

- 1 Replace floorbeam at location U10. See dwg. nos. 9040 and 9043 for information only.
- 2 Remove and replace existing deck with exodermic (steel grid with composite reinforced concrete slab) deck and install precast type "F" rail. See dwg. nos. BR200, and 60031 through 60036 for details. Deck and abutment measurements to be field verified.
- 3 Add rail transitions, typical both ends of structure, see dwg. nos. BR203 and 60037 for details.
- 4 Install preformed elastomeric strip seals at expansion joints, see dwg. nos. BR145 and 60032 for details.
- 5 Install fall restraint system, see Special Provisions SPO0564. Attach approximately 1 m above both bottom chords.
- 6 Remove sidewalk at abutments and construct new drainage curb. See dwg. no. 60033 For Abutment Drainage Curb Elevation detail.
- 7 Clean and paint abutments per 02210.30b. Match existing paint color.

GENERAL NOTES:
Provide all materials and perform all work according to the 1996 Standard Specifications for Highway Construction and the 1998 Supplemental Standard Specifications of the Oregon Department of Transportation.

Existing bridge is designed for MS18 loading. Reinforcing steel to conform to ASTM A706M Grade 420. Use the following splice lengths:

Bar Size	10	13	16	19
	Splice Length (mm)	300	325	425
	400	450	600	850
	Coated			

Splice reinforcing steel at alternate bars, staggered at least one splice length or as far as possible, unless shown otherwise. Transverse deck reinforcing steel shall only be lap spliced between stringers. Mat of reinforcing to be supported by and tied to structural grid tees. Epoxy coat all steel reinforcement in the deck.

Provide class 25-9.5 concrete in precast portions of the deck and class 25-19 in the bridge rails and in the abutment drainage curb. For the cast-in-place portions of the deck provide a PCC patching mix from the category "very rapid set PCC patching mix" with shrinkage compensation from the QPL, maximum aggregate size 9.5 mm. See SPO0562.

All steel plates and shapes shall conform to ASTM A36M. All bolts shall conform to ASTM A325 or ASTM A307 as indicated on the plans. Tighten fasteners according to section 00560 unless otherwise indicated. See SPO0562 For sheet metal form pan specifications. Coat new floorbeam according to SPO0594. All other steel and all fasteners are to be galvanized according to ASTM A123M.

Diamond grind deck as needed to achieve final grade and deck tolerance. Restore deck surface texture as needed by saw cutting.

P.M.: Wayne A. Stotler

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

DATE	REVISION	BY
9-4-07	As Constructed	JAA

DESIGNED BY: HMS
 CHECKED: Hormazj Sbradj
 REVIEWED: Nowzar Ardalan



OREGON DEPARTMENT OF TRANSPORTATION
 BRIDGE ENGINEERING SECTION

ACCOMPANIED BY DWGS. 60031-60037, BR145, BR200, BR203, BR273 For Info. Only: 9038-9046, 8417

