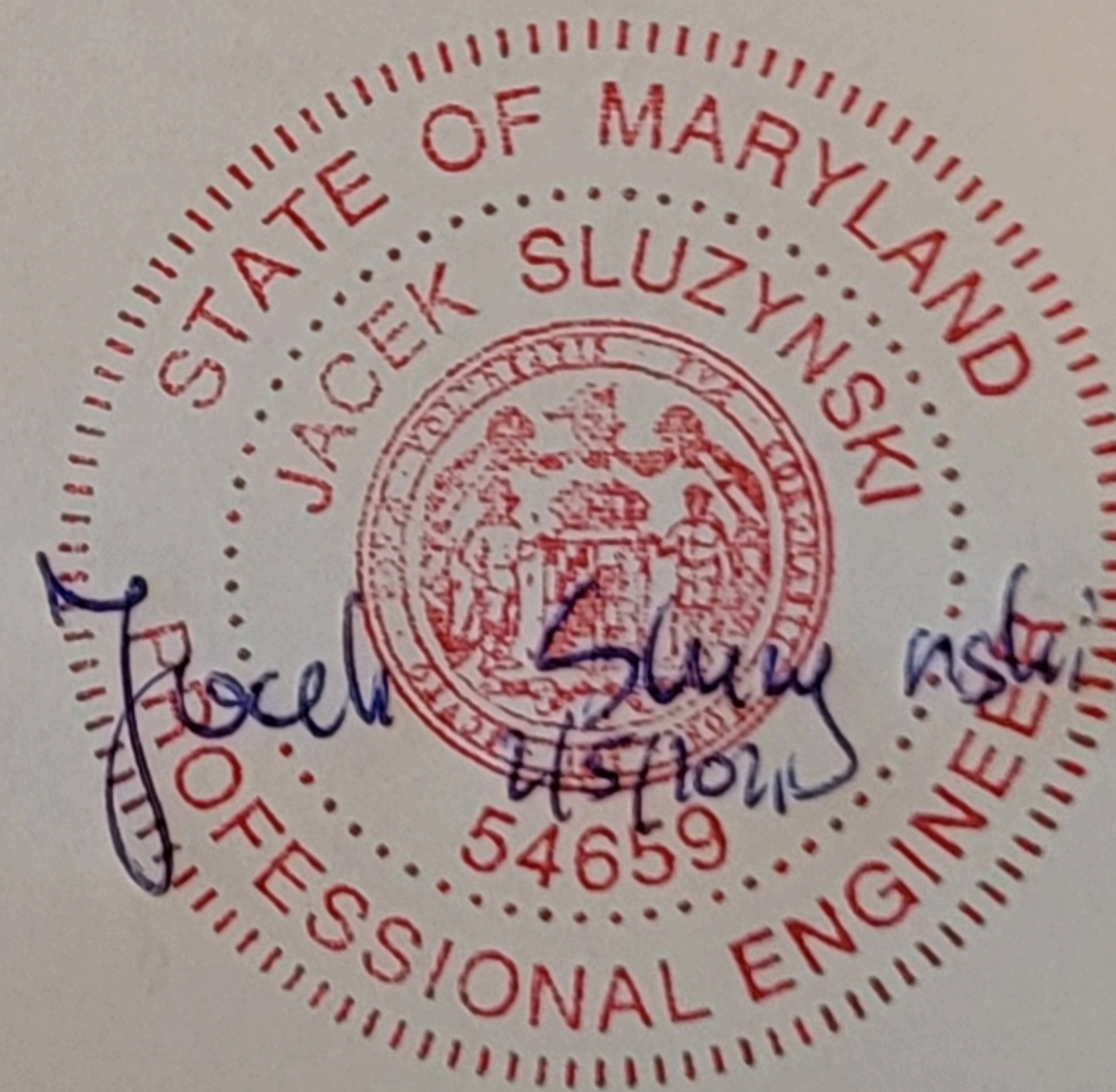
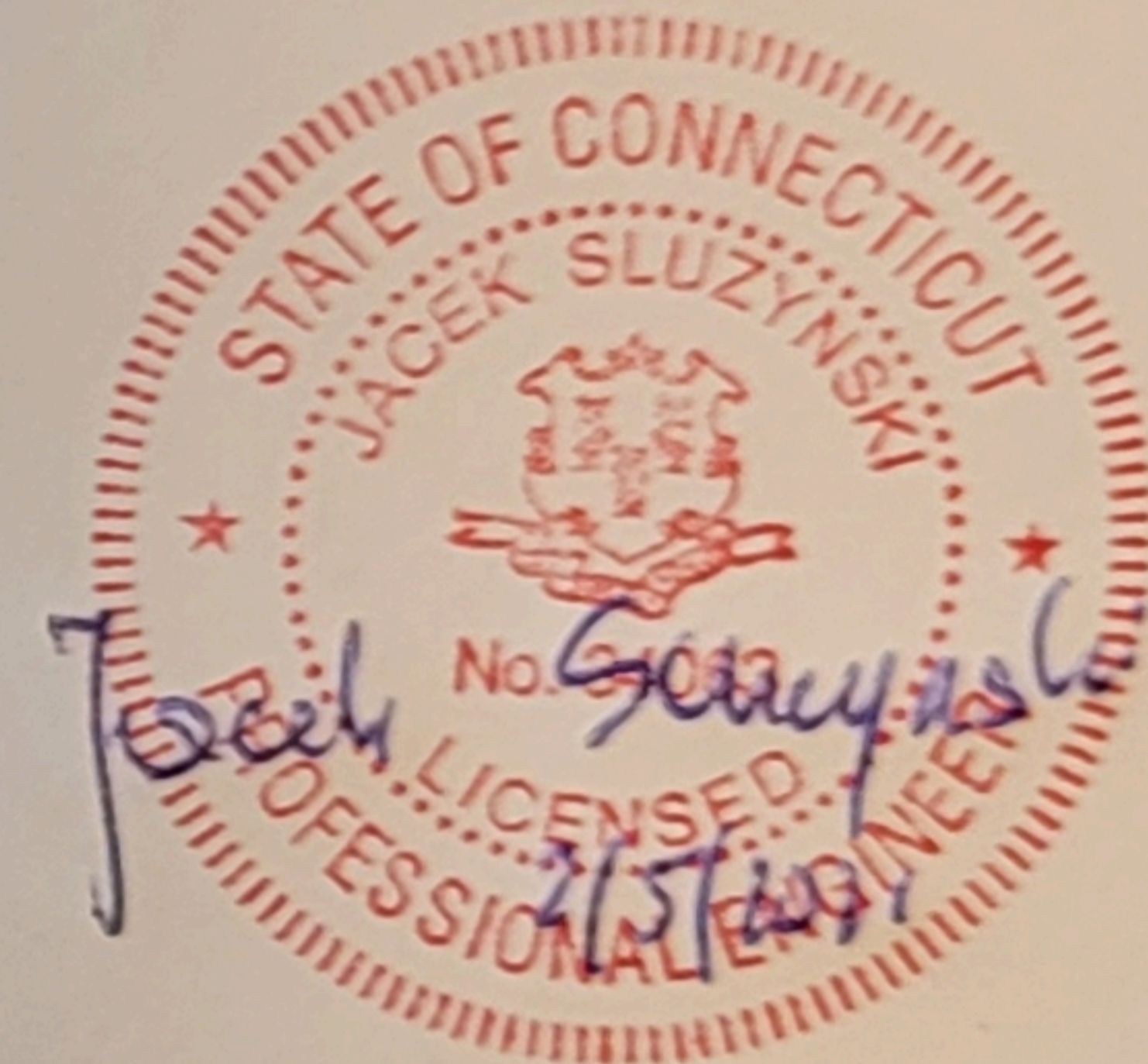
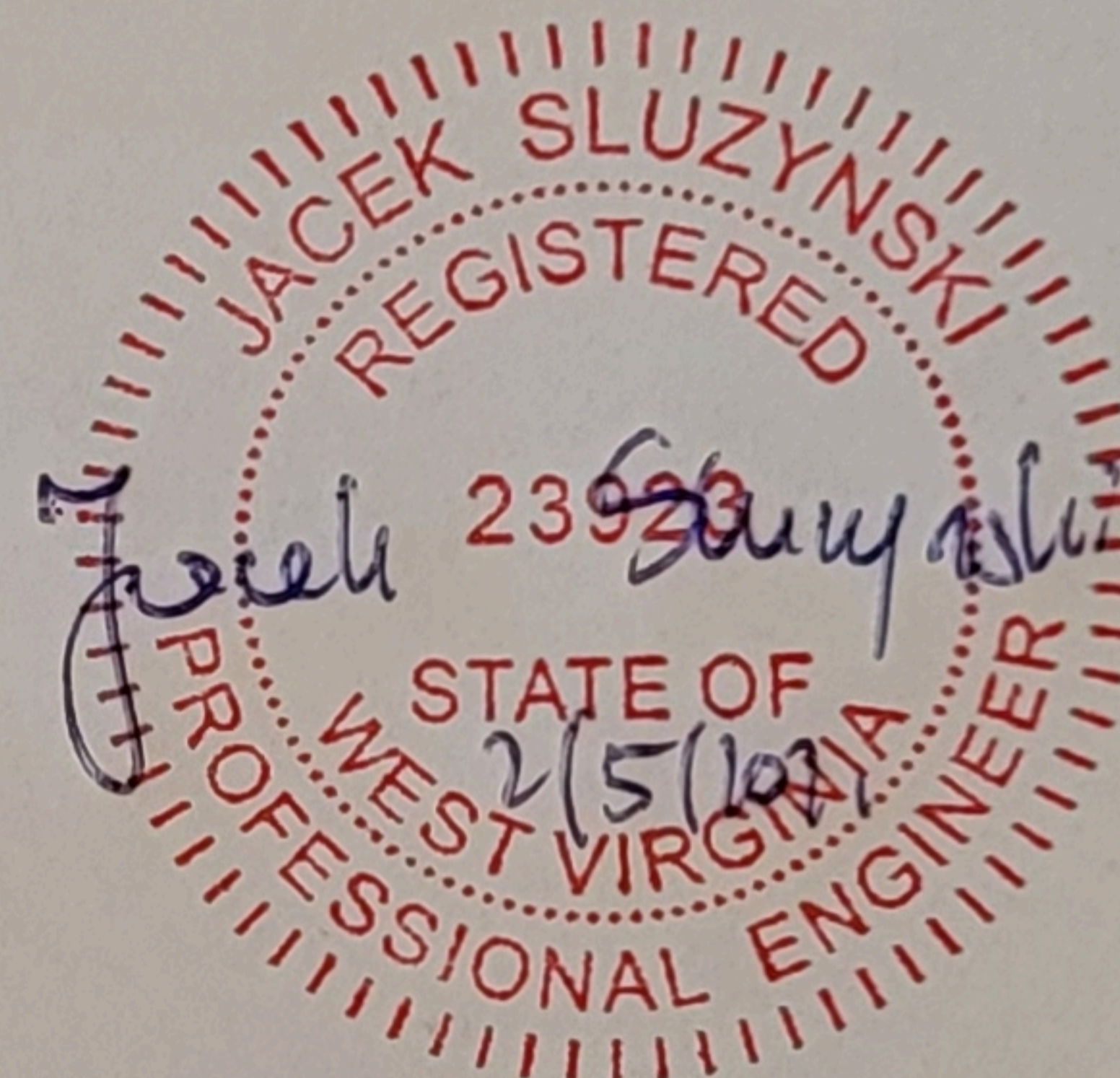
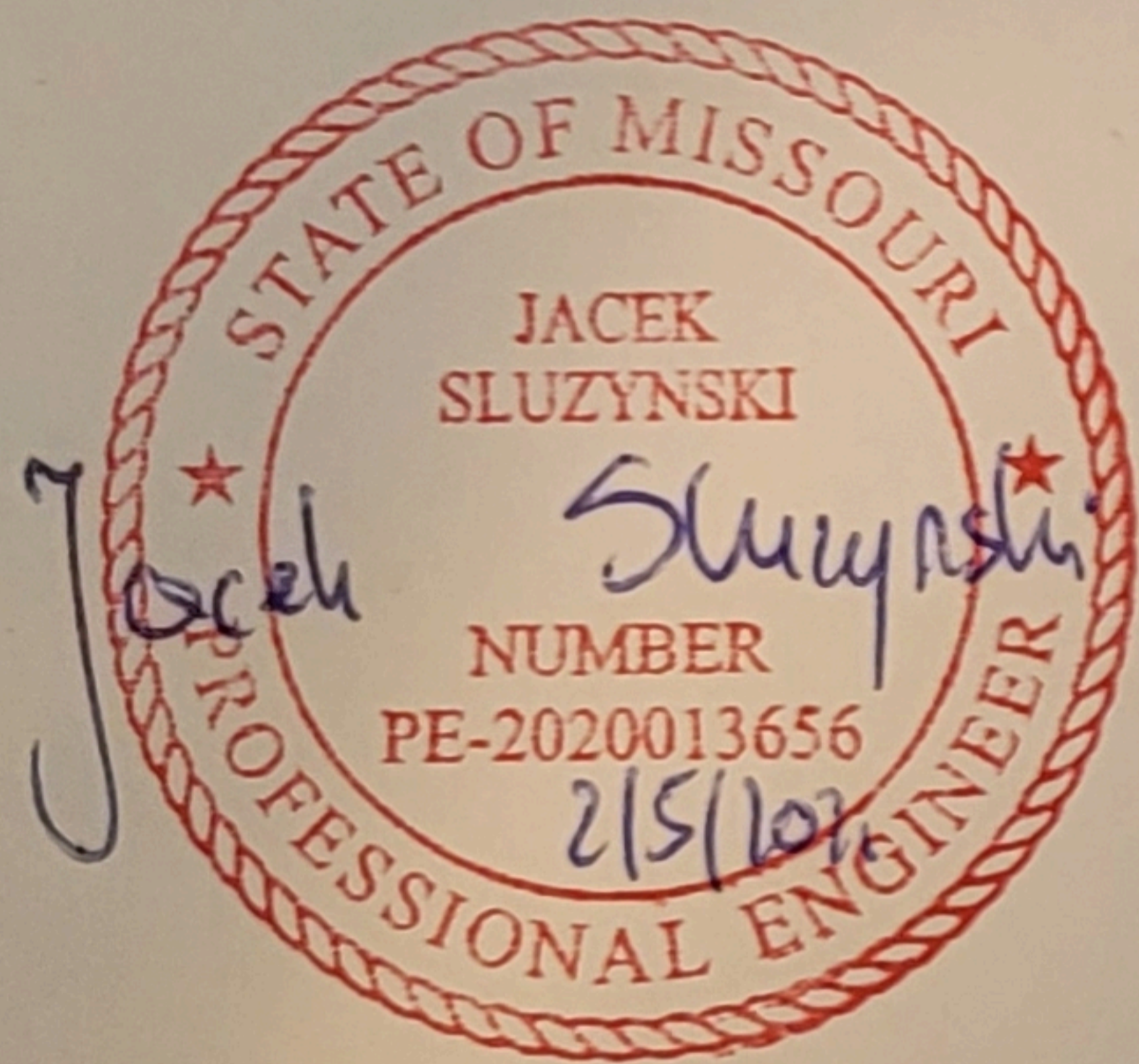
