

ES WINDOWS., INC  
ESW-VERTICAL LOUVER SYSTEM  
LARGE MISSILE IMPACT

GENERAL NOTES:

- THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 8TH EDITION FLORIDA BUILDING CODE (2023) INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).
- THE PRODUCT HAS BEEN TESTED IN ACCORDANCE WITH § QUALIFIED TO FLORIDA BUILDING CODE TESTING PROTOCOLS TAS-201,202, § 203 FOR LARGE MISSILE IMPACT (LEVEL D), UNIFORM PRESSURE CYCLIC WIND PRESSURE, FOR LEVEL E (ENHANCED PROTECTION) MISSILE IMPACT AMCA 540; § AMCA 550 FOR HIGH VELOCITY WIND DRIVEN RAIN. PRODUCTS COMPLIES WITH AMCA 500L.
- QUALIFICATIONS TO AMCA 550 ALLOWS THIS LOUVER TO BE INSTALLED IN A LOCATION WHERE THE ROOM BEHIND THE LOUVER IS NOT DESIGNED TO DRAIN WATER PENETRATING INTO THE ROOM §THE ROOM DOES NOT HOUSE WATER RESISTANT/PROOF EQUIPMENT, COMPONENTS, OR SUPPLIES.
- ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS. ANCHORS EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
- ANCHORING OR LOADING CONDITIONS NOT SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
- MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 8TH EDITION FLORIDA BUILDING CODE (2023) SECTION AS APPLICABLE.
- WOOD BUCKS AND METAL STRUCTURES BY OTHERS TO BE DESIGNED TO SUPPORT THE LOADS IMPOSED BY THIS LOUVER SYSTEM AND TO TRANSFER SUCH LOADS TO THE BUILDING MAIN STRUCTURE.
- ULTIMATE LOAD OBTAINED FROM ASCE 7-22, MULTIPLY BY 0.6 SHALL BE LESS THAN OR EQUAL TO MAX. DESIGN LOAD IN THIS DOCUMENT. THE DESIGN LOADS SHOWN IN THIS DOCUMENT ARE ALLOWABLE DESIGN LOADS.
- MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION IN ACCORDANCE WITH SECTION 1709.9.3 OF FLORIDA BUILDING CODE LABELING TO COMPLY WITH SECTION 1709.9.2.

INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

- STEP 1: DETERMINE DESIGN WIND LOAD REQUIREMENTS BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7-22 STANDARD.
- STEP 2: SEE SHEET E1 & E2 FOR TYPICAL CONFIGURATIONS AND DESIGN LOAD.
- STEP 3: SEE SHEET A1 FOR ANCHOR OPTIONS AND ANCHOR SPACING.
- STEP 4: THE LOWEST VALUE RESULTING FROM STEPS 2 AND 3 SHALL APPLY TO ENTIRE SYSTEM.

## ABBREVIATIONS AND SYMBOLS

F.H. - FRAME HEIGHT  
F.W. - FRAME WIDTH  
LG. - LONG  
STL. - STEEL  
ALUM. - ALUMINUM  
HORIZ. - HORIZONTAL  
W/ - WITH  
W/O - WITHOUT  
VERT. - VERTICAL

CL - CENTER LINE  
S.S. - STAINLESS STEEL  
O.C. - ON CENTER

SECTION NUMBER

X  
XX

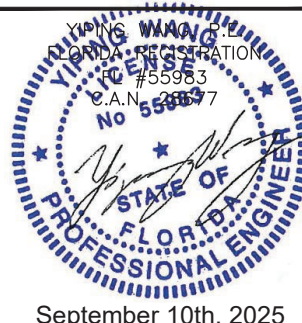
SHEET NUMBER

## LIMITATIONS OF USE

- A- THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.
- B- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.
- C- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
- D- SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D.
- E- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

FLORIDA APPROVAL:

