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ProX HEADER® SYSTEM

CSI Sections:

05 05 23 Metal Fastenings
05 40 00 Cold-formed Metal Framing

1.0 RECOGNITION

Brady Innovations, LLC's ProX Header System has been evaluated for use as header assemblies in cold-formed steel light-frame construction. The system has been evaluated for structural performance. The ProX Header System is recognized for use under the following codes and editions:

- 2018 International Building Code® (IBC)
- 2019 California Building Code (CBC) - attached Supplement

2.0 LIMITATIONS

The ProX Header™ System recognized in this report is subject to the following limitations:

2.1 Complete plans and calculations demonstrating that applied loads are less than the allowable loads shall be furnished to the building official for approval.

2.2 The calculations and plans shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is being constructed.

2.3 Spacing of the cripple studs attached to the ProX Header shall be designed in accordance with the applicable code and shall not exceed 24 inches (610 mm).

2.4 Recognition of the ProX Header members as boundary members in a lateral force resisting system is outside the scope of this report.

2.5 The uncoated minimum base-metal thickness of the cold-formed members, as delivered to the job site, shall be at least 95 percent of the design thickness.

2.6 The ProX Header™ System recognized in this report is produced by Brady Innovations, LLC in City of Industry, CA.

3.0 PRODUCT USE

3.1 General: The ProX Header® System provides transverse (out-of-plane) and vertical load support for cold-formed steel studs above a wall opening, such as door and window openings, in both interior and exterior walls. The system complies with IBC Section 2211.1.

3.2 Design

3.2.1 ProX Header®: ProX Header design and sectional properties are defined in Tables 3 through 6 of this report. The section properties indicated in Tables 3 and 5 of this report are deemed to be in accordance with the North American Specification for the Design of Cold-Formed Steel Structural Members (AISI S100-16). The allowable moments, M_a , as indicated in Tables 4 and 6, are for use with Allowable Stress Design (ASD), and are for the ProX Header used as a flexural member with the flanges braced by studs not exceeding 24 inches (610 mm) on center. For other conditions of flange bracing, the allowable moment shall be determined in accordance with AISI S100-16. The x-axis referenced in the tables applies to the axis that is perpendicular to the plane of the wall. The y-axis referenced in the tables applies to the axis that is parallel to the plane of the wall. The design of flexural members shall address combined stresses in accordance with AISI S100-16, as applicable.

3.2.2 ProX Clip: The allowable load imposed by the ProX Header assembly on the ProX Clip shall not exceed the allowable load capacities shown in Tables 7A through 8B in this report.

3.2.3 ASD Load Combinations: When using the ASD loads in Table 4 of this report in conjunction with the basic ASD Load Combinations in Section 1605.3.1 of the IBC that include wind or earthquake loads, the combinations shall not be reduced by a factor of 0.75. When using the alternative basic ASD Load Combinations in Section 1605.3.2 of the IBC that includes wind or earthquake loads the ASD loads in Table 4 shall not be increased by 33⅓ percent. When using "component and cladding loads", as defined by ASCE 7 and in accordance with Section 1605.3.2 of the IBC, a 0.7 factor may be used for determining deflections for exterior designs only.

3.3 Installation

3.3.1 Installation General: The ProX Header components shall be installed in accordance with this report, approved plans and details, and the manufacturer's published installation instructions. Where conflicts occur, the more restrictive shall govern. The installation instructions for the



ProX Header System (Headers, Clips, Combo, etc.) shall be available at the job site at all times during installation.

The ProX Header assembly is installed by first fastening the ProX Clip to the jamb(s). The cold-formed steel cripple studs shall be installed per the wall schedule. The width of the chosen ProX Header assembly shall be compatible with the web depth of the jamb and cripple studs. The spacing of the cripple studs attached to the ProX Header shall be designed in accordance with the code and shall not exceed 24 inches (610 mm). The cripple studs shall be fastened to the ProX Header. Sheet metal screws shall comply with Section 4.4.4 of this report. The screws shall extend through the steel a minimum of three exposed threads. Installation instructions are detailed in Figure 2 of this report.

3.3.2 Attachment of ProX Clip to Steel Jamb Studs: The ProX Clip shall be installed in full contact with the steel jamb.

3.3.2.1 When Installing ProX Header Outer Only:

- For the 3 $\frac{5}{8}$ -inch (92 mm) and 4-inch (102 mm) ProX Clips, the clip shall be fastened to the steel jamb using No. 8 or No. 10 screws at each of the predrilled hole locations, at the four corners of the ProX Clip, for a total of four screws per clip.
- For the 6-inch (152 mm) and 8-inch (203 mm) ProX Clips, the clip shall be fastened to the steel jamb using No. 8 or No. 10 screws at each of the predrilled hole locations, at the four corners, and the center of the ProX Clip, for a total of six screws per clip.
- Each ProX Clip shall be attached to the web of the steel jamb stud(s) at the desired height.

3.3.2.2 When Installing ProX Header Combo:

- For the 3 $\frac{5}{8}$ -inch (92 mm) and 4-inch (102 mm) ProX Clips, the clip shall be fastened to the steel jamb using No. 8 or No. 10 screws at each of the predrilled hole locations on the ProX Clips, for a total of six screws per clip, three on each side.
- For the 6-inch (152 mm) and 8-inch (203 mm) ProX Clips, the clip shall be fastened to the steel jamb using No. 8 or No. 10 screws at each of the predrilled hole locations on the ProX Clips, for a total of ten screws per clip, five on each side.
- Each ProX Clip shall be attached to the web of the steel jamb stud(s) at the desired height.

