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ICC-ES Evaluation Report

ESR-2281

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Reissued 12/2017
This report is subject to renewal 12/2018.

DIVISION: 05 00 00—METALS

SECTION: 05 40 00—COLD-FORMED METAL FRAMING

SECTION: 05 41 00—STRUCTURAL METAL STUD FRAMING

SECTION: 09 22 16.13—NON-STRUCTURAL METAL STUD FRAMING

REPORT HOLDER:

TELLING INDUSTRIES

**6272 CENTER STREET
MENTOR, OHIO 44060**

EVALUATION SUBJECT:

METAL FRAMING



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DIVISION: 05 00 00—METALS

Section: 05 40 00—Cold-Formed Metal Framing

Section: 05 41 00—Structural Metal Stud Framing

DIVISION: 09 00 00—FINISHES

Section: 09 22 16.13—Non-Structural Metal Stud Framing

REPORT HOLDER:

TELLING INDUSTRIES
6272 CENTER STREET
MENTOR, OHIO 44060
(440) 974-3370
www.tellingindustries.com

EVALUATION SUBJECT:

METAL FRAMING

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)

Property evaluated:

Structural

2.0 USES

Telling Industries metal framing is used for nonload-bearing interior walls, curtain walls, load-bearing walls, floor joists, ceiling joists and furring.

3.0 DESCRIPTION

3.1 General:

The metal framing members described in this report are factory-formed from coils of steel at the facilities noted in Table 8. See Tables 1, 2, 5 and 6, and Figure 1, for recognized profiles and section names. The C-sections (studs) are manufactured with and without web punch-outs. When provided, punch-outs have a width between $\frac{3}{4}$ inch (19 mm) and $1\frac{1}{2}$ inches (38 mm) but in no case greater than one-half the member web height ($d/2$); and a length of 4 inches (102 mm). See Figure 3 for an illustration of punch-outs. The punch-outs are located along the centerline of the webs of the studs with a minimum center-to-center spacing of 24 inches (610 mm). The minimum distance between the end of the stud and the near edge of the web punch-outs is 10 inches (254 mm). The values for studs in each of the tables of

this report are for studs with punch-outs unless otherwise noted.

C-sections with 1.25-inch (32 mm) flanges may have indentations on the flanges. All other surfaces are flat, smooth surfaces. All surfaces of all other members are flat and smooth.

3.2 Materials:

Telling Industries metal framing members are cold-formed from steel coils conforming to ASTM A 1003 ST33H or ASTM A 1003 ST50H for members with a thickness of 33 mils or more, and ASTM A 1003 NS33 for members with a thickness of less than 33 mils [only for use as interior nonload-bearing framing members with a 5 psf (239 Pa) maximum transverse load]. The steel is hot-dipped galvanized with a minimum galvanization coating designation of G60 for all studs, except that the galvanization coating designation may be G40 for use as interior nonload-bearing framing members with a 5 psf (239 Pa) maximum transverse load. The base-metal thickness is specified in Tables 1 through 6.

4.0 DESIGN AND INSTALLATION

4.1 Design:

The section properties indicated in Tables 3 through 6 have been determined in accordance with the 2001 edition of the North American Specification for Design of Cold-formed Steel Structural Members, including 2004 Supplement (AISI-NAS). The allowable moments, M_a , as indicated in Tables 3 through 6, are for use with Allowable Strength Design (ASD), and are for flexural members installed with the compression flange continuously braced. For other conditions of compression flange bracing, the allowable moment must be determined in accordance with AISI-NAS. The design of members must address web crippling, combined bending and web crippling, and combined bending and shear, as applicable, in accordance with the AISI-NAS.

C-sections (studs) listed in Table 7 and channels (tracks) qualify for use with the prescriptive requirements of the IRC. For use of all other sections under the IRC, the cold-formed steel framing members must be limited to engineered structures, in accordance with IRC Section R301.1.3.

4.2 Installation:

The framing members must be installed in accordance with the code, the approved plans and this report. If there is a conflict between the plans submitted for approval and this report, this report governs. The approved plans must be made available at the jobsite at all times.

5.0 CONDITIONS OF USE

The Telling Industries metal framing described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The cold-formed steel members are installed in accordance with the code, the approved plans and this report.
- 5.2 Minimum uncoated base-metal thickness of the cold-formed steel members as delivered to the jobsite are at least 95 percent of the design base-metal thickness noted in Tables 1, 2, 5 and 6.
- 5.3 Complete plans and calculations verifying compliance with this report must be submitted to the code official for each project at the time of permit application. The calculations and drawings must be prepared and sealed by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

- 5.4 Studs and tracks having a galvanized coating weight of less than G60 must be limited to use as nonload-bearing interior wall framing subject to a maximum transverse load of 5 psf (239 Pa).

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Cold-formed Steel Framing Members (AC46), dated February 2007 (editorially revised April 2008).

7.0 IDENTIFICATION

At a spacing not exceeding 48 inches (1219 mm) on center, each cold-formed steel member is stamped with the Telling Industries name or initials (TI); the section name as described in Tables 1 through 6; the evaluation report number (ICC-ES ESR-2281); the minimum uncoated base-metal thickness in mils or decimal inches; the minimum specified yield strength [if greater than 33 ksi (228 MPa)]; and the galvanization coating designation (if G60 or greater).

TABLE 1—C-SECTIONS (STUDS)1

SECTION	DEPTH ² (in)	FLANGE (in)	LIP (in)	INSIDE CORNER RADII (in)	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. ³ (in)	SECTION	DEPTH ² (in)	FLANGE (in)	LIP (in)	INSIDE CORNER RADII (in)	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. ³ (in)
162S125-18	1.625	1.250	0.1875	0.0843	18	0.0188	0.0179	362S125-18	3.625	1.250	0.1875	0.0843	18	0.0188	0.0179
162S125-27	1.625	1.250	0.1875	0.0796	27	0.0283	0.0269	362S125-27	3.625	1.250	0.1875	0.0796	27	0.0283	0.0269
162S125-30	1.625	1.250	0.1875	0.0781	30	0.0312	0.0296	362S125-30	3.625	1.250	0.1875	0.0781	30	0.0312	0.0296
162S125-33	1.625	1.250	0.1875	0.0764	33	0.0346	0.0329	362S125-33	3.625	1.250	0.1875	0.0764	33	0.0346	0.0329
250S125-18	2.500	1.250	0.1875	0.0843	18	0.0188	0.0179	362S125-43	3.625	1.250	0.1875	0.0712	43	0.0451	0.0428
250S125-27	2.500	1.250	0.1875	0.0796	27	0.0283	0.0269	362S125-54	3.625	1.250	0.1875	0.0849	54	0.0566	0.0538
250S125-30	2.500	1.250	0.1875	0.0781	30	0.0312	0.0296	362S125-68	3.625	1.250	0.1875	0.1069	68	0.0713	0.0677
250S125-33	2.500	1.250	0.1875	0.0764	33	0.0346	0.0329	362S137-33	3.625	1.375	0.375	0.0764	33	0.0346	0.0346
250S125-43	2.500	1.250	0.1875	0.0712	43	0.0451	0.0428	362S137-43	3.625	1.375	0.375	0.0712	43	0.0451	0.0451
250S125-54	2.500	1.250	0.1875	0.0849	54	0.0566	0.0538	362S137-54	3.625	1.375	0.375	0.0849	54	0.0566	0.0566
250S125-68	2.500	1.250	0.1875	0.1069	68	0.0713	0.0677	362S137-68	3.625	1.375	0.375	0.1069	68	0.0713	0.0713
250S137-33	2.500	1.375	0.375	0.0764	33	0.0346	0.0329	362S137-97	3.625	1.375	0.375	0.1525	97	0.1017	0.1017
250S137-43	2.500	1.375	0.375	0.0712	43	0.0451	0.0428	362S162-33	3.625	1.625	0.50	0.0764	33	0.0346	0.0346
250S137-54	2.500	1.375	0.375	0.0849	54	0.0566	0.0538	362S162-43	3.625	1.625	0.50	0.0712	43	0.0451	0.0451
250S137-68	2.500	1.375	0.375	0.1069	68	0.0713	0.0677	362S162-54	3.625	1.625	0.50	0.0849	54	0.0566	0.0566
250S137-97	2.500	1.375	0.375	0.1525	97	0.1017	0.0966	362S162-68	3.625	1.625	0.50	0.1069	68	0.0713	0.0713
250S162-33	2.500	1.625	0.50	0.0764	33	0.0346	0.0329	362S162-97	3.625	1.625	0.50	0.1525	97	0.1017	0.1017
250S162-43	2.500	1.625	0.50	0.0712	43	0.0451	0.0428	362S200-33	3.625	2.000	0.625	0.0764	33	0.0346	0.0346
250S162-54	2.500	1.625	0.50	0.0849	54	0.0566	0.0538	362S200-43	3.625	2.000	0.625	0.0712	43	0.0451	0.0451
250S162-68	2.500	1.625	0.50	0.1069	68	0.0713	0.0677	362S200-54	3.625	2.000	0.625	0.0849	54	0.0566	0.0566
250S162-97	2.500	1.625	0.50	0.1525	97	0.1017	0.0966	362S200-68	3.625	2.000	0.625	0.1069	68	0.0713	0.0713
250S200-33	2.500	2.000	0.625	0.0764	33	0.0346	0.0329	362S200-97	3.625	2.000	0.625	0.1525	97	0.1017	0.1017
250S200-43	2.500	2.000	0.625	0.0712	43	0.0451	0.0428	362S250-43	3.625	2.500	0.625	0.0712	43	0.0451	0.0451
250S200-54	2.500	2.000	0.625	0.0849	54	0.0566	0.0538	362S250-54	3.625	2.500	0.625	0.0849	54	0.0566	0.0566
250S200-68	2.500	2.000	0.625	0.1069	68	0.0713	0.0677	362S250-68	3.625	2.500	0.625	0.1069	68	0.0713	0.0713
250S200-97	2.500	2.000	0.625	0.1525	97	0.1017	0.0966	362S250-97	3.625	2.500	0.625	0.1525	97	0.1017	0.1017
250S250-43	2.500	2.500	0.625	0.0712	43	0.0451	0.0428	362S300-54	3.625	3.000	1.000	0.0849	54	0.0566	0.0566
250S250-54	2.500	2.500	0.625	0.0849	54	0.0566	0.0538	362S300-68	3.625	3.000	1.000	0.1069	68	0.0713	0.0713
250S250-68	2.500	2.500	0.625	0.1069	68	0.0713	0.0677	362S300-97	3.625	3.000	1.000	0.1525	97	0.1017	0.1017
250S250-97	2.500	2.500	0.625	0.1525	97	0.1017	0.0966	400S125-18 ⁴	4.000	1.250	0.1875	0.0843	18	0.0188	0.0179
350S125-18	3.500	1.250	0.1875	0.0843	18	0.0188	0.0179	400S125-27	4.000	1.250	0.1875	0.0796	27	0.0283	0.0269
350S125-27	3.500	1.250	0.1875	0.0796	27	0.0283	0.0269	400S125-30	4.000	1.250	0.1875	0.0781	30	0.0312	0.0296
350S125-30	3.500	1.250	0.1875	0.0781	30	0.0312	0.0296	400S125-33	4.000	1.250	0.1875	0.0764	33	0.0346	0.0329
350S125-33	3.500	1.250	0.1875	0.0764	33	0.0346	0.0329	400S125-43	4.000	1.250	0.1875	0.0712	43	0.0451	0.0428
350S125-43	3.500	1.250	0.1875	0.0712	43	0.0451	0.0428	400S125-54	4.000	1.250	0.1875	0.0849	54	0.0566	0.0538
350S125-54	3.500	1.250	0.1875	0.0849	54	0.0566	0.0538	400S125-68	4.000	1.250	0.1875	0.1069	68	0.0713	0.0677
350S125-68	3.500	1.250	0.1875	0.1069	68	0.0713	0.0677	400S137-33	4.000	1.375	0.375	0.0764	33	0.0346	0.0346
350S125-97	3.500	1.250	0.1875	0.1525	97	0.1017	0.0966	400S137-43	4.000	1.375	0.375	0.0712	43	0.0566	0.0451
350S137-33	3.500	1.375	0.375	0.0764	33	0.0346	0.0329	400S137-54	4.000	1.375	0.375	0.0849	54	0.0713	0.0566
350S137-43	3.500	1.375	0.375	0.0712	43	0.0451	0.0428	400S137-68	4.000	1.375	0.375	0.1069	68	0.1017	0.0713
350S137-54	3.500	1.375	0.375	0.0849	54	0.0566	0.0538	400S137-97	4.000	1.375	0.375	0.1525	97	0.1017	0.1017
350S137-68	3.500	1.375	0.375	0.1069	68	0.0713	0.0677	400S162-33	4.000	1.625	0.50	0.0764	33	0.0346	0.0346
350S137-97	3.500	1.375	0.375	0.1525	97	0.1017	0.0966	400S162-43	4.000	1.625	0.50	0.0712	43	0.0451	0.0451
350S162-33	3.500	1.625	0.50	0.0764	33	0.0346	0.0329	400S162-54	4.000	1.625	0.50	0.0849	54	0.0566	0.0566
350S162-43	3.500	1.625	0.50	0.0712	43	0.0451	0.0428	400S162-68	4.000	1.625	0.50	0.1069	68	0.0713	0.0713
350S162-54	3.500	1.625	0.50	0.0849	54	0.0566	0.0538	400S162-97	4.000	1.625	0.50	0.1525	97	0.1017	0.1017
350S162-68	3.500	1.625	0.50	0.1069	68	0.0713	0.0677	400S200-33	4.000	2.000	0.625	0.0764	33	0.0346	0.0346
350S162-97	3.500	1.625	0.50	0.1525	97	0.1017	0.0966	400S200-43	4.000	2.000	0.625	0.0712	43	0.0451	0.0451
350S200-33	3.500	2.000	0.625	0.0764	33	0.0346	0.0329	400S200-54	4.000	2.000	0.625	0.0849	54	0.0566	0.0566
350S200-43	3.500	2.000	0.625	0.0712	43	0.0451	0.0428	400S200-68	4.000	2.000	0.625	0.1069	68	0.0713	0.0713
350S200-54	3.500	2.000	0.625	0.0849	54	0.0566	0.0538	400S200-97	4.000	2.000	0.625	0.1525	97	0.1017	0.1017
350S200-68	3.500	2.000	0.625	0.1069	68	0.0713	0.0677	400S250-43	4.000	2.500	0.625	0.0712	43	0.0451	0.0451
350S200-97	3.500	2.000	0.625	0.1525	97	0.1017	0.0966	400S250-54	4.000	2.500	0.625	0.0849	54	0.0566	0.0566
350S250-43	3.500	2.500	0.625	0.0712	43	0.0451	0.0428	400S250-68	4.000	2.500	0.625	0.1069	68	0.0713	0.0713
350S250-54	3.500	2.500	0.625	0.0849	54	0.0566	0.0538	400S250-97	4.000	2.500	0.625	0.1525	97	0.1017	0.1017
350S250-68	3.500	2.500	0.625	0.1069	68	0.0713	0.0677	400S300-54	4.000	3.000	1.000	0.0849	54	0.0566	0.0566
350S250-97	3.500	2.500	0.625	0.1525	97	0.1017	0.0966	400S300-68	4.000	3.000	1.000	0.1069	68	0.0713	0.0713
350S300-54	3.500	3.000	1.000	0.0849	54	0.0566	0.0538	400S300-97	4.000	3.000	1.000	0.1525	97	0.1017	0.1017
350S300-68	3.500	3.000	1.000	0.1069	68	0.0713	0.0677								
350S300-97	3.500	3.000	1.000	0.1525	97	0.1017	0.0966								

For SI: 1 inch = 25.4 mm.

¹ See Table 3 for member properties. See Figure 1 for illustration of member cross section.

² Depth measured from outside face to outside face of flanges.

³ Base metal thickness of members, exclusive of coatings, delivered to the jobsite must be a minimum of 95 percent of design thickness.

⁴ Web height-to-thickness ratio, h/t, exceeds 200. Web stiffeners in accordance with Sections B1.2 and C3.6.1 of AISI-NAS are required. No holes or punch-outs are permitted in the web.

Table 1 continued on next page.

TABLE 1—C-SECTIONS (STUDS)¹ (Continued)

SECTION	DEPTH ² (in)	FLANGE (in)	LIP (in)	INSIDE CORNER RADII (in)	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. ³ (in)	SECTION	DEPTH ² (in)	FLANGE (in)	LIP (in)	INSIDE CORNER RADII (in)	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. ³ (in)
550S125-27	5.500	1.250	0.1875	0.0796	27	0.0283	0.0269	725S125-27 ⁴	7.250	1.250	0.1875	0.0796	27	0.0283	0.0269
550S125-30	5.500	1.250	0.1875	0.0781	30	0.0312	0.0296	725S125-30 ⁴	7.250	1.250	0.1875	0.0781	30	0.0312	0.0296
550S125-33	5.500	1.250	0.1875	0.0764	33	0.0346	0.0329	725S125-33 ⁴	7.250	1.250	0.1875	0.0764	33	0.0346	0.0329
550S125-43	5.500	1.250	0.1875	0.0712	43	0.0451	0.0428	725S125-43	7.250	1.250	0.1875	0.0712	43	0.0451	0.0428
550S125-54	5.500	1.250	0.1875	0.0849	54	0.0566	0.0538	725S125-54	7.250	1.250	0.1875	0.0849	54	0.0566	0.0538
550S125-68	5.500	1.250	0.1875	0.1069	68	0.0713	0.0677	725S125-68	7.250	1.250	0.1875	0.1069	68	0.0713	0.0677
550S137-33	5.500	1.375	0.375	0.0764	33	0.0346	0.0329	725S137-33 ⁴	7.250	1.375	0.375	0.0764	33	0.0346	0.0329
550S137-43	5.500	1.375	0.375	0.0712	43	0.0451	0.0428	725S137-43	7.250	1.375	0.375	0.0712	43	0.0451	0.0428
550S137-54	5.500	1.375	0.375	0.0849	54	0.0566	0.0538	725S137-54	7.250	1.375	0.375	0.0849	54	0.0566	0.0538
550S137-68	5.500	1.375	0.375	0.1069	68	0.0713	0.0677	725S137-68	7.250	1.375	0.375	0.1069	68	0.0713	0.0677
550S137-97	5.500	1.375	0.375	0.1525	97	0.1017	0.0966	725S137-97	7.250	1.375	0.375	0.1525	97	0.1017	0.0966
550S162-33	5.500	1.625	0.50	0.0764	33	0.0346	0.0329	725S162-33 ⁴	7.250	1.625	0.50	0.0764	33	0.0346	0.0329
550S162-43	5.500	1.625	0.50	0.0712	43	0.0451	0.0428	725S162-43	7.250	1.625	0.50	0.0712	43	0.0451	0.0428
550S162-54	5.500	1.625	0.50	0.0849	54	0.0566	0.0538	725S162-54	7.250	1.625	0.50	0.0849	54	0.0566	0.0538
550S162-68	5.500	1.625	0.50	0.1069	68	0.0713	0.0677	725S162-68	7.250	1.625	0.50	0.1069	68	0.0713	0.0677
550S162-97	5.500	1.625	0.50	0.1525	97	0.1017	0.0966	725S162-97	7.250	1.625	0.50	0.1525	97	0.1017	0.0966
550S200-33	5.500	2.000	0.625	0.0764	33	0.0346	0.0329	725S200-33 ⁴	7.250	2.000	0.625	0.0764	33	0.0346	0.0329
550S200-43	5.500	2.000	0.625	0.0712	43	0.0451	0.0428	725S200-43	7.250	2.000	0.625	0.0712	43	0.0451	0.0428
550S200-54	5.500	2.000	0.625	0.0849	54	0.0566	0.0538	725S200-54	7.250	2.000	0.625	0.0849	54	0.0566	0.0538
550S200-68	5.500	2.000	0.625	0.1069	68	0.0713	0.0677	725S200-68	7.250	2.000	0.625	0.1069	68	0.0713	0.0677
550S200-97	5.500	2.000	0.625	0.1525	97	0.1017	0.0966	725S200-97	7.250	2.000	0.625	0.1525	97	0.1017	0.0966
550S250-43	5.500	2.500	0.625	0.0712	43	0.0451	0.0428	725S250-43	7.250	2.500	0.625	0.0712	43	0.0451	0.0428
550S250-54	5.500	2.500	0.625	0.0849	54	0.0566	0.0538	725S250-54	7.250	2.500	0.625	0.0849	54	0.0566	0.0538
550S250-68	5.500	2.500	0.625	0.1069	68	0.0713	0.0677	725S250-68	7.250	2.500	0.625	0.1069	68	0.0713	0.0677
550S250-97	5.500	2.500	0.625	0.1525	97	0.1017	0.0966	725S250-97	7.250	2.500	0.625	0.1525	97	0.1017	0.0966
550S300-54	5.500	3.000	1.000	0.0849	54	0.0566	0.0538	725S300-54	7.250	3.000	1.000	0.0849	54	0.0566	0.0538
550S300-68	5.500	3.000	1.000	0.1069	68	0.0713	0.0677	725S300-68	7.250	3.000	1.000	0.1069	68	0.0713	0.0677
550S300-97	5.500	3.000	1.000	0.1525	97	0.1017	0.0966	725S300-97	7.250	3.000	1.000	0.1525	97	0.1017	0.0966
600S125-27 ⁴	6.000	1.250	0.1875	0.0796	27	0.0283	0.0269	800S125-30 ⁴	8.000	1.250	0.1875	0.0781	30	0.0312	0.0296
600S125-30	6.000	1.250	0.1875	0.0781	30	0.0312	0.0296	800S125-33 ⁴	8.000	1.250	0.1875	0.0764	33	0.0346	0.0329
600S125-33	6.000	1.250	0.1875	0.0764	33	0.0346	0.0329	800S125-43	8.000	1.250	0.1875	0.0712	43	0.0451	0.0428
600S125-43	6.000	1.250	0.1875	0.0712	43	0.0451	0.0428	800S125-54	8.000	1.250	0.1875	0.0849	54	0.0566	0.0538
600S125-54	6.000	1.250	0.1875	0.0849	54	0.0566	0.0538	800S125-68	8.000	1.250	0.1875	0.1069	68	0.0713	0.0677
600S125-68	6.000	1.250	0.1875	0.1069	68	0.0713	0.0677	800S137-33 ⁴	8.000	1.375	0.375	0.0764	33	0.0346	0.0329
600S125-97	6.000	1.250	0.1875	0.1525	97	0.1017	0.0966	800S137-43	8.000	1.375	0.375	0.0712	43	0.0451	0.0428
600S137-33	6.000	1.375	0.375	0.0764	33	0.0346	0.0329	800S137-54	8.000	1.375	0.375	0.0849	54	0.0566	0.0538
600S137-43	6.000	1.375	0.375	0.0712	43	0.0451	0.0428	800S137-68	8.000	1.375	0.375	0.1069	68	0.0713	0.0677
600S137-54	6.000	1.375	0.375	0.0849	54	0.0566	0.0538	800S137-97	8.000	1.375	0.375	0.1525	97	0.1017	0.0966
600S137-68	6.000	1.375	0.375	0.1069	68	0.0713	0.0677	800S162-33 ⁴	8.000	1.625	0.50	0.0764	33	0.0346	0.0329
600S137-97	6.000	1.375	0.375	0.1525	97	0.1017	0.0966	800S162-43	8.000	1.625	0.50	0.0712	43	0.0451	0.0428
600S162-33	6.000	1.625	0.50	0.0764	33	0.0346	0.0329	800S162-54	8.000	1.625	0.50	0.0849	54	0.0566	0.0538
600S162-43	6.000	1.625	0.50	0.0712	43	0.0451	0.0428	800S162-68	8.000	1.625	0.50	0.1069	68	0.0713	0.0677
600S162-54	6.000	1.625	0.50	0.0849	54	0.0566	0.0538	800S162-97	8.000	1.625	0.50	0.1525	97	0.1017	0.0966
600S162-68	6.000	1.625	0.50	0.1069	68	0.0713	0.0677	800S200-33 ⁴	8.000	2.000	0.625	0.0764	33	0.0346	0.0329
600S162-97	6.000	1.625	0.50	0.1525	97	0.1017	0.0966	800S200-43	8.000	2.000	0.625	0.0712	43	0.0451	0.0428
600S200-33	6.000	2.000	0.625	0.0764	33	0.0346	0.0329	800S200-54	8.000	2.000	0.625	0.0849	54	0.0566	0.0538
600S200-43	6.000	2.000	0.625	0.0712	43	0.0451	0.0428	800S200-68	8.000	2.000	0.625	0.1069	68	0.0713	0.0677
600S200-54	6.000	2.000	0.625	0.0849	54	0.0566	0.0538	800S200-97	8.000	2.000	0.625	0.1525	97	0.1017	0.0966
600S200-68	6.000	2.000	0.625	0.1069	68	0.0713	0.0677	800S250-43	8.000	2.500	0.625	0.0712	43	0.0451	0.0428
600S200-97	6.000	2.000	0.625	0.1525	97	0.1017	0.0966	800S250-54	8.000	2.500	0.625	0.0849	54	0.0566	0.0538
600S250-43	6.000	2.500	0.625	0.0712	43	0.0451	0.0428	800S250-68	8.000	2.500	0.625	0.1069	68	0.0713	0.0677
600S250-54	6.000	2.500	0.625	0.0849	54	0.0566	0.0538	800S250-97	8.000	2.500	0.625	0.1525	97	0.1017	0.0966
600S250-68	6.000	2.500	0.625	0.1069	68	0.0713	0.0677	800S300-54	8.000	3.000	1.000	0.0849	54	0.0566	0.0538
600S250-97	6.000	2.500	0.625	0.1525	97	0.1017	0.0966	800S300-68	8.000	3.000	1.000	0.1069	68	0.0713	0.0677
600S300-54	6.000	3.000	1.000	0.0849	54	0.0566	0.0538	800S300-97	8.000	3.000	1.000	0.1525	97	0.1017	0.0966
600S300-68	6.000	3.000	1.000	0.1069	68	0.0713	0.0677								
600S300-97	6.000	3.000	1.000	0.1525	97	0.1017	0.0966								

For SI: 1 inch = 25.4 mm.

¹ See Table 3 for member properties. See Figure 1 for illustration of member cross section.

² Depth measured from outside face to outside face of flanges.

³ Base metal thickness of members, exclusive of coatings, delivered to the jobsite must be a minimum of 95 percent of design the thickness.

