



Designation: D 4756 – 02a

An American National Standard

Standard Practice for Installation of Rigid Poly(Vinyl Chloride) (PVC) Siding and Soffit¹

This standard is issued under the fixed designation D 4756; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice covers the minimum requirements for and the methods of installation of rigid vinyl siding, soffits, and accessories on the exterior wall and soffit areas of buildings. In all applications, refer also to the specific manufacturer's instructions for installation.

1.2 This practice covers aspects of installation relating to effectiveness and durability in service.

1.3 The various application systems are located in the following sections of this practice:

Section 8	Substrate, Surface Preparation
Section 9	Application of Horizontal Siding
Section 10	Application of Vertical Siding
Section 11	Application of Soffits
Section 12	Special Details

1.4 The values stated in inch-pound units are to be regarded as the standard. The SI units given in parentheses are for information only.

NOTE 1—There are no ISO standards covering the subject matter of this practice.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

D 883 Terminology Relating to Plastics²

D 1600 Terminology for Abbreviated Terms Relating to Plastics²

D 3679 Specification for Rigid Poly(Vinyl Chloride) (PVC) Siding³

D 4477 Specification for Rigid Poly(Vinyl Chloride) (PVC) Soffit³

¹ This practice is under the jurisdiction of ASTM Committee D20 on Plastics and is the direct responsibility of Subcommittee D20.24 on Plastic Building Products.

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² *Annual Book of ASTM Standards*, Vol 08.01.

³ *Annual Book of ASTM Standards*, Vol 08.04.

E 631 Terminology of Building Constructions⁴

2.2 *Council of American Building Officials:*

CABO One and Two Family Dwelling Code: Section R-707 Attic Ventilation⁵

3. Terminology

3.1 *General*—Definitions are in accordance with Terminologies D 883 and E 631 and abbreviations with Terminology D 1600 unless otherwise indicated.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *backerboard*—a flat material used on the face of the house, applied between the studs and the siding (or over existing wall surface) to provide an even surface means install the vinyl siding.

3.2.2 *buttlock*—this is referred to as the bottom of a siding or soffit product, or accessory piece, opposite the nail hem, which locks onto the preceding panel.

3.2.3 *crimp*—small protrusions, typically approximately ½ in. (12.7 mm) long, ⅛ in. (3.2 mm) wide, and projecting ⅛ in. (3.2 mm) formed by a crimper (snaplock punch). (See Fig. 1.)

3.2.4 *crimper*—a special hand tool designed to form crimps (snaplock ears) intended to hold partial panels in place. (See Fig. 1.)

3.2.5 *face nail*—the action of fastening directly on to the “face” of a panel (instead of using the nail slot).

3.2.6 *fascia*—the trim along the perimeter of roofs or roof overhangs. (See Fig. 2.)

3.2.7 *flashing*—special membrane pieces or manufactured trim pieces used to supplement siding panels in weather protection around openings, such as windows and doors.

3.2.8 *furring/furring strip*—a wooden or steel framing material, usually a 1 × 2 in. used to even the surface in preparation of installation. To “fur” a surface means to apply these strips.)

3.2.9 *nailslot punch*—a special hand tool used to create slots for attachment of field-modified siding or accessories. (See Fig. 3.)

3.2.10 *snaplock ears*—See *crimp* and Fig. 1.

3.2.11 *snaplock punch*—See *crimper* and Fig. 1.

⁴ *Annual Book of ASTM Standards*, Vol 04.07.

⁵ Available from Council of American Building Officials, 5203 Leesburg Pike, Falls Church, VA 22041.

