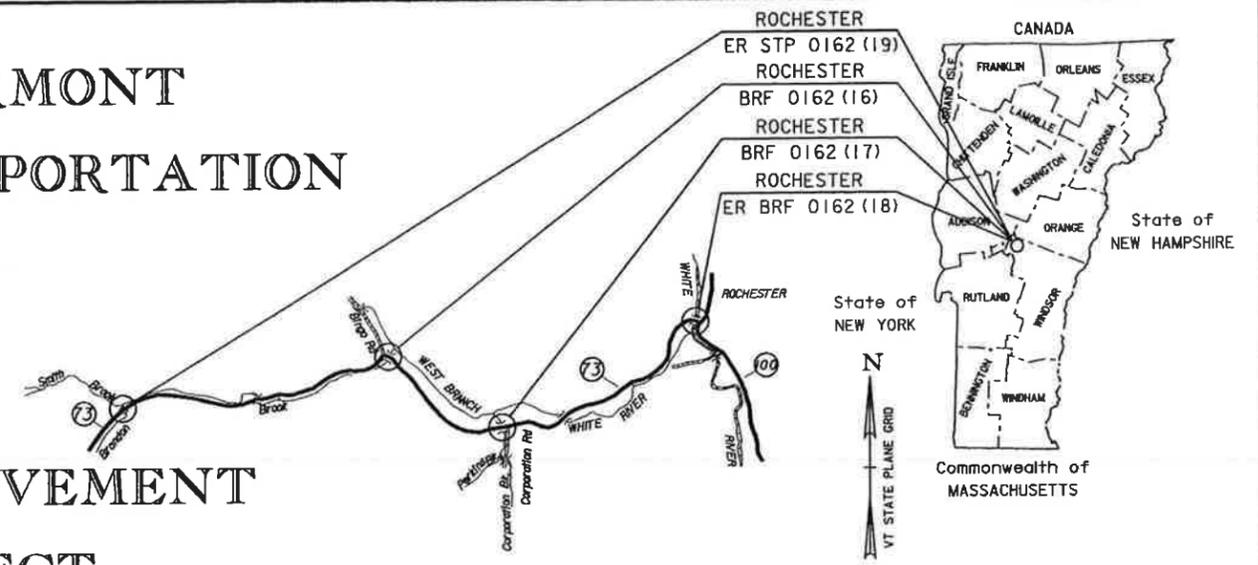


# STATE OF VERMONT AGENCY OF TRANSPORTATION



## PROPOSED IMPROVEMENT BRIDGE PROJECT

TOWN OF ROCHESTER  
COUNTY OF WINDSOR  
VT ROUTE 73 (RURAL MAJOR COLLECTOR)



**ROCHESTER ER STP 0162 (19)**

**BRIDGE NO 13  
(SEE SHEET 13)**

**PROJECT LOCATION:** LOCATED IN THE COUNTY OF WINDSOR, TOWN OF ROCHESTER, ON VT 73; BRIDGE NO 13 OVER BRANDON BROOK, APPROXIMATELY 2.43 MILES EAST OF THE GOSHEN/ROCHESTER TOWN LINE.

**PROJECT DESCRIPTION:** WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES THE REMOVAL AND REPLACEMENT OF THE EXISTING 10' CMP ON THE EXISTING ALIGNMENT, WITH ASSOCIATED ROADWAY AND CHANNEL WORK.

**LENGTH OF STRUCTURE:** 52.94 FT  
**LENGTH OF ROADWAY:** 222.06 FT  
**LENGTH OF PROJECT:** 275.00 FT

**ROCHESTER BRF 0162 (16)**

**BRIDGE NO 15  
(SEE SHEET 59)**

**PROJECT LOCATION:** LOCATED IN THE COUNTY OF WINDSOR, TOWN OF ROCHESTER, ON VT 73; BRIDGE NO 15 OVER BRANDON BROOK, APPROXIMATELY 4.00 MILES WEST OF THE INTERSECTION WITH VT ROUTE 73 AND VT ROUTE 100.

**PROJECT DESCRIPTION:** WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES THE REMOVAL AND REPLACEMENT OF EXISTING BRIDGE NO 15 ON THE EXISTING ALIGNMENT, WITH ASSOCIATED ROADWAY AND CHANNEL WORK.

**LENGTH OF STRUCTURE:** 71.12 FT  
**LENGTH OF ROADWAY:** 163.88 FT  
**LENGTH OF PROJECT:** 235.00 FT

**ROCHESTER BRF 0162 (17)**

**BRIDGE NO 16  
(SEE SHEET 121)**

**PROJECT LOCATION:** LOCATED IN THE COUNTY OF WINDSOR, TOWN OF ROCHESTER, ON VT 73; BRIDGE NO 16 OVER CORPORATION BROOK, APPROXIMATELY 2.50 MILES WEST OF THE INTERSECTION WITH VT 73 AND VT 100.

**PROJECT DESCRIPTION:** WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES THE REMOVAL AND REPLACEMENT OF EXISTING BRIDGE NO 16 ON THE EXISTING ALIGNMENT, WITH ASSOCIATED ROADWAY AND CHANNEL WORK.

**LENGTH OF STRUCTURE:** 65.17 FT  
**LENGTH OF ROADWAY:** 104.83 FT  
**LENGTH OF PROJECT:** 170.00 FT

**ROCHESTER ER BRF 0162 (18)**

**BRIDGE NO 19  
(SEE SHEET 174)**

**PROJECT LOCATION:** LOCATED IN THE COUNTY OF WINDSOR, TOWN OF ROCHESTER, ON VT 73; BRIDGE NO 19 OVER WHITE RIVER, APPROXIMATELY 0.02 MILES WEST OF THE INTERSECTION OF VT 73 AND VT 100.

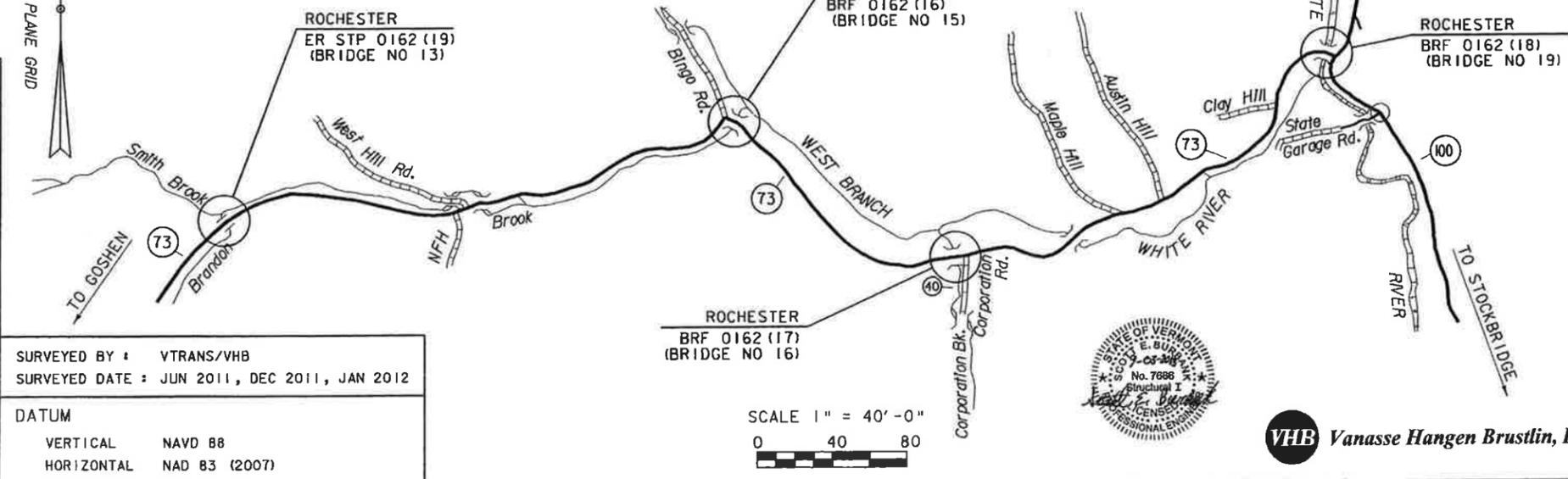
**PROJECT DESCRIPTION:** WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES REMOVAL AND REPLACEMENT OF BRIDGE NO 19 ON A NEW ALIGNMENT, WITH ASSOCIATED ROADWAY AND CHANNEL WORK.

**LENGTH OF STRUCTURE:** 130.33 FEET  
**LENGTH OF ROADWAY:** 235.04 FEET  
**LENGTH OF PROJECT:** 365.37 FEET

QUALITY ASSURANCE PROGRAM: **LEVEL 2**

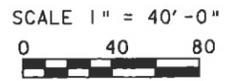
**CONVENTIONAL SYMBOLS**

COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	



**SURVEYED BY :** VTRANS/VHB  
**SURVEYED DATE :** JUN 2011, DEC 2011, JAN 2012

**DATUM**  
VERTICAL NAVD 88  
HORIZONTAL NAD 83 (2007)



**VHB Vanasse Hangen Brustlin, Inc.**

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.  
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

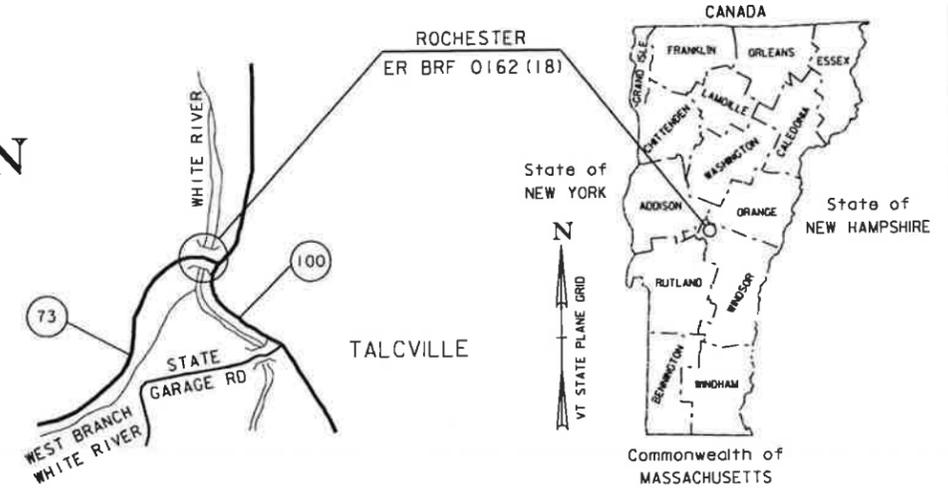
<b>DIRECTOR OF PROGRAM DEVELOPMENT</b>	
APPROVED	DATE 7-5-13
PROJECT MANAGER : JENNIFER M.V. FITCH, P.E.	
PROJECT NAME : ROCHESTER	
PROJECT NUMBER : ER STP 0162 (19), BRF 0162 (16), BRF 0162 (17) & ER BRF 0162 (18)	
SHEET 1 OF 238 SHEETS	

# STATE OF VERMONT AGENCY OF TRANSPORTATION



## PROPOSED IMPROVEMENT BRIDGE PROJECT

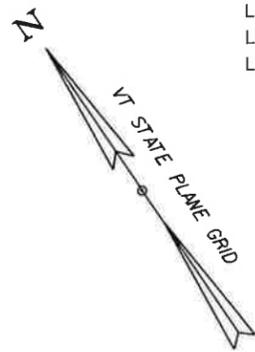
TOWN OF ROCHESTER  
COUNTY OF WINDSOR  
VT ROUTE 73 (RURAL MAJOR COLLECTOR), BRIDGE NO 19



**PROJECT LOCATION:** LOCATED IN THE COUNTY OF WINDSOR, TOWN OF ROCHESTER, ON VT 73; BRIDGE NO 19 OVER WHITE RIVER, APPROXIMATELY 0.02 MILES WEST OF THE INTERSECTION OF VT 73 AND VT 100.

**PROJECT DESCRIPTION:** WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES REMOVAL AND REPLACEMENT OF BRIDGE NO 19 ON A NEW ALIGNMENT, WITH ASSOCIATED ROADWAY AND CHANNEL WORK.

