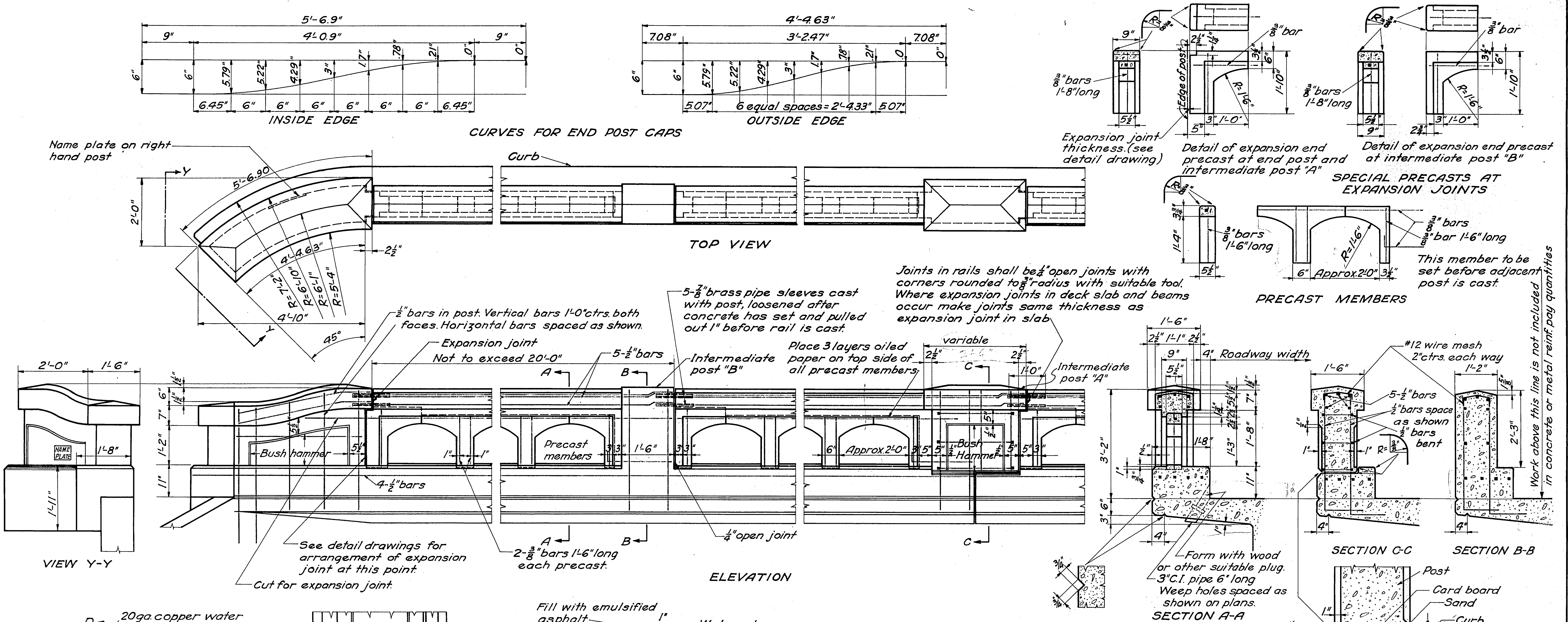

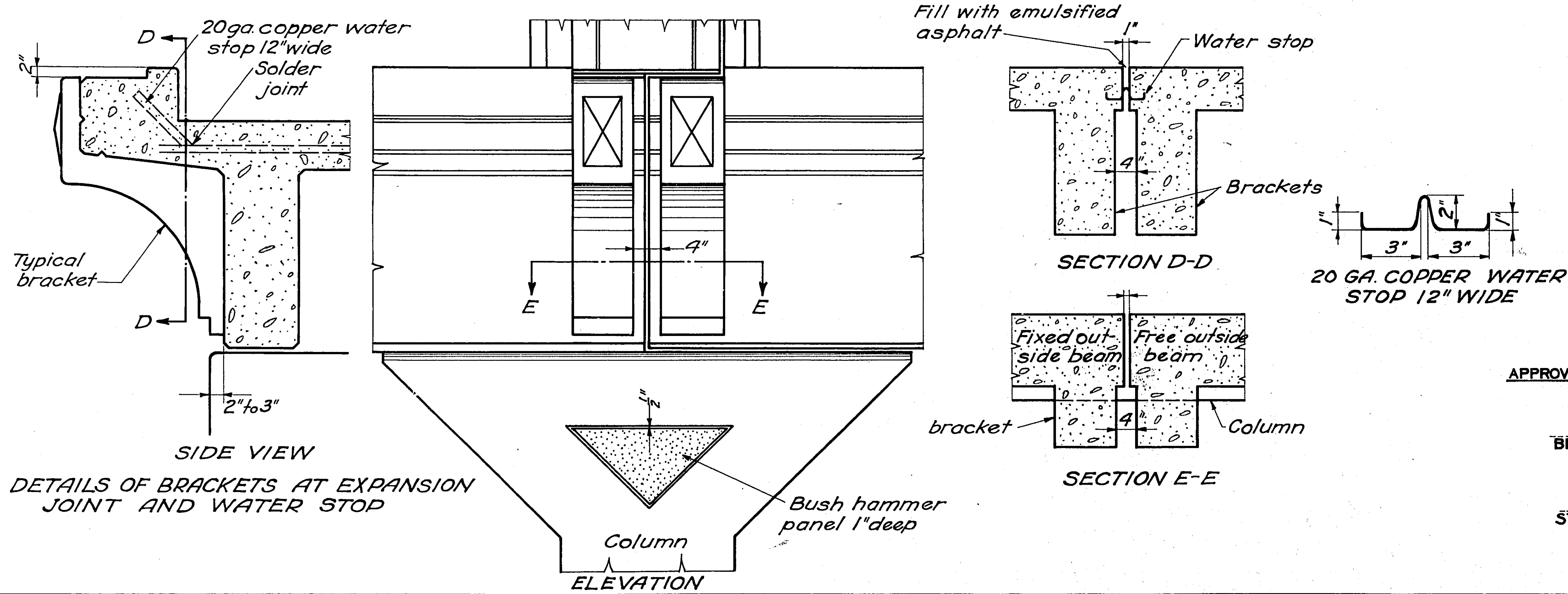

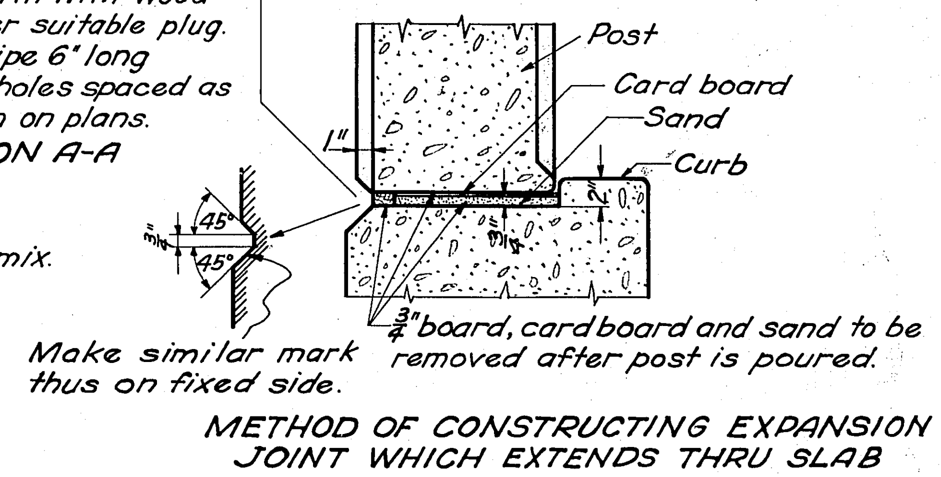

GENERAL NOTES:
Concrete to be of class "D" mix excepting precast members which shall be class "E" mix.
All exposed surfaces to be rubbed with carborundum.
All steel to be square deformed bars.
Name plates when required will be furnished by the state and shall be placed by the contractor.

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OREGON
STATE HIGHWAY COMMISSION
STANDARD
CONCRETE HANDRAIL

SCALE $\frac{3}{4}" = 1'-0"$

OCT. 1925

DRAWING NO. 3292

VOID! See drawing # 3411

Revised 4-27-26

FOR INFORMATION ONLY

GENERAL NOTES:
All concrete shall be class "A" mix except precast rail members which shall be 1:2 mortar and the roadway slab which shall be class "D" mix.
All exposed corners shall have 3/4" bevel unless noted or shown otherwise.
All exposed surfaces shall be finished with carborundum, except as noted.
All steel shall be deformed bars.
Bars to be placed 2" clear from nearest face of concrete unless noted or shown otherwise.
Footings shall be carried deeper than shown if necessary to secure firm foundation
Provide water stops at all construction joints.
Contractor shall check bending lists.
Material and workmanship shall conform to the specifications for bridges of the Oregon State Highway Commission edition of 1926.
Loading H 15 as per specifications

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OREGON
STATE HIGHWAY COMMISSION
ROCKY CREEK ARCH
ON
ROOSEVELT COAST HIGHWAY
LINCOLN CO.
PLAN & ELEVATION

SCALE 1" = 15'-0"	DRAWN BY W. D. S.	SHEET 1 OF 6
MARCH 15-1926	TRACED BY C. C. S.	BRIDGE NO. 1089
CALC. BK. NO. 83	CHECKED BY	DWG. NO. 3335

ACCOMPANIED BY DWGS. NO. 3336-37-38-39 & 3292


Revised 4-27-26
" 8-4-26
1/4" open joint
3/4" Exp. joint
Expansion joint. Score similar mark on other side.
Cardboard or other material 3/8" thick between rib and curtain wall.
Bush hammer surface of all panels
Bush hammer surface
Exp. joint
Batter 1/8" per ft.
Batter 1/4" per ft.
Extrados R=134'-2"
℄ Radius = 131'-1"
Intrados R=130'-1"
Extrados R=87'-4"
℄ Radius=82'-10"
Intrados=78'-4"
Change radius 48'-8 1/2" to ℄ arch
℄ pier
face of pier at cap
wire mesh
3/8" ϕ bar 3'-6" lg.
2-3/4" ϕ bars 3'-9" long.
2-3/8" ϕ bars 3'-9" lg.
BRACKET DETAIL
Shear Keys
Beam D
Beam A
Beam E1
2-3/4" ϕ bars in each haunch
Exp. shoes A
SECTION B-B
Scale 3/8"=1'-0"
Note: Rib steel is buried 4" at haunches and 2" at quarter points and crown. Make the change at junction of 1 1/4" and 1 1/8" steel.
SECTION A-A
Scale 3/8"=1'-0"
8'-0" ℄ col. & rib
8'-5" ℄ beam
1/2" □ stirrups
2-3/4" ϕ bars in each haunch 9'-0" long.
℄ Roadway
℄ Arch
1/2" □ bars @ 5" ctrs. alternate bars bent
5/8" ϕ bars @ 10" ctrs. straight over center beam. 6'-0" long.
1/2" □ bars @ 10" ctrs. bent up into slab. 6'-0" long.
Beam E2
Exp. joint
Beam D2
Beam E
8'-0" ℄ of arch rib
Build shear keys full length of all longitudinal beams.
DETAIL OF SHEAR KEYS
Beam E1
Beam D2
Beam D1
2-3/4" ϕ bars 8'-0" long
2-3/4" ϕ bars 5'-3" long
Exp. joint
SECTION E-E
3/4" bead
SECTION F-F
Cast this section of post with precast bracket
5/8" bolts
DETAIL AT EXP. JOINT ON APP. SPANS
See std. handrail for detail except as shown.
Precast brackets at Exp. joints and bolt in place as shown. Plug holes with concrete after precasts are in place.
Wire mesh
3/8" ϕ bars in both faces
Exp. plts.
SECTION G-G
FOR INFORMATION ONLY
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ON
ROOSEVELT COAST HIGHWAY
LINCOLN CO.
GENERAL DRAWING
APPROVED
BRIDGE ENGINEER
STATE HIGHWAY ENGINEER
SCALE AS NOTED
DRAWN BY W. D. S.
SHEET 2 OF 6
MARCH 15-1926
TRACED BY C. C. S.
BRIDGE NO. 1089
CALC. BK. NO. 83
CHECKED BY
DWG. NO. 3336
ACCOMPANIED BY DWGS. NO. 3335-37-38-39 & 3292

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OREGON
STATE HIGHWAY COMMISSION

ROCKY CREEK ARCH

ON

ROOSEVELT COAST HIGHWAY
LINCOLN CO.

ARCH DETAILS

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BRIDGE ENGINEER

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SCALE AS NOTED	DRAWN BY W.D.S.	SHEET 3 OF 6
MARCH 15 - 1926	TRACED BY C.C.S.	BRIDGE NO. 1089
CALC. BK. NO. 83	CHECKED BY	DRAWING 3337

ACCOMPANIED BY DWGS. NO. 3335-36-38-39 & 3292

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STATE HIGHWAY COMMISSION

ROCKY CREEK ARCH

ON

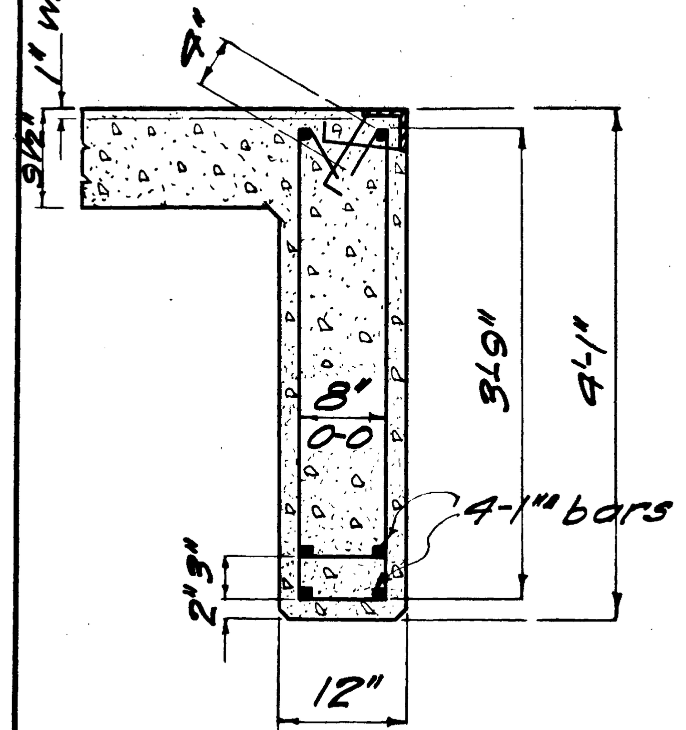
ROOSEVELT COAST HIGHWAY
LINCOLN CO.

APPROACH DETAILS

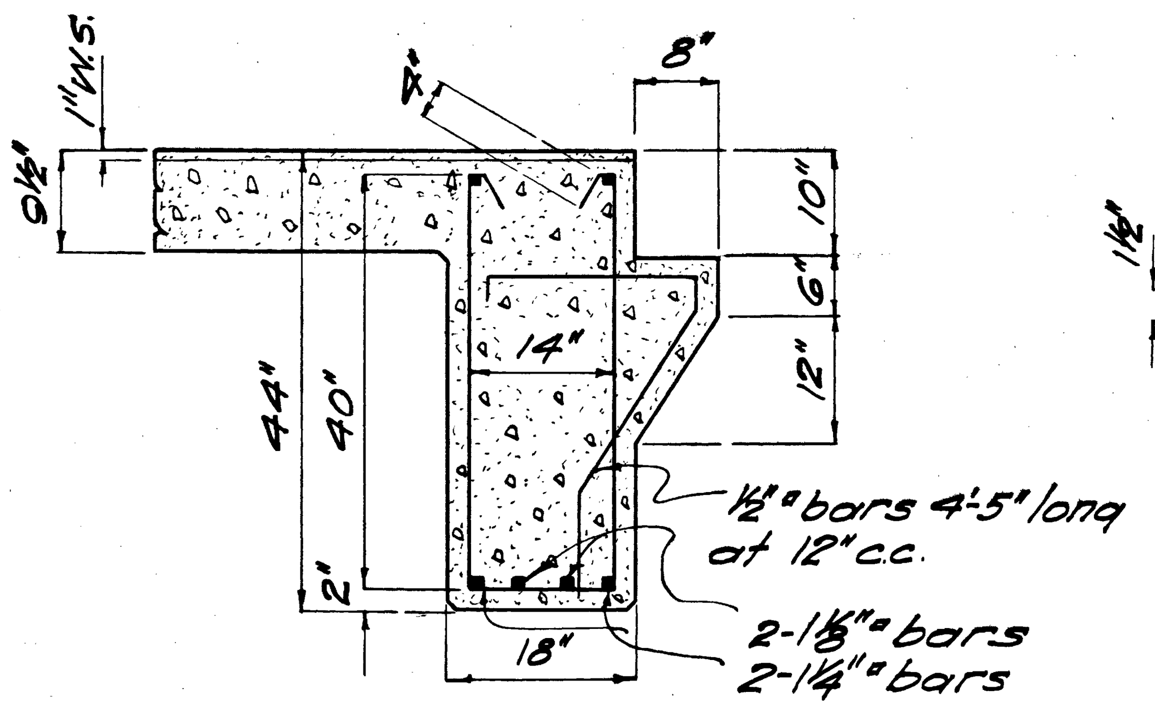
SCALE AS NOTED	DRAWN BY W.D.S.	SHEET 4 OF 6
MARCH 15 - 1926	TRACED BY C.C.S.	BRIDGE NO. 1089
CALC. BK. NO. 83	CHECKED BY	DRAWING 3338

ACCOMPANIED BY DWGS NO. 3335-36-37-39 & 3292

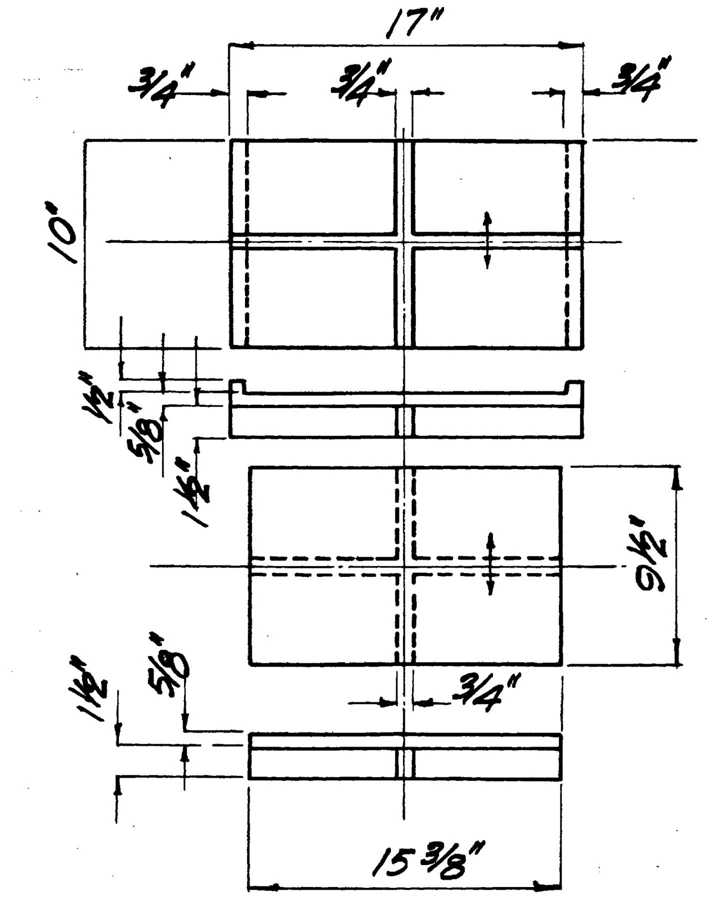
Revised 4-27-26
" 7-22-26



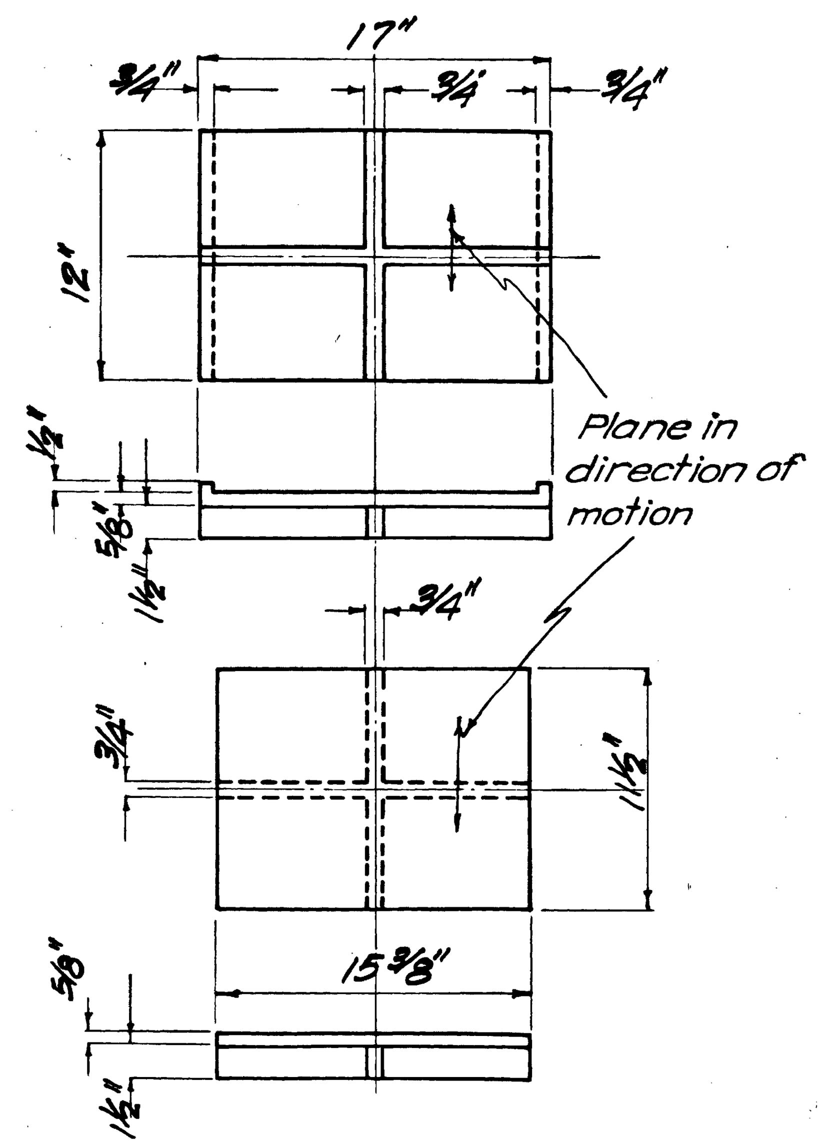
Beam F



Beam J

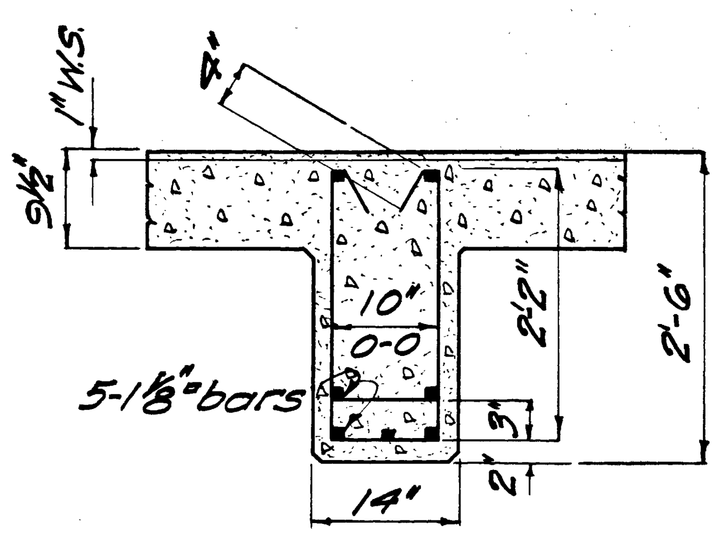


EXP. PLATES A
8 Sets req.



EXP. PLATES C.
4 Sets req.

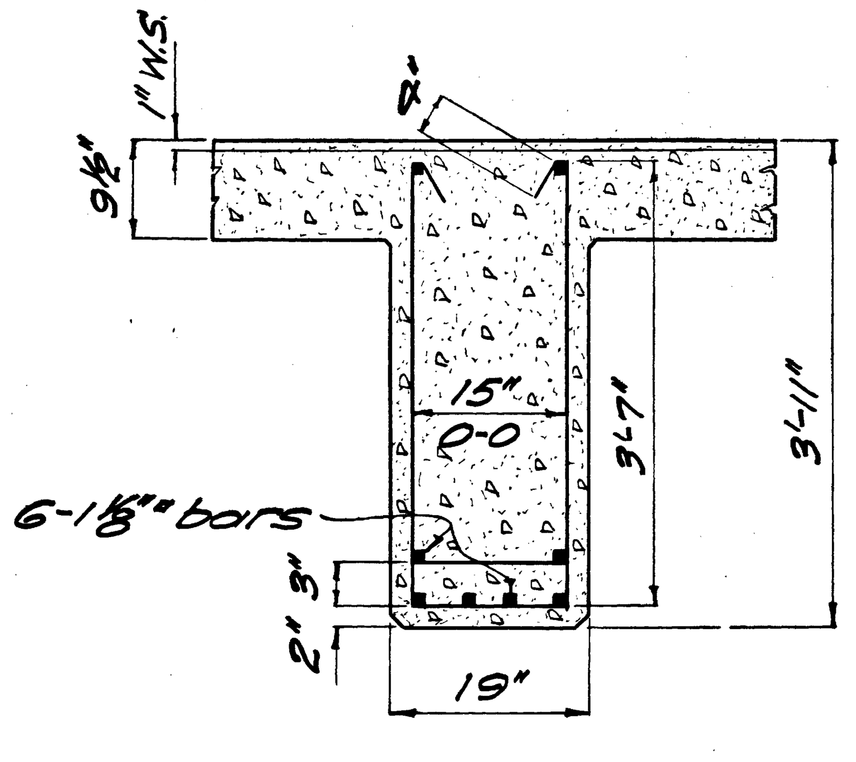
Bronze expansion plates cast as shown, planed smooth in the direction of motion and coated with graphite.



Beams G_1 & G_2

		Net	Total			X		X	6" / 0-0	X		X	
No.	Size	Length	Length	Spc.									
426	½"□	23'-0"	23'-0"	10"	Straight in bottom of slab								
427	½"□	23'-0"	23'-8"	10"	4'-7"	8"	4'-5"	8"	3'-0"	8"	4'-5"	8"	4'-7"
852	½"□	5'-8"	6'-0"	10"	/ over outside bm., bent up into curb								
427	⅝"ϕ	6'-0"	6'-0"	10"	Straight over center bm.								
8	½"□		354'	as shown	Spacer bars								
42	½"□	6'-0"	7'-4"	12"		8" 8" 3'-8" 8" 8"			6" hooks in slab over piers				
6	½"□	22'-0"	22'-0"	as shown	Spacer bars.								
42	½""	6'-0"	7'-0"	12"					6'-0"		6" hooks each end		

SLAB STEEL



Beam H

Beam		Stirrups for one beam, all stirrups ½"□ bars					
Mark	No.	No.	Type	h	w	Length	Spacing from one end.
A	8	16	⊔	3'-3"	16"	8'-6"	3"-6", 10" c.c. along beam
D_1 & D_2	33	16	"	1'-9"	10"	5'-0"	3"-3@7"-8"-2@9"-10"-℄
E_1	6	16	"	3'-3"	8"	7'-10"	3"-6"-9"-10"-5@10"
E_2	4	14	"	3'-3"	8"	7'-10"	3"-6"-5@10"
F_1	2	20	"	3'-9"	8"	8'-10"	3"-8" c.c. along beam
G_1 & G_2	30	23	"	2'-2"	10"	5'-10"	3"-3@7"-9"-9"-10"-11"-12"-12"-12" ℄
H	6	20	"	3'-7"	15"	9'-1"	3"-8" c.c. along beam.
I	2	20	"	3'-6½	15"	9'-0"	3"-8" c.c. along beam.
J	2	26	"	3'-4"	14"	8'-6"	3"-6" c.c. along beam.
W	4	16	"	1'-9½	6"	4'-9"	3"-6@12"-9"

BEAM STIRRUPS

Beam		Steel for one			Net Length									Net
Mark	No.	No.	Size	Length	hook	d / 0-0	x		x	d' / 0-0	hook	d	d'	Length
A	8	2	1¼"□	19'-8"	12"			17'-8"			12"	0	0	17'-8"
		2	1¼"□	22'-2"	12"	2'-2"	4'-4"	7'-2"	4'-4"	2'-2"	12"	3'-1"	3'-1"	17'-8"
		2	½"□	16'-0"	Stirrup hangers									
D_1	6	2	1⅛"□	47'-0"	12"			46'-0"			0	0	0	46'-0"
		2	1⅛"□	33'-0"	0			32'-0"			12"	0	0	32'-0"
		2	1¼"□	19'-8"	12"	12"	2'-4"	8'-4"	2'-4"	5'-0"	0	20"	20"	17'-8"
		3	1¼"□	22'-11"	0	5'-0"	2'-4"	8'-7"	2'-4"	5'-0"	0	20"	20"	21'-11"
		2	½"□	42'-0"	Stirrup hangers									
		2	½"□	30'-0"	Stirrup hangers									
D_2	3	1	1¼"□	16'-5"	12"	12"	2'-4"	8'-1"	2'-4"	12"	12"	20"	20"	13'-5"
		2	1¼"□	15'-5"	12"			13'-5"			12"	0	0	13'-5"
		2	½"□	13'-5"	Stirrup hangers									
E_1	6	3	1⅛"□	19'-8"	12"			17'-8"			12"	0	0	17'-8"
		2	½"□	17'-8"	Stirrup hangers									
E_2	4	3	1⅛"□	22'-2"	12"			20'-8"			12"	0	0	20'-8"
		2	½"□	16'-0"	Stirrup hangers.									
F	2	2	1"□	19'-8"	12"			17'-8"			12"	0	0	17'-8"
		2	1"□	22'-6"	12"	2'-2"	4'-10"	6'-6"	4'-10"	2'-2"	12"	3'-5"	3'-5"	17'-8"
		2	½"□	16'-0"	Stirrup hangers.									
G_1	6	3	1⅛"□	40'-9"	12"			39'-9"			12"	0	0	39'-9"
		2	1⅛"□	26'-6"	12"	12"	2'-7"	14'-4"	2'-7"	5'-0"	0	1'-10"	1'-10"	24'-0"
		2	1⅛"□	26'-3"	0	5'-0"	2'-7"	14'-1"	2'-7"	12"	12"	1'-10"	1'-10"	23'-9"
		2	½"□	39'-0"	Stirrup hangers									
G_2	6	3	1⅛"□	25'-0"	12"			24'-0"			0	0	0	24'-0"
		3	1⅛"□	45'-0"	0			44'-0"			12"	0	0	44'-0"
		4	1⅛"□	26'-3"	12"	12"	2'-7"	14'-1"	2'-7"	5'-0"	0	1'-10"	1'-10"	23'-9"
		2	1⅛"□	29'-6"	0	5'-0"	2'-7"	14'-4"	2'-7"	5'-0"	0	1'-10"	1'-10"	28'-0"
		2	½"□	40'-0"	Stirrup hangers									
		2	½"□	20'-0"	Stirrup hangers									
H	6	4	1⅛"□	19'-8"	12"			17'-8"			12"	0	0	17'-8"
		2	1⅛"□	22'-4"	12"	2'-2"	4'-6"	7'-0"	4'-6"	2'-2"	12"	3'-2"	3'-2"	17'-8"
		2	½"□	16'-0"	Stirrup hangers									
I	2	4	1⅛"□	19'-8"	12"			17'-8"			12"	0	0	17'-8"
		2	1⅛"□	22'-4"	12"	2'-2"	4'-6"	7'-0"	4'-6"	2'-2"	12"	3'-2"	3'-2"	17'-8"
		2	½"□	16'-0"	Stirrup hangers.									
J	2	2	1¼"□	19'-8"	12"			17'-8"			12"	0	0	17'-8"
		2	1⅛"□	22'-4"	12"	2'-2"	4'-6"	7'-0"	4'-6"	2'-2"	12"	3'-2"	3'-2"	17'-8"
		2	½"□	16'-0"	Stirrup hangers.									
W	4	2	¾"ϕ	17'-6"	6"			16'-6"			6"	0	0	16'-6"
		2	½"□	16'-0"	Stirrup hangers.									

