CABLE RAILING SYSTEM
IBC 2024 AND IRC 2024

4/8/2026

JACEK SLUZYNSKI, P.E.
OLDCASTLE APG
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JACEK SLUZYNSKI
LICENSE
No 85244
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

4/8/2026

STATE OF CONNECTICUT
JACEK SLUZYNSKI
No. 34063
LICENSED
PROFESSIONAL ENGINEER

4/8/2026

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JACEK SLUZYNSKI
PE.0058934
PROFESSIONAL ENGINEER

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GEORGIA
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PROFESSIONAL
ENGINEER
JACEK SLUZYNSKI

4/8/2026

STATE OF MARYLAND
JACEK SLUZYNSKI
54659
PROFESSIONAL ENGINEER

4/8/2026

COMMONWEALTH OF MASSACHUSETTS
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JACEK SLUZYNSKI
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ENGINEER
57350
STATE OF MINNESOTA

4/8/2026

STATE OF MISSOURI
JACEK
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4/8/2026

Professional Certification: I certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland.
License No. 54959 Expiration Date 7/11/2027

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature: Jacek Sluzynski
Typed or Printed Name: JACEK SLUZYNSKI
Date: 4/8/2026 License Number: 57350

STATE OF OHIO
JACEK
SLUZYNSKI
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PROFESSIONAL ENGINEER

4/8/2026

COMMONWEALTH OF PENNSYLVANIA
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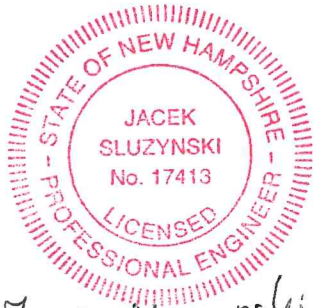

Jacek Sluzynski
4/8/2026

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4/8/2026

EXPIRES: 06/30/2028
Jacek Sluzynski
4/8/2026

Jacek Sluzynski
4/8/2026

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4/8/2026

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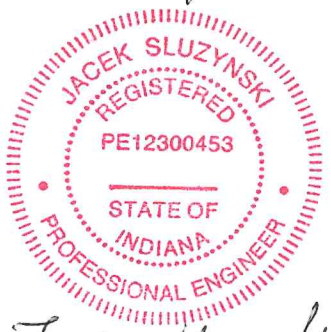

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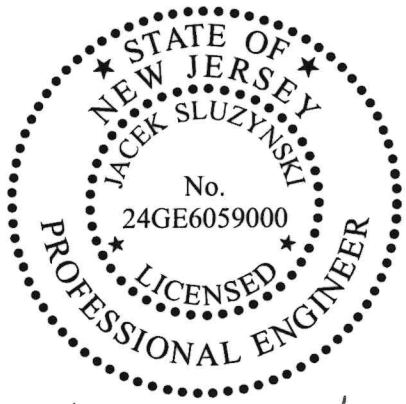

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GENERAL NOTES

1. The "Cable Railing" (*guard*) meets or exceeds 2024 International Building Code (IBC) section 1607.8. and 2024 International Residential Code (IRC) section R301.5.

2. Loads:

   2.1. The top railing of the guard is capable of transferring to the anchoring connection a point load of 200 pounds (Residential applications) and 200 pounds or 50 pounds per linear foot (Commercial applications) applied in any direction.

   2.2. The infill (cable) are capable of transferring to the anchoring connection a horizontally applied normal load of 50 pounds exerted over 1 square foot.

3. The professional engineer (PE) is responsible for the design of the *guard* to the bottom of the base plate, to the bottom of the post, and to mounting surface of the upper and lower railing wall brackets. The PE is not responsible for the design of the anchoring substrate, such as, concrete or wood. Except for the fasteners specified, the PE is not responsible for the selection or location of the anchoring fasteners.

4. The use of this specification indemnifies and saves harmless the PE from all cost and damages including legal fees and appellate fees resulting from material and part fabrication, manufacturing, assembly, system design and erection, construction practices, and RDI warranties. Neither the PE nor RDI shall be held responsible or liable in any way for the use of this product in applications other than shown on this drawing.

5. Materials and manufacturing of the guard shall be in accordance with the Aluminum Association's 2015 "Aluminum Design Manual".