FL47774.1



**MCY ENGINEERING, INC.**

## GLAZING CONSULTANTS

12781 MIRAMAR PARKWAY #301

MIRAMARI, FL. 33027

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mcy@mcyengineering.com

## ESW-VERTICAL LOUVER SYSTEM - LARGE MISSILE IMPACT

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3550 NW 49th Str

Miami, Florida 33142

TEL. (305) 638-5151 FAX. (305) 638-5158

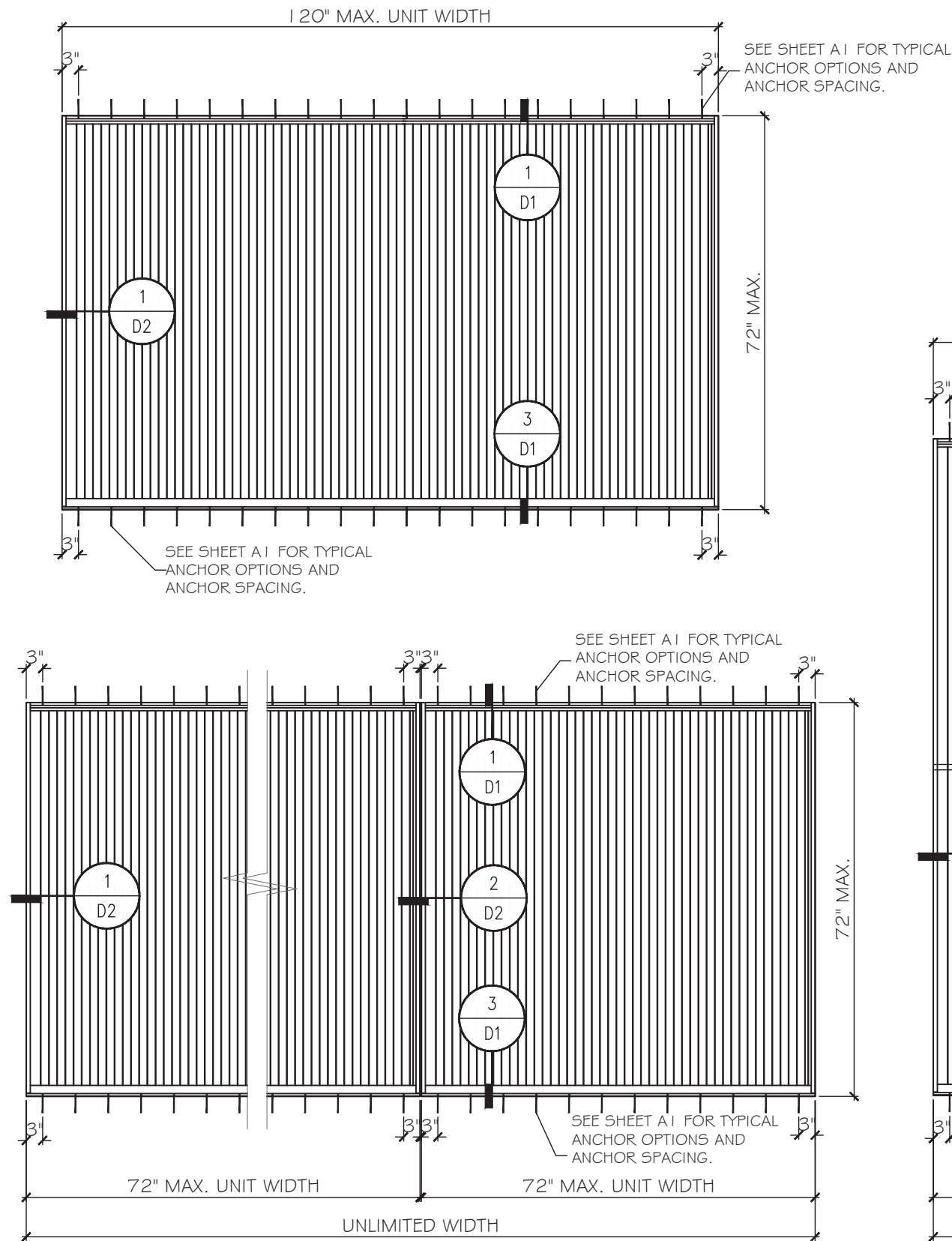
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|                          |                   |
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| Drawn Date<br>08.15.2025 | SCALE<br>AS SHOWN |
| DRAWING NO.<br>AD25-40   |                   |

COVER

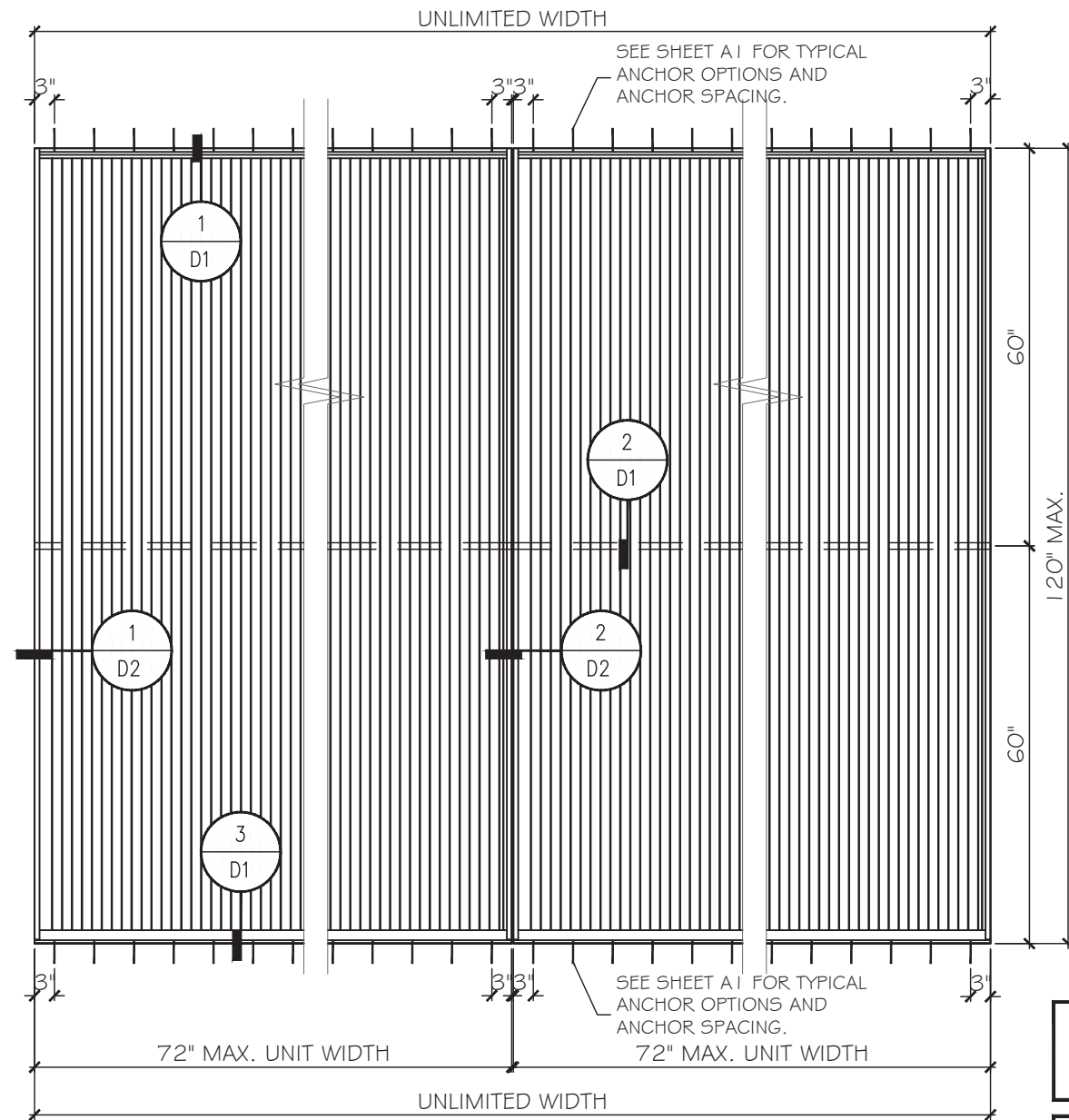
Sheet No.

