Code Compliance Research Report
CCRR-0257

Issue Date: 12-21-2016
Revision Date: 02-26-2025
Renewal Date: 12-31-2025

DIVISION: 05 00 00 – Metal Fabrications
Section: 05 52 00 – Metal Railings

REPORT HOLDER:
Vinylast, Inc.
1830 Swarthmore Avenue
Lakewood, NJ 08701
732-367-7200
www.vinylast.com

REPORT SUBJECT:
***Atlas-Pro Quik-Mount* Post Mount System**
LK Post Mount System
Advantage V2 Post Mount
Advantage Plumb Perfect Post Mount System
Plumb Perfect Pro Series Post Mount System

ADDITIONAL LISTEE:
UFP Ventures II, Inc
1801 Lessard Street
Prairie du Chien, WI 53821

ADDITIONAL LISTEE SUBJECT:
Deckorators Deck Post Mount

1.0 SCOPE OF EVALUATION

1.1 This research report addresses compliance with the following Codes:

- 2024, 2021, 2018 *International Building Code®* (IBC)
- 2024, 2021, 2018 *International Residential Code®* (IRC)

NOTE: This report references the most recent edition of the codes cited. Section numbers in earlier editions of the codes may differ.

1.2 The Post Mount Systems have been evaluated for the following properties (See Table 1):

- Structural Performance

1.3 The Post Mount Systems support guards or guardrails under the definitions of the referenced codes. It is intended for use at or near the open sides of elevated walking areas of buildings and walkways as required by the codes.

2.0 STATEMENT OF COMPLIANCE

The Post Mount Systems comply with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 6.

2.1 2024 IBC and IRC Evaluation Reports

The Intertek CCRR is an *Evaluation Report* for approval of an alternate material, design, or method of construction in accordance with Section 104.2.3.6.1 of the 2024 IBC and Section R104.2.2.6.1 of the 2024 IRC.

3.0 DESCRIPTION

3.1 The Post Mount Systems are designed for surface installation in concrete, steel and wood supporting structures. The Vinylast *Atlas-Pro Quik-Mount* Post Mount Systems are also labeled for UFP Ventures II, Inc as the *Deckorators Deck Post Mount*.

3.2 Components include a post welded to a base plate, top and bottom reinforcement plates (*wood installation only*), post stabilizers, post sleeve and various fasteners.

3.3 *Atlas-Pro Quik Mount, LK Post Mount System, and Deckorators Deck Post Mounts*

3.3.1 Post – 1.575-inch-square by 0.137-inch-thick hollow steel tube (See Figure 1).

3.3.2 Base Plate – 3.5-inch-square by 0.472-inch-thick steel plate with (4) 0.52-inch-diameter holes at each corner (See Figure 1).

3.3.3 Reinforcement Plates – 5 inch-square by 0.135-inch-thick steel plate with (4) and (8) 0.44-inch-diameter holes for the top and bottom plates, respectively (*wood installation only*) (See Figure 5).

3.3.4 Post Stabilizers – 3-$^{11}/_{16}$-inch-square by 6-$^{3}/_{4}$-inch-high ribbed PVC and anchorage (See Figure 6).

3.4 *Advantage V2 Post Mount System*

3.4.1 Post – 1.575-inch-square x 0.137-inch-thick hollow steel tube (See Figure 2).

3.4.2 Base Plate – 3.5-inch-square x 0.472-inch-thick steel plate with (4) 0.52-inch-diameter holes at each corner (See Figure 2).

3.4.3 Post Stabilizers – 3-$^{11}/_{16}$-inch-square by 6-$^{3}/_{4}$-inch-high ribbed PVC and anchorage (See Figure 6).

3.5 *Advantage Plumb Perfect Post Mount System*

3.5.1 Post – 1.575-inch-square x 0.098-inch-thick hollow steel tube (See Figure 3).

3.5.2 Base Plate – 3.5-inch-square x 0.472-inch-thick steel plate with (4) 0.52-inch-diameter holes at each corner (See Figure 3).

3.5.3 Post Stabilizers – For the top rail, 3-$^{1}/_{2}$-square by 5-$^{1}/_{8}$-inch high ribbed PVC block, and bottom rail a 3-$^{1}/_{2}$-inch square by 6-$^{3}/_{4}$-inch high ribbed PVC block (See Figure 7).

3.6 *Plumb Perfect Pro Series Post Mount System*

3.6.1 Post – 1.575-inch-square x 0.137-inch-thick hollow steel tube (See Figure 4).

3.6.2 Base Plate – 3.5-inch-square x 0.472-inch-thick steel plate with (4) 0.52-inch-diameter holes at each corner (See Figure 4).

3.6.3 Post Stabilizers – For the top rail, 3-$^{1}/_{2}$-square by 5-$^{1}/_{8}$-inch high ribbed PVC block, and bottom rail a 3-$^{1}/_{2}$-inch square by 6-$^{3}/_{4}$-inch high ribbed PVC block (See Figure 7).

3.7 For fasteners and fastening schedule, see Table 3.

4.0 PERFORMANCE CHARACTERISTICS

4.1 The Post Mount Systems described in this report have demonstrated adequacy per the performance requirements of ASTM D7032 in accordance with the performance requirements of IBC §1607.9.1 and IRC §301.5.

4.2 See Table 2 for allowable guardrail spans.

5.0 INSTALLATION

5.1 General: The Post Mount Systems must be installed in accordance with the manufacturer's published installation instructions, applicable Codes and this Report. A copy of the instructions must be available on-site during installation.

