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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:****OEG BUILDING MATERIALS, INC.****EVALUATION SUBJECT:****COLD-FORMED STEEL STUDS AND TRACKS****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2018, 2015 and 2012 *International Building Code* (IBC)
- 2018, 2015 and 2012 *International Residential Code* (IRC)

Properties evaluated:

- Structural

2.0 USES

The cold-formed steel studs and tracks are cold-formed steel framing members comprised of the Phantom® Stud line and the OEG Conventional Stud line. The Phantom® Stud are used for framing of interior nonload-bearing composite and non-composite walls. The OEG Conventional Studs are used for nonload-bearing and load bearing non-composite walls.

3.0 DESCRIPTION**3.1 General:**

The cold-formed steel studs and tracks are factory-formed from coils of steel.

The Phantom Stud line includes studs and tracks. The stud is roll-formed in a "C" shape with ribs in the flanges and web, with punch-outs spaced at 24 inches (610 mm) on center along the centerline of the member, with the lead edge of the punch-out 12 inches (305 mm) from the end of the member. The tracks are roll-formed, channel-shaped manufactured without punch-outs. See Tables 1, 2 and 3 for section dimensions and properties. See Figures 1 and 2 for Phantom Stud line configuration and punch-outs sizes.

The OEG Conventional Stud line includes studs, tracks and U-channels. The stud is roll-formed in a "C" shape with

flanges. Studs equal or greater than 3⁵/₈ inches (92 mm) in depth, come standard with punch-outs spaced at 24 inches (610 mm) on center along the centerline of the member, with the lead edge of the punch-out 12 inches (305 mm) from the end of the member. Standard punch-out sizing is 1¹/₂ inches (38 mm) by 4 inches (101 mm). Smaller stud depths may be requested with punch-outs. The tracks and U-channels are roll-formed, channel-shaped, manufactured without punch-outs. See Tables 4, 5, 6 and 7 for section dimensions and properties. See Figures 3 and 4 for OEG Conventional Stud line configurations and punch-outs.

3.2 Material:

3.2.1 Steel: The Phantom Stud line is cold-formed from steel coils complying with ASTM A653. The OEG Conventional studs and tracks are cold-formed from steel coils complying with ASTM A1003. The OEG Conventional U-channel is cold-formed from steel coils complying with ASTM A653. Phantom Stud line thicknesses measure between 13 mils to 19 mils, having a minimum yield strength of 33 ksi (227.5 MPa). The OEG Conventional Stud line thicknesses measure between 18 mils to 118 mils having a minimum yield strength of 33 ksi (227.5 Mpa).

The Steel Stud and Track are galvanized with a G-60 hot dipped galvanized coating.

3.2.2 Gypsum: For composite wall assemblies, the gypsum wallboard must be a minimum of 5/8 inch (15.9 mm) thick, type X, complying with ASTM C1396 and manufactured by the National Gypsum Company.

3.2.3 Fasteners: Fasteners for attaching the gypsum wallboard to studs and tracks must be No. 6 by 1¹/₄ inch long (32 mm), Type S, fine thread, drywall bugle head screws conforming to ASTM C1002.

4.0 DESIGN AND INSTALLATION**4.1 Non Composite Design:**

4.1.1 International Building Code: Section properties and allowable moments for the cold-formed steel framing members evaluated have been determined in accordance with the North American Specification for Design of Cold-Formed Steel Structural Members (AISI S100-16 S1/18). The allowable moments, M_a , listed in this report, are for use with Allowable Strength Design (ASD) and for flexural members with the compression flange continuously braced. For other conditions of compression flange bracing, the allowable moment must be determined in accordance with the applicable edition of AISI S100. The design of members must address web crippling, combined bending and web crippling and combined bending and shear, as applicable, in accordance with AISI S100.

4.1.2 International Residential Code: The OEG Conventional studs qualify for use with prescriptive requirements of the IRC. OEG Conventional tracks with flange width of 1.25 inches (31.75 mm) or greater 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 Composite Design:

4.2.1 International Building Code: Limiting heights for the Phantom Stud line interior, nonload-bearing walls are shown in Table 8.

4.2.2 International Residential Code : Table 8 use must be limited to engineered structures, in accordance with IRC Section R301.1.3.

4.3 Installation:

The framing members must be installed in accordance with the applicable 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 available at the jobsite at all times during installation.

For composite wall systems, fastening of the studs to tracks is optional. End bearing of the stud on the track must be a minimum of 1 inch (25mm). Gypsum wallboard must be installed on both sides of the wall framing for the full wall height, with the long dimension of the gypsum wallboard parallel to the studs.

5.0 CONDITIONS OF USE

The Steel Stud and Track described in this report comply with, or are 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 Steel Stud and Track must be installed in accordance with the applicable code, the approved plans and this report.
- 5.2 Minimum uncoated base-metal thickness of the framing members as delivered to the jobsite must be at least 95 percent of the design base-metal thickness.
- 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 Per Table 8, the interior nonload-bearing wall assemblies are limited to interior installations where the superimposed axial load is zero pounds.
- 5.5 Design of the attachment of the wall assemblies to the surrounding structure is outside the scope of this report.
- 5.6 Per Table 8, for composite wall systems, the installation of the gypsum wallboard must comply with the requirements of ASTM C840 or GA-216.
- 5.7 Use of Phantom Stud line and OEG Conventional Non-Structural studs, in other than nonstructural applications, as defined by AISI S220, is outside the scope of this report.
- 5.8 The cold-formed steel framing members are manufactured in Sayreville, New Jersey, under an approved quality control program by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Cold-formed Steel Framing Members (AC46), dated October 2019.

Data in accordance with ICC-ES Acceptance Criteria for Cold-formed Steel Framing Members—Interior Nonload-bearing Wall Assemblies (AC86), dated June 2019.

7.0 IDENTIFICATION

- 7.1 At a spacing not exceeding 96 inches (2440 mm) on center, each cold-formed steel member is stamped with the report holder's name; the evaluation report number (ESR-4518); member designation; minimum base-metal thickness (uncoated) in decimal thickness or mils; minimum specified yield strength; and the Z180 (G60) galvanization coating.

- 7.2 The report holder's contact information is the following:

**OEG BUILDING MATERIALS, INC.
6001 BORDENTOWN AVE.
SAYREVILLE, NEW JERSEY 08872
(732) 667-3636
<http://www.oegusa.com>
info@oegusa.com**

Definitions of symbols for use with Tables 1 through 6:**Gross Properties**

- A_r: The cross-sectional area of the full unreduced cross-section of the studs, away from the punch-outs.
 Wt: The weight per foot of the full unreduced cross-section of the studs, away from the punch-outs.
 I_x: Moment of inertia of the gross section about the strong axis (X-X).
 R_x: Radius of gyration of the gross section about the X-X axis.
 S_x: Gross section-modulus about the strong axis (X-X).
 I_y: Moment of inertia of the gross section about the weak axis (Y-Y).
 R_y: Radius of gyration of the gross section about the Y-Y axis.
 t: Design base metal thickness without coating.

Effective Properties

- I_{ex}: Effective moment of inertia about the strong axis (X-X) at punch-out.
 S_{ex}: Effective section-modulus about the strong axis (X-X) at punch-out.
 M_{a-L}: Allowable bending moment based on local buckling at punch-out.
 M_{a-D}: Allowable bending moment based on distortional buckling, assuming K_φ = 0 at punch-out.
 V_{aq}: Allowable strong axis shear away from punchout.
 V_{aNet}: Allowable strong axis shear at punchout.

Torsional Properties

- J: St. Venant torsional constant.
 C_w: Torsional warping constant.
 m: Distance from shear center to mid-plane of web.
 X_o: Distance from the shear center to the centroid along the principal X-axis.
 R_o: Polar radius of gyration about the centroidal principal axis.
 β: Torsional flexural constant: $1 - (X_o / R_o)^2$
 L_u: The maximum of the unbraced length to preclude lateral-torsional buckling about the strong axis

TABLE 1—PHANTOM STUD LINE SECTION DIMENSIONS³

SECTION	DEPTH ¹ (in)	FLANGE (in)	LIP (in)	INSIDE CORNER RADII (in)	DESIGN THICKNESS, t ² (in)
NON-STRUCTURAL STUDS					
162PS125-13	1.625	1.25	0.25	0.04	0.0135
250PS125-13	2.5	1.25	0.25	0.04	0.0135
362PS125-13	3.625	1.25	0.25	0.04	0.0135
400PS125-13	4	1.25	0.25	0.04	0.0135
600PS125-13	6	1.25	0.25	0.04	0.0135
162PS125-15	1.625	1.25	0.25	0.04	0.0150
250PS125-15	2.5	1.25	0.25	0.04	0.0150
362PS125-15	3.625	1.25	0.25	0.04	0.0150
400PS125-15	4	1.25	0.25	0.04	0.0150
600PS125-15	6	1.25	0.25	0.04	0.0150
162PS125-19	1.625	1.25	0.25	0.04	0.0190
250PS125-19	2.5	1.25	0.25	0.04	0.0190
362PS125-19	3.625	1.25	0.25	0.04	0.0190
400PS125-19	4	1.25	0.25	0.04	0.0190
600PS125-19	6	1.25	0.25	0.04	0.0190
TRACKS					
162PT118-13	1.625	1.1875	0	0.04	0.0135
250PT118-13	2.5	1.1875	0	0.04	0.0135
362PT118-13	3.625	1.1875	0	0.04	0.0135
400PT118-13	4	1.1875	0	0.04	0.0135
600PT118-13	6	1.1875	0	0.04	0.0135
162PT118-15	1.625	1.1875	0	0.04	0.0150
250PT118-15	2.5	1.1875	0	0.04	0.0150
362PT118-15	3.625	1.1875	0	0.04	0.0150
400PT118-15	4	1.1875	0	0.04	0.0150
600PT118-15	6	1.1875	0	0.04	0.0150
162PT118-19	1.625	1.1875	0	0.04	0.0190
250PT118-19	2.5	1.1875	0	0.04	0.0190
362PT118-19	3.625	1.1875	0	0.04	0.0190
400PT118-19	4	1.1875	0	0.04	0.0190
600PT118-19	6	1.1875	0	0.04	0.0190

For SI: 1 inch = 25.4 mm.

¹Depth measured from outside face to outside face of flanges.²Members delivered to the jobsite must be a minimum of 95 percent of the design thickness.³See Table 7 for web depth to thickness ratios for studs.

TABLE 2—PHANTOM STUD SECTION PROPERTIES^{1,2}

Profile	Design Thick.	Min. Thick.	Fy	Weight	Gross Properties						Effective Properties						Torsional Properties						
					Area	Ix	rx	Iy	ry	Sx	Ixe	Sxe	Mal	Mad	Vag	Vanet	Jx10 ³	Cw	Xo	m	Ro	β	Lu (in)
					(in)	(in)	(ksi)	(lb/ft)	(in ²)	(in ⁴)	(in)	(in ⁴)	(in)	(in ³)	(in ⁴)	(lb-in)	(lb-in)	(lb)	(lb)	(in ⁴)	(in ⁶)	(in)	(in)
162PS125-13	0.0135	0.0130	33	0.260	0.076	0.034	0.668	0.015	0.439	0.038	0.034	0.032	704	611	181	109	0.004	0.006	-1.073	0.629	1.384	0.398	28.0
250PS125-13	0.0135	0.0130	33	0.300	0.088	0.092	1.020	0.017	0.438	0.070	0.092	0.057	1254	1232	110	110	0.005	0.016	-0.944	0.574	1.489	0.598	27.3
362PS125-13	0.0135	0.0130	33	0.350	0.103	0.216	1.446	0.019	0.429	0.115	0.215	0.090	1639	2002	73	73	0.006	0.038	-0.822	0.516	1.727	0.773	27.2
400PS125-13	0.0135	0.0130	33	0.370	0.108	0.271	1.583	0.019	0.425	0.132	0.270	0.093	1837	1832	65	65	0.006	0.047	-0.788	0.499	1.814	0.811	27.0
600PS125-13	0.0135	0.0130	33	0.460	0.135	0.704	2.281	0.022	0.402	0.231	0.677	0.163	2959	2849	42	42	0.008	0.120	-0.651	0.428	2.359	0.923	26.6
162PS125-13	0.0135	0.0130	50	0.260	0.076	0.034	0.668	0.015	0.439	0.038	0.034	0.029	968	743	181	109	0.004	0.006	-1.073	0.629	1.384	0.398	22.7
250PS125-13	0.0135	0.0130	50	0.300	0.088	0.092	1.020	0.017	0.438	0.070	0.092	0.052	1727	1254	110	110	0.005	0.016	-0.944	0.574	1.489	0.598	22.2
362PS125-13	0.0135	0.0130	50	0.350	0.103	0.216	1.446	0.019	0.429	0.115	0.214	0.081	2244	1936	73	73	0.006	0.038	-0.822	0.516	1.727	0.773	22.2
400PS125-13	0.0135	0.0130	50	0.370	0.108	0.271	1.583	0.019	0.425	0.132	0.268	0.092	2519	2156	65	65	0.006	0.047	-0.788	0.499	1.814	0.811	22.0
600PS125-13	0.0135	0.0130	50	0.460	0.135	0.704	2.281	0.022	0.402	0.231	0.671	0.147	4059	3300	42	42	0.008	0.120	-0.651	0.428	2.359	0.923	21.7
162PS125-15	0.0150	0.0144	33	0.290	0.084	0.037	0.668	0.016	0.437	0.043	0.037	0.036	781	611	246	133	0.005	0.008	-1.081	0.638	1.391	0.365	28.9
250PS125-15	0.0150	0.0144	33	0.330	0.097	0.101	1.019	0.019	0.436	0.077	0.101	0.064	1397	1232	151	151	0.006	0.022	-0.952	0.582	1.495	0.573	28.8
362PS125-15	0.0150	0.0144	33	0.390	0.114	0.238	1.444	0.021	0.427	0.127	0.237	0.101	2200	1573	100	100	0.008	0.050	-0.830	0.524	1.728	0.757	28.4
400PS125-15	0.0150	0.0144	33	0.410	0.120	0.300	1.582	0.021	0.423	0.146	0.298	0.113	2061	1832	90	90	0.008	0.063	-0.796	0.507	1.820	0.797	28.3
600PS125-15	0.0150	0.0144	33	0.510	0.150	0.779	2.280	0.024	0.400	0.254	0.750	0.184	3344	2849	58	58	0.010	0.160	-0.659	0.436	2.365	0.916	27.9
162PS125-15	0.0150	0.0144	50	0.290	0.084	0.037	0.668	0.016	0.437	0.043	0.034	0.033	1089	1067	248	134	0.005	0.008	-1.081	0.638	1.391	0.365	23.5
250PS125-15	0.0150	0.0144	50	0.330	0.097	0.101	1.019	0.019	0.436	0.077	0.094	0.059	1958	1865	151	151	0.006	0.022	-0.952	0.582	1.495	0.573	23.4
362PS125-15	0.0150	0.0144	50	0.390	0.114	0.238	1.444	0.021	0.427	0.127	0.221	0.094	2827	2439	100	100	0.008	0.050	-0.830	0.524	1.728	0.757	23.1
400PS125-15	0.0150	0.0144	50	0.410	0.120	0.300	1.582	0.021	0.423	0.146	0.297	0.103	3091	2646	90	90	0.008	0.063	-0.796	0.507	1.820	0.797	23.0
600PS125-15	0.0150	0.0144	50	0.510	0.150	0.779	2.280	0.024	0.400	0.254	0.746	0.166	4576	3449	58	58	0.010	0.160	-0.659	0.436	2.365	0.916	22.8
162PS125-19	0.0190	0.0182	33	0.360	0.106	0.047	0.667	0.020	0.438	0.053	0.046	0.047	1012	792	394	168	0.010	0.010	-1.089	0.648	1.376	0.361	29.2
250PS125-19	0.0190	0.0182	33	0.420	0.122	0.127	1.019	0.023	0.437	0.097	0.123	0.083	1804	1591	306	261	0.012	0.030	-0.985	0.617	1.517	0.557	29.4
362PS125-19	0.0190	0.0182	33	0.490	0.144	0.300	1.443	0.027	0.427	0.161	0.290	0.136	2970	2124	203	203	0.015	0.070	-0.869	0.565	1.751	0.740	29.1
400PS125-19	0.0190	0.0182	33	0.510	0.151	0.377	1.580	0.027	0.423	0.183	0.367	0.148	3201	2845	182	182	0.016	0.090	-0.844	0.557	1.847	0.780	29.3
600PS125-19	0.0190	0.0182	33	0.640	0.189	0.979	2.276	0.030	0.400	0.320	0.954	0.241	4378	3730	118	118	0.020	0.234	-0.716	0.494	2.395	0.904	29.1
162PS125-19	0.0190	0.0182	50	0.360	0.106	0.047	0.667	0.020	0.438	0.053	0.044	0.043	1408	1102	486	207	0.010	0.010	-1.089	0.648	1.376	0.361	23.8
250PS125-19	0.0190	0.0182	50	0.420	0.122	0.127	1.019	0.023	0.437	0.097	0.119	0.076	2519	2221	306	261	0.012	0.030	-0.985	0.617	1.517	0.557	23.9
362PS125-19	0.0190	0.0182	50	0.490	0.144	0.300	1.443	0.027	0.427	0.161	0.281	0.125	4103	2934	203	203	0.015	0.070	-0.869	0.565	1.751	0.740	23.7
400PS125-19	0.0190	0.0182	50	0.510	0.151	0.377	1.580	0.027	0.423	0.183	0.354	0.000	4444	3950	182	182	0.016	0.090	-0.844	0.557	1.847	0.780	23.9
600PS125-19	0.0190	0.0182	50	0.640	0.189	0.979	2.276	0.030	0.400	0.320	0.917	0.220	6039	5266	118	118	0.020	0.234	-0.716	0.494	2.395	0.904	24.0
600PS125-19	0.0190	0.0182	50	0.640	0.189	0.979	2.276	0.030	0.400	0.320	0.917	0.220	6039	5266	118	118	0.020	0.234	-0.716	0.494	2.395	0.904	24.0

For SI: 1 inch = 25.4 mm.

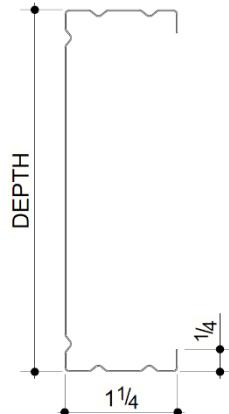
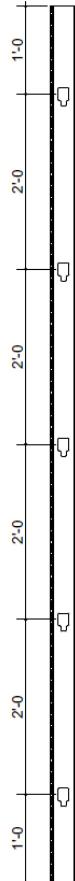
¹Effective properties incorporate the strength increase from the cold work of forming, as applicable.²Gross properties including torsional properties, are based upon full-unreduced cross sections of the studs, away from punch-out.TABLE 3—PHANTOM TRACK SECTION PROPERTIES¹

Profile	Design Thick.	Min. Thick.	Fy	Weight	Gross Properties						Effective Properties				Torsional Properties					
					Area	Ix	rx	Iy	ry	Sx	Ixe	Sxe	Mal	Jx10 ³	Cw	Xo	m	Ro	β	
					(in)	(in)	(ksi)	(lb/ft)	(in ²)	(in ⁴)	(in)	(in ⁴)	(in)	(in ³)	(in ⁴)	(lb-in)	(in ⁴)	(in)	(in)	
162PS118-13	0.0135	0.0130	33	0.193	0.057	0.031	0.733	0.010	0.413	0.035	0.028	0.026	514	0.003	0.005	-0.897	0.547	1.230	0.468	
250PS118-13	0.0135	0.0130	33	0.234	0.069	0.076	1.053	0.011	0.402	0.058	0.064	0.040	798	0.004	0.013	-0.787	0.501	1.375	0.672	
362PS118-13	0.0135	0.0130	33	0.285	0.084	0.174	1.441	0.012	0.384	0.093	0.143	0.057	946	0.005	0.030	-0.683	0.451	1.640	0.827	
400PS118-13	0.0135	0.0130	33	0.303	0.089	0.218	1.566	0.013	0.377	0.106	0.176	0.064	1040	0.005	0.038	-0.654	0.435	1.739	0.859	
600PS118-13	0.0135	0.0130	33	0.394	0.116	0.567	2.212	0.014	0.346	0.186	0.445	0.093	1526	0.007	0.096	-0.537	0.371	2.302	0.946	
162PS118-13	0.0135	0.0130	50	0.193	0.057	0.031	0.733	0.010	0.413	0.035	0.027	0.023	681	0.003</						

TABLE 3—PHANTOM TRACK SECTION PROPERTIES¹ (Continued)

600PS118-13	0.0135	0.0130	50	0.394	0.116	0.567	2.212	0.014	0.346	0.186	0.431	0.080	1993	0.007	0.096	-0.537	0.371	2.302	0.946
162PS118-15	0.0150	0.0144	33	0.221	0.065	0.035	0.736	0.011	0.421	0.041	0.033	0.032	624	0.005	0.006	-0.934	0.585	1.261	0.451
250PS118-15	0.0150	0.0144	33	0.265	0.078	0.088	1.059	0.013	0.412	0.067	0.076	0.051	1013	0.006	0.015	-0.821	0.535	1.402	0.657
362PS118-15	0.0150	0.0144	33	0.322	0.095	0.199	1.450	0.015	0.394	0.106	0.169	0.072	1194	0.007	0.036	-0.715	0.483	1.663	0.815
400PS118-15	0.0150	0.0144	33	0.342	0.101	0.249	1.575	0.015	0.388	0.121	0.209	0.079	1310	0.008	0.045	-0.686	0.468	1.761	0.848
600PS118-15	0.0150	0.0144	33	0.444	0.131	0.646	2.224	0.017	0.357	0.211	0.519	0.116	1911	0.010	0.114	-0.565	0.399	2.211	0.935
162PS118-15	0.0150	0.0144	50	0.221	0.065	0.035	0.736	0.011	0.421	0.041	0.032	0.029	870	0.005	0.006	-0.934	0.585	1.261	0.451
250PS118-15	0.0150	0.0144	50	0.265	0.078	0.088	1.059	0.013	0.412	0.067	0.073	0.044	1303	0.006	0.015	-0.821	0.535	1.402	0.657
362PS118-15	0.0150	0.0144	50	0.322	0.095	0.199	1.450	0.015	0.394	0.106	0.162	0.062	1551	0.007	0.036	-0.715	0.483	1.663	0.815
400PS118-15	0.0150	0.0144	50	0.342	0.101	0.249	1.575	0.015	0.388	0.121	0.200	0.068	1706	0.008	0.045	-0.686	0.468	1.761	0.848
600PS118-15	0.0150	0.0144	50	0.444	0.131	0.646	2.224	0.017	0.357	0.211	0.500	0.101	2515	0.010	0.114	-0.565	0.399	2.211	0.935
162PS118-19	0.0190	0.0182	33	0.279	0.082	0.045	0.737	0.015	0.421	0.051	0.045	0.044	869	0.010	0.008	-0.931	0.582	1.259	0.453
250PS118-19	0.0190	0.0182	33	0.336	0.099	0.111	1.060	0.017	0.411	0.085	0.102	0.074	1465	0.012	0.020	-0.817	0.532	1.400	0.659
362PS118-19	0.0190	0.0182	33	0.408	0.120	0.252	1.450	0.019	0.393	0.135	0.218	0.111	2190	0.015	0.045	-0.712	0.481	1.662	0.816
400PS118-19	0.0190	0.0182	33	0.433	0.127	0.316	1.576	0.019	0.387	0.153	0.277	0.121	2000	0.015	0.057	-0.683	0.465	1.760	0.849
600PS118-19	0.0190	0.0182	33	0.562	0.165	0.817	2.224	0.021	0.356	0.267	0.689	0.172	2840	0.020	0.144	-0.563	0.398	2.322	0.941
162PS118-19	0.0190	0.0182	50	0.279	0.082	0.045	0.737	0.015	0.421	0.051	0.043	0.041	1213	0.010	0.008	-0.931	0.582	1.259	0.453
250PS118-19	0.0190	0.0182	50	0.336	0.099	0.111	1.060	0.017	0.411	0.085	0.097	0.067	2000	0.012	0.020	-0.817	0.532	1.400	0.659
362PS118-19	0.0190	0.0182	50	0.408	0.120	0.252	1.450	0.019	0.393	0.135	0.210	0.094	2813	0.015	0.045	-0.712	0.481	1.662	0.816
400PS118-19	0.0190	0.0182	50	0.433	0.127	0.316	1.576	0.019	0.387	0.153	0.267	0.103	2577	0.015	0.057	-0.683	0.465	1.760	0.849
600PS118-19	0.0190	0.0182	50	0.562	0.165	0.817	2.224	0.021	0.356	0.267	0.662	0.150	3750	0.020	0.144	-0.563	0.398	2.322	0.941

For SI: 1 inch = 25.4 mm.