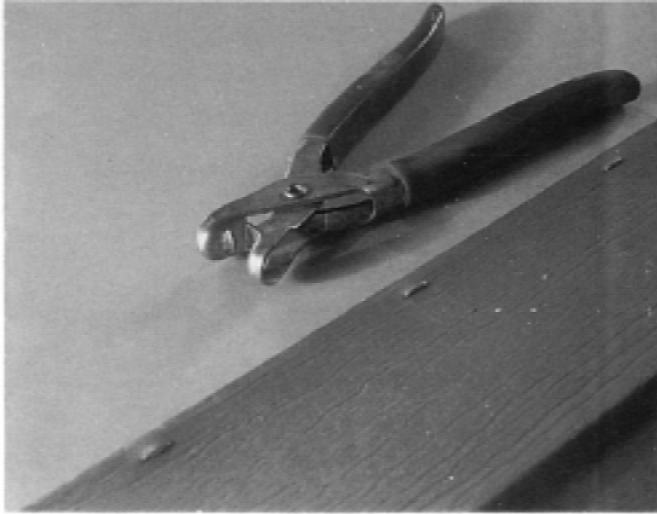


FIG. 1 Crimper and Crimps on Siding

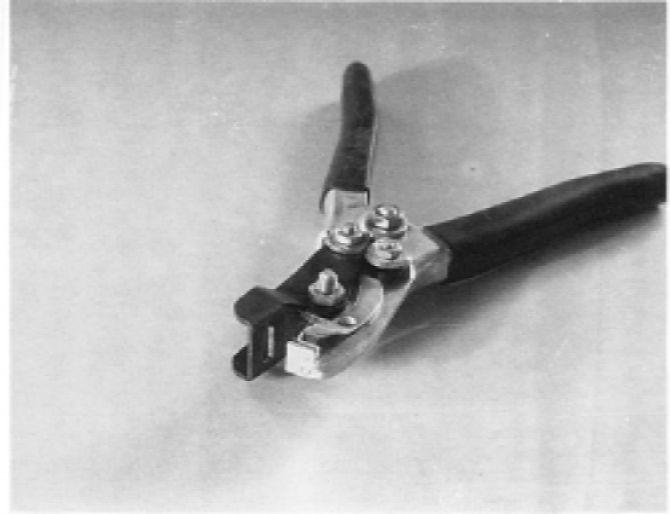


FIG. 3 Nailslot Punch

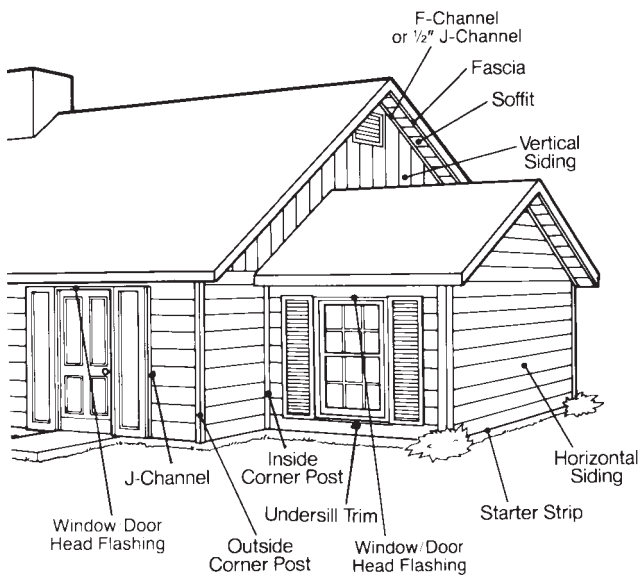


FIG. 2 Panels and Accessories

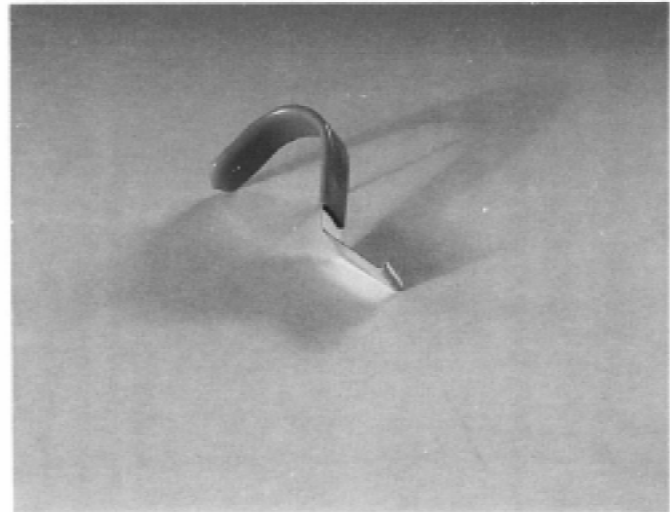


FIG. 4 Zip Tool

3.2.12 *soffit*—the underside surface (typically horizontal) of roof overhangs.

3.2.13 *Strapping*—Flexible materials (i.e. metal strips or hurricane ties used to provide shear or wind resistance.

3.2.14 *zip tool*—a special hand tool used to separate interlocked siding panels. (See Fig. 4.)

4. Delivery of Materials

4.1 All manufactured materials shall be delivered in the original packages, containers, or bundles bearing the size or type product, or both, brand name, and manufacturer (or supplier) identification, manufacturer's lot number, and the ASTM specification to which it conforms.

5. Protection of Materials

5.1 Vinyl siding and accessories will expand when heated and contract when cooled. If siding is installed in hot weather

and the siding is very warm it will be partially “expanded” and allowance for more future “contraction” than expansion should be provided.

5.2 Do not store the crates or cartons in any location where temperatures may exceed 130°F. (For example, on blacktop pavement during unusually hot weather or under dark tarps or plastic wraps without air circulation.)

6. Environmental Conditions

6.1 Vinyl siding and accessories will expand when heated and contract when cooled. If siding is installed in hot weather and the siding is very warm it will be partially “expanded” and allowance for more future “contraction” than expansion should be provided.

6.2 If installing during weather colder than temperatures below 40°F, increase the minimum clearance to $\frac{3}{8}$ in. at all openings and stops to allow for normal expansion and contraction.

7. Materials

7.1 *Horizontal Wall Siding*—See Specification D 3679.

7.2 *Vertical Wall Siding*—See Specification D 3679

7.3 *Soffit Panels*—See Specification D 4477.

7.4 *Accessories*:

7.4.1 *Starter Strip*—Of two types: for horizontal siding and for vertical siding of poly(vinyl chloride) or noncorrosive metal.

7.4.2 *Corner Posts*—Of two types: for inside corners and for outside corners of poly(vinyl chloride).

7.4.3 *Trim Channels*—Produced of poly(vinyl chloride) in a variety of designs and sizes for use around openings and edges of wall and soffit surfaces. (See Fig. 5.)

7.4.4 *Fascia Panels*—Produced of poly(vinyl chloride), typically in a “J” shape with an extended flat leg, intended for field cutting to cover roof trim.

