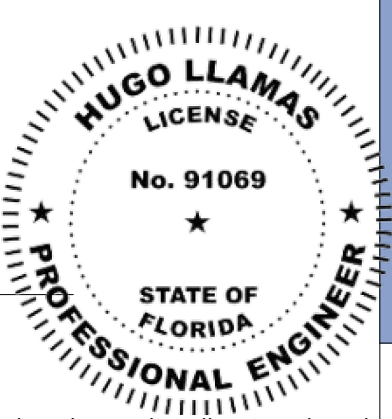


PRODUCT DEVELOPMENT

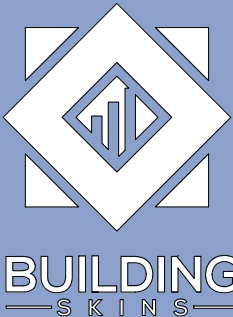


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"GD 5100"
GARAGE DOOR

PRODUCT APPROVAL
DRAWINGS



14 NE 1ST AVE. STE 815,
MIAMI, FL 33132
PH. (786) 553-2225

SERIES "GD 5100"
GARAGE DOOR (L.M.I.)

EMC WINDOWS AND
DOORS, LLC.
3695 NW 74TH STREET
MIAMI, FL 33147
TEL. (305) 283-6280
EMCWINDOWSDOORS@GMAIL.COM

DRAWINGS NUMBER:

25-0158P.10

REVISIONS:

No.	DATE	DESCRIPTION

DATE: FEBRUARY 3rd, 2026

DRAWN BY: AO	SCALE:
SHEET No: 00 OF 06	SHEET NAME: COVER

GD 5100 - GARAGE DOOR

GENERAL NOTES:

- A. THE PRODUCT SHOWN HEREIN IS DESIGNED AND TESTED TO COMPLY WITH THE FLORIDA BUILDING CODE 8TH EDITION 2023 (FBC 2023), INCLUDING HVHZ (HIGH VELOCITY HURRICANE ZONE)
- B. ADEQUACY OF THE EXISTING STRUCTURAL SUBSTRATE (METAL, CONCRETE, MASONRY, WOOD, ETC) NEEDS TO BE ABLE TO WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
- C. WOODBUCKS EITHER 1BY OR 2BY (OPTIONAL) NEED TO BE DESIGNED AND SPECIFIED BY THE ARCHITECT OF RECORD OR THE ENGINEER OF RECORD AND NEED TO BE ABLE TO WITHSTAND ALL THE TRANSFERRED LOADS FROM THE GLAZING PRODUCT CORRECTLY.
- D. ALL ANCHORS NEED TO BE CORROSION RESISTANT, SEE PRODUCT APPROVAL FOR SPECIFIED ANCHORS REQUIRED.
- E. ALL DESIGN LOADS SHOWN IN APPROVAL ARE BASED ON ASD (ALLOWABLE STRESS DESIGN), TO GET ULTIMATE LOADS ASD LOADS NEED TO BE MULTIPLIED BY A FACTOR MULTIPLIER OF 1.6
- F. FINAL PRODUCT NEED TO HAVE LABEL.
- G. THESE GLAZING PRODUCTS ARE RATED FOR LARGE MISSILE IMPACT (L.M.I.)
- H. ALL SITE SPECIFIC CONDITIONS IN ANY PROJECT NEEDS TO BE PROCURED BY A LICENSED REGISTERED ENGINEERED OR ARCHITECT.
- I. WHEN USING THIS PRODUCT, SHUTTERS ARE NOT NECESSARY.
- J. SHIMS THAT ARE USED WITH THIS SYSTEM NEED TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.
- K. THIS PRODUCT APPROVAL COMPLIES WITH ALL WATER INFILTRATION REQUIREMENTS FOR IMPACT AND HVHZ SYSTEMS
- L. MANUFACTURER NEEDS TO SHOW PRODUCT LABEL IN ALL MANUFACTURED SYSTEMS.

