

# EXUMA PVC RAILING

## GENERAL NOTES

- THIS SYSTEM HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FIFTH EDITION (2014).
- THIS RAILING IS DESIGNED TO MEET SECTIONS OF THE CODE GOVERNING ELEVATED BALCONIES AND STRUCTURAL RAILINGS (200LB POINT LOAD, 50PLF TOPCAP LOAD, 50LB POINT LOAD UPON 1SF OF INFILL (NONHVHZ CRITERIA FBC 1607.8.1) AND 25 PSF UPON GROSS AREA OF GUARD (HVHZ CRITERIA FBC 1618.4.6). RAILING DESIGNED FOR WIND LOADING PER CHAP 16 HVHZ, NON-HVHZ & THE PROVISIONS OF ASCE 7-10, Vult = 175 MPH, Vasd = 135.6 MPH, EXPOSURE 'D', AS AN 60% OPEN SIGN UP TO 45' MEAN ROOF HEIGHT USING "ASD" METHODOLOGY.
- ALL FLOOR FINISHES SHALL BE BY OTHERS AND SHALL NOT EXCEED 1/2" MAXIMUM. OTHERWISE THEY SHALL BE SEPARATELY CERTIFIED TO TRANSFER ALL LOADING TO THE PROJECT SUPERSTRUCTURE.
- ALL FASTENERS TO BE #12 X 3/4" OR GREATER 2024-T4, 18-8 SERIES 300 NON-MAGNETIC STAINLESS STEEL, OR CADMIUM PLATED OR OTHERWISE CORROSION RESISTANT MATERIAL AND SHALL COMPLY WITH J.3.4, SPECIFICATIONS FOR ALUM. STRUCTURES, THE ALUMINUM ASSOCIATION, INC., & APPLICABLE FEDERAL, STATE, AND LOCAL CODES.
- ALL EXTRUDED MEMBERS ALUMINUM SHALL BE ALLOY TYPE 6061-T6 OR 6005-T5, U.N.O.
- PVC INFORMATION: ALL PVC RESIN TO BE ASTM D1784 EXTRUDED D638 FLEX STR. 5100PSI D790. ALL TO CONFORM TO ASTM F 964 FOR RIGID POLYVINYL PROFILES.
- ALL CONCRETE SHALL BE UNCRACKED ONLY WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI U.N.O. AND SHALL BE MINIMUM 1.5X THICKER THAN ANY MEMBER EMBEDMENT. ALL CONCRETE BLOCK SHALL CONFORM TO ASTM C-90. ALL EPOXY AND GROUT SHALL MEET OR EXCEED COMPRESSIVE STRENGTH OF THE CONCRETE AND SHALL BE IRON-FREE, NONSHRINK AND NONREACTIVE. WOOD TO BE #2 SYP OR BETTER.
- FOR ALUMINUM ATTACHMENTS ALL ANCHORS SHALL BE SPACED WITH 2xDIAMETER END DISTANCE AND 2.5xDIAMETER MIN SPACING TO ADJACENT ANCHORS, UNLESS NOTED OTHERWISE. FOR STEEL ATTACHMENTS ALL ANCHORS SHALL BE SPACED WITH 3xDIAMETER MIN. SPACING TO ADJACENT ANCHORS AND 3xDIAMETER MIN END DISTANCE.
- ALUMINUM WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE FBC 5TH ED (2014) SECTION 2003.8.1.4 WITH WELD FILLER ALLOYS MEETING ANSI/AWS A5.10 STANDARDS TO ACHIEVE ULTIMATE DESIGN STRENGTH IN ACCORDANCE WITH THE ALUMINUM DESIGN MANUAL PART I, TABLE J.2.1. ALL ALUMINUM CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE TOLERANCES, QUALITY AND METHODS OF CONSTRUCTION AS SET FORTH IN FBC SECTION 2003.2 AND THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE-ALUMINUM (D1.2). MINIMUM WELD IS 1/8" THROAT FULL PERIMETER FILLET WELD UNLESS OTHERWISE NOTED.
- THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
- ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS.
- ENGINEER SEAL AFFIXED HERETO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
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- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- ADHESIVE INFORMATION: MUST BE EXTREME ADHESIVES PVC TRIMWELDER SLOW CURE PART NUMBERS EXT-SC-50ML & EXT-SC220ML. ADHESIVE SHALL COVER ENTIRE BONDING SURFACE ON ALL BONDED CONNECTIONS WITH A MINIMUM FILM THICKNESS OF 0.030" WHEN CURED