5.2 Application:

5.2.1 Installation shall be in accordance Table 3 and Figures 5, 6 and 10.

6.0 CONDITIONS OF USE

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions and the applicable Code. In the event of a conflict between the manufacturer's instructions and this report, this report governs.

6.2 Compatibility of fasteners and other metallic components with the supporting structure (including chemically treated wood) is outside the scope of this report.

6.3 Concrete anchors and anchoring systems for use with the structural posts are not within the scope of this report and are subject to evaluation and approval by the building official. Anchors must satisfy the design load requirements specified in Chapter 16 of the building code. Where required by the building official, engineering calculations and details shall be provided. The calculations shall verify that the anchorage and supporting structure complies with the building code for the type and condition of the supporting construction.

6.4 The Post Mount Systems are qualified for use with guardrail systems that comply with ICC-ES Acceptance Criteria AC174 – *Acceptance Criteria for Deck Board Span Ratings*. The guardrail assembly, including post sleeves and attachment to the Post Mount Systems, must be tested and evaluated separately.

6.5 The Post Mount Systems are manufactured in accordance with an approved quality control system that includes independent, third-party inspections by Intertek.

7.0 SUPPORTING EVIDENCE

7.1 Drawings and installation instructions submitted by Vinylast, Inc.

7.2 Reports of testing demonstrating compliance with the performance requirements of Sections 6.2.3 and 6.2.4 of ASTM D7032-21 [17] in accordance with the performance requirements of IBC Section 1607.9.1 and IRC Section 301.5.

7.3 Documentation of an Intertek approved quality control system for the manufacturing of products recognized in this report.

8.0 IDENTIFICATION

The Post Mount Systems described in this Research Report are identified by a marking bearing the report holders' name (Vinylast, Inc. or UFP Ventures II, Inc) the Intertek Mark, the Code Compliance Research Report number (CCRR-0257) and the following statement: "See CCRR-0257 at bpdirectory.intertek.com for uses and performance levels."

9.0 OTHER CODES

This section is not applicable.

10.0CODE COMPLIANCE RESEARCH REPORT USE

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the https://bpdirectory.intertek.com is recommended to ascertain the current version and status of this report.

TABLE 1 – PROPERTIES EVALUATED

Property	2024 IBC Section	2024 IRC Section
Structural Performance	1607.9.1 [1]	R301.5 [2]

[1] As supported by testing to ultimate concentrated load and applying specified safety factor of 2.5.
[2] As supported by testing to ultimate concentrated load greater than 500 lbs (consistent with the loading prescribed in Section R301.5 of the IRC multiplied by a safety factor of 2.5).

TABLE 2 – APPLICABLE SPAN AND USES

Post Mount	Maximum Post Height (in.) [1]	Attachment	Max Allowable Span (in) [2]	Occupancy Classification
Atlas-Pro Quik Mount Post Mount ***LK Post Mount System*** ***Deckorators Deck Post Mount***	42.25	Wood using deck mount kit (Figure 5)	n/a[3]	IRC (One- and Two-Family Dwellings)
		Concrete or Steel	90	IBC (All Use Groups) -and- IRC (One- and Two-Family Dwellings)
		Concrete or Steel (bolted-thru bottom stabilizer)	130	
Advantage V2 Post Mount	42.56	Wood using deck mount kit (Figure 6)	n/a[3]	IRC (One- and Two-Family Dwellings)
		Concrete or Steel	61	IBC (All Use Groups) -and- IRC (One- and Two-Family Dwellings)
		Concrete or Steel (bolted-thru bottom stabilizer)	87	
Advantage Plumb Perfect Post Mount System	37.01	Concrete or Steel	n/a[3]	IRC (One- and Two-Family Dwellings)
Plumb Perfect Pro Series Post Mount System	37.16			

