

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

PINE RIVER BRIDGE AND APPROACHES (HILLVIEW ROAD) TOWN ROAD LINCOLN COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9857-02-70		

INDEX OF SHEETS

- Sheet No. 1 Title
- Sheet No. 2 Typical Sections and Details
- Sheet No. 3 & 3.1 Estimate of Quantities
- Sheet No. 2 & 2.1 Miscellaneous Quantities
- Sheet No. _____ Right of Way Plat
- Sheet No. 5 Plan and Profile
- Sheet No. 6-6.4 Standard Detail Drawings
- Sheet No. _____ Sign Plates
- Sheet No. 8-8.8 Structure Plans
- Sheet No. _____ Computer Earthwork Data
- Sheet No. 9 Cross Sections

TOTAL SHEETS = 20



STATE PROJECT NUMBER
9857-02-70



*London Construction
Start: July 2, 1990
Project Engr: Sept. 14, 1990
of Eugene Seidler
Contractor Leadman:*

*No Detour - Road
Closed*

APPROVED
FOR
LINCOLN COUNTY

12/4/89 DATE *Michael J. Hej* COUNTY HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED
BY
OWEN AYRES & ASSOCIATES INC.
CONSULTING ENGINEERS
EAU CLAIRE WISCONSIN

David H. Brundler
PROFESSIONAL ENGINEER

DATE 1/29/90

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

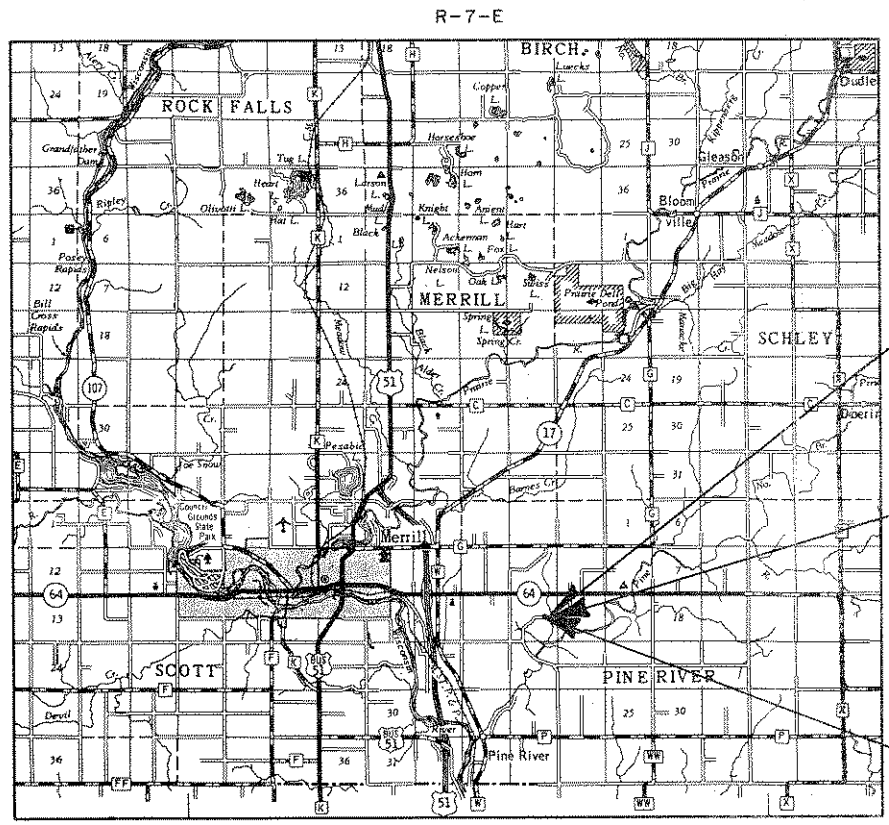
Surveyor O.A. BA. INC. District Checker RGB
Designer O.A. BA. INC. C.O. Checker NRA
District Supervisor RJS C.O. Coordinator LAS

APPROVED:
DATE: 2/5/90 *James D. Brundler* DISTRICT DIRECTOR

APPROVED:
DATE: 2/20/90 *Robert W. Boy* REGIONAL CHIEF ROAD DESIGN ENGINEER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION 5 WISCONSIN DIVISION

APPROVED:
DATE: _____ DIVISION ADMINISTRATOR



STRUCTURE B-35-110

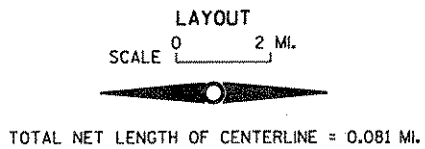
END PROJECT
STA. 12+00

T-31-N

BEGIN PROJECT
STA. 7+70

Y = 487,800 (±200')
X = 2,104,700 (±200')

THE COORDINATES SHOWN ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM, CENTRAL ZONE. SCALED FROM U.S.G.S. TOPOGRAPHIC MAP, PINE DELLS QUAD. FOR IDENTIFICATION ONLY.



FILE COPY

DESIGN DESIGNATION

- A.D.T. (1988) = 90
- A.D.T. (2010) = 125
- D.H.V. = 12
- D. = 50-50
- T. = 10%

CONVENTIONAL SIGNS

- | | | | |
|----------------------------|--|-------------------------------------|--|
| COUNTY LINE | | COMBUSTIBLE FLUIDS (UNDER PRESSURE) | |
| CORPORATE LIMITS | | UNDERGROUND UTILITIES | |
| PROPERTY LINE | | GAS | |
| LOT LINE | | ELECTRIC | |
| LIMITED HIGHWAY EASEMENT | | TELEPHONE | |
| EXISTING RIGHT OF WAY | | SERVICE PEDESTAL | |
| NEW RIGHT OF WAY | | CABLE MARKER | |
| REFERENCE LINE | | POWER POLE | |
| SLOPE INTERCEPT | | TELEPHONE POLE | |
| ORIGINAL GROUND | | RAILROADS | |
| MARSH OR ROCK PROFILE | | MARSH | |
| CULVERT IN PLACE | | WOODED AREA | |
| CULVERT REQUIRED | | | |
| CULVERT REQUIRED (Profile) | | | |

SUBSET: TRROADS
FILE NAME: 09231TS

LEVELS ON 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

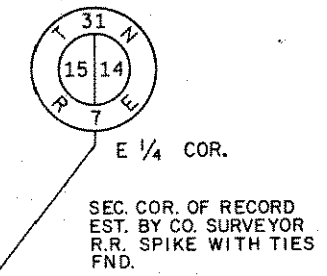
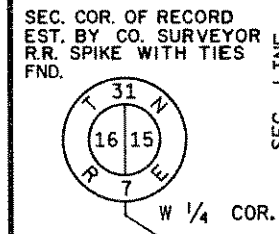
w/9429-1-70

May

CHECKED BY: _____ DATE: _____
BACK CHECKED BY: _____ DATE: _____
CORRECTED BY: _____ DATE: _____

SCHEDULE OF LAND & INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES OR S.F.	R/W ACRES REQUIRED OR S.F.			TOTAL ACRES REM.
				NEW	EXISTING	TOTAL	
1	FARM CREDIT BANK	FEE	39.42	0.06	----	0.06	39.36
2	RANDY L. FROKJER	FEE	20.00	0.07	----	0.07	19.93



BEGIN RELOCATION ORDER STA. 8+75

END RELOCATION ORDER STA. 11+50

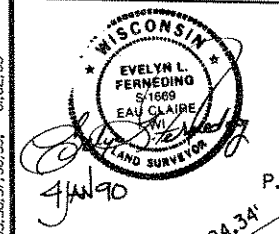
BEGIN PROJECT STA. 7+70.00

END PROJECT STA. 12+00.00

NET LENGTH OF CENTER LINE STA. 7+70 TO STA. 12+00 = 430 LIN. FT.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	10+64	70 d SPK. IN POWER POLE 38' LT.	1294.76



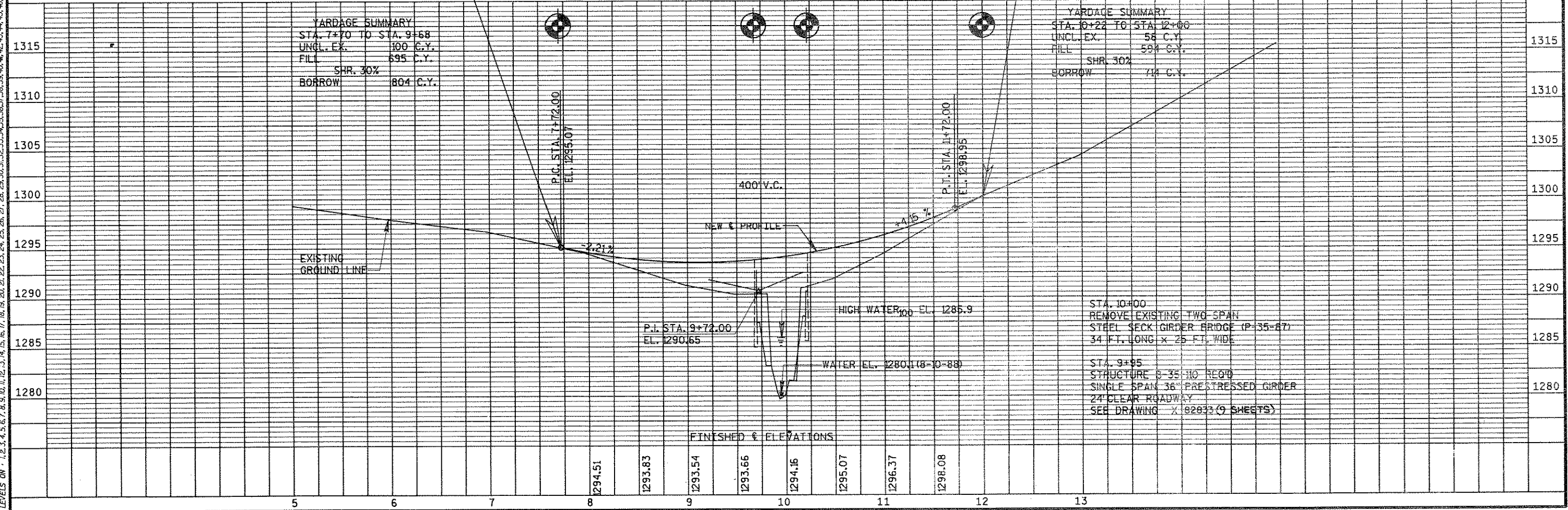
PLOT SCALE:

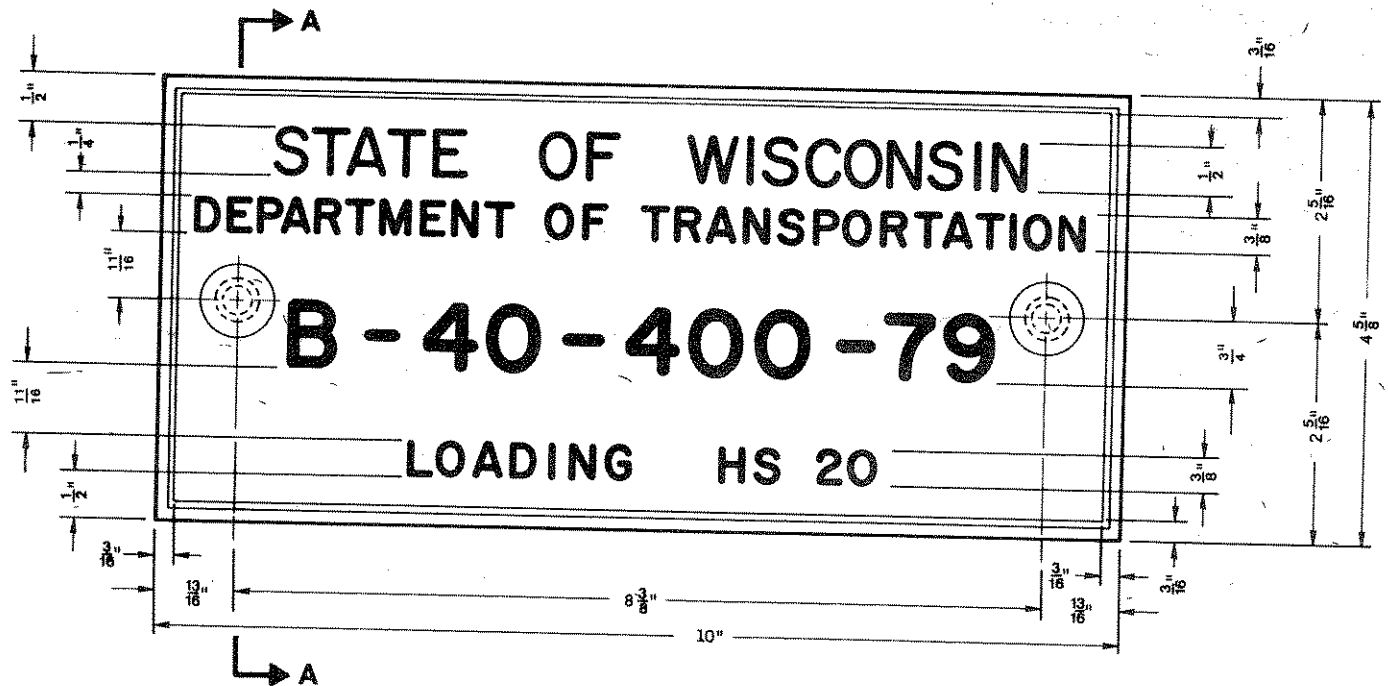
PLOT NAME:

REV. DATE:

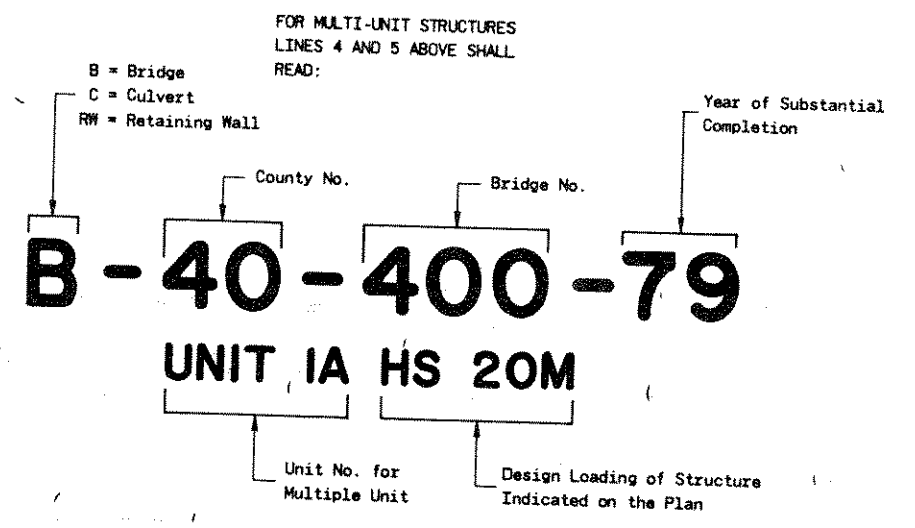
ORIGINATOR:

LEVELS ON: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

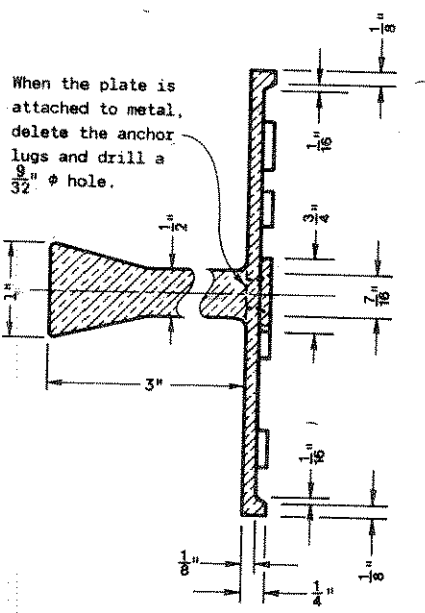




TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

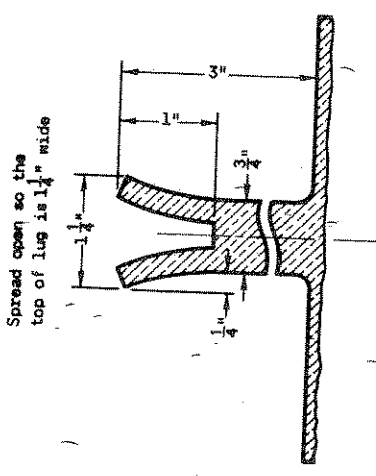


NUMBERING AND LOADING DESIGNATION
MULTI-UNIT STRUCTURES



When the plate is attached to metal, delete the anchor lugs and drill a $\frac{9}{32}$ " ϕ hole.

SECTION A-A



Spread open so the top of lug is $1\frac{1}{4}$ " wide

ALTERNATE LUG

GENERAL NOTES

Name Plates to be installed on Bridges, Culverts, and Retaining Walls shall conform to the requirements of Section 506.2.4 of the Standard Specifications.

The Bridge Number and Design Loading shown on this drawing are examples only. See Construction Plans for individual numbering and design loading.

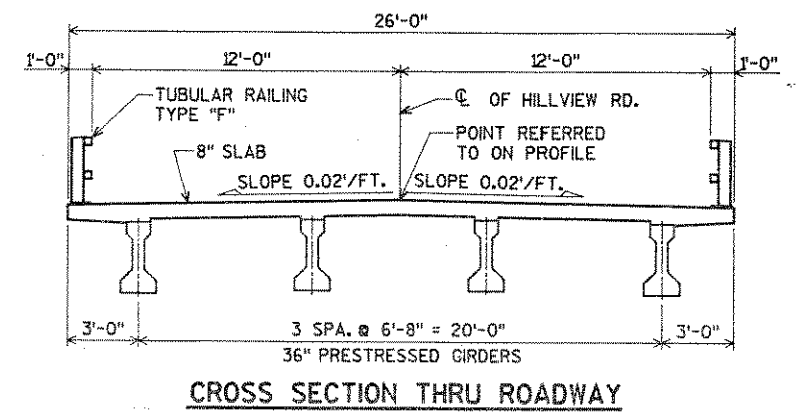
NAME PLATE (STRUCTURES)	
State of Wisconsin Department of Transportation Division of Transportation Facilities	
APPROVED 9-27-79 DATE	<i>[Signature]</i> CHIEF DESIGN ENGINEER
FHWA	

S.D.D. 12A 3-4

SUBSET: TRBRIDGE
FILE NAME: 09231GP

LEVELS ON 4,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

STATE PROJECT NUMBER	SHEET NO.
9857-02-70	8



DESIGN DATA

LIVE LOAD: HS-20 (STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20#/S.F.)
 RATINGS: INVENTORY = HS-27 OPERATING = HS-33
 MAXIMUM STANDARD PERMIT VEHICLE LOAD = 225 KIPS
 ALLOWABLE DESIGN STRESSES:
 CONCRETE MASONRY (SLAB) $f'_c = 4,000$ p.s.i.
 ALL OTHER $f'_c = 3,500$ p.s.i.
 HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) $f_y = 60,000$ p.s.i.
 PRESTRESSED GIRDER
 CONCRETE MASONRY $f'_c = 6,000$ p.s.i.
 STRANDS - 1/2" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 p.s.i.

HYDRAULIC DATA:

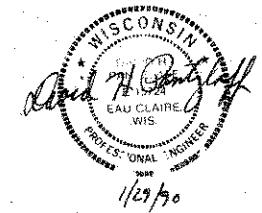
DRAINAGE AREA = 2.8 sq. mi.
 WATERWAY AREA = 81 sq. ft.
 $V = 10.0$ f.p.s.
 $Q_{100} = 810$ c.f.s.
 HIGH WATER $_{100}$ EL. 1285.9
 RDWY. OVERFLOW = N/A

FOUNDATION DATA:

PLACE W. ABUTMENT ON HP 10 x 42 STEEL PILING DRIVEN TO 45 TONS/PILE MINIMUM BEARING VALUE. ESTIMATED LENGTH 45'-0".
 PLACE E. ABUTMENT ON HP 10 x 42 STEEL PILING DRIVEN TO 45 TONS/PILE MINIMUM BEARING VALUE. ESTIMATED LENGTH 35'-0".

TRAFFIC DATA:

A.D.T. = 90 (1988)
 A.D.T. = 125 (2010)
 R.D.S. = 40 M.P.H.

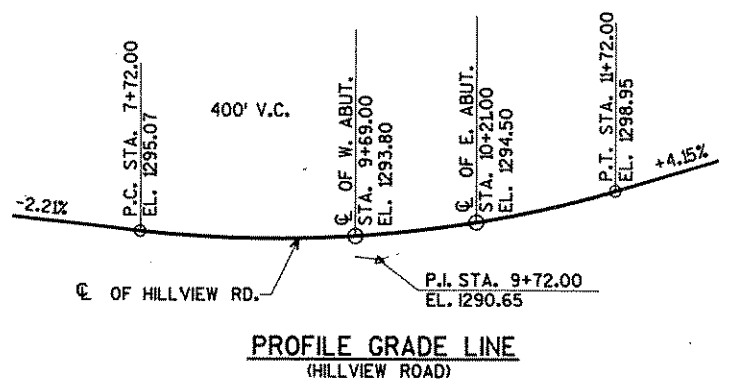
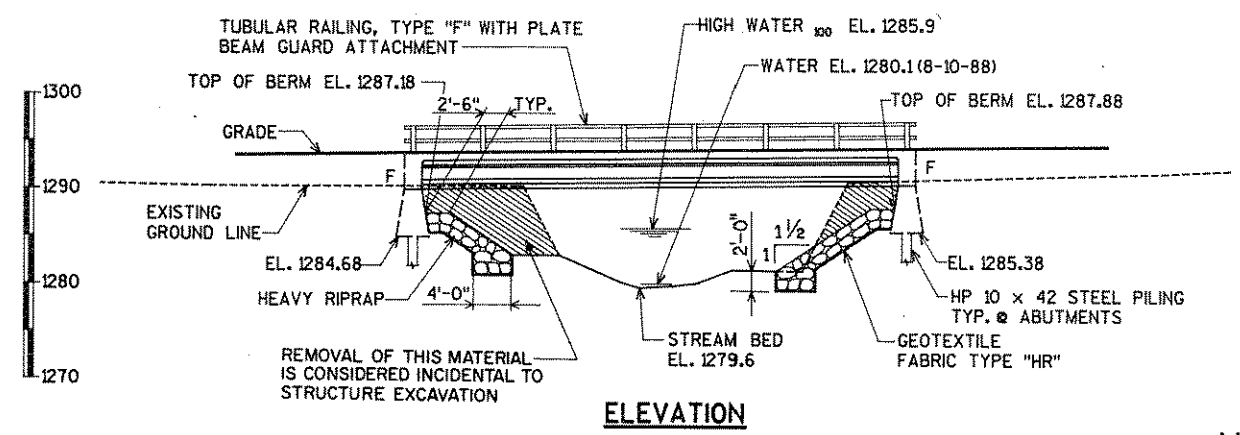
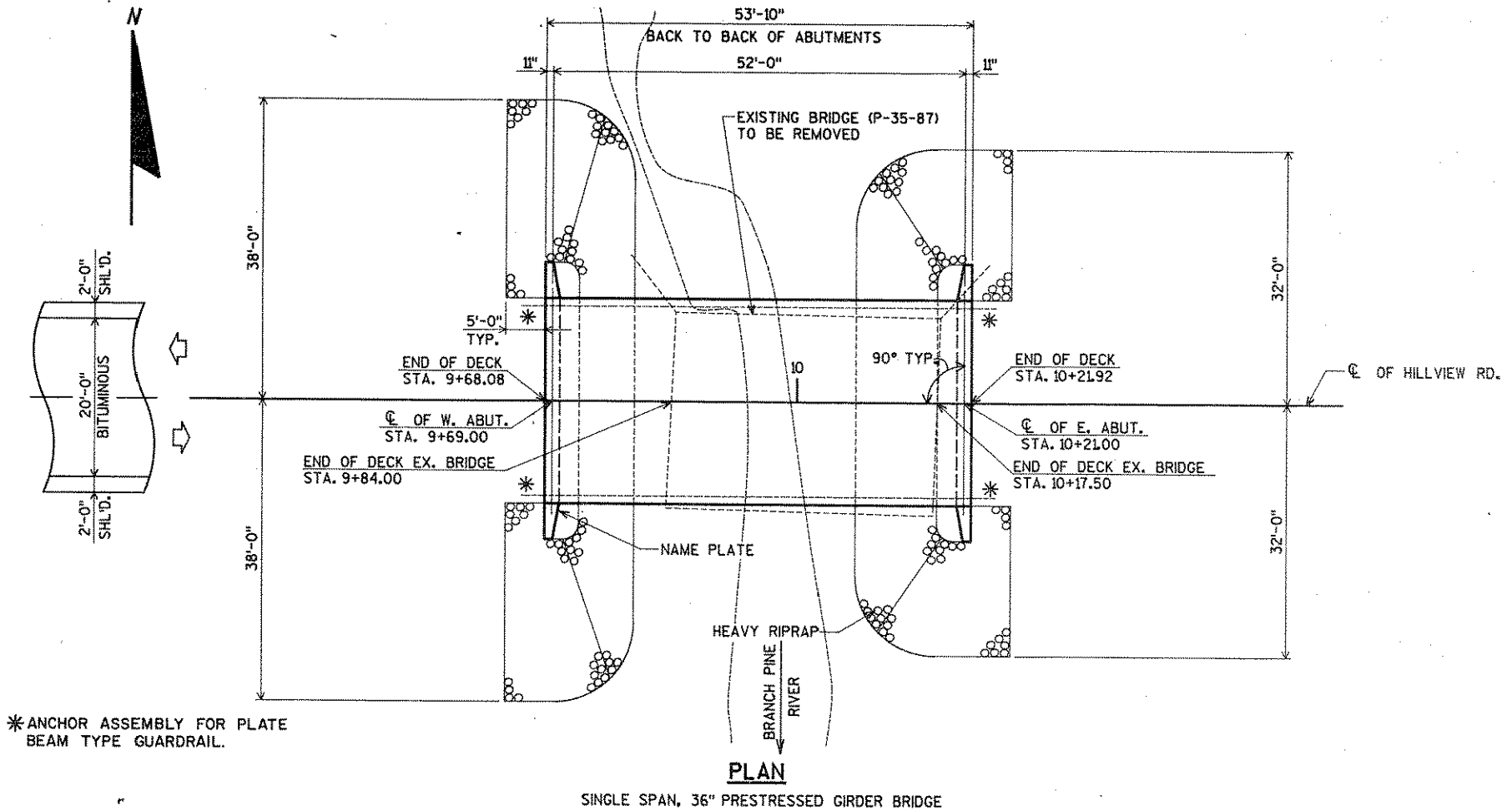


BRIDGE OFFICE CONTACT:
 D. BABLER
 (608) 266-8486

No.	Date	Revision	By
PLANS PREPARED BY			
AYRES Engineers/Architects Planners/Surveyors Associates Owen Ayres & Associates Inc. Eau Claire, Wisconsin			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-35-110 HILLVIEW ROAD OVER BR. PINE RIVER			
County	LINCOLN	Town/Village	PINE RIVER
Design Spec.	A.A.S.H.T.O. '89	Load	HS-20 Const. Spec. 1989
Designed By	MNL	Design Checked	CBM
Drawn By	G.L.D.	Plans Checked	D.H.
Approved	Stanley J. Wood State Bridge Engineer		2/8/90 Date
GENERAL PLAN			SHEET 1 OF 9 X 82833

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES & NOTES
3. SUBSURFACE EXPLORATION
4. ABUTMENTS
5. ALT. STEEL INTER. DIAPHRAGM DETAILS
6. 36" PRESTRESSED GIRDER DETAILS
7. SUPERSTRUCTURE
8. SUPERSTRUCTURE DETAILS
9. TUBULAR RAILING TYPE "F"