3.3.3 Attachment of ProX Header and ProX Insert to ProX Clip: The gap between the end of the ProX Header or the ProX Insert and the steel jamb stud shall not exceed $\frac{3}{8}$ -inch (9.5 mm) at each end of the header.

3.3.3.1 When Installing ProX Header Outer Only: The ProX Outer shall be attached to the ProX Clip using one No. 8 or No. 10 screw at each of the bottom (horizontal) tabs of the ProX Clip (total of two screws) and one No. 8 or No. 10 screw in each of the upper (vertical) tabs on the ProX Clip

(total of two screws). These screws shall be placed in the ProX Outer “rib-line” so that the screw’s head is flush with the finished metal surface. A total of four screws shall be installed, two on each side.

3.3.3.2 When Installing ProX Header Combo: The ProX Outer shall be attached to the ProX Clip using one No. 8 or No. 10 screw in each of the bottom (horizontal) tabs of the ProX Clip (total of two screws) and one No. 8 or No. 10 screw in each of the four (vertical) tabs on the ProX Clip (total of four screws). The ProX Insert shall be installed and attached to the clips with one No. 8 or No. 10 screw in each of the top (horizontal) tabs of the ProX Clip (total of two screws), for a total of eight screws installed, four on each side, per clip.

3.3.4 Attachment of ProX Insert to ProX Outer (ProX Combo): The ProX Insert shall be inserted into the installed ProX Outer member and interlocked with the ProX Outer. The ProX Insert shall also be fastened to the ProX Outer with No. 8 or No. 10 screws within the rib channel section of the ProX Outer, with the screws at a maximum spacing of 8 inches (203 mm) on center.

4.0 PRODUCT DESCRIPTION

4.1 General: The ProX Header® System is a cold-formed steel header (or sill) consisting of (1) ProX Clips™, which are end-support connectors; (2) ProX Header (Outer), which is a modified W-shaped member; and (3) ProX Header (Insert), which is also a modified W-shaped component.

4.2 ProX Header® System Assembly: Components and assembly for the ProX Header® System include the ProX Header (Outer), which is a modified W-shaped member. Member designations and product nomenclature are provided in Table 1, Footnote 1 of this report. The ProX Header (Outer) can be used in an assembly with or without the ProX “Insert.” Either way, the ProX Header connects to the vertical jamb studs of the wall using ProX Clips. A general schematic of the components is provided in Figure 1 of this report. The ProX Clip transfers reaction loads from the ProX Header (with or without the insert) to supporting full-height vertical jamb studs. The ProX Clip is an internal connector that is mechanically attached (screw-attached) to the supporting vertical jamb stud. Once the ProX Clips are attached to the jamb studs, the ProX Header (without Insert) is mechanically interlocked around the ProX Clips to each end of the ProX Header and the header is screw-attached to each clip.

4.3 ProX Header® (Combo) Assembly: When increased strength is required, ProX Header (Outer) shall be combined with the ProX Header (Insert), which is a similarly modified W-shaped component. The ProX (Insert) interlocks into the ProX (Outer) forming an assembly, which is identified as the “ProX Header Combo.” The ProX (Insert) shall not be used by itself, but only in a combination of the ProX (Outer) and ProX (Insert) interlocked together and mechanically fastened (screw-attached) in accordance with this report (known as the ProX Header “Combo” assembly). However, the ProX



(Outer) may be used with or without the ProX (Insert). To construct the ProX Header “Combo,” the insert is placed inside the ProX (Outer), interlocked into place, mechanically fastened along its length to the ProX (Outer), and fastened to the ProX Clip.

4.4 Materials

4.4.1 ProX Header® (Outer) and ProX Header® (Insert):

As shown in Table 2 of this report, the ProX Header (Outer) and ProX Header (Insert) members are manufactured from cold-formed steel having design and minimum uncoated base-metal thicknesses as tabulated in Table 2 of this report and complying with the following specifications:

- The 33-mil-thick and 43-mil-thick (0.84 and 1.09 mm) members are cold-formed from hot-dipped, zinc-coated steel complying with ASTM A 653, SS, Grade 33.
- The 54-mil-thick and 68-mil-thick (1.37 and 1.73 mm) members are cold-formed from hot-dipped, zinc-coated steel complying with ASTM A 653, SS, Grade 50, Class 1.

Table 1 of this report provides ProX Header member dimensions and Figure 1 of this report shows illustrations. In Table 2 of this report designations for the various ProX members are given. The ProX Header members are available in widths of 3½, 4, 6, and 8 inches (92, 102, 152, and 203 mm), and in-stock lengths of 10, 12, and 14 feet (3048, 3658 and 4267 mm). Special (custom order) lengths are also an option.

4.4.2 ProX Clip: The ProX Clip is an internal end connection, as detailed in Table 1 of this report. The ProX Clips are manufactured from cold-formed steel having design and minimum base-metal thicknesses shown in Table 2 of this report. ProX Clips are 54-mil-thick (1.37 mm) members that are stamped from cold-formed, hot-dipped, zinc-coated steel, complying with ASTM A653, SS, Grade 50, Class 1. The ProX Clips are available in nominal widths of 3⅝, 4, 6, and 8 inches (92, 102, 152, and 203 mm) to match the header widths. Table 1 and Table 2 of this report provide ProX Clip dimensions and Figure 1 and Figure 2 of this report provide illustrations. The ProX Clip leg length is 1½ inches (38 mm).

4.4.3 Steel Stud Supports (Jamb Studs): The ProX Header shall be supported by steel jamb studs located on both ends of the header, on each side of the wall opening. The steel jamb stud thickness and grade of steel shall equal or exceed the ProX Header member properties, except for jamb studs supporting 68-mil-thick (1.73 mm) ProX Headers, which may be a minimum 54-mil-thick (1.37 mm) thick. The vertical jamb stud may be installed as a single (wide flange) jamb stud, double jamb stud, or triple jamb stud system. The load capacity and jamb stud system used shall be designed, and installation shall be in accordance with the IBC.

