6FT DECORATIVE FOAM PANEL FENCE ON STEEL POSTS

RATED FOR WIND SPEEDS UP TO **175 MPH**

NONSTRUCTURAL, DECORATIVE BARRIER, FOR INSTALLATION AT GRADE

THIS DRAWING IS A NON-SITE-SPECIFIC PERFORMANCE EVALUATION. A DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR CERTIFYING THE APPLICATION OF THIS INFORMATION TO ANY SITE-SPECIFIC LOCATION.

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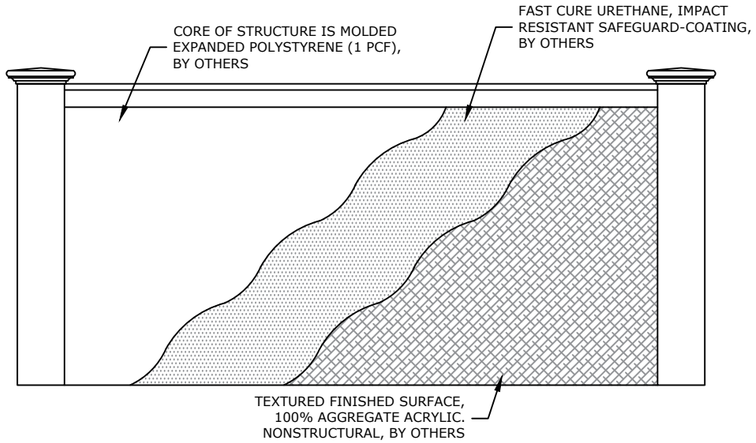
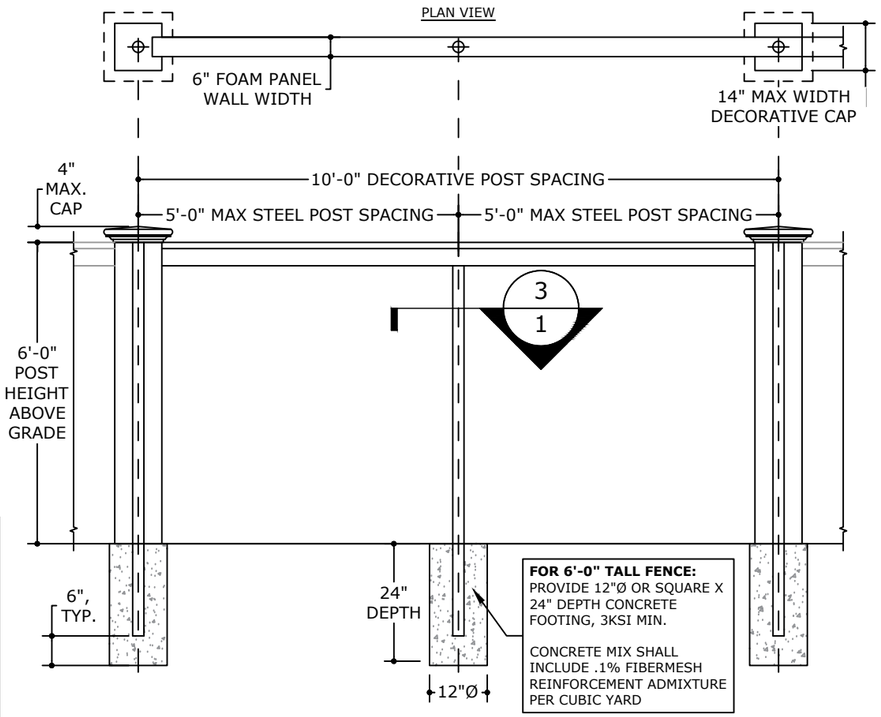
SPACE RESERVED FOR CERTIFYING ENGINEER'S DIGITAL OR PHYSICAL SEAL & DATE OF CERTIFICATION