BRIDGE NO. 01660
 DATE 31-MAY-2001
 CALC. BOOK 4907

MILL CREEK BRIDGE
 MILL CREEK BRIDGE SEC.
 WARM SPRINGS HIGHWAY (M.P. 92.69)
 WASCO COUNTY
 PLAN and ELEVATION

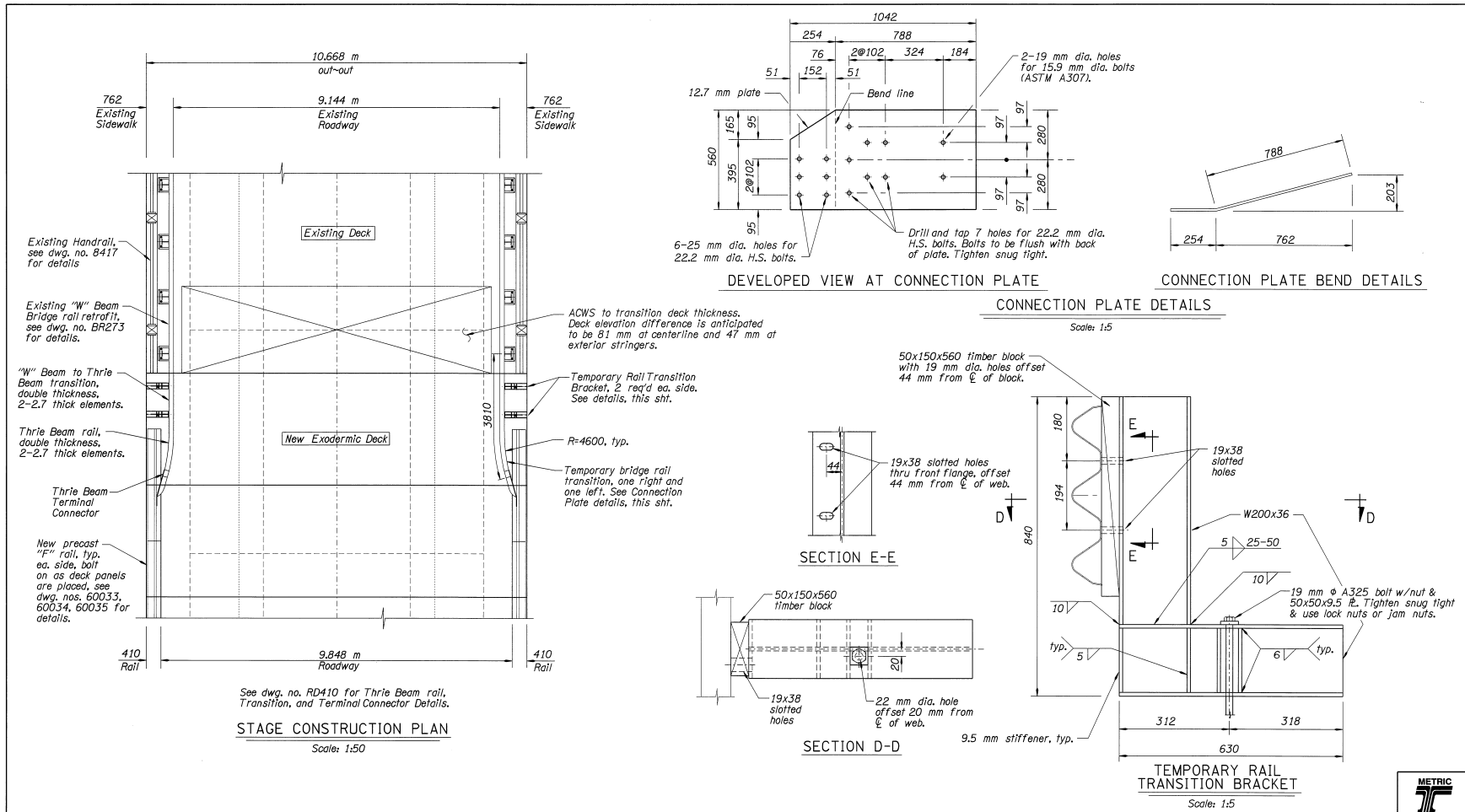
FEDERAL HIGHWAY ADMINISTRATION REGION 10 OREGON DIVISION PROJECT NUMBER

METRIC

SHEET 1 OF 8

DRAWING NO. 60030

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DATE	REVISION	BY
9-5-07	As Constructed	JAM

