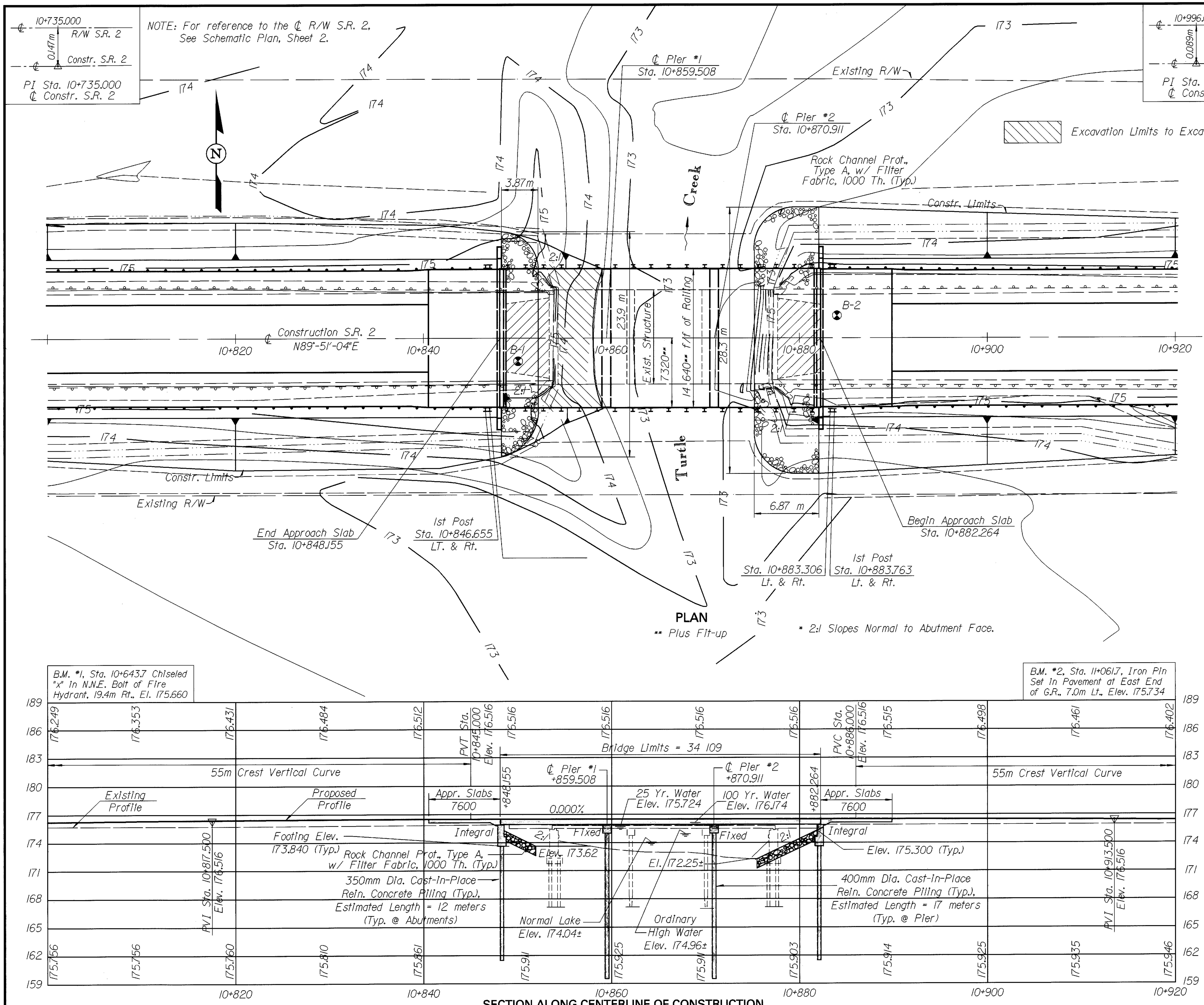


NOTE: For reference to the ℄ R/W S.R. 2, See Schematic Plan, Sheet 2.
PI Sta. 10+735.000 ℄ Constr. S.R. 2
PI Sta. 10+996.045 ℄ Constr. S.R. 2
℄ Pier #1 Sta. 10+859.508
℄ Pier #2 Sta. 10+870.911
Existing R/W
Rock Channel Prot., Type A, w/ Filter Fabric, 1000 Th. (Typ.)
Constr. Limits
Construction S.R. 2 N89°-51'-04"E
Turtle Creek
End Approach Slab Sta. 10+848.155
1st Post Sta. 10+846.655 Lt. & Rt.
Begin Approach Slab Sta. 10+882.264
Sta. 10+883.306 Lt. & Rt.
1st Post Sta. 10+883.763 Lt. & Rt.
PLAN
** Plus Fit-up
* 2:1 Slopes Normal to Abutment Face.
B.M. #1, Sta. 10+643.7 Chiseled "x" in N.N.E. Bolt of Fire Hydrant, 19.4m Rt., El. 175.660
B.M. #2, Sta. 11+061.7, Iron Pin Set in Pavement at East End of G.R., 7.0m Lt., Elev. 175.734
Bridge Limits = 34 109
55m Crest Vertical Curve
Existing Profile
Proposed Profile
Appr. Slabs 7600
25 Yr. Water Elev. 175.724
100 Yr. Water Elev. 176.174
Footing Elev. 173.840 (Typ.)
Rock Channel Prot., Type A, w/ Filter Fabric, 1000 Th. (Typ.)
350mm Dia. Cast-in-Place Rein. Concrete Piling (Typ.), Estimated Length = 12 meters (Typ. @ Abutments)
400mm Dia. Cast-in-Place Rein. Concrete Piling (Typ.), Estimated Length = 17 meters (Typ. @ Pier)
Normal Lake Elev. 174.04±
Ordinary High Water Elev. 174.96±
Elev. 175.300 (Typ.)
SECTION ALONG CENTERLINE OF CONSTRUCTION

![metric units]

Excavation Limits to Excavation Elevation 173.62±.

Hydraulic Data

Drainage Area =	71.0 km²
Q_{25} =	32.8 m³/s
HW_{25} =	175.724
V_{25} =	0.0 m/s
Q_{100} =	39.9 m³/s
HW_{100} =	176.174
V_{100} =	0.0 m/s

Design Traffic

Current ADT (1999) ~ 10280
Design year ADT (2019) ~ 14120
Design year ADTT (2019) ~ 3248

⊗ - Indicates Soil Boring Location

NOTE: Earthwork Limits shown are approximate; actual slopes shall conform to plan cross sections.

The lowest elevation to the bottom of the superstructure clears the HW25 (Design year discharge) water surface elevation by approx. 0.10m

NOTE: All dimensions are in millimeters unless otherwise noted. Stations and elevations however are in meters.

EXISTING STRUCTURE

TYPE: Continuous Concrete Slab with Wall Type Abutments & Capped Piled Piers
SPANS: 7 315±-8 834±-7 315± c/c Bearing
ROADWAY WIDTH: 10 350± f/f of Railing
OVERALL WIDTH: 10 350±
SKEW: None **DISPOSITION:** To Be Removed
ALIGNMENT: Tangent As Per Item 202
DATE BUILT: 1941 **CONDITION:** Poor
APPROACH SLABS: AS-1-54 (4 572 Long)
WEARING SURFACE: Concrete
STRUCTURE FILE NUMBER: 6200095

PROPOSED STRUCTURE

TYPE: Three Span Prestressed Concrete Composite Box Beams on Integral Abutments on Concrete Piles & Cap & Column Piers on Concrete Piles
SPAN: 10 603-10 953-10 603 c/c Bearings
ROADWAY WIDTH: 14 640+Fitup f/f of Railing
SKEW: None
ALIGNMENT: Tangent
APPROACH SLAB: 7 600 (AS-1-81M)
WEARING SURFACE: 155 Min. Rein. Concrete
SUPERELEVATION: None
CROWN: 0.016
LOADING: MS18 and the Alternate Military Loading
LATITUDE: N41°-35'-30"
LONGITUDE: W83°-09'-15"

DESIGN AGENCY: DISTRICT ONE PRODUCTION DEPARTMENT

REVIEWED JRC DATE 5-5-99
STRUCTURE FILE No. 6200109
DRAWN ETS REVISED
DESIGNED ETS CHECKED JTB

OTTAWA COUNTY
Sta. 10+848.155
Sta. 10+882.264

SITE PLAN
Bridge No. OTT-2-10848 over Turtle Creek

OTT-2-10.735/17.135

1/11

45/73

FILENAME: I:\od\80789\od10868\bridge\ot086sp.dgn
DATE & TIME: 05-MAY-1999 12:43
USERNAME: escheck
PROJECT: NONE

ESTIMATED QUANTITIES

Item	Ext.	Total	Unit	Description	Super.	Abut.	Piers	Gen'l
202	11002	Lump		Structure Removed, over 6 Meter Span				Lump
503	11100	Lump		Cofferdams, Cribs and Sheeting				Lump
503	21301	Lump		Unclassified Excavation, As Per Plan (See This Sheet)				Lump
505	11100	Lump		Pile Driving Equipment Mobilization				Lump
507	00600	192	Meter	350mm Cast-In-Place Reinforced Concrete Piles, Driven		192		
507	00650	216	Meter	350mm Cast-In-Place Reinforced Concrete Piles, Furnished		216		
507	00701	272	Meter	400mm Cast-In-Place Reinforced Concrete Piles, Driven, As Per Plan (See This Sheet)			272	
507	00751	296	Meter	400mm Cast-In-Place Reinforced Concrete Piles, Furnished, As Per Plan (See This Sheet)			296	
507	50500	24	Each	Steel Piles Splices		8	16	
Special	51267510	116	Sq Meter	Sealing of Concrete Surface (Epoxy-Urethane) (See Proposal Note)	66	41	9	
516	13600	2	Sq Meter	25mm Preformed Expansion Joint Filler	2			
516	14015	32	Meter	Integral Abutment Expansion Joint Seal, As Per Plan (See This Sheet)		32		
516	43100	144	Each	Elastomeric Bearing with Internal Laminates Only (Neoprene)		48	96	
				25mmx127mmx203mm (50 Durometers) (See Proposal Note)				
517	76300	72.39	Meter	Railing Misc: Twin Steel Tube Bridge Railing (SEE SHEETS 9/11 + 10/11)	72.39			
518	21230	Lump		Porous Backfill with Filter Fabric		Lump		
Special	51822300	78	Meter	Steel Drip Strip	78			
518	40000	39	Meter	150mm Perforated Corrugated Plastic Pipe		39		
518	40010	5	Meter	150mm Non-Perforated Corrugated Plastic Pipe, Including Specials		5		
518	42300	10	Meter	200mm Non-Perforated Corrugated Steel Pipe, Including Specials, 707.01		10		
842	31600	90	Cu Meter	Class S Concrete, Superstructure	90			
842	42500	25	Cu Meter	Class C Concrete, Pier Cap			25	
842	43500	69	Cu Meter	Class C Concrete, Abutment Including Footing		69		
846	73000	18	Sq Meter	Treating Bridge Decks with HMWM Resin	18			
865	12031	36	Each	Prestressed Concrete Composite Box Beam Bridge Members, Level 1, CB430-1220,	36			
				As Per Plan (See Sheet 8/11)				

Item 516 Integral Abutment Expansion Joint Seal, As Per Plan:
Install a 900 mm wide strip, 2.5 mm thick, general purpose, heavy duty neoprene sheet with nylon fabric reinforcment at locations shown in the plans. Secure the 900 mm wide neoprene sheeting to the concrete with 32 x 3 mm (Length x Shank Diameter) galvanized button head spike through a 25 mm outside diameter, 3 mm galvanized washer. Maximum fastener spacing is 225 mm. Other similar galvanized devices which will not damage eiher the neoprene or the concrete may be used subject to the approval of the Engineer.

