

A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: September 17, 2013
Date of Addendum: September 10, 2013

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
009	89-0981-007	BRIDGE AND APPROACHES - PPCB	VAN BUREN	BRFN-098-1(7)--39-89	17SEP009.A02

Notice: Only the bid proposal holders receive this addendum and responsibility for notifying any potential subcontractors or suppliers remains with the proposal holder.

****SHEET NO. 51 AND 53****

SECTION A-A - Change "10 Min. Dowel & Epoxy" to "6 Min. Dowel & Epoxy"

****SHEET NO. 54****

SECTION THRU WEST STEEL RAILING - Change "10 (Min. Embed.)" to "6 (Min. Embed.)"

SECTION THRU WEST STEEL RAILING - Change "2-5/8"x1'-0 (Min.) Galv. Threaded Anchors..." to "2-5/8"x8 (Min.) Galv. Threaded Anchors..."

SECTION THRU EAST STEEL RAILING - Change "10 (Min. Embed.)" to "6 (Min. Embed.)"

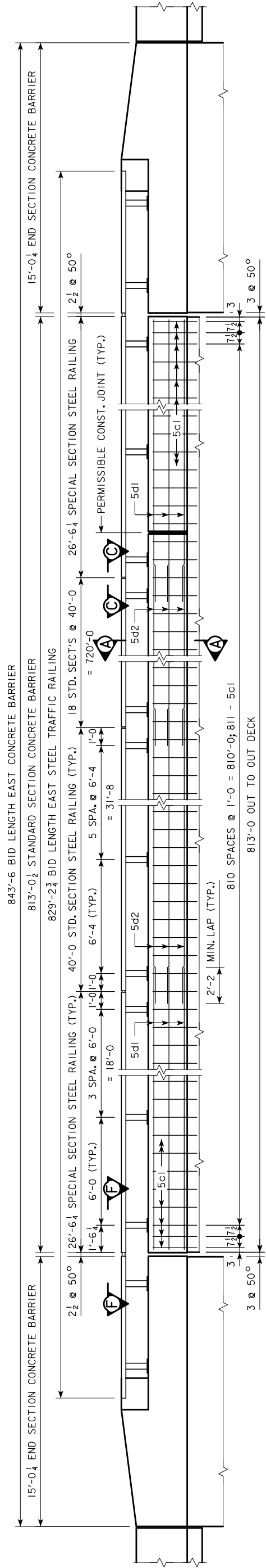
SECTION THRU EAST STEEL RAILING - Change "2-5/8"x1'-0 (Min.) Galv. Threaded Anchors..." to "2-5/8"x8 (Min.) Galv. Threaded Anchors..."

****SHEET NO. 57****

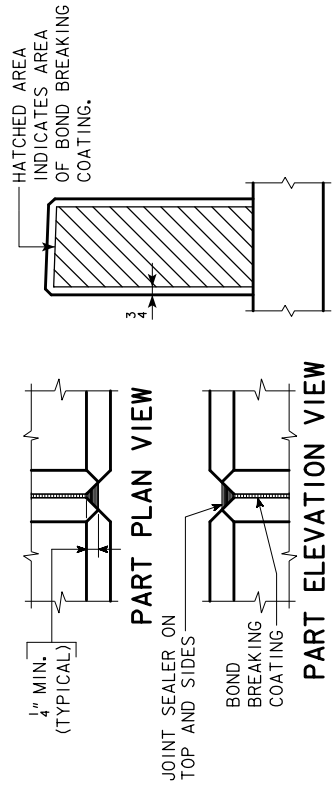
TRAFFIC RAILING NOTES - Change "Anchor bolts shall be drilled and embedded a minimum of 10 inches..." to "Anchor bolts shall be drilled and embedded a minimum of 6 inches..."

TRAFFIC RAILING NOTES - Change "Anchor bolts and the epoxy grout anchorage system shall be capable of obtaining an ultimate load of 34 kips..." to "Anchor bolts and the epoxy grout anchorage system shall be capable of obtaining an ultimate load of 21 kips..."

