

SECTION A - A

ELEVATION

SECTION B – B

## END BOLTING DETAILS

[illegible]

**PROCEDURE FOR END BOLTING  
PARTIAL LENGTH COVER PLATES:**

1. FABRICATE THE NEW SPICE PLATES AND FILLER PLATE.
2. DRILL THE BOLT HOLES IN THE EXISTING GIRDER IN ACCORDANCE WITH ARTICLE 613 OF THE N.Y.S.S.C.M. THIS GENERALLY WILL MEAN SUB-DRILLING AND REAMING ALL HOLES, OR DRILLING TO A TEMPLATE.
3. REMOVE ALL DIRT, PAINT, RUST, GREASE, OIL AND OTHER FOREIGN MATERIAL WITHIN [REDACTED] OF THE CONTACT AREA OF THE EXISTING GIRDER, NEW SPICE PLATES, AND NEW FILLER PLATE BY BLASTING IN ACCORDANCE WITH THE SPECIFICATION.
4. TEST THE TRANSVERSE FILLET WELD AND ALL LONGITUDINAL FILLET WELDS JOINING THE EXISTING COVER PLATE TO THE GIRDER WITHIN [REDACTED] OF THE END OF THE EXISTING COVER PLATE BY PERFORMING MAGNETIC PARTICLE INSPECTION.
5. REMOVE THE ENTIRE TRANSVERSE FILLET WELD BY GRINDING. GRINDING SHALL NOT REMOVE MORE THAN [REDACTED] OF THE BASE METAL IN THE FLANGE OR COVER PLATE.
6. IF ANY INDICATION IS FOUND IN THE BASE METAL OF THE FLANGE, COVER PLATE OR LONGITUDINAL WELDS, OR IF THE INDICATION CANNOT BE REMOVED BY GRINDING TO THE LIMITS ABOVE, IMMEDIATELY CONTACT THE DIRECTOR OF STRUCTURES DESIGN TO DETERMINE THE NEED FOR REPAIRS\*.
7. PRIME ALL EXPOSED METAL SURFACES IN ACCORDANCE WITH THE SPECIFICATIONS.
8. INSTALL THE SPICE PLATES AND FILLER PLATE.
9. FINISH PAINTING THE ASSEMBLY IN ACCORDANCE WITH THE SPECIFICATIONS.

\* - THESE REPAIRS ARE CONSIDERED EXTRA WORK AND SHALL BE PAID FOR PER GENERAL NOTE 14.

GENERAL NOTES:


1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NEW YORK STATE STEEL CONSTRUCTION MANUAL (NYSSCM), WITH CURRENT ADDENDA, EXCEPT AS MODIFIED HEREIN.
2. ALL NEW STEEL SHALL CONFORM TO ASTM A709 GR36 SPECIFICATIONS. COPIES OF CERTIFIED MILL TEST REPORTS SHALL BE PROVIDED.
3. ALL BOLTS SHALL BE [REDACTED] WITH HARDENED WASHERS UNDER THE HEAD AND NUT. ALL HOLES SHALL BE [REDACTED] DIAMETER AND SHALL CONFORM TO ARTICLE 613 OF THE N.Y.S.S.C.M.
4. ALL MAGNETIC PARTICLE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 18 OF THE NYSSCM USING THE YOKE TECHNIQUE EXCEPT THAT TESTS MUST BE PERFORMED IN BOTH AC & DC OUTPUT MODES.
5. IF REQUIRED ALL ULTRASONIC TESTING SHALL BE PERFORMED BY A NEW YORK STATE CERTIFIED ULTRASONIC TECHNICIAN IN ACCORDANCE WITH SECTION 17 OF THE NYSSCM, AND PAID FOR PER NOTE 14.
6. IF REQUIRED ALL DYE PENETRANT TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 19 OF THE NYSSCM, AND PAID FOR PER NOTE 14.
7. ALL NONDESTRUCTIVE TEST REPORTS SHALL BE SUBMITTED TO THE AUTHORITY FOR REVIEW.
8. THE CONTRACTOR SHALL GRIND THE EXISTING TRANSVERSE FILLET WELD AS REQUIRED, TO LIMIT THE TOE DIMENSION TO [REDACTED] THE FINISHED GRINDING SHALL BE SMOOTH AND AS DESCRIBED IN ARTICLE 723 OF THE N.Y.S.S.C.M.
9. ALL FINISHED GRINDING SHALL BE PARALLEL TO THE DIRECTION OF PRINCIPAL STRESS UNLESS THE SURFACE ROUGHNESS IS LESS THAN [REDACTED]
10. THE BOLTS IN THE SPLICE PLATES SHALL NOT BE TIGHTENED DURING THE APPLICATION OF LIVE LOAD STRESS.
11. THE COST OF FIELD DRILLING BOLT HOLES SHALL BE INCLUDED IN ITEM 564.70990425.
12. ALL PAINTING AND ENVIRONMENTAL PROTECTION COSTS SHALL BE INCLUDED IN THE APPROPRIATE PAINTING OR ENVIRONMENTAL PROTECTION ITEM.
13. ALL OTHER COSTS FOR THE END BOLTED CONNECTIONS, INCLUDING TESTING, GRINDING, NEW STEEL WITH BOLT HOLES, BOLTS, NUTS AND WASHERS ETC, SHALL BE INCLUDED IN ITEM 564.70990425.
14. IF ANY INDICATIONS ARE FOUND, ANY REQUIRED REPAIRS SHALL BE CONSIDERED EXTRA WORK AND SHALL BE PAID FOR BY FORCE ACCOUNT OR AN AGREED PRICE.