⁴ Web height-to-thickness ratio, h/t, exceeds 200. Web stiffeners in accordance with Sections B1.2 and C3.6.1 of AISI-NAS are required. No holes or punch-outs are permitted in the web.

Table 1 continued on next page.

TABLE 1—C-SECTIONS (STUDS)¹ (Continued)

SECTION	DEPTH ² (in)	FLANGE (in)	LIP (in)	INSIDE CORNER RADII (in)	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. ³ (in)	SECTION	DEPTH ² (in)	FLANGE (in)	LIP (in)	INSIDE CORNER RADII (in)	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. ³ (in)
925S137-43	9.250	1.375	0.375	0.0712	43	0.0451	0.0428	1150S300-54	11.500	3.000	1.000	0.0849	54	0.0566	0.0538
925S137-54	9.250	1.375	0.375	0.0849	54	0.0566	0.0538	1150S300-68	11.500	3.000	1.000	0.1069	68	0.0713	0.0677
925S137-68	9.250	1.375	0.375	0.1069	68	0.0713	0.0677	1150S300-97	11.500	3.000	1.000	0.1525	97	0.1017	0.0966
925S137-97	9.250	1.375	0.375	0.1525	97	0.1017	0.0966	1200S137-54 ⁴	12.000	1.375	0.375	0.0849	54	0.0566	0.0538
925S162-43	9.250	1.625	0.50	0.0712	43	0.0451	0.0428	1200S137-68	12.000	1.375	0.375	0.1069	68	0.0713	0.0677
925S162-54	9.250	1.625	0.50	0.0849	54	0.0566	0.0538	1200S137-97	12.000	1.375	0.375	0.1525	97	0.1017	0.0966
925S162-68	9.250	1.625	0.50	0.1069	68	0.0713	0.0677	1200S162-54 ⁴	12.000	1.625	0.50	0.0849	54	0.0566	0.0538
925S162-97	9.250	1.625	0.50	0.1525	97	0.1017	0.0966	1200S162-68	12.000	1.625	0.50	0.1069	68	0.0713	0.0677
925S200-43	9.250	2.000	0.625	0.0712	43	0.0451	0.0428	1200S162-97	12.000	1.625	0.50	0.1525	97	0.1017	0.0966
925S200-54	9.250	2.000	0.625	0.0849	54	0.0566	0.0538	1200S200-54 ⁴	12.000	2.000	0.625	0.0849	54	0.0566	0.0538
925S200-68	9.250	2.000	0.625	0.1069	68	0.0713	0.0677	1200S200-68	12.000	2.000	0.625	0.1069	68	0.0713	0.0677
925S200-97	9.250	2.000	0.625	0.1525	97	0.1017	0.0966	1200S200-97	12.000	2.000	0.625	0.1525	97	0.1017	0.0966
925S250-43	9.250	2.500	0.625	0.0712	43	0.0451	0.0428	1200S250-54 ⁴	12.000	2.500	0.625	0.0849	54	0.0566	0.0538
925S250-54	9.250	2.500	0.625	0.0849	54	0.0566	0.0538	1200S250-68	12.000	2.500	0.625	0.1069	68	0.0713	0.0677
925S250-68	9.250	2.500	0.625	0.1069	68	0.0713	0.0677	1200S250-97	12.000	2.500	0.625	0.1525	97	0.1017	0.0966
925S250-97	9.250	2.500	0.625	0.1525	97	0.1017	0.0966	1200S300-54 ⁴	12.000	3.000	1.000	0.0849	54	0.0566	0.0538
925S300-54	9.250	3.000	1.000	0.0849	54	0.0566	0.0538	1200S300-68	12.000	3.000	1.000	0.1069	68	0.0713	0.0677
925S300-68	9.250	3.000	1.000	0.1069	68	0.0713	0.0677	1200S300-97	12.000	3.000	1.000	0.1525	97	0.1017	0.0966
925S300-97	9.250	3.000	1.000	0.1525	97	0.1017	0.0966	1350S137-54 ⁴	13.500	1.375	0.375	0.0849	54	0.0566	0.0538
1000S137-43 ⁴	10.000	1.375	0.375	0.0712	43	0.0451	0.0428	1350S137-68	13.500	1.375	0.375	0.1069	68	0.0713	0.0677
1000S137-54	10.000	1.375	0.375	0.0849	54	0.0566	0.0538	1350S137-97	13.500	1.375	0.375	0.1525	97	0.1017	0.0966
1000S137-68	10.000	1.375	0.375	0.1069	68	0.0713	0.0677	1350S162-54 ⁴	13.500	1.625	0.50	0.0849	54	0.0566	0.0538
1000S137-97	10.000	1.375	0.375	0.1525	97	0.1017	0.0966	1350S162-68	13.500	1.625	0.50	0.1069	68	0.0713	0.0677
1000S162-43 ⁴	10.000	1.625	0.50	0.0712	43	0.0451	0.0428	1350S162-97	13.500	1.625	0.50	0.1525	97	0.1017	0.0966
1000S162-54	10.000	1.625	0.50	0.0849	54	0.0566	0.0538	1350S200-54 ⁴	13.500	2.000	0.625	0.0849	54	0.0566	0.0538
1000S162-68	10.000	1.625	0.50	0.1069	68	0.0713	0.0677	1350S200-68	13.500	2.000	0.625	0.1069	68	0.0713	0.0677
1000S162-97	10.000	1.625	0.50	0.1525	97	0.1017	0.0966	1350S200-97	13.500	2.000	0.625	0.1525	97	0.1017	0.0966
1000S200-43 ⁴	10.000	2.000	0.625	0.0712	43	0.0451	0.0428	1350S250-54 ⁴	13.500	2.500	0.625	0.0849	54	0.0566	0.0538
1000S200-54	10.000	2.000	0.625	0.0849	54	0.0566	0.0538	1350S250-68	13.500	2.500	0.625	0.1069	68	0.0713	0.0677
1000S200-68	10.000	2.000	0.625	0.1069	68	0.0713	0.0677	1350S250-97	13.500	2.500	0.625	0.1525	97	0.1017	0.0966
1000S200-97	10.000	2.000	0.625	0.1525	97	0.1017	0.0966	1350S300-54 ⁴	13.500	3.000	1.000	0.0849	54	0.0566	0.0538
1000S250-43 ⁴	10.000	2.500	0.625	0.0712	43	0.0451	0.0428	1350S300-68	13.500	3.000	1.000	0.1069	68	0.0713	0.0677
1000S250-54	10.000	2.500	0.625	0.0849	54	0.0566	0.0538	1350S300-97	13.500	3.000	1.000	0.1525	97	0.1017	0.0966
1000S250-68	10.000	2.500	0.625	0.1069	68	0.0713	0.0677	1400S137-54 ⁴	14.000	1.375	0.375	0.0849	54	0.0566	0.0538
1000S250-97	10.000	2.500	0.625	0.1525	97	0.1017	0.0966	1400S137-68	14.000	1.375	0.375	0.1069	68	0.0713	0.0677
1000S300-54	10.000	3.000	1.000	0.0849	54	0.0566	0.0538	1400S137-97	14.000	1.375	0.375	0.1525	97	0.1017	0.0966
1000S300-68	10.000	3.000	1.000	0.1069	68	0.0713	0.0677	1400S162-54 ⁴	14.000	1.625	0.50	0.0849	54	0.0566	0.0538
1000S300-97	10.000	3.000	1.000	0.1525	97	0.1017	0.0966	1400S162-68	14.000	1.625	0.50	0.1069	68	0.0713	0.0677
1150S137-43 ⁴	11.500	1.375	0.375	0.0712	43	0.0451	0.0428	1400S162-97	14.000	1.625	0.50	0.1525	97	0.1017	0.0966
1150S137-54	11.500	1.375	0.375	0.0849	54	0.0566	0.0538	1400S200-54 ⁴	14.000	2.000	0.625	0.0849	54	0.0566	0.0538
1150S137-68	11.500	1.375	0.375	0.1069	68	0.0713	0.0677	1400S200-68	14.000	2.000	0.625	0.1069	68	0.0713	0.0677
1150S137-97	11.500	1.375	0.375	0.1525	97	0.1017	0.0966	1400S200-97	14.000	2.000	0.625	0.1525	97	0.1017	0.0966
1150S162-43 ⁴	11.500	1.625	0.50	0.0712	43	0.0451	0.0428	1400S250-54 ⁴	14.000	2.500	0.625	0.0849	54	0.0566	0.0538
1150S162-54	11.500	1.625	0.50	0.0849	54	0.0566	0.0538	1400S250-68	14.000	2.500	0.625	0.1069	68	0.0713	0.0677
1150S162-68	11.500	1.625	0.50	0.1069	68	0.0713	0.0677	1400S250-97	14.000	2.500	0.625	0.1525	97	0.1017	0.0966
1150S162-97	11.500	1.625	0.50	0.1525	97	0.1017	0.0966	1400S300-54 ⁴	14.000	3.000	1.000	0.0849	54	0.0566	0.0538
1150S200-43 ⁴	11.500	2.000	0.625	0.0712	43	0.0451	0.0428	1400S300-68	14.000	3.000	1.000	0.1069	68	0.0713	0.0677
1150S200-54	11.500	2.000	0.625	0.0849	54	0.0566	0.0538	1400S300-97	14.000	3.000	1.000	0.1525	97	0.1017	0.0966
1150S200-68	11.500	2.000	0.625	0.1069	68	0.0713	0.0677								
1150S200-97	11.500	2.000	0.625	0.1525	97	0.1017	0.0966								
1150S250-43 ⁴	11.500	2.500	0.625	0.0712	43	0.0451	0.0428								
1150S250-54	11.500	2.500	0.625	0.0849	54	0.0566	0.0538								
1150S250-68	11.500	2.500	0.625	0.1069	68	0.0713	0.0677								
1150S250-97	11.500	2.500	0.625	0.1525	97	0.1017	0.0966								

For SI: 1 inch = 25.4 mm.

¹ See Table 3 for member properties. See Figure 1 for illustration of member cross section.

² Depth measured from outside face to outside face of flanges.

³ Base metal thickness of members, exclusive of coatings, delivered to the jobsite must be a minimum of 95 percent of design the thickness.

⁴ Web height-to-thickness ratio, h/t, exceeds 200. Web stiffeners in accordance with Sections B1.2 and C3.6.1 of AISI-NAS are required. No holes or punch-outs are permitted in the web.

TABLE 2—CHANNEL (TRACK) SECTIONS¹

SECTION	DEPTH ² (in)	FLANGE (in)	INSIDE CORNER RADII (in)	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. ³ (in)	SECTION	DEPTH ² (in)	FLANGE (in)	INSIDE CORNER RADII (in)	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. ³ (in)
162T125-18	1.625	1.250	0.0843	18	0.0188	0.0179	350T150-27	3.500	1.500	0.0796	27	0.0283	0.0269
162T125-27	1.625	1.250	0.0796	27	0.0283	0.0269	350T150-30	3.500	1.500	0.0781	30	0.0312	0.0296
162T125-30	1.625	1.250	0.0781	30	0.0312	0.0296	350T150-33	3.500	1.500	0.0764	33	0.0346	0.0329
162T125-33	1.625	1.250	0.0764	33	0.0346	0.0329	350T150-43	3.500	1.500	0.0712	43	0.0451	0.0428
162T125-43	1.625	1.250	0.0712	43	0.0451	0.0428	350T150-54	3.500	1.500	0.0849	54	0.0566	0.0538
162T125-54	1.625	1.250	0.0849	54	0.0566	0.0538	350T150-68	3.500	1.500	0.1069	68	0.0713	0.0677
162T125-68	1.625	1.250	0.1069	68	0.0713	0.0677	350T150-97	3.500	1.500	0.1525	97	0.1017	0.0966
162T125-97	1.625	1.250	0.1525	97	0.1017	0.0966	350T200-33	3.500	2.000	0.0764	33	0.0346	0.0329
162T150-18	1.625	1.500	0.0843	18	0.0188	0.0179	350T200-43	3.500	2.000	0.0712	43	0.0451	0.0428
162T150-27	1.625	1.500	0.0796	27	0.0283	0.0269	350T200-54	3.500	2.000	0.0849	54	0.0566	0.0538
162T150-30	1.625	1.500	0.0781	30	0.0312	0.0296	350T200-68	3.500	2.000	0.1069	68	0.0713	0.0677
162T150-33	1.625	1.500	0.0764	33	0.0346	0.0329	350T200-97	3.500	2.000	0.1525	97	0.1017	0.0966
162T150-43	1.625	1.500	0.0712	43	0.0451	0.0428	350T250-43	3.500	2.500	0.0712	43	0.0451	0.0428
162T150-54	1.625	1.500	0.0849	54	0.0566	0.0538	350T250-54	3.500	2.500	0.0849	54	0.0566	0.0538
162T150-68	1.625	1.500	0.1069	68	0.0713	0.0677	350T250-68	3.500	2.500	0.1069	68	0.0713	0.0677
162T150-97	1.625	1.500	0.1525	97	0.1017	0.0966	350T250-97	3.500	2.500	0.1525	97	0.1017	0.0966
162T200-33	1.625	2.000	0.0764	33	0.0346	0.0329	350T300-54	3.500	3.000	0.0849	54	0.0566	0.0538
162T200-43	1.625	2.000	0.0712	43	0.0451	0.0428	350T300-68	3.500	3.000	0.1069	68	0.0713	0.0677
162T200-54	1.625	2.000	0.0849	54	0.0566	0.0538	350T300-97	3.500	3.000	0.1525	97	0.1017	0.0966
162T200-68	1.625	2.000	0.1069	68	0.0713	0.0677	350T400-68	3.500	4.000	0.1069	68	0.0713	0.0677
162T200-97	1.625	2.000	0.1525	97	0.1017	0.0966	350T400-97	3.500	4.000	0.1525	97	0.1017	0.0966
250T125-18	2.500	1.250	0.0843	18	0.0188	0.0179	362T125-18	3.625	1.250	0.0843	18	0.0188	0.0179
250T125-27	2.500	1.250	0.0796	27	0.0283	0.0269	362T125-27	3.625	1.250	0.0796	27	0.0283	0.0269
250T125-30	2.500	1.250	0.0781	30	0.0312	0.0296	362T125-30	3.625	1.250	0.0781	30	0.0312	0.0296
250T125-33	2.500	1.250	0.0764	33	0.0346	0.0329	362T125-33	3.625	1.250	0.0764	33	0.0346	0.0329
250T125-43	2.500	1.250	0.0712	43	0.0451	0.0428	362T125-43	3.625	1.250	0.0712	43	0.0451	0.0428
250T125-54	2.500	1.250	0.0849	54	0.0566	0.0538	362T125-54	3.625	1.250	0.0849	54	0.0566	0.0538
250T125-68	2.500	1.250	0.1069	68	0.0713	0.0677	362T125-68	3.625	1.250	0.1069	68	0.0713	0.0677
250T125-97	2.500	1.250	0.1525	97	0.1017	0.0966	362T125-97	3.625	1.250	0.1525	97	0.1017	0.0966
250T150-27	2.500	1.500	0.0796	27	0.0283	0.0269	362T150-27	3.625	1.500	0.0796	27	0.0283	0.0269
250T150-30	2.500	1.500	0.0781	30	0.0312	0.0296	362T150-30	3.625	1.500	0.0781	30	0.0312	0.0296
250T150-33	2.500	1.500	0.0764	33	0.0346	0.0329	362T150-33	3.625	1.500	0.0764	33	0.0346	0.0329
250T150-43	2.500	1.500	0.0712	43	0.0451	0.0428	362T150-43	3.625	1.500	0.0712	43	0.0451	0.0428
250T150-54	2.500	1.500	0.0849	54	0.0566	0.0538	362T150-54	3.625	1.500	0.0849	54	0.0566	0.0538
250T150-68	2.500	1.500	0.1069	68	0.0713	0.0677	362T150-68	3.625	1.500	0.1069	68	0.0713	0.0677
250T150-97	2.500	1.500	0.1525	97	0.1017	0.0966	362T150-97	3.625	1.500	0.1525	97	0.1017	0.0966
250T200-33	2.500	2.000	0.0764	33	0.0346	0.0329	362T200-33	3.625	2.000	0.0764	33	0.0346	0.0329
250T200-43	2.500	2.000	0.0712	43	0.0451	0.0428	362T200-43	3.625	2.000	0.0712	43	0.0451	0.0428
250T200-54	2.500	2.000	0.0849	54	0.0566	0.0538	362T200-54	3.625	2.000	0.0849	54	0.0566	0.0538
250T200-68	2.500	2.000	0.1069	68	0.0713	0.0677	362T200-68	3.625	2.000	0.1069	68	0.0713	0.0677
250T200-97	2.500	2.000	0.1525	97	0.1017	0.0966	362T200-97	3.625	2.000	0.1525	97	0.1017	0.0966
250T250-43	2.500	2.500	0.0712	43	0.0451	0.0428	362T250-43	3.625	2.500	0.0712	43	0.0451	0.0428
250T250-54	2.500	2.500	0.0849	54	0.0566	0.0538	362T250-54	3.625	2.500	0.0849	54	0.0566	0.0538
250T250-68	2.500	2.500	0.1069	68	0.0713	0.0677	362T250-68	3.625	2.500	0.1069	68	0.0713	0.0677
250T250-97	2.500	2.500	0.1525	97	0.1017	0.0966	362T250-97	3.625	2.500	0.1525	97	0.1017	0.0966
250T300-54	2.500	3.000	0.0849	54	0.0566	0.0538	362T300-54	3.625	3.000	0.0849	54	0.0566	0.0538
250T300-68	2.500	3.000	0.1069	68	0.0713	0.0677	362T300-68	3.625	3.000	0.1069	68	0.0713	0.0677
250T300-97	2.500	3.000	0.1525	97	0.1017	0.0966	362T300-97	3.625	3.000	0.1525	97	0.1017	0.0966
350T125-18	3.500	1.250	0.0843	18	0.0188	0.0179	362T400-68	3.625	4.000	0.1069	68	0.0713	0.0677
350T125-27	3.500	1.250	0.0796	27	0.0283	0.0269	362T400-97	3.625	4.000	0.1525	97	0.1017	0.0966
350T125-30	3.500	1.250	0.0781	30	0.0312	0.0296	400T125-18 ¹	4.000	1.250	0.0843	18	0.0188	0.0179
350T125-33	3.500	1.250	0.0764	33	0.0346	0.0329	400T125-27	4.000	1.250	0.0796	27	0.0283	0.0269
350T125-43	3.500	1.250	0.0712	43	0.0451	0.0428	400T125-30	4.000	1.250	0.0781	30	0.0312	0.0296
350T125-54	3.500	1.250	0.0849	54	0.0566	0.0538	400T125-33	4.000	1.250	0.0764	33	0.0346	0.0329
350T125-68	3.500	1.250	0.1069	68	0.0713	0.0677	400T125-43	4.000	1.250	0.0712	43	0.0451	0.0428
350T125-97	3.500	1.250	0.1525	97	0.1017	0.0966	400T125-54	4.000	1.250	0.0849	54	0.0566	0.0538
							400T125-68	4.000	1.250	0.1069	68	0.0713	0.0677
							400T125-97	4.000	1.250	0.1525	97	0.1017	0.0966

For SI: 1 inch = 25.4 mm

¹ See Table 4 for member properties. See Figure 1 for illustration of member cross section.

² Depth measured from inside face to inside face of flanges.

³ Base metal thickness of members, exclusive of coatings, delivered to the jobsite must be a minimum of 95 percent of design the thickness.

⁴ Web height-to-thickness ratio, h/t, exceeds 200. Web stiffeners in accordance with Sections B1.2 and C3.6.1 of AISI-NAS are required.

Table 2 continued on next page.

TABLE 2—CHANNEL (TRACK) SECTIONS¹ (Continued)

SECTION	DEPTH ² (in)	FLANGE (in)	INSIDE CORNER RADII (in)	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. ³ (in)	SECTION	DEPTH ² (in)	FLANGE (in)	INSIDE CORNER RADII (in)	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. ³ (in)
400T150-27	4.000	1.500	0.0796	27	0.0283	0.0269	600T150-27 ⁴	6.000	1.500	0.0796	27	0.0283	0.0269
400T150-30	4.000	1.500	0.0781	30	0.0312	0.0296	600T150-30	6.000	1.500	0.0781	30	0.0312	0.0296
400T150-33	4.000	1.500	0.0764	33	0.0346	0.0329	600T150-33	6.000	1.500	0.0764	33	0.0346	0.0329
400T150-43	4.000	1.500	0.0712	43	0.0451	0.0428	600T150-43	6.000	1.500	0.0712	43	0.0451	0.0428
400T150-54	4.000	1.500	0.0849	54	0.0566	0.0538	600T150-54	6.000	1.500	0.0849	54	0.0566	0.0538
400T150-68	4.000	1.500	0.1069	68	0.0713	0.0677	600T150-68	6.000	1.500	0.1069	68	0.0713	0.0677
400T150-97	4.000	1.500	0.1525	97	0.1017	0.0966	600T150-97	6.000	1.500	0.1525	97	0.1017	0.0966
400T200-33	4.000	2.000	0.0764	33	0.0346	0.0329	600T150-118	6.000	1.500	0.1863	118	0.1242	0.1180
400T200-43	4.000	2.000	0.0712	43	0.0451	0.0428	600T200-33	6.000	2.000	0.0764	33	0.0346	0.0329
400T200-54	4.000	2.000	0.0849	54	0.0566	0.0538	600T200-43	6.000	2.000	0.0712	43	0.0451	0.0428
400T200-68	4.000	2.000	0.1069	68	0.0713	0.0677	600T200-54	6.000	2.000	0.0849	54	0.0566	0.0538
400T200-97	4.000	2.000	0.1525	97	0.1017	0.0966	600T200-68	6.000	2.000	0.1069	68	0.0713	0.0677
400T250-43	4.000	2.500	0.0712	43	0.0451	0.0428	600T200-97	6.000	2.000	0.1525	97	0.1017	0.0966
400T250-54	4.000	2.500	0.0849	54	0.0566	0.0538	600T200-118	6.000	2.000	0.1863	118	0.1242	0.1180
400T250-68	4.000	2.500	0.1069	68	0.0713	0.0677	600T250-43	6.000	2.500	0.0712	43	0.0451	0.0428
400T250-97	4.000	2.500	0.1525	97	0.1017	0.0966	600T250-54	6.000	2.500	0.0849	54	0.0566	0.0538
400T300-54	4.000	3.000	0.0849	54	0.0566	0.0538	600T250-68	6.000	2.500	0.1069	68	0.0713	0.0677
400T300-68	4.000	3.000	0.1069	68	0.0713	0.0677	600T250-97	6.000	2.500	0.1525	97	0.1017	0.0966
400T300-97	4.000	3.000	0.1525	97	0.1017	0.0966	600T250-118	6.000	2.500	0.1863	118	0.1242	0.1180
400T400-68	4.000	4.000	0.1069	68	0.0713	0.0677	600T300-54	6.000	3.000	0.0849	54	0.0566	0.0538
400T400-97	4.000	4.000	0.1525	97	0.1017	0.0966	600T300-68	6.000	3.000	0.1069	68	0.0713	0.0677
550T125-27	5.500	1.250	0.0796	27	0.0283	0.0269	600T300-97	6.000	3.000	0.1525	97	0.1017	0.0966
550T125-30	5.500	1.250	0.0781	30	0.0312	0.0296	600T300-118	6.000	3.000	0.1863	118	0.1242	0.1180
550T125-33	5.500	1.250	0.0764	33	0.0346	0.0329	600T400-68	6.000	4.000	0.1069	68	0.0713	0.0677
550T125-43	5.500	1.250	0.0712	43	0.0451	0.0428	600T400-97	6.000	4.000	0.1525	97	0.1017	0.0966
550T125-54	5.500	1.250	0.0849	54	0.0566	0.0538	600T400-118	6.000	4.000	0.1863	118	0.1242	0.1180
550T125-68	5.500	1.250	0.1069	68	0.0713	0.0677	725T125-27 ⁴	7.250	1.250	0.0796	27	0.0283	0.0269
550T125-97	5.500	1.250	0.1525	97	0.1017	0.0966	725T125-30 ¹	7.250	1.250	0.0781	30	0.0312	0.0296
550T150-27	5.500	1.500	0.0796	27	0.0283	0.0269	725T125-33 ¹	7.250	1.250	0.0764	33	0.0346	0.0329
550T150-30	5.500	1.500	0.0781	30	0.0312	0.0296	725T125-43	7.250	1.250	0.0712	43	0.0451	0.0428
550T150-33	5.500	1.500	0.0764	33	0.0346	0.0329	725T125-54	7.250	1.250	0.0849	54	0.0566	0.0538
550T150-43	5.500	1.500	0.0712	43	0.0451	0.0428	725T125-68	7.250	1.250	0.1069	68	0.0713	0.0677
550T150-54	5.500	1.500	0.0849	54	0.0566	0.0538	725T125-97	7.250	1.250	0.1525	97	0.1017	0.0966
550T150-68	5.500	1.500	0.1069	68	0.0713	0.0677	725T125-118	7.250	1.250	0.1863	118	0.1242	0.1180
550T150-97	5.500	1.500	0.1525	97	0.1017	0.0966	725T150-27 ⁴	7.250	1.500	0.0796	27	0.0283	0.0269
550T200-33	5.500	2.000	0.0764	33	0.0346	0.0329	725T150-30 ¹	7.250	1.500	0.0781	30	0.0312	0.0296
550T200-43	5.500	2.000	0.0712	43	0.0451	0.0428	725T150-33 ¹	7.250	1.500	0.0764	33	0.0346	0.0329
550T200-54	5.500	2.000	0.0849	54	0.0566	0.0538	725T150-43	7.250	1.500	0.0712	43	0.0451	0.0428
550T200-68	5.500	2.000	0.1069	68	0.0713	0.0677	725T150-54	7.250	1.500	0.0849	54	0.0566	0.0538
550T200-97	5.500	2.000	0.1525	97	0.1017	0.0966	725T150-68	7.250	1.500	0.1069	68	0.0713	0.0677
550T250-43	5.500	2.500	0.0712	43	0.0451	0.0428	725T150-97	7.250	1.500	0.1525	97	0.1017	0.0966
550T250-54	5.500	2.500	0.0849	54	0.0566	0.0538	725T150-118	7.250	1.500	0.1863	118	0.1242	0.1180
550T250-68	5.500	2.500	0.1069	68	0.0713	0.0677	725T200-33 ¹	7.250	2.000	0.0764	33	0.0346	0.0329
550T250-97	5.500	2.500	0.1525	97	0.1017	0.0966	725T200-43	7.250	2.000	0.0712	43	0.0451	0.0428
550T300-54	5.500	3.000	0.0849	54	0.0566	0.0538	725T200-54	7.250	2.000	0.0849	54	0.0566	0.0538
550T300-68	5.500	3.000	0.1069	68	0.0713	0.0677	725T200-68	7.250	2.000	0.1069	68	0.0713	0.0677
550T300-97	5.500	3.000	0.1525	97	0.1017	0.0966	725T200-97	7.250	2.000	0.1525	97	0.1017	0.0966
550T400-68	5.500	4.000	0.1069	68	0.0713	0.0677	725T200-118	7.250	2.000	0.1863	118	0.1242	0.1180
550T400-97	5.500	4.000	0.1525	97	0.1017	0.0966	725T250-43	7.250	2.500	0.0712	43	0.0451	0.0428
600T125-27 ⁴	6.000	1.250	0.0796	27	0.0283	0.0269	725T250-54	7.250	2.500	0.0849	54	0.0566	0.0538
600T125-30	6.000	1.250	0.0781	30	0.0312	0.0296	725T250-68	7.250	2.500	0.1069	68	0.0713	0.0677
600T125-33	6.000	1.250	0.0764	33	0.0346	0.0329	725T250-97	7.250	2.500	0.1525	97	0.1017	0.0966
600T125-43	6.000	1.250	0.0712	43	0.0451	0.0428	725T250-118	7.250	2.500	0.1863	118	0.1242	0.1180
600T125-54	6.000	1.250	0.0849	54	0.0566	0.0538	725T300-54	7.250	3.000	0.0849	54	0.0566	0.0538
600T125-68	6.000	1.250	0.1069	68	0.0713	0.0677	725T300-68	7.250	3.000	0.1069	68	0.0713	0.0677
600T125-97	6.000	1.250	0.1525	97	0.1017	0.0966	725T300-97	7.250	3.000	0.1525	97	0.1017	0.0966
600T125-118	6.000	1.250	0.1863	118	0.1242	0.1180	725T300-118	7.250	3.000	0.1863	118	0.1242	0.1180

For SI: 1 inch = 25.4 mm.

