

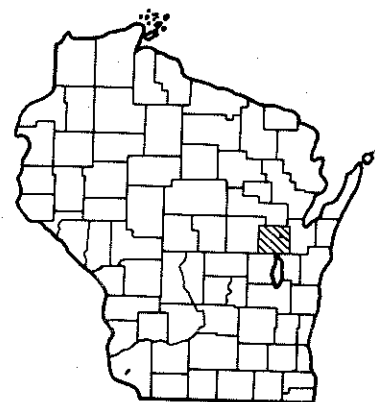
PLAN #740

AS BUILT PLAN #740

Index of Sheets

Sheet No.	1	Title
Sheet No.	2	Typical Cross Sections
Sheet No.	3	Estimate of Quantities
Sheet No.	3	Miscellaneous Quantities
Sheet No.	-	Right of Way Plat
Sheet No.	5	Plan and Profile
Sheet No.	6 - 6.5	Standard Details
Sheet No.	8 - 8.6	Structure Plans
Sheet No.	-	Computer Earthwork Data
Sheet No.	9 - 9.2	Cross Sections

TOTAL SHEETS = 20



Design Designation

A. D. T. (1978)	= 150
A. D. T. (1998)	= 190
D. H. V. (1998)	= 27
D.	= 50-50
T.	= 5 %
V.	= 50 M.P.H.

Conventional Signs

County Line	-----	Culverts in Place	-----
Township or Range Line	-----	Culverts Required	-----
Section Line	-----	Drop Inlet	-----
New Right of Way Line	-----	Power Pole	-----
Present Right of Way Line	-----	Telephone or Telegraph Pole	-----
Wire Fence	-----	Right of Way Markers	-----
Corporate or City Limits	-----	Reference Stake for Hubs Only	-----
Property Line	-----	Marsh	-----
Traveled Way or P.E.	-----	Hedge	-----
Railroads	-----	Trees	-----
Base or Survey Line	-----	Ground Elevation	-----
Caution Symbol (combustible fluids under pressure)	-----	Grade Elevation	-----

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

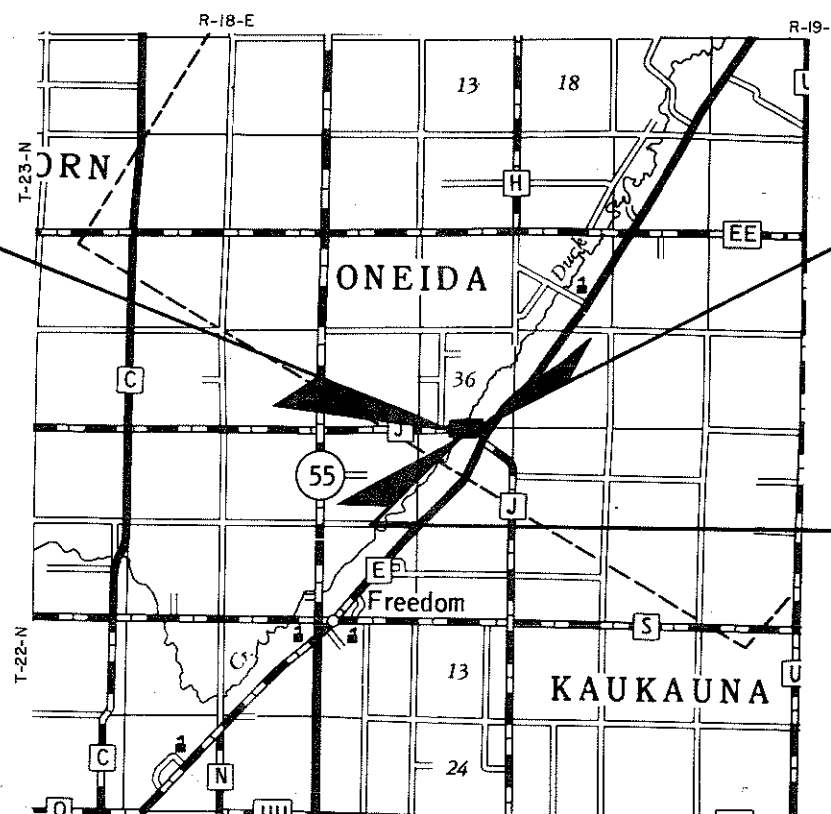
B-44-086
City "J"

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6017-1-71	SOS 4499(2)	I

PLAN AND PROFILE OF PROPOSED S.T.H. 55 - C.T.H. "E" ROAD DUCK CREEK BRIDGE AND APPROACHES C.T.H. "J" OUTAGAMIE COUNTY

STATE PROJECT NUMBER
6017-1-71

Scales
Plan 1 in = 50'
Profile Hor 1 in = 50' Vert 1 in = 5'
Cross Sections Hor 1 in = 5' Vert 1 in = 5'



BEGIN PROJECT 6017-1-71

STA. 76+00
N= 217,085 (±200')
E= 2,454,165 (±200')
1.40' NORTH AND 343.98' WEST OF
THE N. 1/4 CORNER OF SECTION 1,
T. 22 N., R. 18 E.

END PROJECT 6017-1-71

STA. 84+00
N= 217,085 (±200')
E= 2,454,965 (±200')
0.00' NORTH AND 456.02' EAST OF
N. 1/4 CORNER OF SECTION 1,
T. 22 N., R. 18 E.

STRUCTURE B-44-86
STA. 80+40.08 TO 81+31.92

Layout
Scale 0 .5 1 2 MILES

Total Net Length of Centerline = .52 Mi. (RURAL)

AS BUILT PLAN
NO. 740

SUPERVISOR G. BROCKINGTON
RESIDENT L. LACENSKI
CONTRACTOR TANESVILLE CONST. Co.
COMPLETED 8-14-79

APPROVED FOR
OUTAGAMIE
COUNTY BY

5-11-78 Michael J. Manda
(Date) (Signature of Official)

ORIGINAL
PLANS PREPARED BY
BARRIENTOS & ASSOCIATES, INC.
CONSULTING ENGINEERS
MADISON, WISCONSIN



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Surveyor _____ District Checker R.G.P.
Designer _____ C.O. Checker R.A.H.
District Supervisor J.E.F. C.O. Monitor _____

Approved: _____
Date 7/25/78 C.A. Ryan
District Engineer

Approved: _____
Date 8-29-78 D.D. Strand
Chief of Facilities Development

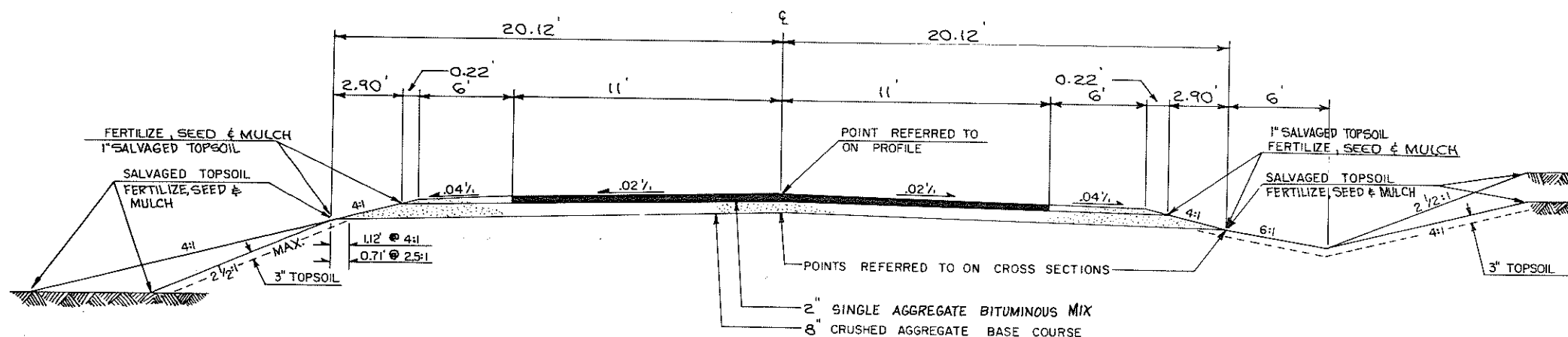
Approved: _____
Date 9-5-78 H. S. Sider
State Highway Engineer

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

Approved: _____
Date _____
Division Engineer

All coordinates shown on this plan are referenced to the
WISCONSIN COORDINATE SYSTEM CENTRAL ZONE and
are scaled from the APPLETON QUADRANGLE for
identification only.

C-14



TYPICAL ROADWAY CROSS SECTION

STATE PROJECT NUMBER	SHEET NO.
6017-1-71	2
TYPICAL CROSS SECTION FOR C.T.H. "J" OUTAGAMIE COUNTY	

GENERAL NOTES

FILL AS SHOWN ON THE PLAN SHEETS PERTAINS TO EMBANKMENT CONSTRUCTED FROM BORROW EXCAVATION AND /OR UNCLASSIFIED EXCAVATION. THE SHRINKAGE ALLOWANCE USED TO COMPUTE THE VOLUME OF MATERIAL NECESSARY TO COMPLETE THE FILL WAS 25 %.

EXACT LOCATION OF ACCESS POINTS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCLUSIVE OF THE ROADBED, ARE TO BE FERTILIZED AND SEEDED AS DIRECTED BY THE ENGINEER. SEED MIXTURE NUMBER 1 SHALL BE USED. PRIVATE UTILITY COMPANIES SHALL ADJUST OR MOVE ALL FACILITIES WHICH INTERFERE WITH NEW CONSTRUCTION. UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. VERIFICATION AS TO THE LOCATION TO THE SATISFACTION OF THE CONTRACTOR OF ALL UTILITIES WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE ASSUMED AS A CONDITION OF THE CONTRACT.

THE WISCONSIN DIVISION OF HIGHWAYS SHALL FURNISH THE CONTRACTOR A BRASS MONUMENT WHICH SHALL BE SET IN THE STRUCTURE AS DESIGNATED BY THE ENGINEER.

STANDARD DETAIL DRAWINGS

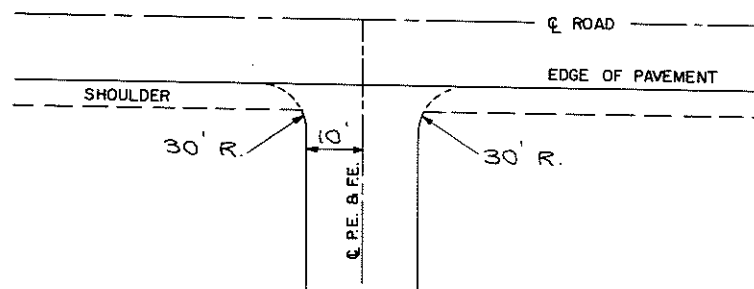
8F1-8	APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH
12A3-2	NAME PLATE (STRUCTURES)
14B2-4a&b	CLASS "A" STEEL PLATE BEAM GUARD AND STEEL PLATE BEAM MEDIAN GUARD (TWO SHEETS)
15C1-5	CONSTRUCTION BARRICADES AND STANDARD SIGNS
16A1-2	LANDMARK REFERENCE MONUMENTS

UTILITIES LOCATED WITHIN THIS PROJECT

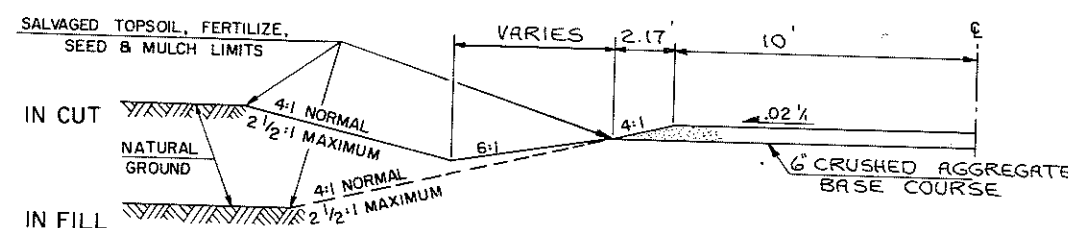
WISCONSIN ELECTRIC POWER COMPANY
MR. WILL PURTHATZKE EXT. 420
800 SO. LYNDPALE AVE.
APPLETON, WIS. 54911
1-414-734-1411

WISCONSIN PUBLIC SERVICE
MR. R.C. BUTTKE
600 N. ADAMS ST.
GREEN BAY, WIS. 54301
1-414-432-3311

WISCONSIN TELEPHONE COMPANY
MR. EARL WICHMAN, CABLE MAINTENANCE CENTER
221 W. WASHINGTON ST.
APPLETON, WIS. 54911
1-414-739-8867



PLAN OF P.E. & F.E.



TYPICAL 1/2 SECTION FOR P.E. & F.E.

GRADE , BASE , SURFACE
(SINGLE AGGREGATE BITUMINOUS MIX) AND
STRUCTURE B-44-86.

STATE PROJECT NUMBER	SHEET NO.
----------------------	-----------

6017 - 1 - 71

3

	STATION TO STATION		NET LENGTH OF CENTER LINE	UNCLASSIFIED EXCAVATION	BORROW EXCAVATION	FINISHING ROADWAY	CRUSHED AGGREGATE BASE COURSE	SINGLE AGGREGATE BITUMINOUS MIX		REMOVING OLD CULVERT, STA. 77+95		CULVERT PIPE, CLASS III, 24-INCH		APRON ENDWALLS FOR CULVERT PIPE, 24-INCH	ANCHORAGES FOR STEEL PLATE BEAM GUARD	STEEL PLATE BEAM GUARD, CLASS A	MOBILIZATION	SALVAGED TOPSOIL	MULCHING	FERTILIZER	SEEDING
	ITEM NO. UNIT	LIN. FT.																			
1	STR. 76+00-84+00		800	145	3074	1	960	235		1		26		2	4	516	1	3,285	2,985	2	40
	PROJECT TOTAL		800	145	3074	1	960	235		1		26		2	4	516	1	3,285	2,985	2	40

SODDING	FIELD OFFICE, TYPE A	LANDMARK REFERENCE MONUMENTS		BRIDGES (STRUCTURES OVER 20 FEET SPAN) B-44-86											
				REMOVING OLD BRIDGE, STATION 80+86	EXCAVATION FOR STRUCTURES, BRIDGES B-44-86	CONCRETE MASONRY, BRIDGES	PRESTRESSED GIRDER, I TYPE, 54-INCH	HIGH- STRENGTH BAR STEEL REINFORCE- MENT, BRIDGES	STRUCTURAL CARBON STEEL	BEARING PADS, ELASTO- MERIC	STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	TUBULAR RAILING, TYPE F STRUCTURE B-44-86	HEAVY RIPRAP	ROCK PENETRATION POINTS	
63101 SQ. YD.	64201 L.S.	62101 EACH		20351 L.S.	20610 L.S.	50201 CU. YD.	50307 LIN. FT.	50504 POUND	50601 POUND	50625 SQ. FT.	51121 LIN. FT.	51340 L.S.	60602 C.Y.	90001 EACH	
1 300	1	4		1	1	153	455	24,380	360	15	270	1	200	12	
T 300	1	4		1	1	153	455	24,380	360	15	270	1	200	12	