MAXIMUM DESIGN LOADS:

- A. SHEET E1 CONTAINS THE MAXIMUM DESIGNED LOADS.
- B. ANCHORS SPACING ARE SHOWN IN SHEET E1 AND D2.
- C. ANCHOR TYPES ARE SHOWN ON SHEET D2. THIS SHEET SHOWS THE EDGE DISTANCE, EMBEDMENT, TYPE OF ANCHOR, AND ALL REQUIREMENTS ANCHORES NEED TO COMPLY WITH THESE SPECIFICATIONS

GLASS DESIGN LOADS:

- A. ALL GLASS CAPACITIES ON THIS APPROVAL ARE BASED ON ASTM E1300-09 (3 SEC. GUSTS)
- B. ALL GLASS SHOWN ON THIS APPROVAL HAS BEEN TESTED FOR LMI AND HVHZ REQUIREMENTS.
- C. ALL SETTING BLOCKS FOR THE GLASS TO BE LOCATED AT 25% OF THE SPAN WIDTH FOR GLASS WIDER THAN 36" AS PER FBC CHAPTER 24
- D. SETTING BLOCK DUROMETER HARDNESS OF 70-90 (SHORE A) AS REFERENCED IN FBC CHAPTER 24
- E. GLASS TYPE SHALL COMPLY WITH APPLICABLE GLAZING REQUIREMENTS PER CHAPTER 24 OF THE FBC.

USE CHARTS AS FOLLOWS:

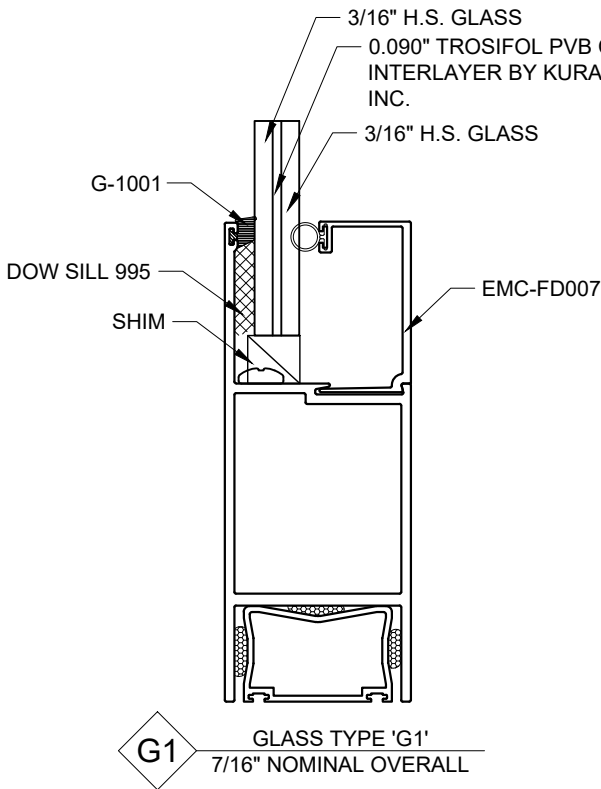
STEP 1: DETERMINE DESIGN WIND LOAD REQUIREMENTS BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE ASCE 7-22 STANDARD OR WIND TUNNEL REPORTS

STEP 2: SEE SHEET E1 FOR APPROVED TYPICAL ELEVATION & CONFIGURATION

STEP 3: SEE SHEET E1 FOR ALLOWED WINDOW SIZE AND APPROVED DESIGN LOAD.

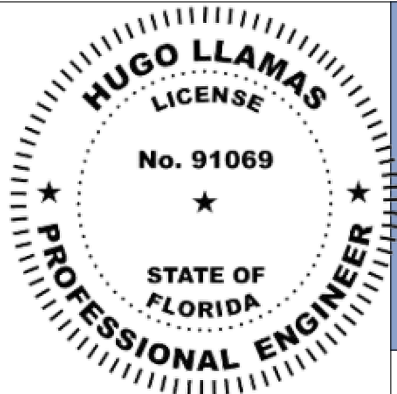
STEP 4: ANCHOR OPTION SEE SHEET D2. ANCHOR LAYOUT SEE SHEET E1.

