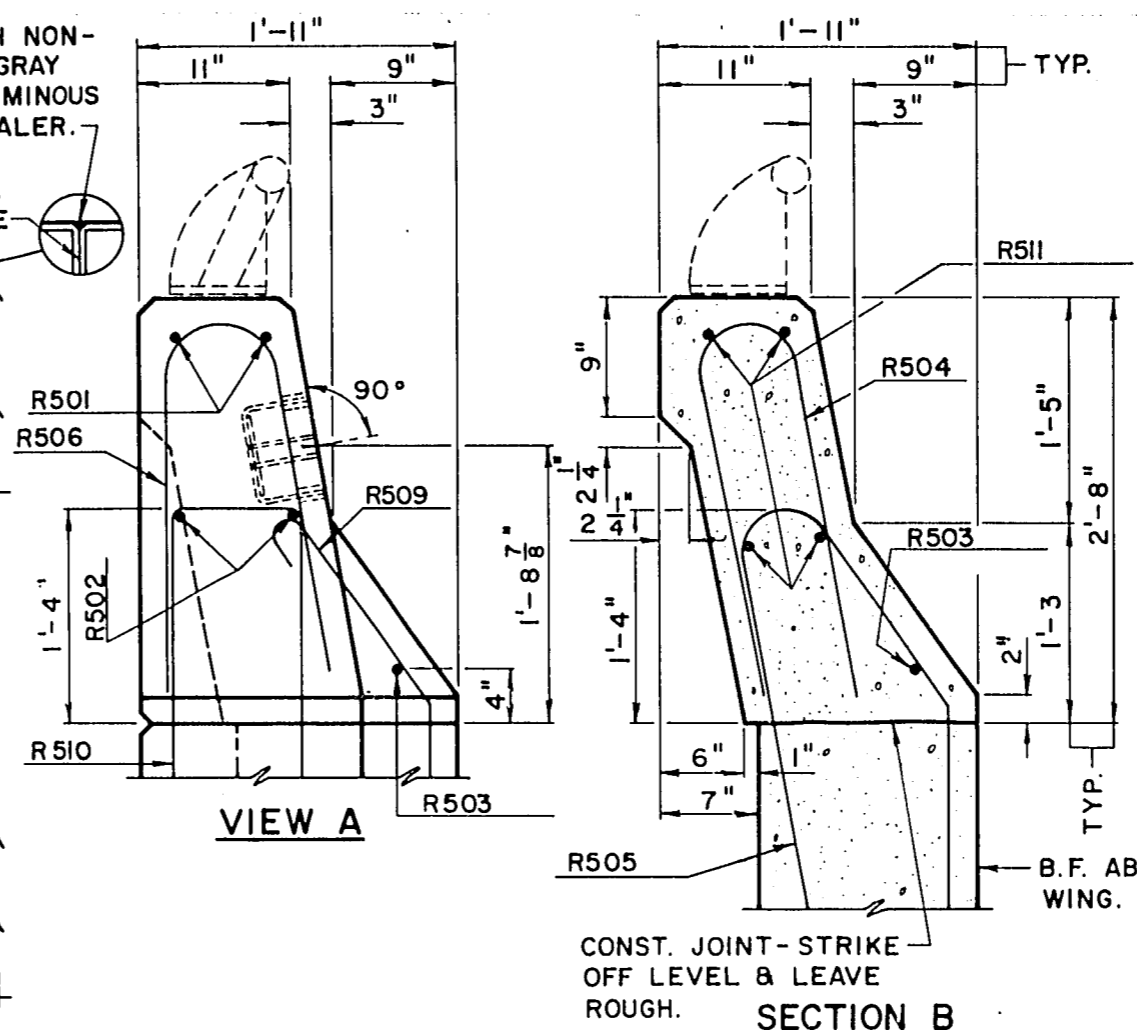
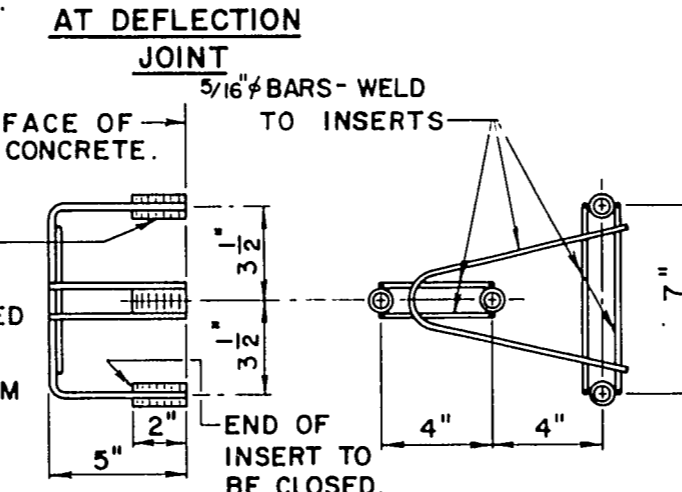