Attached are replacement sheets: 51, 53, 54, & 57



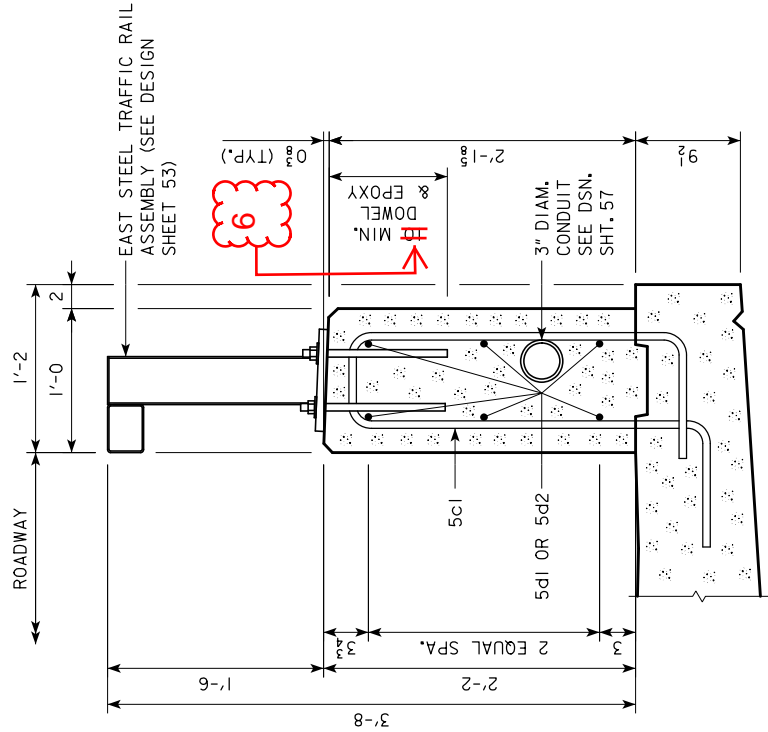
PART VIEW NEAR EAST CONCRETE BARRIER
(LOOKING EAST)



BARRIER RAIL JOINT DETAILS

BARRIER RAIL NOTES:

- MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.
- ALL EXPOSED CORNERS 90° OR SHARPER ARE TO BE FILLETED WITH A 3/4" DRESSED AND BEVELED STRIP.
- ALL BARRIER RAIL REINFORCING STEEL IS TO BE EPOXY COATED.
- THE PERMISSIBLE CONSTRUCTION JOINTS ARE TO BE PLACED BETWEEN VERTICAL BARS AT A MINIMUM SPACING OF 20 FEET. CONSTRUCTION JOINT CONTACT SURFACES ARE TO BE COATED WITH AN APPROVED BOND BREAKER.
- COST OF THE JOINT SEALER AND BOND BREAKER SHALL BE CONSIDERED INCIDENTAL TO THE OTHER CONSTRUCTION.
- THE CONCRETE BARRIER RAIL IS TO BE BID ON A LINEAL FOOT BASIS. THE NUMBER OF LINEAL FEET OF BARRIER RAIL INSTALLED WILL BE PAID FOR AT THE CONTRACT PRICE PER LINEAL FOOT BASED ON PLAN QUANTITIES.
- PRICE BID FOR "CONCRETE BARRIER, PARAPET" BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, EXCLUDING REINFORCING STEEL, AND ALL OF THE EQUIPMENT AND LABOR REQUIRED TO ERECT THE RAIL IN ACCORDANCE WITH THESE PLANS AND CURRENT SPECIFICATIONS. RIGID STEEL CONDUIT, JUNCTION BOXES AND FITTINGS INCLUDING LABOR AND ANY ADDITIONAL WORK TO DO. THE INSTALLATION IS CONSIDERED INCIDENTAL TO THE COST OF THE RAILING.
- ALL BARRIER RAIL REINFORCING IS TO BE INCLUDED WITH THE SUPERSTRUCTURE REINFORCING STEEL.
- THE JOINT SEALER SHALL BE LIGHT GRAY NONSAG LATEX CAULKING SEALER MARKETED FOR OUTDOOR USE. NO TESTING OR CERTIFICATION IS REQUIRED.
- TOP OF THE BARRIER RAIL IS TO BE PARALLEL TO THE THEORETICAL ∇ GRADE.
- CROSS SECTIONAL AREA OF THE STANDARD SECTION OF THE BARRIER RAIL = 2.17 SQUARE FEET.