Center the neoprene on all joints. For horizontal joints, secure the horizontal neoprene strip by using a single line of fasteners, starting at 150 mm (+/-) from the top of the neoprene strip. For the vertical joints secure the vertical neoprene strip by using a single vertical line of fasteners, starting 150 mm (+/-) from the vertical edge of the neoprene strip nearest to the centerline of the roadway. For vertical joints, install 2 additional fasteners at 150 mm center to center across the top of the neoprene strip on the same side of the vertical joint as the single vertical row of fasteners is located.

The vertical neoprene strips should completely overlap the horizontal strips. Laps in the length of the horizontal strips due to the material manufacturing shall be at least 300 mm in length, if not vulcanized or adhesived, or 150 mm in length if the lap is vulcanized or adhesived. No laps are acceptable in vertically installed neoprene strips.

The neoprene sheeting shall be 2.5 mm thick general purpose, heavy duty neoprene sheet with nylon fabric reinforcment. The sheeting shall be "Fairprene Number NN-0003",by E.I. Dupont De Nemours and Company Inc., "Wingprene" by Goodyear Tire and Rubber Company, or an approved alternate. The neoprene sheeting shall conform to the following:

Description of test	ASTM Method	Requirement
Thickness, mm	D751	2.5 ± 0.25
Break Strength, grab WXF, N, minimum	D751	3130 x 3130
Adhesive 25 mm strip, 50 mm Min, N minimum	D751	27
Burst strength (mullen) MPa, minimum	D751	9.65
Heat aging 70 hours T 100°C 180° bend without cracking	D2136	No Cracking of Coating
Low temp. brittleness 1 hour at -40°C, bend around 6 mm mandrel	D2136	No Cracking of Coating

Payment for labor, materials and installation of these items shall be included in Item 516 Integral Abutment Expansion Joint Seal, As Per Plan.

Utility Lines: All expense involved in relocation (installing) the affected utility lines shall be borne by the Utility(ies). The Contractor and Utility(ies) are to cooperate by arranging thier work in such a manner that inconvenience to either will be held to a minimum.

GENERAL NOTES

metric units

Reference shall be made to Standaerd Drawings:

AS-1-81 Dated 10-25-94
DS-1-94M Dated 12-15-94
CPP-2-94M Dated 12-19-94
PSBD-1-93M Dated 12-19-94

and to Supplemental Specifications:

842 Dated 1-6-99
846 Dated 9-9-97
865 Dated 1-6-98
899 Dated 10-21-98
954 Dated 9-9-97

Design Specifications: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1996 Specifications, including the 1998 Interim Specifications and the ODOT Bridge Manual.

Design Data:
Design Loading - MS18 and the Alternate Military Loading
Concrete Class C - Compressive Strength 27.5 MPa (Substructure)
Concrete Class S - Compressive Strength 31.0 MPa (Superstructure)
Reinforcing Steel - ASTM A615M, A616M or A617M, Grade 420 - Yield Strength
Grade 420 Spiral Steel may be plain bars, ASTM A82M or A615M.
Concrete for prestressed beams - Unit Stress:
15.2 MPa Compression
3.1 MPa Tension
Prestressing Strand ASTM A416M - f's = 1860 MPa
Initial stress = 0.75f's (Low Relaxation Strands)
Reinforcing Steel for prestressed beams shall be ASTM A615M, A616M or A617M, Grade 400

Deck Protection Method: Epoxy coated reinforcing steel, steel drip strip, sealing of concrete surfaces (Epoxy), and 65mm concrete cover.

Removal of Existing Structure: When no longer needed to maintain traffic, the existing structure shall be removed upon receiving permisson from the Engineer. Rear Abutment and Pier shall be removed to El. 173.00, and Forward Abutment and Pier shall be removed to El. 172.00.

Removals Over Water: Reasonable care shall be used by the Contractor to prevent removed materials from falling into the water. Any dropped materials shall be immediately recovered and disposed of away from the site except for approved masonary material which may be used as bank protection as directed by the Engineer.

Reinforcing Steel Size is indicated in the bar mark. The first letter identifies the bar location; the next two digits and letter indicates the metric bar size designation; and the remaining digits its sequence number.
Example: A16M01
a) A = location of bar in the structure
b) 16M = Metric bar size designation
c) 01 = Sequence number

Item 503- Unclassified Excavation, as per plan: Unclassified excavation shall be in accordance with item 503 except that the backfill material behind the abutment shall be 304 granular material placed in lifts not to exceed a thickness of more than 150mm.

Abutment Backfill: Abutment Backfill shall be limited to 300mm below the bridge seat elevation until the beams have been in place for at least 3 days.

Pile Design Loads (Ultimate Bearing Value): The Ultimate Bearing Value is 1029 kN per pile for the 350mm diameter cast-in-place reinforced concrete abutment piles. The Ultimate Bearing Value is 1131 kN per pile for the 400mm diameter cast-in-place reinforced concrete pier piles.

Abutment piles:
16 piles 12 meters long, estimated length
16 piles of order length 13.5 meters long
8 splices

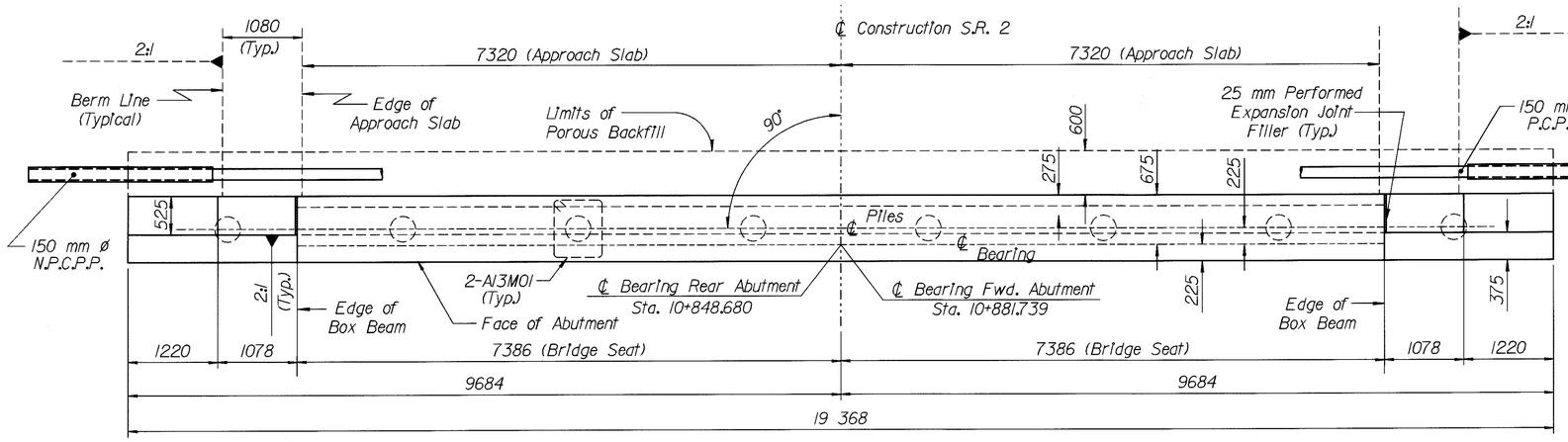
Pier piles:
16 piles 17 meters long, estimated length
16 piles of order length 18.5 meters long
16 splices

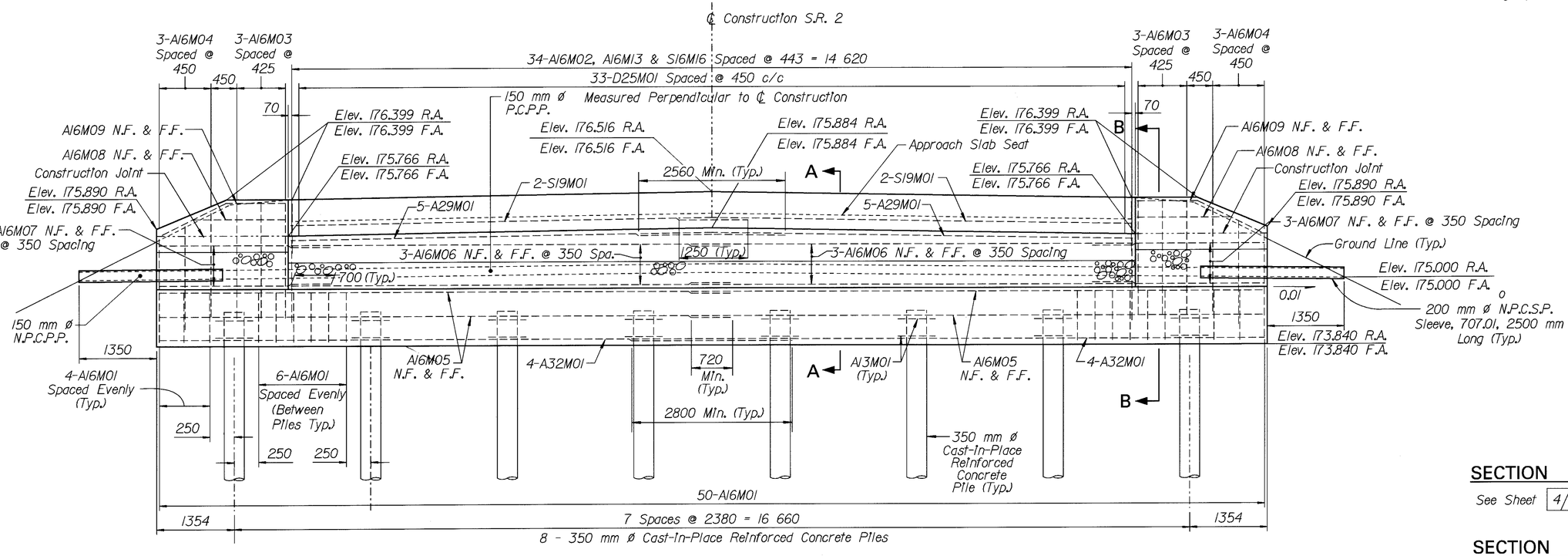
Item 507- 400mm Cast-In-Place Piles, as per plan (Pile Wall Thickness):
The responsibility of choosing and providing a satisfactory pile wall thickness for this project shall be borne by the Contractor except that the pile wall thickness shall not be less than 5.5mm. If a pile wall thickness greater than 5.5mm is necessary to resist the pile insallation driving stress, the Contractor shall make this determination and shall furnish a pile with an acceptable wall thickness.