STEP 5: THE LOWEST VALUE RESULTING FROM STEP 3 THAT EXCEED THE DESIGN WIND PRESSURES DETERMINED THRU STEP 1 SHALL APPLY TO ENTIRE SYSTEM



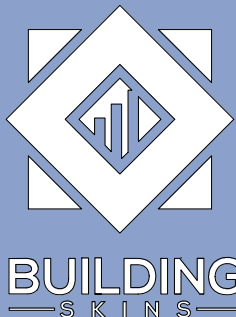
GLASS CONFIGURATION FOR
GARAGE DOOR

NOTE:
GLASS COMPLIES WITH ASTM E1300-09
(3 SEC. GUSTS)



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MIAMI, FL 33132
PH. (786) 553-2225

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GARAGE DOOR (L.M.I.)

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DOORS, LLC.**
3695 NW 74TH STREET
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TEL. (305) 283-6280
EMCWINDOWSDOORS@GMAIL.COM

DRAWINGS NUMBER:

25-0158P.10

REVISIONS:

No.	DATE	DESCRIPTION

DATE:

FEBRUARY 3rd, 2026

DRAWN BY:
AO

SCALE:
6" = 1'-0"

SHEET No:

01 OF 06

SHEET NAME:

G1

ABBREVIATIONS AND SYMBOLS

D.L.O. - DAYLITE OPENING

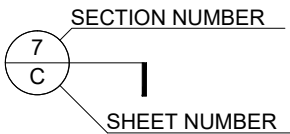
F.H. - FRAME HEIGHT

F.W. - FRAME WIDTH

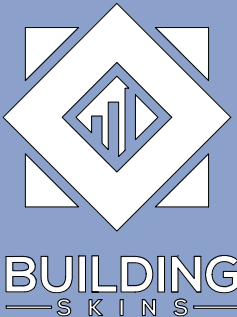
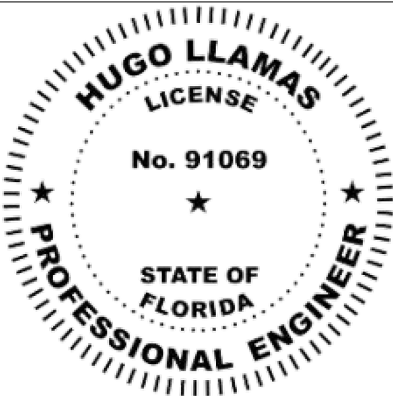
W/ - WITH

