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RESEARCH REPORT: RR 26019
(CSI # 092216)

REEVALUATION DUE

DATE: January 1, 2021
Issued Date: January 1, 2019
Code: 2017 LABC

GENERAL APPROVAL – Renewal – ClarkDietrich ProStud[®] and ProTrak[®] cold-formed steel framing members.

DETAILS

ProSTUD and ProTRAK are cold-formed steel framing members used to construct interior nonload-bearing (nonstructural), gypsum board sheathed walls. ProSTUD steel framing members are “C” shaped members with three evenly spaced grooves in each flange. ProSTUD members have offsets in the web, and diamond embosses on the center of the web of 2-1/2” and deeper members. The flanges of the ProSTUD members may be formed with or without knurling. ProTRAK steel framing members are “U” shaped members without a flange stiffener. ProTRAK members may be formed with or without two evenly spaced grooves in each flange and the flanges may be formed with or without a hem. ProTRAK members may be formed with or without a web offset or the diamond emboss. The flanges of ProSTUD and ProTRAK members may be formed with or without knurling. See attached product profiles. The ProSTUD framing system products that are recognized in this report are limited to the products whose designations are found in Table 1.

ProSTUD and ProTRAK framing members (studs and tracks) are fabricated from steel coil conforming to the mechanical and chemical properties of ASTM A1003. Steel grades for each ProSTUD and ProTRAK framing member designations and specifications are recognized. See Table 1.

ProSTUD and ProTRAK framing assemblies have fire-resistive properties as listed on page 22 of attachment. Fire rated assemblies shall be in accordance with the applicable UL Design No. from UL Certification CIKV.R26512

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The ProSTUD and ProTRAK members have a protective coating which conforms to ASTM Specification C645 and have a protective coating conforming to Specification A653/A653M-G40 minimum.

The ProSTUD[®] product designator is “PDS” and represents a 1¼” flange product. ProSTUD is available in steel design thicknesses of 0.0158”, 0.019, 0.0200”, 0.0312”, and 0.0346”. The ProSTUD and ProTRAK framing members are available in depths of 1-5/8”, 2-1/2”, 3-1/2”, 3-5/8”, 4”, 5-1/2” and 6”. See Table 1 for recognized product designations.

The ProTRAK[®] product designator is “PDT” and represents product with 1-1/4”, 1-1/2”, 2”, 2-1/2” or 3” flanges. ProTRAK thicknesses correspond to the stud thicknesses. See Table 1 for recognized product designations.

ProSTUD is pre-punched with knockouts spaced every 24 inches throughout the stud length and shall not be located less than 10 inches from the end of the member to the near edge of the web knockout. See page 8 of approval for ProSTUD punchout dimensions.

Table 1 – ProSTUD and ProTRAK Specifications¹

ClarkDietrich Designation	Min. Base Steel Thickness	Min. Yield Strength (ksi)
ProSTUD 25	0.0150” (15-mil)	NS 50
ProSTUD 20	0.0181 (18-mil)	NS 70
ProSTUD 20 LTD	0.0190” (19-mil)	NS 65
ProSTUD 30	0.0296” (30-mil)	NS 33
ProSTUD 33	0.0329” (33-mil)	NS 33
ProTRAK 25	0.0150” (15-mil)	NS 50
ProTRAK 20	0.0181 (18-mil)	NS 50
ProTRAK 20 LTD	0.0190” (19-mil)	NS 50
ProTRAK 30	0.0296” (30-mil)	NS 33
ProTRAK 33	0.0329” (33-mil)	NS 33

¹ ProSTUD and ProTRAK are available in depths of 1-5/8”, 2-1/2”, 3-1/2”, 3-5/8”, 4”, 5-1/2” and 6”.

² 18-mil ProSTUD 20 and ProTRAK 20 are available in depths of 1-5/8”, 2-1/2”, 3-5/8”, 4”, and 6”.

Reference attached tables for product properties and design capacities.

- ProSTUD and ProTRAK Section Properties on pages 1-6.
- ProSTUD and ProTRAK Screw Connection Values on page 7.
- ProSTUD Composite Limiting Height tables and instructions on pages 8-12.
- ProSTUD Non-Composite Limiting Height tables on pages 13-16.
- ProSTUD Allowable Ceiling Span tables on pages 17-19.
- ProSTUD Sound Assemblies identified on pages 20-21 provide the Sound Transmission Class (STC) require for air-borne sound according to 2017 Los Angeles Building Code Section 1207.2 where STC ratings are not less than 50 and 45, respectively.
- ProSTUD Fire Rated Assemblies identified in the tables on page 22. ProSTUD and ProTRAK framing meet requirements for use in fire-resistance rated assemblies in accordance with 2017 Los Angeles Building Code Section 703.2 when used in accordance with UL Certification CIKV.R26512 and related UL Design Nos.

