

REV. 06-01-76: ADDED WEIGHTS.

REV. 08-13-76: REVISED WEIGHTS ALUMINUM.

REV. 09-22-77: ADDED "MU"-POST; REVISED PROPERTIES OF RIBBED "U"-POST.

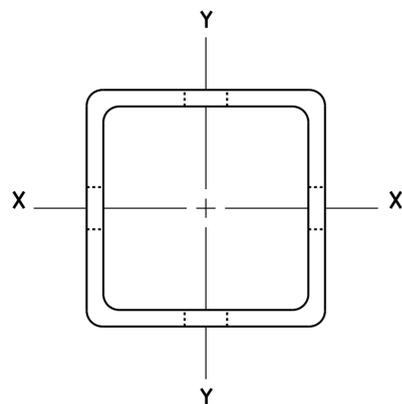
REV. 07-01-78: REQUIREMENTS OF MATERIAL FOR STEEL "U"-POST.

REV. 03-01-88: KNOCKOUT ALTERNATE ADDED.

REV. 10-26-90: REDREW AND REORGANIZED SHEET. DELETED ALUMINUM "U"-POST AND "MU"-POST FROM SHEET. CHANGED SHEET NAME ACCORDINGLY. NUMBERED FOOTNOTES AND ADDED FOOTNOTE NO. ②.

REV. 7-29-91: ADDED P7 AND P8 PERFORATED/KNOCKOUT TUBE POST. ADDED FOOTNOTE NOS. ⑤ AND ⑥.

□ REV. 7-19-13: FY FOR 12 GAUGE P POST CHANGED TO 60 KSI. ADDED P9 POST REVISED FOOTNOTES. CHANGE TITLE.

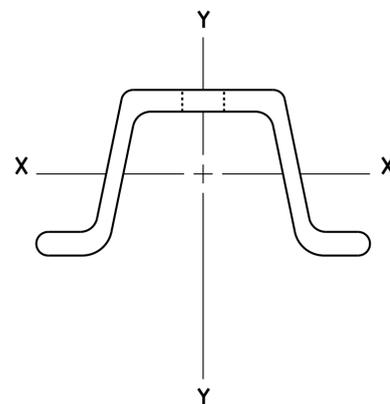


PERFORATED / KNOCKOUT TUBE

① MATERIAL: ASTM A-446 (GRADE A) OR A-1011 GRADE 50

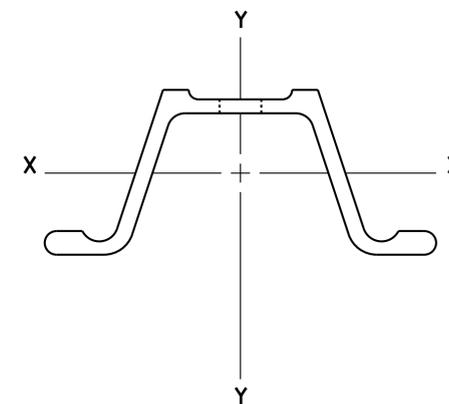
FOR 0.105" USS GAGE 12 GAGE;
F_y=60,000 PSI MIN.

FOR 0.083" USS GAGE 14 GAGE;
F_y=60,000 PSI MIN.