BEAM STEEL

FOR INFORMATION ONLY

OREGON
STATE HIGHWAY COMMISSION

ROCKY CREEK ARCH

ON

ROOSEVELT COAST HIGHWAY
LINCOLN CO.

GENERAL DRAWING

APPROVED
B. McCullough
BRIDGE ENGINEER

STATE HIGHWAY ENGINEER

MARCH 15-1926
CALC. BK. NO. 83

DRAWN BY W.D.S.
TRACED BY "
CHECKED BY

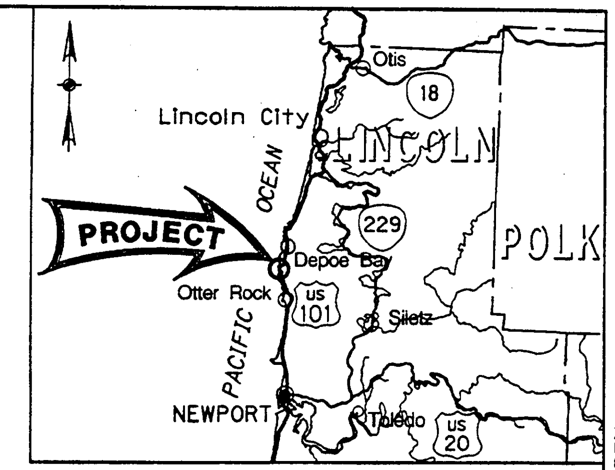
SHEET 5 OF 6
BRIDGE NO. 1089
DWG. NO. 3339

ACCOMPANIED BY DWGS. NO. 3335-6-7-8- & 3292

INDEX OF SHEETS	
DWG. NO.	DESCRIPTION
58407	INDEX, GENERAL NOTES, LOCATION MAP
58408	SITE PLAN
58409	WORK ITEMS
58410	WORK PLATFORM ENCLOSURE CONCEPT
ROCKY CREEK ARCH BRIDGE REHABILITATION	
58411	PLAN AND ELEVATION
58412	TYP. REMOVAL LIMITS AND DETAILS
58413	TYP. CONCRETE REPLACEMENT DETAILS
58414	DECK BAR CUT-OFF DETAILS
58415	CONDUIT EXPANSION JOINT INSTALLATION
58416	MISCELLANEOUS DETAILS
58417	DECK DRAIN DETAILS
58418	RAIL DETAILS - DIMENSIONS
58419	RAIL DETAILS - REINFORCEMENT
58420	HANDRAIL AND END POST DETAILS
58421	CONCRETE REPAIR DETAILS
58422	REINFORCING BAR REPAIR DETAILS
ROCKY CREEK ARCH BRIDGE CATHODIC PROTECTION	
58428	C. P. PLAN AND ELEVATION
58429	C. P. AREA DEFINITIONS
58430	C. P. ZONE DESCRIPTIONS
58431	DC POWER DISTRIBUTION PLAN
58432	C. P. POWER SUPPLY & SYSTEM SCHEMATIC
58433	REINFORCEMENT CONTINUITY DETAILS
58434	GENERAL CATHODIC PROTECTION DETAILS
58435	MONITORING CABINET MOUNTING DETAILS
58436	POWER SUPPLY & DATA SCHEMATICS
58437	DATA CHANNEL SCHEDULES

Standard Drawing Referenced in the Plans: BR120

Reference Drawings of Existing Rocky Creek Bridge Structure: 3335 thru 3339 and 3292.



LOCATION MAP

N.E. 1/4 CORNER SECT. 19, R. 11 W., T. 9 S., W.M.

GENERAL NOTES:

All material and workmanship shall conform to the Standard Specifications for Highway Construction 1996 Edition of the Oregon Department of Transportation, as modified and/or extended by the Special Provisions and Supplemental Standard Specifications for this project.

Deck & Beam "E2" designed using AASHTO Load and Resistance Factor Design (LRFD), 1998 for HL93 loading with allowance for 50 mm future wearing surface.

All reinforcing steel shall conform to ASTM Specification A615M Grade 420 or A706M. Field bend bars shall conform to ASTM Specification A706A.

The following splice lengths shall be used unless shown otherwise :

Bar Size	10	13	16	19	22	25	29	32	36	45 & 55
Splice Length	305	406	508	610	838	1092	1397	1753	2159	Not Allowed

All bars shall be placed 50 mm clear of the nearest face of concrete unless shown otherwise.

All deck concrete shall be Class 30 MPa–19mm see Sec. 00543 in the Special Provisions.

All other concrete shall be Class 25 MPa–19mm or 38mm unless noted otherwise in the Special Provisions.

Resin bonding shall use low or high strength resin from ODOT Qualified Products List.

Saturate all adjacent existing concrete surfaces for a minimum of 24 hours prior to placing new concrete.

All electrical equipment shall conform to the current standards of the National Electrical Manufacturers Association (NEMA) and the Underwriter's Laboratories, (UL), wherever appicable. In addition to the requirements of the plans, all materials and workmanship shall conform to the current requirements of the National Electrical code (NEC), National Electrical Safety Code, standards of the American Society for testing and Materials (ASTM), American National Standards Institute (ANSI), and any local ordinances which may apply, which are not in conflict with the Special Provisions.

METRIC

△	DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Thiet D. Nguyen
REVIEWED: Frank J. Nelson

DESIGNER — EXPIRES: 12/31/01
BRIDGE ENGINEER — EXPIRES: 6-30-01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

ACCOMPANIED BY DWGS. See INDEX

BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE
REHABILITATION & CATHODIC PROTECTION
OTTER CREST LOOP FRONTAGE RD. (M.P. F130.0)
LINCOLN COUNTY

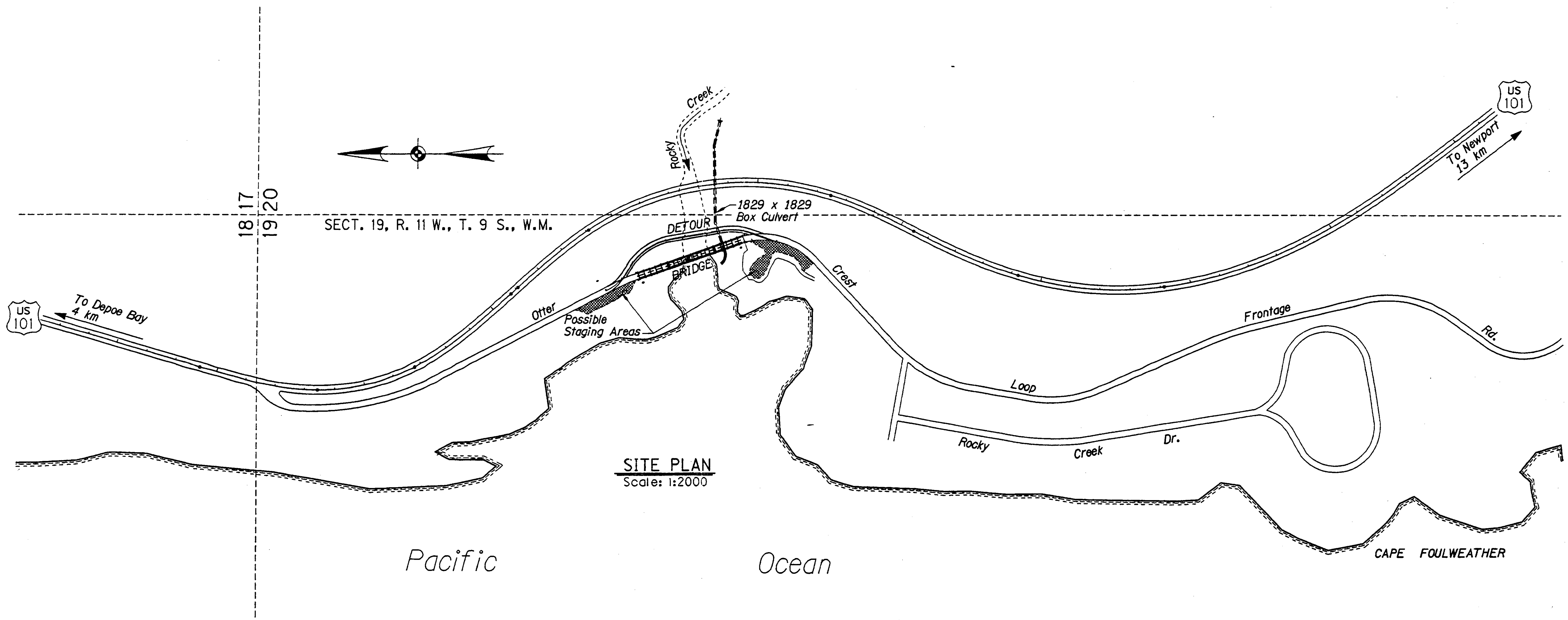
INDEX, GENERAL NOTES & LOCATION MAP

FEDERAL HIGHWAY ADMINISTRATION | PROJECT NUMBER
REGION 10 | OREGON DIVISION

SHEET 1 OF 4

DRAWING NO. 58407

NT7420c: C:\usr\BR\PROJECTS\09314\J01089r1.dgn [VIEW=C1] [PGRID=C1] 01-FEB-2000 OHREN



SITE PLAN
Scale: 1:2000

△	DATE	REVISION	BY

DRAFTED: Tom Ohren

CHECKED: Thiet D. Nguyen

REVIEWED: Frank J. Nelson

DESIGNER

REGISTERED PROFESSIONAL ENGINEER 16586 OREGON ERIC E. BOHN

EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089

DATE 01-FEB-2000

CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE
REHABILITATION & CATHODIC PROTECTION

SITE PLAN

METRIC

SHEET 2 OF 4

DRAWING NO. 58408

\usr\BRY\PROJECTS\09314\J01089r1.dgn [VIEW=A1] [PGRT] 01-FEB-2000 OHREN

NT7420c:

BRIDGE REHABILITATION/OTHER STRUCTURE WORK

WORK ITEMS	SPECIFICATION SECTION DEFINING THE WORK ITEMS	BID ITEMS PAYING FOR THE WORK ITEMS
Remove Rails, Deck, & Selected Beams. Salvage Rail Section	00501-Bridge Removal	Bridge Removal Work Extra For Salvaging and Stockpiling Bridge Rail
Replacing Dentils and Curtain Walls	00501-Bridge Removal	Replace Dentils Replace Curtain Walls
Construct Replacement Beams	00530-Steel Reinf. for Concrete 00532-Rebar Continuity 00540-Concrete Bridges	Reinforcement Structural Concrete, Class 25
Construct Deck	00530-Steel Reinf. for Concrete 00532-Rebar Continuity 00543-Microsilica Structural Concrete 00581-Bridge Drainage System 00583-Electrical Conduit in Bridges	Reinforcement Structural Concrete, Class 30 MC Bridge Drains 78 mm Electrical Conduit 53 mm Electrical Conduit
Construct Rails	00587-Bridge Rails 00532-Rebar Continuity	Ornamental Concrete Rails
Replace Deficient Concrete Cover	01215-Locate & Remove Near Surface Metal 01220-Replace Damaged Reinforcing Bars 01235-Replace Damaged Concrete 01245-Locate and Eliminate Electrical Discontinuities in Rebar 01255-Prepare Secondary Anode Surfaces 02010-Portland Cement	Locate Damaged Concrete Replace Damaged Concrete Structural Concrete, Class 25 Structural, Class 30
Deck Drain Replacement	00501-Bridge Removal 00530-Steel Reinforcement for Conc. 00535-Resin Bonded Anchor System 00540-Concrete Bridges 00581-Bridge Drainage System	Bridge Removal Work Bridge Drains
Provide Work Platform/Enclosure	01205-Provide Work Platform/Enclosure	Provide Work Platform/Enclosure
Prepare Waste Handling Plan	01205-Provide Work Platform/Enclosure 01210-Prepare Waste Handeling Plan 01255-Prepare Secondary Anode Surfaces	Provide Work Platform/Enclosure

CATHODIC PROTECTION

WORK ITEMS	SPECIFICATION SECTION DEFINING THE WORK ITEMS	BID ITEMS PAYING FOR THE WORK ITEMS
Locate and Remove Near Surface Metal	01215-Locate and Remove Near Surface Metal 01235-Replace Damaged Concrete 01255 Prepare Secondary Anode Surfaces 01260-Install Secondary Anodes	Locate Near Surface Metal Remove Near Surface Metal < 9.5 mm Average Diameter Remove Near Surface Metal > 9.5 mm Average Diameter Relocate City water Line
Install Reference Cells	01215-Locate and Remove Near Surface Metal 01235-Replace Damaged Concrete 01240-Install Reference Cells 01270-Install Remote Monitoring System Wiring	Install Reference Cells
Locate and Eliminate Electrical Discontinuities in Rebar	01215-Locate and Remove Near Surface Metal 01245-Locate and Eliminate Electrical Discontinuities in Rebar	Basic Continuity Check Additional Continuity Check Excavation For Continuity Welds Establish Continuity
Install Anode Terminal Plates	01250-Install Anode Terminal Plates 01260-Install Zinc Anodes	Install Anode Terminal Plates
Prepare Zinc Anode Surfaces	01215-Locate and Remove Near Surface Metal 01255-Prepare Zinc Anode Surfaces 01260-Install Zinc Anodes	Prepare Zinc Anode Surfaces
Install Zinc Anodes	01255-Prepare Zinc Anode Surfaces 01260-Install Zinc Anodes	Install Zinc Anodes
Install DC Power Wiring	01245-Locate and Eliminate Electrical Discontinuities in Rebar 01265-Install DC Power Wiring	Install DC Power Wiring
Install Monitoring Wiring	01215-Locate and Remove Surface Metal 01235-Replace Damaged Concrete 01240-Install Reference Cells 01265-Install DC Power Wire 01270-Install Monitoring Wiring	Install Monitoring Wiring
Install DC Power Supplies and Remote Monitoring and Control System	01275-Install DC Power Supplies and Remote Monitoring and Control System	Power Supplies and Monitoring System
Install AC Power Supply System	01280-Install AC Power Supply System	Install AC Power Supply System

DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Thiet D. Nguyen
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 16586 OREGON MAY 20, 1985 ERIC E. BOHN
EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

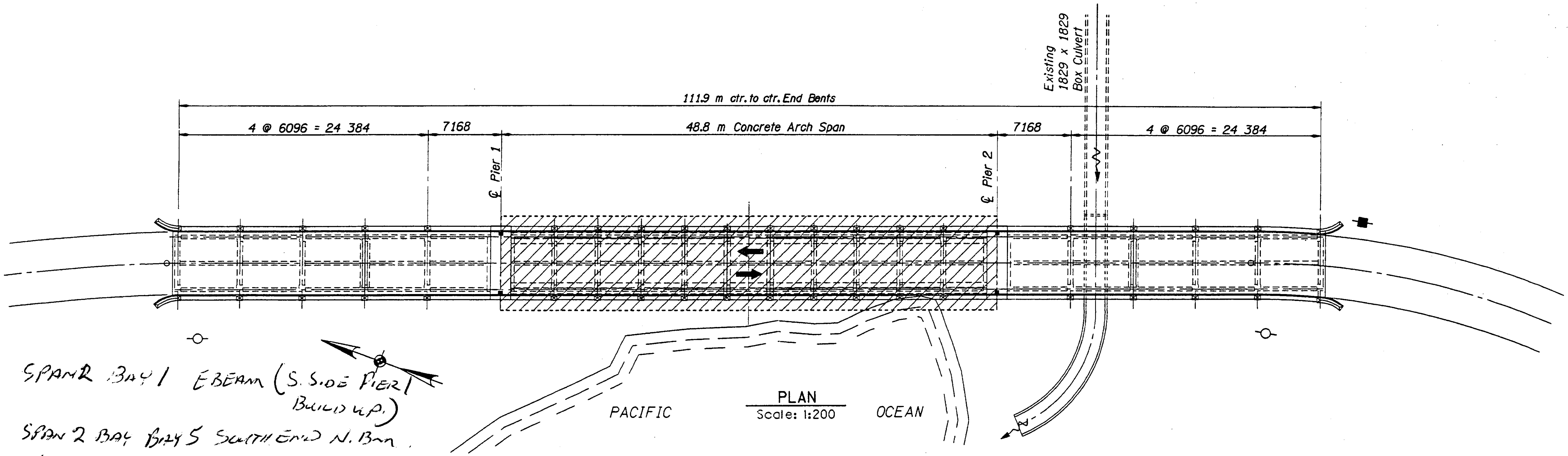
BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE REHABILITATION & CATHODIC PROTECTION

WORK ITEMS

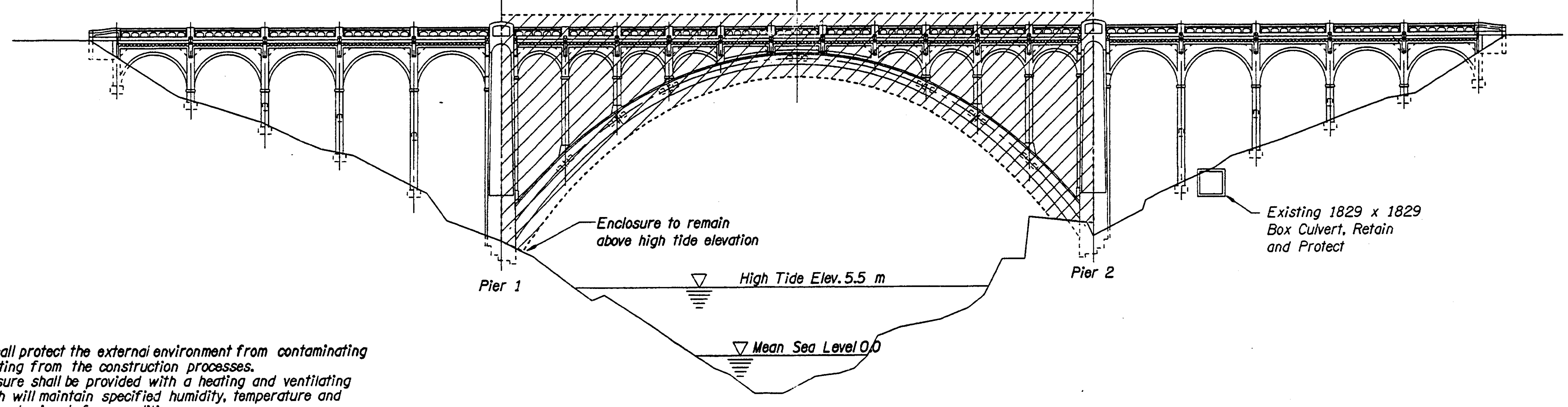
METRIC
SHEET 3 OF 4
DRAWING NO. 58409

NT7420c: C:\usr\BR\PROJECTS\09314\J01089r-1.dgn [VIEW=14] [PGRID=14] 01-FEB-2000 OHREN



PLAN
Scale: 1:200

SPAN 2 BAY 1 E BEAM (S. SIDE PIER 1 BUILD UP.)
SPAN 2 BAY BAY 5 SOUTH END N. BM.
" BAY 7 N. END S BM.
PIER 2 ALL E-BMS



ELEVATION

NOTE:

Enclosure shall protect the external environment from contaminating wastes resulting from the construction processes.
Inside enclosure shall be provided with a heating and ventilating system which will maintain specified humidity, temperature and atmosphere contaminent-free conditions.

*The portion of the weather tight climate control enclosure that is required for the north and south approach spans to the arch span is not shown. in the approach spans the enclosure may be supported from the ground.

NOTE: All dimensions are in millimeters (mm) except as noted.

△	DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Thiet D. Nguyen
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 15086 OREGON JULY 20, 1982 ERIC E. BONN
EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE REHABILITATION & CATHODIC PROTECTION

WORK PLATFORM ENCLOSURE CONCEPT

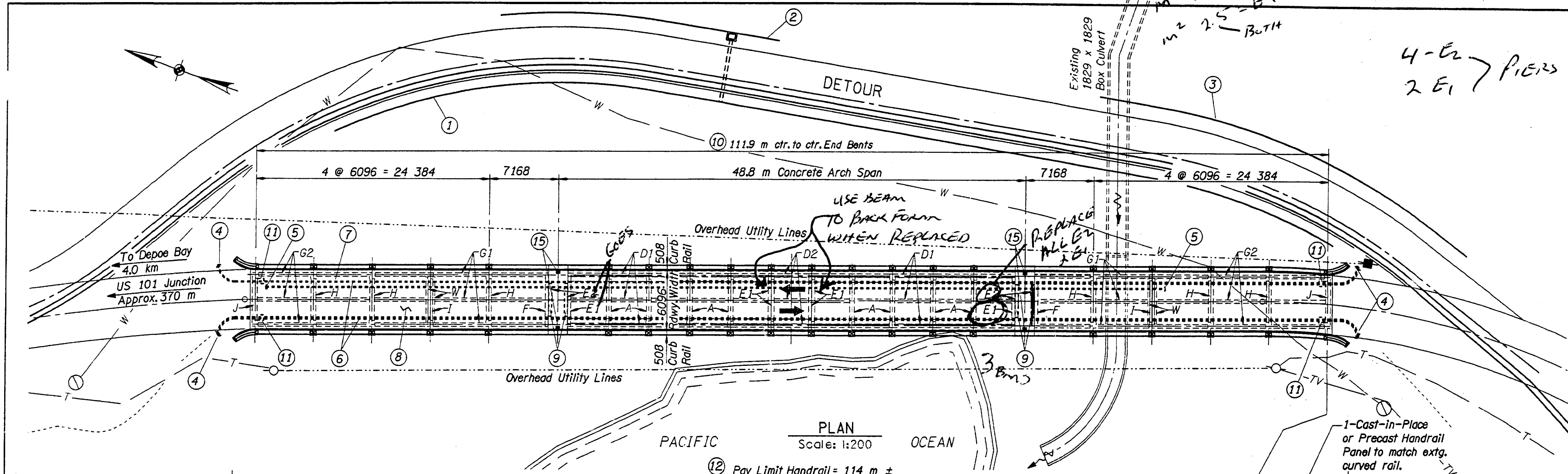
METRIC

SHEET 4 OF 4

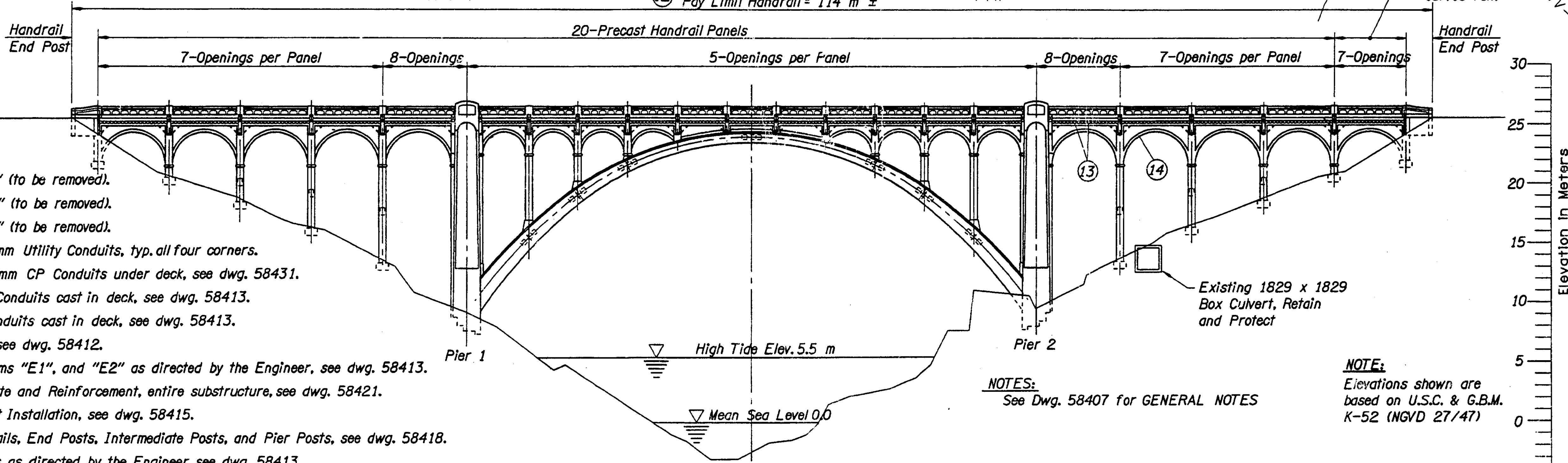
DRAWING NO. 58410

NT7420c: \usr\BR\PROJECTS\09314\J01089r1.dgn [VIEW=C3] [PGRF 3] 01-FEB-2000 OHREN

(typ. ea. end)



PLAN
Scale: 1:200



ELEVATION
Scale: 1:200

WORK ITEMS

1. MSE Retaining Wall "A" (to be removed).
2. MSE Retaining Wall "B" (to be removed).
3. MSE Retaining Wall "C" (to be removed).
4. Stub-out and Cap 78 mm Utility Conduits, typ. all four corners.
5. Stub-out and Cap 53 mm CP Conduits under deck, see dwg. 58431.
6. 6-78 mm PVC Utility Conduits cast in deck, see dwg. 58413.
7. 2-53 mm PVC CP Conduits cast in deck, see dwg. 58413.
8. Remove/Replace Deck, see dwg. 58412.
9. Remove/Replace all Beams "E1", and "E2" as directed by the Engineer, see dwg. 58413.
10. Repair Damaged Concrete and Reinforcement, entire substructure, see dwg. 58421.
11. Conduit Expansion Joint Installation, see dwg. 58415.
12. Remove/Replace Handrails, End Posts, Intermediate Posts, and Pier Posts, see dwg. 58418.
13. Remove/Replace Dentils as directed by the Engineer, see dwg. 58413.
14. Remove/Replace Curtain Walls as directed by the Engineer, see dwg. 58412.
15. Bridge Deck Drains, see dwg. 58417.

NOTES:
See Dwg. 58407 for GENERAL NOTES

NOTE:
Elevations shown are based on U.S.C. & G.B.M. K-52 (NGVD 27/47)

NOTE: All dimensions are in millimeters (mm) except as noted.

DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Thiet D. Nguyen
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 16588 OREGON JULY 20, 1993 ERIC E. BORN
EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE REHABILITATION

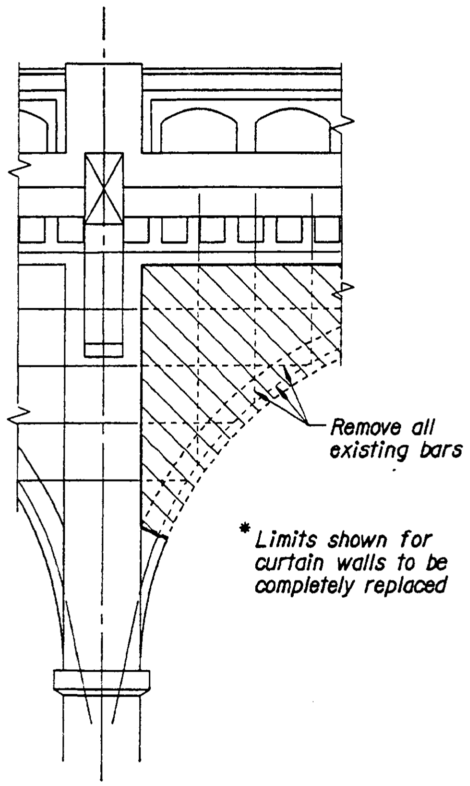
PLAN AND ELEVATION

METRIC

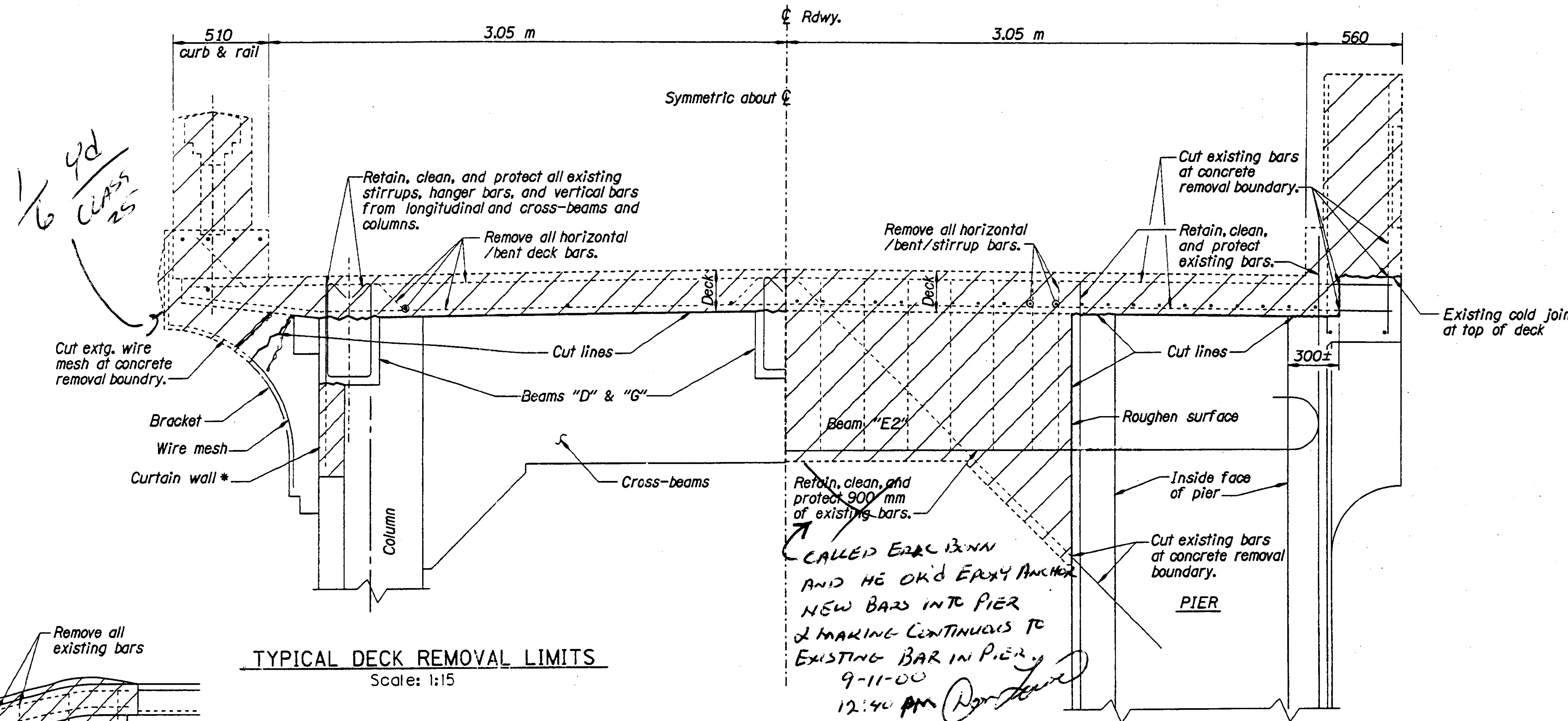
SHEET R1 OF R12

DRAWING NO. 58411

OHREN 01-FEB-2000 [VIEW=C2] [PGRID=C2] C:\usr\BR\PROJECTS\09314\J01089r1.dgn NT7420C:

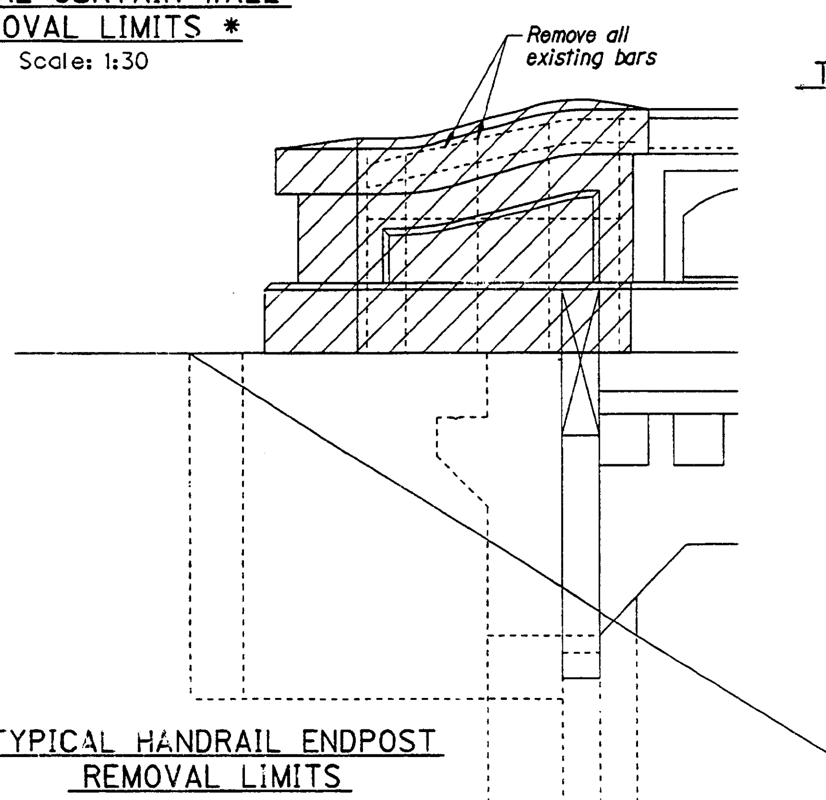


TYPICAL CURTAIN WALL REMOVAL LIMITS *
Scale: 1:30



TYPICAL DECK REMOVAL LIMITS
Scale: 1:15

DECK REMOVAL LIMITS AT PIERS
Scale: 1:15



TYPICAL HANDRAIL ENDPOST REMOVAL LIMITS
Scale: 1:15

△	DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Thiet D. Nguyen
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 16586 OREGON JULY 20, 1992 ERIC E. BOHN
EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE REHABILITATION

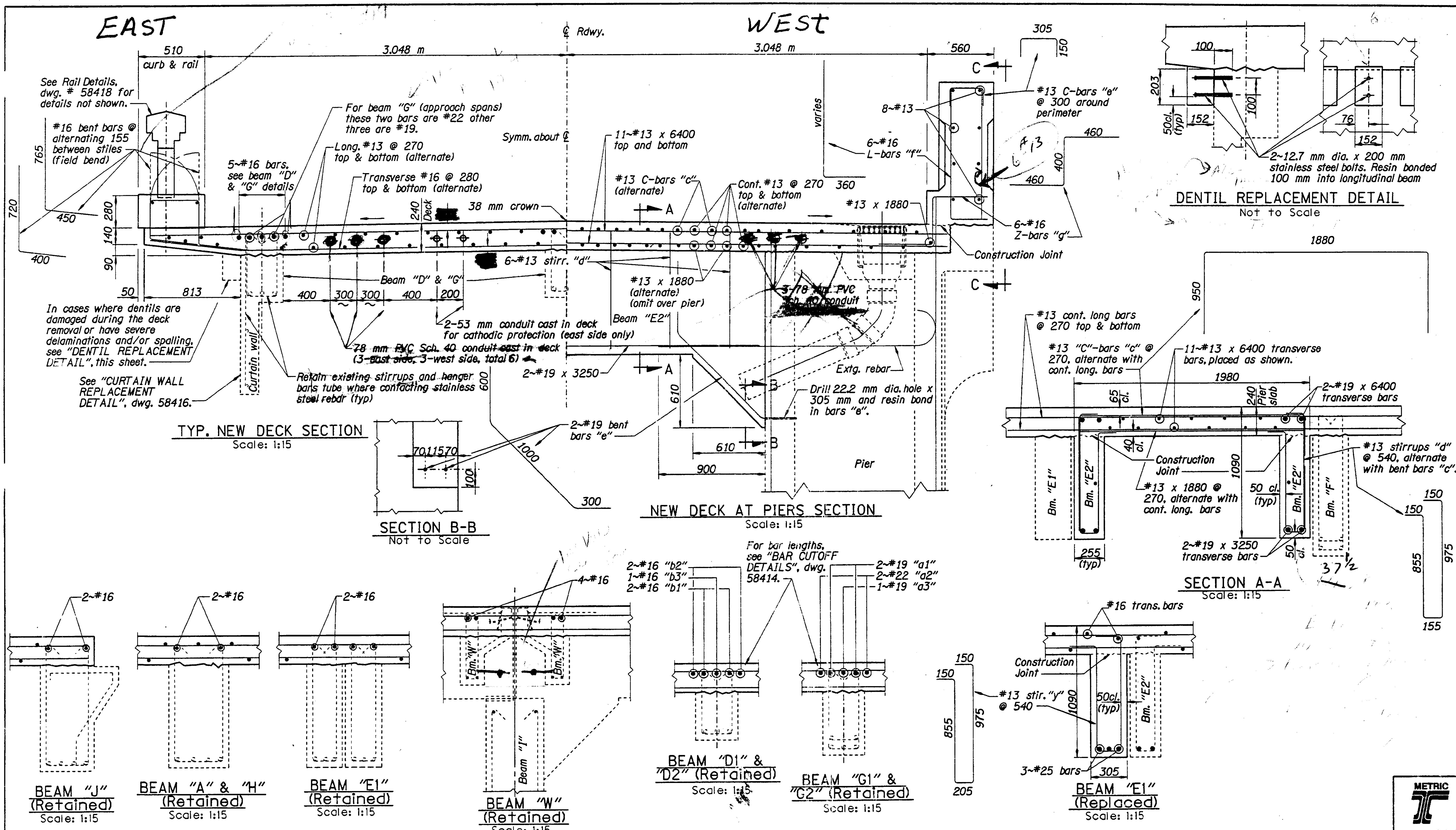
TYPICAL REMOVAL LIMITS AND DETAILS

METRIC

SHEET R2 OF R12

DRAWING NO. 58412

NT7420c: \usr\BR\PROJECTS\09314\J01089r2.dgn [VIEW=12] [PGRT] 01-FEB-2000 OHREN



DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Thiet D. Nguyen
REVIEWED: Frank J. Nelson

DESIGNER
EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE REHABILITATION

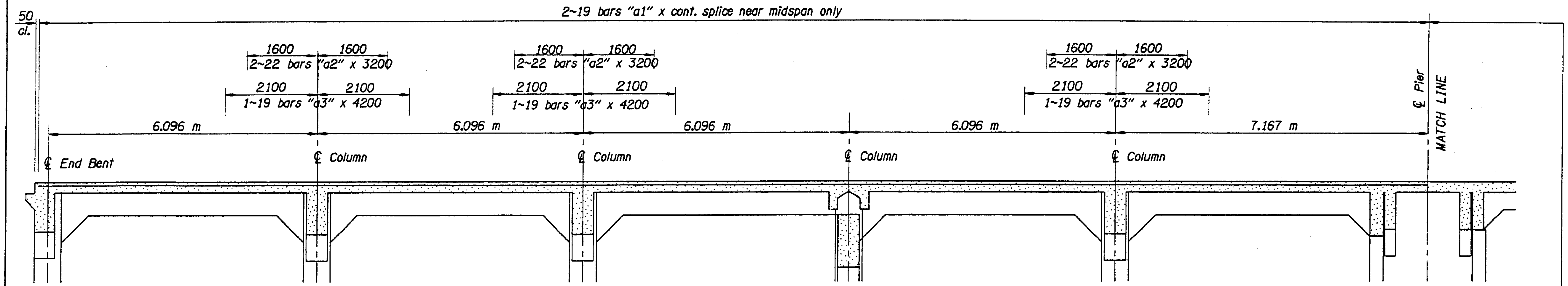
TYPICAL CONCRETE REPLACEMENT DETAILS

METRIC

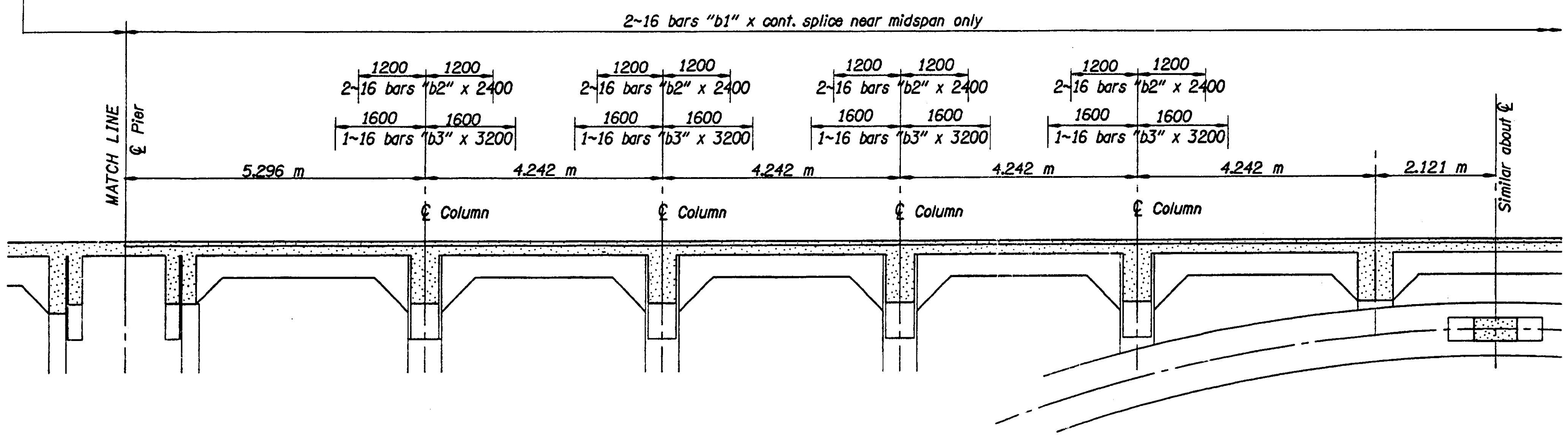
SHEET R3 OF R12

DRAWING NO. 58413

OHREN 01-FEB-2000 [VIEW=1] [PGRID=1] C:\usr\BR\PROJECTS\09314\J01089r2.dgn NT7420c:



LONGITUDINAL BEAM SECTION
Scale: 1:50



LONGITUDINAL BEAM SECTION
Scale: 1:50

NOTE: All dimensions are in millimeters (mm) except as noted.

△	DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Thiet D. Nguyen
REVIEWED: Frank J. Nelson

DESIGNER
EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

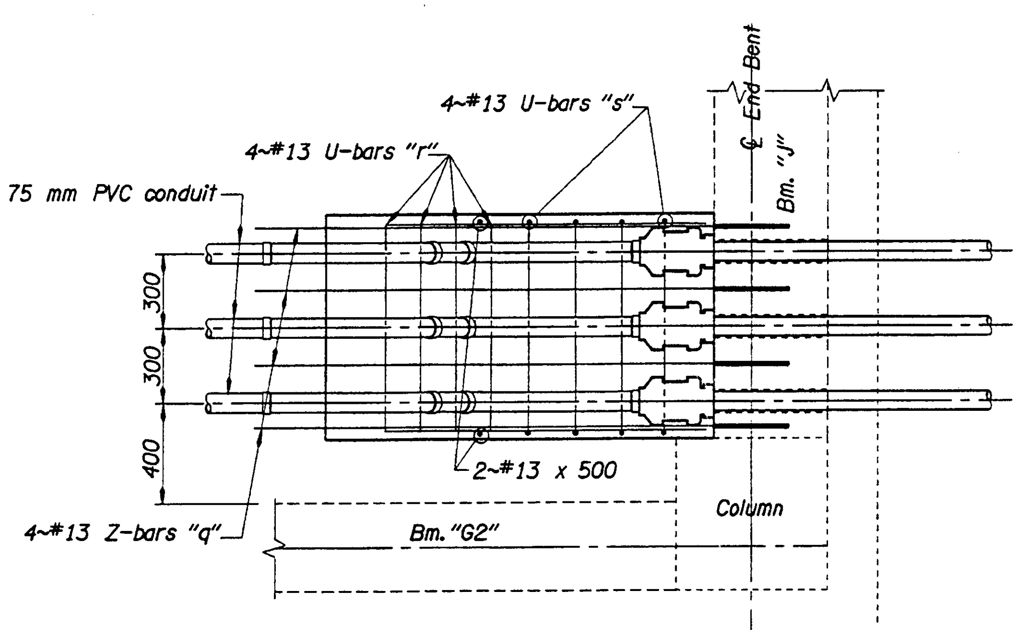
BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE REHABILITATION

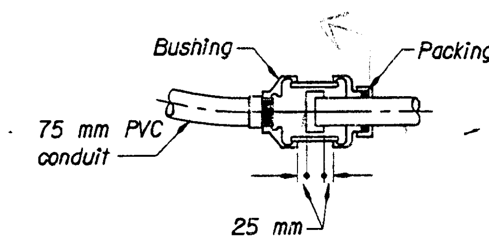
DECK BAR CUT-OFF DETAILS

METRIC
SHEET R4 OF R12
DRAWING NO. 58414

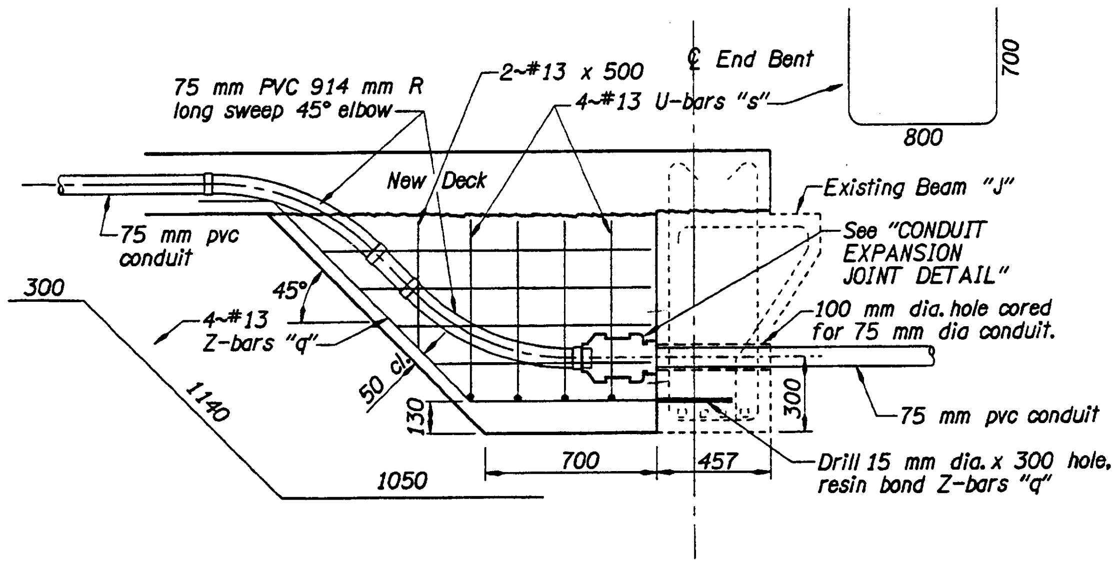
NT7420C: ~\usr\BR\PROJECTS\09314\J01089r1.dgn [VIEW=E1] [PGRID] 01-FEB-2000 OHREN



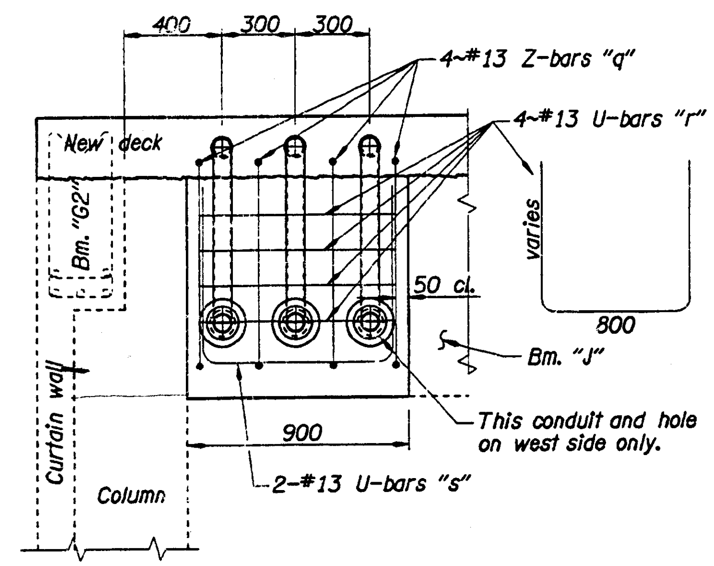
TOP VIEW
Scale: 1:15



CONDUIT EXPANSION JOINT DETAIL
Scale: 1:10



SIDE VIEW
Scale: 1:15



END VIEW
Scale: 1:15

△	DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Thiet D. Nguyen
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 16589 OREGON ERIC E. BORN
EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE REHABILITATION

CONDUIT EXPANSION JOINT INSTALLATION

METRIC
SHEET R5 OF R12
DRAWING NO. 58415

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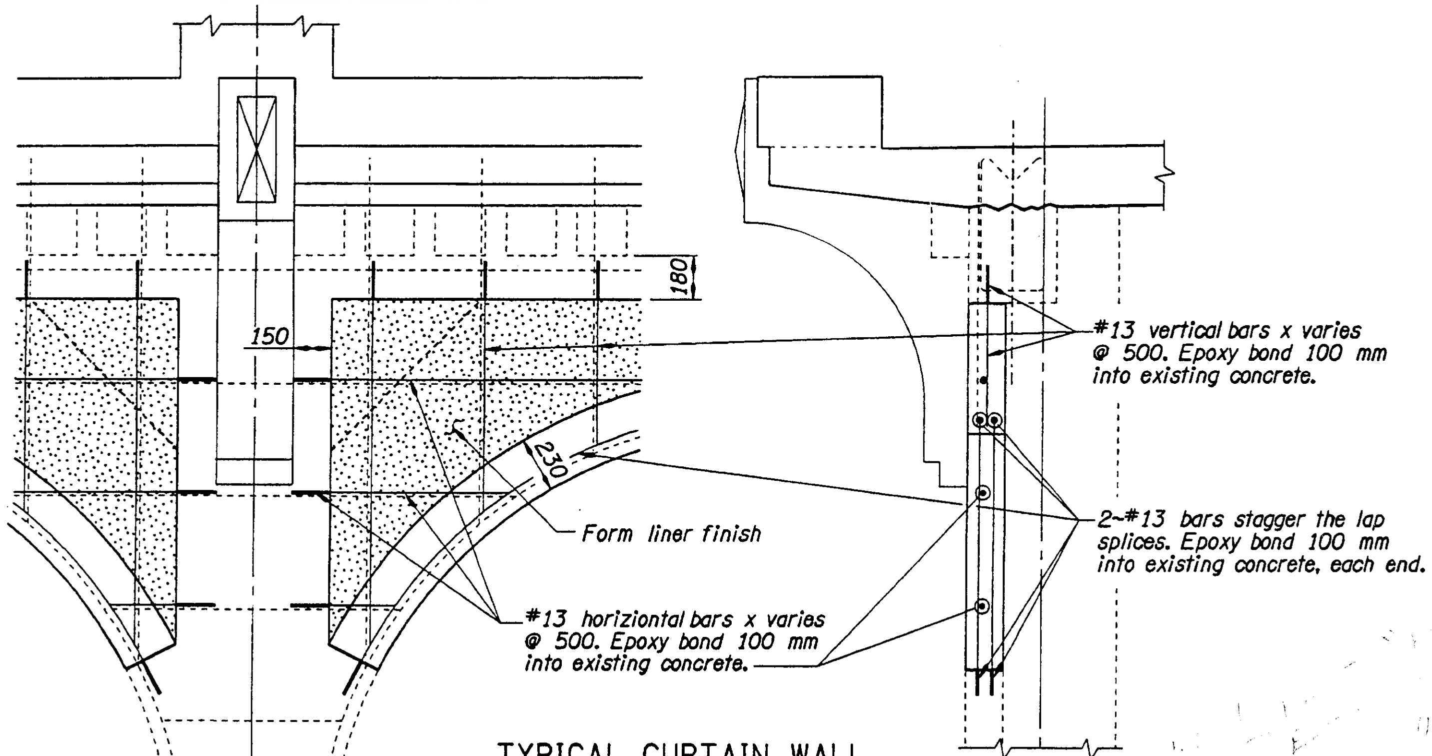
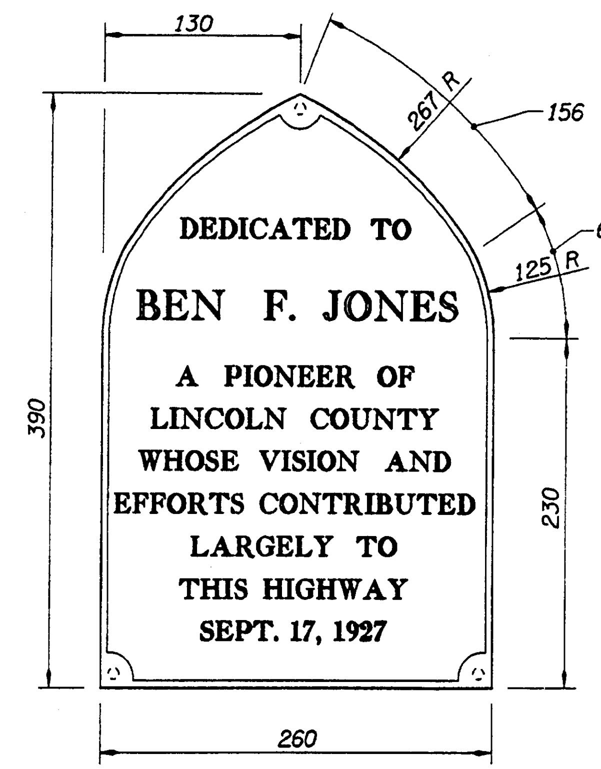
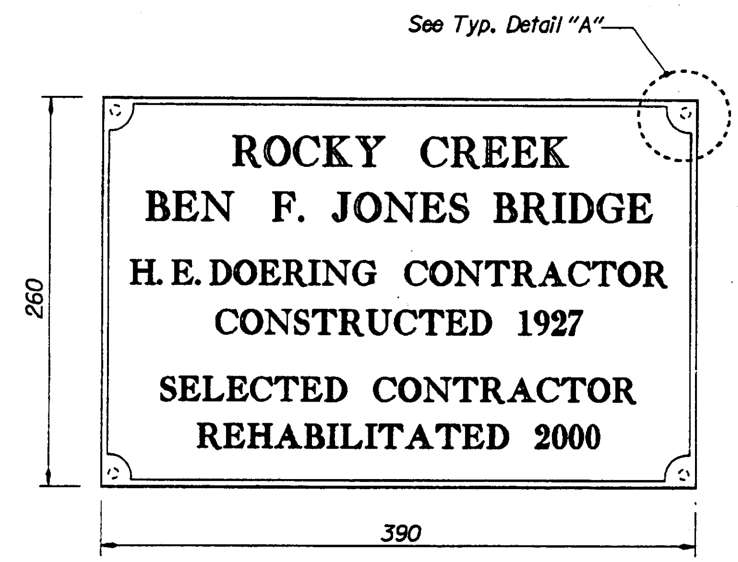


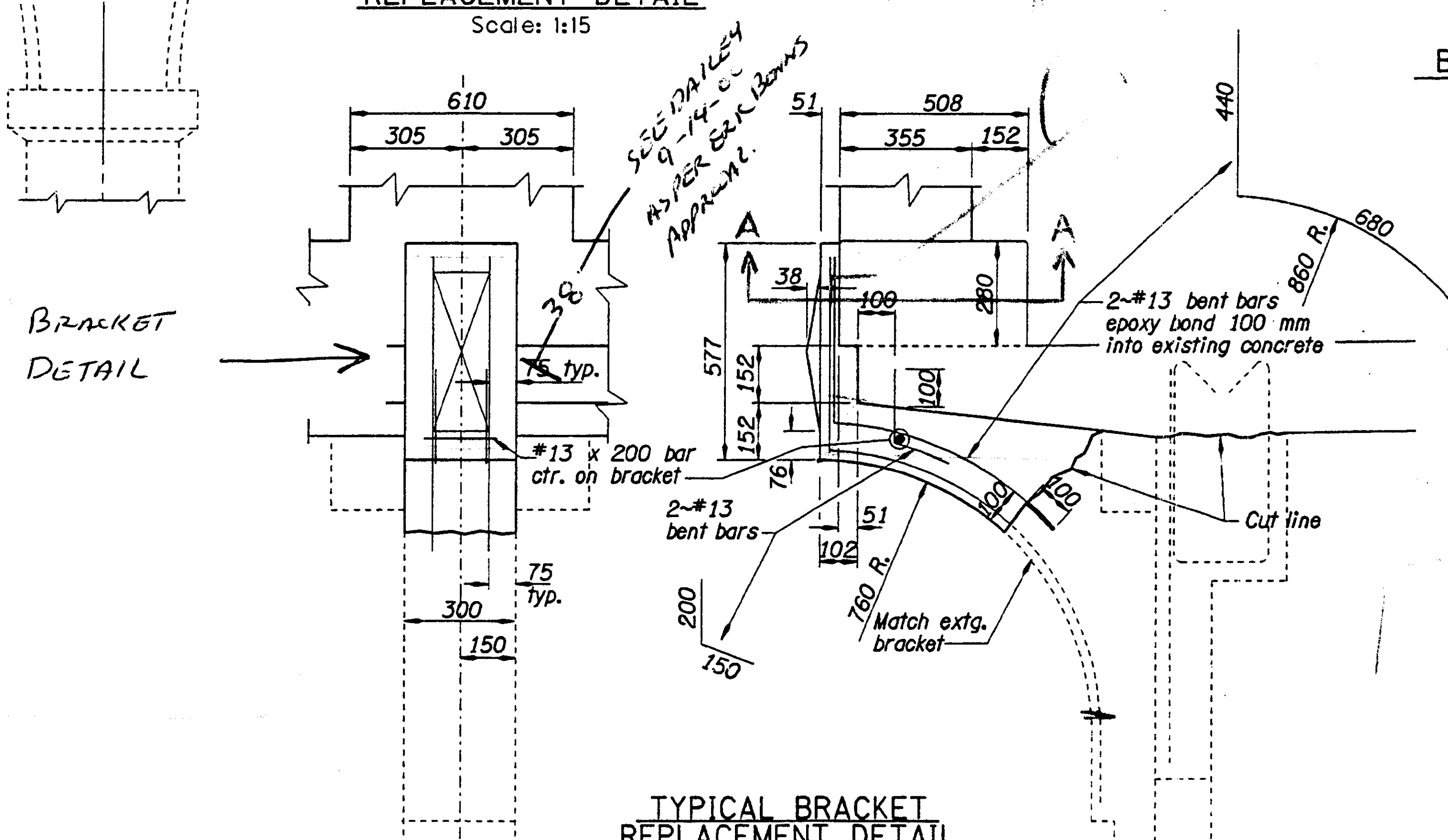
TYPICAL CURTAIN WALL REPLACEMENT DETAIL
Scale: 1:15



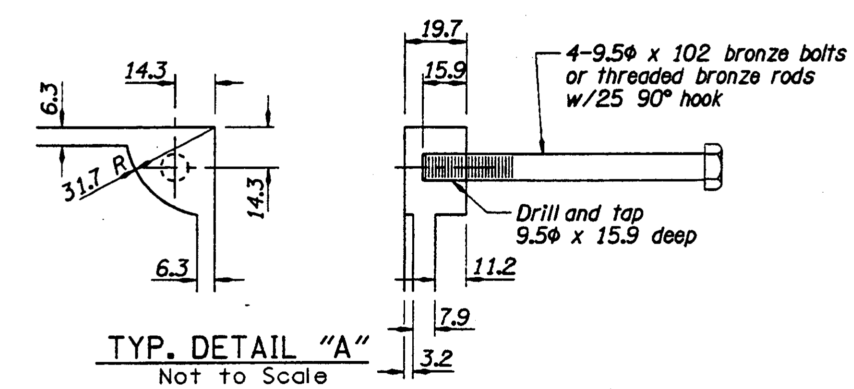
BRIDGE MEMORIAL PLATE DETAIL
Not to Scale



BRIDGE NAME PLATE DETAIL
Not to Scale



TYPICAL BRACKET REPLACEMENT DETAIL
Scale: 1:10



TYP. DETAIL "A"
Not to Scale

BRIDGE NAME PLATE GENERAL NOTES:

All bolts or rods shall comform to ASTM B140M Specifications.

Name plates shall be made of Bronze and shall conform to ASTM B584M (UNC C83600) Specifications.

Face of name plate shall be placed flush with the face of the rail.

Place two name plates, opposite sides of the roadway and opposite ends of the structure.

Place one memorial plate, at one end of structure, as directed by the Engineer.

NOTE: All dimensions are in millimeters (mm) except as noted.

