

Product Evaluation

FR41 | 1022

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: FR-41

Effective Date: October 1, 2022

Re-evaluation Date: October 2026

Product Name: Extruded Aluminum Columns with Hurricane Bracket System

Manufacturer: AFCO Industries, Inc.
3400 Roy Street
Alexandria, LA 71307
(318) 448-1651

The Extruded Aluminum Columns with Hurricane Bracket System is acceptable for exterior commercial and residential applications in the designated catastrophe zones along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

Product Description:

AFCO Industries Extruded Aluminum Columns with Hurricane Bracket System are produced in several types. The types of extruded columns covered in this evaluation report are the 6" round fluted; 8" round fluted; 6" square fluted; 8" square fluted; 6" square Craftsman; and 8" square Wellington. The hurricane brackets systems are an integral part of the system and are supplied with the columns. There is a unique bracket system for each column specified in this evaluation report.

Limitations:

Allowable Uplift Loads: The allowable column uplift loads are specified in Table 1.

Table 1. Allowable Uplift & Bracket System

Column	Allowable Uplift Load (lbs.)	Bracket System
6" Diameter Round Fluted	1933	AHB00602 Figure 1
8" Diameter Round Fluted	2167	AHB00802 Figure 2
6" Square Craftsman	2877	AHB00101 Figure 3
8" Wellington	2933	AHB00101 Figure 3
6" Square Fluted	2216	AHB00601 Figure 4
8" Square Fluted	2216	AHB00801 Figure 5

Hurricane Bracket System: A Hurricane Bracket System is required for each column. The type of Hurricane Bracket system is specified in Table 1. Figures 1 thru 5 in this evaluation report illustrate the Hurricane Bracket Systems.

Attachment of Columns to Structure and to Foundation: It is the responsibility of the inspecting engineer to design the connection of the column to the beam and the connection of the column to the foundation using the Hurricane Bracket Systems specified in this evaluation report. Applicable loads on the columns must be determined in accordance with the adopted IBC and ASCE 7 as required for the project location. The specific limitations associated with the columns and the Hurricane Bracket Systems are as follows:

- The evaluation report only addresses allowable uplift loads on the columns.
- The site-specific wind loads must be determined by the inspecting engineer based on the codes adopted for the project location.
- Only vertical loading is addressed.
- The connection of the columns to the beam at the top and to the foundation using the Hurricane Bracket Systems must be designed by a Texas licensed engineer.
- The compressive strength of the concrete foundation must be determined.
- No wave action from water incursion exists.
- The Hurricane Bracket System associated with the specified column must be used. Refer to Table 1.

Installation:**Bracket Assembly to Column:**

- The Hurricane Bracket System is fabricated for the different types of columns and installed on the top and bottom (two (2) at the top and two (2) at the bottom).
- The Hurricane Bracket System consists of aluminum plates. The plates are manufactured from 6005-T6 extruded aluminum. Aluminum angles are used for the outside plates on the square columns. The angles are 1.25" x 1.25" x 0.188" thick x 3" long. An aluminum flat plate is used on the outside of the round columns. The flat plate is 3.304" x 1.125" with a typical wall thickness of 0.125". The plates and the angles are provided with the columns.
- Place outside plate(s) flush with the end of column and clamp to the column shaft to prevent movement. Refer to Figure 1 thru 5.
- For each bracket, two (2) fasteners are required to secure the bracket to the columns and two fasteners are required to secure the bracket to the foundation. It is required that the fastener size and type used be determined by a Texas licensed engineer based on the required uplift loads, the construction of the beam at the top and the construction of the foundation.
- One extra pair of brackets may be needed at the corner of a structure because of the overhead beam turning or move the bracket to the adjacent stave to make the turn.
- Repeat this process on the opposite side and on the other end of the column.
- The column uplift capacity must not exceed the allowable uplift loads specified in Table 1.