1 OF 7



TYPICAL EXTERIOR ELEVATION

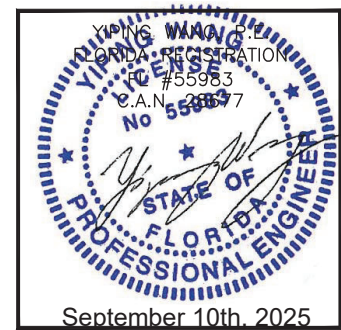
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|------------------|
| + 150 PSF        |
| - 150 PSF        |



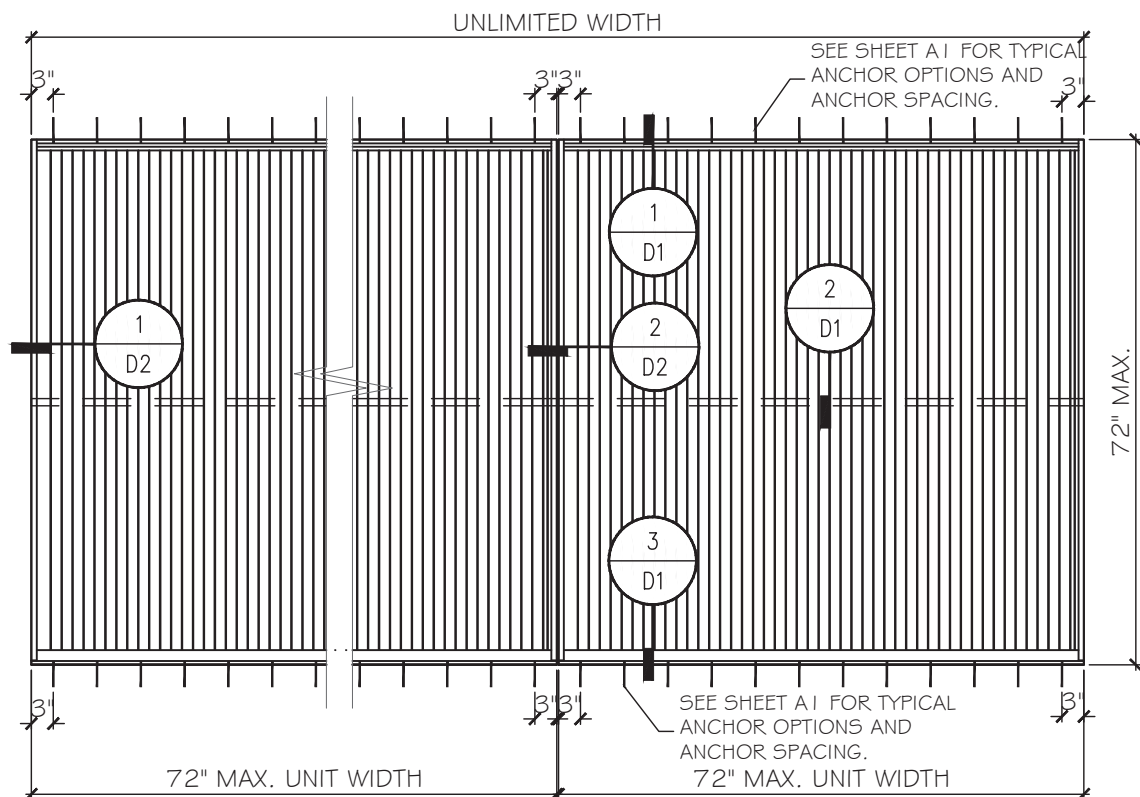
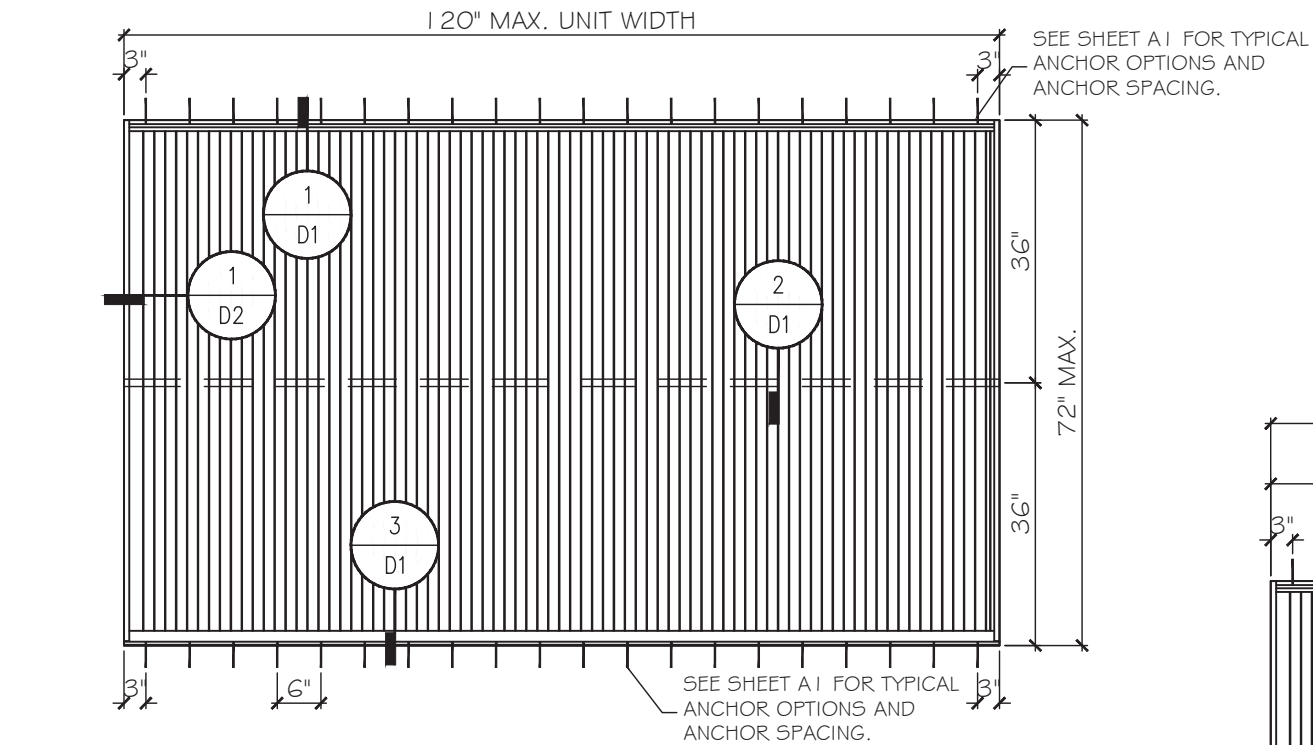
TYPICAL EXTERIOR ELEVATION

