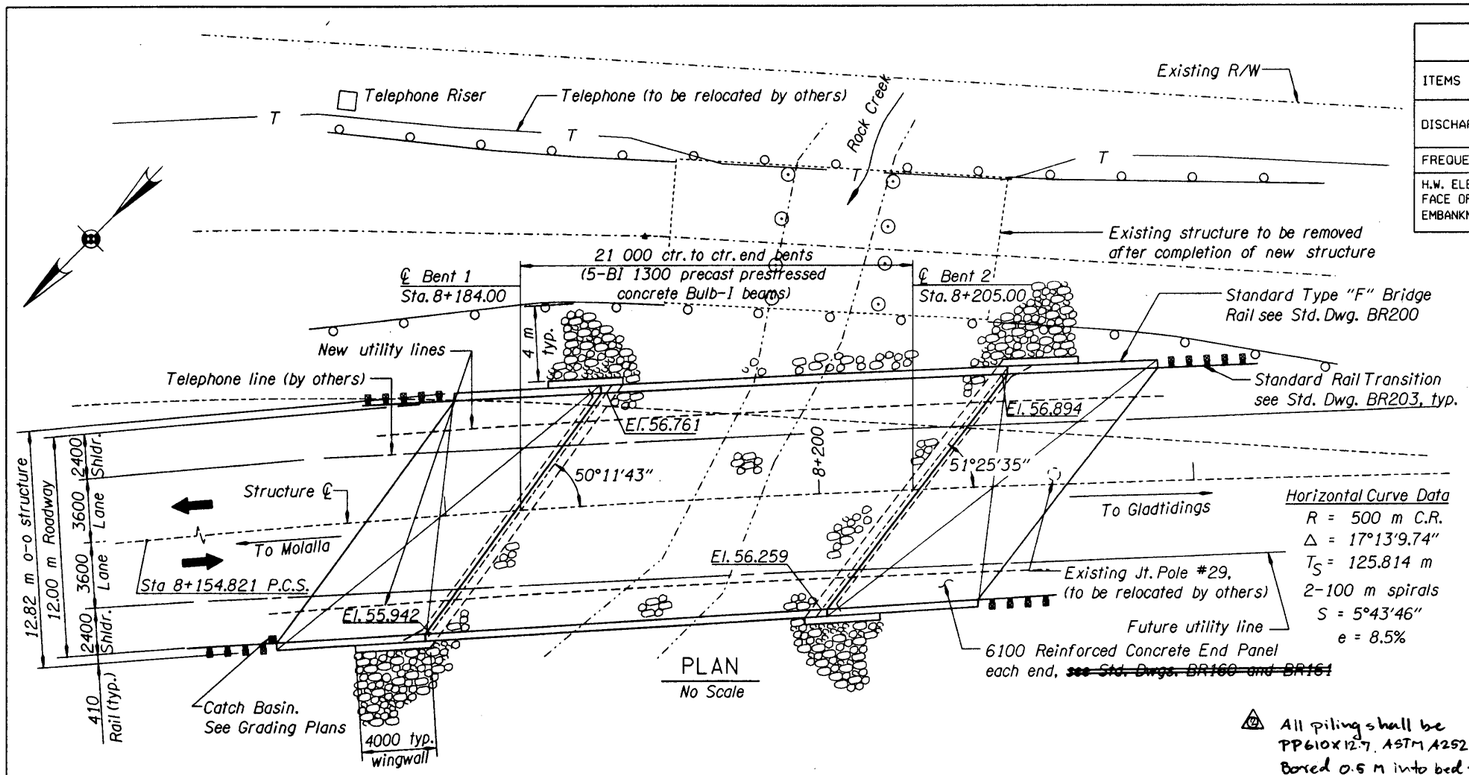
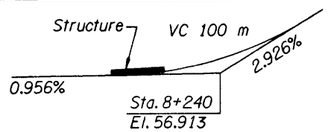
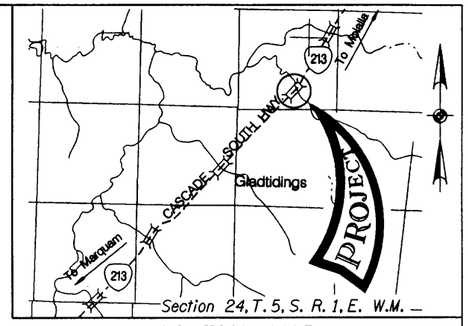