¹Effective properties incorporate the strength increase from the cold work of forming, as applicable.**FIGURE 1—PHANTOM STUD SECTION PROFILE**

PUNCHOUT SIZE TABLE		
Section Designation	Punchout Length	Punchout Width
	(in)	(in)
162PS125	1.750	0.750
250PS125	1.750	0.750
362PS125	2.500	1.500
400PS125	2.500	1.500
600PS125	2.500	1.500

FIGURE 2—PHANTOM STUD PUNCHOUT SIZE TABLE AND PATTERN

TABLE 4—OEG CONVENTIONAL STUD LINE SECTION DIMENSIONS³

SECTION	DEPTH ¹ (in)	FLANGE (in)	LIP (in)	INSIDE CORNERS RADII (in)	DESIGN THICK., t ² (in)	SECTION	DEPTH ¹ (in)	FLANGE (in)	LIP (in)	INSIDE CORNERS RADII (in)	DESIGN THICK. ² (in)
NON-STRUCTURAL STUDS											
162S125-18	1.625	1.25	0.188	0.0844	0.0188	362S125-54	3.625	1.25	0.188	0.0849	0.0566
162S125-27	1.625	1.25	0.188	0.0796	0.0283	362S125-68	3.625	1.25	0.188	0.107	0.0713
162S125-30	1.625	1.25	0.188	0.0782	0.0312	400S125-27	4	1.25	0.188	0.0796	0.0283
162S125-33	1.625	1.25	0.188	0.0765	0.0346	400S125-30	4	1.25	0.188	0.0782	0.0312
250S125-18	2.5	1.25	0.188	0.0844	0.0188	400S125-33	4	1.25	0.188	0.0765	0.0346
250S125-27	2.5	1.25	0.188	0.0796	0.0283	400S125-43	4	1.25	0.188	0.0712	0.0451
250S125-30	2.5	1.25	0.188	0.0782	0.0312	400S125-54	4	1.25	0.188	0.0849	0.0566
250S125-33	2.5	1.25	0.188	0.0765	0.0346	400S125-68	4	1.25	0.188	0.107	0.0713
250S125-43	2.5	1.25	0.188	0.0712	0.0451	550S125-27	5.5	1.25	0.188	0.0796	0.0283
250S125-54	2.5	1.25	0.188	0.0849	0.0566	550S125-30	5.5	1.25	0.188	0.0782	0.0312
250S125-68	2.5	1.25	0.188	0.107	0.0713	550S125-33	5.5	1.25	0.188	0.0765	0.0346
350S125-18	3.5	1.25	0.188	0.0844	0.0188	550S125-43	5.5	1.25	0.188	0.0712	0.0451
350S125-27	3.5	1.25	0.188	0.0796	0.0283	550S125-54	5.5	1.25	0.188	0.0849	0.0566
350S125-30	3.5	1.25	0.188	0.0782	0.0312	550S125-68	5.5	1.25	0.188	0.107	0.0713
350S125-33	3.5	1.25	0.188	0.0765	0.0346	600S125-30	6	1.25	0.188	0.0782	0.0312
350S125-43	3.5	1.25	0.188	0.0712	0.0451	600S125-33	6	1.25	0.188	0.0765	0.0346
350S125-54	3.5	1.25	0.188	0.0849	0.0566	600S125-43	6	1.25	0.188	0.0712	0.0451
350S125-68	3.5	1.25	0.188	0.107	0.0713	600S125-54	6	1.25	0.188	0.0849	0.0566
362S125-18	3.625	1.25	0.188	0.0844	0.0188	600S125-68	6	1.25	0.188	0.107	0.0713
362S125-27	3.625	1.25	0.188	0.0796	0.0283	800S125-43	8	1.25	0.188	0.0712	0.0451
362S125-30	3.625	1.25	0.188	0.0782	0.0312	800S125-54	8	1.25	0.188	0.0849	0.0566
362S125-33	3.625	1.25	0.188	0.0765	0.0346	800S125-68	8	1.25	0.188	0.107	0.0713
362S125-43	3.625	1.25	0.188	0.0712	0.0451						
STRUCTURAL STUDS											
250S137-33	2.5	1.375	0.375	0.0765	0.0346	1200S200-54	12	2	0.625	0.0849	0.0566
250S137-43	2.5	1.375	0.375	0.0712	0.0451	1200S200-68	12	2	0.625	0.107	0.0713
250S137-54	2.5	1.375	0.375	0.0849	0.0566	1200S200-97	12	2	0.625	0.1526	0.1017
250S137-68	2.5	1.375	0.375	0.107	0.0713	1200S200-118	12	2	0.625	0.1863	0.1242
362S137-33	3.625	1.375	0.375	0.0765	0.0346	1400S200-54	14	2	0.625	0.0849	0.0566
362S137-43	3.625	1.375	0.375	0.0712	0.0451	1400S200-68	14	2	0.625	0.107	0.0713
362S137-54	3.625	1.375	0.375	0.0849	0.0566	1400S200-97	14	2	0.625	0.1526	0.1017
362S137-68	3.625	1.375	0.375	0.107	0.0713	1400S200-118	14	2	0.625	0.1863	0.1242
400S137-33	4	1.375	0.375	0.0765	0.0346	1600S200-68	16	2	0.625	0.107	0.0713
400S137-43	4	1.375	0.375	0.0712	0.0451	1600S200-97	16	2	0.625	0.1526	0.1017
400S137-54	4	1.375	0.375	0.0849	0.0566	1600S200-118	16	2	0.625	0.1863	0.1242
400S137-68	4	1.375	0.375	0.107	0.0713	362S250-33	3.625	2.5	0.625	0.0765	0.0346
600S137-33	6	1.375	0.375	0.0765	0.0346	362S250-43	3.625	2.5	0.625	0.0712	0.0451
600S137-43	6	1.375	0.375	0.0712	0.0451	362S250-54	3.625	2.5	0.625	0.0849	0.0566
600S137-54	6	1.375	0.375	0.0849	0.0566	362S250-68	3.625	2.5	0.625	0.107	0.0713
600S137-68	6	1.375	0.375	0.107	0.0713	362S250-97	3.625	2.5	0.625	0.1526	0.1017
600S137-97	6	1.375	0.375	0.1526	0.1017	400S250-33	4	2.5	0.625	0.0765	0.0346
800S137-33	8	1.375	0.375	0.0765	0.0346	400S250-43	4	2.5	0.625	0.0712	0.0451
800S137-43	8	1.375	0.375	0.0712	0.0451	400S250-54	4	2.5	0.625	0.0849	0.0566
800S137-54	8	1.375	0.375	0.0849	0.0566	400S250-68	4	2.5	0.625	0.107	0.0713
800S137-68	8	1.375	0.375	0.107	0.0713	400S250-97	4	2.5	0.625	0.1526	0.1017
800S137-97	8	1.375	0.375	0.1526	0.1017	600S250-43	6	2.5	0.625	0.0712	0.0451
250S162-33	2.5	1.625	0.5	0.0765	0.0346	600S250-54	6	2.5	0.625	0.0849	0.0566
250S162-43	2.5	1.625	0.5	0.0712	0.0451	600S250-68	6	2.5	0.625	0.107	0.0713
250S162-54	2.5	1.625	0.5	0.0849	0.0566	600S250-97	6	2.5	0.625	0.1526	0.1017
250S162-68	2.5	1.625	0.5	0.107	0.0713	600S250-118	6	2.5	0.625	0.1863	0.1242
350S162-33	3.5	1.625	0.5	0.0765	0.0346	800S250-43	8	2.5	0.625	0.0712	0.0451
350S162-43	3.5	1.625	0.5	0.0712	0.0451	800S250-54	8	2.5	0.625	0.0849	0.0566
350S162-54	3.5	1.625	0.5	0.0849	0.0566	800S250-68	8	2.5	0.625	0.107	0.0713
350S162-68	3.5	1.625	0.5	0.107	0.0713	800S250-97	8	2.5	0.625	0.1526	0.1017
350S162-97	3.5	1.625	0.5	0.1526	0.1017	800S250-118	8	2.5	0.625	0.1863	0.1242
362S162-33	3.625	1.625	0.5	0.0765	0.0346	1000S250-43	10	2.5	0.625	0.0712	0.0451
362S162-43	3.625	1.625	0.5	0.0712	0.0451	1000S250-54	10	2.5	0.625	0.0849	0.0566
362S162-54	3.625	1.625	0.5	0.0849	0.0566	1000S250-68	10	2.5	0.625	0.107	0.0713
362S162-68	3.625	1.625	0.5	0.107	0.0713	1000S250-97	10	2.5	0.625	0.1526	0.1017
362S162-97	3.625	1.625	0.5	0.1526	0.1017	1000S250-118	10	2.5	0.625	0.1863	0.1242
400S162-33	4	1.625	0.5	0.0765	0.0346	1200S250-54	12	2.5	0.625	0.0849	0.0566
400S162-43	4	1.625	0.5	0.0712	0.0451	1200S250-68	12	2.5	0.625	0.107	0.0713
400S162-54	4	1.625	0.5	0.0849	0.0566	1200S250-97	12	2.5	0.625	0.1526	0.1017
400S162-68	4	1.625	0.5	0.107	0.0713	1200S250-118	12	2.5	0.625	0.1863	0.1242
400S162-97	4	1.625	0.5	0.1526	0.1017	1400S250-54	14	2.5	0.625	0.0849	0.0566
550S162-33	5.5	1.625	0.5	0.0765	0.0346	1400S250-68	14	2.5	0.625	0.107	0.0713
550S162-43	5.5	1.625	0.5	0.0712	0.0451	1400S250-97	14	2.5	0.625	0.1526	0.1017
550S162-54	5.5	1.625	0.5	0.0849	0.0566	1400S250-118	14	2.5	0.625	0.1863	0.1242
550S162-68	5.5	1.625	0.5	0.107	0.0713	1600S250-68	16	2.5	0.625	0.107	0.0713
550S162-97	5.5	1.625	0.5	0.1526	0.1017	1600S250-97	16	2.5	0.625	0.1526	0.1017
600S162-33	6	1.625	0.5	0.0765	0.0346	1600S250-118	16	2.5	0.625	0.1863	0.1242
600S162-43	6	1.625	0.5	0.0712	0.0451	362S300-33	3.625	3	0.625	0.0765	0.0346
600S162-54	6	1.625	0.5	0.0849	0.0566	362S300-43	3.625	3	0.625	0.0712	0.0451
600S162-68	6	1.625	0.5	0.107	0.0713	362S300-54	3.625	3	0.625	0.0849	0.0566
600S162-97	6	1.625	0.5	0.1526	0.1017	362S300-68	3.625	3	0.625	0.107	0.0713
600S162-118	6	1.625	0.5	0.1863	0.1242	362S300-97	3.625	3	0.625	0.1526	0.1017

TABLE 4—OEG CONVENTIONAL STUD LINE SECTION DIMENSIONS³ (Continued)

800S162-33	8	1.625	0.5	0.0765	0.0346	400S300-33	4	3	0.625	0.0765	0.0346
SECTION	DEPTH ¹ (in)	FLANGE (in)	LIP (in)	INSIDE CORNERS RADII (in)	DESIGN THICK., t ² (in)	SECTION	DEPTH ¹ (in)	FLANGE (in)	LIP (in)	INSIDE CORNERS RADII (in)	DESIGN THICK. ² (in)
800S162-43	8	1.625	0.5	0.0712	0.0451	400S300-43	4	3	0.625	0.0712	0.0451
800S162-54	8	1.625	0.5	0.0849	0.0566	400S300-54	4	3	0.625	0.0849	0.0566
800S162-68	8	1.625	0.5	0.107	0.0713	400S300-68	4	3	0.625	0.107	0.0713
800S162-97	8	1.625	0.5	0.1526	0.1017	400S300-97	4	3	0.625	0.1526	0.1017
800S162-118	8	1.625	0.5	0.1863	0.1242	600S300-54	6	3	0.625	0.0849	0.0566
1000S162-43	10	1.625	0.5	0.0712	0.0451	600S300-68	6	3	0.625	0.107	0.0713
1000S162-54	10	1.625	0.5	0.0849	0.0566	600S300-97	6	3	0.625	0.1526	0.1017
1000S162-68	10	1.625	0.5	0.107	0.0713	600S300-118	6	3	0.625	0.1863	0.1242
1000S162-97	10	1.625	0.5	0.1526	0.1017	800S300-54	8	3	0.625	0.0849	0.0566
1000S162-118	10	1.625	0.5	0.1863	0.1242	800S300-68	8	3	0.625	0.107	0.0713
1200S162-54	12	1.625	0.5	0.0849	0.0566	800S300-97	8	3	0.625	0.1526	0.1017
1200S162-68	12	1.625	0.5	0.107	0.0713	800S300-118	8	3	0.625	0.1863	0.1242
1200S162-97	12	1.625	0.5	0.1526	0.1017	1000S300-54	10	3	0.625	0.0849	0.0566
1200S162-118	12	1.625	0.5	0.1863	0.1242	1000S300-68	10	3	0.625	0.107	0.0713
350S200-43	3.5	2	0.625	0.0712	0.0451	1000S300-97	10	3	0.625	0.1526	0.1017
350S200-54	3.5	2	0.625	0.0849	0.0566	1000S300-118	10	3	0.625	0.1863	0.1242
350S200-68	3.5	2	0.625	0.107	0.0713	1200S300-54	12	3	0.625	0.0849	0.0566
350S200-97	3.5	2	0.625	0.1526	0.1017	1200S300-68	12	3	0.625	0.107	0.0713
362S200-33	3.625	2	0.625	0.0765	0.0346	1200S300-97	12	3	0.625	0.1526	0.1017
362S200-43	3.625	2	0.625	0.0712	0.0451	1200S300-118	12	3	0.625	0.1863	0.1242
362S200-54	3.625	2	0.625	0.0849	0.0566	1400S300-54	14	3	0.625	0.0849	0.0566
362S200-68	3.625	2	0.625	0.107	0.0713	1400S300-68	14	3	0.625	0.107	0.0713
362S200-97	3.625	2	0.625	0.1526	0.1017	1400S300-97	14	3	0.625	0.1526	0.1017
400S200-33	4	2	0.625	0.0765	0.0346	1400S300-118	14	3	0.625	0.1863	0.1242
400S200-43	4	2	0.625	0.0712	0.0451	1600S300-68	16	3	0.625	0.107	0.0713
400S200-54	4	2	0.625	0.0849	0.0566	1600S300-97	16	3	0.625	0.1526	0.1017
400S200-68	4	2	0.625	0.107	0.0713	1600S300-118	16	3	0.625	0.1863	0.1242
400S200-97	4	2	0.625	0.1526	0.1017	600S350-54	6	3.5	1	0.0849	0.0566
550S200-33	5.5	2	0.625	0.0765	0.0346	600S350-68	6	3.5	1	0.107	0.0713
550S200-43	5.5	2	0.625	0.0712	0.0451	600S350-97	6	3.5	1	0.1526	0.1017
550S200-54	5.5	2	0.625	0.0849	0.0566	600S350-118	6	3.5	1	0.1863	0.1242
550S200-68	5.5	2	0.625	0.107	0.0713	800S350-54	8	3.5	1	0.0849	0.0566
550S200-97	5.5	2	0.625	0.1526	0.1017	800S350-68	8	3.5	1	0.107	0.0713
600S200-33	6	2	0.625	0.0765	0.0346	800S350-97	8	3.5	1	0.1526	0.1017
600S200-43	6	2	0.625	0.0712	0.0451	800S350-118	8	3.5	1	0.1863	0.1242
600S200-54	6	2	0.625	0.0849	0.0566	1000S350-54	10	3.5	1	0.0849	0.0566
600S200-68	6	2	0.625	0.107	0.0713	1000S350-68	10	3.5	1	0.107	0.0713
600S200-97	6	2	0.625	0.1526	0.1017	1000S350-97	10	3.5	1	0.1526	0.1017
600S200-118	6	2	0.625	0.1863	0.1242	1000S350-118	10	3.5	1	0.1863	0.1242
800S200-33	8	2	0.625	0.0765	0.0346	1200S350-54	12	3.5	1	0.0849	0.0566
800S200-43	8	2	0.625	0.0712	0.0451	1200S350-68	12	3.5	1	0.107	0.0713
800S200-54	8	2	0.625	0.0849	0.0566	1200S350-97	12	3.5	1	0.1526	0.1017
800S200-68	8	2	0.625	0.107	0.0713	1200S350-118	12	3.5	1	0.1863	0.1242
800S200-97	8	2	0.625	0.1526	0.1017	1400S350-54	14	3.5	1	0.0849	0.0566
800S200-118	8	2	0.625	0.1863	0.1242	1400S350-68	14	3.5	1	0.107	0.0713
1000S200-43	10	2	0.625	0.0712	0.0451	1400S350-97	14	3.5	1	0.1526	0.1017
1000S200-54	10	2	0.625	0.0849	0.0566	1400S350-118	14	3.5	1	0.1863	0.1242
1000S200-68	10	2	0.625	0.107	0.0713	1600S350-68	16	3.5	1	0.107	0.0713
1000S200-97	10	2	0.625	0.1526	0.1017	1600S350-97	16	3.5	1	0.1526	0.1017
1000S200-118	10	2	0.625	0.1863	0.1242	1600S350-118	16	3.5	1	0.1863	0.1242
TRACKS											
162T125-18	1.625	1.25	0	0.0844	0.0188	1600T125-54	16	1.25	0	0.0849	0.0566
162T125-27	1.625	1.25	0	0.0796	0.0283	1600T125-68	16	1.25	0	0.107	0.0713
162T125-30	1.625	1.25	0	0.0782	0.0312	1600T125-97	16	1.25	0	0.1526	0.1017
162T125-33	1.625	1.25	0	0.0765	0.0346	1600T125-118	16	1.25	0	0.1863	0.1242
250T125-18	2.5	1.25	0	0.0844	0.0188	250T150-27	2.5	1.5	0	0.0796	0.0283
250T125-27	2.5	1.25	0	0.0796	0.0283	250T150-30	2.5	1.5	0	0.0782	0.0312
250T125-30	2.5	1.25	0	0.0782	0.0312	250T150-33	2.5	1.5	0	0.0765	0.0346
250T125-33	2.5	1.25	0	0.0765	0.0346	250T150-43	2.5	1.5	0	0.0712	0.0451
250T125-43	2.5	1.25	0	0.0712	0.0451	250T150-54	2.5	1.5	0	0.0849	0.0566
250T125-54	2.5	1.25	0	0.0849	0.0566	250T150-68	2.5	1.5	0	0.107	0.0713
250T125-68	2.5	1.25	0	0.107	0.0713	350T150-27	3.5	1.5	0	0.0796	0.0283
350T125-18	3.5	1.25	0	0.0844	0.0188	350T150-30	3.5	1.5	0	0.0782	0.0312
350T125-27	3.5	1.25	0	0.0796	0.0283	350T150-33	3.5	1.5	0	0.0765	0.0346
350T125-30	3.5	1.25	0	0.0782	0.0312	350T150-43	3.5	1.5	0	0.0712	0.0451
350T125-33	3.5	1.25	0	0.0765	0.0346	350T150-54	3.5	1.5	0	0.0849	0.0566
350T125-43	3.5	1.25	0	0.0712	0.0451	350T150-68	3.5	1.5	0	0.107	0.0713
350T125-54	3.5	1.25	0	0.0849	0.0566	350T150-97	3.5	1.5	0	0.1526	0.1017
350T125-68	3.5	1.25	0	0.107	0.0713	362T150-27	3.625	1.5	0	0.0796	0.0283
350T125-97	3.5	1.25	0	0.1526	0.1017	362T150-30	3.625	1.5	0	0.0782	0.0312
362T125-18	3.625	1.25	0	0.0844	0.0188	362T150-33	3.625	1.5	0	0.0765	0.0346
362T125-27	3.625	1.25	0	0.0796	0.0283	362T150-43	3.625	1.5	0	0.0712	0.0451
362T125-30	3.625	1.25	0	0.0782	0.0312	362T150-54	3.625	1.5	0	0.0849	0.0566
362T125-33	3.625	1.25	0	0.0765	0.0346	362T150-68	3.625	1.5	0	0.107	0.0713
362T125-43	3.625	1.25	0	0.0712	0.0451	362T150-97	3.625	1.5	0	0.1526	0.1017
362T125-54	3.625	1.25	0	0.0849	0.0566	400T150-27	4	1.5	0	0.0796	0.0283

TABLE 4—OEG CONVENTIONAL STUD LINE SECTION DIMENSIONS³ (Continued)

SECTION	DEPTH ¹ (in)	FLANGE (in)	LIP (in)	INSIDE CORNER RADII (in)	DESIGN THICK., t ² (in)	SECTION	DEPTH ¹ (in)	FLANGE (in)	LIP (in)	INSIDE CORNER RADII (in)	DESIGN THICK. ² (in)
362T125-68	3.625	1.25	0	0.107	0.0713	400T150-30	4	1.5	0	0.0782	0.0312
362T125-97	3.625	1.25	0	0.1526	0.1017	400T150-33	4	1.5	0	0.0765	0.0346
400T125-18	4	1.25	0	0.0844	0.0188	400T150-43	4	1.5	0	0.0712	0.0451
400T125-27	4	1.25	0	0.0796	0.0283	400T150-54	4	1.5	0	0.0849	0.0566
400T125-30	4	1.25	0	0.0782	0.0312	400T150-68	4	1.5	0	0.107	0.0713
400T125-33	4	1.25	0	0.0765	0.0346	400T150-97	4	1.5	0	0.1526	0.1017
400T125-43	4	1.25	0	0.0712	0.0451	550T150-27	5.5	1.5	0	0.0796	0.0283
400T125-54	4	1.25	0	0.0849	0.0566	550T150-30	5.5	1.5	0	0.0782	0.0312
400T125-68	4	1.25	0	0.107	0.0713	550T150-33	5.5	1.5	0	0.0765	0.0346
400T125-97	4	1.25	0	0.1526	0.1017	550T150-43	5.5	1.5	0	0.0712	0.0451
550T125-27	5.5	1.25	0	0.0796	0.0283	550T150-54	5.5	1.5	0	0.0849	0.0566
550T125-30	5.5	1.25	0	0.0782	0.0312	550T150-68	5.5	1.5	0	0.107	0.0713
550T125-33	5.5	1.25	0	0.0765	0.0346	550T150-97	5.5	1.5	0	0.1526	0.1017
550T125-43	5.5	1.25	0	0.0712	0.0451	600T150-27	6	1.5	0	0.0796	0.0283
550T125-54	5.5	1.25	0	0.0849	0.0566	600T150-30	6	1.5	0	0.0782	0.0312
550T125-68	5.5	1.25	0	0.107	0.0713	600T150-33	6	1.5	0	0.0765	0.0346
550T125-97	5.5	1.25	0	0.1526	0.1017	600T150-43	6	1.5	0	0.0712	0.0451
600T125-27	6	1.25	0	0.0796	0.0283	600T150-54	6	1.5	0	0.0849	0.0566
600T125-30	6	1.25	0	0.0782	0.0312	600T150-68	6	1.5	0	0.107	0.0713
600T125-33	6	1.25	0	0.0765	0.0346	600T150-97	6	1.5	0	0.1526	0.1017
600T125-43	6	1.25	0	0.0712	0.0451	800T150-33	8	1.5	0	0.0765	0.0346
600T125-54	6	1.25	0	0.0849	0.0566	800T150-43	8	1.5	0	0.0712	0.0451
600T125-68	6	1.25	0	0.107	0.0713	800T150-54	8	1.5	0	0.0849	0.0566
600T125-97	6	1.25	0	0.1526	0.1017	800T150-68	8	1.5	0	0.107	0.0713
800T125-33	8	1.25	0	0.0765	0.0346	800T150-97	8	1.5	0	0.1526	0.1017
800T125-43	8	1.25	0	0.0712	0.0451	1000T150-43	1	1.5	0	0.0712	0.0451
800T125-54	8	1.25	0	0.0849	0.0566	1000T150-54	1	1.5	0	0.0849	0.0566
800T125-68	8	1.25	0	0.107	0.0713	1000T150-68	1	1.5	0	0.107	0.0713
800T125-97	8	1.25	0	0.1526	0.1017	1000T150-97	1	1.5	0	0.1526	0.1017
1000T125-43	1	1.25	0	0.0712	0.0451	1200T150-54	12	1.5	0	0.0849	0.0566
1000T125-54	1	1.25	0	0.0849	0.0566	1200T150-68	12	1.5	0	0.107	0.0713
1000T125-68	1	1.25	0	0.107	0.0713	1200T150-97	12	1.5	0	0.1526	0.1017
1000T125-97	1	1.25	0	0.1526	0.1017	1400T150-54	14	1.5	0	0.0849	0.0566
1200T125-54	12	1.25	0	0.0849	0.0566	1400T150-68	14	1.5	0	0.107	0.0713
1200T125-68	12	1.25	0	0.107	0.0713	1400T150-97	14	1.5	0	0.1526	0.1017
1200T125-97	12	1.25	0	0.1526	0.1017	1400T150-118	14	1.5	0	0.1863	0.1242
1400T125-54	14	1.25	0	0.0849	0.0566	1600T150-54	16	1.5	0	0.0849	0.0566
1400T125-68	14	1.25	0	0.107	0.0713	1600T150-68	16	1.5	0	0.107	0.0713
1400T125-97	14	1.25	0	0.1526	0.1017	1600T150-97	16	1.5	0	0.1526	0.1017
1400T125-118	14	1.25	0	0.1863	0.1242	1600T150-118	16	1.5	0	0.1863	0.1242
U-CHANNEL											
075U050-54	0.75	0.5	0	-	0.0566	200U050-54	2.00	0.5	0	-	0.0566
150U050-54	1.50	0.5	0	-	0.0566	250U050-54	2.50	0.5	0	-	0.0566

For SI: 1 inch = 25.4 mm.