4.4.4 Fasteners: Fasteners used in this system shall be self-drilling sheet metal screws complying with ASTM C1513 or

listed in an evaluation report issued by an approved and accredited evaluation service agency. The No. 8 screws shall have minimum shear and tensile allowable loads of 344 pounds (1.53 kN) and 118 pounds (0.52 kN), respectively. The No. 10 screws shall have minimum shear and tensile allowable loads of 370 pounds (1.64 kN) and 137 pounds (0.61 kN), respectively.

5.0 IDENTIFICATION

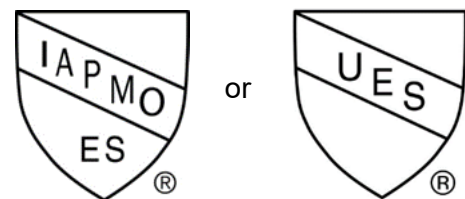
Each ProX Header component (ProX Outer and ProX Insert) and ProX Clip shall be identified as follows:

5.1 A label shall be affixed on at least one of the following: product, packaging, installation instructions, or descriptive literature.

5.1.1 Each ProX factory-cut Header component (ProX Outer and ProX Insert) shall be identified with a label indicating the report holder's name, the name of the ProX member (ProX Header, ProX Insert), the base-metal thickness (uncoated) in decimal units, the minimum yield strength, the galvanized coating designation (G60), and the evaluation report number (ER-286). Field-cut members (cut from longer factory-cut and labeled sections) and field-cut “installed” sections are not required to be individually labeled.

5.1.2 Each ProX Clip is identified with the name of the ProX component (ProX Clip), the base-metal thickness (uncoated) in decimal units, the minimum yield strength, the coating grade (G60), and the Evaluation Report Number (ER-286).

5.2 The label shall include the company name or trademark, model number, and the Evaluation Report Number (ER-286) to identify the products recognized in this report. A die-stamp label may also substitute for the label. Either IAPMO Uniform ES Mark of Conformity may also be used as shown below:



IAPMO UES ER-286

6.0 SUBSTANTIATING DATA

The following data has been submitted:

6.1 Appendix B of the ICC-ES Acceptance Criteria for Cold-formed Steel Framing Members (AC46), dated October 2019.



6.2 Appendix A of the ICC-ES Acceptance Criteria for Connectors Used with Cold-formed Steel Structural Members (AC261), dated February 2019.

6.3 Test reports are from laboratories in compliance with ISO/IEC 17025.

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on Brady Innovations, LLC's ProX Header System to assess conformance to the codes shown in Section 1.0 of this report, and serves as documentation of the product certification. Products are manufactured at locations noted in Section 2.6 of this report under a quality control program with periodic inspections under the surveillance of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org

Table 1 – DIMENSIONS OF ProX HEADER COMPONENTS

ProX OUTER			ProX CLIP		ProX INSERT		
Member Designation ¹	Width (inches)	Height (inches)	Member Designation	Leg Length (inches)	Member Designation	Width (inches)	Height (inches)
362X425	3.625	4.25	362Clip-54	1.5	362XT162	3.464	1.625
400X425	4.000	4.25	400Clip-54	1.5	400XT162	3.839	1.625
600X425	6.000	4.25	600Clip-54	1.5	600XT162	5.839	1.625
800X425	8.000	4.25	800Clip-54	1.5	800XT162	7.839	1.625

For SI: 1 inch=25.4 mm

¹ Member designation is defined as the width by the depth or height of the header and the base-metal steel thickness, in mills. For example, 362X425-33 represents a ProX Outer having a width of 3.62 inches by a height of 4.25 inches and having a steel thickness of 33 mills. The X letter in the member designation represents the ProX Outer, the XT letters in the member designation represent the ProX Insert, and the XTC letters in the member designation represent the ProX Combo.

TABLE 2—ProX HEADER STEEL THICKNESSES AND YIELD STRENGTH

THICKNESS ¹				MINIMUM YIELD STRENGTH ² (ksi)	GALVANIZATION COATING DESIGNATION ³
Gage	Mils	Minimum Uncoated Base-Metal Thickness ⁴ (inch)	Design Thickness (inch)		
20	33	0.0329	0.0346	33	G60
18	43	0.0428	0.0451	33	G60
16	54	0.0538	0.0566	50	G60
14	68	0.0677	0.0713	50	G60

For SI: 1 inch=25.4 mm.

¹ProX Outer and Insert members are manufactured using the thicknesses of cold-formed steel shown in the table, except the ProX Clips are manufactured using No. 16 gage (54 mills) steel.

²The 33- and 43-mil-thick ProX Outer and Insert members are cold-formed from hot-dipped zinc-coated steel complying with ASTM A653, SS, Grade 33; and the 54- and 68-mil-thick ProX Outer and Insert members are cold-formed from hot-dipped zinc-coated steel complying with ASTM A 653, SS, Grade 50 Class 1.

³Hot-dipped zinc coating complies with ASTM A653.

⁴Minimum uncoated base-metal thickness of the cold-formed steel header members shall not at any location be less than 95 percent of the specified design thicknesses, except lesser thicknesses are permitted at bends due to cold-forming effects.