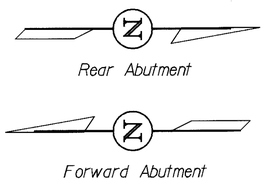
DESIGN AGENCY: DISTRICT ONE PRODUCTION DEPARTMENT
DESIGNED: CTS | CHECKED: STB | DRAWN: CTS | REVISED | REVIEWED: JRC | DATE: 5-5-99 | STRUCTURE FILE NUMBER: 6200109

ESTIMATED QUANTITES & GENERAL NOTES
Bridge No. OTT-2-10848
over Turtle Creek

OTT-2-10.735/17.135







LEGEND

N.F. = Near Face
R.F. = Rear Face
R.A. = Rear Abutment
F.A. = Forward Abutment
P.C.P.P. = Perforated Corrugated Plastic Pipe
N.P.C.P.P. = Non-Perforated Corrugated Plastic Pipe, Including Specials
N.P.C.S.P. = Non-Perforated Corrugated Steel Pipe, Including Special

SECTION A-A
See Sheet 4/11

SECTION B-B
See Sheet 4/11

NOTES:

Porous Backfill: With filter fabric, 600mm thick shall extend up to the plane of the subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls. Geotextile fabric shall conform with 712.09, Type A. The Bottom of the porous backfill shall be sloped (0.08 min.) laterally to drain. Geotextile fabric is included with porous backfill for payment.

ABUTMENT ELEVATION

Abutment Concrete above the beam seat shall not be placed until the prestressed box beams have been placed.

All dimensions are in millimeters, unless otherwise noted except for stations and elevations which are in meters.

metric units

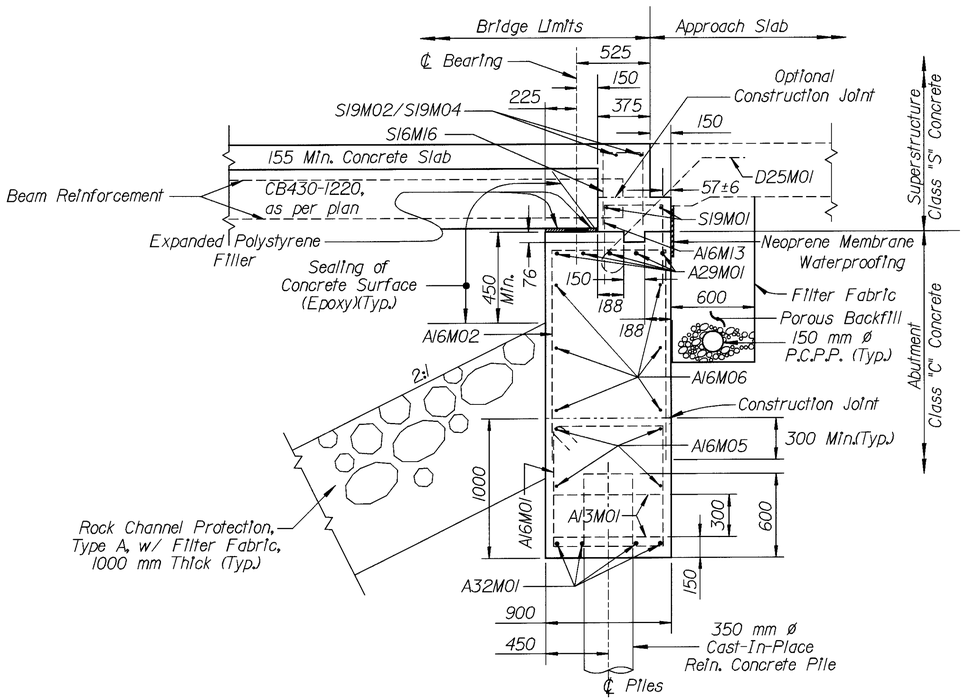
DESIGN AGENCY
DISTRICT ONE
PRODUCTION DEPARTMENT

DESIGNED EJS | DRAWN EJS | CHECKED JTB | REVISED
REVIEWED JRC | DATE 5-5-99 | STRUCTURE FILE NUMBER 6200109

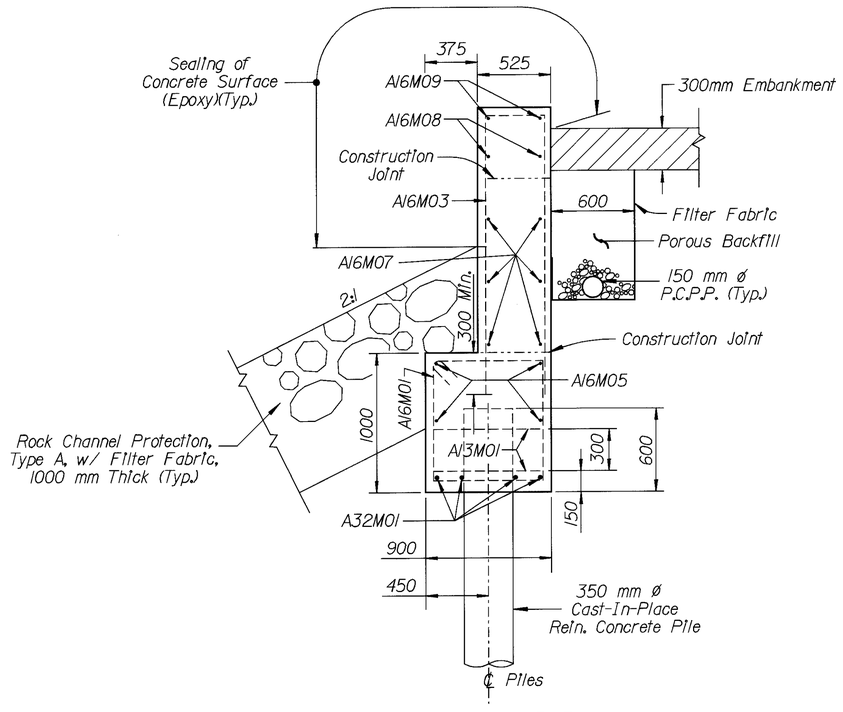
ABUTMENT DETAILS
Bridge No. OTT-2-10848
over Turtle Creek

OTT-2-10.735/17.135

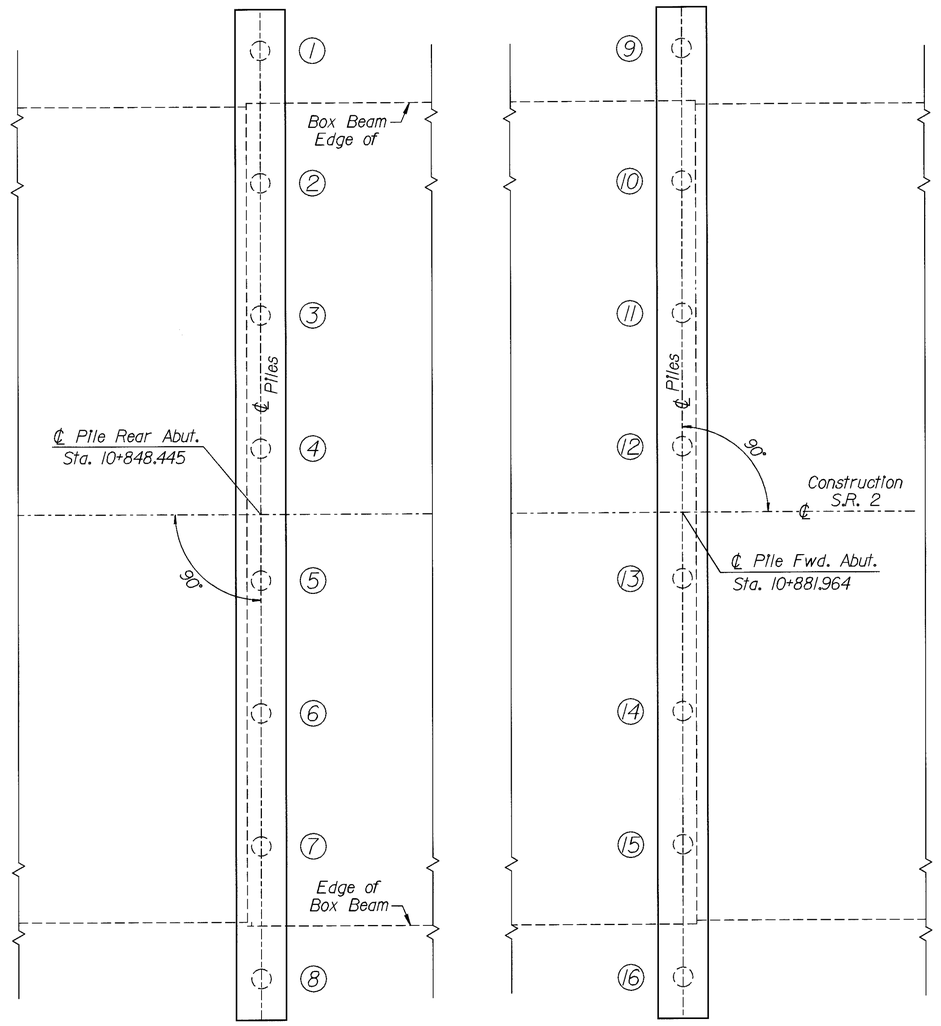
REF.FILE *1,$$$$$$$$$$REF.FILENAME1$$$$$$$$$$$$$$$$
REF.FILE *1,LEVELS ON:$$$$$$$$$$REF.FILE1$$$$$$$$$$$$$$$$
REF.FILE *2,$$$$$$$$$$REF.FILENAME2$$$$$$$$$$$$$$$$
REF.FILE *2,LEVELS ON:$$$$$$$$$$REF.FILE2$$$$$$$$$$$$$$$$
REF.FILE *3,$$$$$$$$$$REF.FILENAME3$$$$$$$$$$$$$$$$
REF.FILE *3,LEVELS ON:$$$$$$$$$$REF.FILE3$$$$$$$$$$$$$$$$
REF.FILE *4,$$$$$$$$$$REF.FILENAME4$$$$$$$$$$$$$$$$
REF.FILE *4,LEVELS ON:$$$$$$$$$$REF.FILE4$$$$$$$$$$$$$$$$
FILENAME:$$$$$$$$$$DESIGNFILENAME$$$$$$$$$$$$$$$$
DATE & TIME:$$$$$$$$$$DATE&TIME$$$$$$$$$$$$$$$$
USERNAME:$$$$$$$$$$USERNAME$$$$$$$$$$$$$$$$
PROJECT:$$$$$$$$$$PROJECT$$$$$$$$$$$$$$$$
LEVELS ON:$$$$$$$$$$LEVELSON$$$$$$$$$$$$$$$$
LOT TABLE:$$$$$$$$$$LOTTABLE$$$$$$$$$$$$$$$$
PEN TABLE:$$$$$$$$$$PENTABLE$$$$$$$$$$$$$$$$