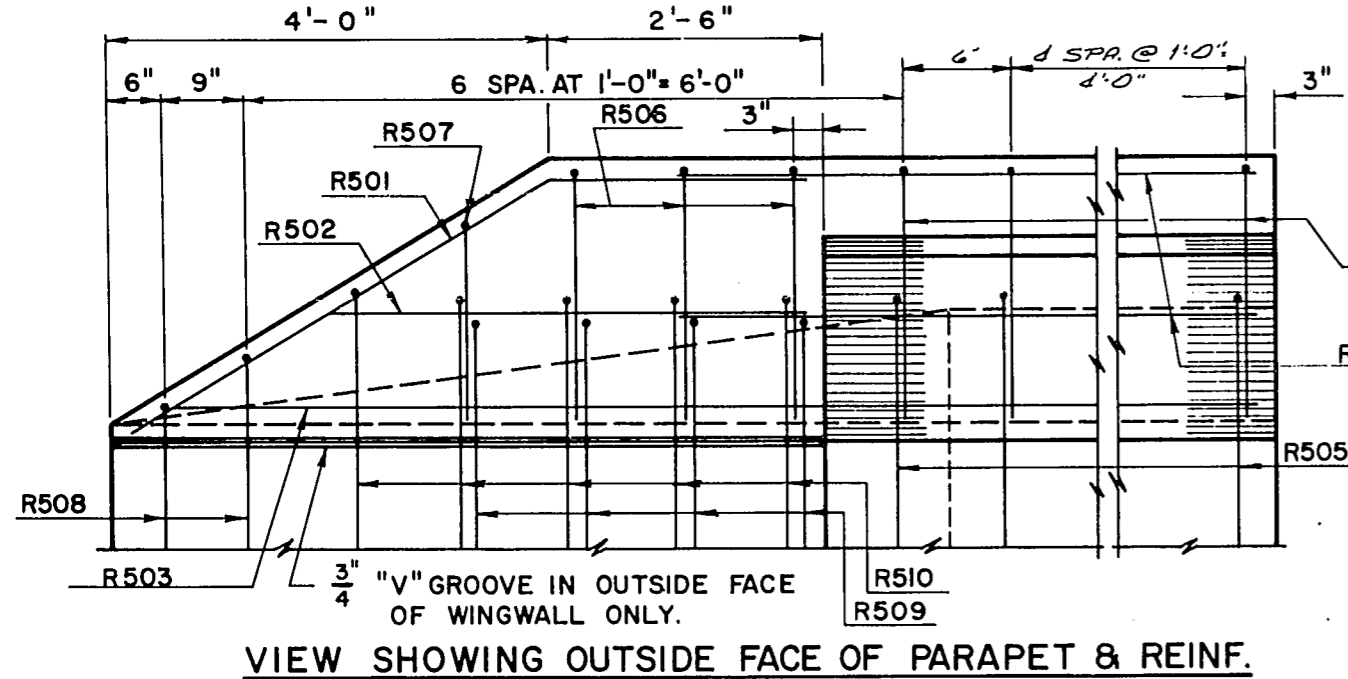
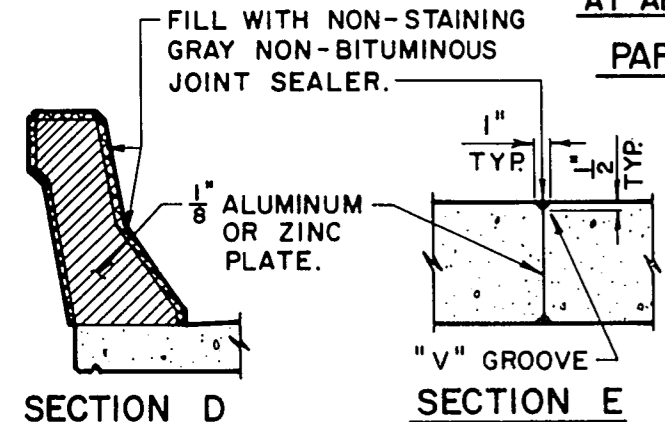