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TABLE 3—PROX OUTER SECTIONAL PROPERTIES

DESCRIPTION			GROSS SECTION PROPERTIES						EFFECTIVE PROPERTIES						TORSIONAL PROPERTIES				
Member Designation ¹	Design Steel Thickness (inch)	Weight (lbs./ft.)	Area (in. ²)	I _x (in. ⁴)	R _x (in.)	I _y (in. ⁴)	R _y (in.)	I _x Pos. (in. ⁴)	I _x Neg. (in. ⁴)	I _y (in. ⁴)	S _x Pos. (in. ³)	S _x Neg. (in. ³)	S _y (in. ³)	Y _o (in.)	J (in. ⁴)	C _w (in. ⁶)	Ro (in.)		
362X425-33	0.0346	1.6610	0.48853	0.7487	1.2380	1.1067	1.5051	0.3699	0.74869	0.83181	0.12191	0.27855	0.39064	-2.0762	0.0001950	2.2738	2.8475		
362X425-43	0.0451	2.1519	0.63291	0.9608	1.2321	1.4110	1.4931	0.5540	0.9608	1.11330	0.18766	0.35931	0.53793	-2.0665	0.0004291	2.8719	2.8316		
362X425-54	0.0566	2.6752	0.78683	1.1819	1.2256	1.7236	1.4800	0.6840	1.1819	1.33250	0.23334	0.44490	0.64169	-2.0610	0.0008402	3.4670	2.8178		
362X425-68	0.0713	3.3271	0.97854	1.4497	1.2172	2.0953	1.4633	0.9944	1.4497	1.70130	0.35150	0.55050	0.84590	-2.0551	0.0016582	4.1490	2.8011		
400X425-33	0.0346	1.7051	0.50151	0.7789	1.2462	1.3605	1.6471	0.3879	0.7789	1.02600	0.12637	0.28552	0.43849	-2.1374	0.0002001	2.8338	2.9722		
400X425-43	0.0451	2.2094	0.64983	0.9998	1.2404	1.7374	1.6351	0.5800	0.9998	1.37410	0.19406	0.36838	0.60351	-2.1280	0.0004406	3.5851	2.9565		
400X425-54	0.0566	2.7474	0.80806	1.2305	1.2340	2.1261	1.6221	0.7166	1.2305	1.64820	0.24140	0.45629	0.72125	-2.1228	0.0008629	4.3372	2.9428		
400X425-68	0.0713	3.4180	1.0053	1.5106	1.2258	2.5909	1.6054	1.0404	1.5106	2.10770	0.36280	0.56490	0.95090	-2.1171	0.0017035	5.2054	2.9261		
600X425-33	0.0346	1.9404	0.57071	0.9168	1.2674	3.2507	2.3866	0.4686	0.9168	2.46650	0.14507	0.31498	0.71069	-2.2394	0.0002277	6.9805	3.5096		
600X425-43	0.0451	2.5161	0.74003	1.1779	1.2616	4.1732	2.3747	0.6968	1.1779	3.35460	0.22090	0.40660	0.99690	-2.2301	0.0005017	8.8786	3.4935		
600X425-54	0.0566	3.1323	0.92126	1.4520	1.2556	5.1380	2.3616	0.8626	1.4524	4.05660	0.27520	0.50420	1.20030	-2.2238	0.0009838	10.8150	3.4784		
600X425-68	0.0713	3.9028	1.1479	1.7880	1.2479	6.3120	2.3449	1.2472	1.7877	5.20550	0.41020	0.62520	1.57920	-2.2165	0.0019450	13.1010	3.4596		
800X425-33	0.0346	2.1757	0.63991	1.0250	1.2653	6.1460	3.0991	0.5296	0.9727	4.48780	0.15800	0.32590	0.95370	-2.1896	0.0002554	13.3150	4.0000		
800X425-43	0.0451	2.8228	0.83023	1.3170	1.2594	7.9120	3.0870	0.7856	1.3137	6.24650	0.23960	0.43260	1.38110	-2.1798	0.0005630	16.9820	3.9834		
800X425-54	0.0566	3.5172	1.0345	1.6250	1.2534	9.7740	3.0738	0.9734	1.6252	7.61930	0.29860	0.53750	1.68190	-2.1720	0.0011050	20.7610	3.9669		
800X425-68	0.0713	4.3876	1.2905	2.0030	1.2458	12.0580	3.0567	1.4050	2.0030	10.0820	0.44300	0.66700	2.31430	-2.1637	0.0021870	25.2700	3.9462		

For SI: 1 inch = 25.4 mm, 1 in.² = 645 mm², 1 in.³ = 16,390 mm³, 1 in.⁴ = 416,306 mm⁴



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TABLE 4—ProX OUTER ALLOWABLE VALUES

DESCRIPTION			ALLOWABLE VALUES			
Member Designation	Design Steel Thickness (inch)	Weight (lbs./ft.)	Positive Moment +Ma (in.-lbs)		Negative Moment -Ma (in.-lbs)	
			X-Axis	Y-Axis	X-Axis	Y-Axis
362X425-33	0.0346	1.6610	2,409	5,695	5,504	5,695
362X425-43	0.0451	2.1519	3,708	8,232	7,100	8,232
362X425-54	0.0566	2.6752	6,986	14,309	13,320	14,309
362X425-68	0.0713	3.3271	10,524	19,735	16,483	19,735
400X425-33	0.0346	1.7051	2,497	6,096	5,642	6,096
400X425-43	0.0451	2.2094	3,835	8,841	7,279	8,841
400X425-54	0.0566	2.7474	7,228	15,396	13,661	15,396
400X425-68	0.0713	3.4180	10,863	21,322	16,914	21,322
600X425-33	0.0346	1.9404	2,867	8,497	6,224	8,497
600X425-43	0.0451	2.5161	4,366	12,472	8,035	12,472
600X425-54	0.0566	3.1323	8,239	21,892	15,096	21,892
600X425-68	0.0713	3.9028	12,283	30,761	18,720	30,761
800X425-33	0.0346	2.1757	3,123	11,140	6,440	11,140
800X425-43	0.0451	2.8228	4,735	16,482	8,549	16,482
800X425-54	0.0566	3.5172	8,939	29,103	16,092	29,103
800X425-68	0.0713	4.3876	13,263	41,272	19,969	41,272