DETAIL SUMMARY OF MISCELLANEOUS QUANTITIES

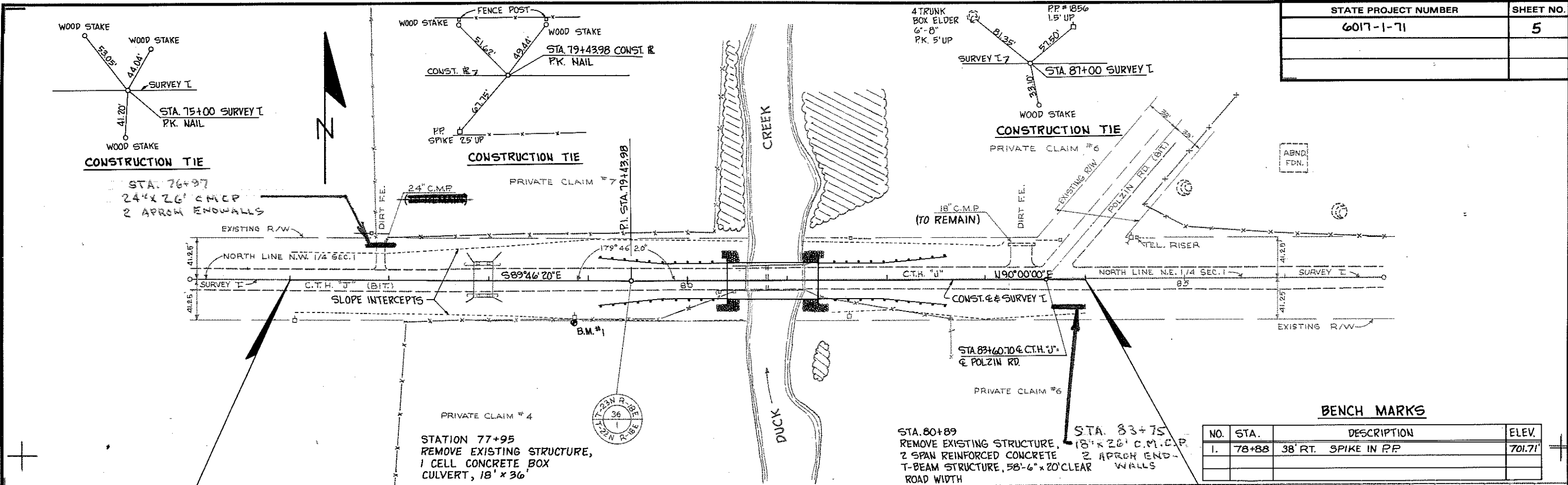
STEEL PLATE BEAM GUARD, CLASS A				
STATION TO STATION		LOCATION	LIN. FT.	ANCHORS REQ'D
79+11	- 80+40	LT.	129	1
79+11	- 80+40	RT.	129	1
81+31	- 82+60	LT.	129	1
81+31	- 82+60	RT.	129	1

SODDING		
STATION TO STATION	LOCATION	SQ. YDS.
81+31 TO 84+00	RT.	300

FIELD AND PRIVATE ENTRANCE PIPE								
STATION	LOCATION	DIA. (IN.)	LENGTH (L.F.)	TYPE	RCCP (CLASS)	THICKNESS (INCHES)		END TREATMENT
						STEEL	ALUMINUM	
77+02	LT.	24	26	C.P.	III	0.064	0.060	2

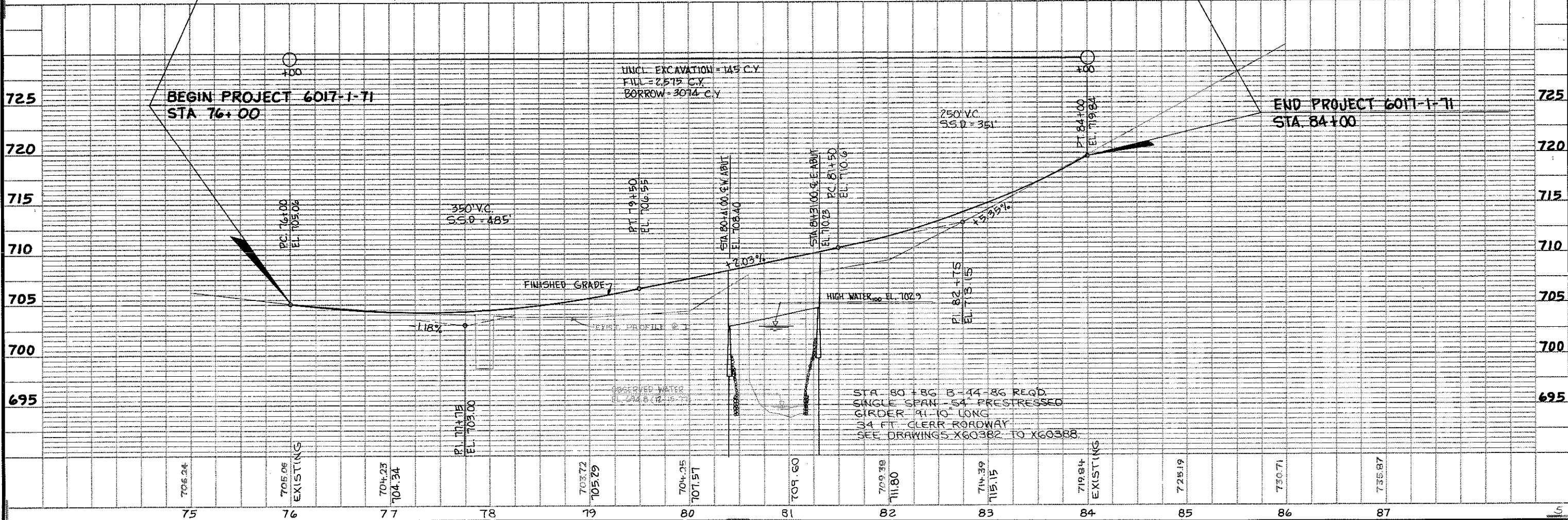
LANDMARK REFERENCE MONUMENTS			
STATION	DESCRIPTION	LOCATION	NUMBER
79+43.98	1/4 CORNER	E	4

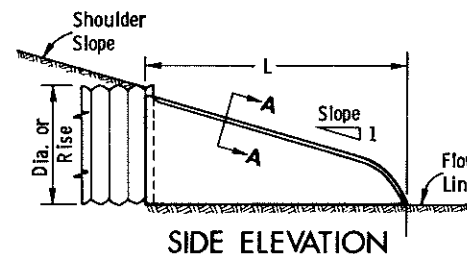
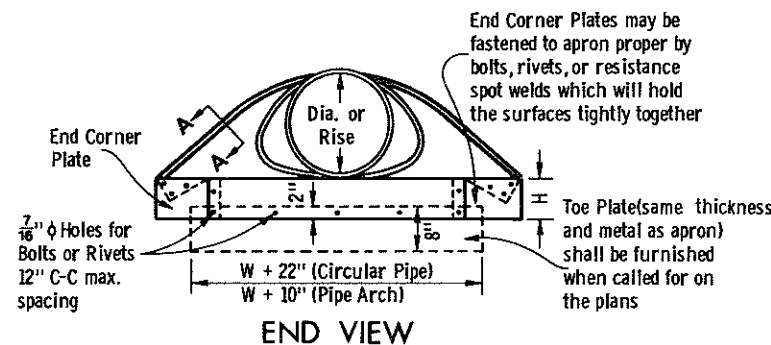
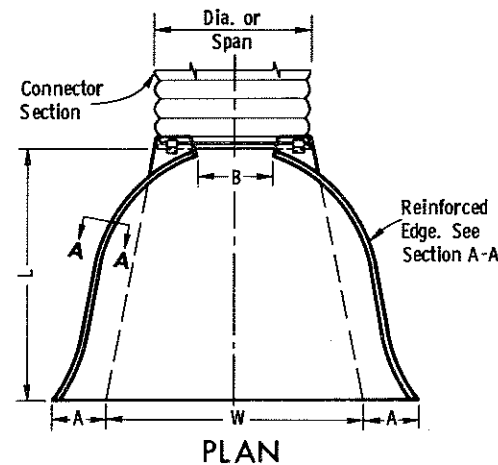
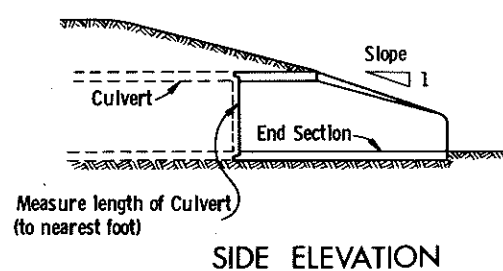
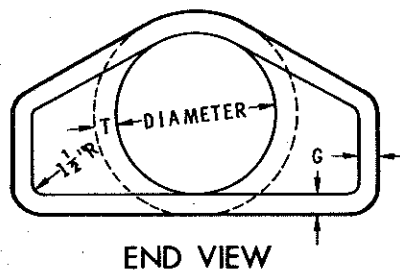
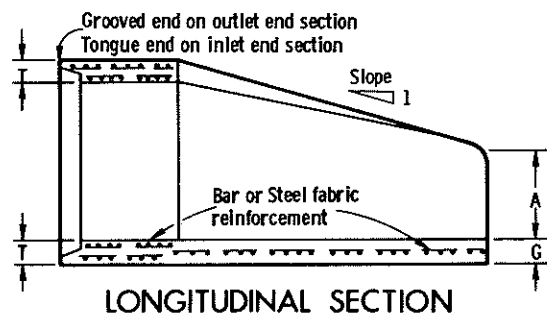
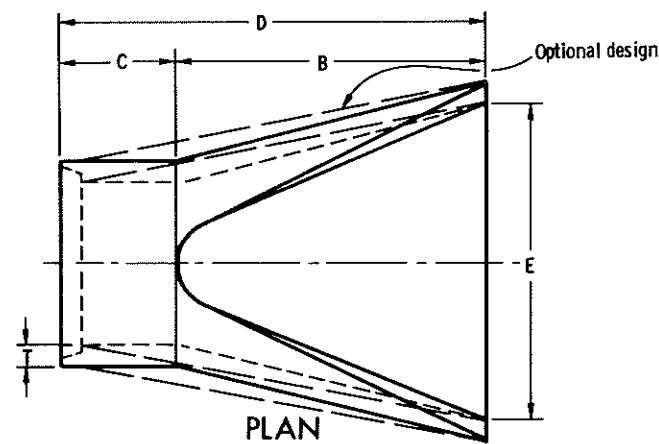
STATE PROJECT NUMBER	SHEET NO.
6017-1-71	5



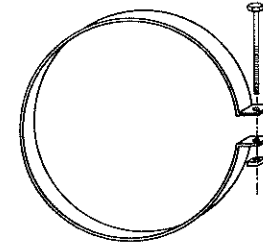
BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1.	78+88	38' RT. SPIKE IN R.P.	701.71

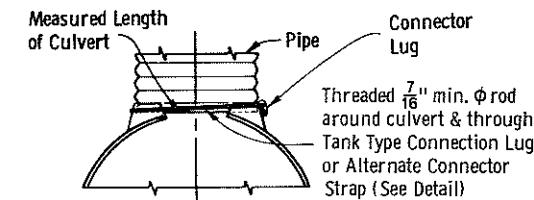




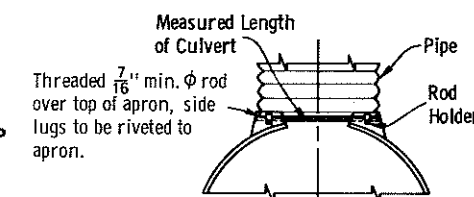
1" Wide, 12 Ga. galvanized (0.109" thick) strap with standard 6" x 1/2" band bolt and nut



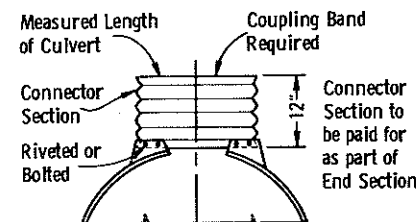
Alternate for Type 1 Connection
END SECTION CONNECTOR STRAP



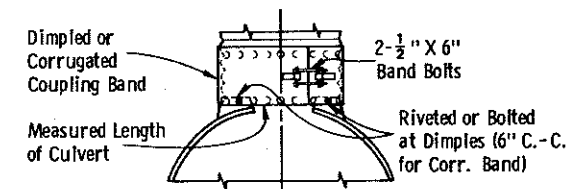
TYPE 1
For 12" thru 24" only (Circular Pipe)



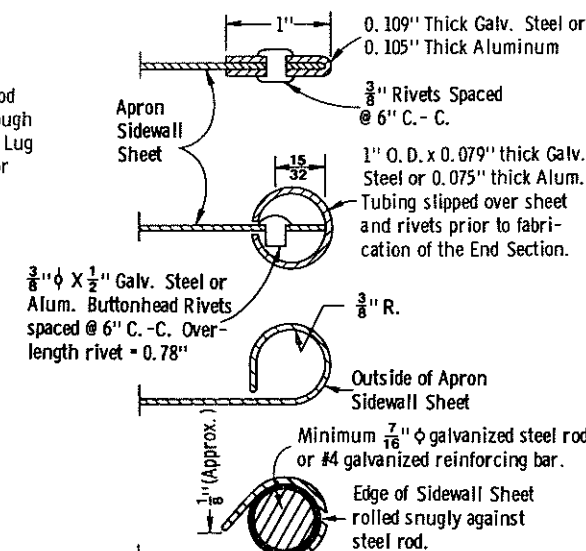
TYPE 2
For 30" and 36" only (Circular Pipe)
For 17" X 13" thru 57" X 38" only (Pipe Arch)



TYPE 3
For 42" thru 84" only (Circular Pipe)
For 64" X 43" & 71" X 47" (Pipe Arch)



TYPE 5
Alternate for
All sizes Corrugated Circular Pipe and Pipe Arch



SECTION A-A

GENERAL NOTES

Details of construction, materials, and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Variations of the dimensions and designs shown hereon will be permitted providing equivalent capacity and structural integrity are attained, and prior approval of the Engineer is obtained.

Concrete culvert endwalls may not be used with galvanized steel or aluminum culvert pipe or vice versa.

Galvanized steel or aluminum endwalls shall normally be installed on culvert pipe of the same metal. The use of galvanized steel endwalls on aluminum pipes is permitted, provided the two metals at the joint interface are kept separated by a suitable insulating material approximately 1/8" thick or greater. Such material would be an asphalt impregnated fabric, a sheet plastic, a rubber gasket or other nondegradable material of substantial strength.

When two or more pipe arches with apron endwalls are to be laid adjacent to each other, they shall be separated by the following amount.

Pipes: Total width of apron endwall less the diameter of pipe plus 6 inches.

Pipe Arches: Total width of apron endwall less the span dimension of the pipe arch plus 6 inches.

NOTE: Dimpled Band fits over Outside of Endwall, and Corr. Band fits Inside Endwall. Dimpled Band may be used with Helically Corrugated Pipe

CONNECTION DETAILS

CIRCULAR PIPE

For Circumferentially Corrugated Pipe use Endwall Connection Details 1, 2, 3, or 5 as applicable.

For Helically Corrugated Pipe use Endwall Connection Details 1, 2 or 5.

For Helically Corrugated Pipes with two Circumferential Corrugations at each end use Endwall Connection Details 1, 2, or 3

PIPE ARCH

Use Endwall Connection Details 2, 3, or 5 as applicable.