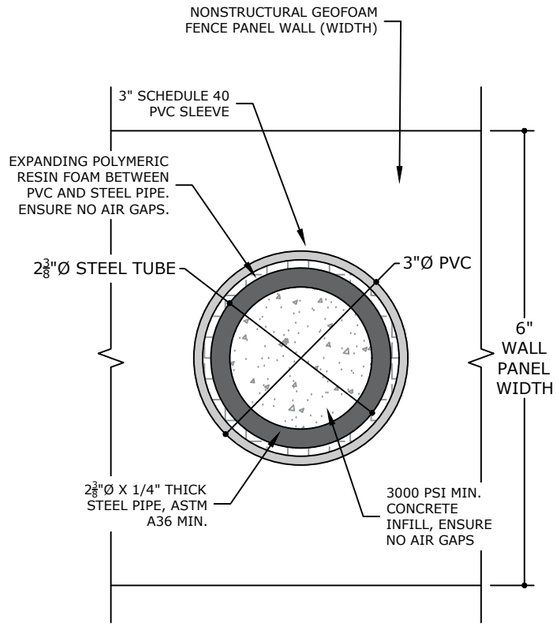
1/1 GENERAL FENCE LAYOUT — NOT TO SCALE — ELEVATION



FOR 6'-0" TALL FENCE:
PROVIDE 12"Ø OR SQUARE X 24" DEPTH CONCRETE FOOTING, 3KSI MIN.

CONCRETE MIX SHALL INCLUDE .1% FIBERMESH REINFORCEMENT ADMIXTURE PER CUBIC YARD

2/1 STRUCTURAL SECTION FOR FENCE — NOT TO SCALE — SECTION



3/1 FENCE POST ASSEMBLY — NOT TO SCALE — SECTION

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VALID AS A GENERIC PERFORMANCE EVALUATION ONLY FOR UP TO **250FT** OF **COMMERCIAL OR RESIDENTIAL** FENCING AT (1) LOCATION.

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FOOTING NOTES:
1. VALID FOR USE IN EXPOSURES 'C' & 'D' INSIDE & OUTSIDE THE FLORIDA HIGH VELOCITY HURRICANE ZONE (HVHZ, DADE & BROWARD COUNTIES) UP TO 115MPH Vult
2. FOOTING DIMENSION (DIAMETER) SHALL BE EITHER THE DIAMETER OF A ROUND OR DIMENSIONS OF A SQUARE FOOTING.
3. FOOTERS DESIGNED USING LIMITING CRITERIA IN FBC / IBC CHAPTER 2328 INSIDE THE FL HVHZ AND CONSIDERED VALID FOR USE OUTSIDE HVHZ IN EXPOSURE 'C' AND 'D' CONDITIONS. THE PRODUCT MAY LIST BUT STAY IN TACT IN SATURATED SOIL AT PEAK WINDS AND IS STILL CONSIDERED PROPERLY DESIGNED.
4. FOOTING SPECIFICATIONS ASSUME 5' MAX FENCE POST SPAN.
5. FOR FENCES WITH CONCRETE FOOTINGS EMBEDDED INTO SOIL, DESIGN IS SUCH THAT FENCES MAY LIST DURING PERIODS OF HIGH WINDS AND SATURATED SOILS AND IS STILL CONSIDERED PROPERLY DESIGNED

DESIGN CRITERIA:

CURRENT STATE BUILDING CODE
INTERNATIONAL BUILDING CODE & RESIDENTIAL CODE (2018 & 2021)
ASCE 7-22 LOAD COMBINATIONS

1. WIND LOADING DESIGN CRITERIA
   - 1.1. METHODOLOGY..... SOLID WALL & FENCE (PER ASCE 29.4)
   - 1.2. ULTIMATE WIND SPEED..... 175 MPH (ASD = SQRT(0.6)*Vult)
   - 1.3. RISK CATEGORY..... RISK II
   - 1.4. WIND EXPOSURE FACTOR..... D
   - 1.5. DIRECTIONALITY/OTHER FACTORS..... Kd=0.85, G=0.85, Kz=0.85, Kzt=1.0
   - 1.6. SYSTEM MOUNTING HEIGHT..... 0 FEET (AT GRADE)
   - **1.7. RESULTANT DESIGN WIND LOADING: 23.5 PSF**

PER FBC CHAPTER 1616.2.1: ALL FENCES UP TO 6'-0" IN HEIGHT MAY BE DESIGNED FOR 115 MPH INSIDE & OUTSIDE THE HVHZ.

