Revision and Errata List— March 2021
# AISC Steel Construction Manual, 15th Edition

The following list represents corrections to the Third Printing of the AISC *Steel Construction Manual*, 15th Edition. These corrections are incorporated in the Fourth Printing dated March 2021.

Page(s)	Item
3-207	Replace the top figure in Table 3-22c with the following (right figure, fourth row, middle two terms, denominator revised to 38).
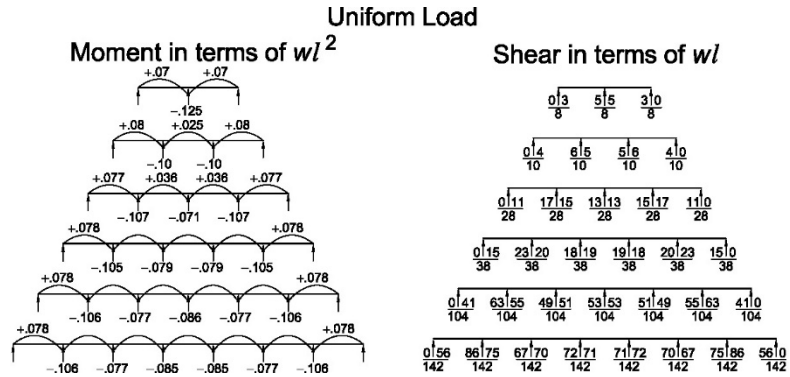
3-218	Replace the figure for Case 29 with the following (direction of R_3 arrow reversed):
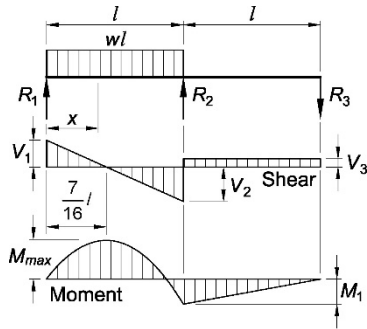
4-106 thru 4-131	Add the following to the Table 4-7 footer:

Note: Interpolation between $L = 0$ ft and 10 ft for the Y-Y axis may produce an incorrect result.

4-132 thru 4-138	Add the following to the Table 4-7 footer:

Note: Interpolation between $L = 0$ ft and 4 ft for the Y-Y axis may produce an incorrect result.

7-85 to 7-86	Revise Table 7-19 as shown in "15th Edition Manual Errata - 3rd Printing_ATT 1"

8-15   Revise Equation 8-16 as follows ($2e_x^2$ revised to $2e_x$):

$$l_a = \frac{\sqrt{4e_x^2 + l_w^2 \tan^2 \theta} - 2e_x}{\tan \theta} \tag{8-16}$$

8-16   Revise Equation 8-17 as follows ($2e_x^2$ revised to $2e_x$):

$$f_a = \frac{N}{l_a} = \frac{N \tan \theta}{\sqrt{4e_x^2 + l_w^2 \tan^2 \theta} - 2e_x} \tag{8-17}$$

Revise Equation 8-18 as follows (M revised to $4M$):

$$f_b = \frac{4M}{l_w^2 - l_a^2} \tag{8-18}$$

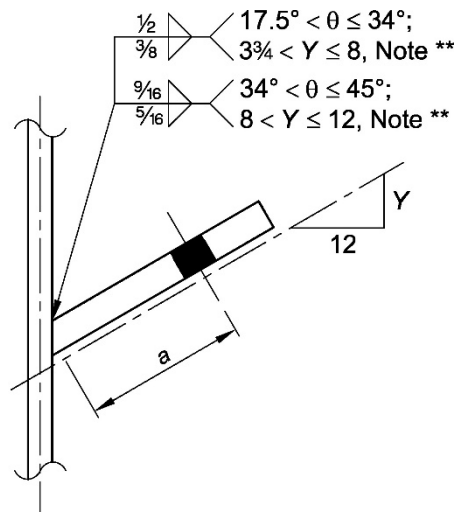9-17   Revise Equation 9-35 as follows (ρ replaced with η):

$$M_n = \frac{t^2 F_y}{4} \left(\frac{4\sqrt{2abcT\eta} + L\eta}{2ab} \right) \tag{9-35}$$

Revise Equation 9-36 to 9-36a and add new Equation 9-36b:

$$\rho = 2ab + ac + bc \tag{9-36a}$$
$$\eta = 4ab + ac + bc \tag{9-36b}$$

10-163   Replace the "For $17.5° < \theta \le 45°$ from Perpendicular" figure with the following (shear plate is now beveled):

16.1-167   In Section M2.1, replace the second sentence with "The temperature of heated areas shall not exceed 1,100°F (590°C) for ASTM A514/A514M steel nor 1,200°F (650°C) for other steels."