DRAWN	CHECKED	REVIEWED
HMS	Hamid Sadrj	Nowzar Ardalan

DESIGNER

REGISTERED PROFESSIONAL ENGINEER

MADEK

SEAN WHITE

EXPIRES 6-30-2002

OREGON DEPARTMENT OF TRANSPORTATION

BRIDGE ENGINEERING SECTION

BRIDGE NO.	01660
DATE	01-JUN-2001
CALC. BOOK	4907

MILL CREEK BRIDGE

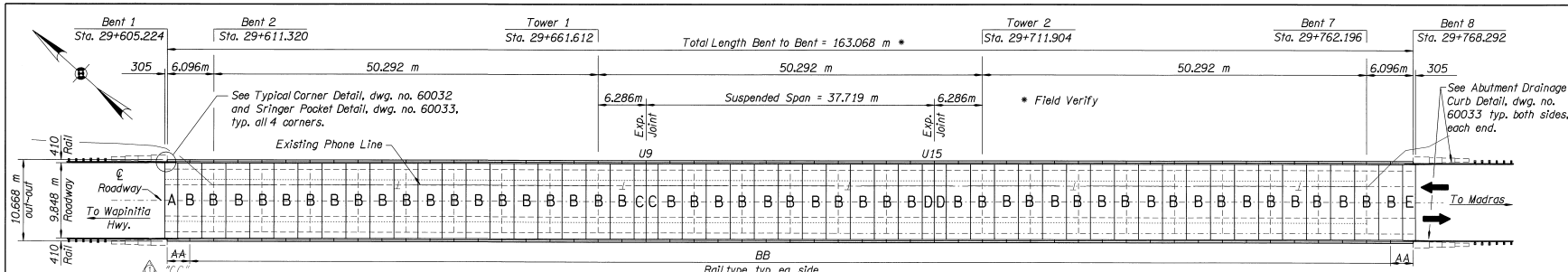
STAGE CONSTRUCTION PLAN and DETAILS

METRIC

SHEET 7 OF 8

DRAWING NO. 60036

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PRECAST "F" RAIL LAYOUT TABLE

Rail Designation	Nominal Length	Special Features	Quantity Required
AA	2959	1525 taper one end only	1 Left, 2 Right
BB	3143	8 with expansion joint dths., one end only	100

See dwg. nos. BR200, BR203, 60033, 60034, 60035, and 60036 for additional rail details.

CC 2809 1525 taper one end only 1 Left, 1 Right

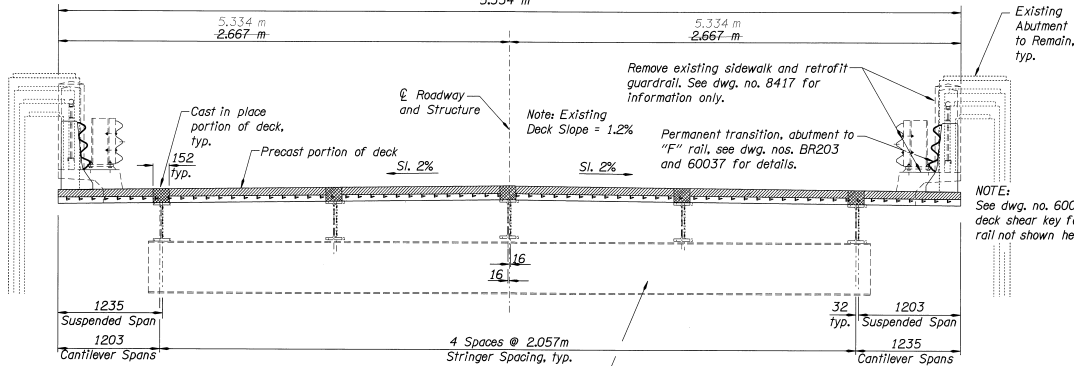
DECK PLAN
Scale: 1:250

NOTE:
Nominal lengths and widths are from center to center of joints between precast elements. Obtain net measures by deducting joint widths from nominal measures.

PRECAST PANEL LAYOUT TABLE

Panel Designation	Nominal Width	Special Features	Quantity Required
A	1691	No transverse shear key back on station.	1*
B	3143		49
C	1572	Expansion Joint ahead on station.	2
D	1572	Expansion Joint back on station.	2
E	1691	No transverse shear key ahead on station.	1*

* See dwg. no. 60032 for Typical Corner Detail for panels A and E only.



NOTE:
Deck elevation is anticipated to be 81 mm higher than existing at centerline and 47 mm higher at exterior stringers. New deck elevation will be controlled by stringer splice plates and rivets. See dwg. no. 9041 for information only.