Note: Install the column and Hurricane Bracket System in accordance with the manufacturer's installation instructions and this product evaluation report. Keep the manufacturer's installation instructions on the job site during the installation. Use fasteners that are corrosion resistant as specified in the IRC and the IBC.

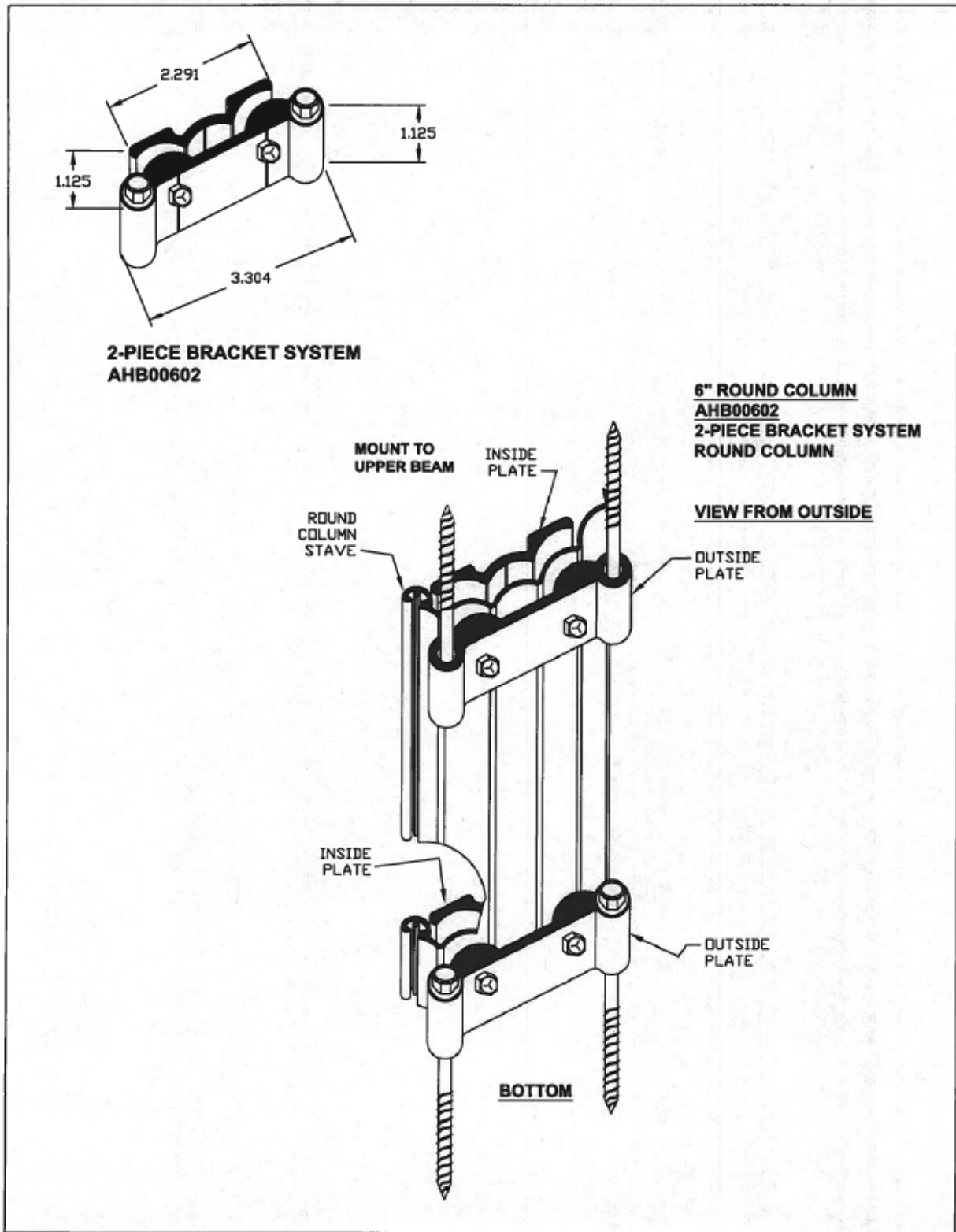


Figure 1. 6" Diameter Round Fluted

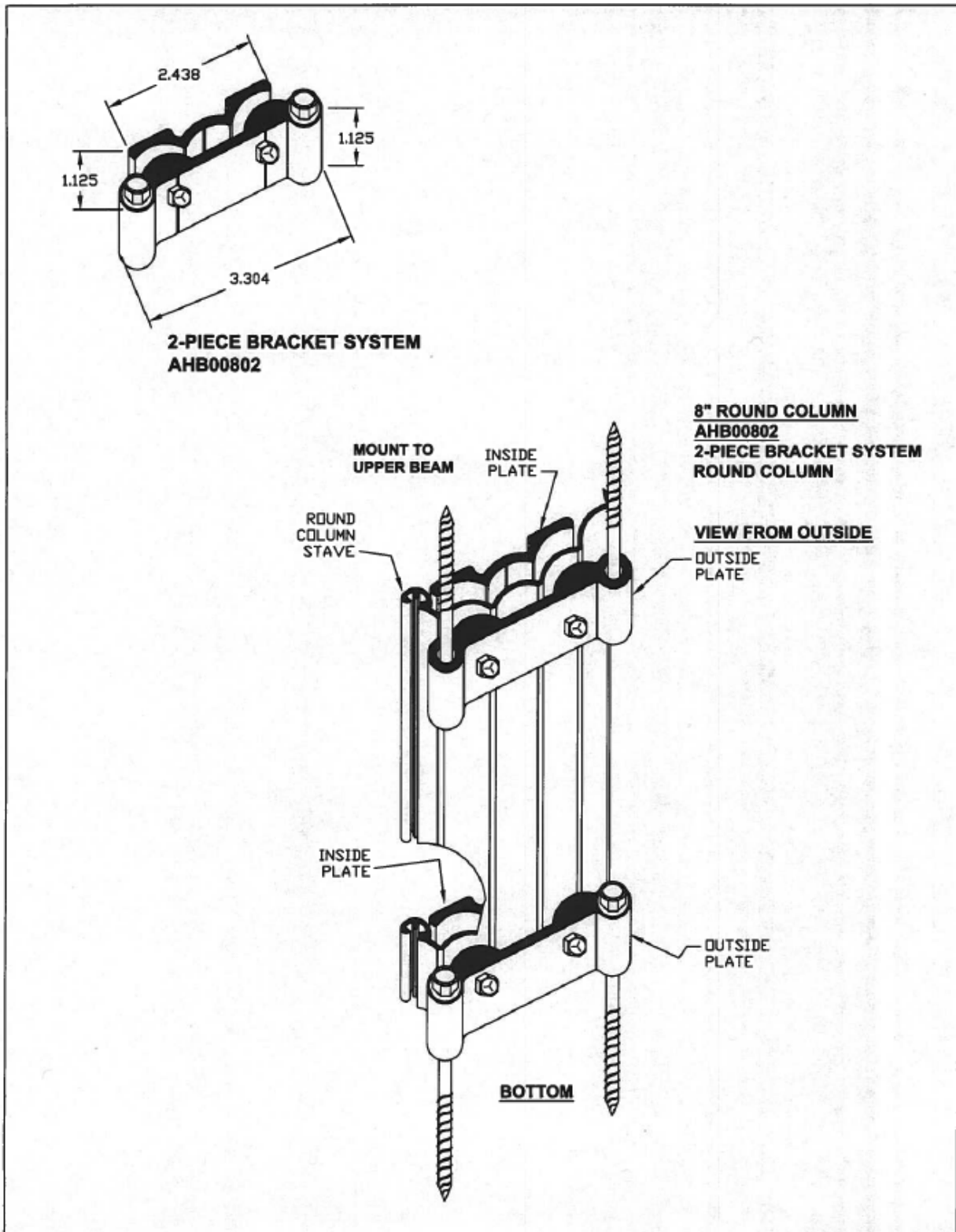