## DESIGN NOTES:

**WIND LOAD:**  
 FLORIDA BUILDING CODE FIFTH EDITION (2014) ASCE 7-10  
 Vult=175 MPH / Vasd=135.6 MPH, EXPOSURE 'D', RISK CATEGORY=II, 45FT MAXIMUM ABOVE GRADE, DESIGNED USING ABOVE GROUND OPEN SIGN METHOD, 60% OPEN USED IN CALCULATIONS  
 $Kd=0.85$ ,  $Kzt=1.0$ ,  $Kz=TABLE\ 30.3-1$ ,  
 $qh = 0.00256 * Kz * Kzt * Kd * V * V$   
 $P = qh * G * Cf * Kz$

**RAIL LOAD:**  
 THIS RAILING IS DESIGNED TO MEET SECTIONS OF THE CODE GOVERNING ELEVATED BALCONIES AND STRUCTURAL RAILINGS (200LB POINT LOAD OR 50 PLF APPLIED ALONG TOP CAP, 25 PSF UPON GROSS AREA OF GUARD, HVHZ CRITERIA FBC 1618.4.6).

**SCOPE OF WORK:**  
 ① PROVIDE NEW PVC/ALUMINUM RAILING SYSTEM AS SHOWN HEREIN.

## NOTE:

THESE PLANS CERTIFY THE STRUCTURAL ADEQUACY OF THE PROPOSED SYSTEM IN ACCORDANCE WITH THE STRUCTURAL REQUIREMENTS OF THE BUILDING CODE ONLY. WE OFFER NO CERTIFICATION NOR REVIEW REGARDING THE LOCATION OR DIMENSIONS PROVIDED BY CONTRACTOR AND SHOWN HEREIN. ALL WIDTH/LOCATION/EGRESS ISSUES ARE TO BE ADDRESSED BY THE PERMITTING CONTRACTOR AND THE LOCAL BUILDING OFFICIAL.

## VERSATEX TRIMBOARD TEST DATA



FLEXURAL STRENGTH = 5100 PSI  
 FLEXURAL MODULUS = 215000 PSI  
 MODULUS OF ELASTICITY = 205000 PSI  
 ASTM E84 - FLAME SPREAD INDEX = 25  
 - SMOKE DENSITY INDEX = 1000  
 ASTM D635 - BURNING RATE = FAILED TO IGNITE  
 ASTM G155 - ACCELERATED WEATHERING - MOR = 7049 PSI  
 - MOE = 268100 PSI  
 ASTM D256 - IZOD IMPACT RESISTANCE = 0.270 FT-LBS/IN

**VERSATEX TRIMBOARD NOTE:**  
 DESIGN AS SPECIFIED SHALL UTILIZE THE VERSATEX PVC MATERIAL REFERENCED IN ARCHITECTURAL TESTING TEST REPORT #77621.02-106-31

## ABBREVIATIONS

A.F.F. ABOVE FINISHED FLOOR  
 STL STEEL  
 ALUM ALUMINUM  
 HORIZ. HORIZONTAL  
 VERT VERTICAL  
 ELEV. ELEVATION  
 N.T.S. NOT TO SCALE  
 N/A NOT APPLICABLE  
 G.C. GENERAL CONTRACTOR  
 ARCH. ARCHITECT  
 P.S.F. POUNDS PER SQUARE FOOT  
 REQ'D. REQUIRED  
 TYP. TYPICAL  
 PERP PERPENDICULAR  
 DIR DIRECTION  
 O.D. OUTER DIAMETER