¹ See Table 4 for member properties. See Figure 1 for illustration of member cross section.

² Depth measured from inside face to inside face of flanges.

³ Base metal thickness of members, exclusive of coatings, delivered to the jobsite must be a minimum of 95 percent of design the thickness.

⁴ Web height-to-thickness ratio, h/t, exceeds 200. Web stiffeners in accordance with Sections B1.2 and C3.6.1 of AISI-NAS are required.

Table 2 continued on next page.

TABLE 2—CHANNEL (TRACK) SECTIONS¹ (Continued)

SECTION	DEPTH ² (in)	FLANGE (in)	INSIDE CORNER RADII (in)	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. ³ (in)	SECTION	DEPTH ² (in)	FLANGE (in)	INSIDE CORNER RADII (in)	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. ³ (in)
725T400-68	7.250	4.000	0.1069	68	0.0713	0.0677	925T300-54	9.250	3.000	0.0849	54	0.0566	0.0538
725T400-97	7.250	4.000	0.1525	97	0.1017	0.0966	925T300-68	9.250	3.000	0.1069	68	0.0713	0.0677
725T400-118	7.250	4.000	0.1863	118	0.1242	0.1180	925T300-97	9.250	3.000	0.1525	97	0.1017	0.0966
800T125-30 ⁴	8.000	1.250	0.0781	30	0.0312	0.0296	925T300-118	9.250	3.000	0.1863	118	0.1242	0.1180
800T125-33 ⁴	8.000	1.250	0.0764	33	0.0346	0.0329	925T400-68	9.250	4.000	0.1069	68	0.0713	0.0677
800T125-43	8.000	1.250	0.0712	43	0.0451	0.0428	925T400-97	9.250	4.000	0.1525	97	0.1017	0.0966
800T125-54	8.000	1.250	0.0849	54	0.0566	0.0538	925T400-118	9.250	4.000	0.1863	118	0.1242	0.1180
800T125-68	8.000	1.250	0.1069	68	0.0713	0.0677	1000T125-43 ⁴	10.000	1.250	0.0712	43	0.0451	0.0428
800T125-97	8.000	1.250	0.1525	97	0.1017	0.0966	1000T125-54	10.000	1.250	0.0849	54	0.0566	0.0538
800T125-118	8.000	1.250	0.1863	118	0.1242	0.1180	1000T125-68	10.000	1.250	0.1069	68	0.0713	0.0677
800T150-30 ⁴	8.000	1.500	0.0781	30	0.0312	0.0296	1000T125-97	10.000	1.250	0.1525	97	0.1017	0.0966
800T150-33 ⁴	8.000	1.500	0.0764	33	0.0346	0.0329	1000T125-118	10.000	1.250	0.1863	118	0.1242	0.1180
800T150-43	8.000	1.500	0.0712	43	0.0451	0.0428	1000T150-43 ⁴	10.000	1.500	0.0712	43	0.0451	0.0428
800T150-54	8.000	1.500	0.0849	54	0.0566	0.0538	1000T150-54	10.000	1.500	0.0849	54	0.0566	0.0538
800T150-68	8.000	1.500	0.1069	68	0.0713	0.0677	1000T150-68	10.000	1.500	0.1069	68	0.0713	0.0677
800T150-97	8.000	1.500	0.1525	97	0.1017	0.0966	1000T150-97	10.000	1.500	0.1525	97	0.1017	0.0966
800T150-118	8.000	1.500	0.1863	118	0.1242	0.1180	1000T150-118	10.000	1.500	0.1863	118	0.1242	0.1180
800T200-33 ⁴	8.000	2.000	0.0764	33	0.0346	0.0329	1000T200-43 ⁴	10.000	2.000	0.0712	43	0.0451	0.0428
800T200-43	8.000	2.000	0.0712	43	0.0451	0.0428	1000T200-54	10.000	2.000	0.0849	54	0.0566	0.0538
800T200-54	8.000	2.000	0.0849	54	0.0566	0.0538	1000T200-68	10.000	2.000	0.1069	68	0.0713	0.0677
800T200-68	8.000	2.000	0.1069	68	0.0713	0.0677	1000T200-97	10.000	2.000	0.1525	97	0.1017	0.0966
800T200-97	8.000	2.000	0.1525	97	0.1017	0.0966	1000T200-118	10.000	2.000	0.1863	118	0.1242	0.1180
800T200-118	8.000	2.000	0.1863	118	0.1242	0.1180	1000T250-43 ⁴	10.000	2.500	0.0712	43	0.0451	0.0428
800T250-43	8.000	2.500	0.0712	43	0.0451	0.0428	1000T250-54	10.000	2.500	0.0849	54	0.0566	0.0538
800T250-54	8.000	2.500	0.0849	54	0.0566	0.0538	1000T250-68	10.000	2.500	0.1069	68	0.0713	0.0677
800T250-68	8.000	2.500	0.1069	68	0.0713	0.0677	1000T250-97	10.000	2.500	0.1525	97	0.1017	0.0966
800T250-97	8.000	2.500	0.1525	97	0.1017	0.0966	1000T250-118	10.000	2.500	0.1863	118	0.1242	0.1180
800T250-118	8.000	2.500	0.1863	118	0.1242	0.1180	1000T300-54	10.000	3.000	0.0849	54	0.0566	0.0538
80T3000-54	8.000	3.000	0.0849	54	0.0566	0.0538	1000T300-68	10.000	3.000	0.1069	68	0.0713	0.0677
800T300-68	8.000	3.000	0.1069	68	0.0713	0.0677	1000T300-97	10.000	3.000	0.1525	97	0.1017	0.0966
800T300-97	8.000	3.000	0.1525	97	0.1017	0.0966	1000T300-118	10.000	3.000	0.1863	118	0.1242	0.1180
800T300-118	8.000	3.000	0.1863	118	0.1242	0.1180	1000T400-68	10.000	4.000	0.1069	68	0.0713	0.0677
800T400-68	8.000	4.000	0.1069	68	0.0713	0.0677	1000T400-97	10.000	4.000	0.1525	97	0.1017	0.0966
800T400-97	8.000	4.000	0.1525	97	0.1017	0.0966	1000T400-118	10.000	4.000	0.1863	118	0.1242	0.1180
800T400-118	8.000	4.000	0.1863	118	0.1242	0.1180	1150T125-43 ⁴	11.500	1.250	0.0712	43	0.0451	0.0428
925T125-43 ⁴	9.250	1.250	0.0712	43	0.0451	0.0428	1150T125-54 ⁴	11.500	1.250	0.0849	54	0.0566	0.0538
925T125-54	9.250	1.250	0.0849	54	0.0566	0.0538	1150T125-68	11.500	1.250	0.1069	68	0.0713	0.0677
925T125-68	9.250	1.250	0.1069	68	0.0713	0.0677	1150T125-97	11.500	1.250	0.1525	97	0.1017	0.0966
925T125-97	9.250	1.250	0.1525	97	0.1017	0.0966	1150T125-118	11.500	1.250	0.1863	118	0.1242	0.1180
925T125-118	9.250	1.250	0.1863	118	0.1242	0.1180	1150T150-43 ⁴	11.500	1.500	0.0712	43	0.0451	0.0428
925T150-43 ⁴	9.250	1.500	0.0712	43	0.0451	0.0428	1150T150-54 ⁴	11.500	1.500	0.0849	54	0.0566	0.0538
925T150-54	9.250	1.500	0.0849	54	0.0566	0.0538	1150T150-68	11.500	1.500	0.1069	68	0.0713	0.0677
925T150-68	9.250	1.500	0.1069	68	0.0713	0.0677	1150T150-97	11.500	1.500	0.1525	97	0.1017	0.0966
925T150-97	9.250	1.500	0.1525	97	0.1017	0.0966	1150T150-118	11.500	1.500	0.1863	118	0.1242	0.1180
925T150-118	9.250	1.500	0.1863	118	0.1242	0.1180	1150T200-43 ⁴	11.500	2.000	0.0712	43	0.0451	0.0428
925T200-43 ⁴	9.250	2.000	0.0712	43	0.0451	0.0428	1150T200-54 ⁴	11.500	2.000	0.0849	54	0.0566	0.0538
925T200-54	9.250	2.000	0.0849	54	0.0566	0.0538	1150T200-68	11.500	2.000	0.1069	68	0.0713	0.0677
925T200-68	9.250	2.000	0.1069	68	0.0713	0.0677	1150T200-97	11.500	2.000	0.1525	97	0.1017	0.0966
925T200-97	9.250	2.000	0.1525	97	0.1017	0.0966	1150T200-118	11.500	2.000	0.1863	118	0.1242	0.1180
925T200-118	9.250	2.000	0.1863	118	0.1242	0.1180	1150T250-43 ⁴	11.500	2.500	0.0712	43	0.0451	0.0428
925T250-43 ⁴	9.250	2.500	0.0712	43	0.0451	0.0428	1150T250-54 ⁴	11.500	2.500	0.0849	54	0.0566	0.0538
925T250-54	9.250	2.500	0.0849	54	0.0566	0.0538	1150T250-68	11.500	2.500	0.1069	68	0.0713	0.0677
925T250-68	9.250	2.500	0.1069	68	0.0713	0.0677	1150T250-97	11.500	2.500	0.1525	97	0.1017	0.0966
925T250-97	9.250	2.500	0.1525	97	0.1017	0.0966	1150T250-118	11.500	2.500	0.1863	118	0.1242	0.1180
925T250-118	9.250	2.500	0.1863	118	0.1242	0.1180							

For SI: 1 inch = 25.4 mm.

¹ See Table 4 for member properties. See Figure 1 for illustration of member cross section.

² Depth measured from inside face to inside face of flanges.

³ Base metal thickness of members, exclusive of coatings, delivered to the jobsite must be a minimum of 95 percent of design the thickness.

⁴ Web height-to-thickness ratio, h/t, exceeds 200. Web stiffeners in accordance with Sections B1.2 and C3.6.1 of AISI-NAS are required.

Table 2 continued on next page.

TABLE 2—CHANNEL (TRACK) SECTIONS¹ (Continued)

SECTION	DEPTH ² (in)	FLANGE (in)	INSIDE CORNER RADII (in)	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. ³ (in)	SECTION	DEPTH ² (in)	FLANGE (in)	INSIDE CORNER RADII (in)	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. ³ (in)
1150T300-54 ⁴	11.500	3.000	0.0849	54	0.0566	0.0538	1350T200-54 ⁴	13.500	2.000	0.0849	54	0.0566	0.0538
1150T300-68	11.500	3.000	0.1069	68	0.0713	0.0677	1350T200-68	13.500	2.000	0.1069	68	0.0713	0.0677
1150T300-97	11.500	3.000	0.1525	97	0.1017	0.0966	1350T200-97	13.500	2.000	0.1525	97	0.1017	0.0966
1150T300-118	11.500	3.000	0.1863	118	0.1242	0.1180	1350T200-118	13.500	2.000	0.1863	118	0.1242	0.1180
1150T400-68	11.500	4.000	0.1069	68	0.0713	0.0677	1350T250-54 ⁴	13.500	2.500	0.0849	54	0.0566	0.0538
1150T400-97	11.500	4.000	0.1525	97	0.1017	0.0966	1350T250-68	13.500	2.500	0.1069	68	0.0713	0.0677
1150T400-118	11.500	4.000	0.1863	118	0.1242	0.1180	1350T250-97	13.500	2.500	0.1525	97	0.1017	0.0966
1200T125-54 ⁴	12.000	1.250	0.0849	54	0.0566	0.0538	1350T250-118	13.500	2.500	0.1863	118	0.1242	0.1180
1200T125-68	12.000	1.250	0.1069	68	0.0713	0.0677	1350T300-54 ⁴	13.500	3.000	0.0849	54	0.0566	0.0538
1200T125-97	12.000	1.250	0.1525	97	0.1017	0.0966	1350T300-68	13.500	3.000	0.1069	68	0.0713	0.0677
1200T125-118	12.000	1.250	0.1863	118	0.1242	0.1180	1350T300-97	13.500	3.000	0.1525	97	0.1017	0.0966
1200T150-54 ⁴	12.000	1.500	0.0849	54	0.0566	0.0538	1350T300-118	13.500	3.000	0.1863	118	0.1242	0.1180
1200T150-68	12.000	1.500	0.1069	68	0.0713	0.0677	1350T400-68	13.500	4.000	0.1069	68	0.0713	0.0677
1200T150-97	12.000	1.500	0.1525	97	0.1017	0.0966	1350T400-97	13.500	4.000	0.1525	97	0.1017	0.0966
1200T150-118	12.000	1.500	0.1863	118	0.1242	0.1180	1350T400-118	13.500	4.000	0.1863	118	0.1242	0.1180
1200T200-54 ⁴	12.000	2.000	0.0849	54	0.0566	0.0538	1350T400-118	13.500	4.000	0.1863	118	0.1242	0.1180
1200T200-68	12.000	2.000	0.1069	68	0.0713	0.0677	1400T125-54 ⁴	14.000	1.250	0.0849	54	0.0566	0.0538
1200T200-97	12.000	2.000	0.1525	97	0.1017	0.0966	1400T125-68	14.000	1.250	0.1069	68	0.0713	0.0677
1200T200-118	12.000	2.000	0.1863	118	0.1242	0.1180	1400T125-97	14.000	1.250	0.1525	97	0.1017	0.0966
1200T250-54 ⁴	12.000	2.500	0.0849	54	0.0566	0.0538	1400T125-118	14.000	1.250	0.1863	118	0.1242	0.1180
1200T250-68	12.000	2.500	0.1069	68	0.0713	0.0677	1400T150-54 ⁴	14.000	1.500	0.0849	54	0.0566	0.0538
1200T250-97	12.000	2.500	0.1525	97	0.1017	0.0966	1400T150-68	14.000	1.500	0.1069	68	0.0713	0.0677
1200T250-118	12.000	2.500	0.1863	118	0.1242	0.1180	1400T150-97	14.000	1.500	0.1525	97	0.1017	0.0966
1200T300-54 ⁴	12.000	3.000	0.0849	54	0.0566	0.0538	1400T150-118	14.000	1.500	0.1863	118	0.1242	0.1180
1200T300-68	12.000	3.000	0.1069	68	0.0713	0.0677	1400T200-54 ⁴	14.000	2.000	0.0849	54	0.0566	0.0538
1200T300-97	12.000	3.000	0.1525	97	0.1017	0.0966	1400T200-68	14.000	2.000	0.1069	68	0.0713	0.0677
1200T300-118	12.000	3.000	0.1863	118	0.1242	0.1180	1400T200-97	14.000	2.000	0.1525	97	0.1017	0.0966
1200T400-68	12.000	4.000	0.1069	68	0.0713	0.0677	1400T200-118	14.000	2.000	0.1863	118	0.1242	0.1180
1200T400-97	12.000	4.000	0.1525	97	0.1017	0.0966	1400T250-54 ⁴	14.000	2.500	0.0849	54	0.0566	0.0538
1200T400-118	12.000	4.000	0.1863	118	0.1242	0.1180	1400T250-68	14.000	2.500	0.1069	68	0.0713	0.0677
1350T125-54 ⁴	13.500	1.250	0.0849	54	0.0566	0.0538	1400T250-97	14.000	2.500	0.1525	97	0.1017	0.0966
1350T125-68	13.500	1.250	0.1069	68	0.0713	0.0677	1400T250-118	14.000	2.500	0.1863	118	0.1242	0.1180
1350T125-97	13.500	1.250	0.1525	97	0.1017	0.0966	1400T300-54 ⁴	14.000	3.000	0.0849	54	0.0566	0.0538
1350T125-118	13.500	1.250	0.1863	118	0.1242	0.1180	1400T300-68	14.000	3.000	0.1069	68	0.0713	0.0677
1350T150-54 ⁴	13.500	1.500	0.0849	54	0.0566	0.0538	1400T300-97	14.000	3.000	0.1525	97	0.1017	0.0966
1350T150-68	13.500	1.500	0.1069	68	0.0713	0.0677	1400T300-118	14.000	3.000	0.1863	118	0.1242	0.1180
1350T150-97	13.500	1.500	0.1525	97	0.1017	0.0966	1400T400-68	14.000	4.000	0.1069	68	0.0713	0.0677
1350T150-118	13.500	1.500	0.1863	118	0.1242	0.1180	1400T400-97	14.000	4.000	0.1525	97	0.1017	0.0966
							1400T400-118	14.000	4.000	0.1863	118	0.1242	0.1180

For SI: 1 inch = 25.4 mm.

¹ See Table 4 for member properties. See Figure 1 for illustration of member cross section.

² Depth measured from inside face to inside face of flanges.

³ Base metal thickness of members, exclusive of coatings, delivered to the jobsite must be a minimum of 95 percent of design the thickness.

⁴ Web height-to-thickness ratio, h/t, exceeds 200. Web stiffeners in accordance with Sections B1.2 and C3.6.1 of AISI-NAS are required.

TABLE 3—C-SECTION (STUD) SECTION PROPERTIES

Section	Gross Properties						33 ksi Effective Properties					50 ksi Effective					Torsional Properties				
	Area	Weight	Ixx (in ⁴)	Rx (in)	Iyy (in ⁴)	Ry (in)	Ixx (in ⁴)	Sxx (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	Ixx (in ⁴)	Sxx (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	Jx1000 (in ⁴)	Cw (in ⁶)	Xo (in)	Ro (in)	β
162S125-18	0.080	0.27	0.038	0.686	0.016	0.447	0.034	0.031	0.61	302	0.962	---	---	---	---	---	0.009	0.009	-1.029	1.315	0.388
162S125-27	0.120	0.41	0.056	0.682	0.023	0.443	0.055	0.053	1.05	494	0.903	---	---	---	---	---	0.032	0.013	-1.017	1.302	0.390
162S125-30	0.131	0.45	0.061	0.681	0.026	0.441	0.060	0.060	1.19	543	0.889	---	---	---	---	---	0.043	0.014	-1.014	1.298	0.390
162S125-33	0.145	0.49	0.067	0.679	0.028	0.440	0.066	0.069	1.37	601	0.873	---	---	---	---	---	0.058	0.016	-1.010	1.294	0.391
250S125-18	0.097	0.33	0.099	1.014	0.019	0.439	0.089	0.059	1.17	258	1.391	---	---	---	---	---	0.011	0.023	-0.904	1.427	0.599
250S125-27	0.144	0.49	0.147	1.009	0.027	0.434	0.144	0.097	1.92	685	1.343	---	---	---	---	---	0.039	0.034	-0.893	1.416	0.602
250S125-30	0.159	0.54	0.161	1.008	0.030	0.433	0.159	0.110	2.17	832	1.329	---	---	---	---	---	0.052	0.037	-0.889	1.412	0.603
250S125-33	0.176	0.60	0.178	1.006	0.033	0.431	0.175	0.125	2.48	975	1.313	---	---	---	---	---	0.070	0.040	-0.885	1.408	0.605
250S125-43	0.227	0.77	0.228	1.001	0.041	0.426	0.225	0.177	3.49	1265	1.266	---	---	---	---	---	0.154	0.050	-0.873	1.396	0.608
250S125-54	0.280	0.95	0.277	0.994	0.049	0.419	0.277	0.218	4.98	1553	1.260	0.274	0.209	6.25	2353	1.280	0.299	0.060	-0.859	1.379	0.612
250S125-68	0.345	1.18	0.334	0.984	0.057	0.408	0.334	0.266	6.30	1891	1.252	0.334	0.262	7.84	2866	1.261	0.585	0.072	-0.839	1.356	0.617
250S137-33	0.197	0.67	0.203	1.015	0.052	0.515	0.203	0.158	3.11	975	1.268	---	---	---	---	---	0.079	0.076	-1.141	1.612	0.499
250S137-43	0.255	0.87	0.261	1.010	0.067	0.511	0.261	0.205	4.53	1265	1.260	---	---	---	---	---	0.173	0.096	-1.129	1.599	0.501
250S137-54	0.316	1.07	0.318	1.004	0.080	0.504	0.318	0.255	5.76	1553	1.250	0.318	0.244	8.22	2353	1.274	0.337	0.115	-1.115	1.583	0.504
250S137-68	0.390	1.33	0.386	0.994	0.095	0.495	0.386	0.309	7.19	1891	1.250	0.386	0.308	10.65	2866	1.251	0.661	0.138	-1.096	1.561	0.507
250S137-97	0.533	1.81	0.506	0.975	0.120	0.475	0.506	0.405	10.01	2506	1.250	0.506	0.405	14.75	3798	1.250	1.839	0.176	-1.057	1.514	0.513
250S162-33	0.223	0.76	0.235	1.027	0.087	0.624	0.235	0.180	3.55	975	1.274	---	---	---	---	---	0.089	0.146	-1.470	1.898	0.401
250S162-43	0.289	0.98	0.302	1.022	0.111	0.620	0.302	0.240	5.22	1265	1.253	---	---	---	---	---	0.196	0.184	-1.457	1.885	0.402
250S162-54	0.358	1.22	0.370	1.016	0.135	0.613	0.370	0.296	6.57	1553	1.250	0.370	0.284	9.42	2353	1.275	0.383	0.223	-1.443	1.868	0.403
250S162-68	0.443	1.51	0.450	1.007	0.162	0.605	0.450	0.360	8.21	1891	1.250	0.450	0.357	12.11	2866	1.255	0.752	0.268	-1.424	1.846	0.405
250S162-97	0.610	2.07	0.596	0.989	0.209	0.586	0.596	0.477	11.45	2506	1.250	0.596	0.477	16.93	3798	1.250	2.102	0.346	-1.386	1.801	0.408
250S200-33	0.258	0.88	0.279	1.040	0.154	0.773	0.276	0.197	3.9	975	1.312	---	---	---	---	---	0.103	0.302	-1.926	2.321	0.312
250S200-43	0.334	1.14	0.358	1.036	0.198	0.769	0.358	0.278	5.49	1265	1.266	---	---	---	---	---	0.227	0.382	-1.914	2.308	0.312
250S200-54	0.415	1.41	0.440	1.030	0.241	0.763	0.440	0.352	7.65	1553	1.250	0.440	0.321	9.60	2353	1.303	0.443	0.464	-1.899	2.291	0.313
250S200-68	0.515	1.75	0.537	1.022	0.293	0.754	0.537	0.430	9.57	1891	1.250	0.537	0.417	13.84	2866	1.271	0.872	0.561	-1.881	2.270	0.313
250S200-97	0.711	2.42	0.718	1.005	0.386	0.736	0.718	0.575	13.36	2506	1.250	0.718	0.575	19.82	3798	1.250	2.452	0.735	-1.843	2.224	0.314
250S250-43	0.379	1.29	0.426	1.060	0.336	0.941	0.426	0.297	5.87	1265	1.325	---	---	---	---	---	0.257	0.638	-2.404	2.791	0.258
250S250-54	0.471	1.60	0.524	1.055	0.412	0.935	0.524	0.379	7.49	1553	1.309	0.521	0.341	10.22	2353	1.364	0.503	0.778	-2.389	2.774	0.258
250S250-68	0.586	1.99	0.643	1.047	0.503	0.926	0.643	0.495	10.79	1891	1.275	0.643	0.446	13.35	2866	1.331	0.993	0.944	-2.371	2.752	0.258
250S250-97	0.813	2.77	0.864	1.031	0.670	0.908	0.864	0.690	15.6	2506	1.251	0.864	0.663	22.31	3798	1.277	2.803	1.245	-2.332	2.707	0.258
350S125-18	0.115	0.39	0.215	1.366	0.021	0.423	0.203	0.072	1.42	180	2.175	---	---	---	---	---	0.014	0.050	-0.797	1.637	0.763
350S125-27	0.173	0.59	0.320	1.361	0.030	0.418	0.315	0.130	2.57	614	2.020	---	---	---	---	---	0.046	0.072	-0.787	1.627	0.766
350S125-30	0.190	0.65	0.351	1.359	0.033	0.417	0.346	0.150	2.96	824	1.979	---	---	---	---	---	0.062	0.079	-0.784	1.624	0.767
350S125-33	0.210	0.72	0.387	1.358	0.036	0.415	0.382	0.175	3.45	1024	1.935	---	---	---	---	---	0.084	0.087	-0.780	1.620	0.768
350S125-43	0.272	0.93	0.498	1.352	0.046	0.410	0.495	0.258	5.10	1739	1.818	---	---	---	---	---	0.184	0.109	-0.769	1.609	0.771
350S125-54	0.337	1.15	0.608	1.344	0.055	0.402	0.608	0.328	6.49	2253	1.778	0.604	0.308	9.22	3372	1.834	0.360	0.131	-0.755	1.593	0.775
350S125-68	0.417	1.42	0.739	1.332	0.064	0.391	0.737	0.409	9.67	2774	1.753	0.737	0.400	11.97	4202	1.772	0.706	0.156	-0.737	1.571	0.780
350S137-33	0.232	0.79	0.441	1.380	0.059	0.503	0.441	0.223	4.41	1024	1.848	---	---	---	---	---	0.093	0.153	-1.016	1.786	0.676
350S137-43	0.300	1.02	0.568	1.375	0.075	0.498	0.568	0.307	6.07	1739	1.785	---	---	---	---	---	0.204	0.193	-1.005	1.774	0.679
350S137-54	0.372	1.27	0.696	1.367	0.090	0.492	0.696	0.385	7.61	2253	1.761	0.696	0.366	10.95	3372	1.808	0.398	0.233	-0.991	1.759	0.683
350S137-68	0.461	1.57	0.849	1.357	0.107	0.482	0.849	0.474	11.04	2774	1.750	0.849	0.472	14.12	4202	1.755	0.782	0.280	-0.973	1.738	0.687
350S137-97	0.635	2.16	1.130	1.334	0.136	0.462	1.130	0.629	15.54	3765	1.750	1.130	0.629	22.90	5704	1.750	2.189	0.361	-0.935	1.693	0.695
350S162-33	0.258	0.88	0.508	1.404	0.098	0.617	0.508	0.257	5.08	1024	1.845	---	---	---	---	---	0.103	0.277	-1.324	2.026	0.573
350S162-43	0.334	1.14	0.654	1.400	0.125	0.612	0.654	0.357	7.05	1739	1.780	---	---	---	---	---	0.227	0.350	-1.312	2.014	0.575
350S162-54	0.415	1.41	0.804	1.392	0.152	0.606	0.804	0.447	8.83	2253	1.759	0.804	0.426	12.74	3372	1.806	0.443	0.426	-1.298	1.998	0.578
350S162-68	0.515	1.75	0.985	1.383	0.184	0.597	0.985	0.551	12.56	2774	1.750	0.985	0.549	16.44	4202	1.754	0.872	0.514	-1.280	1.977	0.581
350S162-97	0.711	2.42	1.320	1.362	0.238	0.578	1.320	0.738	17.71	3765	1.750	1.320	0.738	26.18	5704	1.750	2.452	0.672	-1.242	1.932	0.587
350S200-33	0.292	0.99	0.598	1.431	0.175	0.773	0.597	0.283	5.59	1024	1.899	---	---	---	---	---	0.117	0.541	-1.760	2.396	0.461
350S200-43	0.379	1.29	0.771	1.426	0.224	0.768	0.771	0.410	8.09	1739	1.802	---	---	---	---	---	0.257	0.687	-1.748	2.383	0.462
350S200-54	0.471	1.60	0.950	1.420	0.274	0.762	0.950	0.530	10.47	2253	1.758	0.950	0.470	14.07	3372	1.864	0.503	0.838	-1.733	2.367	0.464
350S200-68	0.586	1.99	1.167	1.411	0.333	0.754	1.167	0.655	14.58	2774	1.750	1.167	0.638	19.10	4202	1.776	0.993	1.018	-1.715	2.345	0.465
350S200-97	0.813	2.77	1.576	1.393	0.440	0.736	1.576	0.884	20.57	3765	1.750	1.576	0.884	30.51	5704	1.750	2.803	1.347	-1.676	2.300	0.469
350S250-43	0.424	1.44	0.906	1.461	0.380	0.946	0.906	0.431	8.52	1739	1.893	---	---	---	---	---	0.288	1.151	-2.220	2.821	0.381
350S250-54	0.528	1.80	1.118	1.455	0.467	0.940	1.118	0.559	11.04	2253	1.854	1.113	0.494	14.78	3372	1.956	0.564	1.409	-2.205	2.804	0.382
350S250-68	0.657	2.24	1.376	1.447	0.570	0.931	1.376	0.739	16.1	2774	1.794	1.376	0.661	19.78	4202	1.885	1.114	1.718	-2.186	2.782	0.383
350S250-97	0.915	3.11	1.870	1.430	0.762	0.913	1.870	1.050	23.72	3765	1.752</										