**LENGTH OF STRUCTURE :** 130.33 FEET  
**LENGTH OF ROADWAY :** 235.04 FEET  
**LENGTH OF PROJECT :** 365.37 FEET

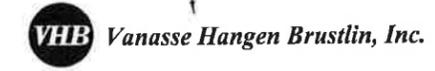
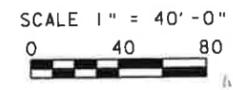
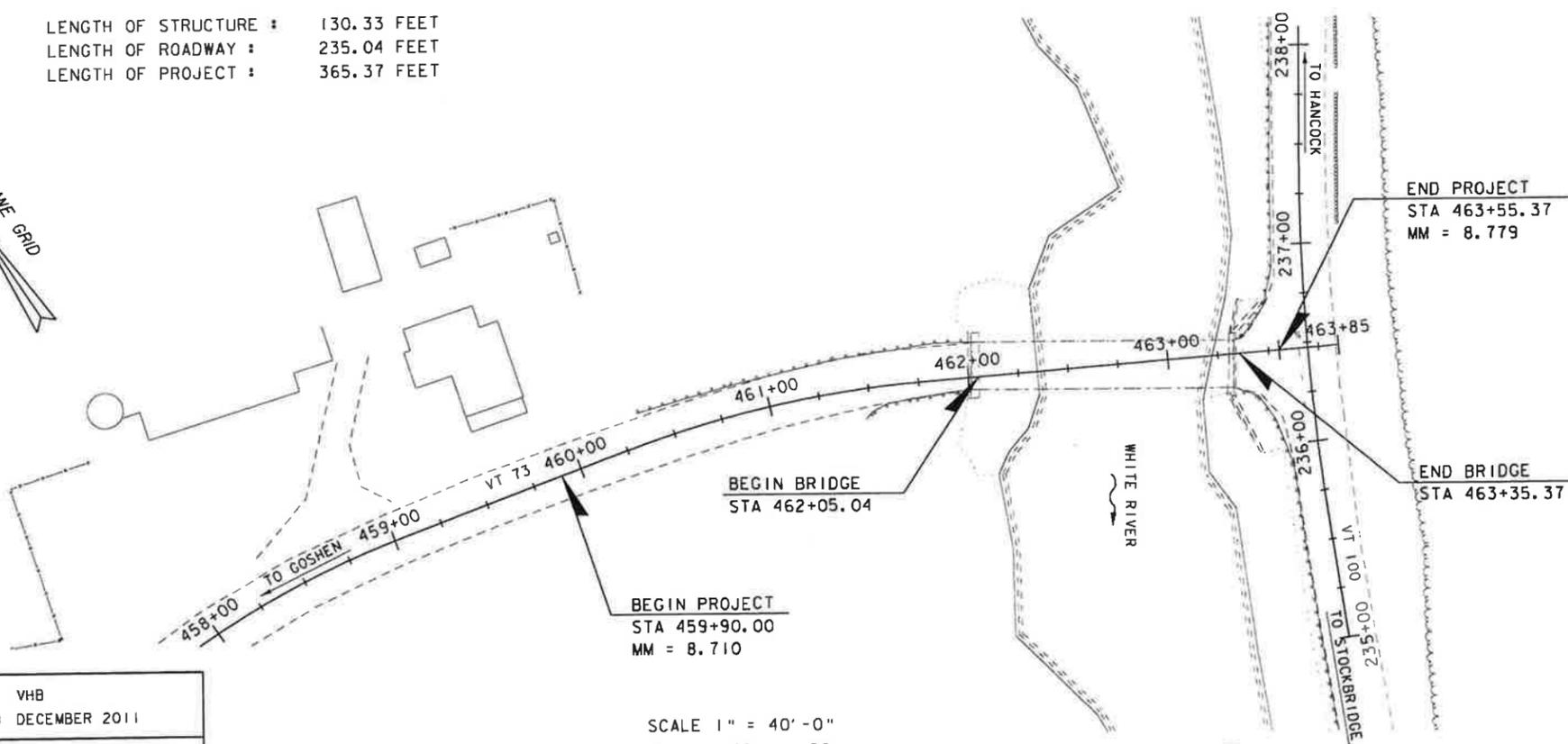


QUALITY ASSURANCE PROGRAM: LEVEL 2

CONVENTIONAL SYMBOLS	
COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	

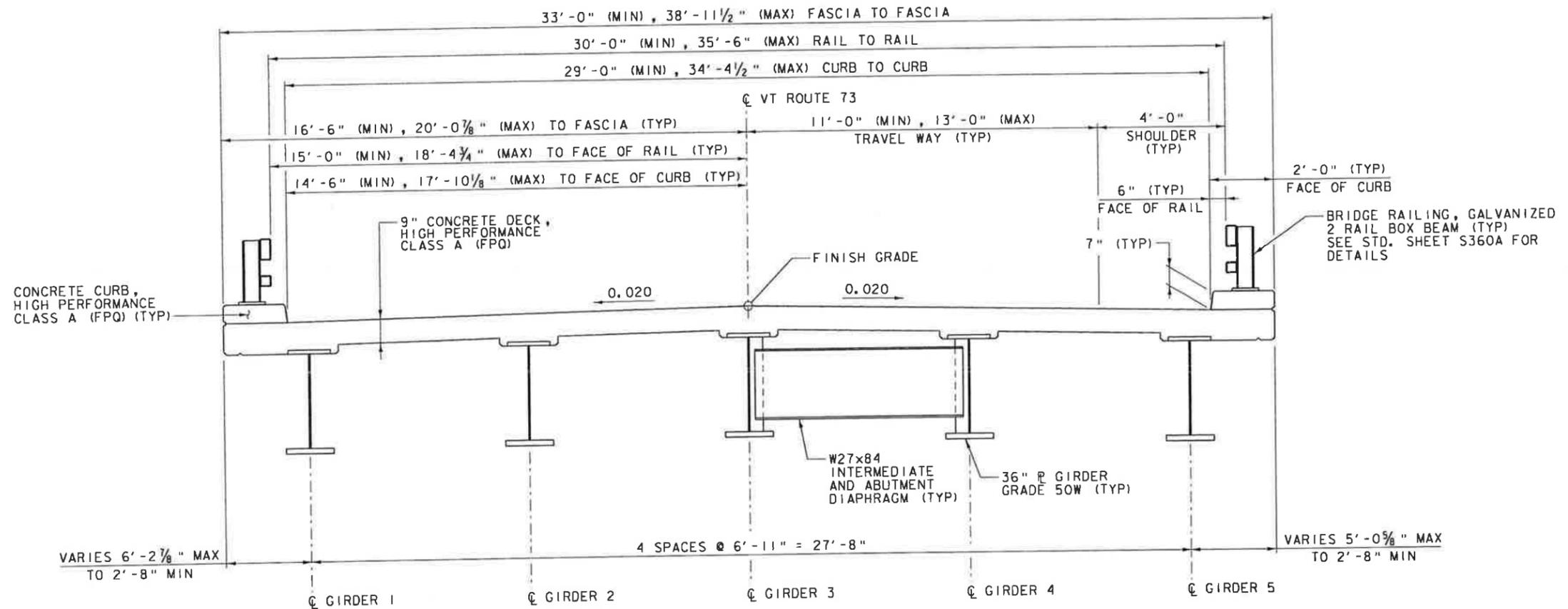
SURVEYED BY : VHB  
 SURVEYED DATE : DECEMBER 2011

DATUM  
 VERTICAL NAVD 88  
 HORIZONTAL NAD 83 (2007)

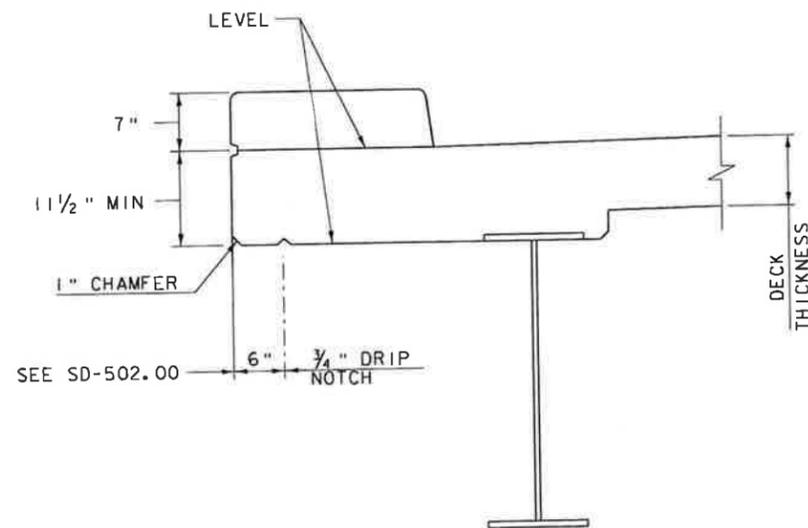


THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT. CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

PROJECT MANAGER : JENNIFER M. V. FITCH, P.E.  
 PROJECT NAME : ROCHESTER  
 PROJECT NUMBER : ER BRF 0162 (18)  
 SHEET 174 OF 238 SHEETS



TYPICAL BRIDGE SECTION  
SCALE 1/2" = 1'-0"



FASCIA & DRIP NOTCH DETAIL  
NOT TO SCALE

PROJECT NAME: ROCHESTER  
PROJECT NUMBER: ER BRF 0162(18)

FILE NAME: zllc332+yp.dgn  
PROJECT LEADER: S.E. BURBANK  
DESIGNED BY: S.E. BURBANK  
BR 19 TYPICAL BRIDGE SECTION

PLOT DATE: 9/3/2013  
DRAWN BY: B.J. MASSE  
CHECKED BY: G.S. GOODRICH  
SHEET 176 OF 238



## PROJECT NOTES

### GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2011, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6<sup>TH</sup> EDITION, AND ITS LATEST REVISIONS.
2. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DOCUMENT THE CONDITION OF ALL STRUCTURES THAT HAVE THE POTENTIAL FOR DAMAGE FROM CONSTRUCTION ACTIVITIES. THIS DOCUMENTATION SHALL BE IN THE FORM OF VIDEO OR PICTURES, WITH SUFFICIENT DESCRIPTION, AND SHALL BE SUPPLIED TO THE ENGINEER PRIOR TO ANY EXCAVATION OR DRIVING OF SHEET PILING. THE COST OF PREPARING THIS DOCUMENTATION WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED INCIDENTAL TO ALL CONTRACT ITEMS. SEE SPECIAL PROVISIONS.
4. THE BRIDGE IS DESIGNED FOR HL-93 LIVE LOAD WITH A 2.5 INCH ALLOWANCE FOR FUTURE PAVEMENT.
5. THE LIMITS OF THE COFFERDAM ARE TO BE DETERMINED BY THE CONTRACTOR.
6. A TEMPORARY BRIDGE IS IN PLACE OVER THE EXISTING, FAILED STRUCTURE. REMOVAL OF THIS TEMPORARY BRIDGE SHALL BE PAID FOR UNDER ITEM 900.645, "SPECIAL PROVISION (REMOVAL OF TEMPORARY BRIDGE)". REMOVAL OF ABUTMENT NO. 1 WILL NOT BE PAID FOR SEPARATELY, BUT IS INCLUDED IN THE UNIT PRICE BID FOR ITEM 900.645, "SPECIAL PROVISION (REMOVAL OF TEMPORARY BRIDGE)". THE TEMPORARY BRIDGE IS THE PROPERTY OF VTRANS AND SHALL BE RETURNED TO THE VTRANS MAINTENANCE FACILITY IN SPRINGFIELD, VT. CONTACT BILL SARGENT AT (802) 828-2699 TO MAKE NECESSARY ARRANGEMENTS AS PER THE SPECIAL PROVISIONS.
7. THE CONTRACTOR SHALL NOT REMOVE THE EXISTING TEMPORARY BRIDGE REFERENCED ABOVE UNTIL THE NEW TEMPORARY BRIDGE IS INSTALLED ON THE DETOUR ALIGNMENT AND OPEN TO TRAFFIC.

### TRAFFIC CONTROL

8. THE CONTRACTOR SHALL IMPLEMENT THE ROAD CLOSURE, TRAFFIC CONTROL, AND DETOUR AS SHOWN ON THE PLANS.
9. DURING CONSTRUCTION, TRAFFIC SHALL BE MAINTAINED ON A TWO-WAY TEMPORARY BRIDGE LOCATED DOWNSTREAM OF THE NEW STRUCTURE. THE TEMPORARY BRIDGE AND DETOUR SHALL BE PAVED. THE CONTRACTOR SHALL PROVIDE A NEW TWO-WAY TEMPORARY BRIDGE. CONSTRUCTION AND MAINTENANCE OF THE TEMPORARY BRIDGE AND ITS APPROACHES SHALL BE PAID FOR UNDER ITEM 528.11, "TWO-WAY TEMPORARY BRIDGE".
10. FULL ACCESS TO ALL SIDE ROADS AND DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL (ER BR 0162(18))".
11. UNLESS COVERED UNDER INDIVIDUAL PAY ITEMS OR NOTED OTHERWISE, ALL COSTS FOR WORK SHOWN ON THE TRAFFIC CONTROL SHEETS AND FOR TEMPORARY TRAFFIC CONTROL DEVICES WILL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR ITEM 641.10, "TRAFFIC CONTROL (BRF 0162(16))". THIS INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING ITEMS:
  - TEMPORARY TRAFFIC BARRIERS
  - RETROREFLECTIVE DRUMS
  - SIGNS
  - SIGN POSTS
  - ENERGY ABSORPTION ATTENUATORSTEMPORARY TRAFFIC BARRIER SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 621.
12. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).

### EARTHWORK

13. REMOVAL OF THE EXISTING ABUTMENT NO. 2 STRUCTURE SHALL BE UNDER ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE". THIS WORK SHALL INCLUDE REMOVAL OF ANY PORTIONS OF THE EXISTING ABUTMENT NO. 2 THAT FALLS OUTSIDE THE LIMITS OF STRUCTURE EXCAVATION OR UNCLASSIFIED CHANNEL EXCAVATION.
14. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SUBSECTION 301.06 REGARDING THE COMPACTION OF THE SUBBASE MATERIAL.
15. A COFFERDAM IS REQUIRED FOR THE CONSTRUCTION OF ABUTMENT NO. 2. REFER TO THE "TYPICAL EARTHWORKS SECTIONS" FOR COFFERDAM NOTES.
16. THE HEIGHT OF FILL BEHIND ABUTMENT NO. 1 WILL BE LIMITED TO THE HORIZONTAL CONSTRUCTION JOINT ELEVATION UNTIL THE DECK HAS BEEN POURED AND THE CURING PERIOD IS UP.
17. STONE FILL, TYPE III SHALL BE PLACED IN FRONT OF THE ABUTMENTS BEFORE THE NEW GIRDERS ARE SET, AS SHOWN ON THE PLANS.
18. TEMPORARY CONSTRUCTION FILLS WITHIN THE WATERCOURSE FOR ANY PURPOSE SHALL CONSIST OF CLEAN STONE FILL ONLY, NO OTHER FILLING IN THE STREAM SHALL OCCUR WITHOUT THE APPROVAL OF THE STREAM ALTERATION ENGINEER.
19. ANY TEMPORARY EXCAVATION AND FILL NECESSARY TO MAINTAIN TRAFFIC SHALL BE INCIDENTAL TO ITEM 528.11, "TWO-WAY TEMPORARY BRIDGE".
20. ANY TEMPORARY MEANS OF SUPPORTING EXCAVATION NECESSARY TO MAINTAIN TRAFFIC SHALL BE INCIDENTAL TO ITEM 528.11, "TWO-WAY TEMPORARY BRIDGE" AND SHALL MEET THE REQUIREMENTS OF SECTION 204. ASSOCIATED CONSTRUCTION DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH SECTION 105.
21. THE AREA DISTURBED BY THE TEMPORARY DETOUR SHALL BE RESTORED TO ITS ORIGINAL GRADE AND VEGETATED. THE COST OF THE SEED, FERTILIZER, MULCH AND LIME WILL BE INCIDENTAL TO ITEM 528.11, "TWO-WAY TEMPORARY BRIDGE".