¹Depth measured from outside face to outside face of flanges.

²Members delivered to the jobsite must be a minimum of 95 percent of the design thickness.

³See Table 7 for web depth to thickness ratios for studs.

TABLE 5—OEG CONVENTIONAL STUD SECTION PROPERTIES^{1,2,3,4}

Profile	Design Thick.	Fy	Weight	Gross Properties						Effective Properties						Torsional Properties						
				Area	Ix	Sx	rx	ly	ry	Ixe	Sxe	Mal	Mad	Vag	Janet	Jx10^3	Cw	Xo	m	Ro	β	Lu
	(in)	(ksi)	(lb/ft)	(in^2)	(in^4)	(in^3)	(in)	(in^4)	(in)	(in^4)	(in^3)	(lb-in)	(lb-in)	(lb)	(lb)	(in^4)	(in^6)	(in)	(in)	(in)	(in)	(in)
NON-STRUCTURAL STUDS																						
162S125-18	0.0188	33	0.27	0.08	0.038	0.046	0.686	0.016	0.447	0.034	0.031	0.61	0.65	302	100	0.009	0.009	-1.029	0.594	1.315	0.388	29
162S125-27	0.0283	33	0.41	0.12	0.056	0.069	0.682	0.023	0.443	0.055	0.053	1.05	1.14	494	106	0.032	0.013	-1.018	0.587	1.303	0.39	29.1
162S125-30	0.0312	33	0.45	0.132	0.061	0.075	0.681	0.026	0.441	0.06	0.06	1.19	1.3	543	106	0.043	0.014	-1.014	0.585	1.299	0.39	29.2
162S125-33	0.0346	33	0.49	0.145	0.067	0.083	0.679	0.028	0.44	0.066	0.069	1.37	1.48	601	105	0.058	0.016	-1.01	0.583	1.294	0.391	29.3
250S125-18	0.0188	33	0.33	0.097	0.099	0.079	1.014	0.019	0.439	0.089	0.06	1.18	1.03	258	196	0.011	0.023	-0.904	0.543	1.428	0.599	29
250S125-27	0.0283	33	0.49	0.144	0.147	0.118	1.009	0.027	0.434	0.145	0.098	1.93	1.83	685	344	0.039	0.034	-0.893	0.537	1.416	0.602	28.9
250S125-30	0.0312	33	0.54	0.159	0.161	0.129	1.008	0.03	0.433	0.159	0.11	2.18	2.09	832	378	0.052	0.037	-0.89	0.535	1.413	0.603	28.9
250S125-33	0.0346	33	0.6	0.176	0.178	0.142	1.007	0.033	0.431	0.175	0.126	2.48	2.41	975	399	0.07	0.04	-0.886	0.532	1.409	0.604	28.9
250S125-43	0.0451	33	0.77	0.227	0.228	0.182	1.002	0.041	0.427	0.226	0.177	3.49	3.44	1265	394	0.154	0.05	-0.874	0.526	1.396	0.608	28.9
250S125-54	0.0566	33	0.95	0.28	0.277	0.222	0.994	0.049	0.419	0.277	0.218	4.98	5.08	1553	373	0.299	0.06	-0.859	0.518	1.379	0.612	26.8
250S125-54	0.0566	50	0.95	0.28	0.277	0.222	0.994	0.049	0.419	0.275	0.209	6.26	6.17	2353	565	0.299	0.06	-0.859	0.518	1.379	0.612	23.3
250S125-68	0.0713	33	1.18	0.346	0.335	0.268	0.984	0.058	0.408	0.335	0.267	6.3	6.33	1891	342	0.586	0.072	-0.84	0.508	1.356	0.617	26.6
250S125-68	0.0713	50	1.18	0.346	0.335	0.268	0.984	0.058	0.408	0.335	0.263	7.86	8.01	2866	519	0.586	0.072	-0.84	0.508	1.356	0.617	23.3

TABLE 5—OEG CONVENTIONAL STUD SECTION PROPERTIES^{1,2,3,4} (Continued)

350S125-18	0.0188	33	0.39	0.115	0.215	0.123	1.366	0.021	0.423	0.197	0.072	1.42	1.47	180	159	0.014	0.05	-0.798	0.495	1.638	0.763	28.8		
350S125-27	0.0283	33	0.59	0.173	0.32	0.183	1.361	0.03	0.419	0.313	0.13	2.57	2.65	614	359	0.046	0.073	-0.788	0.489	1.627	0.766	28.7		
350S125-30	0.0312	33	0.65	0.19	0.351	0.201	1.36	0.033	0.417	0.346	0.15	2.97	3.05	824	436	0.062	0.079	-0.784	0.488	1.624	0.767	28.6		
350S125-33	0.0346	33	0.72	0.21	0.388	0.222	1.358	0.036	0.416	0.382	0.175	3.46	3.53	1024	487	0.084	0.087	-0.781	0.485	1.621	0.768	28.6		
350S125-43	0.0451	33	0.93	0.272	0.498	0.284	1.352	0.046	0.411	0.493	0.258	5.1	5.12	1739	631	0.185	0.109	-0.769	0.479	1.609	0.771	28.5		
Profile	Design Thick.	Fy	Weight	Gross Properties							Effective Properties							Torsional Properties						
				Area	I _x	S _x	r _x	I _y	r _y	I _{xe}	S _{xe}	M _{ax}	M _{ad}	V _{ag}	V _{anet}	J _{x10^3}	C _w	X _o	m	R _o	β	Lu		
	(in)	(ksi)	(lb/ft)	(in ²)	(in ⁴)	(in)	(in ⁴)	(in)	(in ⁴)	(in ³)	(lb-in)	(lb-in)	(lb)	(in ⁴)	(in ⁶)	(in)	(in)	(in)	(in)	(in)				
350S125-54	0.0566	33	1.15	0.337	0.609	0.348	1.344	0.055	0.403	0.609	0.328	6.49	6.87	2253	633	0.36	0.131	-0.755	0.472	1.593	0.775	28.4		
350S125-54	0.0566	50	1.15	0.337	0.609	0.348	1.344	0.055	0.403	0.603	0.308	9.23	9.26	3372	947	0.36	0.131	-0.755	0.472	1.593	0.775	22.9		
350S125-68	0.0713	33	1.42	0.417	0.739	0.422	1.332	0.064	0.392	0.739	0.409	9.68	9.99	2774	592	0.706	0.156	-0.737	0.462	1.572	0.78	25.8		
350S125-68	0.0713	50	1.42	0.417	0.739	0.422	1.332	0.064	0.392	0.739	0.401	12.01	12.55	4203	897	0.706	0.156	-0.737	0.462	1.572	0.78	22.8		
362S125-18	0.0188	33	0.4	0.118	0.234	0.129	1.409	0.021	0.421	0.215	0.075	1.48	1.52	173	163	0.014	0.054	-0.786	0.49	1.667	0.778	28.8		
362S125-27	0.0283	33	0.6	0.176	0.347	0.192	1.404	0.031	0.416	0.34	0.135	2.67	2.76	592	370	0.047	0.079	-0.776	0.484	1.657	0.781	28.6		
362S125-30	0.0312	33	0.66	0.194	0.381	0.21	1.402	0.033	0.415	0.375	0.156	3.09	3.17	794	449	0.063	0.086	-0.773	0.482	1.654	0.782	28.6		
362S125-33	0.0346	33	0.73	0.215	0.421	0.232	1.401	0.037	0.413	0.415	0.182	3.6	3.68	1024	521	0.086	0.094	-0.77	0.48	1.651	0.783	28.5		
362S125-43	0.0451	33	0.95	0.278	0.541	0.298	1.395	0.046	0.408	0.535	0.269	5.32	5.34	1739	676	0.188	0.118	-0.758	0.474	1.64	0.786	28.4		
362S125-54	0.0566	33	1.17	0.344	0.661	0.365	1.386	0.055	0.401	0.661	0.343	6.78	7.2	2341	705	0.367	0.142	-0.744	0.466	1.624	0.79	28.3		
362S125-54	0.0566	50	1.17	0.344	0.661	0.365	1.386	0.055	0.401	0.655	0.322	9.63	9.67	3372	1016	0.367	0.142	-0.744	0.466	1.624	0.79	22.8		
362S125-68	0.0713	33	1.45	0.426	0.804	0.444	1.374	0.065	0.39	0.804	0.432	8.54	8.76	2884	662	0.721	0.17	-0.726	0.457	1.602	0.795	28.2		
362S125-68	0.0713	50	1.45	0.426	0.804	0.444	1.374	0.065	0.39	0.804	0.419	12.56	13.12	4370	1004	0.721	0.17	-0.726	0.457	1.602	0.795	22.7		
400S125-27	0.0283	33	0.64	0.187	0.438	0.219	1.531	0.031	0.41	0.428	0.151	2.98	3.07	533	398	0.05	0.098	-0.745	0.469	1.751	0.819	28.5		
400S125-30	0.0312	33	0.7	0.206	0.481	0.24	1.529	0.034	0.409	0.473	0.174	3.44	3.54	715	484	0.067	0.108	-0.742	0.467	1.748	0.82	28.5		
400S125-33	0.0346	33	0.77	0.228	0.531	0.265	1.527	0.038	0.407	0.523	0.203	4.02	4.11	976	595	0.091	0.118	-0.738	0.465	1.745	0.821	28.4		
400S125-43	0.0451	33	1	0.295	0.682	0.341	1.522	0.048	0.402	0.676	0.302	5.96	5.99	1739	810	0.2	0.148	-0.727	0.459	1.734	0.824	28.2		
400S125-54	0.0566	33	1.24	0.365	0.836	0.418	1.512	0.057	0.394	0.836	0.387	7.65	8.13	2603	944	0.39	0.178	-0.713	0.452	1.718	0.828	28.1		
400S125-54	0.0566	50	1.24	0.365	0.836	0.418	1.512	0.057	0.394	0.828	0.362	10.82	10.88	3372	1223	0.39	0.178	-0.713	0.452	1.718	0.828	22.7		
400S125-68	0.0713	33	1.54	0.452	1.018	0.509	1.5	0.067	0.383	1.018	0.494	9.76	10.05	3215	895	0.767	0.213	-0.695	0.443	1.697	0.832	28		
400S125-68	0.0713	50	1.54	0.452	1.018	0.509	1.5	0.067	0.383	1.018	0.475	14.22	14.86	4871	1356	0.767	0.213	-0.695	0.443	1.697	0.832	22.5		
550S125-27	0.0283	33	0.78	0.229	0.939	0.341	2.023	0.034	0.385	0.898	0.246	4.87	4.27	382	382	0.061	0.205	-0.642	0.417	2.158	0.912	27.9		
550S125-30	0.0312	33	0.86	0.252	1.032	0.375	2.022	0.037	0.384	0.996	0.286	5.65	4.95	512	512	0.082	0.224	-0.639	0.416	2.155	0.912	27.9		
550S125-33	0.0346	33	0.95	0.279	1.14	0.415	2.02	0.041	0.382	1.112	0.335	6.63	5.79	699	699	0.112	0.246	-0.636	0.414	2.152	0.913	27.8		
550S125-43	0.0451	33	1.23	0.362	1.469	0.534	2.013	0.052	0.377	1.458	0.5	9.89	8.62	1550	1199	0.246	0.309	-0.626	0.408	2.142	0.915	27.6		
550S125-54	0.0566	33	1.53	0.45	1.806	0.657	2.003	0.062	0.37	1.805	0.647	12.79	11.94	2739	1666	0.481	0.374	-0.613	0.401	2.127	0.917	27.3		
550S125-54	0.0566	50	1.53	0.45	1.806	0.657	2.003	0.062	0.37	1.791	0.606	18.15	15.78	3093	1881	0.481	0.374	-0.613	0.401	2.127	0.917	22.1		
550S125-68	0.0713	33	1.9	0.559	2.21	0.804	1.988	0.072	0.359	2.21	0.801	18.94	18.61	4347	2057	0.948	0.448	-0.597	0.392	2.106	0.92	24.7		
550S125-68	0.0713	50	1.9	0.559	2.21	0.804	1.988	0.072	0.359	2.21	0.792	23.72	22	5350	2532	0.948	0.448	-0.597	0.392	2.106	0.92	21.9		
600S125-30	0.0312	33	0.91	0.268	1.276	0.425	2.182	0.038	0.376	1.219	0.315	6.22	5.4	468	468	0.087	0.274	-0.611	0.401	2.297	0.929	27.7		
600S125-33	0.0346	33	1.01	0.297	1.41	0.47	2.18	0.042	0.375	1.361	0.37	7.31	6.32	638	638	0.118	0.3	-0.608	0.399	2.294	0.93	27.6		
600S125-43	0.0451	33	1.31	0.385	1.818	0.606	2.173	0.053	0.37	1.807	0.555	10.97	9.47	1416	1240	0.261	0.379	-0.598	0.393	2.284	0.931	27.3		
600S125-54	0.0566	33	1.63	0.479	2.237	0.746	2.162	0.063	0.362	2.236	0.728	14.38	13.19	2739	1890	0.511	0.457	-0.586	0.386	2.269	0.933	27.1		
600S125-54	0.0566	50	1.63	0.479	2.237	0.746	2.162	0.063	0.362	2.22	0.674	20.17	17.37	2823	1947	0.511	0.457	-0.586	0.386	2.269	0.933	21.9		
600S125-68	0.0713	33	2.02	0.595	2.742	0.914	2.146	0.073	0.351	2.741	0.911	21.54	20.67	4347	2339	1.008	0.549	-0.57	0.378	2.249	0.936	24.4		
600S125-68	0.0713	50	2.02	0.595	2.742	0.914	2.146	0.073	0.351	2.741	0.899	26.93	24.37	5350	2879	1.008	0.549	-0.57	0.378	2.249	0.936	21.6		
800S125-43	0.0451	33	1.62	0.475	3.723	0.931	2.799	0.056	0.342	3.583	0.773	15.28	12.58	1051	1051	0.322	0.735	-0.51	0.344	2.866	0.968	26.4		
800S125-54	0.0566	33	2.01	0.592	4.596	1.149	2.787	0.066	0.335	4.432	0.943	28.23	23.21	2091	2091	0.632	0.89	-0.5	0.338	2.851	0.969	26		
800S125-54	0.0566	50	2.01	0.592	4.596	1.149	2.787	0.066	0.335	4.432	0.943	28.23	23.21	2091	2091	0.632	0.89	-0.5	0.338	2.851	0.969	21.1		
800S125-68	0.0713	33	2.51	0.738	5.656	1.414	2.769	0.078	0.325	5.654	1.379	27.26	25.24	4221	3367	1.25	1.069	-0.485	0.33	2.83	0.971	25.6		
800S125-68	0.0713	50	2.51	0.738	5.656																			

TABLE 5—OEG CONVENTIONAL STUD SECTION PROPERTIES^{1,2,3,4} (Continued)

Profile	Design Thick.	Fy	Weight	Gross Properties						Effective Properties						Torsional Properties						
	(in)	(ksi)	(lb/ft)	Area	Ix	Sx	rx	Iy	ry	Ixe	Sxe	Mal	Mad	Vag	Vanet	Jx10^3	Cw	Xo	m	Ro	β	Lu
				(in^2)	(in^4)	(in^4)	(in^3)	(in)	(in^4)	(in^4)	(in^3)	(lb-in)	(lb-in)	(lb)	(lb)	(in^4)	(in^6)	(in)	(in)	(in)		(in)
250S137-43	0.0451	33	0.87	0.255	0.261	0.208	1.011	0.067	0.511	0.261	0.205	4.53	4.6	1265	394	0.173	0.096	-1.129	0.67	1.599	0.501	33.6
250S137-54	0.0566	33	1.07	0.316	0.318	0.255	1.004	0.08	0.504	0.318	0.255	5.76	5.76	1553	373	0.337	0.115	-1.115	0.663	1.583	0.504	33.4
250S137-54	0.0566	50	1.07	0.316	0.318	0.255	1.004	0.08	0.504	0.318	0.244	8.22	8.34	2353	565	0.337	0.115	-1.115	0.663	1.583	0.504	27.1
250S137-68	0.0713	33	1.33	0.39	0.386	0.309	0.995	0.096	0.495	0.386	0.309	7.2	7.2	1891	342	0.661	0.138	-1.096	0.653	1.561	0.507	33.1
250S137-68	0.0713	50	1.33	0.39	0.386	0.309	0.995	0.096	0.495	0.386	0.308	10.66	10.68	2866	519	0.661	0.138	-1.096	0.653	1.561	0.507	26.8
362S137-33	0.0346	33	0.8	0.236	0.479	0.264	1.424	0.059	0.501	0.479	0.232	4.59	4.73	1024	521	0.094	0.165	-1.003	0.615	1.813	0.694	34.7
362S137-43	0.0451	33	1.04	0.306	0.616	0.34	1.419	0.075	0.497	0.616	0.32	6.33	6.66	1739	676	0.207	0.208	-0.991	0.608	1.801	0.697	34.6
Profile	Design Thick.	Fy	Weight	Gross Properties						Effective Properties						Torsional Properties						
	(in)	(ksi)	(lb/ft)	Area	Ix	Sx	rx	Iy	ry	Ixe	Sxe	Mal	Mad	Vag	Vanet	Jx10^3	Cw	Xo	m	Ro	β	Lu
				(in^2)	(in^4)	(in^4)	(in^3)	(in)	(in^4)	(in^4)	(in^3)	(lb-in)	(lb-in)	(lb)	(lb)	(in^4)	(in^6)	(in)	(in)	(in)		(in)
362S137-54	0.0566	33	1.29	0.379	0.756	0.417	1.412	0.091	0.49	0.756	0.402	7.95	8.24	2341	705	0.405	0.251	-0.978	0.601	1.786	0.7	34.6
362S137-54	0.0566	50	1.29	0.379	0.756	0.417	1.412	0.091	0.49	0.756	0.382	11.42	11.91	3372	1016	0.405	0.251	-0.978	0.601	1.786	0.7	27.9
362S137-68	0.0713	33	1.6	0.47	0.923	0.509	1.401	0.109	0.481	0.923	0.498	9.84	10.06	2884	662	0.797	0.302	-0.959	0.592	1.765	0.704	34.6
362S137-68	0.0713	50	1.6	0.47	0.923	0.509	1.401	0.109	0.481	0.923	0.493	14.77	15.24	4370	1004	0.797	0.302	-0.959	0.592	1.765	0.704	27.8
400S137-33	0.0346	33	0.85	0.249	0.603	0.302	1.556	0.061	0.496	0.603	0.259	5.12	5.29	976	595	0.099	0.204	-0.965	0.597	1.897	0.741	34.5
400S137-43	0.0451	33	1.1	0.323	0.776	0.388	1.551	0.078	0.491	0.776	0.359	7.09	7.47	1739	810	0.219	0.257	-0.954	0.591	1.886	0.744	34.3
400S137-54	0.0566	33	1.36	0.401	0.953	0.477	1.543	0.094	0.484	0.953	0.453	8.96	9.42	2603	944	0.428	0.311	-0.94	0.583	1.87	0.747	34.3
400S137-54	0.0566	50	1.36	0.401	0.953	0.477	1.543	0.094	0.484	0.953	0.428	12.82	13.38	3372	1223	0.428	0.311	-0.94	0.583	1.87	0.747	27.7
400S137-68	0.0713	33	1.69	0.497	1.165	0.583	1.531	0.112	0.475	1.165	0.568	11.22	11.51	3215	895	0.842	0.375	-0.922	0.574	1.85	0.751	34.2
400S137-68	0.0713	50	1.69	0.497	1.165	0.583	1.531	0.112	0.475	1.165	0.558	16.7	17.44	4871	1356	0.842	0.375	-0.922	0.574	1.85	0.751	27.6
600S137-33	0.0346	33	1.08	0.318	1.583	0.528	2.23	0.069	0.464	1.548	0.455	8.98	8.19	638	638	0.127	0.5	-0.807	0.519	2.416	0.889	33.5
600S137-43	0.0451	33	1.41	0.413	2.042	0.681	2.224	0.087	0.459	2.041	0.645	12.74	11.83	1416	1240	0.28	0.633	-0.796	0.513	2.406	0.89	33.3
600S137-54	0.0566	33	1.75	0.514	2.518	0.839	2.214	0.105	0.452	2.518	0.832	16.45	15.96	2739	1890	0.549	0.769	-0.784	0.506	2.392	0.893	33
600S137-54	0.0566	50	1.75	0.514	2.518	0.839	2.214	0.105	0.452	2.518	0.777	23.26	21.25	2823	1947	0.549	0.769	-0.784	0.506	2.392	0.893	26.8
600S137-68	0.0713	33	2.18	0.64	3.095	1.032	2.2	0.125	0.443	3.095	1.032	24.05	20.39	4347	2339	1.084	0.93	-0.768	0.497	2.372	0.895	32.8
600S137-68	0.0713	50	2.18	0.64	3.095	1.032	2.2	0.125	0.443	3.095	1.03	30.85	28.91	5350	2879	1.084	0.93	-0.768	0.497	2.372	0.895	26.5
600S137-97	0.1017	33	3.03	0.889	4.19	1.397	2.171	0.159	0.423	4.189	1.396	34.49	34.5	5911	2512	3.066	1.216	-0.734	0.48	2.33	0.901	32.4
600S137-97	0.1017	50	3.03	0.889	4.19	1.397	2.171	0.159	0.423	4.189	1.396	50.81	50.82	0472	3806	3.066	1.216	-0.734	0.48	2.33	0.901	26.1
800S137-33	0.0346	33	1.32	0.388	3.199	0.8	2.873	0.073	0.435	2.998	0.622	12.3	10.72	474	474	0.155	0.957	-0.696	0.46	2.988	0.946	32.5
800S137-43	0.0451	33	1.71	0.503	4.135	1.034	2.866	0.093	0.43	4.001	0.896	17.7	15.78	1051	1051	0.341	1.214	-0.687	0.454	2.979	0.947	32.2
800S137-54	0.0566	33	2.13	0.627	5.111	1.278	2.855	0.112	0.423	5.077	1.179	23.29	21.75	2091	2091	0.67	1.478	-0.676	0.448	2.964	0.948	32
800S137-54	0.0566	50	2.13	0.627	5.111	1.278	2.855	0.112	0.423	4.974	1.083	32.43	28.49	2091	2091	0.67	1.478	-0.676	0.448	2.964	0.948	25.9
800S137-68	0.0713	33	2.66	0.782	6.305	1.576	2.839	0.134	0.414	6.303	1.541	30.45	29.77	4221	3367	1.325	1.789	-0.661	0.44	2.944	0.95	31.6
800S137-68	0.0713	50	2.66	0.782	6.305	1.576	2.839	0.134	0.414	6.286	1.468	43.97	39.6	4221	3367	1.325	1.789	-0.661	0.44	2.944	0.95	25.6
800S137-97	0.1017	33	3.72	1.093	8.601	2.15	2.806	0.17	0.394	8.598	2.15	53.09	53.11	3843	4824	3.767	2.349	-0.63	0.423	2.902	0.953	27.6
800S137-97	0.1017	50	3.72	1.093	8.601	2.15	2.806	0.17	0.394	8.598	2.15	64.36	63.95	0885	5938	3.767	2.349	-0.63	0.423	2.902	0.953	25.1
250S162-33	0.0346	33	0.76	0.223	0.235	0.188	1.027	0.087	0.624	0.235	0.18	3.55	3.56	975	399	0.089	0.146	-1.47	0.859	1.898	0.401	44.1
250S162-43	0.0451	33	0.98	0.289	0.302	0.242	1.022	0.111	0.62	0.302	0.24	5.22	5.25	1265	394	0.196	0.184	-1.457	0.852	1.885	0.402	42.1
250S162-54	0.0566	33	1.22	0.358	0.37	0.296	1.016	0.135	0.613	0.37	0.296	6.57	6.57	1553	373	0.383	0.223	-1.443	0.845	1.868	0.404	41.8
250S162-54	0.0566	50	1.22	0.358	0.37	0.296	1.016	0.135	0.613	0.37	0.284	9.42	9.46	2353	565	0.383	0.223	-1.443	0.845	1.868	0.404	33.9
250S162-68	0.0713	33	1.51	0.443	0.45	0.36	1.008	0.162	0.605	0.45	0.36	8.21	8.21	1891	342	0.752	0.268	-1.424	0.835	1.847	0.405	41.7
250S162-68	0.0713	50	1.51	0.443	0.45	0.36	1.008	0.162	0.605	0.45	0.357	12.11	12.21	2866	519	0.752	0.268	-1.424	0.835	1.847	0.405	33.7
350S162-33	0.0346	33	0.88	0.258	0.508	0.291	1.404	0.098	0.617	0.508	0.257	5.09	5.22	1024	487	0.103	0.277	-1.324	0.796	2.026	0.573	42.7
350S162-43	0.0451	33	1.14	0.334	0.655	0.374	1.4	0.125	0.612	0.654	0.357	7.05	7.31	1739	631	0.227	0.35	-1.312	0.789	2.014	0.575	42.6
350S162-54	0.0566	33	1.41	0.415	0.805	0.46	1.393	0.152	0.606	0.804	0.447	8.83	9.08	2253	633	0.443	0.426	-1.298	0.782	1.998	0.578	42.7
350S162-54	0.0566	50																				