PLAN
No Scale

HYDRAULIC DATA				
ITEMS	(UNITS)	DESIGN FLOOD	BASE FLOOD	MAX. PROBABLE FLOOD
DISCHARGE	(m^3/s)	51.8	60.2	79.3
FREQUENCY	(YRS.)	50	100	500
H.W. ELEV. AT UPSTREAM FACE OF BRIDGE ALONG EMBANKMENT	(m)	53.90	54.04	54.27

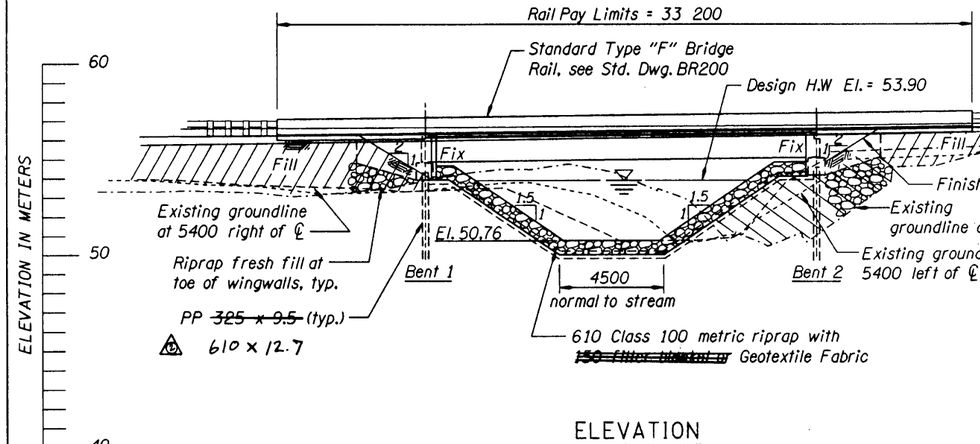


GRADELINE DIAGRAM
No Scale



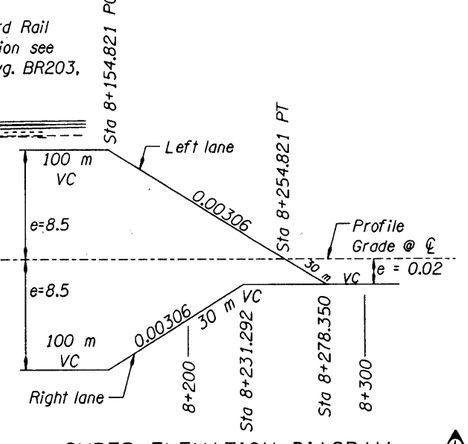
LOCATION MAP
No Scale

Horizontal Curve Data
R = 500 m C.R.
Δ = 17°13'9.74"
T_S = 125.814 m
2-100 m spirals
S = 5°43'46"
e = 8.5%



ELEVATION
No Scale

Elevations shown are based on the National Geodetic Vertical Datum 1991



SUPER ELEVATION DIAGRAM
No Scale

△2 All piling shall be PP610x12.7, ASTM A252, Grade 3 Bored 0.5 m into bed rock with grout encasement.

General Notes:

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

Bridge is designed for MS22.5 loading with an allowance of 1.20 KN/m^2 for future wearing surface.

Concrete deck is designed using the empirical method for isotropic reinforcing of the Ontario Highway Bridge Design Code.

Concrete members (except prestressed members) are designed by Load Factor Design Method.