### STRUCTURAL STEEL

22. ALL STRUCTURAL STEEL PAID UNDER ITEM 506.55, "STRUCTURAL STEEL, PLATE GIRDER (FPQ)" SHALL CONFORM TO AASHTO M270M/M270 GRADE 50W.
23. ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
24. ALL MEMBERS MARKED (CVN) MUST MEET THE CHARPY V-NOTCH TESTING REQUIREMENTS AS INDICATED IN SUBSECTION 714.01.
25. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH-STRENGTH BOLTS IN 15/16" DIAMETER HOLES, PER SECTION 506.
26. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF SUBSECTION 506.10.
27. ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
28. AFTER THE STRUCTURAL STEEL HAS BEEN SET ON THE BEARINGS, ELEVATIONS SHALL BE TAKEN ALONG THE TOP OF EACH GIRDER UNDER THE DIRECTION OF THE RESIDENT ENGINEER. THESE ELEVATIONS SHALL BE USED IN DETERMINING THE FINAL GRADE.
29. ANY HOLES IN FASCIA GIRDERS NOT OTHERWISE FILLED SHALL BE FILLED WITH BOLTS CONFORMING TO ASTM A325 TYPE III. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19.
30. BEARING STIFFENERS AND GIRDER ENDS SHALL BE VERTICAL UNDER FULL DEAD LOAD DEFLECTION.
31. THE FAYING SURFACES ON THE CONNECTION PLATES SHALL BE PREPARED AS CLASS "B". THESE SURFACES SHALL BE PROTECTED FROM DAMAGE AND CORROSION PRIOR TO THE CONNECTION.
32. THE CONTRACTOR MAY INCLUDE AN OPTIONAL FIELD SPLICE TO FACILITATE TRANSPORTATION OF THE STEEL GIRDERS. THE FIELD SPLICE SHALL BE DESIGNED BY THE FABRICATOR. DESIGN CALCULATIONS SHALL BE SUBMITTED WITH THE FABRICATION DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT. THE STEEL QUANTITY SHALL NOT BE INCREASED TO ACCOUNT FOR THE ADDITIONAL WEIGHT OF STEEL FOR THE OPTIONAL FIELD SPLICE. ALL COSTS FOR THE OPTIONAL FIELD SPLICE SHALL BE INCLUDED IN ITEM 506.55, "STRUCTURAL STEEL, PLATE GIRDER (FPQ)".

### H-PILES

33. ABUTMENT PILES
  - A. THE PILES SHALL BE HP 12x84.
  - B. THE PILES SHALL BE DRIVEN TO A NOMINAL PILE DRIVING RESISTANCE (RNDR) OF 409 KIPS, PROVIDED A MINIMUM PENETRATION OF 35 FEET BELOW THE BOTTOM OF PILE CAP HAVE BEEN ACHIEVED.
34. TO PREVENT DAMAGE TO THE PILES, PILE SHOES ARE REQUIRED AND SHALL CONFORM TO SUBSECTION 505.04 (f).
35. A MINIMUM OF TWO DYNAMIC TESTS ARE REQUIRED AT ABUTMENT NO. 1 DURING PILE INSTALLATION. PAYMENT IS ITEM 505.45, "DYNAMIC PILE LOADING TEST".
36. THE TOPS OF THE PILES AFTER DRIVING SHALL NOT VARY FROM THE POSITION SHOWN ON THE PLANS BY MORE THAN 5 DEGREES. THE CONTRACTOR SHALL DEMONSTRATE TO THE SATISFACTION OF THE ENGINEER HOW THE TOLERANCES WILL BE MET. THESE MEASURES SHALL BE DEMONSTRATED IN A SUBMITTAL TO BE ACCEPTED BEFORE PILE DRIVING COMMENCES.
37. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY.

### CONCRETE

38. CONCRETE FOR THE DECK, CURBS AND ABUTMENTS ABOVE THE BRIDGE SEAT OR CONSTRUCTION JOINT SHALL BE ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CLASS A (FPQ)".
39. ALL OTHER SUBSTRUCTURE CONCRETE SHALL BE ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B" UNLESS OTHERWISE NOTED.
40. NO CONCRETE IN ABUTMENT NO. 1 OR ABUTMENT NO. 1 WINGWALLS SHALL BE PLACED ABOVE THE BRIDGE SEAT ELEVATIONS UNTIL THE GIRDERS OR SLABS HAVE BEEN PROFILED AND THE FINISHED GRADE OF THE DECK HAS BEEN DETERMINED.
41. IN ACCORDANCE WITH SUBSECTION 506.23 (a) AND AS DIRECTED BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL TAKE MEASURES NECESSARY TO PROTECT ALL SUBSTRUCTURE CONCRETE FROM STAINING DUE TO OXIDE FORMATION ON THE STRUCTURAL STEEL PRIOR TO PLACEMENT OF THE DECK. THESE MEASURES WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B". ANY SUCH STAINING THAT OCCURS PRIOR TO DECK PLACEMENT SHALL BE REMOVED AT NO ADDITIONAL COST TO THE STATE.
42. THE DECK IS TO BE POURED IN ONE CONTINUOUS POUR WITH A MAXIMUM DURATION OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A TRANSVERSE CONSTRUCTION JOINT SHALL BE USED BETWEEN ADJACENT POURS. A MINIMUM 96 HOUR DELAY BETWEEN ADJACENT POURS SHALL BE OBSERVED.
43. RELATIVE TO GRADE, ALL DECK POURS SHALL BEGIN FROM THE LOW ELEVATION END AND PROCEED TOWARDS THE HIGH ELEVATION END.
44. STAY-IN-PLACE CORRUGATED METAL FORMS (SIPCMF) SHALL BE USED TO FORM THE UNDERSIDE OF THE CONCRETE BRIDGE DECK BETWEEN THE STEEL GIRDERS. THE SIPCMF AND THEIR COMPONENTS, ATTACHMENTS, ETC. SHALL BE GALVANIZED OR STAINLESS STEEL. THE SIPCMF SHALL BE LOCATED TO MAINTAIN A CONSTANT CONCRETE DECK THICKNESS OF 9" FROM THE TOP OF THE SIPCMF'S CORRUGATIONS. THE CORRUGATIONS SHALL BE FILLED WITH FOAM OR A LIGHT WEIGHT MATERIAL APPROVED BY THE MANUFACTURER OR AS DIRECTED BY THE ENGINEER.
45. FLEMING BRACKETS OR SIMILAR FALSE WORK SHALL BE DESIGNED BY THE CONTRACTOR AND PLACED AT A MAXIMUM SPACING OF 4'-0". THE BRACKETS SHALL BEAR NEAR THE BOTTOM FLANGE AND IN NO CASE SHALL THEY BEAR ABOVE THE BOTTOM QUARTER OF THE WEB DEPTH.
46. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH x 1 INCH UNLESS OTHERWISE NOTED.
47. ITEM 514.10, "WATER REPELLENT, SILANE", SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON THE BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES.
48. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.
49. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.
50. MINIMUM COVER FOR REINFORCING STEEL SHALL BE 2" ALONG THE BACK FACES OF WALLS AGAINST EARTH, 1½" ALONG THE BOTTOM SURFACE OF THE DECK AND 3" ELSEWHERE, UNLESS OTHERWISE NOTED.

PROJECT NAME: ROCHESTER  
PROJECT NUMBER: ER BR 0162(18)

FILE NAME: zllc332pr.dgn  
PROJECT LEADER: S.E BURBANK  
DESIGNED BY: L.S. CHERVINCKY  
BR 19 PROJECT NOTES (1 OF 2)

PLOT DATE: 9/3/2013  
DRAWN BY: E.A. FIALA  
CHECKED BY: G.S. GOODRICH  
SHEET 180 OF 238

**CONCRETE (CONTINUED)**

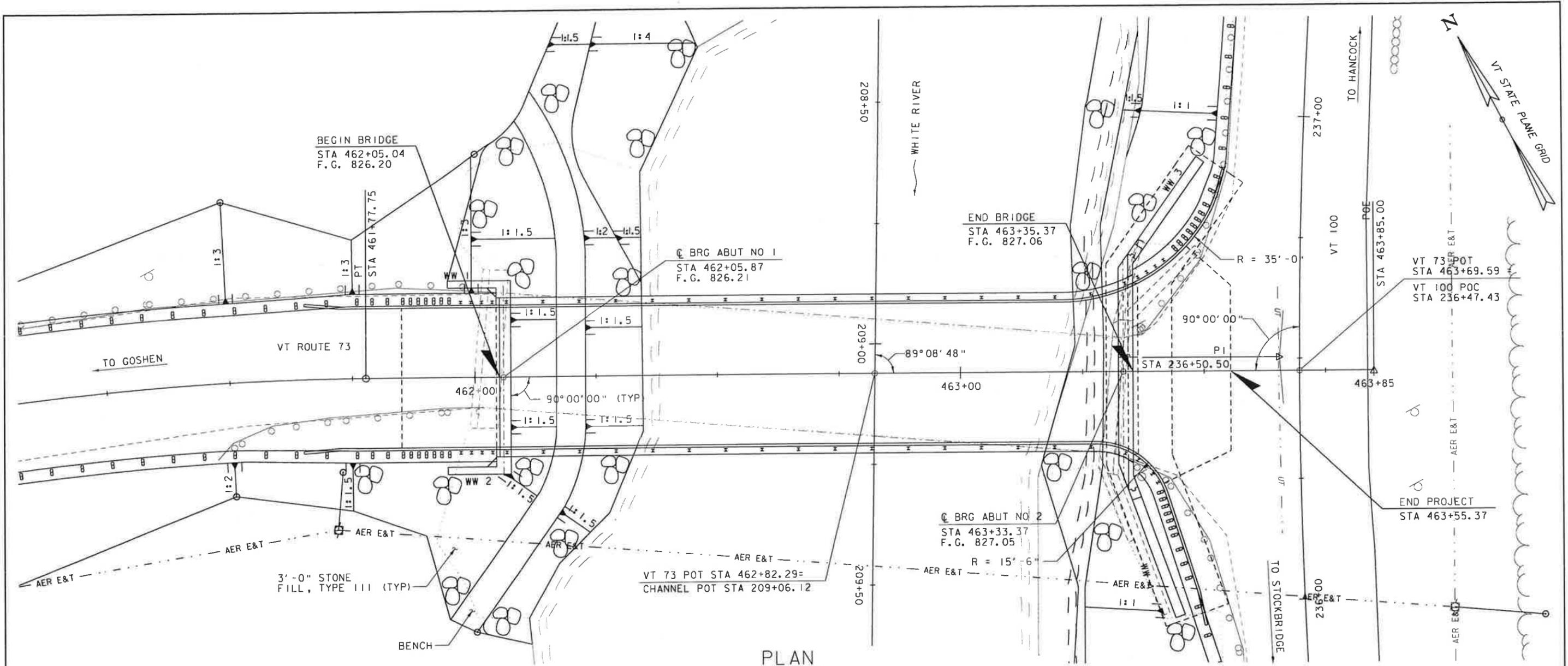
- 51. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
- 52. ALL REINFORCEMENT IN THE DECK, CURBS, BACKWALL AND WINGWALLS ABOVE THE HORIZONTAL CONSTRUCTION JOINT AT ABUTMENT NO. 2, AND THE REINFORCEMENT ABOVE THE CONSTRUCTION JOINT FOR THE INTEGRAL ABUTMENT AND WINGWALLS AT ABUTMENT NO. 1 SHALL BE ITEM 507.12, "REINFORCING STEEL, LEVEL II" IN ACCORDANCE WITH SECTION 507. ALL OTHER REINFORCING STEEL SHALL BE ITEM 507.11, "REINFORCING STEEL, LEVEL I" IN ACCORDANCE WITH SECTION 507.
- 53. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE:  
    SPACING    +/- 1"  
    CLEARANCE  +/- 1/4"
- 54. CUTTING AND REPAIRING DAMAGED AREAS OF COATED REINFORCING STEEL SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 507.04.
- 55. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE SMOOTH STEEL TROWEL FINISHED.