6. All *guard* extrusions shall be aluminum 6005-T5. Cables and brackets 316 SS.

7. All *guard* fasteners are 410 stainless steel.

8. RDI manufacturing tolerances for the guard are equal to or tighter than allowed by the IBC and IRC. Contact RDI for specific tolerances.

9. All concrete shall be uncracked only, with a minimum compressive strength of 3000psi and shall be minimum 1.5X thicker than any anchor embedment. All epoxy and grout shall meet or exceed compressive strength of the concrete and shall be iron-free, non-shrink and non -reactive. Concrete footers shall contain min 0.1% fiber mesh admixture per CY.

10. All wood shall be pressure treaded No. 2 Southern Yellow Pine with minimum specific gravity, G=0.55

11. Surrounding soil to be compacted to 98% optimum density, 2500 psf minimum and

12. Insulate aluminum from dissimilar metals to prevent electrolysis. Insure all bare metal is protected from corrosive environments such as installation near the ocean.

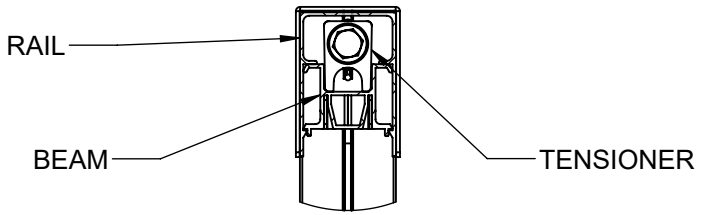
13. Neither the PE nor RDI is responsible for construction tolerances, field dimensions, or installation of the *guard.*

14. No changes are allowed without written authorization from the engineer.

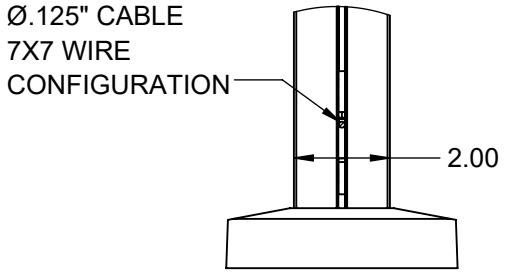
15. Copies of this drawing without an original signature and seal of the engineer are invalid.

16. No inspection was made at this jobsite and the design depicted herein is based upon data supplied by the contractor. This engineer is to not be held liable or in any way responsible for the use of any inaccurate information supplied by others. The contractor shall field verify all measurements and information used in this design before any changes are made to field condition, fabrication and the installation of the materials.