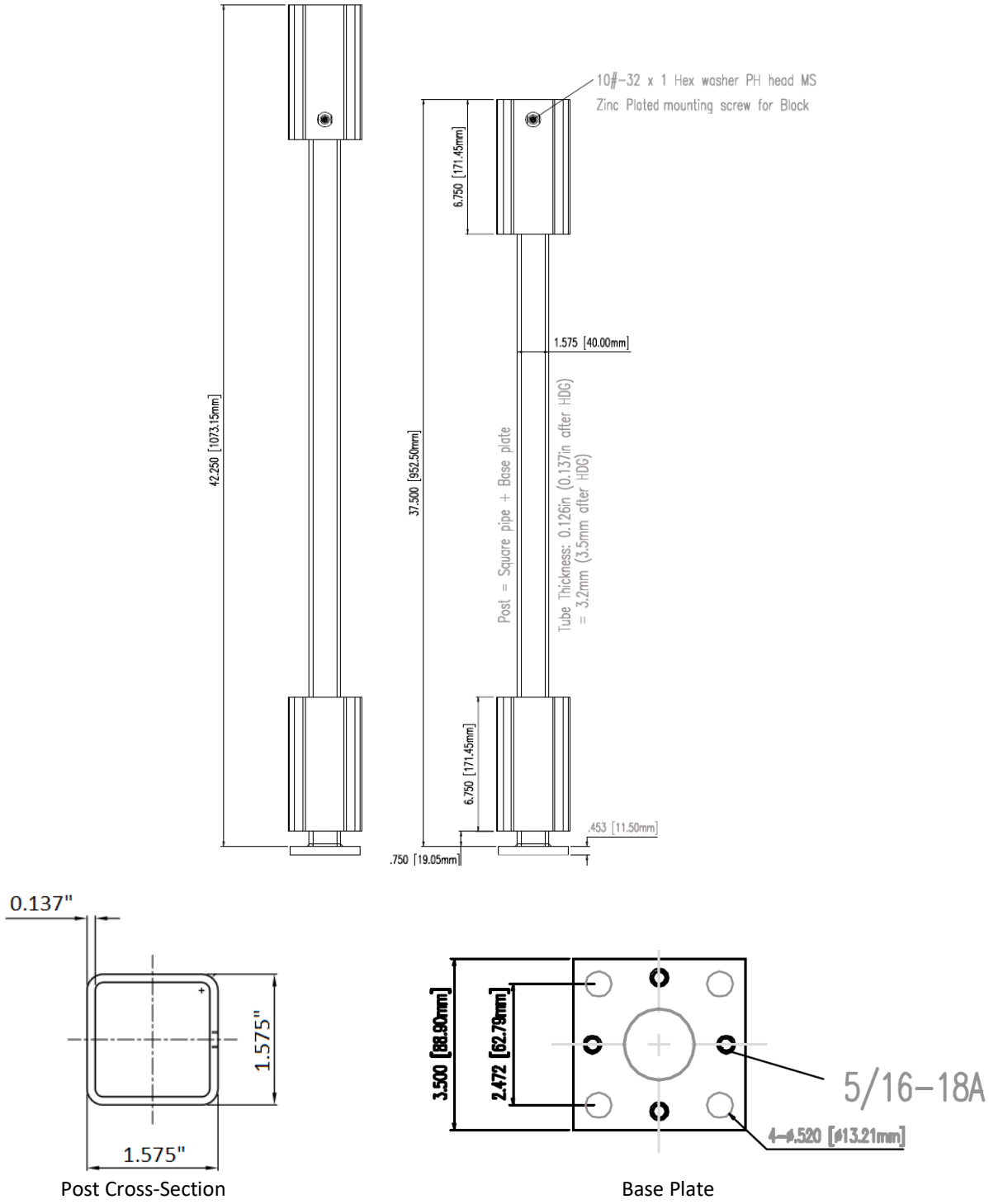
[1] Post height is measured from bottom edge of the base plate to top edge of the top rail's post stabilizer block.
[2] Span is measured from center of post to center of post.
[3] Max allowable span for the post mount system is governed by the max allowable span of the overall assembly the post mount systems is utilized to support.

TABLE 3 – FASTENING SCHEDULE

Connection	Post Mount	Supporting Structure	Fastener
Post Mount to Supporting Structure	*Atlas-Pro Quik Mount* *LK Post Mount System* *Deckorators Deck Post Mount* *Advantage V2*	Wood [1]	Four 3/8-16 by 6-inch-long Grade 5 hex-head bolts, nuts, washers, and bottom 5 inch reinforcing plate. *Advantage V2* uses a bottom 3-5/8 inch reinforcing plate.
		Concrete or Steel (bolted-thru bottom stabilizer)	Four 1/2-13 by 12-inch-long zinc plated threaded rod with one nut and one washer at the top of the bottom PVC spacer, one nut at the top of the post mount base plate, and two nuts and one washer on the bottom
	Atlas-Pro Quik Mount *LK Post Mount System* *Deckorators Deck Post Mount* *Advantage V2* *Advantage Plumb Perfect* *Plumb Perfect Pro Series*	Concrete or Steel	Four 3/8-inch Grade 8 hex-head bolts[2] with washers and two nuts
Top PVC Spacer to Post	*Atlas-Pro Quik Mount* *LK Post Mount System* *Deckorators Deck Post Mount* *Advantage V2*	N/A	#10-32 x 1-inch hex-washer head / Phillips drive zinc plated machine screw
	Advantage Plumb Perfect *Plumb Perfect Pro Series*	N/A	Assembly of 1/2” -12x1-1/4” hex-head bolt with stainless steel washers and nuts
Bottom PVC Spacer to Post	*Atlas-Pro Quik Mount* *LK Post Mount System* *Deckorators Deck Post Mount* *Advantage V2* *Advantage Plumb Perfect* *Plumb Perfect Pro Series*	N/A	#10-32 x 1-inch hex-washer head / Phillips drive zinc plated machine screw

[1] The deck is constructed with two mounting blocks of nominal 2x8 pressure-treated Southern Yellow Pine installed between 16-inch spaced deck framing beneath the post location. Each 2x8 block is attached to the deck framing with four #10 x 3-inch deck screws per side. See Figure 10.

[2] The type and length of the anchor bolts is dependent upon the material and condition of the supporting structure and is not within the scope of this report. See Section 6 for Conditions of Use for additional requirements.