DECK SECTION
Scale: 1:25

NOTE:
Replace one floorbeam at location U10, see dwg. nos. 9040 and 9043 for information only. Shopcoat per SPO0594. Replace in kind except use H.S. bolts and direct tension indicating washers per 00560.

CONSTRUCTION SEQUENCE:

1. Construct Drainage facilities shown on roadway plans, plug 20 bridge deck drains.
2. Install fall protection system.
3. Place work platforms under first construction area, see SPO0170.30c. Move platforms as work progresses.
4. Remove handrail.
5. Transverse sawcut concrete deck.
6. Close bridge.
7. Starting on the southeast, sawcut AC at edge of bridge deck, remove sidewalk at abutment, form pocket where new deck will overlap abutment sidewalk, construct drainage curb, construct guardrail transitions. See dwg. no. 60037 for details.
8. Remove portion of deck being replaced.
9. Vacuum stringers; remove portion of paint to facilitate weld stud placement. See SPO0594.
10. Set foam strips or sheet metal angles as needed for forming.
11. Place new deck panels, weld stringer studs, raise to grade, pull forming into position.
12. Pour closure concrete.
13. After concrete obtains specified strength, set bridge rail segments in place, bolt and grout in position.
14. Repeat steps 8 - 13 as closure time allows.
15. Place AC to transition change in deck elevations.
16. Install temporary rail transitions. See dwg. no. 60036 for details.
17. Install joint seals.
18. Open bridge to traffic.
19. As work allows, replace floorbeam at location U10.
20. Repeat steps 3 - 18 to complete deck replacement.
21. Repeat abutment work of step 7 at the northwest end.
22. Diamond grind deck to tolerances in 00540.53. Saw cut to restore deck roadway finish where needed. Max. removal 6 mm.

NOTE: Diamond ground and retined entire deck surface

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

DATE	REVISION	BY
9-5-07	As Constructed	JAM

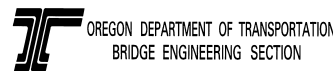
DRAWN	CHECKED	REVIEWED
HMS	Hormoz Ardanj	Nowzar Ardanj