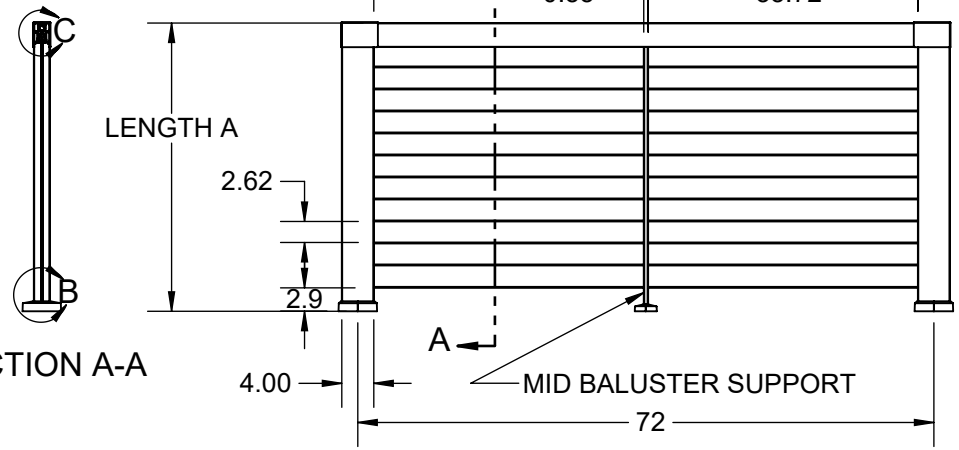
ELEVATION RAIL DETAILS



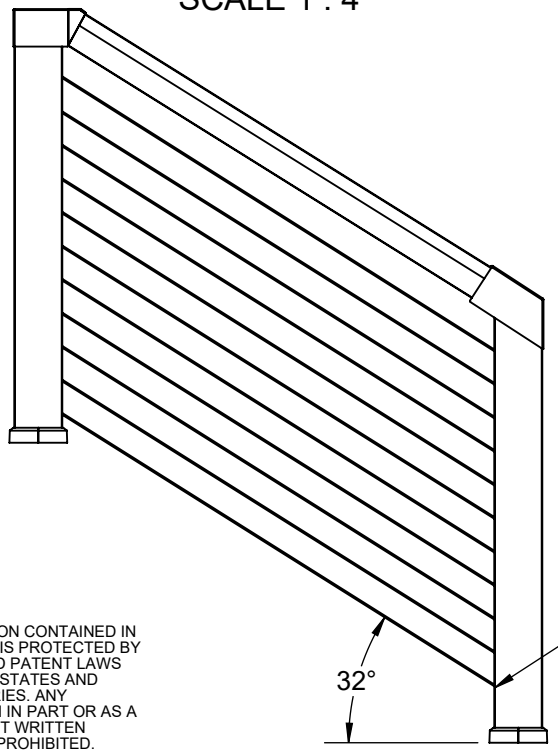
DETAIL C
SCALE 1 : 4



DETAIL B
SCALE 1 : 4



SECTION A-A



STAIR SECTIONS HAVE
A WORKING RANGE OF
26-38 DEGREES

NOTE:
(A) FINISHED RAIL HEIGHT = 36", 42"
(B) PANEL LENGTH = 68"
(C) MAX IRC SPAN = 72"X36"
(D) MAX IBC SPAN = 72"X42"
(E) TENSION CABLE TO PREVENT PASSING 4" SPHERE

NOTE:
(A) MAX STAIR RAIL LENGTH = 60"
(B) STAIRS AVAILABLE IN 36" AND 42" RAIL HEIGHTS
(C) TENSION CABLE TO PREVENT PASSING 4" SPHERE

rdi RAILING

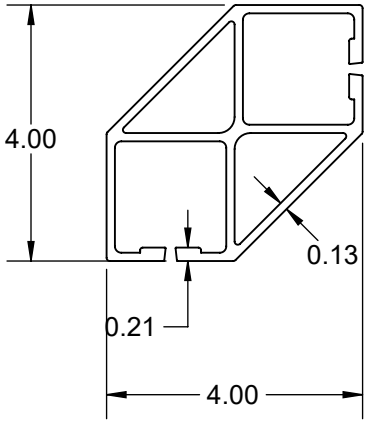
DRAWN:	DATE:	APPROVED:
CH	08/22/2024	

DESCRIPTION: ELEVATION LEVEL AND STAIR RAIL

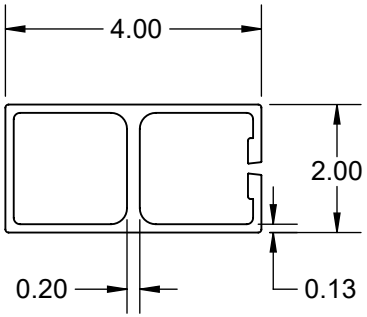
SHEET 1 OF 7	REVISION	PART NUMBER
SCALE 1:24	0	N/A
WEIGHT: N/A		