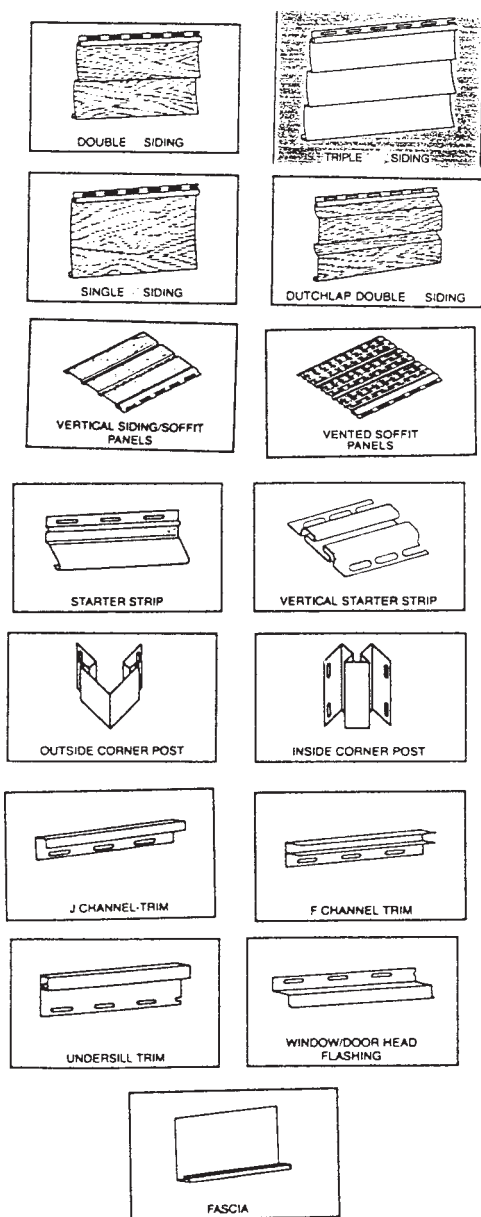


FIG. 5 Typical Trim Products

NOTE 2—To minimize the possibility of any color variation use material from a single manufacturer's lot number for application to one building.

7.5 *Fasteners*:

7.5.1 *Nails*—Corrosion-resistant with head diameter $\frac{5}{16}$ in. (7.9 mm) minimum, shank diameter $\frac{1}{8}$ in. (3.2 mm), length sufficient to penetrate not less than $\frac{3}{4}$ in. (19 mm) into framing or furring.

7.5.2 *Staples*—Corrosion-resistant, 16 gage minimum, with $\frac{3}{8}$ to $\frac{1}{2}$ -in. (9.5 to 12.7-mm) crown, length sufficient to penetrate not less than $\frac{3}{4}$ in. (19 mm) into framing or furring.

7.5.3 *Screws*—Corrosion resistant, self-tapping type, No. 8 truss head or pan head length sufficient to penetrate wall thickness of steel stud or $\frac{3}{4}$ in. into framing or furring.

8. Substrate, Surface Preparation

8.1 Apply vinyl siding directly over sheathing or other solid surface that is in an even plane. Apply over wood furring strips when the surface is uneven.

8.1.1 Drive fasteners into framing, furring, or nailable sheathing or siding.

8.2 On existing structures, secure any loose boards, replace any rotted ones, recaulk around windows, doors, and other areas as necessary to protect from moisture penetration. Use furring as needed to create an even surface.

8.3 *Furring*—masonry and uneven surfaces, as examples, require wood furring strips nominal 1 by 2 in. (25.4 by 50.8 mm) applied vertically and typically spaced 16 in. (406 mm) on center for horizontal siding and applied horizontally and typically spaced 12 in. (305 mm) on center for vertical siding.

9. Application of Horizontal Siding

9.1 *General Requirements*—Vinyl siding and accessories expand and contract as much as $\frac{1}{2}$ " (12.7mm) over 12-ft (3.65m) length with changes in temperature. For this reason adhere to the following provisions:

9.1.1 When applied, vinyl siding products must be attached “loosely,” leaving approximately a $\frac{1}{32}$ -in. (0.8-mm) space between the vinyl and the fastener head or crown to permit thermal movement. (See Fig. 6.)

9.1.2 Center fasteners in slots of siding and accessories to permit possible expansion and contraction. (See Fig. 7.)

9.1.3 Do not face nail; it would restrict any thermal movement. (See Fig. 8.)

9.2 *Installation of Accessories*—Accessories, including starter strips, corner posts and door/window trim, are installed prior to application of the siding adhering to the provisions of 9.1 and those which follow.

9.2.1 *Starter Strip*—Determine the lowest point along the area to receive siding and install starter strips located so that

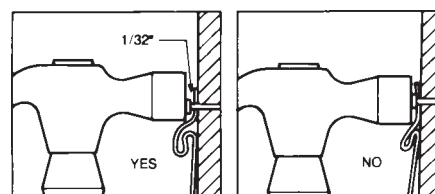


FIG. 6 Attachment of Vinyl Siding