DESIGNER

REGISTERED PROFESSIONAL ENGINEER

SEAN WHITE

EXPIRES: 12-30-2002

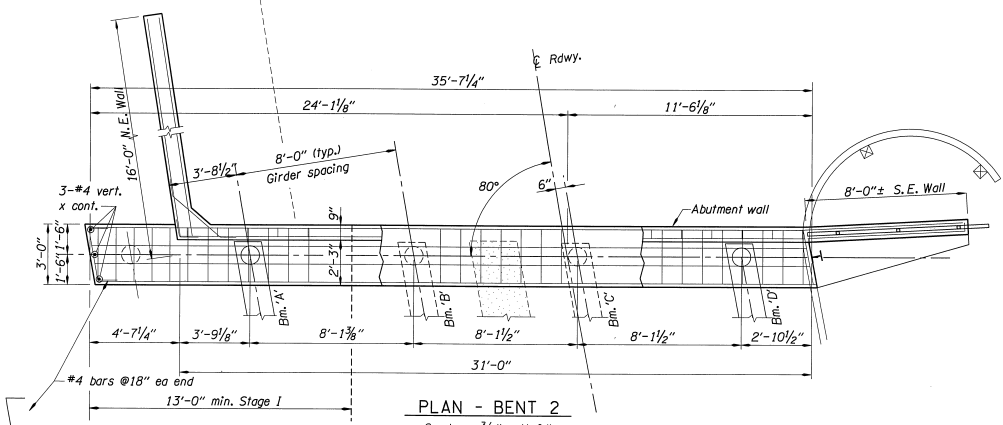


BRIDGE NO.	DATE	CALC BOOK
01660	01-JUN-2001	4907

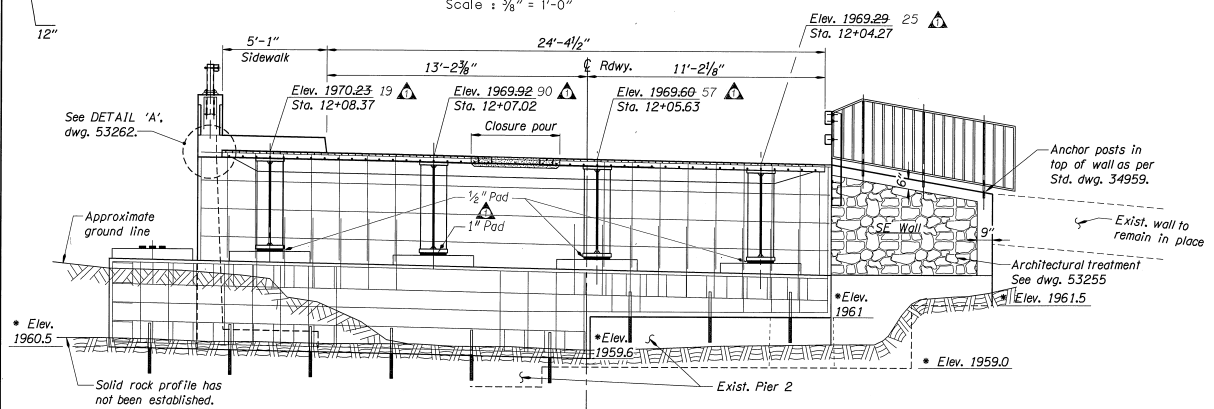
MILL CREEK BRIDGE	
DECK PLAN	

METRIC	
SHEET	2 OF 8
DRAWING NO.	60031

OHREN
 10-MAY-1996
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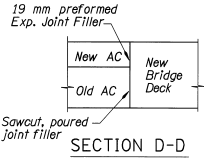
PLAN - BENT 2
Scale : $\frac{3}{8}'' = 1'-0''$



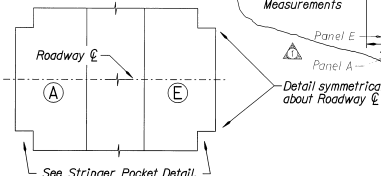
ELEVATION - BENT 2
Scale : $\frac{3}{8}'' = 1'-0''$

- NOTE:**
1. For Typical Bent Section, see dwg. 53259.
 2. Elevations shown are finish grade at top of grid deck, & $\text{\textcircled{C}}$ bent.
 3. Splice all horizontal bars between stages.
 - * 4. Assumed elev. for concrete quantity estimate. Final footing elevation to be determined in the field by the engineer.

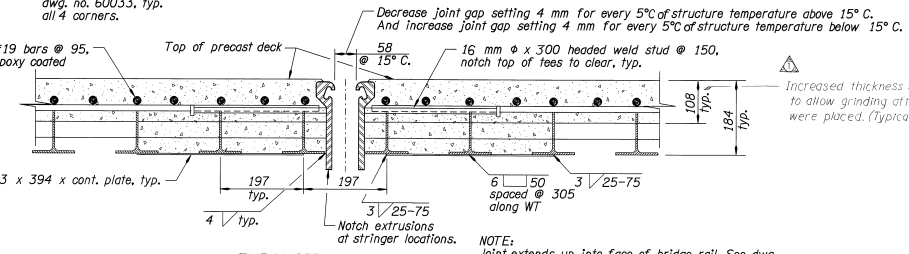
	DATE	REVISION	BY	DRAFTED: Tom Ohren CHECKED: Nowzar Ardalan REVIEWED: Frank J. Nelson			BRIDGE NO.	IMNAHA RIVER (IMNAHA) BRIDGE	SHEET 9 OF 26
	10-18-07	As Constructed	JAM				DATE		
							BENT 2 DETAILS		