TABLE 3—C-SECTION (STUD) SECTION PROPERTIES (Continued)

Section	Gross Properties					33 ksi Effective Properties					50 ksi Effective					Torsional Properties					
	Area	Weight	I _{xx} (in ⁴)	R _x (in)	I _{yy} (in ⁴)	R _y (in)	I _{xx} (in ⁴)	S _{xx} (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	I _{xx} (in ⁴)	S _{xx} (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	Jx1000 (in ⁴)	Cw (in ⁶)	Xo (in)	Ro (in)	β
362S200-33	0.297	1.01	0.648	1.478	0.177	0.772	0.647	0.294	5.81	1024	1.974	---	---	---	---	---	0.118	0.577	-1.741	2.411	0.478
362S200-43	0.385	1.31	0.836	1.474	0.227	0.767	0.836	0.427	8.43	1739	1.873	---	---	---	---	---	0.261	0.734	-1.729	2.398	0.480
362S200-54	0.479	1.63	1.030	1.467	0.277	0.761	1.030	0.553	10.93	2341	1.826	1.030	0.490	14.66	3372	1.936	0.511	0.896	-1.715	2.382	0.482
362S200-68	0.595	2.02	1.265	1.458	0.337	0.753	1.265	0.687	15.29	2884	1.813	1.265	0.666	19.95	4370	1.844	1.008	1.089	-1.696	2.360	0.484
362S200-97	0.826	2.81	1.711	1.440	0.446	0.735	1.711	0.928	21.59	3922	1.813	1.711	0.928	32.03	5943	1.813	2.847	1.441	-1.658	2.315	0.487
362S250-43	0.430	1.46	0.980	1.510	0.385	0.946	0.980	0.449	8.88	1739	1.966	---	---	---	---	---	0.292	1.230	-2.199	2.830	0.396
362S250-54	0.535	1.82	1.210	1.504	0.473	0.940	1.210	0.582	11.51	2341	1.924	1.205	0.514	15.40	3372	2.030	0.571	1.506	-2.184	2.813	0.397
362S250-68	0.666	2.27	1.490	1.496	0.578	0.931	1.490	0.774	16.85	2884	1.858	1.490	0.689	20.63	4370	1.956	1.129	1.837	-2.165	2.791	0.398
362S250-97	0.927	3.16	2.027	1.478	0.772	0.912	2.027	1.100	24.85	3922	1.815	2.027	1.046	35.17	5943	1.862	3.197	2.452	-2.126	2.746	0.400
362S300-54	0.592	2.01	1.390	1.533	0.734	1.114	1.393	0.607	11.99	2341	2.006	1.312	0.529	15.83	3372	2.122	0.632	2.316	-2.659	3.265	0.337
362S300-68	0.738	2.51	1.716	1.525	0.900	1.105	1.716	0.811	16.02	2884	1.938	1.684	0.716	21.44	4370	2.041	1.250	2.833	-2.640	3.243	0.337
362S300-97	1.029	3.50	2.343	1.509	1.213	1.086	2.343	1.217	26.95	3922	1.858	2.320	1.150	34.42	5943	1.905	3.548	3.803	-2.600	3.196	0.338
400S125-18 ^b	0.125	0.42	0.294	1.536	0.021	0.414	0.281	0.083	1.64	156	2.524	---	---	---	---	---	0.015	0.068	-0.754	1.760	0.816
400S125-27	0.187	0.64	0.438	1.531	0.031	0.410	0.431	0.151	2.97	533	2.349	---	---	---	---	---	0.050	0.098	-0.744	1.751	0.819
400S125-30	0.206	0.70	0.481	1.529	0.034	0.408	0.474	0.174	3.44	715	2.303	---	---	---	---	---	0.067	0.107	-0.741	1.748	0.820
400S125-33	0.228	0.77	0.531	1.527	0.038	0.407	0.524	0.203	4.01	976	2.252	---	---	---	---	---	0.091	0.118	-0.738	1.744	0.821
400S125-43	0.295	1.00	0.682	1.521	0.048	0.402	0.680	0.301	5.96	1739	2.117	---	---	---	---	---	0.200	0.148	-0.727	1.733	0.824
400S125-54	0.365	1.24	0.835	1.512	0.057	0.394	0.835	0.387	7.65	2603	2.064	0.830	0.361	10.81	3372	2.133	0.390	0.178	-0.713	1.718	0.828
400S125-68	0.452	1.54	1.017	1.499	0.066	0.383	1.015	0.492	9.72	3215	2.016	1.015	0.474	14.18	4871	2.056	0.767	0.213	-0.695	1.696	0.832
400S137-33	0.249	0.85	0.603	1.556	0.061	0.496	0.603	0.259	5.12	976	2.152	---	---	---	---	---	0.099	0.204	-0.965	1.897	0.741
400S137-43	0.323	1.10	0.776	1.551	0.078	0.491	0.776	0.359	7.09	1739	2.076	---	---	---	---	---	0.219	0.257	-0.954	1.885	0.744
400S137-54	0.401	1.36	0.953	1.542	0.094	0.484	0.953	0.453	8.96	2603	2.042	0.953	0.428	12.82	3372	2.101	0.428	0.311	-0.940	1.870	0.747
400S137-68	0.497	1.69	1.165	1.531	0.112	0.475	1.165	0.567	11.21	3215	2.011	1.165	0.558	16.70	4871	2.033	0.842	0.375	-0.922	1.849	0.751
400S137-97	0.686	2.33	1.557	1.507	0.142	0.454	1.557	0.764	18.88	4394	2.000	1.557	0.764	27.81	6658	2.000	2.365	0.486	-0.885	1.806	0.760
400S162-33	0.275	0.94	0.692	1.586	0.103	0.611	0.692	0.299	5.91	976	2.144	---	---	---	---	---	0.110	0.363	-1.263	2.118	0.644
400S162-43	0.357	1.21	0.892	1.581	0.131	0.606	0.892	0.417	8.23	1739	2.066	---	---	---	---	---	0.242	0.460	-1.252	2.106	0.647
400S162-54	0.443	1.51	1.098	1.574	0.159	0.600	1.098	0.526	10.39	2603	2.036	1.098	0.498	14.90	3372	2.095	0.473	0.560	-1.238	2.090	0.649
400S162-68	0.550	1.87	1.346	1.564	0.192	0.591	1.346	0.658	13	3215	2.010	1.346	0.648	19.41	4871	2.029	0.933	0.677	-1.220	2.069	0.653
400S162-97	0.762	2.59	1.812	1.542	0.249	0.572	1.812	0.892	21.4	4394	2.000	1.812	0.892	31.64	6658	2.000	2.628	0.889	-1.182	2.025	0.659
400S200-33	0.310	1.05	0.812	1.619	0.183	0.769	0.812	0.328	6.49	976	2.200	---	---	---	---	---	0.124	0.697	-1.688	2.462	0.530
400S200-43	0.402	1.37	1.047	1.615	0.235	0.764	1.047	0.478	9.45	1739	2.086	---	---	---	---	---	0.272	0.886	-1.676	2.449	0.532
400S200-54	0.500	1.70	1.292	1.608	0.287	0.758	1.292	0.623	12.3	2603	2.031	1.292	0.549	16.43	3372	2.156	0.534	1.083	-1.662	2.433	0.534
400S200-68	0.622	2.12	1.589	1.599	0.349	0.750	1.589	0.780	15.4	3215	2.009	1.589	0.751	22.48	4871	2.051	1.054	1.318	-1.643	2.412	0.536
400S200-97	0.864	2.94	2.155	1.579	0.462	0.731	2.155	1.063	24.72	4394	2.000	2.155	1.063	36.68	6658	2.000	2.978	1.749	-1.605	2.368	0.540
400S250-43	0.447	1.52	1.224	1.655	0.399	0.945	1.224	0.503	9.93	1739	2.185	---	---	---	---	---	0.303	1.486	-2.139	2.864	0.443
400S250-54	0.556	1.89	1.512	1.649	0.490	0.938	1.512	0.653	12.9	2603	2.138	1.506	0.576	17.24	3372	2.256	0.594	1.821	-2.124	2.848	0.444
400S250-68	0.693	2.36	1.864	1.640	0.599	0.929	1.864	0.883	17.45	3215	2.046	1.864	0.775	23.19	4871	2.171	1.174	2.225	-2.105	2.826	0.445
400S250-97	0.966	3.29	2.541	1.622	0.801	0.911	2.541	1.253	28.31	4394	2.002	2.541	1.191	40.06	6658	2.054	3.329	2.978	-2.066	2.780	0.448
400S300-54	0.613	2.09	1.732	1.681	0.760	1.114	1.723	0.680	13.44	2603	2.225	1.637	0.592	17.72	3372	2.353	0.655	2.802	-2.594	3.285	0.377
400S300-68	0.764	2.60	2.139	1.673	0.933	1.105	2.139	0.914	18.06	3215	2.143	2.099	0.805	24.09	4871	2.261	1.295	3.432	-2.574	3.263	0.378
400S300-97	1.067	3.63	2.928	1.656	1.258	1.086	2.928	1.381	30.58	4394	2.049	2.897	1.307	39.12	6658	2.100	3.679	4.619	-2.535	3.216	0.379
550S125-27	0.229	0.78	0.938	2.023	0.034	0.385	0.898	0.246	4.86	382	3.150	---	---	---	---	---	0.061	0.205	-0.641	2.157	0.912
550S125-30	0.252	0.86	1.031	2.021	0.037	0.384	0.996	0.286	5.65	512	3.083	---	---	---	---	---	0.082	0.224	-0.639	2.154	0.912
550S125-33	0.279	0.95	1.139	2.019	0.041	0.382	1.111	0.335	6.62	699	3.012	---	---	---	---	---	0.112	0.246	-0.635	2.151	0.913
550S125-43	0.362	1.23	1.468	2.013	0.052	0.377	1.458	0.500	9.88	1550	2.834	---	---	---	---	---	0.246	0.309	-0.625	2.141	0.915
550S125-54	0.450	1.53	1.805	2.002	0.061	0.369	1.805	0.647	12.79	2739	2.764	1.791	0.606	18.13	3093	2.845	0.481	0.374	-0.613	2.126	0.917
550S125-68	0.559	1.90	2.209	1.987	0.072	0.358	2.205	0.801	18.94	4347	2.753	2.205	0.791	23.68	5350	2.765	0.948	0.448	-0.597	2.106	0.920
550S137-33	0.301	1.02	1.283	2.064	0.067	0.472	1.283	0.453	8.95	699	2.781	---	---	---	---	---	0.120	0.411	-0.841	2.278	0.864
550S137-43	0.391	1.33	1.655	2.059	0.085	0.467	1.655	0.592	13.08	1550	2.767	---	---	---	---	---	0.265	0.520	-0.830	2.268	0.866
550S137-54	0.486	1.65	2.039	2.049	0.103	0.460	2.039	0.741	16.77	2739	2.750	2.039	0.714	24.03	3093	2.790	0.519	0.632	-0.817	2.254	0.868
550S137-68	0.604	2.05	2.503	2.036	0.123	0.451	2.503	0.910	21.22	4347	2.750	2.503	0.909	31.42	5350	2.752	1.023	0.764	-0.801	2.234	0.871
550S137-97	0.838	2.85	3.380	2.008	0.155	0.430	3.380	1.229	30.35	6282	2.750	3.380	1.229	44.72	9518	2.750	2.891	0.997	-0.766	2.192	0.878
550S162-33	0.327	1.11	1.458	2.112	0.113	0.589	1.458	0.512	10.11	699	2.787	---	---	---	---	---	0.130	0.713	-1.114	2.459	0.795
550S162-43	0.424	1.44	1.883	2.107	0.145	0.584	1.883	0.681	14.79	1550	2.757	---	---	---	---	---	0.288	0.905	-1.103	2.448	0.797
550S162-54	0.528	1.80	2.324	2.098	0.176	0.577	2.324	0.845	18.76	2739	2										

TABLE 3—C-SECTION (STUD) SECTION PROPERTIES (Continued)

Section	Gross Properties						33 ksi Effective Properties					50 ksi Effective					Torsional Properties				
	Area	Weight	Ixx (in ⁴)	Rx (in)	Iyy (in ⁴)	Ry (in)	Ixx (in ⁴)	Sxx (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	Ixx (in ⁴)	Sxx (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	Jx1000 (in ⁴)	Cw (in ⁶)	Xo (in)	Ro (in)	β
600S137-33	0.318	1.08	1.582	2.229	0.069	0.464	1.548	0.455	8.98	638	3.224	---	---	---	---	---	0.127	0.500	-0.807	2.416	0.889
600S137-43	0.413	1.41	2.042	2.223	0.087	0.459	2.041	0.645	12.74	1416	3.087	---	---	---	---	---	0.280	0.633	-0.796	2.406	0.890
600S137-54	0.514	1.75	2.518	2.213	0.105	0.452	2.518	0.832	16.44	2739	3.013	2.518	0.777	23.26	2823	3.112	0.549	0.769	-0.784	2.391	0.893
600S137-68	0.640	2.18	3.094	2.200	0.125	0.443	3.094	1.031	24.05	4347	3.000	3.094	1.030	30.84	5350	3.002	1.084	0.930	-0.768	2.371	0.895
600S137-97	0.889	3.03	4.188	2.170	0.159	0.422	4.188	1.396	34.48	6911	3.000	4.188	1.396	50.80	10472	3.000	3.066	1.216	-0.734	2.330	0.901
600S162-33	0.344	1.17	1.793	2.282	0.116	0.581	1.793	0.577	11.41	638	3.039	---	---	---	---	---	0.137	0.861	-1.072	2.587	0.828
600S162-43	0.447	1.52	2.316	2.276	0.148	0.576	2.316	0.767	16.68	1416	3.007	---	---	---	---	---	0.303	1.095	-1.062	2.577	0.830
600S162-54	0.556	1.89	2.860	2.267	0.180	0.570	2.860	0.953	21.17	2739	3.000	2.860	0.916	30.33	2823	3.048	0.594	1.337	-1.049	2.562	0.832
600S162-68	0.693	2.36	3.525	2.255	0.218	0.560	3.525	1.175	26.79	4347	3.000	3.525	1.164	39.47	5350	3.011	1.174	1.626	-1.032	2.543	0.835
600S162-97	0.966	3.29	4.797	2.229	0.283	0.541	4.797	1.599	38.37	6911	3.000	4.797	1.599	56.73	10472	3.000	3.329	2.153	-0.997	2.501	0.841
600S200-33	0.379	1.29	2.075	2.340	0.209	0.743	2.058	0.621	12.28	638	3.126	---	---	---	---	---	0.151	1.593	-1.457	2.855	0.740
600S200-43	0.492	1.67	2.683	2.335	0.268	0.739	2.683	0.873	17.24	1416	3.028	---	---	---	---	---	0.334	2.033	-1.446	2.844	0.742
600S200-54	0.613	2.09	3.319	2.327	0.328	0.732	3.319	1.106	24.07	2739	3.000	3.319	1.015	30.40	2823	3.103	0.655	2.493	-1.432	2.829	0.744
600S200-68	0.764	2.60	4.101	2.316	0.400	0.723	4.101	1.367	30.42	4347	3.000	4.101	1.317	43.71	5350	3.047	1.295	3.047	-1.415	2.809	0.746
600S200-97	1.067	3.63	5.612	2.293	0.530	0.705	5.612	1.871	43.49	6911	3.000	5.612	1.871	64.53	10472	3.000	3.679	4.080	-1.378	2.767	0.752
600S250-43	0.537	1.83	3.082	2.396	0.458	0.923	3.082	0.918	18.14	1416	3.134	---	---	---	---	---	0.364	3.411	-1.874	3.179	0.652
600S250-54	0.670	2.28	3.819	2.388	0.562	0.917	3.819	1.159	22.9	2739	3.115	3.766	1.069	32.00	2823	3.207	0.715	4.194	-1.860	3.163	0.654
600S250-68	0.836	2.84	4.727	2.378	0.688	0.908	4.727	1.508	32.82	4347	3.057	4.723	1.386	41.49	5350	3.155	1.416	5.145	-1.842	3.142	0.656
600S250-97	1.169	3.98	6.496	2.357	0.923	0.889	6.496	2.161	48.81	6911	3.003	6.496	2.063	69.38	10472	3.062	4.030	6.947	-1.803	3.098	0.661
600S300-54	0.726	2.47	4.319	2.439	0.875	1.098	4.269	1.211	23.93	2739	3.210	4.014	1.106	33.13	2823	3.313	0.775	6.452	-2.299	3.527	0.575
600S300-68	0.907	3.09	5.354	2.430	1.075	1.089	5.344	1.581	31.23	4347	3.150	5.221	1.446	43.30	5350	3.253	1.537	7.937	-2.080	3.505	0.577
600S300-97	1.271	4.32	7.381	2.410	1.454	1.070	7.381	2.352	52.07	6911	3.058	7.280	2.247	67.28	10472	3.113	4.381	10.776	-2.241	3.461	0.581
725S125-27 ⁴	0.279	0.95	1.852	2.577	0.036	0.360	1.693	0.332	6.56	287	4.324	---	---	---	---	---	0.074	0.387	-0.554	2.661	0.957
725S125-30 ⁴	0.307	1.04	2.036	2.575	0.039	0.358	1.886	0.387	7.65	384	4.235	---	---	---	---	---	0.100	0.423	-0.552	2.658	0.957
725S125-33 ⁴	0.340	1.16	2.251	2.573	0.043	0.357	2.114	0.456	9.00	525	4.137	---	---	---	---	---	0.136	0.464	-0.549	2.655	0.957
725S125-43	0.441	1.50	2.905	2.566	0.055	0.352	2.835	0.691	13.65	1163	3.886	---	---	---	---	---	0.299	0.586	-0.540	2.646	0.958
725S125-54	0.549	1.87	3.582	2.554	0.065	0.344	3.582	0.920	18.17	2316	3.750	3.504	0.841	25.18	2316	3.897	0.587	0.708	-0.528	2.631	0.960
725S125-68	0.684	2.33	4.403	2.537	0.076	0.334	4.396	1.210	23.91	4347	3.631	4.396	1.141	34.15	4680	3.732	1.159	0.851	-0.514	2.610	0.961
725S137-33 ⁴	0.362	1.23	2.509	2.634	0.072	0.445	2.392	0.559	11.05	525	4.009	---	---	---	---	---	0.144	0.766	-0.733	2.770	0.930
725S137-43	0.469	1.60	3.241	2.628	0.091	0.441	3.178	0.802	15.84	1163	3.832	---	---	---	---	---	0.318	0.971	-0.724	2.761	0.931
725S137-54	0.585	1.99	4.003	2.617	0.110	0.434	4.003	1.048	20.72	2316	3.723	3.945	0.968	28.99	2316	3.859	0.624	1.181	-0.712	2.746	0.933
725S137-68	0.729	2.48	4.932	2.602	0.131	0.424	4.932	1.359	26.86	4347	3.627	4.932	1.304	39.03	4680	3.706	1.235	1.430	-0.697	2.726	0.935
725S137-97	1.016	3.46	6.710	2.569	0.166	0.404	6.710	1.851	36.58	8484	3.625	6.710	1.851	55.42	10885	3.625	3.504	1.875	-0.665	2.685	0.939
725S162-33 ⁴	0.388	1.32	2.822	2.698	0.122	0.562	2.706	0.638	12.61	525	3.986	---	---	---	---	---	0.155	1.309	-0.982	2.926	0.887
725S162-43	0.503	1.71	3.648	2.692	0.156	0.557	3.585	0.913	18.04	1163	3.814	---	---	---	---	---	0.341	1.666	-0.972	2.916	0.889
725S162-54	0.627	2.13	4.513	2.683	0.190	0.550	4.513	1.188	23.48	2316	3.715	4.455	1.100	32.93	2316	3.850	0.670	2.036	-0.960	2.902	0.891
725S162-68	0.782	2.66	5.572	2.669	0.229	0.541	5.572	1.536	30.35	4347	3.627	5.572	1.479	44.29	4680	3.699	1.325	2.479	-0.944	2.882	0.893
725S162-97	1.093	3.72	7.618	2.640	0.297	0.522	7.618	2.101	50.43	8484	3.625	7.618	2.101	74.54	10885	3.625	3.767	3.293	-0.911	2.841	0.897
725S200-33 ⁴	0.422	1.44	3.241	2.771	0.221	0.724	3.234	0.743	14.67	525	3.915	---	---	---	---	---	0.168	2.395	-1.346	3.164	0.819
725S200-43	0.548	1.87	4.193	2.765	0.284	0.719	4.193	1.131	22.34	1163	3.656	---	---	---	---	---	0.372	3.059	-1.335	3.154	0.821
725S200-54	0.684	2.33	5.195	2.756	0.347	0.713	5.195	1.433	31.18	2316	3.625	5.195	1.321	39.55	2316	3.738	0.730	3.755	-1.322	3.139	0.823
725S200-68	0.853	2.90	6.428	2.744	0.423	0.704	6.428	1.773	39.46	4347	3.625	6.428	1.710	56.77	4680	3.677	1.446	4.596	-1.305	3.119	0.825
725S200-97	1.194	4.06	8.831	2.719	0.561	0.685	8.831	2.436	56.64	8484	3.625	8.831	2.436	84.04	10885	3.625	4.118	6.175	-1.270	3.078	0.830
725S250-43	0.593	2.02	4.778	2.838	0.486	0.905	4.778	1.186	23.44	1163	3.772	---	---	---	---	---	0.402	5.134	-1.744	3.451	0.745
725S250-54	0.740	2.52	5.927	2.829	0.597	0.898	5.927	1.495	29.55	2316	3.752	5.837	1.388	41.55	2316	3.853	0.791	6.319	-1.730	3.436	0.747
725S250-68	0.925	3.15	7.347	2.819	0.730	0.889	7.347	1.942	42.27	4347	3.689	7.334	1.795	53.75	4680	3.796	1.567	7.765	-1.712	3.415	0.749
725S250-97	1.296	4.41	10.130	2.796	0.980	0.869	10.130	2.788	62.98	8484	3.628	10.130	2.666	89.66	10885	3.694	4.468	10.516	-1.675	3.373	0.753
725S300-54	0.797	2.71	6.659	2.891	0.931	1.081	6.575	1.561	30.84	2316	3.857	6.219	1.398	41.84	2316	4.018	0.851	9.721	-2.152	3.762	0.673
725S300-68	0.996	3.39	8.265	2.881	1.144	1.071	8.244	2.032	40.15	4347	3.792	8.037	1.871	56.02	4680	3.904	1.688	11.976	-2.133	3.741	0.675
725S300-97	1.398	4.76	11.429	2.859	1.547	1.052	11.429	3.018	66.8	8484	3.691	11.267	2.891	86.57	10885	3.751	4.819	16.310	-2.095	3.697	0.679
800S125-30 ⁴	0.330	1.12	2.606	2.808	0.040	0.349	2.366	0.430	8.50	347	4.746	---	---	---	---	---	0.107	0.531	-0.522	2.878	0.967
800S125-33 ⁴	0.366	1.25	2.881	2.806	0.044	0.347	2.656	0.507	10.02	474	4.639	---	---	---	---	---	0.146	0.582	-0.519	2.875	0.967
800S125-43	0.475	1.62	3.721	2.799	0.056	0.342	3.581	0.773	15.27	1051	4.359	---	---	---	---	---	0.322	0.735	-0.510	2.865	0.968
800S125-54	0.592	2.01	4.593	2.786	0.066	0.335	4.566	1.035	20.46	2091	4.200	4.431	0.942	28.21	2091	4.370	0.632	0.889	-0.499	2.850	0.969
800S125-68	0.738	2.51	5.653	2.768	0.078																