**SUBSTRUCTURE ON LEDGE**

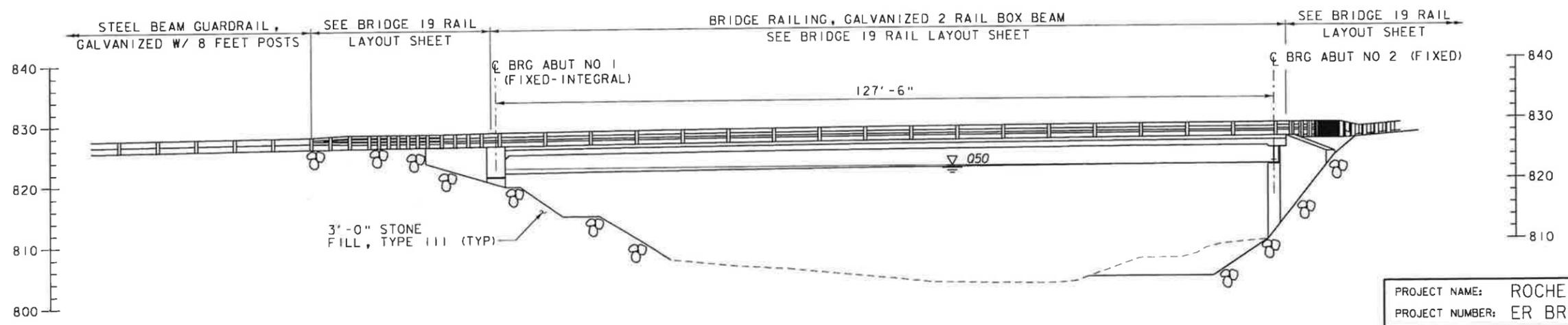
- 56. FOOTINGS AND SUB-FOOTINGS SHALL BE FOUNDED ON LEDGE WHICH HAS BEEN CLEANED OF ALL LOOSE ROCK AND DEBRIS TO ENSURE THAT SUBSTRUCTURES ARE PLACED ON COMPETENT ROCK.
- 57. UPON COMPLETION OF THE EXCAVATION FOR SUBSTRUCTURES FOUNDED ON BEDROCK AND PRIOR TO PLACING FORMWORK, THE RESIDENT ENGINEER SHALL NOTIFY THE PROJECT MANAGER AND THE VTRANS STATE GEOLOGIST. THE GEOLOGIST WILL DETERMINE IF THE BEDROCK IS COMPETENT TO OBTAIN THE REQUIRED NOMINAL BEARING RESISTANCE. THE CONTRACTOR SHALL NOTIFY THE GEOLOGIST 72 HOURS PRIOR TO WHEN THE ANALYSIS WILL BE NEEDED.
- 58. LEDGE THAT IS EXCAVATED FOR PLACEMENT OF FOOTINGS SHALL BE EXCAVATED TO PROVIDE A LEVEL SURFACE OR AS DIRECTED BY THE RESIDENT ENGINEER.
- 59. THE SUBSTRUCTURE UNITS AT ABUTMENT NO. 2 HAVE BEEN DESIGNED FOR THE TOP OF FOOTING ELEVATIONS SHOWN ON THE PLANS. IF THE LEDGE ELEVATION IS GREATER THAN 1'-0" BELOW THE DESIGN BOTTOM OF FOOTING, A SUBFOOTING SHALL BE POURED SO THAT THE DESIGN TOP OF FOOTING IS AT THE REQUIRED ELEVATION. CONCRETE FOR SUBFOOTING SHALL BE PAID FOR AS CLASS B CONCRETE.
- 60. THE LIMITS OF THE SUBFOOTING (IF REQUIRED) SHALL BE 1'-0" OUTSIDE THE LIMITS OF THE FOOTING.
- 61. WHERE LEDGE IS WITHIN ONE FOOT FROM THE BOTTOM OF THE ABUTMENT NO. 2 FOOTING AS DESIGNED, THE FOOTING MAY BE POURED TO THE TOP OF THE LEDGE USING ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B".
- 62. WHERE LEDGE IS BELOW TOP OF ABUTMENT NO. 2 FOOTING BY LESS THAN THE DEPTH OF FOOTING, THE LEDGE SHALL BE EXCAVATED DOWN TO THE INDICATED BOTTOM OF FOOTING FOR THE FULL WIDTH (TOE TO HEEL) OF THE CONFIGURATION.
- 63. IF LEDGE IS ABOVE THE DESIGN TOP OF ABUTMENT NO. 2 FOOTING, THE FOOTING MAY BE RAISED. BEFORE ANY UPWARD ADJUSTMENT IS MADE IN FOOTING ELEVATION, THE PROJECT MANAGER SHALL BE CONTACTED AND PROVIDED WITH A LEDGE PROFILE. NO FURTHER WORK SHALL BE DONE UNTIL APPROVAL OF THE CONFIGURATION IS RECEIVED.
- 64. #8 DOWELS SHALL BE DRILLED AND GROUTED INTO THE LEDGE AS SHOWN ON THE PLANS. THE DOWELS SHALL HAVE A 2'-0" EMBEDMENT INTO THE LEDGE AND SHALL EXTEND INTO THE FOOTING A MINIMUM OF 1'-6". IN AREAS WHERE A SUBFOOTING IS REQUIRED #8 DOWELS WILL ALSO BE USED AT THE INTERFACE BETWEEN SUBFOOTING AND FOOTING. THE DRILLING AND GROUTING SHALL BE PAID FOR UNDER THE ITEM 507.16, "DRILLING AND GROUTING DOWELS".



PROJECT NAME:	ROCHESTER
PROJECT NUMBER:	ER BRF 0162(18)
FILE NAME:	zllc332pn.dgn
PROJECT LEADER:	S.E. BURBANK
DESIGNED BY:	L.S. CHERVINCKY
BR 19 PROJECT NOTES (2 OF 2)	
PLOT DATE:	9/3/2013
DRAWN BY:	E.A. FIALA
CHECKED BY:	G.S. GOODRICH
SHEET	181 OF 238



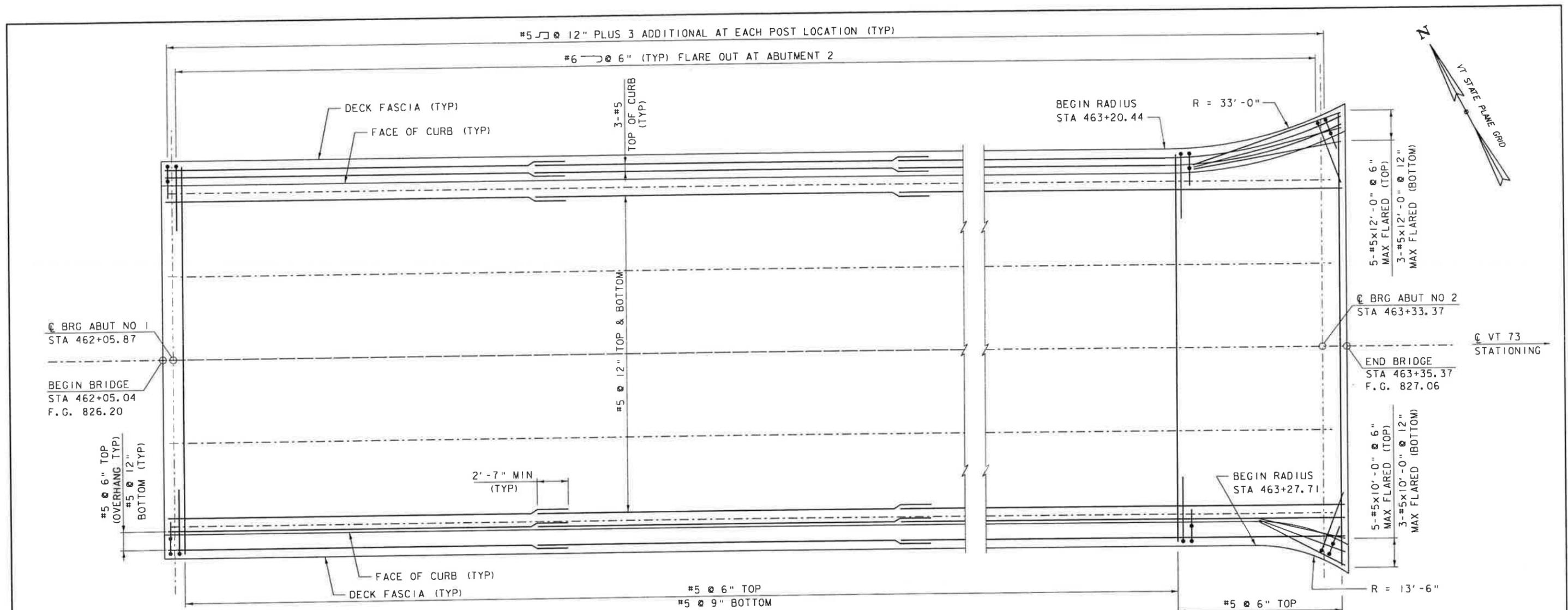
PLAN  
SCALE 1" = 10'-0"  
10 0 10



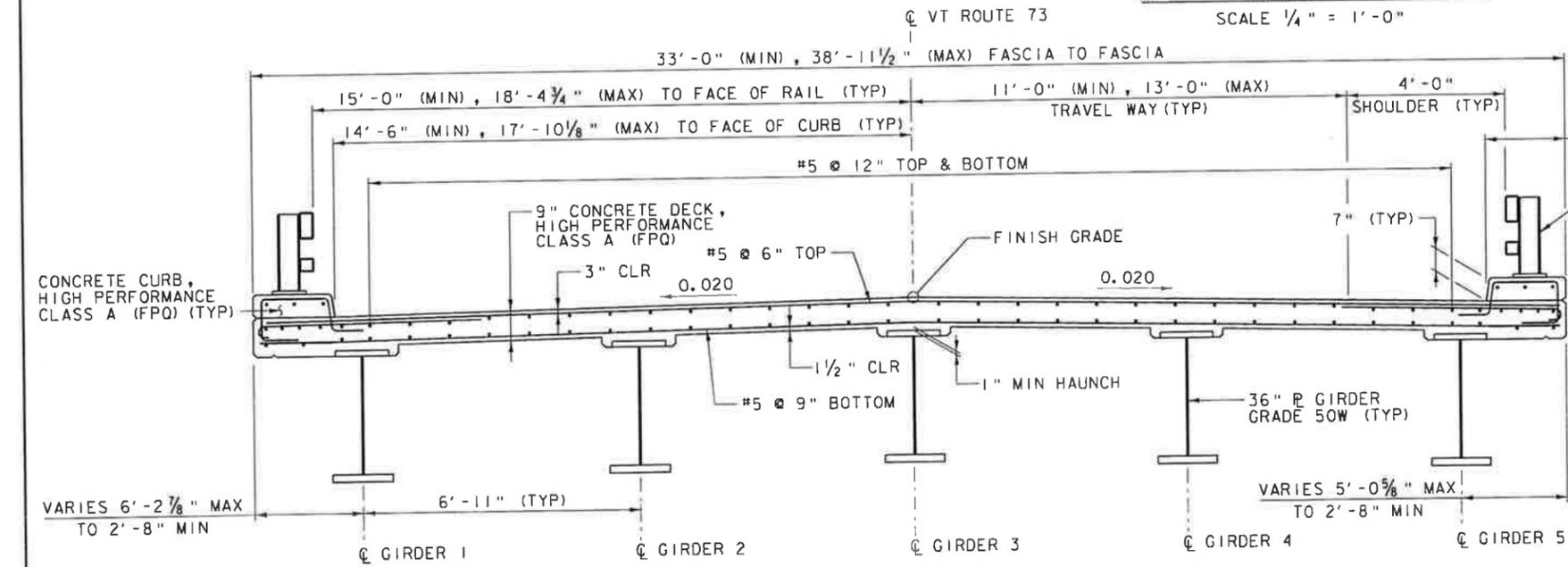
ELEVATION  
SCALE 1" = 10'-0"  
JE 3R

PROJECT NAME:	ROCHESTER	PLOT DATE:	9/3/2013
PROJECT NUMBER:	ER BRF 0162(18)	DRAWN BY:	C.L. CILLEY
FILE NAME:	zlic332pe.dgn	CHECKED BY:	G.S. GOODRICH
PROJECT LEADER:	S.E. BURBANK	SHEET	203 OF 238
DESIGNED BY:	C.L. CILLEY		
BR 19 PLAN AND ELEVATION (BRIDGE)			

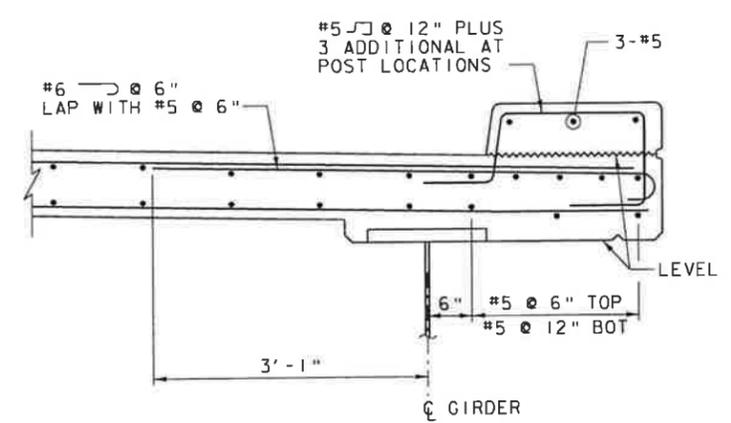




**DECK REINFORCING PLAN**  
SCALE 1/4" = 1'-0"



**TYPICAL DECK REINFORCEMENT**  
SCALE 1/2" = 1'-0"



**TYPICAL OVERHANG REINFORCEMENT**  
SCALE 1" = 1'-0"

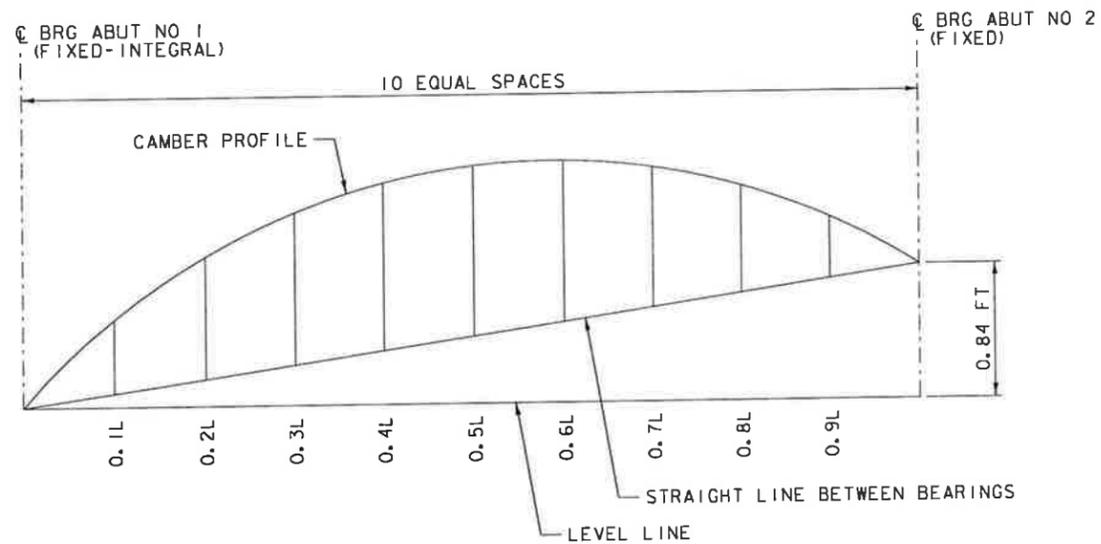
**NOTE:**  
 NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 ▲ = CUT TO FIT IN FIELD  
 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME:	ROCHESTER	PLOT DATE:	9/3/2013
PROJECT NUMBER:	ER BRF 0162(18)	DRAWN BY:	B.J. MASSE
FILE NAME:	211c332supl.dgn	CHECKED BY:	L. CHERVINCKY
PROJECT LEADER:	S.E. BURBANK	SHEET	204 OF 238
DESIGNED BY:	E.A. FIALA		
BR 19 DECK REINFORCING DETAILS			