POSTS AND RAILS

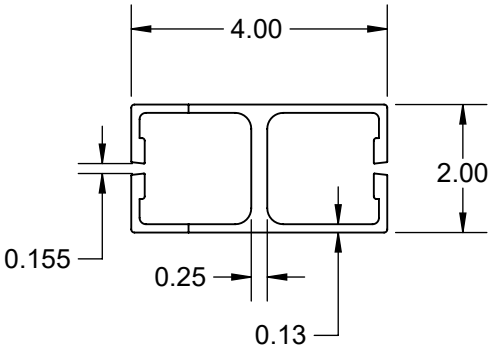
CORNER



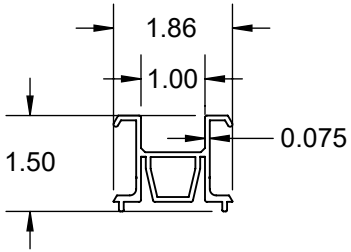
END



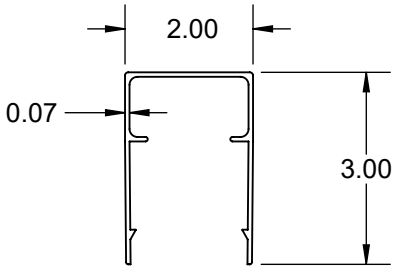
MID



BEAM



RAIL



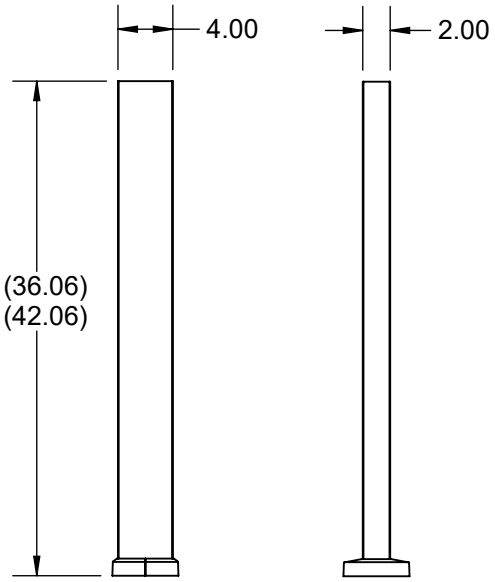
RAILING

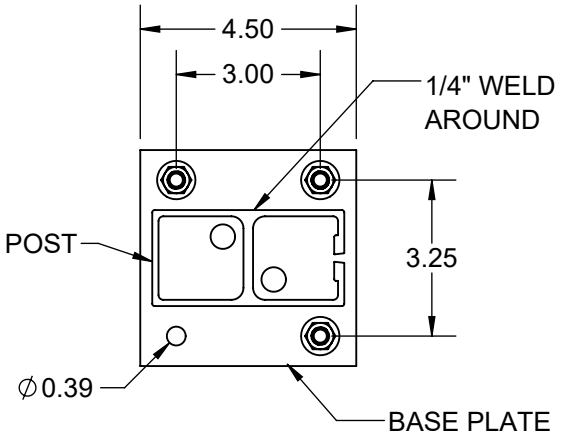
DRAWN:	DATE:	APPROVED:
CH	08/22/2024	

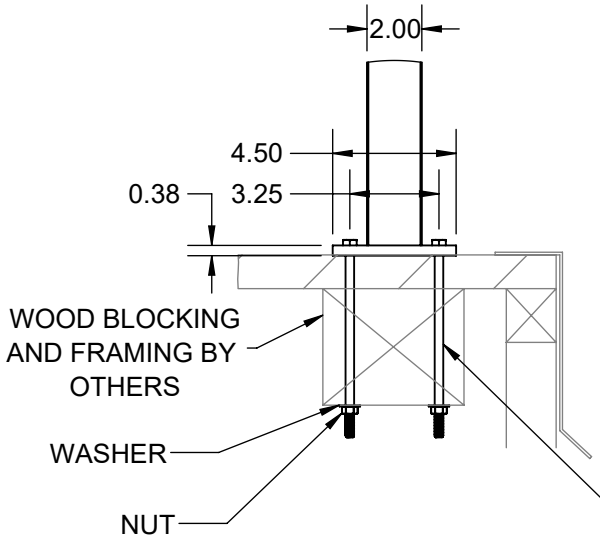
DESCRIPTION: POST AND RAIL DETAILS

SHEET 2 OF 7	REVISION	PART NUMBER
SCALE 1:12	0	N/A
WEIGHT: N/A		

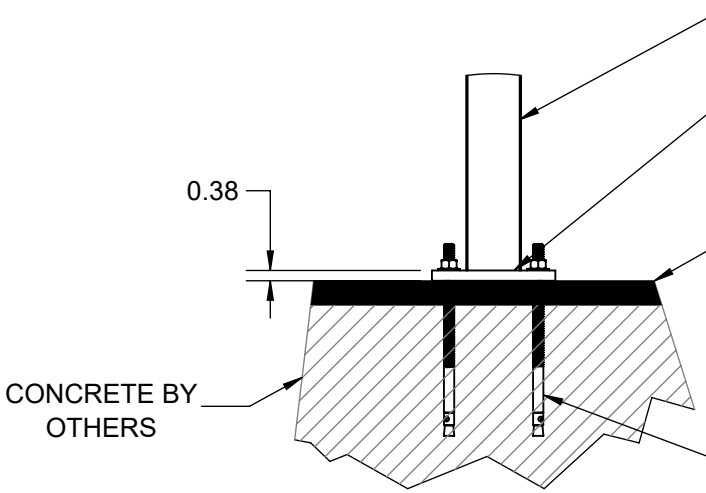
SURFACE MOUNT DETAILS







3/8" DIAMETER THROUGH BOLTS
INTO SOLID WOOD .
SEE MOUNTING SCHEDULE ON
LAST PAGE.