△	DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Thiet D. Nguyen
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER OREGON ERIC E. BOHN
EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

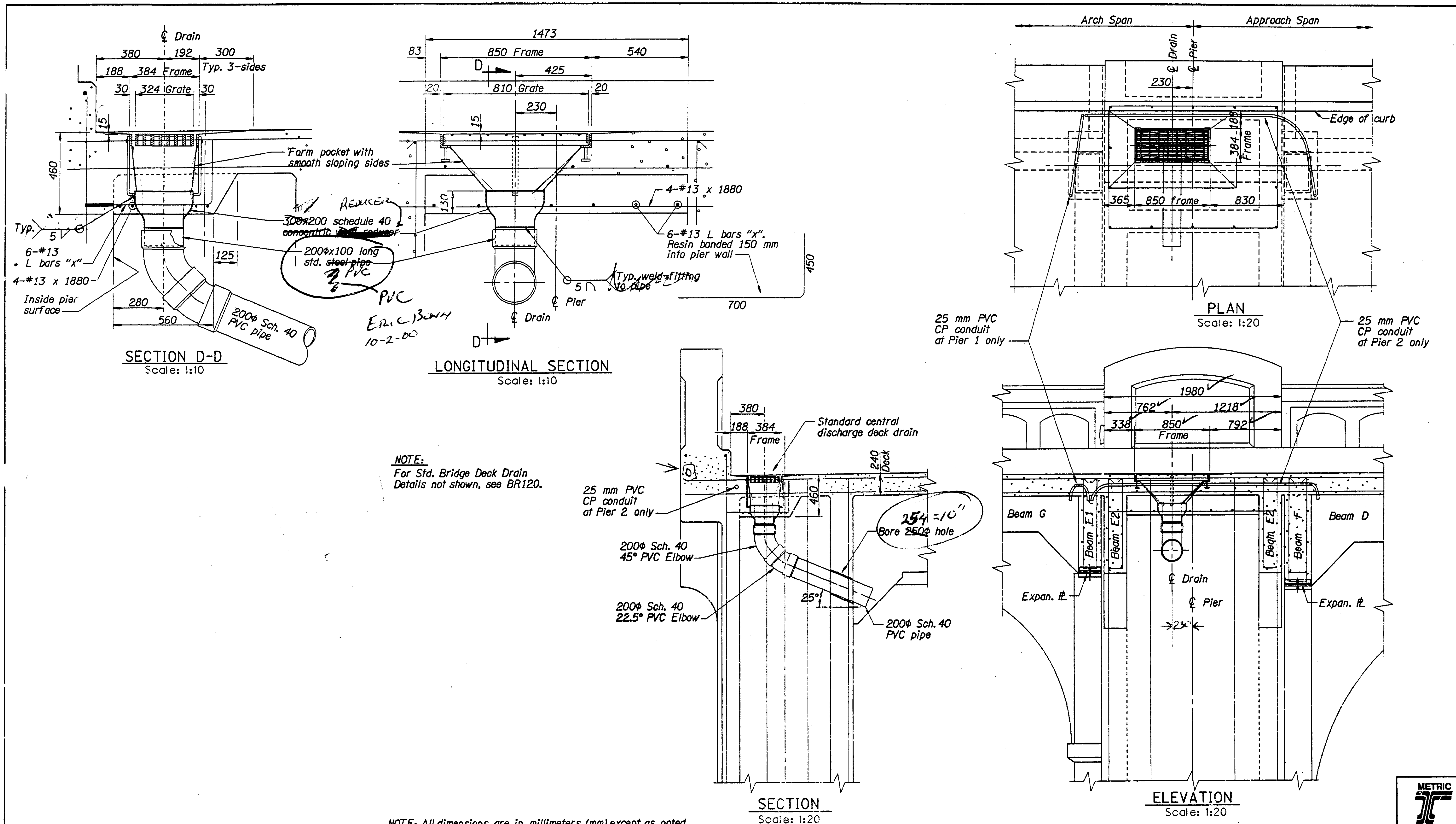
BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE
REHABILATION

MISCELLANEOUS DETAILS

METRIC
SHEET R6 OF R12
DRAWING NO. 58416

NT7420C: \usr\BR\PROJECTS\09314\J01089r1.dgn [VIEW=J1] [PGR] 01-FEB-2000 OHREN



△	DATE	REVISION	BY

DRAFTED: Tom Ohren

CHECKED: Thiet D. Nguyen

REVIEWED: Frank J. Nelson

DESIGNER

REGISTERED PROFESSIONAL ENGINEER 16588 OREGON JULY 20, 1993 ERIC E. BOHN

EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089

DATE 01-FEB-2000

CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE REHABILITATION

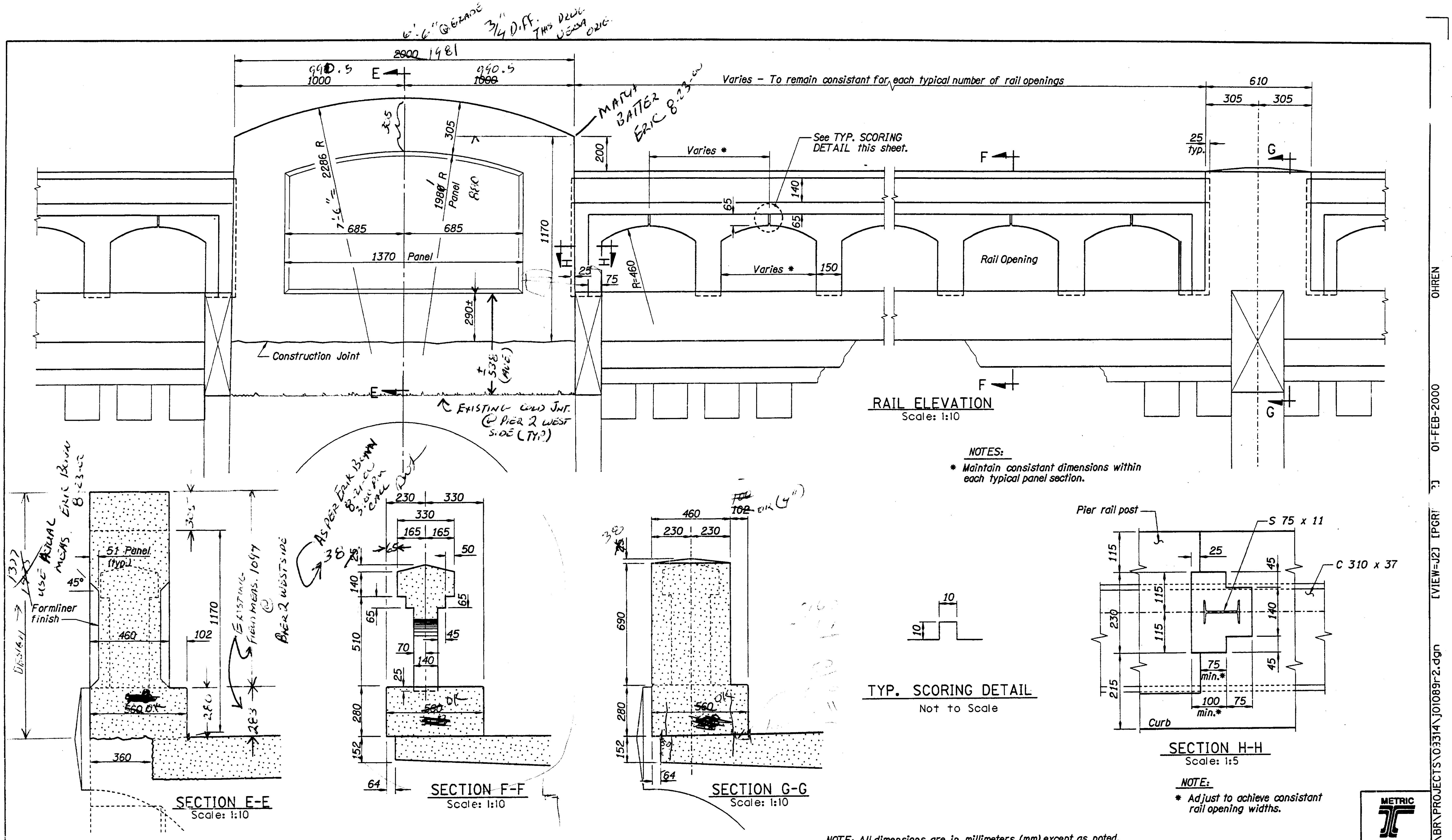
DECK DRAIN DETAILS

METRIC

SHEET R7 OF R12

DRAWING NO. 58417

NT7420c: C:\usr\BR\PROJECTS\09314\J01089r2.dgn [VIEW=HI] [PGRID=HI] 01-FEB-2000 OHREN



	DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Thiet D. Nguyen
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 16586 OREGON ERIC E. BOHN
EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

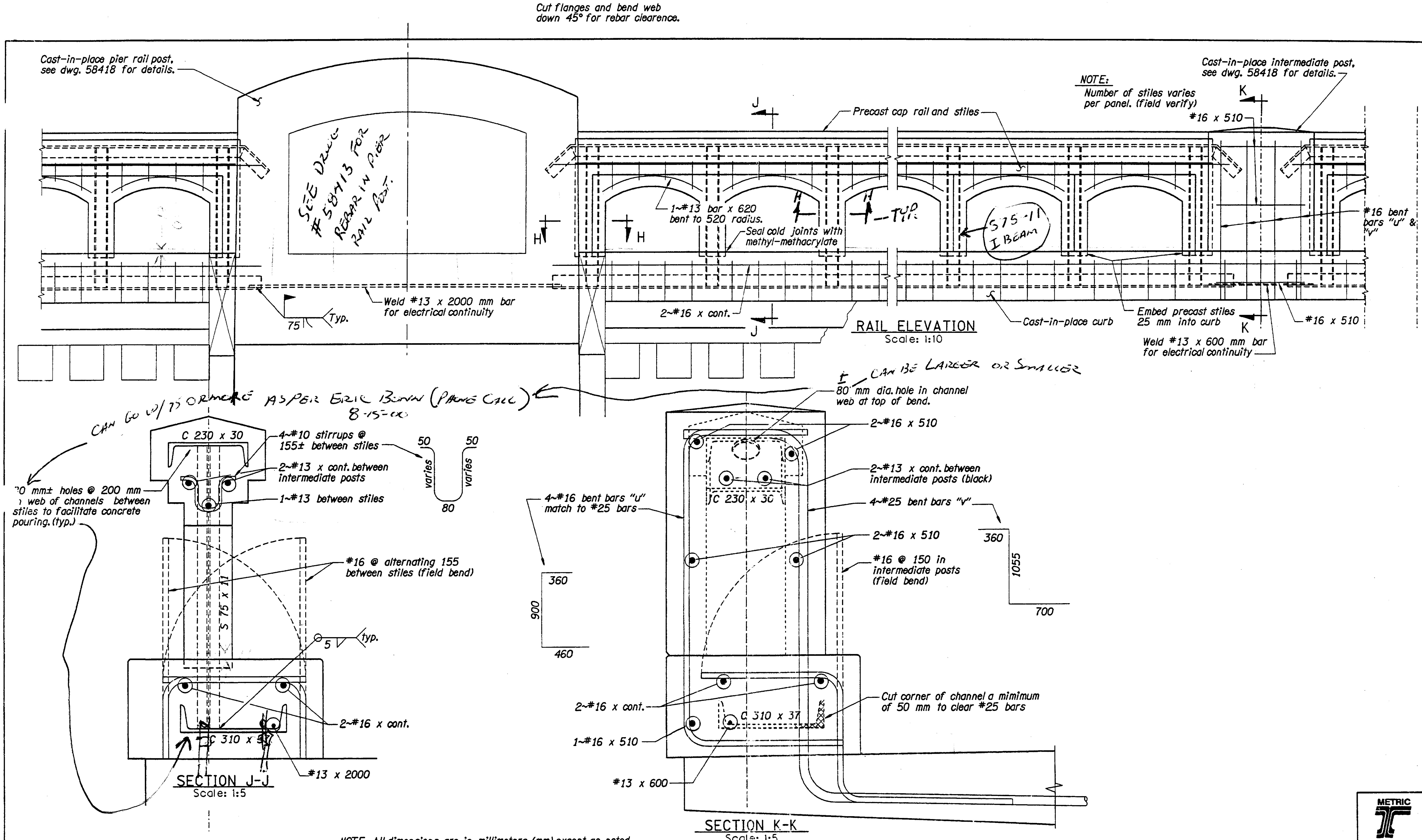
BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE REHABILITATION

RAIL DETAILS - DIMENSIONS

METRIC

SHEET R8 OF R12
DRAWING NO. 58418



NOTE: All dimensions are in millimeters (mm) except as noted.

△	DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Thiet D. Nguyen
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 16586 OREGON JULY 20, 1990 ERIC E. BONN
EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE REHABILITATION

RAIL DETAILS - REINFORCEMENT

METRIC

SHEET R9 OF R12

DRAWING NO. 58419

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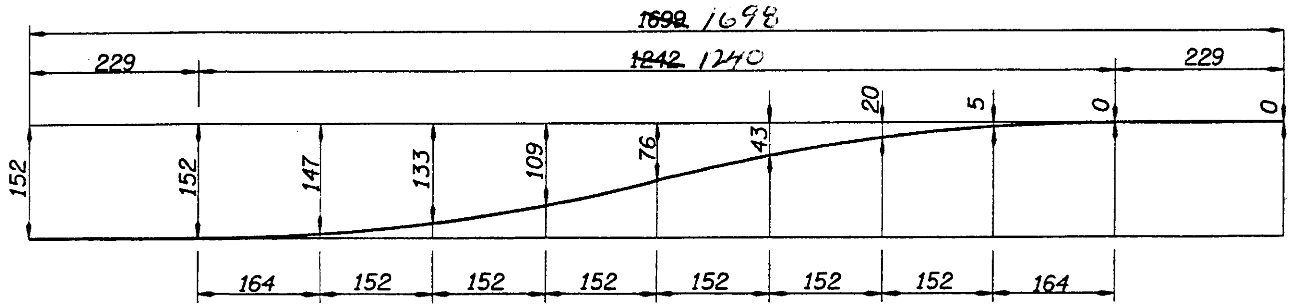
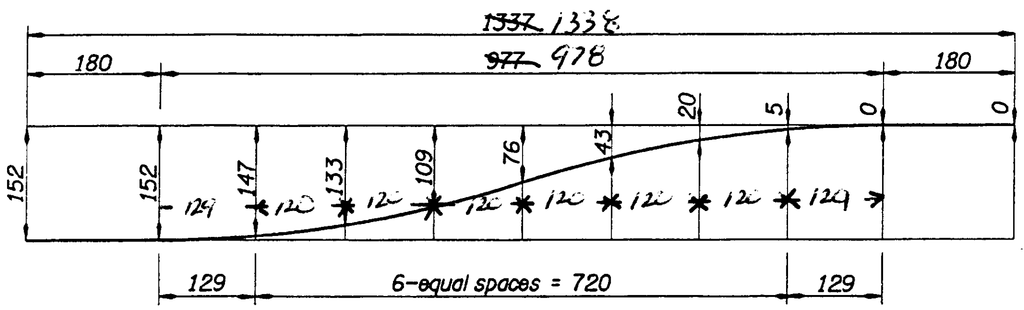
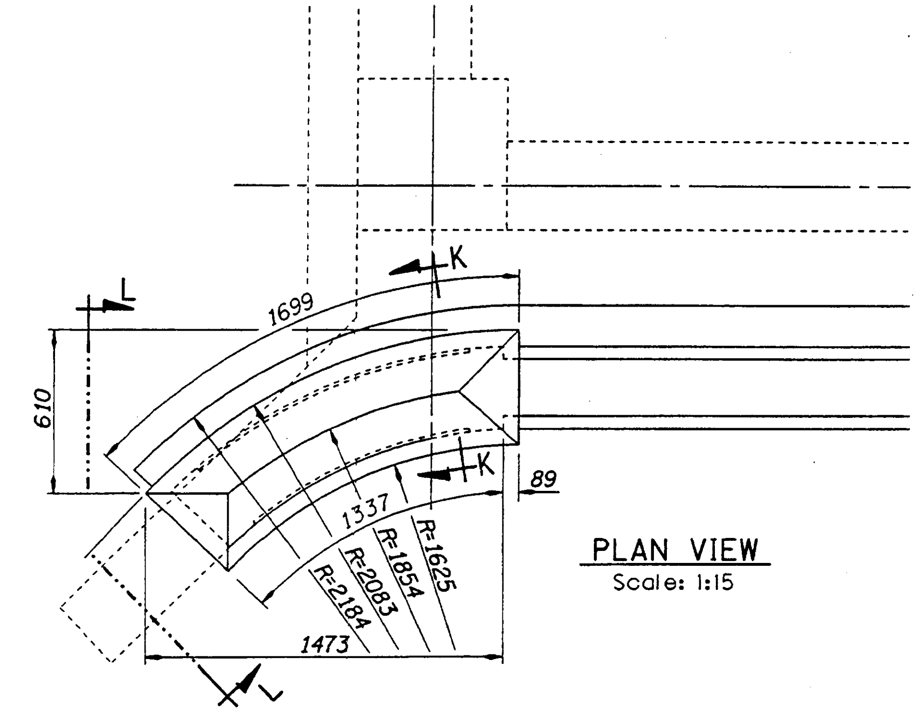


INSIDE EDGE

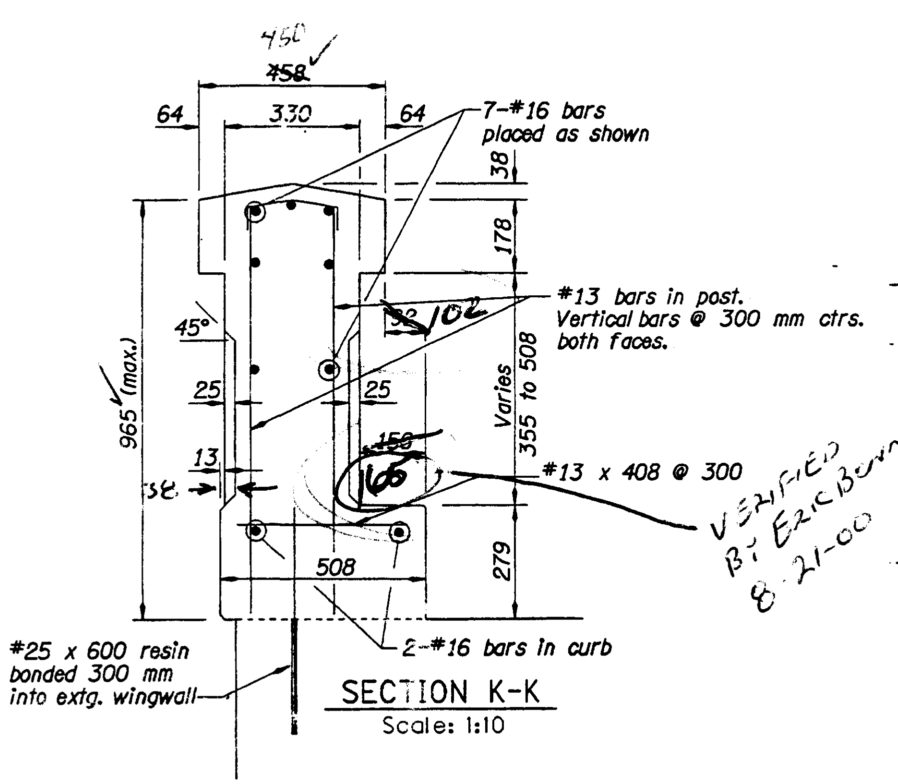


OUTSIDE EDGE

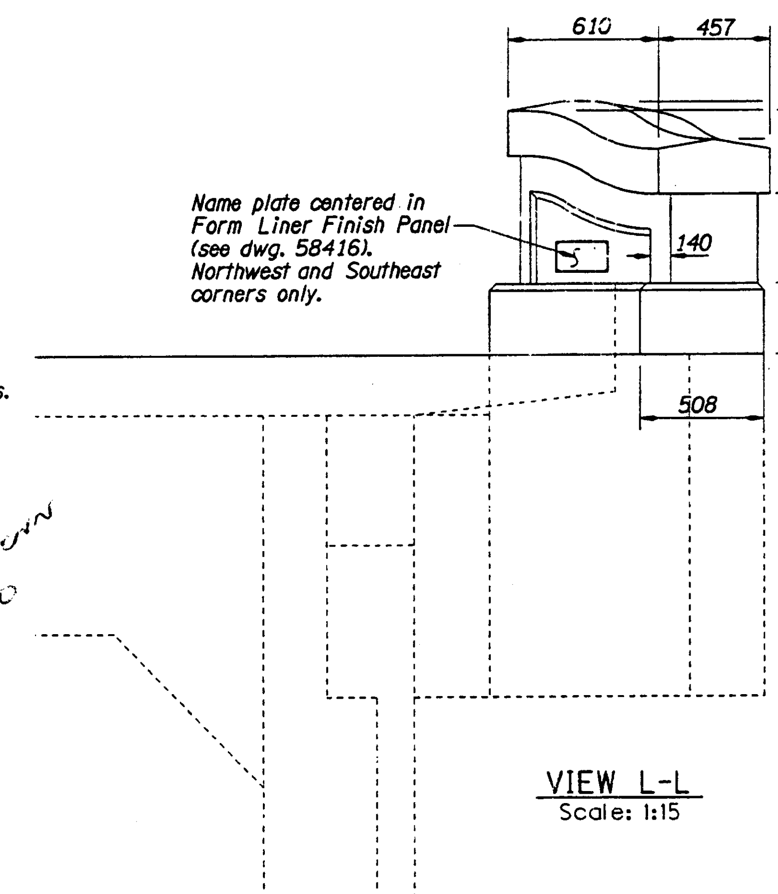
CURVES FOR END POST CAP



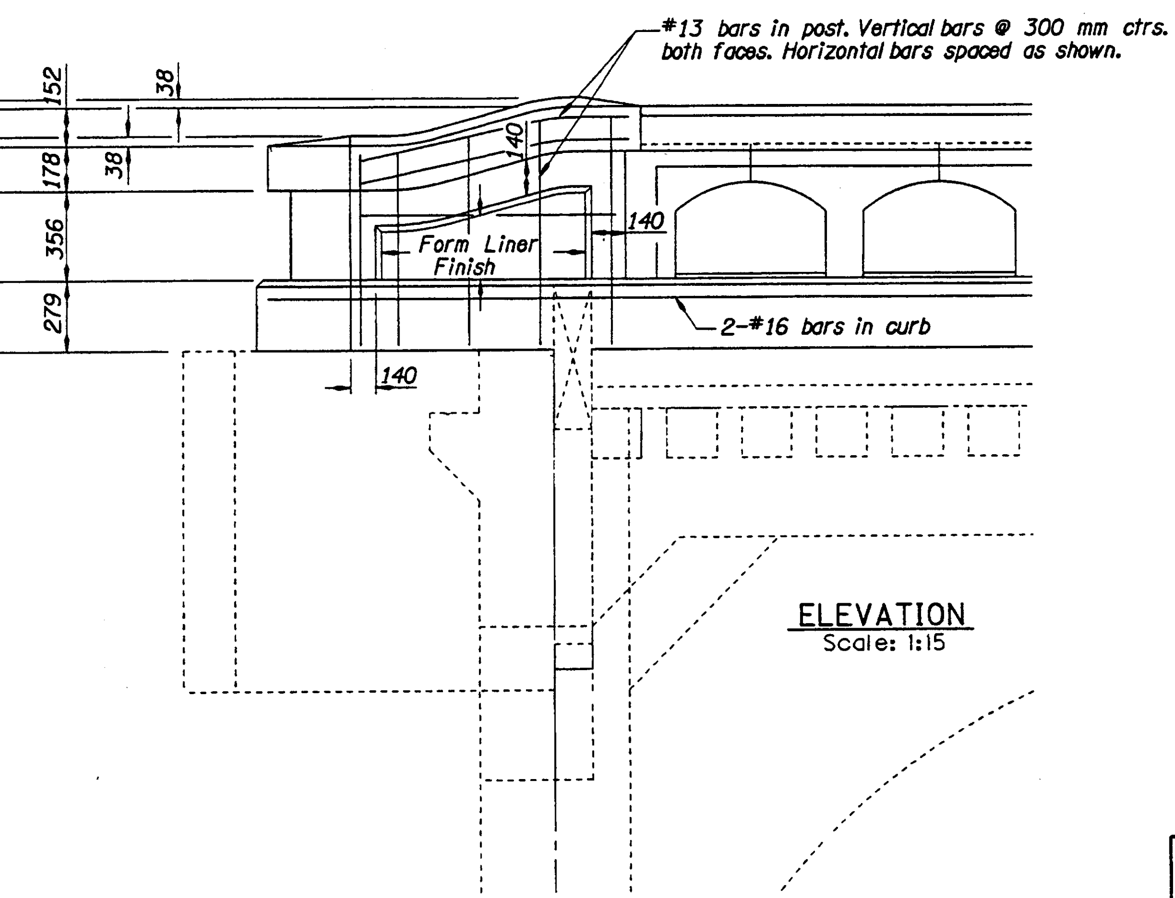
PLAN VIEW
Scale: 1:15



SECTION K-K
Scale: 1:10



VIEW L-L
Scale: 1:15



ELEVATION
Scale: 1:15

NOTE: All dimensions are in millimeters (mm) except as noted.

△	DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Thiet D. Nguyen
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 16680 OREGON JULY 20, 1993 ERIC E. BOHN
EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE REHABILATION

HANDRAIL END POST DETAILS

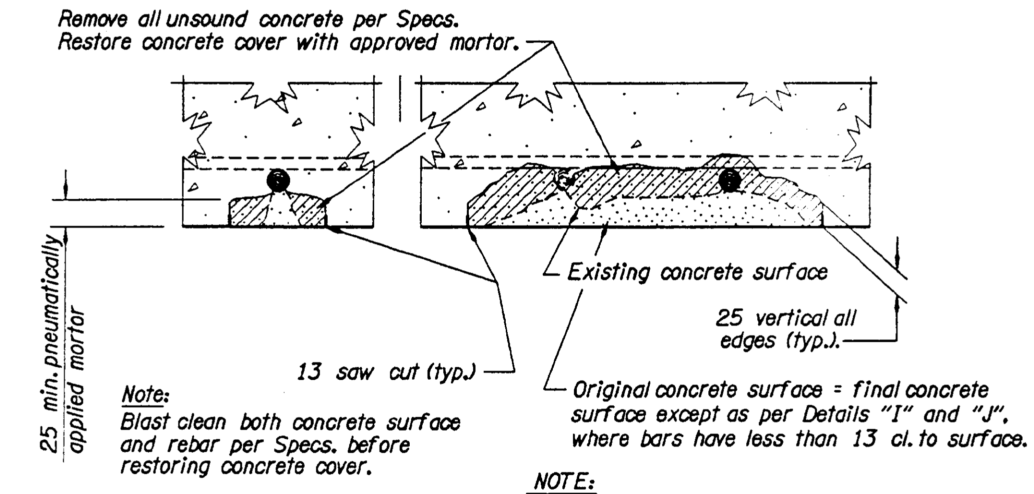
METRIC

SHEET R10 OF R12

DRAWING NO. 58420

NT7420c: \usr\BR\PROJECTS\03314\J01089r1.dgn [VIEW=15] [PGRIT 1 01-FEB-2000 OHREN

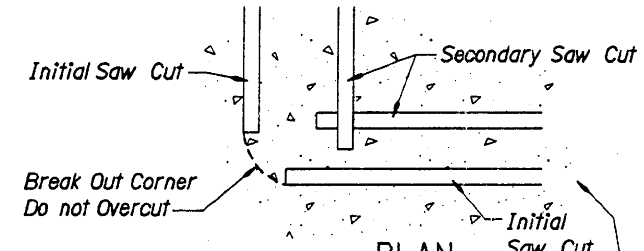
Repair with pneumatically applied mortar.



Note:
Blast clean both concrete surface and rebar per Specs. before restoring concrete cover.

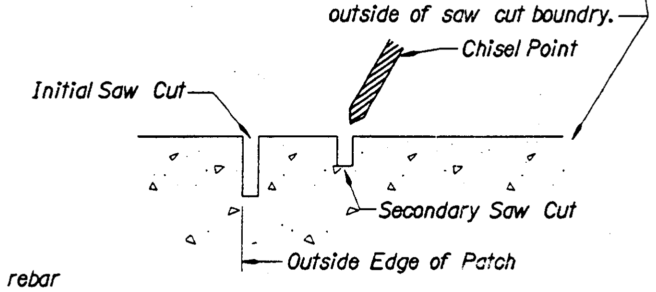
DETAIL "H"
NO Scale

NOTE:
To be used when there is 13 min. clearance between rebar and existing face of concrete (when there is less then 13 min. clearance see Details "I" and "J" below).



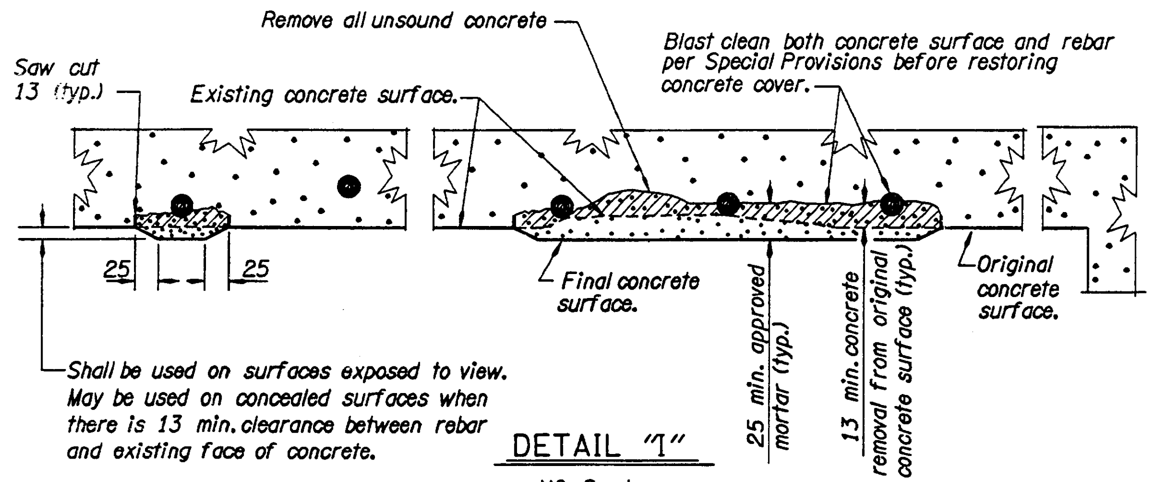
PLAN
SAW CUT BOUNDARY
NO SCALE

One method used to avoid removing sound concrete outside of saw cut boundry.