DESIGN, CODES. AND CALCULATIONS

DESIGN NOTES

1. ALLOWABLE DESIGN PRESSURES UTILIZED IN THIS DOCUMENT HAVE BEEN CALCULATED PER THE REQUIREMENTS OF THE CODES AND STANDARDS STATED HEREIN USING ASCE 7-16 ALLOWABLE STRESS DESIGN METHODOLOGY WITH THE CRITERIA AS OUTLINED HEREIN. THE CONTRACTOR SHALL CONTACT THE AUTHORITY HAVING JURISDICTION TO ENSURE APPROPRIATE CRITERIA TO BE USED BEFORE CONSTRUCTION BEGINS.
2. THIS DRAWING SET IS PREPARED AS A SITE SPECIFIC DESIGN. TYPICAL FIELD CONDITIONS HAVE BEEN ASSUMED.
3. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
4. ANY EXISTING HOST STRUCTURE MUST BE CAPABLE OF SUPPORTING THE LOADED SYSTEM AS VERIFIED BY THE ENGINEER & OR ARCHITECT OF RECORD, et.al. THE HOST STRUCTURE WHICH IS DESIGNED, CERTIFIED, AND INSPECTED BY OTHERS MUST PROVIDE SUFFICIENT CAPACITY FOR THE SYSTEM & REACTIONS DETAILED HEREIN. NO WARRANTY OR GUARANTEE TO THESE CONDITIONS, EITHER EXPRESSED OR IMPLIED, IS OFFERED WITH THIS CERTIFICATION.
5. SHOP DRAWINGS SHALL BE SUBMITTED FOR E.O.R. REVIEW AND APPROVAL BEFORE INSTALLATION.
6. FOR FENCES WITH CONCRETE FOOTINGS EMBEDDED INTO SOIL, DESIGN IS SUCH THAT FENCES MAY LIST DURING PERIODS OF HIGH WINDS AND SATURATED SOILS AND IS STILL CONSIDERED PROPERLY DESIGNED

STRUCTURAL MATERIALS & CONNECTIONS

STEEL

1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST A.I.S.C. STEEL CONSTRUCTION MANUAL AND SHALL CONFORM WITH THE LATEST A.S.T.M. SPECIFICATIONS.
2. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS UNLESS OTHERWISE NOTED ON THE CONTRACT DOCUMENTS:

   ROLLED SHAPES AND CHANNELS: ASTM A572 OR A992, MIN. YIELD STRENGTH 50 KSI

   ANGLES FOR TRUSSES AND BRACES: ASTM A36 MIN YIELD STRENGTH 36 KSI
   MISCELLANEOUS ANGLES: ASTM A36
   HOLLOW STRUCTURAL SECTIONS:ASTM A500 GRADE B, MIN YIELD STRENGTH 42 KSI FOR ROUND AND 46 KSI FOR RECTANGULAR HSS
3. CONNECTION MATERIAL SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS OR AS NEEDED FOR CONNECTION DESIGN:
   ANGLES: ASTM A36
   WTs: ASTM A992
   PLATES: ASTM A572, MIN YIELD STRENGTH 50 KSI
   BOLTS: ASTM A325
   NUTS: ASTM A563
   WASHERS: ASTM F436
   ANCHOR RODS: ASTM F1554 GRADE 55 WITH WELDABILITY SUPPLEMENT S1
   WELD ELECTRODES: E70XX
3. ALL OTHER STEEL MEMBERS NOT SPECIFIED SHALL CONFORM TO ASTM A36 STAINLESS STEEL UNLESS OTHERWISE NOTED
4. SHOW ALL COPES, HOLES, OPENINGS AND MODIFICATIONS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR ERECTION OR THE WORK OF OTHER TRADES ON THE SHOP DRAWINGS FOR APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.
5. FIELD MODIFICATION OF STRUCTURAL STEEL IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE ARCHITECT AND STRUCTURAL ENGINEER.
6. STEEL MEMBERS IN CONTACT WITH CONCRETE AND WOOD SHALL BE PROTECTED BY "KOPPERS BITUMINOUS PAINT" OR STEEL PRIMER IN ACCORDANCE WITH CURRENT FLORIDA BUILDING CODE. ALL WELDS TO BE COVERED WITH NON-REACTIVE PAINT
7. FOR STEEL MEMBERS AND EMBEDMENTS EXPOSED TO WEATHER, PROVIDE HOT-DIPPED GALVANIZED FINISH.
8. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.