BENCH MARK:
 70 d SPIKE IN POWER POLE
 STA. 10+64.0, 38' LT.
 EL. 1294.76

CHECKED BY: _____
 BACK CHECKED BY: _____
 CORRECTED BY: _____

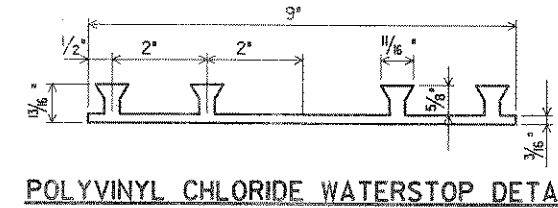
SUBSET: TRBRIDGE
FILE NAME: 09231GP

LEVELS ON 4,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

BACK CHECKED BY: _____
CORRECTED BY: _____

TOTAL ESTIMATED QUANTITIES

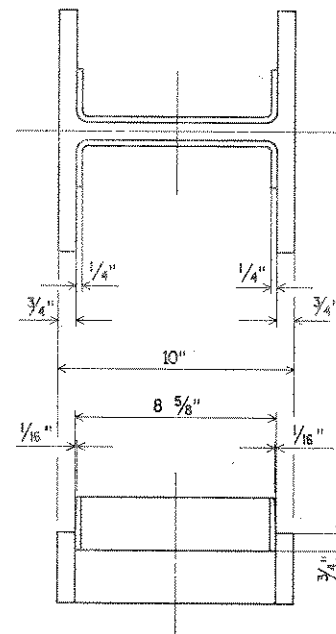
BID ITEMS	UNIT	W. ABUT.	E. ABUT.	SUPER.	TOTAL
REMOVING OLD BRIDGE, STA. 10+00	L.S.	-----	-----	-----	1
EXCAVATION FOR STRUCTURES, BRIDGES B-35-110	L.S.	-----	-----	-----	1
CONCRETE MASONRY, BRIDGES	C.Y.	18.2	18.2	48.6	85
PROTECTIVE SURFACE TREATMENT	GAL.	-----	-----	7	7
PRESTRESSED GIRDER, I-TYPE, 36-INCH	L.F.	-----	-----	212	212
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	1,580	1,580	5,220	8,380
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	-----	-----	4,550	4,550
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	4	4	-----	8
STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	L.F.	180	140	-----	320
TUBULAR RAILING, TYPE F, STRUCTURE B-35-110	L.S.	-----	-----	-----	1
HEAVY RIPRAP	C.Y.	90	95	-----	185
GEOTEXTILE FABRIC, TYPE HR	S.Y.	150	155	-----	305
PILE POINTS	EACH	4	4	-----	8
NON-BID ITEMS					
FILLER	SIZE	-----	-----	-----	1/2 & 3/4
POLYVINYL CHLORIDE WATERSTOP	L.F.	34	34	-----	68



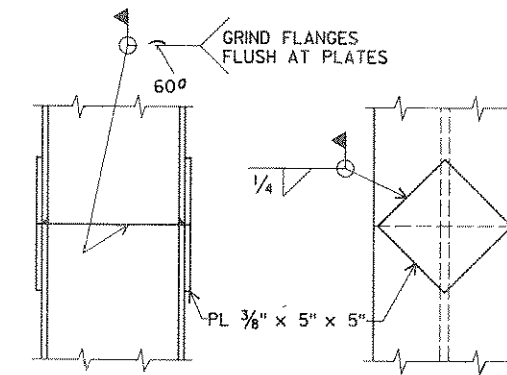
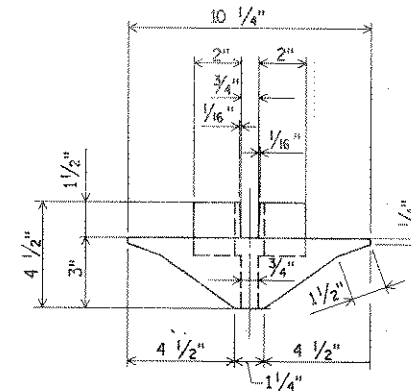
POLYVINYL CHLORIDE WATERSTOP DETAIL

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
 THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.
 JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.
 THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.
 PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP OF DECK.
 ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.
 THE EXISTING BRIDGE (P-35-87) IS A TWO SPAN STEEL DECK GIRDER BRIDGE WITH A WIDTH OF 25 FEET AND AN OVERALL LENGTH OF 34 FEET.



PILE POINT DETAIL
FOR HP 10x42 STEEL PILING.



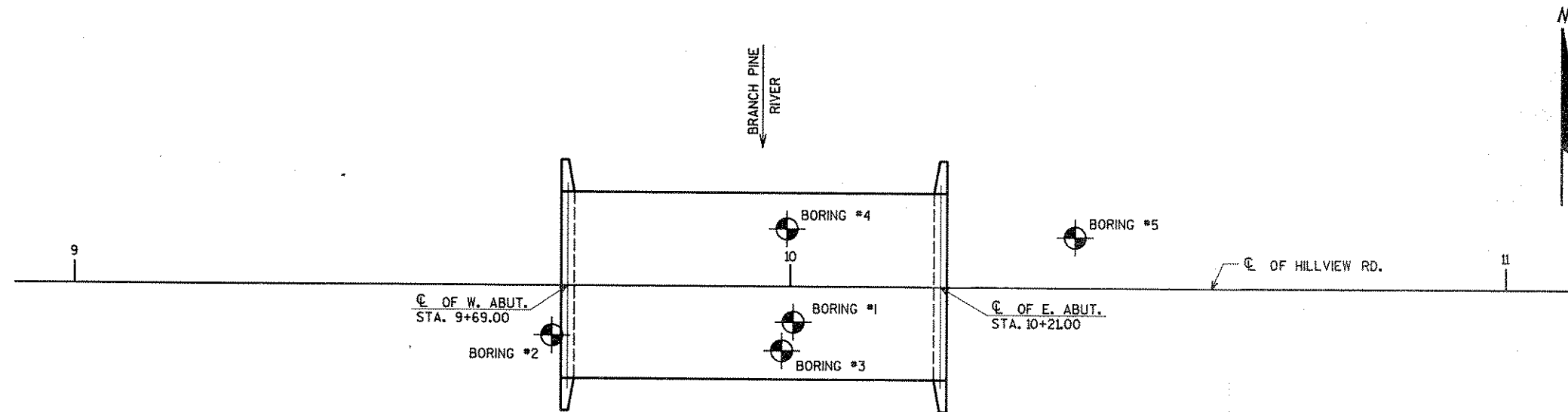
HP 10 x 42 SPLICE DETAIL

No.	Date	Revision	By
PLANS PREPARED BY			
AYRES ASSOCIATES Engineers/Architects Planners/Surveyors Owen Ayres & Associates Inc. Eau Claire, Wisconsin			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-35-110			
Const. Spec.	1989	Drawn By G.L.D.	Plans Checked C.B.M.
QUANTITIES & NOTES			SHEET 2 OF 9 X 82833

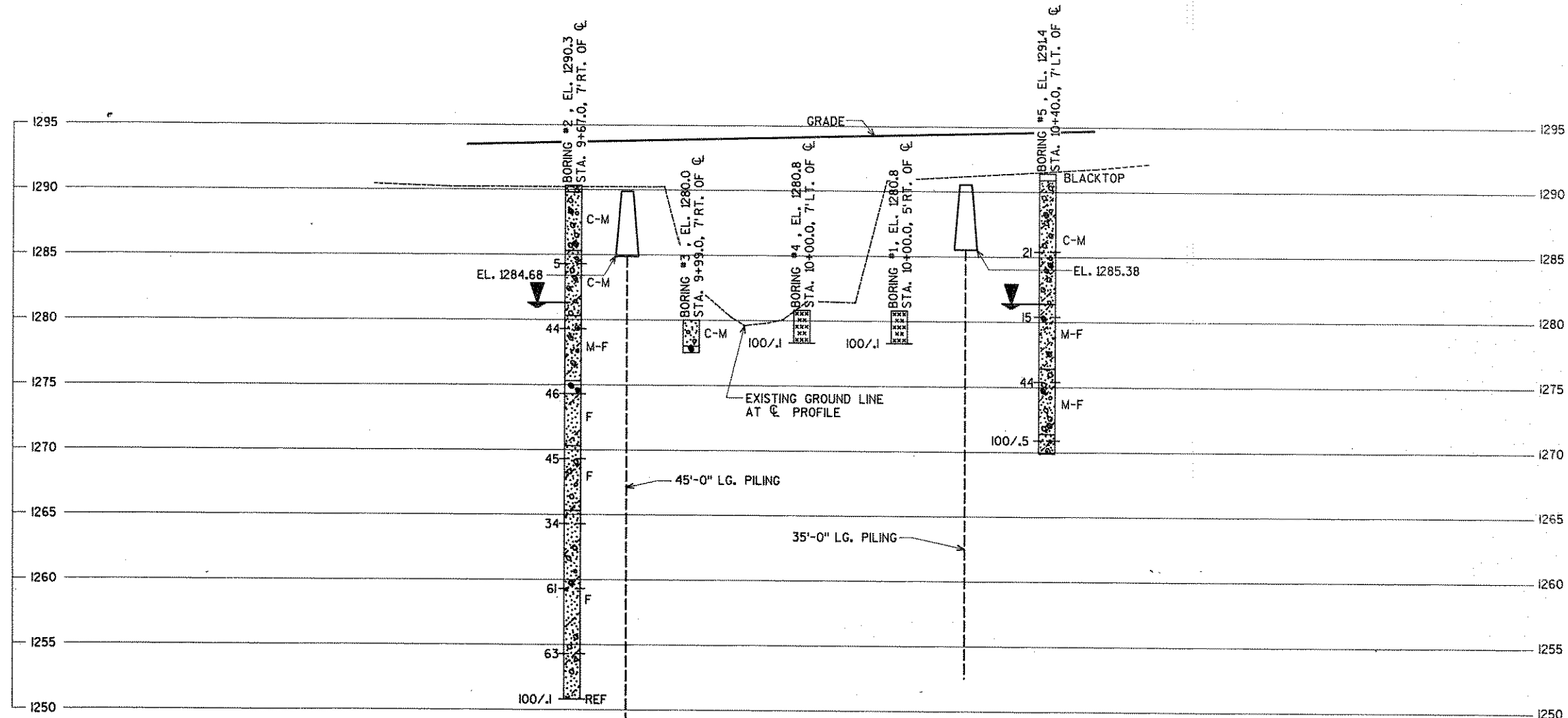
SUBSET: TRBRIDGE
FILE NAME: 0923ICP

LEVELS ON 4, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

UNCHECKED BY: _____
DATE: _____
BACK CHECKED BY: _____
DATE: _____
CORRECTED BY: _____



BORINGS TAKEN BY:
WISCONSIN TEST DRILLING, INC.
SCHOFIELD, WISCONSIN
JANUARY 3 & 4, 1989



STATE PROJECT NUMBER: 9857-02-70
SHEET NO.: 8.2

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

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

LEGEND OF PROBING
 Probing No., Station, 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., Elev. Sta. & Offset
 Unconfined Strength → 7.7 *
 Blows Per Foot 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 DEPT. OF TRANSPORTATION 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.

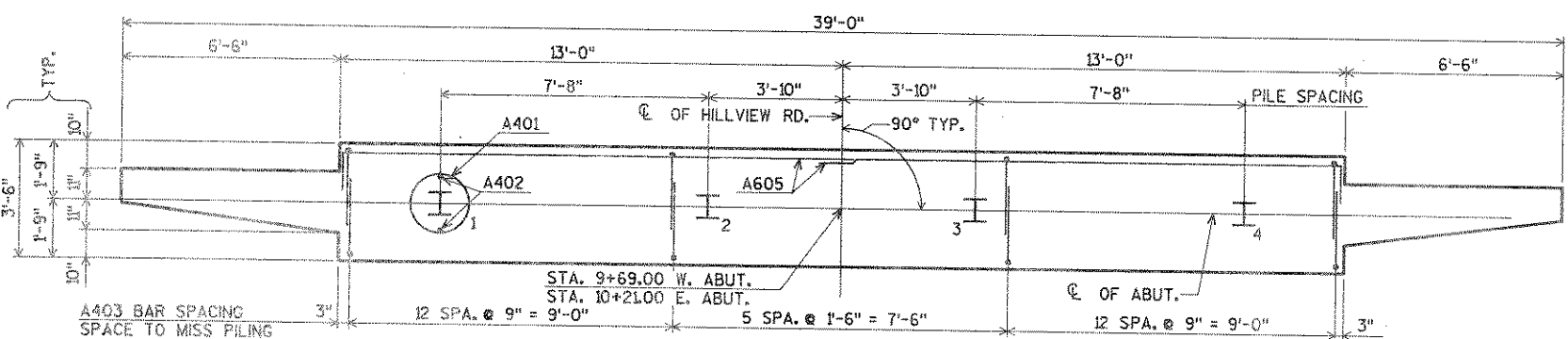
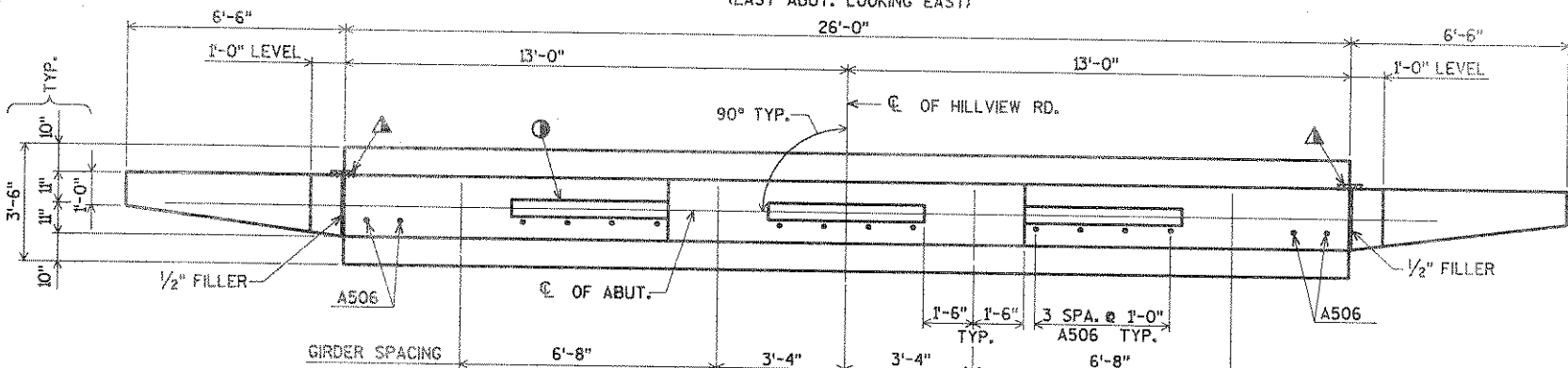
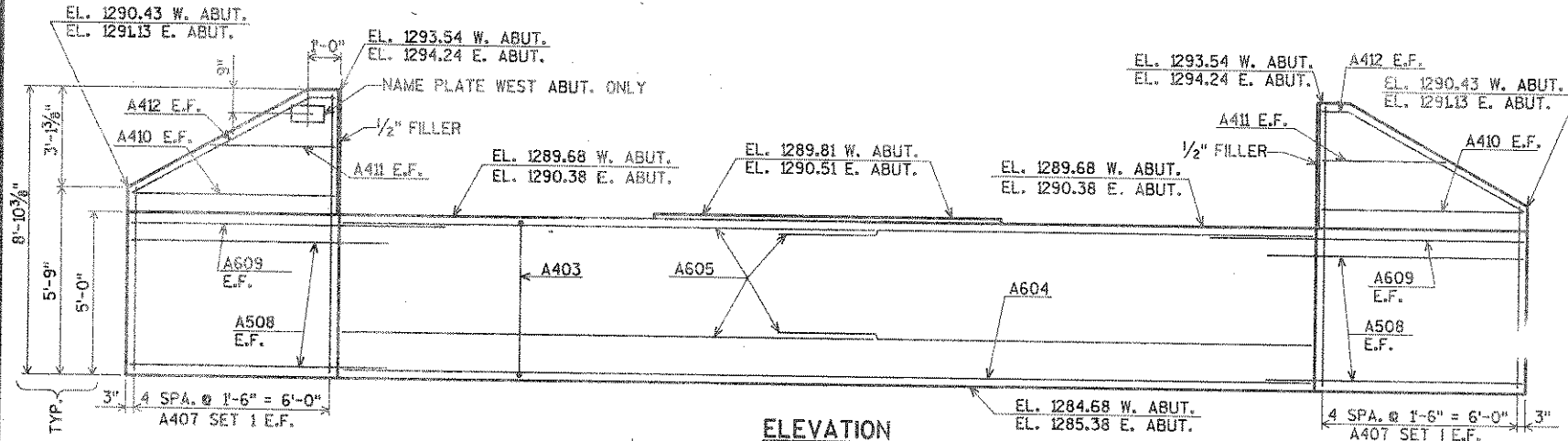
No.	Date	Revision	By
PLANS PREPARED BY AYRES ASSOCIATES Engineers/Architects Planners/Surveyors Owen Ayres & Associates Inc. Eau Claire, Wisconsin			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-35-110			
Const. Spec.	1989	Drawn By G.L.D.	Plans Checked MNL
SUBSURFACE EXPLORATION			SHEET 3 OF 9 X 82833

SUBSET: TRBRIDGE
FILE NAME: 09231ABUT

LEVELS ON 4, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

DATE: _____
CORRECTED BY: _____

NOTE: 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.)