| MAX. DESIGN LOAD |
|------------------|
| + 150 PSF        |
| - 150 PSF        |

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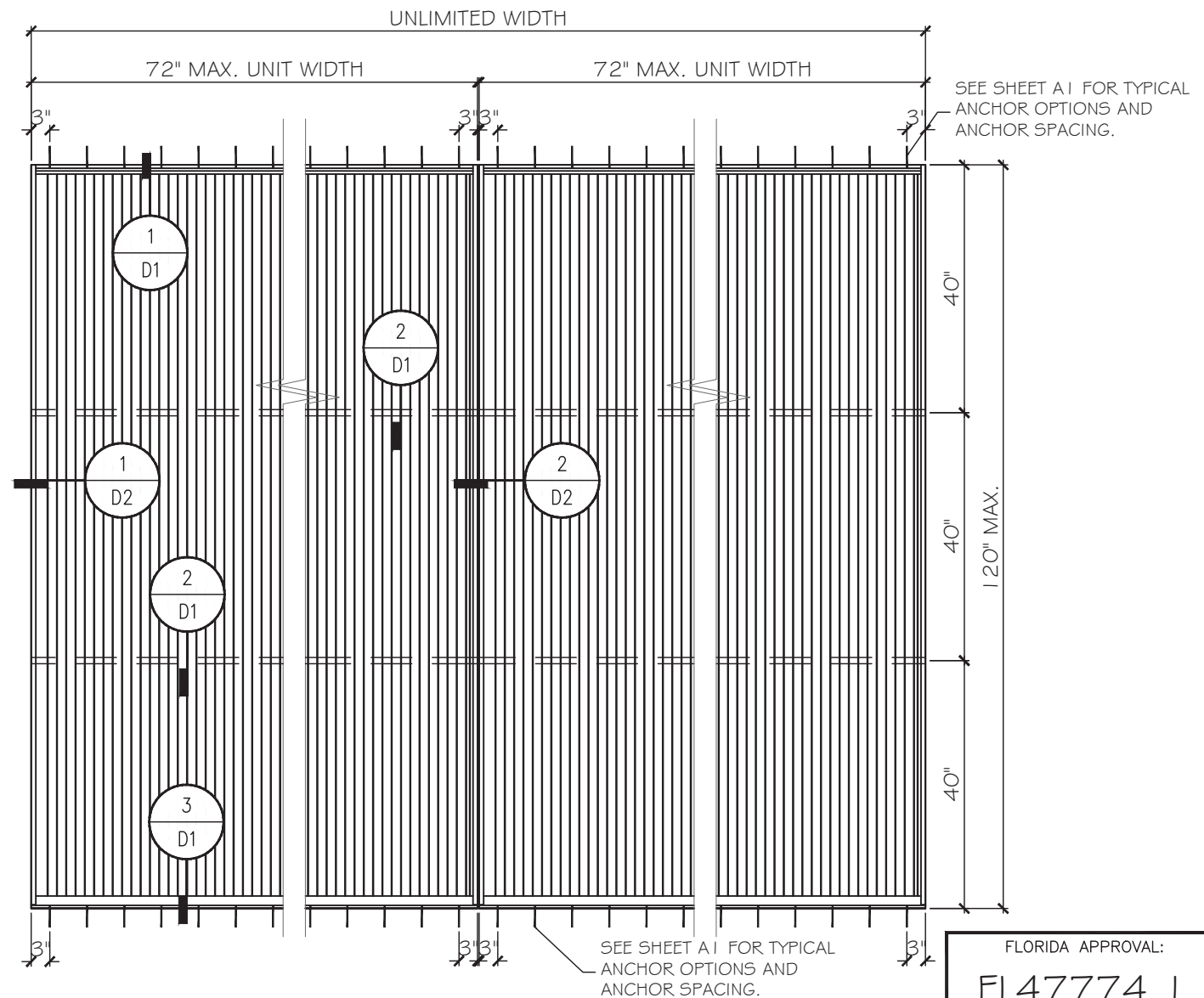


| Rev. No.    | Date       | Drawn By | Description     |
|-------------|------------|----------|-----------------|
| RO          | 08.15.2025 | James    | NEW APPLICATION |
| DRAUGHTING  |            |          |                 |
| DRAWN DATE  |            |          |                 |
| SCALE       |            |          |                 |
| DRAWING NO. |            |          |                 |
| AD25-40     |            |          |                 |
| E1          |            |          |                 |
| Sheet No.   |            |          |                 |
| 2 OF 7      |            |          |                 |