DIA.	APPROX. WEIGHT/SECTION	T	A	B	C	D	E	G	APPROX. SLOPE
12"	530	2"	4"	24"	48 7/8"	72 7/8"	24"	2"	3 to 1
15"	740	2 1/4"	6"	27"	46"	73"	30"	2 1/4"	
18"	990	2 1/2"	9"	27"	46"	73"	36"	2 1/2"	
21"	1,280	2 3/4"	9"	36"	37 1/2"	73 1/2"	42"	2 3/4"	
24"	1,520	3"	9 1/2"	43 1/2"	30"	73 1/2"	48"	3"	
27"	1,930	3 1/4"	10 1/2"	49 1/2"	24"	73 1/2"	54"	3 1/4"	
30"	2,190	3 1/2"	12"	54"	19 3/4"	73 3/4"	60"	3 1/2"	
36"	4,100	4"	15"	63"	34 3/4"	97 3/4"	72"	4"	
42"	5,380	4 1/2"	21"	63"	35"	98"	78"	4 1/2"	
48"	6,550	5"	24"	72"	26"	98"	84"	5"	3 to 1
54"	8,040	5 1/2"	27"	65"	33 1/4" - 35"	98 1/4" - 100"	90"	5"	2 1/2 to 1
60"	8,730	6"	30"	60"	39"	99"	96"	5"	2 to 1
66"	10,630	6 1/2"	34"	72"	41"	102"	102"	5 1/2"	
72"	12,520	7"	36"	78"	21"	108"	108"	6"	
78"	14,430	7 1/2"	36"	78"	21"	114"	114"	6 1/2"	2 to 1
84"	18,160	8"	36"	90 1/2"	21"	111 1/2"	120"	6 1/2"	1 1/2 to 1

** Minimum
* Maximum

REINFORCED CONCRETE APRON ENDWALLS

D PIPE DIAM.	MIN.	MIN.	DIMENSIONS					APPROX. SLOPE
	METAL	ALUM.	A	B	H	L	W	
	THICKNESS		± 1"	MAX.	± 1"	± 1½"	± 2"	
12"	0.064	0.060	6"	6"	6"	21"	24"	2½ to 1
15"	↑	↑	7"	8"	↑	26"	30"	↑
18"	↑	↓	8"	10"	↑	31"	36"	↑
21"	↓	0.060	9"	12"	↓	36"	42"	↑
24"	0.064	0.075	10"	13"	6"	41"	48"	↑
30"	0.079	0.075	12"	16"	8"	51"	60"	↑
36"	0.079	0.105	14"	19"	9"	60"	72"	↑
42"	0.109	↑	16"	22"	11"	69"	84"	2½ to 1
48"	↑	↓	18"	27"	12"	78"	90"	2¼ to 1
54"	↑	0.105	↑	30"	↑	84"	102"	2 to 1
60"	↑	NA	↑	33"	↑	87"	114"	1¾ to 1
66"	↑	↑	↑	36"	↑	87"	120"	1½ to 1
72"	↑	↑	↑	39"	↑	87"	126"	1⅓ to 1
78"	↑	↑	↑	42"	↓	87"	132"	1¼ to 1
84"	0.109	NA	18"	45"	12"	87"	138"	1⅕ to 1

NOTE: All splices to be lap riveted or bolted

METAL OR ALUMINUM APRON ENDWALLS FOR CIRCULAR PIPES

METAL APRON ENDWALLS FOR PIPE ARCHES

NOTE: All splices to be lap riveted or bolted

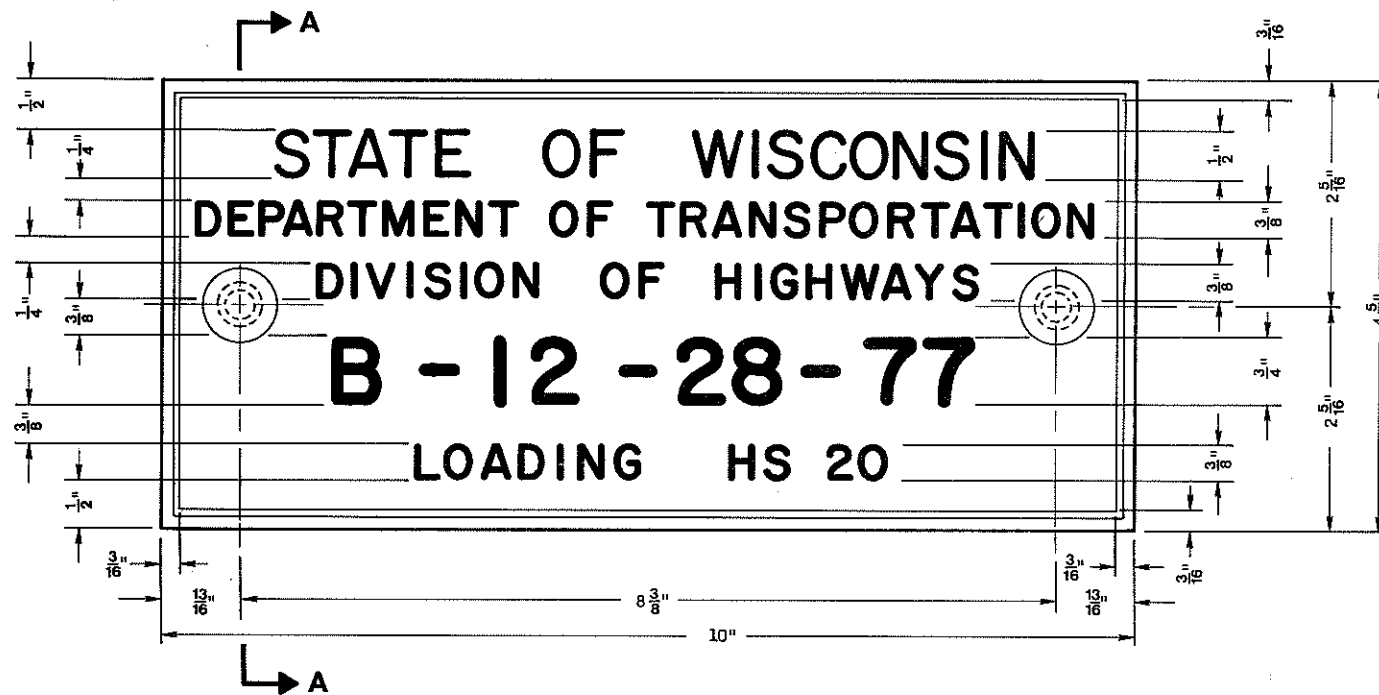
PIPE - ARCH DIMENSIONS SPAN	RISE	MIN. METAL THICK.	DIMENSIONS					APPROX. SLOPE
			A ± 1"	B MAX.	H ± 1"	L ± 1/2"	W ± 2"	
17"	13"	0.064	7"	9"	6"	19"	30"	2 1/2 to 1
21"	15"		7"	10"		23"	36"	
24"	18"		8"	12"		28"	42"	
28"	20"	0.064	9"	14"		32"	48"	
35"	24"	0.079	10"	16"	6"	39"	60"	
42"	29"	0.079	12"	18"	8"	46"	75"	
49"	33"	0.109	13"	21"	9"	53"	85"	
57"	38"		18"	26"	12"	63"	90"	2 1/2 to 1
64"	43"		18"	30"	12"	70"	102"	2 1/4 to 1
71"	47"		18"	33"	12"	77"	114"	2 1/4 to 1
77"	52"		18"	36"	12"	77"	126"	2 to 1
83"	57"	0.109	18"	39"	12"	77"	138"	2 to 1

APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

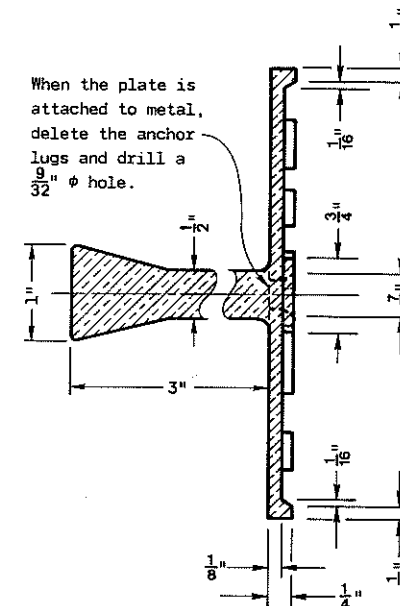
State of Wisconsin
Department of Transportation
Division of Highways

APPROVED
7-14-78
DATE
APPROVED
7-17-78
DATE
IHW

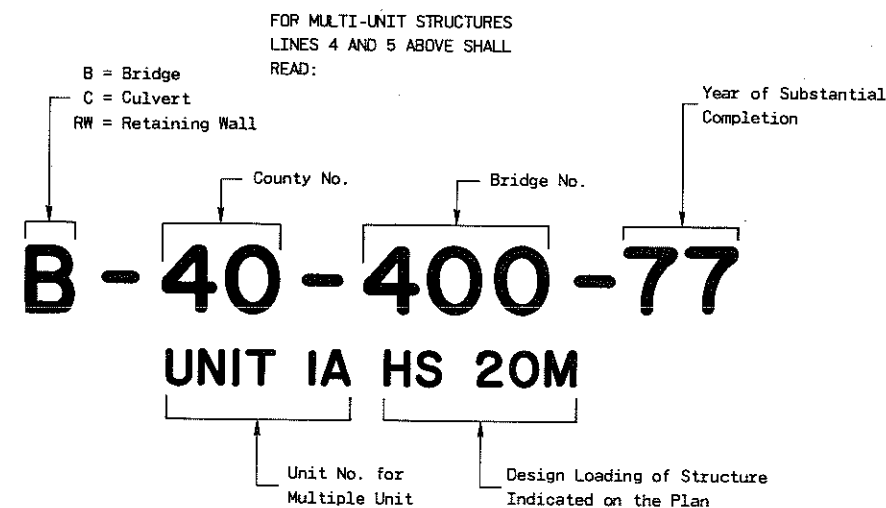
[Signature]
SUPERVISING DEVELOPMENT ENGINEER
[Signature]
CHIEF OF BUREAU'S DEVELOPMENT



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



SECTION A-A



**NUMBERING AND LOADING DESIGNATION
MULTI-UNIT STRUCTURES**

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 Highways*

APPROVED
8-5-77
DATE

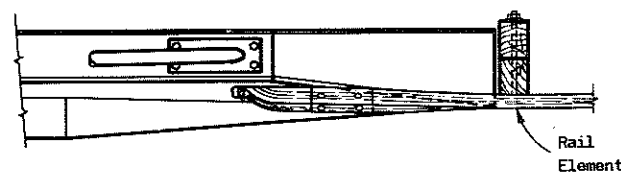
R.W. Baker
SUPERVISING DEVELOPMENT ENGINEER

APPROVED
8-8-77
DATE

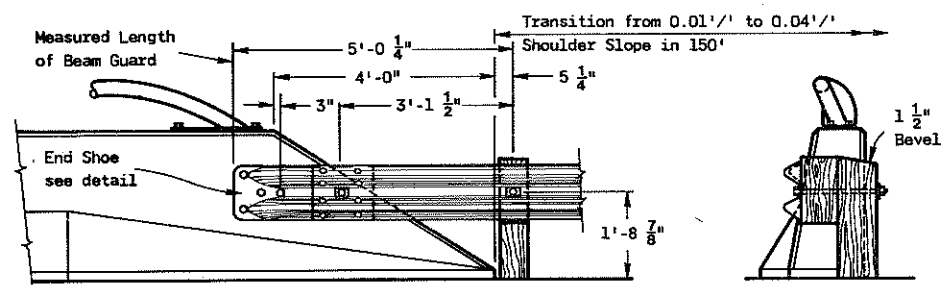
D.J. Shank
CHIEF OF FACILITIES DEVELOPMENT

FHWA

S.D.D. 12 A 3-2



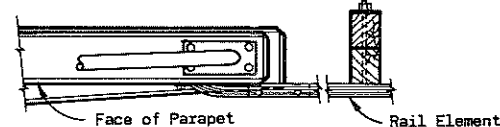
PLAN VIEW



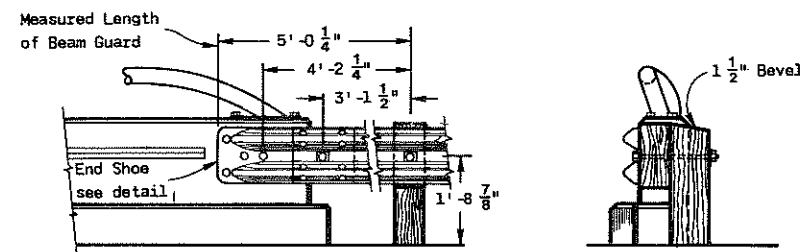
FRONT ELEVATION

END ELEVATION

STRUCTURE MOUNTING DETAIL
SLOPING TYPE PARAPET WALL



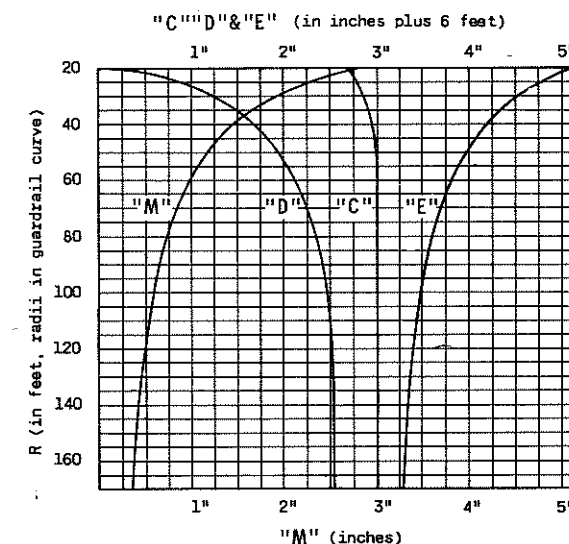
PLAN VIEW



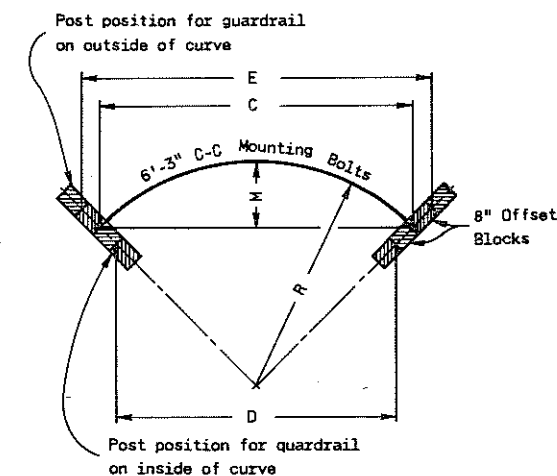
FRONT ELEVATION

END ELEVATION

STRUCTURE MOUNTING DETAIL
VERTICAL TYPE PARAPET WALL



CURVE DATA FOR POST SPACING AND BEAM CURVING



CHORD LENGTHS FOR POST SPACING AND
MIDDLE ORDINATES FOR BEAM CURVING

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

The exact location of the beginning and end of each guardrail installation shall be as shown on the plans or as directed by the Engineer.

Square anchor alternates will be permitted. Square anchors shall be a minimum of 24 inches x 24 inches.

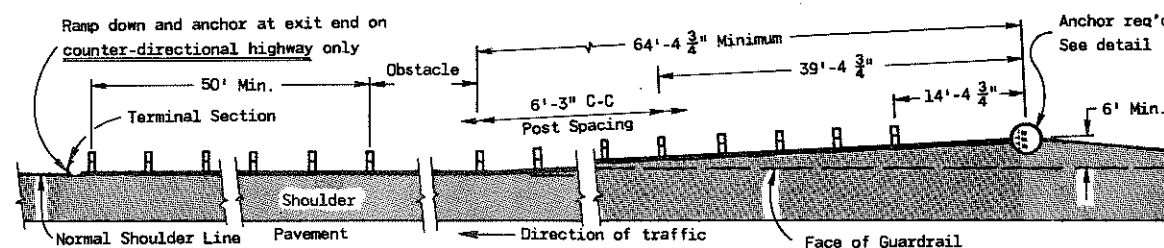
The shoulder widening to accommodate the anchored end of the guardrail shall be accomplished at the rate of widening not to exceed 15 to 1.

Upon approval of the Engineer, the 6 foot anchor offset may be reduced to nothing for replacement installations where existing conditions will not permit the desirable offset. However, when no offset greater than or equal to 3 feet can be provided, the minimum length of guardrail in advance of an obstacle (obstacle to anchor) shall be 150 feet.

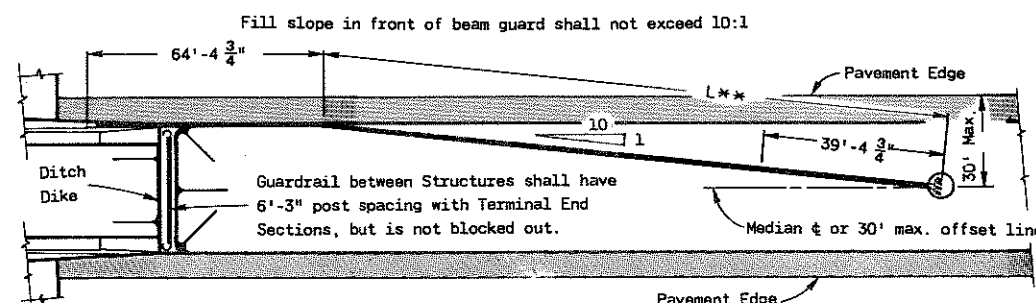
The minimum clearance from the front face of guardrail to obstacle shall be 3 feet unless otherwise shown on contract plans. When clearance is less than 3 feet post spacing shall be reduced to 3 feet - 1 1/2 inches C.C.

The "Post Footing Details At Piers" shall be used when guardrail posts are over structure footings and less than 3 feet - 6 inches of earth is provided over the top of the footing.

NOTE:
THIS STANDARD DETAIL DRAWING CONSISTS OF
TWO PLATES, AND BOTH PLATES ARE REQUIRED
WHEN THIS STANDARD IS CALLED FOR IN THE
PLANS.