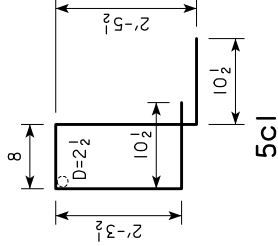
SECTION A-A

(EAST CONCRETE BARRIER AND STEEL RAIL)

EPOXY COATED REINF. - EAST STD. SECTION

BAR	LOCATION	SHAPE NO.	LENGTH	WEIGHT
5c1	BARRIER RAIL, VERTICAL	815	7'-2	6092
5d1	BARRIER RAIL, LONGIT., ENDS	12	29'-2	365
5d2	BARRIER RAIL, LONGIT.	120	40'-0	5006
BARRIER RAIL END SECTION (2 @ 280)				560
TOTAL (LBS.) (INCLUDED WITH SUPERSTRUCTURE QUANTITIES)				12,023

BENT BAR DETAILS



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIAMETER.

CONC. PLACEMENT SUMMARY - E. RAIL

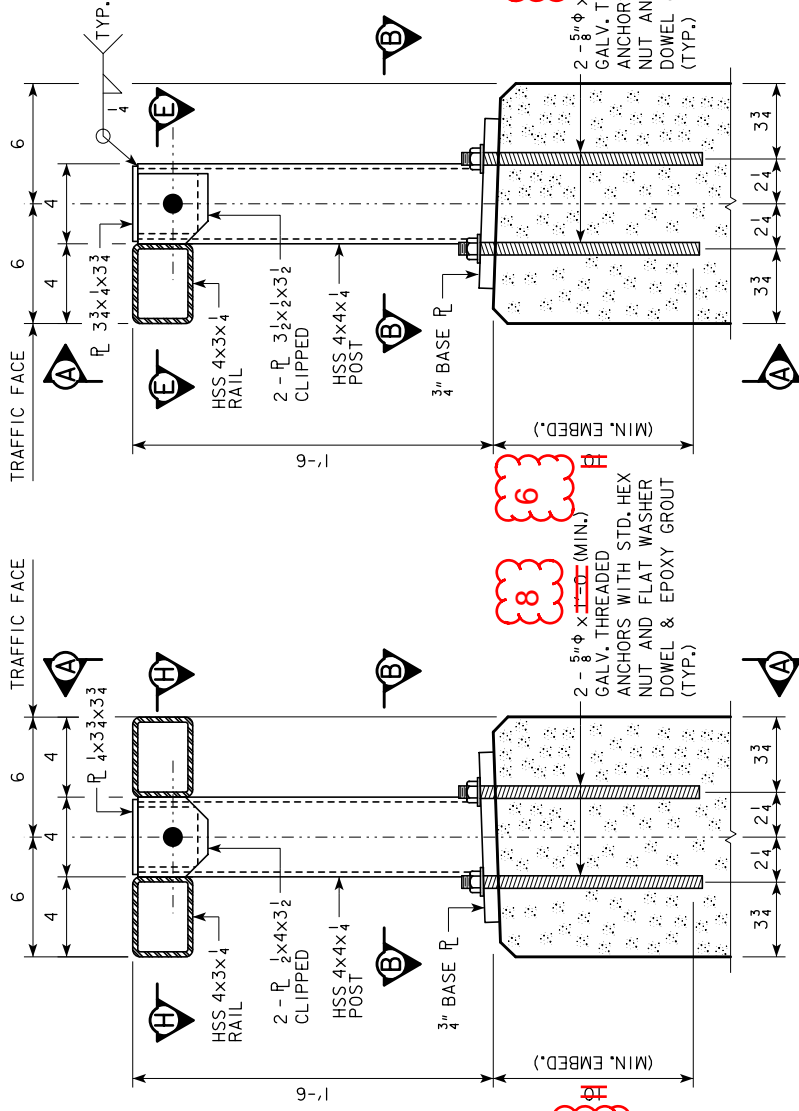
LOCATION	TOTAL
STANDARD SECTION	65.3
END SECTIONS (2 @ 1.5)	3.0
TOTAL (CY)	68.3

ESTIMATED QUANTITIES - E. RAIL

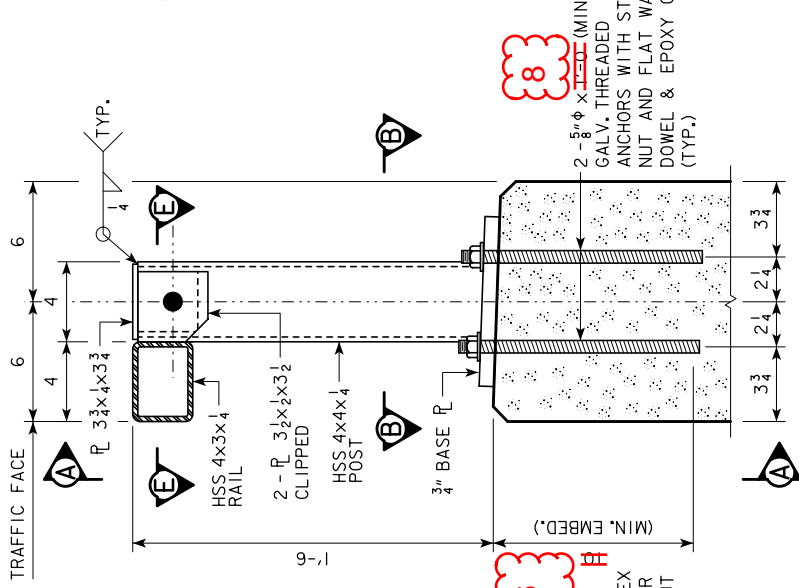
ITEM	UNIT	TOTAL