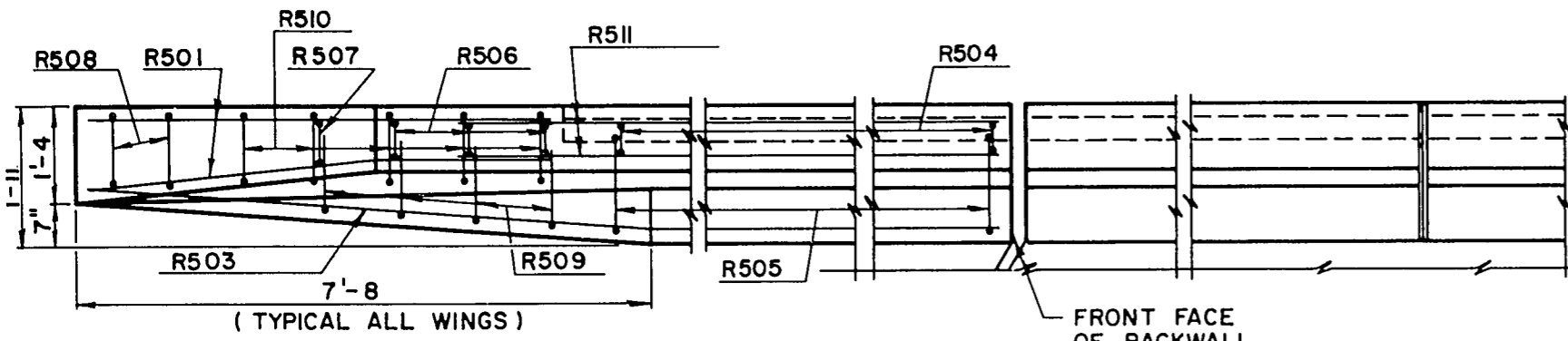
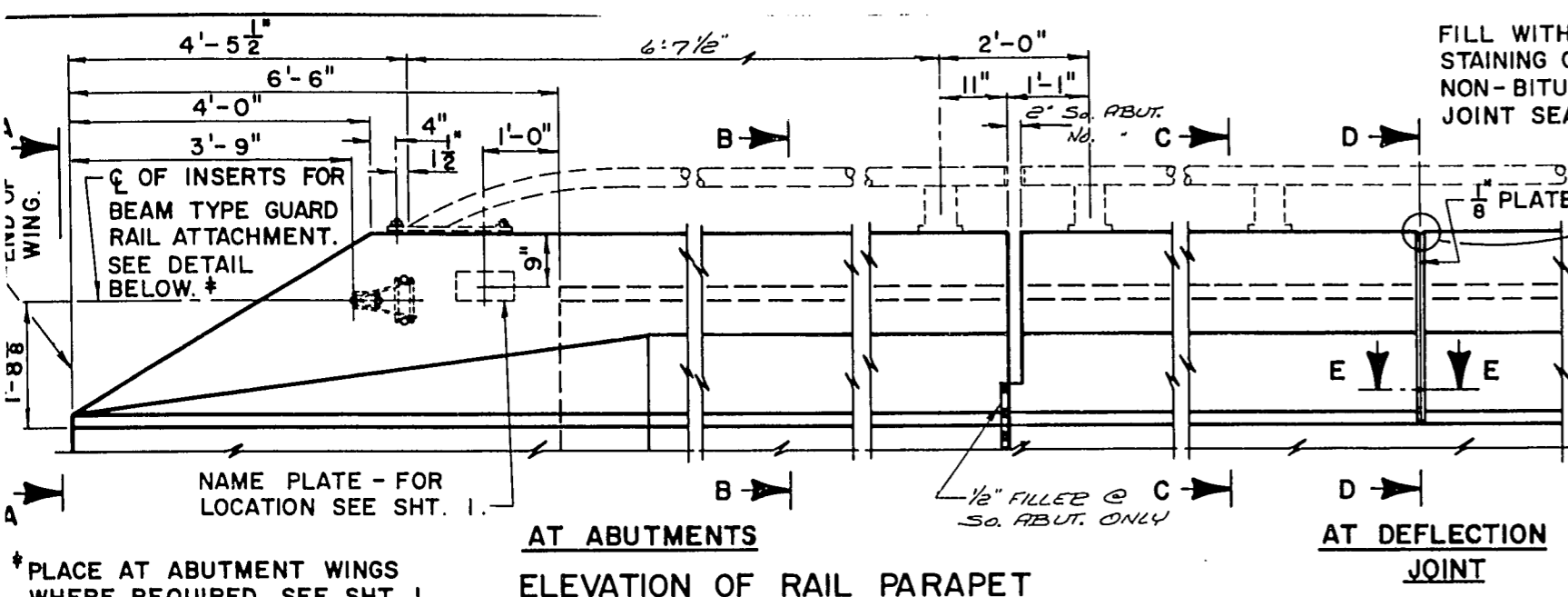