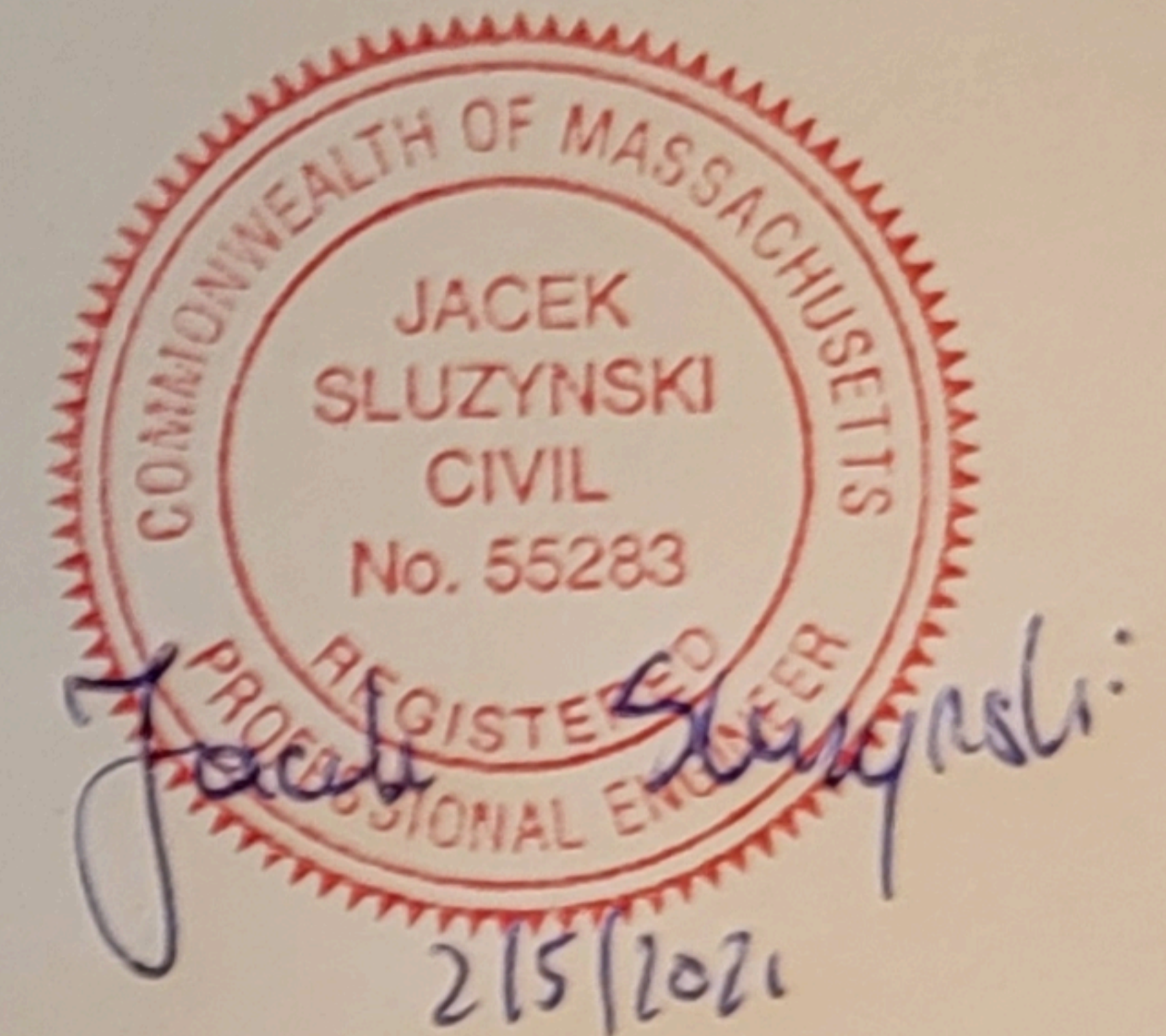
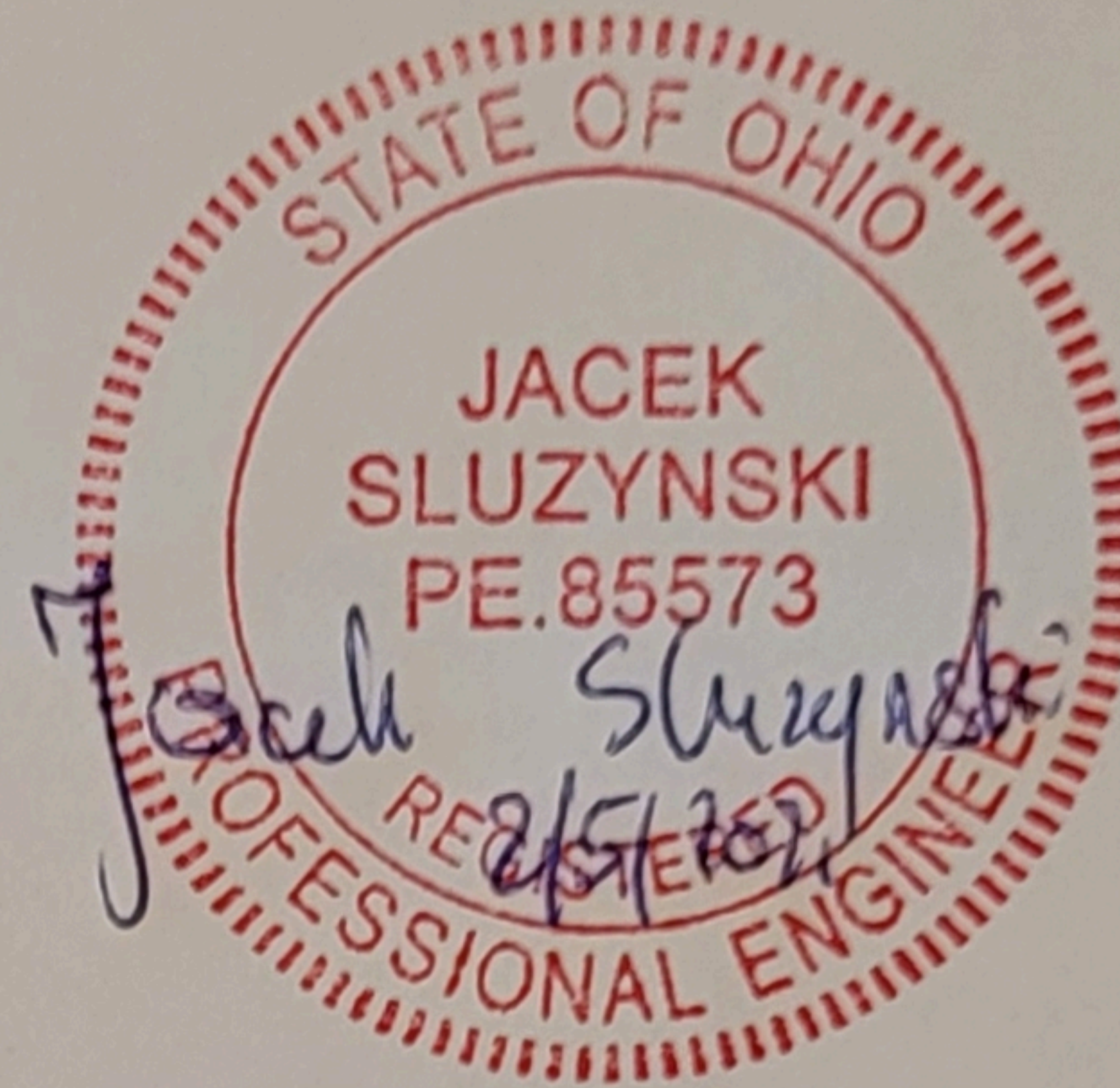
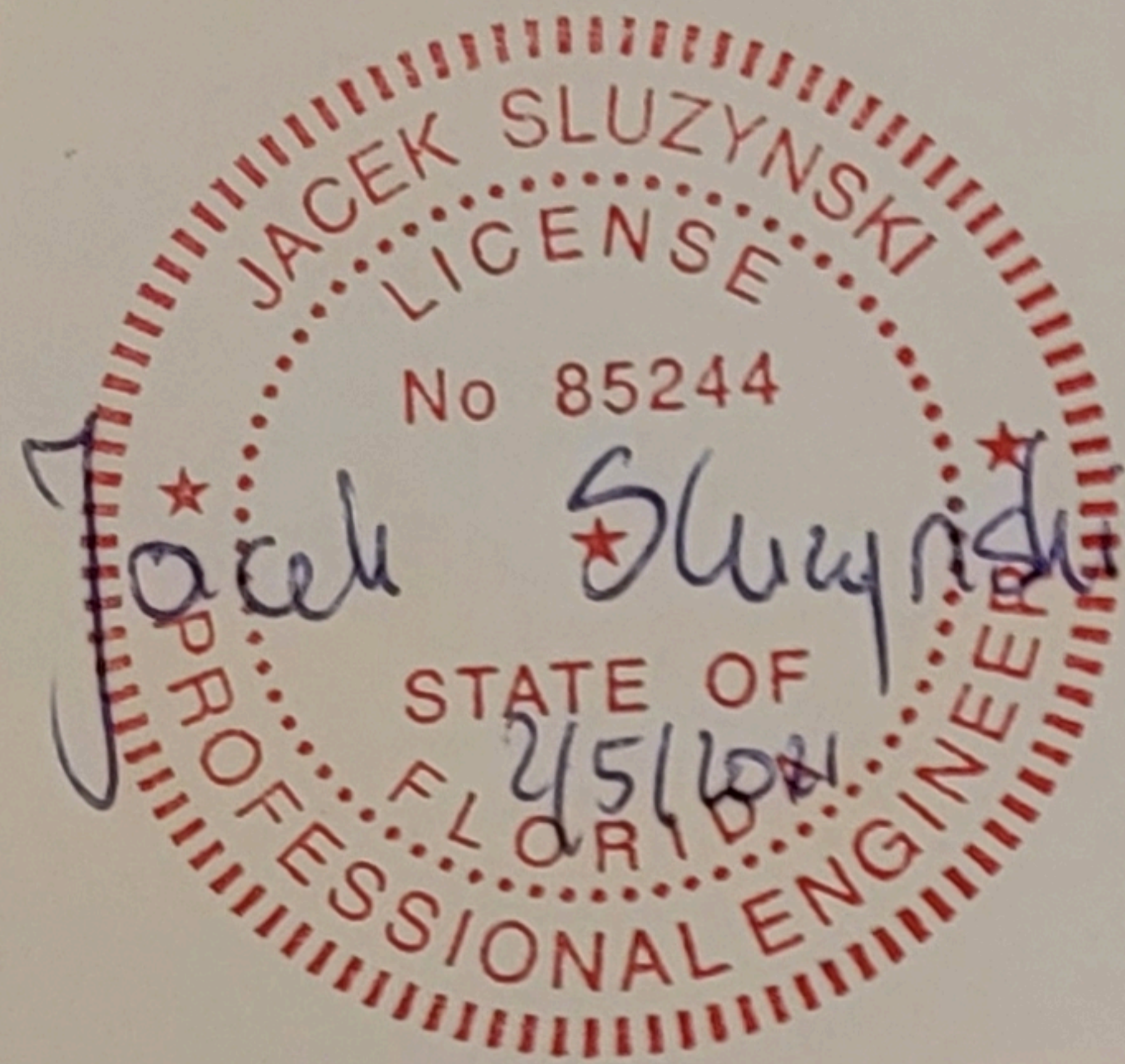




