Revisions and Errata List
AISC Steel Design Guide 24, 1st Printing (Printed Edition) and March 2015 Revision (Digital Edition)
February 16, 2023

The following list represents corrections to the first printing and the March 2015 revision (digital edition) of AISC Design Guide 24, *Hollow Structural Section Connections.*

Page(s)	Item
10	The reference to the equation $R_n = F_w A_w$ should be "*Spec.* Eq. J2-3" instead of "*Spec.* Eq. I2-3."
37	In the first calculation box at the top of the page, the value of b is incorrect in the calculation for $T_r/(d_b + 2b)$. The calculation should be revised to:

LRFD	ASD
$\dfrac{T_u}{d_b+2b} = \dfrac{7.60\text{ kips}}{¾\text{ in.}+2\left(\dfrac{11.0\text{ in.}-8.00\text{ in.}}{2}\right)}$ $= 2.03\text{ kips/in.}$ Use T_u/g in the weld size determination	$\dfrac{T_a}{d_b+2b} = \dfrac{5.05\text{ kips}}{¾\text{ in.}+2\left(\dfrac{11.0\text{ in.}-8.00\text{ in.}}{2}\right)}$ $= 1.35\text{ kips/in.}$ Use T_a/g in the weld size determination

Page(s)	Item
52	In the left column, update the ϕ and Ω values in the calculation box to:

LRFD	ASD
$c = \phi = 0.75$ $R_c = \phi r_n$	$c = \dfrac{1}{\Omega}$ where $\Omega = 2.00$ $R_c = \dfrac{r_n}{\Omega}$

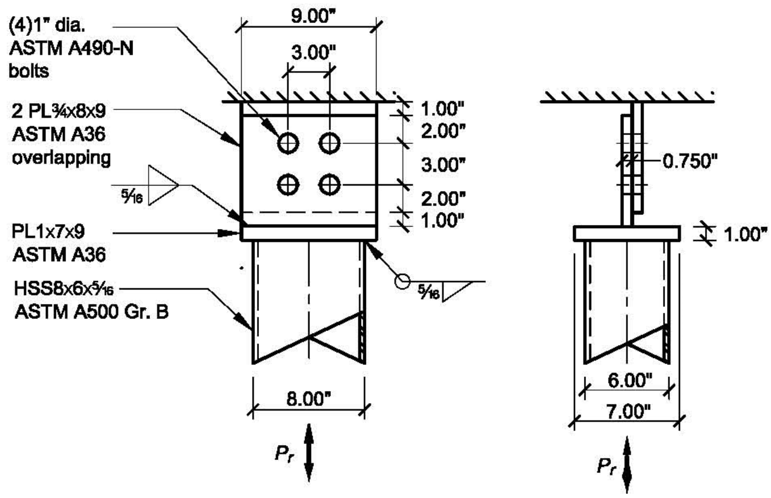
53 Equation 5-16 should be revised as follows to correct the denominator:

$$w \geq \frac{P_r\sqrt{2}}{2BF_{wc}}$$

53 Equation 5-21 should be revised so that alpha cannot be taken as negative. Replace Equation 5-21 with the following:

$$\alpha = \frac{K(P_r / n)}{{t_p}^2} - 1 \geq 0$$

55 Figure 5-9 should be revised so that the connection plate dimensions are as shown in the figure below:



59 In the middle of the page, the corrected calculations should read:

For the end bolts

$$L_c = 2.00 - 1\tfrac{1}{16}\text{ in.}/2$$
$$= 1.47\text{ in.}$$

and therefore, the left side of the inequality in Equation J3-6a is:

$$1.2L_c tF_u = 1.2(1.47\text{ in.})(0.750\text{ in.})(58\text{ ksi})$$
$$= 76.7\text{ kips}$$

The right side of the inequality in Equation J3-6a is:

$$2.4dtF_u = 2.4(1.00\text{ in.})(0.750\text{ in.})(58\text{ ksi})$$
$$= 104\text{ kips}$$
$$76.7\text{ kips} < 104\text{ kips}$$

Therefore, use $R_n = 76.7$ kips

60 Replace the first calculation box with the following:

LRFD	ASD
For the end bolts $\phi = 0.75$ $\phi R_n = 0.75(76.7\text{ kips})$ $= 57.5\text{ kips}$	For the end bolts $\Omega = 2.00$ $\dfrac{R_n}{\Omega} = \dfrac{76.7\text{ kips}}{2.00}$ $= 38.4\text{ kips}$
For the interior bolts $\phi_v r_n = 101$ kips per inch of thickness $\phi R_n = 101\text{ kips/in.}(0.750\text{ in.})$ $= 75.8\text{ kips}$	For the interior bolts $\dfrac{r_n}{\Omega_v} = 67.4$ kips per inch of thickness $\dfrac{\phi_n}{\Omega} = 67.4\text{ kips/in.}(0.750\text{ in.})$ $= 50.6\text{ kips}$
For the 4 bolts	For the 4 bolts