DETAIL 'B'

NOTE: ONE FIELD SPLICE SHALL BE PERMITTED IN ANGLES. ANGLE AND STUDS SHALL BE PAID FOR AS STRUCTURAL CARBON STEEL.



No.	Date	Revised	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-17			
Const. Spec.	1969	Drawn By	QU00
		Plans Checked	G. H. A.
EXPANSION JOINT			SHEET 14 OF 16
			X 46190

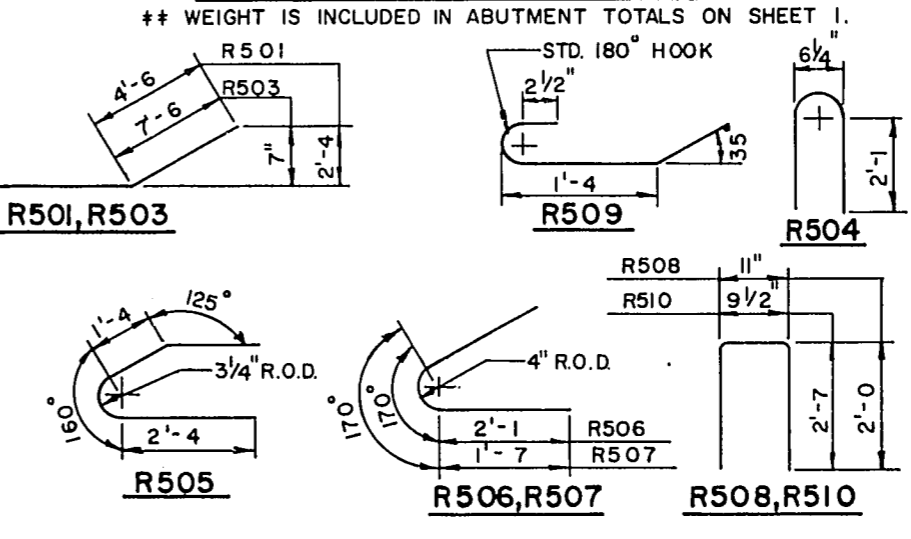


NOTE: BENDING DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

RAIL PARAPET

BILL OF BARS @ ABUTS. LBS. **

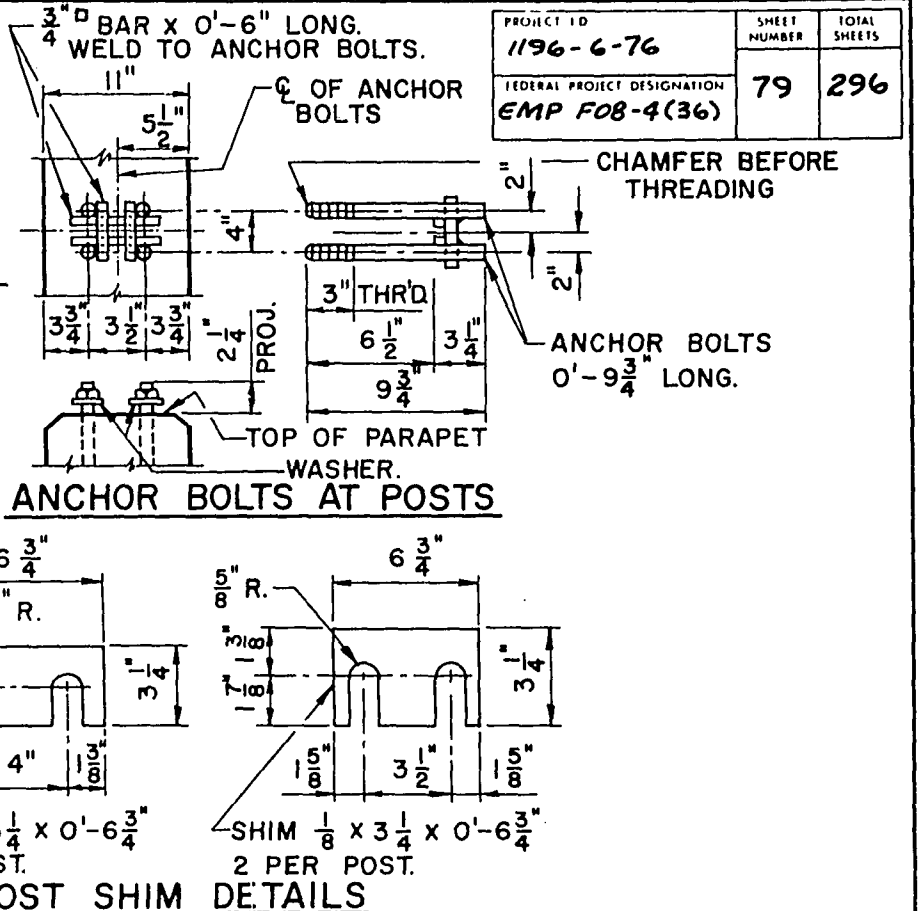