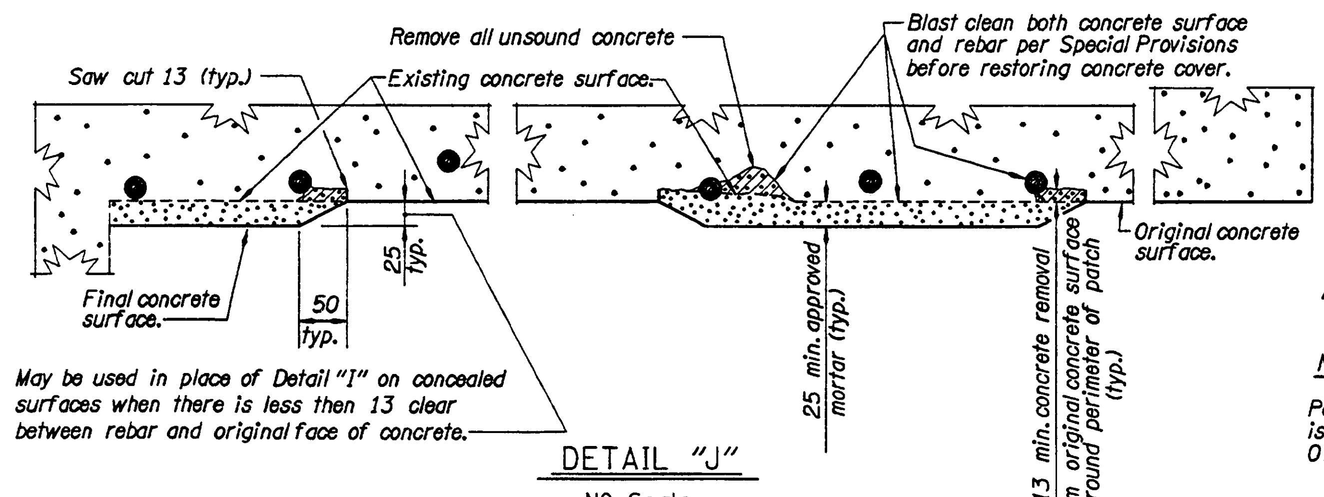
ELEVATION
SAW CUT BOUNDARY
NO SCALE

NOTE:
See Special Provisions "Subsection 01235.32-Concrete Removal Requirements".



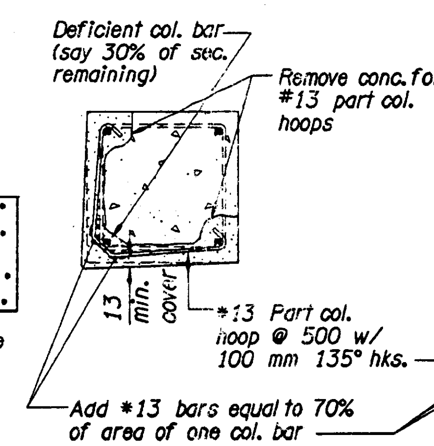
Shall be used on surfaces exposed to view. May be used on concealed surfaces when there is 13 min. clearance between rebar and existing face of concrete.

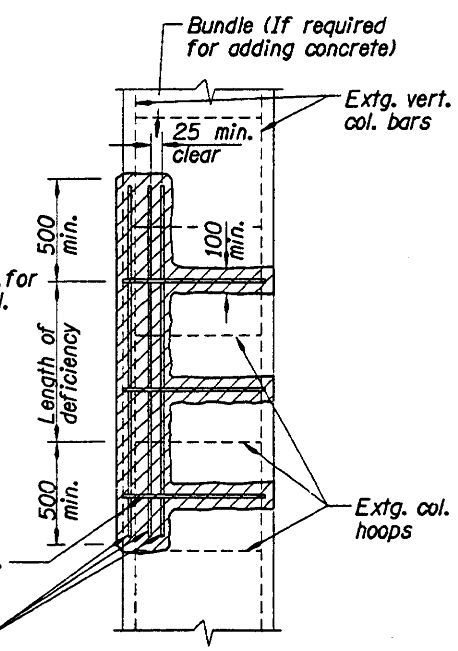
DETAIL "I"
NO Scale



May be used in place of Detail "I" on concealed surfaces when there is less then 13 clear between rebar and original face of concrete.

DETAIL "J"
NO Scale





COLUMN REPAIR DETAIL
Not to Scale

NOTE:
Pay quanity for this example is 4 [Sec. Specs. Subsection 01220.32(f)]

NOTES:
Use Detail "I" for :
Rail brackets.
Exterior faces and bottom of exterior beams and curtain walls.
Columns and pier walls
Arch ribs.

Use Detail "I" or J" for all other locations.
Detail "H" may be used in place of Detail "I" or "J" if shallow bars are bent back into concrete excavation so there is 13 min. clearance between rebar and original face of concrete.

NOTE: All dimensions are in millimeters (mm) except as noted.

METRIC

DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Thiet D. Nguyen
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 16586 OREGON JULY 20, 1993 ERIC E. BOHN
EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE REHABILITATION

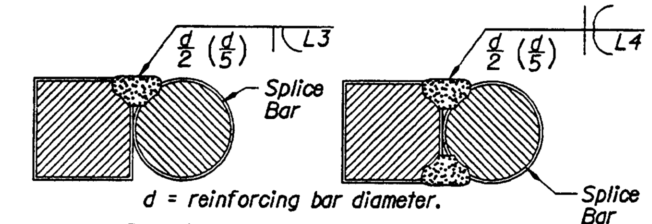
CONCRETE REPAIR DETAILS

SHEET R11 OF R12
DRAWING NO. 58421

NT7420c: C:\usr\BR\PROJECTS\09314\J01089r-1.dgn [VIEW=1] [PGRID=1] 01-FEB-2000 OHREN

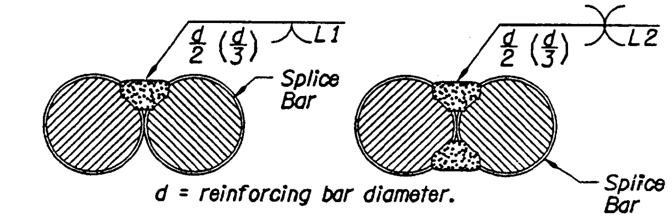
MINIMUM WELD LENGTHS			
Splice Bar Size		Single Flare Bevel Groove Weld L3 (mm)	Double Flare Bevel Groove Weld L4 (mm)
(Metric)	(English)		
#10	#3	130	90
#13	#4	150	100
#16	#5	180	110

MINIMUM WELD LENGTHS			
Splice Bar Size		Single Flare V-Groove Weld L1 (mm)	Double Flare V-Groove Weld L2 (mm)
(Metric)	(English)		
#10	#3	75	50
#13	#4	90	60
#16	#5	100	65
#20	#6	115	70
#22	#7	130	75
#25	#8	140	85



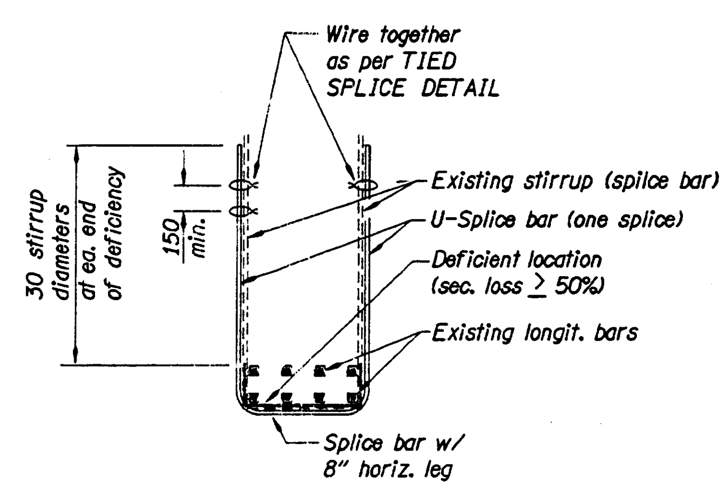
d = reinforcing bar diameter.

FLARE BEVEL GROOVE WELDS
(SQUARE & ROUND REBARS)



d = reinforcing bar diameter.

FLARE V-GROOVE WELDS
(ROUND REBARS)

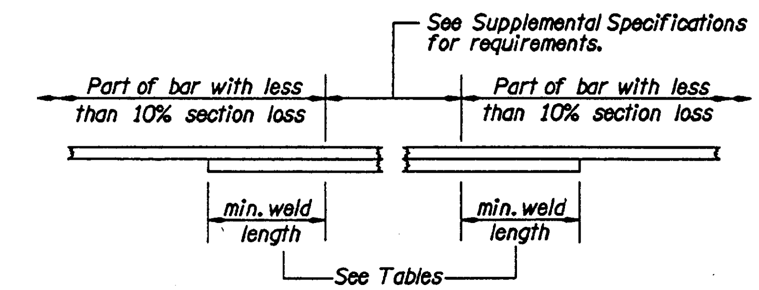


REBAR IN SECTION OF BEAM

NOT TO SCALE

NOTES:

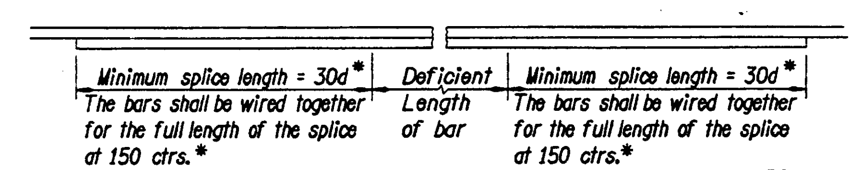
See Supplemental Standard Specifications for criteria required to add bar section. Where existing bar is deficient splice a grade 60 round bar with area equal to equivalent area of existing bar or as otherwise called for in Subsection 01220.31.



LAPPED WELDED SPLICE OPTION

WELDED SPLICE DETAILS

No Scale



d = nominal diameter of added bar (See Std. Specs. Subsection 00530.81) unless shown otherwise.

LAPPED, TIED SPLICE OPTION

* Unless shown otherwise.

TIED SPLICE DETAILS

NOT TO SCALE

NOTE: All dimensions are in millimeters (mm) except as noted.

DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Thiet D. Nguyen
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 16506 OREGON JULY 20, 1993 ERIC E. BONN
EXPIRES: 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE REHABILATION

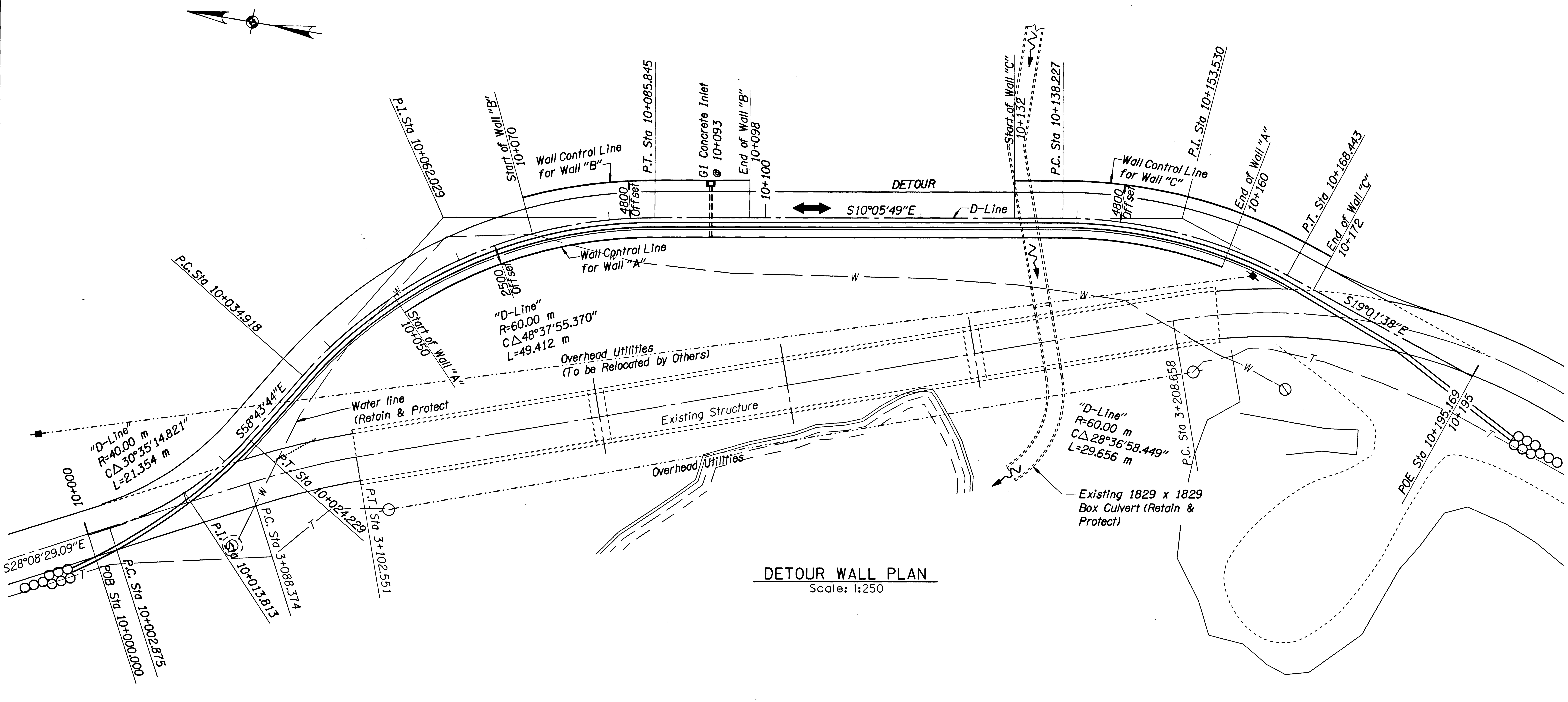
REINFORCING BAR REPAIR DETAILS

METRIC

SHEET R12 OF R12

DRAWING NO. 58422

OHREN 01-FEB-2000 [VIEW=13] [PGRIT \usr\BR\PROJECTS\09314\J01089r1.dgn NT7420c:



DETOUR WALL PLAN
Scale: 1:250

NOTE: All dimensions are in millimeters (mm) except as noted.

△	DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Robert Grubbs
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 16886 OREGON JULY 20, 1993 ERIC E. BONN
EXPIRES: 12/31/99

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089
DATE 17-DEC-1999
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE
DETOUR WALLS

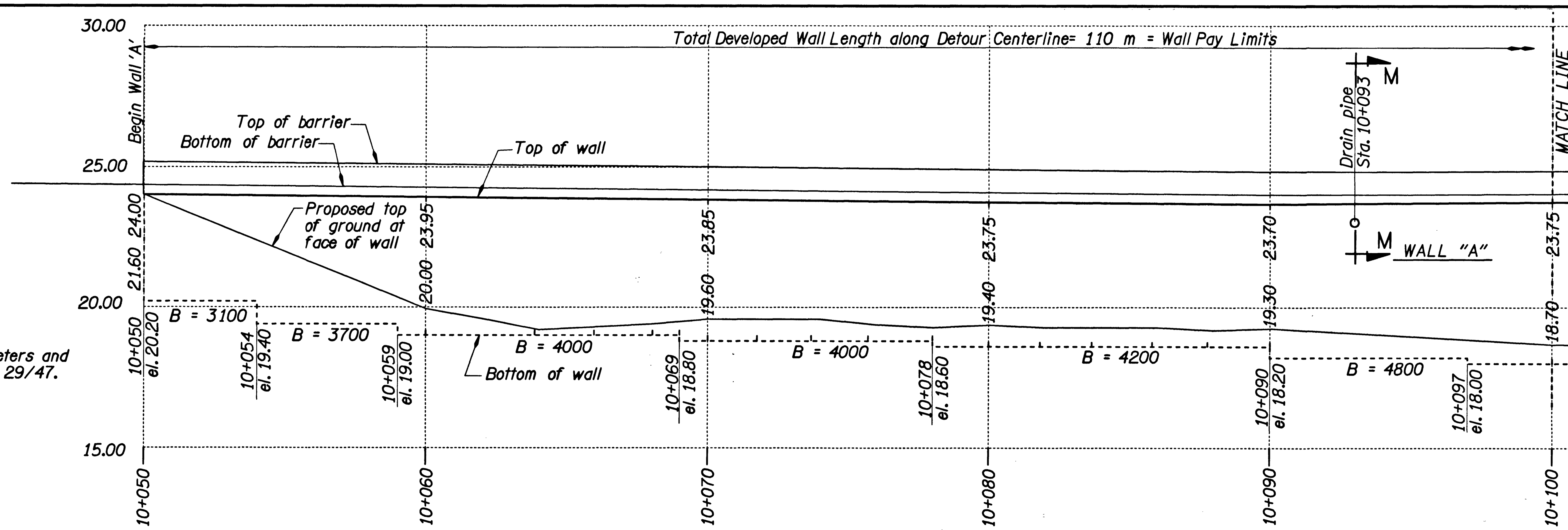
DETOUR WALL PLAN

METRIC

SHEET D1 OF D5

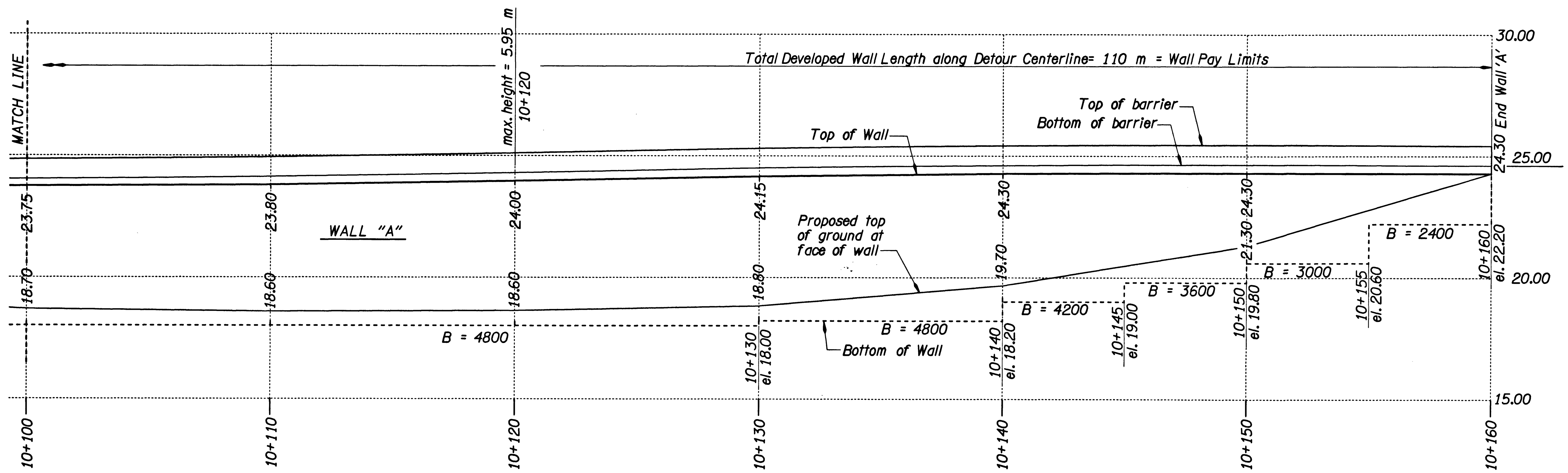
DRAWING NO. 58423

OHREN 17-DEC-1999 [VIEW=M1] [PGRID=M1] C:\usr\BR\PROJECTS\09314\j01089d1.dgn NT7420c:



NOTE:
Elevations are in meters and are based on NGVD 29/47.

NOTE:
See Dwg. 58426 for Section M-M



ELEVATION - WALL 'A'
Scale: 1:100

NOTE: All dimensions are in millimeters (mm) except as noted.

△	DATE	REVISION	BY

DRAFTED: Eric Bonn\Tom Ohren
CHECKED: Robert Grubbs
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 16666 OREGON JULY 20, 1993 ERIC E. BORN
EXPIRES: 12/31/99

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

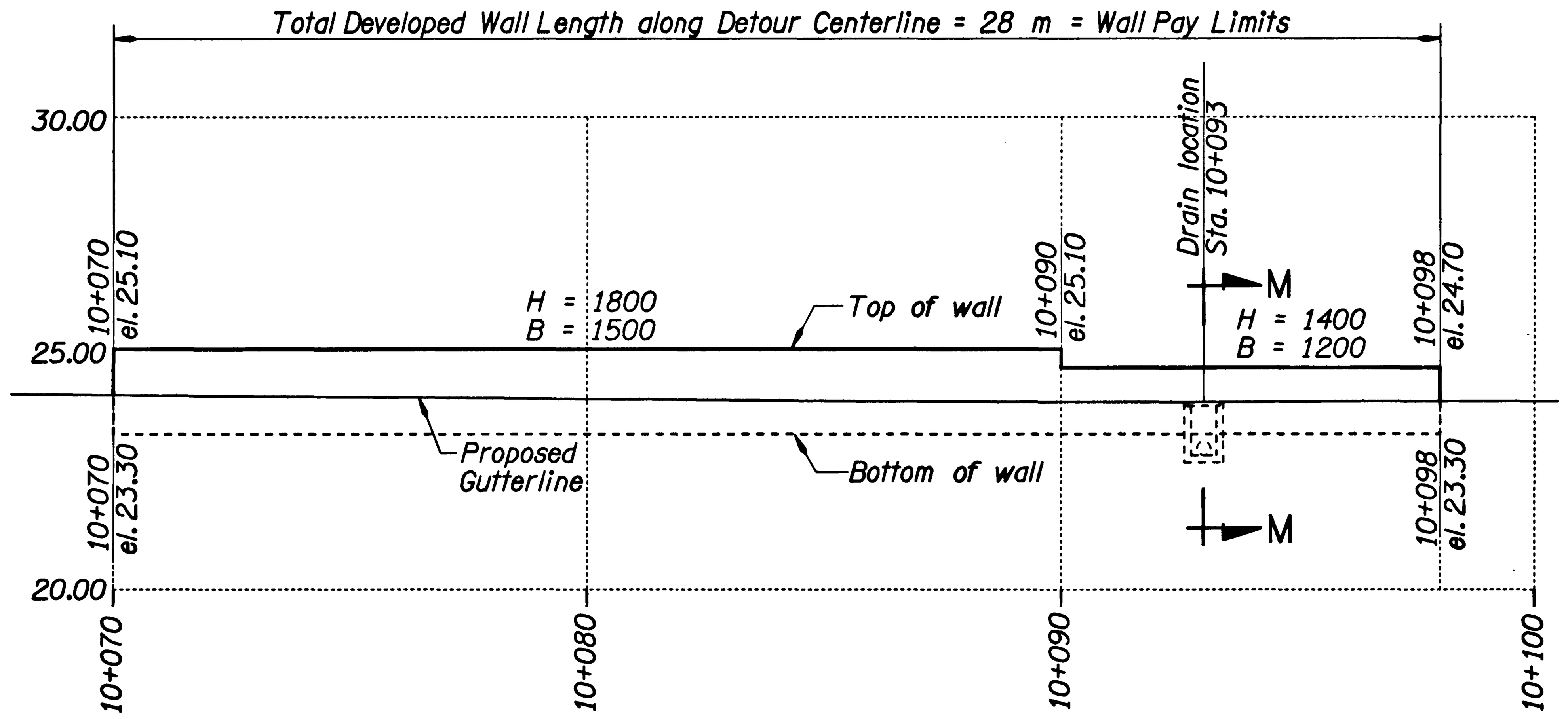
BRIDGE NO. 01089
DATE 17-DEC-1999
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE DETOUR WALLS

ELEVATION - DETOUR RETAINING WALL 'A'

METRIC
SHEET D2 OF D5
DRAWING NO. 58424

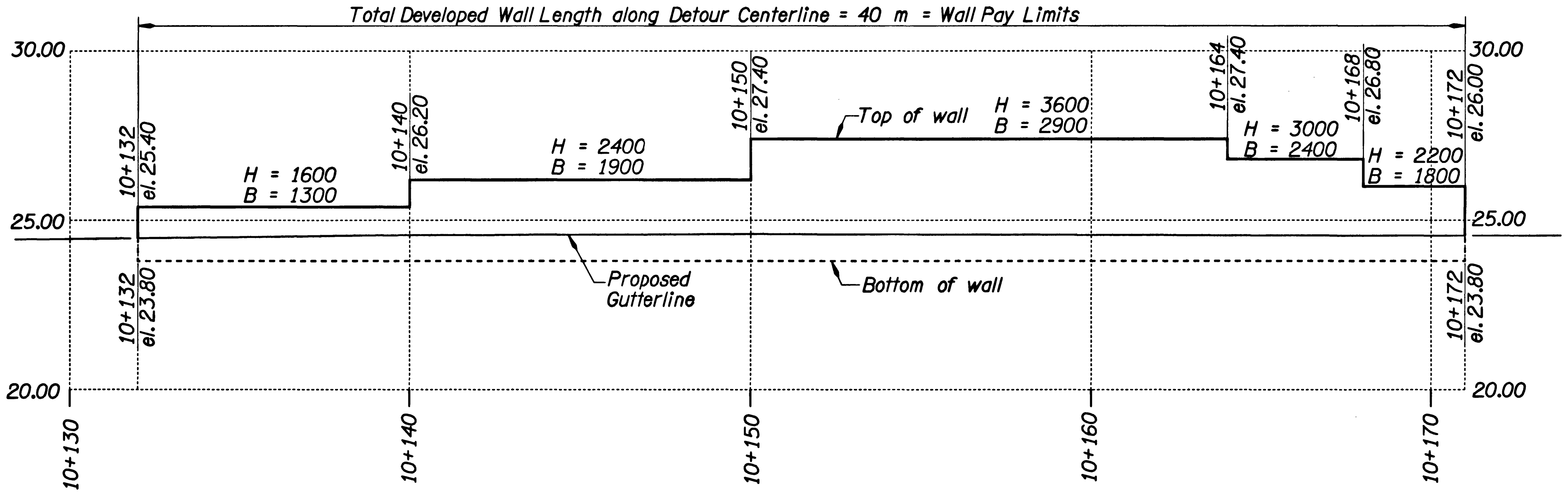
NT7420c: C:\usr\BR\PROJECTS\09314\j01089d1.dgn [VIEW=D1] [PGRID=D1] 17-DEC-1999 OHREN



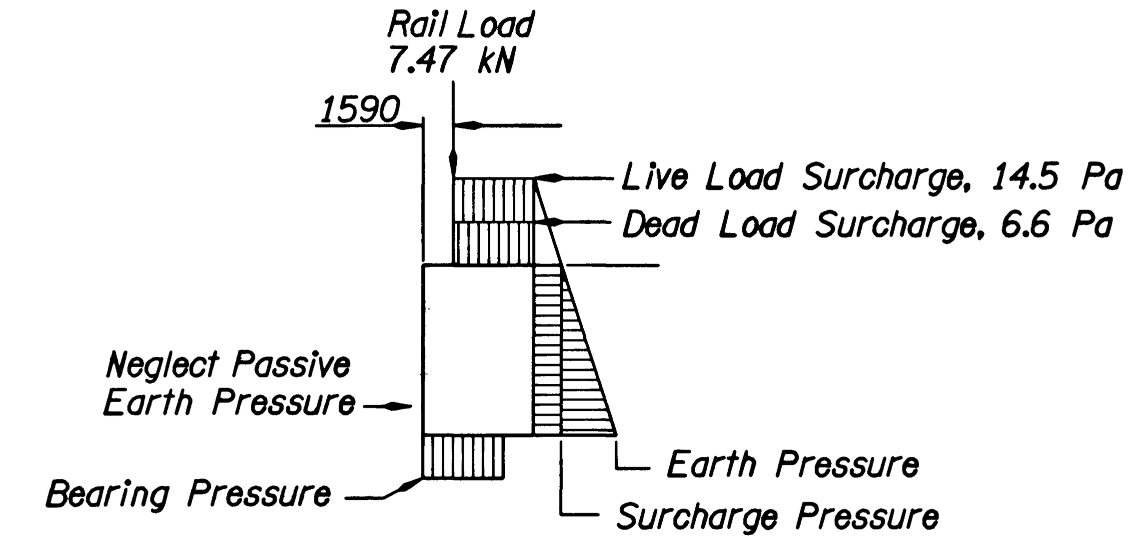
ELEVATION - WALL 'B'
Scale: 1:100

NOTE:
See Dwg. 58426 for Section M-M

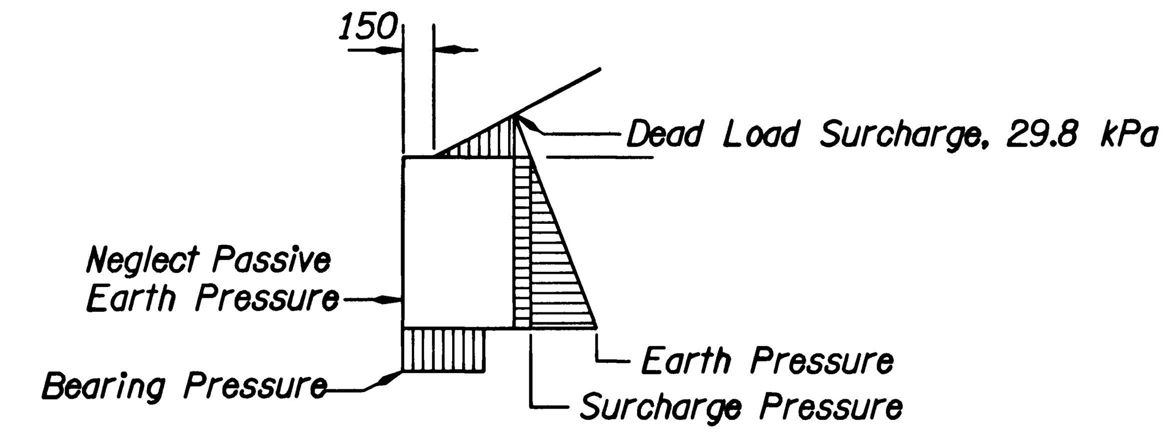
NOTE:
Elevations are in meters and are based on NGVD 29/47.



ELEVATION - WALL 'C'
Scale: 1:100



PROJECT LOADING CONDITIONS - WALL 'A'
No Scale



PROJECT LOADING CONDITIONS - WALLS 'B' & 'C'
No Scale

GENERAL NOTES:

All material and workmanship shall conform to the 1996 Standard Specifications for Highway Construction of the Oregon Department of Transportation and supplemental project special provisions.

Design shall conform to the requirements of the Load and Resistance Factor Design Method (LRFD). 1998.

Retaining wall designed for the following soil property values:

	Density kN/m^3	Angle of Internal Friction	c
Retained Material	18.9	35°	*
Foundation Material	18.9	35°	*
Reinforced Material	18.9	35°	*

*Cohesion neglected, c = 0 kPa

NOTE: All dimensions are in millimeters (mm) except as noted.

