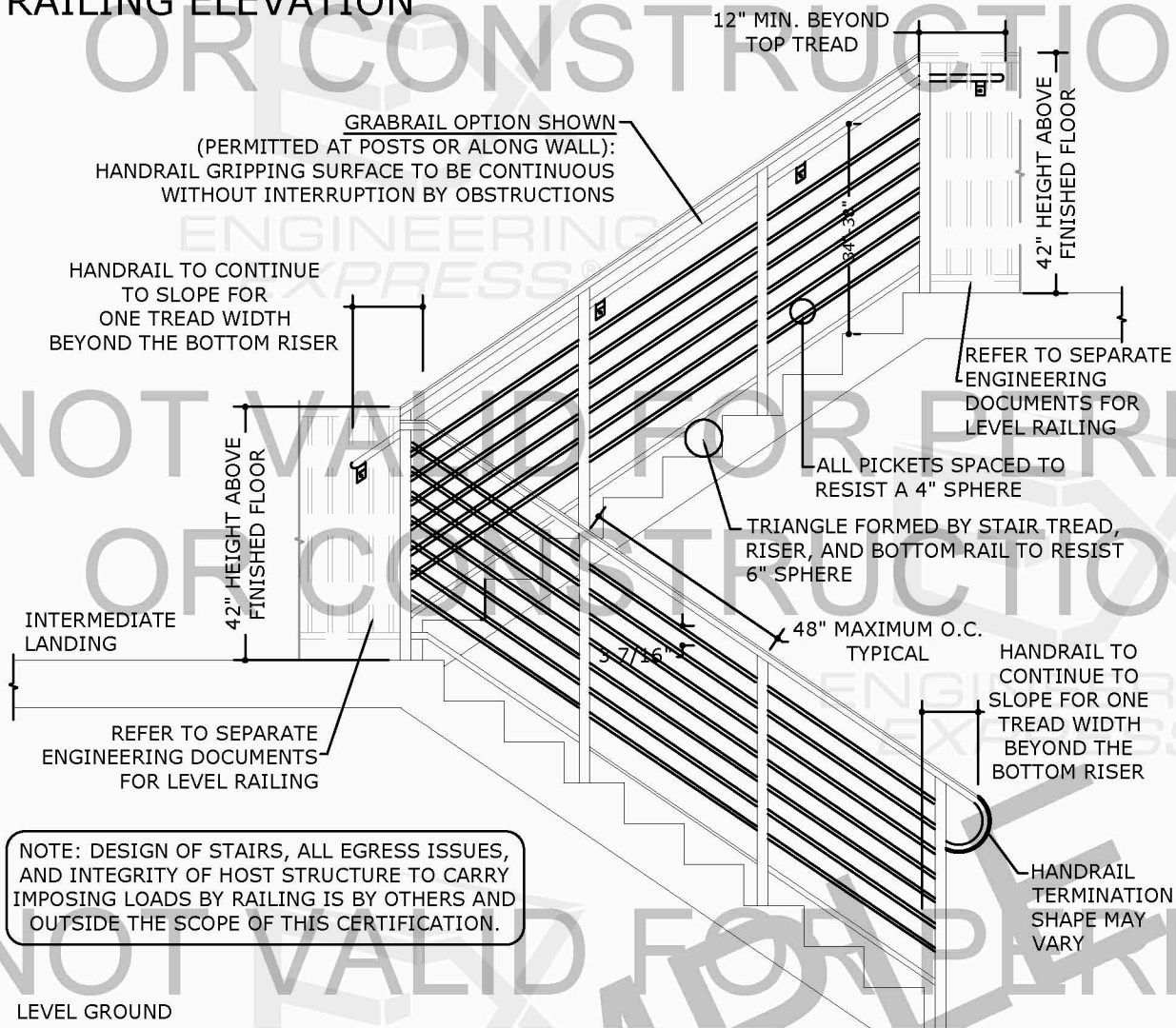
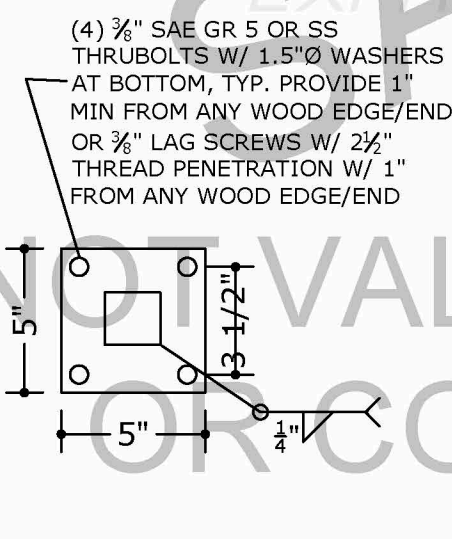