OTHER MATERIALS

6. EPS CORE COMPOSITE PANELS SHALL BE CONSTRUCTED USING TYPE 3105-H154 ALUMINUM FACINGS, EXPANDED POLYSTYRENE FOAM SHALL HAVE TYPICAL DENSITY OF 1,0 PCF & 2,0 PCF AND SHALL BE MANUFACTURED BY DYPLAST PRODUCTS. THE EPS FOAM SHALL BE ADHERED TO THE ALUMINUM FACING WITH ISOGRIP SP 202 ADHESIVE (BY ASHLAND SPECIALTY). FABRICATION SHALL BE IN ACCORDANCE WITH APPROVED FABRICATION METHODS BY MANUFACTURER FOR ALL PANELS.
7. IF APPLICABLE, COMPOSITE PANELS SHALL COMPLY WITH CHAPTER 7 SECTION 721, CHAPTER 8 SECTION 803, CLASS A INTERIOR FINISH, AND CHAPTER 26 SECTION 2603 OF THE FLORIDA/INTERNATIONAL CODE.
8. EXPANDED POLYSTYRENE FOAM SHALL HAVE TYPICAL DENSITY OF 1.0 PCF.
9. PVC INFORMATION: ALL PVC RESIN TO BE ASTM01784 EXTRUDED D638 FLEX STR. 9600PSI D790. ALL TO CONFORM TO ASTM F 964 FOR RIGID POLYVINYL PROFILES.

NON-STRUCTURAL ELEMENTS:

1. THE INSTALLATION OF ANY ACCESSORIES THAT DO NOT AFFECT THE STRUCTURAL INTEGRITY OF THE STRUCTURE ARE OUTSIDE THE SCOPE OF THIS CERTIFICATION AND NOT REQUIRED TO BE CERTIFIED UNDER THIS STRUCTURAL DRAWING. THEY MAY BE INSTALLED WITHIN LIMITATIONS STATED HEREIN AND AS DESIRED PER MFR. SPECIFICATIONS. DETAILS PROVIDED HEREIN ARE FOR REFERENCE ONLY

FOUNDATIONS, CONCRETE, AND REINFORCEMENT

CONCRETE

1. CONCRETE MIXTURES SHALL BE DESIGNED TO REACH A COMPRESSIVE STRENGTH OF 8,000 PSI IN 28 DAYS UNO.
2. ALL MIXING, TRANSPORTING, PLACING, & CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318.
3. NO ADMIXTURES ARE TO BE USED WITHOUT THE WRITTEN APPROVAL OF THE ABOVE-SIGNED ENGINEER.
4. CONCRETE SHALL BE TYPE 1 PORTLAND CEMENT MEETING THE REQUIREMENTS OF ASTM C150, AGGREGATES TO MEET ASTM C33. POTABLE WATER SHALL BE USED.
5. SLUMP SHALL BE A MINIMUM OF 3" AND MAXIMUM OF 5" CONCRETE DURING AND IMMEDIATELY AFTER DEPOSITING SHALL BY THOROUGHLY COMPACTED BY MEANS OF MECHANICAL VIBRATION.

REINFORCING STEEL

1. ALL REINFORCEMENT SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE NEW BILLET STEEL CONFORMING TO CURRENT REQUIREMENTS OF ASTM A615, GRADE 60 (U.O.N.), FREE FROM OIL, LOOSE SCALE AND LOOSE RUST AND BENT, LAPPED, PLACED, SUPPORTED AND FASTENED ACCORDING TO THE "ACI DETAILING MANUAL" (SP-66) AND THE ACI 318.
2. CLEAR COVER FOR REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
   FOOTINGS PERMANENTLY EXPOSED TO EARTH: 3"
3. ALL STEEL SHALL BE SECURELY HELD IN PLACE DURING POURING OF CONCRETE. IF REQUIRED, ADDITIONAL BARS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR TO FURNISH SUPPORT FOR ALL BARS.