SECTION A-A



SECTION B-B



ABUTMENT PILE NUMBERING DIAGRAM

LEGEND

P.C.P.P. - Perforated Corrugated Plastic Pipe

metric units

DESIGN AGENCY
DISTRICT ONE
PRODUCTION DEPARTMENT

DESIGNED	DRAWN	REVIEWED	DATE
EJS	EJS	JRC	5-5-99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JTB		6200109	

ABUTMENT DETAILS

Bridge No. OTT-2-10848
over Turtle Creek

OTT-2-10.735/17.135

REF.FILE *1,$$$$$$$$$$REFFILENAME1$$$$$$$$$$
REF.FILE *1,LEVELS ON: $$$$$$$$$$REFFILE1$$$$$$$$$$
REF.FILE *2,$$$$$$$$$$REFFILENAME2$$$$$$$$$$
REF.FILE *2 LEVELS ON: $$$$$$$$$$REFFILE2$$$$$$$$$$
REF.FILE *3,$$$$$$$$$$REFFILENAME3$$$$$$$$$$
REF.FILE *3 LEVELS ON: $$$$$$$$$$REFFILE3$$$$$$$$$$
REF.FILE *4,$$$$$$$$$$REFFILENAME4$$$$$$$$$$
REF.FILE *4 LEVELS ON: $$$$$$$$$$REFFILE4$$$$$$$$$$
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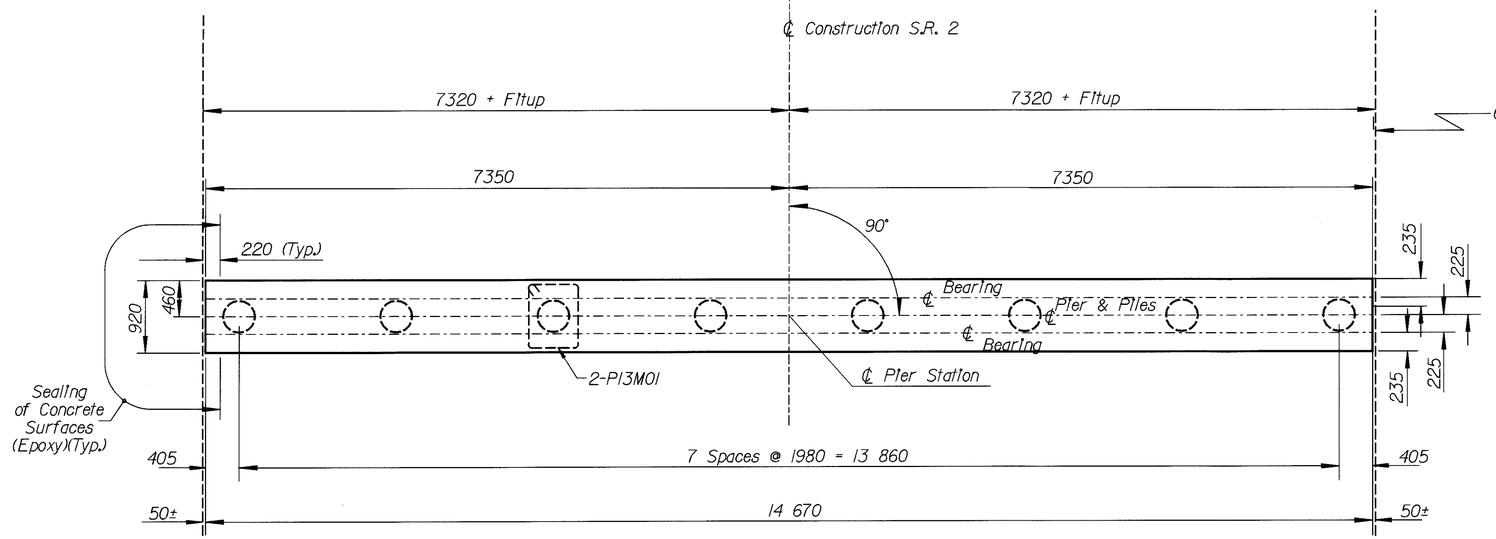
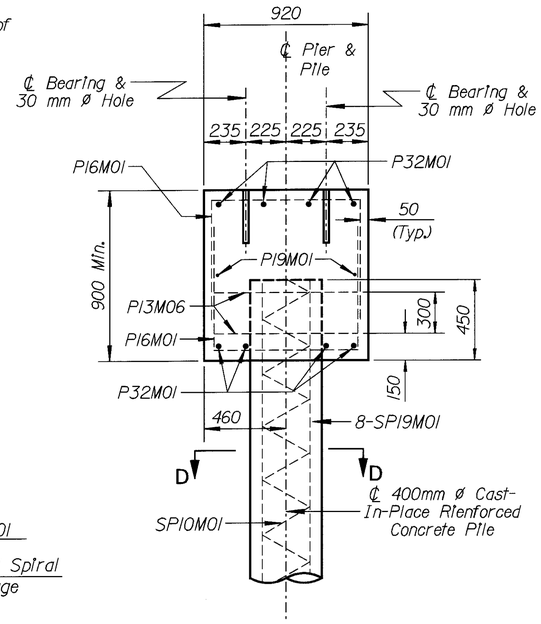
DATE & TIME: $$$$$TIMEDATE$$$$$
USER NAME: $$$$$$$$$$USERNAME$$$$$$$$$$
PROJECT: $$$$$$$$$$PROJECT$$$$$$$$$$
LEVELS ON: $$$$$$$$$$LEVELSON$$$$$$$$$$
PLOT TABLE: $$$$$$$$$$PLOTTABLE$$$$$$$$$$
PEN TABLE: $$$$$$$$$$PENTABLE$$$$$$$$$$

metric units

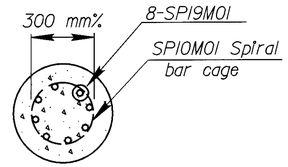




CENTERLINE PIER STATIONS AND ELEVATIONS

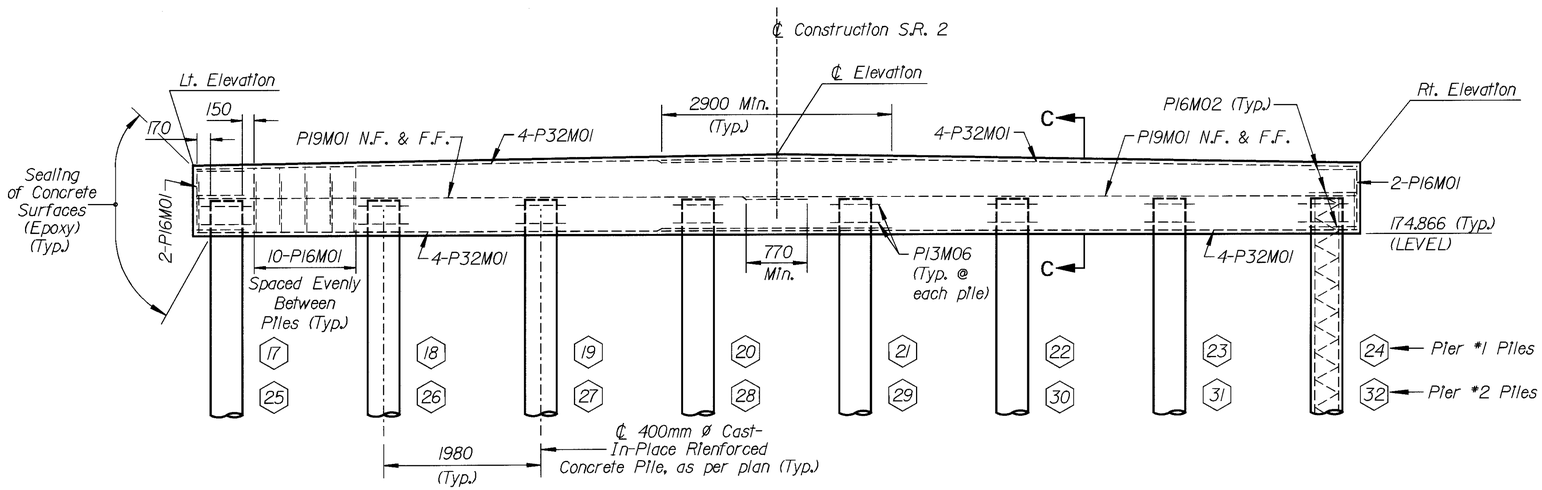
Pier Number	℄ Pier Station	Lt. Elevation	℄ Elevation	Rt. Elevation
Pier #1	Sta. 10+859.508	175.766	175.884	175.766
Pier #2	Sta. 10+870.911	175.766	175.884	175.766

NOTE: Elevations are along the ℄ of the Piers



SECTION D-D

SECTION C-C



PIER ELEVATION VIEW

LEGEND
N.F. - Near Face
F.F. - Far Face

Bridge Seat Reinforcing: Reinforcing steel in the vicinty of the bridge seat shall be placed accuratly to avoid interference with the drilling of anchor bar holes.

Reference Standard Drawing CPP-2-94M for Cast-In-Place Reinforced Concrete Piles

All dimensions are in millimeters, unless otherwise noted except for Stations and Elevations which are in Meters.

DESIGN AGENCY
DISTRICT ONE
PRODUCTION DEPARTMENT

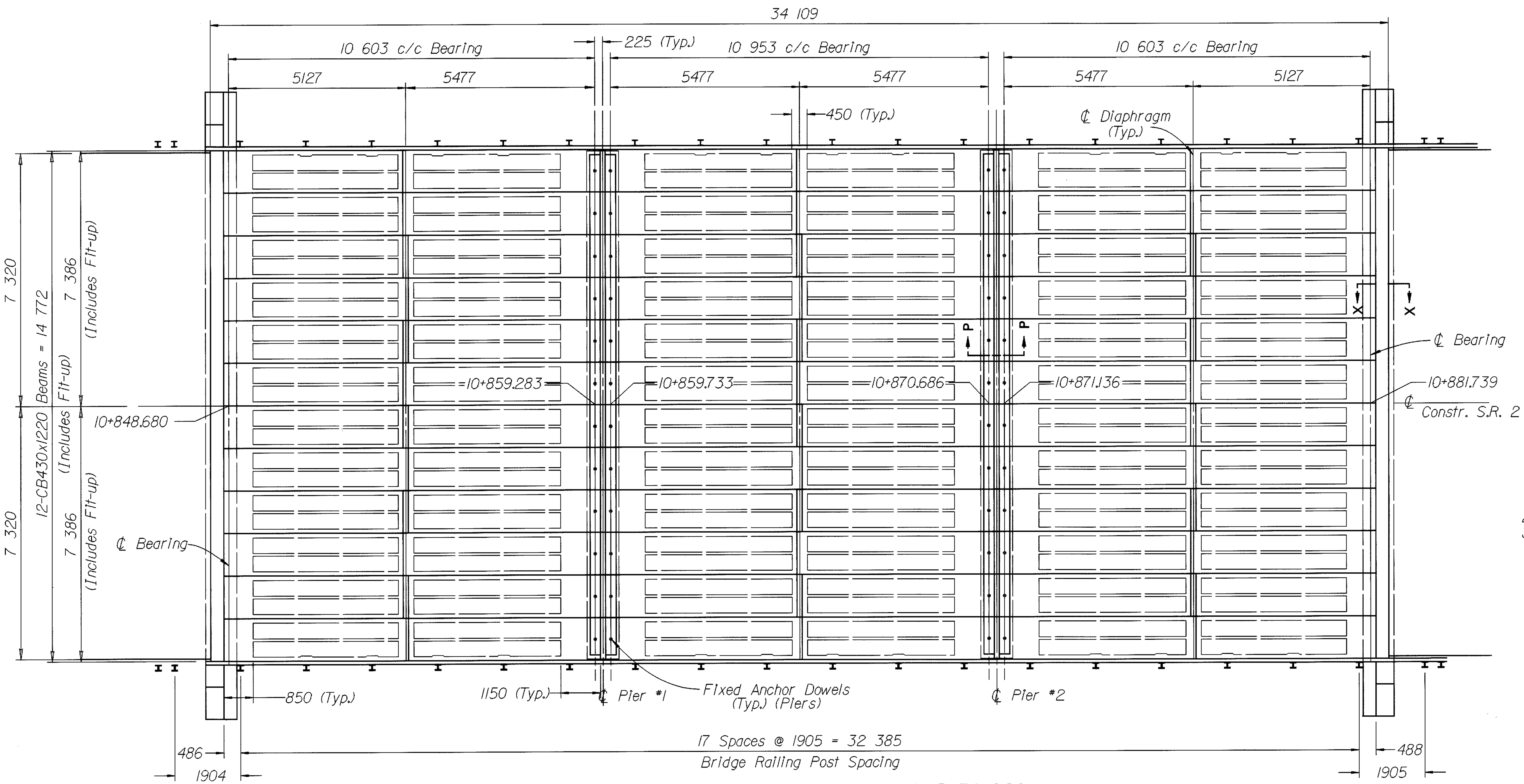
DESIGNED	DRAWN	REVIEWED	DATE
EJS	EJS	JRC	5-5-99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JTB		6200109	