**BOL ALUMINUM RAILING SYSTEM
IBC 2018 AND IRC 2018**

2/5/2021

**JACEK SLUZYNSKI, P.E.
BARRETTE OUTDOOR LIVING
2401 CORPORATE BLVD • BROOKSVILLE, FL 34604
(352) 754-8555**



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 SLUZYSKI
Date: 2/5/2021 License Number: 57350

Professional Certification. I hereby 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. 54659, Expiration Date: 7/11/2021

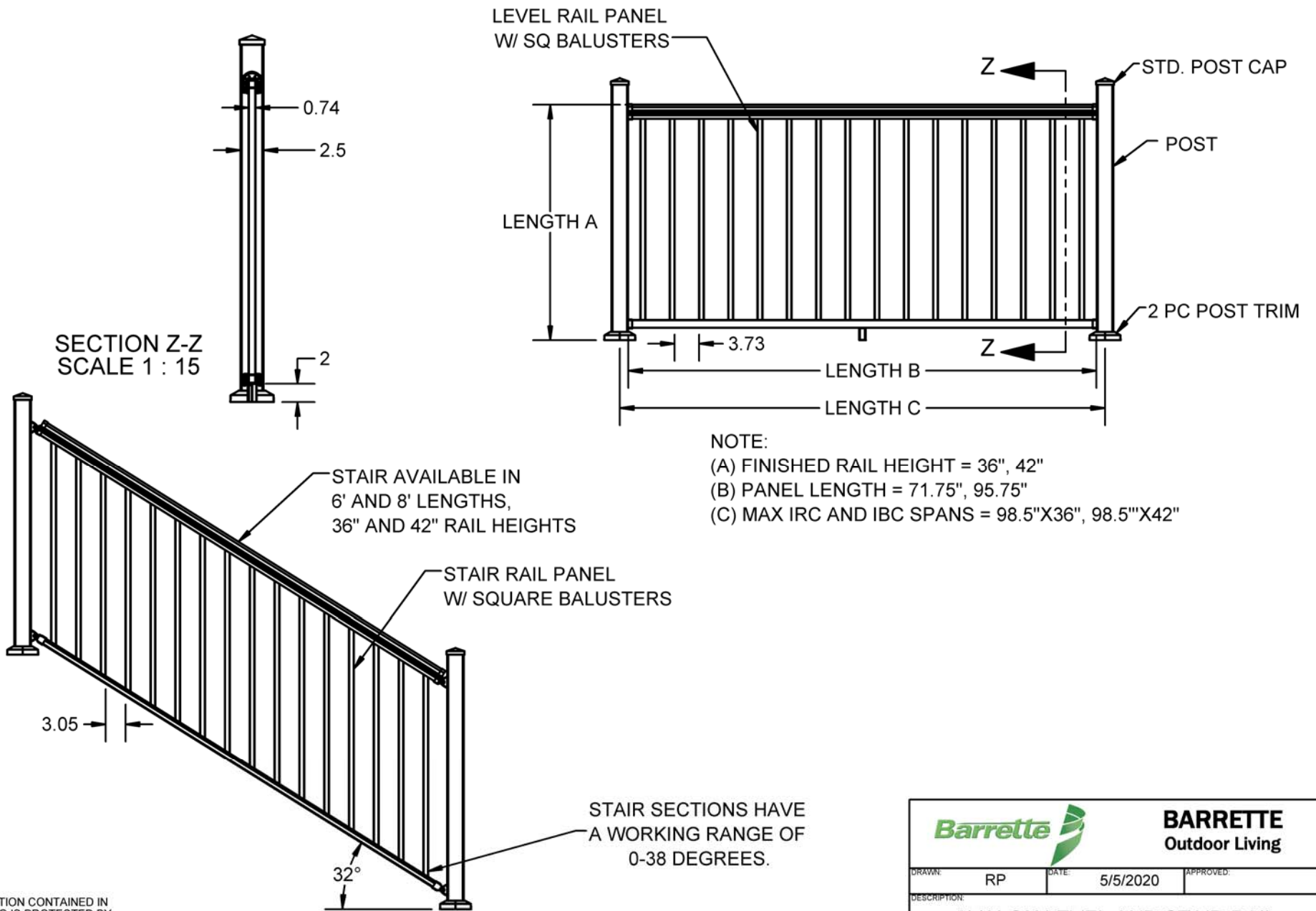
Jacek Sluzynski

GENERAL NOTES



1. The "Avalon Railing" (*guard*) meets or exceeds the 2018 International Building Code (IBC) section 1607.8. and R301.5. 2018 International Residential Code (IRC).
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 pickets 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 the 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 Barrette warranties. Neither the PE nor Barrette 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 except pickets which shall be 6063-T52.
7. All *guard* fasteners are 410 stainless steel.
8. Barrette manufacturing tolerances for the guard are equal to or tighter than allowed by the IBC and IRC. Contact Barrette 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 treated 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 Barrette 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.