Seismic design is in accordance with the AASHTO Division 1-A, "Seismic Design" Standard Specifications for Seismic Design of Highway Bridges. The site bedrock acceleration coefficient (A) is 0.17g and the assumed soil response coefficient is 1.0.

△1 ~~All piling shall be PP 325 x 9.5, ASTM A252, Grade 3 driven open ended to an ultimate capacity of 2915 KN per pile.~~

~~Pile tip elevation for minimum pile penetration at Bent 1 shall be elevation 45.7.~~

~~Pile tip elevation for minimum pile penetration at Bent 2 shall be elevation 46.9.~~

~~All piling shall be driven to the specified ultimate capacity using driving criteria developed from the ODOT Gates Equation.~~

All reinforcing steel shall conform to ASTM Specification A706M, or AASHTO M31/M (ASTM A615) Grade 420 N/mm^2.

Field bent stirrups shall conform to ASTM Specification A706M. The following splice lengths shall be used unless shown otherwise:

Bar Size		10	13	16	19	22	25	29	32	36	43	57
Splice Length (mm)	Uncoated	300	400	500	600	850	1075	1400	1750	2150	Not Permitted	
	Epoxy Coated	425	550	700	850	1175	1525	1925	2450	3000	Not Permitted	

Splice reinforcing steel at alternate locations, staggering as far as possible, unless shown otherwise.

Epoxy coat reinforcing steel in the upper portion of the deck and bridge end panels. This includes top longitudinal bars, and top transverse bars and all bars extending from the Bridge Deck or End Panels into the parapets.

Place bars 50mm clear of the nearest face of concrete (unless shown otherwise). The top bends of stirrups extending from prestressed precast units may be shop or field bent (unless shown otherwise).

Do not fabricate reinforcing steel for abutments and wingwalls until final elevations have been determined in the field.

Concrete in precast prestressed beams shall be 40 -19.

Concrete in reinforced concrete end panels and deck shall be Class 30 -19.

All other concrete shall be Class 25 -37.5 or 19.

Prestressing steel shall be in accordance with detail plans.

△1 Bore hole and place PP610x12.70. Settlement of placed piles shall be negligible

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

	DATE	REVISION	BY
△1	8-13-97	No driven piles, Bore holes.	H.S.
△2	10-11-2001	As Constructed.	PKT