TABLE 5—OEG CONVENTIONAL STUD SECTION PROPERTIES^{1,2,3,4} (Continued)

362S162-54	0.0566	33	1.44	0.422	0.873	0.482	1.438	0.154	0.605	0.873	0.467	9.22	9.52	2341	705	0.451	0.457	-1.283	0.774	2.02	0.597	42.5
362S162-54	0.0566	50	1.44	0.422	0.873	0.482	1.438	0.154	0.605	0.873	0.444	13.28	13.6	3372	1016	0.451	0.457	-1.283	0.774	2.02	0.597	34.4
362S162-68	0.0713	33	1.78	0.524	1.069	0.59	1.429	0.186	0.596	1.069	0.579	11.43	11.65	2884	662	0.887	0.552	-1.264	0.765	1.999	0.6	42.7
362S162-68	0.0713	50	1.78	0.524	1.069	0.59	1.429	0.186	0.596	1.069	0.574	17.19	17.66	4370	1004	0.887	0.552	-1.264	0.765	1.999	0.6	34.4
362S162-97	0.1017	33	2.46	0.724	1.436	0.792	1.408	0.241	0.577	1.436	0.776	18.63	15.65	3922	577	2.496	0.723	-1.226	0.745	1.954	0.606	43.3
362S162-97	0.1017	50	2.46	0.724	1.436	0.792	1.408	0.241	0.577	1.436	0.776	27.54	23.71	5943	875	2.496	0.723	-1.226	0.745	1.954	0.606	34.5
400S162-33	0.0346	33	0.94	0.275	0.692	0.346	1.586	0.103	0.611	0.692	0.299	5.91	6.07	976	595	0.11	0.363	-1.263	0.768	2.118	0.644	42.3
400S162-43	0.0451	33	1.21	0.357	0.892	0.446	1.581	0.131	0.606	0.892	0.417	8.23	8.55	1739	810	0.242	0.46	-1.252	0.761	2.106	0.647	42.2
Profile	Design Thick.	Fy	Weight	Gross Properties						Effective Properties						Torsional Properties						
				Area	Ix	Sx	rx	ly	ry	Ixe	Sxe	Mal	Mad	Vag	Vanet	Jx10^3	Cw	Xo	m	Ro	β	Lu
	(in)	(ksi)	(lb/ft)	(in^2)	(in^4)	(in^3)	(in)	(in^4)	(in)	(in^4)	(lb-in)	(lb-in)	(lb)	(in^4)	(in^6)	(in)	(in)	(in)	(in)	(in)		
400S162-54	0.0566	33	1.51	0.443	1.098	0.549	1.574	0.159	0.6	1.098	0.526	10.39	10.85	2603	944	0.473	0.56	-1.238	0.754	2.09	0.649	42.2
400S162-54	0.0566	50	1.51	0.443	1.098	0.549	1.574	0.159	0.6	1.098	0.498	14.9	15.25	3372	1223	0.473	0.56	-1.238	0.754	2.09	0.649	34.1
400S162-68	0.0713	33	1.87	0.55	1.346	0.673	1.564	0.192	0.591	1.346	0.658	13	13.3	3215	895	0.933	0.677	-1.22	0.745	2.069	0.653	42.2
400S162-68	0.0713	50	1.87	0.55	1.346	0.673	1.564	0.192	0.591	1.346	0.648	19.41	20.16	4871	1356	0.933	0.677	-1.22	0.745	2.069	0.653	34
400S162-97	0.1017	33	2.59	0.762	1.813	0.907	1.542	0.25	0.572	1.813	0.892	21.41	17.92	4394	797	2.628	0.889	-1.182	0.725	2.026	0.66	42.6
400S162-97	0.1017	50	2.59	0.762	1.813	0.907	1.542	0.25	0.572	1.813	0.892	31.65	27.15	5658	1207	2.628	0.889	-1.182	0.725	2.026	0.66	34.1
550S162-33	0.0346	33	1.11	0.327	1.459	0.53	2.112	0.113	0.589	1.459	0.512	10.11	8.63	699	699	0.13	0.713	-1.114	0.697	2.459	0.795	41.4
550S162-43	0.0451	33	1.44	0.424	1.884	0.685	2.107	0.145	0.584	1.883	0.681	14.8	13.14	1550	1199	0.288	0.905	-1.103	0.691	2.449	0.797	41.2
550S162-54	0.0566	33	1.8	0.528	2.325	0.845	2.098	0.176	0.577	2.324	0.845	18.76	17.88	2739	1666	0.564	1.105	-1.09	0.684	2.434	0.8	41
550S162-54	0.0566	50	1.8	0.528	2.325	0.845	2.098	0.176	0.577	2.324	0.811	26.86	23.53	3093	1881	0.564	1.105	-1.09	0.684	2.434	0.8	33.2
550S162-68	0.0713	33	2.24	0.657	2.862	1.041	2.087	0.212	0.569	2.861	1.041	23.72	23.73	4347	2057	1.114	1.342	-1.072	0.675	2.414	0.803	40.9
550S162-68	0.0713	50	2.24	0.657	2.862	1.041	2.087	0.212	0.569	2.861	1.031	34.95	32.3	5350	2532	1.114	1.342	-1.072	0.675	2.414	0.803	33.1
550S162-97	0.1017	33	3.11	0.915	3.887	1.414	2.062	0.276	0.55	3.887	1.413	33.92	33.92	5282	1997	3.154	1.775	-1.037	0.656	2.372	0.809	40.8
550S162-97	0.1017	50	3.11	0.915	3.887	1.414	2.062	0.276	0.55	3.887	1.413	50.14	50.14	9518	3026	3.154	1.775	-1.037	0.656	2.372	0.809	32.8
600S162-33	0.0346	33	1.17	0.344	1.793	0.598	2.282	0.116	0.581	1.793	0.577	11.41	9.47	638	638	0.137	0.861	-1.072	0.677	2.588	0.828	41.1
600S162-43	0.0451	33	1.52	0.447	2.316	0.772	2.277	0.148	0.576	2.316	0.767	16.68	14.47	1416	1240	0.303	1.095	-1.062	0.67	2.577	0.83	40.9
600S162-54	0.0566	33	1.89	0.556	2.861	0.954	2.268	0.18	0.57	2.86	0.953	21.17	19.76	2739	1890	0.594	1.337	-1.049	0.663	2.563	0.833	40.7
600S162-54	0.0566	50	1.89	0.556	2.861	0.954	2.268	0.18	0.57	2.86	0.916	30.33	25.91	2823	1947	0.594	1.337	-1.049	0.663	2.563	0.833	33
600S162-68	0.0713	33	2.36	0.693	3.526	1.175	2.256	0.218	0.561	3.525	1.175	26.79	26.79	4347	2339	1.174	1.626	-1.032	0.655	2.543	0.835	40.6
600S162-68	0.0713	50	2.36	0.693	3.526	1.175	2.256	0.218	0.561	3.525	1.164	39.47	35.71	5350	2879	1.174	1.626	-1.032	0.655	2.543	0.835	32.8
600S162-97	0.1017	33	3.28	0.966	4.799	1.6	2.229	0.283	0.542	4.798	1.599	38.38	38.39	5911	2512	3.329	2.153	-0.997	0.636	2.501	0.841	40.3
600S162-97	0.1017	50	3.28	0.966	4.799	1.6	2.229	0.283	0.542	4.798	1.599	56.73	56.75	0472	3806	3.329	2.153	-0.997	0.636	2.501	0.841	32.5
600S162-118	0.1242	33	3.94	1.158	5.655	1.885	2.209	0.322	0.527	5.654	1.885	46.83	46.84	8267	2391	5.956	2.487	-0.971	0.623	2.47	0.846	40.2
600S162-118	0.1242	50	3.94	1.158	5.655	1.885	2.209	0.322	0.527	5.654	1.885	68.95	68.97	2526	3622	5.956	2.487	-0.971	0.623	2.47	0.846	32.3
800S162-33	0.0346	33	1.41	0.413	3.583	0.896	2.944	0.125	0.55	3.385	0.71	14.03	12.61	474	474	0.165	1.63	-0.936	0.607	3.138	0.911	40.1
800S162-43	0.0451	33	1.83	0.537	4.635	1.159	2.938	0.16	0.546	4.5	1.019	20.14	18.34	1051	1051	0.364	2.076	-0.926	0.601	3.128	0.912	39.8
800S162-54	0.0566	33	2.28	0.67	5.737	1.434	2.927	0.194	0.539	5.702	1.334	26.36	24.99	2091	2091	0.715	2.539	-0.914	0.594	3.114	0.914	39.6
800S162-54	0.0566	50	2.28	0.67	5.737	1.434	2.927	0.194	0.539	5.6	1.229	36.79	32.83	2091	2091	0.715	2.539	-0.914	0.594	3.114	0.914	32.1
800S162-68	0.0713	33	2.84	0.836	7.092	1.773	2.913	0.235	0.53	7.09	1.737	34.33	33.86	4221	3367	1.416	3.093	-0.899	0.586	3.094	0.916	39.3
800S162-68	0.0713	50	2.84	0.836	7.092	1.773	2.913	0.235	0.53	7.07	1.664	49.81	45.13	4221	3367	1.416	3.093	-0.899	0.586	3.094	0.916	31.9
800S162-97	0.1017	33	3.98	1.169	9.717	2.429	2.883	0.305	0.511	9.714	2.429	58.28	58.29	3843	4824	4.03	4.114	-0.866	0.568	3.053	0.92	35.1
800S162-97	0.1017	50	3.98	1.169	9.717	2.429	2.883	0.305	0.511	9.714	2.429	72.71	71.98	0885	5938	4.03	4.114	-0.866	0.568	3.053	0.92	31.4
800S162-118	0.1242	33	4.79	1.407	11.509	2.877	2.86	0.347	0.496	11.506	2.876	71.48	71.5	1341	4971	7.234	4.766	-0.842	0.556	3.023	0.922	34.2
800S162-118	0.1242	50	4.79	1.407	11.509	2.877	2.86	0.347	0.496	11.506	2.876	105.24	105.27	6235	7115	7.234	4.766	-0.842	0.556	3.023	0.922	28
1000S162-43	0.0451	33	2.13	0.627	8.028	1.606	3.577	0.168	0.518	7.523	1.302	25.74	22.5	836	836	0.425	3.43	-0.823	0.545	3.707	0.951	38.8
1000S162-54	0.0566	33	2.66	0.783	9.954	1.991	3.566	0.204	0.511	9.628	1.722	34.02	31.13	1661	1661	0.836	4.198	-0.812	0.538	3.693	0.952	38.5
1000S162-54	0.0566	50	2.66	0.783	9.954	1.991	3.566	0.204	0.511	9.391	1.572	47.07	40.39	1661	1661	0.836	4.198	-0.812	0.538	3.693	0.952	31.3
1000S162-68	0.0713	33	3.33	0.978	12.33	2.466	3.															

TABLE 5—OEG CONVENTIONAL STUD SECTION PROPERTIES^{1,2,3,4} (Continued)

1000S162-118	0.1242	33	5.63	1.655	20.177	4.035	3.491	0.364	0.469	20.171	4.034	100.25	100.28	3189	7747	8.511	7.924	-0.746	0.502	3.601	0.957	33		
1000S162-118	0.1242	50	5.63	1.655	20.177	4.035	3.491	0.364	0.469	20.171	4.034	120.78	120.41	6235	9536	8.511	7.924	-0.746	0.502	3.601	0.957	30		
1200S162-54	0.0566	33	3.05	0.896	15.736	2.623	4.191	0.212	0.486	14.744	2.109	41.68	36.4	1377	1377	0.957	6.34	-0.732	0.493	4.282	0.971	37.5		
1200S162-54	0.0566	50	3.05	0.896	15.736	2.623	4.191	0.212	0.486	14.299	1.914	57.32	46.79	1377	1377	0.957	6.34	-0.732	0.493	4.282	0.971	30.5		
1200S162-68	0.0713	33	3.81	1.121	19.526	3.254	4.174	0.255	0.477	18.956	2.817	55.66	50.99	2771	2771	1.899	7.739	-0.719	0.485	4.262	0.972	37.2		
1200S162-68	0.0713	50	3.81	1.121	19.526	3.254	4.174	0.255	0.477	18.391	2.645	79.2	66.18	2771	2771	1.899	7.739	-0.719	0.485	4.262	0.972	30.2		
1200S162-97	0.1017	33	5.36	1.576	26.977	4.496	4.138	0.332	0.459	26.967	4.327	85.51	83.91	3147	7411	5.433	10.331	-0.691	0.47	4.22	0.973	36.4		
1200S162-97	0.1017	50	5.36	1.576	26.977	4.496	4.138	0.332	0.459	26.738	4.091	122.5	111.38	3147	7411	5.433	10.331	-0.691	0.47	4.22	0.973	29.5		
1200S162-118	0.1242	33	6.48	1.904	32.158	5.36	4.11	0.377	0.445	32.146	5.358	105.87	105.91	3189	9714	9.788	12.002	-0.67	0.459	4.188	0.974	35.9		
Profile	Design Thick.	Fy	Weight	Gross Properties							Effective Properties							Torsional Properties						
				Area	I _x	S _x	r _x	I _y	r _y	I _{xe}	S _{xe}	M _{ax}	M _{ad}	V _{ag}	J _{anet}	J _{x10^3}	C _w	X _o	m	R _o	β	Lu	(in)	
				(in)	(ksi)	(lb/ft)	(in ²)	(in ⁴)	(in ³)	(in)	(in ⁴)	(in)	(in ³)	(lb-in)	(lb-in)	(lb)	(in ⁴)	(in ⁶)	(in)	(in)				(in)
1200S162-118	0.1242	50	6.48	1.904	32.158	5.36	4.11	0.377	0.445	32.146	5.169	154.75	147.33	4986	1037	9.788	12.002	-0.67	0.459	4.188	0.974	29		
350S200-43	0.0451	33	1.29	0.379	0.771	0.441	1.426	0.224	0.768	0.771	0.41	8.09	8.36	1739	631	0.257	0.687	-1.748	1.032	2.383	0.462	53.7		
350S200-54	0.0566	33	1.6	0.471	0.95	0.543	1.42	0.274	0.762	0.95	0.53	10.48	10.73	2253	633	0.503	0.838	-1.733	1.024	2.367	0.464	53.8		
350S200-54	0.0566	50	1.6	0.471	0.95	0.543	1.42	0.274	0.762	0.95	0.47	14.07	14.87	3372	947	0.503	0.838	-1.733	1.024	2.367	0.464	43.5		
350S200-68	0.0713	33	1.99	0.586	1.167	0.667	1.411	0.333	0.754	1.167	0.655	14.59	13.18	2774	592	0.993	1.018	-1.715	1.014	2.345	0.465	54.1		
350S200-68	0.0713	50	1.99	0.586	1.167	0.667	1.411	0.333	0.754	1.167	0.638	19.11	19.68	4203	897	0.993	1.018	-1.715	1.014	2.345	0.465	43.5		
350S200-97	0.1017	33	2.77	0.813	1.577	0.901	1.393	0.44	0.736	1.577	0.885	20.58	17.81	3765	511	2.803	1.347	-1.676	0.994	2.3	0.469	55		
350S200-97	0.1017	50	2.77	0.813	1.577	0.901	1.393	0.44	0.736	1.577	0.885	30.53	26.98	5705	775	2.803	1.347	-1.676	0.994	2.3	0.469	43.9		
362S200-33	0.0346	33	1.01	0.297	0.648	0.358	1.478	0.177	0.772	0.642	0.294	5.81	6.19	1024	521	0.118	0.577	-1.741	1.03	2.411	0.478	53.6		
362S200-43	0.0451	33	1.31	0.385	0.836	0.461	1.474	0.227	0.767	0.836	0.427	8.43	8.7	1739	676	0.261	0.734	-1.729	1.024	2.398	0.48	53.5		
362S200-54	0.0566	33	1.63	0.479	1.03	0.568	1.467	0.277	0.761	1.03	0.553	10.93	11.23	2341	705	0.511	0.896	-1.715	1.016	2.382	0.482	53.6		
362S200-54	0.0566	50	1.63	0.479	1.03	0.568	1.467	0.277	0.761	1.03	0.49	14.66	15.48	3372	1016	0.511	0.896	-1.715	1.016	2.382	0.482	43.3		
362S200-68	0.0713	33	2.02	0.595	1.266	0.698	1.458	0.337	0.753	1.266	0.687	15.29	15.54	2884	662	1.008	1.089	-1.696	1.006	2.36	0.484	50.6		
362S200-68	0.0713	50	2.02	0.595	1.266	0.698	1.458	0.337	0.753	1.266	0.666	19.95	20.52	4370	1004	1.008	1.089	-1.696	1.006	2.36	0.484	43.3		
362S200-97	0.1017	33	2.81	0.826	1.712	0.945	1.44	0.446	0.735	1.712	0.929	21.6	18.66	3922	577	2.847	1.441	-1.658	0.986	2.316	0.487	54.7		
362S200-97	0.1017	50	2.81	0.826	1.712	0.945	1.44	0.446	0.735	1.712	0.929	32.04	28.28	5943	875	2.847	1.441	-1.658	0.986	2.316	0.487	43.6		
400S200-33	0.0346	33	1.05	0.31	0.812	0.406	1.619	0.183	0.769	0.804	0.329	6.49	6.9	976	595	0.124	0.697	-1.688	1.007	2.462	0.53	53.1		
400S200-43	0.0451	33	1.37	0.402	1.048	0.524	1.615	0.235	0.764	1.048	0.478	9.45	9.74	1739	810	0.272	0.886	-1.676	1	2.45	0.532	53		
400S200-54	0.0566	33	1.7	0.5	1.292	0.646	1.608	0.287	0.758	1.292	0.623	12.3	12.77	2603	944	0.534	1.083	-1.662	0.993	2.433	0.534	53		
400S200-54	0.0566	50	1.7	0.5	1.292	0.646	1.608	0.287	0.758	1.292	0.549	16.43	17.32	3372	1223	0.534	1.083	-1.662	0.993	2.433	0.534	42.9		
400S200-68	0.0713	33	2.12	0.622	1.59	0.795	1.599	0.349	0.75	1.589	0.78	15.41	15.71	3215	895	1.054	1.318	-1.643	0.983	2.412	0.536	53.2		
400S200-68	0.0713	50	2.12	0.622	1.59	0.795	1.599	0.349	0.75	1.589	0.751	22.48	23.04	4871	1356	1.054	1.318	-1.643	0.983	2.412	0.536	42.9		
400S200-97	0.1017	33	2.94	0.864	2.156	1.078	1.58	0.463	0.732	2.156	1.064	24.73	21.3	4394	797	2.978	1.749	-1.605	0.963	2.368	0.541	53.8		
400S200-97	0.1017	50	2.94	0.864	2.156	1.078	1.58	0.463	0.732	2.156	1.064	36.69	32.27	6658	1207	2.978	1.749	-1.605	0.963	2.368	0.541	43.1		
550S200-33	0.0346	33	1.23	0.362	1.694	0.616	2.164	0.204	0.751	1.678	0.559	11.05	9.8	699	699	0.144	1.326	-1.508	0.925	2.743	0.698	51.9		
550S200-43	0.0451	33	1.6	0.469	2.189	0.796	2.159	0.261	0.746	2.189	0.776	15.34	13.97	1550	1199	0.318	1.691	-1.496	0.918	2.731	0.7	51.7		
550S200-54	0.0566	33	1.99	0.585	2.707	0.984	2.152	0.32	0.739	2.707	0.984	21.41	18.67	2739	1666	0.624	2.072	-1.483	0.911	2.716	0.702	51.6		
550S200-54	0.0566	50	1.99	0.585	2.707	0.984	2.152	0.32	0.739	2.707	0.901	26.99	24.85	3093	1881	0.624	2.072	-1.483	0.911	2.716	0.702	41.8		
550S200-68	0.0713	33	2.48	0.729	3.341	1.215	2.141	0.389	0.731	3.341	1.215	27.03	27.04	4347	2057	1.235	2.531	-1.465	0.902	2.695	0.705	51.6		
550S200-68	0.0713	50	2.48	0.729	3.341	1.215	2.141	0.389	0.731	3.341	1.188	39.44	33.46	5350	2532	1.235	2.531	-1.465	0.902	2.695	0.705	41.7		
550S200-97	0.1017	33	3.46	1.016	4.565	1.66	2.119	0.516	0.713	4.564	1.66	38.59	38.59	5282	1997	3.504	3.384	-1.428	0.882	2.653	0.71	51.6		
550S200-97	0.1017	50	3.46	1.016	4.565	1.66	2.119	0.516	0.713	4.564	1.66	57.26	57.27	9518	3026	3.504	3.384	-1.428	0.882	2.653	0.71	41.5		
600S200-33	0.0346	33	1.29	0.379	2.076	0.692	2.34	0.209	0.743	2.058	0.621	12.28	10.77	638	638	0.151	1.593	-1.457	0.901	2.855	0.74	51.6		
600S200-43	0.0451	33	1.67	0.492	2.683	0.894	2.335	0.268	0.739	2.683	0.873	17.24	15.39	1416	1240	0.334	2.033	-1.446	0.894	2.844	0.742	51.4		
600S200-54	0.0566	33	2.09	0.613	3.32	1.107	2.327	0.329	0.732	3.319	1.106	24.07	22.08	2739	1890	0.655	2.493	-1.432	0.887	2.829	0.744	51.3		
600S200-54	0.0566	50	2.09	0.613	3.32	1.107	2.327	0.329	0.732	3.319	1.015	30.4	27.39	2823	1947	0.655	2.4							

TABLE 5—OEG CONVENTIONAL STUD SECTION PROPERTIES^{1,2,3,4} (Continued)