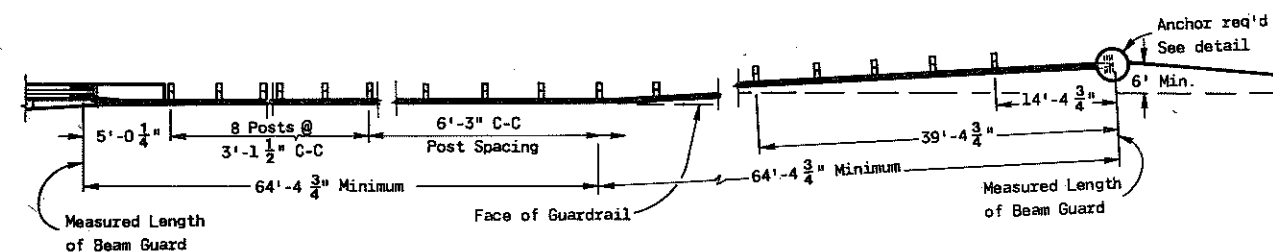
TYPICAL INSTALLATION AT
LOCATIONS OTHER THAN STRUCTURES



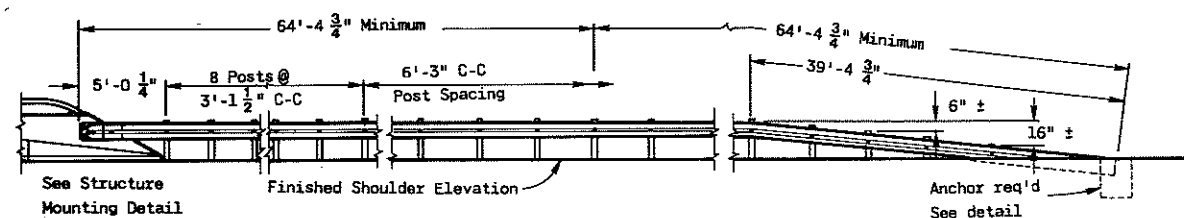
** Variable based on Median width or 30' max. offset

PLAN VIEW

MEDIAN PROTECTION



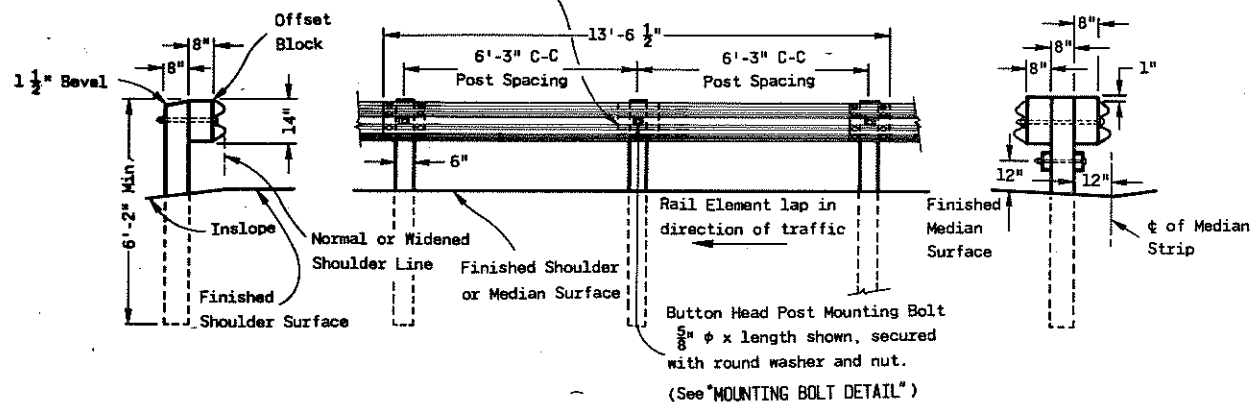
PLAN VIEW



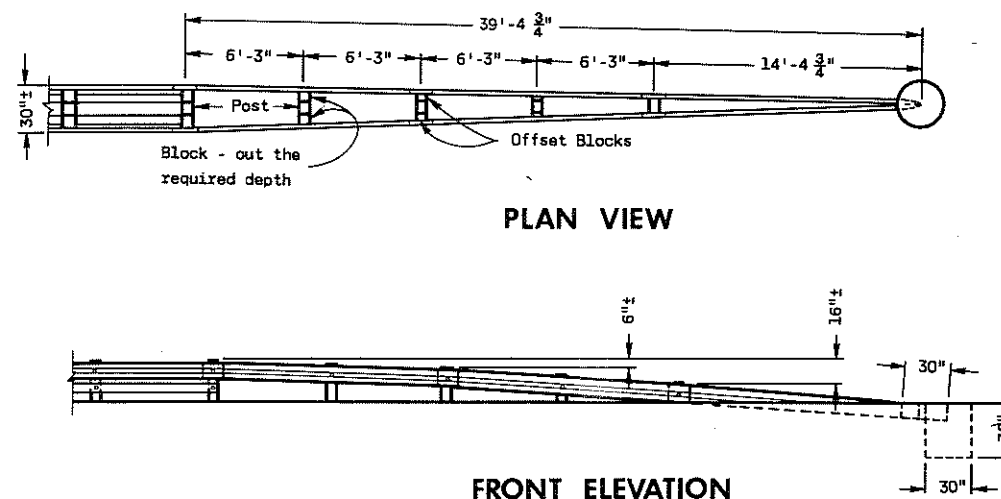
FRONT ELEVATION

TYPICAL INSTALLATION AT STRUCTURES

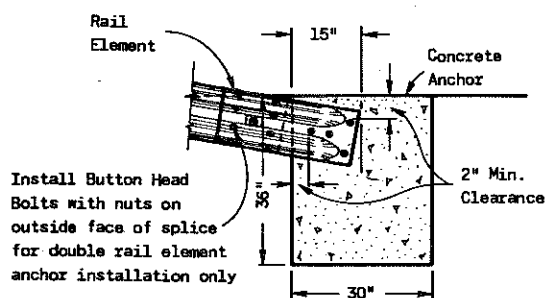
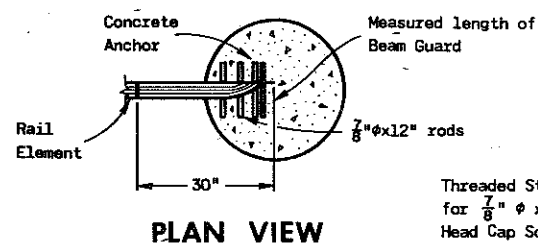
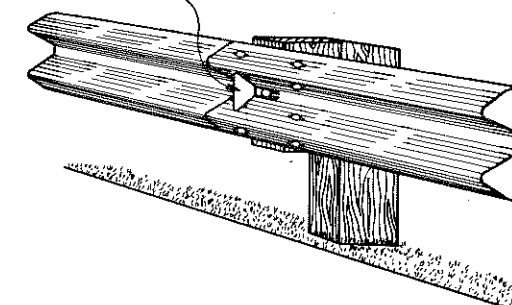
Sawed and treated timber posts and offset blocks shall be furnished and placed in accordance with Standard Specifications. Posts shall be 6" x 8" x 6'-6" and have 6" x 8" x 14" offset blocks.



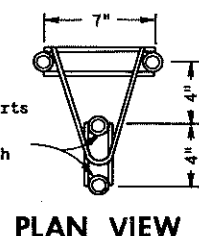
END ELEVATION FRONT ELEVATION END ELEVATION
 STEEL PLATE BEAM GUARD STEEL PLATE BEAM MEDIAN GUARD
 STEEL PLATE BEAM GUARD OR STEEL PLATE BEAM MEDIAN GUARD



NOTE: (DIVIDED HIGHWAYS) Reflector spacing shall be 50' C-C on installations less than 200' long, with a minimum of 3 reflectors on any installation. For installations 200' or longer, spacing shall be 100' C-C. (COUNTER-DIRECTIONAL HIGHWAYS) Reflector spacing shall be 25' C-C on installations less than 200' long, with a minimum of 6 reflectors on any installation, and every other reflectorized surface shall be reversed. For installations 200' or longer, spacing shall be 50' C-C.

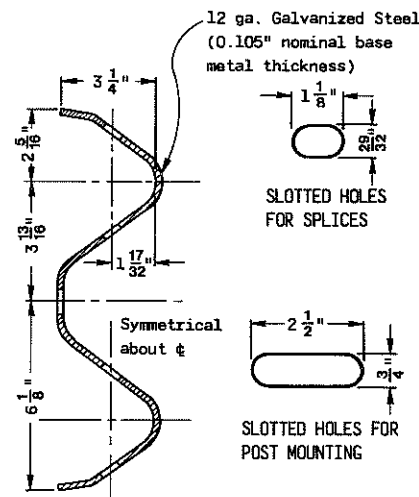


SECTION VIEW ANCHOR DETAIL SINGLE RAIL ELEMENT INSTALLATION

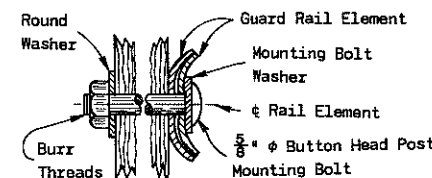


**ELEVATION
4 BOLT INSERT
ASSEMBLY**

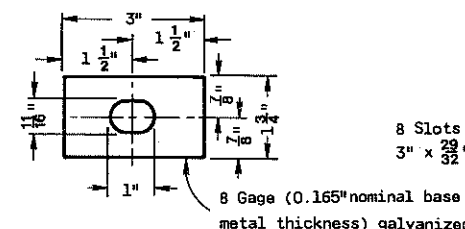
NOTE: Installation of 4 Bolt
Insert Assembly (with Cap
Screws inserted) to be part
of Bridge Contract.



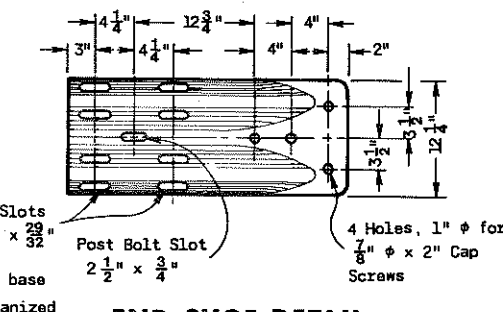
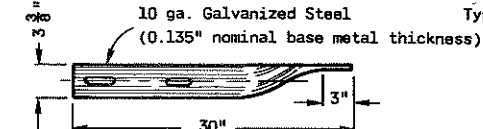
SECTION THRU RAIL ELEMENT



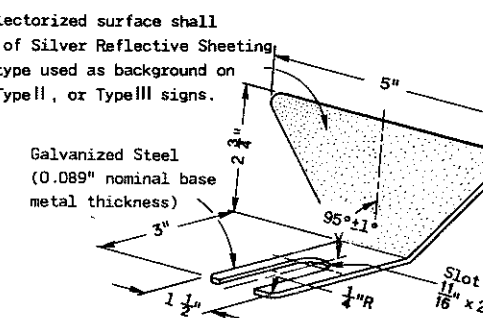
MOUNTING BOLT DETAIL



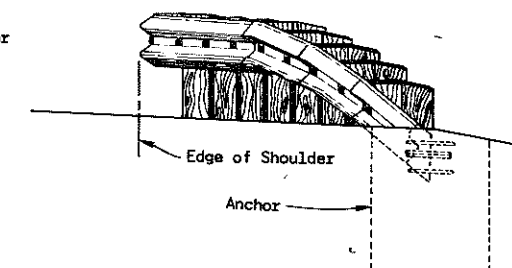
MOUNTING BOLT WASHER



END SHOE DETAIL

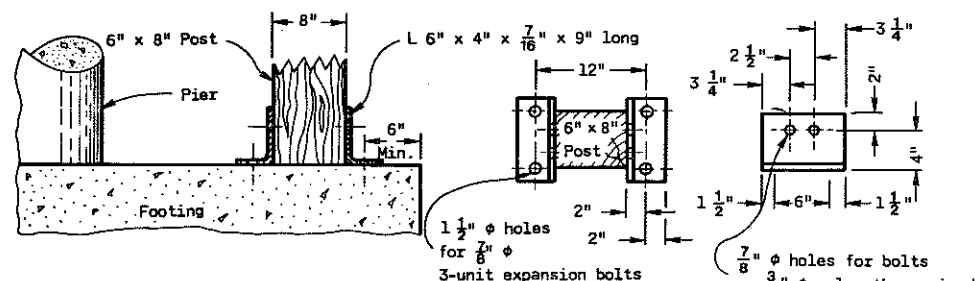


REFLECTOR DETAIL

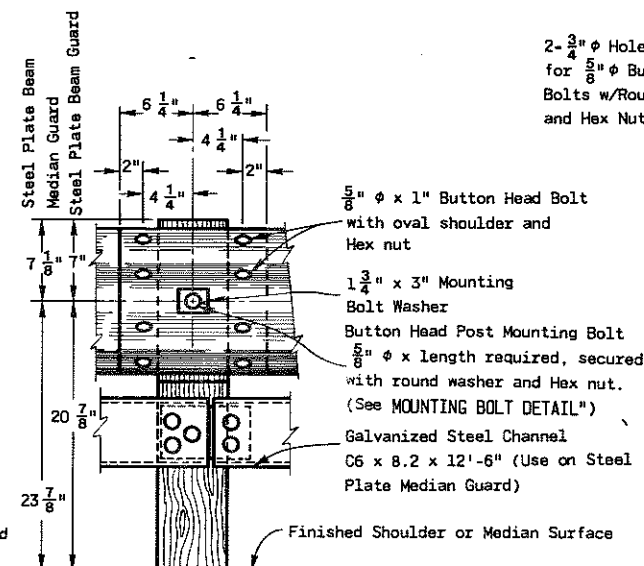


TYPICAL TERMINAL END ELEVATION

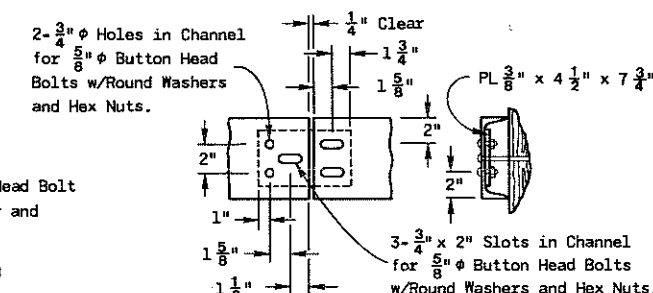
NOTE:
THIS STANDARD DETAIL DRAWING CONSISTS
OF TWO PLATES, AND BOTH PLATES ARE
REQUIRED WHEN THIS STANDARD IS CALLED
FOR IN THE PLANS.