W/O - WITHOUT

O.C. - ON CENTER



GD 5100 - GARAGE DOOR



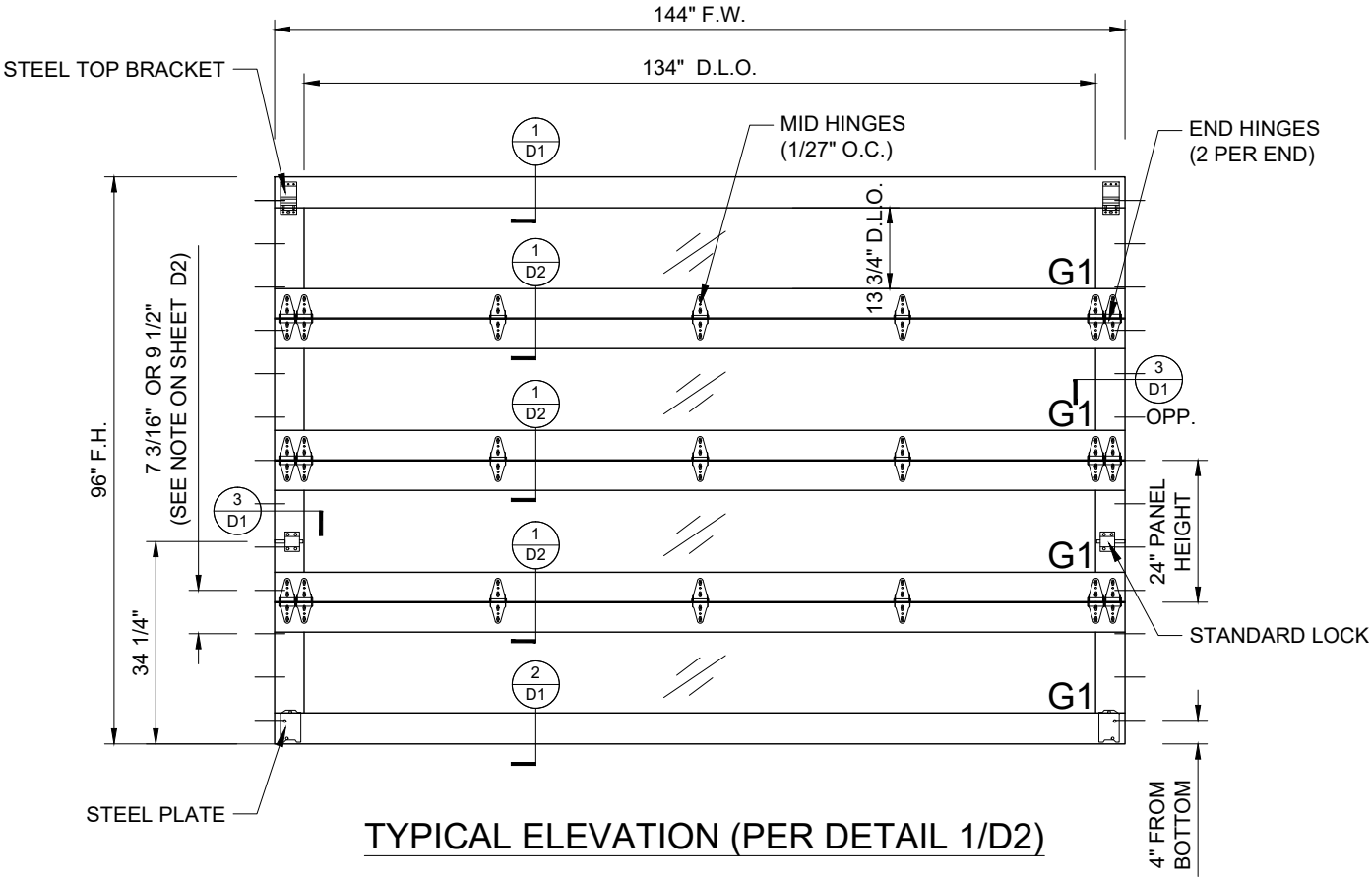
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TYPICAL ELEVATION (PER DETAIL 1/D2)

DESIGN LOAD
FOR SIZES SHOWN ABOVE OR SMALLER
AS PERMITTED BY FBC
+50.0 PSF / -60.0 PSF

DRAWINGS NUMBER:

25-0158P.10

REVISIONS:

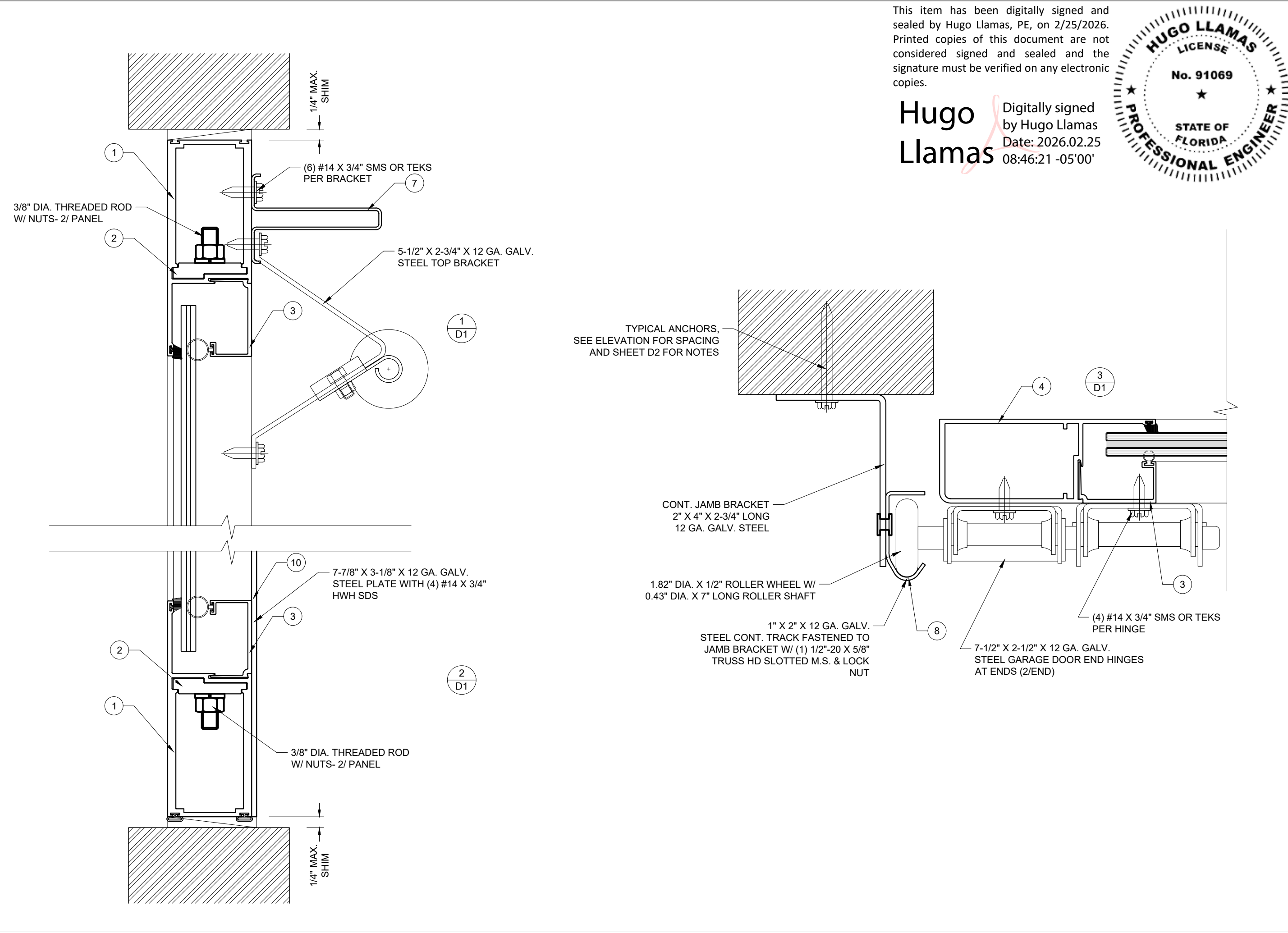
No.	DATE	DESCRIPTION

DATE: FEBRUARY 3rd, 2026

DRAWN BY: AO SCALE: 3/8" = 1'-0"

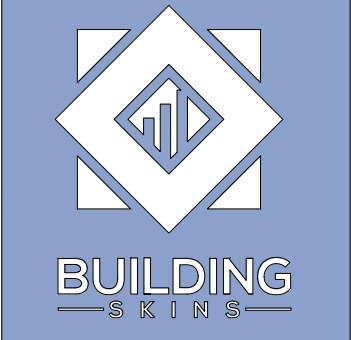
SHEET No: SHEET NAME:

02 OF 06 E1



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No.	DATE	DESCRIPTION

DATE:

FEBRUARY 3rd, 2026

DRAWN BY:
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SCALE:
6" = 1'-0"

SHEET No:

SHEET NAME:

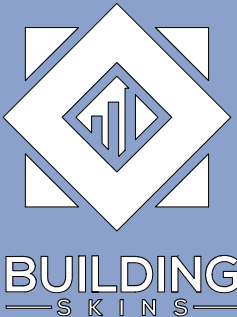
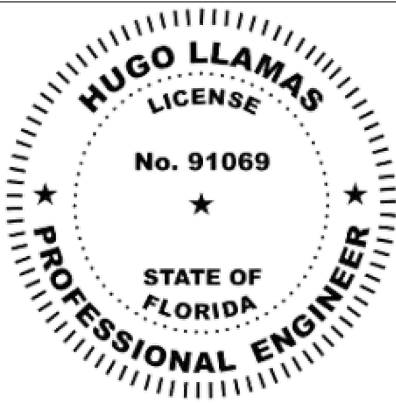
03 OF 06

D1

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SHEET No:

04 OF 06

SHEET NAME:

D2

TYPICAL ANCHORS:

5/16" DIA. ULTRACON+ BY DEWALT (Fu = 64 KSI, Fy = 48 KSI)

THRU WOOD BUCKS INTO CONCRETE (3 KSI MIN.)
– 1-3/4" MIN. EMBEDMENT
DIRECTLY INTO CONCRETE (3 KSI MIN.)
– 1-3/4" MIN. EMBEDMENT INTO CONCRETE

3/8" HILTI KWIK BOLT 3 EXPANSION

INTO GROUT FILLED BLOCK - ASTM C90 (2 KSI MIN.)
– 2-1/2" MIN. EMBEDMENT

5/16" DIA. DEWALT DRILL-FLEX STEEL

INTO STEEL: 1/8" THK. (Fy = 36 KSI MIN.)
– (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
– STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED

5/16" DIA. LAG SCREWS
INTO SOUTHERN PINE (SG=0.55)

CRITICAL EDGE DISTANCE:

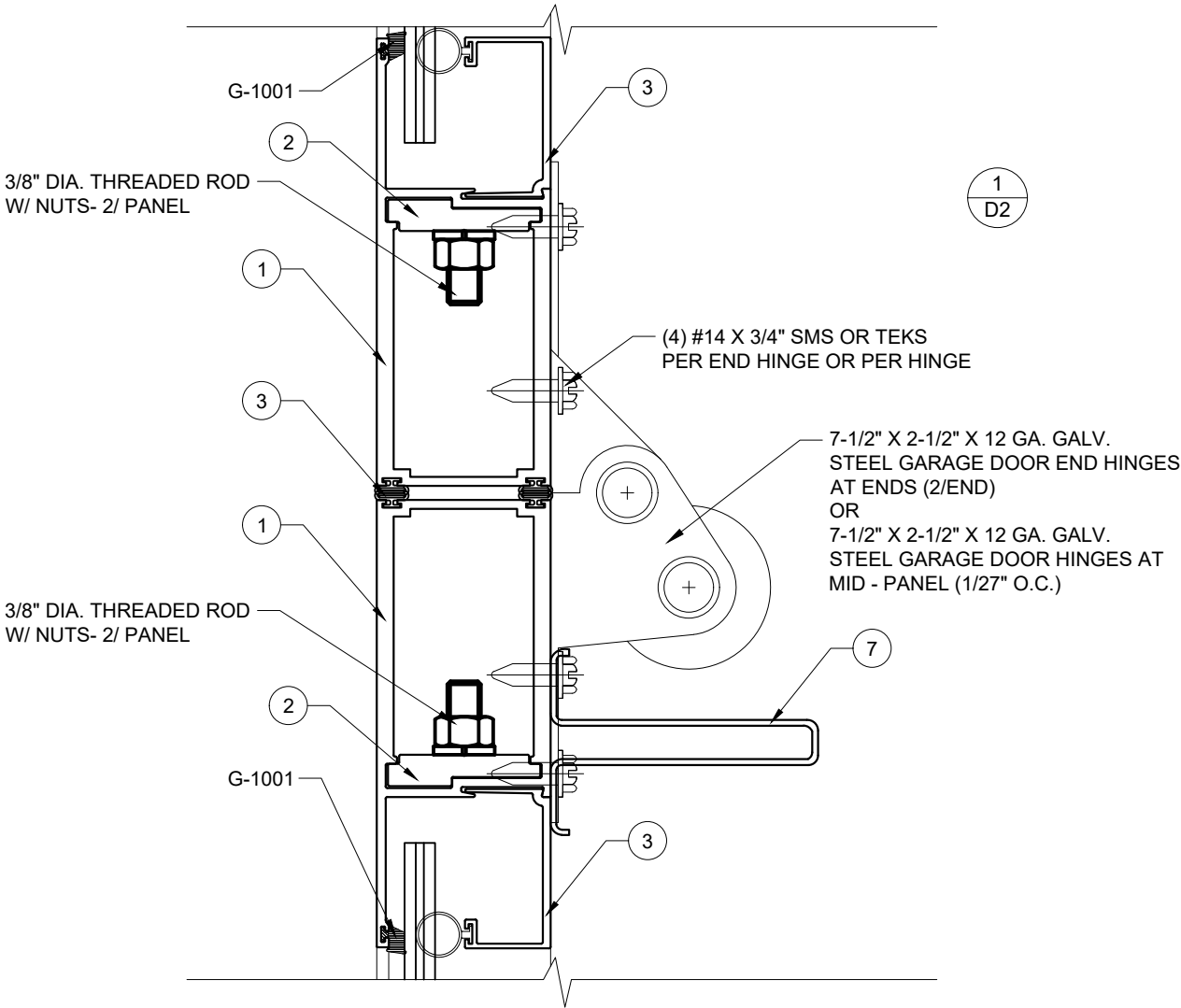
INTO CONCRETE – 3-1/8" MIN.
INTO FILLED BLOCK- 4" MIN.
INTO WOOD STRUCTURE – 1-1/2" MIN.
INTO METAL STRUCTURE – 3/4" MIN.