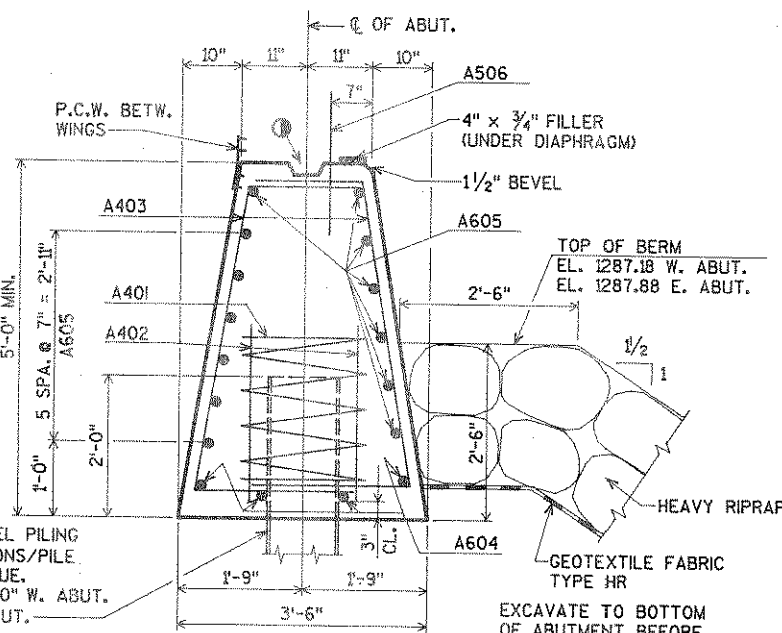
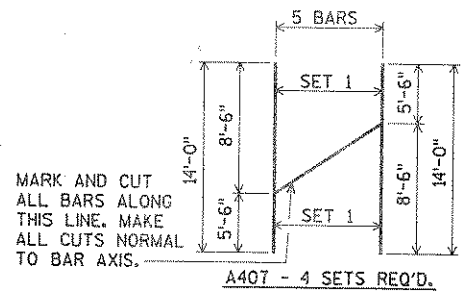
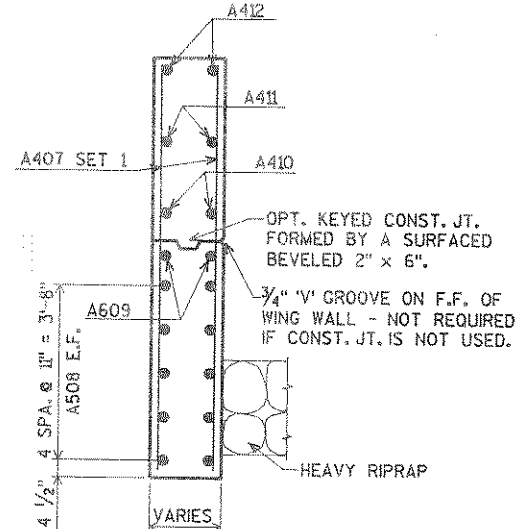


- KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6".
- VERT. P.C.W. FROM BELOW BRIDGE SEAT TO TOP OF WING. SPLICE AT JUNCTION WITH HORIZ. WATERSTOP BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE.
- P.C.W. DENOTES POLYVINYL CHLORIDE WATERSTOP. SEE SHEET 2 FOR DETAILS.
- FOR PILE SPLICE DETAIL SEE SHEET 2.
- SEAL ALL VERTICAL ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.

NOTE: TO ELIMINATE STEPPING & SPLICING OF THE WATERSTOP, THE TOP OF BODY MAY BE SLOPED BETWEEN THE LEVEL BEAM SEAT AREAS.

A506 BARS MAY BE PLACED AFTER ABUT. IS POURED BUT BEFORE CONC. HAS SET. IMBED BARS 1'-0".

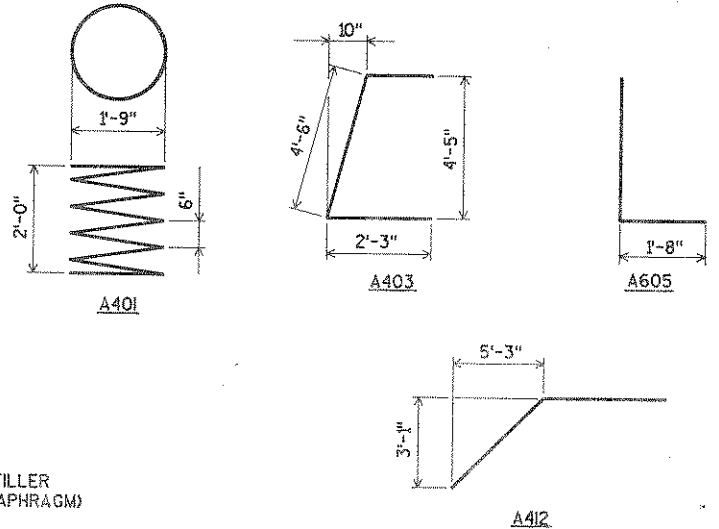
HP 10 x 42 STEEL PILING DRIVEN TO 45 TONS/PILE. MIN. BEARING VALUE. EST. LENGTH 45'-0" W. ABUT. AND 35'-0" E. ABUT.



BILL OF BARS (FOR ONE ABUTMENT ONLY)

BAR NO.	NO. REQ'D.	LENGTH	BENT BAR	COATED BAR	CUT. DIAG.	LOCATION
1,580# UNCOATED						
BODY @ PILES						
LOCATION						
A401	4	28-0	X			BODY @ PILES
A402	8	2-3				BODY @ PILES
A403	60	8-3	X			BODY VERT.
A604	4	25-8				BODY HORIZ.
A605	26	15-10	X			BODY HORIZ.
A506	16	2-0				BODY DOWELS
A407	10	14-0	X			WINGS VERT. E.F. SET 1
A508	20	7-10				WINGS HORIZ. E.F.
A609	4	9-7				WINGS HORIZ. E.F.
A410	4	6-2				WINGS HORIZ. E.F.
A411	4	3-9				WINGS HORIZ. E.F.
A412	4	6-10	X			WINGS DIAG. E.F.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.
B.F. DENOTES BACK FACE.
F.F. DENOTES FRONT FACE.
E.F. DENOTES EACH FACE.



PLANS PREPARED BY
AYRES ASSOCIATES Engineers/Architects
Planners/Surveyors
Owen Ayres & Associates Inc.
Eau Claire, Wisconsin

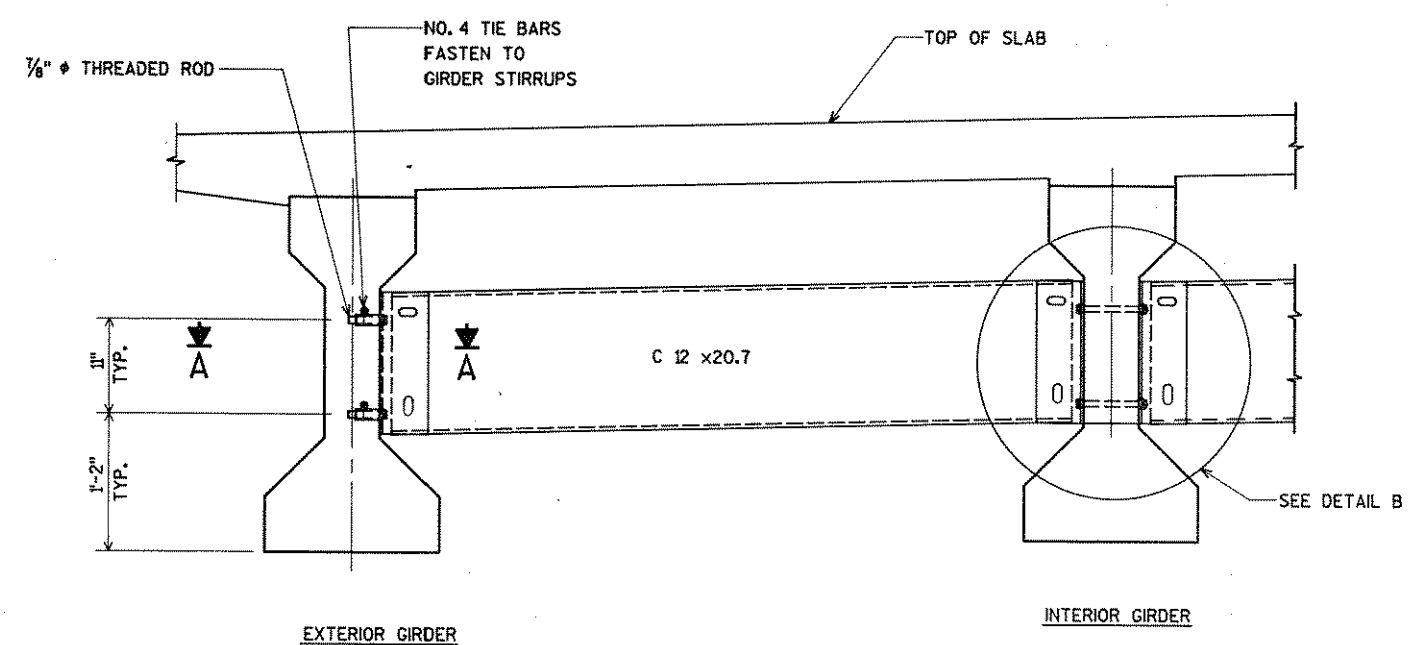
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURE B-35-110

Cons. Spec. 1989
Drawn By G.L.D.
Plans Checked C.B.M.

ABUTMENTS
SHEET 4 OF 9
X 82833

SUBSET: TRBRIDGE
FILE NAME: 0923ISUP

LEVELS ON 42.3, 4.5, 6.7, 8.9, 10.1, 12.13, 14.15, 16.17, 18.19, 20.21, 22.23, 24.25, 26.27, 28.29, 30.31, 32.33, 34.35, 36.37, 38.39, 40.41, 42.43, 44.45, 46.47, 48.49, 50.51, 52.53, 54.55, 56.57, 58.59, 60.61, 62.63



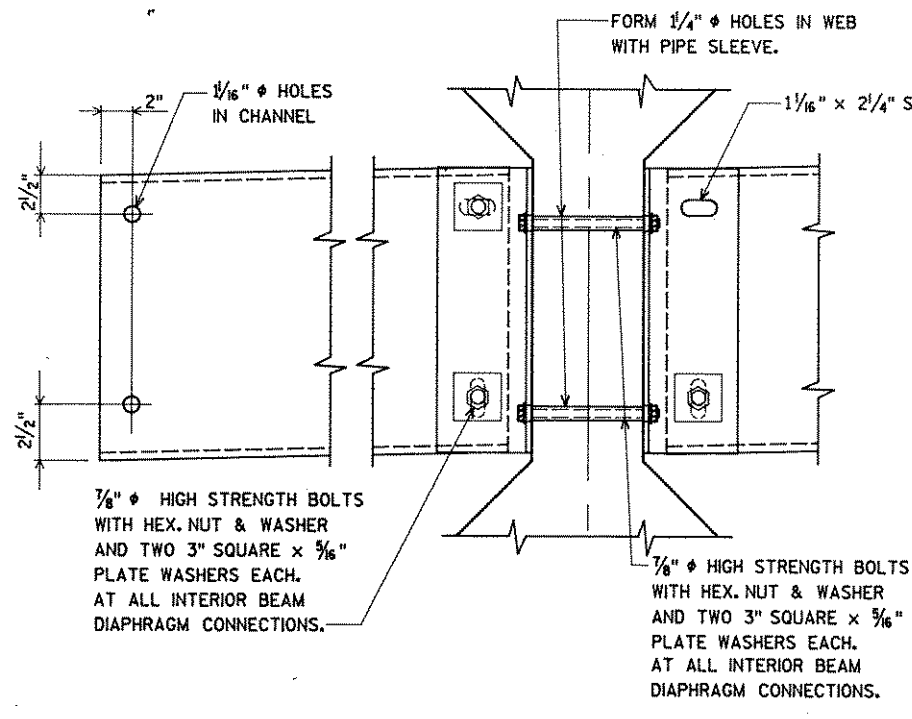
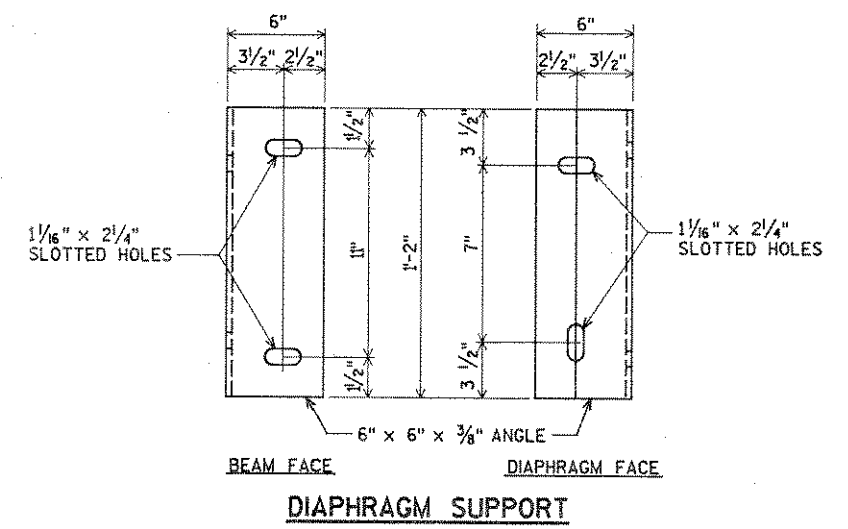
PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES FOR ALTERNATE DIAPHRAGM