PIER DETAILS
Bridge No. OTT-2-10848
over Turtle Creek

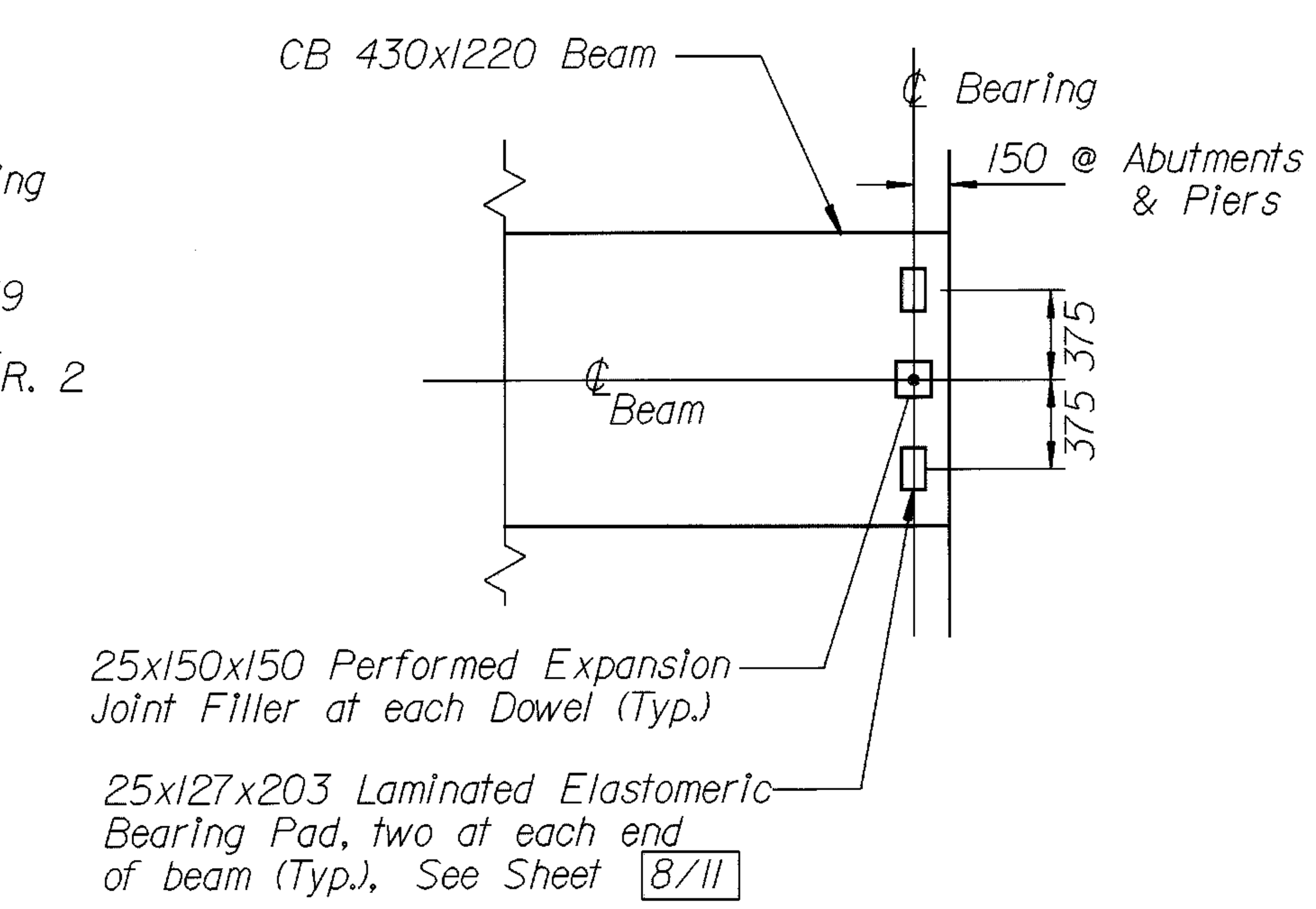
OTT-2-10.73517.135

5/11

49/73



SUPERSTRUCTURE FRAMING PLAN

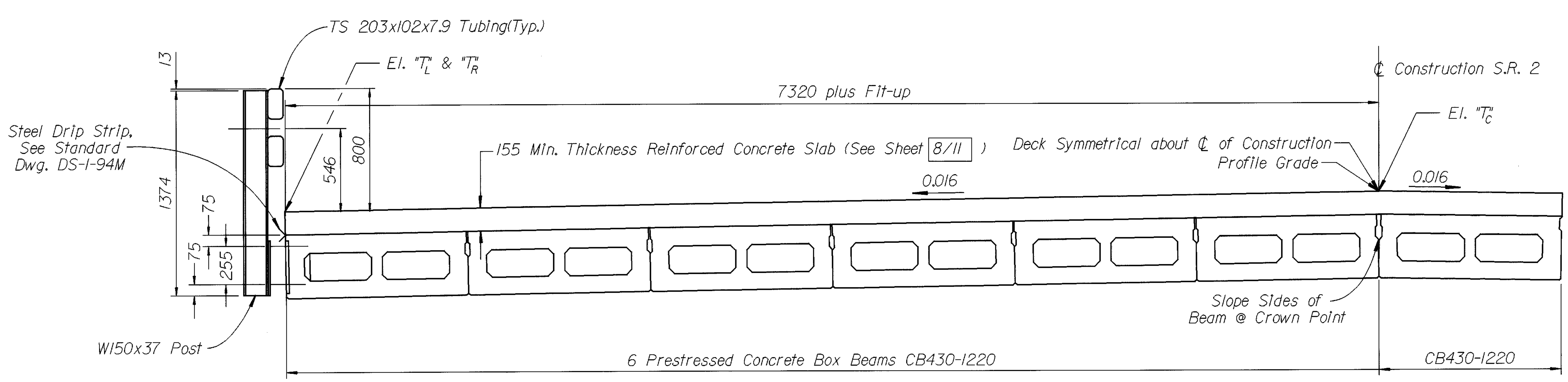


SECTION X-X

See Sheet 8/11

SECTION P-P

See Sheet 7/11



HALF TRANSVERSE SECTION

For Elevations T_L, T_R & T_C See Sheet 8/11

NOTE: All dimensions are in millimeters unless otherwise noted. Stations and elevations however are in meters.

metric units

DESIGN AGENCY
DISTRICT ONE
PRODUCTION DEPARTMENT

DESIGNED EJS	DRAWN EJS	REVIEWED JLC	DATE 5-5-99
CHECKED JTB	REVISED		STRUCTURE FILE NUMBER 6200109

SUPERSTRUCTURE DETAILS

Bridge No. OTT-2-10848
over Turtle Creek

OTT-2-10.735/17.135

REF.FILE #1:
REF.FILE #1 LEVELS ON:
REF.FILE #2:
REF.FILE #2 LEVELS ON:
REF.FILE #3:
REF.FILE #3 LEVELS ON:
REF.FILE #4:
REF.FILE #4 LEVELS ON:
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DATE & TIME: 04-MAY-1999 17:42
USERNAME: eschecke
PROJECT: NONE
LEVELS ON: [1-64]
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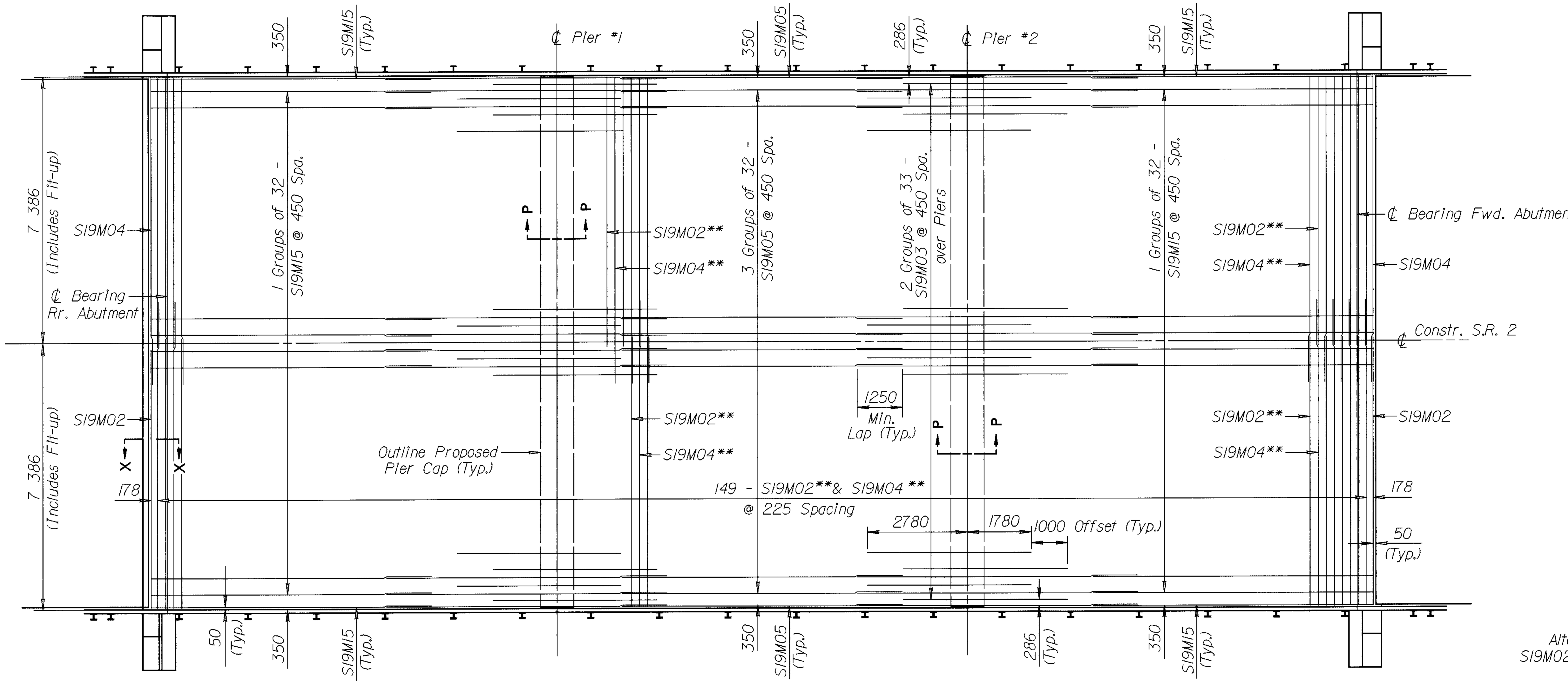
NOTE: All dimensions are in millimeters unless otherwise noted. Stations and elevations however are in meters.