DRAFTED: Ann Durley
CHECKED: -------
REVIEWED: Mark Hirota

DESIGNER — REGISTERED PROFESSIONAL ENGINEER 17910 OREGON JULY 23, 1985 HORMOZ SERADJ — EXPIRES: 6-30-98

BRIDGE ENGINEER — REGISTERED PROFESSIONAL ENGINEER 6499 OREGON JULY 11, 1989 TERRY J. SHIKE — EXPIRES: 6-30-98

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

ACCOMPANIED BY DWGS. 54204 thru 54211, 54616 BR200, BR203 and BR350

BRIDGE NO. 18277
DATE 18-FEB-1997
CALC. BOOK 4561

ROCK CREEK BRIDGE
ROCK CREEK BRIDGE SECTION
CASCADE HIGHWAY (M.P. 18.66)
CLACKAMAS COUNTY
PLAN and ELEVATION

FEDERAL HIGHWAY ADMINISTRATION | PROJECT NUMBER
REGION 10 | OREGON DIVISION

METRIC

SHEET 1 OF 13
DRAWING NO. 54203

Project Manager: Ron Clay

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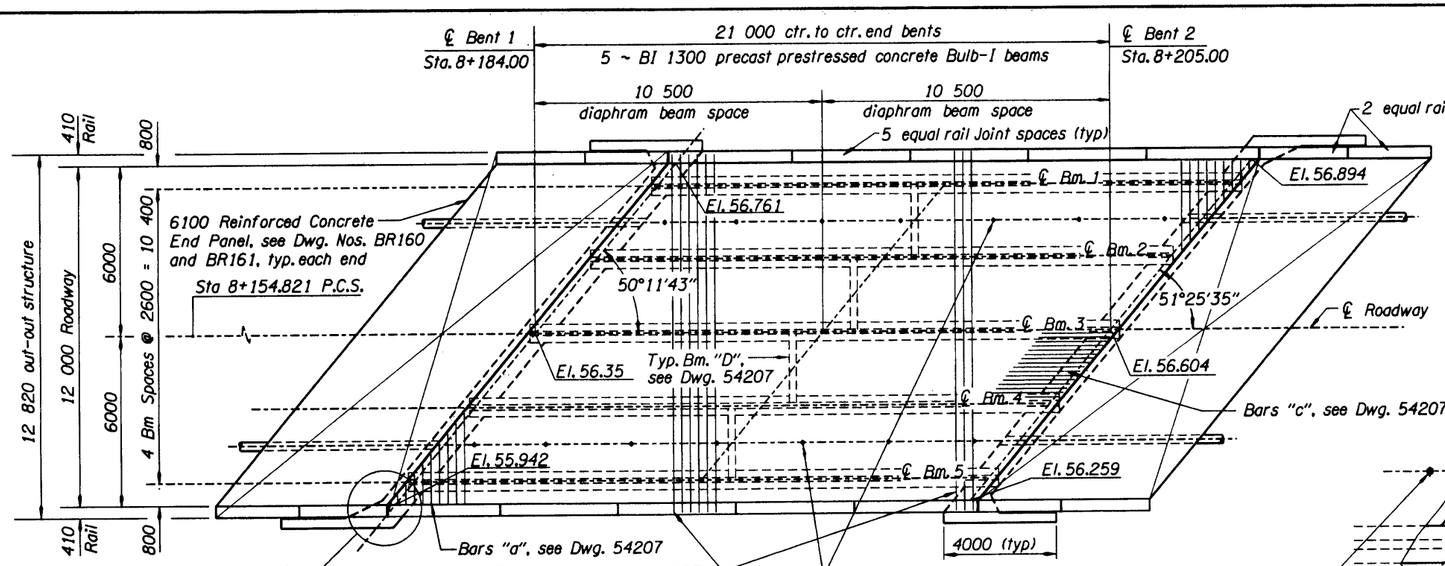
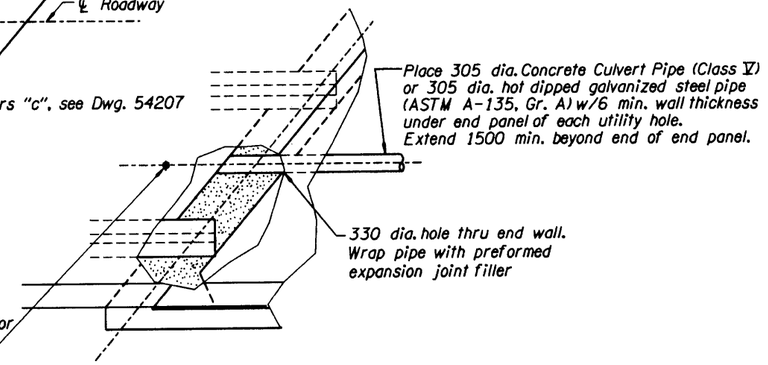


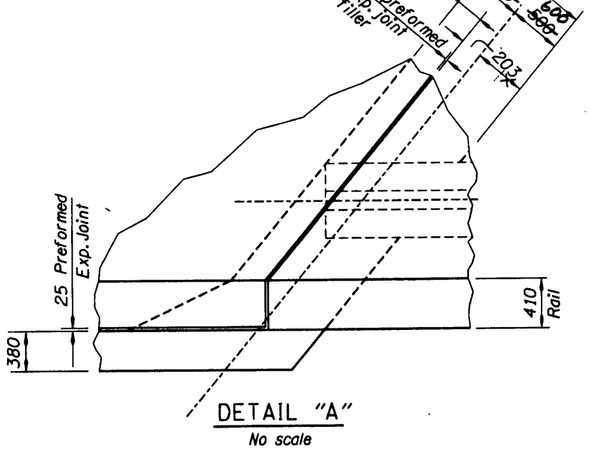
NOTE:

Elevations shown are finish grade at top of concrete slab on ℄'s Bents of gutter lines.