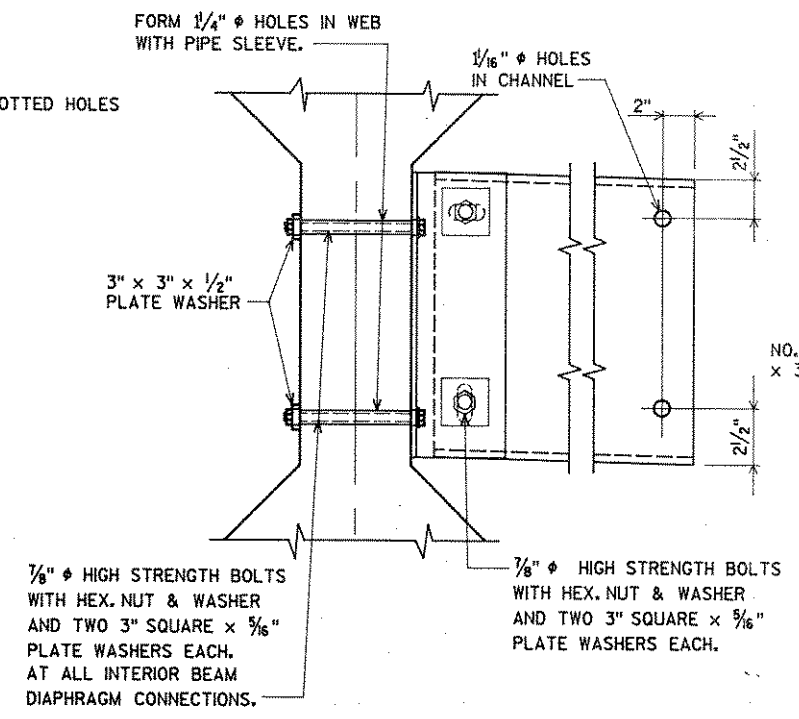
STEEL DIAPHRAGMS MAY BE USED IN LIEU OF CAST-IN-PLACE CONCRETE DIAPHRAGMS. NO ADDITIONAL PAYMENT WILL BE MADE IF STEEL DIAPHRAGMS ARE USED.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1

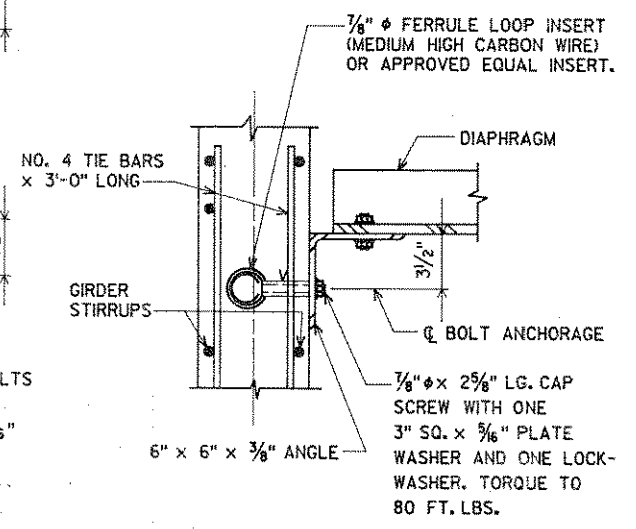
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT SI OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



DETAIL B

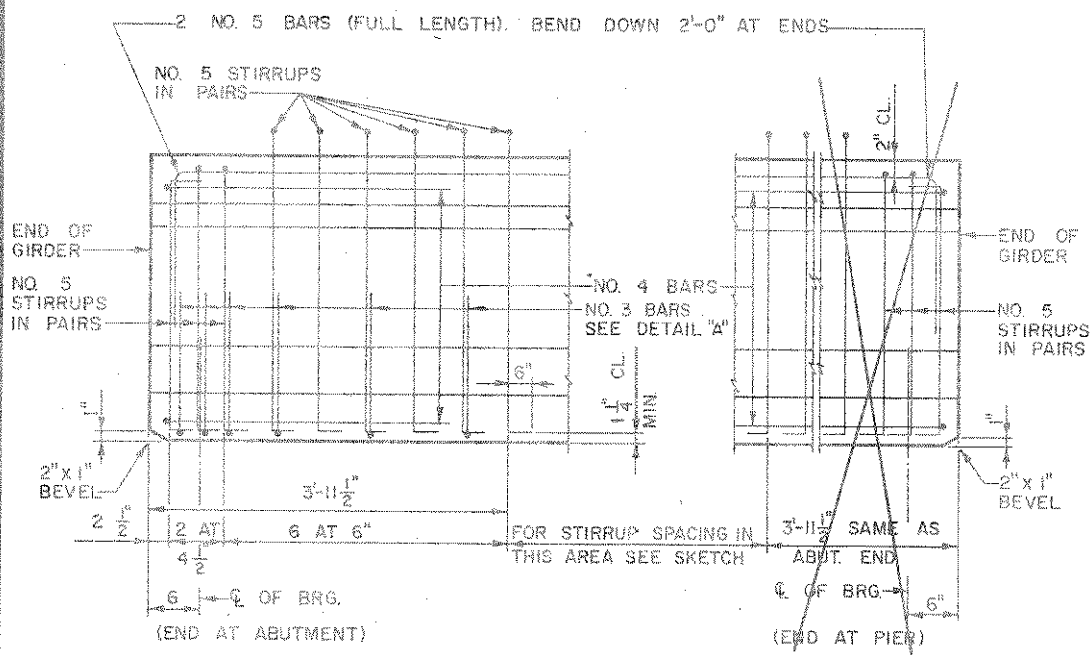


DETAIL B

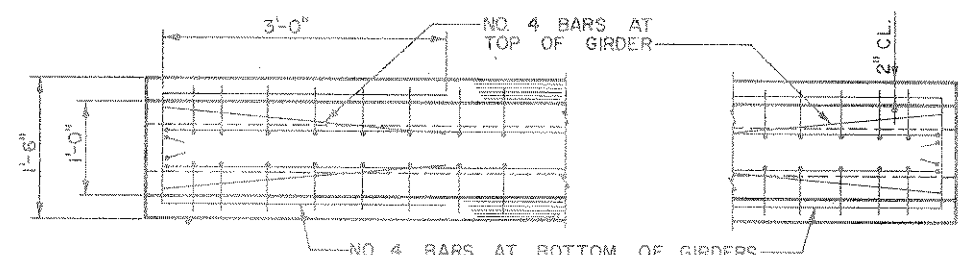


SECTION A

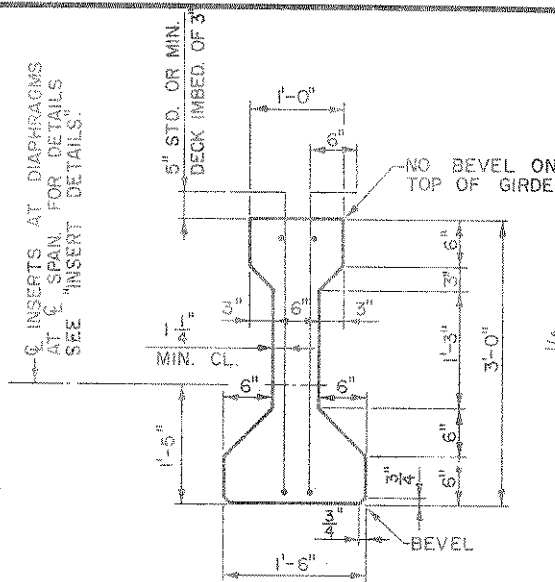
No.	Date	Revision	By
PLANS PREPARED BY			
AYRES ASSOCIATES Engineers/Architects Planners/Surveyors Owen Ayres & Associates Inc. Eau Claire, Wisconsin			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-35-110	
Const. Spec.	1989	Drawn By	G.L.D.
		Plans Checked	C.B.M.
ALT. STEEL INTER. DIAPHRAGM DETAILS			SHEET 5 OF 9
			X82833



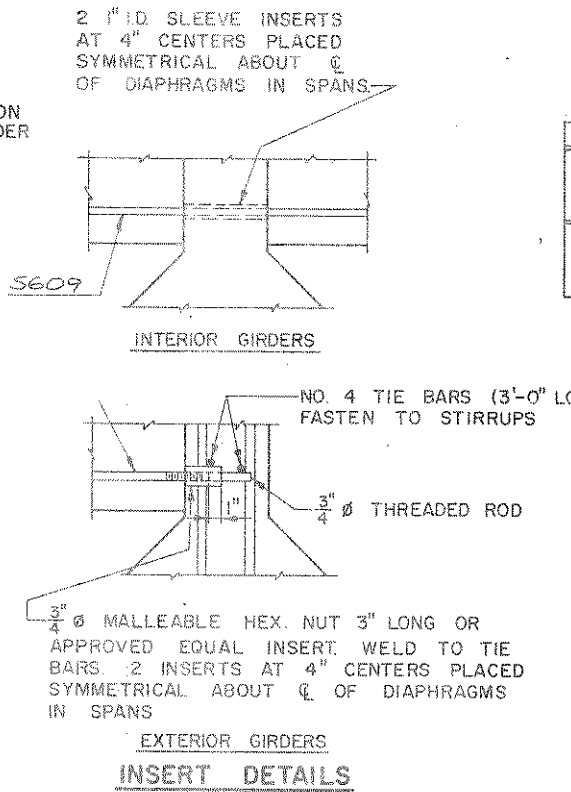
SIDE VIEW OF GIRDER



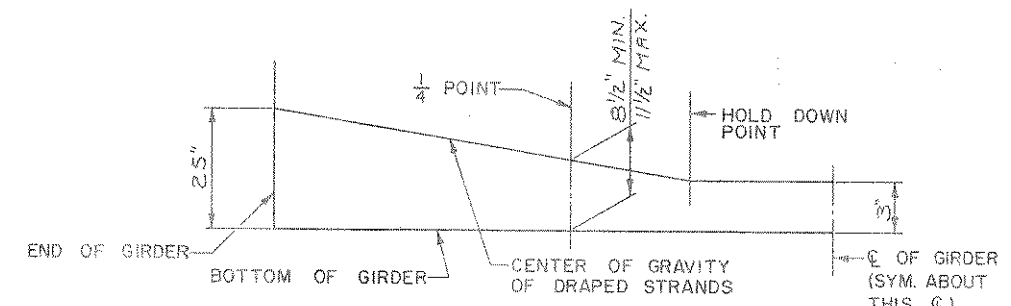
TOP VIEW OF GIRDER



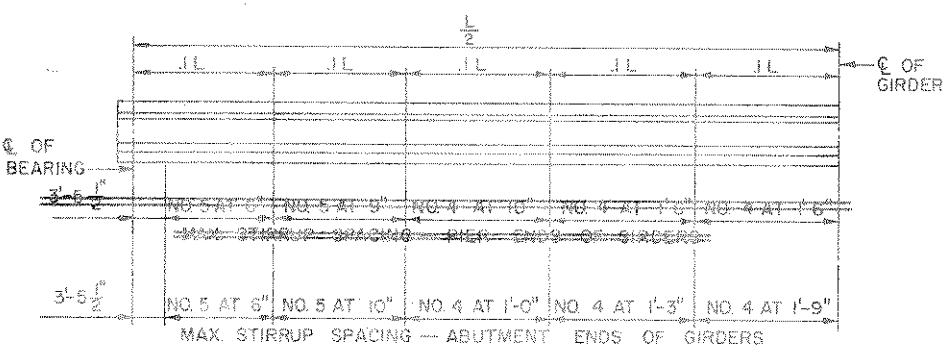
SECTION THRU GIRDER



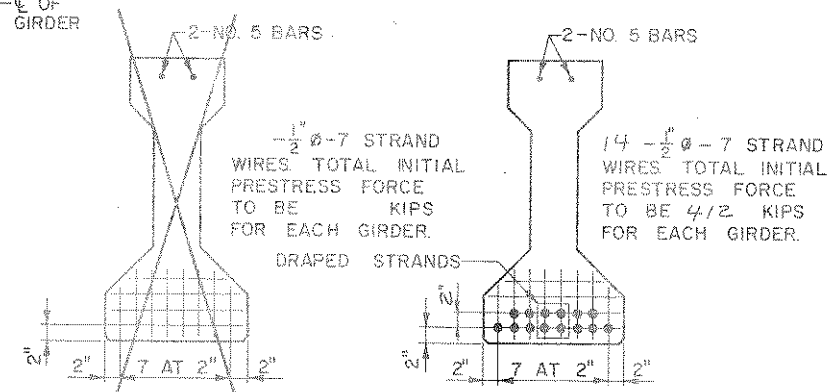
INSERT DETAILS



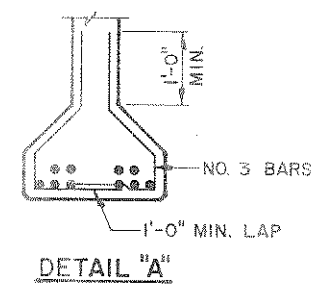
DRAPED STRAND PROFILE



SKETCH SHOWING MAXIMUM STIRRUP SPACING
 ALL STIRRUPS TO BE IN PAIRS AS SHOWN ABOVE.
 THE LOCATION OF STIRRUPS SHALL BE SUBMITTED FOR APPROVAL ON THE SHOP DRAWINGS.
 THE OVERALL LENGTH OF GIRDERS "L" IS 33'-0".