For SI: 1 inch =25.4 mm, 1lb/ft =14.6 N/m, 1 in-lb = 0.112985 N-m

TABLE 5—ProX COMBO SECTIONAL PROPERTIES

MEMBER DESIGNATION	GROSS SECTION PROPERTIES					EFFECTIVE PROPERTIES						TORSIONAL PROPERTIES			
	Area (in. ²)	I _x (in. ⁴)	R _x (in.)	I _y (in. ⁴)	R _y (in.)	I _x Pos. (in. ⁴)	I _x Neg. (in. ⁴)	I _y (in. ⁴)	S _x Pos. (in. ³)	S _x Neg. (in. ³)	S _y (in. ³)	Y _o (in.)	J (in. ⁴)	C _w (in. ⁶)	R _o (in.)
362XTC425-33	0.7985	0.9237	1.0755	1.5771	1.4054	0.64530	0.92370	1.32010	0.24804	0.38078	0.66212	-1.5102	0.0003186	2.5199	2.3265
362XTC425-43	1.0327	1.1838	1.0707	2.0157	1.3971	0.8821	1.1838	1.51030	0.34583	0.49150	0.72694	-1.4966	0.0007002	3.1769	2.3104
362XTC425-54	1.2891	1.4644	1.0658	2.4694	1.3840	1.0919	1.4644	2.10180	0.43070	0.61180	1.07500	-1.4923	0.0013766	3.8561	2.2975
362XTC425-68	1.6009	1.7981	1.0598	2.9801	1.3644	1.4502	1.7981	2.60590	0.58630	0.75840	1.36200	-1.5061	0.0027128	4.6076	2.2920
400XTC425-33	0.82478	0.9820	1.0912	1.9512	1.5381	0.6996	0.9820	1.63750	0.26712	0.40120	0.74605	-1.5309	0.0003291	3.1526	2.4290
400XTC425-43	1.069	1.2717	1.0907	2.5172	1.5345	0.9602	1.2717	2.17140	0.37120	0.51970	1.00010	-1.5511	0.0007248	4.0748	2.4393
400XTC425-54	1.3339	1.5897	1.0917	3.1269	1.5310	1.1974	1.5897	2.66070	0.46220	0.64880	1.21480	-1.5720	0.0014244	5.0897	2.4509
400XTC425-68	1.6627	1.9820	1.0919	3.8750	1.5265	1.6064	1.9821	3.38730	0.62890	0.80870	1.56180	-1.6028	0.0028170	6.3350	2.4681
600XTC425-33	0.96285	1.2816	1.1537	4.7898	2.2304	0.9842	1.2417	4.01930	0.37230	0.50500	1.22590	-1.5166	0.0003842	7.7281	2.9335
600XTC425-43	1.2512	1.6530	1.1494	6.1790	2.2224	1.3322	1.6529	5.40140	0.51290	0.66750	1.68740	-1.4998	0.0008480	9.8530	2.9171
600XTC425-54	1.556	2.0420	1.1457	7.5680	2.2054	1.6496	2.0424	6.54390	0.63930	0.83010	2.04260	-1.5082	0.0016620	12.0010	2.9071
600XTC425-68	1.9385	2.5220	1.1407	9.2770	2.1877	2.1544	2.5222	8.22020	0.85290	1.03410	2.60750	-1.5087	0.0032850	14.5530	2.8919
800XTC425-33	1.0981	1.5760	1.1980	9.1800	2.8913	1.1815	1.3383	7.36400	0.43250	0.56480	1.64570	-1.4643	0.0004380	14.6350	3.4553
800XTC425-43	1.4235	2.0280	1.1937	11.8000	2.8792	1.6550	1.8760	10.0560	0.62460	0.76950	2.32370	-1.4635	0.0009650	18.6350	3.4433
800XTC425-54	1.7709	2.5050	1.1893	14.5410	2.8655	2.0590	2.3410	12.3290	0.78300	0.96180	2.85380	-1.4658	0.0018910	22.7380	3.4314
800XTC425-68	2.2046	3.0890	1.1838	17.8800	2.8479	2.7080	3.0850	15.9840	1.05680	1.24240	3.81920	-1.4696	0.0037360	27.6080	3.4164

For SI: 1 inch = 25.4 mm, 1 in.² = 645 mm², 1 in.³ = 16,390 mm³, 1 in.⁴ = 416306 mm⁴