## SYMBOLS

⊕ -- CENTER LINE  
 -- ELEVATION VIEWS  
 ○ -- DETAIL NUMBER  
 ○ -- SHEET NUMBER  
 INDICATES REVISED ITEMS

## SHEET INDEX

# SHEET	DESCRIPTION
1	COVER
2-4	RAILING ELEVATIONS/DETAILS
3	TOTAL

## ABOUT THIS DOCUMENT

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 EXUMA PVC RAILING  
 FLORIDA BUILDING CODE FIFTH EDITION  
 MASTER PLAN SHEET

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	PNU	NEFLB	09/24/18

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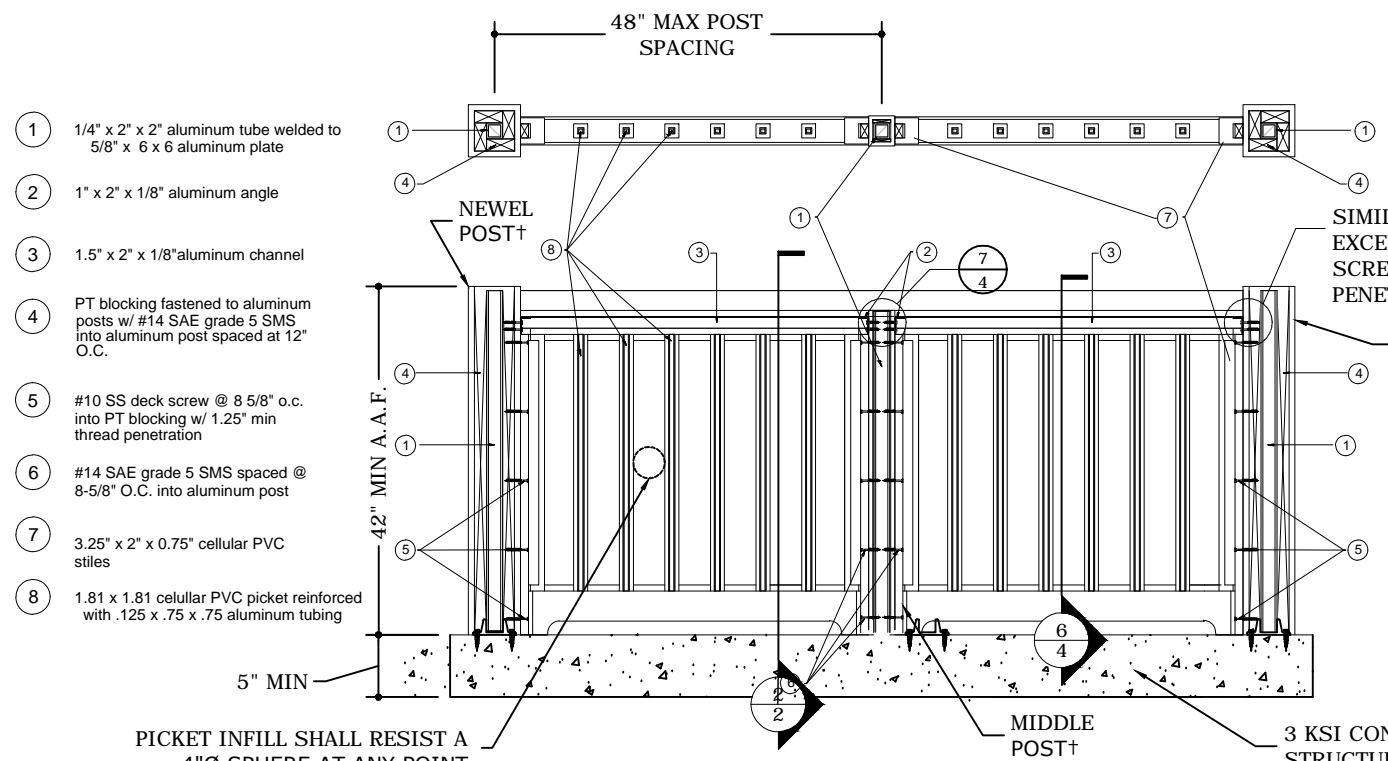
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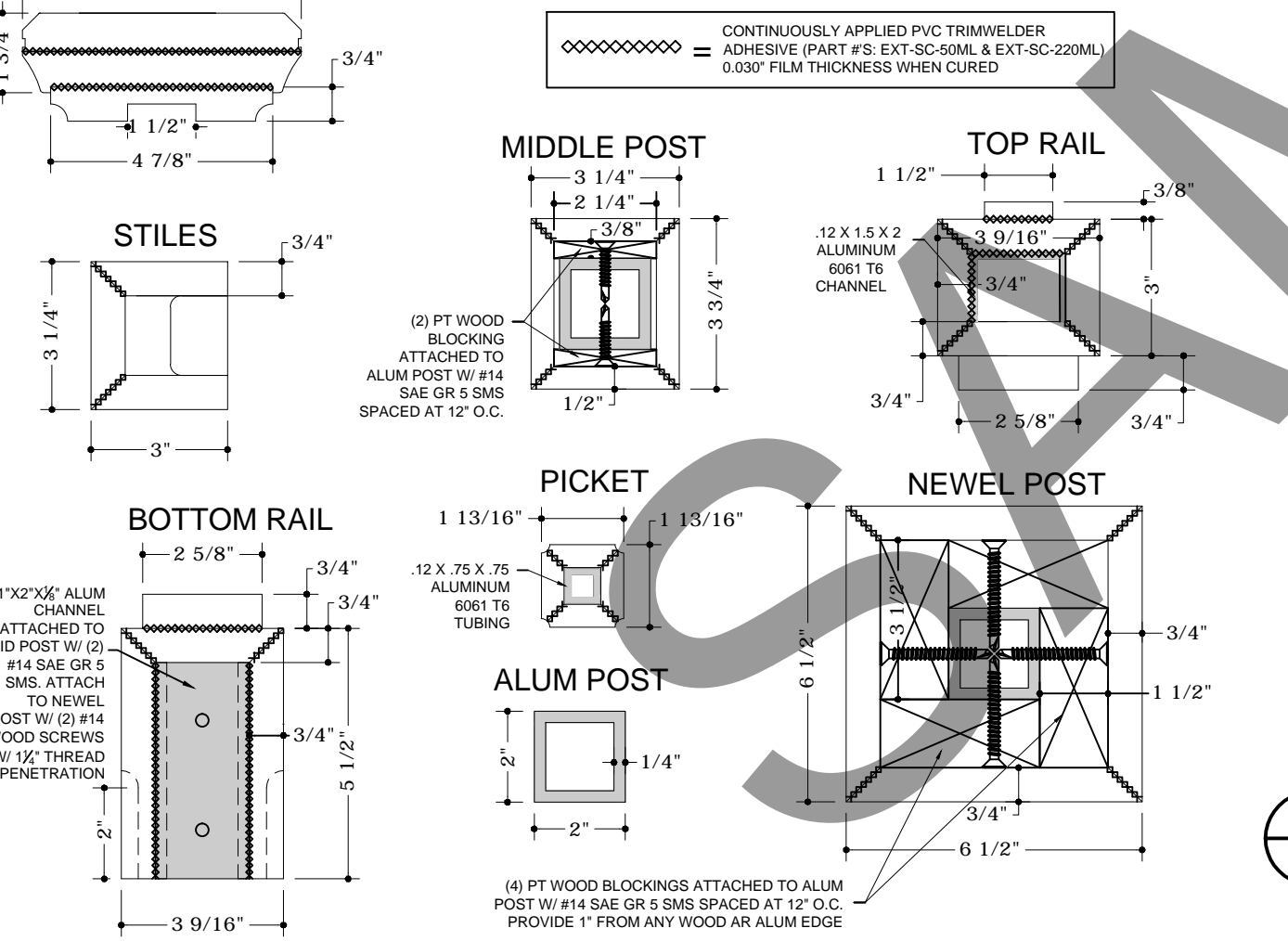
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**RAIL ELEVATION (VERTICAL PICKETS SHOWN)**  
ELEVATION VIEW  
1 N.T.S.  
2 N.T.S.