AVALON ALUMINUM RAIL AND BALUSTER DETAILS



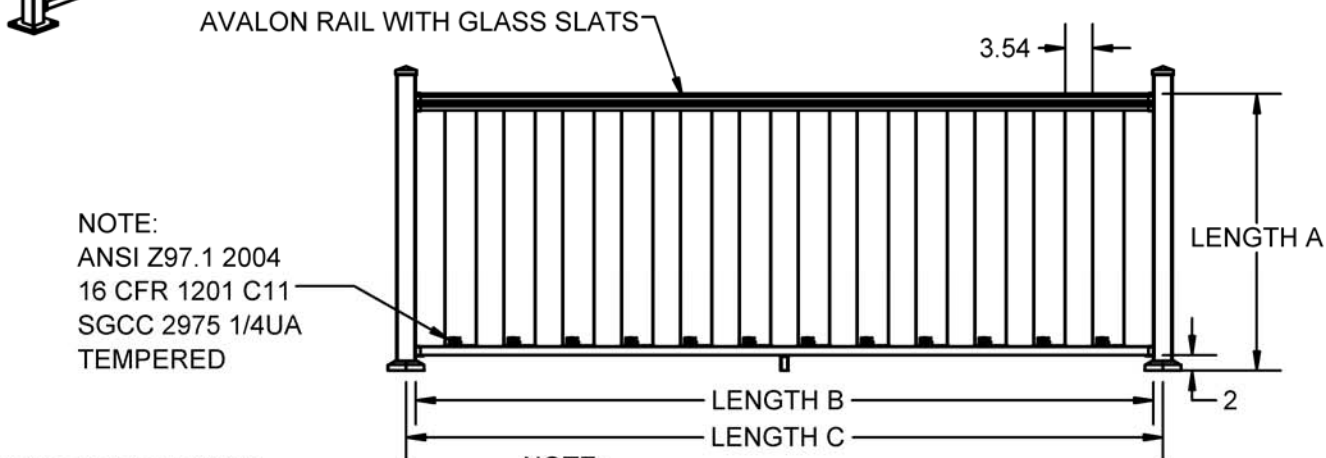
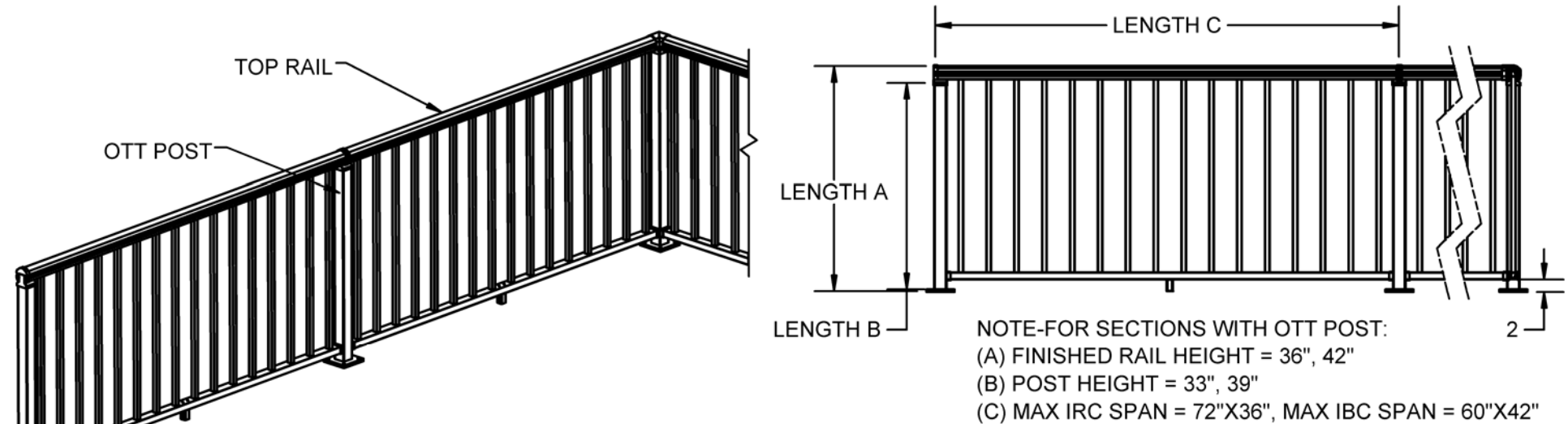
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| | | | |
|---|---|-----------------------------------|--|
|  | | BARRETTE Outdoor Living | |
| DRAWN: RP | DATE: 5/5/2020 | APPROVED: | |
| DESCRIPTION: AVALON LEVEL AND STAIR RAIL | | | |
| SHEET 1 OF 12 | REVISION | PART NUMBER | |
| SCALE 1:21 |  | N/A | |
| WEIGHT: N/A | | | |

AVALON OVER THE TOP (OTT) AND GLASS LEVEL RAIL DETAILS

NOTE:



1. FOR OTT, A TOP RAIL LONGER THAN PANEL LENGTH IS NEEDED.
 - IRC COMPLIANT PANELS (RESIDENTIAL) ARE 6FT MAXIMUM APPLICATIONS
 - IBC COMPLIANT PANELS (COMMERCIAL) ARE 5FT MAXIMUM APPLICATIONS
2. NO STAIRS AVAILABLE FOR AVALON OTT OR GLASS.



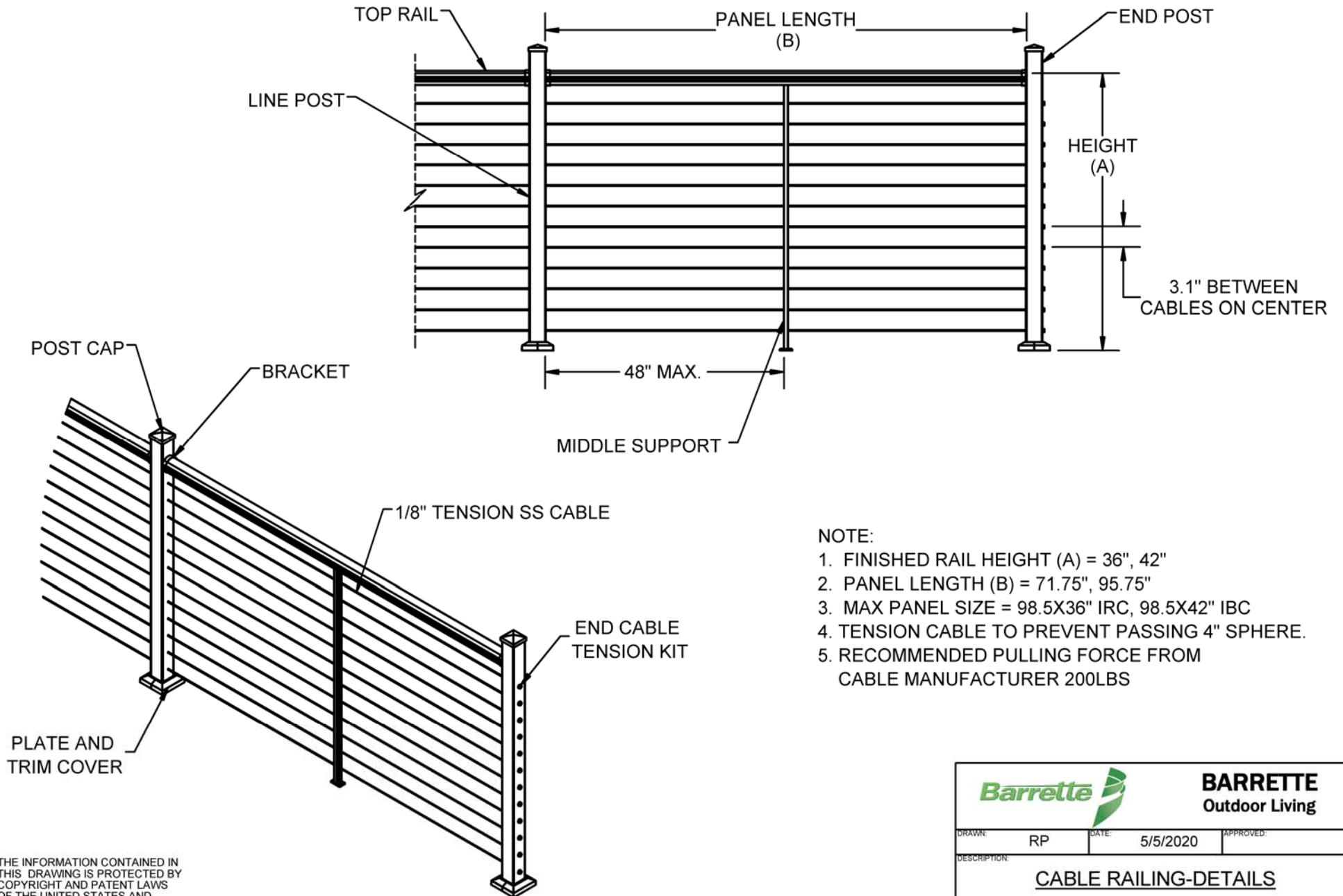
NOTE:
ANSI Z97.1 2004
16 CFR 1201 C11
SGCC 2975 1/4UA
TEMPERED

NOTE:
(A) FINISHED RAIL HEIGHT = 36", 42"
(B) PANEL LENGTH = 71.75", 95.75"
(C) MAX SPANS = 98.5X36" IRC, 98.5X42" IBC

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| | | | |
|---|---|-----------------------------------|----------|
|  | | BARRETTE Outdoor Living | |
| DRAWN: | RP | DATE: | 5/5/2020 |
| APPROVED: | | | |
| AVALON OVER TOP AND GLASS RAIL | | | |
| SHEET 2 OF 12 | REVISION | PART NUMBER | |
| SCALE 1:25 |  | N/A | |
| WEIGHT: N/A | | | |