16.1-358   At the end of the first sentence on the page, the expression "$P \ge 1.5P_y$" is revised to "$P \ge 0.15P_y$"

Table 7-19
Dimensions of Non-High-Strength Fasteners, in.

Square   Hex, Heavy Hex   Countersunk
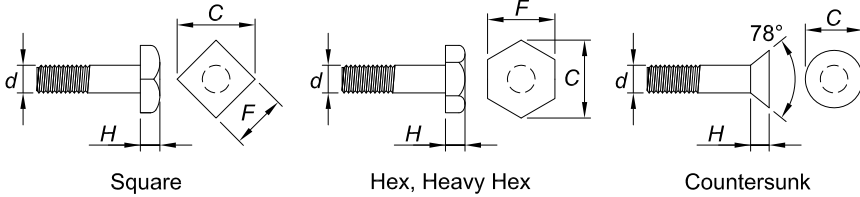
Bolt Dia., d, in.	Square			Hex			Heavy Hex			Countersunk		Min. Thrd. Length, in.	
	F, in.	C, in.	H, in.	F, in.	C, in.	H, in.	F, in.	C, in.	H, in.	C, in.	H, in.	$L \le$ 6 in.	$L >$ 6 in.
1/4	3/8	1/2	3/16	7/16	1/2	3/16	–	–	–	1/2	1/8	3/4	1
3/8	9/16	13/16	1/4	9/16	5/8	1/4	–	–	–	11/16	3/16	1	1 1/4
1/2	3/4	1 1/16	5/16	3/4	7/8	3/8	7/8	1	3/8	7/8	1/4	1 1/4	1 1/2
5/8	15/16	15/16	7/16	15/16	1 1/16	7/16	1 1/16	1 1/4	7/16	1 1/8	5/16	1 1/2	1 3/4
3/4	1 1/8	1 9/16	1/2	1 1/8	15/16	1/2	1 1/4	1 7/16	1/2	1 3/8	3/8	1 3/4	2
7/8	15/16	1 7/8	5/8	15/16	1 1/2	9/16	1 7/16	1 11/16	9/16	1 9/16	7/16	2	2 1/4
1	1 1/2	2 1/8	11/16	1 1/2	1 3/4	11/16	1 5/8	1 7/8	11/16	1 13/16	1/2	2 1/4	2 1/2
1 1/8	1 11/16	2 3/8	3/4	1 11/16	1 15/16	3/4	1 13/16	2 1/16	3/4	2 1/16	9/16	2 1/2	2 3/4
1 1/4	1 7/8	2 5/8	7/8	1 7/8	2 3/16	7/8	2	2 5/16	7/8	2 1/4	5/8	2 3/4	3
1 3/8	2 1/16	2 15/16	15/16	2 1/16	2 3/8	15/16	2 3/16	2 1/2	15/16	2 1/2	11/16	3	3 1/4
1 1/2	2 1/4	3 3/16	1	2 1/4	2 5/8	1	2 3/8	2 3/4	1	2 11/16	3/4	3 1/4	3 1/2
1 3/4	–	–	–	2 5/8	3	1 3/16	2 3/4	3 3/16	1 3/16	–	–	3 3/4	4
2	–	–	–	3	3 7/16	1 3/8	3 1/8	3 5/8	1 3/8	–	–	4 1/4	4 1/2
2 1/4	–	–	–	3 3/8	3 7/8	1 1/2	3 1/2	4 1/16	1 1/2	–	–	4 3/4	5
2 1/2	–	–	–	3 3/4	4 5/16	1 11/16	3 7/8	4 1/2	1 11/16	–	–	5 1/4	5 1/2
2 3/4	–	–	–	4 1/8	4 3/4	1 13/16	4 1/4	4 15/16	1 13/16	–	–	5 3/4	6
3	–	–	–	4 1/2	5 3/16	2	4 5/8	5 5/16	2	–	–	6	6 1/2
3 1/4	–	–	–	4 7/8	5 5/8	2 3/16	–	–	–	–	–	6	7
3 1/2	–	–	–	5 1/4	6 1/16	2 5/16	–	–	–	–	–	6	7 1/2
3 3/4	–	–	–	5 5/8	6 1/2	2 1/2	–	–	–	–	–	6	8
4	–	–	–	6	6 15/16	2 11/16	–	–	–	–	–	6	8 1/2

Notes:
For high-strength bolt and nut dimensions, refer to Table 7-14.
Square, hex and heavy hex bolt dimensions, rounded to nearest $^1/_{16}$ in., are in accordance with ASME B18.2.6.
Countersunk bolt dimensions, rounded to the nearest $^1/_{16}$ in., are in accordance with ASME B18.5.
Minimum thread length = $2d + ^1/_4$ in. for bolts up to 6 in. long, and $2d + ^1/_2$ in. for bolts longer than 6 in.

