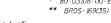




* 80-03108-00-BR

noute No.





 $1_8''$ \$\phi\$ Holes for 1''\$\phi\$ x 4'' Round Head Bolts. Provide 2 flat washers & locknuts for curled end section. 3a'' Drain Hole

END OF RAIL DETAILS

—Traffic side of rail

NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F. All other steel shapes and plates shall conform to the requirements of ASSHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.

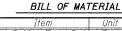
All posts, railing, rail splices, anchor devices, end sections and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.

ASIM A 388. Galvanized rall shall not be painted.
Railing shall be according to Section 509 of the Standard
Specifications, except as noted, and will be paid for at the contract
unit price per foot for STEEL RAILING, TYPE S-1.
All field drilled holes shall be coated with an approved zinc rich

paint before erection.

The lower portion of the post flange in contact with concrete shall

receive two coats of asphalt paint conforming to Section 1060.07 Type II or place $\frac{1}{3}$ " fabric bearing pad between the post and concrete. The $\frac{3}{4}$ " high strength bolts used to connect the 6 x 4 x $\frac{3}{4}$ angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1''\u03c4 high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional $\frac{1}{8}$ turn. The $\frac{5}{8}$ % cap screws in bottom of posts shall be tightened to a snug fit only.



ILLINOIS DEPARTMENT OF TRANSPORTATION TYPE S-1 STEEL RAILING

TR 110 OVER WILLOW CREEK STA. 7+26.00 SCHUYLER COUNTY S.N. 085-4307

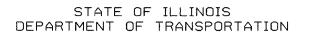
DATE SCALE: VERT. DATE: 9/8/04

REVISIONS NAME

DRAWN BY: LANDREY
DESIGNED BY: MATHUR
CHECKED BY: TRELLO COMPUTER FILE NO.

GREENE & BRADFORD, INC B

SN0854307_RL PROJECT 02341 4/7/06-MML



7 Rail Post Spaces @ 10'-0" = 70'-0"

ELEVATION VIEW

Exterior Deck Beam

Without Slot With Slot or Recess

⁷8''Φ Holes

1 n ' p Holes

1316 " x 3" Slotted Holes

SECTION A-A

334" 334"

SECTION B-B

34 X

2-13₁₆ " Holes in angles

1-13₁₆ " x 51₂" Slotted Holes in Post

6" long

in angles

in post

As Required

's" max.

VIEW A-A ROUND HEAD BOLT

2-34"0 x 34"

H.S. Bolts with hex nut & flat

washers

—1¹8''Ф Holes

5 " Chamfei

End of

with flat washer

€ Post—

((1) (1) (1)

 $\bullet \oplus \bullet$

-HSS 12" x 4" x 1/" 2-34'' x 6'' Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. ⁷8''\$ Holes in hollow structural section may be drilled in the field. W6x25--Spacer HSS 12" x 4" x ½ ¹³₁₆ " x 5½" Slotted Hole in post 4" long tack weld ³₁₆ " ∮ holes in angles 2-1"\$ x 734" H.S. Bolts

Deck Beams 2-5₈"Φ x 5³₄" Cap Screws

with flat washer P 4"x 6"x 7" (See Detail D) Tack Weld to Spacer HSS 6"x 4"x $^{I}_{4}$ " Spacer, 3^{3}_{4} " long-Tack Weid to post and plate

SECTION AT RAIL POST

1" x 6" x 13"

334" Holes VIEW C-C

HSS 6" x 4" x 4 -€¹³16 "x3" Slotted Holes Spacer

DETAIL D

CURLED END SECTION DETAILS

-10 Gage

Note: Cost of Curled End Section will not be measured for payment but shall be included in the cost of Steel

Roadway Face of

 -1^{l_2} " ϕ holes

End Section

-ф-

-⊕-

VIEW E-E

1/4" at rail splice

4" 4" 4" 2" Locknut
"6" Holes
in 38" L

PLAN-BOTT. SPLICE P

TYPICAL

1½" at exp. jt. at 50° F.

1" Steel Plate

Railing Type S-1.

 $\overline{3_{le}}$ Typ.P. 38" x 2'2" x 20" Top & Bottom 34" \$ x 6" Granular or solid flux Hollow filled headed studs conforming to article 1006.32 of the Std. Specs. structural section P 38" x 1078" x 20" Each Side ${}^{5}8''$ ϕ x ${}^{13}4''$ Cap Screw with flat washer

34"\$ Holes in hollow structural section

SECTIONS AT RAIL SPLICE

--- 1" Steel Plate

24" Approx.

ANCHOR DEVICE

 $x \, I_2^{l} {}^{\prime \prime} \, x \, 6^{\prime \prime}$

* Threaded areas shall be plugged or blocked off during casting of beam.

interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising, or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

** Whenever the lower insert assemblies

58'0 Cap Screw.

* 1" H.S. Nut AASHTO M 164

automatically end welded. 4 Required per P

conforming to AASHTO M291. Grade A - 3" long welded to

#3 bar and tap pipe for

* 34'' XXS Pipe or Hex Coupler Nuts

welded to P

each nut

Cast 1" voids behind

J.O234\DFAWNGS\SNO85-430T\SNO85430T\ 09.0000 1'.DRM.= XES.8850_ENG_BRIDGE.plt 6/30/2006 ||190877 AM michalial