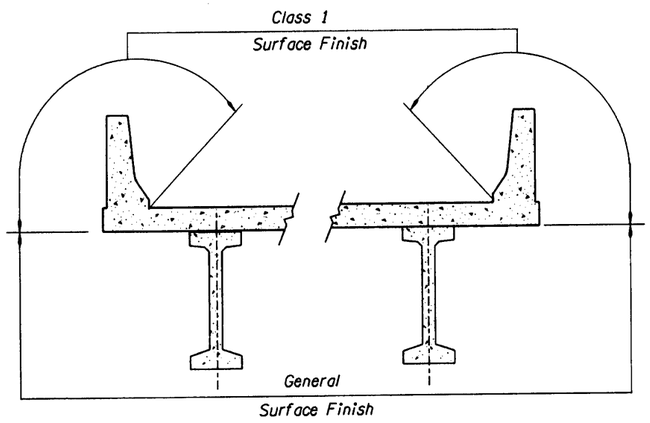
DECK PLAN
No Scale

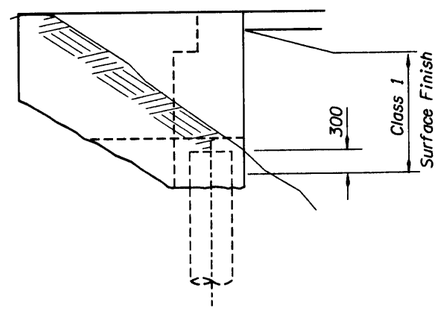
Hot dipped galvanized Richmond Structural Concrete Inserts, Series EC-2F, or an approved equal for 19 dia. threaded rods. Place in bottom of deck @ 3.00 m max. ctrs. full length of deck in each exterior bay as shown. (For utility installations). Install short galvanized bolts in inserts not immediately used.