CABLE RAILING PANEL-DETAILS



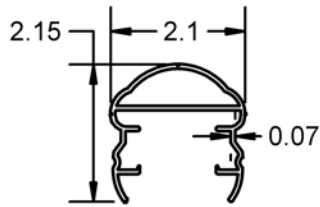
NOTE:

1. FINISHED RAIL HEIGHT (A) = 36", 42"
2. PANEL LENGTH (B) = 71.75", 95.75"
3. MAX PANEL SIZE = 98.5X36" IRC, 98.5X42" IBC
4. TENSION CABLE TO PREVENT PASSING 4" SPHERE.
5. RECOMMENDED PULLING FORCE FROM CABLE MANUFACTURER 200LBS

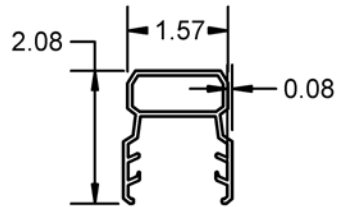
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| | | | |
|---|---|-----------------------------------|----------|
|  | | BARRETTE Outdoor Living | |
| DRAWN: | RP | DATE: | 5/5/2020 |
| APPROVED: | | | |
| CABLE RAILING-DETAILS | | | |
| SHEET 3 OF 12 | REVISION | PART NUMBER | |
| SCALE 1:25 |  | N/A | |
| WEIGHT: N/A | | | |

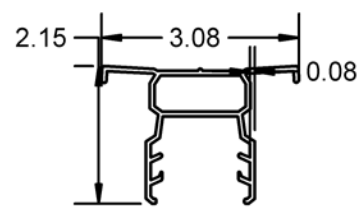
TOP AND BOTTOM RAIL



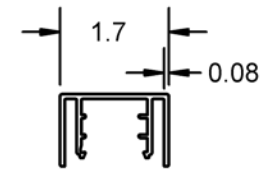
PELLINORE TOP RAIL



TRISTAN TOP RAIL



OBERON TOP RAIL
(SEE NOTE 1.)

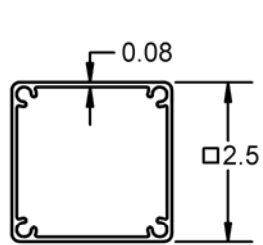


BOTTOM RAIL

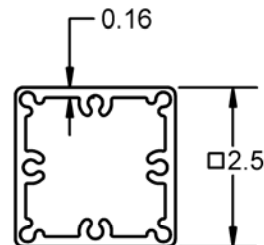
NOTE:

1. A DECK BOARD MUST BE USED WHEN INSTALLING OBERON.
2. BRACKET COVERS ARE INCLUDED WITH TOP RAIL.

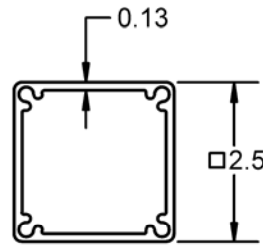
POSTS



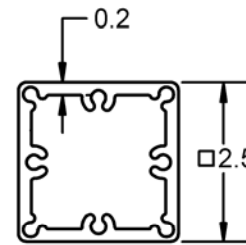
AVALON POST
RESIDENTIAL/CABLE RAILING
LINE POST-RESIDENTIAL



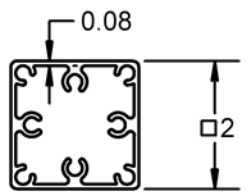
AVALON HD POST/
CABLE RAILING
LINE POST



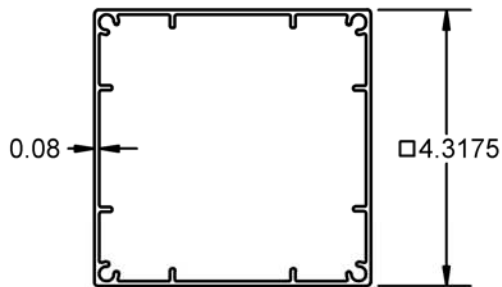
CORNER POST
FOR CABLE RAILING



END POST
FOR CABLE RAILING

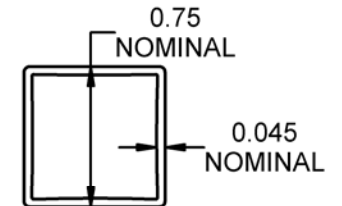


AVALON OTT POST

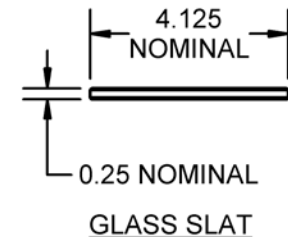


AVALON AR POST

BALUSTERS



SQ. BALUSTER



GLASS SLAT

1. AVALON POST RESIDENTIAL recommended for Residential applications (any width).
2. AVALON HD POST/CABLE RAILING LINE POST recommended for Commercial applications - not wider than 8ft .
3. END POST FOR CABLE RAILING recommended for cabel railing applications - end post only .
4. CORNER POST FOR CABLE RAILING recommended for cabel railing applications - corner post only .
5. AVL OTT POST recommended for Residential - 6ft wide applications and Commercial - 5ft applications.
6. AVL AR POST can be used on any Residential or Commercial applications.

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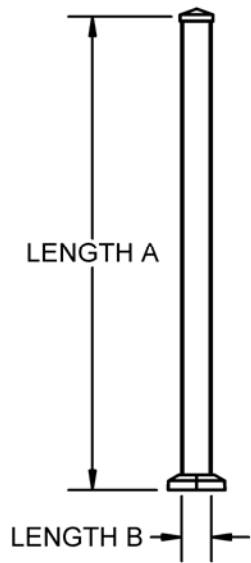


BARRETTE
Outdoor Living

| | | | |
|--|------------------|-------------|--|
| DRAWN: RP | DATE: 10/25/2018 | APPROVED: | |
| DESCRIPTION: AVALON / CABLE RAILING PROFILES | | | |
| SHEET 4 OF 12 | REVISION | PART NUMBER | |
| SCALE 1:3 | 0 | | |
| WEIGHT: N/A | | N/A | |

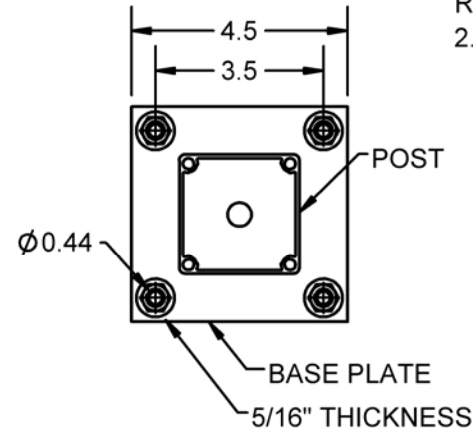
AVALON POST AND SURFACE MOUNT DETAILS

NOTE: IMAGES ONLY REFERENCE 2" AND 2.5" POSTS.



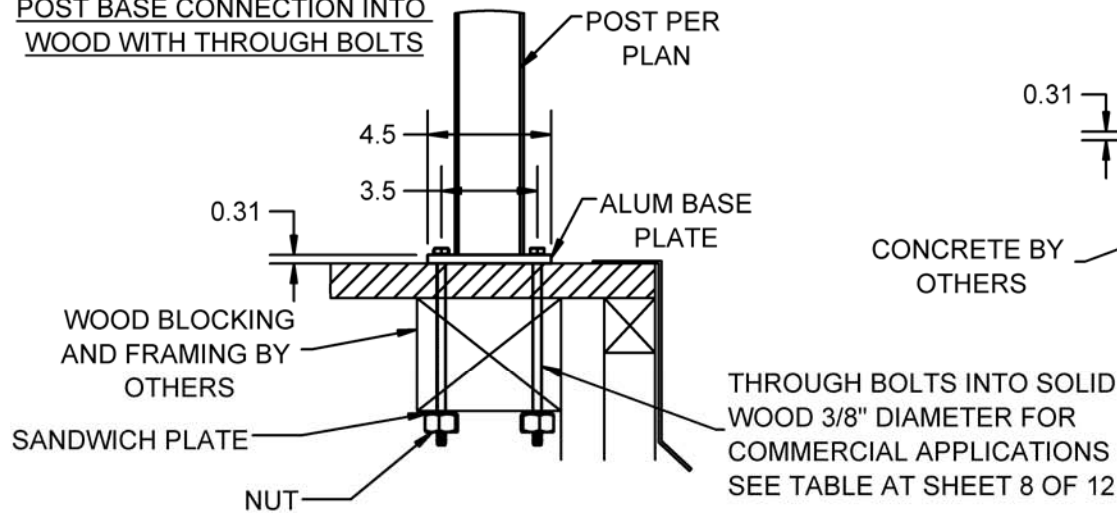
| POSTS | LENGTH A | LENGTH B |
|-----------|----------|----------|
| STD. POST | 39" | 2.50" |
| STD. POST | 45" | 2.50" |
| STD. POST | 60" | 2.50" |
| HD. POST | 45" | 2.50" |
| HD. POST | 60" | 2.50" |
| OTP. POST | 33" | 2.00" |
| OTP. POST | 39" | 2.00" |
| AR. POST | 39" | 4.32" |
| AR. POST | 45" | 4.32" |
| AR. POST | 108" | 4.32" |

Note:
 2.5" posts include factory mounted base plate, two piece trim, post cap, and leveling shims.
 4.3125" post sold separately as components.