The approval is subject to the following conditions:

1. The installation of ProSTUD and ProTRAK products must be in accordance with the approved plans and this report. The approved plans must be available on the jobsite at all times during installation.
2. The attachment of studs to tracks is optional. For composite wall assemblies, the 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. Maximum fastener spacing is provided in footnotes of attached tables.
3. The gypsum wallboard must be installed as required per ASTM C840.
4. The steel framing described in this approval is limited to use as non-loadbearing interior walls and ceilings. The wall assemblies shall be limited to interior installations where the superimposed axial load is zero pounds. This note shall be made a part of the construction documents and/or plans under general notes for light gauge steel construction.
5. Non-loadbearing (nonstructural) wall heights are determined by the lesser of the limiting conditions which include wall deflection, shear strength, web crippling strength, or flexural strength of the stud.
6. All designs, details and calculations shall be prepared by a licensed civil or structural engineer or architect, registered in the state of California. The design, details and calculations shall be submitted to the structural plan check division for review for each project application.
7. The design of the wall connection to the surrounding structure is outside the scope of this general approval.

8. The minimum base steel thickness of the section delivered to the jobsite must be a minimum of 95% of the design thickness.
9. The ProSTUD and ProTRAK framing identified in this approval is manufactured in accordance with the manufacturer's approved quality control system with inspections by Archite ctural Testing (IAS AA-676).
10. ProSTUD and ProTRAK produced in accordance with this approval shall be identified with labeling at a maximum spacing of 96 inches that include the following information.
 - a. The manufacturer's name
 - b. The ProSTUD and ProTRAK framing designation
 - c. Minimum base steel thickness (uncoated) in decimals or mils
 - d. Yield Strength
 - e. Galvanization coating designation G40
 - f. The City of Los Angeles Research Report (LARR) number.
 - g. UL certification label on each product skid for ProSTUD and ProTRAK framing to be used in fire-resistance rated assemblies.

DISCUSSION

The report is in compliance with 2017 Los Angele Building Code.

The approval is based on the following:

- Reports of testing and engineering analysis in accordance with ICC-ES Acceptance Criteria for Cold-Formed Steel Framing Members (AC46), dated June 2012,
- Reports of testing and engineering analysis in accordance with ICC-ES Acceptance Criteria for Cold-formed Steel Framing Members – Interior Nonload-bearing Wall Assemblies (AC86), dated May 2012.
- Reports of evaluation and engineering analysis in accordance with AISI S100-07 with 2010 supplement, North American Specification for the Design of Cold-Formed Steel Structural Members.
- Reports of acoustical testing in accordance with ASTM E90 – Testing Standard for Air-Borne Sound Transmission Loss of Building Partitions and Elements.
- Reports of fire-rated assemblies in accordance with UL Design No. from UL Certification CIKV.R26512

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by the Department of Building and Safety Engineers and Inspectors.

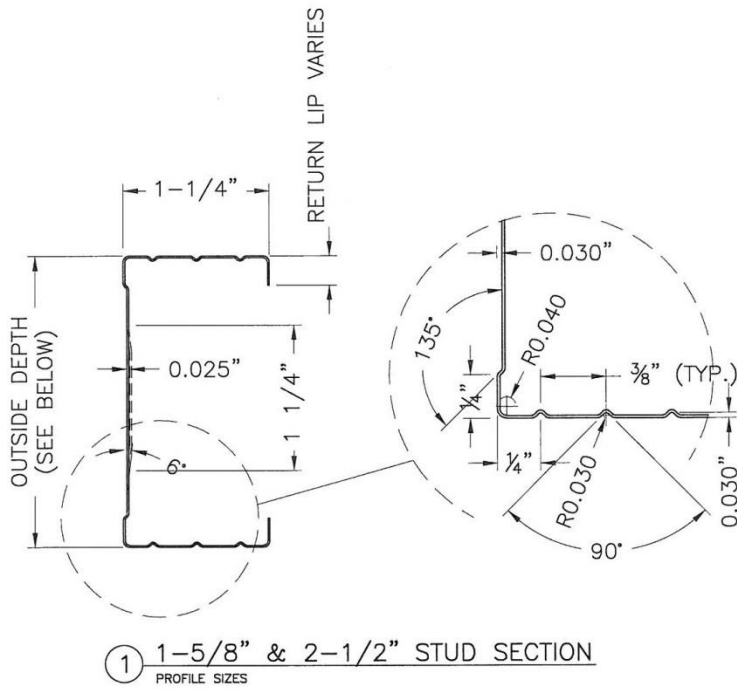
ClarkDietrich Building Systems, LLC
RE: ProSTUD and ProTRAK Cold-Formed Steel Framing Members

This general approval of an equivalent alternate of the Code is only valid where an engineer and/or inspector of this Department has determined that all conditions of this Approval have been met in the project in which it is to be used.