CONCRETE BARRIER, PARAPET	LF	843.5
STRUCTURAL STEEL RAILING, TRAFFIC	LF	829.2

DESIGN FOR 0° SKEW
810'-0 X 40' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE W/ 10' TRAIL
 111'-0 END SPANS
EAST BARRIER DETAILS
 STATION 117+15.00
VAN BUREN COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 50 OF 61 FILE NO. 30432 DESIGN NO. 114
 JULY, 2013

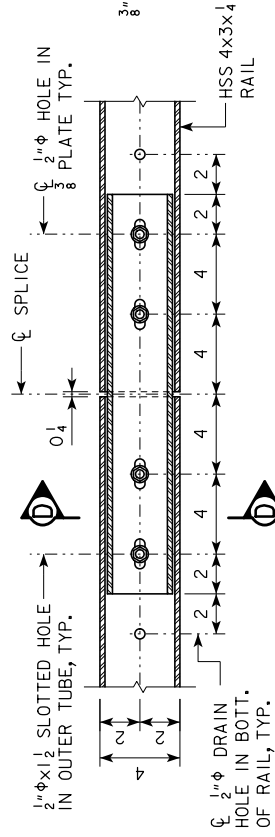
SEE DESIGN SHEET 53
 FOR SECTIONS C-C & F-F



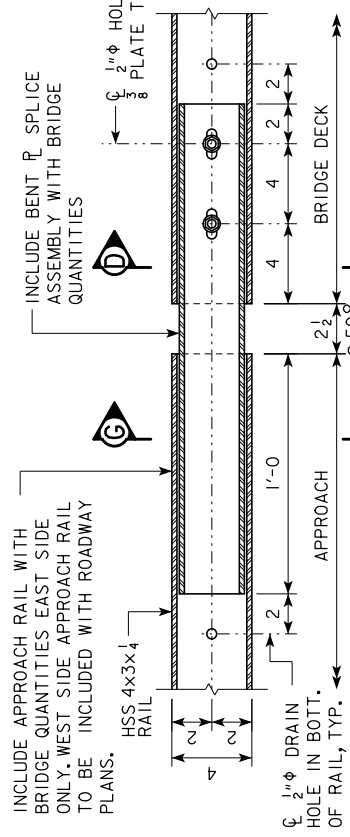
SECTION THRU WEST STEEL RAILING



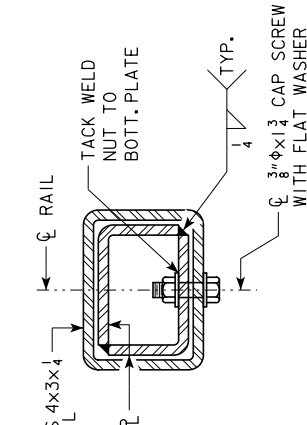
SECTION THRU EAST STEEL RAILING



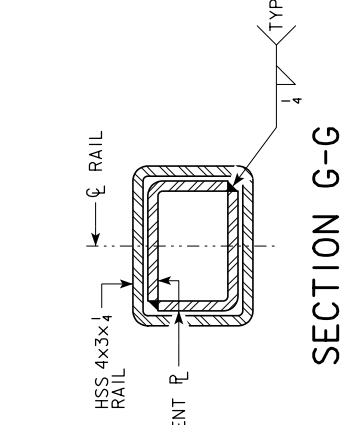
SECTION C-C TYPICAL RAIL SPLICE



SECTION F-F TYPICAL RAIL EXPANSION JOINT (TYP. EACH HSS 4x3x4 AT DECK JOINT)