TABLE 6—ProX COMBO ALLOWABLE LOADS

DESCRIPTION ^{1,2}			ALLOWABLE VALUES					
Member Designation	Design Steel Thickness (inch)	Weight (lbs./ft.)	Positive Moment +Ma (in.-lbs)		Negative Moment -Ma (in.-lbs)		Vertical Shear Va (lbs.)	
			X-Axis	Y-Axis	X-Axis	Y-Axis	#8 @ 8" o/c ¹	#10 @ 8" o/c
362XTC425-33	0.0346	2.7149	4,901	13,084	7,524	13,084	250	270
362XTC425-43	0.0451	3.5111	6,834	14,365	9,712	14,365	424	457
362XTC425-54	0.0566	4.3830	12,895	32,187	18,318	32,187	602	648
362XTC425-68	0.0713	5.4430	17,553	40,779	22,706	40,779	717	771
400XTC425-33	0.0346	2.8043	5,278	14,742	7,928	14,742	254	274
400XTC425-43	0.0451	3.6347	7,335	19,762	10,269	19,762	448	483
400XTC425-54	0.0566	4.5354	13,838	36,372	19,425	36,372	675	725
400XTC425-68	0.0713	5.6530	18,831	46,760	24,213	46,760	877	943
600XTC425-33	0.0346	3.2737	7,356	24,225	9,979	24,225	241	260
600XTC425-43	0.0451	4.2540	10,135	33,345	13,190	33,345	394	425
600XTC425-54	0.0566	5.2903	19,142	61,157	24,853	61,157	556	598
600XTC425-68	0.0713	6.5909	25,537	78,068	30,960	78,068	627	675
800XTC425-33	0.0346	3.7336	8,547	32,520	11,160	32,520	244	264
800XTC425-43	0.0451	4.8397	12,341	45,917	15,205	45,917	387	417
800XTC425-54	0.0566	6.0211	23,444	85,444	28,796	85,444	543	584
800XTC425-68	0.0713	7.4956	31,640	114,350	37,200	114,350	593	637

For SI: 1 inch = 25.4 mm, 1lb/ft = 14.6 N/m, 1 in.-lb = 0.112985 N-m

¹Screw spacing is each side of the ProX Outer to the ProX Insert. Allowable shear is based upon a uniform loading.

²ProX Outer and ProX Insert shall have the same steel thickness

TABLE 7A—ProX CLIP ALLOWABLE VALUES – WITHOUT INSERT INSTALLED WITH NO.8 SCREWS

ProX OUTER WIDTHS (inches)	ProX OUTER THICKNESS (mils)	NUMBER OF FASTENERS ATTACHING ProX CLIP TO VERTICAL STEEL JAMB STUD ^{1,2}	NUMBER OF SCREWS ATTACHING ProX OUTER TO CLIP ^{3,4}	ALLOWABLE SHEAR VALUES (pounds) ⁵	
				V _{vertical}	V _{horizontal}
3.625	33	4	4	400	472
3.625	43	4	4	573	492
3.625	54	4	4	726	514
3.625	68	4	4	726	514
4.000	33	4	4	400	523
4.000	43	4	4	573	690
4.000	54	4	4	783	719
4.000	68	4	4	783	719
6.000	33	6	4	492	538
6.000	43	6	4	704	709
6.000	54	6	4	963	921
6.000	68	6	4	963	921
8.000	33	6	4	492	538
8.000	43	6	4	704	709
8.000	54	6	4	963	921
8.000	68	6	4	963	921

For SI: 1 inch = 25.4 mm, 1 mil = 0.0254 mm, 1 lb = 4.45 N.

¹Jamb member thickness to equal or exceed ProX Header thickness, except as described in Section 3.2.3 of this report.

²The screws from clip to jamb shall be located at the four corner holes of the clip when supporting a ProX Header without the insert.

³Maximum gap between the end of header and jamb shall be 3/8-inch.

⁴All clips are 54 mils thick.

⁵Values shall not be increased by 33% for load combinations involving wind or seismic loading.



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TABLE 7B—ProX CLIP ALLOWABLE VALUES – WITH INSERT AND NO.8 SCREWS

ProX COMBO ¹ WIDTHS (inches)	ProX COMBO THICKNESS (mils)	NUMBER OF FASTENERS ATTACHING ProX CLIP TO STEEL JAMB STUD ²	NUMBER OF SCREWS ATTACHING ProX OUTER TO CLIP ^{3,4}	ALLOWABLE SHEAR VALUES ⁵ (pounds)	
				V _{vertical}	V _{horizontal}
3.625	33	6	8	865	657
3.625	43	6	8	1215	701
3.625	54	6	8	1582	747
3.625	68	6	8	1582	747
4.000	33	6	8	923	861
4.000	43	6	8	1273	1057
4.000	54	6	8	1704	1111
4.000	68	6	8	1704	1111
6.000	33	10	8	985	698
6.000	43	10	8	1328	960
6.000	54	10	8	1751	1282
6.000	68	10	8	1751	1282
8.000	33	10	8	985	698
8.000	43	10	8	1328	960
8.000	54	10	8	1751	1282
8.000	68	10	8	1751	1282

For SI: 1 inch = 25.4 mm, 1 mil = 0.0254 mm, 1 lb = 4.45 N.

¹ProX Outer and ProX Insert shall have the same thickness. All clips are 54 mils thick.

²Jamb member thickness to equal or exceed ProX Header thickness, except as described in Section 3.2.3 of this report.

³Maximum gap between the end of header and jamb to be 3/8 inch.

⁴Thescrews from clip to jamb shall be located in all holes of the clip when supporting ProX Combo (with Insert). At clips with 10 screw holes, the screws shall be placed in the center of two holes as well (6 total). At ProX Header with Insert, a fastener shall be installed in each hole.

⁵Values shall not be increased by 33% for load combinations involving wind or seismic loading.

TABLE 8A—ProX CLIP ALLOWABLE VALUES – WITHOUT INSERT INSTALLED WITH NO.10 SCREWS

ProX OUTER WIDTHS (inches)	ProX OUTER THICKNESS (mils)	NUMBER OF FASTENERS ATTACHING ProX CLIP TO STEEL JAMB STUD ^{1,2}	NUMBER OF SCREWS ATTACHING ProX OUTER TO CLIP ^{3,4}	ALLOWABLE SHEAR VALUES ⁵ (pounds)	
				V _{vertical}	V _{horizontal}
3.625	33	4	4	442	483
3.625	43	4	4	631	506
3.625	54	4	4	793	531
3.625	68	4	4	793	531
4.000	33	4	4	442	558
4.000	43	4	4	631	711
4.000	54	4	4	861	734
4.000	68	4	4	861	734
6.000	33	6	4	544	574
6.000	43	6	4	775	759
6.000	54	6	4	1014	989
6.000	68	6	4	1014	989
8.000	33	6	4	544	574
8.000	43	6	4	775	759
8.000	54	6	4	1014	989
8.000	68	6	4	1014	989

For SI: 1 inch = 25.4 mm, 1 mil = 0.0254 mm, 1 lb = 4.45 N.