600S200-118	0.1242	33	4.36	1.283	6.643	2.214	2.276	0.612	0.691	6.643	2.214	53.07	53.07	3267	2391	6.595	4.753	-1.351	0.845	2.736	0.756	51.1		
600S200-118	0.1242	50	4.36	1.283	6.643	2.214	2.276	0.612	0.691	6.643	2.214	78.46	78.46	2526	3622	6.595	4.753	-1.351	0.845	2.736	0.756	41.1		
800S200-33	0.0346	33	1.52	0.448	4.097	1.024	3.024	0.227	0.712	4.096	0.816	16.12	14.53	474	474	0.179	2.971	-1.288	0.817	3.363	0.853	50.6		
800S200-43	0.0451	33	1.98	0.582	5.303	1.326	3.018	0.292	0.708	5.302	1.293	25.54	20.99	1051	1051	0.395	3.797	-1.277	0.811	3.353	0.855	50.3		
800S200-54	0.0566	33	2.47	0.726	6.574	1.644	3.009	0.357	0.701	6.573	1.643	35.75	30.39	2091	2091	0.775	4.663	-1.265	0.804	3.338	0.856	47.8		
800S200-54	0.0566	50	2.47	0.726	6.574	1.644	3.009	0.357	0.701	6.573	1.499	44.87	37.39	2091	2091	0.775	4.663	-1.265	0.804	3.338	0.856	40.7		
800S200-68	0.0713	33	3.09	0.907	8.143	2.036	2.996	0.435	0.692	8.141	2.035	45.29	41.81	4221	3367	1.537	5.712	-1.248	0.796	3.319	0.859	47		
800S200-68	0.0713	50	3.09	0.907	8.143	2.036	2.996	0.435	0.692	8.141	1.964	65.21	54.73	4221	3367	1.537	5.712	-1.248	0.796	3.319	0.859	38.4		
800S200-97	0.1017	33	4.32	1.271	11.207	2.802	2.97	0.577	0.674	11.204	2.801	65.13	65.14	8843	4824	4.381	7.684	-1.214	0.777	3.278	0.863	45.5		
800S200-97	0.1017	50	4.32	1.271	11.207	2.802	2.97	0.577	0.674	11.204	2.801	96.63	89.8	0885	5938	4.381	7.684	-1.214	0.777	3.278	0.863	37.2		
Profile	Design Thick.	Fy (ksi)	Weight (lb/ft)	Gross Properties							Effective Properties							Torsional Properties						
				Area (in ²)	I _x (in ⁴)	S _x (in ³)	r _x (in)	I _y (in ⁴)	r _y (in)	I _{xe} (in ⁴)	S _{xe} (in ³)	M _{ax} (lb-in)	M _{ad} (lb-in)	V _{ag} (lb)	V _{anet} (lb)	J _{x10^3} (in ⁴)	C _w (in ⁶)	X _o (in)	m (in)	R _o (in)	β (in)	Lu (in)		
				(in)	(kci)	(lb/ft)	(in ²)	(in ⁴)	(in ³)	(in)	(in ⁴)	(in)	(in ⁴)	(lb-in)	(lb)	(in ⁴)	(in ⁶)	(in)	(in)	(in)	(in)	(in)		
800S200-118	0.1242	33	5.21	1.531	13.32	3.33	2.95	0.666	0.659	13.317	3.329	79.79	79.81	1341	4971	7.872	8.981	-1.188	0.764	3.248	0.866	44.6		
800S200-118	0.1242	50	5.21	1.531	13.32	3.33	2.95	0.666	0.659	13.317	3.329	117.97	117.61	6235	7115	7.872	8.981	-1.188	0.764	3.248	0.866	36.5		
1000S200-43	0.0451	33	2.29	0.672	9.088	1.818	3.676	0.309	0.677	8.603	1.47	29.05	26.16	836	836	0.456	6.236	-1.147	0.743	3.91	0.914	49.3		
1000S200-54	0.0566	33	2.86	0.839	11.282	2.256	3.666	0.378	0.671	10.954	1.984	39.2	35.88	1661	1661	0.896	7.665	-1.135	0.737	3.896	0.915	49.1		
1000S200-54	0.0566	50	2.86	0.839	11.282	2.256	3.666	0.378	0.671	10.77	1.705	51.05	46.64	1661	1661	0.896	7.665	-1.135	0.737	3.896	0.915	39.8		
1000S200-68	0.0713	33	3.57	1.05	13.999	2.8	3.652	0.46	0.662	13.921	2.607	51.52	49.09	3345	3345	1.779	9.401	-1.12	0.729	3.877	0.917	48.8		
1000S200-68	0.0713	50	3.57	1.05	13.999	2.8	3.652	0.46	0.662	13.666	2.42	72.47	64.53	3345	3345	1.779	9.401	-1.12	0.729	3.877	0.917	39.6		
1000S200-97	0.1017	33	5.01	1.474	19.343	3.869	3.622	0.61	0.643	19.337	3.867	76.42	76.44	8843	6434	5.082	12.679	-1.088	0.711	3.836	0.92	48.2		
1000S200-97	0.1017	50	5.01	1.474	19.343	3.869	3.622	0.61	0.643	19.337	3.741	112.01	104.79	9864	7177	5.082	12.679	-1.088	0.711	3.836	0.92	39		
1000S200-118	0.1242	33	6.05	1.779	23.06	4.612	3.6	0.704	0.629	23.054	4.611	110.5	110.53	3189	7747	9.149	14.848	-1.064	0.699	3.806	0.922	43.3		
1000S200-118	0.1242	50	6.05	1.779	23.06	4.612	3.6	0.704	0.629	23.054	4.611	138.05	135.82	6235	9536	9.149	14.848	-1.064	0.699	3.806	0.922	38.7		
1200S200-54	0.0566	33	3.24	0.953	17.668	2.945	4.307	0.394	0.643	16.679	2.425	47.93	42.49	1377	1377	1.017	11.55	-1.032	0.681	4.475	0.947	48		
1200S200-54	0.0566	50	3.24	0.953	17.668	2.945	4.307	0.394	0.643	16.335	2.073	62.07	54.77	1377	1377	1.017	11.55	-1.032	0.681	4.475	0.947	39		
1200S200-68	0.0713	33	4.06	1.192	21.955	3.659	4.291	0.479	0.634	21.378	3.216	63.54	58.86	2771	2771	2.02	14.176	-1.017	0.673	4.456	0.948	47.7		
1200S200-68	0.0713	50	4.06	1.192	21.955	3.659	4.291	0.479	0.634	20.865	2.963	88.72	76.6	2771	2771	2.02	14.176	-1.017	0.673	4.456	0.948	38.7		
1200S200-97	0.1017	33	5.71	1.677	30.428	5.071	4.259	0.635	0.615	30.418	4.899	96.81	95.49	8147	7411	5.783	19.15	-0.987	0.656	4.415	0.95	47		
1200S200-97	0.1017	50	5.71	1.677	30.428	5.071	4.259	0.635	0.615	30.177	4.66	139.52	126.94	8147	7411	5.783	19.15	-0.987	0.656	4.415	0.95	38.1		
1200S200-118	0.1242	33	6.9	2.028	36.361	6.06	4.235	0.733	0.601	36.349	6.058	119.71	119.75	3189	9714	10.427	22.451	-0.964	0.644	4.384	0.952	46.6		
1200S200-118	0.1242	50	6.9	2.028	36.361	6.06	4.235	0.733	0.601	36.349	5.865	175.61	166.9	4986	1037	10.427	22.451	-0.964	0.644	4.384	0.952	37.7		
1400S200-54	0.0566	33	3.63	1.066	25.961	3.709	4.936	0.406	0.617	23.768	2.866	56.63	48.21	1177	1177	1.138	16.355	-0.946	0.633	5.063	0.965	47		
1400S200-54	0.0566	50	3.63	1.066	25.961	3.709	4.936	0.406	0.617	23.201	2.44	73.06	61.71	1177	1177	1.138	16.355	-0.946	0.633	5.063	0.965	38.2		
1400S200-68	0.0713	33	4.54	1.335	32.297	4.614	4.919	0.494	0.608	30.686	3.824	75.56	67.54	2365	2365	2.262	20.083	-0.932	0.625	5.043	0.966	46.7		
1400S200-68	0.0713	50	4.54	1.335	32.297	4.614	4.919	0.494	0.608	29.798	3.505	104.93	87.16	2365	2365	2.262	20.083	-0.932	0.625	5.043	0.966	37.9		
1400S200-97	0.1017	33	6.4	1.881	44.87	6.41	4.884	0.655	0.59	44.687	5.918	16.94	111.94	5939	6939	6.484	27.156	-0.904	0.609	5.002	0.967	45.9		
1400S200-97	0.1017	50	6.4	1.881	44.87	6.41	4.884	0.655	0.59	43.619	5.58	167.08	147.07	5939	6939	6.484	27.156	-0.904	0.609	5.002	0.967	37.3		
1400S200-118	0.1242	33	7.74	2.276	53.719	7.674	4.858	0.756	0.576	53.525	7.097	212.48	195.75	2745	1287	11.704	31.861	-0.883	0.598	4.971	0.968	36.8		
1600S200-68	0.0713	33	5.03	1.477	45.31	5.664	5.538	0.506	0.585	41.918	4.431	87.56	75.16	2062	2062	2.503	27.155	-0.862	0.584	5.635	0.977	45.7		
1600S200-68	0.0713	50	5.03	1.477	45.31	5.664	5.538	0.506	0.585	40.526	4.045	121.11	96.33	2062	2062	2.503	27.155	-0.862	0.584	5.635	0.977	37.1		
1600S200-97	0.1017	33	7.09	2.084	63.076	7.885	5.501	0.671	0.567	61.76	6.938	137.1	126.87	6043	6043	7.186	36.744	-0.835	0.569	5.593	0.978	44.9		
1600S200-97	0.1017	50	7.09	2.084	63.076	7.885	5.501	0.671	0.567	59.936	6.5	194.62	165.1	6043	6043	7.186	36.744	-0.835	0.569	5.593	0.978	36.4		
1600S200-118	0.1242	33	8.59	2.525	75.633	9.454	5.473	0.774	0.554	74.087	8.332	249.45	222.01	1088	1088	12.29	43.132	-0.815	0.558	5.561	0.979	44.3		
1600S200-118	0.1242	50	8.59	2.525	75.633	9.454	5.473	0.774	0.554	74.087	8.332	249.45	222.01	1088	1088	12.29	43.132	-0.815	0.558	5.561	0.979	35.9		
362S250-33	0.0346	33	1.13	0.331	0.76	0.419	1.514	0.299	0.951	-	-	6.59	1024	521	0.132	0.965	-2.211	1.284	2.844	0.395	64.2			
362S250-43	0.0451	33	1.46	0.43	0.98	0.541	1.51	0.385	0.946	0.98	0.449	8.88												

TABLE 5—OEG CONVENTIONAL STUD SECTION PROPERTIES^{1,2,3,4} (Continued)

362S250-97	0.1017	33	3.16	0.927	2.028	1.119	1.479	0.773	0.913	2.028	1.103	24.91	22.11	3922	577	3.197	2.452	-2.126	1.239	2.746	0.401	65.7		
362S250-97	0.1017	50	3.16	0.927	2.028	1.119	1.479	0.773	0.913	2.028	1.056	35.51	33.49	5943	875	3.197	2.452	-2.126	1.239	2.746	0.401	52.5		
400S250-33	0.0346	33	1.17	0.344	0.948	0.474	1.66	0.31	0.949	-	-	-	-	-	0.137	1.165	-2.151	1.259	2.878	0.441	63.7			
400S250-43	0.0451	33	1.52	0.447	1.224	0.612	1.655	0.399	0.945	1.224	0.503	9.93	10.42	1739	810	0.303	1.486	-2.139	1.252	2.865	0.443	63.7		
400S250-54	0.0566	33	1.89	0.556	1.512	0.756	1.649	0.49	0.938	1.512	0.653	12.91	13.92	2603	944	0.594	1.821	-2.124	1.244	2.848	0.444	63.8		
400S250-54	0.0566	50	1.89	0.556	1.512	0.756	1.649	0.49	0.938	1.496	0.576	17.24	18.43	3372	1223	0.594	1.821	-2.124	1.244	2.848	0.444	51.6		
400S250-68	0.0713	33	2.36	0.693	1.865	0.932	1.64	0.599	0.929	1.865	0.883	17.45	18.42	3215	895	1.174	2.225	-2.105	1.235	2.826	0.445	64		
400S250-68	0.0713	50	2.36	0.693	1.865	0.932	1.64	0.599	0.929	1.865	0.775	23.2	24.77	4871	1356	1.174	2.225	-2.105	1.235	2.826	0.445	51.6		
400S250-97	0.1017	33	3.28	0.966	2.542	1.271	1.623	0.801	0.911	2.542	1.257	28.39	25.12	4394	797	3.329	2.978	-2.066	1.214	2.781	0.448	64.8		
400S250-97	0.1017	50	3.28	0.966	2.542	1.271	1.623	0.801	0.911	2.542	1.202	40.44	38.05	5658	1207	3.329	2.978	-2.066	1.214	2.781	0.448	51.9		
600S250-43	0.0451	33	1.83	0.537	3.083	1.028	2.396	0.458	0.923	3.083	0.918	18.14	16.21	1416	1240	0.364	3.411	-1.874	1.136	3.179	0.652	62.4		
Profile	Design	Fy Thick.	Weight (ksi) (lb/ft)	Gross Properties							Effective Properties							Torsional Properties						
	Area (in^2)			Ix (in^4)	Sx (in^4)	rx (in^3)	Iy (in^4)	ry (in^4)	Ixe (in^4)	Sxe (in^3)	Mal (lb-in)	Mad (lb-in)	Vag (lb)	Janet (in^4)	Jx10^3 (in^6)	Cw (in)	Xo (in)	m (in)	Ro (in)	β (in)	Lu			
	(in)			(kci)	(lb/ft)	(in^2)	(in^4)	(in^3)	(in)	(in^4)	(lb-in)	(lb-in)	(lb)	(in^4)	(in^6)	(in)	(in)	(in)	(in)	(in)	(in)			
600S250-54	0.0566	33	2.28	0.67	3.82	1.273	2.389	0.562	0.917	3.819	1.159	22.9	21.9	2739	1890	0.715	4.194	-1.86	1.129	3.163	0.654	62.3		
600S250-54	0.0566	50	2.28	0.67	3.82	1.273	2.389	0.562	0.917	3.766	1.069	32	28.72	2823	1947	0.715	4.194	-1.86	1.129	3.163	0.654	50.5		
600S250-68	0.0713	33	2.84	0.836	4.728	1.576	2.379	0.688	0.908	4.727	1.508	32.83	31.52	4347	2339	1.416	5.145	-1.842	1.119	3.142	0.657	62.2		
600S250-68	0.0713	50	2.84	0.836	4.728	1.576	2.379	0.688	0.908	4.724	1.386	41.5	39.08	5350	2879	1.416	5.145	-1.842	1.119	3.142	0.657	50.4		
600S250-97	0.1017	33	3.98	1.169	6.498	2.166	2.358	0.923	0.889	6.497	2.161	48.81	48.93	5911	2512	4.03	6.947	-1.803	1.1	3.099	0.661	62.2		
600S250-97	0.1017	50	3.98	1.169	6.498	2.166	2.358	0.923	0.889	6.497	2.063	69.39	66.84	0472	3806	4.03	6.947	-1.803	1.1	3.099	0.661	50.2		
600S250-118	0.1242	33	4.79	1.407	7.715	2.572	2.342	1.076	0.875	7.715	2.572	59.6	59.6	8267	2391	7.234	8.142	-1.775	1.085	3.066	0.665	57.3		
600S250-118	0.1242	50	4.79	1.407	7.715	2.572	2.342	1.076	0.875	7.715	2.498	85.94	86.87	2526	3622	7.234	8.142	-1.775	1.085	3.066	0.665	46.7		
800S250-43	0.0451	33	2.13	0.627	6.017	1.504	3.097	0.5	0.893	6.015	1.314	25.96	22.07	1051	1051	0.425	6.374	-1.675	1.043	3.632	0.787	61.5		
800S250-54	0.0566	33	2.66	0.783	7.467	1.867	3.089	0.614	0.886	7.466	1.712	33.82	30.08	2091	2091	0.836	7.85	-1.661	1.036	3.617	0.789	61.4		
800S250-54	0.0566	50	2.66	0.783	7.467	1.867	3.089	0.614	0.886	7.378	1.525	45.66	39.14	2091	2091	0.836	7.85	-1.661	1.036	3.617	0.789	49.8		
800S250-68	0.0713	33	3.33	0.978	9.263	2.316	3.077	0.752	0.877	9.261	2.22	48.33	43.65	4221	3367	1.658	9.652	-1.644	1.027	3.597	0.791	58.2		
800S250-68	0.0713	50	3.33	0.978	9.263	2.316	3.077	0.752	0.877	9.241	2.059	61.65	53.78	4221	3367	1.658	9.652	-1.644	1.027	3.597	0.791	49.6		
800S250-97	0.1017	33	4.67	1.372	12.793	3.198	3.053	1.009	0.858	12.79	3.191	72.07	70.75	3843	4824	4.731	13.091	-1.607	1.008	3.555	0.796	56.8		
800S250-97	0.1017	50	4.67	1.372	12.793	3.198	3.053	1.009	0.858	12.79	3.054	102.7	93.46	0885	5938	4.731	13.091	-1.607	1.008	3.555	0.796	46.4		
800S250-118	0.1242	33	5.63	1.655	15.246	3.811	3.035	1.176	0.843	15.243	3.811	88.32	88.33	1341	4971	8.511	15.395	-1.58	0.994	3.524	0.799	55.9		
800S250-118	0.1242	50	5.63	1.655	15.246	3.811	3.035	1.176	0.843	15.243	3.707	127.52	122.98	6235	7115	8.511	15.395	-1.58	0.994	3.524	0.799	45.6		
1000S250-43	0.0451	33	2.44	0.717	10.205	2.041	3.771	0.531	0.86	10.203	1.617	31.95	27.68	836	836	0.486	10.481	-1.518	0.965	4.155	0.867	60.7		
1000S250-54	0.0566	33	3.05	0.896	12.681	2.536	3.762	0.653	0.854	12.677	2.277	44.99	38.04	1661	1661	0.957	12.922	-1.505	0.958	4.141	0.868	60.5		
1000S250-54	0.0566	50	3.05	0.896	12.681	2.536	3.762	0.653	0.854	12.661	1.879	56.27	49.19	1661	1661	0.957	12.922	-1.505	0.958	4.141	0.868	49.1		
1000S250-68	0.0713	33	3.81	1.121	15.756	3.151	3.749	0.799	0.844	15.752	3.028	65.93	55.64	3345	3345	1.899	15.909	-1.488	0.95	4.121	0.87	57.3		
1000S250-68	0.0713	50	3.81	1.121	15.756	3.151	3.749	0.799	0.844	15.742	2.769	82.9	68.16	3345	3345	1.899	15.909	-1.488	0.95	4.121	0.87	48.8		
1000S250-97	0.1017	33	5.36	1.576	21.834	4.367	3.722	1.073	0.825	21.828	4.357	98.41	91.82	8843	6434	5.433	21.632	-1.454	0.932	4.08	0.873	55.8		
1000S250-97	0.1017	50	5.36	1.576	21.834	4.367	3.722	1.073	0.825	21.828	4.181	140.63	120.2	9864	7177	5.433	21.632	-1.454	0.932	4.08	0.873	45.6		
1000S250-118	0.1242	33	6.48	1.904	26.088	5.218	3.702	1.251	0.811	26.082	5.083	174.85	159.88	6235	9536	9.788	25.49	-1.428	0.918	4.05	0.876	54.7		
1000S250-118	0.1242	50	6.48	1.904	26.088	5.218	3.702	1.251	0.811	26.082	5.083	174.85	159.88	6235	9536	9.788	25.49	-1.428	0.918	4.05	0.876	44.8		
1200S250-54	0.0566	33	3.43	1.009	19.687	3.281	4.417	0.683	0.823	18.832	2.483	49.06	45.45	1377	1377	1.078	19.505	-1.378	0.892	4.699	0.914	59.5		
1200S250-54	0.0566	50	3.43	1.009	19.687	3.281	4.417	0.683	0.823	18.437	2.149	64.34	58.42	1377	1377	1.078	19.505	-1.378	0.892	4.699	0.914	48.3		
1200S250-68	0.0713	33	4.3	1.263	24.491	4.082	4.403	0.836	0.813	23.964	3.496	69.08	62.98	2771	2771	2.141	24.034	-1.362	0.884	4.68	0.915	59.2		
1200S250-68	0.0713	50	4.3	1.263	24.491	4.082	4.403	0.836	0.813	23.576	3.007	90.04	81.64	2771	2771	2.141	24.034	-1.362	0.884	4.68	0.915	48.1		
1200S250-97	0.1017	33	6.05	1.779	34.027	5.671	4.373	1.122	0.794	34.017	5.496	108.6	102.58	8147	7411	6.134	32.734	-1.329	0.867	4.639	0.918	58.6		
1200S250-97	0.1017	50	6.05	1.779	34.027	5.671	4.373	1.122	0.794	33.837	5.038	150.83	135.45	8147	7411	6.134	32.734	-1.329	0.867	4.639	0.918	47.5		
1200S250-118	0.1242	33	7.32	2.152	40.74	6.79	4.351	1.308	0.78	40.728	6.788	134.13	133.26	3189	9714	11.065	38.619	-1.305	0.854	4.609	0.92	58.2		
1200S250-118	0.1242	50	7.32	2.152	40.74	6.79	4.351	1.308	0.78	40.728														

TABLE 5—OEG CONVENTIONAL STUD SECTION PROPERTIES^{1,2,3,4} (Continued)