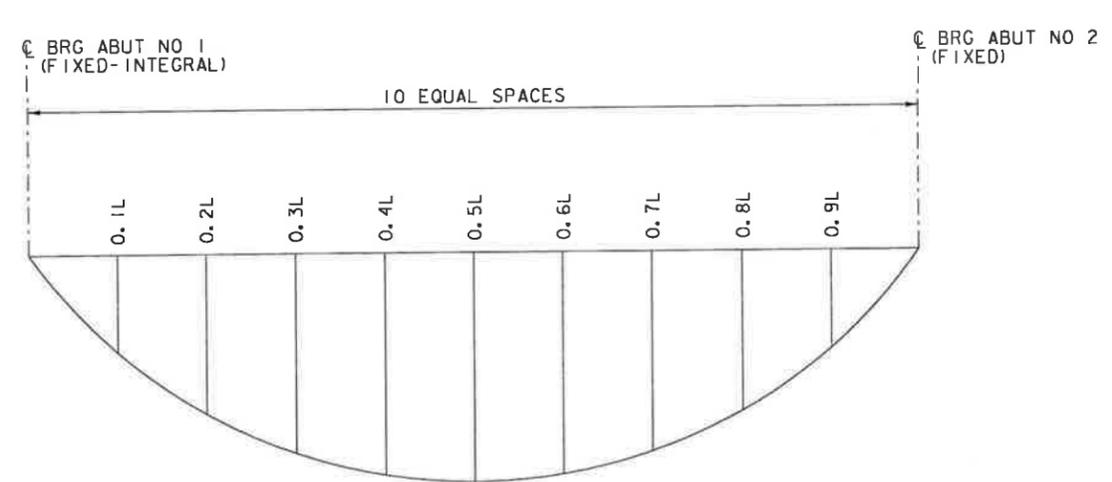




		CAMBER TABLE @ 1/10 POINTS (INCHES)										
POINT ON GIRDER		¢ BRG. ABUT #1	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	¢ BRG. ABUT #2
GIRDERS 1 THRU 5	STEEL DL	0.00	-0.88	-1.67	-2.28	-2.67	-2.81	-2.67	-2.28	-1.67	-0.88	0.00
	CONCRETE SLAB	0.00	-2.32	-4.39	-6.01	-7.04	-7.40	-7.04	-6.01	-4.39	-2.32	0.00
	SUPERIMPOSED DL	0.00	-0.16	-0.31	-0.43	-0.50	-0.52	-0.50	-0.43	-0.31	-0.16	0.00
	TOTAL DEFLECTION	0.00	-3.37	-6.37	-8.72	-10.21	-10.72	-10.21	-8.72	-6.37	-3.37	0.00
	RESIDUAL CAMBER	0.00	0.57	1.03	1.36	1.55	1.59	1.48	1.23	0.86	0.44	0.00
	TOTAL CAMBER	0.00	3.94	7.40	10.08	11.76	12.31	11.70	9.95	7.23	3.81	0.00



CAMBER DIAGRAM



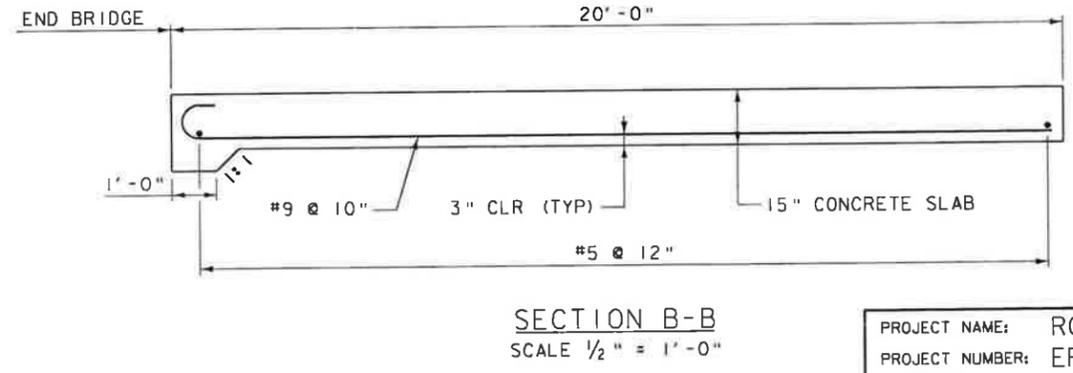
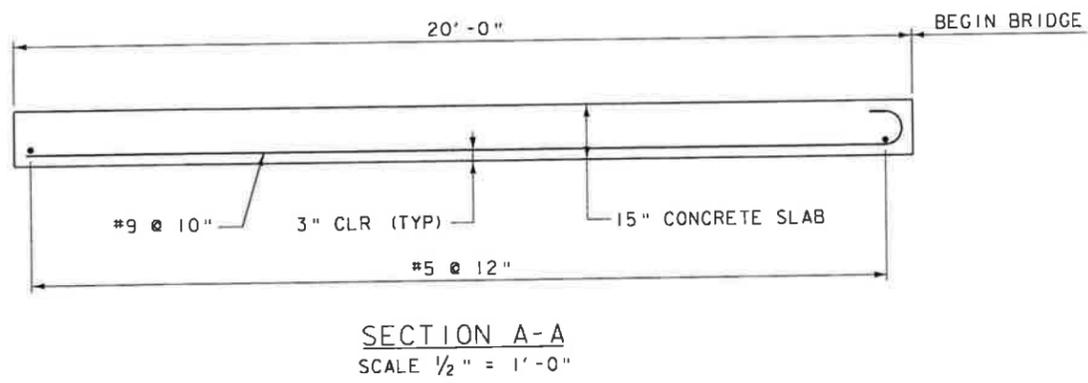
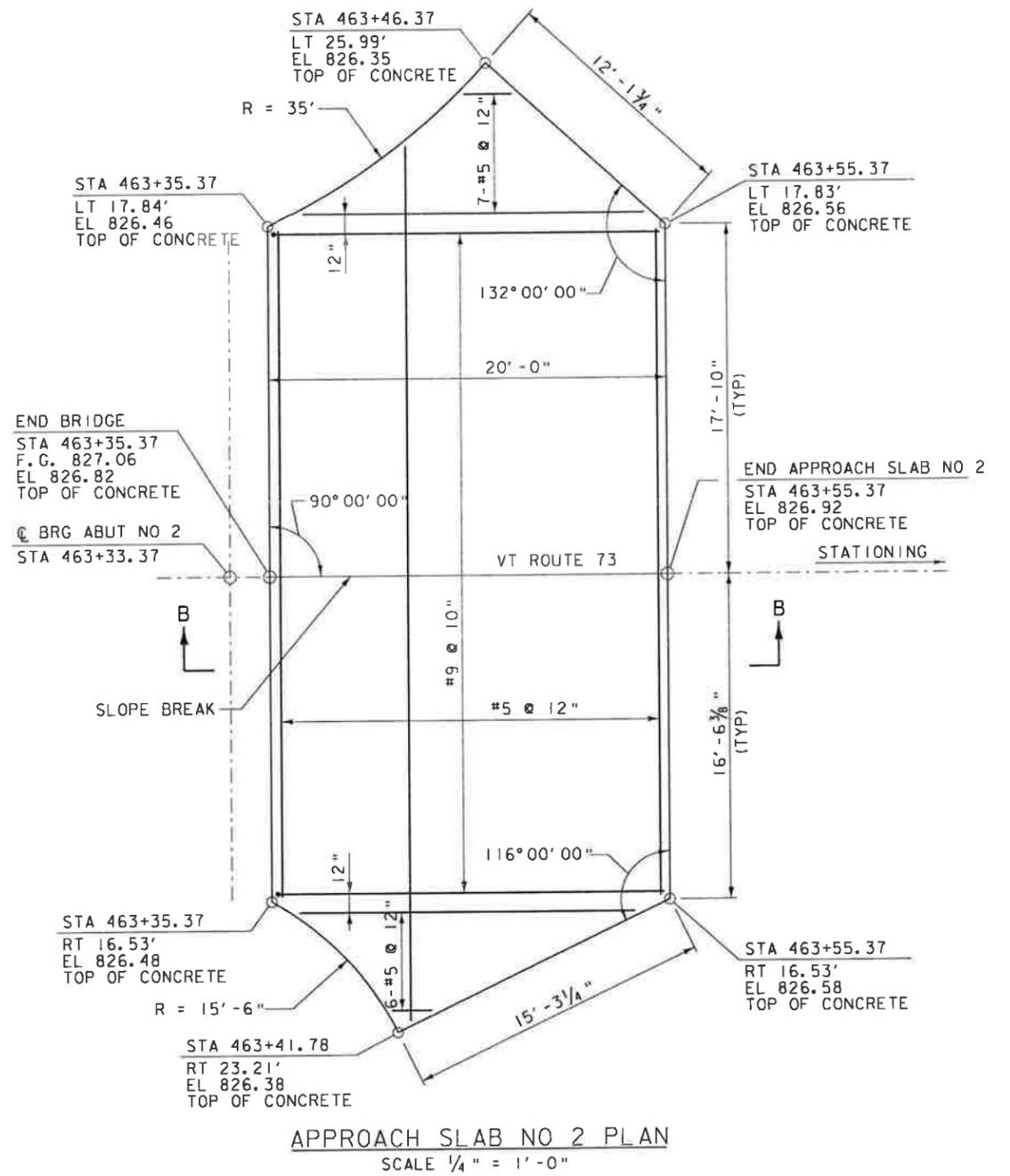
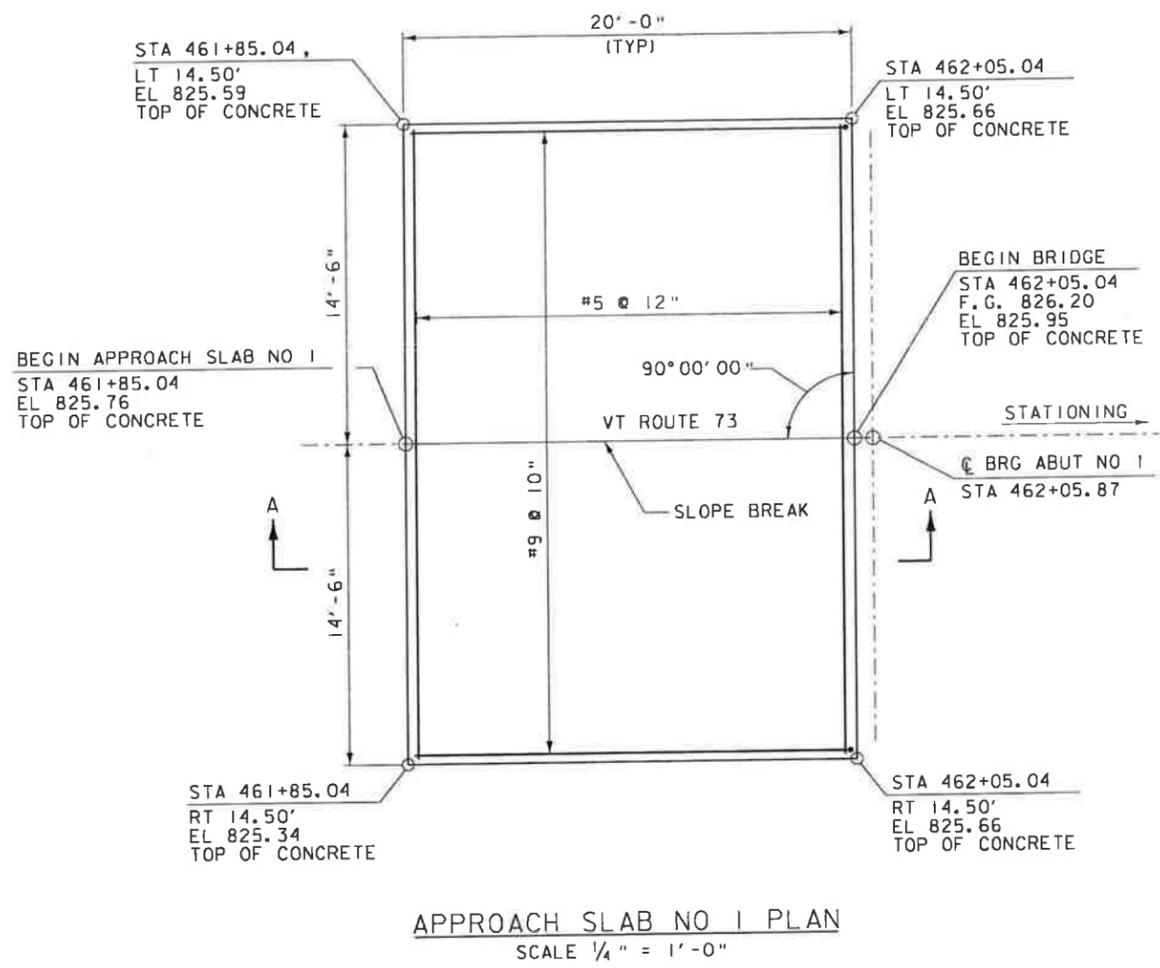
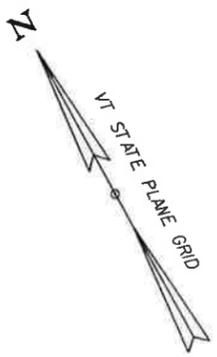
DEFLECTION DIAGRAM