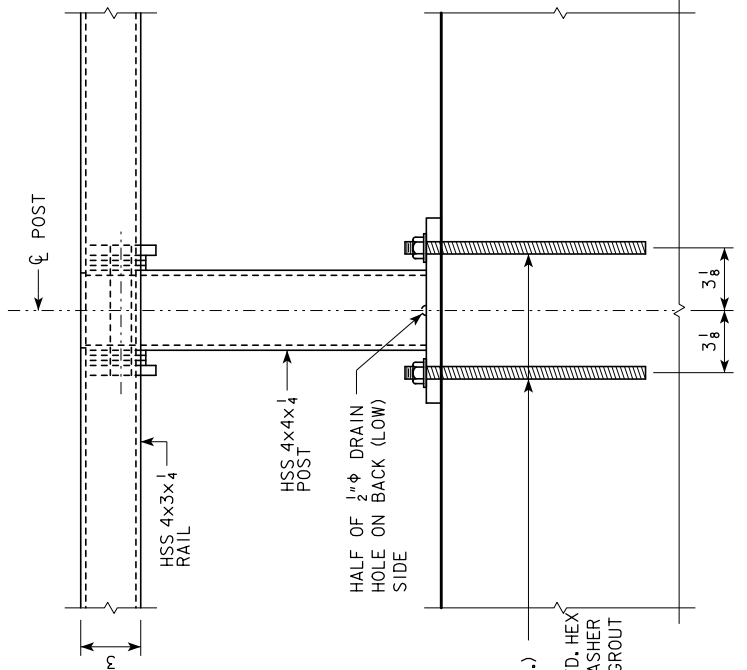


SECTION D-D

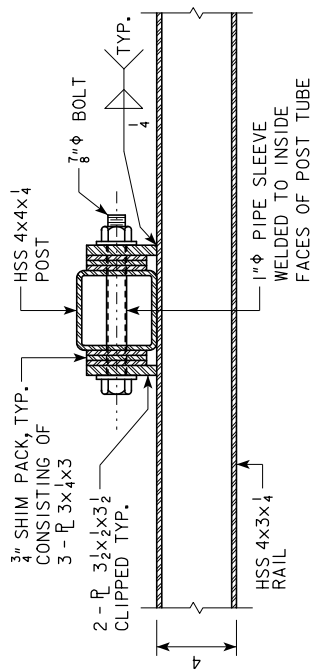


SECTION G-G

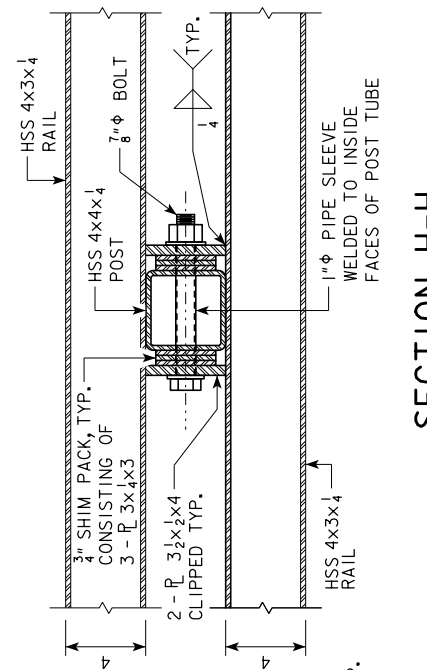
SEE DESIGN SHEETS 50 & 52 FOR LOCATION OF SECTIONS C-C & F-F