WELDED ALUMINUM STRUCTURAL STAIR RAILING WITH OPTIONAL GRABRAIL
MASTER PLAN - WELDED CONSTRUCTION - STRUCTURAL DESIGN ONLY

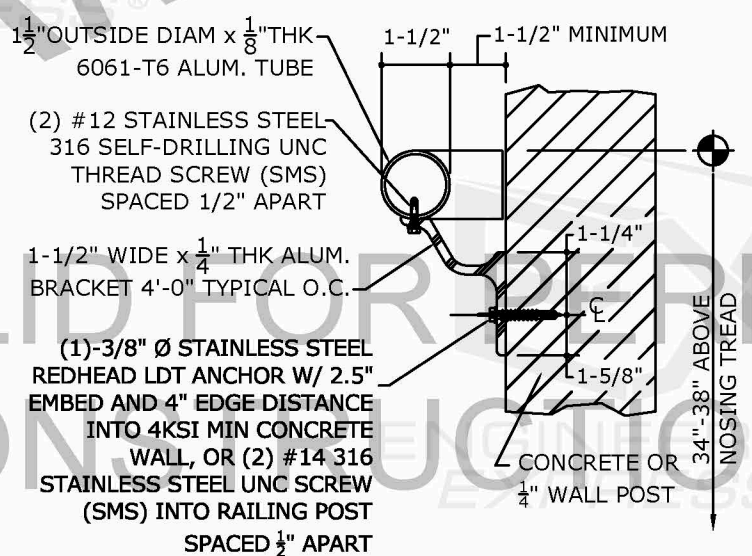
RAILING ELEVATION



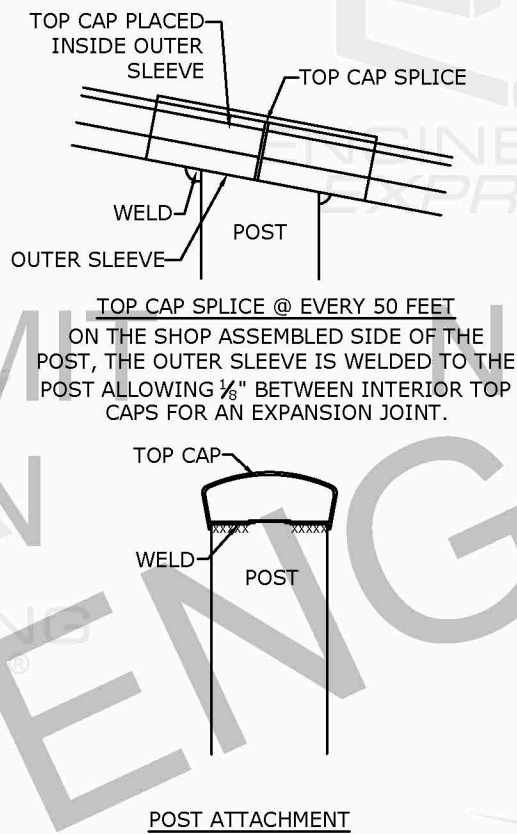
DETAIL 'A'
BASEPLATE
1/2" THICK, 6061-T6