Figure 2. 6" Diameter Round Fluted

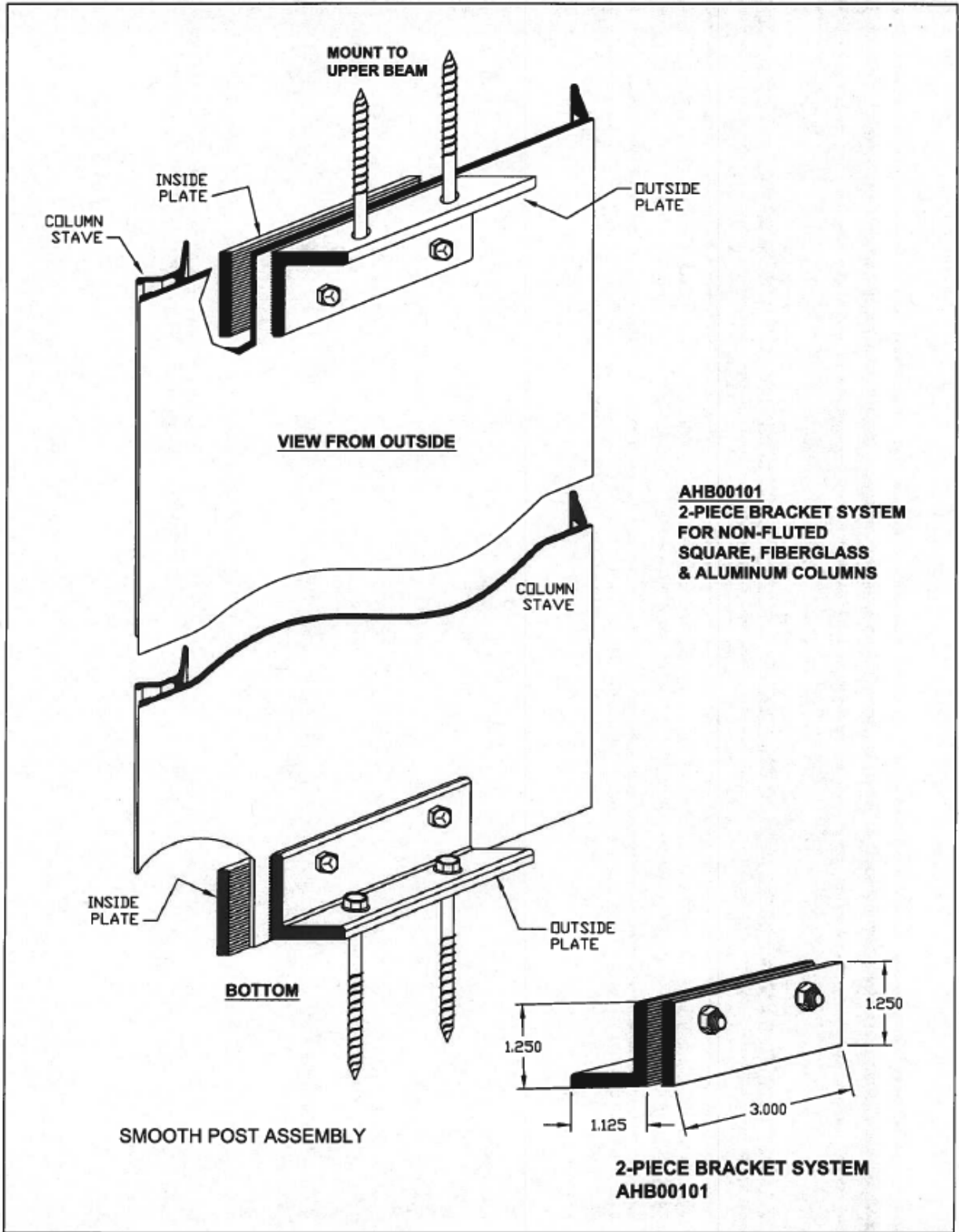


Figure 3. 6" Square Craftsman/8" Wellington