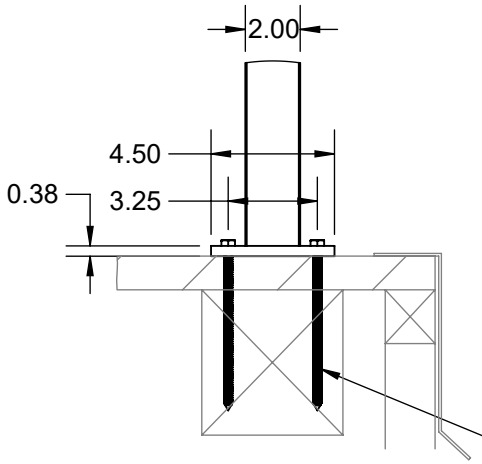
RAILING

DRAWN:	DATE:	APPROVED:
CH	08/22/2024	

DESCRIPTION: SURFACE MOUNT DETAILS

SHEET 3 OF 7	REVISION	PART NUMBER
SCALE 1:1	0	N/A
WEIGHT: N/A		

SURFACE MOUNT DETAILS



4 LAG BOLTS INTO SOLID WOOD 3/8" DIAMETER MINIMUM. SEE MOUNTING SCHEDULE ON LAST PAGE

RAILING

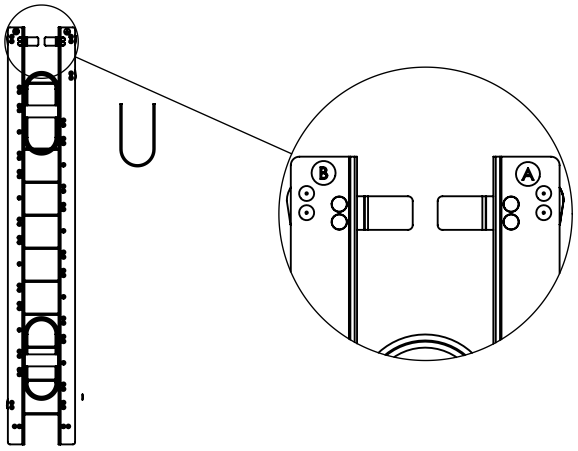
DRAWN:	DATE:	APPROVED:
CH	08/22/2024	

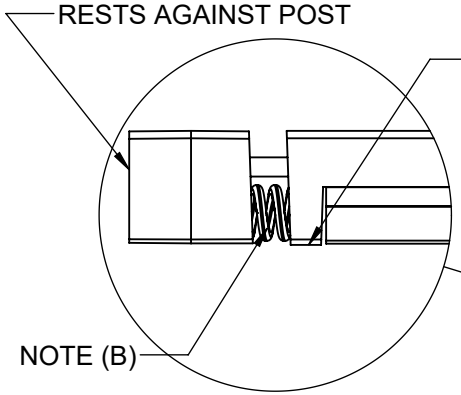
DESCRIPTION: SURFACE MOUNT DETAILS

SHEET 4 OF 7	REVISION	PART NUMBER
SCALE 1:1	0	N/A
WEIGHT: N/A		

BRACKETS & ACCESSORIES

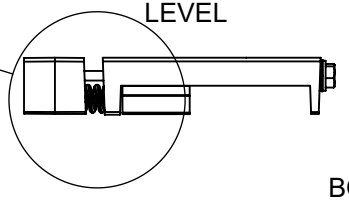
LEVEL CABLE GUIDES



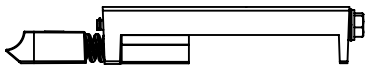


DETAIL F
SCALE 2 : 5

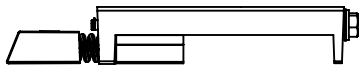
TENSIONERS



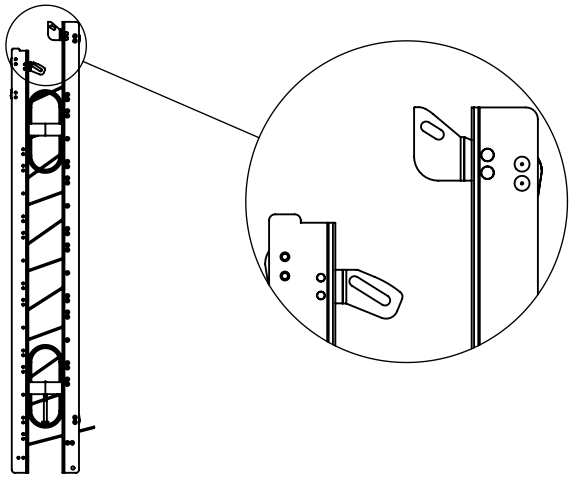
TOP STAIR
(TENSIONER A)



BOTTOM STAIR
(TENSIONER B)



STAIR CABLE GUIDES



NOTE:
(A) 9/16" SOCKET OR WRENCH USED TO TURN BOLT TO TENSION CABLES
(B) SPRING WILL COMPRESS AND SPACE WILL CLOSE ONCE 250LB LIMIT IS REACHED