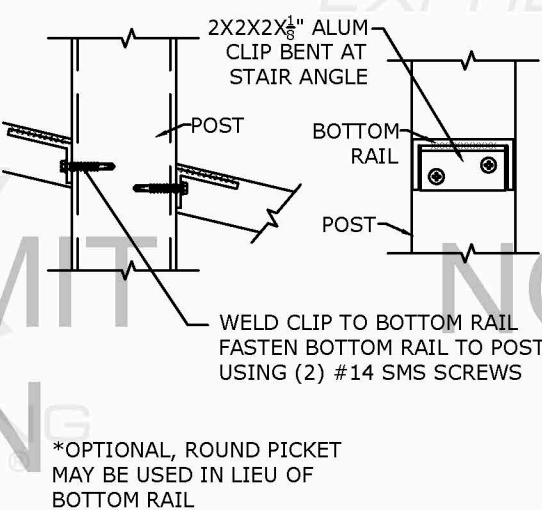
DETAIL 'B'
GRABRAIL CONNECTION
RAIL ENDS RETURN TO WALL



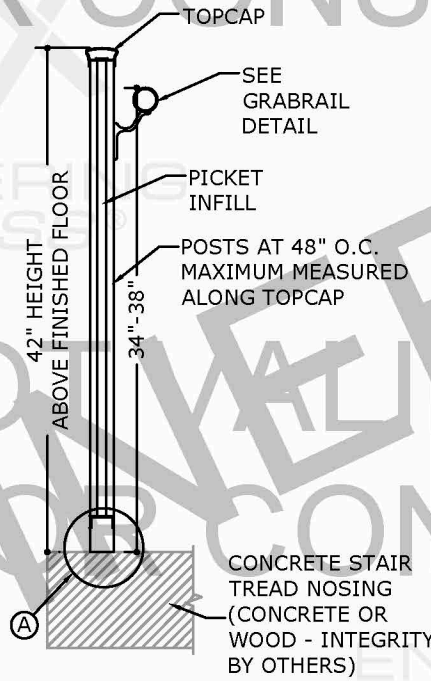
DETAIL 'C'
TOP CAP CONNECTION



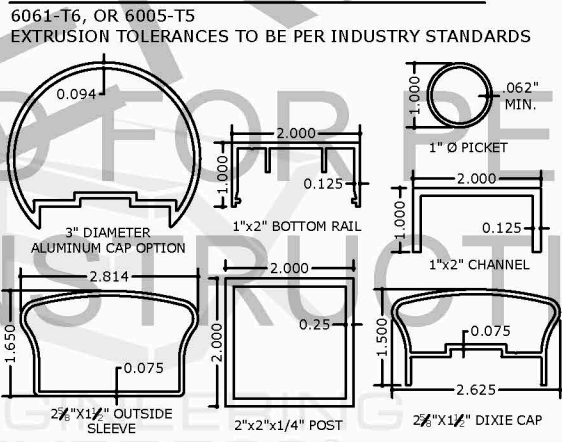
DETAIL 'D'
BOTTOM RAIL CONNECTION



RAILING SECTION



RAILING EXTRUSIONS



DESIGN NOTES

1. THIS SYSTEM HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE 7TH EDITION (2020). ALSO APPLICABLE FOR FBC 8TH EDITION (2023). DESIGN SHALL UTILIZE ASD DESIGN METHOD USING ASCE 7-16 OR ASCE 7-10 CODES FOR SITE SPECIFIC APPLICATION AS APPLICABLE.
2. THIS RAILING IS DESIGNED TO MEET SECTIONS OF THE CODE GOVERNING FBC SECTION 1012 FOR HANDRAILS, AND FOR ELEVATED BALCONIES AND STRUCTURAL RAILINGS: 200LB POINT LOAD, 50PLF TOPCAP LOAD, 50LB POINT LOAD UPON 15F OF INFILL (NONHVHZ CRITERIA FBC 1607.8) AND 25 PSF UPON GROSS AREA OF GUARD (HVHZ CRITERIA FBC 1618.4).
3. RAILING DESIGNED FOR WIND LOADING PER CHAP 16 HVHZ, NON-HVHZ & THE PROVISIONS OF ASCE 7-16 AS A 80% OPEN SIGN USING "ASD" METHODOLOGY, EXTERIOR INSTALLATION SITE CONDITIONS ARE NOT TO EXCEED THE FOLLOWING:
Vult = 175 MPH, Vasd = 135.5 MPH, EXPOSURE 'D', MAX HEIGHT = 60FT.
4. EXTERIOR INSTALLATION HEIGHT <= 60 FT FLAT GROUND TO TOP OF RAIL.
5. ALL FLOOR FINISHES SHALL BE BY OTHERS AND SHALL NOT EXCEED 1/4" MAXIMUM & STRUCTURALLY ADHERED, OTHERWISE THEY SHALL BE SEPARATELY CERTIFIED TO TRANSFER ALL LOADING TO THE PROJECT SUPERSTRUCTURE. DIMENSIONS ARE POST-FLOOR FINISHES.

CONNECTIONS

6. ALL FASTENERS TO BE #12 X 3/4" OR GREATER SERIES 300 NON-MAGNETIC STAINLESS STEEL, OR CADMIUM PLATED OR OTHERWISE CORROSION RESISTANT MATERIAL.
7. FABRICATION SHALL BE IN ACCORDANCE WITH 2020/2023 FBC SECTION 2003.8 WITH WELD FILLER ALLOYS MEETING ANSI/AWS A5.10 STANDARDS;
8. ALUMINUM CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE TOLERANCES, QUALITY AND METHODS OF CONSTRUCTION AS SET FORTH IN THE 2015 ALUMINUM DESIGN MANUAL PER CODE REQUIREMENTS.
9. MINIMUM WELD IS 1/8" THROAT FULL PERIMETER FILLET WELD UNLESS OTHERWISE NOTED.
10. 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.