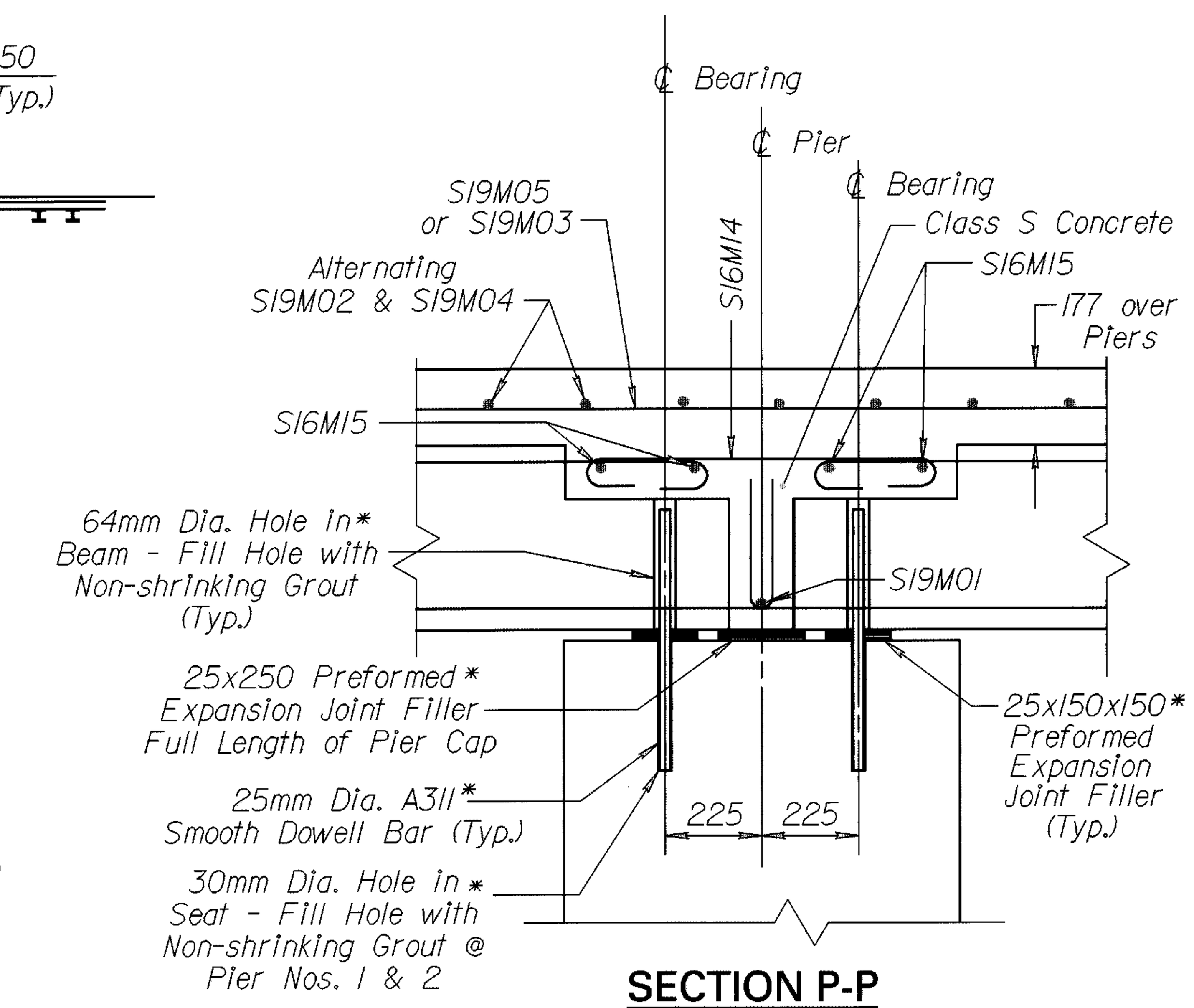


SUPERSTRUCTURE DECK PLAN

(Reinforcement)

SECTION X-X

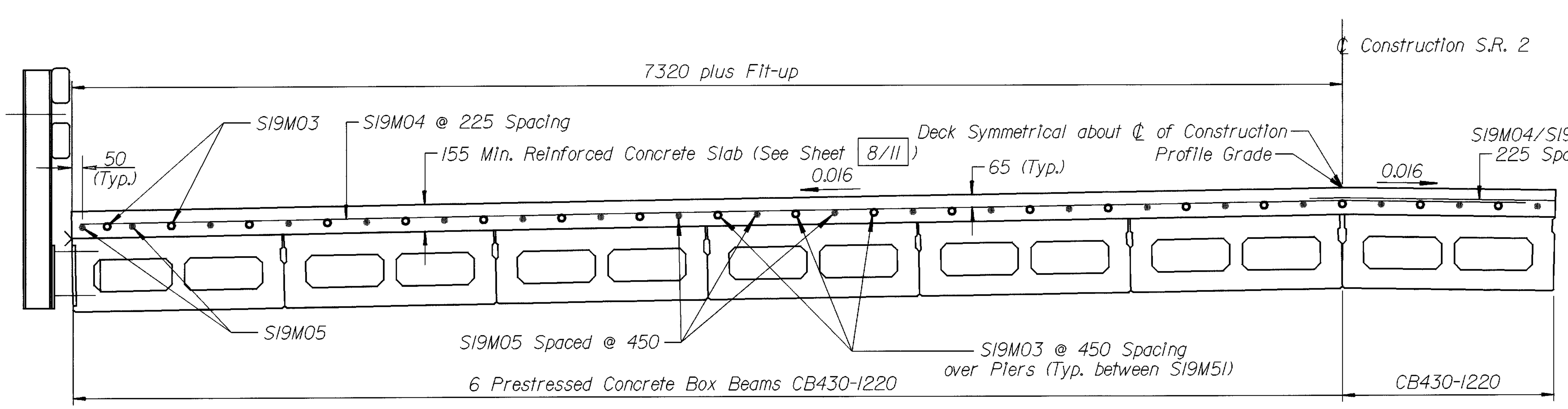
See Sheet 8/11



SECTION P-P

* Include with Item 865 Prestressed Concrete Beam

** Alternate Bars so Laps Alternate from Right to Left of ℄ Construction



HALF TRANSVERSE SECTION

DESIGN AGENCY
DISTRICT ONE
PRODUCTION DEPARTMENT

REVIEWED JRC DATE 5-5-99
STRUCTURE FILE NUMBER 6200109
DRAWN EJS REVISED
DESIGNED EJS CHECKED JTB

DECK PLAN AND SECTION DETAILS
Bridge No. OTT-2-10848 over Turtle Creek

OTT-2-10.735/17.135

REF.FILE *1: REF.FILE *1 LEVELS ON:
REF.FILE *2: REF.FILE *2 LEVELS ON:
REF.FILE *3: REF.FILE *3 LEVELS ON:
REF.FILE *4: REF.FILE *4 LEVELS ON:
FILENAME: DATE & TIME: 05-MAY-1999 12:14
USERNAME: eschecke
PROJECT: NONE
LEVELS ON: 1-63
PLOT QUEUE:
PEN TABLE:

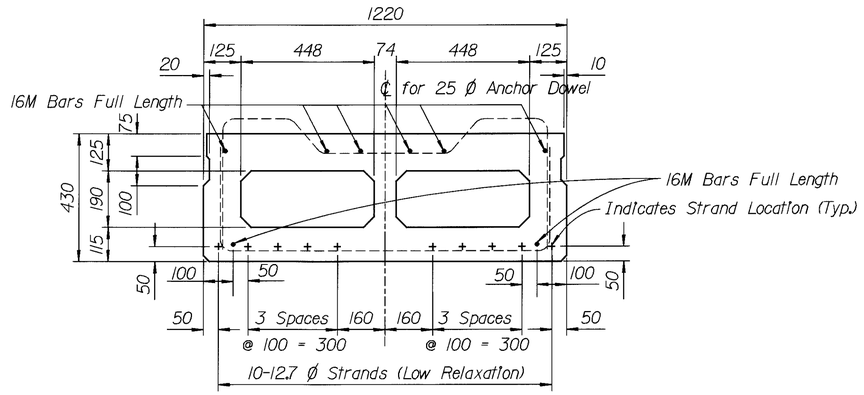
Camber

Calculated camber at time of paving, including allowance for camber growth due to creep, is 27mm.

Calculated deflection due to weight of Reinforced Concrete Slab and railing is 5mm.

Net final camber of beams is 22mm. This is 22mm in excess of the amount required to place the top of the beam parallel to profile grade. This excess amount shall be compensated for by thickening the Reinforced Concrete Slab from 155mm at center of span to 177mm at the ends.

Elastomeric Bearings shall comply with Item 516 and Articles 18.2.5 through 18.2.8 of Section 18, Bearing Devices, Division II, Construction of the AASHTO Standard Specification for Highway Bridges. Bearings shall be Grade 3, 50 durometer elastomer, and shall be subjected to the load testing requirements corresponding to Design Method A. Testing shall be included in the unit price bid for bearings, each.

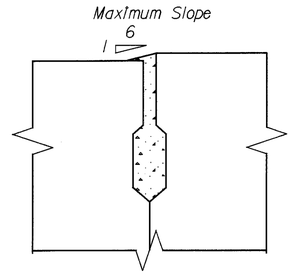


CB430-1220, AS PER PLAN

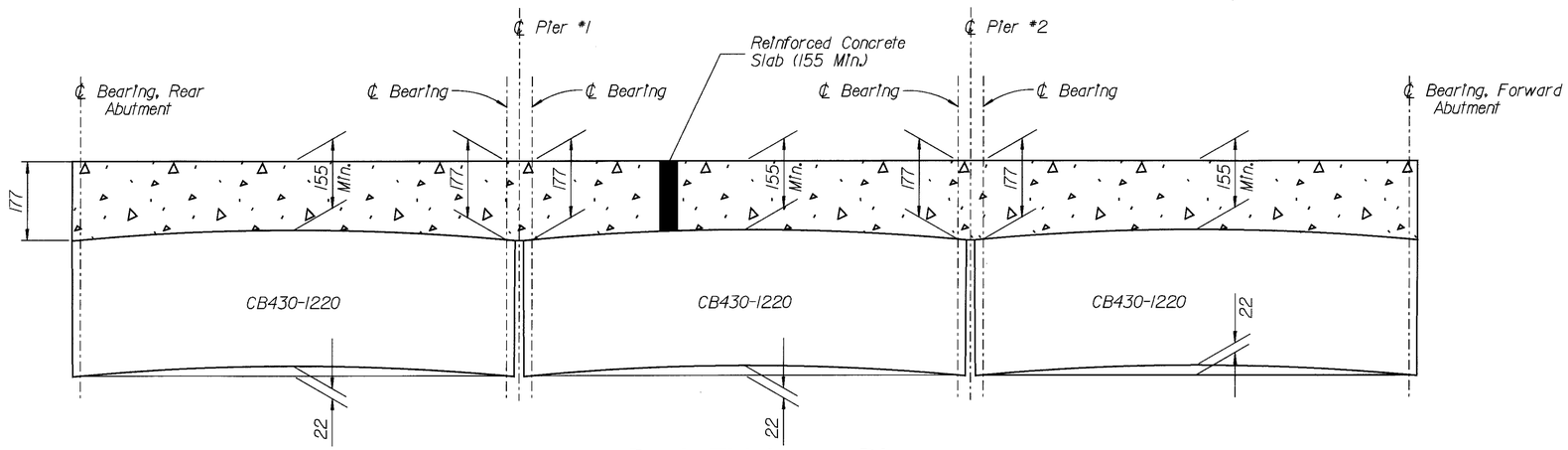
For Other Beam Detail Information See Std. Dwg. PSBD-1-93M

metric units

Note: All dimensions are in millimeters unless otherwise noted.