METRIC

△	DATE	REVISION	BY

DRAFTED: Eric Bonn\Tom Ohren
CHECKED: Robert Grubbs
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 16886 OREGON JULY 20, 1993 ERIC E. BONN
EXPIRES: 12/31/99

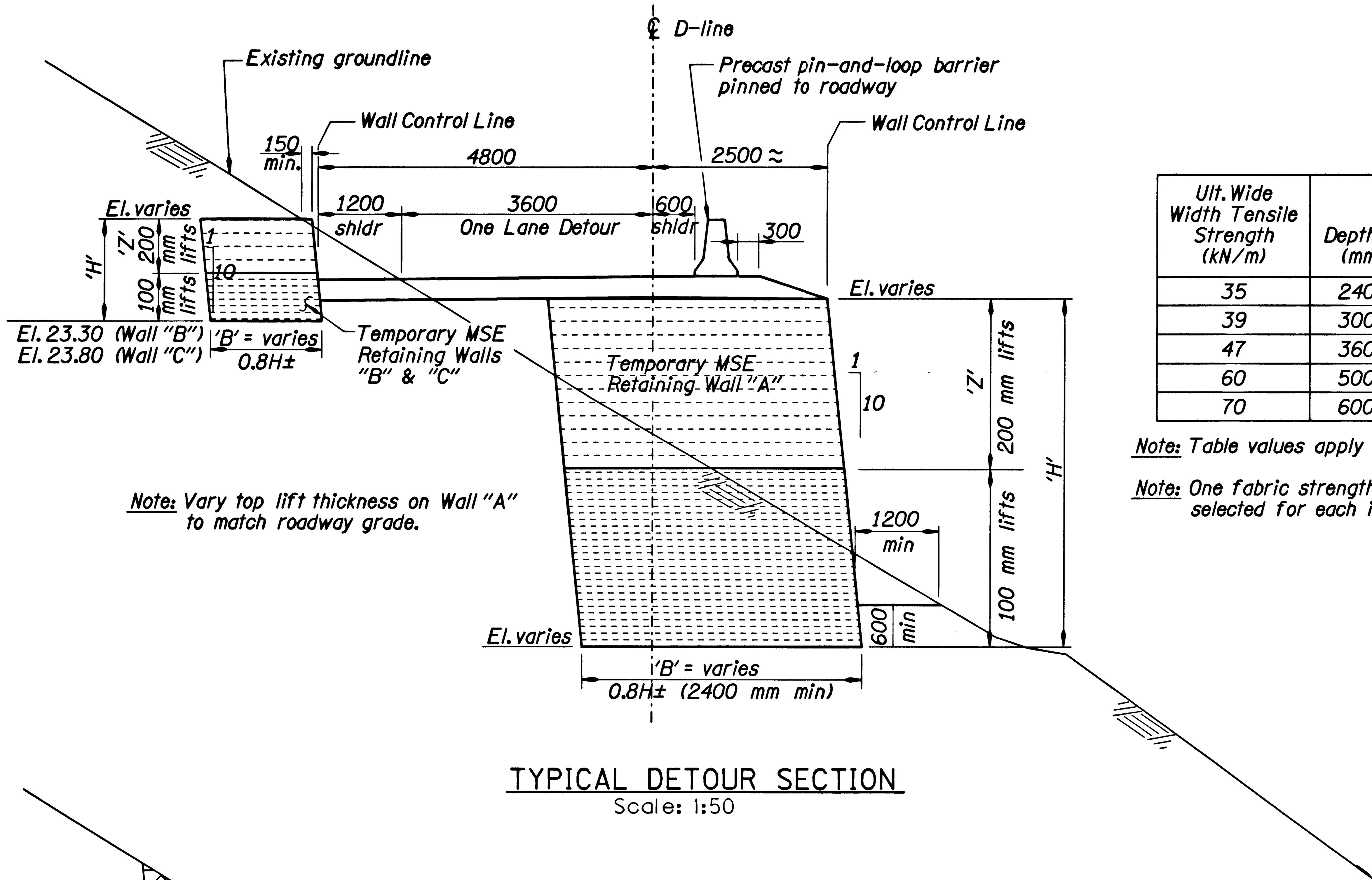
OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089
DATE 17-DEC-1999
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE DETOUR WALLS

ELEVATION - DETOUR RETAINING WALLS 'B' & 'C'

SHEET D3 OF D5
DRAWING NO. 58425



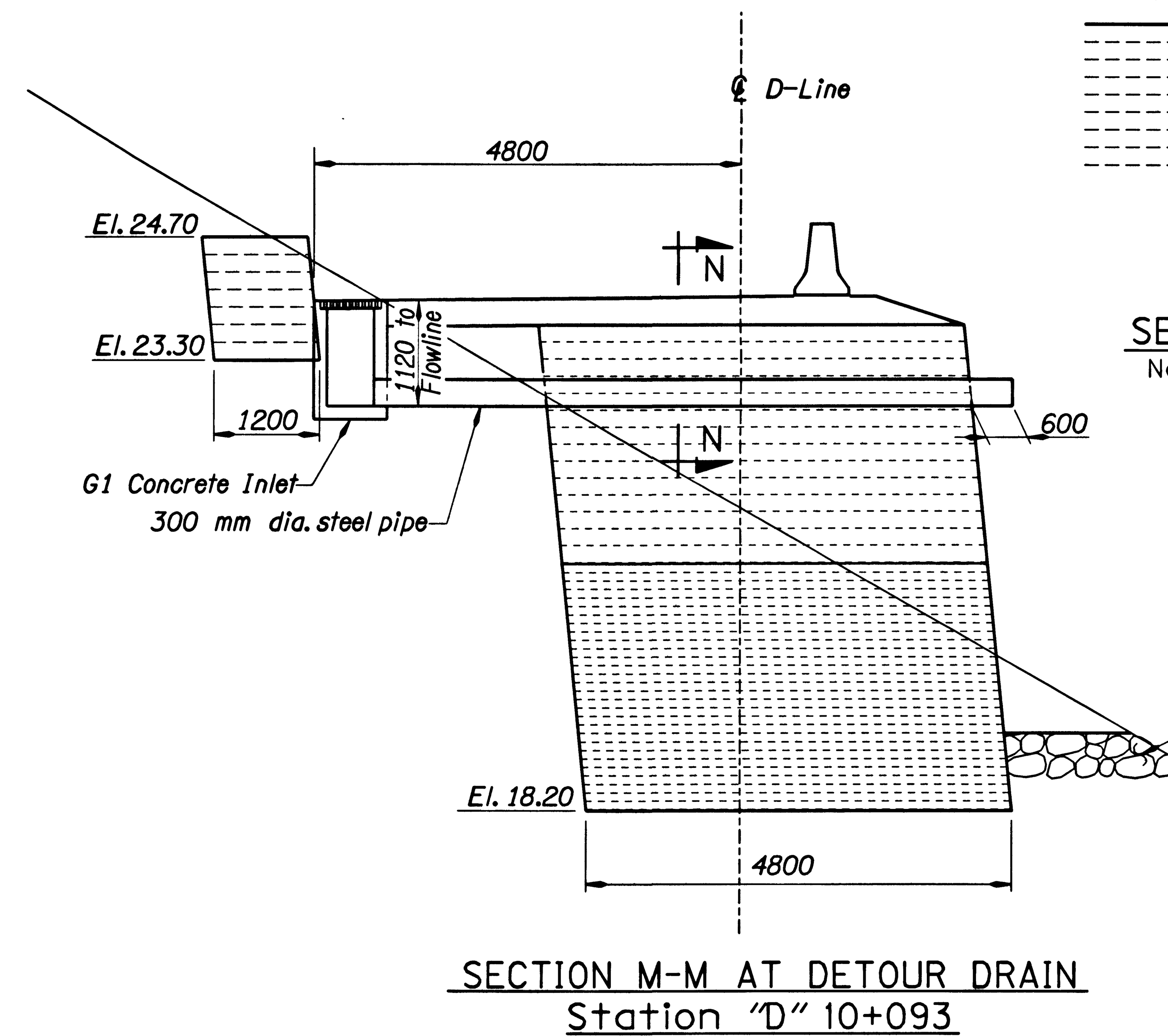
Note: Vary top lift thickness on Wall "A" to match roadway grade.

TYPICAL DETOUR SECTION
Scale: 1:50

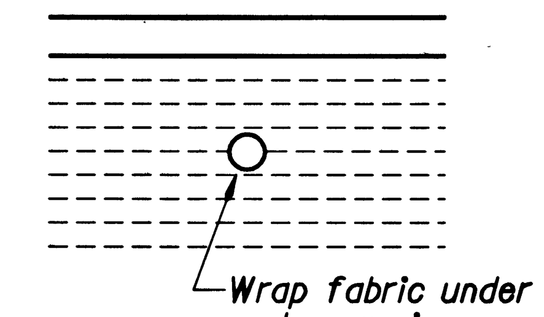
Ult. Wide Width Tensile Strength (kN/m)	Depth Z (mm)
35	2400
39	3000
47	3600
60	5000
70	6000

Note: Table values apply for all walls.

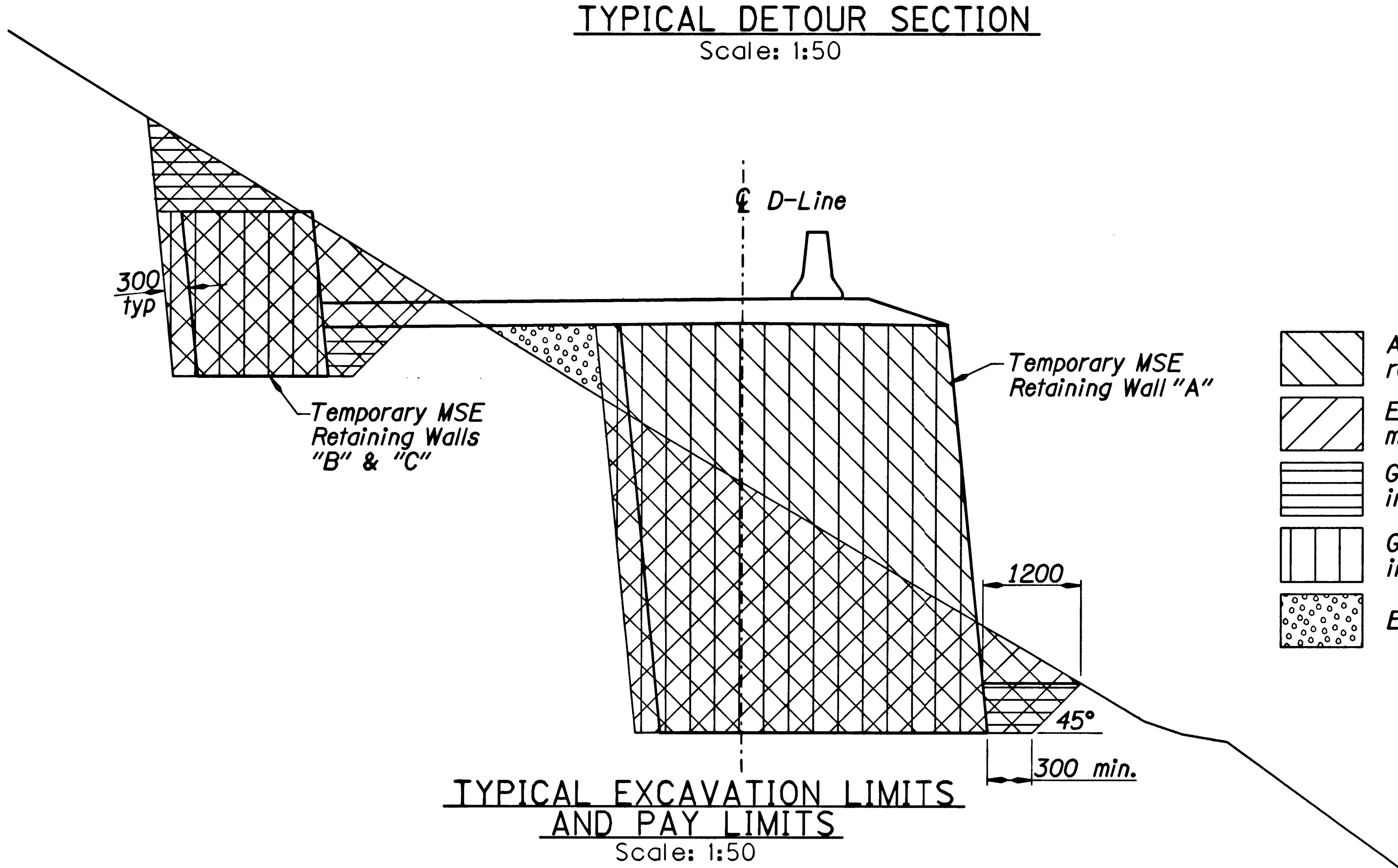
Note: One fabric strength is to be selected for each individual wall.



SECTION M-M AT DETOUR DRAIN
Station "D" 10+093
Scale: 1:50



SECTION N-N
Not to Scale



TYPICAL EXCAVATION LIMITS AND PAY LIMITS
Scale: 1:50

- Area included in retaining wall pay limits
- Excavation and replacement of excavated material included in retaining wall pay item
- General backfill included in retaining wall pay item
- Granular wall backfill and wall removal included in retaining wall pay item
- Embankment-in-Place (00330)

NOTE: All dimensions are in millimeters (mm) except as noted.

△	DATE	REVISION	BY

DRAFTED: Eric Bonn\Tom Ohren
CHECKED: Robert Grubbs
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 16588 OREGON JULY 20, 1993 ERIC E. BONN
EXPIRES: 12/31/99

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089
DATE 17-DEC-1999
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE
DETOUR WALLS

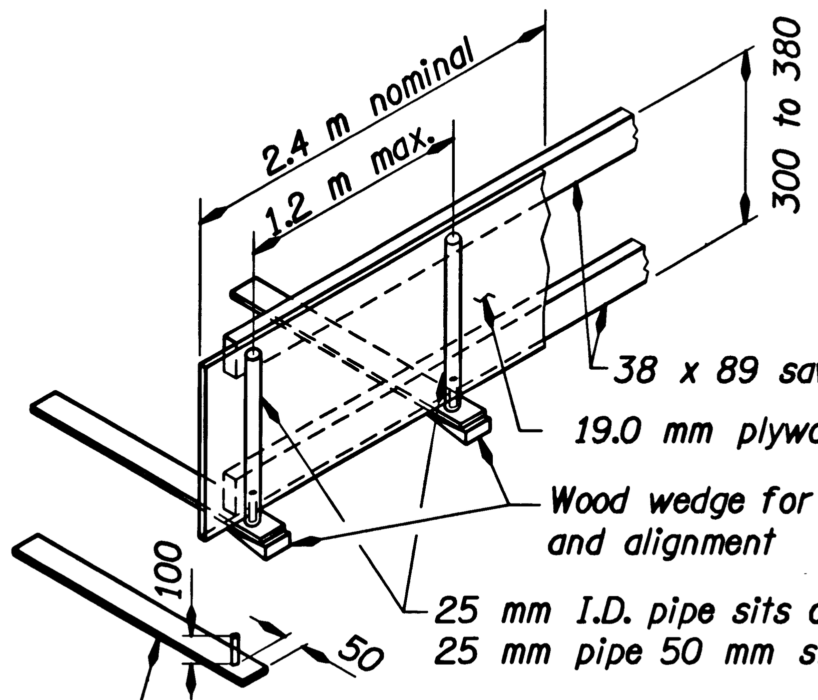
DETOUR WALL SECTIONS AND DETAILS

METRIC

SHEET D4 OF D5

DRAWING NO. 58426

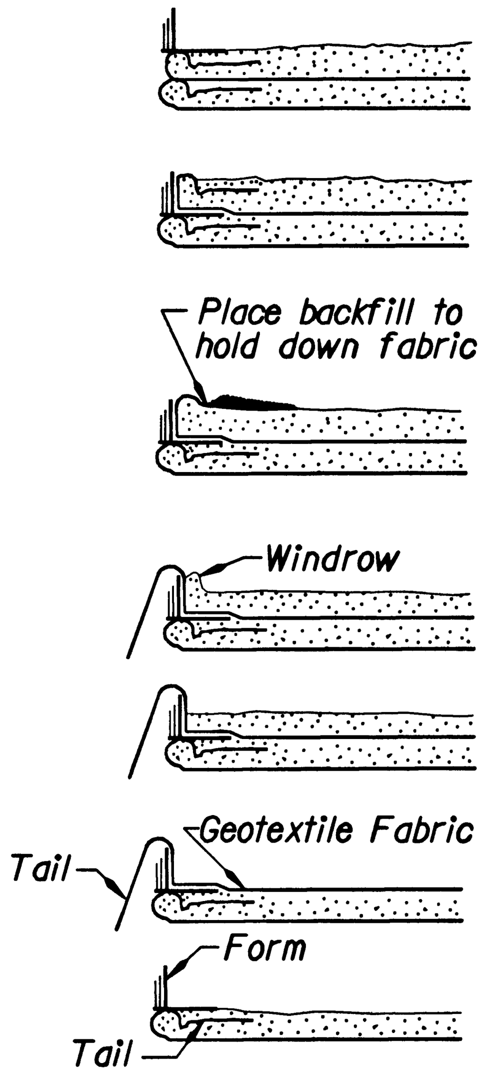
OHREN 17-DEC-1999 [VIEW=E1] [PGRID=E1] c:\usr\br\projects\09314\j01089d1.dgn NT7420c:



SUGGESTED FORMING METHOD : EXPOSED GEOTEXTILE WALL FACE

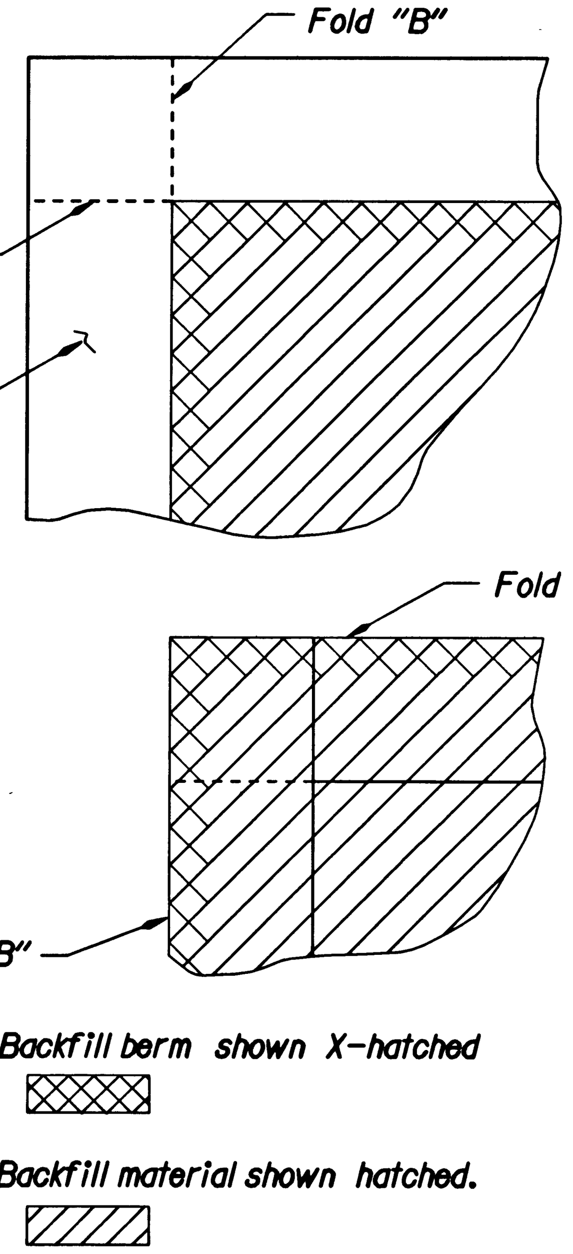
(OR USE EQUIVALENT APPROVED BY THE ENGINEER)

No Scale



CONSTRUCTION PROCEDURE: EXPOSED GEOTEXTILE WALL FACE

No Scale

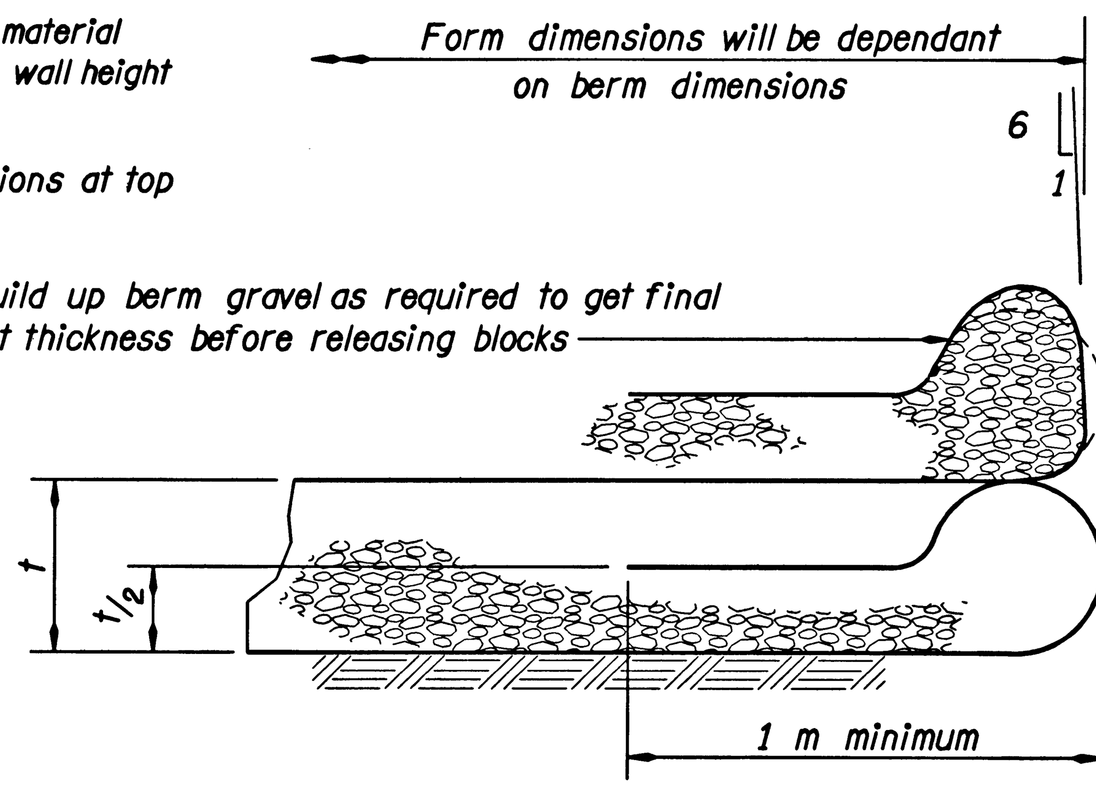


PLAN - CORNER LAP DETAIL

No Scale

CORNER CONSTRUCTION NOTES:

1. Place backfill to about half of the total lift height. Provide berm as required.
2. Fold geotextile at Fold "A" allowing enough fabric to provide the minimum "tail" length.
3. Fold geotextile at Fold "B" allowing enough fabric to provide the minimum "tail" length.
4. Place the final lift of backfill material and repeat process until desired wall height is reached.
5. Use this detail at step locations at top of walls



WRAP DETAILS

No Scale

NOTE: All dimensions are in millimeters (mm) except as noted.

△	DATE	REVISION	BY

DRAFTED: Tom Ohren

CHECKED: Robert Grubbs

REVIEWED: Frank J. Nelson

DESIGNER

REGISTERED PROFESSIONAL ENGINEER 16686 OREGON JULY 20, 1993 ERIC E. BOHN

EXPIRES: 12/31/99

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO.	01089
DATE	17-DEC-1999
CALC. BOOK	4835

ROCKY CREEK (BEN JONES) BRIDGE DETOUR WALLS

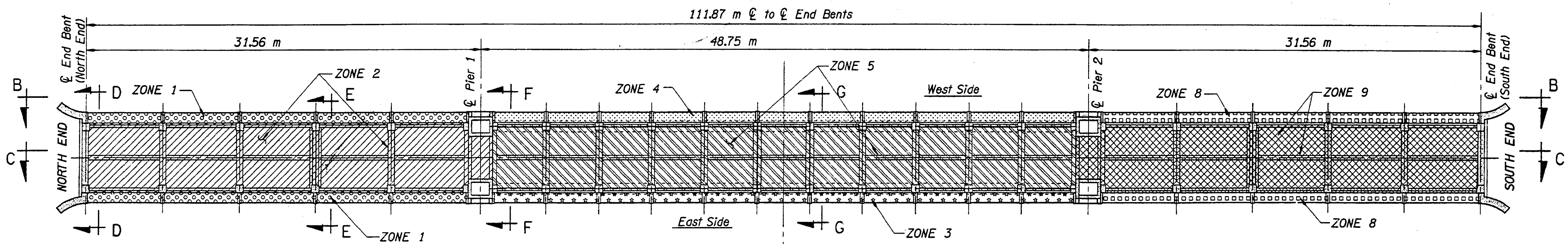
MSE RETAINING WALL DETAILS

METRIC

SHEET D5 OF D5

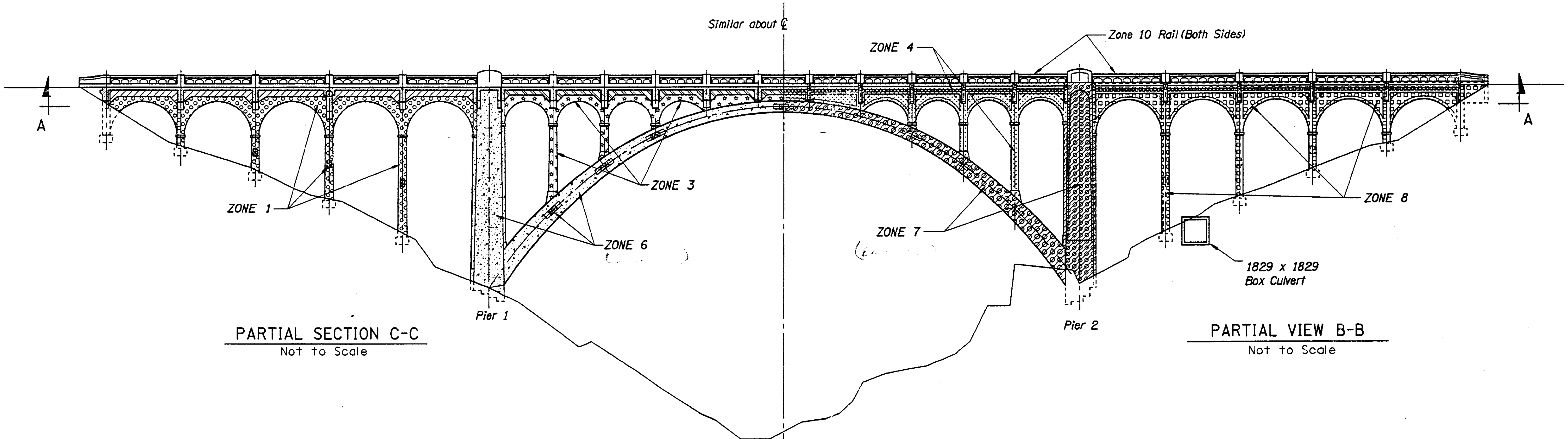
DRAWING NO. 58427

NT7420c: C:\usr\BR\PROJECTS\09314\j01089dl.dgn [VIEW=F1] [PGRID=F1] 17-DEC-1999 OHREN



BOTTOM OF DECK VIEW A-A
(ARCHS NOT SHOWN FOR CLARITY)
Not to Scale

NOTE:
See Dwg. 58429 for Sections D-D, E-E, F-F, and G-G.



PARTIAL SECTION C-C
Not to Scale

PARTIAL VIEW B-B
Not to Scale

NT7420c: C:\usr\BR\PROJECTS\09314\J01089cp1.dgn [VIEW=C1] [PGRID=C1] 01-FEB-2000

△	DATE	REVISION	BY

DRAFTED: Tom Ohren
REVIEWED: Frank J. Nelson
DESIGNED: Michelle L. Gallardo

CHECKED
REGISTERED PROFESSIONAL ENGINEER 12137 OREGON MAY 15, 1987 CURTIS B. CRYER
EXPIRES: 12/31/2001

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

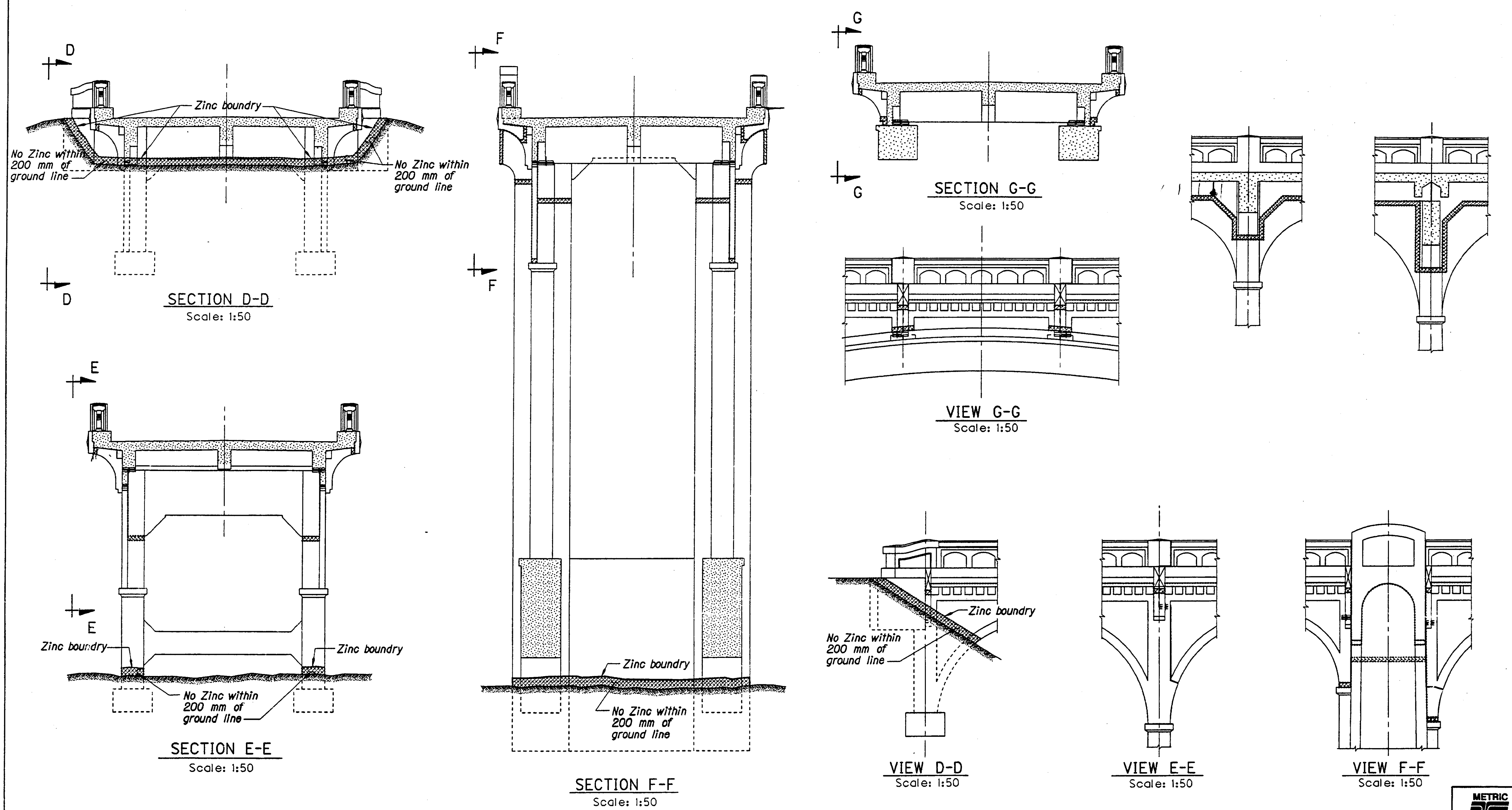
ROCKY CREEK (BEN JONES) BRIDGE
CATHODIC PROTECTION

C. P. PLAN AND ELEVATION

METRIC

SHEET CP1 OF CP10

DRAWING NO. 58428



METRIC

DATE	REVISION	BY

DRAFTED: Tom Ohren

REVIEWED: Frank J. Nelson

DESIGNED: Michelle L. Gallardo

CHECKED

REGISTERED PROFESSIONAL ENGINEER 12137 OREGON JULY 15, 1983 CURTIS S. CRYER

EXPIRES: 12/31/2001

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089

DATE 01-FEB-2000

CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE
CATHODIC PROTECTION

C. P. AREA DIFINITIONS

SHEET CP2 OF CP10

DRAWING NO. 58429

\usr\BR\PROJECTS\09314\J01089cp1.dgn [VIEW=E3] [PGRI 3] 01-FEB-2000

NT7420c:

CATHODIC PROTECTION ZONES

Cathodic Protection Zone	Spans	Arch Ribs & struts	Column Struts	Bottom of Overhang	Overhang Brackets	Bottom of Deck	Longitudinal Deck Girders	Transverse Deck Beams	Columns	Architectural Blocks (dentals). Curtain Walls.	Piers	Rail & Curb	Approximate Total Area (m^2)	BOUNDARIES:
1	1		•	•	/				•	•			400	Span 1 curtain walls intersection with outside longitudinal beams. Column above capitol intersection with Pier 1. Columns 200 mm above ground.
2	1					•	•	•					300	Span 1 longitudinal beams intersection with curtain wall. Bottom of deck and Span 2 longitudinal beams just South of Pier 1. Intersection of transverse deck beams with Pier 1.
3	2			•	/				•	•			270	Span 2 West curtain walls intersection with outside west longitudinal beams. West column above capitol intersection with west Pier 1 & Pier 2. West columns insection with west arch rib.
4	2			•	/				•	•			270	Same as Zone 3 exchanging west for east.
5	2					•	•	•					450	Span 2 longitudinal beams intersection with curtain wall. Bottom of deck and Span 2 longitudinal beams just North of Pier 2. Intersection of transverse deck beams with Pier 2.
6	2	•									•		540	Intersection of West Piers 1&2 with columns above capitol and beams. Piers 1,2 and arch rib 200 mm above ground. Intersection of arch ribs with columns and curtain wall. Center of arch strut.
7	2	•									•		540	Same as Zone 6 exchanging West for East.
8	3		•	•	/				•	•			400	Same as Zone 1 exchanging Span 1 for Span 3 and Pier 1 for Pier 2.
9	3					•	•	•					300	Same as Zone 2 exchanging Span 1 for Span 3, Pier 1 for Pier 2 and South for North.
10	1 2 3				•							•	260	Underside horizontal surface of deck slab. Horizontal bottom of overhang bracket.