TYPICAL EXTERIOR ELEVATION

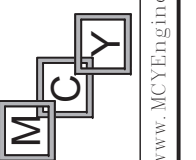
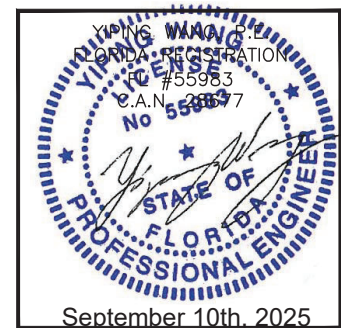
| MAX. DESIGN LOAD |
|------------------|
| + 190 PSF        |
| - 190 PSF        |



TYPICAL EXTERIOR ELEVATION

| MAX. DESIGN LOAD |
|------------------|
| + 190 PSF        |
| - 190 PSF        |

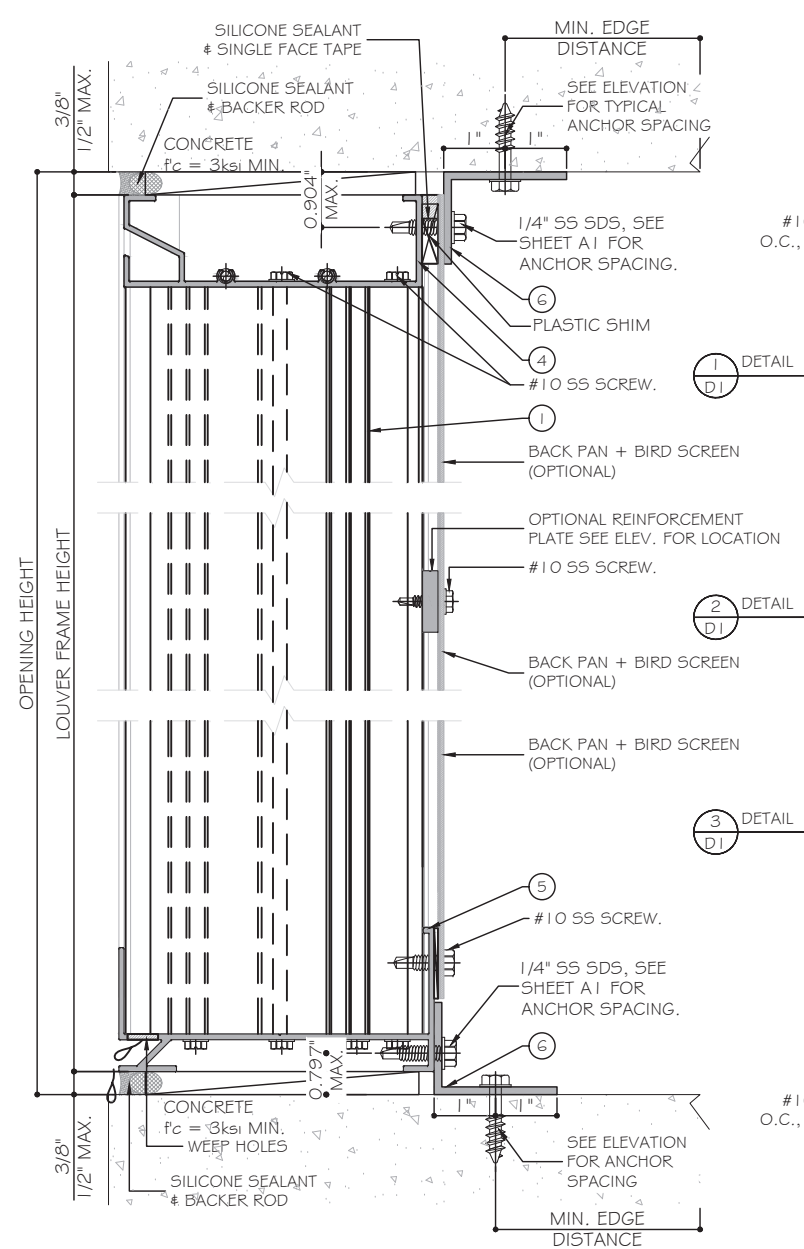
FLORIDA APPROVAL:  
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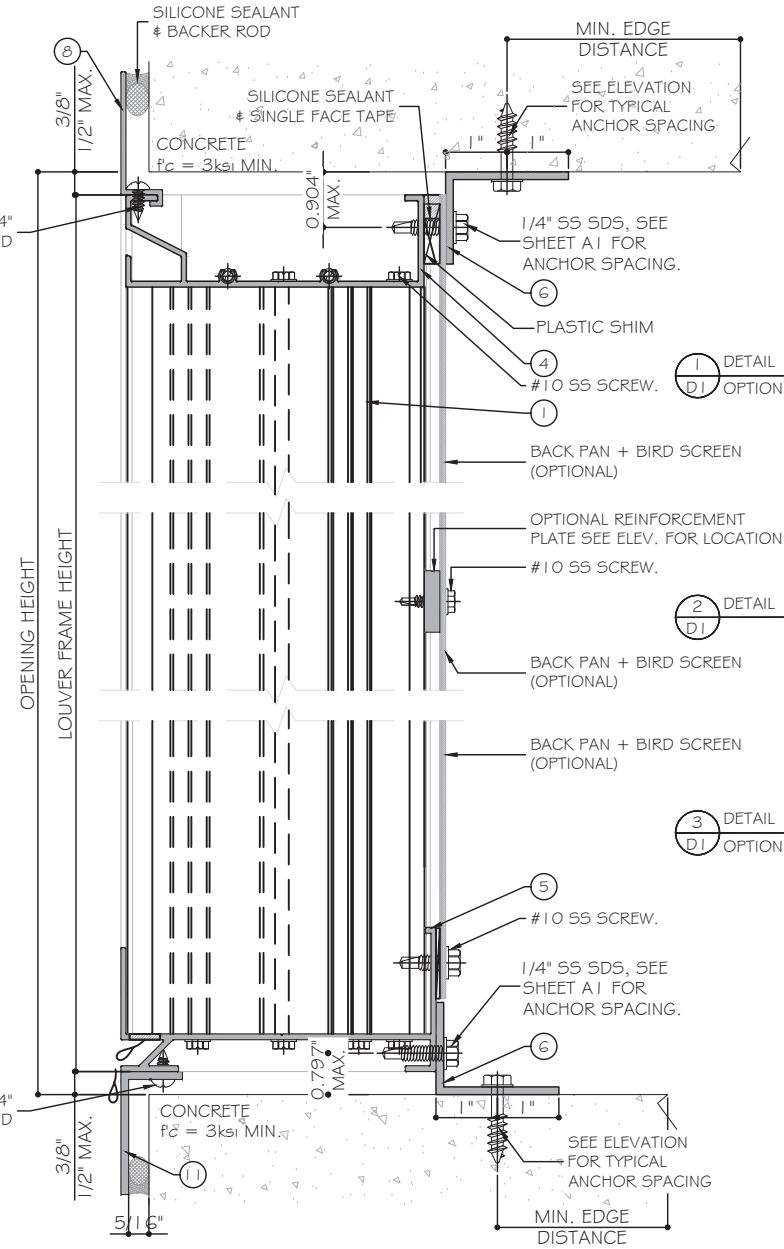
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| Rev. No.            | Date       | Drawn By | Description     |
|---------------------|------------|----------|-----------------|
| R0                  | 08.15.2025 | James    | NEW APPLICATION |
| Drawing No. AD25-40 |            |          |                 |
| Sheet No. 3 OF 7    |            |          |                 |