Detail of shear key mortor where adjacent beams have vertical offset due to different camber, skew effect.

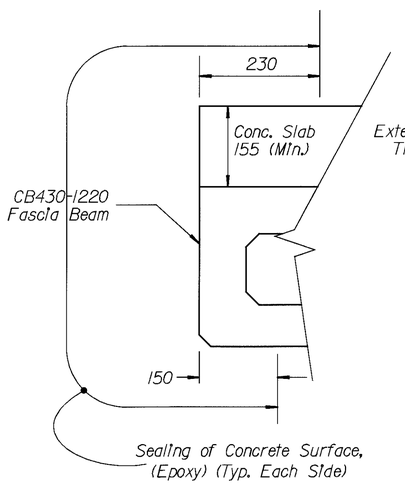


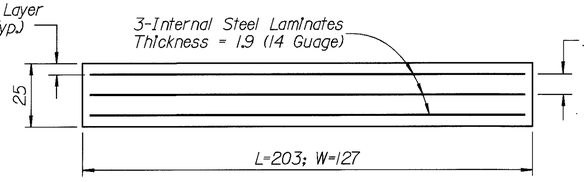
Deck Thickness Diagram

DECK SCREED ELEVATIONS(*)

Location	℄ Brg. R.A.	½Span 1 thru 3	℄ Pier 1 & 2	℄ Brg. F.A.
Edge of bridge Deck El. "Tr & Tl"	176.398	176.403	176.398	176.398
Crown ℄ Construction El. "Tc"	176.516	176.521	176.516	176.516

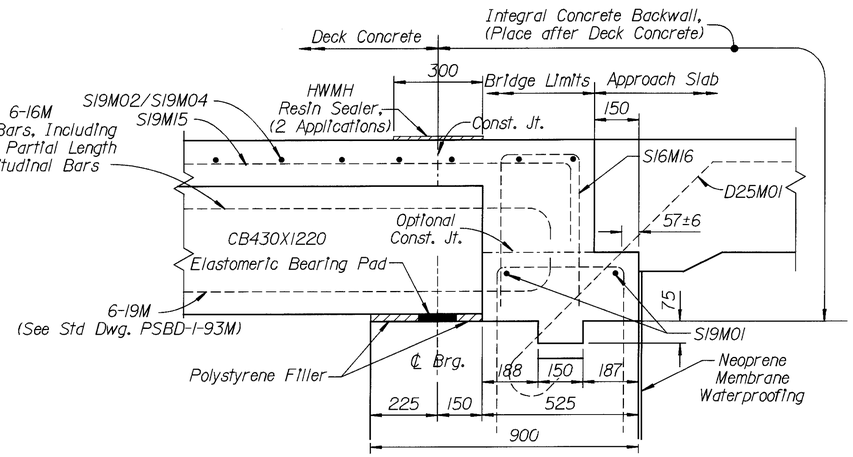
(*) Screed Elevations shown are for the deck surface prior to concrete placement. Allowance has been made for anticipated calculated dead load deflections.





Laminated Elastomeric Bearing Details

Bearing Design Loads: 40.5 kN Dead Load
47.4 kN Live Load (Excluding Impact)
Maximum Design Load = 87.9 kN



SECTION X-X
INTEGRAL BACKWALL DETAIL

For Further Detail Information See Sheet 4/11 .

DESIGN AGENCY: DISTRICT ONE, PRODUCTION DEPARTMENT
DESIGNED: EJS | DRAWN: EJS | REVIEWED: JRC | DATE: 5-5-99
CHECKED: JTB | REVISED: | STRUCTURE FILE NUMBER: 6200109

MISC. SUPERSTRUCTURE DETAILS
Bridge No. OTT-2-10848
over Turtle Creek

OTT-2-10.735/17.135

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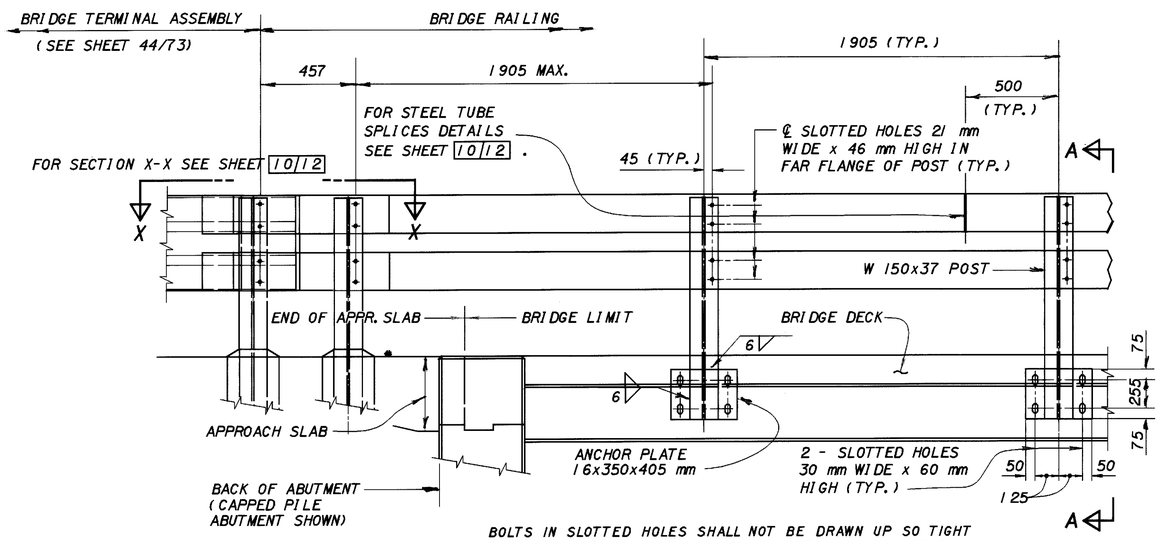
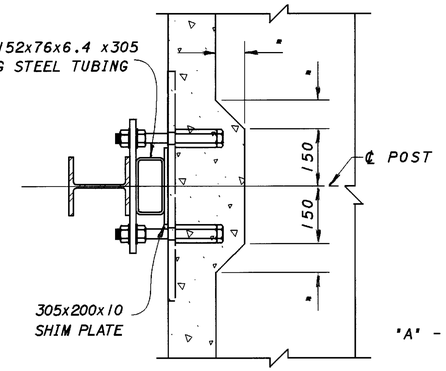


BOLTS IN SLOTTED HOLES SHALL NOT BE DRAWN UP SO TIGHT AS TO PREVENT SLIDING BETWEEN THE TUBE AND CHANNEL.

RAILING ELEVATION

TWIN TUBE RAILING WITH THRIE BEAM TERMINAL CONNECTOR AT THE FIRST POST OFF THE BRIDGE.

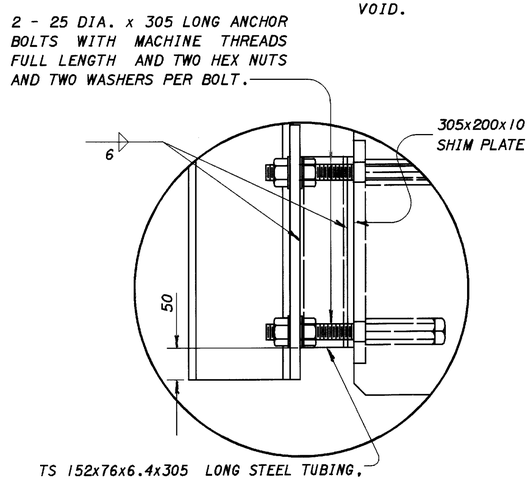


SECTION J-J

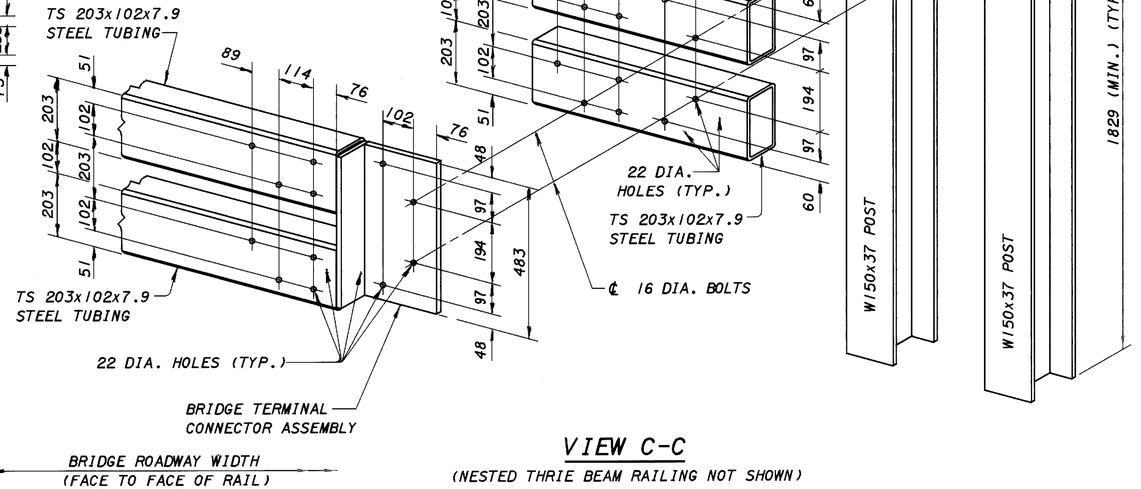
LEGEND

'A' - OVERLAY THICKNESS. THIS DIMENSION VARIES ACROSS THE LENGTH OF THE BRIDGE.

* - THIS DIMENSION IS THE SAME AS THE WIDTH OF FILLET IN THE BOX BEAMS'S VOID.