MATERIAL

11. ALL EXTRUDED MEMBERS SHALL BE ALUMINUM ALLOY TYPE 6061-T6, 6005-T5 OR BETTER, UNLESS NOTED OTHERWISE.
12. 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.
13. ALL EPOXY & GROUT SHALL MEET OR EXCEED COMPRESSIVE STRENGTH OF THE CONCRETE AND SHALL BE IRON-FREE, NON-SHRINK AND NON-REACTIVE WITH A COMPRESSIVE STRENGTH OF 5,000PSI MIN.
14. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS. ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS.
15. ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS.

GENERAL NOTES

16. 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 & APPELATE 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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TEL : (954) 792-1988
42" RAILING WITH OPTIONAL GRABRAIL MASTER PLAN
FBC 2020 (7TH ED) & 2023 (8TH ED)

DATE	DRWN	CHKD	DATE	REVISION
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	MEF	CCB		

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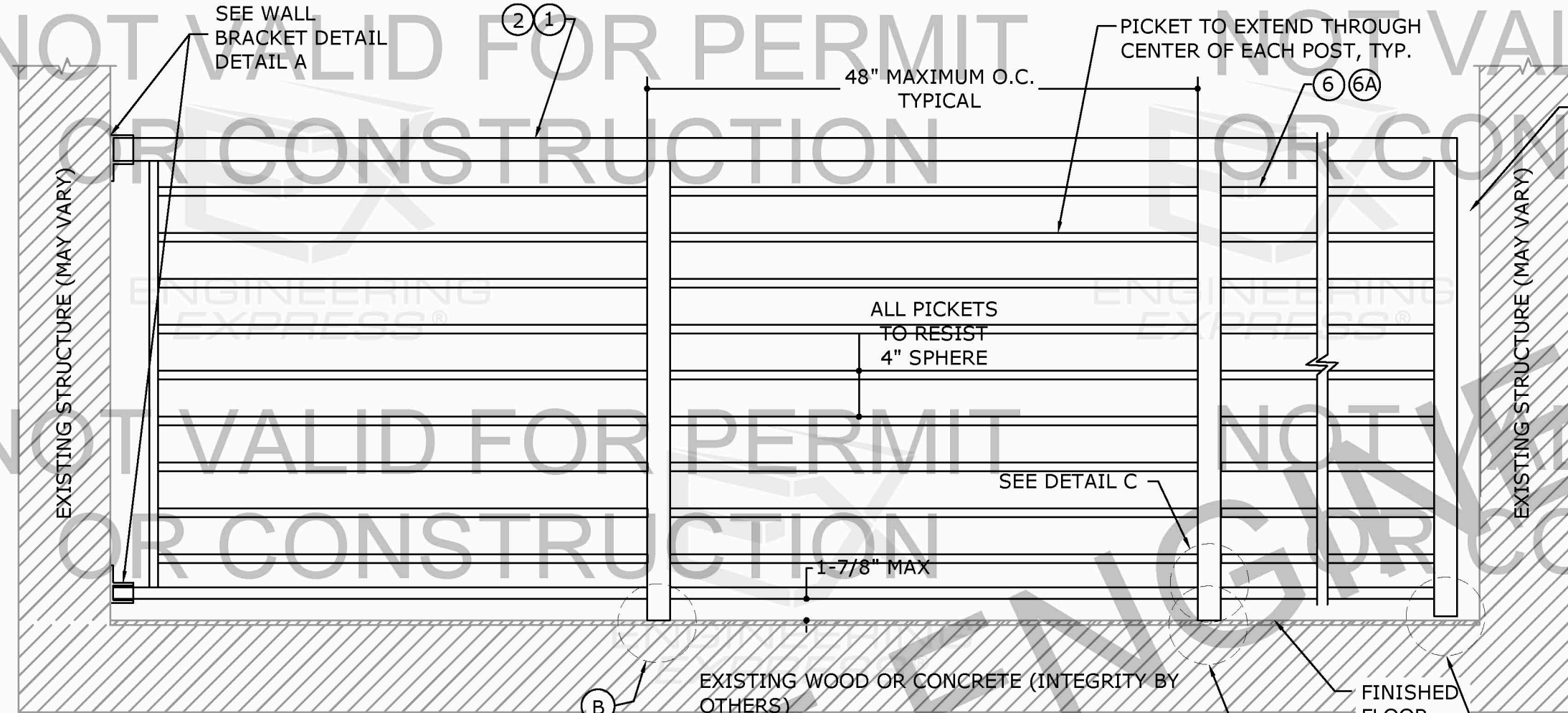
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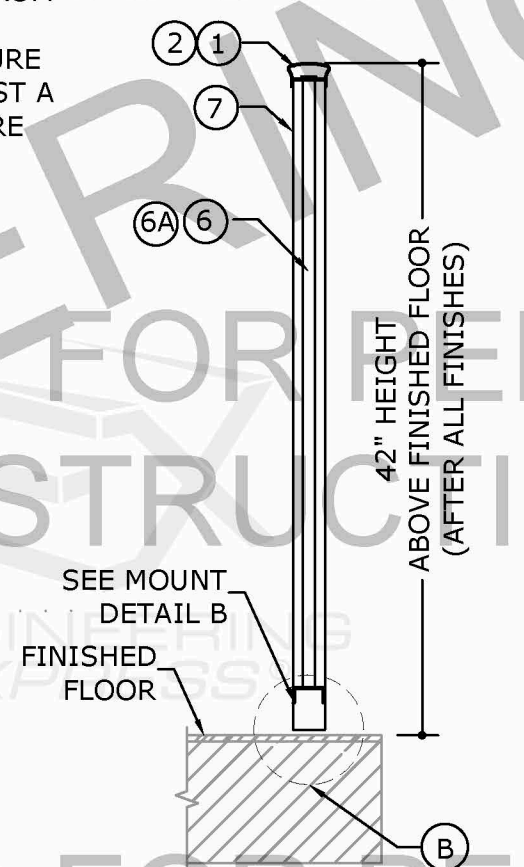