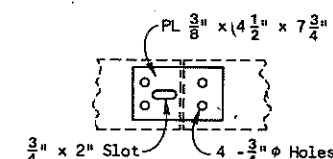
SECTION VIEW PLAN VIEW ELEVATION



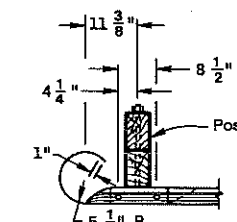
RAIL ELEMENT SPLICING AND POST MOUNTING DETAIL



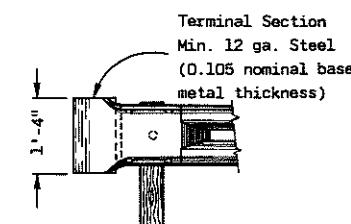
RUB RAIL SPLICE DETAIL



SPlice PLATE



PLAN VIEW



FRONT ELEVATION
TERMINAL SECTION DETAILS

CLASS "A"
STEEL PLATE BEAM GUARD &
STEEL PLATE BEAM MEDIAN GUARD

State of Wisconsin
Department of Transportation
Division of Highways

RECOMMENDED FOR APPROVAL

5-7-76

APPROVED

5-11-76

CHIEF of FACILITIES DEVELOPMENT

16

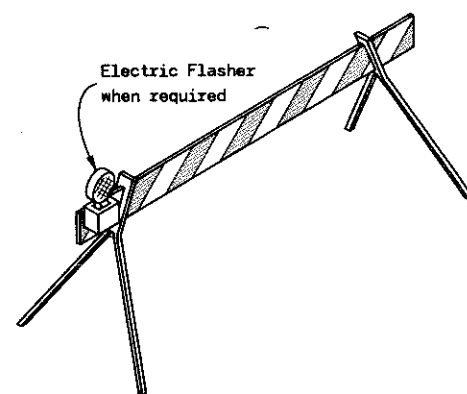
4/5-1951

W. L. Fisher

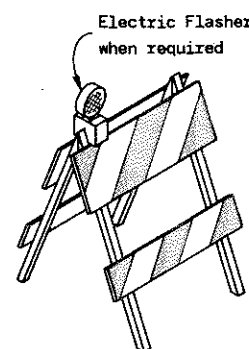
TABLE OF BARRICADE CHARACTERISTICS

BARRICADE TYPE	I	II	III
Height	3' Minimum		5' Minimum
* Rail Width	8" Minimum to 12" Maximum		
Rail Length	2' Minimum to variable Maximum		
** Stripe Width	6" at 45° Angle		
Stripe Colors	Reflectorized Orange & White		

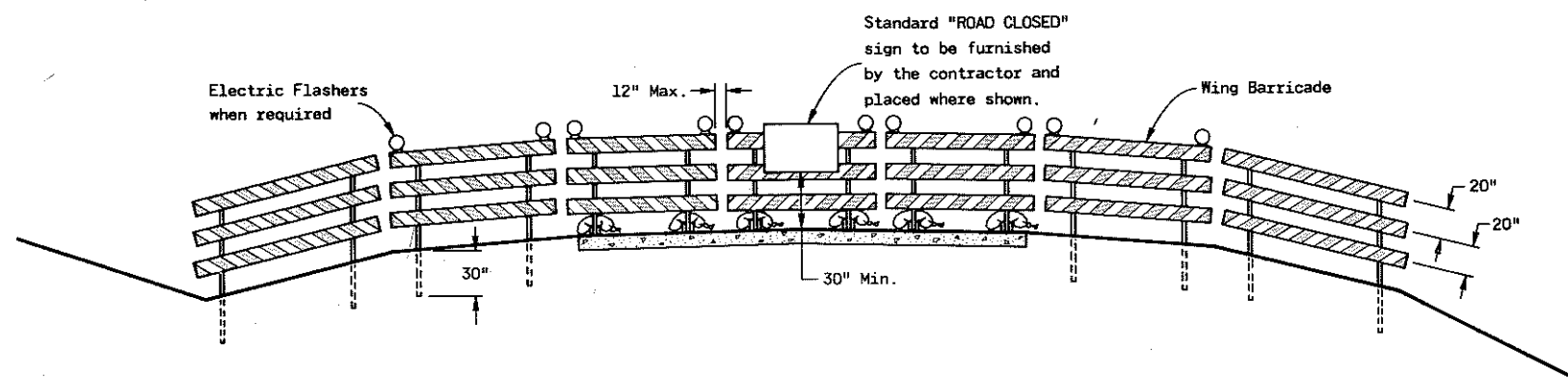
* Nominal dimensions when barricade is constructed of lumber.
 ** May be 4" for rail lengths less than 3'.



TYPICAL TYPE I BARRICADE

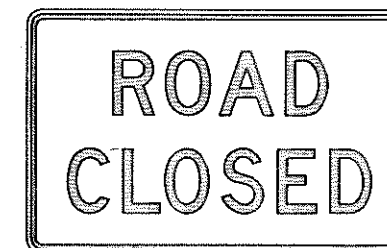


TYPICAL TYPE II BARRICADE



TYPICAL INSTALLATION SHOWING TYPE III BARRICADE

CONSTRUCTION BARRICADES



R11-2
 48" x 30"

Black Lettering on Reflective
 White Background
 Letter Series "D"
 Letter height 8"



W20-3
 48" x 48"

Black Lettering on Reflective
 Orange Background
 Letter Series "D"
 Letter height 7"

STANDARD SIGNS-TYPE II

GENERAL NOTES

The contractor shall furnish, erect and maintain Barricades and Signs. Details regarding location, spacing, dimensions, fabrication, material, sign lettering, lighting devices and color of Barricades and Signs shall conform to this drawing, the Wisconsin Manual on Uniform Traffic Control Devices, the Standard Specifications, Special Provisions and/or plans.

Type III Barricades and Signs shall be erected at the termini of projects and at other road or street locations where it is necessary to control or eliminate public access to the construction area.

Type I and II Barricades shall be used on projects when traffic is to be maintained through the construction area.

The actual field location of barricade installations and advance signs shall be as directed by the Engineer.

Each barricade shall have the name and telephone number of a person responsible for 24 hour emergency service printed in letters at least 3/4 inch in height.

CONSTRUCTION BARRICADES & STANDARD SIGNS

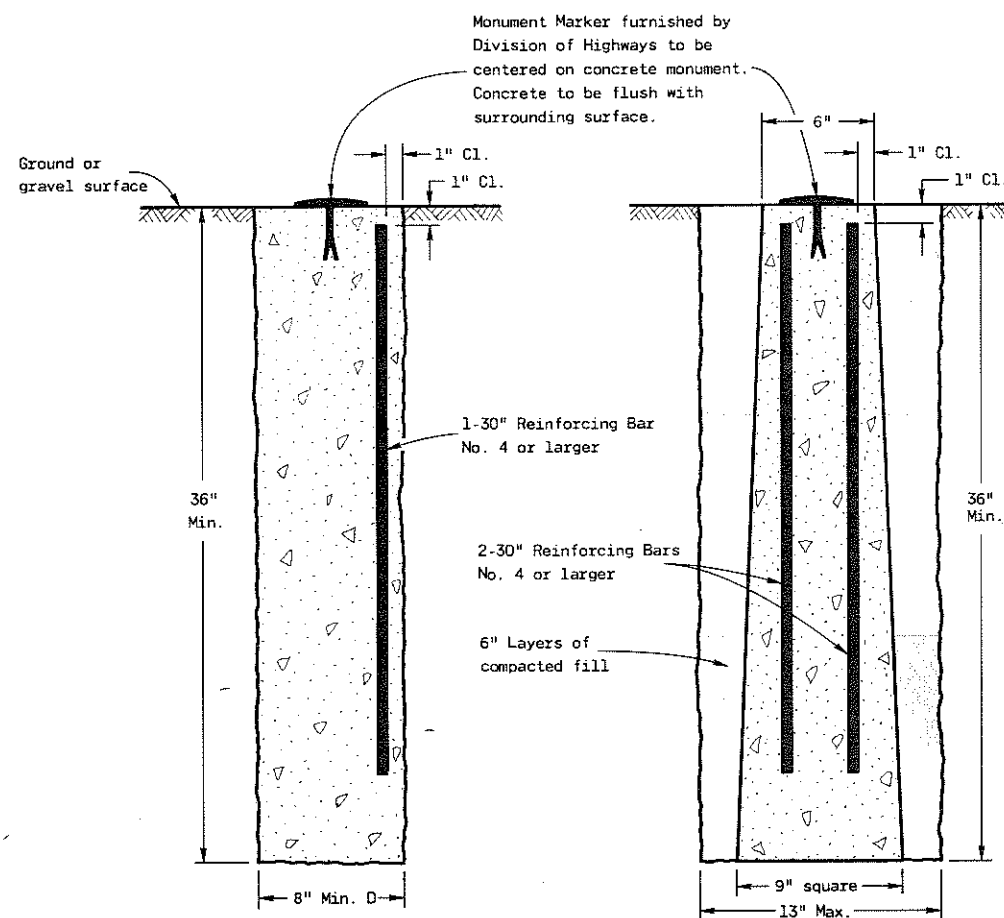
State of Wisconsin
 Department of Transportation
 Division of Highways

APPROVED
 10-1-76
 DATE

D. J. Standa
 CHIEF OF FACILITIES DEVELOPMENT

APPROVED
 10-1-76
 DATE

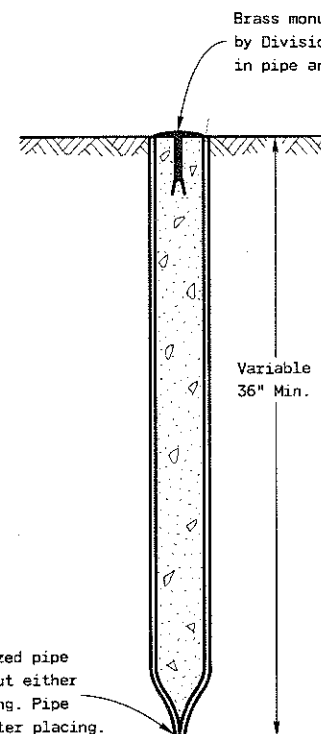
W. J. Siedler
 STATE HIGHWAY ENGINEER



**CAST-IN-PLACE
CONCRETE MONUMENT**

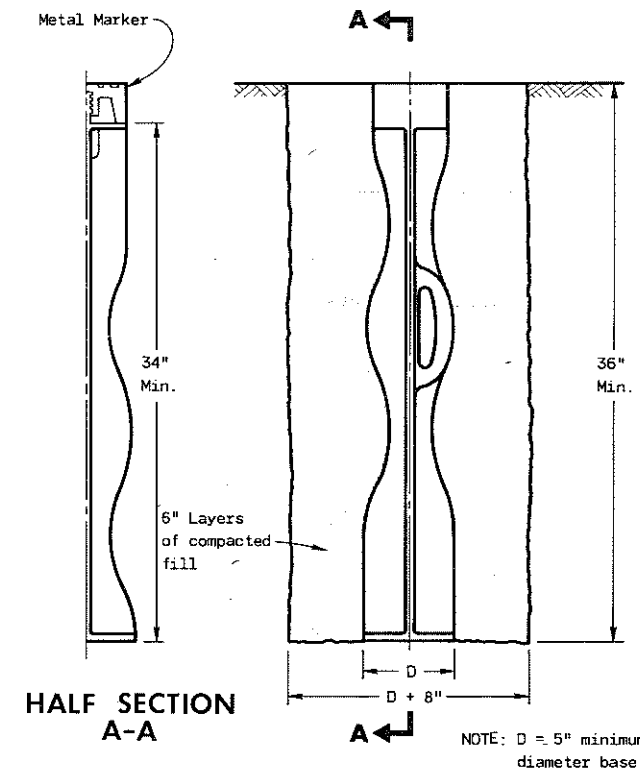
**PRECAST
CONCRETE MONUMENT**

TYPE A



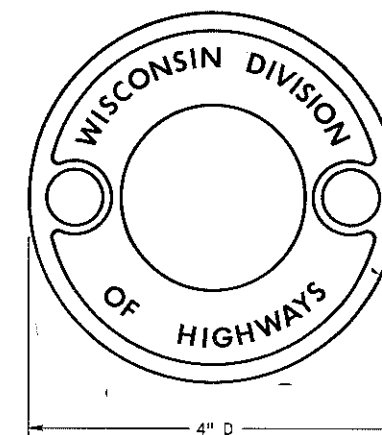
TYPE B

NOT TO BE USED IN PAVEMENT STRUCTURE

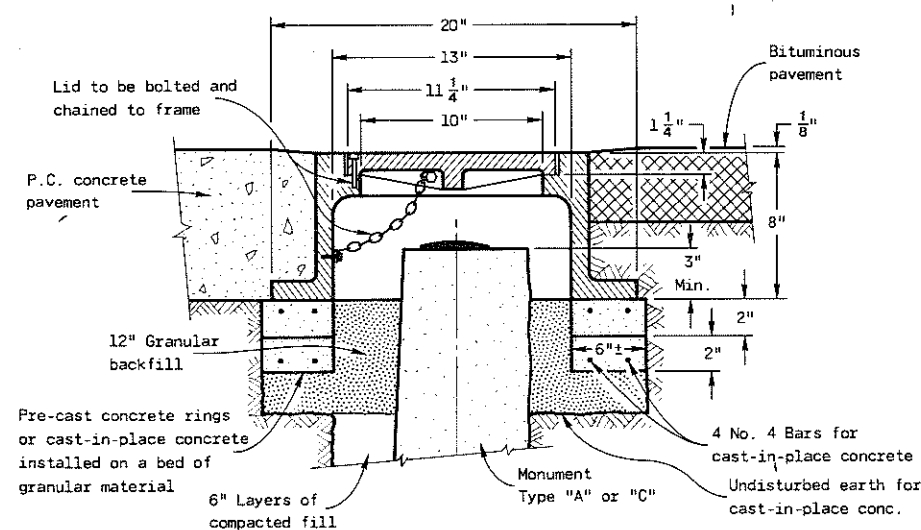


METAL MONUMENT
(Includes Marker)

TYPE C

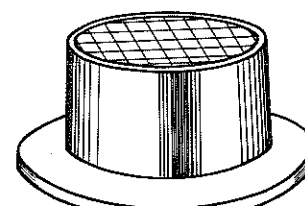


TOP LEGEND FOR MARKER



DETAIL OF MONUMENT COVER

INSTALLATION IN PAVEMENT OVER A MONUMENT



(Approximate weight - 95 lbs.)

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detailed drawings of proposed alternate designs for Metal Monuments or Monument Covers shall be submitted to the Engineer for approval.

The installed Metal Monument must be easily detected with a dip needle. Inert permanent magnets shall be attached near the top and bottom of those Monuments constructed of a metal alloy which is not attractive to a dip needle.

Type A and Type C Monuments are equal alternates unless otherwise specified on the plan or by special provision.

When Landmark Reference Monument and Cover is specified, contractor shall furnish and install Monument and Monument Cover in conformance with details on this drawing and pertinent requirements of Section 611 of the Standard Specifications.

The Monument Cover shall be a "Non-Rocking" type. Adjustment of the Cover to grade may be accomplished by the use of mortar and brick, or by either pre-cast or cast-in-place Reinforced Concrete Grade Rings.

Monuments shall be located and placed at the direction of the Engineer.

LANDMARK REFERENCE MONUMENTS

State of Wisconsin
Department of Transportation
Division of Highways

RECOMMENDED FOR APPROVAL:

2-15-74

DATE

J. C. Hennrich
CHIEF OF FACILITIES DEVELOPMENT

APPROVED

3-21-74

DATE

W. J. Sudler
STATE HIGHWAY ENGINEER

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 BAR STEEL SHALL BE IMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
 ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.
 FILLER SHALL CONFORM TO AASHTO. DESIGNATION M153, TYPE I, II OR III, OR M213.
 THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP TO THE EXTENT SHOWN ON THIS SHEET AND THE ABUTMENT SHEET.

DESIGN DATA

LIVE LOAD

DESIGN RATING : HS20
 INVENTORY RATING : HS23
 OPERATING RATING : HS55
 STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 P.S.F.

ALLOWABLE DESIGN STRESSES

CONCRETE MASONRY - SLAB $f'_c = 4000$ P.S.I.
 ALL OTHER $f'_c = 3500$ P.S.I.
 HIGH STRENGTH BAR STEEL REINFORCEMENT,
 GRADE 60 $f_y = 60,000$ P.S.I.
 54" PRESTRESSED CONC. GIRDER
 CONCRETE MASONRY $f'_c = 6000$ P.S.I.
 1/2" DIA STRANDS $f_s = 270,000$ P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10x42 STEEL "H" PILES, EST. 25'-0" LG. W. ABUT., EST. 25'-0" LG. E. ABUT., AND DRIVEN TO A MIN. BRG. VALUE OF 55 TONS/PILE. ALL PILES TO BE FITTED W/ ROCK PENETRATION POINTS.

HYDRAULIC DATA

DRAINAGE AREA 48.1 SQ. MI.
 $Q_{100} = 4000$ C.F.S.
 VEL. 7.9 F.P.S.
 WATERWAY AREA 506 SQ. FT.
 HIGH WATER₁₀₀ EL. 702.9

TRAFFIC DATA

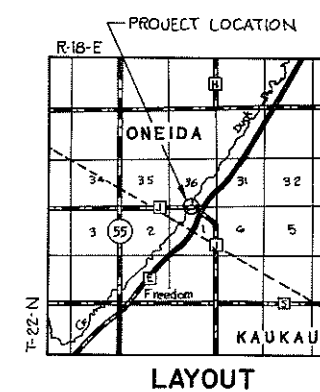
A.D.T. (1976) = 150
 R.D.S. = 50 M.P.H.