PROJECT NAME: ROCHESTER  
 PROJECT NUMBER: ER BRF 0162(18)

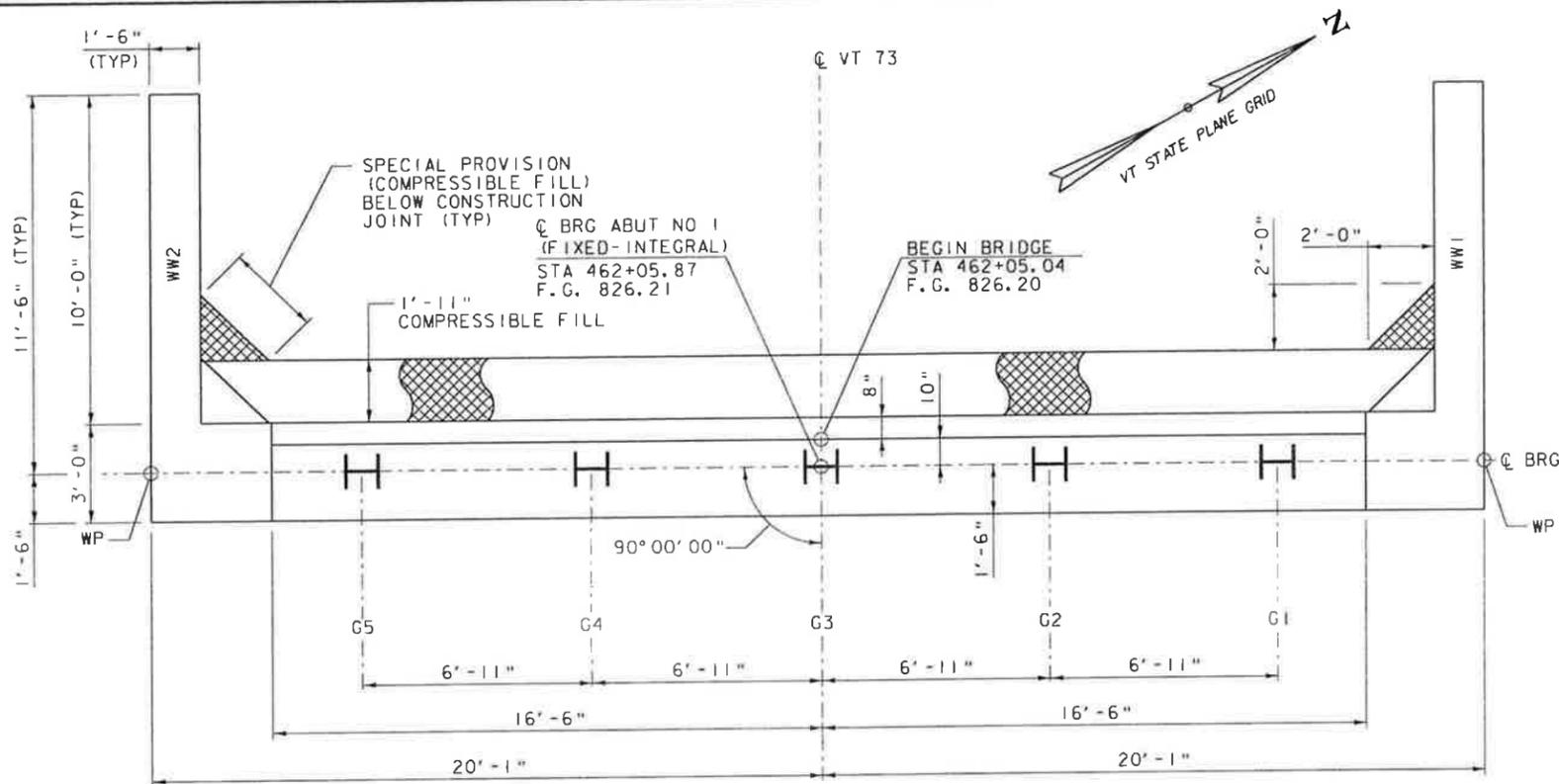
FILE NAME: z1lc332sup2.dgn  
 PROJECT LEADER: S.E. BURBANK  
 DESIGNED BY: L.S. CHERVINCKY  
 BR 19 MISCELLANEOUS DETAILS

PLOT DATE: 9/3/2013  
 DRAWN BY: B.J. MASSE  
 CHECKED BY: G.S. GOODRICH  
 SHEET 206 OF 238

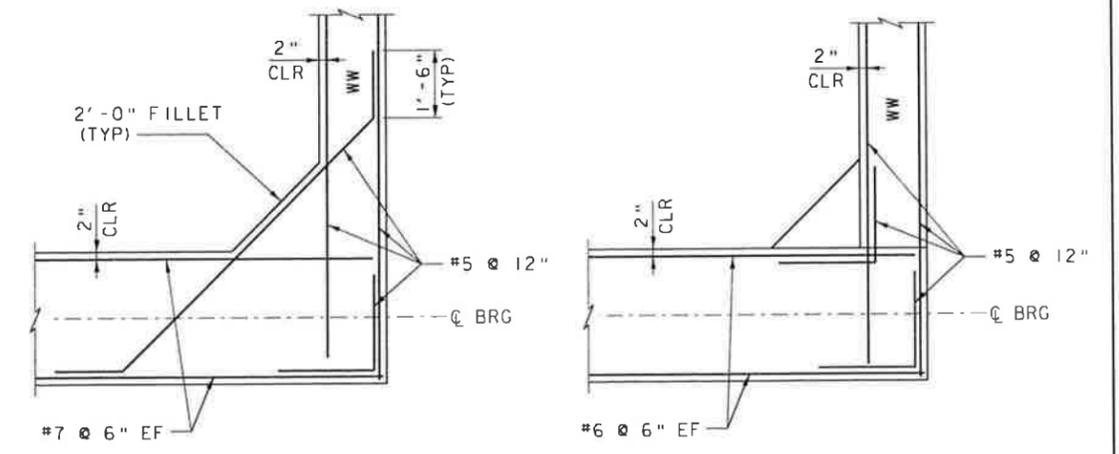




PROJECT NAME:	ROCHESTER	PLOT DATE:	9/3/2013
PROJECT NUMBER:	ER BRF 0162(18)	DRAWN BY:	B.J. MASSE
FILE NAME:	zllc332slab.dgn	CHECKED BY:	G.S. GOODRICH
PROJECT LEADER:	S.E. BURBANK	SHEET	208 OF 238
DESIGNED BY:	L.S. CHERVINCKY		
BR 19 APPROACH SLAB DETAILS			

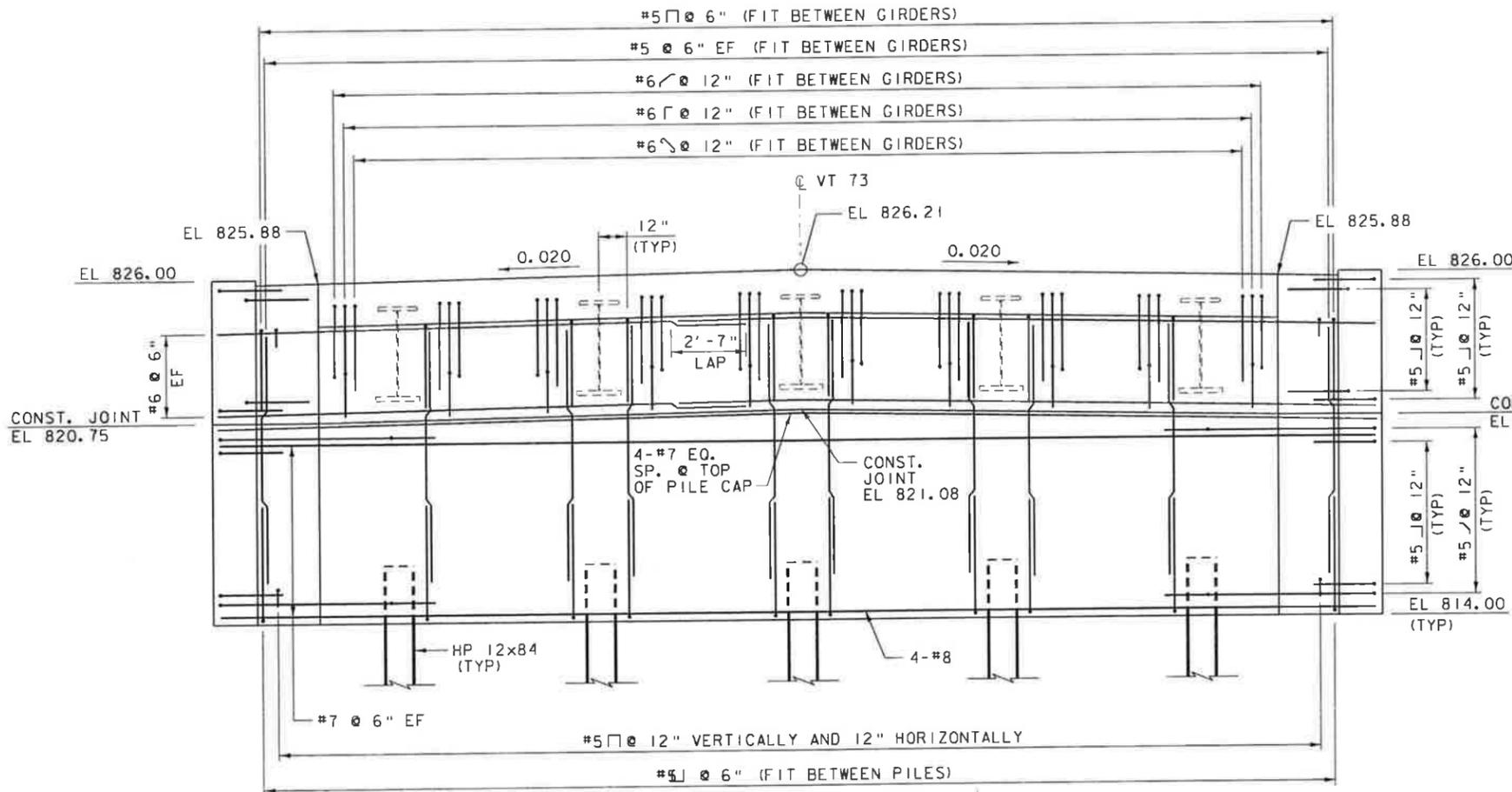


ABUTMENT NO 1 PLAN  
SCALE 3/8" = 1'-0"

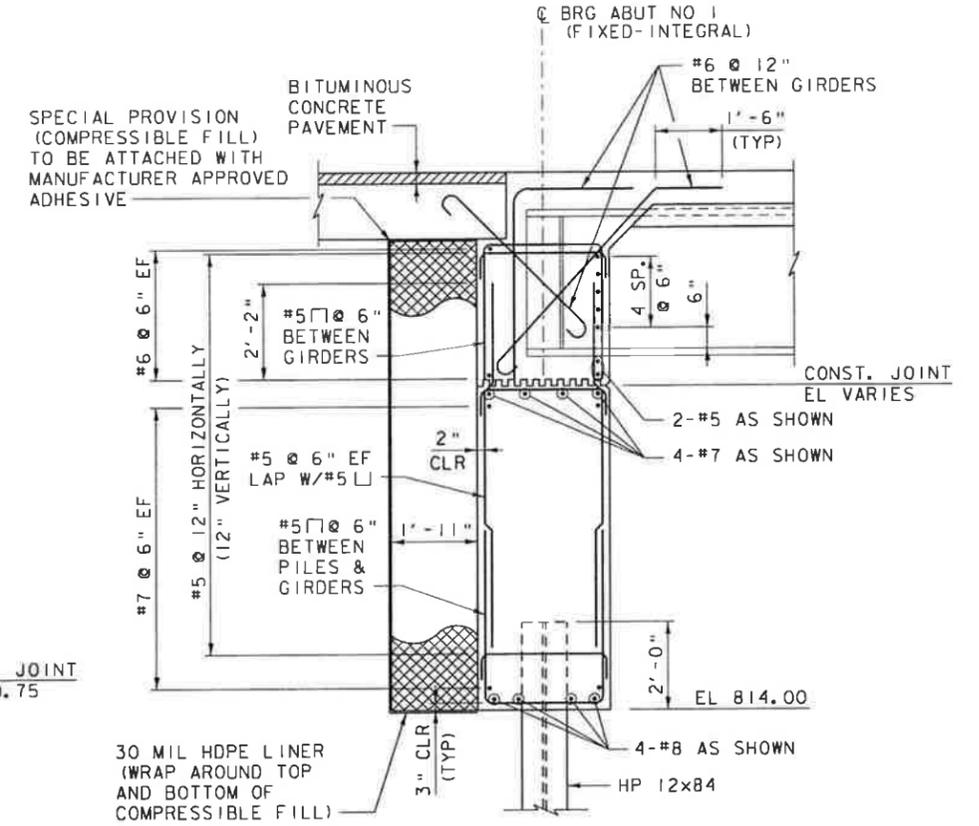


CORNER DETAIL BELOW  
CONSTRUCTION JOINT  
SCALE 1/2" = 1'-0"