RAILING

DRAWN:	DATE:	APPROVED:
CH	08/22/2024	

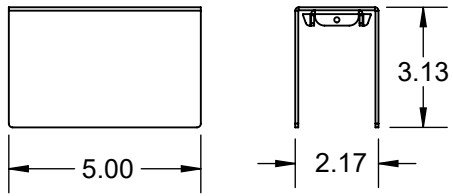
DESCRIPTION: BRACKETS & ACCESSORIES

SHEET 5 OF 7	REVISION	PART NUMBER
SCALE 1:2	0	N/A
WEIGHT: N/A		

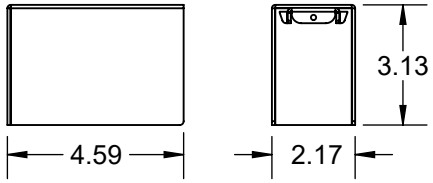
BRACKETS & ACCESSORIES

POST CAPS

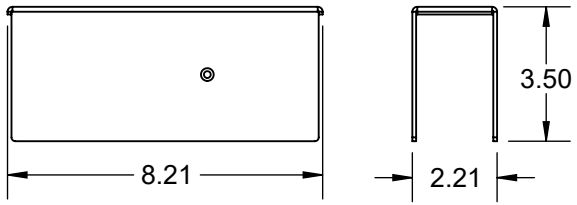
LEVEL LINE CAP



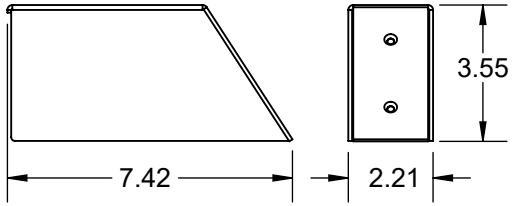
LEVEL END CAP



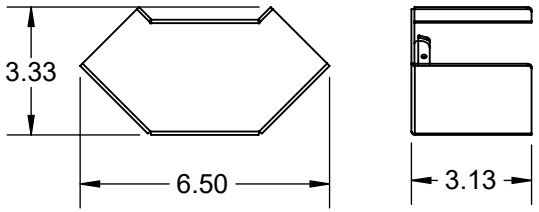
STAIR LINE CAP



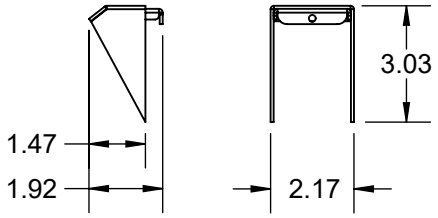
STAIR END CAP



CORNER CAP

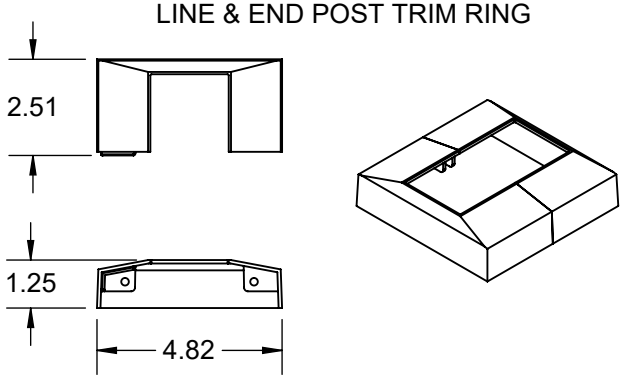


STAIR ADAPTER

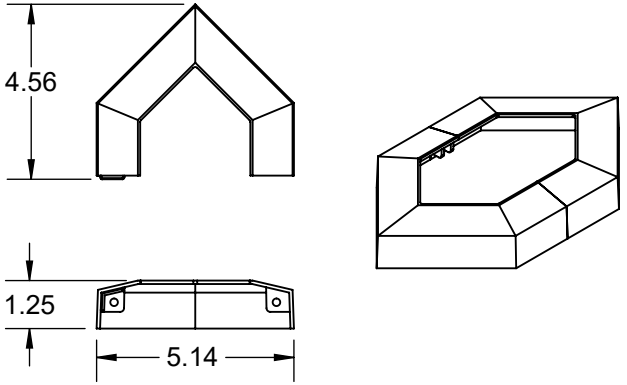


POST TRIMS

LINE & END POST TRIM RING



CORNER POST TRIM RING



RAILING

DRAWN:	DATE:	APPROVED:
CH	08/22/2024	

DESCRIPTION: BRACKETS & ACCESSORIES

SHEET 6 OF 7	REVISION	PART NUMBER
SCALE 1:5	0	N/A
WEIGHT: N/A		

MOUNTING SCHEDULE

FOR RESIDENTIAL APPLICATIONS 36" HIGH					