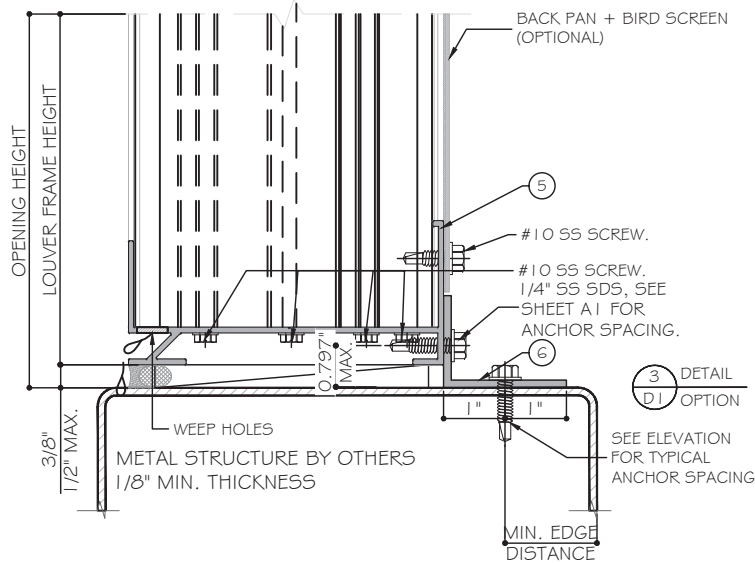
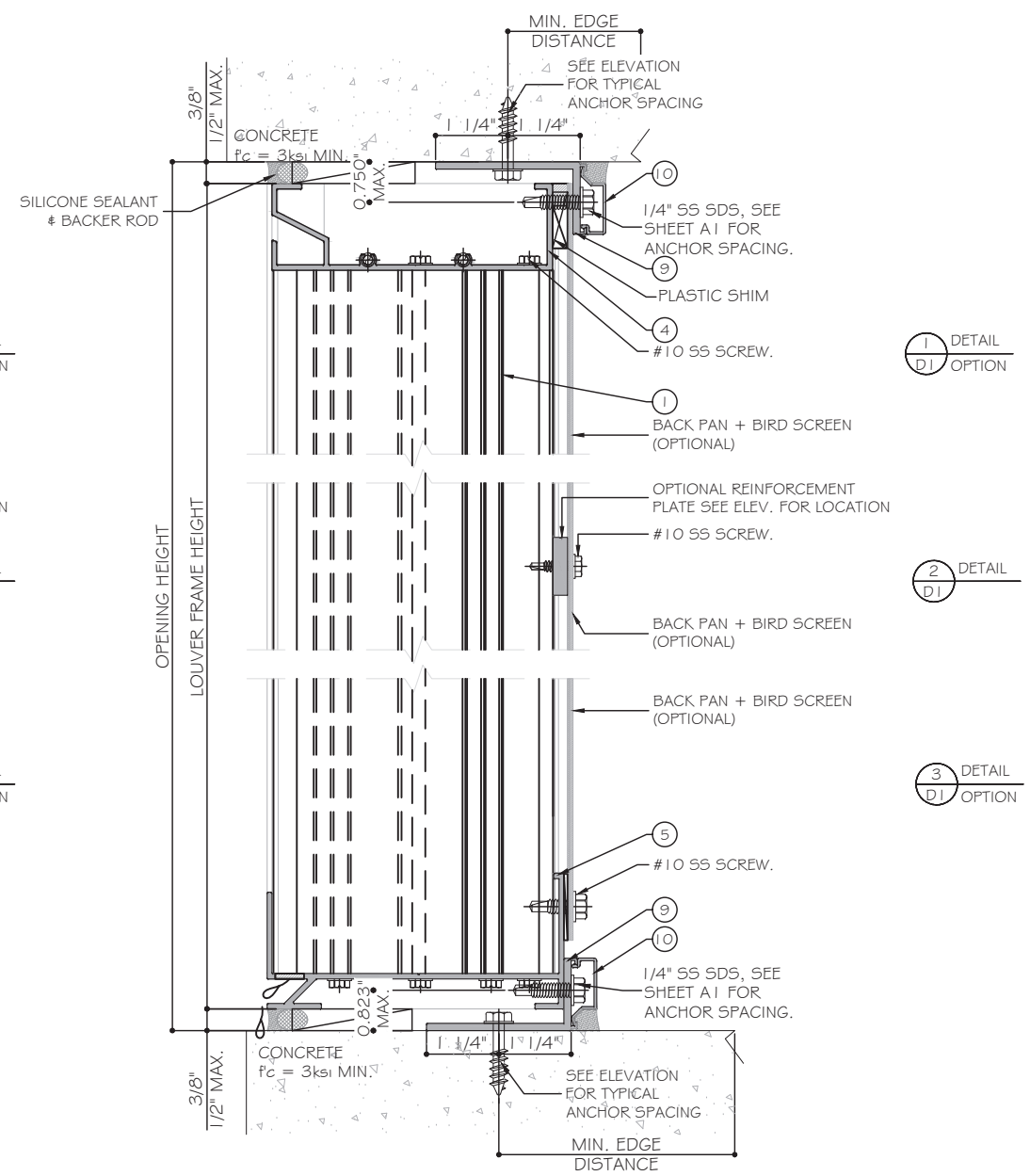