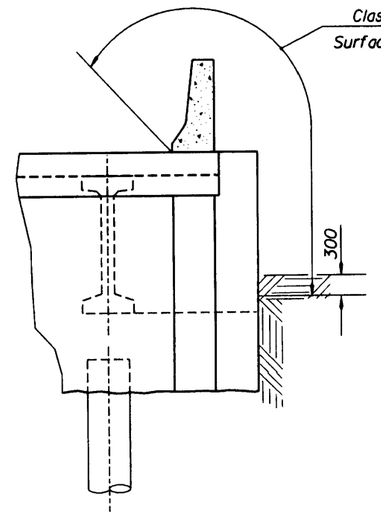




DETAIL "A"
No scale







CONCRETE FINISH DIAGRAMS
No Scale

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

METRIC

△	DATE	REVISION	BY
△1	10-11-2001	As Constructed.	PKT

DRAFTED: John Ott
CHECKED: -------
REVIEWED: Mark Hirota
EXPIRES: 6-30-98

DESIGNER
REGISTERED PROFESSIONAL ENGINEER 17940 OREGON JULY 25, 1995 HOWARD SERADY

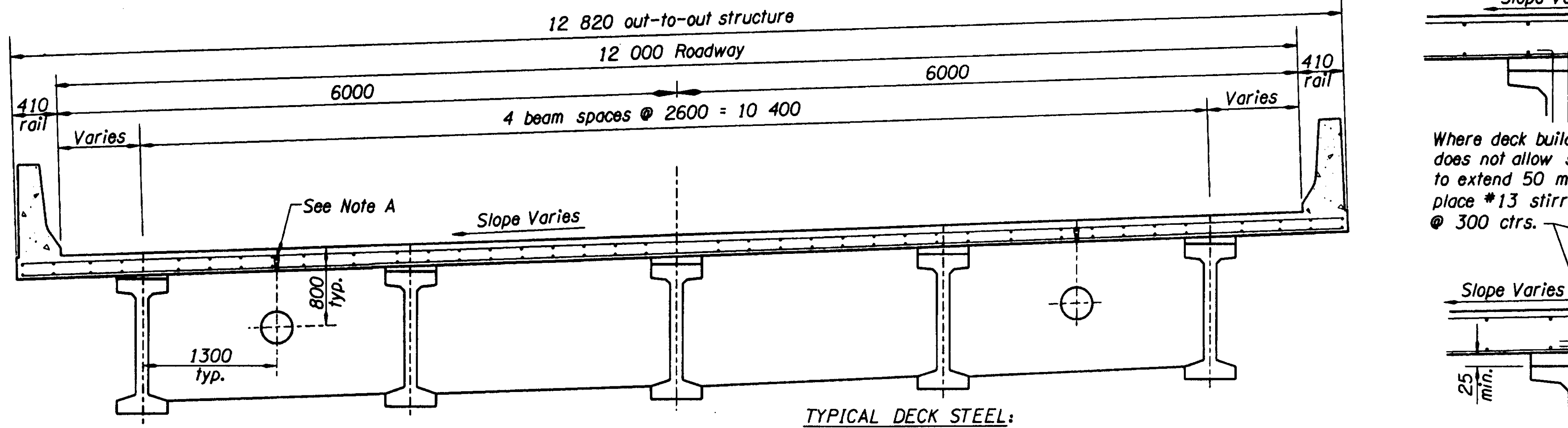
OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

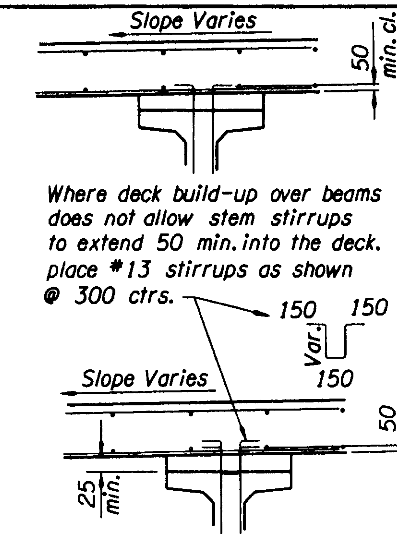
BRIDGE NO. 18277
DATE 19-FEB-1997
CALC. BOOK 4561

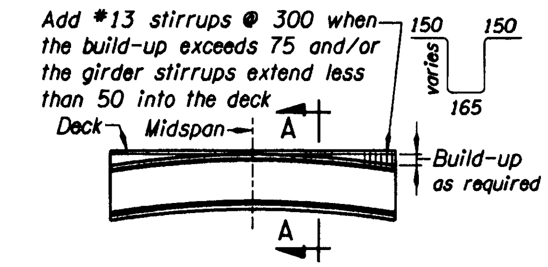
ROCK CREEK BRIDGE
DECK PLAN

SHEET 4 OF 13
DRAWING NO. 54206

19-FEB-1997 [VIEW=D1] [PGRID=D1] C:\US\BR\PROJECT S\07027\f18277r.dgn br2020f:







Beam soffits shall be on level grade prior to prestressing. Difference between deck elevation and camber in beams shall be compensated for by build-up over beams.