BENCH MARK

NO.	STA.	DESCRIPTION	ELEV.
1	78+88	38' RT. SPIKE IN POWER POLE	701.71

TOTAL ESTIMATED QUANTITIES

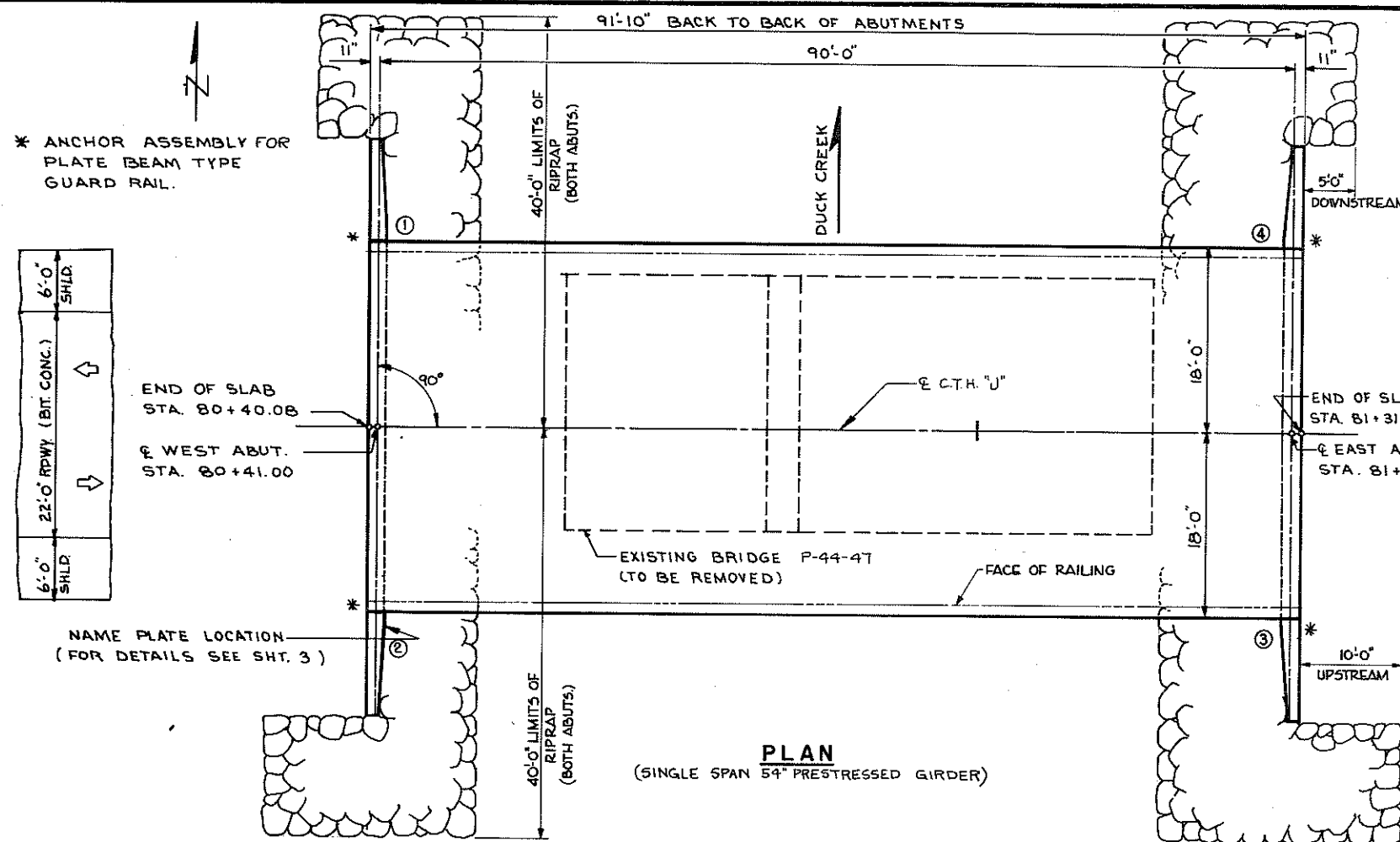
BID ITEMS		UNIT	W. ABUT.	SUPER	E. ABUT.	TOTAL
REMOVING OLD BRIDGE (P-44-47)		L.S.				
EXCAVATION FOR STRUCTURES, (B-44-86)		L.S.				
CONCRETE MASONRY		C.Y.	26.2	100.6	26.2	153
PRESTRESSED GIRDER, I TYPE, 54 INCH		L.F.		455		455
HIGH STRENGTH BAR STEEL REINFORCEMENT		LBS.	1,625	21,130	1,625	24,380
STRUCTURAL CARBON STEEL		LBS.		360		360
BEARING PADS, ELASTOMERIC		S.F.		15		15
STEEL PILING, DELIVERED & DRIVEN, HP 10x42		L.F.	120		150	270
TUBULAR RAILING, TYPE 'F'		L.S.				
HEAVY RIPRAP		C.Y.	90		110	200
ROCK PENETRATION POINTS		EACH	6		6	12
NON-BID ITEMS						
FILLER		SIZE				1/2" x 3/4"
POLYVINYL CHLORIDE WATERSTOP		L.F.	36		36	72



LAYOUT

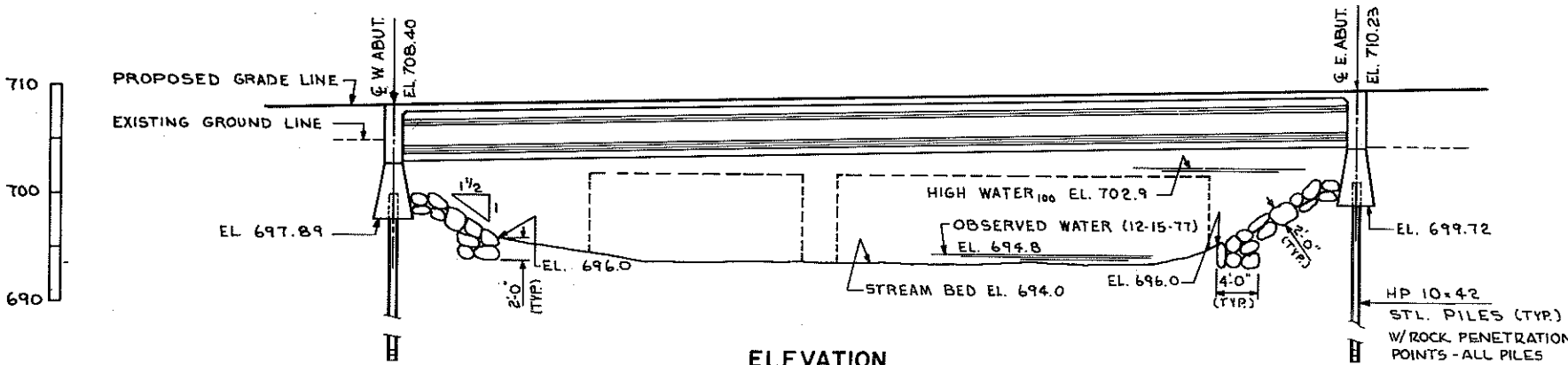
BARRIENTOS & ASSOCIATES, INC.
 CONSULTING ENGINEERS
 2020 UNIVERSITY AVE. MADISON, WISC. 53705
 PH 608-238-6761

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-86			
C.T.H. "J" OVER DUCK CREEK			
County	OUTAGAMIE	Town	ONEIDA
Design Spec.	AASHTO '73 B	Load	HS20
Design	INTERIM '78	Const. Spec.	WIS '75
Drawn	LMB	Checked	LMB
By	PDZ	By	LMB
Approved	W.A. Kline	Date	8-21-78
Chief Bridge Engineer			
GENERAL PLAN		SHEET 1 OF 7	
		X 60382	

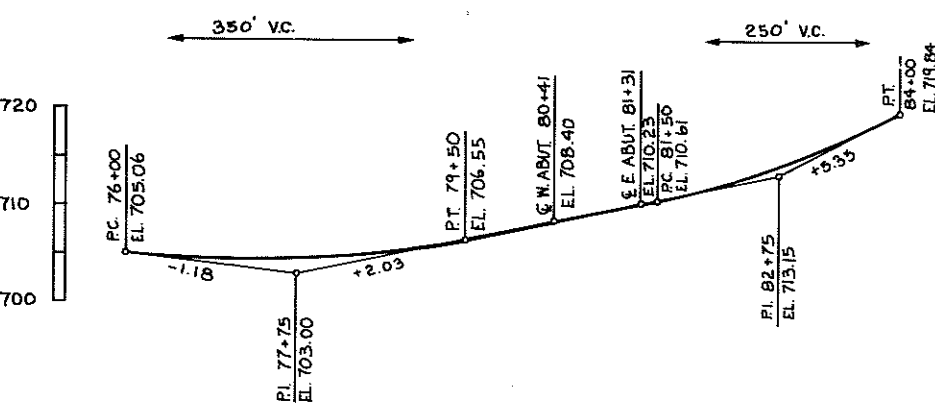


PLAN

(SINGLE SPAN 54" PRESTRESSED GIRDER)

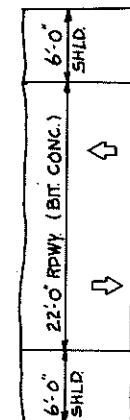


ELEVATION



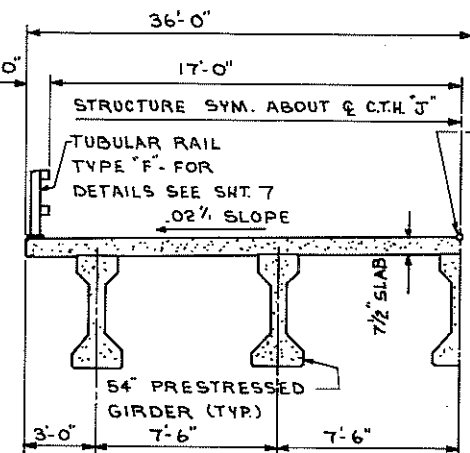
PROFILE GRADE LINE

* ANCHOR ASSEMBLY FOR PLATE BEAM TYPE GUARD RAIL.



END OF SLAB STA. 80+40.08
 & WEST ABUT. STA. 80+41.00

NAME PLATE LOCATION (FOR DETAILS SEE SHT. 3)



HALF-SECTION THRU BRIDGE (TYP.)

LIST OF DRAWINGS

1. GENERAL PLAN — X 60382
2. SUBSURFACE EXPLORATION — X 60383
3. ABUTMENTS — X 60384
4. 54" PRESTRESSED GIRDER DETAILS — X 60385
5. SUPERSTRUCTURE — X 60386
6. SUPERSTRUCTURE — X 60387
7. TUBULAR STEEL RAILING, TYPE 'F' — X 60388



BORINGS PERFORMED BY:
SOILS & ENGINEERING SERVICES, INC.
MADISON, WISCONSIN
BORINGS PERFORMED ON:
MARCH 2, 1978

EL BORING #1B, STA. 80+31.00,
8'-0" LT. OF EL C.T.H. 'U'

EL W. ABUT.
STA. 80+41.00

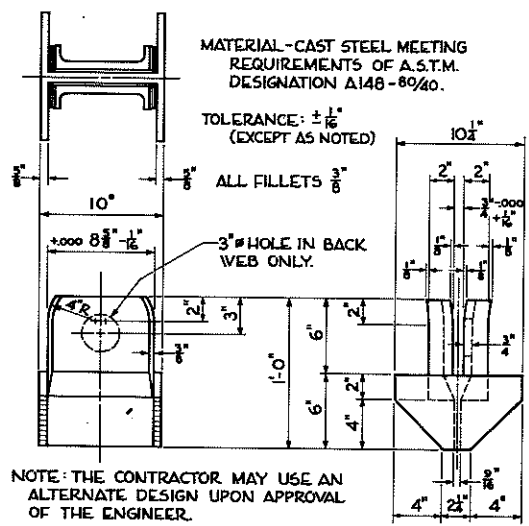
EL E. ABUT.
STA. 81+31.00

EL BORING #2, STA. 81+30.00,
5'-0" RT. OF EL C.T.H. 'U'

EL C.T.H. 'U'

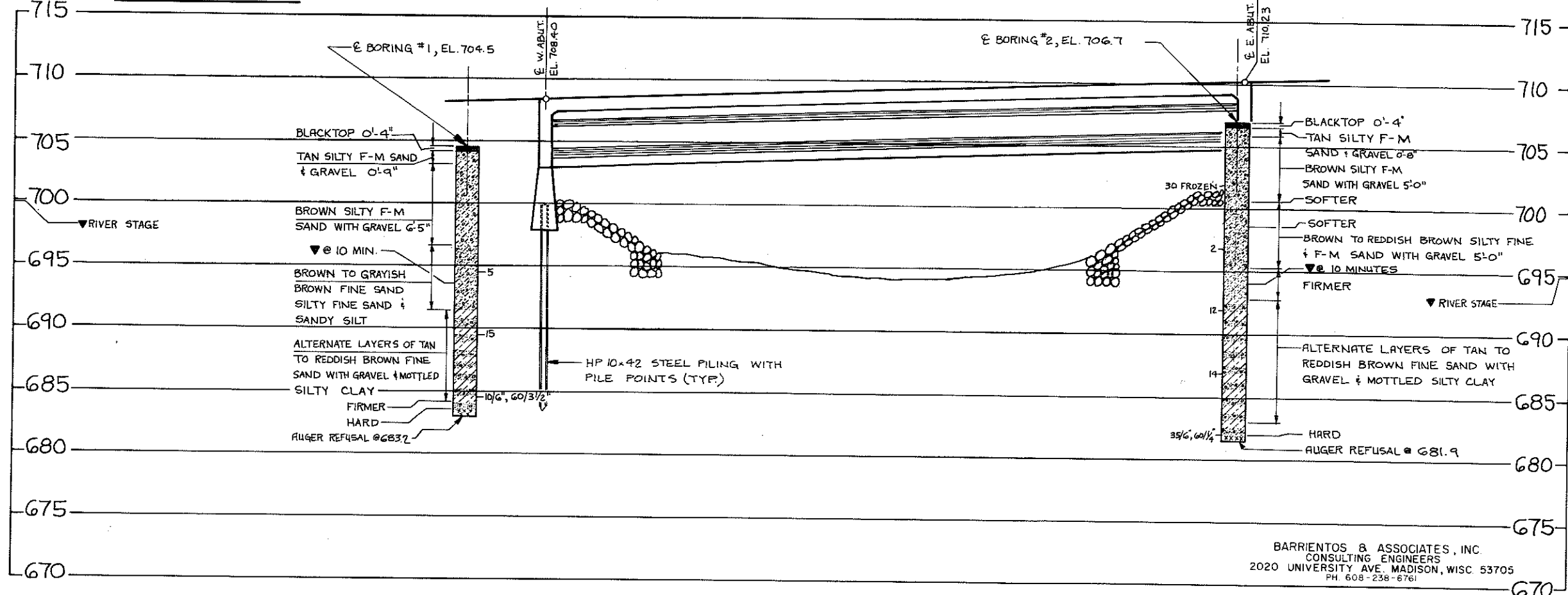
81+00

PROPOSED STRUCTURE



NOTE: THE CONTRACTOR MAY USE AN
ALTERNATE DESIGN UPON APPROVAL
OF THE ENGINEER.

10" 'H' PILE POINT



BARRIENTOS & ASSOCIATES, INC.
CONSULTING ENGINEERS
2020 UNIVERSITY AVE. MADISON, WISC. 53705
PH. 608-238-6761

STATE PROJECT NUMBER SHEET NO.