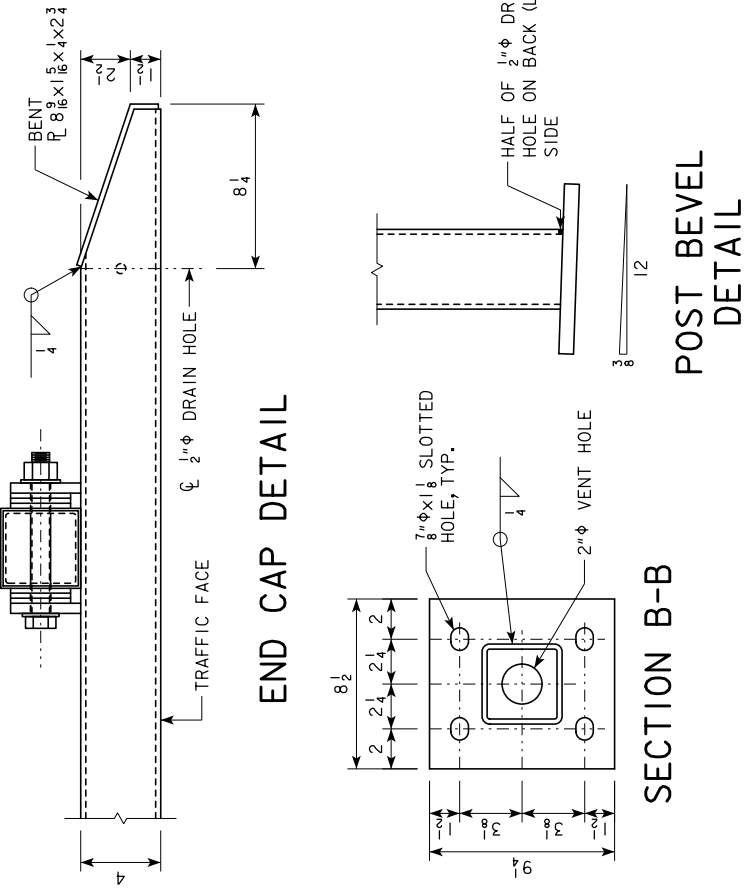
VIEW A-A



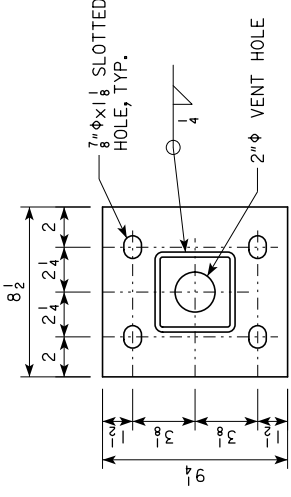
SECTION E-E



SECTION H-H

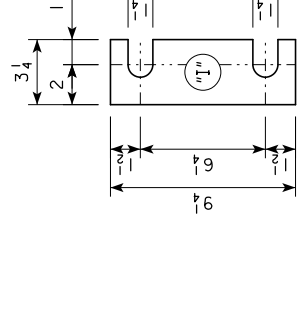


END CAP DETAIL



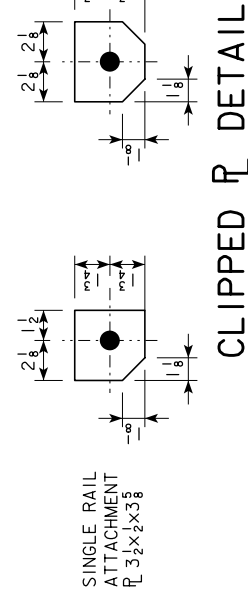
SECTION B-B

POST BEVEL DETAIL



SHIM PLATE DETAIL

NOTE: PROVIDE 300 EACH TYPE "I" AND TYPE "II" 1/16" GALVANIZED STEEL SHIMS, TO BE USED AS REQUIRED.



CLIPPED R DETAIL

DESIGN FOR 0° SKEW
810'-0 X 40' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE W/ 10' TRAIL
 111'-0 END SPANS 4 @ 147'-0 INTERIOR SPANS
STEEL TRAFFIC RAIL DETAILS
 JULY, 2013
VAN BUREN COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 53 OF 61 FILE NO. 30432 DESIGN NO. 114

NOTE: SEE DESIGN SHEET 56 FOR "TRAFFIC RAILING NOTES" & "TESTING NOTES FOR TRAFFIC RAILING"

TRAFFIC RAILING NOTES:

ALL TUBE STEEL SHALL COMPLY WITH ASTM A 500, GRADE B. ALL OTHER STRUCTURAL STEEL MATERIALS SHALL COMPLY WITH ASTM A 709, GRADE 36 MINIMUM.

GRIND SMOOTH ALL BURRS AND SHARP CORNERS OF STEEL RAILING COMPONENTS PRIOR TO GALVANIZING.

THE RAILING COMPONENTS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A 123. ALL RAILING ASSEMBLY HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

CONTRACTOR SHALL VERIFY DIMENSIONS OF CONCRETE ON BRIDGE PRIOR TO COMMENCING FINAL LAYOUT AND INSTALLATION OF RAILING. NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN CONCRETE DIMENSIONS PRIOR TO RAILING INSTALLATION.

SET ALL RAILING POSTS VERTICAL IN THE TRANSVERSE DIRECTION AND NORMAL TO GRADE ALONG THE CONCRETE BARRIER.

ANCHOR BOLTS SHALL BE FULLY THREADED AND SHALL MEET THE REQUIREMENTS OF MATERIALS I.M. 453.08.