$\phi R_n = 2(57.5 \text{ kips}) + 2(75.8 \text{ kips})$ $= 267 \text{ kips}$	$\dfrac{R_n}{\Omega} = 2(38.4 \text{ kips}) + 2(50.6 \text{ kips})$ $= 178 \text{ kips}$

62 Replace the calculations beginning at the top of the page with the following:

where

$$A_{gv} = 2L_{gv}t_s$$
$$L_{gv} = 3.00 \text{ in.} + 2.00 \text{ in.}$$
$$= 5.00 \text{ in.}$$
$$\text{A}_{gv} = 2(5.00 \text{ in.})(0.750 \text{ in.})$$
$$= 7.50 \text{ in.}^2$$
$$A_{nv} = A_{gv} - 2(1.5)(d_h + \tfrac{1}{16} \text{ in.})t_s$$
$$= 7.50 \text{ in.}^2 - 2(1.5)(1\tfrac{1}{16} \text{ in.} + \tfrac{1}{16} \text{ in.})(0.750 \text{ in.})$$
$$= 4.97 \text{ in.}^2$$
$$A_{nt} = t_s\left[3.00 - (d_h + \tfrac{1}{16})\right]$$
$$= 0.750 \text{ in.}\left[3.00 - (1\tfrac{1}{16} \text{ in.} + \tfrac{1}{16} \text{ in.})\right]$$
$$= 1.41 \text{ in.}^2$$
$$U_{bs} = 1.0 \text{ since tension is uniform}$$

The left side of the inequality given in AISC *Specification* Equation J4-5 is:

$$0.6F_uA_{nv} + U_{bs}F_uA_{nt} = 0.6(58 \text{ ksi})(4.97 \text{ in.}^2) + 1.0(58 \text{ ksi})(1.41 \text{ in.}^2)$$
$$= 255 \text{ kips}$$

The right side of the inequality given in Equation J4-5 is

$$0.6F_yA_{gv} + U_{bs}F_uA_{nt} = 0.6(36 \text{ ksi})(7.50 \text{ in.}^2) + 1.0(58 \text{ ksi})(1.41 \text{ in.}^2)$$
$$= 244 \text{ kips}$$

Because $255 \text{ kips} > 244 \text{ kips}$, use $\phi R_n = 244 \text{ kips}$.

The available strength of the tee stem for the limit state of block shear rupture is:

LRFD	ASD
$\phi = 0.75$ $\phi R_n = 0.75(244 \text{ kips})$ $= 183 \text{ kips}$	$\Omega = 2.00$ $\dfrac{R_n}{\Omega} = \dfrac{244 \text{ kips}}{2.00}$ $= 122 \text{ kips}$

93 In the left column, first complete paragraph, the second to last sentence beginning with "In the case shown in Figure 8-3(b)…" should be revised to read, "In the case shown in Figure 8-3(c)…."

94 In Figure 8-3(b), the upward vertical load on the chord, $0.2P_r$, should be replaced with $0.2P_r\sin\theta$.

110 In Figure 8-9, the axial loads on the branch members i and j should be given as P_L = 69.0 kips and P_D = 23.0 kips.

113 Replace the 5th line from the bottom with:

$25\% \le O_v = 5.5\% \le 100\%$ **o.k.**

114 The calculation boxes should be replaced with the following:

LRFD	ASD
For compression branch and tension branch, $P_u = 1.2(23.0\text{ kips}) + 1.6(69.0\text{ kips})$ $= 138\text{ kips}$	For compression branch and tension branch, $P_a = 23.0\text{ kips} + 69.0\text{ kips}$ $= 92.0\text{ kips}$

115 The calculation boxes at the top of the page should be replaced with the following:

LRFD	ASD
For tension (overlapping) branch, $\phi P_n = 0.95(159\text{ kips})$ $= 151\text{ kips}$ $151\text{ kips} > 138\text{ kips}$ **o.k.** For compression (overlapped) branch, $\phi P_n = 0.95(248\text{ kips})$ $= 236\text{ kips}$ $236\text{ kips} > 138\text{ kips}$ **o.k.**	For tension (overlapping) branch, $\dfrac{P_n}{\Omega} = \dfrac{159\text{ kips}}{1.58}$ $= 101\text{ kips}$ $101\text{ kips} > 92.0\text{ kips}$ **o.k.** For compression (overlapped) branch, $\dfrac{P_n}{\Omega} = \dfrac{248\text{ kips}}{1.58}$ $= 157\text{ kips}$ $157\text{ kips} > 92.0\text{ kips}$ **o.k.**

137 In Figure 9-4, the HSS16×12×½ should be an HSS 16×12×⅝. The three rectangular HSS members should be labeled as ASTM A500 Gr. B.