#10 SS SCREW @ 24" O.C., 6" FROM EACH END

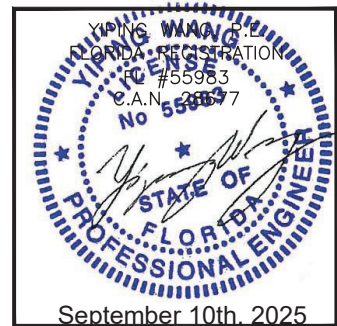


#10 SS SCREW @ 24" O.C., 6" FROM EACH END



WOOD BUCKS BY OTHERS. MUST SUPPORT LOADS IMPOSED BY LOUVER SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

FLORIDA APPROVAL:  
FL47774.1

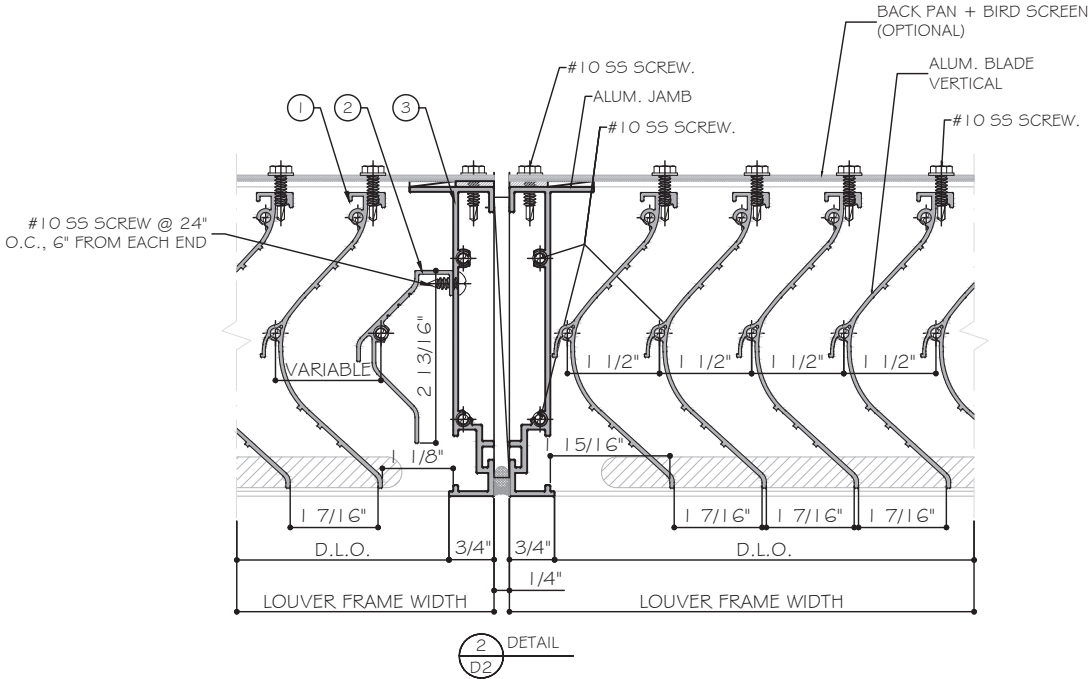
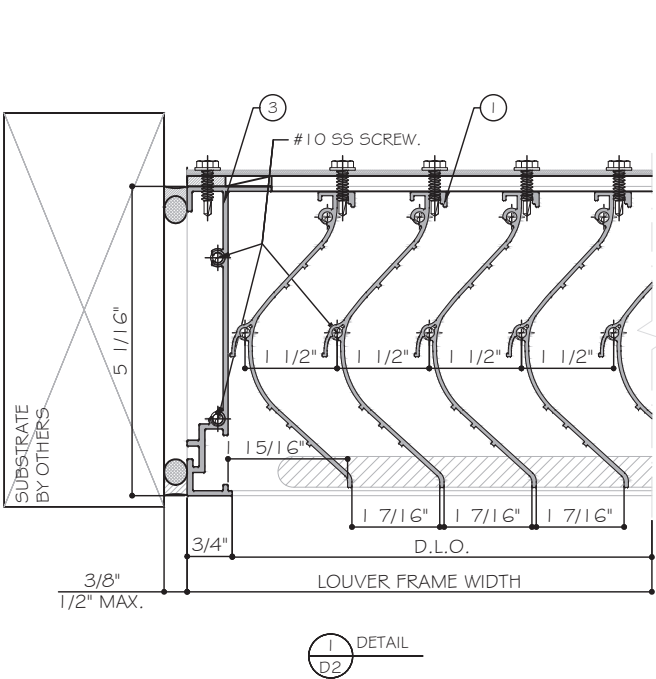