TOTAL = 3,730 m^2

DATE	REVISION	BY

DRAFTED: Tom Ohren

REVIEWED: Frank J. Nelson

DESIGNED: Michelle L. Gallardo

CHECKED

EXPIRES: 12/31/2001

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089

DATE 01-FEB-2000

CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE
CATHODIC PROTECTION

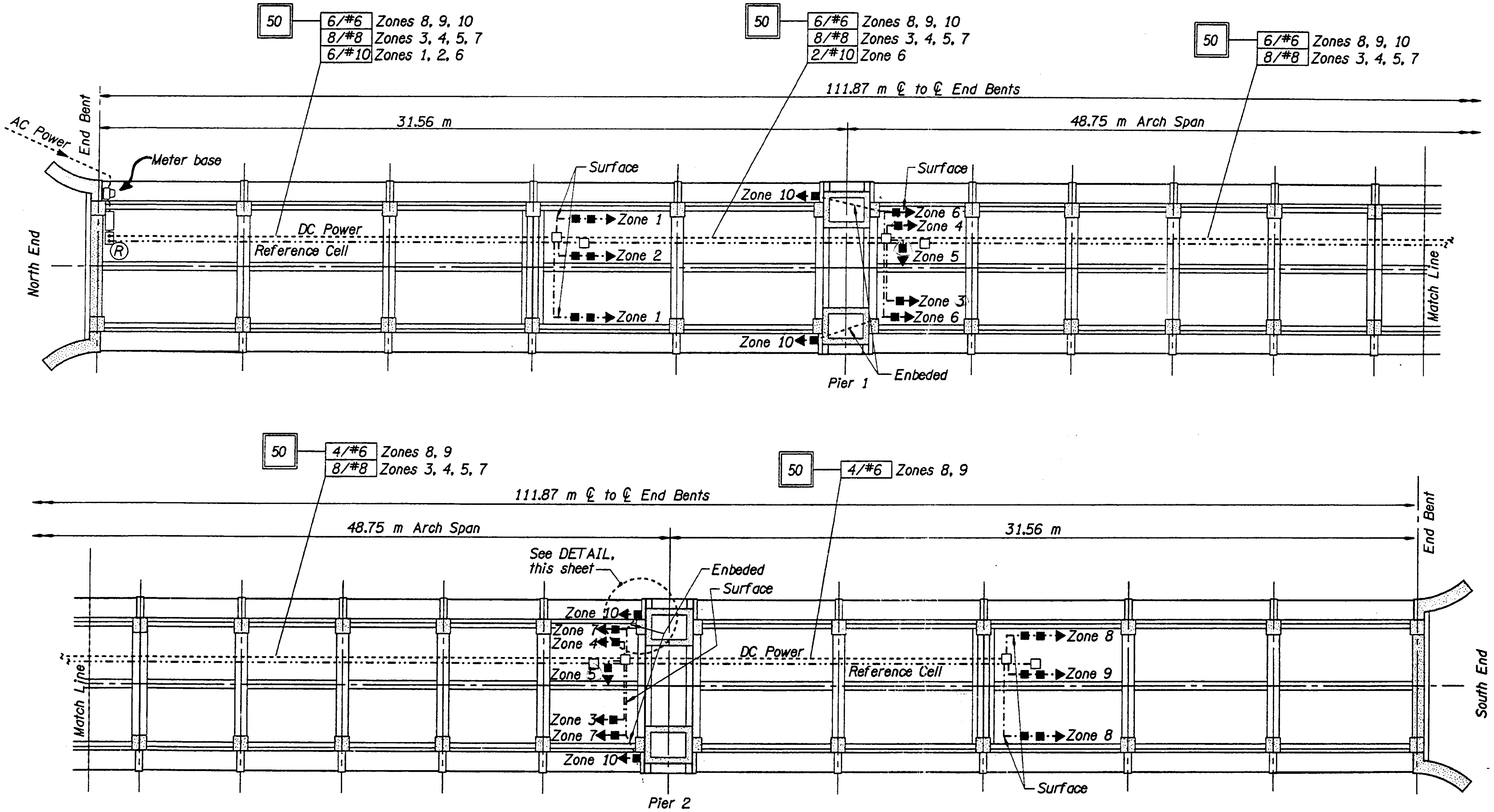
C. P. ZONE DESCRIPTIONS

METRIC

SHEET CP3 OF CP10

DRAWING NO. 58430

NT7420c: C:\usr\BRYPROJECTS\09314\JC1089cp1.dgn [VIEW=E1] [PGRID=E1] 01-FEB-2000

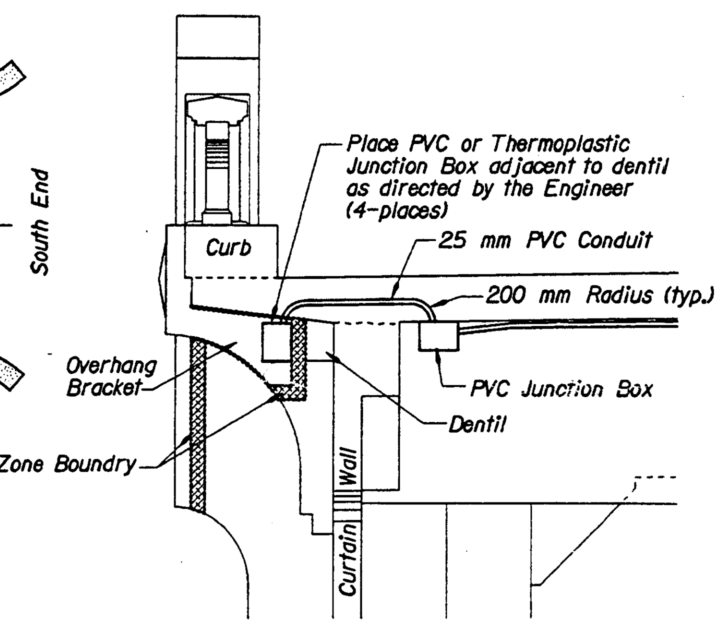


DECK PLAN - DC POWER DESTRIBUTION

Scale: 1:100

LEGEND

- Conduit for DC Power (Embeded)
- Conduit for DC Power (Surface)
- Conduit for Reference Cell Connection
- □ PVC or Thermoplastic Junction Box
- ■ 64 X 3 thick Brass Pad/Bolt Primary Anode Assembly See Dwg. 54196
- ◀ Connect negative (cathode) wire to zone "king" bar See Dwg. 54196 for connection details
- Z#N Zone numbers N
- (R) Rectifier at indicated location.
- [S] Install "S" size schedule 40 PVC conduit.
- [N/#S] Install electrical conductors in conduit ("N" =number of conductors) ("S" = size of conductors)



TYP. DC POWER DISTRIBUTION DETAIL AT PIERS

Not to Scale

NOTE:
For Conduit around Drain, see dwg. 58417.

METRIC

△	DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Michelle L. Gallardo
REVIEWED: Frank J. Nelson

DESIGNER
EXPIRES: 12/31/2001

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

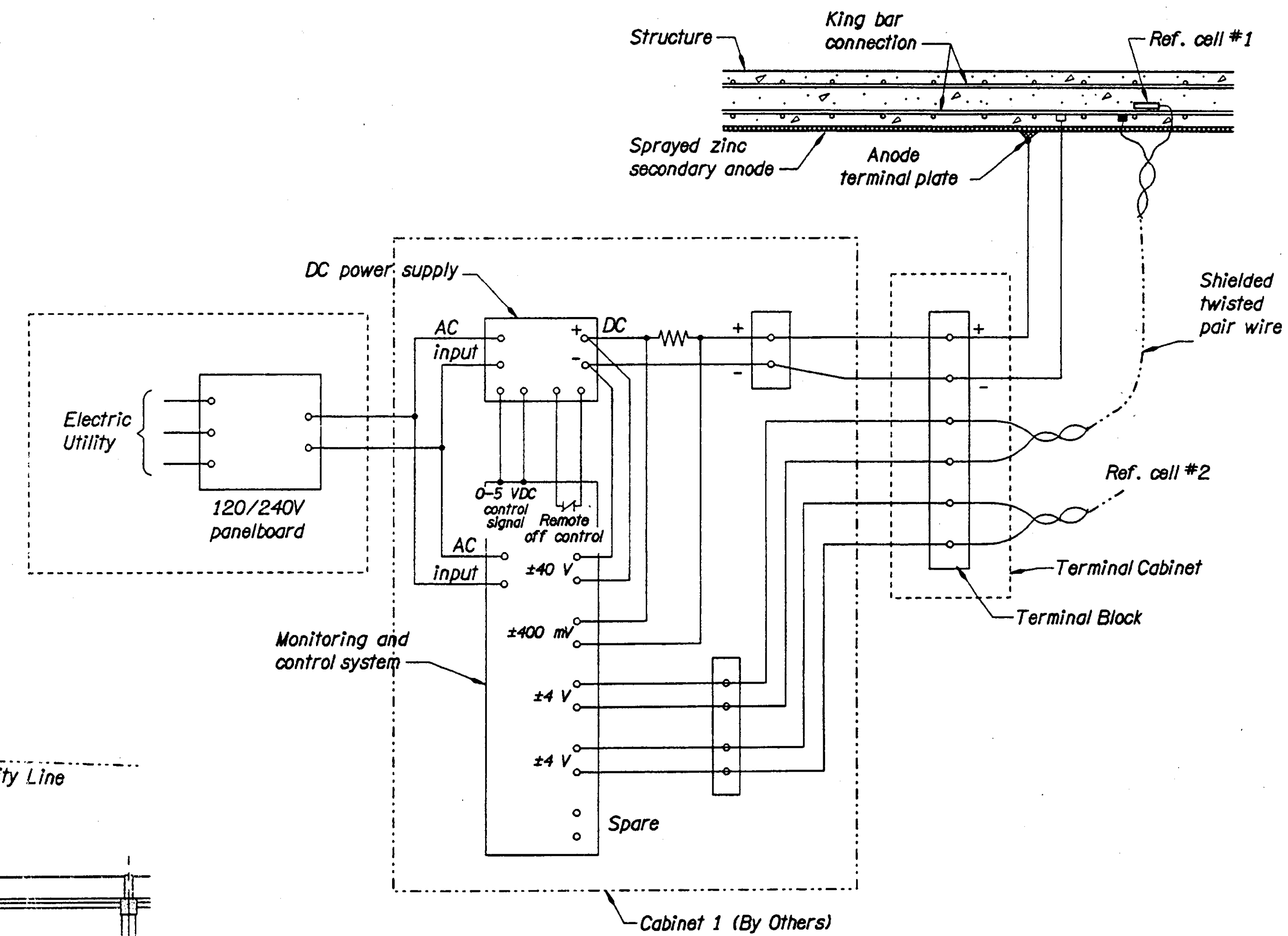
BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE
CATHODIC PROTECTION

DC POWER DISTRIBUTION PLAN

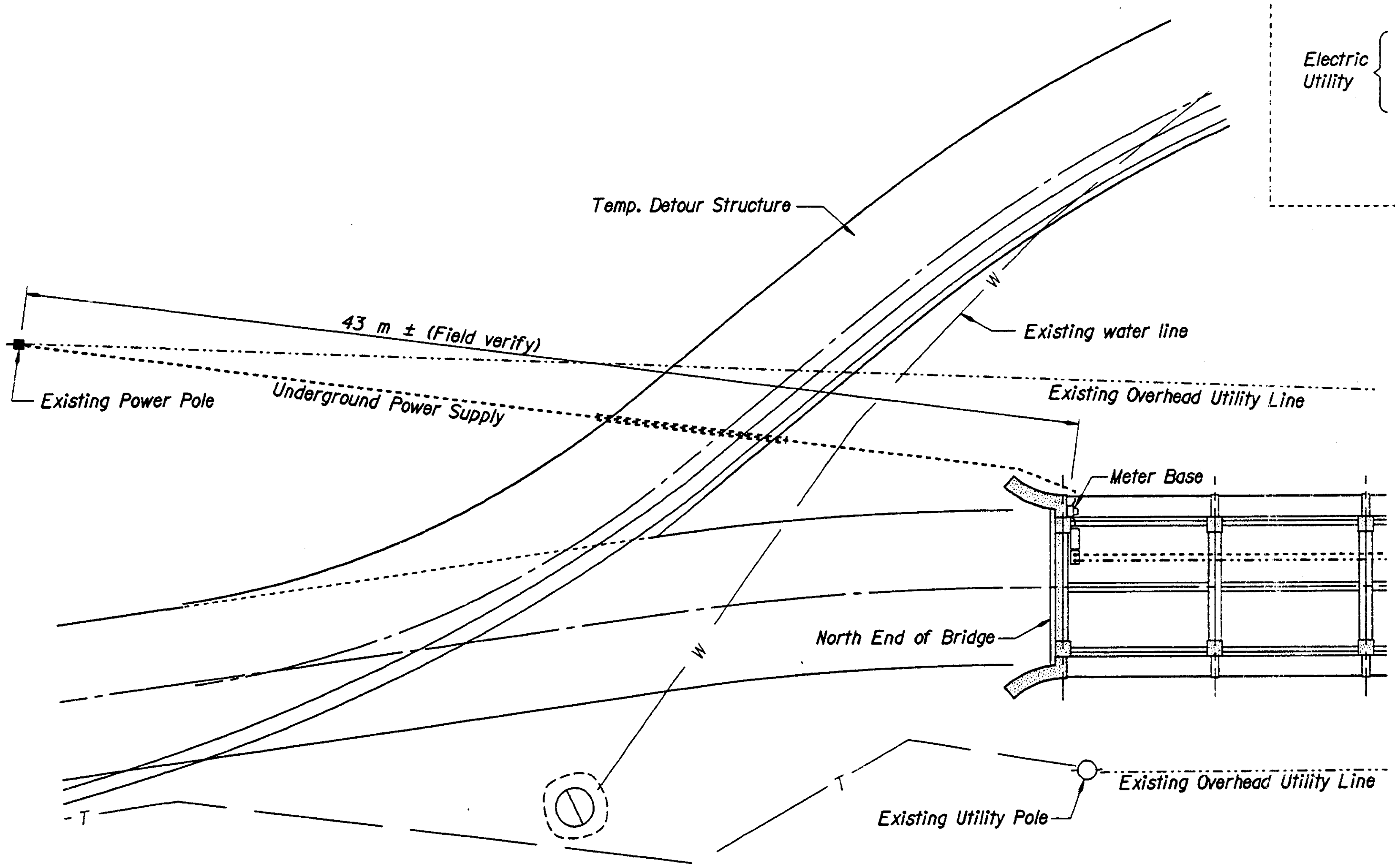
SHEET CP4 OF CP10
DRAWING NO. 58431

OHREN 01-FEB-2000 [VIEW=D1] [PGRID] \usr\BR\PROJECTS\09314\J01089cpl.dgn NT7420c:



CATHODIC PROTECTION SYSTEM SCHEMATIC

Not to Scale



POWER SUPPLY DETAIL

Scale: 1:500

△	DATE	REVISION	BY

DRAFTED: Tom Ohren

CHECKED: Michelle L. Gallardo

REVIEWED: Frank J. Nelson

DESIGNER

REGISTERED PROFESSIONAL ENGINEER 12137 OREGON JULY 15, 1983 CURTIS B. CRYER

EXPIRES: 12/31/2001

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089

DATE 01-FEB-2000

CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE
CATHODIC PROTECTION

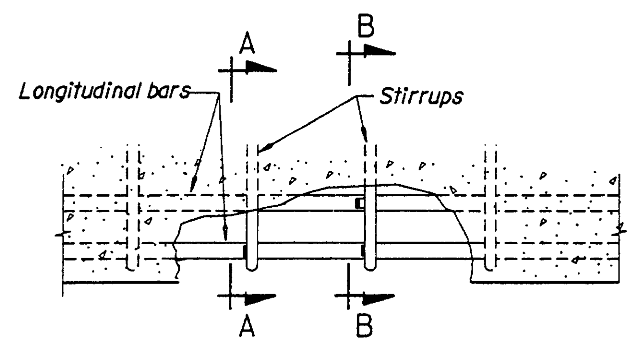
C. P. POWER SUPPLY & SYSTEM SCHEMATIC

METRIC

SHEET CP5 OF CP10

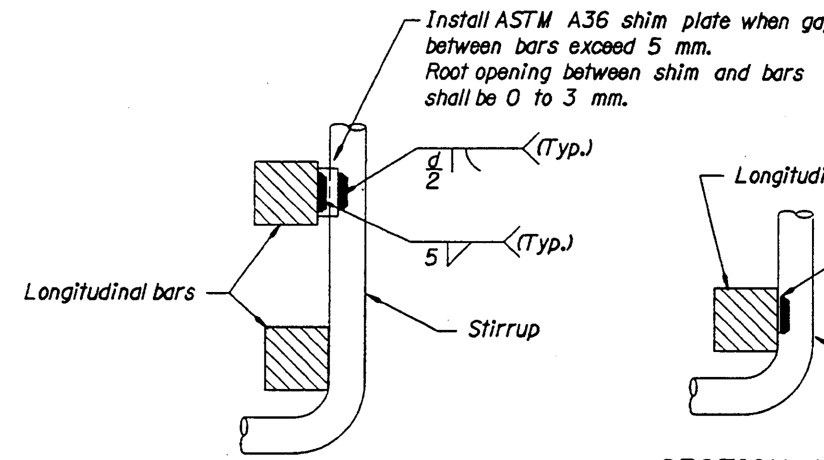
DRAWING NO. 58432

NT7420c: C:\usr\BR\PROJECTS\09314\J01089cp1.dgn [VIEW=MI] [PGRID=MI] 01-FEB-2000 OHREN



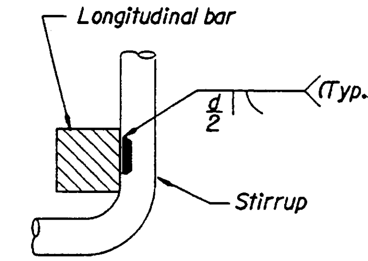
CONTINUITY WELD DETAIL

no scale



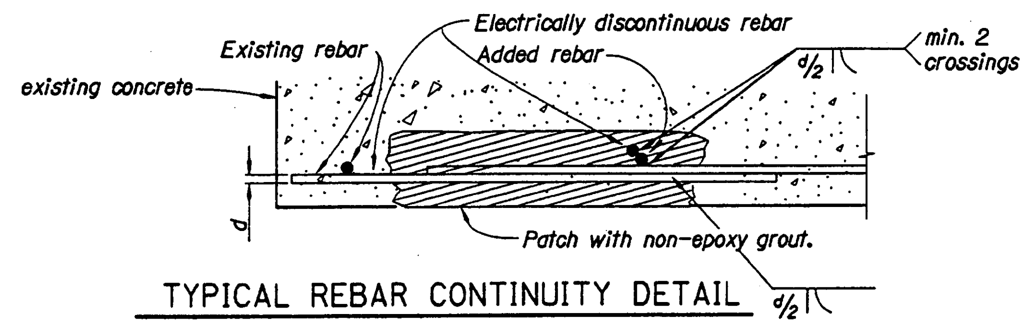
SECTION B-B

no scale



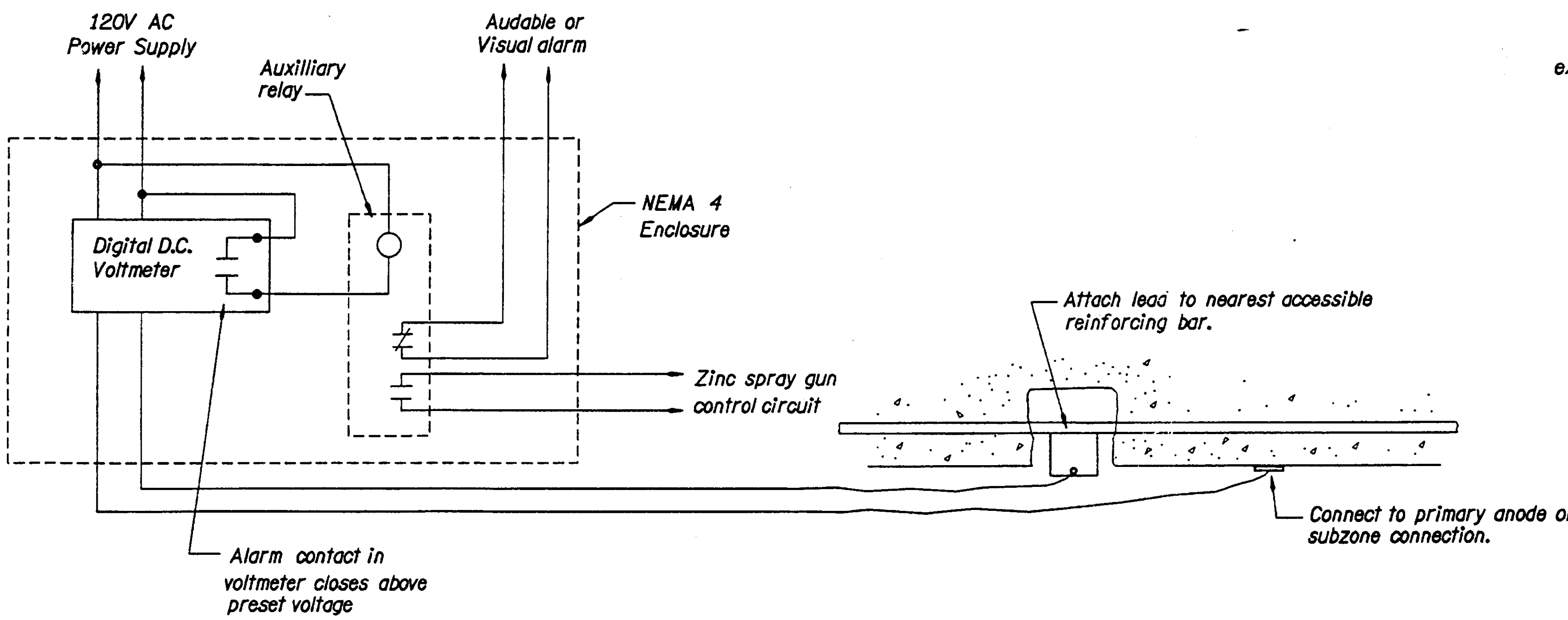
SECTION A-A

no scale



TYPICAL REBAR CONTINUITY DETAIL

no scale



SHORT CIRCUIT MONITORING SYSTEM

WELDING NOTES:

Welding of reinforcing steel splices shall be in accordance with ANSI/AWS D1.4-79, "Structural Welding Code Reinforcing Steel".

Bars larger than #25 shall not be welded.

METRIC

△	DATE	REVISION	BY

DRAFTED: Tom Ohren

CHECKED: Michelle L. Gallardo (signature) Michelle L. Gallardo

REVIEWED: Frank J. Nelson (signature) Frank J. Nelson

DESIGNER

REGISTERED PROFESSIONAL ENGINEER 12137 OREGON JULY 15, 1983 CURTIS B. CRYER

EXPIRES: 12/31/2001

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089

DATE 01-FEB-2000

CALC. BOOK 4835

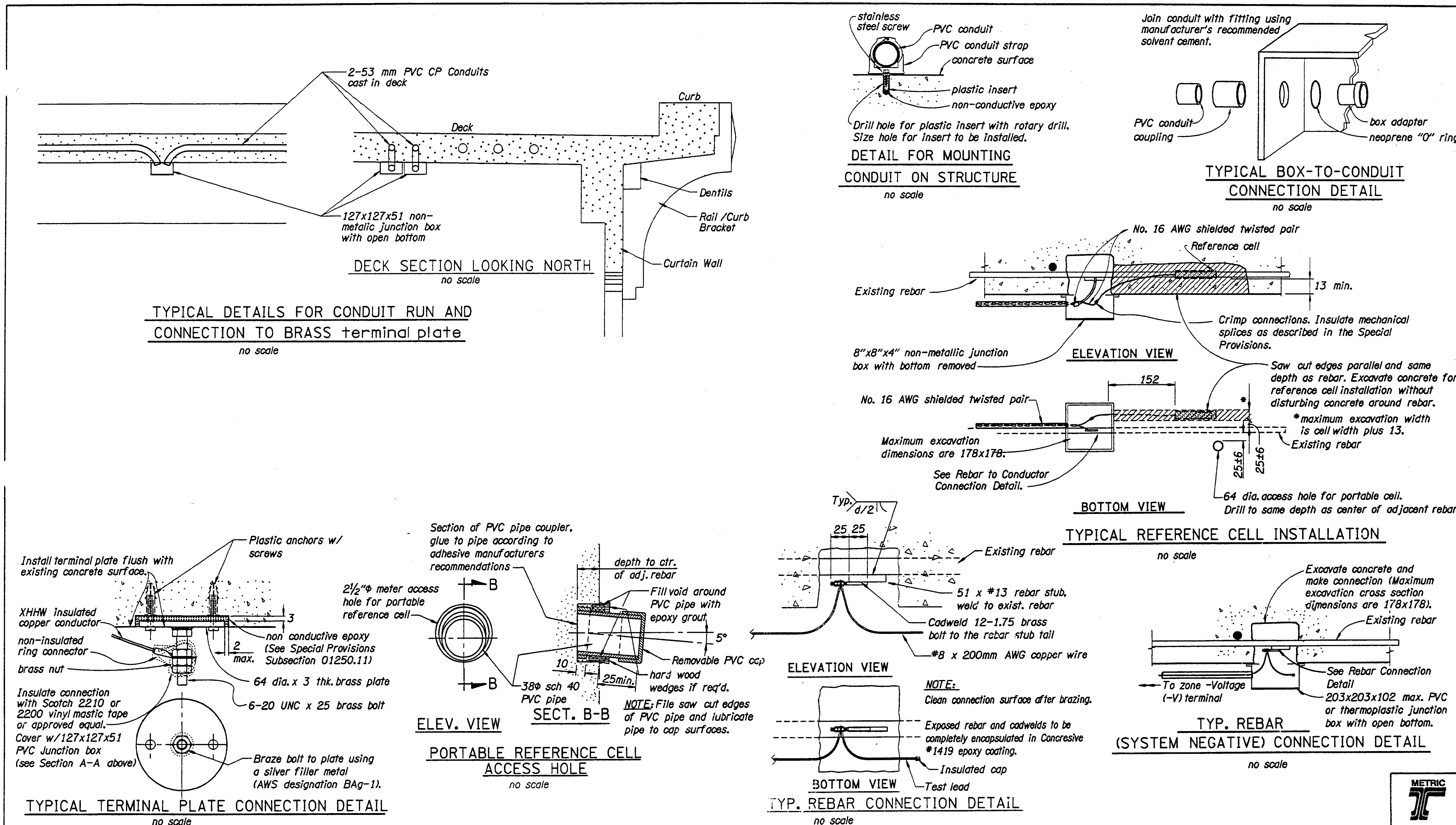
ROCKY CREEK (BEN JONES) BRIDGE CATHODIC PROTECTION

REINFORCEMENT CONTINUITY DETAILS

SHEET CP6 OF CP10

DRAWING NO. 58433

NT7420C: \usr-\BR\PROJECTS\09314\01089cpl.dgn [VIEW=1] [PGRID- 01-FEB-2000 OHREN



OHREN 01-FEB-2000 [VIEW=12] [PGRID=12] NT7420c: C:\usr\BR\PROJECTS\09314\J01089cp1.dgn

METRIC

△	DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Michelle L. Gallardo
REVIEWED: Frank J. Nelson

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 12137 OREGON JULY 15, 1983 CURTIS B. CRIER
EXPIRES: 12/31/2001