6017-1-71

81

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.
Refusal 95/6
7 Average Blows Per Foot

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

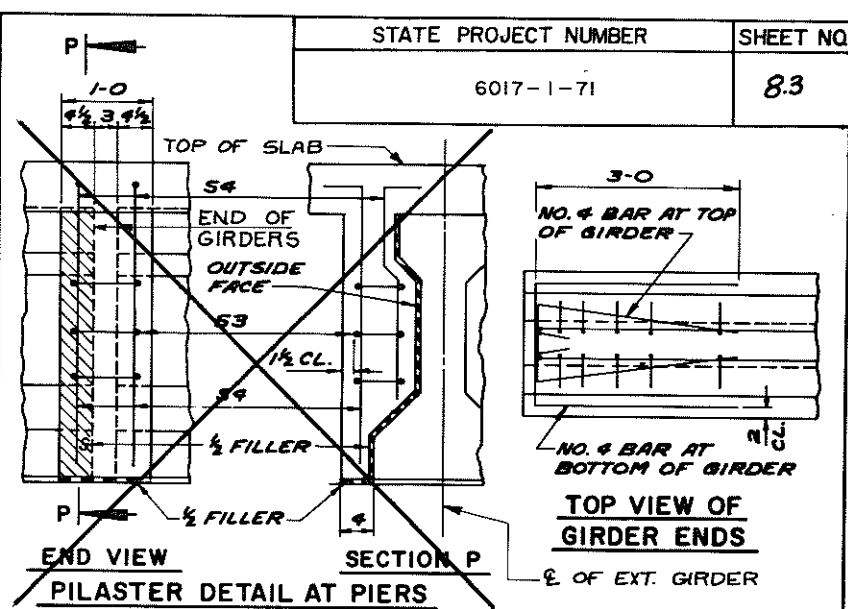
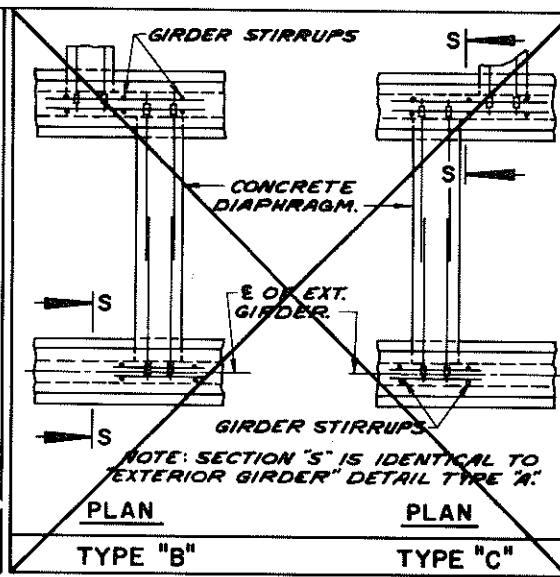
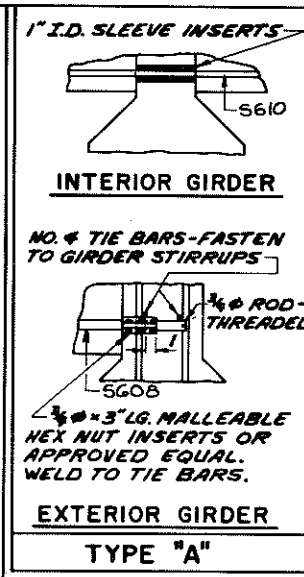
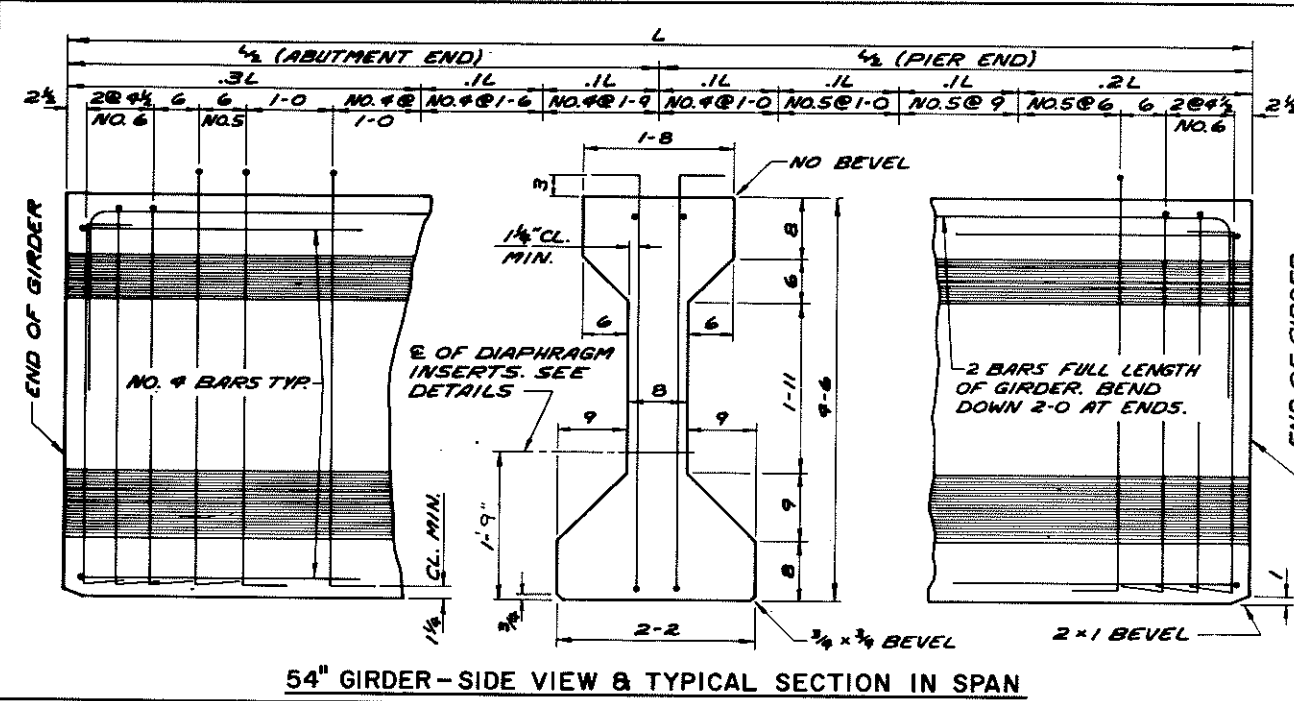
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-44-86

Const. WIS. '75' Drawn By MDP Plans Checked L.M.B.

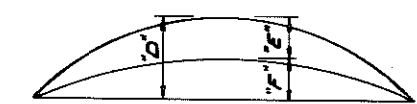
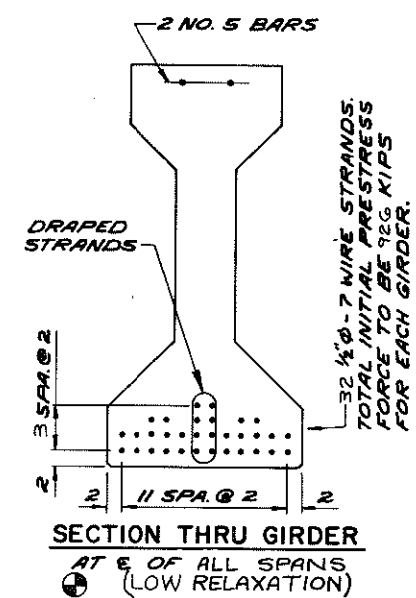
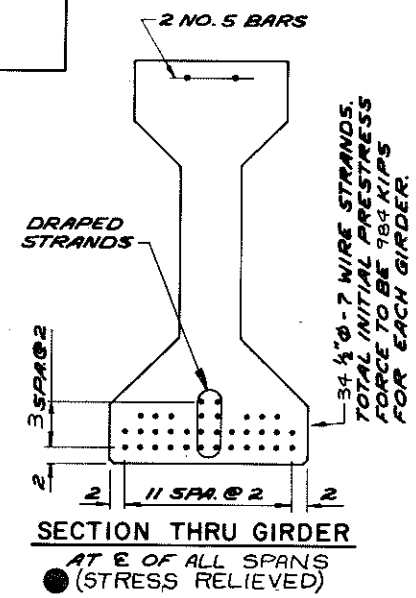
SUBSURFACE
EXPLORATION

SHEET 2 OF 7
X 60383



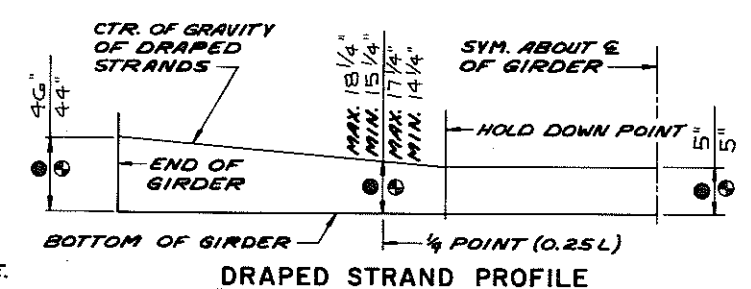
NOTES

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 P.S.I. AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.
 INSERTS SHALL BE PLACED ON 4" CENTERS SYMMETRICALLY ABOUT THE E 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 GIRDER THAT ARE FINALLY EXPOSED.)
 TOP LONGITUDINAL BARS IN GIRDER MAY BE SPLICED BY USING 35 BAR DIAMETER LAPS. PLACE ONE LAP AT E OF GIRDER IF LENGTH IS < 65'-0". PLACE LAPS AT THE 1/3RD POINTS OF GIRDER IF LENGTH IS > 65'-0".
 ALL NON-PRESTRESSED BAR STEEL REINFORCEMENT SHALL BE GRADE 60.



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

* MINIMUM CYLINDER STRENGTH OF CONCRETE AT TIME OF TRANSFER OF PRESTRESS FORCE.



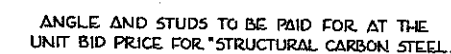
GIRDER DATA			
		● STRESS RELIEVED	● LOW RELAXATION
GIRDER LENGTH "L" REQUIRED		91'-0"	91'-0"
f'ci (psi) *	DRAPED PATTERN	4800	4800
	SPREAD PATTERN		
DEFLECTION DATA **	PRESTRESS CAMBER "D"	1 1/2"	1 1/4"
	DEAD LOAD DEFLECTION "E"	3/4"	3/4"
	RESIDUAL CAMBER "F"	3/4"	1/2"
USE DIAPHRAGM INSERT DETAIL TYPE "A"			

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-86			
Const. Spec. WIS. '75	Drawn By M.D.P.	Plans Checked L.M.B.	
54" PRESTRESSED GIRDER DETAILS			SHEET 4 OF 7 X60385



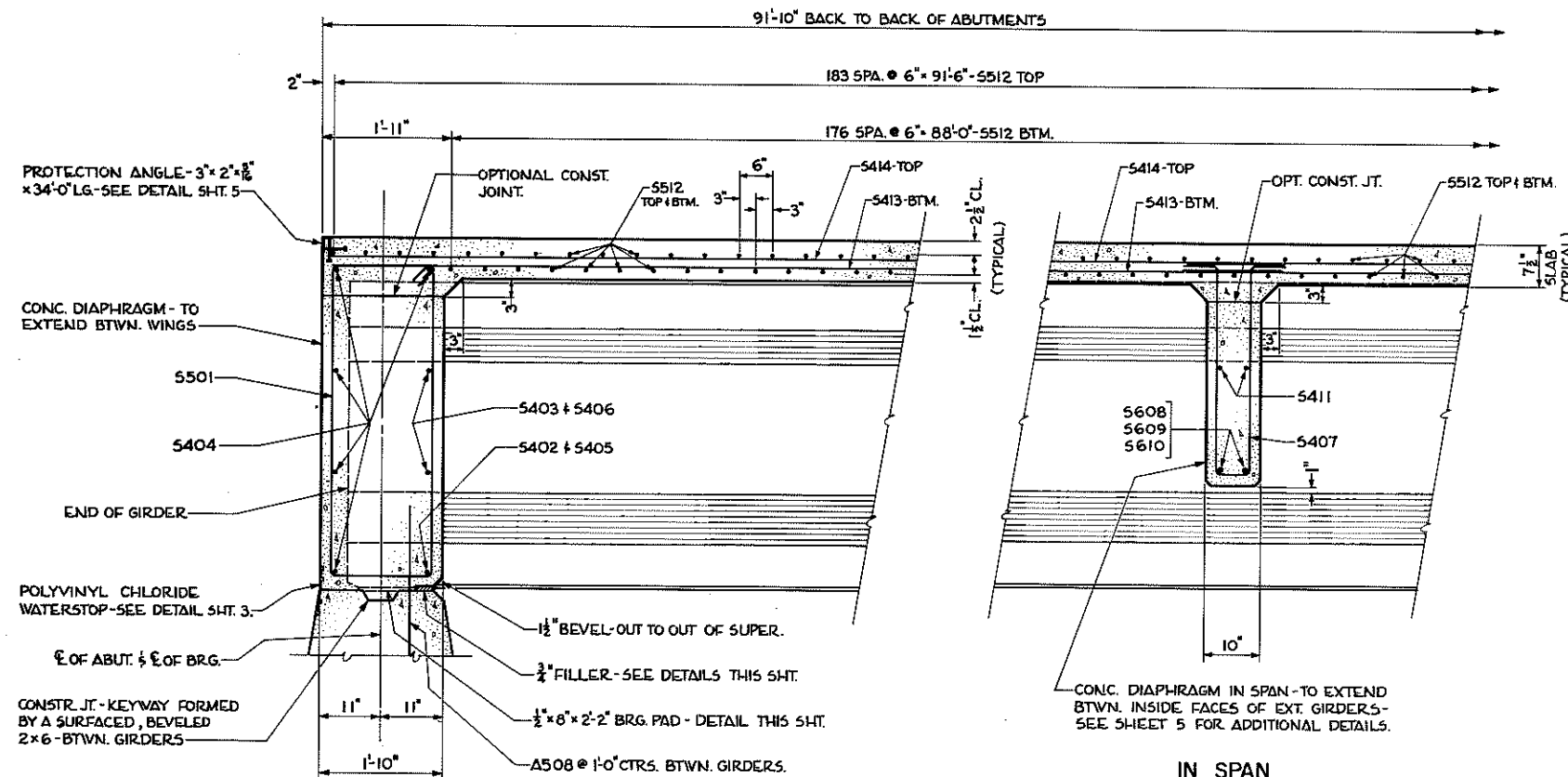
TOTAL: 21,130*

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
PLAIN BAR-THREAD ONE END 3".



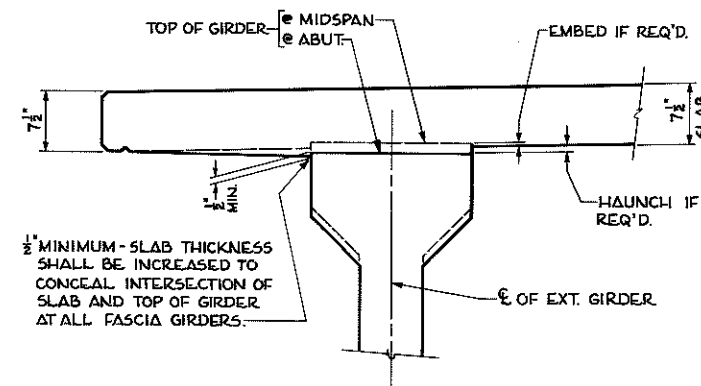
PROTECTION ANGLE DETAIL

5	SUPERSTRUCTURE	SHEET 5 OF 7
		X 60386

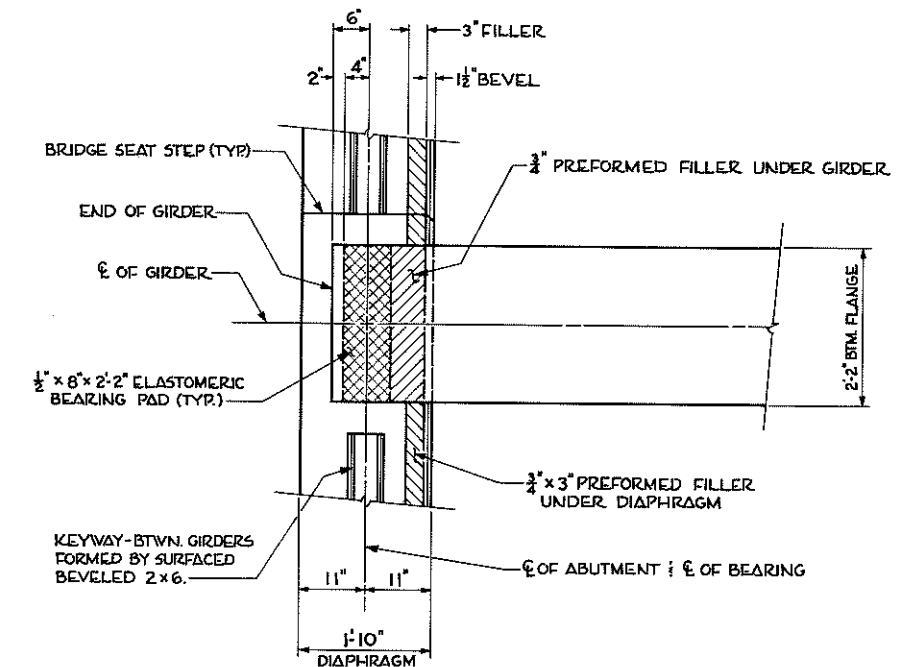


AT ABUTMENTS

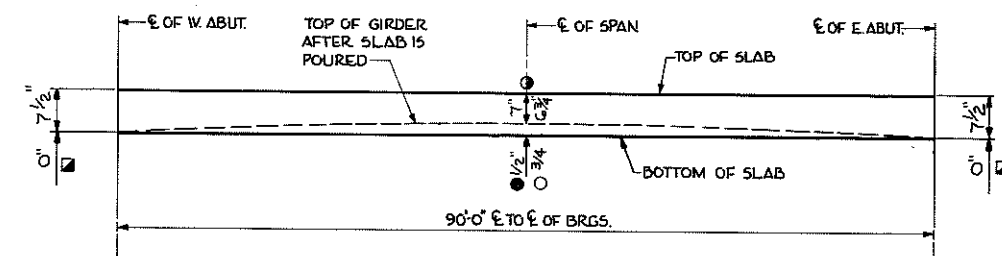
PARTIAL LONGITUDINAL SECTION



SLAB DETAIL AT EXTERIOR GIRDER



BEARING PAD DETAILS



SLAB FORMING DIAGRAM

① TO COMPENSATE FOR VARIATIONS IN PRESTRESS CAMBER AND OTHER MINOR CONSTRUCTION DISCREPANCIES THE IMBEDMENT OF THE GIRDER INTO THE SLAB MAY BE VARIED WITH A MAXIMUM OF 1 1/2" ALLOWABLE EMBEDMENT AND THE SLAB HELD TO PLAN THICKNESS.