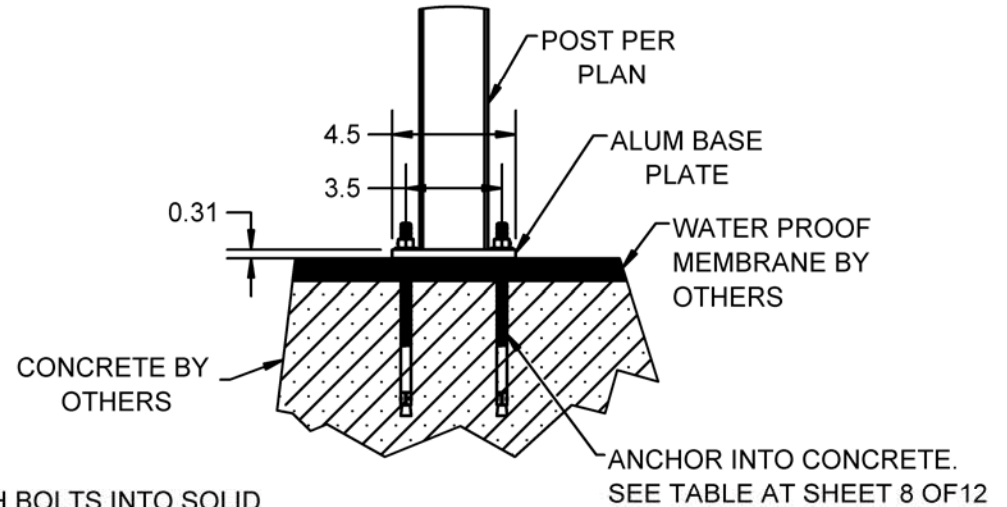


POST BASE CONNECTION INTO CONCRETE WITH WEDGE ANCHORS

POST BASE CONNECTION INTO WOOD WITH THROUGH BOLTS



THROUGH BOLTS INTO SOLID WOOD 3/8" DIAMETER FOR COMMERCIAL APPLICATIONS SEE TABLE AT SHEET 8 OF 12

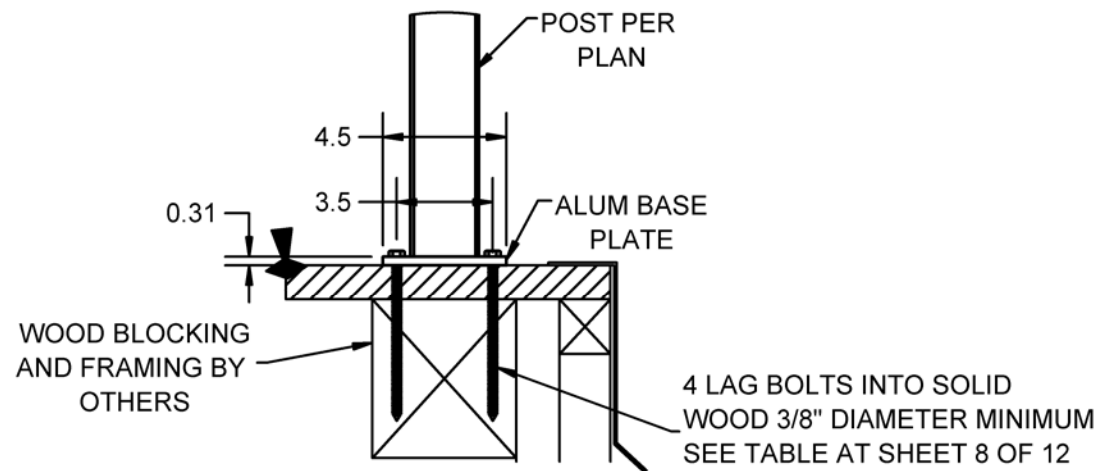


- NOTE:
1. COMMERCIAL APPLICATIONS ARE ALWAYS BOLTED, USE 3/8" DIAMETER A307 THROUGH BOLTS INTO SOLID WOOD BLOCKING.
 2. WOOD BLOCKING BY OTHERS.
 3. BLOCKING MUST BE DESIGNED TO WITHSTAND PROPER LOADING.

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| | | | |
|--|------------------|-----------------------------------|-------------|
| | | BARRETTE Outdoor Living | |
| DRAWN: RP | DATE: 10/25/2018 | APPROVED: | |
| DESCRIPTION AVALON POST AND SURFACE MOUNT DETAIL | | | |
| SHEET 5 OF 12 | | REVISION | PART NUMBER |
| SCALE 1:16 | | | N/A |
| WEIGHT: N/A | | | |

AVALON POST AND SURFACE MOUNT DETAILS





POST BASE CONNECTION INTO
WOOD WITH LAG BOLTS

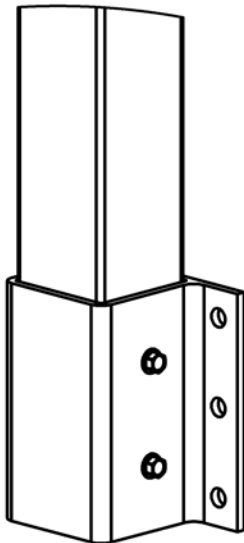
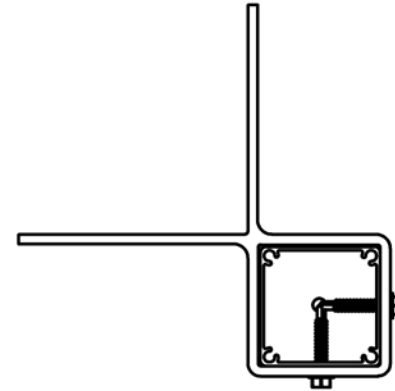
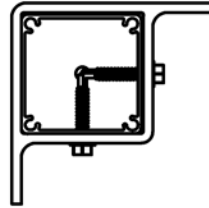
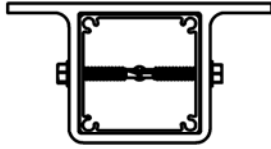
NOTE:

1. WOOD BLOCKING BY OTHERS.
2. BLOCKING MUST BE DESIGNED TO WITHSTAND PROPER LOADING.

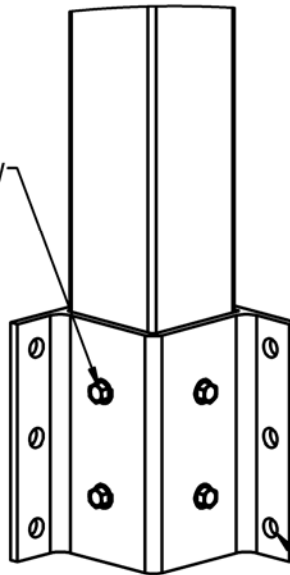
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| | | | |
|---|----|---|-------------|
|  | | BARRETTE Outdoor Living | |
| DRAWN: | RP | DATE: | 10/25/2018 |
| | | APPROVED: | |
| AVALON POST AND SURFACE MOUNT DETAIL | | | |
| SHEET 6 OF 12 | | REVISION | PART NUMBER |
| SCALE 1:16 | |  | N/A |
| WEIGHT: N/A | | | |

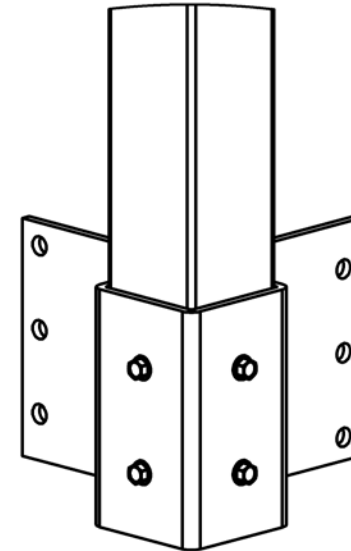
SIDE MOUNT DETAILS



(4) - # 12 SCREW



SEE TABLE AT
SHEET 8 OF 12
FOR ANCHOR
SCHEDULE





LINE POST/ END
POST BRACKET

IN CORNER POST
BRACKET

OUT CORNER POST
BRACKET

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| | | | |
|---|---|-----------------------------------|------------|
|  | | BARRETTE Outdoor Living | |
| DRAWN: | RP | DATE: | 10/25/2018 |
| APPROVED: | | | |
| DESCRIPTION: SIDE MOUNT DETAIL | | | |
| SHEET 7 OF 12 | REVISION | PART NUMBER | |
| SCALE 1:16 |  | N/A | |
| WEIGHT: N/A | | | |

MOUNTING SCHEDULE

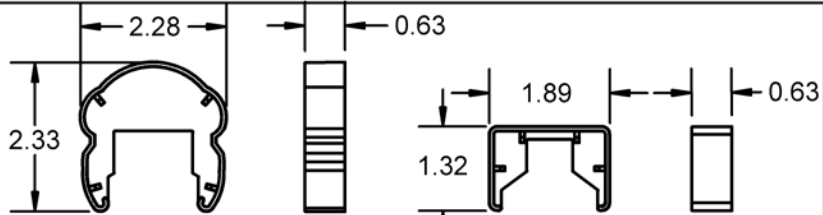
| FOR RESIDENTIAL APPLICATIONS 36" HIGH | | | | | |
|---------------------------------------|--------|---|---|---|--|
| PANEL WIDTH | LOAD | RECOMMENDED BOLT APPLICATION | FOR LAG BOLT APPLICATION 3/8" DIA. SCREW. MINIMUM EMBEDDED SCREW THREAD LENGTH REQUIRED | FOR THROUGH BOLT APPLICATION | FOR CONCRETE ANCHOR APPLICATION 3/8" TITAN HD ANCHOR MINIMUM REQUIRED LENGTH (MINIMUM DISTANCE OF 4" FROM EDGE REQUIRED) |
| 8FT | 200LBS | LAG BOLT -OR- THROUGH BOLT -OR- CONCRETE ANCHOR | 3.5IN | 3/8" HEX BOLT 3/8" FLAT WASHER 3/8" LOCK WASHER 3/8" NUT | 4IN |
| 6FT | | | 3IN | | 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" FROM EDGE REQUIRED) |
| 8FT | 400LBS | THROUGH BOLT -OR- CONCRETE ANCHOR | 3.5IN | 3/8" HEX BOLT 3/8" FLAT WASHER 3/8" LOCK WASHER 3/8" NUT | 4IN |
| 6FT | 300LBS | LAG BOLT -OR- THROUGH BOLT -OR- CONCRETE ANCHOR | 3IN | | 3IN |
| 4FT | 200LBS | LAG BOLT -OR- THROUGH BOLT -OR- CONCRETE ANCHOR | 2.5IN | | 3IN |

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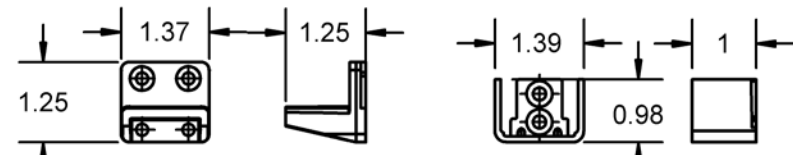
| | | | |
|---|----|---|-------------|
|  | | BARRETTE Outdoor Living | |
| DRAWN: | RP | DATE: | 10/25/2018 |
| APPROVED: | | | |
| MOUNTING SCHEDULE | | | |
| SHEET 8 OF 12 | | REVISION | PART NUMBER |
| SCALE 1:16 | |  | N/A |
| WEIGHT: N/A | | | |