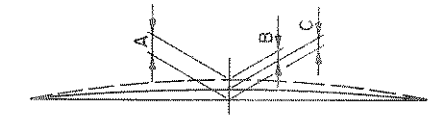
SECTION THRU GIRDER TAKEN AT CENTERLINE OF SPAN



DETAIL "A"

DEFLECTION DATA

CAMBER	SPAN 1	SPAN 2	SPAN 3
* A = PRESTRESS CAMBER			
* B = DEAD LOAD DEFLECTION			
* C = RESIDUAL CAMBER			
* A = PRESTRESS CAMBER	1"		
* B = DEAD LOAD DEFLECTION	3/8"		
* C = RESIDUAL CAMBER	5/8"		



* PRESTRESS CAMBER AND DEAD LOAD DEFLECTION DATA SHOWN ARE THEORETICAL AND MAY VARY WITH CONCRETE STRENGTH, VARIABLE PRESTRESSING CONDITIONS AND PRESTRESS LOSSES.

MINIMUM CYLINDER STRENGTH OF CONCRETE AT TIME OF TRANSFER OF PRESTRESS FORCE f'_{ci} (p.s.i.)

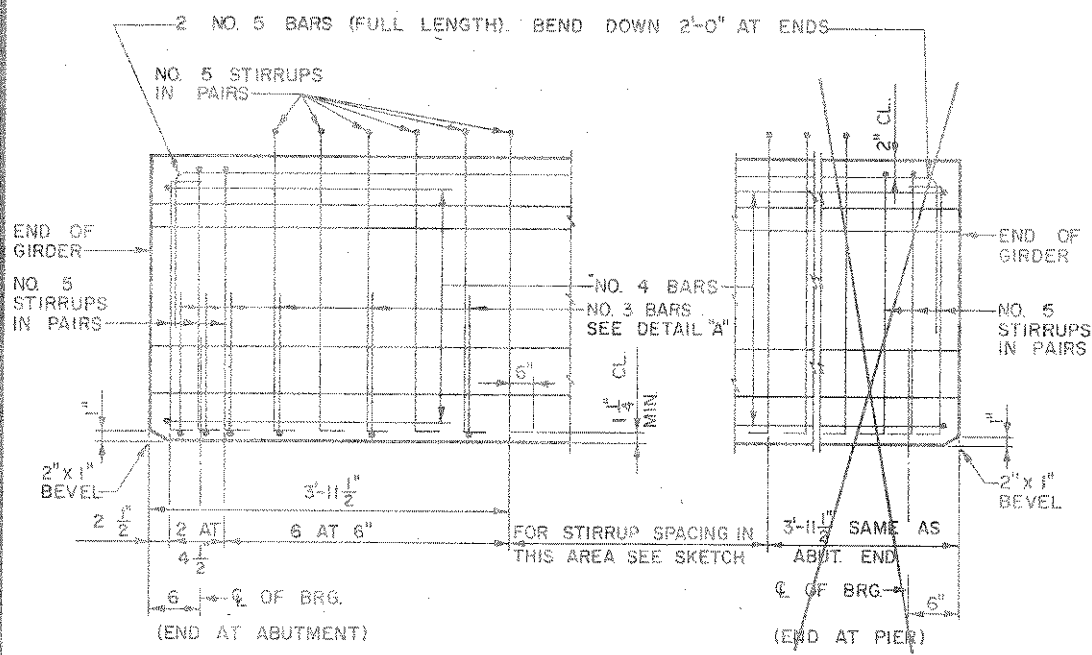
GIRDER TYPE	SPAN 1	SPAN 2	SPAN 3
DRAPED PATTERN □			
DRAPED PATTERN ▲	4800		
SPREAD PATTERN			

GENERAL NOTES

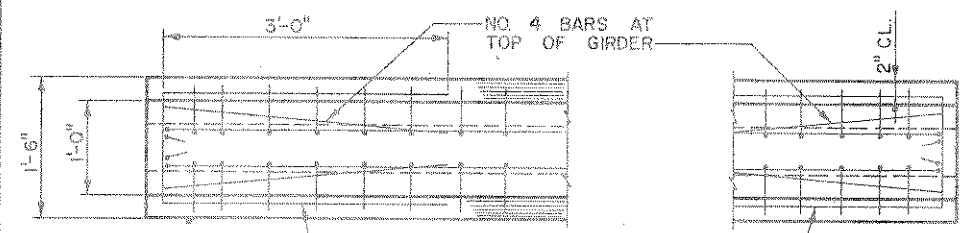
THE GIRDER MANUFACTURER SHALL PROVIDE A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN. STRANDS SHALL BE FLUSH WITH END OF GIRDERS. PRESTRESSING STRANDS SHALL HAVE AN ULTIMATE STRENGTH OF 270,000 p.s.i. ALL NON PRESTRESSED BAR STEEL REINFORCEMENT SHALL BE GRADE 60. TOPS OF GIRDERS TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO SLAB, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL BE TROWEL FINISHED.

□ DENOTES STRESS RELIEVED GIRDER
 ▲ DENOTES LOW RELAXATION GIRDER

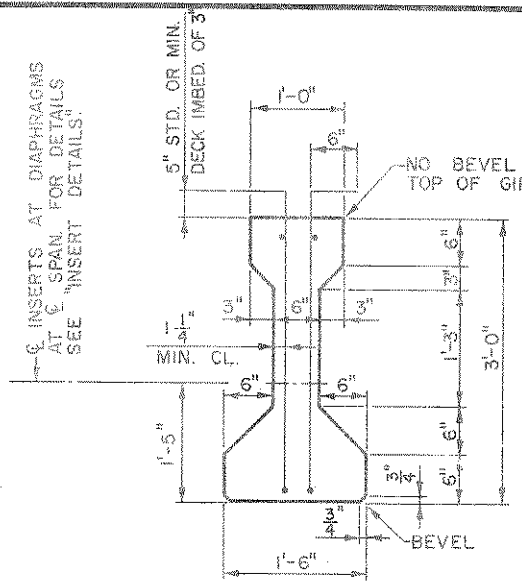
No.	Date	Revision	By
Engineers / Architects Planners / Surveyors Owen Ayres & Associates Inc. Eau Claire, Wisconsin			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-35-110			
Cont. Spec.	1989	Drawn By G.L.D.	Plans Checked C.B.M.
36" PRESTRESSED GIRDER DETAILS			SHEET 6 OF 9 X82833



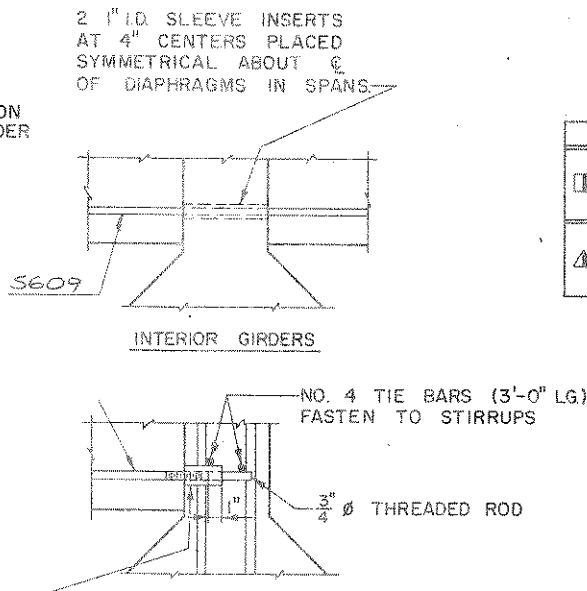
SIDE VIEW OF GIRDER



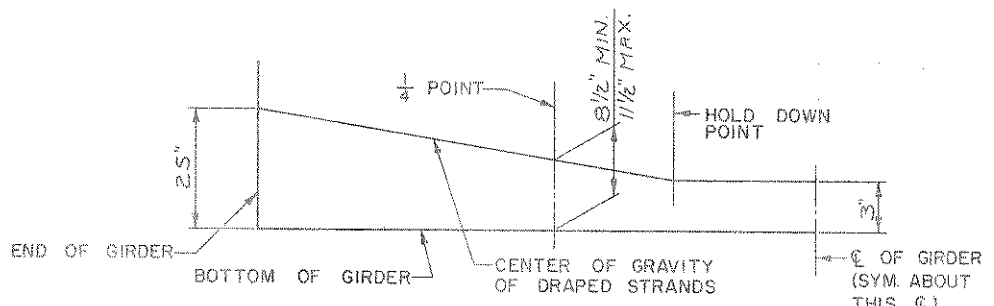
TOP VIEW OF GIRDER



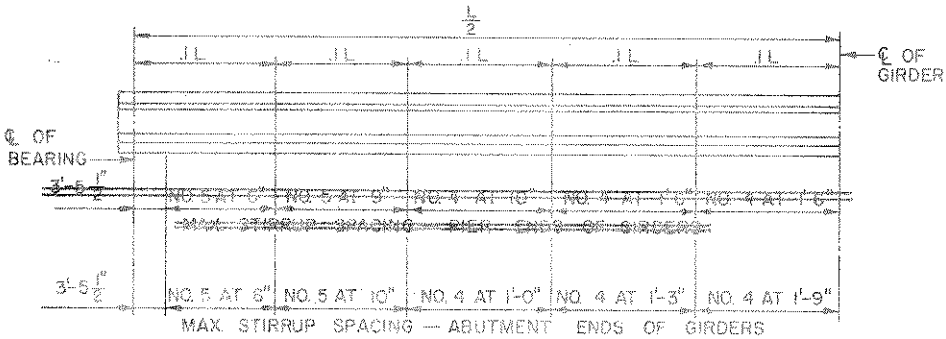
SECTION THRU GIRDER



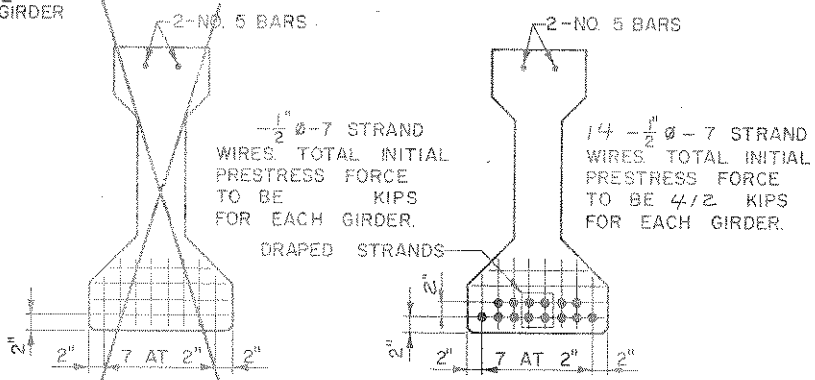
INSERT DETAILS



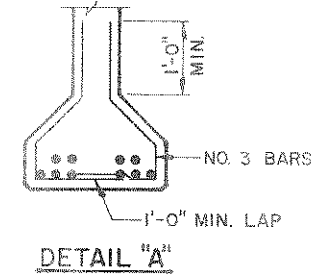
DRAPED STRAND PROFILE



SKETCH SHOWING MAXIMUM STIRRUP SPACING
 ALL STIRRUPS TO BE IN PAIRS AS SHOWN ABOVE.
 THE LOCATION OF STIRRUPS SHALL BE SUBMITTED FOR APPROVAL ON THE SHOP DRAWINGS.
 THE OVERALL LENGTH OF GIRDER "L" IS 53'-0".



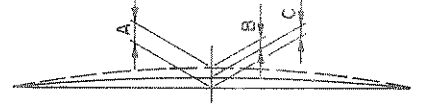
SECTION THRU GIRDER TAKEN AT C OF SPAN



DETAIL "A"

DEFLECTION DATA

CAMBER	SPAN 1	SPAN 2	SPAN 3
* A = PRESTRESS CAMBER			
* B = DEAD LOAD DEFLECTION			
* C = RESIDUAL CAMBER			
* A = PRESTRESS CAMBER	1"		
* B = DEAD LOAD DEFLECTION	3/8"		
* C = RESIDUAL CAMBER	5/8"		



* PRESTRESS CAMBER AND DEAD LOAD DEFLECTION DATA SHOWN ARE THEORETICAL AND MAY VARY WITH CONCRETE STRENGTH, VARIABLE PRESTRESSING CONDITIONS AND PRESTRESS LOSSES.

MINIMUM CYLINDER STRENGTH OF CONCRETE AT TIME OF TRANSFER OF PRESTRESS FORCE f'ci (p.s.i.)

GIRDER TYPE	SPAN 1	SPAN 2	SPAN 3
DRAPED PATTERN □			
DRAPED PATTERN ▲	4800		
SPREAD PATTERN			

GENERAL NOTES

THE GIRDER MANUFACTURER SHALL PROVIDE A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDER. ALL GIRDER SHALL BE CAST FULL LENGTH AS SHOWN. STRANDS SHALL BE FLUSH WITH END OF GIRDER. PRESTRESSING STRANDS SHALL HAVE AN ULTIMATE STRENGTH OF 270,000 p.s.i. ALL NON PRESTRESSED BAR STEEL REINFORCEMENT SHALL BE GRADE 60. TOPS OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO SLAB, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL BE TROWEL FINISHED.