U-POST

② MATERIAL: ASTM A-499
F_y=50,000 PSI MIN.
GRADE 50



RIBBED U-POST

② MATERIAL: ASTM A-499
F_y=50,000 PSI MIN.
GRADE 50

MEMBER DESIGNATION	MINIMUM SECTION PROPERTIES	WT LBS/FT
P1	A = 0.380 IN. ² S _{xx} = 0.172 IN. ³ I _{xx} = 0.129 IN. ⁴	1.702 1 1/2" ∅
P2	A = 0.485 IN. ² S _{xx} = 0.264 IN. ³ I _{xx} = 0.231 IN. ⁴	2.060 1 3/4" ∅
P3	A = 0.590 IN. ² S _{xx} = 0.372 IN. ³ I _{xx} = 0.372 IN. ⁴	2.416 2" ∅
P4	A = 0.695 IN. ² S _{xx} = 0.499 IN. ³ I _{xx} = 0.561 IN. ⁴	2.773 2 1/4" ∅
⑦ P5	A = 0.803 IN. ² S _{xx} = 0.643 IN. ³ I _{xx} = 0.804 IN. ⁴	3.141 2 1/2" ∅
⑥-⑦ P6	A = 1.010 IN. ² S _{xx} = 0.783 IN. ³ I _{xx} = 0.979 IN. ⁴	4.006 2 1/2" ∅
④ P7	A = 0.392 IN. ² S _{xx} = 0.230 IN. ³ I _{xx} = 0.201 IN. ⁴	1.882 1 3/4" ∅
④ P8	A = 0.474 IN. ² S _{xx} = 0.296 IN. ³ I _{xx} = 0.296 IN. ⁴	2.164 2" ∅
⑦ P9	A = 0.841 IN. ² S _{xx} = 0.533 IN. ³ I _{xx} = 0.605 IN. ⁴	3.430 2 3/16" ∅

MEMBER DESIGNATION	MINIMUM SECTION PROPERTIES	WT LBS/FT
U1	A = 0.590 IN. ² S _{xx} = 0.225 IN. ³ I _{xx} = 0.179 IN. ⁴	2.00
U2	A = 0.645 IN. ² S _{xx} = 0.254 IN. ³ I _{xx} = 0.201 IN. ⁴	2.25
U3	A = 0.748 IN. ² S _{xx} = 0.289 IN. ³ I _{xx} = 0.233 IN. ⁴	2.50
U4	A = 0.819 IN. ² S _{xx} = 0.329 IN. ³ I _{xx} = 0.277 IN. ⁴	2.75
U5	A = 0.817 IN. ² S _{xx} = 0.363 IN. ³ I _{xx} = 0.331 IN. ⁴	2.75
⑦ U6	A = 0.918 IN. ² S _{xx} = 0.403 IN. ³ I _{xx} = 0.372 IN. ⁴	3.00
⑦ U7	A = 1.195 IN. ² S _{xx} = 0.511 IN. ³ I _{xx} = 0.460 IN. ⁴	4.00

MEMBER DESIGNATION	MINIMUM SECTION PROPERTIES	WT LBS/FT
R1	A = 0.600 IN. ² S _{xx} = 0.233 IN. ³ I _{xx} = 0.175 IN. ⁴	2.00
⑦ R2	A = 0.881 IN. ² S _{xx} = 0.406 IN. ³ I _{xx} = 0.415 IN. ⁴	3.00

FOOTNOTES

- ① SEE GENERAL NOTES (A) AND (B) ON STANDARD DRAWING T-S-17 FOR MANUFACTURING REQUIREMENTS FOR STEEL AND GALVANIZING.
- ② STEEL "U"-POST SHALL BE MANUFACTURED FROM STEEL CONFORMING TO THE MATERIAL REQUIREMENTS OF ASTM A-499 AND GALVANIZED CONFORMING TO ASTM A-123.
- ③ P1 THRU P5 MEMBER DESIGNATIONS ARE TO BE 12 GAGE.
- ④ THE CONTRACTOR MAY SUBSTITUTE P2 FOR P7 AND P3 FOR P8. QUANTITIES ARE COMPUTED ON PLANS BASED ON USING P7 OR P8. NO INCREASE IN QUANTITIES WILL BE ALLOWED WHEN USING THE ABOVE SUBSTITUTIONS.
- ⑤ P7, P8 AND P9 MEMBER DESIGNATIONS ARE TO BE 14 GAGE.
- ⑥ P6 IS TO BE 10 GAUGE.
- ⑦ POSTS REQUIRE SLIP BASE CONNECTION.

□ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

**STANDARD STEEL
SIGN
SUPPORTS**