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

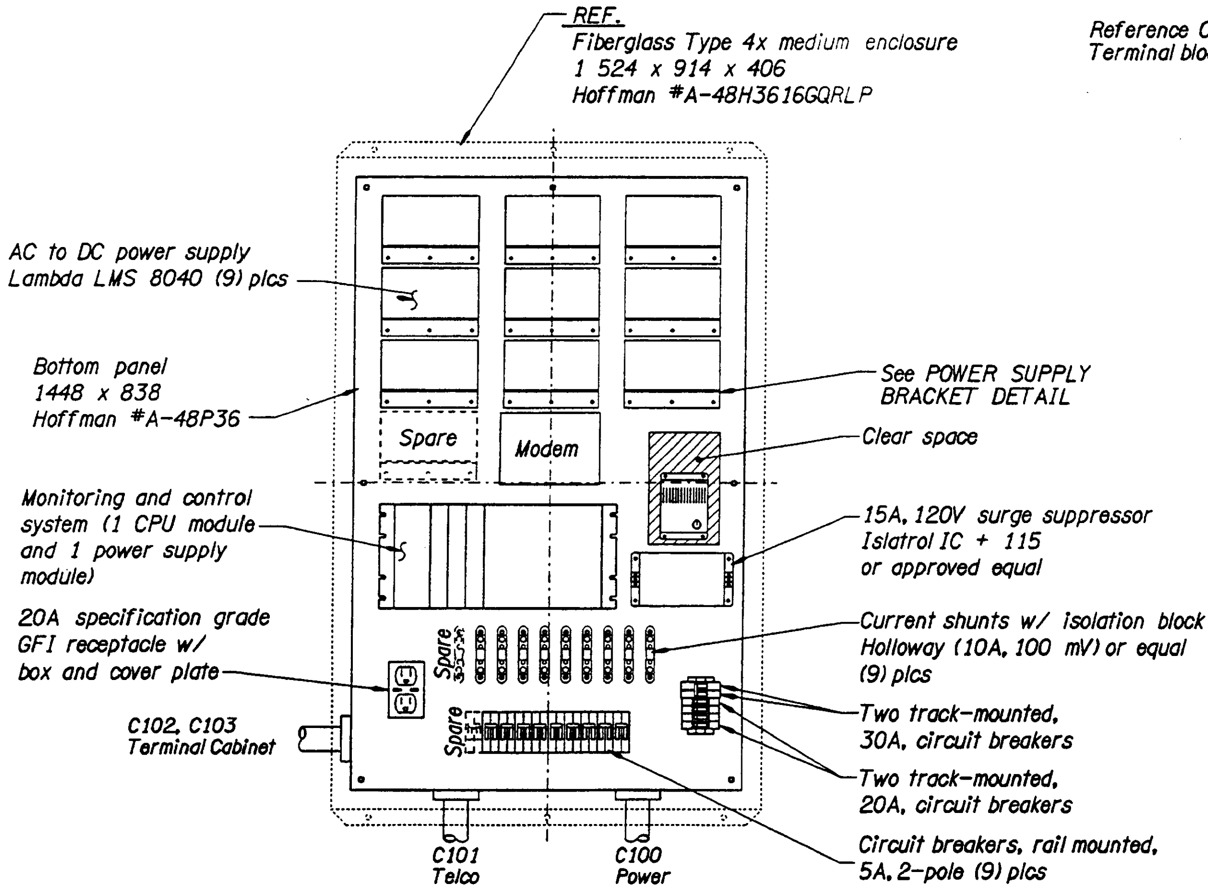
BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE
CATHODIC PROTECTION

GENERAL CATHODIC PROTECTION DETAILS

SHEET CP7 OF CP10

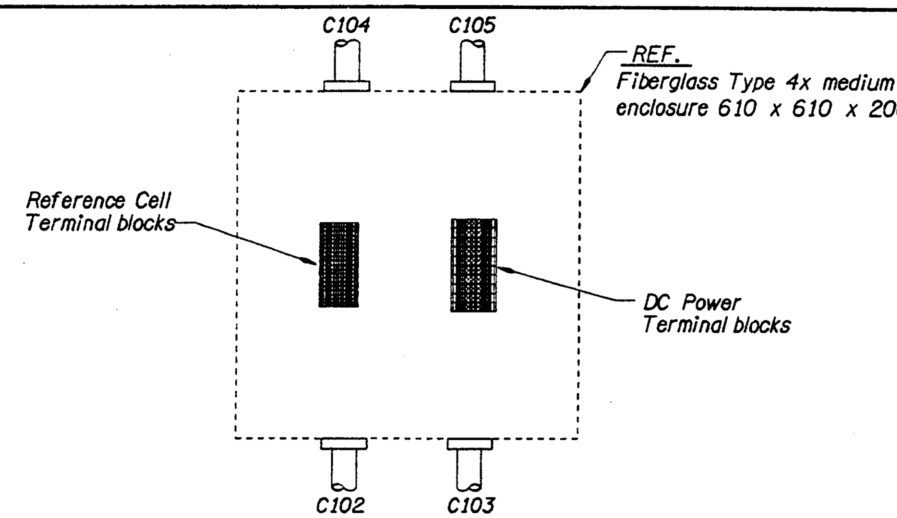
DRAWING NO. 58434



POWER SUPPLY AND MONITORING SYSTEM CABINET

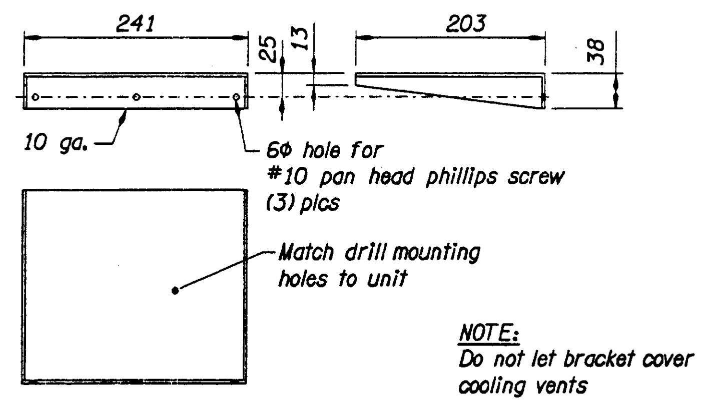
No Scale

NOTES:
Supplied by Others.
Contractors required to mount the cabinet, connect to 120V AC, and install conduit to Terminal Cabinet.



TERMINAL JUNCTION CABINET

No Scale



POWER SUPPLY BRACKET DETAIL

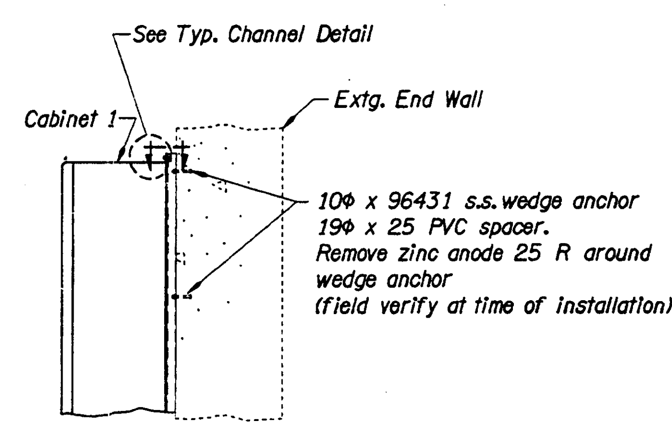
No Scale

CONDUIT SCHEDULE

CONDUIT	SIZE	FROM	TO	CIRCUIT
C100	25	AC meter at NE corner	Cabinet 1	2 - #2 Copper power supplies 1 - #2 Copper ground 1 - #4 Neutral
C101	19	Telephone utility service point	Cabinet 1	Telephone cable (4 conductor, 22 gauge)
C102	51	Terminal cabinet	Cabinet 1	20 - #16 shielded cable for reference cells
C103	51	Terminal cabinet	Cabinet 1	4 - #6 Power cables 8 - #8 6 - #10
C104	51	Reference junction box under deck	Terminal cabinet	20 - #16 shielded cable for reference cells
C105	51	Power junction box under deck	Terminal cabinet	4 - #6 Power cables 8 - #8 6 - #10

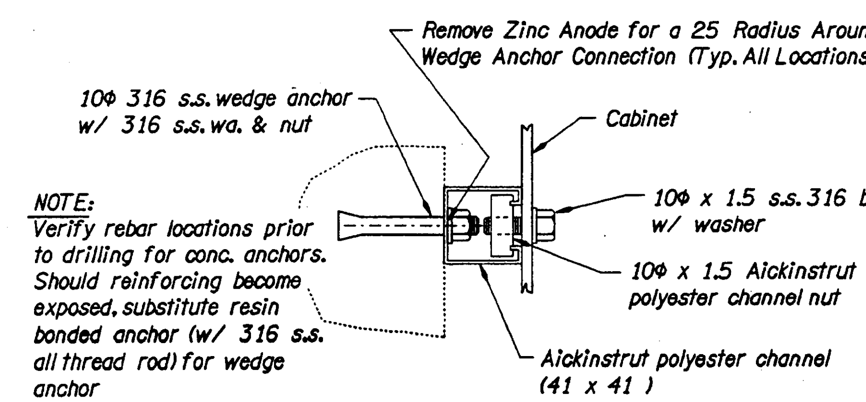
CONDUIT SCHEDULE

No Scale



CABINET 1 MOUNTING DETAIL

Not to Scale



TYP. CHANNEL DETAIL

Not to Scale

NOTE: All dimensions are in millimeters (mm) except as noted.

METRIC

DATE	REVISION	BY

DRAFTED: Tom Ohren
CHECKED: Michelle L. Gallardo
REVIEWED: Frank J. Nelson

DESIGNER
EXPIRES: 12/31/2001

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

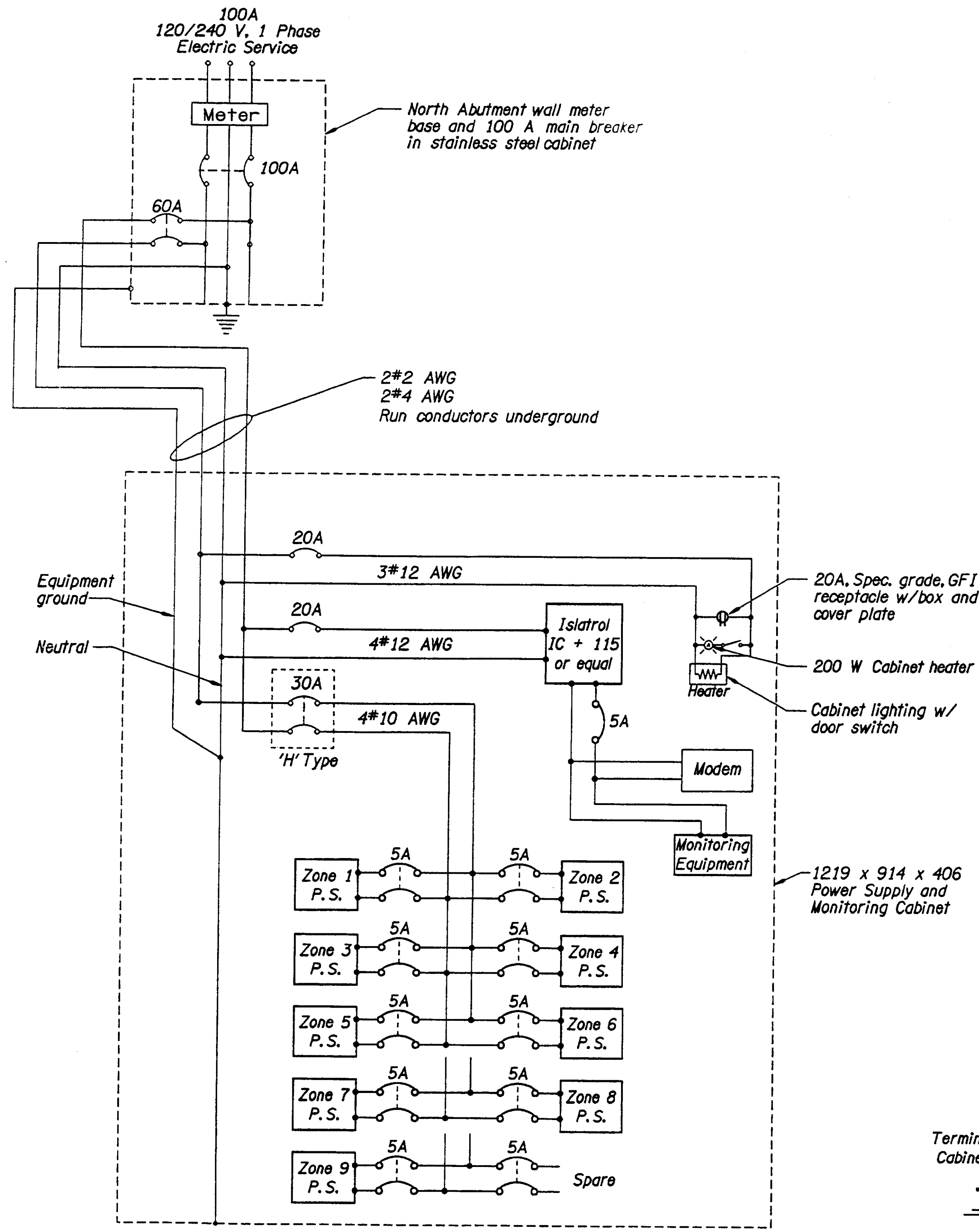
BRIDGE NO. 01089
DATE 01-FEB-2000
CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE CATHODIC PROTECTION

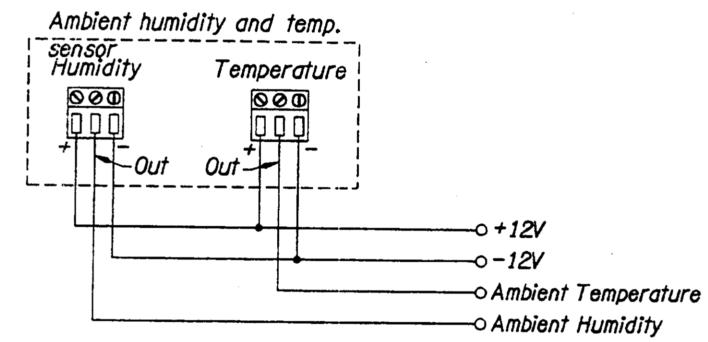
MONITORING CABINET LAYOUT AND CONDUIT SCHEDULE

SHEET CP.8 OF CP.10
DRAWING NO. 58435

OHREN 01-FEB-2000 NT7420c: :\usr\br\projects\09314\J01089opl.dgn [VIEW=J3]

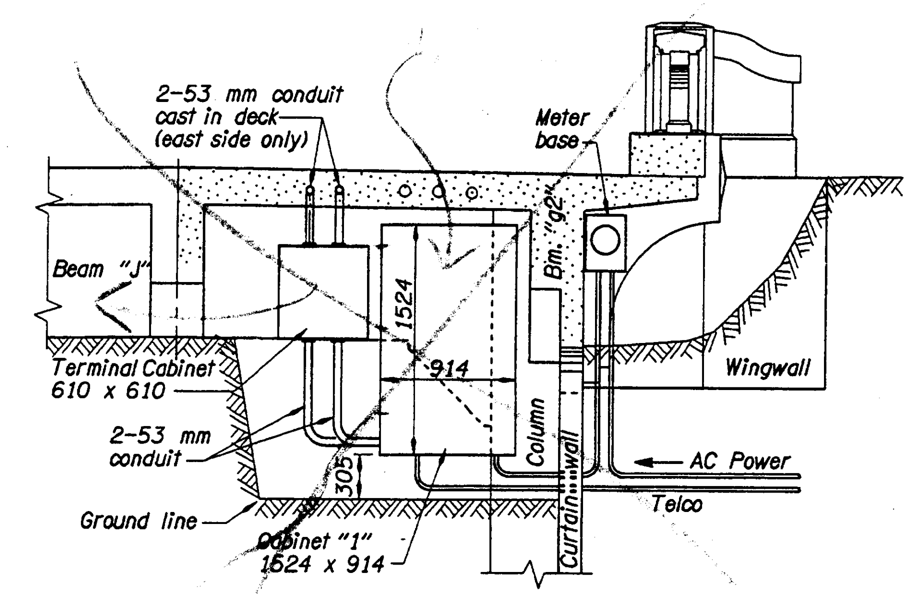


CP POWER SUPPLY AND DISTRIBUTION WIRING DIAGRAM



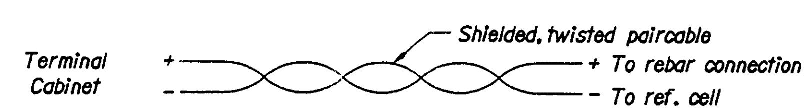
HUMIDITY/TEMPERATURE SENSOR CONNECTIONS

No Scale



NORTH ABUTMENT WALL

Not to Scale



TYP. REFERENCE CELL CONNECTION

No Scale

NOTE: All dimensions are in millimeters (mm) except as noted.

△	DATE	REVISION	BY

DRAFTED: Tom Ohren

CHECKED: Michelle L. Gallardo

REVIEWED: Frank J. Nelson

DESIGNER

EXPIRES: 12/31/2001

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089

DATE 01-FEB-2000

CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE CATHODIC PROTECTION

POWER SUPPLY AND DATA SCHEMATICS

METRIC

SHEET CP9 OF CP10

DRAWING NO. 58436

NT7420c: c:\usr\BR\PROJECTS\09314\j01089cp1.dgn [VIEW=G1] [PGRID=G1] 01-FEB-2000 OHREN

CABINET 1 (Zone 1-6)

Module Type	Channel No.	Range	Description
Analog Input	1	40 V	Zone 1 Voltage
	2	400 mV	Zone 1 Current
	3	4 V	Zone 1 Graphite Cell
	4	4 V	Zone 1 Silver-Silver Chloride Cell
Analog Input	5	40 V	Zone 2 Voltage
	6	400 mV	Zone 2 Current
	7	4 V	Zone 2 Graphite Cell
	8	4 V	Zone 2 Silver-Silver Chloride Cell
Analog Input	9	40 V	Zone 3 Voltage
	10	400 mV	Zone 3 Current
	11	4 V	Zone 3 Graphite Cell
	12	4 V	Zone 3 Silver-Silver Chloride Cell
Analog Input	13	40 V	Zone 4 Voltage
	14	400 mV	Zone 4 Current
	15	4 V	Zone 4 Graphite Cell
	16	4 V	Zone 4 Silver-Silver Chloride Cell
Analog Input	17	40 V	Zone 5 Voltage
	18	400 mV	Zone 5 Current
	19	4 V	Zone 5 Graphite Cell
	20	4 V	Zone 5 Silver-Silver Chloride Cell
Analog Input	21	40 V	Zone 6 Voltage
	22	400 mV	Zone 6 Current
	23	4 V	Zone 6 Graphite Cell
	24	4 V	Zone 6 Silver-Silver Chloride Cell

CABINET 1 (Zone 7-10)

Module Type	Channel No.	Range	Description
Analog Input	25	40 V	Zone 7 Voltage
	26	400 mV	Zone 7 Current
	27	4 V	Zone 7 Graphite Cell
	28	4 V	Zone 7 Silver-Silver Chloride Cell
Analog Input	29	40 V	Zone 8 Voltage
	30	400 mV	Zone 8 Current
	31	4 V	Zone 8 Graphite Cell
	32	4 V	Zone 8 Silver-Silver Chloride Cell
Analog Input	33	40 V	Zone 9 Voltage
	34	400 mV	Zone 9 Current
	35	4 V	Zone 9 Graphite Cell
	36	4 V	Zone 9 Silver-Silver Chloride Cell
Spare	37	40 V	Zone 10 Voltage
	38	400 mV	Zone 10 Current
	39	4 V	Zone 10 Graphite Cell
	40	4 V	Zone 10 Silver-Silver Chloride Cell
Analog Input	41	1 V	Ambient Temperature
	42	1 V	Ambient Humidity
	43	1 V	Cabinet Temperature
	44		
Analog Input	45		
	46		
	47		
	48		

Module Type		Range	Description
Digital Output			Zone 1 Relay
			Zone 2 Relay
			Zone 3 Relay
			Zone 4 Relay
			Zone 5 Relay
			Zone 6 Relay
			Zone 7 Relay
			Zone 8 Relay
			Zone 9 Relay
			Zone 10 Relay

NOTE: All dimensions are in millimeters (mm) except as noted.

△	DATE	REVISION	BY

DRAFTED: Tom Ohren

CHECKED: Michelle L. Gallardo

REVIEWED: Frank J. Nelson

DESIGNER

REGISTERED PROFESSIONAL ENGINEER 12137 OREGON JULY 15, 1983 CURTIS B. CRYER

EXPIRES: 12/31/2001

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO. 01089

DATE 01-FEB-2000

CALC. BOOK 4835

ROCKY CREEK (BEN JONES) BRIDGE
CATHODIC PROTECTION

DATA CHANNEL SCHEDULES

METRIC

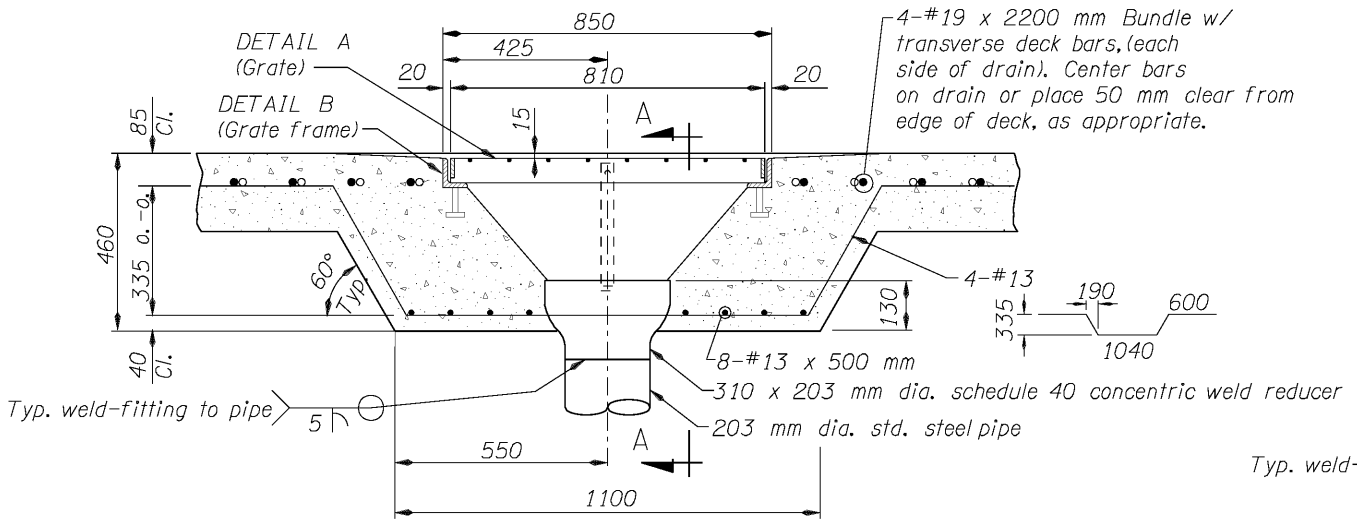
SHEET CP10 OF CP10

DRAWING NO. 58437

NT7420c: \user\BR\PROJECTS\09314\J01089cp1.dgn [VIEW=J2] [FGRID] 01-FEB-2000 OHREN

GENERAL NOTES:

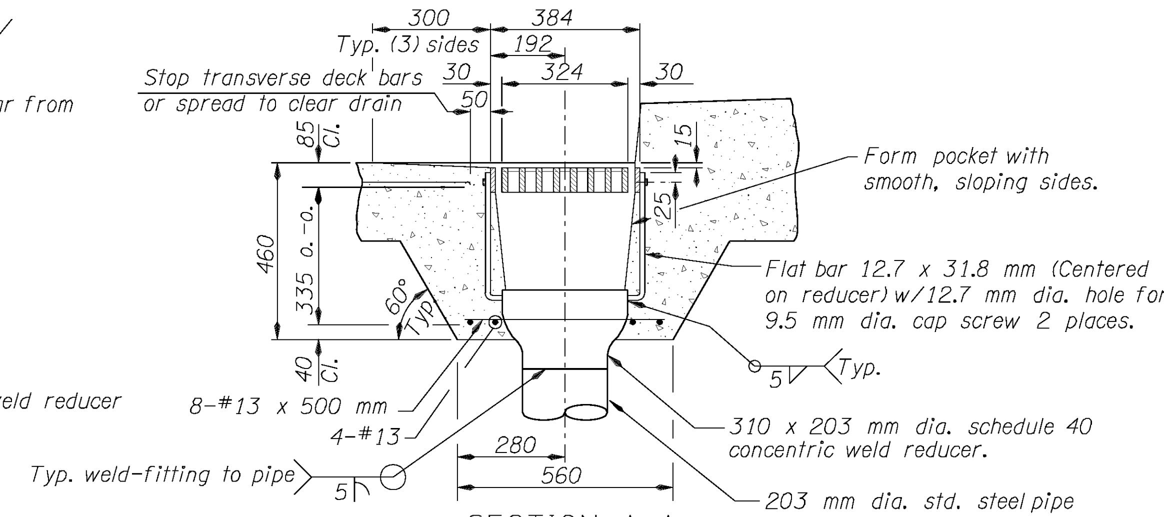
1. Standard steel pipe shall conform to ASTM Specification A53, Grade B.
2. All structural steel shall be AASHTO M183M (ASTM A36M).
3. All drain pipes and strap assemblies shall be hot-dip galvanized after fabrication.
4. All reinforcing bars shall be AASHTO M31M (ASTM A615M), Grade 420) or ASTM A706M and shall be epoxy coated.
5. Bottom of the drain pipe shall end 50 mm below the bottom of the superstructure unless noted otherwise on project plans.



LONGITUDINAL SECTION

TYPE "A" DRAIN

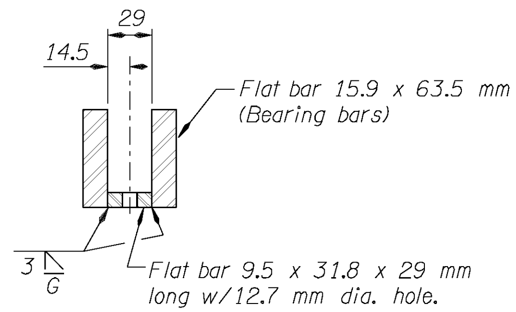
Scale: 1:10



SECTION A-A

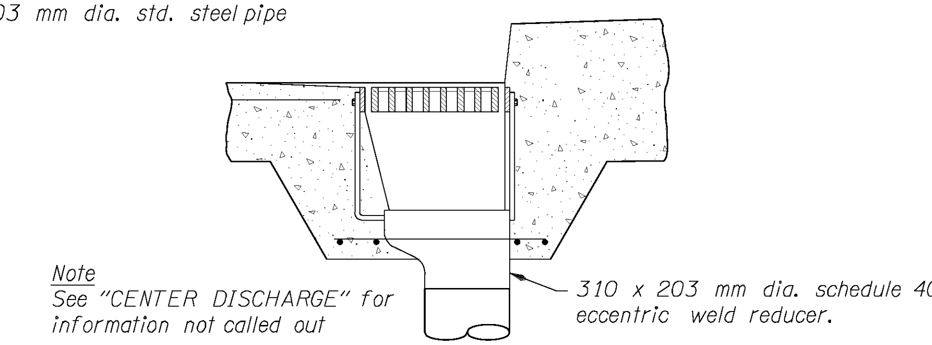
CENTER DISCHARGE

Scale: 1:10



SECTION B-B

Scale: 1:40

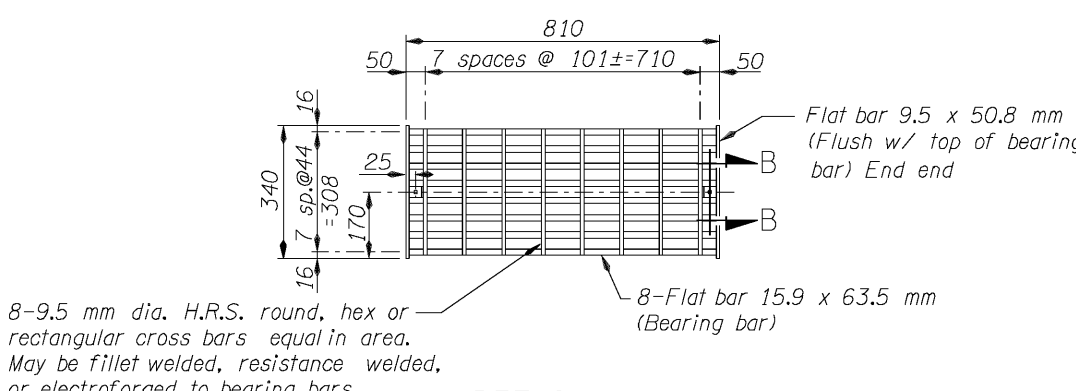


SECTION A-A

TYPE "A" DRAIN

DISCHARGE OFFSET PERPENDICULAR TO GUTTER

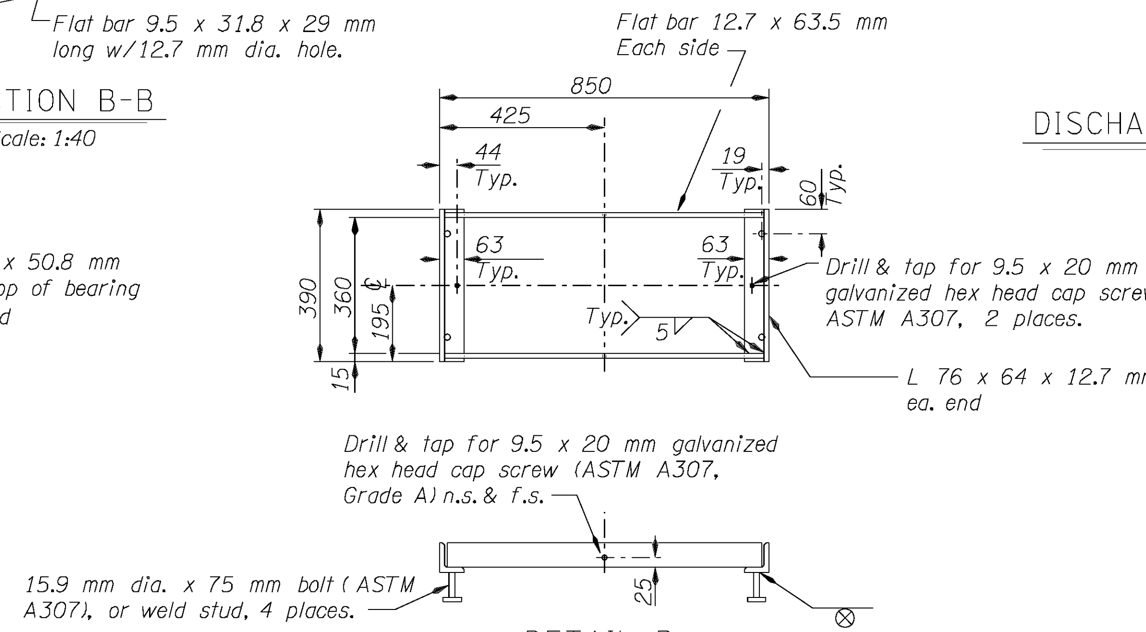
Scale: 1:10



DETAIL A

TYPE A GRATE

Scale: 1:10



DETAIL B

TYPE A GRATE FRAME

Scale: 1:10

NOTE: All dimensions are in millimeters (mm) except as noted.

△	DATE	REVISION	BY

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

ACCOMPANIED BY DWGS.

BRIDGE NO. STANDARD

DATE

CALC. BOOK

STANDARD DECK DRAINS

GENERAL DETAILS

SHEET 1 OF 1

DRAWING NO. BR120

y02 br120.dgn

BR120