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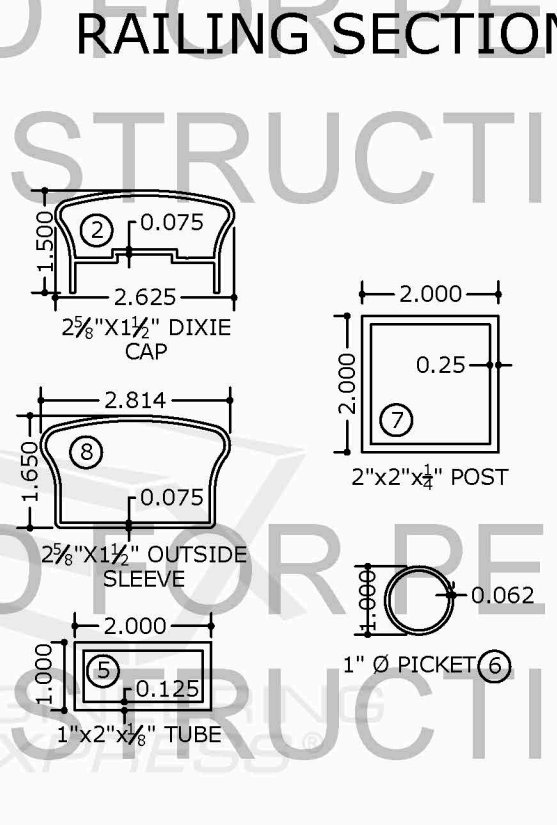
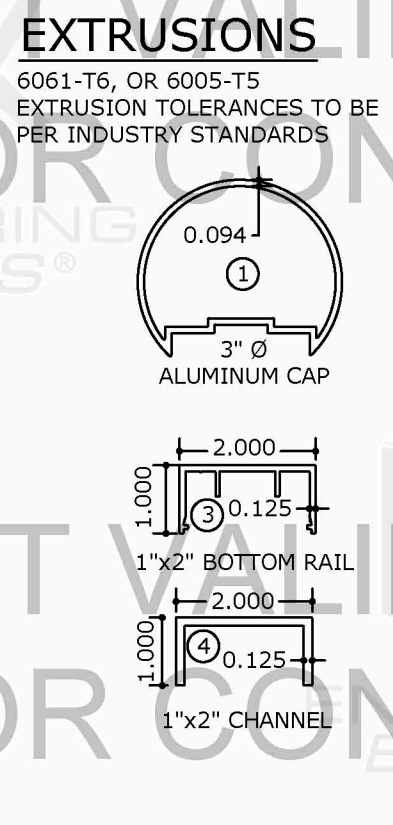
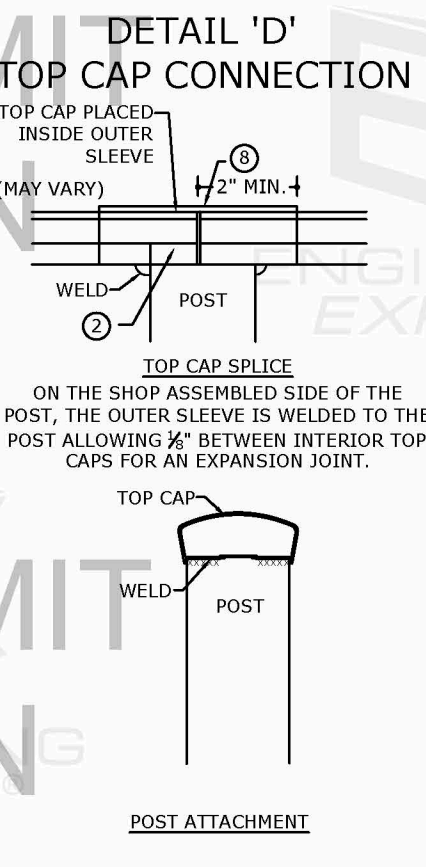