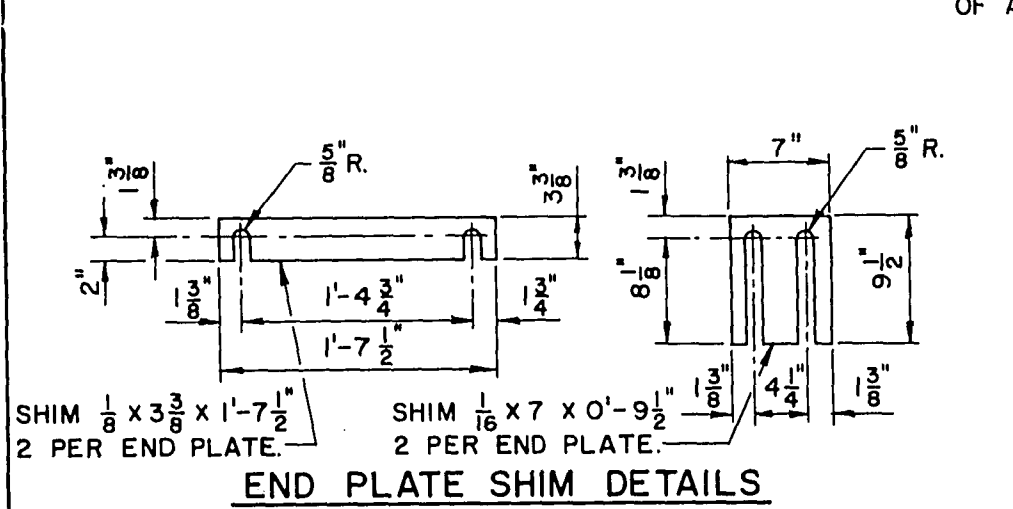
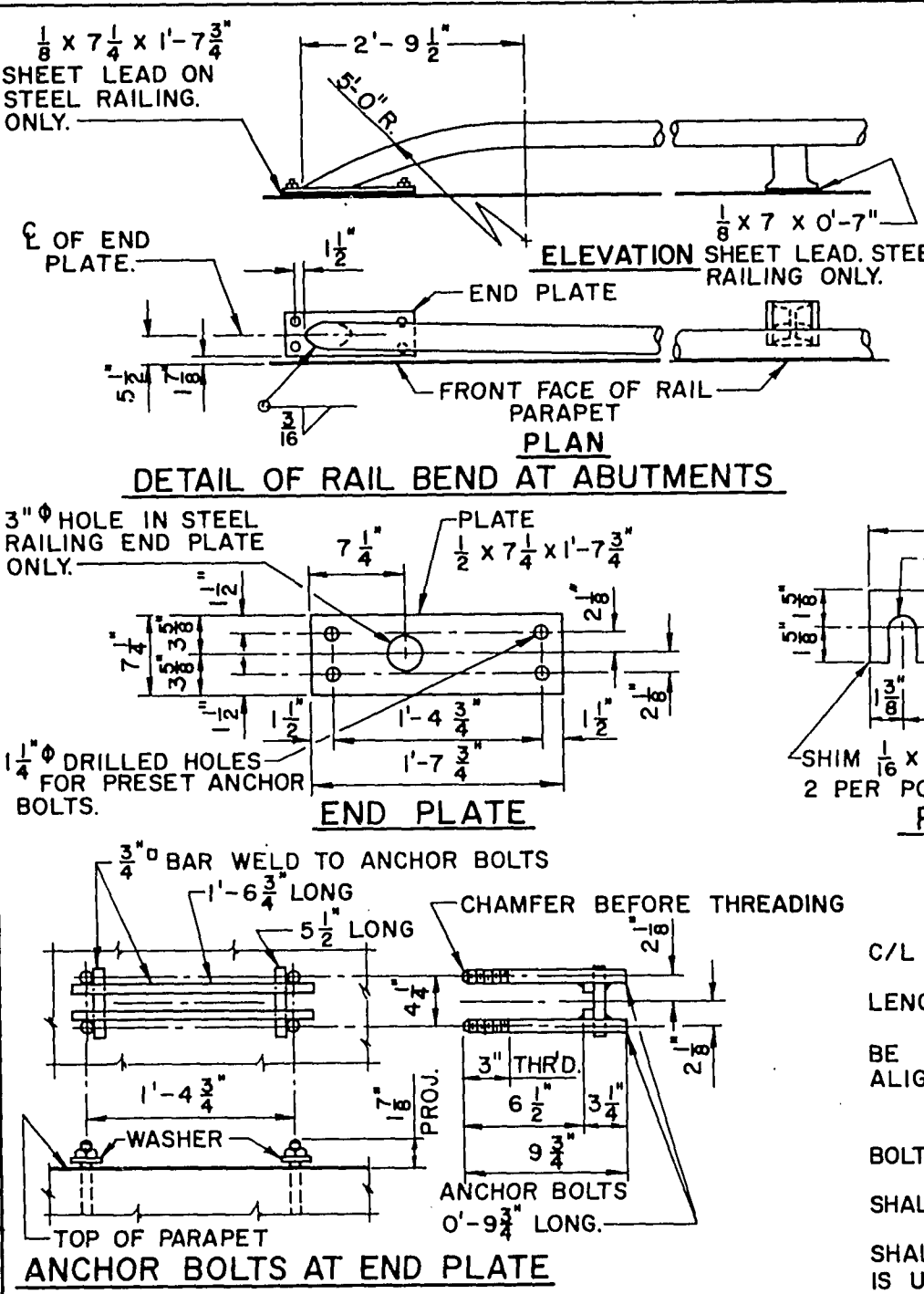
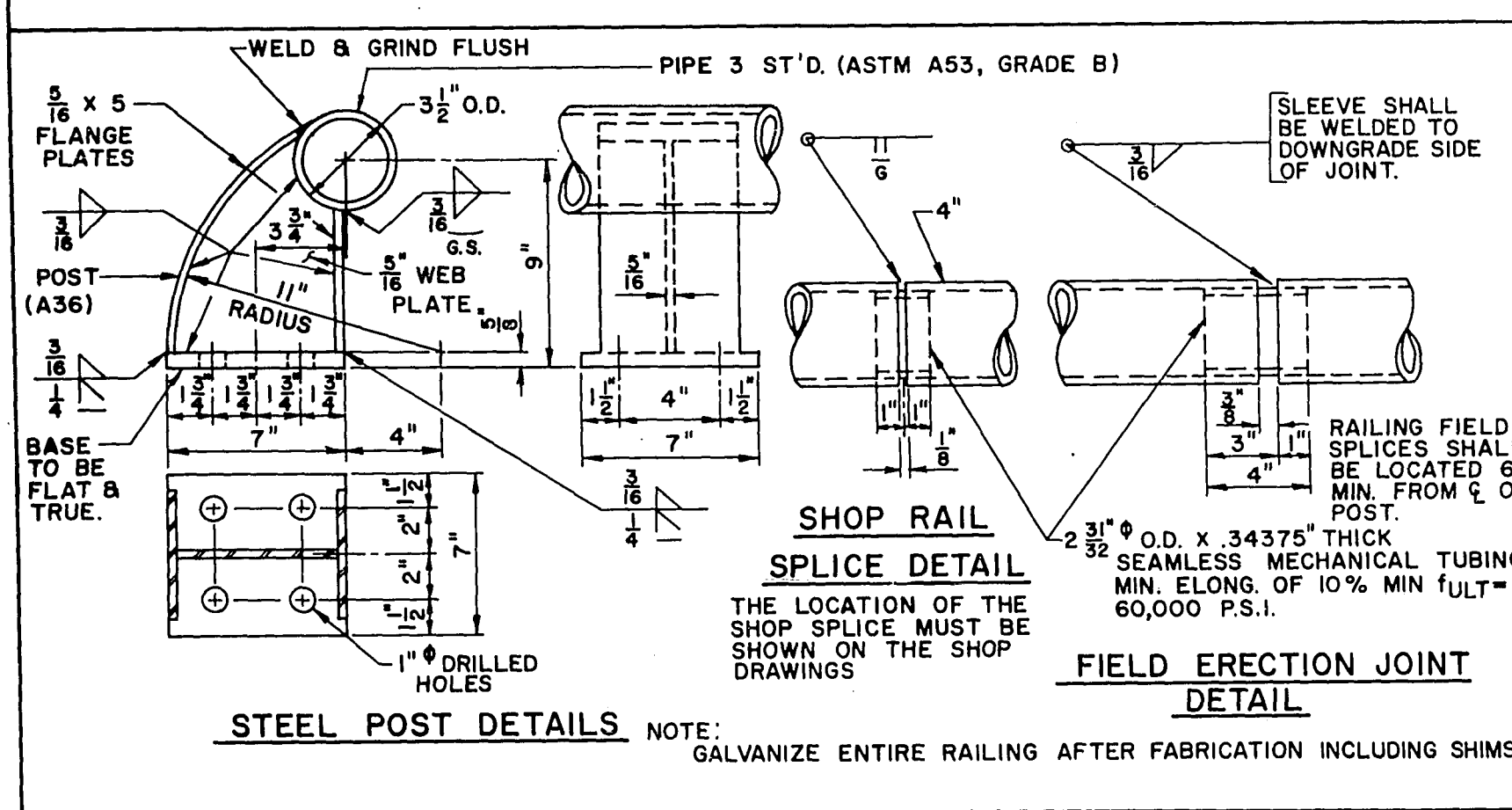
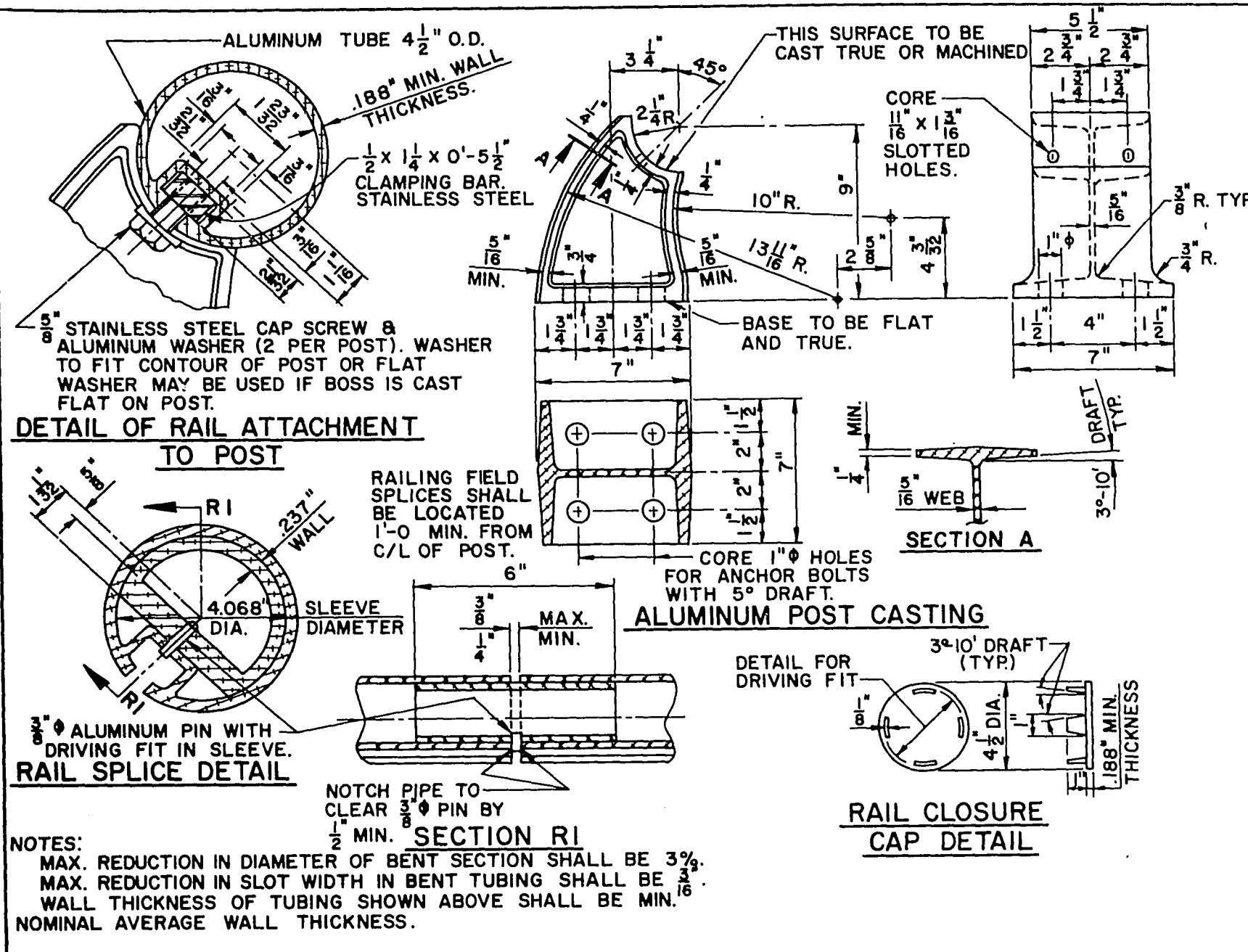
MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
R501	8	6'-10"	X	WINGS 1 THRU 4
R502	8	4'-5"	X	" 1 " 4
R503	4	11'-8"	X	" 1 " 4
R504	8	5'-0"	X	" 1 " 4
R505	8	5'-10"	X	" 1 " 4
R506	12	5'-2"	X	" 1 THRU 4
R507	4	4'-2"	X	" 1 " 4
R508	8	4'-10"	X	" 1 " 4
R509	16	3'-3"	X	" 1 " 4
R510	20	5'-10"	X	" 1 " 4
R511	16	7'-0"	X	" 1 " 4