TABLE 3—C-SECTION (STUD) SECTION PROPERTIES (Continued)

Section	Gross Properties						33 ksi Effective Properties					50 ksi Effective					Torsional Properties				
	Area	Weight	I _{xx} (in ⁴)	R _x (in)	I _{yy} (in ⁴)	R _y (in)	I _{xx} (in ⁴)	S _{xx} (in ³)	Ma (in-k)	V _a (lb)	Y _{cg} (in)	I _{xx} (in ⁴)	S _{xx} (in ³)	Ma (in-k)	V _a (lb)	Y _{cg} (in)	J _x 1000 (in ⁴)	C _w (in ⁶)	X _o (in)	R _o (in)	β
800S250-43	0.627	2.13	6.015	3.097	0.500	0.893	6.015	1.313	25.95	1051	4.219	---	---	---	---	---	0.425	6.374	-1.675	3.632	0.787
800S250-54	0.783	2.66	7.465	3.088	0.614	0.886	7.465	1.712	33.82	2091	4.134	7.378	1.525	45.66	2091	4.323	0.836	7.850	-1.661	3.617	0.789
800S250-68	0.978	3.33	9.261	3.077	0.752	0.877	9.261	2.220	48.33	4221	4.068	9.240	2.059	61.65	4221	4.179	1.658	9.652	-1.644	3.597	0.791
800S250-97	1.372	4.67	12.789	3.053	1.009	0.857	12.789	3.191	72.07	8843	4.003	12.789	3.054	102.70	10885	4.073	4.731	13.091	-1.607	3.555	0.796
800S300-54	0.839	2.86	8.358	3.156	0.960	1.069	8.249	1.785	35.28	2091	4.244	7.862	1.535	45.96	2091	4.500	0.896	12.076	-2.073	3.924	0.721
800S300-68	1.050	3.57	10.382	3.145	1.179	1.060	10.351	2.321	45.86	4221	4.175	10.082	2.145	64.21	4221	4.292	1.779	14.888	-2.055	3.903	0.723
800S300-97	1.474	5.02	14.375	3.123	1.595	1.040	14.375	3.443	76.21	8843	4.070	14.170	3.304	98.92	10885	4.133	5.082	20.304	-2.017	3.860	0.727
925S137-43	0.560	1.90	5.941	3.258	0.096	0.414	5.612	1.053	20.8	905	5.088	---	---	---	---	---	0.379	1.688	-0.633	3.345	0.964
925S137-54	0.698	2.37	7.352	3.246	0.116	0.407	7.175	1.396	27.58	1800	4.930	6.993	1.274	38.15	1800	5.122	0.745	2.055	-0.623	3.330	0.965
925S137-68	0.871	2.96	9.084	3.229	0.138	0.398	9.084	1.846	36.47	3628	4.771	8.905	1.743	52.19	3628	4.904	1.476	2.491	-0.609	3.310	0.966
925S137-97	1.220	4.15	12.437	3.193	0.174	0.378	12.437	2.689	66.42	8843	4.625	12.437	2.637	78.95	10710	4.671	4.205	3.275	-0.580	3.267	0.968
925S162-43	0.593	2.02	6.616	3.339	0.165	0.528	6.288	1.196	23.64	905	5.051	---	---	---	---	---	0.402	2.877	-0.859	3.488	0.939
925S162-54	0.740	2.52	8.198	3.328	0.201	0.521	8.019	1.576	31.15	1800	4.907	7.841	1.443	43.22	1800	5.096	0.791	3.521	-0.848	3.473	0.940
925S162-68	0.925	3.15	10.148	3.313	0.242	0.512	10.148	2.074	40.98	3628	4.760	9.965	1.970	58.99	3628	4.883	1.567	4.293	-0.833	3.454	0.942
925S162-97	1.296	4.41	13.947	3.280	0.315	0.493	13.947	3.016	59.59	8843	4.625	13.947	2.962	88.70	10710	4.667	4.468	5.719	-0.802	3.413	0.945
925S200-43	0.639	2.17	7.519	3.431	0.303	0.689	7.204	1.351	26.7	905	5.060	---	---	---	---	---	0.433	5.240	-1.193	3.697	0.896
925S200-54	0.797	2.71	9.329	3.422	0.371	0.682	9.147	1.818	35.92	1800	4.881	9.009	1.567	46.91	1800	5.181	0.851	6.438	-1.180	3.683	0.897
925S200-68	0.996	3.39	11.568	3.408	0.451	0.673	11.568	2.379	47	3628	4.749	11.398	2.217	66.36	3628	4.908	1.688	7.893	-1.164	3.664	0.899
925S200-97	1.398	4.76	15.963	3.379	0.598	0.654	15.963	3.451	68.2	8843	4.625	15.963	3.397	101.71	10710	4.664	4.819	10.637	-1.131	3.623	0.902
925S250-43	0.684	2.33	8.474	3.521	0.520	0.872	8.474	1.502	29.69	905	5.018	---	---	---	---	---	0.464	8.801	-1.573	3.953	0.842
925S250-54	0.853	2.90	10.525	3.512	0.640	0.866	10.525	2.096	41.42	1800	4.768	10.469	1.746	52.27	1800	5.137	0.911	10.847	-1.559	3.939	0.843
925S250-68	1.067	3.63	13.070	3.499	0.783	0.856	13.070	2.714	59.09	3628	4.698	13.031	2.529	75.73	3628	4.816	1.809	13.349	-1.542	3.919	0.845
925S250-97	1.499	5.10	18.090	3.473	1.050	0.837	18.090	3.903	88.17	8843	4.629	18.090	3.742	125.86	10710	4.704	5.170	18.137	-1.507	3.878	0.849
925S300-54	0.910	3.10	11.721	3.589	1.001	1.049	11.573	2.155	42.57	1800	4.915	11.135	1.764	52.83	1800	5.323	0.972	16.911	-1.956	4.219	0.785
925S300-68	1.139	3.87	14.572	3.577	1.231	1.040	14.520	2.833	55.98	3628	4.813	14.158	2.610	78.14	3628	4.955	1.930	20.596	-1.938	4.199	0.787
925S300-97	1.601	5.45	20.218	3.553	1.665	1.020	20.218	4.194	92.84	8843	4.701	19.928	4.035	120.79	10710	4.767	5.520	28.138	-1.901	4.157	0.791
1000S137-43 [†]	0.593	2.02	7.232	3.491	0.097	0.405	6.727	1.147	22.66	836	5.577	---	---	---	---	---	0.402	2.014	-0.605	3.566	0.971
1000S137-54	0.740	2.52	8.956	3.478	0.117	0.398	8.636	1.526	30.15	1661	5.401	8.393	1.389	41.58	1661	5.613	0.791	2.454	-0.595	3.551	0.972
1000S137-68	0.925	3.15	11.076	3.461	0.140	0.389	11.010	2.029	40.09	3345	5.220	10.732	1.908	57.13	3345	5.373	1.567	2.975	-0.581	3.531	0.973
1000S137-97	1.296	4.41	15.192	3.424	0.177	0.369	15.192	3.038	60.04	8843	5.000	15.192	2.917	87.32	9864	5.102	4.468	3.913	-0.554	3.488	0.975
1000S162-43 [†]	0.627	2.13	8.025	3.577	0.168	0.518	7.523	1.302	25.74	836	5.532	---	---	---	---	---	0.425	3.430	-0.823	3.707	0.951
1000S162-54	0.783	2.66	9.950	3.565	0.204	0.511	9.627	1.722	34.02	1661	5.371	9.391	1.572	47.07	1661	5.580	0.836	4.198	-0.812	3.692	0.952
1000S162-68	0.978	3.33	12.325	3.550	0.246	0.502	12.256	2.276	44.98	3345	5.205	11.978	2.154	64.51	3345	5.345	1.658	5.121	-0.798	3.673	0.953
1000S162-97	1.372	4.67	16.967	3.516	0.320	0.483	16.967	3.393	67.06	8843	5.000	16.967	3.269	97.89	9864	5.095	4.731	6.827	-0.768	3.631	0.955
1000S200-43 [†]	0.672	2.29	9.085	3.676	0.309	0.677	8.602	1.470	29.05	836	5.535	---	---	---	---	---	0.456	6.236	-1.147	3.910	0.914
1000S200-54	0.839	2.86	11.278	3.666	0.378	0.671	10.953	1.984	39.2	1661	5.338	10.769	1.705	51.05	1661	5.666	0.896	7.665	-1.135	3.896	0.915
1000S200-68	1.050	3.57	13.994	3.652	0.460	0.662	13.920	2.607	51.51	3345	5.188	13.665	2.420	72.46	3345	5.367	1.779	9.401	-1.120	3.876	0.917
1000S200-97	1.474	5.02	19.336	3.622	0.609	0.643	19.336	3.867	76.42	8843	5.000	19.336	3.741	112.00	9864	5.088	5.082	12.679	-1.088	3.836	0.920
1000S250-43 [†]	0.717	2.44	10.203	3.771	0.531	0.860	10.203	1.617	31.95	836	5.508	---	---	---	---	---	0.486	10.481	-1.518	4.155	0.867
1000S250-54	0.896	3.05	12.677	3.762	0.653	0.854	12.677	2.277	44.99	1661	5.213	12.660	1.879	56.26	1661	5.635	0.957	12.922	-1.505	4.140	0.868
1000S250-68	1.121	3.81	15.751	3.749	0.799	0.844	15.751	3.028	65.93	3345	5.076	15.741	2.768	82.89	3345	5.248	1.899	15.909	-1.488	4.121	0.870
1000S250-97	1.576	5.36	21.827	3.722	1.072	0.825	21.827	4.357	98.41	8843	5.004	21.827	4.181	140.63	9864	5.082	5.433	21.632	-1.454	4.080	0.873
1000S300-54	0.953	3.24	14.076	3.844	1.024	1.037	13.938	2.312	45.69	1661	5.394	13.440	1.902	56.96	1661	5.826	1.017	19.888	-1.892	4.408	0.816
1000S300-68	1.192	4.06	17.509	3.832	1.258	1.027	17.441	3.158	62.41	3345	5.195	17.099	2.802	83.89	3345	5.437	2.020	24.551	-1.874	4.388	0.818
1000S300-97	1.677	5.71	24.318	3.808	1.702	1.007	24.318	4.671	103.39	8843	5.079	23.970	4.499	134.69	9864	5.148	5.783	33.570	-1.838	4.346	0.821
1150S137-43 [†]	0.661	2.25	10.325	3.952	0.100	0.388	9.301	1.334	26.36	725	6.577	---	---	---	---	---	0.448	2.764	-0.556	4.010	0.981
1150S137-54	0.825	2.81	12.800	3.938	0.120	0.381	12.025	1.786	35.3	1439	6.369	11.627	1.617	48.43	1439	6.618	0.881	3.369	-0.546	3.994	0.981
1150S137-68	1.032	3.51	15.854	3.920	0.143	0.372	15.463	2.396	47.34	2895	6.147	14.977	2.238	67.01	2895	6.336	1.748	4.085	-0.534	3.974	0.982
1150S137-97	1.449	4.93	21.817	3.881	0.181	0.353	21.817	3.687	72.87	8518	5.830	21.738	3.478	104.13	8518	5.995	4.994	5.379	-0.508	3.930	0.983
1150S162-43 [†]	0.695	2.36	11.383	4.047	0.173	0.499	10.366	1.514	29.92	725	6.516	---	---	---	---	---	0.471	4.703	-0.761	4.148	0.966
1150S162-54	0.868	2.95	14.126	4.035	0.210	0.492	13.350	2.012	39.76	1439	6.325	12.964	1.829	54.75	1439	6.570	0.927	5.759	-0.750	4.134	0.967
1150S162-68	1.085	3.69	17.521	4.018	0.253	0.483	17.124	2.681	52.99	2895	6.120	16.642	2.523	75.52	2895	6.295	1.839	7.028	-0.737	4.114	0.968
1150S162-97	1.52																				

TABLE 3—C-SECTION (STUD) SECTION PROPERTIES (Continued)

Section	Gross Properties ¹						33 ksi Effective Properties ^{2,3}					50 ksi Effective ^{2,3}					Torsional Properties				
	Area	Weight	Ixx (in ⁴)	Rx (in)	Iyy (in ⁴)	Ry (in)	Ixx (in ⁴)	Sxx (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	Ixx (in ⁴)	Sxx (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	Jx1000 (in ⁴)	Cw (in ⁶)	Xo (in)	Ro (in)	β
1200S250-54 ⁴	1.009	3.43	19.681	4.416	0.683	0.823	18.832	2.482	49.05	1377	6.794	18.433	2.149	64.34	1377	7.159	1.078	19.505	-1.378	4.699	0.914
1200S250-68	1.263	4.30	24.484	4.402	0.836	0.813	23.963	3.496	69.08	2771	6.460	23.575	3.007	90.04	2771	6.846	2.141	24.034	-1.362	4.679	0.915
1200S250-97	1.779	6.05	34.016	4.373	1.121	0.794	34.016	5.496	108.6	8147	6.098	33.835	5.037	150.82	8147	6.340	6.134	32.734	-1.329	4.639	0.918
1200S300-54 ⁴	1.066	3.63	21.699	4.512	1.074	1.004	21.648	2.736	54.06	1377	6.708	21.043	2.272	68.04	1377	7.195	1.138	30.051	-1.743	4.940	0.876
1200S300-68	1.335	4.54	27.020	4.499	1.320	0.994	26.918	4.064	80.3	2771	6.229	26.510	3.317	99.32	2771	6.759	2.262	37.126	-1.726	4.921	0.877
1200S300-97	1.881	6.40	37.616	4.472	1.786	0.974	37.616	6.035	133.59	8147	6.086	37.085	5.831	174.57	8147	6.159	6.484	50.853	-1.691	4.880	0.880
1350S137-54 ⁴	0.938	3.19	19.386	4.545	0.123	0.362	17.546	2.133	42.14	1221	7.705	16.866	1.922	57.54	1221	8.001	1.002	4.839	-0.493	4.586	0.988
1350S137-68	1.174	4.00	24.050	4.526	0.147	0.353	22.783	2.885	57.02	2455	7.432	21.907	2.677	80.15	2455	7.667	1.990	5.870	-0.482	4.565	0.989
1350S137-97	1.652	5.62	33.215	4.484	0.185	0.335	33.215	4.535	89.62	7206	7.015	32.333	4.229	126.61	7206	7.240	5.696	7.735	-0.458	4.520	0.990
1350S162-54 ⁴	0.981	3.34	21.228	4.652	0.216	0.469	19.394	2.399	47.41	1221	7.641	18.737	2.170	64.98	1221	7.932	1.047	8.273	-0.682	4.725	0.979
1350S162-68	1.228	4.18	26.368	4.634	0.261	0.461	25.092	3.222	63.66	2455	7.389	24.228	3.012	90.19	2455	7.606	2.081	10.101	-0.669	4.705	0.980
1350S162-97	1.728	5.88	36.510	4.596	0.338	0.442	36.510	5.018	99.15	7206	7.000	35.611	4.709	140.98	7206	7.211	5.959	13.494	-0.643	4.662	0.981
1350S200-54 ⁴	1.037	3.53	23.688	4.778	0.403	0.623	21.864	2.756	54.46	1221	7.568	21.358	2.348	70.31	1221	8.013	1.108	15.066	-0.966	4.915	0.961
1350S200-68	1.299	4.42	29.461	4.762	0.491	0.615	28.180	3.672	72.55	2455	7.340	27.397	3.369	100.88	2455	7.606	2.201	18.498	-0.952	4.895	0.962
1350S200-97	1.830	6.23	40.907	4.728	0.650	0.596	40.905	5.662	111.89	7206	6.983	39.991	5.350	160.18	7206	7.176	6.309	25.008	-0.923	4.854	0.964
1350S250-54 ⁴	1.094	3.72	26.245	4.898	0.701	0.801	24.632	2.816	55.64	1221	7.780	24.075	2.432	72.82	1221	8.188	1.168	25.480	-1.296	5.129	0.936
1350S250-68	1.370	4.66	32.675	4.883	0.858	0.791	31.477	3.983	78.7	2455	7.400	30.883	3.415	102.23	2455	7.837	2.322	31.409	-1.281	5.110	0.937
1350S250-97	1.932	6.57	45.471	4.852	1.151	0.772	45.457	6.332	125.12	7206	6.967	44.659	5.767	172.67	7206	7.257	6.660	42.816	-1.250	5.069	0.939
1350S300-54 ⁴	1.151	3.92	28.803	5.003	1.106	0.980	27.240	2.905	57.41	1221	7.941	25.104	2.484	74.37	1221	8.375	1.229	39.293	-1.647	5.358	0.906
1350S300-68	1.442	4.91	35.890	4.989	1.358	0.971	34.869	4.072	80.46	2455	7.586	33.417	3.516	105.27	2455	8.006	2.443	48.565	-1.631	5.338	0.907
1350S300-97	2.033	6.92	50.035	4.961	1.838	0.951	50.035	6.743	133.25	7206	7.053	48.895	6.117	183.16	7206	7.352	7.010	66.580	-1.597	5.297	0.909
1400S137-54 ⁴	0.967	3.29	21.317	4.696	0.124	0.358	19.109	2.219	43.85	1177	8.046	18.345	1.998	59.82	1177	8.353	1.032	5.251	-0.482	4.734	0.990
1400S137-68	1.210	4.12	26.455	4.676	0.147	0.349	24.868	3.008	59.43	2365	7.761	23.871	2.787	83.44	2365	8.007	2.050	6.372	-0.470	4.712	0.990
1400S137-97	1.703	5.79	36.565	4.634	0.186	0.331	36.434	4.748	93.82	6939	7.320	35.366	4.417	132.24	6939	7.560	5.871	8.397	-0.447	4.667	0.991
1400S162-54 ⁴	1.009	3.43	23.302	4.805	0.218	0.464	21.103	2.496	49.32	1177	7.977	20.365	2.256	67.54	1177	8.278	1.078	8.980	-0.667	4.873	0.981
1400S162-68	1.263	4.30	28.952	4.787	0.262	0.456	27.357	3.357	66.33	2365	7.714	26.375	3.135	93.85	2365	7.940	2.141	10.966	-0.654	4.853	0.982
1400S162-97	1.779	6.05	40.115	4.748	0.340	0.437	39.965	5.248	103.71	6939	7.302	38.897	4.915	147.14	6939	7.527	6.134	14.651	-0.628	4.810	0.983
1400S200-54 ⁴	1.066	3.63	25.951	4.935	0.406	0.617	23.767	2.866	56.63	1177	7.898	23.199	2.440	73.05	1177	8.359	1.138	16.355	-0.946	5.062	0.965
1400S200-68	1.335	4.54	32.284	4.918	0.494	0.608	30.684	3.824	75.56	2365	7.660	29.797	3.505	104.93	2365	7.937	2.262	20.083	-0.932	5.043	0.966
1400S200-97	1.881	6.40	44.853	4.883	0.655	0.590	44.683	5.917	116.93	6939	7.281	43.616	5.580	167.07	6939	7.488	6.484	27.156	-0.904	5.001	0.967
1400S250-54 ⁴	1.122	3.82	28.702	5.057	0.707	0.794	26.758	2.927	57.83	1177	8.113	26.141	2.527	75.65	1177	8.535	1.198	27.675	-1.272	5.275	0.942
1400S250-68	1.406	4.78	35.743	5.042	0.865	0.784	34.239	4.145	81.9	2365	7.718	33.565	3.550	106.29	2365	8.173	2.383	34.118	-1.257	5.255	0.943
1400S250-97	1.983	6.75	49.764	5.010	1.160	0.765	49.579	6.611	130.64	6939	7.263	48.650	6.010	179.95	6939	7.568	6.835	46.520	-1.225	5.214	0.945
1400S300-54 ⁴	1.179	4.01	31.453	5.165	1.115	0.972	29.581	3.019	59.66	1177	8.277	27.227	2.580	77.25	1177	8.726	1.259	42.690	-1.617	5.499	0.914
1400S300-68	1.477	5.03	39.201	5.151	1.370	0.963	37.902	4.236	83.71	2365	7.908	36.290	3.655	109.42	2365	8.344	2.503	52.772	-1.601	5.480	0.915
1400S300-97	2.084	7.09	54.675	5.122	1.854	0.943	54.574	7.035	139.02	6939	7.350	53.226	6.372	190.78	6939	7.664	7.186	72.365	-1.568	5.439	0.917

For **SI**: 1 inch = 25.4mm, 1 pound = 4.4482 N.

¹Gross properties are based on the full-unreduced cross section of the studs, away from web punch-outs.

²Effective properties are based on punched sections.

³Use the effective moment of inertia for deflection calculations.

⁴Web height to thickness ratio, h/t, exceeds 200. Web stiffeners in accordance with Sections B1.2 and C3.6.1 of AISI-NAS are required. No holes or punch-outs are permitted in the web.

SYMBOLS:

- Ixx=Strong axis moment of inertia.
- Rx=Strong axis radius of gyration.
- Iyy=Weak axis moment of inertia.
- Ry=Weak axis radius of gyration.
- Sxx=Strong axis section modulus.
- Va = Allowable shear at unpunched web section.
- Ycg= Distance from top of flange to effective center of gravity.
- J=St. Venant torsion constant.
- Cw=Warping constant.
- Xo=Distance from shear center to neutral axis.
- β=Torsional flexural constant.