CORNER DETAIL ABOVE  
CONSTRUCTION JOINT  
SCALE 1/2" = 1'-0"



ABUTMENT NO 1 ELEVATION  
SCALE 3/8" = 1'-0"

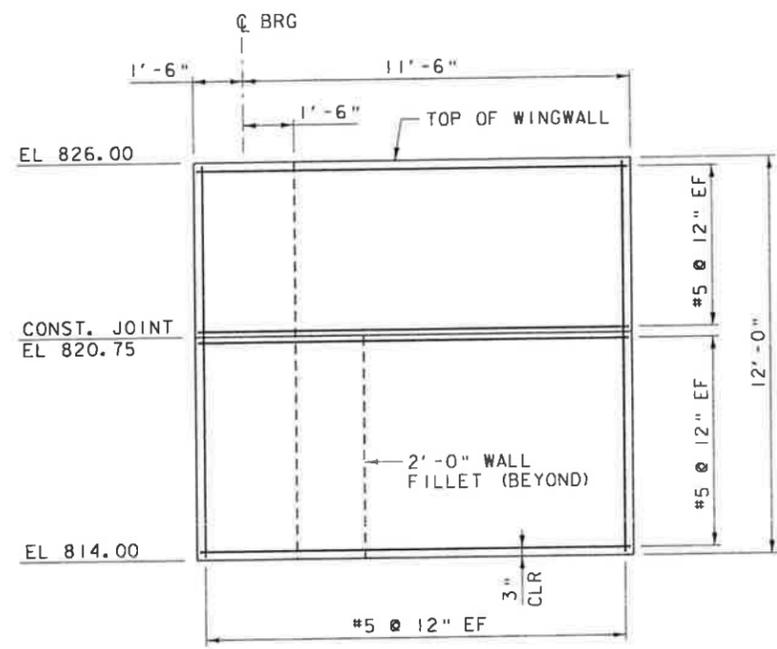


ABUTMENT NO 1 SECTION  
SCALE 1/2" = 1'-0"

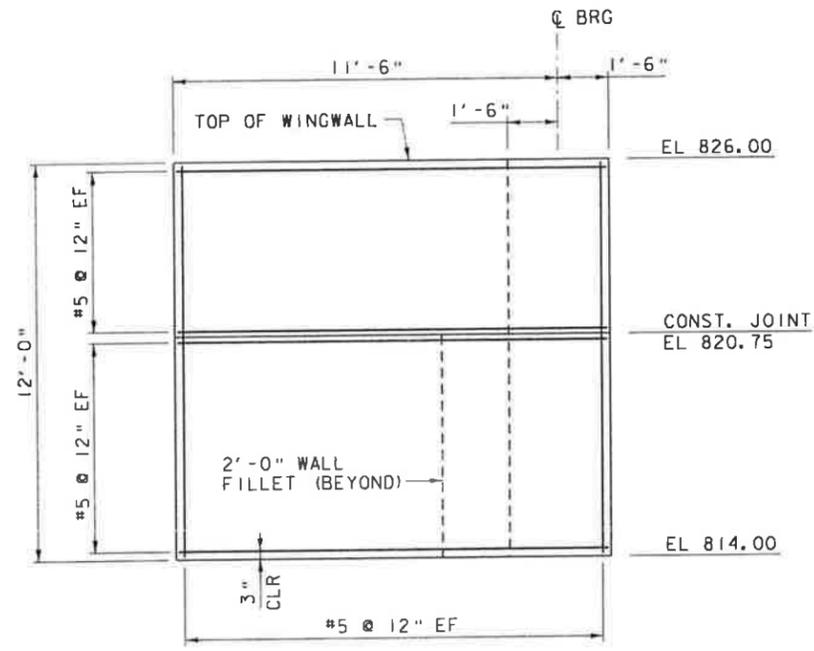
NOTE:  
NF = NEAR FACE  
FF = FAR FACE  
EF = EACH FACE  
▲ = CUT TO FIT IN FIELD  
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME:	ROCHESTER	PLOT DATE:	9/3/2013
PROJECT NUMBER:	ER BRF 0162(18)	DRAWN BY:	B.J. MASSE
FILE NAME:	zllc332sub.dgn	CHECKED BY:	G.S. GOODRICH
PROJECT LEADER:	S.E. BURBANK	DESIGNED BY:	J.T. KLEIN
BR 19 ABUTMENT NO 1 PLAN & ELEVATION			SHEET 209 OF 238

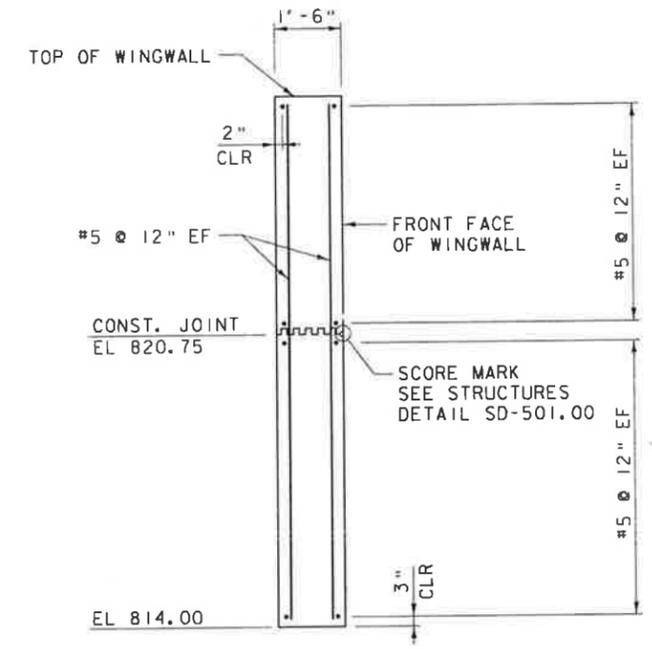




WINGWALL NO 1 ELEVATION  
SCALE 3/8" = 1'-0"



WINGWALL NO 2 ELEVATION  
SCALE 3/8" = 1'-0"



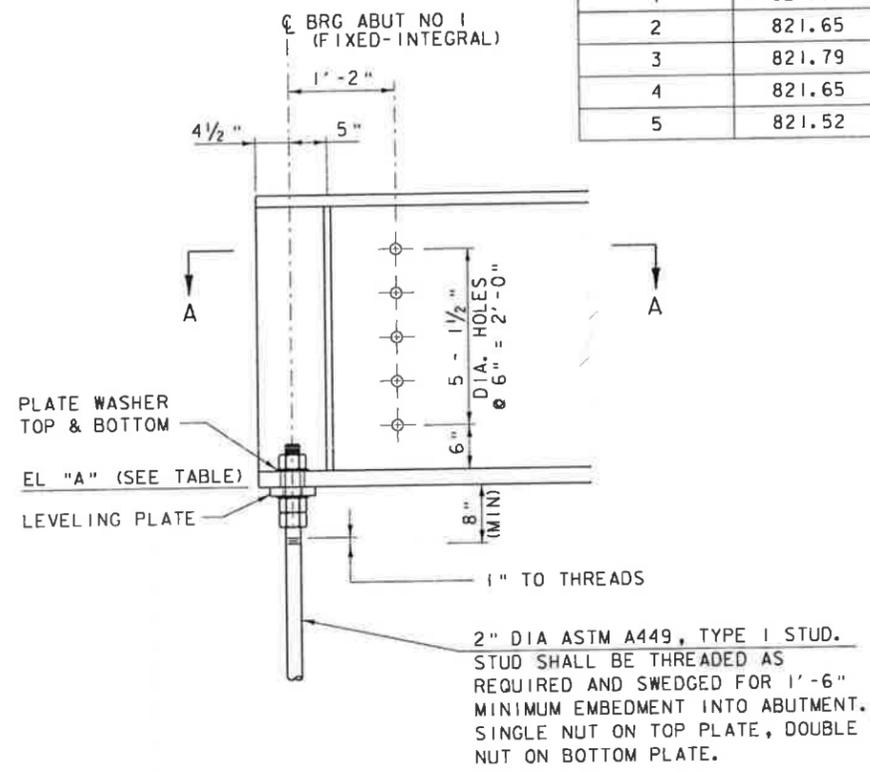
WINGWALL TYPICAL  
SCALE 1/2" = 1'-0"

**NOTE:**  
 NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 ▲ = CUT TO FIT IN FIELD  
 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

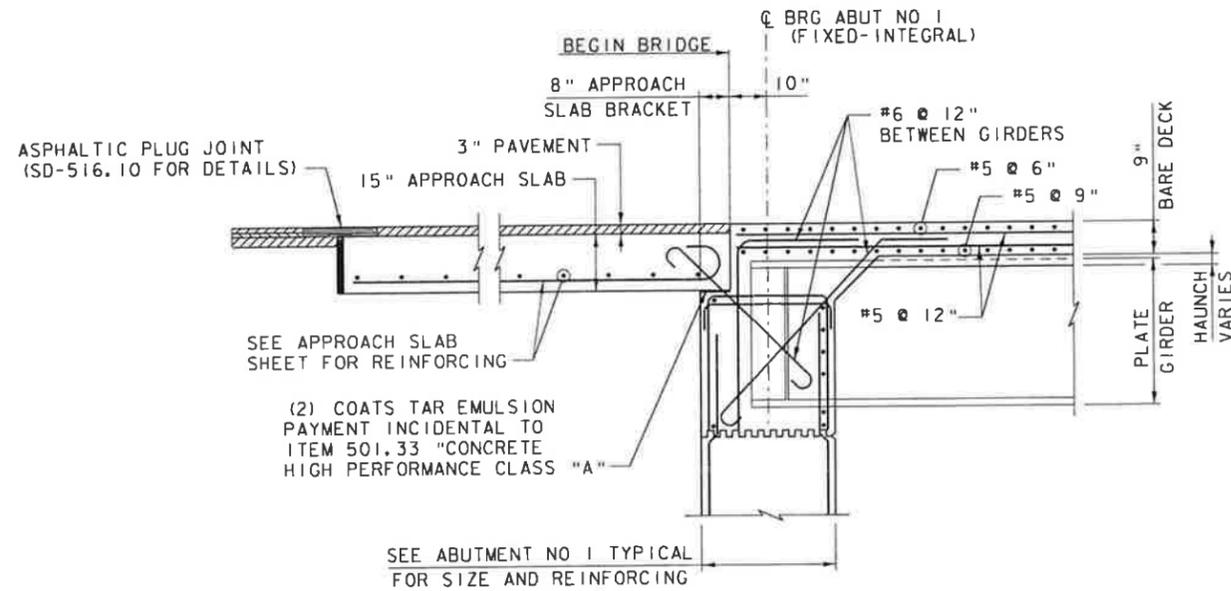
PROJECT NAME:	ROCHESTER
PROJECT NUMBER:	ER BRF 0162(18)
FILE NAME:	211c332sub.dgn
PROJECT LEADER:	S.E. BURBANK
DESIGNED BY:	J.T. KLEIN
BR 19 ABUTMENT NO 1 WINGWALLS	
PLOT DATE:	9/3/2013
DRAWN BY:	B.J. MASSE
CHECKED BY:	G.S. GOODRICH
SHEET	210 OF 238



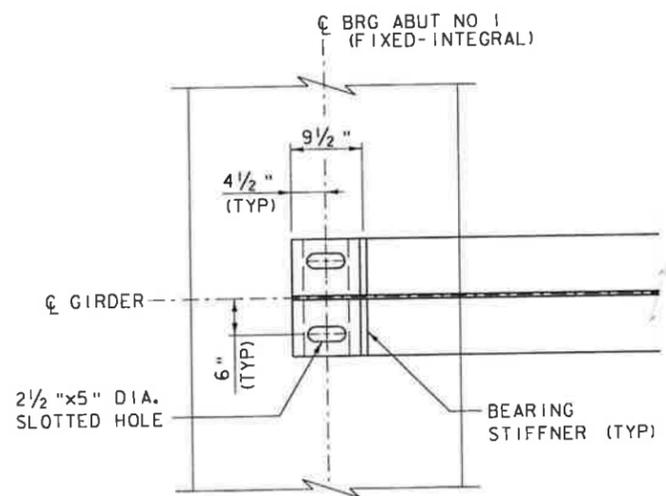
GIRDER ELEVATION TABLE	
GIRDER NO	EL "A"
1	821.51
2	821.65
3	821.79
4	821.65
5	821.52



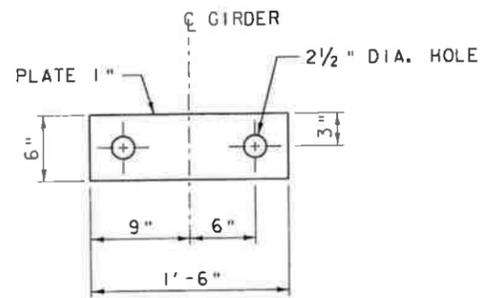
**GIRDER END DETAIL**  
SCALE 1" = 1'-0"



**BEGIN BRIDGE INTEGRAL ABUTMENT DETAIL**  
SCALE 1/2" = 1'-0"



**SECTION A-A**  
SCALE 1" = 1'-0"



**LEVELING PLATE**  
SCALE 1/2" = 1'-0"

**NOTE:**

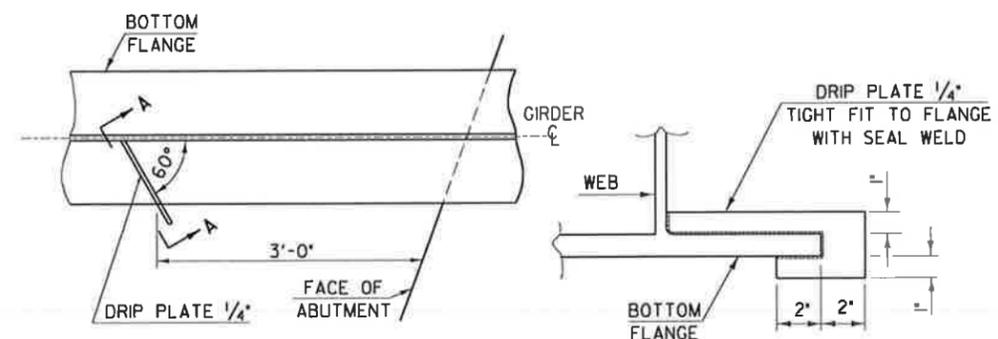
- ANCHOR STUDS AND LEVELING PLATES SHALL BE PAID FOR BY ITEM 506.55, "STRUCTURAL STEEL, PLATE GIRDER (FPQ)".