NOTES

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR ALUMINUM PLATE CUT AS SHOWN IN SECTION "D" BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH BITUMINOUS PAINT AND PLATE SEPARATORS MAY BE OMITTED.

WORK THIS SHEET WITH SHEET TITLED "DETAILS FOR TYPE 'J' TUBULAR ALUMINUM OR STEEL RAILING."



GENERAL NOTES

BID ITEM SHALL BE TUBULAR RAILING, TYPE 'J'.

ALL POST SPACINGS ARE TAKEN HORIZONTALLY ALONG C/L OF ANCHOR BOLTS.

RAILING SHALL BE FABRICATED IN TWO OR THREE PANEL LENGTHS.

SHIMS CONFORMING TO SAME MATERIAL AS POSTS SHALL BE USED UNDER POSTS AND END PLATES WHERE REQ'D FOR ALIGNMENT.

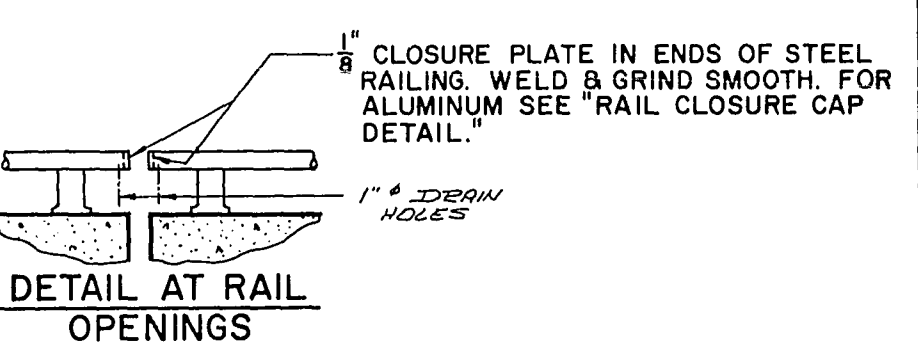
RAIL POSTS SHALL BE SET NORMAL TO GRADE.

THE SHANK AND ROOT OF THREAD DIAMETER FOR ANCHOR BOLTS SHALL BE A MIN. OF 0.62 INCHES.

ANCHOR BOLTS, NUTS & WASHERS FOR ALUMINUM RAILING SHALL BE STAINLESS STEEL.

ANCHOR BOLTS, NUTS & WASHERS FOR STEEL RAILING SHALL BE EITHER STAINLESS STEEL OR ASTM A307. IF A307 IS USED ELECTRO-GALVANIZE NUTS, WASHERS & TOP $\frac{3}{2}"$ OF ANCHOR BOLTS.

SHIMS SHALL CONFORM TO SAME MATERIAL AS POSTS.



No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-17			
Const. Spec. 1969	Drawn By BUDD	Plans Checked G. H. A.	
TUBULAR RAILING TYPE 'J'			SHEET 16 OF 16 X46192