1400S250-97	0.1017	33	6.74	1.983	49.781	7.112	5.011	1.161	0.765	49.583	6.611	30.65	120.72	6939	6939	6.835	46.52	-1.225	0.811	5.215	0.945	57.6		
1400S250-97	0.1017	50	6.74	1.983	49.781	7.112	5.011	1.161	0.765	48.652	6.011	79.96	158.04	6939	6939	6.835	46.52	-1.225	0.811	5.215	0.945	46.7		
1400S250-118	0.1242	33	8.17	2.4	59.697	8.528	4.987	1.353	0.751	59.678	8.331	64.62	158.71	2745	1287	12.342	54.927	-1.203	0.798	5.185	0.946	57.1		
1400S250-118	0.1242	50	8.17	2.4	59.697	8.528	4.987	1.353	0.751	59.508	7.881	235.96	210.55	2745	1287	12.342	54.927	-1.203	0.798	5.185	0.946	46.2		
1600S250-68	0.0713	33	5.27	1.549	49.832	6.229	5.673	0.889	0.758	46.61	4.793	94.7	81.74	2062	2062	2.624	46.23	-1.167	0.778	5.841	0.96	57.3		
1600S250-68	0.0713	50	5.27	1.549	49.832	6.229	5.673	0.889	0.758	45.551	4.092	122.52	104.69	2062	2062	2.624	46.23	-1.167	0.778	5.841	0.96	46.5		
1600S250-97	0.1017	33	7.44	2.186	69.503	8.688	5.639	1.193	0.739	68.162	7.729	52.72	137.55	5043	6043	7.536	63.082	-1.138	0.762	5.8	0.962	56.5		
1600S250-97	0.1017	50	7.44	2.186	69.503	8.688	5.639	1.193	0.739	66.581	6.983	209.07	178.72	5043	6043	7.536	63.082	-1.138	0.762	5.8	0.962	45.9		
1600S250-118	0.1242	33	9.01	2.649	83.459	10.43	5.613	1.39	0.724	33.429	9.828	194.2	182.77	1088	1088	13.62	74.524	-1.116	0.75	5.769	0.963	56		
1600S250-118	0.1242	50	9.01	2.649	83.459	10.43	5.613	1.39	0.724	31.927	9.223	276.13	240.23	1088	1088	13.62	74.524	-1.116	0.75	5.769	0.963	45.4		
362S300-33	0.0346	33	1.24	0.366	0.871	0.481	1.543	0.463	1.125	-	-	-	6.89	1024	521	0.146	1.478	-2.686	1.537	3.296	0.336	74.3		
362S300-43	0.0451	33	1.62	0.475	1.125	0.621	1.539	0.596	1.12	-	-	-	9.85	1739	676	0.322	1.888	-2.674	1.53	3.282	0.336	74.3		
Profile	Design Thick.	Fy	Weight	Gross Properties							Effective Properties							Torsional Properties						
				Area	Ix	Sx	rx	Iy	ry	Ixe	Sxe	Mal	Mad	Vag	Janet	Jx10^3	Cw	Xo	m	Ro	β	Lu	(in)	
				(in)	(ksi)	(lb/ft)	(in^2)	(in^4)	(in^3)	(in)	(in^4)	(in)	(in^4)	(in^3)	(lb-in)	(lb-in)	(lb)	(in^4)	(in^6)	(in)				(in)
362S300-54	0.0566	33	2.01	0.592	1.391	0.767	1.533	0.734	1.114	1.379	0.607	11.99	13.22	2341	705	0.632	2.316	-2.659	1.522	3.265	0.337	74.5		
362S300-54	0.0566	50	2.01	0.592	1.391	0.767	1.533	0.734	1.114	1.295	0.529	15.83	17.35	3372	1016	0.632	2.316	-2.659	1.522	3.265	0.337	60.2		
362S300-68	0.0713	33	2.51	0.738	1.716	0.947	1.525	0.9	1.105	1.715	0.811	16.02	17.65	2884	662	1.25	2.833	-2.64	1.512	3.243	0.337	74.9		
362S300-68	0.0713	50	2.51	0.738	1.716	0.947	1.525	0.9	1.105	1.681	0.716	21.45	23.43	4370	1004	1.25	2.833	-2.64	1.512	3.243	0.337	60.4		
362S300-97	0.1017	33	3.5	1.029	2.343	1.293	1.509	1.213	1.086	2.343	1.226	27.15	25.55	3922	577	3.548	3.803	-2.6	1.491	3.196	0.338	76.2		
362S300-97	0.1017	50	3.5	1.029	2.343	1.293	1.509	1.213	1.086	2.318	1.15	34.44	36.43	5943	875	3.548	3.803	-2.6	1.491	3.196	0.338	60.9		
400S300-33	0.0346	33	1.29	0.379	1.084	0.542	1.692	0.479	1.125	-	-	-	-	-	0.151	1.786	-2.621	1.51	3.316	0.375	73.9			
400S300-43	0.0451	33	1.67	0.492	1.4	0.7	1.687	0.617	1.12	-	-	-	-	-	0.334	2.282	-2.608	1.503	3.302	0.376	73.9			
400S300-54	0.0566	33	2.09	0.613	1.732	0.866	1.681	0.76	1.114	1.717	0.68	13.44	14.7	2603	944	0.655	2.802	-2.594	1.496	3.285	0.377	74		
400S300-54	0.0566	50	2.09	0.613	1.732	0.866	1.681	0.76	1.114	1.612	0.592	17.72	19.25	3372	1223	0.655	2.802	-2.594	1.496	3.285	0.377	59.9		
400S300-68	0.0713	33	2.6	0.764	2.14	1.07	1.673	0.933	1.105	2.138	0.914	18.07	19.68	3215	895	1.295	3.432	-2.574	1.486	3.263	0.378	74.3		
400S300-68	0.0713	50	2.6	0.764	2.14	1.07	1.673	0.933	1.105	2.094	0.805	24.1	26.06	4871	1356	1.295	3.432	-2.574	1.486	3.263	0.378	60		
400S300-97	0.1017	33	3.63	1.067	2.928	1.464	1.656	1.259	1.086	2.929	1.391	30.8	28.93	4394	797	3.679	4.619	-2.535	1.465	3.217	0.379	75.3		
400S300-97	0.1017	50	3.63	1.067	2.928	1.464	1.656	1.259	1.086	2.894	1.307	39.13	40.74	6658	1207	3.679	4.619	-2.535	1.465	3.217	0.379	60.3		
600S300-54	0.0566	33	2.47	0.726	4.32	1.44	2.439	0.875	1.098	4.269	1.211	23.93	22.81	2739	1890	0.775	6.452	-2.299	1.372	3.527	0.575	72.8		
600S300-54	0.0566	50	2.47	0.726	4.32	1.44	2.439	0.875	1.098	4.015	1.106	33.13	29.63	2823	1947	0.775	6.452	-2.299	1.372	3.527	0.575	59.1		
600S300-68	0.0713	33	3.09	0.907	5.355	1.785	2.43	1.075	1.089	5.344	1.581	31.24	30.89	4347	2339	1.537	7.937	-2.28	1.363	3.506	0.577	72.8		
600S300-68	0.0713	50	3.09	0.907	5.355	1.785	2.43	1.075	1.089	5.222	1.446	43.3	40.54	5350	2879	1.537	7.937	-2.28	1.363	3.506	0.577	58.9		
600S300-97	0.1017	33	4.32	1.271	7.383	2.461	2.41	1.454	1.07	7.382	2.353	52.08	52.42	5911	2512	4.381	10.776	-2.241	1.343	3.461	0.581	68.8		
600S300-97	0.1017	50	4.32	1.271	7.383	2.461	2.41	1.454	1.07	7.281	2.248	67.29	64.7	0472	3806	4.381	10.776	-2.241	1.343	3.461	0.581	58.8		
600S300-118	0.1242	33	5.21	1.531	8.787	2.929	2.396	1.705	1.055	8.787	2.841	64.31	66.3	8267	2391	7.872	12.683	-2.212	1.328	3.427	0.583	68.1		
600S300-118	0.1242	50	5.21	1.531	8.787	2.929	2.396	1.705	1.055	8.713	2.797	94.26	90.41	2526	3622	7.872	12.683	-2.212	1.328	3.427	0.583	55.4		
800S300-54	0.0566	33	2.86	0.839	8.36	2.09	3.156	0.959	1.069	8.249	1.785	35.28	31.14	2091	2091	0.896	12.076	-2.073	1.271	3.924	0.721	72.2		
800S300-54	0.0566	50	2.86	0.839	8.36	2.09	3.156	0.959	1.069	7.863	1.535	45.97	40.24	2091	2091	0.896	12.076	-2.073	1.271	3.924	0.721	58.6		
800S300-68	0.0713	33	3.57	1.05	10.384	2.596	3.145	1.179	1.06	10.351	2.321	45.86	42.56	4221	3367	1.779	14.888	-2.055	1.262	3.904	0.723	72		
800S300-68	0.0713	50	3.57	1.05	10.384	2.596	3.145	1.179	1.06	10.084	2.145	64.22	55.49	4221	3367	1.779	14.888	-2.055	1.262	3.904	0.723	58.4		
800S300-97	0.1017	33	5.01	1.474	14.379	3.595	3.123	1.595	1.04	14.377	3.443	76.22	73.28	3843	4824	5.082	20.304	-2.017	1.243	3.861	0.727	67.7		
800S300-97	0.1017	50	5.01	1.474	14.379	3.595	3.123	1.595	1.04	14.172	3.304	98.93	89.93	0885	5938	5.082	20.304	-2.017	1.243	3.861	0.727	58.1		
800S300-118	0.1242	33	6.05	1.779	17.172	4.293	3.107	1.872	1.026	17.169	4.168	94.35	95.82	1341	4971	9.149	23.979	-1.989	1.229	3.829	0.73	66.8		
800S300-118	0.1242	50	6.05	1.779	17.172	4.293	3.107	1.872	1.026	17.021	4.108	138.43	126.75	6235	7115	9.149	23.979	-1.989	1.229	3.829	0.73	54.5		
1000S300-54	0.0566	33	3.24	0.953	14.08	2.816	3.845	1.024	1.037	13.938	2.312	45.7	39.43	1661	1661	1.017	19.888	-1.892	1.185	4.409	0.816	71.5		
1000S300-54	0.0566	50	3.24	0.953	14.08	2.816	3.845	1.024	1.037	13.441	1.903	56.97	50.71	1661	1661	1.017	19.888	-1.892	1.185	4.409	0.816	58		
1000S300-68	0.0713	33	4.06	1.192	17.513	3.503	3.833	1.258	1.027	17.442	3.158	62.41	54.31	3345	3345	2.02	24.551	-1.874	1.176	4.389	0.818	71.3		
1000S300-68	0.0713	50	4.06	1.192	17.513</																			

TABLE 5—OEG CONVENTIONAL STUD SECTION PROPERTIES^{1,2,3,4} (Continued)

1000S300-118	0.1242	50	6.9	2.028	29.117	5.823	3.789	1.998	0.993	28.858	5.587	188.24	164.27	6235	9536	10.427	39.725	-1.811	1.144	4.316	0.824	53.8		
1200S300-54	0.0566	33	3.63	1.066	21.705	3.618	4.513	1.074	1.004	21.65	2.736	54.06	47.38	1377	1377	1.138	30.051	-1.743	1.111	4.941	0.876	70.7		
1200S300-54	0.0566	50	3.63	1.066	21.705	3.618	4.513	1.074	1.004	21.045	2.273	68.04	60.68	1377	1377	1.138	30.051	-1.743	1.111	4.941	0.876	57.4		
1200S300-68	0.0713	33	4.54	1.335	27.028	4.505	4.5	1.32	0.994	26.919	4.064	80.31	65.75	2771	2771	2.262	37.126	-1.726	1.103	4.921	0.877	70.5		
1200S300-68	0.0713	50	4.54	1.335	27.028	4.505	4.5	1.32	0.994	26.51	3.317	99.33	84.83	2771	2771	2.262	37.126	-1.726	1.103	4.921	0.877	57.2		
1200S300-97	0.1017	33	6.4	1.881	37.627	6.271	4.473	1.787	0.975	37.617	6.035	133.59	116.12	3147	7411	6.484	50.853	-1.691	1.085	4.88	0.88	66		
1200S300-97	0.1017	50	6.4	1.881	37.627	6.271	4.473	1.787	0.975	37.087	5.831	174.58	141.13	3147	7411	6.484	50.853	-1.691	1.085	4.88	0.88	56.7		
1200S300-118	0.1242	33	7.74	2.276	45.119	7.52	4.452	2.096	0.96	45.107	7.323	165.77	154.73	3189	9714	11.704	60.251	-1.666	1.071	4.85	0.882	64.9		
1200S300-118	0.1242	50	7.74	2.276	45.119	7.52	4.452	2.096	0.96	44.722	7.232	243.68	201.79	4986	1037	11.704	60.251	-1.666	1.071	4.85	0.882	53		
1400S300-54	0.0566	33	4.01	1.179	31.463	4.495	5.166	1.115	0.972	29.584	3.019	59.66	54.77	1177	1177	1.259	42.69	-1.617	1.046	5.5	0.914	69.9		
1400S300-54	0.0566	50	4.01	1.179	31.463	4.495	5.166	1.115	0.972	27.235	2.58	77.26	69.85	1177	1177	1.259	42.69	-1.617	1.046	5.5	0.914	56.8		
1400S300-68	0.0713	33	5.03	1.477	39.213	5.602	5.152	1.37	0.963	37.904	4.237	83.72	76.55	2365	2365	2.503	52.772	-1.601	1.038	5.48	0.915	69.6		
1400S300-68	0.0713	50	5.03	1.477	39.213	5.602	5.152	1.37	0.963	36.295	3.655	109.43	98.3	2365	2365	2.503	52.772	-1.601	1.038	5.48	0.915	56.5		
Profile	Design Thick.	Fy	Weight	Gross Properties							Effective Properties							Torsional Properties						
				Area	Ix	Sx	rx	Iy	ry	Ixe	Sxe	Mal	Mad	Vag	Vanet	Jx10^3	Cw	Xo	m	Ro	β	(in)	Lu	
				(in)	(ksi)	(lb/ft)	(in^2)	(in^4)	(in)	(in^4)	(in)	(in^4)	(in^3)	(lb-in)	(lb)	(lb)	(in^4)	(in^6)	(in)	(in)				(in)
1400S300-97	0.1017	33	7.09	2.084	54.692	7.813	5.123	1.854	0.943	54.577	7.035	139.02	127.07	6939	6939	7.186	72.365	-1.568	1.02	5.44	0.917	68.9		
1400S300-97	0.1017	50	7.09	2.084	54.692	7.813	5.123	1.854	0.943	53.232	6.373	190.8	165.54	6939	6939	7.186	72.365	-1.568	1.02	5.44	0.917	55.9		
1400S300-118	0.1242	33	8.59	2.525	65.676	9.382	5.1	2.175	0.928	65.657	9.046	178.76	167.63	2745	1287	12.981	85.812	-1.544	1.008	5.409	0.919	68.5		
1400S300-118	0.1242	50	8.59	2.525	65.676	9.382	5.1	2.175	0.928	65.574	8.427	252.31	220.94	2745	1287	12.981	85.812	-1.544	1.008	5.409	0.919	55.5		
1600S300-68	0.0713	33	5.51	1.62	54.355	6.794	5.793	1.411	0.933	51.472	4.893	96.68	86.51	2062	2062	2.745	71.608	-1.494	0.981	6.055	0.939	68.7		
1600S300-68	0.0713	50	5.51	1.62	54.355	6.794	5.793	1.411	0.933	49.116	4.21	126.05	110.6	2062	2062	2.745	71.608	-1.494	0.981	6.055	0.939	55.8		
1600S300-97	0.1017	33	7.78	2.288	75.929	9.491	5.761	1.91	0.914	74.744	8.203	162.1	145.47	5043	6043	7.887	98.275	-1.463	0.964	6.014	0.941	67.9		
1600S300-97	0.1017	50	7.78	2.288	75.929	9.491	5.761	1.91	0.914	72.678	7.391	221.3	188.44	5043	6043	7.887	98.275	-1.463	0.964	6.014	0.941	55.1		
1600S300-118	0.1242	33	9.43	2.773	91.284	11.41	5.738	2.24	0.899	91.255	0.638	210.21	193.58	1088	1088	14.258	16.606	-1.439	0.951	5.983	0.942	67.4		
1600S300-118	0.1242	50	9.43	2.773	91.284	11.41	5.738	2.24	0.899	89.916	9.836	294.49	253.4	1088	1088	14.258	16.606	-1.439	0.951	5.983	0.942	54.7		
600S350-54	0.0566	33	2.81	0.825	5.023	1.674	2.467	1.491	1.344	4.912	1.453	28.7	27.98	2739	1890	0.881	12.942	-3.037	1.787	4.137	0.461	91.8		
600S350-54	0.0566	50	2.81	0.825	5.023	1.674	2.467	1.491	1.344	4.722	1.335	39.98	36.57	2823	1947	0.881	12.942	-3.037	1.787	4.137	0.461	74.4		
600S350-68	0.0713	33	3.51	1.032	6.238	2.079	2.459	1.841	1.336	6.237	1.949	38.51	37.64	4347	2339	1.748	15.968	-3.018	1.777	4.116	0.462	91.8		
600S350-68	0.0713	50	3.51	1.032	6.238	2.079	2.459	1.841	1.336	6.167	1.771	53.02	49.71	5350	2879	1.748	15.968	-3.018	1.777	4.116	0.462	74.4		
600S350-97	0.1017	33	4.93	1.449	8.633	2.878	2.441	2.518	1.318	8.632	2.823	61.56	62.5	5911	2512	4.994	21.811	-2.979	1.757	4.071	0.464	87.5		
600S350-97	0.1017	50	4.93	1.449	8.633	2.878	2.441	2.518	1.318	8.632	2.594	77.65	78.38	0472	3806	4.994	21.811	-2.979	1.757	4.071	0.464	74.4		
600S350-118	0.1242	33	5.95	1.748	10.306	3.435	2.428	2.979	1.305	10.306	3.268	108.45	107.7	2526	3622	8.99	25.791	-2.951	1.742	4.038	0.466	86.9		
600S350-118	0.1242	50	5.95	1.748	10.306	3.435	2.428	2.979	1.305	10.306	3.268	108.45	107.7	2526	3622	8.99	25.791	-2.951	1.742	4.038	0.466	70.6		
800S350-54	0.0566	33	3.19	0.938	9.685	2.421	3.213	1.646	1.324	9.478	2.125	41.98	38.3	2091	2091	1.002	22.897	-2.766	1.668	4.442	0.612	90		
800S350-54	0.0566	50	3.19	0.938	9.685	2.421	3.213	1.646	1.324	9.191	1.869	55.97	49.75	2091	2091	1.002	22.897	-2.766	1.668	4.442	0.612	73.1		
800S350-68	0.0713	33	4	1.174	12.048	3.012	3.203	2.034	1.316	12.046	2.838	56.07	51.9	4221	3367	1.99	28.308	-2.748	1.658	4.421	0.614	89.9		
800S350-68	0.0713	50	4	1.174	12.048	3.012	3.203	2.034	1.316	11.91	2.596	77.74	68.07	4221	3367	1.99	28.308	-2.748	1.658	4.421	0.614	72.9		
800S350-97	0.1017	33	5.62	1.652	16.741	4.185	3.183	2.784	1.298	16.739	3.786	113.35	108.71	0885	5938	5.696	38.834	-2.71	1.639	4.378	0.617	85.4		
800S350-97	0.1017	50	5.62	1.652	16.741	4.185	3.183	2.784	1.298	16.739	3.786	113.35	108.71	0885	5938	5.696	38.834	-2.71	1.639	4.378	0.617	72.7		
800S350-118	0.1242	33	6.79	1.997	20.045	5.011	3.168	3.296	1.285	20.043	5.011	111.45	111.46	1341	4971	10.267	46.068	-2.682	1.624	4.346	0.619	84.6		
800S350-118	0.1242	50	6.79	1.997	20.045	5.011	3.168	3.296	1.285	20.043	4.763	158.04	150.43	6235	7115	10.267	46.068	-2.682	1.624	4.346	0.619	68.9		
1000S350-54	0.0566	33	3.58	1.052	16.223	3.245	3.928	1.768	1.297	15.943	2.772	54.77	48.71	1661	1661	1.123	36.575	-2.546	1.566	4.857	0.725	88.9		
1000S350-54	0.0566	50	3.58	1.052	16.223	3.245	3.928	1.768	1.297	15.578	2.328	69.7	62.99	1661	1661	1.123	36.575	-2.546	1.566	4.857	0.725	72.2		
1000S350-68	0.0713	33	4.48	1.317	20.209	4.042	3.917	2.185	1.288	20.205	3.824	75.57	66.42	3345	3345	2.232	45.277	-2.529	1.557	4.837	0.727	88.7		
1000S350-68	0.0713	50	4.48	1.317	20.209	4.042	3.917	2.185	1.288	20.027	3.418	102.33	86.63	3345	3345	2.232	45.277	-2.529	1.557	4.837	0.727	72		
1000S350-97	0.1017	33	6.31	1.855	28.154	5.631	3.895	2.992	1.27	28.149	5.518	120.33	112.84	8843	6434	6.397	62.28	-2.492	1.538	4.795	0.73	84.1		
1000S350-97	0.1017	50	6.31	1.855	28.154	5.6																		

TABLE 5—OEG CONVENTIONAL STUD SECTION PROPERTIES^{1,2,3,4} (Continued)

1200S350-68	0.0713	33	4.97	1.46	31.004	5.167	4.609	2.306	1.257	30.997	4.908	96.98	80.85	2771	2771	2.473	67.251	-2.346	1.469	5.322	0.806	87.7
1200S350-68	0.0713	50	4.97	1.46	31.004	5.167	4.609	2.306	1.257	30.917	4.062	121.6	104.93	2771	2771	2.473	67.251	-2.346	1.469	5.322	0.806	71.2
1200S350-97	0.1017	33	7	2.059	43.28	7.213	4.585	3.159	1.239	43.27	7.071	154.22	138.62	3147	7411	7.098	92.672	-2.31	1.45	5.281	0.809	83
1200S350-97	0.1017	50	7	2.059	43.28	7.213	4.585	3.159	1.239	43.27	6.59	197.32	170.91	3147	7411	7.098	92.672	-2.31	1.45	5.281	0.809	70.8
1200S350-118	0.1242	33	8.48	2.494	52.006	8.668	4.567	3.742	1.225	51.995	8.666	192.75	181.98	3189	9714	12.821	10.302	-2.284	1.436	5.251	0.811	81.9
1200S350-118	0.1242	50	8.48	2.494	52.006	8.668	4.567	3.742	1.225	51.995	8.26	274.08	239.06	4986	1037	12.821	10.302	-2.284	1.436	5.251	0.811	66.9
1400S350-54	0.0566	33	4.35	1.278	35.84	5.12	5.296	1.947	1.234	35.661	3.823	75.55	68.82	1177	1177	1.365	76.252	-2.207	1.4	5.868	0.859	87
1400S350-54	0.0566	50	4.35	1.278	35.84	5.12	5.296	1.947	1.234	33.317	3.249	97.28	88.28	1177	1177	1.365	76.252	-2.207	1.4	5.868	0.859	70.7
1400S350-68	0.0713	33	5.45	1.602	44.719	6.388	5.283	2.406	1.226	44.708	5.701	112.65	94.85	2365	2365	2.715	94.534	-2.19	1.391	5.849	0.86	86.8
1400S350-68	0.0713	50	5.45	1.602	44.719	6.388	5.283	2.406	1.226	44.708	4.71	141.01	122.54	2365	2365	2.715	94.534	-2.19	1.391	5.849	0.86	70.4
1400S350-97	0.1017	33	7.7	2.262	62.525	8.932	5.257	3.296	1.207	62.509	8.762	191.09	164.02	6939	6939	7.799	130.43	-2.156	1.373	5.809	0.862	82
1400S350-97	0.1017	50	7.7	2.262	62.525	8.932	5.257	3.296	1.207	62.509	8.19	245.21	201.34	6939	6939	7.799	130.43	-2.156	1.373	5.809	0.862	69.9
1400S350-118	0.1242	33	9.33	2.742	75.221	10.75	5.238	3.904	1.193	75.202	0.743	238.95	216.76	2745	1287	14.099	55.387	-2.13	1.36	5.779	0.864	80.9
1400S350-118	0.1242	50	9.33	2.742	75.221	10.75	5.238	3.904	1.193	75.202	10.26	340.45	282.98	2745	1287	14.099	55.387	-2.13	1.36	5.779	0.864	66.1
Profile	Design Thick.	Fy	Weight	Gross Properties						Effective Properties						Torsional Properties						
				Area	Ix	Sx	rx	Iy	ry	Ixe	Sxe	Mal	Mad	Vag	Vanet	Jx10^3	Cw	Xo	m	Ro	β	Lu
				(in)	(ksi)	(lb/ft)	(in^2)	(in^4)	(in^3)	(in)	(in^4)	(in)	(in^4)	(in^3)	(lb-in)	(lb-in)	(lb)	(in^4)	(in^6)	(in)		
1600S350-68	0.0713	33	5.94	1.745	61.641	7.705	5.944	2.49	1.195	58.539	6.042	19.39	108.09	2062	2062	2.957	127.37	-2.055	1.322	6.402	0.897	85.8
1600S350-68	0.0713	50	5.94	1.745	61.641	7.705	5.944	2.49	1.195	57.446	5.18	155.1	139.05	2062	2062	2.957	127.37	-2.055	1.322	6.402	0.897	69.7
1600S350-97	0.1017	33	8.39	2.466	86.296	10.79	5.916	3.41	1.176	84.932	9.772	193.1	176.74	6043	6043	8.501	75.895	-2.022	1.304	6.362	0.899	85.2
1600S350-97	0.1017	50	8.39	2.466	86.296	10.79	5.916	3.41	1.176	83.695	8.383	250.97	230.44	6043	6043	8.501	75.895	-2.022	1.304	6.362	0.899	69.1
1600S350-118	0.1242	33	10.17	2.99	03.924	12.99	5.895	4.039	1.162	03.894	2.368	244.39	231.31	1088	1088	15.376	209.692	-1.998	1.291	6.332	0.9	84.8
1600S350-118	0.1242	50	10.17	2.99	03.924	12.99	5.895	4.039	1.162	02.539	1.306	338.49	304.73	1088	1088	15.376	209.692	-1.998	1.291	6.332	0.9	68.8

For SI: 1 inch = 25.4 mm.