¹Jamb member thickness to match or exceed ProX Header thickness, except as described in Section 3.2.3 of this report.

²Locate the screws from clip to jamb at the four corner holes of the clip when supporting a ProX Header without the insert.

³Maximum gap between the end of header and jamb to be 3/8-inch.

⁴All clips are 54 mils thick.

⁵Values shall not be increased by 33% for load combinations involving wind or seismic loading.



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TABLE 8B—ProX CLIP ALLOWABLE VALUES – WITH INSERT AND NO.10 SCREWS

ProX COMBO WIDTHS (inches) ¹	ProX COMBO THICKNESS (mils)	NUMBER OF FASTENERS ATTACHING ProX CLIP TO STEEL JAMB STUD ²	NUMBER OF SCREWS ATTACHING ProX OUTER TO CLIP ^{3,4}	ALLOWABLE VALUES (pounds) ⁵	
				V _{vertical}	V _{horizontal}
3.625	33	6	8	938	682
3.625	43	6	8	1317	730
3.625	54	6	8	1708	784
3.625	68	6	8	1708	784
4.000	33	6	8	996	909
4.000	43	6	8	1375	1093
4.000	54	6	8	1848	1143
4.000	68	6	8	1848	1143
6.000	33	10	8	1057	753
6.000	43	10	8	1428	1036
6.000	54	10	8	1892	1381
6.000	68	10	8	1892	1381
8.000	33	10	8	1057	753
8.000	43	10	8	1428	1036
8.000	54	10	8	1892	1381
8.000	68	10	8	1892	1381

For SI: 1 inch = 25.4 mm, 1 mil = 0.0254 mm, 1 lb = 4.45 N.

¹ProX Outer and ProX Insert shall have the same thickness.

²Jamb member thickness to equal or exceed ProX Header thickness, except as described in Section 3.2.3 of this report.

³At clips with 10 screw holes, screws shall be installed in the center two holes as well (6 total). At ProX Header with Insert screws shall be installed in all holes.

⁴Locate screws from dip to jamb in all holes of the clip when supporting ProX Combo (with Insert). The maximum gap between the end of the header and jamb shall be 3/8-inch. All clips are 54 mils thick.

⁵Values shall not be increased by 33 percent for load combinations involving wind or seismic loading.