ANCHOR BOLTS SHALL BE DRILLED AND EMBEDDED A MINIMUM OF ~~3~~ INCHES INTO THE FINISHED CONCRETE AND SECURED WITH AN EPOXY GROUT ANCHORAGE SYSTEM. ANCHOR INSTALLATION, INCLUDING HOLE SIZE, DRILLING AND HOLE CLEANOUT PROCEDURES SHALL BE IN ACCORDANCE WITH THE EPOXY GROUT MANUFACTURER'S RECOMMENDATIONS.

ANCHOR BOLTS AND THE EPOXY GROUT ANCHORAGE SYSTEM SHALL BE CAPABLE OF OBTAINING AN ULTIMATE LOAD OF ~~8~~ KIPS IN TENSION, BASED ON 4000 PSI CONCRETE, CONSIDERING ANCHOR SPACING AND EDGE DISTANCE. THE CONTRACTOR SHALL SUBMIT EVIDENCE OF THE PROPOSED EPOXY GROUT ANCHORAGE SYSTEM'S ABILITY TO DEVELOP THIS LOAD TO THE ENGINEER FOR APPROVAL.

ANCHOR BOLTS SHALL BE FIELD TESTED IN ACCORDANCE WITH DS-12039.

EDGES OF THE POST BASE PLATES SHALL RECEIVE AN APPLICATION OF CAULKING SEALER TO PROVIDE A WATERTIGHT INTERFACE WITH THE CONCRETE SURFACE. CAULK FOR BASE PLATES SHALL BE LIGHT GREY NONSAG LATEX CAULK MARKETED FOR OUTDOOR USE. NO TESTING OR CERTIFICATION IS REQUIRED. DO NOT CONTAMINATE ADJACENT CONCRETE SURFACES WITH CAULK.

SUBMIT SHOP DRAWINGS FOR ALL COMPONENTS OF THE RAILING.

INCLUDE ALL COSTS ASSOCIATED WITH THE RAILING AND ANCHORAGES, INCLUDING TESTING COSTS ASSOCIATED WITH DS-12039, IN THE PRICE BID FOR "STRUCTURAL STEEL RAILING, TRAFFIC".

TESTING NOTES FOR TRAFFIC RAILING:

THE RESULTS OF THE FOLLOWING TEST SHALL BE SUBMITTED AS A CERTIFIED TEST REPORT TO THE CENTRAL MATERIALS OFFICE IN AMES, ALONG WITH A CERTIFIED MILL TEST REPORT. IN ADDITION, FOR EACH TUBE SIZE USED, A 1 FOOT LONG SAMPLE SHALL BE SUBMITTED BY THE FABRICATION SHOP TO THE CENTRAL MATERIALS OFFICE IN AMES FOR VERIFICATION TESTING.

ALL TUBE STEEL SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM E 436 - "DROP-WEIGHT TEAR TESTS OF FERRITIC STEELS", EXCEPT WITH THE FOLLOWING MODIFICATIONS:

- ALL TESTS SHALL BE PERFORMED BY THE PRODUCING MILL PRIOR TO FABRICATION.
- THE TESTING SHALL BE CONDUCTED AT AT TEMPERATURE OF 0°F ON A 3" x 1'-0" SPECIMEN.
- IF THE AVERAGE PERCENT SHEAR AREA FALLS BELOW 50 PERCENT, THE MATERIAL REPRESENTED BY THESE TESTS SHALL BE REJECTED.

ALL MATERIALS SHALL BE ACCEPTED ON THE BASIS OF COMPLYING TEST RESULTS AND CERTIFIED MILL TEST REPORT.

TO FACILITATE ACCEPTANCE AND REJECTION OF MATERIAL, THE MANUFACTURER OF THE STRUCTURAL STEEL SHAPE SHALL IDENTIFY THE PRODUCT WITH THE STEEL HEAT NUMBER THAT IS TRACEABLE AT THE TIME OF ACCEPTANCE. THE HEAT NUMBER SHALL BE PLACED AT INTERVALS NOT TO EXCEED 4'-0.

PEDESTRIAN RAILING NOTES:

ALL TUBE STEEL SHALL COMPLY WITH ASTM A 500, GRADE B. ALL OTHER STRUCTURAL STEEL MATERIALS SHALL COMPLY WITH ASTM A 709, GRADE 36 MINIMUM.

GRIND SMOOTH ALL BURRS AND SHARP CORNERS OF STEEL RAILING COMPONENTS PRIOR TO GALVANIZING.