Brackets & Accessories



TOP COVER

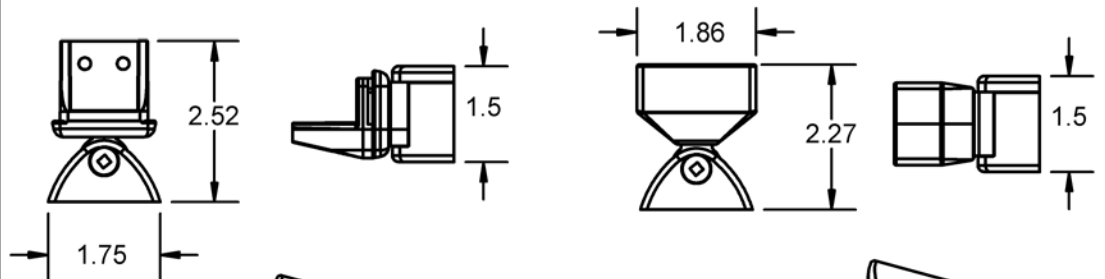
BOTTOM COVER



TOP BRACKET

BOTTOM BRACKET

LEVEL BRACKET



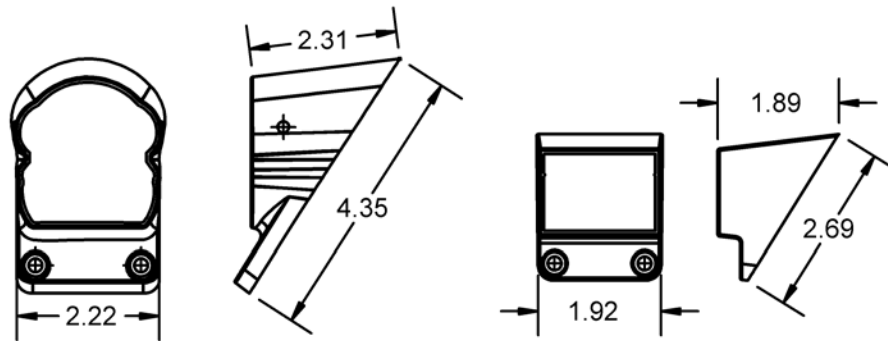
TOP BRACKET

BOTTOM BRACKET

*TOP COVER IS THE SAME AS LEVEL BRACKET

LEVEL ANGLE BRACKET

FIXED ANGLE STAIR BRACKET



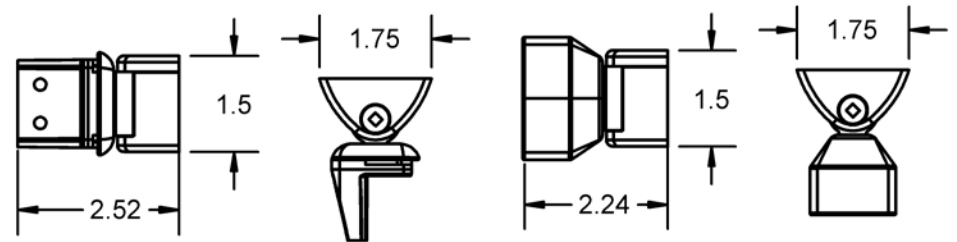
TOP STAIR TOP RAIL BRACKET

TOP STAIR BOTTOM RAIL BRACKET

BOTTOM STAIR TOP RAIL BRACKET

BOTTOM STAIR BOTTOM RAIL BRACKET

STAIR BRACKET



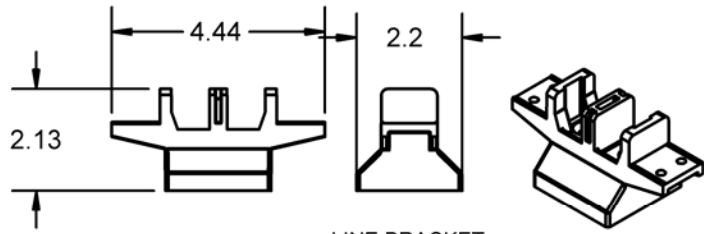
TOP BRACKET

BOTTOM BRACKET

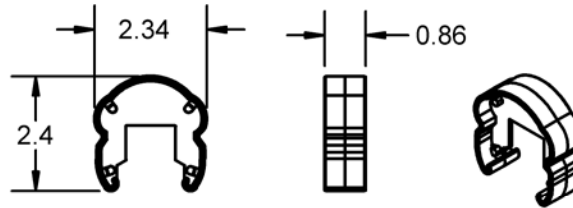
*TOP COVER IS THE SAME AS LEVEL BRACKET

| | | | |
|---|----------------|-----------------------------------|--|
| | | BARRETTE Outdoor Living | |
| DRAWN: RP | DATE: 5/5/2020 | APPROVED: | |
| DESCRIPTION: AVALON OVER TOP AND GLASS RAIL | | | |
| SHEET 9 OF 12 | REVISION | PART NUMBER | |
| SCALE 1:3 | | N/A | |
| WEIGHT: 0.044 | | | |

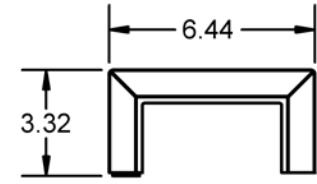
Brackets & Accessories



LINE BRACKET

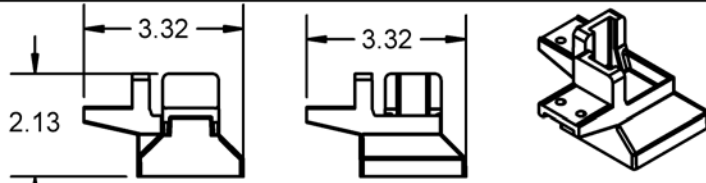


LINE COVER

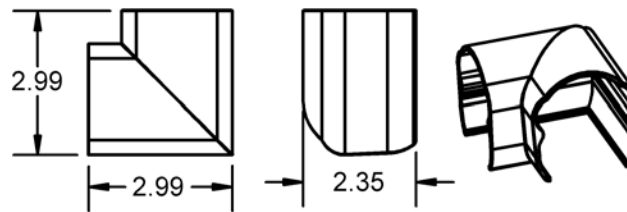


4.25" TRIM RING

OVER THE POST LINE BRACKET

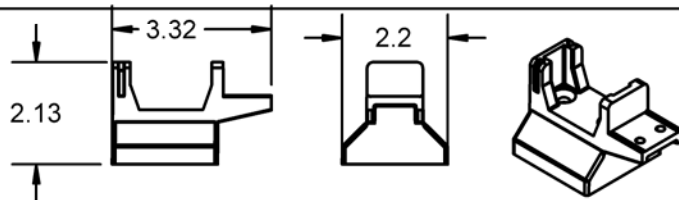


CORNER BRACKET

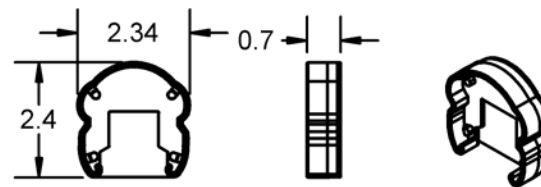


CORNER COVER

OVER THE POST CORNER BRACKET

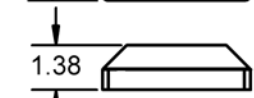
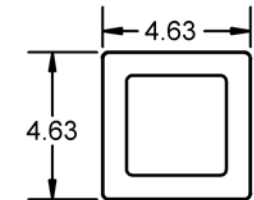


END BRACKET



END COVER

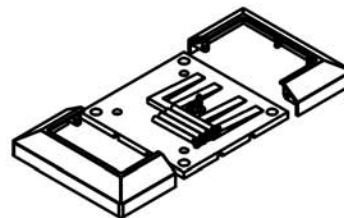
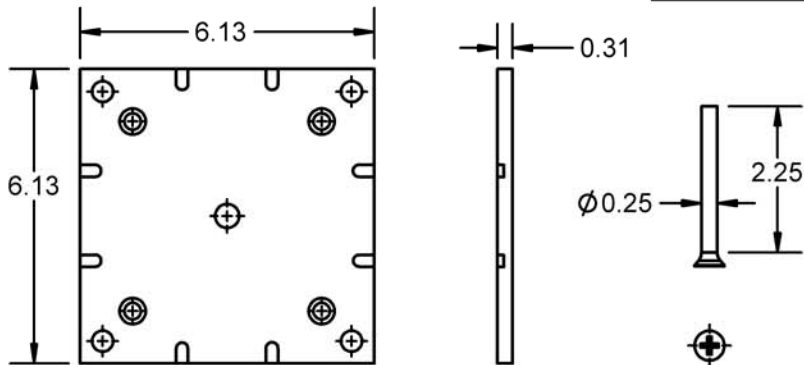
OVER THE POST END BRACKET



4.25" FLAT POST CAP

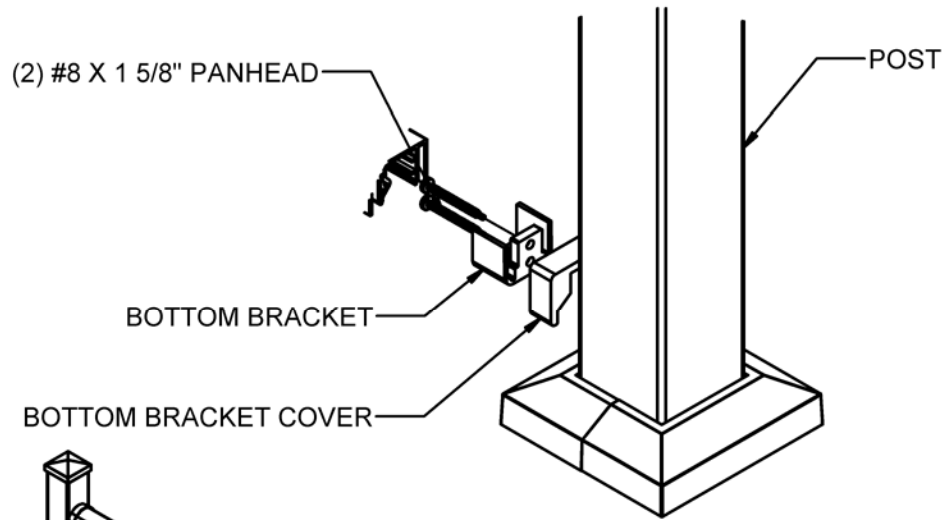
4.25" MOUNTING KIT

108" POST SLEEVE CAN BE USED AS A STRUCTURAL POST
(REQUIRES 2 MOUNTING KITS)