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

- LOW RELAXATION
○ STRESS RELIEVED

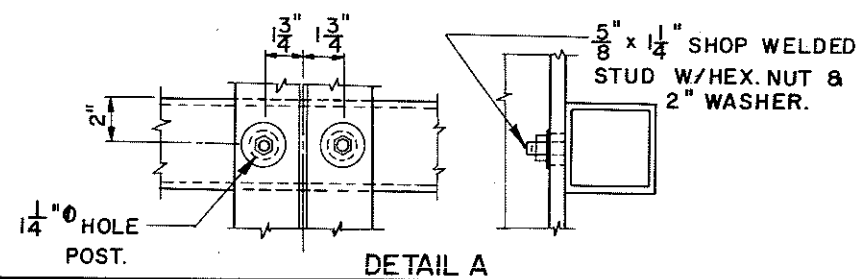
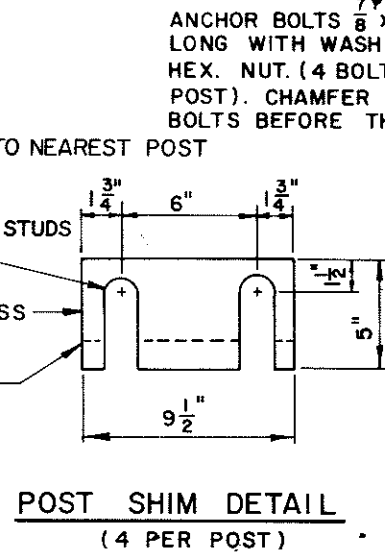
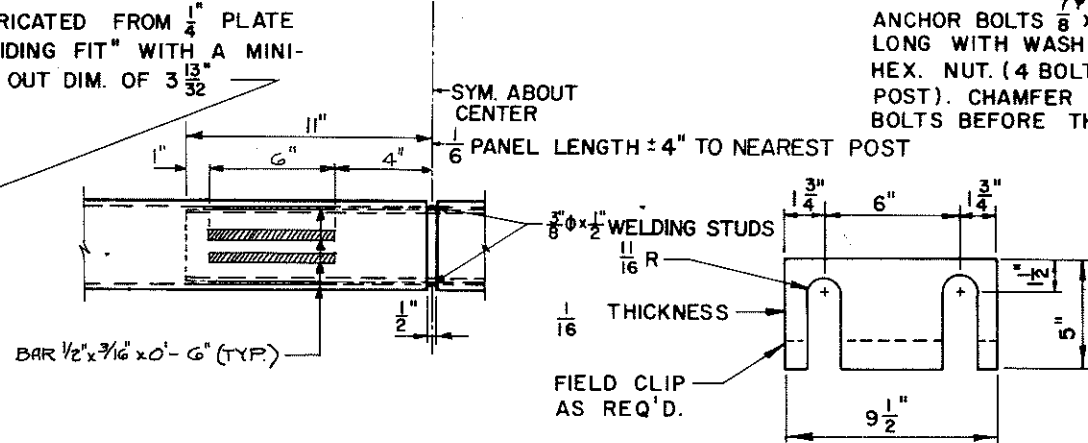
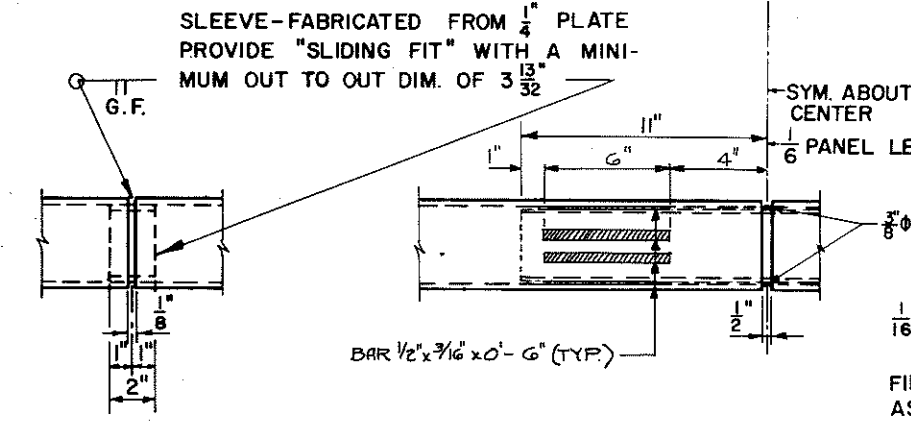
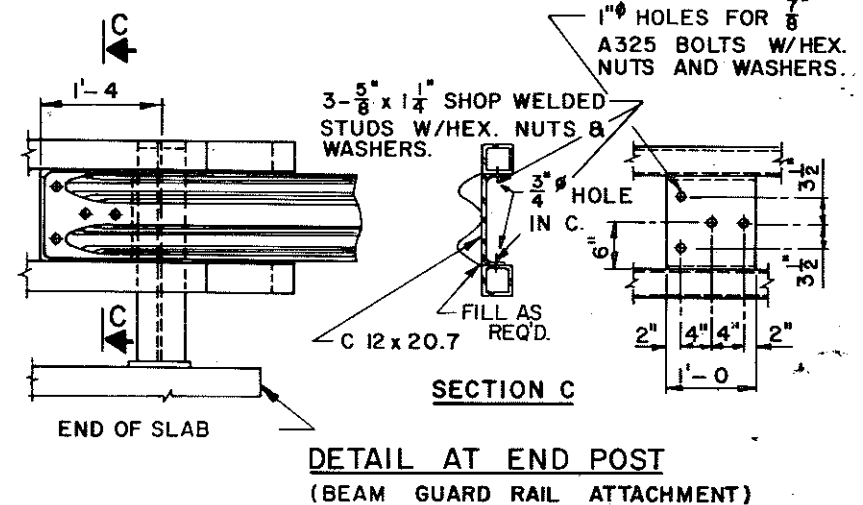
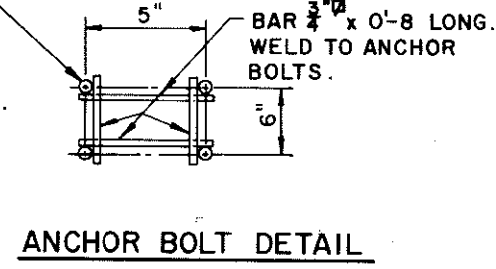
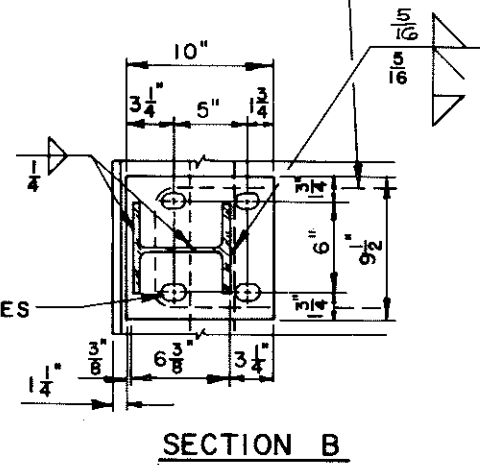
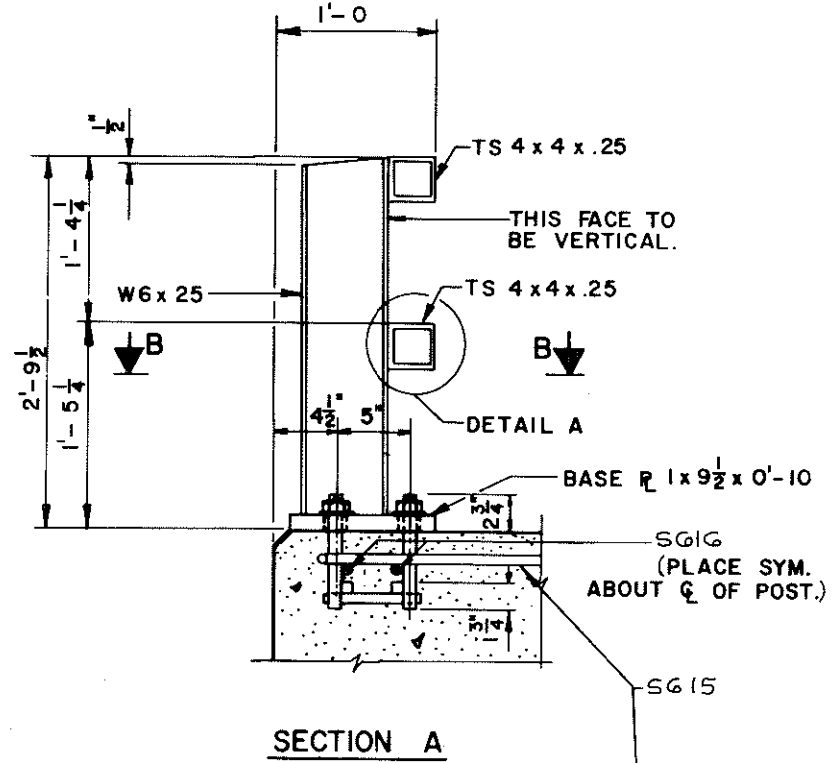
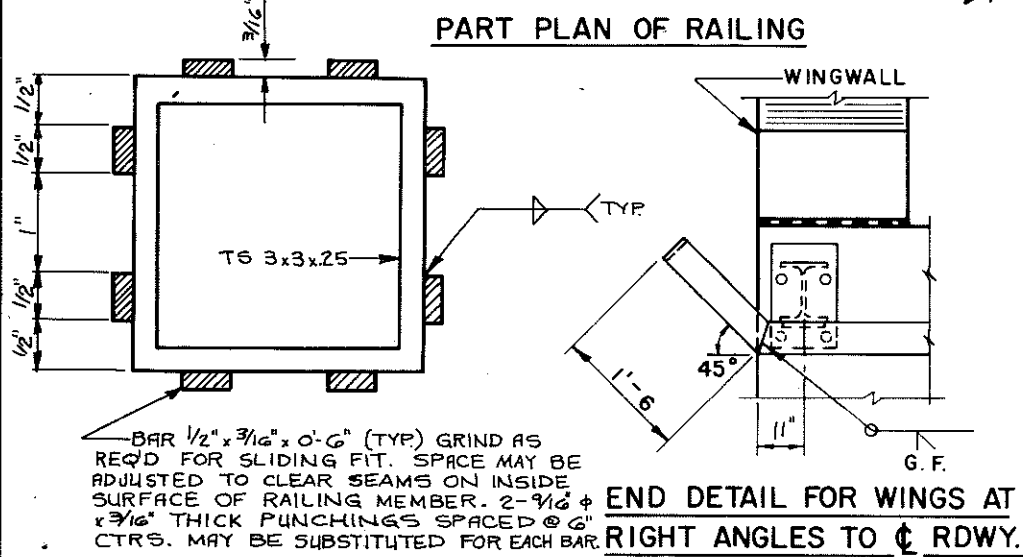
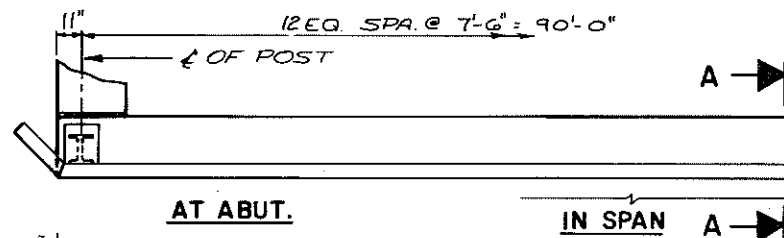
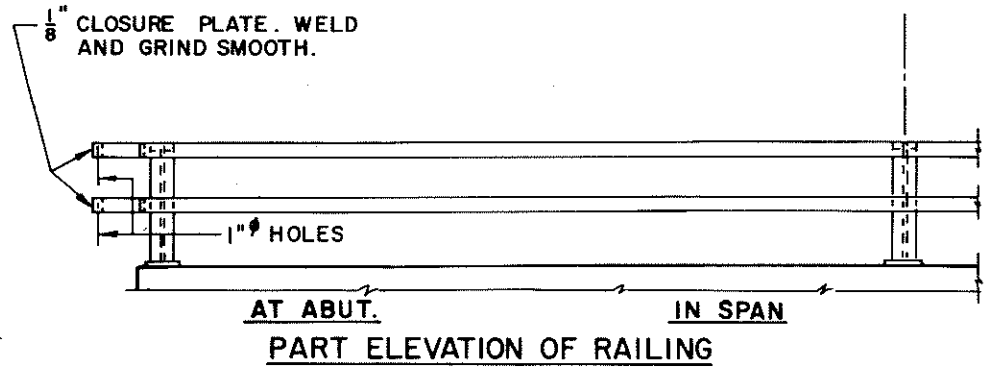
BARRIENTOS & ASSOCIATES, INC.
CONSULTING ENGINEERS
2020 UNIVERSITY AVE. MADISON, WISC. 53705
PH 608-238-5761

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-86			
Const. Spec.	WIS. '75	Drawn By	S.R.L.
Plans Checked	L.M.B.		
SUPERSTRUCTURE DETAILS		SHEET 6 OF 7	
		X60387	

GENERAL NOTES

1. BID ITEM SHALL BE 'TUBULAR RAILING, TYPE F'.
 2. POST BASE PLATES SHALL BE FLAT 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.
 3. RAILING SHALL BE 4x4x.25 STRUCTURAL TUBING CONFORMING TO A.S.T.M. DESIGNATION A36.
 4. ANCHOR BOLTS SHALL BE $\frac{7}{8}$ " NOMINAL CONFORMING TO A.S.T.M. A449 WITH 3" THREAD AND HIGH STRENGTH NUTS AND WASHERS.
 5. POST, BASE PLATES AND 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.
 6. PLACE ANCHOR BOLTS NORMAL TO BASE PLATE.
 7. ALL MEMBERS, INCLUDING UPPER 4" OF ANCHOR BOLTS, SHALL BE GALVANIZED AFTER FABRICATION.
 8. BEAM GUARD ATTACHMENT MAY BE WELDED TO RAILS AND RAILS MAY BE WELDED TO POSTS.
 9. FILL POST ANCHOR BOLT HOLES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.
 10. RAILING SHALL BE FABRICATED IN 2 OR 3 PANEL LENGTHS.
 11. STEEL SHIMS SHALL BE USED UNDER POST WHERE REQ'D. FOR ALIGNMENT.
 12. CALK EXPOSED OPENINGS BETWEEN SHIMS.
- NOTE: BEAM GUARD RAIL ATTACHMENTS TO BE INCLUDED IN BID ITEMS FOR RAILINGS.

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No.	Date	Revision	By
1	7/5	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	
2	7/5	STRUCTURE B-44-86	
3	7/5	TUBULAR STEEL RAILING, TYPE "F"	
4	7/5	SHEET 7 OF 7	
5	7/5	X 60388	