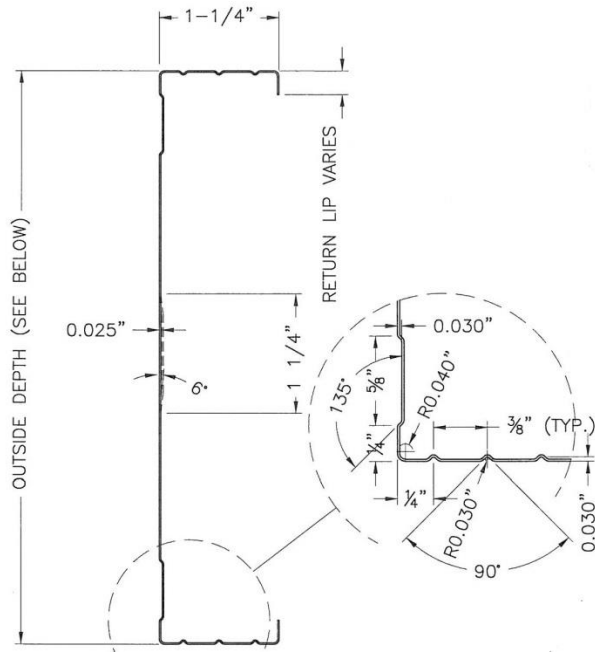
DAVID CHANG, Chief
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104.6.2, 2203.1

Attachments: Product Properties, Allowable Span Charts and Sound and Fire-Rated
 Assemblies (22 pages)

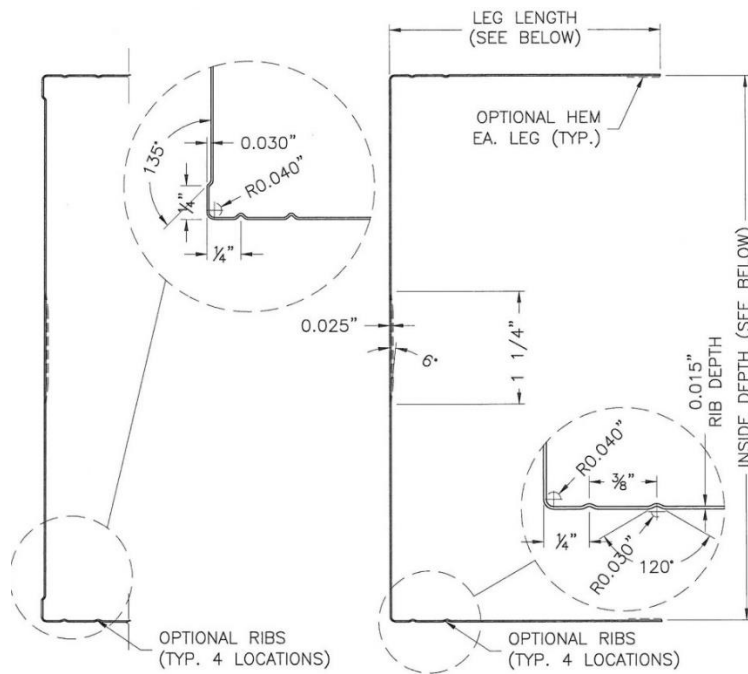


Return Lip Dimensions		
Section	Minimum Thickness	Return Lip
162S125	0.015"	0.250"
250S125		
350S125		
362S125		
400S125		
550S125		
600S125	0.0181"	0.275"
162S125		0.315"
250S125		0.325"
362S125		0.34
400S125		0.386
600S125		0.265"
162S125	0.019"	0.300"
250S125		0.315"
350S125		0.315
362S125		0.330"
400S125		0.350"
550S125		0.360"
600S125	0.0296"	0.250"
162S125		
250S125		
350S125		
362S125		
400S125		
550S125	0.0329"	0.250"
600S125		
162S125		
250S125		
350S125		
362S125		
400S125		
550S125		
600S125		



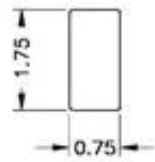
3-1.2", 3-5/8", 4", 5-1/2" & 6" Studs

PROSTUD SECTION PROFILE

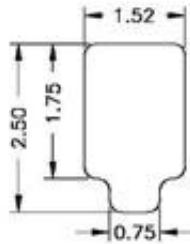


Optional Web Offset

PROTRAK SECTION PROFILE

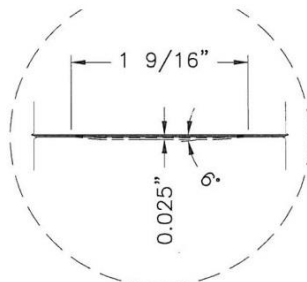


HOLE PUNCH
IN STUD SIZES
1-5/8" TO 2-1/2"

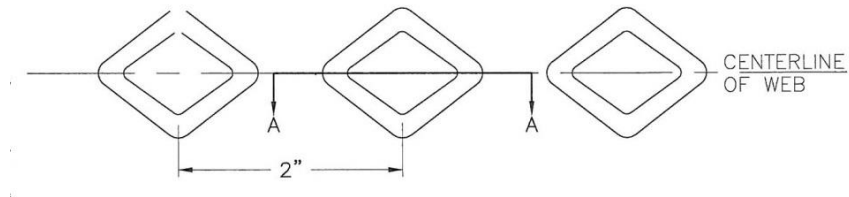


HOLE PUNCH
IN STUD SIZES
3-1/2" TO 6"

PUNCH-OUT HOLE DIMENSIONS



SECTION A-A



WEB EMBOSSEMENT DETAIL
(No embossment on 1-5/8" studs)