¹Effective properties incorporate the strength increase from the cold work of forming, as applicable.²Tabulated gross properties, including torsional properties, are based upon full-unreduced cross section of the studs, away from punch-outs.³For deflection calculations, use the effective moment of inertia.⁴Allowable moment includes cold-work of forming.TABLE 6—OEG CONVENTIONAL TRACK AND U-CHANNEL SECTION PROPERTIES^{1,2,3,4}

Profile	Design Thick.	Fy	Area	Weight	Gross Properties					Effective Properties					Torsional Properties					
					Ix	Sx	rx	Iy	ry	Ixe	Sxe	Mal	Mad	Vag	Jx10^3	Cw	Xo	m	Ro	β
					(in)	(ksi)	(in^2)	(lbs/ft)	(in^4)	(in^3)	(in)	(in^4)	(in^3)	(lb-in)	(lb)	(in^4)	(in^6)	(in)	(in)	
TRACKS																				
162T125-18	0.0188	33	0.078	0.26	0.042	0.048	0.733	0.013	0.411	0.03	0.025	0.5	302	0.0091	0.007	-0.876	0.503	1.215	0.479	
162T125-27	0.0283	33	0.117	0.4	0.063	0.072	0.735	0.02	0.41	0.051	0.044	0.87	541	0.0312	0.01	-0.872	0.501	1.211	0.482	
162T125-30	0.0312	33	0.129	0.44	0.07	0.079	0.735	0.022	0.409	0.057	0.05	1	597	0.0417	0.012	-0.87	0.5	1.21	0.483	
162T125-33	0.0346	33	0.143	0.49	0.077	0.087	0.736	0.024	0.408	0.066	0.058	1.15	663	0.0569	0.013	-0.868	0.499	1.209	0.484	
250T125-18	0.0188	33	0.094	0.32	0.104	0.079	1.052	0.015	0.4	0.078	0.044	0.88	245	0.0111	0.018	-0.767	0.46	1.362	0.682	
250T125-27	0.0283	33	0.141	0.48	0.157	0.119	1.053	0.022	0.398	0.129	0.079	1.56	685	0.0378	0.027	-0.763	0.457	1.36	0.685	
250T125-30	0.0312	33	0.156	0.53	0.173	0.131	1.053	0.025	0.397	0.145	0.09	1.77	832	0.0506	0.03	-0.762	0.456	1.359	0.686	
250T125-33	0.0346	33	0.173	0.59	0.192	0.145	1.054	0.027	0.397	0.166	0.103	2.03	1024	0.069	0.033	-0.76	0.456	1.358	0.687	
250T125-43	0.0451	33	0.225	0.77	0.25	0.188	1.055	0.035	0.395	0.231	0.147	2.91	1356	0.1526	0.042	-0.755	0.453	1.356	0.69	
250T125-54	0.0566	33	0.282	0.96	0.318	0.236	1.062	0.043	0.392	0.31	0.203	4.01	1692	0.3015	0.054	-0.749	0.449	1.357	0.696	
250T125-54	0.0566	50	0.282	0.96	0.318	0.236	1.062	0.043	0.392	0.297	0.188	5.64	2563	0.3015	0.054	-0.749	0.449	1.357	0.696	
250T125-68	0.0713	33	0.355	1.21	0.409	0.297	1.072	0.054	0.389	0.409	0.281	5.56	2112	0.6022	0.069	-0.74	0.444	1.36	0.704	
250T125-68	0.0713	50	0.355	1.21	0.409	0.297	1.072	0.054	0.389	0.403	0.262	7.85	3199	0.6022	0.069	-0.74	0.444	1.36	0.704	
350T125-18	0.0188	33	0.113	0.38	0.22	0.121	1.395	0.017	0.382	0.174	0.062	1.22	173	0.0133	0.038	-0.675	0.418	1.596	0.821	
350T125-27	0.0283	33	0.17	0.58	0.331	0.182	1.396	0.025	0.381	0.277	0.128	2.53	590	0.0453	0.057	-0.67	0.416	1.595	0.823	
350T125-30	0.0312	33	0.187	0.64	0.365	0.2	1.396	0.027	0.38	0.312	0.145	2.86	790	0.0607	0.063	-0.669	0.415	1.594	0.824	
350T125-33	0.0346	33	0.207	0.71	0.405	0.222	1.397	0.03	0.379	0.355	0.165	3.27	1024	0.0828	0.07	-0.668	0.414	1.594	0.824	

TABLE 6—OEG CONVENTIONAL TRACK AND U-CHANNEL SECTION PROPERTIES^{1,2,3,4} (Continued)

350T125-43	0.0451	33	0.27	0.92	0.528	0.288	1.398	0.038	0.377	0.49	0.233	4.61	1739	0.1832	0.09	-0.663	0.412	1.592	0.826
350T125-54	0.0566	33	0.339	1.15	0.668	0.361	1.404	0.048	0.375	0.651	0.317	6.26	2392	0.3619	0.114	-0.658	0.408	1.595	0.83
350T125-54	0.0566	50	0.339	1.15	0.668	0.361	1.404	0.048	0.375	0.626	0.297	8.9	3372	0.3619	0.114	-0.658	0.408	1.595	0.83
350T125-68	0.0713	33	0.427	1.45	0.851	0.454	1.412	0.059	0.372	0.851	0.433	8.55	2994	0.7231	0.144	-0.65	0.403	1.599	0.835
350T125-68	0.0713	50	0.427	1.45	0.851	0.454	1.412	0.059	0.372	0.839	0.407	12.19	4536	0.7231	0.144	-0.65	0.403	1.599	0.835
350T125-97	0.1017	33	0.608	2.07	1.243	0.645	1.43	0.081	0.366	1.243	0.645	14.57	4213	2.096	0.209	-0.636	0.394	1.607	0.844
350T125-97	0.1017	50	0.608	2.07	1.243	0.645	1.43	0.081	0.366	1.243	0.645	21.69	6383	2.096	0.209	-0.636	0.394	1.607	0.844
362T125-18	0.0188	33	0.115	0.39	0.238	0.127	1.437	0.017	0.38	0.189	0.064	1.26	167	0.0136	0.042	-0.665	0.413	1.628	0.833
362T125-27	0.0283	33	0.173	0.59	0.358	0.191	1.438	0.025	0.378	0.301	0.135	2.66	569	0.0463	0.062	-0.661	0.411	1.627	0.835
362T125-30	0.0312	33	0.191	0.65	0.395	0.21	1.438	0.027	0.378	0.339	0.152	3.01	762	0.062	0.068	-0.659	0.41	1.627	0.836
362T125-33	0.0346	33	0.212	0.72	0.438	0.232	1.439	0.03	0.377	0.385	0.174	3.44	1024	0.0845	0.076	-0.658	0.41	1.626	0.836
362T125-43	0.0451	33	0.276	0.94	0.571	0.302	1.439	0.039	0.375	0.531	0.245	4.84	1739	0.187	0.098	-0.654	0.407	1.625	0.838
362T125-54	0.0566	33	0.346	1.18	0.723	0.378	1.445	0.048	0.373	0.705	0.332	6.57	2480	0.3695	0.123	-0.648	0.404	1.627	0.841
362T125-54	0.0566	50	0.346	1.18	0.723	0.378	1.445	0.048	0.373	0.678	0.312	9.34	3372	0.3695	0.123	-0.648	0.404	1.627	0.841
Profile	Design Thick.	Fy	Area	Weight	Gross Properties					Effective Properties				Torsional Properties					
					Ix	Sx	rx	ly	ry	Ixe	Sxe	Mal	Vag	Jx10^3	Cw	Xo	m	Ro	B
					(in)	(ksi)	(in^2)	(lbs/ft)	(in^4)	(in^3)	(in)	(in^4)	(in)	(in^4)	(in^6)	(in)	(in)	(in)	(in)
362T125-68	0.0713	33	0.436	1.48	0.921	0.475	1.454	0.06	0.37	0.921	0.453	8.96	3104	0.7382	0.156	-0.641	0.399	1.631	0.846
362T125-68	0.0713	50	0.436	1.48	0.921	0.475	1.454	0.06	0.37	0.908	0.427	12.78	4703	0.7382	0.156	-0.641	0.399	1.631	0.846
362T125-97	0.1017	33	0.621	2.11	1.344	0.675	1.471	0.082	0.364	1.343	0.675	15.25	4339	2.1398	0.226	-0.626	0.39	1.64	0.854
362T125-97	0.1017	50	0.621	2.11	1.344	0.675	1.471	0.082	0.364	1.343	0.675	22.7	6574	2.1398	0.226	-0.626	0.39	1.64	0.854
400T125-18	0.0188	33	0.122	0.42	0.298	0.145	1.562	0.017	0.374	0.241	0.07	1.39	151	0.0144	0.052	-0.637	0.4	1.727	0.864
400T125-27	0.0283	33	0.184	0.63	0.449	0.217	1.562	0.025	0.372	0.38	0.156	3.08	515	0.0491	0.078	-0.633	0.398	1.726	0.866
400T125-30	0.0312	33	0.203	0.69	0.495	0.239	1.563	0.028	0.371	0.427	0.176	3.49	689	0.0658	0.085	-0.632	0.397	1.726	0.866
400T125-33	0.0346	33	0.225	0.76	0.549	0.265	1.563	0.031	0.371	0.484	0.201	3.97	940	0.0897	0.095	-0.63	0.396	1.725	0.867
400T125-43	0.0451	33	0.293	1	0.716	0.344	1.564	0.04	0.369	0.666	0.282	5.57	1739	0.1985	0.122	-0.626	0.394	1.724	0.868
400T125-54	0.0566	33	0.367	1.25	0.904	0.431	1.569	0.049	0.366	0.883	0.381	7.53	2739	0.3921	0.154	-0.621	0.39	1.727	0.871
400T125-54	0.0566	50	0.367	1.25	0.904	0.431	1.569	0.049	0.366	0.85	0.359	10.74	3372	0.3921	0.154	-0.621	0.39	1.727	0.871
400T125-68	0.0713	33	0.462	1.57	1.151	0.541	1.577	0.061	0.364	1.15	0.517	10.22	3435	0.7835	0.194	-0.614	0.386	1.731	0.874
400T125-68	0.0713	50	0.462	1.57	1.151	0.541	1.577	0.061	0.364	1.134	0.488	14.62	5205	0.7835	0.194	-0.614	0.386	1.731	0.874
400T125-97	0.1017	33	0.659	2.24	1.674	0.768	1.594	0.084	0.358	1.673	0.768	17.36	4842	2.2713	0.28	-0.6	0.377	1.74	0.881
400T125-97	0.1017	50	0.659	2.24	1.674	0.768	1.594	0.084	0.358	1.673	0.768	25.84	7337	2.2713	0.28	-0.6	0.377	1.74	0.881
550T125-27	0.0283	33	0.226	0.77	0.948	0.336	2.046	0.027	0.348	0.786	0.192	3.79	372	0.0604	0.16	-0.543	0.352	2.146	0.936
550T125-30	0.0312	33	0.25	0.85	1.045	0.371	2.047	0.03	0.347	0.897	0.226	4.47	499	0.081	0.176	-0.542	0.351	2.145	0.936
550T125-33	0.0346	33	0.277	0.94	1.159	0.411	2.047	0.033	0.346	1.029	0.27	5.33	680	0.1104	0.195	-0.541	0.35	2.145	0.936
550T125-43	0.0451	33	0.36	1.23	1.51	0.534	2.047	0.043	0.344	1.428	0.417	8.23	1504	0.2443	0.252	-0.537	0.348	2.144	0.937
550T125-54	0.0566	33	0.452	1.54	1.904	0.668	2.052	0.053	0.342	1.862	0.597	11.8	2739	0.4828	0.315	-0.532	0.345	2.147	0.939
550T125-54	0.0566	50	0.452	1.54	1.904	0.668	2.052	0.053	0.342	1.811	0.535	16.01	2980	0.4828	0.315	-0.532	0.345	2.147	0.939
550T125-68	0.0713	33	0.569	1.94	2.413	0.839	2.059	0.066	0.34	2.412	0.807	15.95	4347	0.9647	0.397	-0.526	0.341	2.152	0.94
550T125-68	0.0713	50	0.569	1.94	2.413	0.839	2.059	0.066	0.34	2.38	0.769	23.02	5350	0.9647	0.397	-0.526	0.341	2.152	0.94
550T125-97	0.1017	33	0.811	2.76	3.484	1.19	2.072	0.09	0.334	3.484	1.19	26.87	6730	2.7973	0.564	-0.514	0.333	2.161	0.943
550T125-97	0.1017	50	0.811	2.76	3.484	1.19	2.072	0.09	0.334	3.484	1.19	40.01	10197	2.7973	0.564	-0.514	0.333	2.161	0.943
600T125-27	0.0283	33	0.241	0.82	1.169	0.381	2.204	0.028	0.34	0.958	0.211	4.16	341	0.0642	0.196	-0.519	0.339	2.29	0.949
600T125-30	0.0312	33	0.265	0.9	1.288	0.42	2.204	0.031	0.34	1.095	0.249	4.92	456	0.086	0.215	-0.518	0.338	2.29	0.949
600T125-33	0.0346	33	0.294	1	1.429	0.465	2.205	0.034	0.339	1.258	0.297	5.87	622	0.1173	0.238	-0.516	0.337	2.289	0.949
600T125-43	0.0451	33	0.383	1.3	1.862	0.604	2.205	0.044	0.337	1.768	0.461	9.11	1377	0.2596	0.307	-0.513	0.335	2.289	0.95
600T125-54	0.0566	33	0.48	1.63	2.345	0.757	2.209	0.054	0.335	2.299	0.666	13.15	2728	0.513	0.384	-0.508	0.332	2.292	0.951

TABLE 6—OEG CONVENTIONAL TRACK AND U-CHANNEL SECTION PROPERTIES^{1,2,3,4} (Continued)

600T125-54	0.0566	50	0.48	1.63	2.345	0.757	2.209	0.054	0.335	2.241	0.592	17.74	2728	0.513	0.384	-0.508	0.332	2.292	0.951
600T125-68	0.0713	33	0.605	2.06	2.97	0.951	2.216	0.067	0.332	2.969	0.916	18.09	4347	1.0251	0.483	-0.503	0.329	2.296	0.952
600T125-68	0.0713	50	0.605	2.06	2.97	0.951	2.216	0.067	0.332	2.934	0.858	25.69	5350	1.0251	0.483	-0.503	0.329	2.296	0.952
600T125-97	0.1017	33	0.862	2.93	4.282	1.348	2.229	0.092	0.327	4.281	1.347	30.43	7359	2.9726	0.685	-0.491	0.321	2.305	0.955
600T125-97	0.1017	50	0.862	2.93	4.282	1.348	2.229	0.092	0.327	4.281	1.347	40.33	10885	2.9726	0.685	-0.491	0.321	2.305	0.955
800T125-33	0.0346	33	0.363	1.24	2.897	0.711	2.824	0.036	0.313	2.442	0.407	8.03	465	0.1449	0.456	-0.439	0.294	2.875	0.977
800T125-43	0.0451	33	0.473	1.61	3.774	0.925	2.824	0.046	0.311	3.484	0.64	12.65	1030	0.3208	0.589	-0.436	0.292	2.875	0.977
800T125-54	0.0566	33	0.594	2.02	4.747	1.158	2.828	0.057	0.309	4.427	0.824	24.66	2039	0.6339	0.735	-0.432	0.289	2.877	0.977
800T125-68	0.0713	33	0.748	2.54	6	1.455	2.833	0.07	0.307	5.998	1.357	26.81	4087	1.2668	0.92	-0.427	0.286	2.881	0.978
800T125-68	0.0713	50	0.748	2.54	6	1.455	2.833	0.07	0.307	5.956	1.216	36.4	4087	1.2668	0.92	-0.427	0.286	2.881	0.978
800T125-97	0.1017	33	1.066	3.63	8.617	2.062	2.844	0.097	0.301	8.614	2.062	40.74	8843	3.6738	1.296	-0.417	0.279	2.89	0.979
800T125-97	0.1017	50	1.066	3.63	8.617	2.062	2.844	0.097	0.301	8.614	2.062	61.72	10885	3.6738	1.296	-0.417	0.279	2.89	0.979
1000T125-43	0.0451	33	0.563	1.92	6.633	1.306	3.431	0.047	0.29	5.887	0.819	16.19	822	0.3819	0.973	-0.379	0.259	3.465	0.988
1000T125-54	0.0566	33	0.707	2.4	8.337	1.635	3.434	0.059	0.288	7.961	1.216	24.03	1628	0.7548	1.212	-0.376	0.256	3.467	0.988
Profile	Design Thick.	Fy	Area	Weight	Gross Properties					Effective Properties					Torsional Properties				
					Ix	Sx	rx	ly	ry	Ixe	Sxe	Mal	Vag	Jx10^3	Cw	Xo	m	Ro	β
(in)	(ksi)	(in^2)	(lbs/ft)	(in^4)	(in^3)	(in)	(in^4)	(in)	(in^4)	(in^3)	(lb-in)	(lb)	(in^4)	(in^6)	(in)	(in)			
1000T125-54	0.0566	50	0.707	2.4	8.337	1.635	3.434	0.059	0.288	7.48	1.055	31.59	1628	0.7548	1.212	-0.376	0.256	3.467	0.988
1000T125-68	0.0713	33	0.89	3.03	10.526	2.054	3.439	0.073	0.286	10.453	1.781	35.19	3261	1.5084	1.515	-0.372	0.253	3.471	0.989
1000T125-68	0.0713	50	0.89	3.03	10.526	2.054	3.439	0.073	0.286	10.156	1.575	47.15	3261	1.5084	1.515	-0.372	0.253	3.471	0.989
1000T125-97	0.1017	33	1.269	4.32	15.083	2.913	3.448	0.1	0.281	15.077	2.907	57.44	8843	4.3751	2.123	-0.363	0.247	3.478	0.989
1000T125-97	0.1017	50	1.269	4.32	15.083	2.913	3.448	0.1	0.281	15.077	2.753	82.42	9507	4.3751	2.123	-0.363	0.247	3.478	0.989
1200T125-54	0.0566	33	0.82	2.79	13.341	2.187	4.034	0.06	0.271	12.297	1.492	29.47	1354	0.8756	1.82	-0.333	0.23	4.056	0.993
1200T125-54	0.0566	50	0.82	2.79	13.341	2.187	4.034	0.06	0.271	11.463	1.286	38.51	1354	0.8756	1.82	-0.333	0.23	4.056	0.993
1200T125-68	0.0713	33	1.033	3.51	16.834	2.749	4.037	0.074	0.268	16.247	2.206	43.6	2713	1.7501	2.27	-0.329	0.227	4.06	0.993
1200T125-68	0.0713	50	1.033	3.51	16.834	2.749	4.037	0.074	0.268	15.689	1.934	57.9	2713	1.7501	2.27	-0.329	0.227	4.06	0.993
1200T125-97	0.1017	33	1.472	5.01	24.09	3.899	4.045	0.102	0.264	24.078	3.69	72.92	7902	5.0763	3.171	-0.322	0.222	4.066	0.994
1200T125-97	0.1017	50	1.472	5.01	24.09	3.899	4.045	0.102	0.264	23.752	3.443	103.07	7902	5.0763	3.171	-0.322	0.222	4.066	0.994
1400T125-54	0.0566	33	0.933	3.17	19.987	2.815	4.628	0.061	0.256	17.728	1.767	34.92	1160	0.9965	2.559	-0.299	0.209	4.645	0.996
1400T125-54	0.0566	50	0.933	3.17	19.987	2.815	4.628	0.061	0.256	16.412	1.517	45.42	1160	0.9965	2.559	-0.299	0.209	4.645	0.996
1400T125-68	0.0713	33	1.175	4	25.208	3.538	4.631	0.076	0.254	23.556	2.632	52.02	2322	1.9917	3.189	-0.296	0.206	4.648	0.996
1400T125-68	0.0713	50	1.175	4	25.208	3.538	4.631	0.076	0.254	22.623	2.293	68.65	2322	1.9917	3.189	-0.296	0.206	4.648	0.996
1400T125-97	0.1017	33	1.676	5.7	36.043	5.021	4.638	0.104	0.249	35.776	4.48	88.53	6761	5.7776	4.444	-0.289	0.201	4.653	0.996
1400T125-97	0.1017	50	1.676	5.7	36.043	5.021	4.638	0.104	0.249	34.591	4.134	123.77	6761	5.7776	4.444	-0.289	0.201	4.653	0.996
1400T125-118	0.1242	33	2.046	6.96	44.09	6.109	4.642	0.124	0.246	44.068	5.854	115.67	12344	0.5201	5.334	-0.284	0.197	4.657	0.996
1400T125-118	0.1242	50	2.046	6.96	44.09	6.109	4.642	0.124	0.246	43.754	5.454	163.28	12344	0.5201	5.334	-0.284	0.197	4.657	0.996
1600T125-54	0.0566	33	1.046	3.56	28.5	3.519	5.219	0.062	0.243	24.292	2.042	40.35	1014	1.1174	3.432	-0.272	0.191	5.232	0.997
1600T125-54	0.0566	50	1.046	3.56	28.5	3.519	5.219	0.062	0.243	22.355	1.748	52.33	1014	1.1174	3.432	-0.272	0.191	5.232	0.997
1600T125-68	0.0713	33	1.318	4.48	35.935	4.423	5.222	0.077	0.241	32.445	3.058	60.42	2030	2.2333	4.273	-0.268	0.189	5.234	0.997
1600T125-68	0.0713	50	1.318	4.48	35.935	4.423	5.222	0.077	0.241	31.009	2.651	79.38	2030	2.2333	4.273	-0.268	0.189	5.234	0.997
1600T125-97	0.1017	33	1.879	6.39	51.349	6.279	5.227	0.105	0.237	49.848	5.273	104.2	5908	6.4788	5.945	-0.262	0.184	5.239	0.997
1600T125-97	0.1017	50	1.879	6.39	51.349	6.279	5.227	0.105	0.237	47.837	4.826	144.48	5908	6.4788	5.945	-0.262	0.184	5.239	0.997
1600T125-118	0.1242	33	2.294	7.81	62.789	7.641	5.231	0.125	0.234	62.756	6.965	137.63	10783	11.7973	7.126	-0.257	0.181	5.243	0.998
1600T125-118	0.1242	50	2.294	7.81	62.789	7.641	5.231	0.125	0.234	60.935	6.42	192.22	10783	11.7973	7.126	-0.257	0.181	5.243	0.998
250T150-27	0.0283	33	0.156	0.53	0.181	0.137	1.078	0.037	0.486	0.139	0.082	1.61	685	0.0415	0.044	-0.976	0.575	1.534	0.595

TABLE 6—OEG CONVENTIONAL TRACK AND U-CHANNEL SECTION PROPERTIES^{1,2,3,4} (Continued)