PROJECT NAME: ROCHESTER	PLOT DATE: 9/3/2013
PROJECT NUMBER: ER BRF 0162(18)	DRAWN BY: B.J. MASSE
FILE NAME: z1lc332sub.dgn	DESIGNED BY: L.S. CHERVINCKY
PROJECT LEADER: S.E. BURBANK	CHECKED BY: G.S. GOODRICH
BR 19 ABUTMENT NO 1 DETAILS	SHEET 211 OF 238

**STRUCTURAL STEEL GENERAL NOTES:**

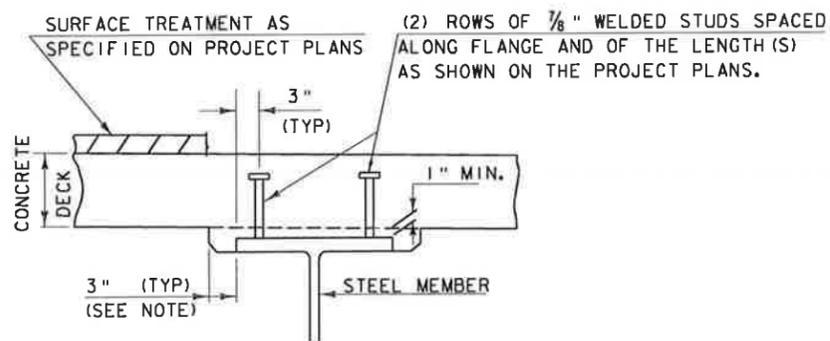
1. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH-STRENGTH BOLTS IN 15/16" DIAMETER HOLES, PER SUBSECTION 506.J9, UNLESS OTHERWISE SPECIFIED.
2. ALL HOLES IN THE WEBS OF THE FASCIA GIRDERS THAT ARE NOT OTHERWISE FILLED, SHALL BE FILLED WITH EITHER BUTTON HEAD OR HEX HEAD BOLTS. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.J9.
3. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF SUBSECTION 506.I0.
4. ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
5. STRUCTURAL STEEL MEMBERS DESIGNATED 'CVN' IN THE PLANS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH SUBSECTION 714.O1 OF THE STANDARD SPECIFICATIONS.
6. ENDS OF GIRDERS ARE TO BE VERTICAL IN THEIR FINAL POSITION.
7. AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF THE GIRDERS SHALL BE TAKEN AS DIRECTED BY THE RESIDENT ENGINEER FOR USE IN DETERMINING FINISHED GRADES.



**PLAN DRIP PLATE**

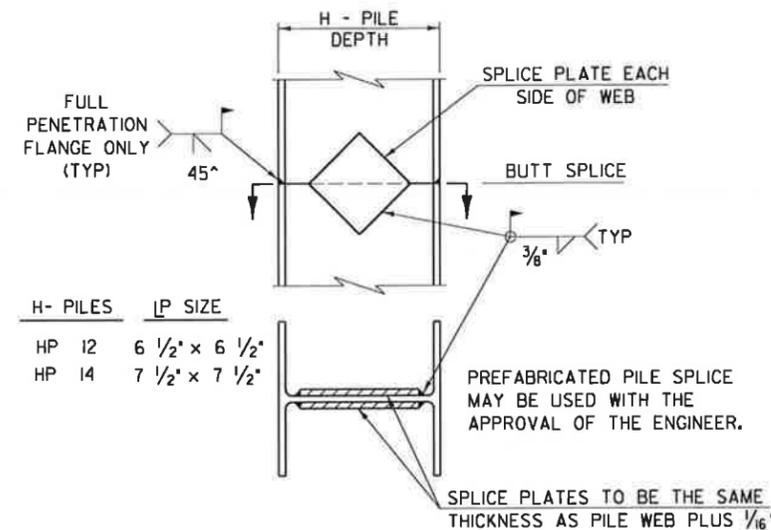
**SECTION A - A**

NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA GIRDERS ON THE HIGH SIDE OF ALL PIERS AND ABUTMENTS OR AS INDICATED ON PROJECT PLANS.



NOTE:  
THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. ANY VOIDS RESULTING FROM FORMING SYSTEM ELEMENTS SHALL BE FILLED WITH JOINT SEALER, POLYURETHANE MEETING THE REQUIREMENTS OF SECTION 524. THE COST OF THE JOINT SEALER, POLYURETHANE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

**HAUNCH AND SHEAR CONNECTOR DETAIL**



**DETAIL OF PILE SPLICE**

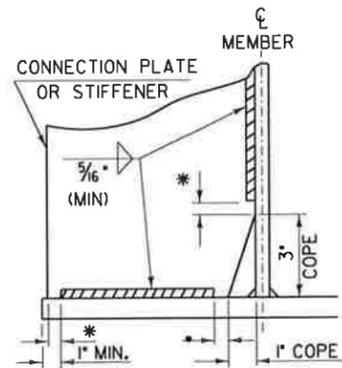
DETAILS ON THIS SHEET ARE 'NOT TO SCALE' UNLESS NOTED OTHERWISE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
JUNE 4, 2010	MODIFIED NOTES

**STRUCTURAL STEEL  
DETAILS & NOTES**

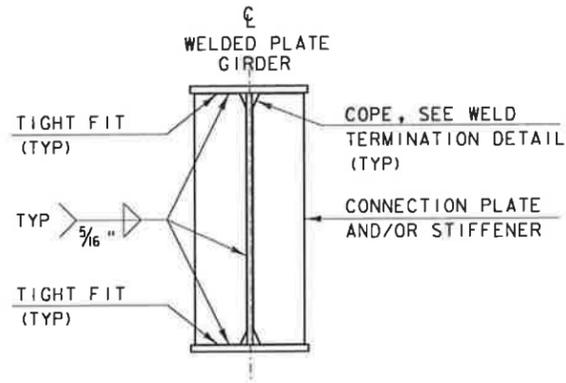


**STRUCTURES  
DETAIL  
SD-6 01.00**



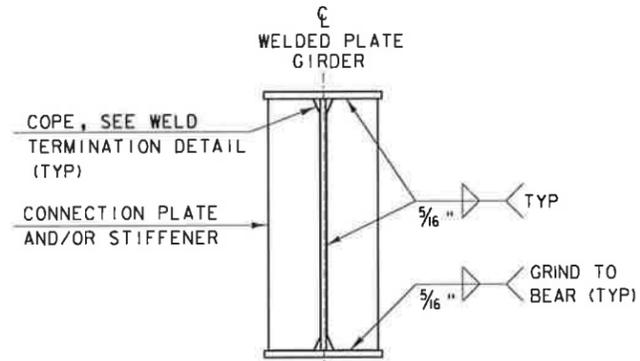
WELD TERMINATION AND COPING  
DETAILS FOR STEEL MEMBERS

\*NO WELD FOR 3/8" MIN. 7/8" MAX. (EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)

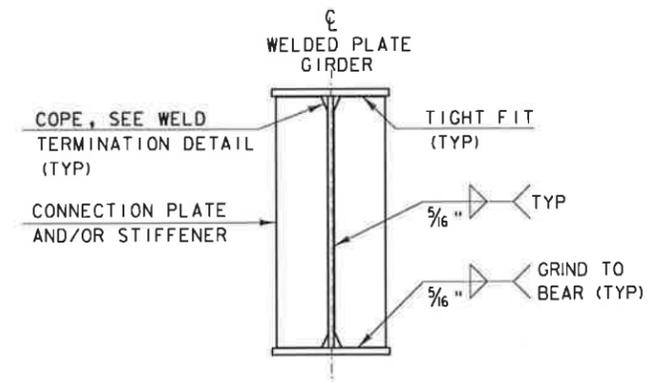


INTERMEDIATE CONNECTION PLATES  
AND/OR STIFFENERS FOR WELDED  
PLATE GIRDERS

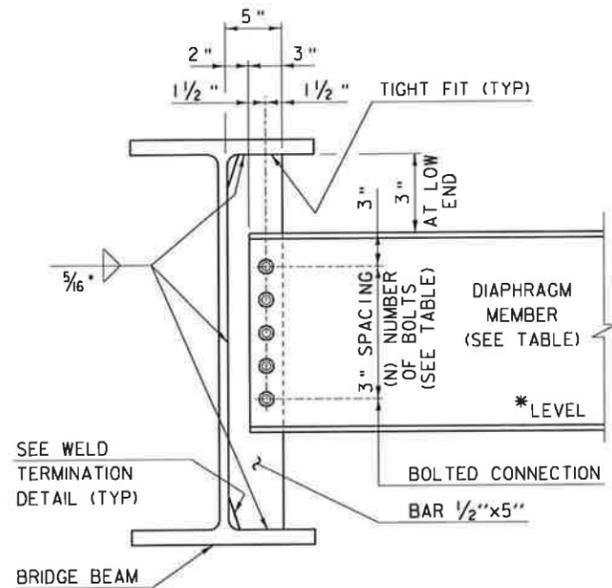
INTERMEDIATE DETAIL IS ONLY USED WHEN PLATE DOES NOT OCCUR AT AN ABUTMENT OR PIER.



ABUTMENT BEARING STIFFENERS  
AND/OR CONNECTION PLATES  
FOR WELDED PLATE GIRDERS



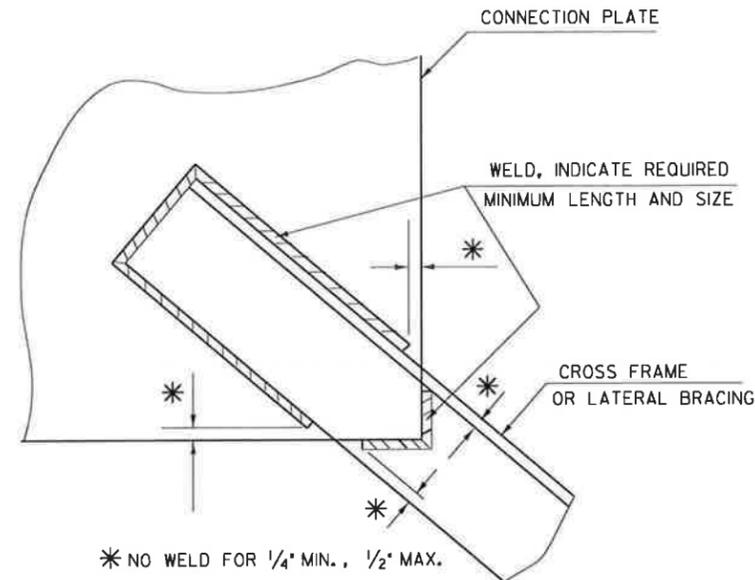
PIER BEARING STIFFENERS  
AND/OR CONNECTION PLATES  
FOR WELDED PLATE GIRDERS



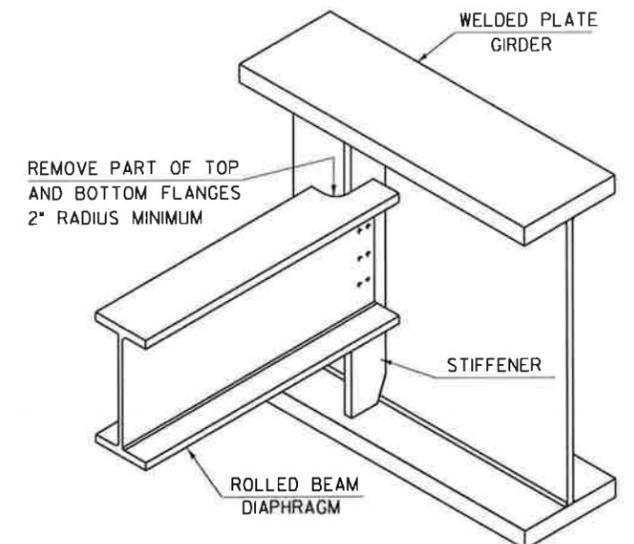
INTERMEDIATE DIAPHRAGMS  
FOR 24" TO 48" BRIDGE BEAMS

\* IF CLEARANCE CANNOT BE MET, DIAPHRAGM MAY BE SLOPED.

	DEPTH	DIAPHRAGM MEMBER	(N) BOLTS
ROLLED BEAM	24"	C15x33.9	4
	30"		
	31"	MC18x42.7	5
	36"		
PLATE GIRDER WEB	37"	W21x44	6
	42"		
PLATE GIRDER WEB	31"	W27x84	7
	36"		
	37"	W33x118	9
	42"		
	43"	W36x135	10
	48"		



WELD LOCATION DETAIL AT CROSS  
FRAMES AND LATERAL BRACING



ROLLED BEAM USED AS DIAPHRAGM

DETAILS ON THIS SHEET ARE 'NOT TO SCALE' UNLESS NOTED OTHERWISE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
MAY 2, 2011	ADD INTERMEDIATE DIAPHRAGMS DETAIL & ADD NOT TO SCALE NOTE

# STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES



**STRUCTURES  
DETAIL  
SD-6 02.00**