Post Cross-Section

Base Plate

Figure 1 – *Atlas-Pro Quik-Mount* Posts

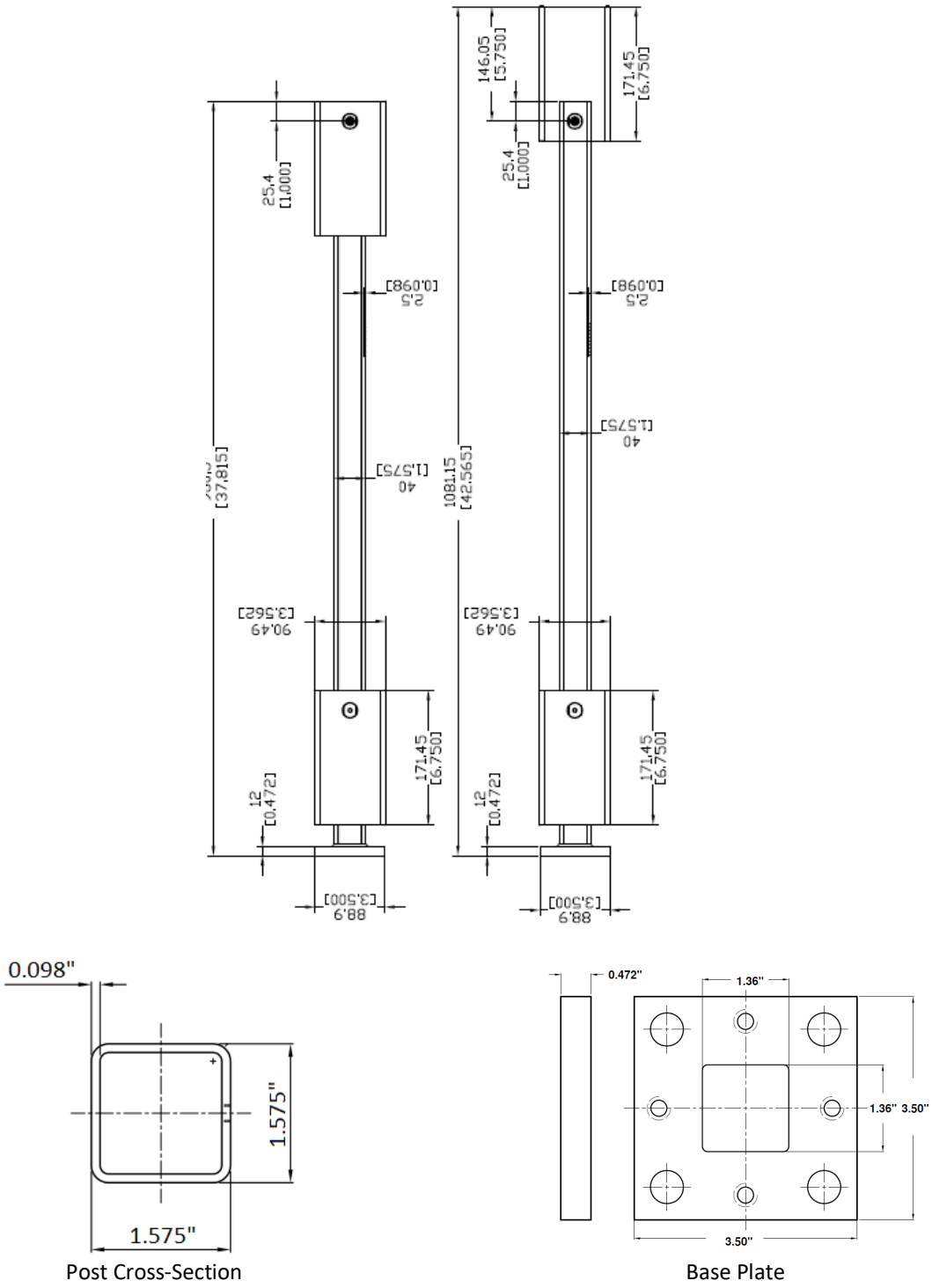


Figure 2 – *Advantage V2 Post Mount*