250T150-30	0.0312	33	0.172	0.58	0.2	0.151	1.078	0.04	0.486	0.157	0.093	1.83	832	0.0557	0.049	-0.975	0.574	1.533	0.595
250T150-33	0.0346	33	0.19	0.65	0.221	0.167	1.079	0.045	0.485	0.18	0.107	2.11	1024	0.0759	0.054	-0.973	0.573	1.532	0.596
250T150-43	0.0451	33	0.248	0.84	0.289	0.217	1.08	0.058	0.483	0.252	0.154	3.03	1356	0.1679	0.07	-0.968	0.57	1.529	0.599
250T150-54	0.0566	33	0.311	1.06	0.368	0.273	1.088	0.072	0.481	0.342	0.214	4.22	1692	0.3317	0.089	-0.961	0.566	1.53	0.605
250T150-54	0.0566	50	0.311	1.06	0.368	0.273	1.088	0.072	0.481	0.325	0.197	5.89	2563	0.3317	0.089	-0.961	0.566	1.53	0.605
250T150-68	0.0713	33	0.391	1.33	0.472	0.344	1.099	0.089	0.478	0.465	0.299	5.92	2112	0.6627	0.114	-0.953	0.561	1.531	0.613
250T150-68	0.0713	50	0.391	1.33	0.472	0.344	1.099	0.089	0.478	0.445	0.276	8.27	3199	0.6627	0.114	-0.953	0.561	1.531	0.613
350T150-27	0.0283	33	0.184	0.63	0.377	0.207	1.432	0.041	0.47	0.298	0.132	2.62	590	0.0491	0.094	-0.869	0.529	1.739	0.751
350T150-30	0.0312	33	0.203	0.69	0.416	0.228	1.432	0.045	0.47	0.336	0.15	2.96	790	0.0658	0.103	-0.867	0.528	1.739	0.751
350T150-33	0.0346	33	0.225	0.76	0.461	0.253	1.432	0.049	0.469	0.382	0.171	3.39	1024	0.0897	0.114	-0.866	0.527	1.738	0.752
350T150-43	0.0451	33	0.293	1	0.601	0.329	1.433	0.064	0.467	0.531	0.243	4.8	1739	0.1985	0.148	-0.861	0.525	1.736	0.754
350T150-54	0.0566	33	0.367	1.25	0.762	0.412	1.44	0.079	0.465	0.712	0.332	6.57	2392	0.3921	0.187	-0.855	0.521	1.738	0.758
350T150-54	0.0566	50	0.367	1.25	0.762	0.412	1.44	0.079	0.465	0.679	0.31	9.28	3372	0.3921	0.187	-0.855	0.521	1.738	0.758
350T150-68	0.0713	33	0.462	1.57	0.972	0.518	1.45	0.099	0.462	0.957	0.459	9.07	2994	0.7835	0.238	-0.847	0.516	1.742	0.763
350T150-68	0.0713	50	0.462	1.57	0.972	0.518	1.45	0.099	0.462	0.919	0.428	12.81	4536	0.7835	0.238	-0.847	0.516	1.742	0.763
350T150-97	0.1017	33	0.659	2.24	1.423	0.738	1.469	0.137	0.456	1.422	0.738	16.33	4213	2.2713	0.346	-0.831	0.506	1.749	0.774
350T150-97	0.1017	50	0.659	2.24	1.423	0.738	1.469	0.137	0.456	1.422	0.701	20.98	6383	2.2713	0.346	-0.831	0.506	1.749	0.774
Profile	Design Thick.	Fy	Area	Weight	Gross Properties					Effective Properties					Torsional Properties				
					Ix	Sx	rx	Iy	ry	Ixe	Sxe	Mal	Vag	Jx10^3	Cw	Xo	m	Ro	β
					(in)	(ksi)	(in^2)	(lbs/ft)	(in^4)	(in^3)	(in)	(in^4)	(in)	(in^4)	(in^3)	(lb-in)	(lb)	(in^4)	
362T150-27	0.0283	33	0.187	0.64	0.408	0.217	1.475	0.041	0.468	0.323	0.14	2.76	569	0.05	0.102	-0.857	0.524	1.769	0.765
362T150-30	0.0312	33	0.207	0.7	0.45	0.239	1.475	0.045	0.467	0.364	0.158	3.12	762	0.067	0.112	-0.856	0.523	1.768	0.766
362T150-33	0.0346	33	0.229	0.78	0.499	0.264	1.475	0.05	0.467	0.414	0.18	3.56	1024	0.0914	0.124	-0.854	0.522	1.768	0.766
362T150-43	0.0451	33	0.298	1.02	0.65	0.344	1.476	0.064	0.465	0.575	0.255	5.04	1739	0.2023	0.16	-0.85	0.519	1.766	0.768
362T150-54	0.0566	33	0.374	1.27	0.823	0.431	1.483	0.08	0.462	0.77	0.349	6.89	2480	0.3997	0.202	-0.844	0.516	1.768	0.772
362T150-54	0.0566	50	0.374	1.27	0.823	0.431	1.483	0.08	0.462	0.735	0.325	9.74	3372	0.3997	0.202	-0.844	0.516	1.768	0.772
362T150-68	0.0713	33	0.471	1.6	1.05	0.542	1.493	0.1	0.46	1.034	0.481	9.5	3104	0.7986	0.257	-0.836	0.511	1.771	0.777
362T150-68	0.0713	50	0.471	1.6	1.05	0.542	1.493	0.1	0.46	0.993	0.449	13.43	4703	0.7986	0.257	-0.836	0.511	1.771	0.777
362T150-97	0.1017	33	0.672	2.28	1.535	0.771	1.512	0.138	0.453	1.535	0.771	17.07	4339	2.3152	0.374	-0.82	0.501	1.779	0.787
362T150-97	0.1017	50	0.672	2.28	1.535	0.771	1.512	0.138	0.453	1.535	0.733	21.94	6574	2.3152	0.374	-0.82	0.501	1.779	0.787
400T150-27	0.0283	33	0.198	0.67	0.509	0.246	1.602	0.042	0.461	0.409	0.154	3.04	515	0.0529	0.127	-0.824	0.509	1.86	0.804
400T150-30	0.0312	33	0.218	0.74	0.561	0.271	1.603	0.046	0.461	0.458	0.183	3.61	689	0.0708	0.14	-0.823	0.508	1.86	0.804
400T150-33	0.0346	33	0.242	0.82	0.622	0.3	1.603	0.051	0.46	0.519	0.208	4.12	940	0.0966	0.155	-0.821	0.507	1.859	0.805
400T150-43	0.0451	33	0.315	1.07	0.811	0.39	1.604	0.066	0.458	0.719	0.293	5.8	1739	0.2138	0.2	-0.817	0.504	1.857	0.807
400T150-54	0.0566	33	0.396	1.35	1.026	0.489	1.61	0.082	0.456	0.96	0.399	7.89	2739	0.4223	0.252	-0.811	0.501	1.86	0.81
400T150-54	0.0566	50	0.396	1.35	1.026	0.489	1.61	0.082	0.456	0.918	0.374	11.19	3372	0.4223	0.252	-0.811	0.501	1.86	0.81
400T150-68	0.0713	33	0.498	1.69	1.306	0.615	1.619	0.102	0.453	1.286	0.548	10.82	3435	0.8439	0.32	-0.804	0.496	1.864	0.814
400T150-68	0.0713	50	0.498	1.69	1.306	0.615	1.619	0.102	0.453	1.237	0.513	15.36	5205	0.8439	0.32	-0.804	0.496	1.864	0.814
400T150-97	0.1017	33	0.71	2.41	1.904	0.874	1.638	0.142	0.447	1.904	0.874	19.35	4842	2.4466	0.463	-0.788	0.487	1.872	0.823
400T150-97	0.1017	50	0.71	2.41	1.904	0.874	1.638	0.142	0.447	1.904	0.832	24.92	7337	2.4466	0.463	-0.788	0.487	1.872	0.823
550T150-27	0.0283	33	0.241	0.82	1.059	0.376	2.099	0.046	0.436	0.893	0.207	4.1	372	0.0642	0.263	-0.716	0.456	2.26	0.9
550T150-30	0.0312	33	0.265	0.9	1.168	0.414	2.099	0.05	0.435	0.995	0.251	4.96	499	0.086	0.289	-0.715	0.455	2.259	0.9
550T150-33	0.0346	33	0.294	1	1.295	0.459	2.099	0.055	0.434	1.115	0.31	6.12	680	0.1173	0.32	-0.714	0.455	2.259	0.9
550T150-43	0.0451	33	0.383	1.3	1.688	0.596	2.1	0.072	0.432	1.516	0.468	9.25	1504	0.2596	0.414	-0.709	0.452	2.258	0.901
550T150-54	0.0566	33	0.48	1.63	2.129	0.747	2.105	0.089	0.43	2.005	0.628	12.41	2739	0.513	0.519	-0.704	0.449	2.261	0.903
550T150-54	0.0566	50	0.48	1.63	2.129	0.747	2.105	0.089	0.43	1.928	0.595	17.81	2980	0.513	0.519	-0.704	0.449	2.261	0.903
550T150-68	0.0713	33	0.605	2.06	2.7	0.939	2.113	0.111	0.427	2.661	0.85	16.8	4347	1.0251	0.655	-0.698	0.445	2.266	0.905

TABLE 6—OEG CONVENTIONAL TRACK AND U-CHANNEL SECTION PROPERTIES^{1,2,3,4} (Continued)

550T150-68	0.0713	50	0.605	2.06	2.7	0.939	2.113	0.111	0.427	2.569	0.804	24.07	5350	1.0251	0.655	-0.698	0.445	2.266	0.905	
550T150-97	0.1017	33	0.862	2.93	3.905	1.334	2.128	0.153	0.421	3.905	1.334	29.52	6730	2.9726	0.937	-0.684	0.436	2.275	0.909	
550T150-97	0.1017	50	0.862	2.93	3.905	1.334	2.128	0.153	0.421	3.905	1.278	38.28	10197	2.9726	0.937	-0.684	0.436	2.275	0.909	
600T150-27	0.0283	33	0.255	0.87	1.301	0.424	2.26	0.047	0.427	1.012	0.214	4.23	341	0.068	0.32	-0.686	0.441	2.4	0.918	
600T150-30	0.0312	33	0.281	0.96	1.434	0.467	2.26	0.051	0.427	1.159	0.253	5.01	456	0.0911	0.352	-0.685	0.44	2.4	0.918	
600T150-33	0.0346	33	0.311	1.06	1.59	0.517	2.26	0.057	0.426	1.335	0.303	5.99	622	0.1242	0.39	-0.684	0.439	2.4	0.919	
600T150-43	0.0451	33	0.405	1.38	2.073	0.673	2.261	0.073	0.424	1.89	0.474	9.36	1377	0.2749	0.504	-0.68	0.437	2.399	0.92	
600T150-54	0.0566	33	0.509	1.73	2.612	0.843	2.266	0.091	0.422	2.473	0.689	13.62	2728	0.5432	0.632	-0.675	0.434	2.402	0.921	
600T150-54	0.0566	50	0.509	1.73	2.612	0.843	2.266	0.091	0.422	2.4	0.609	18.24	2728	0.5432	0.632	-0.675	0.434	2.402	0.921	
600T150-68	0.0713	33	0.641	2.18	3.31	1.059	2.273	0.113	0.419	3.262	0.963	19.03	4347	1.0855	0.797	-0.669	0.43	2.406	0.923	
600T150-68	0.0713	50	0.641	2.18	3.31	1.059	2.273	0.113	0.419	3.162	0.891	26.68	5350	1.0855	0.797	-0.669	0.43	2.406	0.923	
600T150-97	0.1017	33	0.913	3.11	4.78	1.504	2.288	0.156	0.414	4.779	1.504	29.71	7359	3.1479	1.138	-0.656	0.421	2.416	0.926	
600T150-97	0.1017	50	0.913	3.11	4.78	1.504	2.288	0.156	0.414	4.779	1.444	43.24	10885	3.1479	1.138	-0.656	0.421	2.416	0.926	
800T150-33	0.0346	33	0.38	1.29	3.181	0.781	2.892	0.06	0.397	2.57	0.414	8.18	465	0.1518	0.751	-0.588	0.388	2.977	0.961	
800T150-43	0.0451	33	0.496	1.69	4.145	1.016	2.892	0.077	0.395	3.69	0.655	12.95	1030	0.3361	0.972	-0.584	0.386	2.977	0.961	
800T150-54	0.0566	33	0.622	2.12	5.216	1.272	2.896	0.096	0.393	4.977	0.969	19.15	2039	0.6641	1.215	-0.58	0.383	2.98	0.962	
800T150-54	0.0566	50	0.622	2.12	5.216	1.272	2.896	0.096	0.393	4.693	0.844	25.27	2039	0.6641	1.215	-0.58	0.383	2.98	0.962	
800T150-68	0.0713	33	0.783	2.66	6.596	1.599	2.902	0.119	0.39	6.527	1.412	27.91	4087	1.3272	1.526	-0.575	0.379	2.984	0.963	
Profile	Design Thick.	Fy	Area	Weight	Gross Properties						Effective Properties					Torsional Properties				
					Ix	Sx	rx	Iy	ry	Ixe	Sxe	Mal	Vag	Jx10^3	Cw	Xo	m	Ro	β	
(in)	(ksi)	(in^2)	(lbs/ft)	(in^4)	(in^3)	(in)	(in^4)	(in)	(in^4)	(in^3)	(lb-in)	(lb)	(in^4)	(in^6)	(in)	(in)	(in)			
800T150-68	0.0713	50	0.783	2.66	6.596	1.599	2.902	0.119	0.39	6.361	1.255	37.58	4087	1.3272	1.526	-0.575	0.379	2.984	0.963	
800T150-97	0.1017	33	1.116	3.8	9.483	2.27	2.914	0.165	0.385	9.48	2.269	44.83	8843	3.8491	2.162	-0.564	0.372	2.993	0.965	
800T150-97	0.1017	50	1.116	3.8	9.483	2.27	2.914	0.165	0.385	9.48	2.192	65.62	10885	3.8491	2.162	-0.564	0.372	2.993	0.965	
1000T150-43	0.0451	33	0.586	1.99	7.21	1.419	3.508	0.08	0.37	6.197	0.837	16.54	822	0.3972	1.612	-0.513	0.345	3.565	0.979	
1000T150-54	0.0566	33	0.735	2.5	9.065	1.778	3.512	0.1	0.368	8.433	1.249	24.69	1628	0.785	2.013	-0.509	0.342	3.567	0.98	
1000T150-54	0.0566	50	0.735	2.5	9.065	1.778	3.512	0.1	0.368	7.881	1.079	32.3	1628	0.785	2.013	-0.509	0.342	3.567	0.98	
1000T150-68	0.0713	33	0.926	3.15	11.45	2.234	3.517	0.124	0.366	11.343	1.846	36.48	3261	1.5688	2.522	-0.505	0.339	3.572	0.98	
1000T150-68	0.0713	50	0.926	3.15	11.45	2.234	3.517	0.124	0.366	10.776	1.621	48.53	3261	1.5688	2.522	-0.505	0.339	3.572	0.98	
1000T150-97	0.1017	33	1.32	4.49	16.42	3.171	3.527	0.172	0.361	16.414	3.165	62.54	8843	4.5504	3.557	-0.495	0.332	3.58	0.981	
1000T150-97	0.1017	50	1.32	4.49	16.42	3.171	3.527	0.172	0.361	16.414	3.165	86.9	9507	4.5504	3.557	-0.495	0.332	3.58	0.981	
1200T150-54	0.0566	33	0.848	2.89	14.384	2.358	4.118	0.103	0.348	12.964	1.53	30.23	1354	0.9059	3.033	-0.454	0.31	4.157	0.988	
1200T150-54	0.0566	50	0.848	2.89	14.384	2.358	4.118	0.103	0.348	12.023	1.313	39.32	1354	0.9059	3.033	-0.454	0.31	4.157	0.988	
1200T150-68	0.0713	33	1.068	3.63	18.156	2.964	4.122	0.127	0.345	17.57	2.281	45.08	2713	1.8105	3.795	-0.45	0.307	4.161	0.988	
1200T150-68	0.0713	50	1.068	3.63	18.156	2.964	4.122	0.127	0.345	16.568	1.987	59.48	2713	1.8105	3.795	-0.45	0.307	4.161	0.988	
1200T150-97	0.1017	33	1.523	5.18	25.999	4.208	4.131	0.176	0.34	25.987	3.996	78.97	7902	5.2516	5.335	-0.441	0.301	4.169	0.989	
1200T150-97	0.1017	50	1.523	5.18	25.999	4.208	4.131	0.176	0.34	25.72	3.616	108.27	7902	5.2516	5.335	-0.441	0.301	4.169	0.989	
1400T150-54	0.0566	33	0.962	3.27	21.402	3.015	4.718	0.105	0.33	18.625	1.81	35.76	1160	1.0267	4.28	-0.41	0.283	4.747	0.993	
1400T150-54	0.0566	50	0.962	3.27	21.402	3.015	4.718	0.105	0.33	17.156	1.547	46.33	1160	1.0267	4.28	-0.41	0.283	4.747	0.993	
1400T150-68	0.0713	33	1.211	4.12	27	3.79	4.722	0.13	0.328	25.415	2.717	53.69	2322	2.0521	5.349	-0.407	0.28	4.751	0.993	
1400T150-68	0.0713	50	1.211	4.12	27	3.79	4.722	0.13	0.328	23.807	2.352	70.42	2322	2.0521	5.349	-0.407	0.28	4.751	0.993	
1400T150-97	0.1017	33	1.727	5.87	38.626	5.381	4.73	0.18	0.323	38.342	4.834	95.52	6761	5.9529	7.503	-0.399	0.275	4.757	0.993	
1400T150-97	0.1017	50	1.727	5.87	38.626	5.381	4.73	0.18	0.323	37.288	4.332	129.7	6761	5.9529	7.503	-0.399	0.275	4.757	0.993	
1400T150-118	0.1242	33	2.108	7.17	47.269	6.549	4.735	0.215	0.319	47.248	6.291	124.31	12344	10.8394	9.048	-0.393	0.27	4.762	0.993	
1400T150-118	0.1242	50	2.108	7.17	47.269	6.549	4.735	0.215	0.319	46.913	5.887	176.25	12344	10.8394	9.048	-0.393	0.27	4.762	0.993	
1600T150-54	0.0566	33	1.075	3.66	30.343	3.747	5.314	0.106	0.314	25.453	2.09	41.29	1014	1.1476	5.757	-0.374	0.26	5.336	0.995	

TABLE 6—OEG CONVENTIONAL TRACK AND U-CHANNEL SECTION PROPERTIES^{1,2,3,4} (Continued)

1600T150-54	0.0566	50	1.075	3.66	30.343	3.747	5.314	0.106	0.314	23.309	1.782	53.34	1014	1.1476	5.757	-0.374	0.26	5.336	0.995
1600T150-68	0.0713	33	1.354	4.6	38.268	4.71	5.317	0.132	0.312	34.949	3.152	62.28	2030	2.2938	7.188	-0.371	0.258	5.339	0.995
1600T150-68	0.0713	50	1.354	4.6	38.268	4.71	5.317	0.132	0.312	32.544	2.717	81.35	2030	2.2938	7.188	-0.371	0.258	5.339	0.995
1600T150-97	0.1017	33	1.93	6.57	54.708	6.69	5.324	0.183	0.308	53.176	5.674	112.13	5908	6.6541	10.066	-0.363	0.253	5.345	0.995
1600T150-97	0.1017	50	1.93	6.57	54.708	6.69	5.324	0.183	0.308	51.389	5.047	151.12	5908	6.6541	10.066	-0.363	0.253	5.345	0.995
1600T150-118	0.1242	33	2.356	8.02	66.919	8.144	5.329	0.218	0.304	56.886	7.46	147.42	10783	12.1166	12.124	-0.358	0.249	5.35	0.996
1600T150-118	0.1242	50	2.356	8.02	66.919	8.144	5.329	0.218	0.304	55.028	6.911	206.93	10783	12.1166	12.124	-0.358	0.249	5.35	0.996
U-CHANNEL																			
075U050-54	0.0566	33	0.087	0.296	0.007	-	0.289	0.002	0.156	0.007	0.019	0.459	315	-	-	-	-	-	-
150U050-54	0.0566	33	0.13	0.441	0.039	-	0.549	0.003	0.146	0.039	0.052	1.23	840	-	-	-	-	-	-
200U050-54	0.0566	33	0.158	0.537	0.08	-	0.711	0.003	0.137	0.08	0.08	1.883	1190	-	-	-	-	-	-
250U050-54	0.0566	33	0.186	0.633	0.14	-	0.868	0.003	0.13	0.14	0.112	2.648	1540	-	-	-	-	-	-

For SI: 1 inch = 25.4 mm.

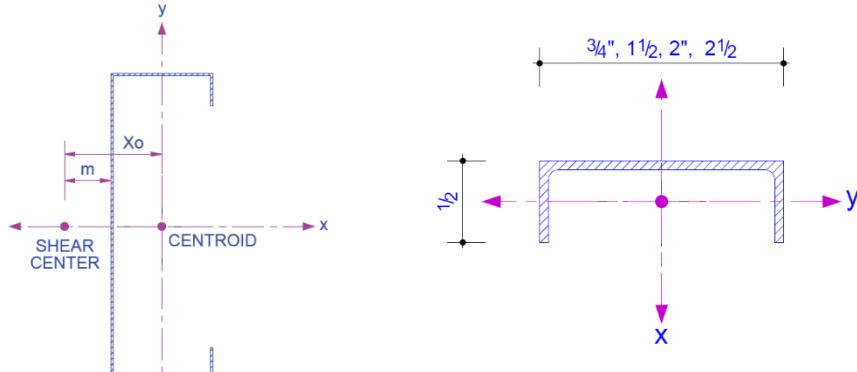
¹Effective properties incorporate the strength increase from the cold work of forming, as applicable.²Tabulated gross properties, including torsional properties, are based upon full-unreduced cross section of the studs, away from punch-outs.³For deflection calculations, use the effective moment of inertia.⁴Allowable moment includes cold-work of forming.**FIGURE 3—OEG CONVENTIONAL STUD AND U CHANNEL SECTION PROFILE****FIGURE 4—OEG CONVENTIONAL STUD PUNCH OUT**

TABLE 7—WEB DEPTH TO THICKNESS RATIOS FOR PHANTOM STUDS AND OEG CONVENTIONAL STUDS^{2, 3}

Style	Web Depth (in)	13 mil	18 mil	19 mil	27 mil	30 mil	33 mil	43 mil	54 mil	68 mil	97 mil	118 mil
162PS	1.625	112	-	79	-	-	-	-	-	-	-	-
250PS	2.500	177	-	125	-	-	-	-	-	-	-	-
362PS	3.625	-	-	185	-	-	-	-	-	-	-	-
400PS	4.000	-	-	204 ¹	-	-	-	-	-	-	-	-
600PS	6.000	-	-	-	-	-	-	-	-	-	-	-
162S	1.625	-	75	-	50	45	41	31	24	18	11	8
250S	2.500	-	122	-	81	73	66	50	39	30	20	15
350S	3.500	-	175	-	116	105	95	72	57	44	29	23
362S	3.625	-	182	-	120	109	98	75	59	46	31	24
400S	4.000	-	202 ¹	-	134	121	109	84	66	51	34	27
550S	5.500	-	-	-	187	169	153	117	92	72	49	39
600S	6.000	-	-	-	204 ¹	185	167	128	101	79	54	43
800S	8.000	-	-	-	-	249 ¹	225 ¹	172	136	107	74	59
1000S	10.000	-	-	-	-	-	-	217 ¹	172	135	93	76
1200S	12.000	-	-	-	-	-	-	-	207 ¹	163	113	92
1400S	14.000	-	-	-	-	-	-	-	242 ¹	191	133	108
1600S	16.000	-	-	-	-	-	-	-	-	219 ¹	152	124

For SI: 1 inch = 25.4 mm.

¹ Web height-to-thickness ratio, h/t, exceeds 200 but is less than 260. Web must have bearing stiffeners at all support points and concentrated loads in accordance with AISI S100. No holes or punch-outs are permitted in the web at these locations.

² Web height-to-thickness ratio, h/t, exceeding 260 are marked with a dash.

³ h value used for h/t calculation is the flat width of the web; this is the out to out member size minus twice the thickness, minus twice the inside bend radius.

TABLE 8—LIMITING HEIGHTS—PHANTOM COMPOSITE WALLS^{1,2,3,4,5}

Profile	Depth	Design thickness	Minimum thickness	Spacing		Span Length (ft)								
				Fy	O.C.	5 PSF			7.5 PSF			10 PSF		
		(in)	(in)	(in)	(in)	(ksi)	(in)	L/120	L/240	L/360	L/120	L/240	L/360	L/120
250PS125-13	2-1/2	0.0135	0.0130	33	12	13.83 f	13.58	12.16	11.25 f	11.25 f	10.58	9.75 f	9.75 f	9.58
250PS125-13		0.0135	0.0130	33	16	11.92 f	11.92 f	11.00	9.75 f	9.75 f	9.58	8.41 f	8.41 f	8.41 f
250PS125-13		0.0135	0.0130	33	24	9.75 f	9.75 f	9.58	8.00 f	8.00 f	8.00 f	-	-	-
162PS125-19	1-5/8	0.0190	0.0182	33	12	13.59	11.25	9.92	11.88	9.83	8.33	10.42 f	8.67	-
162PS125-19		0.0190	0.0182	33	16	12.36	10.16	8.75	10.34 f	8.67	-	9.00 f	7.75	-
162PS125-19		0.0190	0.0182	33	24	10.42 f	8.67	-	8.50 f	-	-	-	-	-
250PS125-19	2-1/2	0.0190	0.0182	33	12	16.58 f	14.33	12.83	13.58 f	12.58	11.25	11.75 f	11.42	10.16
250PS125-19		0.0190	0.0182	33	16	14.42 f	13.08	11.67	11.66 f	11.42	10.16	10.16 f	10.16 f	9.08
250PS125-19		0.0190	0.0182	33	24	11.75 f	11.42	10.16	9.58 f	9.58 f	8.67	8.33 f	8.33 f	-
362PS125-19	3-5/8	0.0190	0.0182	33	12	19.0 f	17.08	14.92	15.58 f	14.92	13.00	13.50 f	13.50 f	11.83
362PS125-19		0.0190	0.0182	33	16	16.5 f	15.5	13.50	13.50 f	13.50 f	12.09	11.67 f	11.67 f	10.58
362PS125-19		0.0190	0.0182	33	24	13.5 f	13.5 f	11.83	11.00 f	11.00 f	10.16	9.50 f	9.50 f	9.08
600PS125-19	6	0.0190	0.0182	33	12	23.16 f	23.16 f	22.16	18.92 f	18.92 f	18.92 f	16.42 f	16.42 f	16.42 f
600PS125-19		0.0190	0.0182	33	16	20.08 f	20.08 f	20.08 f	16.33 f	16.33 f	16.33 f	14.16 f	14.16 f	14.16 f
600PS125-19		0.0190	0.0182	33	24	16.42 f	16.42 f	16.42 f	13.39 f	13.42 f	13.42 f	-	-	-

For SI: 1 inch = 25.4 mm.

¹ Gypsum wallboard, complying with Section 3.2.2, must be attached on both sides of the wall framing for the full height of the wall with the long dimension of the gypsum wallboard parallel to the studs.

² The gypsum board must be installed using minimum No. 6 Type S. Drywall screws spaced a maximum of 12 in. on-center for studs at 24-in spacing, and 16 in. on-center for studs at 16 and 12 in. spacing.

³ No fasteners are required for attaching the stud to the track.

⁴ Stud end bearing must be a minimum of 1 inch.

⁵ "f" adjacent to the height value indicates that flexural stress controls the allowable height. Otherwise, deflection controls.