TABLE 4—CHANNEL (TRACK) SECTION PROPERTIES

Section	Gross Properties ¹						33 ksi Effective Properties ²					50 ksi Effective ²					Torsional Properties				
	Area	Weight	Ixx (in ⁴)	Rx (in)	Iyy (in ⁴)	Ry (in)	Ixx (in ⁴)	Sxx (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	Ixx (in ⁴)	Sxx (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	Jx1000 (in ⁴)	Cw (in ⁶)	Xo (in)	Ro (in)	β
162T125-18	0.077	0.26	0.041	0.733	0.013	0.411	0.030	0.025	0.50	302	1.082	---	---	---	---	---	0.009	0.007	-0.878	1.215	0.478
162T125-27	0.117	0.40	0.063	0.735	0.020	0.410	0.050	0.044	0.87	541	1.048	---	---	---	---	---	0.031	0.010	-0.872	1.211	0.482
162T125-30	0.129	0.44	0.070	0.735	0.022	0.409	0.057	0.050	1.00	597	1.038	---	---	---	---	---	0.042	0.012	-0.870	1.210	0.483
162T125-33	0.143	0.49	0.077	0.736	0.024	0.408	0.066	0.058	1.15	663	1.026	---	---	---	---	---	0.057	0.013	-0.868	1.209	0.484
162T125-43	0.186	0.63	0.101	0.737	0.031	0.407	0.093	0.085	1.68	867	0.995	---	---	---	---	---	0.126	0.017	-0.863	1.206	0.488
162T125-54	0.233	0.79	0.129	0.746	0.038	0.404	0.126	0.119	2.36	1079	0.975	0.120	0.109	3.27	1634	1.006	0.249	0.021	-0.856	1.205	0.496
162T125-68	0.293	1.00	0.168	0.757	0.047	0.401	0.168	0.168	3.33	1339	0.961	0.166	0.155	4.65	2029	0.991	0.497	0.028	-0.846	1.205	0.506
162T125-97	0.417	1.42	0.255	0.781	0.065	0.395	0.255	0.257	5.81	1853	0.990	0.255	0.257	7.70	2808	0.990	1.439	0.042	-0.827	1.204	0.528
162T150-27	0.131	0.45	0.074	0.750	0.032	0.495	0.055	0.045	0.90	541	1.092	---	---	---	---	---	0.035	0.017	-1.100	1.420	0.400
162T150-30	0.144	0.49	0.081	0.751	0.035	0.494	0.062	0.052	1.03	597	1.082	---	---	---	---	---	0.047	0.019	-1.098	1.419	0.401
162T150-33	0.160	0.54	0.090	0.751	0.039	0.494	0.072	0.060	1.19	663	1.070	---	---	---	---	---	0.064	0.021	-1.096	1.418	0.402
162T150-43	0.208	0.71	0.118	0.753	0.050	0.492	0.102	0.089	1.75	867	1.037	---	---	---	---	---	0.141	0.027	-1.091	1.414	0.405
162T150-54	0.261	0.89	0.151	0.762	0.063	0.490	0.140	0.126	2.48	1079	1.015	0.132	0.114	3.42	1634	1.049	0.279	0.035	-1.083	1.412	0.411
162T150-68	0.329	1.12	0.197	0.774	0.078	0.487	0.190	0.180	3.55	1339	0.997	0.185	0.164	4.91	2029	1.032	0.557	0.046	-1.073	1.410	0.421
162T150-97	0.468	1.59	0.299	0.800	0.108	0.481	0.299	0.302	5.97	1853	0.990	0.299	0.283	8.48	2808	1.017	1.614	0.070	-1.053	1.407	0.440
162T200-33	0.194	0.66	0.116	0.773	0.085	0.660	0.081	0.063	1.25	663	1.145	---	---	---	---	---	0.078	0.047	-1.565	1.866	0.297
162T200-43	0.253	0.86	0.152	0.775	0.110	0.658	0.117	0.094	1.85	867	1.111	---	---	---	---	---	0.172	0.061	-1.559	1.861	0.298
162T200-54	0.318	1.08	0.196	0.785	0.137	0.656	0.164	0.134	2.65	1079	1.088	0.153	0.121	3.62	1634	1.124	0.339	0.078	-1.551	1.858	0.303
162T200-68	0.400	1.36	0.255	0.799	0.171	0.653	0.232	0.195	3.86	1339	1.067	0.218	0.176	5.26	2029	1.106	0.678	0.102	-1.540	1.854	0.310
162T200-97	0.570	1.94	0.389	0.827	0.239	0.648	0.389	0.345	6.82	1853	1.044	0.373	0.313	9.38	2808	1.084	1.965	0.157	-1.519	1.846	0.323
250T125-18	0.094	0.32	0.103	1.051	0.015	0.400	0.078	0.045	0.90	249	1.580	---	---	---	---	---	0.011	0.018	-0.769	1.362	0.681
250T125-27	0.141	0.48	0.157	1.053	0.022	0.398	0.129	0.079	1.56	685	1.519	---	---	---	---	---	0.038	0.027	-0.763	1.360	0.685
250T125-30	0.156	0.53	0.173	1.053	0.025	0.397	0.145	0.090	1.77	832	1.507	---	---	---	---	---	0.051	0.030	-0.762	1.359	0.686
250T125-33	0.173	0.59	0.192	1.054	0.027	0.397	0.166	0.103	2.03	1024	1.492	---	---	---	---	---	0.069	0.033	-0.760	1.358	0.687
250T125-43	0.225	0.77	0.250	1.055	0.035	0.395	0.231	0.147	2.91	1356	1.454	---	---	---	---	---	0.153	0.042	-0.755	1.356	0.690
250T125-54	0.282	0.96	0.318	1.062	0.043	0.392	0.310	0.203	4.01	1692	1.426	0.297	0.188	5.64	2563	1.463	0.301	0.054	-0.749	1.357	0.696
250T125-68	0.355	1.21	0.408	1.072	0.054	0.389	0.408	0.281	5.56	2111	1.404	0.402	0.262	7.85	3199	1.440	0.602	0.069	-0.740	1.360	0.704
250T125-97	0.506	1.72	0.604	1.092	0.074	0.383	0.604	0.423	9.56	2954	1.428	0.604	0.423	12.67	4476	1.428	1.745	0.101	-0.724	1.365	0.719
250T150-27	0.156	0.53	0.181	1.078	0.037	0.486	0.139	0.082	1.61	685	1.576	---	---	---	---	---	0.042	0.044	-0.976	1.534	0.595
250T150-30	0.172	0.58	0.199	1.078	0.040	0.486	0.157	0.093	1.83	832	1.563	---	---	---	---	---	0.056	0.049	-0.975	1.533	0.595
250T150-33	0.190	0.65	0.221	1.079	0.045	0.485	0.179	0.107	2.11	1024	1.548	---	---	---	---	---	0.076	0.054	-0.973	1.532	0.596
250T150-43	0.248	0.84	0.289	1.080	0.058	0.483	0.252	0.154	3.03	1356	1.508	---	---	---	---	---	0.168	0.070	-0.968	1.529	0.599
250T150-54	0.311	1.06	0.368	1.088	0.072	0.481	0.342	0.213	4.22	1692	1.477	0.325	0.197	5.89	2563	1.517	0.332	0.089	-0.961	1.529	0.605
250T150-68	0.391	1.33	0.472	1.099	0.089	0.478	0.465	0.299	5.92	2111	1.449	0.445	0.276	8.27	3199	1.490	0.663	0.114	-0.953	1.531	0.613
250T150-97	0.557	1.90	0.701	1.121	0.124	0.471	0.701	0.491	9.69	2954	1.428	0.701	0.463	13.86	4476	1.460	1.921	0.168	-0.935	1.534	0.629
250T200-33	0.225	0.76	0.280	1.117	0.097	0.658	0.203	0.112	2.22	1024	1.627	---	---	---	---	---	0.090	0.118	-1.418	1.921	0.455
250T200-43	0.293	1.00	0.366	1.118	0.126	0.657	0.288	0.163	3.21	1356	1.605	---	---	---	---	---	0.198	0.153	-1.413	1.918	0.457
250T200-54	0.367	1.25	0.466	1.127	0.157	0.654	0.396	0.228	4.51	1692	1.572	0.371	0.209	6.25	2563	1.615	0.392	0.195	-1.405	1.917	0.462
250T200-68	0.462	1.57	0.600	1.139	0.196	0.652	0.548	0.324	6.41	2111	1.538	0.517	0.296	8.86	3199	1.586	0.783	0.251	-1.396	1.916	0.469
250T200-97	0.659	2.24	0.893	1.165	0.275	0.646	0.893	0.556	10.99	2954	1.496	0.856	0.510	15.27	4476	1.544	2.271	0.374	-1.376	1.915	0.484
250T250-43	0.338	1.15	0.443	1.146	0.230	0.826	0.318	0.169	3.34	1356	1.688	---	---	---	---	---	0.229	0.283	-1.873	2.346	0.362
250T250-54	0.424	1.44	0.565	1.155	0.287	0.824	0.440	0.238	4.70	1692	1.655	0.410	0.217	6.50	2563	1.699	0.453	0.361	-1.865	2.343	0.366
250T250-68	0.534	1.82	0.728	1.168	0.360	0.821	0.616	0.341	6.74	2111	1.620	0.576	0.310	9.27	3199	1.670	0.904	0.466	-1.855	2.341	0.372
250T250-97	0.761	2.59	1.086	1.195	0.506	0.815	1.028	0.596	11.79	2954	1.571	0.972	0.541	16.20	4476	1.626	2.622	0.696	-1.834	2.336	0.384
250T300-54	0.480	1.63	0.664	1.176	0.470	0.989	0.477	0.245	4.85	1692	1.727	0.443	0.223	6.69	2563	1.772	0.513	0.599	-2.335	2.795	0.302
250T300-68	0.605	2.06	0.856	1.189	0.589	0.987	0.674	0.353	6.98	2111	1.693	0.626	0.319	9.56	3199	1.744	1.025	0.773	-2.324	2.791	0.307
250T300-97	0.862	2.93	1.279	1.218	0.830	0.981	1.144	0.625	12.35	2954	1.642	1.072	0.563	16.86	4476	1.699	2.973	1.158	-2.303	2.784	0.316
350T125-18	0.113	0.38	0.219	1.394	0.016	0.383	0.174	0.063	1.25	175	2.264	---	---	---	---	---	0.013	0.038	-0.675	1.595	0.821
350T125-27	0.170	0.58	0.331	1.396	0.025	0.381	0.277	0.128	2.53	590	2.044	---	---	---	---	---	0.045	0.057	-0.670	1.595	0.823
350T125-30	0.187	0.64	0.365	1.396	0.027	0.380	0.312	0.145	2.86	790	2.030	---	---	---	---	---	0.061	0.063	-0.669	1.594	0.824
350T125-33	0.207	0.71	0.405	1.397	0.030	0.379	0.354	0.165	3.27	1024	2.014	---	---	---	---	---	0.083	0.070	-0.668	1.594	0.824
350T125-43	0.270	0.92	0.528	1.397	0.038	0.377	0.490	0.233	4.61	1739	1.971	---	---	---	---	---	0.183	0.090	-0.663	1.592	0.826
350T125-54	0.339	1.15	0.668	1.404	0.048	0.375	0.651	0.317	6.26	2392	1.937	0.626	0.297	8.89	3372	1.978	0.362	0.114	-0.658	1.595	0.830
350T125-68	0.427	1.45	0.851	1.412	0.059	0.372	0.851	0.433	8.55	2994	1.908	0.839	0.407	12.18	4536	1.949	0.723	0.144	-0.650	1.599	0.835
350T125-97	0.608	2.07	1.243	1.430	0.081	0.366	1.243	0.645	14.56	4213	1.928	1.243	0.645	19.30	6383	1.928	2.096	0.209	-0.636	1.607	0.844
350T150-27	0.184	0.63	0.377	1.431	0.041	0.470	0.298	0.132	2.62	590	2.111	---	---								

TABLE 4—CHANNEL (TRACK) SECTION PROPERTIES (Continued)

Section	Gross Properties ¹						33 ksi Effective Properties ²					50 ksi Effective ²					Torsional Properties				
	Area	Weight	I _{xx} (in ⁴)	R _x (in)	I _{yy} (in ⁴)	R _y (in)	I _{xx} (in ⁴)	S _{xx} (in ³)	M _a (in-k)	V _a (lb)	Y _{cg} (in)	I _{xx} (in ⁴)	S _{xx} (in ³)	M _a (in-k)	V _a (lb)	Y _{cg} (in)	J _x 1000 (in ⁴)	C _w (in ⁶)	X _o (in)	R _o (in)	β
362T125-18	0.115	0.39	0.237	1.435	0.017	0.380	0.189	0.065	1.29	169	2.352	---	---	---	---	---	0.014	0.042	-0.665	1.627	0.833
362T125-27	0.173	0.59	0.358	1.438	0.025	0.378	0.301	0.135	2.66	569	2.109	---	---	---	---	---	0.046	0.062	-0.661	1.627	0.835
362T125-30	0.191	0.65	0.395	1.438	0.027	0.378	0.339	0.152	3.01	762	2.095	---	---	---	---	---	0.062	0.068	-0.659	1.626	0.836
362T125-33	0.212	0.72	0.438	1.438	0.030	0.377	0.384	0.174	3.44	1024	2.079	---	---	---	---	---	0.085	0.076	-0.658	1.626	0.836
362T125-43	0.276	0.94	0.571	1.439	0.039	0.375	0.531	0.245	4.84	1739	2.035	---	---	---	---	---	0.187	0.098	-0.654	1.625	0.838
362T125-54	0.346	1.18	0.723	1.445	0.048	0.373	0.705	0.332	6.57	2480	2.000	0.678	0.312	9.34	3372	2.042	0.369	0.123	-0.648	1.627	0.841
362T125-68	0.436	1.48	0.921	1.454	0.060	0.370	0.921	0.453	8.95	3104	1.971	0.907	0.427	12.78	4703	2.012	0.738	0.156	-0.641	1.631	0.846
362T125-97	0.621	2.11	1.343	1.471	0.082	0.363	1.343	0.675	15.24	4370	1.990	1.343	0.675	20.20	6622	1.990	2.140	0.226	-0.626	1.639	0.854
362T150-27	0.187	0.64	0.408	1.475	0.041	0.468	0.323	0.140	2.76	569	2.177	---	---	---	---	---	0.050	0.102	-0.857	1.769	0.765
362T150-30	0.207	0.70	0.449	1.475	0.045	0.467	0.364	0.158	3.12	762	2.162	---	---	---	---	---	0.067	0.112	-0.856	1.768	0.766
362T150-33	0.229	0.78	0.499	1.475	0.050	0.467	0.414	0.180	3.56	1024	2.146	---	---	---	---	---	0.091	0.124	-0.854	1.767	0.766
362T150-43	0.298	1.02	0.650	1.476	0.064	0.465	0.574	0.255	5.04	1739	2.099	---	---	---	---	---	0.202	0.160	-0.850	1.766	0.768
362T150-54	0.374	1.27	0.823	1.483	0.080	0.462	0.769	0.349	6.89	2480	2.060	0.735	0.325	9.74	3372	2.107	0.400	0.202	-0.844	1.768	0.772
362T150-68	0.471	1.60	1.050	1.492	0.099	0.459	1.034	0.480	9.49	3104	2.024	0.993	0.449	13.43	4703	2.072	0.799	0.257	-0.836	1.771	0.777
362T150-97	0.672	2.29	1.534	1.512	0.138	0.453	1.534	0.771	15.23	4370	1.990	1.534	0.733	21.94	6622	2.028	2.315	0.374	-0.820	1.778	0.787
362T200-33	0.264	0.90	0.619	1.532	0.110	0.645	0.464	0.190	3.76	1024	2.267	---	---	---	---	---	0.105	0.269	-1.270	2.092	0.631
362T200-43	0.343	1.17	0.808	1.534	0.142	0.643	0.649	0.270	5.34	1739	2.218	---	---	---	---	---	0.233	0.560	-1.265	2.090	0.633
362T200-54	0.431	1.47	1.024	1.541	0.177	0.640	0.879	0.372	7.35	2480	2.175	0.832	0.345	10.34	3372	2.226	0.460	0.442	-1.259	2.091	0.637
362T200-68	0.543	1.85	1.307	1.552	0.221	0.638	1.199	0.519	10.26	3104	2.132	1.138	0.480	14.37	4703	2.187	0.919	0.564	-1.250	2.093	0.643
362T200-97	0.773	2.63	1.917	1.575	0.308	0.631	1.915	0.867	17.14	4370	2.071	1.839	0.803	24.06	6622	2.128	2.666	0.825	-1.232	2.097	0.655
362T250-43	0.389	1.32	0.966	1.577	0.260	0.818	0.713	0.281	5.56	1739	2.323	---	---	---	---	---	0.263	0.641	-1.702	2.460	0.521
362T250-54	0.487	1.66	1.224	1.585	0.324	0.816	0.971	0.389	7.69	2480	2.279	0.914	0.360	10.77	3372	2.331	0.521	0.812	-1.695	2.460	0.525
362T250-68	0.614	2.09	1.565	1.597	0.406	0.813	1.337	0.546	10.79	3104	2.233	1.259	0.502	15.04	4703	2.292	1.040	1.038	-1.686	2.460	0.530
362T250-97	0.875	2.98	2.300	1.621	0.570	0.807	2.180	0.928	18.34	4370	2.163	2.069	0.851	25.49	6622	2.228	3.016	1.524	-1.667	2.461	0.541
362T300-54	0.544	1.85	1.425	1.618	0.531	0.988	1.051	0.402	7.94	2480	2.372	0.985	0.371	11.11	3372	2.425	0.581	1.337	-2.146	2.863	0.439
362T300-68	0.685	2.33	1.823	1.631	0.665	0.985	1.456	0.566	11.19	3104	2.326	1.364	0.519	15.55	4703	2.386	1.161	1.711	-2.136	2.862	0.443
362T300-97	0.977	3.32	2.682	1.657	0.937	0.979	2.409	0.972	19.21	4370	2.251	2.268	0.887	26.54	6622	2.320	3.367	2.518	-2.116	2.860	0.453
362T400-68	0.828	2.82	2.339	1.681	1.444	1.321	1.654	0.595	11.75	3104	2.485	1.537	0.544	16.28	4703	2.544	1.403	3.785	-3.063	3.735	0.328
362T400-97	1.180	4.02	3.447	1.709	2.042	1.316	2.790	1.033	20.41	4370	2.410	2.599	0.936	28.02	6622	2.482	4.068	5.585	-3.041	3.729	0.335
400T125-18 ³	0.122	0.41	0.297	1.560	0.017	0.374	0.241	0.072	1.42	153	2.619	---	---	---	---	---	0.014	0.052	-0.637	1.726	0.864
400T125-27	0.184	0.63	0.449	1.562	0.025	0.372	0.380	0.156	3.08	515	2.306	---	---	---	---	---	0.049	0.078	-0.633	1.726	0.866
400T125-30	0.203	0.69	0.495	1.562	0.028	0.371	0.427	0.176	3.49	689	2.289	---	---	---	---	---	0.066	0.085	-0.632	1.726	0.866
400T125-33	0.225	0.76	0.549	1.563	0.031	0.371	0.484	0.201	3.97	940	2.272	---	---	---	---	---	0.090	0.095	-0.630	1.725	0.867
400T125-43	0.293	1.00	0.716	1.563	0.040	0.369	0.666	0.282	5.57	1739	2.227	---	---	---	---	---	0.198	0.122	-0.626	1.724	0.868
400T125-54	0.367	1.25	0.904	1.569	0.049	0.366	0.882	0.381	7.53	2739	2.191	0.849	0.359	10.74	3372	2.234	0.392	0.154	-0.621	1.727	0.871
400T125-68	0.462	1.57	1.150	1.577	0.061	0.363	1.150	0.517	10.22	3435	2.159	1.134	0.488	14.62	5205	2.202	0.783	0.194	-0.614	1.731	0.874
400T125-97	0.659	2.24	1.673	1.594	0.084	0.357	1.673	0.768	17.35	4842	2.178	1.673	0.768	23.00	7337	2.178	2.271	0.280	-0.600	1.740	0.881
400T150-27	0.198	0.67	0.509	1.602	0.042	0.461	0.409	0.154	3.04	515	2.420	---	---	---	---	---	0.053	0.127	-0.824	1.860	0.804
400T150-30	0.218	0.74	0.561	1.603	0.046	0.461	0.458	0.183	3.61	689	2.359	---	---	---	---	---	0.071	0.140	-0.823	1.859	0.804
400T150-33	0.242	0.82	0.622	1.603	0.051	0.460	0.519	0.208	4.12	940	2.342	---	---	---	---	---	0.097	0.155	-0.821	1.859	0.805
400T150-43	0.315	1.07	0.811	1.604	0.066	0.458	0.719	0.293	5.80	1739	2.294	---	---	---	---	---	0.214	0.200	-0.817	1.857	0.807
400T150-54	0.396	1.35	1.025	1.610	0.082	0.456	0.960	0.399	7.89	2739	2.253	0.918	0.374	11.19	3372	2.301	0.422	0.252	-0.811	1.860	0.810
400T150-68	0.498	1.69	1.306	1.619	0.102	0.453	1.286	0.548	10.82	3435	2.214	1.237	0.513	15.35	5205	2.264	0.844	0.320	-0.804	1.864	0.814
400T150-97	0.710	2.41	1.903	1.638	0.141	0.447	1.903	0.874	17.27	4842	2.178	1.903	0.832	24.92	7337	2.217	2.447	0.463	-0.788	1.872	0.823
400T200-33	0.277	0.94	0.768	1.666	0.113	0.639	0.581	0.220	4.34	940	2.469	---	---	---	---	---	0.110	0.336	-1.229	2.166	0.678
400T200-43	0.360	1.23	1.002	1.668	0.146	0.637	0.811	0.311	6.14	1739	2.418	---	---	---	---	---	0.244	0.436	-1.224	2.164	0.680
400T200-54	0.452	1.54	1.268	1.675	0.182	0.635	1.093	0.426	8.42	2739	2.374	1.037	0.397	11.88	3372	2.426	0.483	0.551	-1.217	2.165	0.684
400T200-68	0.569	1.94	1.617	1.685	0.227	0.632	1.485	0.591	11.68	3435	2.327	1.412	0.549	16.42	5205	2.385	0.965	0.702	-1.209	2.168	0.689
400T200-97	0.811	2.76	2.363	1.707	0.317	0.625	2.360	0.981	19.38	4842	2.262	2.268	0.911	27.28	7337	2.322	2.797	1.022	-1.192	2.173	0.699
400T250-43	0.405	1.38	1.193	1.715	0.268	0.813	0.888	0.324	6.40	1739	2.529	---	---	---	---	---	0.275	0.799	-1.653	2.517	0.569
400T250-54	0.509	1.73	1.511	1.723	0.335	0.811	1.205	0.445	8.80	2739	2.484	1.137	0.413	12.38	3372	2.537	0.543	1.011	-1.646	2.517	0.572
400T250-68	0.641	2.18	1.928	1.735	0.418	0.808	1.652	0.622	12.28	3435	2.435	1.559	0.574	17.19	5205	2.495	1.086	1.289	-1.637	2.518	0.578
400T250-97	0.913	3.11	2.823	1.758	0.587	0.802	2.679	1.048	20.72	4842	2.358	2.546	0.965	28.89	7337	2.426	3.148	1.886	-1.618	2.521	0.588
400T300-54	0.565	1.92	1.753	1.761	0.548	0.985	1.302	0.460	9.09	2739	2.582	1.224	0.426	12.77	3372	2.636	0.604	1.662	-2.090	2.905	0.482
400T300-68	0.712	2.42	2.239	1.774	0.686	0.982	1.7														

TABLE 4—CHANNEL (TRACK) SECTION PROPERTIES (Continued)

Section	Gross Properties ¹					33 ksi Effective Properties ²					50 ksi Effective ²					Torsional Properties					
	Area	Weight	I _{xx} (in ⁴)	R _x (in)	I _{yy} (in ⁴)	R _y (in)	I _{xx} (in ⁴)	S _{xx} (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	I _{xx} (in ⁴)	S _{xx} (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	Jx1000 (in ⁴)	Cw (in ⁶)	Xo (in)	Ro (in)	β
550T200-33	0.329	1.12	1.567	2.184	0.123	0.613	1.246	0.307	6.06	680	3.453	---	---	---	---	---	0.131	0.694	-1.088	2.516	0.813
550T200-43	0.428	1.46	2.043	2.185	0.160	0.611	1.690	0.495	9.79	1504	3.209	---	---	---	---	---	0.290	0.900	-1.083	2.514	0.814
550T200-54	0.537	1.83	2.578	2.191	0.199	0.609	2.253	0.669	13.21	2739	3.158	2.153	0.630	18.86	2980	3.215	0.573	1.133	-1.077	2.517	0.817
550T200-68	0.676	2.30	3.274	2.200	0.248	0.606	3.027	0.914	18.06	4347	3.103	2.894	0.857	25.67	5350	3.166	1.146	1.434	-1.070	2.521	0.820
550T200-97	0.964	3.28	4.746	2.219	0.347	0.600	4.735	1.483	29.30	6730	3.023	4.566	1.391	41.64	10197	3.090	3.323	2.067	-1.055	2.529	0.826
550T250-43	0.473	1.61	2.399	2.252	0.295	0.790	1.841	0.516	10.20	1504	3.339	---	---	---	---	---	0.321	1.643	-1.484	2.810	0.721
550T250-54	0.594	2.02	3.029	2.259	0.368	0.788	2.466	0.699	13.81	2739	3.286	2.346	0.657	19.66	2980	3.346	0.634	2.070	-1.478	2.812	0.724
550T250-68	0.748	2.54	3.849	2.269	0.460	0.785	3.338	0.960	18.97	4347	3.228	3.338	0.929	27.80	5350	3.295	1.267	2.627	-1.470	2.815	0.727
550T250-97	1.066	3.63	5.588	2.290	0.646	0.779	5.314	1.580	31.23	6730	3.135	5.073	1.470	44.01	10197	3.211	3.674	3.801	-1.453	2.822	0.735
550T300-54	0.650	2.21	3.479	2.313	0.606	0.965	2.654	0.723	14.28	2739	3.404	2.526	0.663	19.84	2980	3.495	0.694	3.390	-1.898	3.144	0.636
550T300-68	0.819	2.79	4.424	2.324	0.758	0.962	3.610	0.960	19.68	4347	3.345	3.417	0.929	27.80	5350	3.414	1.388	4.307	-1.889	3.146	0.639
550T300-97	1.167	3.97	6.430	2.347	1.068	0.956	5.816	1.654	32.68	6730	3.245	5.516	1.531	45.83	10197	3.326	4.024	6.248	-1.871	3.150	0.647
550T400-68	0.961	3.27	5.573	2.408	1.655	1.312	4.073	1.049	20.74	4347	3.551	3.834	0.976	29.21	5350	3.622	1.629	9.418	-2.766	3.895	0.496
550T400-97	1.371	4.66	8.113	2.433	2.339	1.306	6.666	1.759	34.76	6730	3.447	6.265	1.619	48.49	10197	3.534	4.726	13.707	-2.746	3.895	0.503
600T125-27 ³	0.241	0.82	1.168	2.204	0.028	0.340	0.958	0.210	4.16	341	3.812	---	---	---	---	---	0.064	0.196	-0.519	2.290	0.949
600T125-30	0.265	0.90	1.288	2.204	0.031	0.340	1.095	0.249	4.92	456	3.726	---	---	---	---	---	0.086	0.215	-0.518	2.289	0.949
600T125-33	0.294	1.00	1.428	2.204	0.034	0.339	1.258	0.297	5.87	622	3.635	---	---	---	---	---	0.117	0.238	-0.516	2.289	0.949
600T125-43	0.383	1.30	1.861	2.205	0.044	0.337	1.768	0.461	9.11	1377	3.412	---	---	---	---	---	0.260	0.307	-0.513	2.288	0.950
600T125-54	0.480	1.63	2.344	2.209	0.054	0.335	2.299	0.666	13.15	2728	3.246	2.241	0.592	17.73	2728	3.400	0.513	0.384	-0.508	2.291	0.951
600T125-68	0.605	2.06	2.969	2.215	0.067	0.332	2.969	0.916	18.09	4347	3.164	2.934	0.858	25.69	5350	3.241	1.025	0.483	-0.503	2.296	0.952
600T125-97	0.862	2.93	4.281	2.228	0.092	0.326	4.281	1.347	30.43	7359	3.178	4.281	1.347	40.33	10885	3.178	2.973	0.685	-0.491	2.305	0.955
600T125-118	1.052	3.58	5.268	2.237	0.109	0.321	5.268	1.637	37.94	8936	3.217	5.268	1.637	56.32	13539	3.217	5.411	0.832	-0.483	2.311	0.956
600T150-27 ³	0.255	0.87	1.300	2.260	0.047	0.427	1.011	0.214	4.23	341	3.919	---	---	---	---	---	0.068	0.320	-0.686	2.400	0.918
600T150-30	0.281	0.96	1.434	2.260	0.051	0.427	1.159	0.253	5.01	456	3.831	---	---	---	---	---	0.091	0.352	-0.685	2.400	0.918
600T150-33	0.311	1.06	1.590	2.260	0.057	0.426	1.334	0.303	5.99	622	3.737	---	---	---	---	---	0.124	0.390	-0.684	2.399	0.919
600T150-43	0.405	1.38	2.072	2.261	0.073	0.424	1.890	0.474	9.36	1377	3.506	---	---	---	---	---	0.275	0.504	-0.680	2.398	0.920
600T150-54	0.509	1.73	2.611	2.266	0.091	0.422	2.473	0.689	13.62	2728	3.330	2.400	0.609	18.24	2728	3.493	0.543	0.632	-0.675	2.401	0.921
600T150-68	0.641	2.18	3.309	2.273	0.113	0.419	3.262	0.963	19.03	4347	3.227	3.162	0.891	26.68	5350	3.322	1.086	0.797	-0.669	2.406	0.923
600T150-97	0.913	3.11	4.778	2.288	0.156	0.413	4.778	1.504	29.71	7359	3.178	4.778	1.444	43.23	10885	3.222	3.148	1.138	-0.656	2.415	0.926
600T150-118	1.114	3.79	5.886	2.298	0.186	0.409	5.886	1.829	41.41	8936	3.217	5.886	1.829	61.64	13539	3.217	5.730	1.389	-0.647	2.422	0.929
600T200-33	0.346	1.18	1.913	2.352	0.126	0.604	1.542	0.333	6.59	622	3.803	---	---	---	---	---	0.138	0.847	-1.048	2.645	0.843
600T200-43	0.451	1.53	2.494	2.353	0.163	0.602	2.076	0.565	11.16	1377	3.469	---	---	---	---	---	0.305	1.098	-1.044	2.643	0.844
600T200-54	0.565	1.92	3.145	2.359	0.203	0.600	2.759	0.759	15.00	2728	3.416	2.641	0.717	21.48	2728	3.475	0.604	1.381	-1.038	2.646	0.846
600T200-68	0.712	2.42	3.990	2.367	0.254	0.597	3.696	1.034	20.42	4347	3.360	3.540	0.973	29.12	5350	3.424	1.206	1.746	-1.031	2.650	0.849
600T200-97	1.015	3.45	5.773	2.385	0.354	0.591	5.758	1.667	32.95	7359	3.276	5.558	1.568	46.94	10885	3.345	3.499	2.510	-1.016	2.659	0.854
600T200-118	1.239	4.21	7.122	2.398	0.426	0.586	7.122	2.170	42.88	8936	3.240	7.122	2.051	61.42	13539	3.305	6.369	3.083	-1.006	2.665	0.858
600T250-43	0.496	1.69	2.916	2.425	0.303	0.781	2.269	0.563	11.13	1377	3.666	---	---	---	---	---	0.336	2.004	-1.436	2.925	0.759
600T250-54	0.622	2.12	3.678	2.432	0.377	0.779	3.014	0.793	15.68	2728	3.550	2.881	0.732	21.92	2728	3.641	0.664	2.523	-1.430	2.927	0.761
600T250-68	0.783	2.67	4.670	2.442	0.472	0.776	4.065	1.085	21.45	4347	3.490	3.871	1.017	30.46	5350	3.559	1.327	3.198	-1.422	2.930	0.764
600T250-97	1.116	3.80	6.767	2.462	0.662	0.770	6.441	1.775	35.08	7359	3.392	6.157	1.656	49.58	10885	3.470	3.849	4.616	-1.406	2.938	0.771
600T250-118	1.363	4.64	8.359	2.477	0.798	0.765	8.306	2.343	46.30	8936	3.341	7.990	2.188	65.51	13539	3.421	7.008	5.686	-1.394	2.943	0.776
600T300-54	0.679	2.31	4.212	2.492	0.622	0.957	3.239	0.821	16.22	2728	3.674	3.108	0.722	21.61	2728	3.832	0.725	4.129	-1.842	3.243	0.677
600T300-68	0.854	2.91	5.350	2.502	0.778	0.954	4.389	1.126	22.25	4347	3.611	4.164	1.053	31.53	5350	3.683	1.448	5.239	-1.834	3.246	0.681
600T300-97	1.218	4.15	7.762	2.524	1.096	0.948	7.034	1.857	36.69	7359	3.506	6.681	1.724	51.62	10885	3.590	4.200	7.582	-1.816	3.251	0.688
600T300-118	1.487	5.06	9.955	2.540	1.325	0.944	9.157	2.471	48.82	8936	3.447	8.734	2.291	68.59	13539	3.536	7.646	9.359	-1.803	3.255	0.693
600T400-68	0.997	3.39	6.711	2.594	1.702	1.306	4.943	1.187	23.45	4347	3.828	4.665	1.107	33.15	5350	3.901	1.690	11.435	-2.697	3.964	0.537
600T400-97	1.422	4.84	9.751	2.619	2.405	1.301	8.042	1.975	39.03	7359	3.719	7.574	1.824	54.62	10885	3.808	4.901	16.604	-2.678	3.965	0.544
600T400-118	1.735	5.91	12.068	2.637	2.916	1.296	10.593	2.651	52.39	8936	3.653	9.994	2.439	73.03	13539	3.751	8.924	20.542	-2.664	3.966	0.549
725T125-27 ³	0.276	0.94	1.855	2.593	0.029	0.323	1.471	0.258	5.09	281	4.703	---	---	---	---	---	0.074	0.301	-0.467	2.654	0.969
725T125-30 ³	0.304	1.03	2.045	2.593	0.032	0.323	1.688	0.306	6.04	377	4.599	---	---	---	---	---	0.099	0.330	-0.466	2.654	0.969
725T125-33 ³	0.337	1.15	2.268	2.593	0.035	0.322	1.946	0.365	7.22	514	4.489	---	---	---	---	---	0.135	0.365	-0.465	2.654	0.969
725T125-43	0.439	1.49	2.955	2.593	0.045	0.320	2.763	0.573	11.32	1137	4.212	---	---	---	---	---	0.298	0.471	-0.462	2.654	0.970
725T125-54	0.551	1.88	3.718	2.597	0.056	0.318	3.666	0.837	16.54	2252	3.992	3.510	0.737	22.06	2252	4.193	0.589	0.589	-0.458	2.656	0.970
725T125-68	0.694	2.36	4.702	2.603	0.069	0.315	4.702	1.198	23.68	4347	3.813	4.667	1.0								