BUILD - UP DECK DETAIL

TYPICAL DECK SECTION

No Scale

SECTION A-A

No Scale

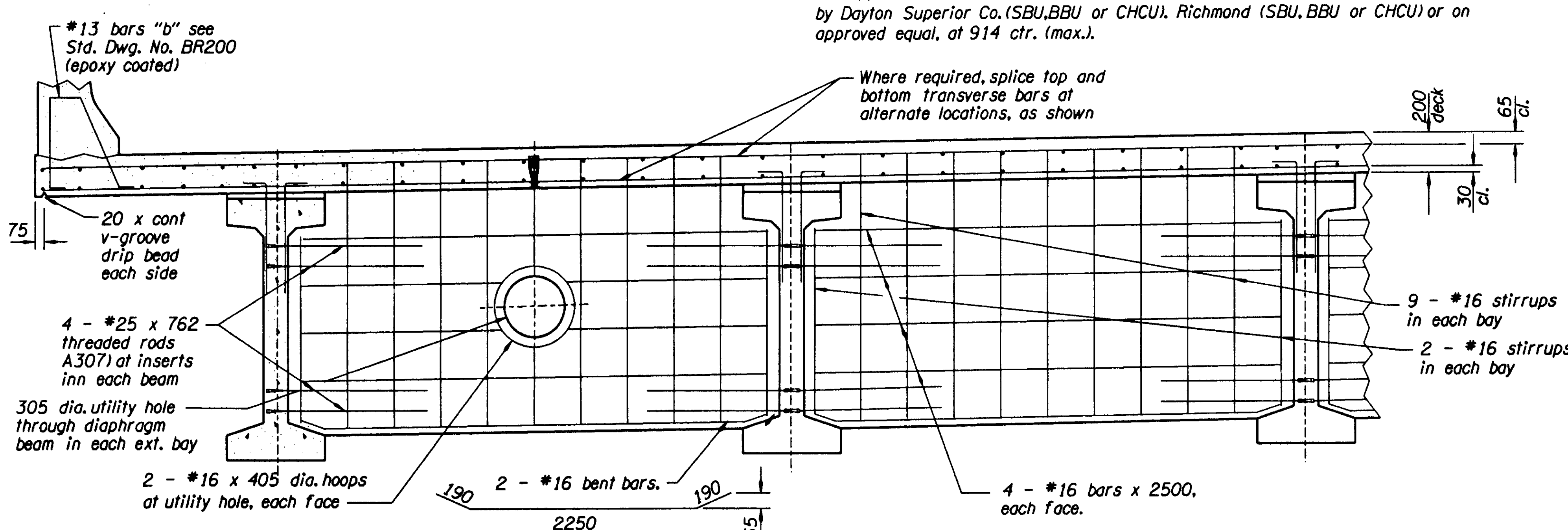
Note A:
Hot dipped galvanized Richmond Structural Concrete Inserts, Series EC-2F, or an approved equal for 19 dia. threaded rods. Place in bottom of deck @ 3000 max. ctrs. full length of deck in each exterior bay and in overhang as shown. (For utility installations not immediately used, install sort galvanized bolts in insert).

POUR SCHEDULE:
1. Pour diaphragm Bem-D.
2. Pour deck to within 1 m of the centerline of the end bents.
3. Pour end bents.
4. Pour remainder of deck.

TYPICAL DECK STEEL:
Longitudinal Bars:
Bars "c" - #16 L-bars 2500 @ 150 max. ctrs. w/1000 legs (top bars epoxy coated) place at end bents
#16 bars x cont. @ 300 max. ctrs. (top of deck) epoxy coated.
#16 bars x cont. @ 300 max. ctrs. (bottom of deck)
Place all longitudinal bars parallel to beams.