ANCHOR SPACING:

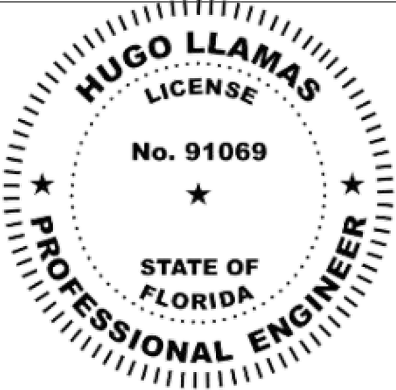
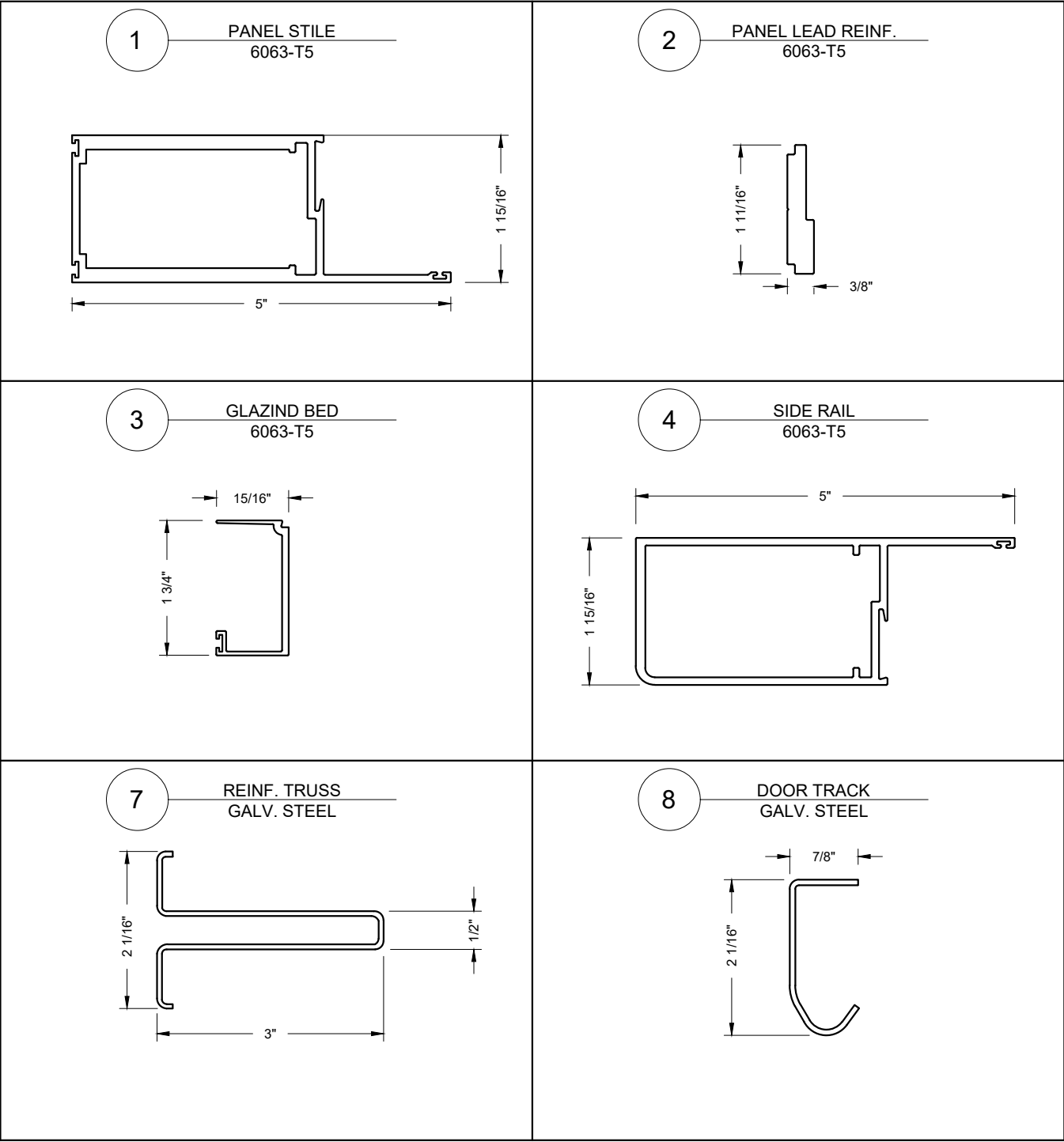
ANCHORS SHALL BE LOCATED 4" FROM BOTTOM AND SPACED VERTICALLY AS FOLLOWS:
– 7-3/16" MAX O.C. WHEN ANCHORED INTO CONCRETE OR FILLED BLOCKS.
– 9-1/2" MAX O.C. WHEN ANCHORED INTO WOOD OR METAL.