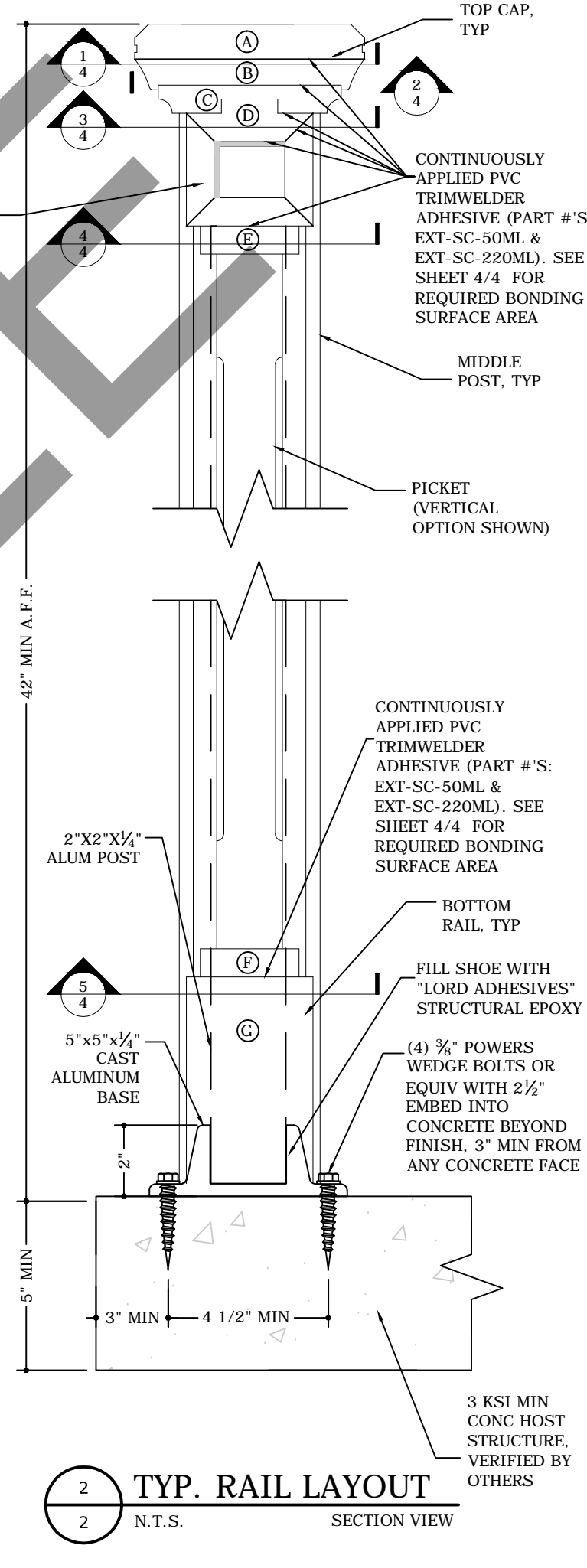


†NOTE: EITHER NEWEL POST OR MID-POST COVER MAY BE USED AT ANY POST LOCATION

\*NOTE: MAXIMUM RAIL HEIGHT AND POST SPACING SHALL BE IDENTICAL TO THE LIMITATIONS DESCRIBED IN DETAIL 1/2

ALL PICKET END CONNECTIONS SHOWN WITH BOLD LINES ( / ) SHALL BE BONDED WITH PVC TRIMWELDER SLOW CURE ADHESIVE

**3 ALT. "EXUMA" PICKET DESIGN\***  
ELEVATION VIEW  
2 N.T.S.



**2 TYP. RAIL LAYOUT**  
SECTION VIEW  
2 N.T.S.