□ DENOTES STRESS RELIEVED GIRDER
 ▲ DENOTES LOW RELAXATION GIRDER

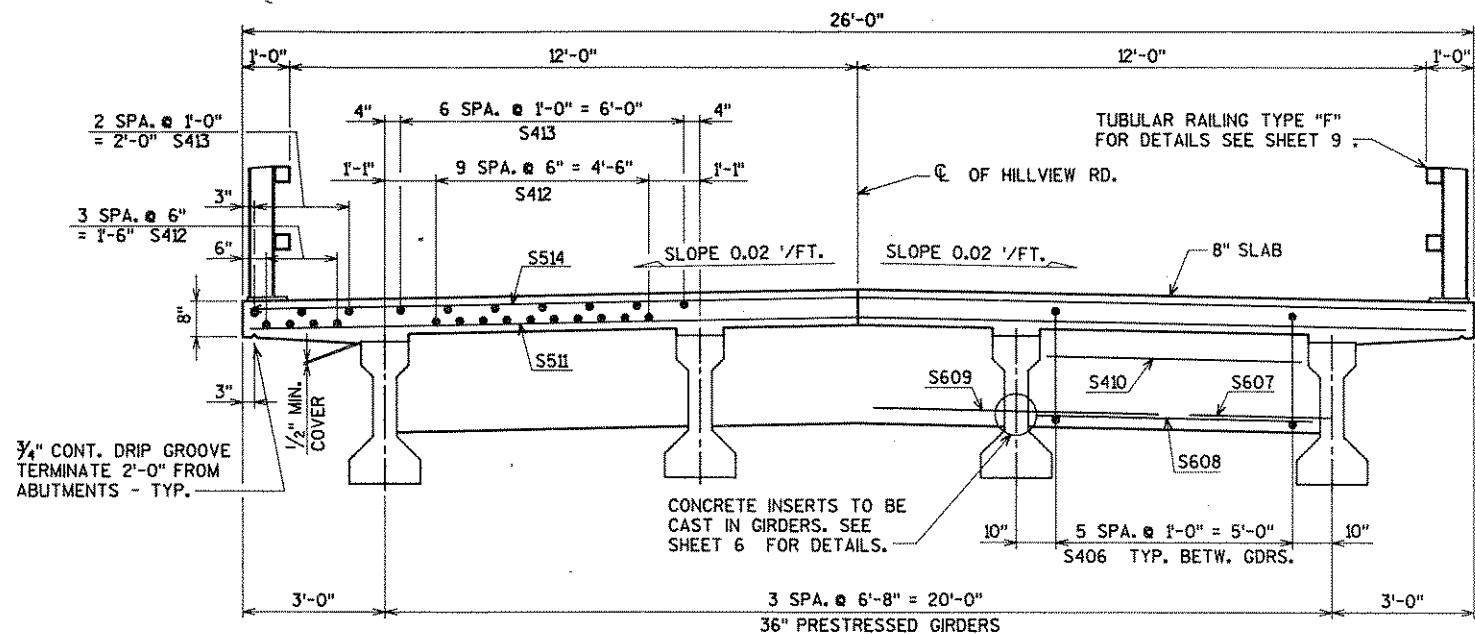
No.	Date	Revision	By
		Engineers / Architects Planners / Surveyors Owen Ayres & Associates Inc. Eau Claire, Wisconsin	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-35-110			
Const. Spec.	1989	Drawn By G.L.D.	Plans Checked C.B.M.
36" PRESTRESSED GIRDER DETAILS			SHEET 6 OF 9 X82833

SUBSET: TRBRIDGE
FILE NAME: 09231SUP

LABELS ON 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

CORRECTED BY: _____
DATE: _____

STATE PROJECT NUMBER	SHEET NO.
9857-02-70	8.6

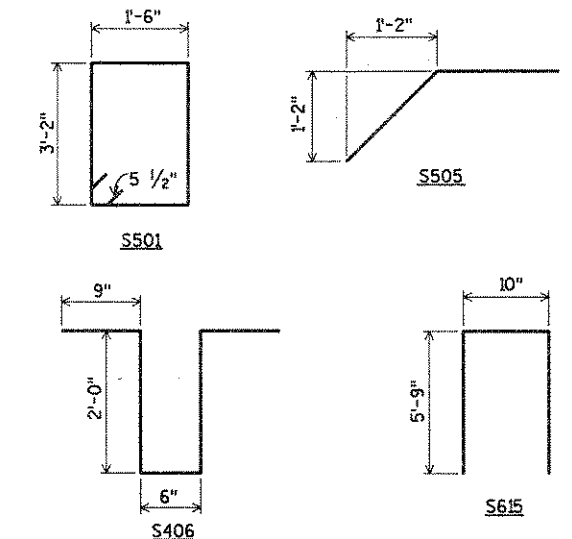
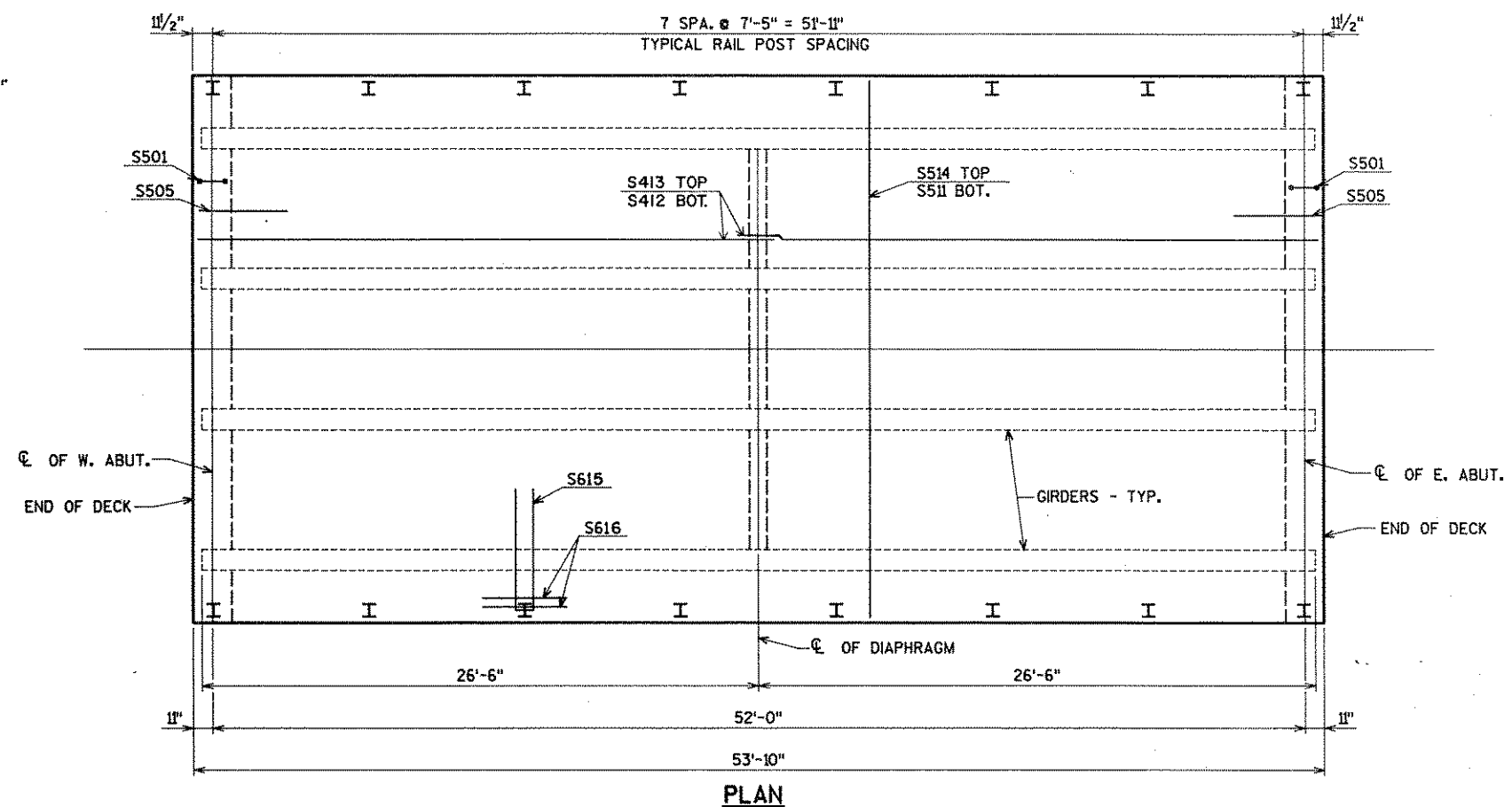


TYPICAL CROSS SECTION THRU DECK

BILL OF BARS

BAR NO.	NO. REQ'D.	LENGTH	BENT BAR	COATED BAR	CUT. DIAGR.	5,220 * UNCOATED 4,550 * COATED	
						LOCATION	
S501	48	10-0	X				DIAPHRAGM @ ABUT. VERT.
S602	8	25-8					DIAPHRAGM @ ABUT. HORIZ.
S603	8	1-11					DIAPHRAGM @ ABUT. HORIZ.
S604	12	4-10					DIAPHRAGM @ ABUT. HORIZ.
S505	48	3-7	X	X			DIAPHRAGM @ ABUT.
S406	18	5-8	X				DIAPHRAGM IN SPAN VERT.
S607	4	3-1					DIAPH. IN SPAN HORIZ. EXT. GDR.
S608	6	5-10					DIAPH. IN SPAN HORIZ. BETW. GDR.
S609	4	6-2					DIAPH. IN SPAN HORIZ. INT. GDR.
S410	6	5-4					DIAPH. IN SPAN HORIZ. BETW. GDR.
S511	101	25-8					SLAB TRANSVERSE BOT.
S412	76	27-6					SLAB LONGITUDINAL BOT.
S413	54	27-6	X				SLAB LONGITUDINAL TOP
S514	108	25-8	X				SLAB TRANSVERSE TOP
S615	16	12-0	X	X			SLAB @ RAIL POSTS
S616	32	4-0	X	X			SLAB @ RAIL POSTS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.
⊞ THREAD ONE END 3".



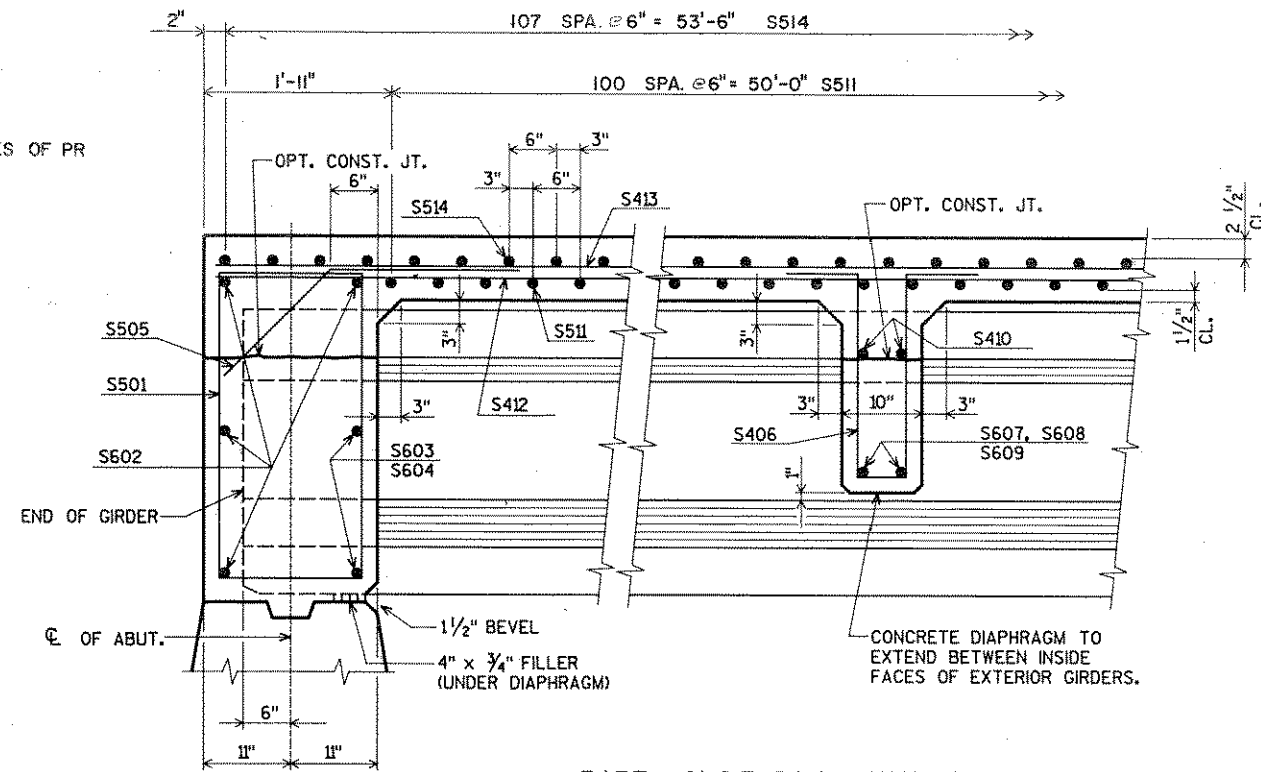
No.	Date	Revision	By
PLANS PREPARED BY AYRES Engineers/Architects Planners/Surveyors ASSOCIATES Owen Ayres & Associates Inc. Eau Claire, Wisconsin			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURE B-35-110			
Constr. Spec.	1989	Drawn By	G.L.D.
		Plans Checked	C.B.M.
SUPERSTRUCTURE			SHEET 7 OF 9
			X 02833

SUBSET: TRBRIDGE
FILE NAME: 09231SUP

LEVELS ON 4,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

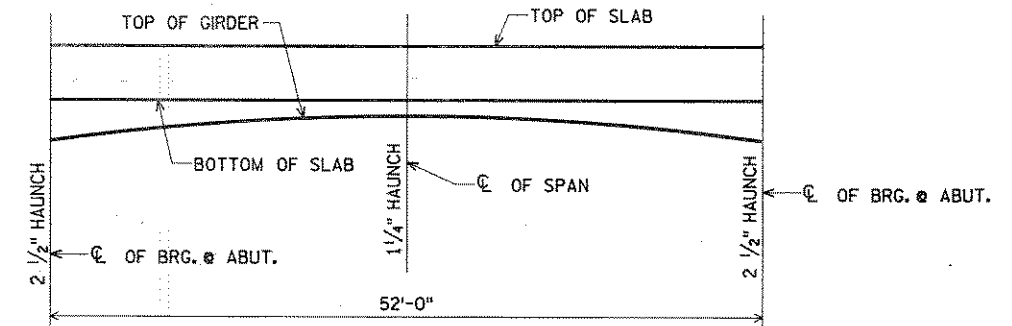
DATE: _____
DATE: _____
BACK CHECKED BY: _____
CORRECTED BY: _____

ALL SURFACES OF PR

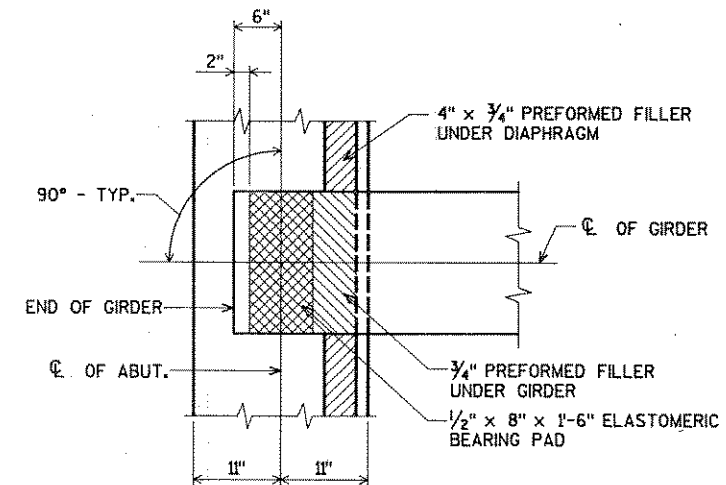


PART LONGITUDINAL SECTION

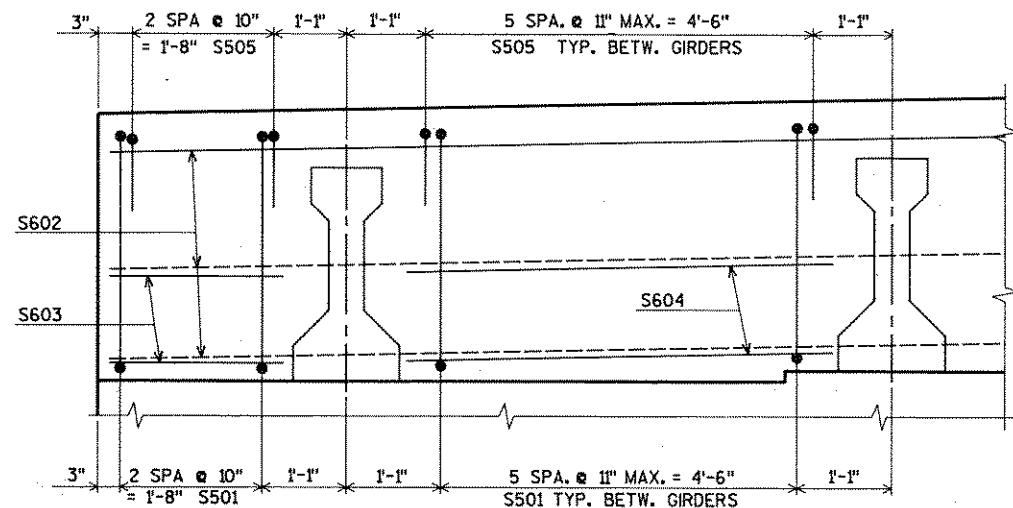
ALL SURFACES OF PRESTRESSED GIRDERS THAT WILL BE WITHIN THE LIMITS OF THE ABUTMENT CONCRETE DIAPHRAGM SHALL BE COATED WITH PARAFIN WAX.