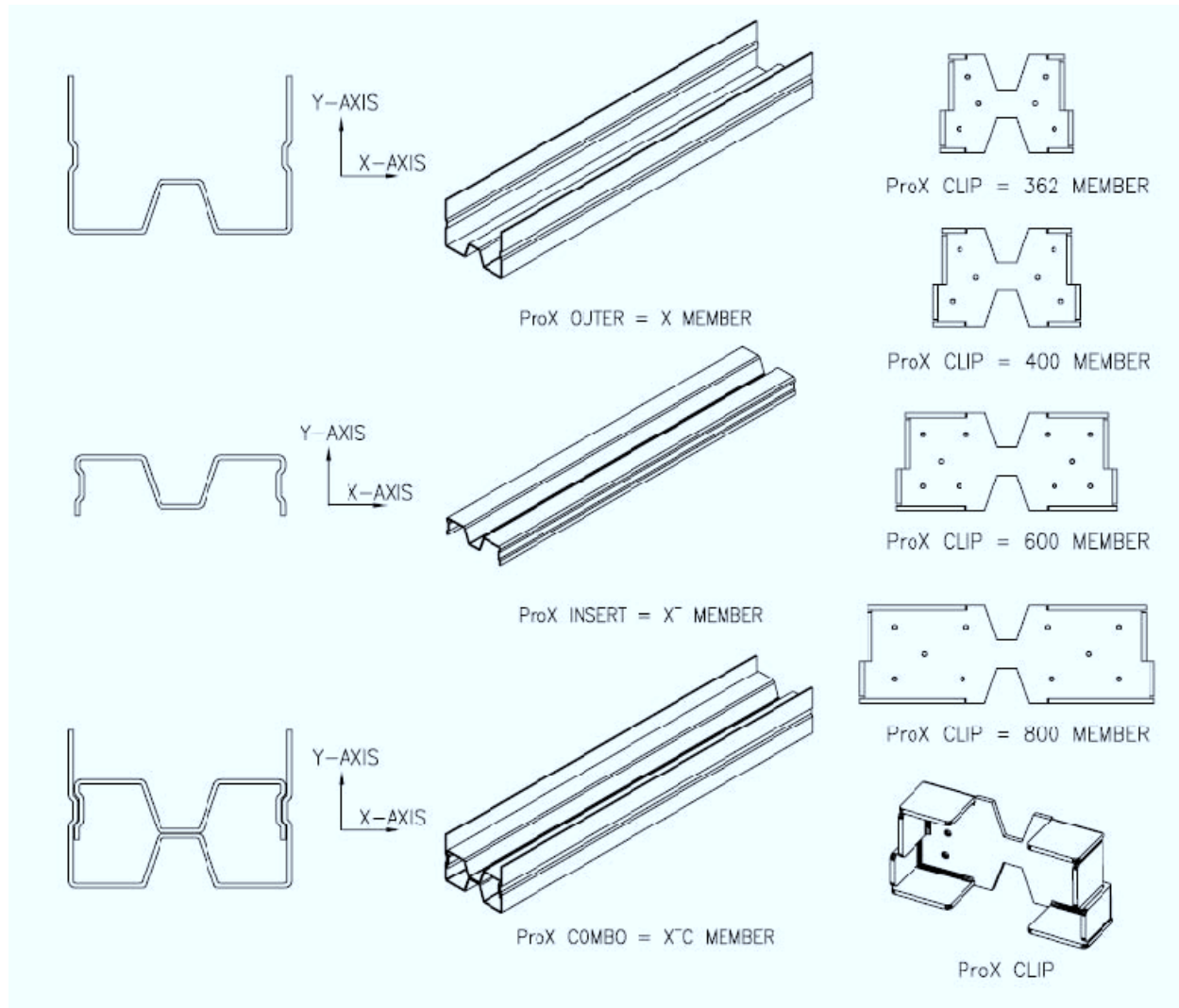


FIGURE 1 – ProX OUTER AND COMBO HEADERS AND CLIPS

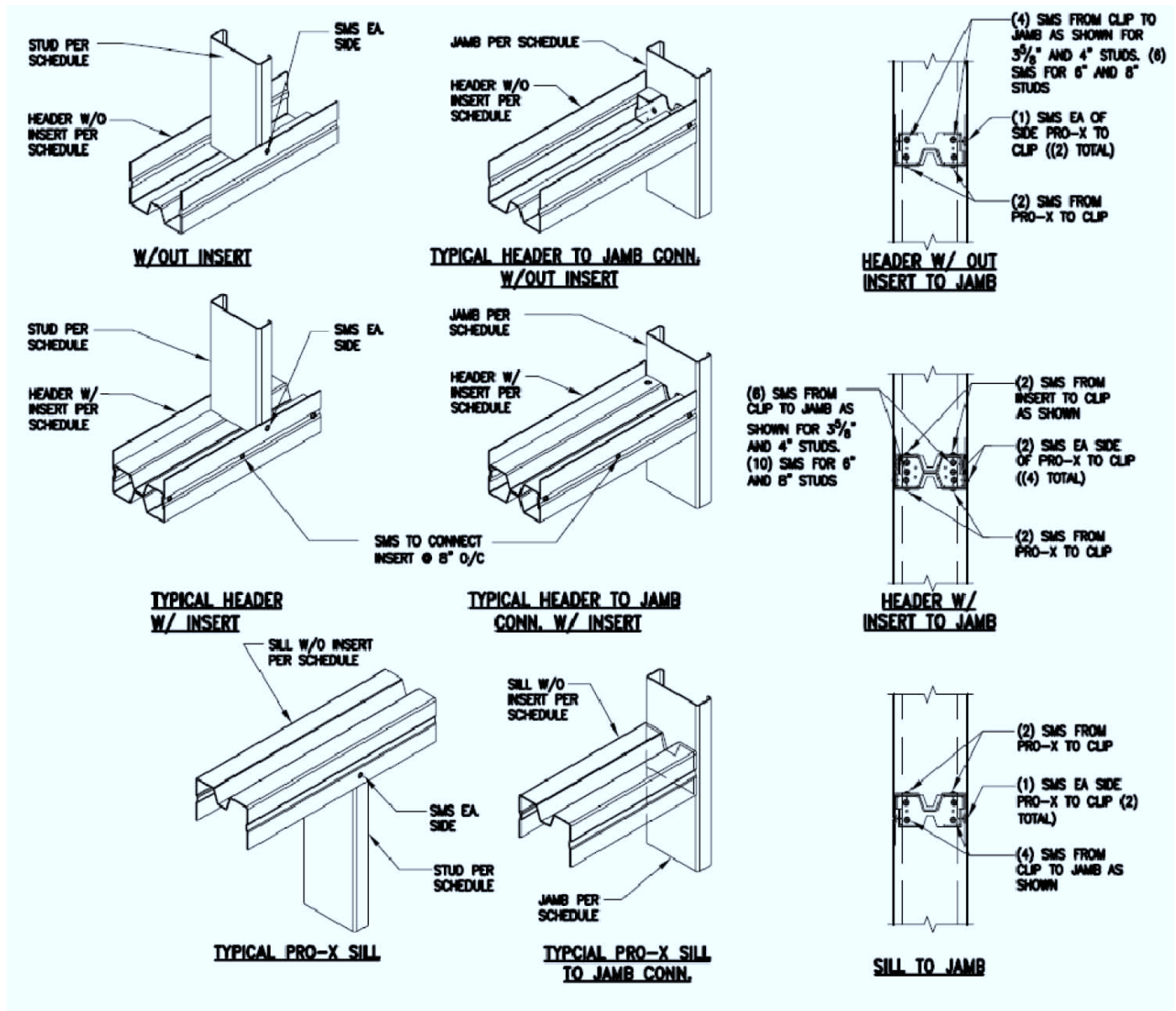


FIGURE 2 – INSTALLATION PROCEDURES



CALIFORNIA SUPPLEMENT

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ProX HEADER® SYSTEM

CSI Sections:

- 05 05 23 Metal Fastenings
- 05 40 00 Cold-formed Metal Framing

1.0 RECOGNITION

The Brady Innovations, LLC's ProX Header System as evaluated and represented in IAPMO UES Evaluation Report ER-286 and with changes as noted in this supplement is a satisfactory alternative for use in buildings built under the following codes (and regulations):

- 2019 California Building Code (CBC)

2.0 APPLICABILITY

All provisions of ER-286 referencing the 2018 IBC shall apply to use under the 2019 CBC.

This supplement expires concurrently with ER-286.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org