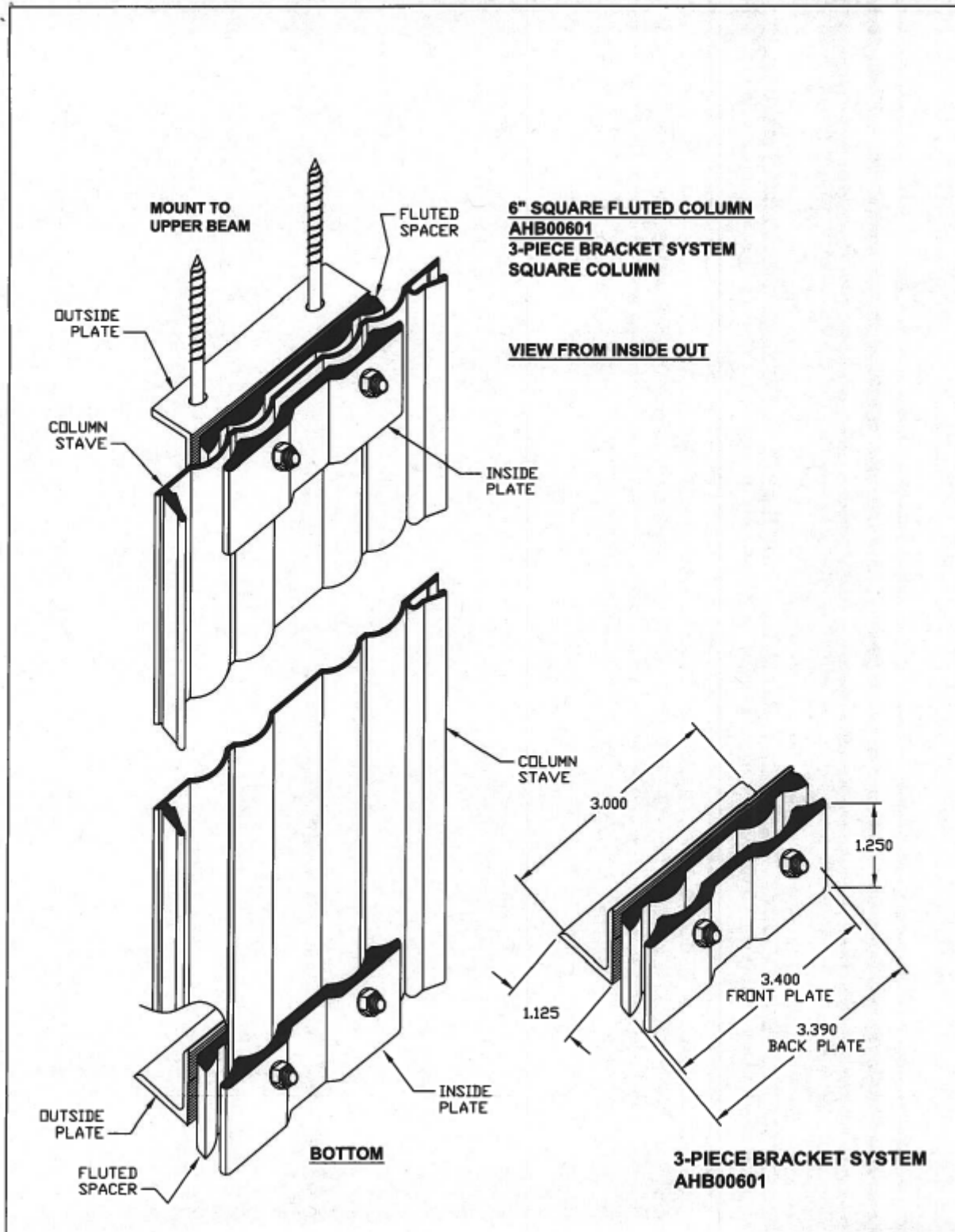


Figure 4. 6" Square Fluted

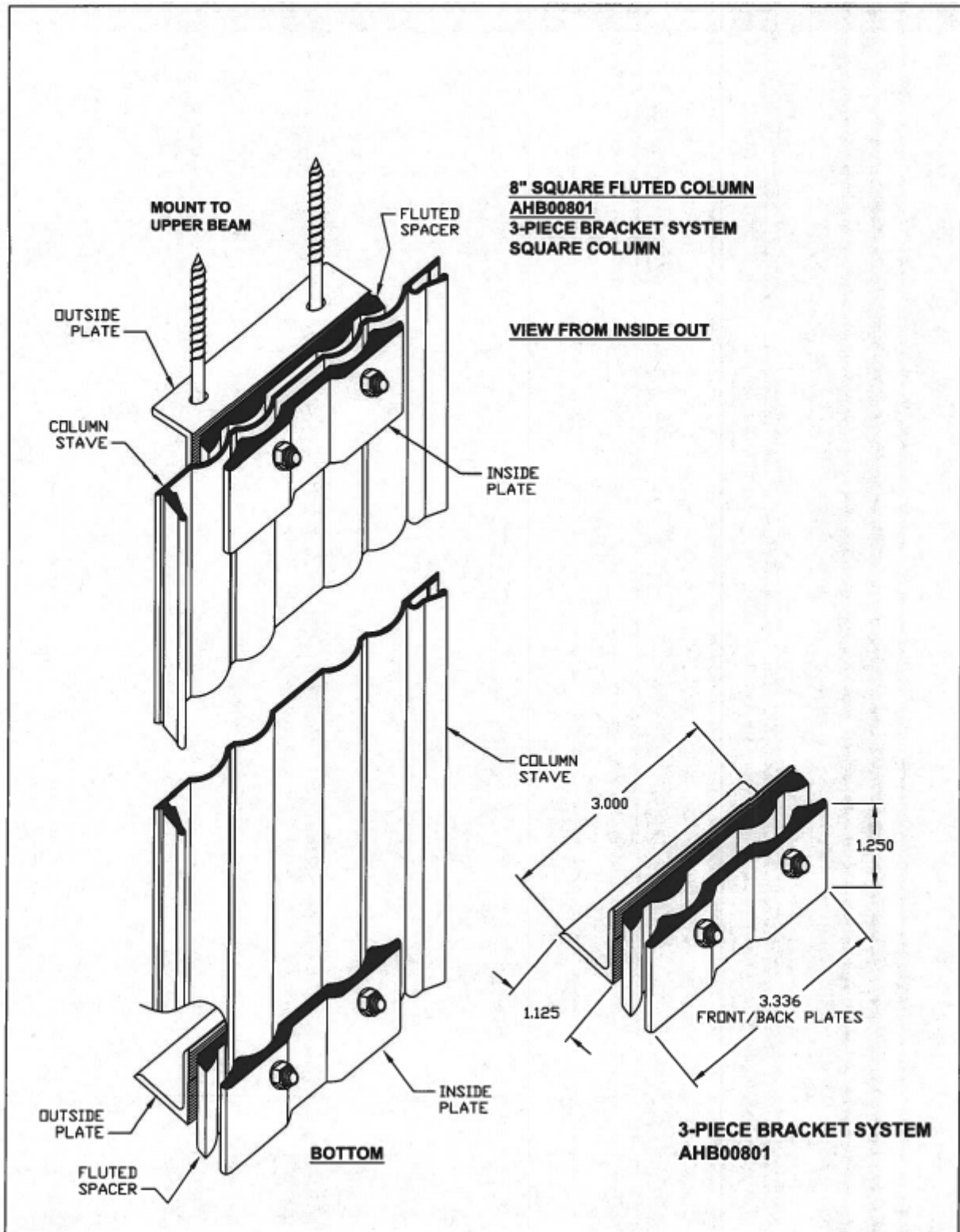


Figure 5. 8" Square Fluted