SLAB FORMING DIAGRAM

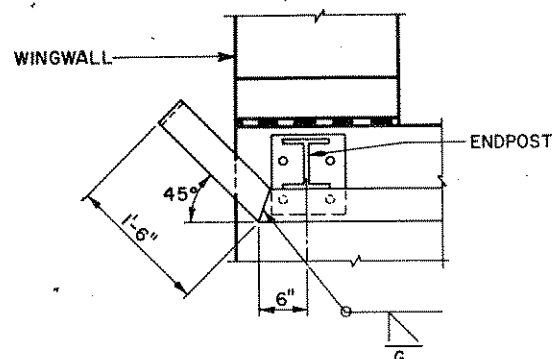


BEARING PLAN

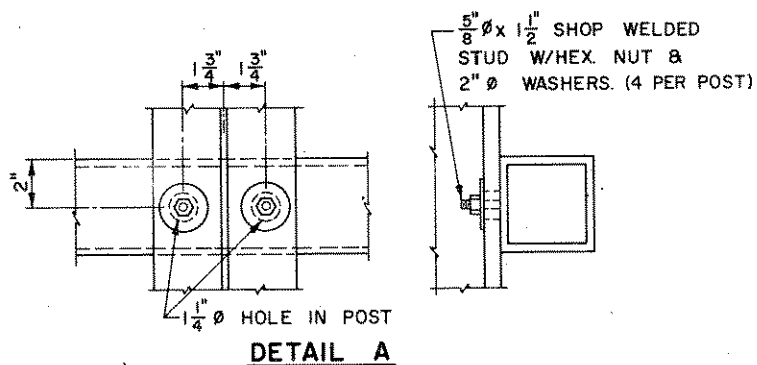


SECTION AT ABUTMENT

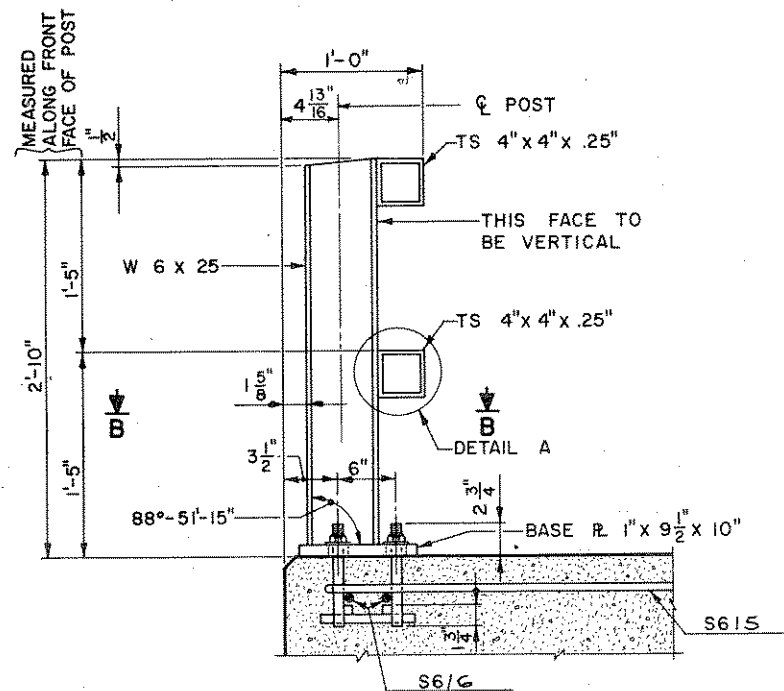
No.	Date	Revision	By
PLANS PREPARED BY			
AYRES ASSOCIATES Engineers/Architects Planners/Surveyors Owen Ayres & Associates Inc. Eau Claire, Wisconsin			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-35-110			
Const. Spec.	1989	Drawn By G.L.D.	Plans Checked C.B.M.
SUPERSTRUCTURE DETAILS			SHEET 8 OF 9
			X 02833



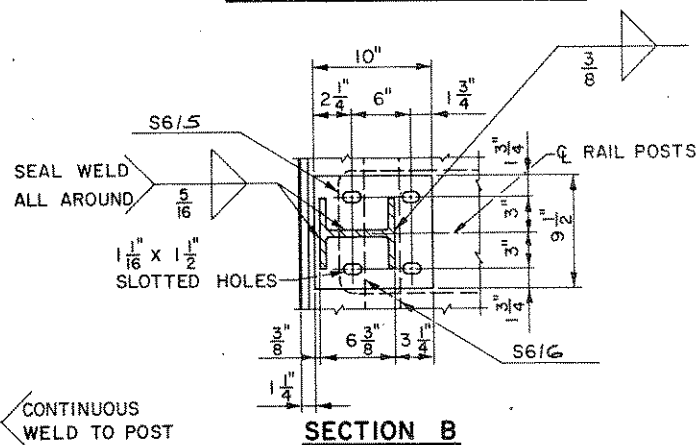
END DETAIL FOR WINGS



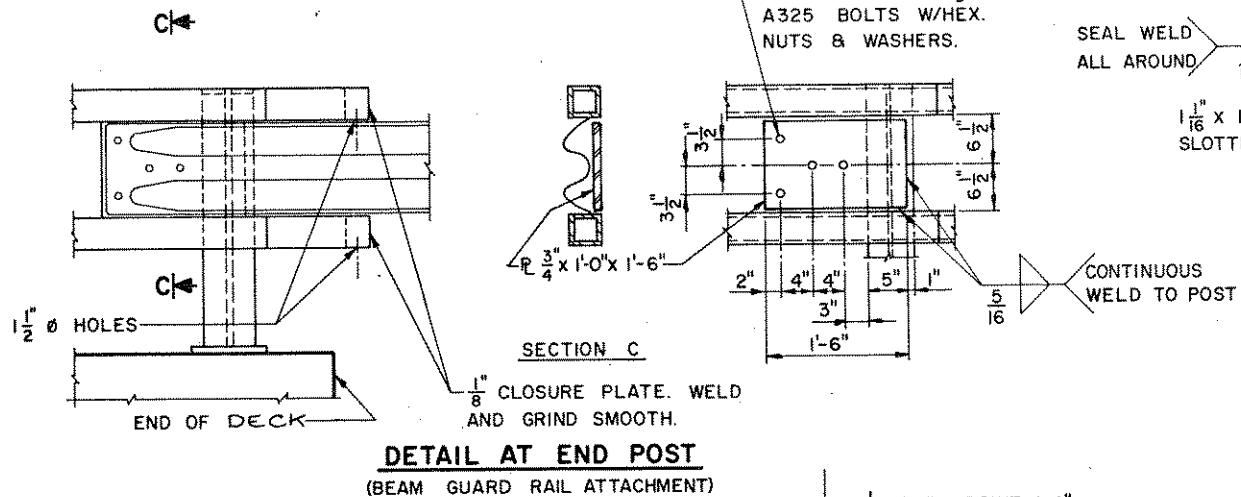
DETAIL A



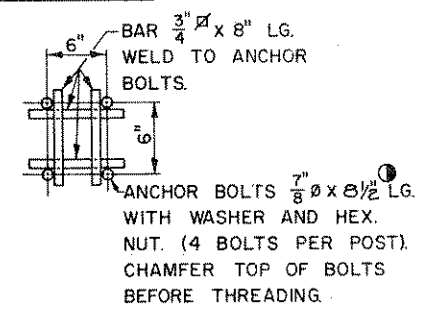
SECTION THRU RAILING



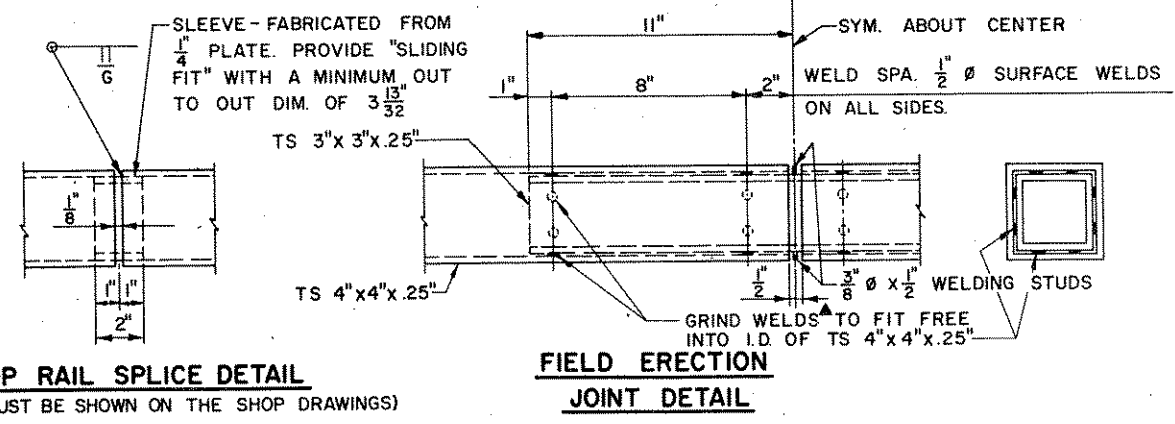
SECTION B



DETAIL AT END POST (BEAM GUARD RAIL ATTACHMENT)

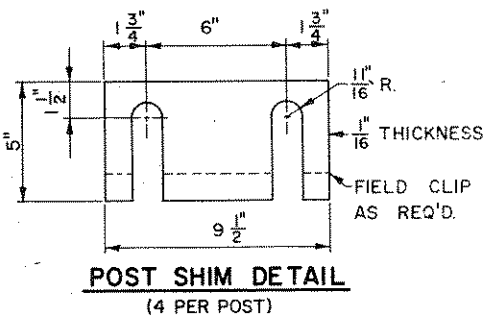


ANCHOR BOLT DETAIL



FIELD ERECTION JOINT DETAIL

SHOP RAIL SPLICE DETAIL (LOCATION MUST BE SHOWN ON THE SHOP DRAWINGS)



POST SHIM DETAIL (4 PER POST)

GENERAL NOTES

1. BID ITEM SHALL BE "TUBULAR RAILING, TYPE F"
2. POST BASE PLATE SHALL BE FLAT WITH ALL SURFACES SMOOTH & FREE FROM WARP & ALL EDGES SMOOTH, STRAIGHT & VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.
3. RAILING SHALL BE 4" x 4" x .25" STRUCTURAL TUBING CONFORMING TO A.S.T.M. DESIGNATION A36.
4. ANCHOR BOLTS SHALL BE 7/8" NOMINAL CONFORMING TO A.S.T.M. A449 WITH 3" THREAD AND A325 NUTS AND WASHERS.
5. CAULK EXPOSED OPENINGS BETWEEN SHIMS.
6. POST, BASE PLATES & SHIMS SHALL BE MADE FROM MATERIAL CONFORMING TO A.S.T.M. DESIGNATION A36. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST NORMAL TO GRADE LINE.
7. PLACE ANCHOR BOLTS NORMAL TO BASE PLATE.
8. ALL MEMBERS, INCLUDING UPPER 4" OF ANCHOR BOLTS, SHALL BE GALVANIZED AFTER FABRICATION.
9. WELD WITH E70 ELECTRODES.
10. FILL BOLT SLOT OPENINGS IN POST SHIMS AND BASE PLATE WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.
11. STEEL SHIMS SHALL BE USED UNDER POSTS WHERE REQUIRED FOR ALIGNMENT.
12. RAILING SHALL BE FABRICATED IN 2 AND 3 PANEL LENGTHS.
13. PRIOR TO GALVANIZING, ALL STEEL RAILING SHALL BE GIVEN A NO. 6 COMMERCIAL BLAST CLEANING BY S.S.P.C. SPECIFICATIONS. BLAST CLEANING IS NOT REQUIRED FOR COLD FORMED 4" x 4" x .25" STRUCTURAL TUBING, EXCEPT TO REMOVE WELDING SLAG AND IMPERVIOUS SUBSTANCES.

- ▲ MINIMUM 5/8" FLAT SURFACE DIAMETER PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.
- OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION. (MIN. YIELD OF 92 K.S.I. AND ELONGATION OF 14%).
- ① 1'-3" LG. ANCHOR BOLTS AT END POSTS.

No.	Date	Revision	By
AYRES ASSOCIATES Engineers / Architects Planners / Surveyors Over Ayres & Associates Inc. Eau Claire, Wisconsin			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-35-110			
Const. Spec. 1989	Drawn By G.L.D.	Plans Checked C.B.M.	
TUBULAR RAILING TYPE "F"			SHEET 9 OF 9 X 82833