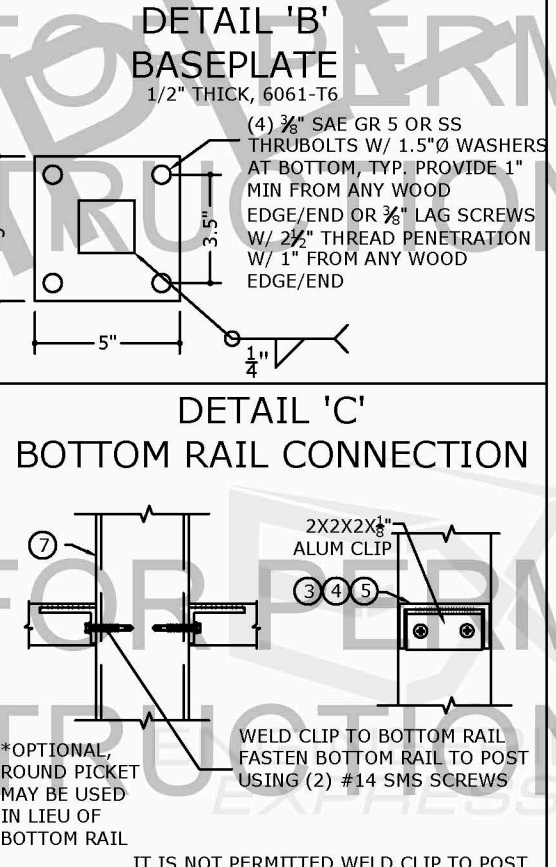
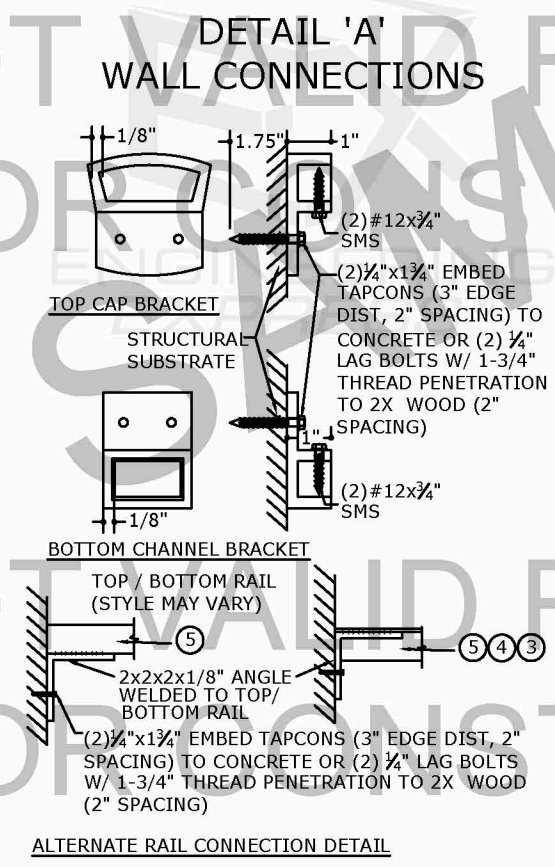


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