PANEL WIDTH	LOAD	RECOMMENDED BOLT APPLICATION	FOR LAG BOLT APPLICATION 3/8" DIA. SCREW. MINIMUM EMBEDDED SCREW THREAD LENGTH REQUIRED	FOR THROUGH BOLT APPLICATION	FOR CONCRETE ANCHOR APPLICATION 3/8" TITAN HD ANCHOR MINIMUM REQUIRED LENGTH (MINIMUM DISTANCE OF 4" FROM EDGE REQUIRED)
6FT	200LBS	LAG BOLT -OR- THROUGH BOLT -OR- CONCRETE ANCHOR	3IN	3/8" HEX BOLT 3/8" FLAT WASHER 3/8" LOCK WASHER 3/8" NUT	3IN
4FT			2.5IN		3IN

FOR COMMERCIAL APPLICATIONS 42" HIGH					
PANEL WIDTH	LOAD	RECOMMENDED BOLT APPLICATION	FOR LAG BOLT APPLICATION 3/8" DIA. SCREW. MINIMUM EMBEDDED SCREW THREAD LENGTH REQUIRED	FOR THROUGH BOLT APPLICATION	FOR CONCRETE ANCHOR APPLICATION 3/8" TITAN HD ANCHOR MINIMUM REQUIRED LENGTH (MINIMUM DISTANCE OF 4" FORM EDGE REQUIRED)
6FT	300LBS	LAG BOLT -OR- THROUGH BOLT -OR- CONCRETE ANCHOR	3IN	3/8" HEX BOLT 3/8" FLAT WASHER 3/8" LOCK WASHER 3/8" NUT	3IN
4FT	200LBS		2.5IN		3IN

RAILING

DRAWN:	DATE:	APPROVED:
CH	08/22/2024	

DESCRIPTION: MOUNTING SCHEDULE

SHEET 7 OF 7	REVISION	PART NUMBER
SCALE 1:1	0	N/A
WEIGHT: N/A		