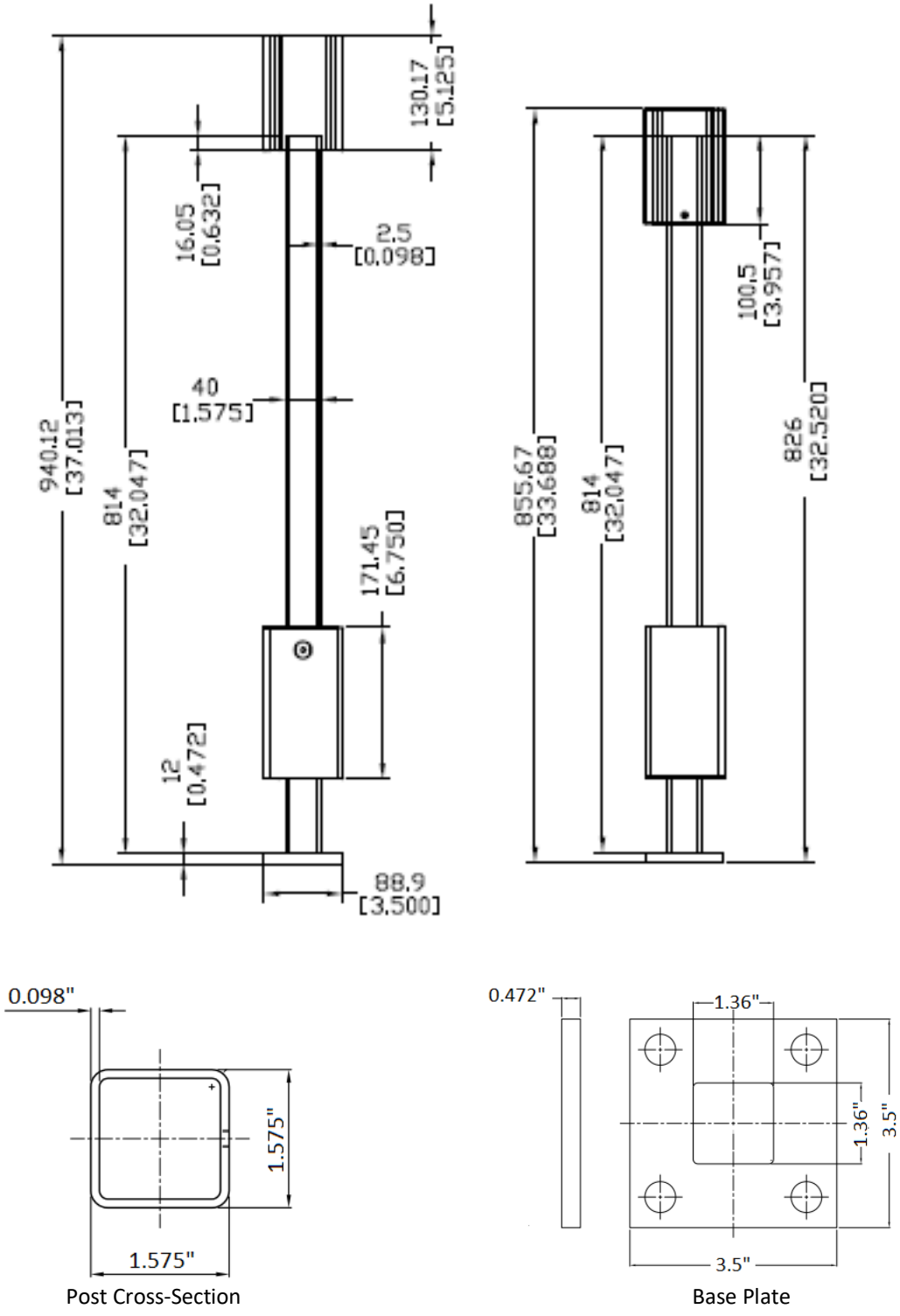
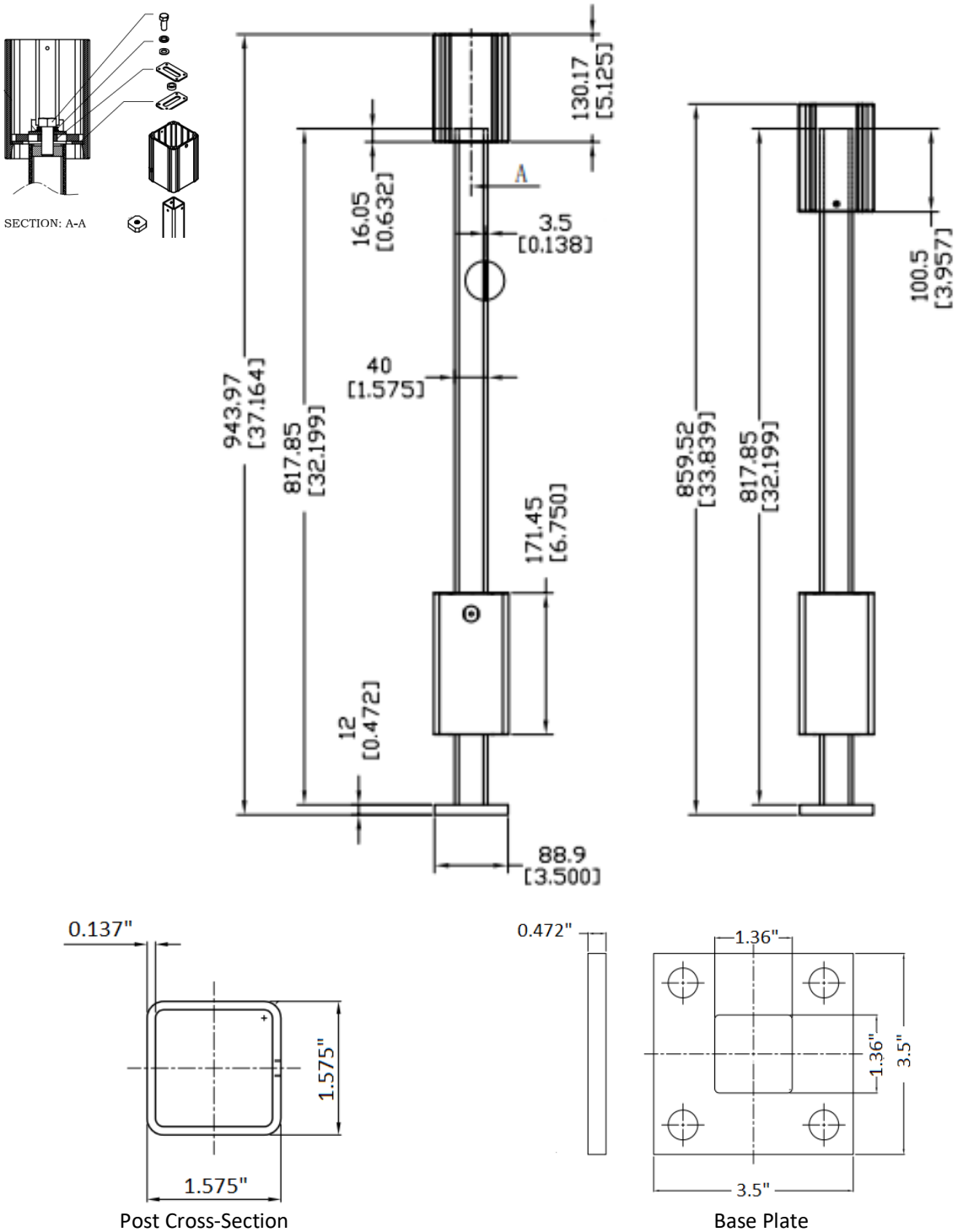
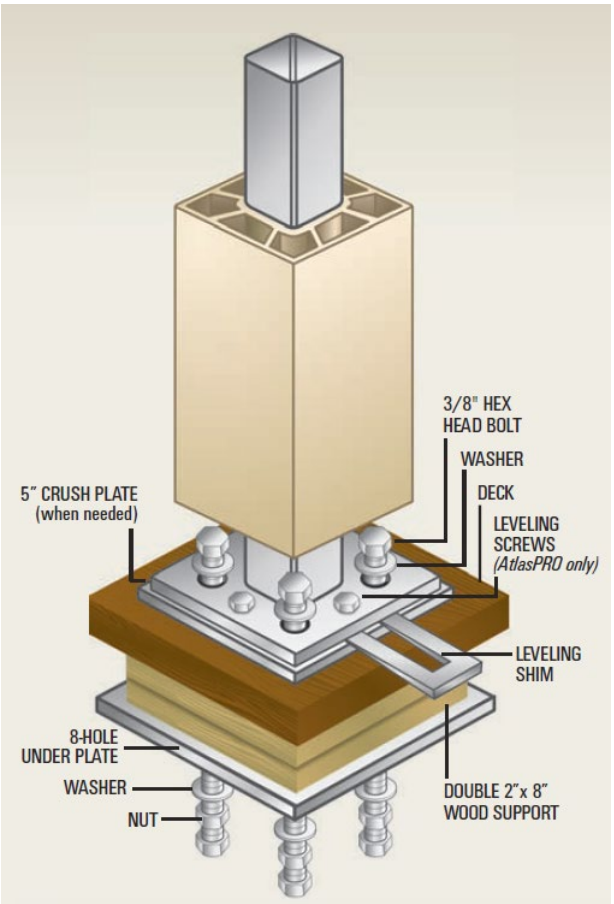