TABLE 4—CHANNEL (TRACK) SECTION PROPERTIES (Continued)

Section	Gross Properties ¹					33 ksi Effective Properties ²					50 ksi Effective ²					Torsional Properties					
	Area	Weight	I _{xx} (in ⁴)	R _x (in)	I _{yy} (in ⁴)	R _y (in)	I _{xx} (in ⁴)	S _{xx} (in ³)	M _a (in-k)	V _a (lb)	Y _{cg} (in)	I _{xx} (in ⁴)	S _{xx} (in ³)	M _a (in-k)	V _a (lb)	Y _{cg} (in)	J _x 1000 (in ⁴)	C _w (in ⁶)	X _o (in)	R _o (in)	β
725T300-54	0.749	2.55	6.424	2.928	0.657	0.936	5.034	1.075	21.25	2252	4.358	4.905	0.868	25.99	2252	4.696	0.800	6.354	-1.718	3.521	0.762
725T300-68	0.944	3.21	8.145	2.938	0.822	0.933	6.761	1.478	29.21	4347	4.272	6.444	1.392	41.68	4516	4.347	1.599	8.044	-1.710	3.525	0.765
725T300-97	1.345	4.58	11.772	2.958	1.157	0.927	10.717	2.403	47.49	8843	4.156	10.216	2.246	67.26	10885	4.246	4.638	11.589	-1.693	3.532	0.770
725T300-118	1.642	5.59	14.515	2.973	1.398	0.923	13.873	3.173	62.70	10857	4.090	13.268	2.960	88.64	16235	4.185	8.445	14.256	-1.681	3.538	0.774
725T400-68	1.086	3.70	10.112	3.051	1.805	1.289	7.582	1.559	30.81	4347	4.512	7.256	1.379	41.29	4516	4.693	1.841	17.505	-2.542	4.175	0.629
725T400-97	1.549	5.27	14.635	3.074	2.550	1.283	12.177	2.556	50.51	8843	4.390	11.522	2.378	71.19	10885	4.486	5.339	25.302	-2.524	4.180	0.635
725T400-118	1.891	6.43	18.064	3.091	3.092	1.279	15.935	3.402	67.22	10857	4.316	15.091	3.151	94.35	16235	4.421	9.722	31.200	-2.511	4.183	0.640
800T125-30 ³	0.328	1.11	2.611	2.824	0.032	0.314	2.113	0.339	6.71	341	5.136	---	---	---	---	---	0.106	0.413	-0.440	2.875	0.977
800T125-33 ³	0.363	1.24	2.895	2.824	0.036	0.313	2.441	0.407	8.03	465	5.015	---	---	---	---	---	0.145	0.456	-0.439	2.875	0.977
800T125-43	0.473	1.61	3.773	2.824	0.046	0.311	3.484	0.640	12.65	1030	4.708	---	---	---	---	---	0.321	0.589	-0.436	2.874	0.977
800T125-54	0.594	2.02	4.745	2.827	0.057	0.309	4.668	0.940	18.58	2039	4.457	4.426	0.824	24.66	2039	4.684	0.634	0.735	-0.432	2.877	0.977
800T125-68	0.748	2.54	5.998	2.833	0.070	0.306	5.998	1.356	26.80	4087	4.244	5.956	1.216	36.39	4087	4.437	1.267	0.920	-0.427	2.881	0.978
800T125-97	1.066	3.63	8.613	2.843	0.096	0.301	8.613	2.062	40.74	8843	4.178	8.613	2.062	61.72	10885	4.178	3.674	1.296	-0.417	2.889	0.979
800T125-118	1.301	4.43	10.569	2.850	0.114	0.297	10.569	2.506	58.08	12009	4.217	10.569	2.506	86.21	16235	4.217	6.688	1.567	-0.410	2.895	0.980
800T150-30 ¹	0.343	1.17	2.868	2.891	0.054	0.398	2.219	0.345	6.82	341	5.254	---	---	---	---	---	0.111	0.679	-0.589	2.977	0.961
800T150-33 ³	0.380	1.29	3.180	2.891	0.060	0.397	2.569	0.414	8.18	465	5.131	---	---	---	---	---	0.152	0.751	-0.588	2.977	0.961
800T150-43	0.496	1.69	4.144	2.891	0.077	0.395	3.689	0.655	12.95	1030	4.815	---	---	---	---	---	0.336	0.972	-0.584	2.976	0.961
800T150-54	0.622	2.12	5.214	2.896	0.096	0.393	4.976	0.969	19.15	2039	4.552	4.692	0.844	25.27	2039	4.790	0.664	1.215	-0.580	2.979	0.962
800T150-68	0.783	2.67	6.594	2.902	0.119	0.390	6.527	1.412	27.91	4087	4.323	6.361	1.255	37.58	4087	4.530	1.327	1.526	-0.575	2.984	0.963
800T150-97	1.116	3.80	9.479	2.914	0.165	0.384	9.479	2.269	44.83	8843	4.178	9.479	2.192	65.62	10885	4.225	3.849	2.162	-0.564	2.993	0.965
800T150-118	1.363	4.64	11.641	2.923	0.197	0.380	11.641	2.760	62.48	12009	4.217	11.641	2.760	93.00	16235	4.217	7.008	2.627	-0.555	2.999	0.966
800T200-33 ³	0.415	1.41	3.749	3.005	0.135	0.571	2.788	0.424	8.37	465	5.349	---	---	---	---	---	0.166	1.638	-0.917	3.194	0.918
800T200-43	0.541	1.84	4.887	3.006	0.175	0.569	4.043	0.676	13.35	1030	5.023	---	---	---	---	---	0.367	2.124	-0.913	3.193	0.918
800T200-54	0.679	2.31	6.152	3.011	0.218	0.567	5.505	1.009	19.93	2039	4.746	5.149	0.871	26.09	2039	4.998	0.725	2.664	-0.908	3.196	0.919
800T200-68	0.854	2.91	7.786	3.019	0.272	0.564	7.306	1.490	29.45	4087	4.494	7.051	1.310	39.22	4087	4.721	1.448	3.357	-0.902	3.201	0.921
800T200-97	1.218	4.15	11.212	3.034	0.379	0.558	11.176	2.491	49.22	8843	4.285	10.833	2.347	70.27	10885	4.373	4.200	4.792	-0.889	3.210	0.923
800T200-118	1.487	5.06	13.785	3.045	0.455	0.553	13.785	3.212	63.48	12009	4.243	13.785	3.059	91.59	16235	4.313	7.646	5.854	-0.879	3.217	0.925
800T250-43	0.586	1.99	5.629	3.100	0.326	0.746	4.593	0.739	14.60	1030	5.051	---	---	---	---	---	0.397	3.877	-1.274	3.433	0.862
800T250-54	0.735	2.50	7.090	3.106	0.407	0.744	5.948	1.193	23.57	2039	4.636	5.816	0.959	28.71	2039	5.015	0.785	4.870	-1.268	3.436	0.864
800T250-68	0.926	3.15	8.978	3.114	0.509	0.741	7.917	1.648	32.57	4087	4.526	7.588	1.560	46.72	4087	4.600	1.569	6.151	-1.261	3.441	0.866
800T250-97	1.320	4.49	12.944	3.132	0.713	0.735	12.361	2.641	52.19	8843	4.414	11.872	2.487	74.47	10885	4.500	4.550	8.818	-1.247	3.450	0.869
800T250-118	1.611	5.48	15.930	3.144	0.860	0.731	15.822	3.448	68.14	12009	4.354	15.272	3.248	97.26	16235	4.442	8.285	10.807	-1.236	3.457	0.872
80T3000-54	0.792	2.69	8.028	3.184	0.675	0.923	6.396	1.178	23.28	2039	4.862	6.237	0.956	28.62	2039	5.227	0.845	7.960	-1.652	3.704	0.801
800T300-68	0.997	3.39	10.171	3.194	0.844	0.920	8.497	1.709	33.76	4087	4.665	8.160	1.548	46.36	4087	4.819	1.690	10.067	-1.644	3.708	0.803
800T300-97	1.422	4.84	14.676	3.213	1.188	0.914	13.395	2.757	54.49	8843	4.544	12.794	2.586	77.43	10885	4.636	4.901	14.472	-1.628	3.716	0.808
800T300-118	1.735	5.91	18.074	3.227	1.436	0.910	17.291	3.626	71.65	12009	4.474	16.563	3.394	101.63	16235	4.572	8.924	17.775	-1.617	3.722	0.811
800T400-68	1.140	3.88	12.555	3.319	1.859	1.277	9.505	1.802	35.62	4087	4.917	9.180	1.520	45.51	4087	5.208	1.931	21.882	-2.458	4.323	0.677
800T400-97	1.625	5.53	18.141	3.341	2.626	1.271	15.169	2.932	57.93	8843	4.789	14.387	2.737	81.95	10885	4.888	5.602	31.564	-2.441	4.329	0.682
800T400-118	1.984	6.75	22.363	3.357	3.184	1.267	19.784	3.885	76.76	12009	4.710	18.774	3.612	108.14	16235	4.819	10.201	38.863	-2.428	4.333	0.686
925T125-43 ³	0.530	1.80	5.436	3.204	0.047	0.297	4.902	0.752	14.86	890	5.556	---	---	---	---	---	0.359	0.817	-0.399	3.243	0.985
925T125-54	0.664	2.26	6.834	3.207	0.058	0.296	6.607	1.112	21.98	1761	5.257	6.228	0.968	28.99	1761	5.527	0.709	1.018	-0.395	3.245	0.985
925T125-68	0.837	2.85	8.632	3.212	0.072	0.293	8.632	1.621	32.04	3528	4.990	8.429	1.440	43.11	3528	5.228	1.418	1.273	-0.391	3.249	0.986
925T125-97	1.193	4.06	12.377	3.221	0.099	0.288	12.377	2.577	58.21	8843	4.803	12.377	2.495	74.71	10291	4.878	4.112	1.787	-0.381	3.257	0.986
925T125-118	1.456	4.95	15.171	3.228	0.117	0.283	15.171	3.133	72.61	13189	4.842	15.171	3.133	107.78	16235	4.842	7.487	2.156	-0.375	3.262	0.987
925T150-43 ³	0.552	1.88	5.931	3.278	0.079	0.379	5.170	0.769	15.19	890	5.669	---	---	---	---	---	0.374	1.351	-0.538	3.343	0.974
925T150-54	0.693	2.36	7.458	3.281	0.099	0.377	7.013	1.144	22.61	1761	5.358	6.575	0.991	29.66	1761	5.639	0.740	1.688	-0.534	3.346	0.975
925T150-68	0.872	2.97	9.424	3.287	0.122	0.374	9.362	1.683	33.26	3528	5.073	8.962	1.484	44.42	3528	5.327	1.478	2.117	-0.529	3.350	0.975
925T150-97	1.244	4.23	13.526	3.298	0.169	0.369	13.526	2.816	55.65	8843	4.803	13.526	2.636	78.91	10291	4.934	4.287	2.990	-0.518	3.359	0.976
925T150-118	1.518	5.17	16.590	3.306	0.202	0.365	16.590	3.426	77.55	13189	4.842	16.590	3.426	115.44	16235	4.842	7.806	3.624	-0.511	3.365	0.977
925T200-43 ³	0.597	2.03	6.920	3.404	0.180	0.550	5.628	0.791	15.64	890	5.891	---	---	---	---	---	0.405	2.962	-0.848	3.551	0.943
925T200-54	0.749	2.55	8.706	3.409	0.225	0.547	7.706	1.188	23.47	1761	5.565	7.168	1.021	30.57	1761	5.859	0.800	3.711	-0.843	3.554	0.944
925T200-68	0.944	3.21	11.009	3.416	0.280	0.545	10.412	1.769	34.95	3528	5.257	9.868	1.544	46.22	3528	5.531	1.599	4.671	-0.837	3.559	0.945
925T200-97	1.345	4.58	15.822	3.																	

TABLE 4—CHANNEL (TRACK) SECTION PROPERTIES (Continued)

Section	Gross Properties ¹					33 ksi Effective Properties ²					50 ksi Effective ²					Torsional Properties					
	Area	Weight	Ixx (in ⁴)	Rx (in)	Iyy (in ⁴)	Ry (in)	Ixx (in ⁴)	Sxx (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	Ixx (in ⁴)	Sxx (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	Jx1000 (in ⁴)	Cw (in ⁶)	Xo (in)	Ro (in)	β
1000T200-43 ³	0.631	2.15	8.361	3.640	0.183	0.539	6.722	0.861	17.01	822	6.422	---	---	---	---	---	0.428	3.540	-0.813	3.769	0.953
1000T200-54	0.792	2.69	10.516	3.645	0.228	0.537	9.231	1.295	25.60	1628	6.067	8.560	1.111	33.26	1628	6.386	0.845	4.434	-0.809	3.772	0.954
1000T200-68	0.997	3.39	13.292	3.651	0.284	0.534	12.551	1.936	38.26	3261	5.728	11.820	1.684	50.42	3261	6.029	1.690	5.576	-0.803	3.776	0.955
1000T200-97	1.422	4.84	19.087	3.664	0.397	0.528	19.031	3.427	67.72	8843	5.310	18.583	3.081	92.25	9507	5.543	4.901	7.924	-0.791	3.786	0.956
1000T200-118	1.735	5.91	23.422	3.674	0.476	0.524	23.422	4.420	87.35	13189	5.244	23.422	4.208	125.99	16235	5.334	8.924	9.649	-0.783	3.793	0.957
1000T250-43 ³	0.676	2.30	9.515	3.751	0.344	0.713	7.172	0.876	17.32	822	6.637	---	---	---	---	---	0.458	6.477	-1.147	3.987	0.917
1000T250-54	0.848	2.89	11.972	3.757	0.429	0.711	9.913	1.326	26.20	1628	6.274	9.141	1.132	33.89	1628	6.601	0.906	8.125	-1.142	3.990	0.918
1000T250-68	1.068	3.64	15.138	3.764	0.536	0.708	13.578	1.997	39.46	3261	5.921	12.708	1.726	51.68	3261	6.235	1.810	10.240	-1.135	3.995	0.919
1000T250-97	1.523	5.18	21.760	3.780	0.751	0.702	20.871	3.596	71.05	8843	5.466	20.254	3.201	95.84	9507	5.722	5.252	14.617	-1.122	4.005	0.921
1000T250-118	1.860	6.33	26.723	3.791	0.905	0.698	26.538	4.721	93.29	13189	5.364	25.721	4.422	132.38	16235	5.490	9.562	17.858	-1.112	4.012	0.923
1000T300-54	0.905	3.08	13.427	3.852	0.714	0.888	11.083	1.452	28.69	1628	6.250	10.826	1.191	35.65	1628	6.676	0.966	13.289	-1.500	4.228	0.874
1000T300-68	1.140	3.88	16.985	3.860	0.893	0.885	14.416	2.377	46.96	3261	5.716	14.106	1.904	57.01	3261	6.194	1.931	16.771	-1.493	4.233	0.876
1000T300-97	1.625	5.53	24.434	3.878	1.257	0.879	22.441	3.798	75.04	8843	5.571	21.530	3.589	107.45	9507	5.669	5.602	24.009	-1.478	4.242	0.879
1000T300-118	1.984	6.75	30.023	3.890	1.519	0.875	28.792	4.950	97.82	13189	5.494	27.680	4.668	139.76	16235	5.598	10.201	29.395	-1.468	4.249	0.881
1000T400-68	1.282	4.36	20.678	4.016	1.982	1.243	16.172	2.330	46.04	3261	6.165	15.757	1.894	56.72	3261	6.616	2.173	36.414	-2.262	4.774	0.775
1000T400-97	1.828	6.22	29.671	4.036	2.799	1.237	25.207	4.032	79.68	8843	5.842	24.036	3.795	113.63	9507	5.947	6.304	52.310	-2.246	4.782	0.779
1000T400-118	2.232	7.60	36.826	4.051	3.392	1.233	32.638	5.292	104.58	13189	5.754	31.116	4.960	148.50	16235	5.870	11.478	64.212	-2.234	4.787	0.782
1150T125-43 ³	0.631	2.15	9.503	3.881	0.048	0.277	8.164	0.953	18.84	714	7.141	---	---	---	---	---	0.428	1.330	-0.346	3.906	0.992
1150T125-54 ³	0.792	2.69	11.940	3.883	0.060	0.275	11.109	1.423	28.11	1414	6.762	10.376	1.228	36.78	1414	7.102	0.845	1.656	-0.343	3.908	0.992
1150T125-68	0.997	3.39	15.067	3.887	0.074	0.272	14.658	2.100	41.49	2832	6.404	14.174	1.844	55.21	2832	6.720	1.690	2.066	-0.339	3.912	0.992
1150T125-97	1.422	4.84	21.568	3.895	0.102	0.267	21.568	3.493	69.03	8250	6.043	21.405	3.270	97.89	8250	6.230	4.901	2.888	-0.331	3.918	0.993
1150T125-118	1.735	5.91	26.404	3.901	0.120	0.263	26.404	4.425	87.43	13189	5.967	26.404	4.251	127.26	15072	6.081	8.924	3.474	-0.325	3.923	0.993
1150T150-43 ³	0.654	2.22	3.963	0.082	0.354	8.563	0.973	19.22	714	7.262	---	---	---	---	---	0.443	2.209	-0.470	4.006	0.986	0.986
1150T150-54 ³	0.820	2.79	3.966	0.102	0.353	11.726	1.460	28.84	1414	6.870	10.893	1.254	37.56	1414	7.221	0.876	2.757	-0.467	4.009	0.986	0.986
1150T150-68	1.033	3.51	3.971	0.127	0.350	15.864	2.173	42.93	2832	6.494	14.986	1.895	56.74	2832	6.825	1.750	3.450	-0.463	4.013	0.987	0.987
1150T150-97	1.472	5.01	3.980	0.175	0.345	23.324	3.788	74.85	8250	6.038	23.210	3.437	102.92	8250	6.287	5.076	4.854	-0.454	4.021	0.987	0.987
1150T150-118	1.798	6.12	3.987	0.209	0.341	28.569	4.788	94.61	13189	5.967	28.569	4.611	138.05	15072	6.077	9.243	5.866	-0.447	4.026	0.988	0.988
1150T200-43 ³	0.699	2.38	4.107	0.188	0.519	9.239	0.999	19.75	714	7.502	---	---	---	---	---	0.474	4.871	-0.752	4.208	0.968	0.968
1150T200-54 ³	0.877	2.98	4.111	0.234	0.517	12.758	1.510	29.84	1414	7.095	11.767	1.290	38.63	1414	7.460	0.936	6.095	-0.748	4.210	0.968	0.968
1150T200-68	1.104	3.76	4.117	0.292	0.514	17.440	2.271	44.89	2832	6.695	16.335	1.965	58.82	2832	7.048	1.871	7.657	-0.743	4.215	0.969	0.969
1150T200-97	1.574	5.36	4.129	0.407	0.508	26.818	4.079	80.61	8250	6.173	26.177	3.634	108.82	8250	6.464	5.427	10.855	-0.732	4.224	0.970	0.970
1150T200-118	1.922	6.54	4.138	0.488	0.504	32.901	5.435	107.40	13189	5.995	32.901	5.010	149.99	15072	6.196	9.881	13.195	-0.724	4.231	0.971	0.971
1150T250-43 ³	0.744	2.53	13.307	4.230	0.354	0.690	9.811	1.017	20.09	714	7.730	---	---	---	---	---	0.504	8.930	-1.068	4.417	0.942
1150T250-54 ³	0.933	3.18	16.734	4.235	0.442	0.688	13.633	1.544	30.51	1414	7.315	12.505	1.314	39.33	1414	7.688	0.997	11.194	-1.063	4.420	0.942
1150T250-68	1.175	4.00	21.145	4.242	0.552	0.685	18.774	2.338	46.19	2832	6.901	17.476	2.011	60.20	2832	7.267	1.992	14.091	-1.057	4.425	0.943
1150T250-97	1.676	5.70	30.350	4.256	0.773	0.679	29.267	4.265	84.27	8250	6.341	28.347	3.765	112.73	8250	6.656	5.778	20.068	-1.045	4.434	0.944
1150T250-118	2.046	6.96	37.232	4.266	0.932	0.675	36.975	5.784	114.30	13189	6.119	36.017	5.244	157.00	15072	6.363	10.520	24.476	-1.036	4.441	0.946
1150T300-54 ³	0.990	3.37	18.651	4.341	0.738	0.863	15.715	1.659	32.78	1414	7.323	14.899	1.368	40.97	1414	7.788	1.057	18.327	-1.404	4.643	0.909
1150T300-68	1.247	4.24	23.576	4.349	0.923	0.860	20.405	2.683	53.01	2832	6.734	19.977	2.173	65.06	2832	7.258	2.113	23.103	-1.397	4.648	0.910
1150T300-97	1.778	6.05	33.862	4.365	1.298	0.855	31.233	4.668	92.25	8250	6.337	30.048	4.432	132.69	8250	6.438	6.128	32.999	-1.384	4.658	0.912
1150T300-118	2.170	7.38	41.563	4.376	1.569	0.850	39.925	6.054	119.62	13189	6.256	38.473	5.734	171.67	15072	6.363	11.159	40.336	-1.374	4.665	0.913
1150T400-68	1.389	4.73	28.438	4.524	2.057	1.217	22.766	2.659	52.54	2832	7.200	22.207	2.176	65.14	2832	7.699	2.354	50.181	-2.136	5.149	0.828
1150T400-97	1.981	6.74	40.888	4.543	2.905	1.211	34.891	4.950	97.82	8250	6.624	33.497	4.547	136.13	8250	6.810	6.829	71.928	-2.121	5.158	0.831
1150T400-118	2.419	8.23	50.225	4.557	3.520	1.206	44.979	6.460	127.66	13189	6.530	43.009	6.084	182.16	15072	6.651	12.436	88.152	-2.110	5.165	0.833
1200T125-54 ³	0.820	2.79	13.335	4.033	0.060	0.271	12.296	1.491	29.47	1354	7.106	11.460	1.286	38.51	1354	7.460	0.876	1.820	-0.333	4.055	993
1200T125-68	1.033	3.51	16.826	4.036	0.074	0.268	16.246	2.206	43.60	2713	6.730	15.686	1.934	57.90	2713	7.061	1.750	2.270	-0.329	4.059	993
1200T125-97	1.472	5.01	24.078	4.044	0.102	0.263	24.078	3.690	72.92	7902	6.338	23.751	3.442	103.06	7902	6.541	5.076	3.171	-0.322	4.065	994
1200T125-118	1.798	6.12	29.472	4.049	0.121	0.259	29.472	4.740	93.67	13189	6.217	29.472	4.490	134.44	14434	6.377	9.243	3.812	-0.316	4.070	994
1200T150-54 ³	0.848	2.89	14.378	4.117	0.103	0.348	12.962	1.530	30.23	1354	7.215	12.020	1.313	39.31	1354	7.581	0.906	3.033	-0.454	4.156	988
1200T150-68	1.068	3.64	18.148	4.121	0.127	0.345	17.568	2.281	45.08	2713	6.820	16.566	1.987	59.48	2713	7.168	1.810	3.795	-0.450	4.160	988
1200T150-97	1.523	5.18	25.987	4.130	0.176	0.340	25.987	3.996	78.97	7902	6.331	25.719	3.616	108.27	7902	6.598	5.252	5.335	-0.441	4.168	989
1200T150-118	1.860	6.33	31.825	4.137	0.210	0.336	31.825	5.119													