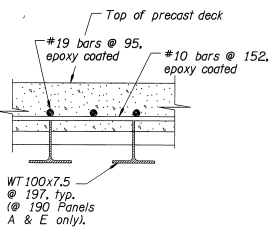
SECTION D-D



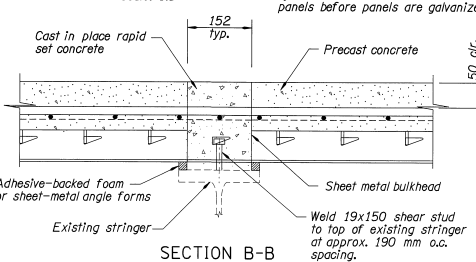
TYPICAL CORNER DETAIL
PANELS "A" and "E"
No Scale



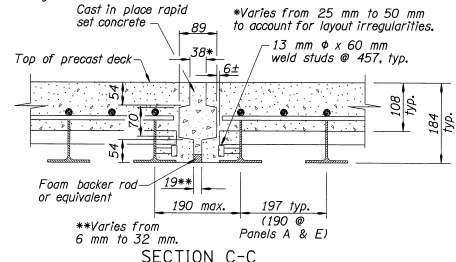
EXPANSION JOINT DETAIL
Scale: 1:5



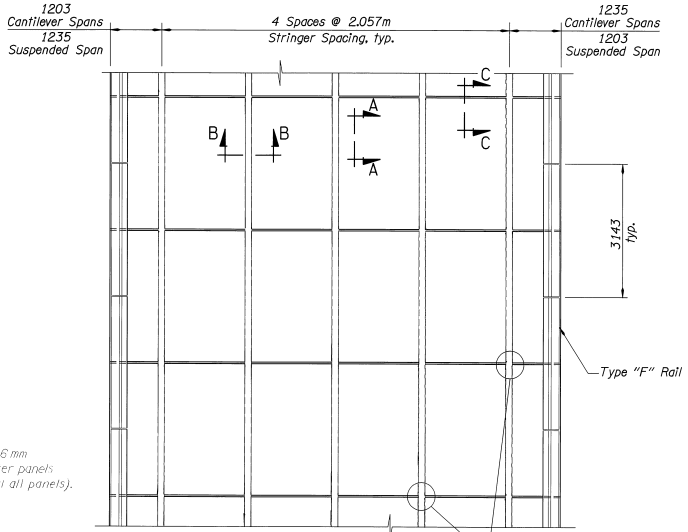
SECTION A-A
Scale: 1:5



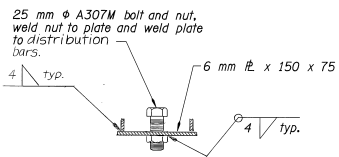
SECTION B-B
Scale: 1:5



SECTION C-C
No Scale



PLAN - PRECAST PANEL
Scale: 1:50



SUGGESTED
LEVELLING BOLT DETAIL
No Scale

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

DATE	REVISION	BY	DESIGNER
9-5-07	As Constructed	JAM	HMS
			Checked: Hormoz Sarraj
			Reviewed: Nowzar Ardalan

DESIGNER

EXPIRES: 6-30-2002

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

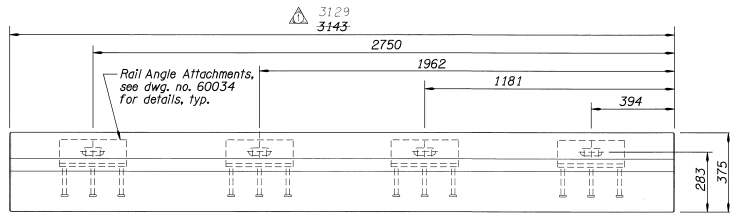
BRIDGE NO.	01660
DATE	01-JUN-2001
CALC. BOOK	4907