Figure 3 – *Advantage Plumb Perfect Post Mount System*



Post Cross-Section Base Plate

Figure 4 – *Plumb Perfect Pro Series Post Mount System*



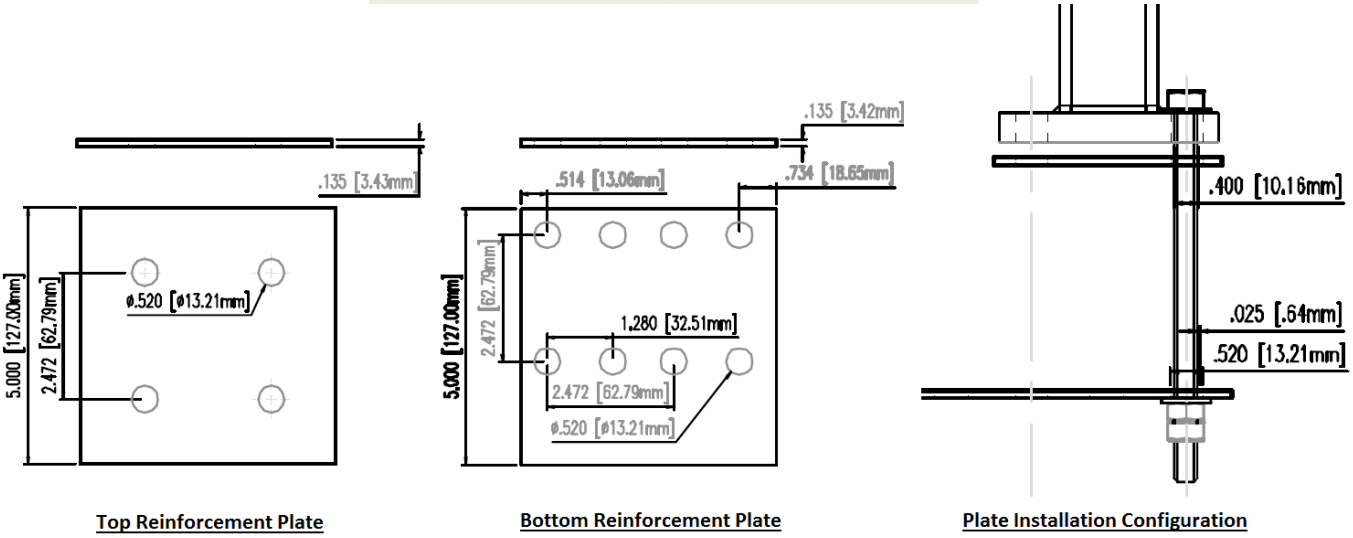
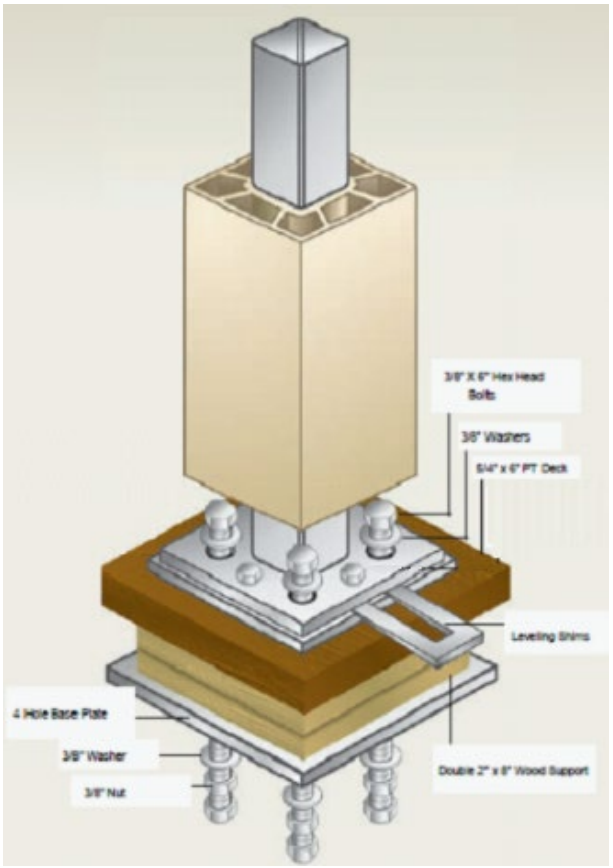
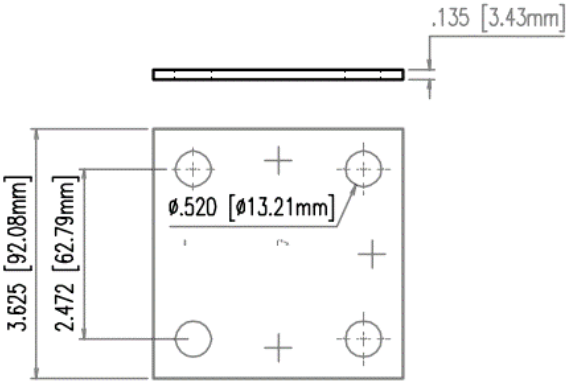