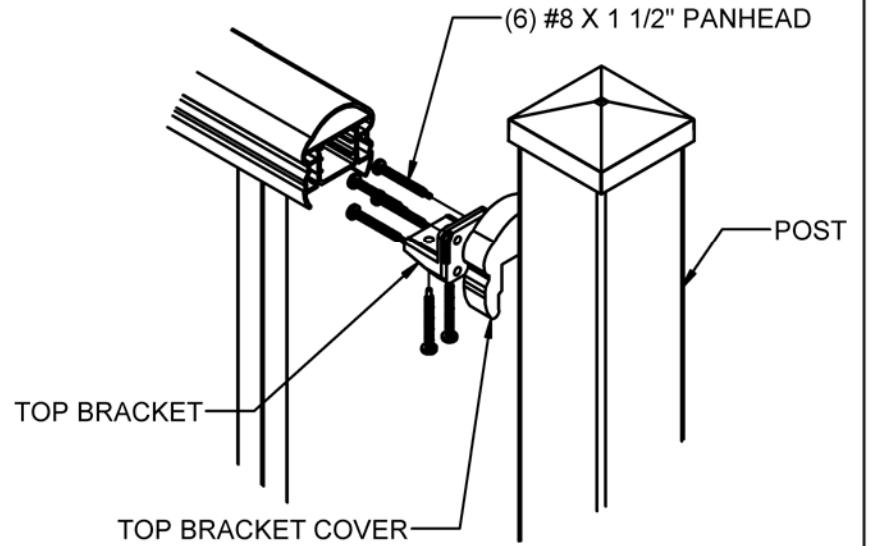


MOUNTING KIT COMES WITH TRIM RING

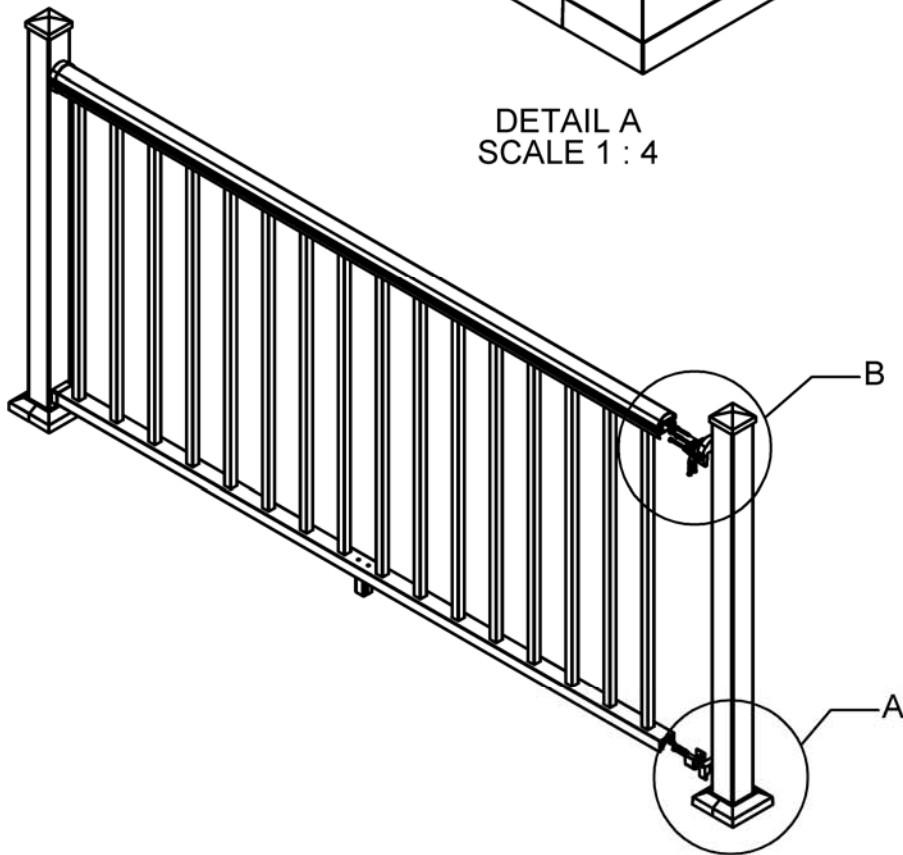
| | | | |
|---------------------------------------|----------|------------------------------------|----------|
| | | BARRETTE Outdoor Living | |
| DRAWN: | RP | DATE: | 5/5/2020 |
| APPROVED: | | APPROVED: | |
| DESCRIPTION: | | | |
| AVALON OVER TOP AND GLASS RAIL | | | |
| SHEET 10 OF 12 | REVISION | PART NUMBER | |
| SCALE 1:4 | | N/A | |
| WEIGHT: 0.292 | | | |



DETAIL A
SCALE 1 : 4

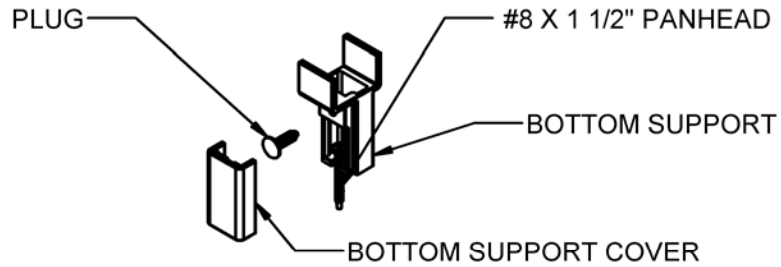


DETAIL B
SCALE 1 : 4

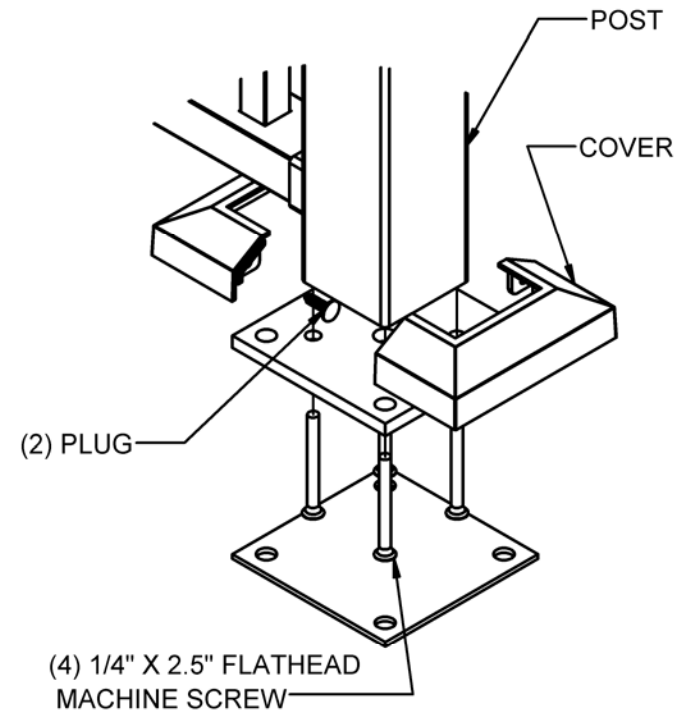
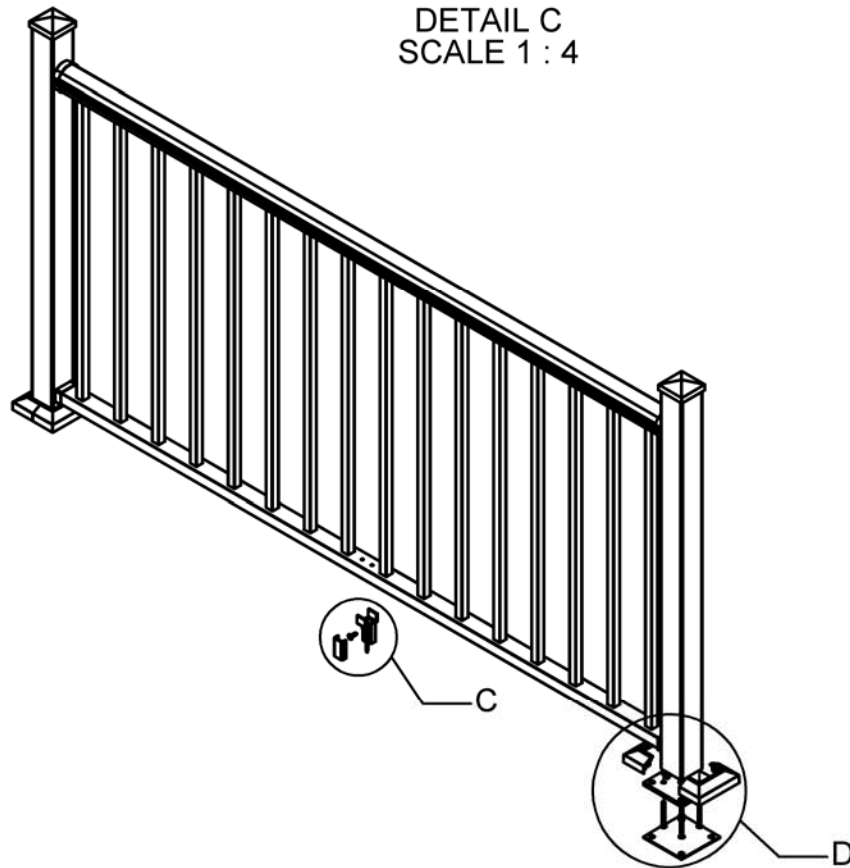


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| | | | |
|---|----------------|-----------------------------------|--|
| | | BARRETTE Outdoor Living | |
| DRAWN: RP | DATE: 5/5/2020 | APPROVED: | |
| DESCRIPTION: AVALON FASTENER DETAIL | | | |
| SHEET 11 OF 12 | REVISION | PART NUMBER | |
| SCALE 1:16 | | N/A | |
| WEIGHT: 25.52 | | | |




DETAIL C
SCALE 1 : 4



DETAIL D
SCALE 1 : 4

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| | | | |
|---|---|-----------------------------------|--|
|  | | BARRETTE Outdoor Living | |
| DRAWN: RP | DATE: 5/5/2020 | APPROVED: | |
| DESCRIPTION: AVALON FASTENER DETAIL | | | |
| SHEET 12 OF 12 | REVISION | PART NUMBER | |
| SCALE 1:16 |  | N/A | |
| WEIGHT: 25.52 | | | |