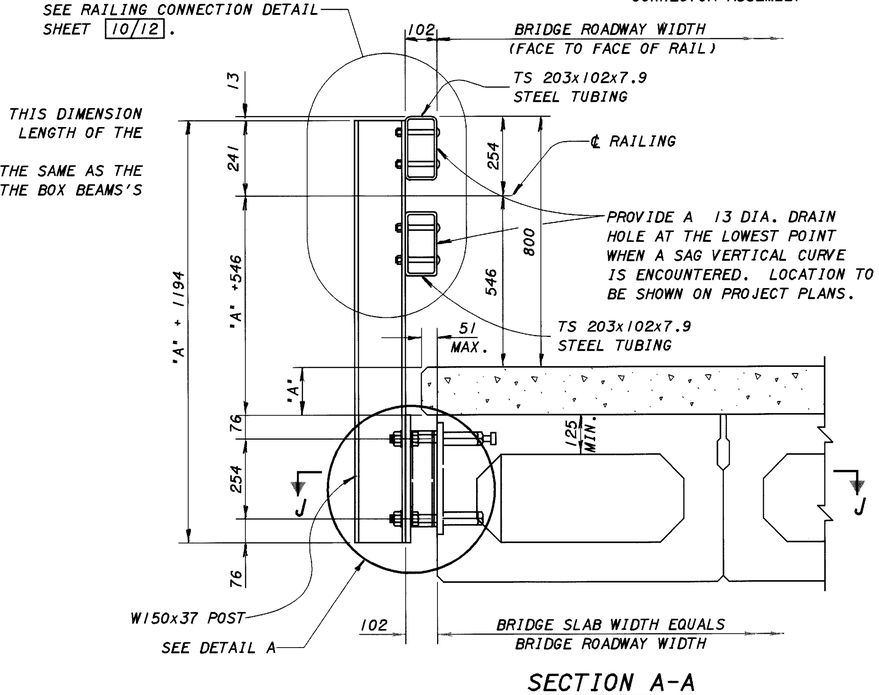


DETAIL A



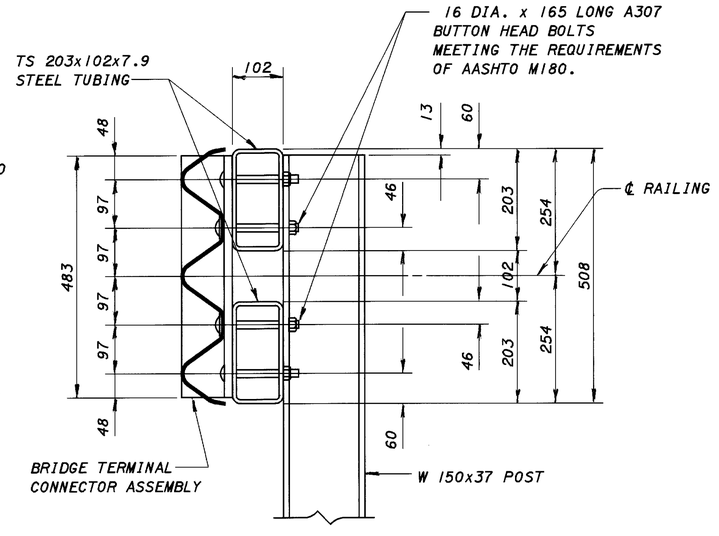
VIEW C-C

(NESTED THRIE BEAM RAILING NOT SHOWN)



SECTION A-A

(FOR 430 AND DEEPER COMPOSITE PRESTRESSED BOX BEAM BRIDGES)



VIEW F-F

SECTION THRU RAIL AT THRIE BEAM BRIDGE TERMINAL CONNECTION ASSEMBLY

DESIGN AGENCY
DISTRICT ONE
PRODUCTION DEPARTMENT

DESIGNED EJS
DRAWN EJS
CHECKED JTB
REVIEWED JLC DATE 5-5-05
REVISED
STRUCTURE FILE NUMBER 6200109

RAILING DETAILS
BRIDGE No. OTT-2-10848
over Turtle Creek

OTTT-2-10.735/17.135

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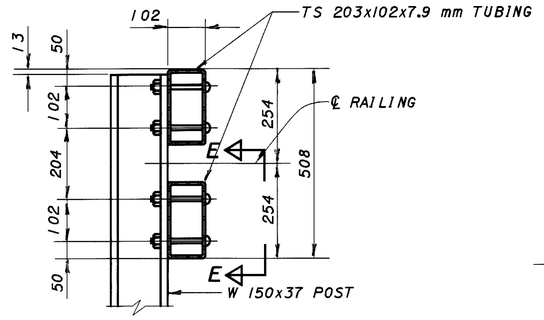
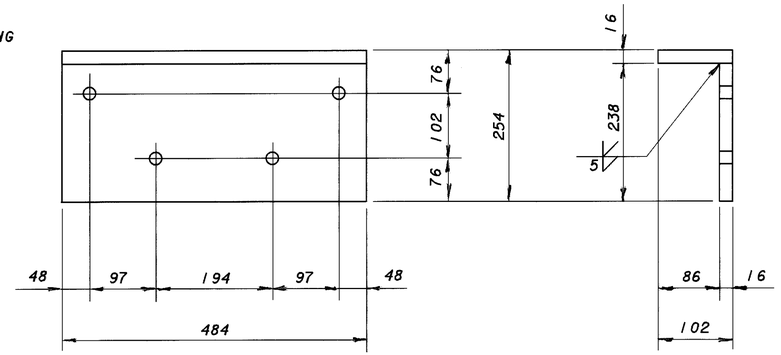
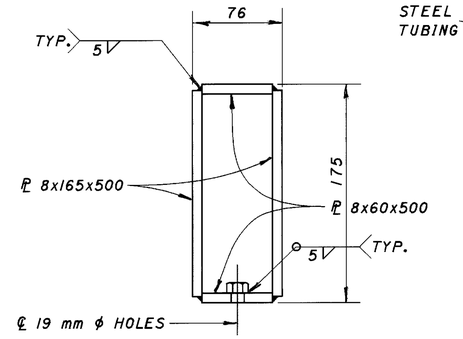
NOTE:
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.



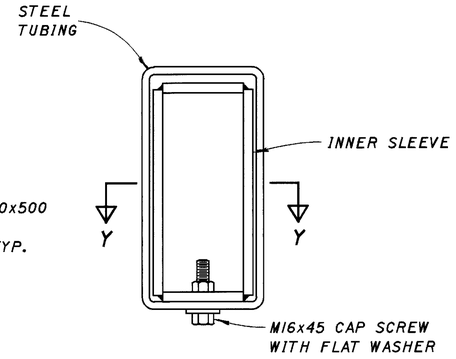
TYPICAL SECTION THRU RAIL USING THRIE BEAM TERMINAL CONNECTOR



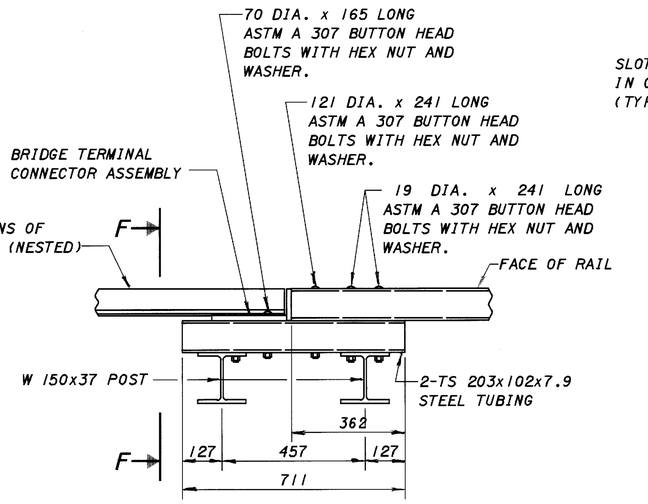
BRIDGE TERMINAL CONNECTOR ASSEMBLY



FINISHED DIMENSIONS OF INNER SLEEVE

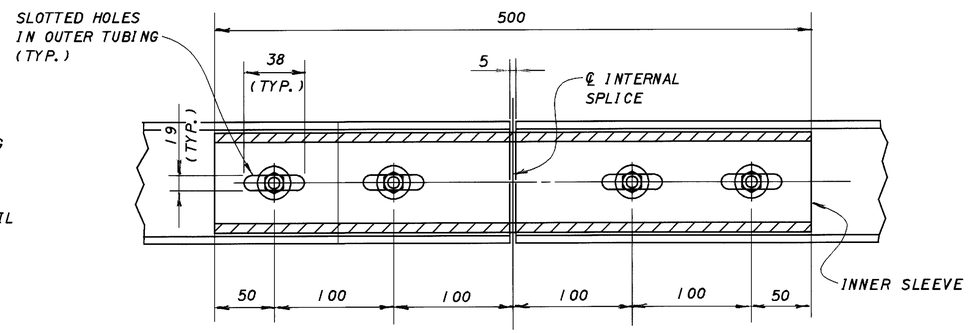


SECTION THRU SPLICE



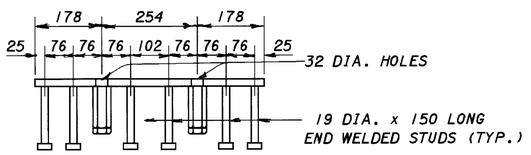
SECTION X-X

FOR VIEW F-F SEE SHEET 9/12

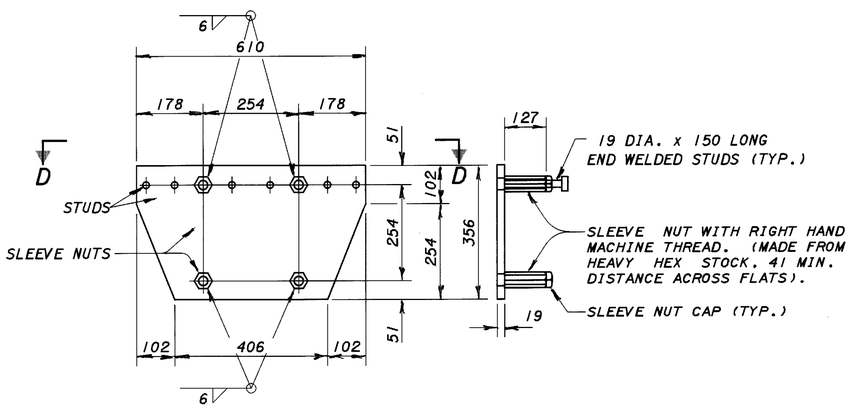


SECTION Y-Y

TUBE SPLICE DETAILS

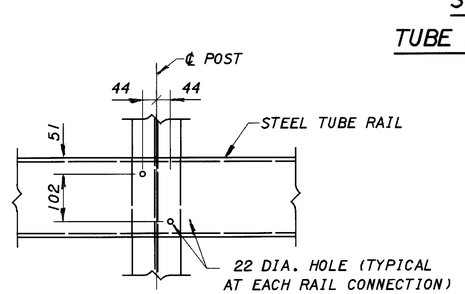


VIEW D-D

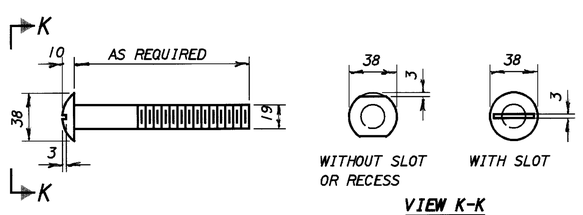


ELEVATION END VIEW

POST ANCHOR DEVICE

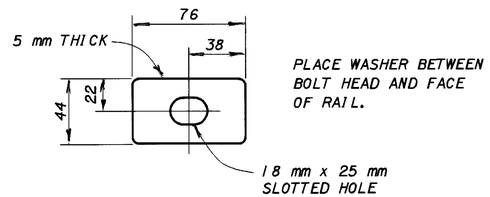


VIEW E-E



VIEW K-K

DETAIL OF 19 DIA. ROUND HEAD BOLT



SPECIAL WASHER

DESIGN AGENCY
DISTRICT ONE
PRODUCTION DEPARTMENT

DESIGNED	DRAWN	REVIEWED	DATE
EJS	EJS	JLC	5-5-17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JTB		6200109	

RAILING DETAIL
BRIDGE No. OTT-2-10848
over Turtle Creek

OTT-2-10.735/17.135

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