Figure 5 – Post Mount Installation to Wood blocking using 5 inch Reinforcement Plates





Bottom Reinforcement Plate

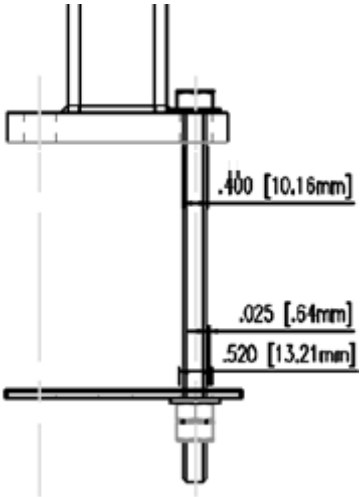


Plate Installation Configuration

Figure 6 – Post Mount Installation to Wood blocking using 3-5/8 inch Reinforcement Plates

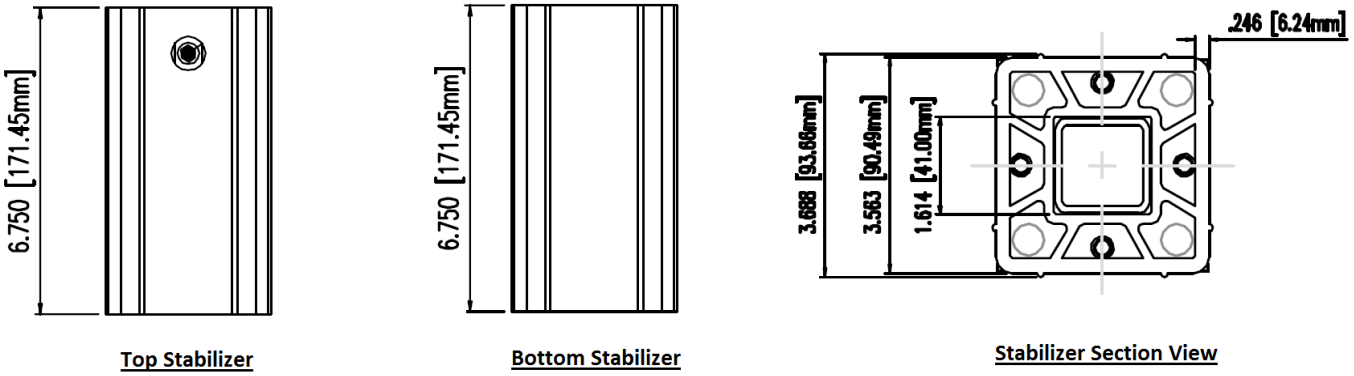


Figure 7 – Post Stabilizers for *Atlas-Pro* and *Advantage V2*