MILL CREEK BRIDGE

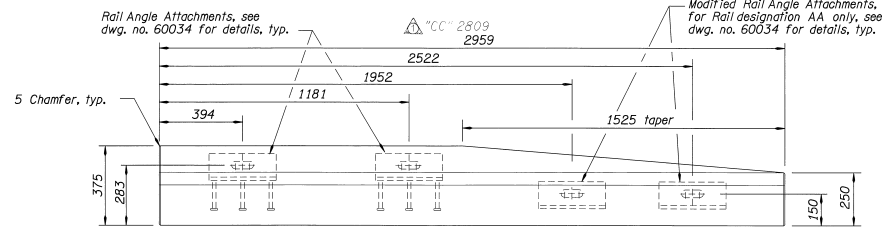
PRECAST PANEL PLAN and DETAILS

METRIC
SHEET
OF
DRAWING NO.
60032

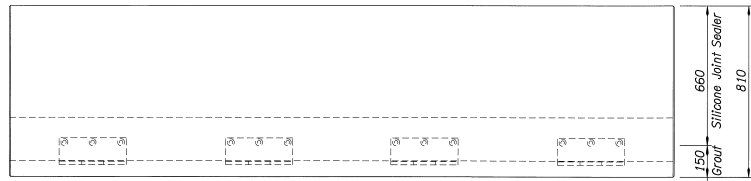
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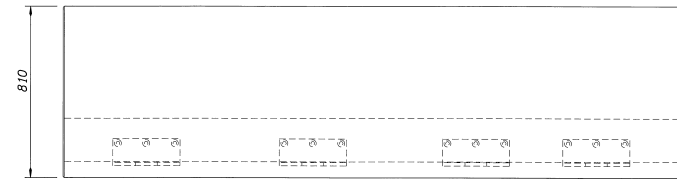
PLAN
BB TYPE "F" RAIL
Scale: 1:10



PLAN
AA TYPE "F" RAIL
Scale: 1:10

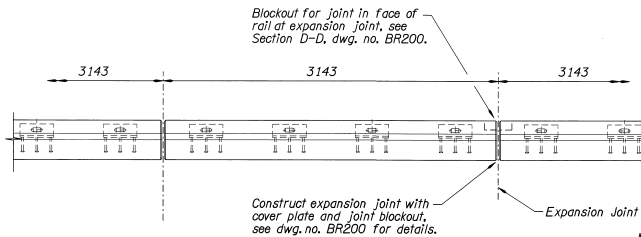


ELEVATION
BB TYPE "F" RAIL
Scale: 1:10

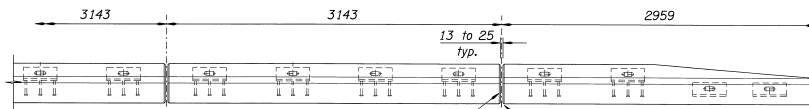


ELEVATION
AA TYPE "F" RAIL
Scale: 1:10

NOTE: See dwg. nos. BR200, BR203, 60032, 60034, and 60036 for additional details.



Construct expansion joint with cover plate and joint blackout, see dwg. no. BR200 for details.



Typical Contraction Joint

Chamfer rail ends, tops and sides, 5 mm, typ. Fill lower 150 mm of contraction joint with grout. Remainder of joint to be filled with silicone joint sealer.

NOTE: See dwg. no. 60031 Deck Plan.