THE RAILING COMPONENTS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A 123. FOLLOW GOOD STANDARD PRACTICES IN ACCORDANCE WITH ASTM A 143 AND ASTM A 384. PREPARE THE FABRICATED RAILING SURFACES BY ABRASIVE BLAST CLEANING TO A MINIMUM OF SSPC SP 6 "COMMERCIAL BLAST CLEANING" PRIOR TO HOT-DIP GALVANIZING. DO NOT QUENCH RAILING COMPONENTS AFTER GALVANIZING.

ALL RAILING MEMBERS SHALL BE FLAT AND STRAIGHT AFTER FABRICATION AND GALVANIZING TO WITHIN 1/8-INCH IN 10 FEET. STRAIGHTEN BY MECHANICAL MEANS WITHOUT DAMAGE TO THE ZINC COATING.

ALL RAILING ASSEMBLY HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

CONTRACTOR SHALL VERIFY DIMENSIONS OF CONCRETE ON BRIDGE PRIOR TO COMMENCING FINAL LAYOUT AND INSTALLATION OF RAILING. NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN CONCRETE DIMENSIONS PRIOR TO RAILING INSTALLATION.

SET ALL RAILING PANELS VERTICAL IN THE TRANSVERSE DIRECTION AND NORMAL TO GRADE ALONG THE BRIDGE.

THE STUD CONCRETE ANCHORS SHALL BE GALVANIZED AND HAVE A MINIMUM PULLOUT STRENGTH OF 8 KIPS BASED ON 4000 PSI CONCRETE. ALL ANCHORING HARDWARE IS TO BE IN CONFORMANCE WITH MATERIALS I.M. 453.09.

EDGES OF THE POST BASE PLATES SHALL RECEIVE AN APPLICATION OF CAULKING SEALER TO PROVIDE A WATERTIGHT INTERFACE WITH THE CONCRETE SURFACE. CAULK FOR BASE PLATES SHALL BE LIGHT GREY NONSAG LATEX CAULK MARKETED FOR OUTDOOR USE. NO TESTING OR CERTIFICATION IS REQUIRED. DO NOT CONTAMINATE ADJACENT CONCRETE SURFACES WITH CAULK.

SUBMIT SHOP DRAWINGS FOR ALL COMPONENTS OF THE RAILING.

INCLUDE ALL COSTS ASSOCIATED WITH THE RAILING AND ANCHORAGES IN THE PRICE BID FOR "STRUCTURAL STEEL PEDESTRIAN HAND RAILING".

PEDESTRIAN RAILING MOCKUP NOTES:

CONSTRUCT A MOCKUP RAILING PANEL FOR REVIEW BY THE ENGINEER. FOR THE PURPOSES OF THE MOCKUP, ONE STANDARD RAILING PANEL AND 2 POSTS SHALL BE FABRICATED AND GALVANIZED ACCORDING TO THE REQUIREMENTS IN THESE PLANS. ACTUAL RAILING PRODUCTION MAY NOT PROCEED UNTIL FINAL APPROVAL OF THE MOCKUP. IF THE MOCKUP IS REJECTED, CONSTRUCT ANOTHER MOCKUP AT THE DIRECTION OF THE ENGINEER. USE MATERIALS AND METHODS TO CREATE THE MOCKUP(S) THAT ARE IDENTICAL TO THOSE PROPOSED FOR THE ACTUAL RAILINGS FOR THE PROJECT. THE APPROVED MOCKUP SHALL REMAIN AT THE SITE FOR COMPARISON TO ACTUAL RAILINGS AS THEY ARE DELIVERED. PROTECT THE MOCKUP RAILING FROM WEATHER AND DAMAGE DURING STORAGE PERIOD. IF APPROVED FOR USE, INSTALL THE MOCKUP AS PART OF THE FINAL RAILING.

INCLUDE ALL COSTS ASSOCIATED WITH THE MOCKUP IN THE PRICE BID FOR "STRUCTURAL STEEL PEDESTRIAN HAND RAILING".

DESIGN FOR 0° SKEW
**810'-0 X 40' PRETENSIONED PRESTRESSED
CONCRETE BEAM BRIDGE W/ 10' TRAIL**
111'-0 END SPANS 4 @ 147'-0 INTERIOR SPANS
TRAFFIC & PEDESTRIAN RAILING NOTES
JULY, 2013
STATION 117+15.00
VAN BUREN COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 56 OF 61 FILE NO. 30432 DESIGN NO. 114