**NOTES TO THE DESIGNER**  
(NOT TO BE SHOWN ON THE FINAL PLANS)

1. THIS DETAIL IMPROVES THE FATIGUE CATEGORY FOR THE REMAINING LIFE TO CATEGORY "B".
2. THE ACTUAL LIVE LOAD STRESS RANGE SHALL BE LESS THAN ALLOWABLE FOR A CATEGORY "B" DETAIL.
3. THE REMAINING FATIGUE LIFE, BASED ON THE CATEGORY "B" DETAIL, SHALL BE CONSISTENT WITH PROJECT REQUIREMENTS.
4. THE END-BOLTED CONNECTION SHALL BE DESIGNED IN ACCORDANCE WITH FOLLOWING PROCEDURE:
  - A. ASSUMING THE MODIFICATION WILL BE DONE IN PLACE AND THE EXISTING DEAD LOAD STRESS WILL REMAIN IN THE BEAM, DETERMINE THE MAXIMUM ACTUAL LIVE LOAD STRESS IN THE SPLICE PLATE THAT WOULD OCCUR AT THE END OF THE COVER PLATE.

IF THE COVER PLATE WILL NOT BE MODIFIED IN PLACE, THE DESIGNER SHALL DETERMINE THE MAXIMUM ACTUAL STRESS THAT THE SPLICE PLATE WILL EXPERIENCE ASSUMING COMPOSITE ACTION WITH THE GIRDER AFTER INSTALLATION OF THE SPLICE PLATES.
  - B. THE FORCE TO BE DESIGNED FOR IS THE MAXIMUM STRESS FOUND IN STEP 'A' MULTIPLIED BY THE COVER PLATE AREA.
  - C. THE NEW SPLICE PLATE SHALL BE CAPABLE OF RESISTING THE FORCE FOUND IN STEPS 'B' IN TENSION, AND SHALL HAVE ITS NEUTRAL AXIS LOCATED AS CLOSE AS POSSIBLE TO THE NEUTRAL AXIS OF THE EXISTING COVER PLATE.
  - D. THE NUMBER OF BOLTS PROVIDED ON EACH HALF OF THE SPLICE SHALL BE CAPABLE OF RESISTING THE FORCE FOUND IN STEP 'B' BASED ON DOUBLE SHEAR, CLASS 'A' FAYING SURFACES, WITH [REDACTED] BOLTS. IF THE INSIDE SPLICE PLATES ARE NOT USED, THE NUMBER OF BOLTS PROVIDED SHALL BE DETERMINED BASED ON SINGLE SHEAR.
5. THE SPLICE PLATE AND FILLER PLATE DIMENSIONS SHOULD BE BASED ON A 1 INCH GAP BETWEEN THE EXISTING COVER PLATE AND THE NEW FILLER PLATE.
6. THE NOTES AND DETAILS ON THE PLANS SHOULD BE CONSISTENT WITH THE ASSUMPTIONS MADE ABOVE.
7. THE MINIMUM PLATE THICKNESS SHALL BE [REDACTED]
8. IF THE SPLICE PLATES ARE IN COMPRESSION, THE BOLT SPACING MUST ALSO MEET THE STITCHING AND SEALING REQUIREMENTS OF SUBSECTION 10.24.6 OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES - 17th EDITION.

PE STAMP &  
SIGNATURE ARE  
REQUIRED  
ON THIS SHEET.


DATE	DESCRIPTION	BY	SYM.
<i>REVISIONS</i>			
<b>NEW YORK STATE THRUWAY AUTHORITY DEPARTMENT OF ENGINEERING 200 SOUTHERN BLVD., ALBANY, N.Y. 12209</b>			
TITLE OF PROJECT			
<b>TITLE OF PROJECT LINE 1</b>			
<b>TITLE OF PROJECT LINE 2</b>			
LOCATION OF PROJECT			
<b>LOCATION OF PROJECT LINE 1</b>			
<b>LOCATION OF PROJECT LINE 2</b>			
TITLE OF DRAWING			
<b>PARTIAL LENGTH COVER PLATE END BOLTING DETAILS</b>			
		CONTRACT NUMBER:	
		<b>TA</b>	
		DATE:	
		3/10	
		DRAWING NUMBER:	
		*	