TABLE 4—CHANNEL (TRACK) SECTION PROPERTIES (Continued)

Section	Gross Properties ¹						33 ksi Effective Properties ²					50 ksi Effective ²					Torsional Properties				
	Area	Weight	Ixx (in ⁴)	Rx (in)	Iyy (in ⁴)	Ry (in)	Ixx (in ⁴)	Sxx (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	Ixx (in ⁴)	Sxx (in ³)	Ma (in-k)	Va (lb)	Ycg (in)	Jx1000 (in ⁴)	Cw (in ⁶)	Xo (in)	Ro (in)	β
1350T200-54 ³	0.990	3.37	22.100	4.725	0.240	0.493	18.481	1.797	35.50	1203	8.504	16.933	1.529	45.78	1203	8.926	1.057	8.769	-0.680	4.799	0.980
1350T200-68	1.247	4.24	27.896	4.730	0.299	0.490	25.437	2.719	53.72	2409	8.029	23.666	2.339	70.02	2409	8.446	2.113	11.002	-0.675	4.803	0.980
1350T200-97	1.778	6.05	39.954	4.741	0.418	0.485	39.954	4.955	97.91	7014	7.376	38.298	4.374	130.95	7014	7.741	6.128	15.561	-0.666	4.812	0.981
1350T200-118	2.170	7.38	48.938	4.749	0.501	0.481	48.938	6.745	133.29	12808	7.090	48.938	6.084	182.17	12808	7.397	11.159	18.883	-0.658	4.818	0.981
1350T250-54 ³	1.046	3.56	24.733	4.862	0.455	0.660	19.647	1.834	36.25	1203	8.738	17.905	1.556	46.57	1203	9.168	1.117	16.152	-0.974	5.002	0.962
1350T250-68	1.318	4.48	31.231	4.868	0.569	0.657	27.222	2.792	55.18	2409	8.249	25.180	2.390	71.56	2409	8.679	2.233	20.311	-0.969	5.007	0.963
1350T250-97	1.879	6.39	44.764	4.881	0.797	0.651	43.449	5.161	101.99	7014	7.557	41.227	4.519	135.30	7014	7.946	6.479	28.858	-0.957	5.016	0.964
1350T250-118	2.294	7.81	54.860	4.890	0.961	0.647	54.611	7.112	140.55	12808	7.239	53.395	6.346	189.99	12808	7.577	11.797	35.137	-0.949	5.023	0.964
1350T300-54 ³	1.103	3.75	27.366	4.981	0.764	0.832	20.668	1.862	36.79	1203	8.962	18.754	1.574	47.14	1203	9.396	1.178	26.494	-1.295	5.213	0.938
1350T300-68	1.389	4.73	34.566	4.988	0.955	0.829	28.793	2.846	56.23	2409	8.464	26.515	2.427	72.67	2409	8.902	2.354	33.361	-1.289	5.218	0.939
1350T300-97	1.981	6.74	49.574	5.003	1.343	0.824	46.466	5.312	104.97	7014	7.745	43.800	4.624	138.45	7014	8.152	6.829	47.541	-1.276	5.228	0.940
1350T300-118	2.419	8.23	60.782	5.013	1.623	0.819	58.718	7.381	145.84	12808	7.404	57.131	6.535	195.67	12808	7.765	12.436	58.014	-1.267	5.235	0.941
1350T400-68	1.532	5.21	41.236	5.188	2.141	1.182	33.862	3.099	61.24	2409	8.617	33.002	2.552	76.41	2409	9.172	2.596	72.561	-1.990	5.681	0.877
1350T400-97	2.184	7.43	59.194	5.206	3.023	1.176	51.002	6.297	124.44	7014	7.658	49.671	5.259	157.45	7014	8.173	7.531	103.775	-1.976	5.691	0.879
1350T400-118	2.667	9.08	72.626	5.218	3.663	1.172	65.435	8.167	161.38	12808	7.559	62.783	7.733	231.52	12808	7.684	13.713	126.976	-1.965	5.698	0.881
1400T125-54 ³	0.933	3.18	19.977	4.627	0.061	0.256	17.725	1.767	34.91	1160	8.511	16.407	1.517	45.42	1160	8.920	0.997	2.559	-0.299	4.643	0.996
1400T125-68	1.175	4.00	25.196	4.630	0.076	0.254	23.552	2.632	52.01	2322	8.063	22.620	2.293	68.64	2322	8.456	1.992	3.189	-0.296	4.646	0.996
1400T125-97	1.676	5.70	36.024	4.636	0.104	0.249	35.775	4.480	88.53	6761	7.557	34.588	4.134	123.76	6761	7.823	5.778	4.445	-0.289	4.652	0.996
1400T125-118	2.046	6.96	44.068	4.641	0.123	0.245	44.068	5.853	115.67	12344	7.359	43.752	5.453	163.27	12344	7.597	10.520	5.334	-0.284	4.656	0.996
1400T150-54 ³	0.962	3.27	21.392	4.717	0.105	0.330	18.620	1.810	35.76	1160	8.624	17.153	1.547	46.33	1160	9.044	1.027	4.280	-0.410	4.746	0.993
1400T150-68	1.211	4.12	26.987	4.721	0.130	0.327	25.409	2.717	53.68	2322	8.155	23.803	2.352	70.42	2322	8.565	2.052	5.349	-0.407	4.749	0.993
1400T150-97	1.727	5.88	38.607	4.729	0.180	0.322	38.340	4.834	95.52	6761	7.542	37.285	4.332	129.69	6761	7.879	5.953	7.503	-0.399	4.756	0.993
1400T150-118	2.108	7.17	47.247	4.734	0.214	0.319	47.247	6.291	124.31	12344	7.354	46.911	5.886	176.24	12344	7.582	10.839	9.048	-0.393	4.761	0.993
1400T200-54 ³	1.018	3.46	24.221	4.878	0.242	0.487	20.098	1.868	36.92	1160	8.863	18.387	1.589	47.56	1160	9.298	1.087	9.520	-0.665	4.947	0.982
1400T200-68	1.282	4.36	30.571	4.883	0.301	0.485	27.707	2.830	55.93	2322	8.370	25.738	2.432	72.81	2322	8.801	2.173	11.942	-0.661	4.951	0.982
1400T200-97	1.828	6.22	43.773	4.893	0.420	0.479	43.679	5.174	102.24	6761	7.685	41.749	4.559	136.48	6761	8.068	6.304	16.883	-0.651	4.959	0.983
1400T200-118	2.232	7.60	53.606	4.900	0.504	0.475	53.606	7.062	139.54	12344	7.380	53.453	6.354	190.23	12344	7.706	11.478	20.479	-0.644	4.965	0.983
1400T250-54 ³	1.075	3.66	27.051	5.017	0.458	0.653	21.342	1.907	37.68	1160	9.100	19.421	1.616	48.38	1160	9.543	1.148	17.550	-0.954	5.149	0.966
1400T250-68	1.354	4.61	34.154	5.023	0.573	0.650	29.615	2.906	57.42	2322	8.592	27.352	2.485	74.40	2322	9.037	2.294	22.063	-0.949	5.153	0.966
1400T250-97	1.930	6.57	48.939	5.036	0.803	0.645	47.449	5.386	106.42	6761	7.869	44.883	4.708	140.94	6761	8.276	6.654	31.333	-0.938	5.163	0.967
1400T250-118	2.356	8.02	59.964	5.044	0.967	0.641	59.734	7.438	146.99	12344	7.531	58.277	6.622	198.25	12344	7.888	12.117	38.137	-0.930	5.169	0.968
1400T300-54 ³	1.131	3.85	29.881	5.139	0.769	0.825	22.429	1.935	38.24	1160	9.327	20.324	1.635	48.96	1160	9.774	1.208	28.800	-1.271	5.358	0.944
1400T300-68	1.425	4.85	37.737	5.146	0.962	0.822	31.291	2.961	58.50	2322	8.810	28.775	2.523	75.54	2322	9.264	2.415	36.257	-1.265	5.363	0.944
1400T300-97	2.032	6.91	54.105	5.160	1.353	0.816	50.615	5.540	109.48	6761	8.061	47.633	4.815	144.17	6761	8.485	7.005	51.644	-1.252	5.373	0.946
1400T300-118	2.481	8.44	66.323	5.171	1.635	0.812	64.159	7.713	152.42	12344	7.699	62.201	6.816	204.06	12344	8.080	12.755	62.998	-1.243	5.380	0.947
1400T400-68	1.567	5.33	44.903	5.352	2.160	1.174	37.078	3.210	63.43	2322	8.976	35.376	2.647	79.24	2322	9.545	2.656	78.896	-1.957	5.818	0.887
1400T400-97	2.235	7.61	64.437	5.369	3.049	1.168	55.644	6.656	131.52	6761	7.916	54.354	5.437	162.79	6761	8.520	7.706	112.783	-1.943	5.828	0.889
1400T400-118	2.729	9.29	79.041	5.382	3.695	1.164	71.315	8.620	170.34	12344	7.815	68.478	8.172	244.66	12344	7.942	14.032	137.951	-1.932	5.835	0.890

For SI: 1 inch = 25.4mm, 1 pound = 4.4482 N.

¹Gross properties are based on the full-unreduced cross section of the studs, away from web punch-outs.

²Use the effective moment of inertia for deflection calculations.

³Web height to thickness ratio, h/t, exceeds 200. Web stiffeners in accordance with Sections B1.2 and C3.6.1 of AISI-NAS are required.

SYMBOLS:

- Ixx=Strong axis moment of inertia.
- Rx=Strong axis radius of gyration.
- Iyy=Weak axis moment of inertia.
- Ry=Weak axis radius of gyration.
- Sxx=Strong axis section modulus.
- Ma=Allowable bending moment.
- Va = Allowable shear.
- Ycg= Distance from top of flange to effective center of gravity.
- J=St. Venant torsion constant.
- Cw=Warping constant.
- Xo=Distance from shear center to neutral axis.
- Ro=Radii of gyration.
- β=Torsional flexural constant.

TABLE 5—U CHANNELS STRUCTURAL PROPERTIES^{1,2}

SECTION ⁵	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. (in)	INSIDE CORNER RADII (in)	WEIGHT (lb/ft)	GROSS SECTION PROPERTIES ³					EFFECTIVE SECTION PROPERTIES			ALLOWABLE MOMENT ⁴ M _a (in-k)
						Area (in ²)	I _x (in ⁴)	r _x (in)	I _y (in ⁴)	r _y (in)	I _x (in ⁴)	S _x (in ³)	Area (in ²)	
75U050-54	54	0.0566	0.0538	0.0849	0.30	0.087	0.007	0.288	0.002	0.155	0.007	0.019	0.087	0.45
150U050-54	54	0.0566	0.0538	0.0849	0.44	0.129	0.039	0.547	0.003	0.144	0.039	0.052	0.129	1.22
200U050-54	54	0.0566	0.0538	0.0849	0.54	0.157	0.079	0.709	0.003	0.136	0.079	0.079	0.157	1.87
250U050-54	54	0.0566	0.0538	0.0849	0.63	0.186	0.139	0.866	0.003	0.128	0.139	0.111	0.186	2.64

For SI: 1 inch = 25.4 mm, 1 lb/ft = 1.488 kg/m, 1 in-lb = 11.30 N-m.

I_x = Strong axis moment of inertia. r_y = Weak axis radius of gyration.
 r_x = Strong axis radius of gyration. S_x = Strong axis section modulus.
 I_y = Weak axis moment of inertia.

¹F_y = 33 ksi.

²Use the effective moment of inertia for deflection calculations.

³Gross properties are based on the full-unreduced cross section of the U channel.

⁴Full lateral support of compression flanges must be provided.

⁵Depth of member is measured from outside face to outside face of flanges. See Figure 1.

TABLE 6—HAT FURRING CHANNEL PROPERTIES^{1,3}

SECTION	MILS	DESIGN THICK. (in)	MIN. BASE METAL THICK. (in)	INSIDE CORNER RADII (in)	WEIGHT (lb/ft)	DEPTH (in)	GROSS SECTION PROPERTIES					EFFECTIVE SECTION PROPERTIES		ALLOWABLE MOMENT ² M _a (ft-lb)
							Area (in ²)	I _x (in ⁴)	r _x (in)	I _y (in ⁴)	r _y (in)	I _x (in ⁴)	S _x (in ³)	
087F125-18	18	0.0188	0.0179	0.0843	0.239	0.875	0.0702	0.0089	0.356	0.0354	0.710	0.0086	0.0160	26.41
087F125-30	30	0.0312	0.0296	0.0784	0.391	0.875	0.1149	0.0143	0.353	0.0580	0.710	0.0143	0.0365	50.47
150F125-18	18	0.0188	0.0179	0.0843	0.320	1.500	0.0939	0.0311	0.575	0.0467	0.705	0.0299	0.0344	56.59
150F125-30	30	0.0312	0.0296	0.0784	0.525	1.500	0.1543	0.0503	0.571	0.0797	0.705	0.0503	0.0639	105.25

For SI: 1 inch = 25.4 mm, 1 lb/ft = 1.488 kg/m, 1 in-lb = 11.30 N-m.

I_x = Strong axis moment of inertia.
 r_x = Strong axis radius of gyration.
 I_y = Weak axis moment of inertia.
 r_y = Weak axis radius of gyration.
 S_x = Strong axis section modulus.

¹F_y = 33 ksi.

²Allowable moment is applicable for both positive and negative moments. Full lateral support of compression flanges must be provided.

³Use the effective moment of inertia for deflection calculations.

TABLE 7—C-SECTIONS (STUDS) FOR USE WITH THE IRC

IRC MEMBER DESIGNATION	EQUIVALENT TELLING INDUSTRIES MEMBER DESIGNATION			
	t = 33	t = 43	t = 54	t = 68
350S162-t	350S162-33	350S162-43	350S162-54	350S162-68
	350S200-33	350S200-43	350S200-54	350S200-68
550S162-t	550S162-33	550S162-43	550S162-54	550S162-68
	550S200-33	550S200-43	550S200-54	550S200-68
800S162-t	800S162-33	800S162-43	800S162-54	800S162-68
	800S200-33	800S200-43	800S200-54	800S200-68
1000S162-t	---	1000S162-43	1000S162-54	1000S162-68
	---	1000S200-43	1000S200-54	1000S200-68
1200S162-t	---	---	1200S162-54	1200S162-68
	---	---	1200S200-54	1200S200-68

TABLE 8—MANUFACTURING LOCATIONS

Telling Industries Kingman, Arizona 86409 928-681-8409	Telling Industries Osceola, Arkansas 72370 870-563-2597
Telling Industries Cambridge, Ohio 43725 740-435-8900	

SECTION PROFILES

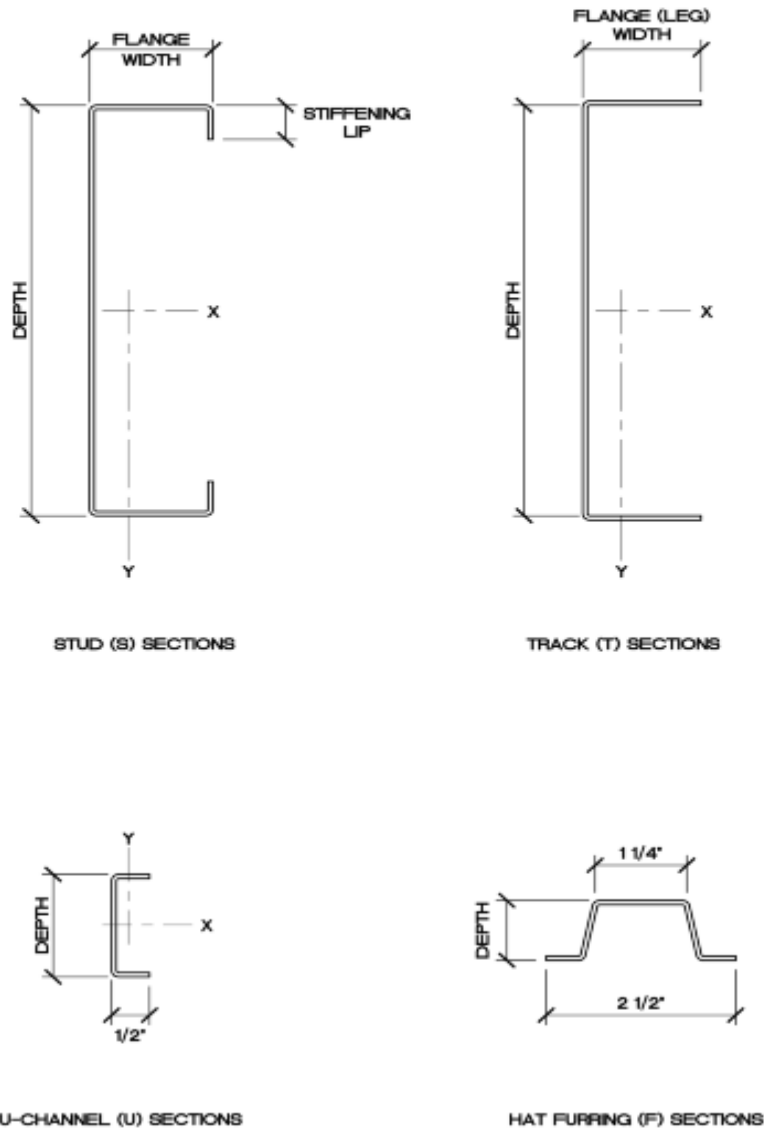


FIGURE 1—SECTION PROFILES

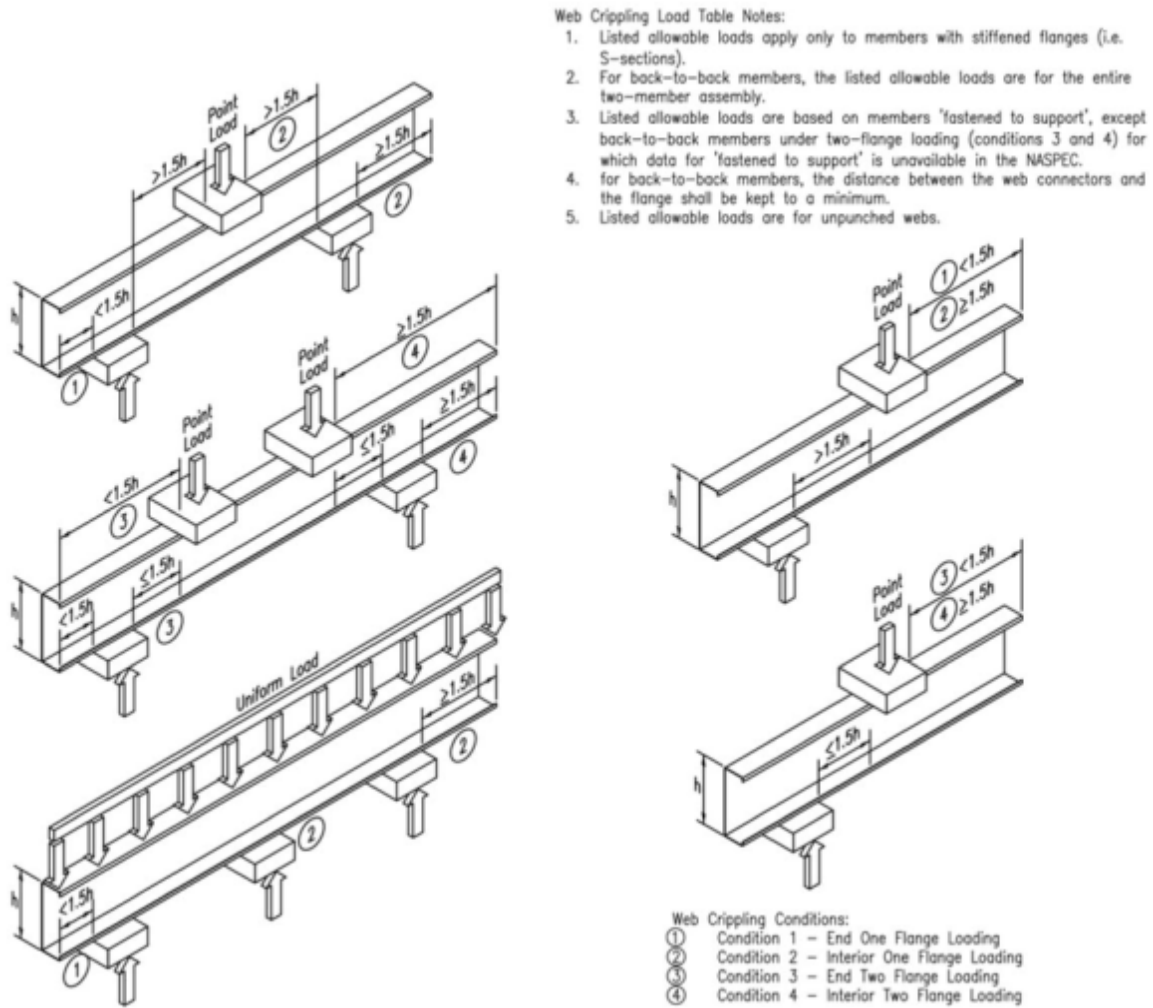
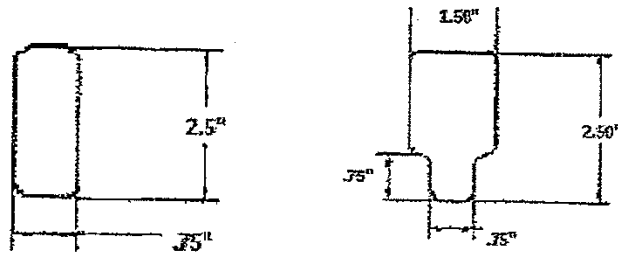


FIGURE 2—WEB CRIPPLING LOADING CONDITIONS

NON-LOAD BEARING KNOCKOUT SIZES



LOAD BEARING KNOCKOUT SIZES

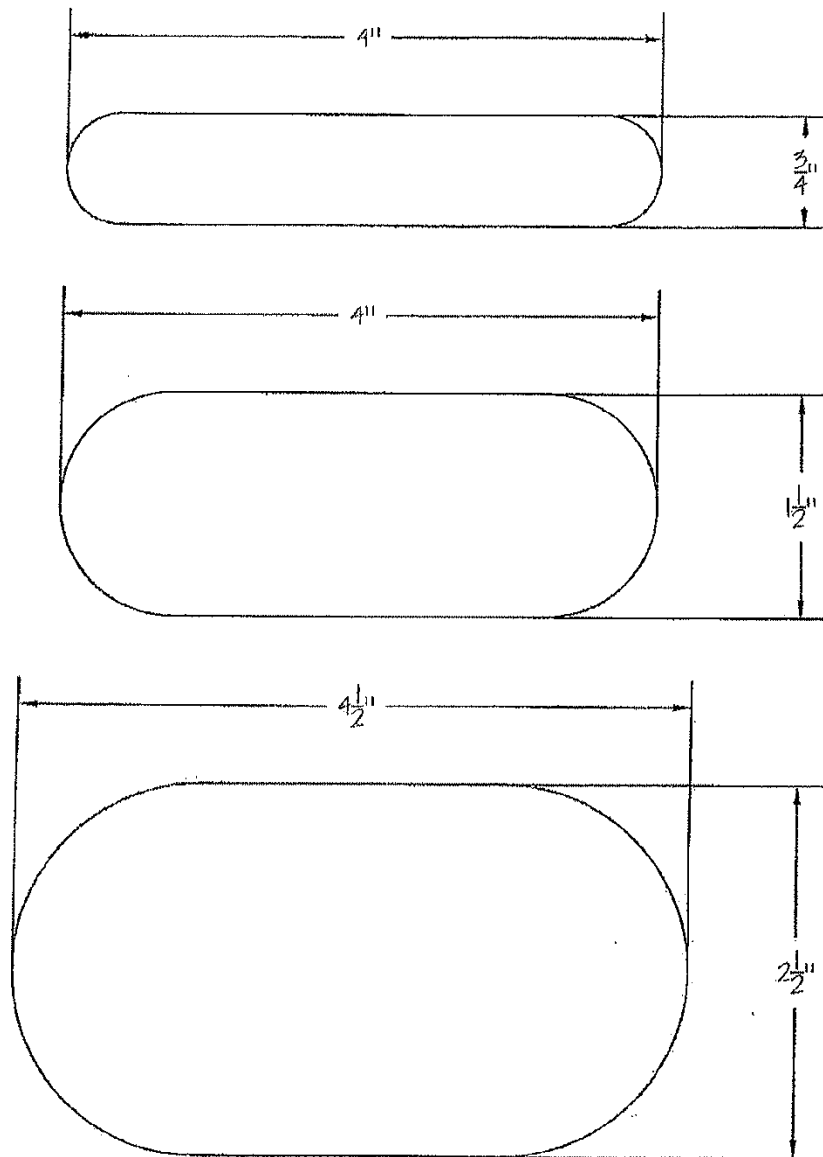


FIGURE 3—PUNCHOUTS