SEALANTS:

ALL FRAME AND PANEL JOINTS, INSTALLATION SCREWS AND HEADS OF ANCHOR FASTENERS TO BE SEALED WITH DOW CORNING 995 SILICONE BUILDING SEALANT.

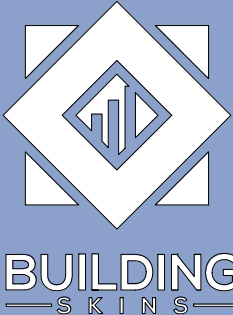


EXTRUSIONS



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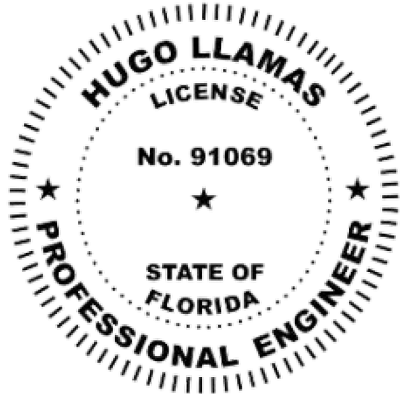
DRAWN BY: AO SCALE: 6" = 1'-0"

SHEET No: 05 OF 06 SHEET NAME: P1

BILL OF MATERIALS

ITEM #	REQUIRED	DESCRIPTION	MATERIAL
1	AS REQD	TOP AND BOTTOM RAIL	ALUMINUM 6063-T5
2	AS REQD	PANEL LEAD REINF.	ALUMINUM 6063-T5
3	AS REQD	GLAZING BED	ALUMINUM 6063-T5
4	2	SIDE RAIL	ALUMINUM 6063-T5
7	AS REQD	REINFORCING TRUSS, FULL LENGTH	GALV. STEEL
8	2	VERTICAL DOOR TRACK	GALV. STEEL
9	2	STANDARD LOCK	-
10	2	BOTTOM FIXTURE. STEEL PLATE	-

NOTE:
STANDARD CENTER LOCK ASSEMBLY SHALL CONSIST OF A 1" W × 0.15" THK.
STEEL LATCH WITH SPRING-LOADED SLIDE BOLT (BOTH SIDES), FASTENED
WITH (4) #14 × 3/4" HEX WASHER HEAD SELF-DRILLING SCREWS.



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REVISIONS:

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DATE: FEBRUARY 3rd, 2026

DRAWN BY: AO	SCALE: N.T.S.
SHEET No: 06 OF 06	SHEET NAME: P2