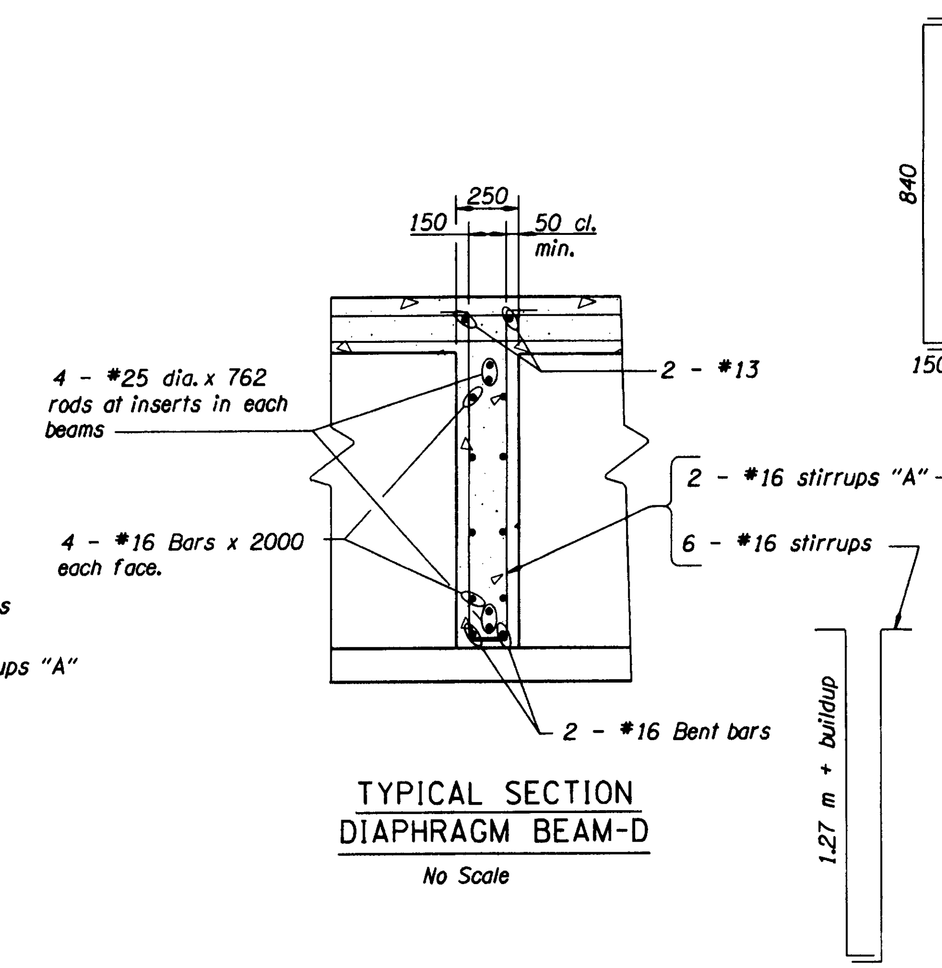
Transverse Bars:
Bars "a" - #16 bars x varies @ 300 max. ctrs. w/600 legs (top and bottom)
Bars "b" - #16 bars x cont. @ 300 max. ctrs. (top and bottom)
Top bars epoxy coated.
Place all tansverse bars perpendicular to ℄ roadway.

Bottom mat reinforcing steel shall be supported from the forms with precast mortor blocks at 914 ctrs. (max.) each way. Top mat reinforcing steel shall be supported from the bottom mat reinforcing steel with reinforcing bar supports by Dayton Superior Co. (SBU, BBU or CHCU), Richmond (SBU, BBU or CHCU) or on approved equal, at 914 ctr. (max.).



DIAPHRAGM BEAM-D DETAIL

No Scale



TYPICAL SECTION
DIAPHRAGM BEAM-D

No Scale

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

METRIC

△	DATE	REVISION	BY
	10-11-2001	As Constructed.	PKT

DRAFTED: John Ott

CHECKED: -------

REVIEWED: Mark Hirota

DESIGNER

REGISTERED PROFESSIONAL ENGINEER 17910 OREGON Hormoz Seradj JULY 25, 1993 HORMOZ SERADJ

EXPIRES: 6-30-98

OREGON DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING SECTION

BRIDGE NO.	18277
DATE	19-FEB-1997
CALC. BOOK	4561

ROCK CREEK BRIDGE

TYPICAL DECK SECTION AND DETAILS

SHEET 5 OF 13

DRAWING NO. 54207

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