PARTIAL PLAN-
RAIL PLACEMENT
Scale: 1:20

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

DATE	REVISION	BY
9-5-07	As Constructed	JAM

DRAWN	CHECKED	REVIEWED
HMS	Hormoz Sarraj	Nowzar Ardalan

DESIGNER

SEAN WHITE



BRIDGE NO.	01660
DATE	01-JUN-2001
CALC. BOOK	4907

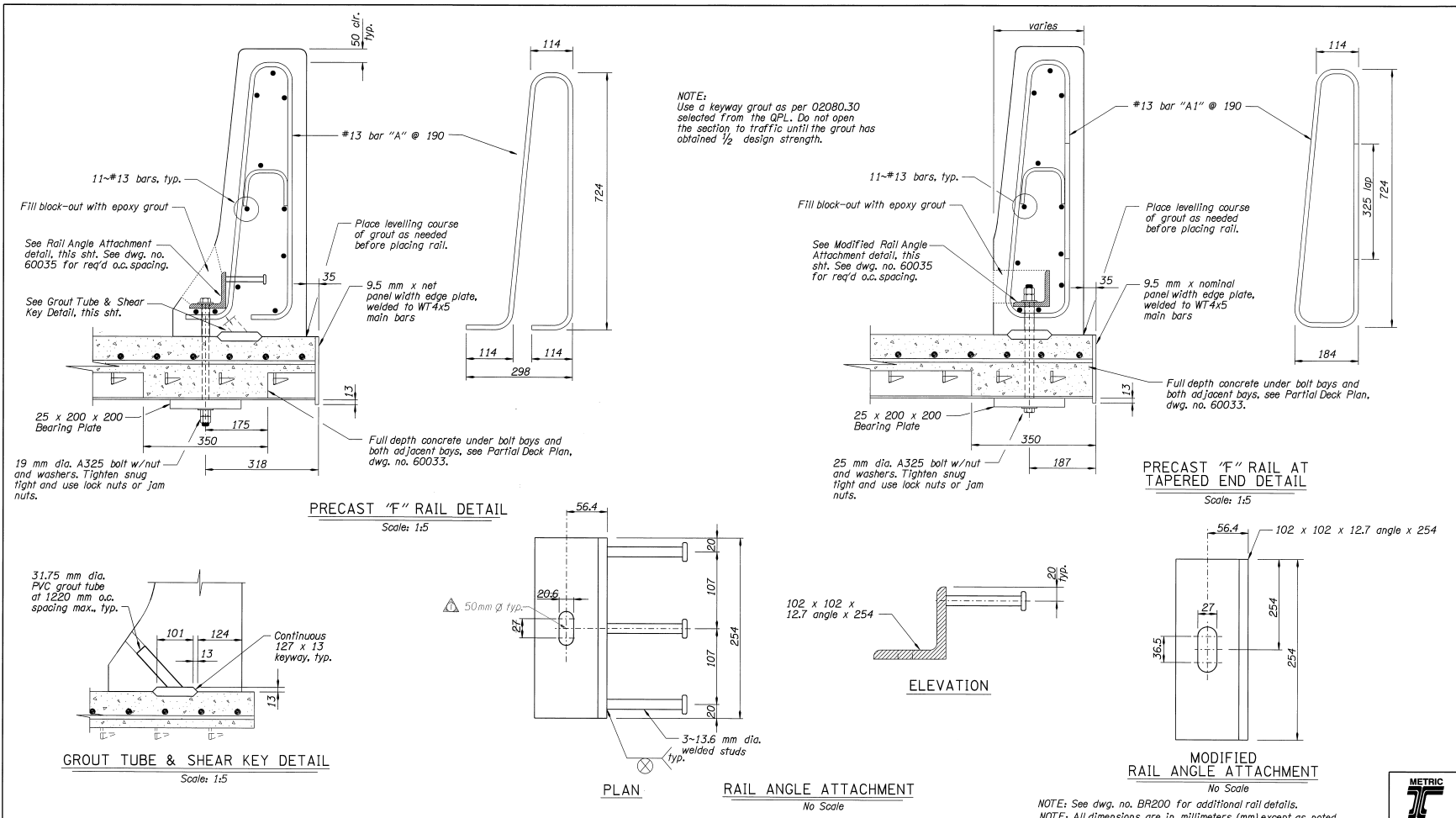
MILL CREEK BRIDGE	
PRECAST TYPE "F" RAIL PLAN & ELEVATIONS	

METRIC

SHEET 6 OF 8

DRAWING NO. 60035

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DATE	REVISION	BY	DRAFTED
9-5-07	As Constructed	JAM	HMS
			Checked: <i>Hormoz Beradj</i>
			Reviewed: <i>Nowzar Ardalan</i>

DESIGNER

EXPIRES: 6-30-2002

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO.	01660
DATE	01-JUN-2001
CALC. BOOK	4907

MILL CREEK BRIDGE

PRECAST TYPE "F" RAIL DETAILS

METRIC
SHEET
5
OF
8
DRAWING NO.
60034