B18.2.1

DESIGN CONSIDERATIONS FOR BOLTS

Table 7-19 (continued)
Dimensions of Non-High-Strength Fasteners, in.
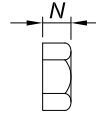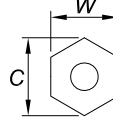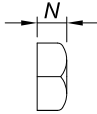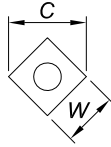
Square, Heavy Square   Hex, Heavy Hex

13/16

Nut Size, in.	Square			Hex			Heavy Square			Heavy Hex		
	W, in.	C, in.	N, in.	W, in.	C, in.	N, in.	W, in.	C, in.	N, in.	W, in.	C, in.	N, in.
1/4	7/16	5/8	1/4	7/16	1/2	3/16	1/2	11/16	1/4	1/2	9/16	1/4
3/8	5/8	7/8	5/16	9/16	5/8	1/4	11/16	1	3/8	11/16	13/16	3/8
1/2	4/5	1 1/8	7/16	3/4	7/8	3/8	7/8	1 1/4	1/2	7/8	1	1/2
5/8	1	1 7/16	9/16	15/16	1 1/16	7/16	1 1/16	1 1/2	5/8	1 1/16	1 1/4	5/8
3/4	1 1/8	1 9/16	11/16	1 1/8	1 5/16	1/2	1 1/4	1 3/4	3/4	1 1/4	1 7/16	3/4
7/8	1 5/16	1 7/8	3/4	1 5/16	1 1/2	9/16	1 7/16	2 1/16	7/8	1 7/16	1 11/16	7/8
1	1 1/2	2 1/8	7/8	1 1/2	1 3/4	11/16	1 5/8	2 5/16	1	1 5/8	1 7/8	1
1 1/8	1 11/16	2 3/8	1	1 11/16	1 15/16	3/4	1 13/16	2 9/16	1 1/8	1 13/16	2 1/16	1 1/8
1 1/4	1 7/8	2 5/8	1 1/8	1 7/8	2 3/16	7/8	2	2 13/16	1 1/4	2	2 5/16	1 1/4
1 3/8	2 1/16	2 15/16	1 1/4	2 1/16	2 3/8	15/16	2 3/16	3 1/8	1 3/8	2 3/16	2 1/2	1 3/8
1 1/2	2 1/4	3 3/16	1 15/16	2 1/4	2 5/8	1	2 3/8	3 3/8	1 1/2	2 3/8	2 3/4	1 1/2
1 3/4	–	–	–	–	–	–	–	–	–	2 3/4	3 3/16	1 3/4
2	–	–	–	–	–	–	–	–	–	3 1/8	3 5/8	2
2 1/4	–	–	–	–	–	–	–	–	–	3 1/2	4 1/16	2 3/16
2 1/2	–	–	–	–	–	–	–	–	–	3 7/8	4 1/2	2 7/16
2 3/4	–	–	–	–	–	–	–	–	–	4 1/4	4 15/16	2 11/16
3	–	–	–	–	–	–	–	–	–	4 5/8	5 5/16	2 15/16
3 1/4	–	–	–	–	–	–	–	–	–	5	5 3/4	3 3/16
3 1/2	–	–	–	–	–	–	–	–	–	5 3/8	6 3/16	3 7/16
3 3/4	–	–	–	–	–	–	–	–	–	5 3/4	6 5/8	3 11/16
4	–	–	–	–	–	–	–	–	–	6 1/8	7 1/16	3 15/16

(Annotation callouts for N column values: 1/4, 5/16, 7/16, 9/16, 11/16, 3/4, 7/8, 1, 1-1/8, 1-3/16, 1-5/16)

Notes:
For high-strength bolt and nut dimensions, refer to Table 7-14.
Square, hex and heavy hex bolt dimensions, rounded to nearest 1/16 in., are in accordance with ASME B18.2.6.
Countersunk bolt dimensions, rounded to the nearest 1/16 in., are in accordance with ASME B18.5.
Minimum thread length = $2d + \frac{1}{4}$ in. for bolts up to 6 in. long, and $2d + \frac{1}{2}$ in. for bolts longer than 6 in.

(Annotation: "nut")

(Annotation: B18.2.2)

AMERICAN INSTITUTE OF STEEL CONSTRUCTION