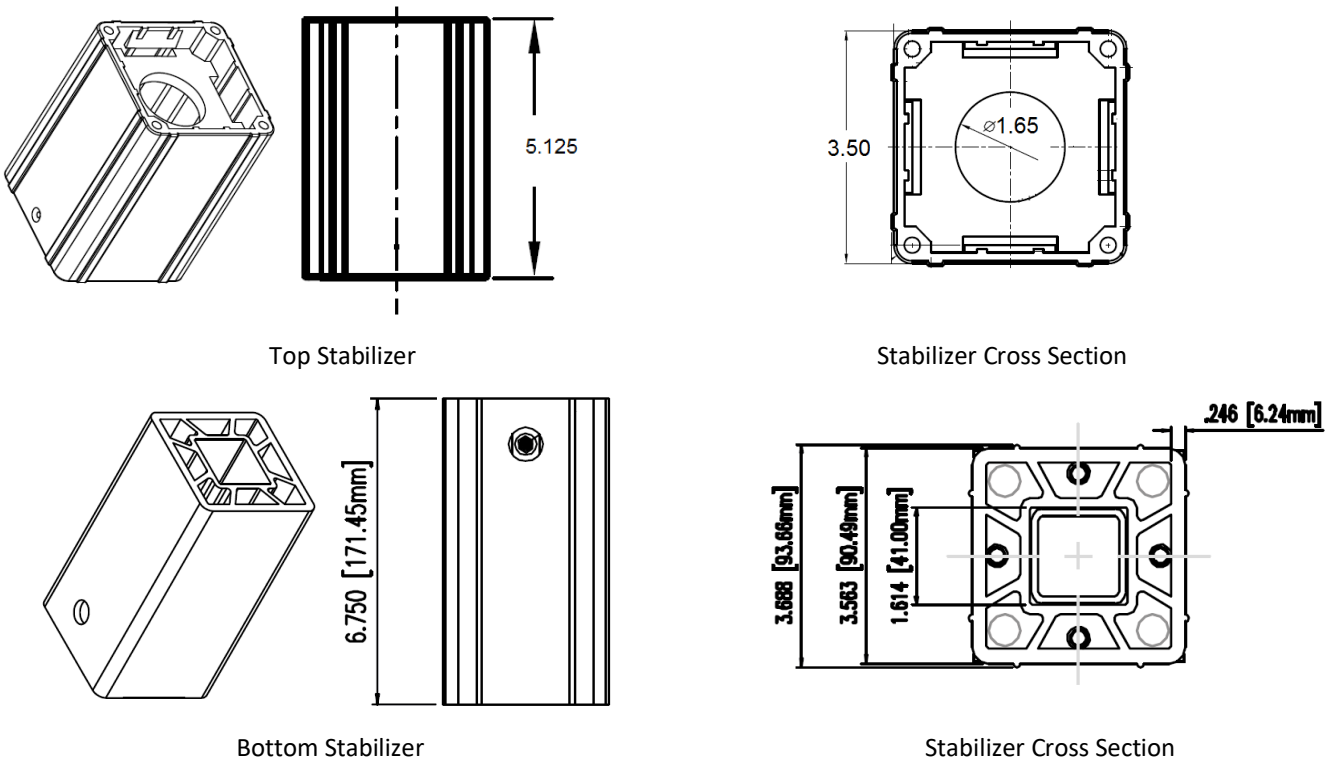


Figure 8 – Post Stabilizers for *Advantage Plumb Perfect* and *Plumb Perfect Pro Post Mounts*

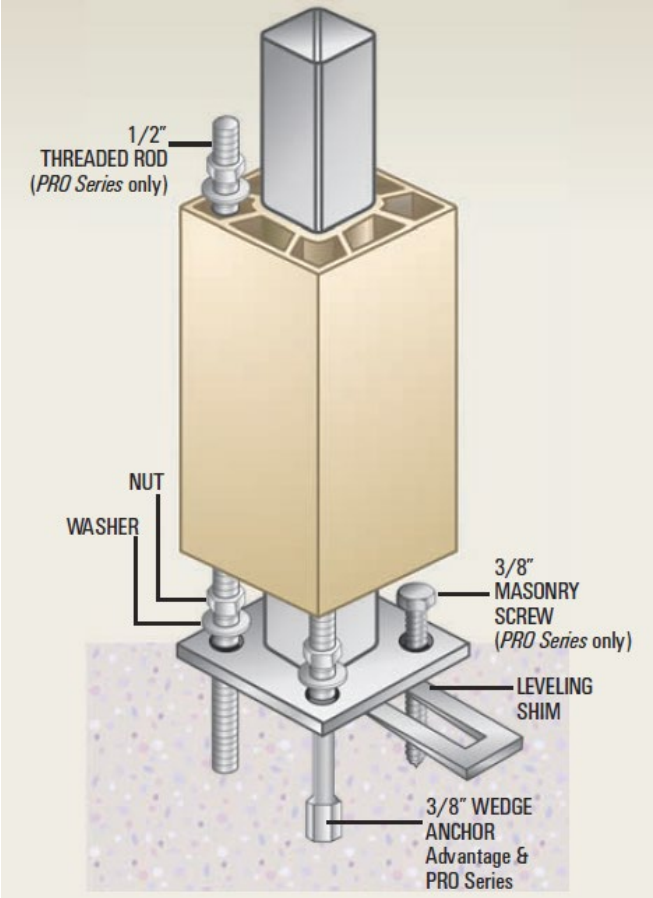


Figure 9 – Concrete Installation
Note: Concrete anchors are not within the scope of this report and are shown for illustrative purpose only. See Section 5.1.3 and 6.3.

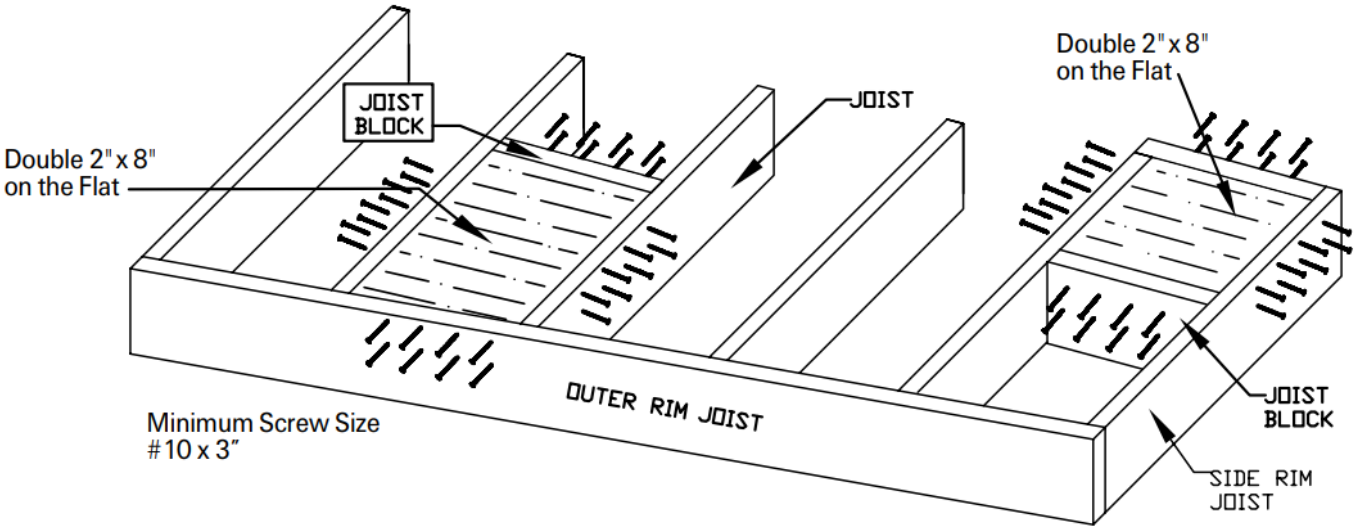


Figure 10 – Blocking Diagram