GENERAL NOTES & DISCLAIMERS

1. DIMENSIONS ARE SHOWN TO ILLUSTRATE DESIGN FORCES AND OTHER DESIGN CRITERIA. THEY MAY VARY SLIGHTLY, BUT SHALL REMAIN IN CONFORMANCE WITH THE LIMITATIONS OF THIS PLAN. THE CONTRACTOR IS TO VERIFY ALL FIELD DIMENSIONS PRIOR TO INSTALLATION, AND VERIFY THAT PROPOSED DIMENSIONS AND FIELD CONDITIONS AGREE WITH THIS PROPOSED PLAN. USE OF THIS DOCUMENT CONSTITUTES ACCEPTANCE OF THE PROPOSED SYSTEM LAYOUT, COMPONENTS SELECTED, AND INSTALLATION. THESE DRAWINGS ARE NOT INTENDED TO BE USED AS FABRICATION OR SHOP DRAWINGS.
2. ENGINEERING EXPRESS HAS NOT VISITED THIS JOBSITE. INFORMATION CONTAINED HEREIN IS BASED ON CONTRACTOR SUPPLIED DATA AND MEASUREMENTS. ENGINEERING EXPRESS SHALL NOT BE HELD RESPONSIBLE OR LIABLE IN ANY WAY FOR ERRONEOUS OR INACCURATE DATA OR MEASUREMENTS. WORK SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THIS ENGINEERING SHALL BE NOTIFIED AND GIVEN AN OPPORTUNITY TO REEVALUATE OUR WORK UPON DISCOVERY OF ANY INACCURATE INFORMATION PRIOR TO MODIFICATION OF EXISTING FIELD CONDITIONS AND FABRICATION AND INSTALLATION OF MATERIALS.
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4. THIS DOCUMENT SHALL NOT BE USED OR REPRODUCED WITHOUT THE ORIGINAL SIGNATURE & RAISED SEAL OF THE CERTIFYING P.E. ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION. PHOTOCOPIES AND UNSEALED DOCUMENTS ARE NOT TO BE ACCEPTED.
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15. THIS DOCUMENT IS GENERIC AND DOES NOT PERTAIN TO ANY SPECIFIC PROJECT SITE. INFORMATION CONTAINED HEREIN IS BASED ON CONTRACTOR-SUPPLIED DATA AND MEASUREMENTS. ENGINEERING EXPRESS SHALL NOT BE HELD RESPONSIBLE OR LIABLE IN ANY WAY FOR ERRONEOUS OR INACCURATE DATA OR MEASUREMENTS. DIMENSIONS ARE SHOWN TO ILLUSTRATE DESIGN FORCES AND OTHER DESIGN CRITERIA. THEY MAY VARY SLIGHTLY, BUT MUST REMAIN WITHIN THE LIMITATIONS SPECIFIED HEREIN. WORK SHALL BE FIELD VERIFIED BY OTHERS PRIOR TO CONSTRUCTION. ENGINEERING EXPRESS SHALL BE NOTIFIED AND GIVEN AN OPPORTUNITY TO REEVALUATE OUR WORK UPON DISCOVERY OF ANY INACCURATE INFORMATION PRIOR TO MODIFICATION OF EXISTING FIELD CONDITIONS AND FABRICATION AND INSTALLATION OF MATERIALS.
16. ALTERATIONS, ADDITIONS, HIGHLIGHTING, OR OTHER MARKINGS TO THIS DOCUMENT ARE ONLY PERMITTED TO SHOW SITE-SPECIFIC CONDITIONS, HOWEVER ANY CHANGES, ALTERATIONS OR ADDITIONS MADE TO THE CONTENT OF THIS DOCUMENT WILL INVALIDATE THIS CERTIFICATION.
17. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED

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DECORATIVE FOAM PANEL FENCE ON STEEL POSTS
PERFORMANCE EVALUATION
ASCE 7-22 / IBC 2021

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	ANC	CCB	5/8/25
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SCALE: NTS UNLESS NOTED

1 OF 1