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| Rev. No.            | Date  | Drawn By | Description     |
|---------------------|-------|----------|-----------------|
| 08.15.2025          | James |          | NEW APPLICATION |
| 08.15.2025          | James |          | AS SHOWN        |
| DRAWING NO. AD25-40 |       |          |                 |
| D1                  |       |          |                 |
| Sheet No. 5 OF 7    |       |          |                 |

WOOD BUCKS BY OTHERS. MUST  
SUPPORT LOADS IMPOSED BY LOUVER SYSTEM  
AND TRANSFER THEM TO THE BUILDING  
STRUCTURE.



FLORIDA APPROVAL:  
FL47774.1

YIPING WANG  
FLORIDA REGISTRATION  
#55983  
C.A.N. 20237

September 10th, 2025

|             |  |          |  |  |  |
|-------------|--|----------|--|--|--|
| Drawing No. |  | SCALE    |  |  |  |
| 08.15.2025  |  | AS SHOWN |  |  |  |
| DRAWING NO. |  |          |  |  |  |
| AD25-40     |  |          |  |  |  |
| D2          |  |          |  |  |  |
| Sheet No.   |  |          |  |  |  |
| 6 OF 7      |  |          |  |  |  |

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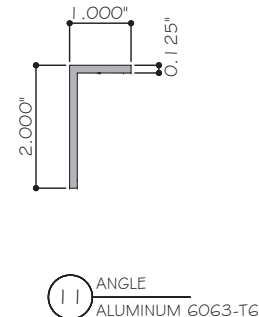
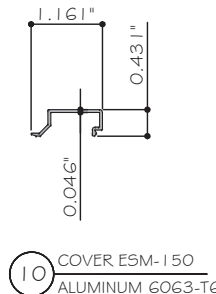
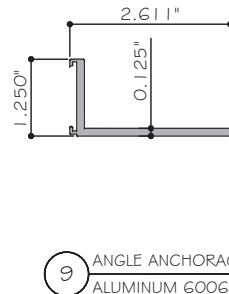
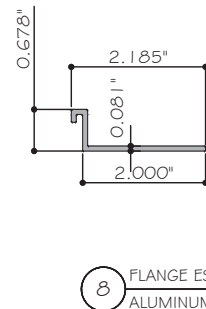
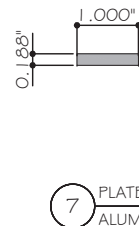
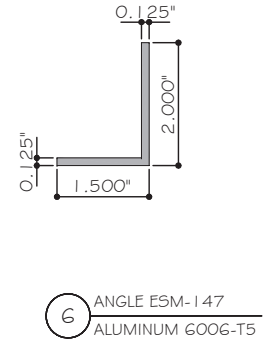
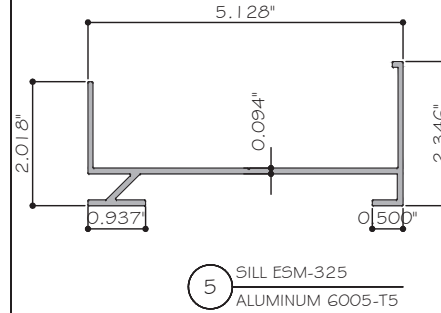
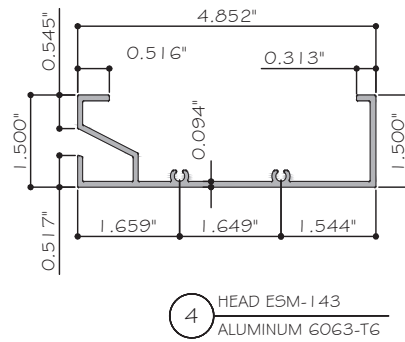
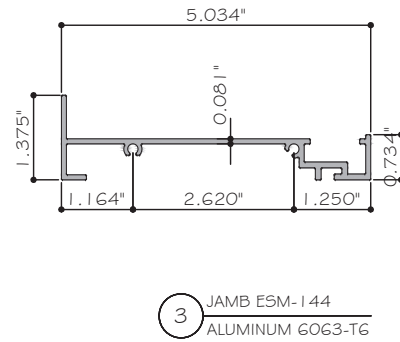
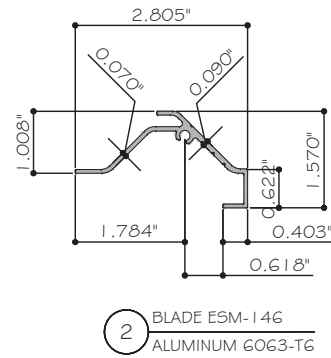
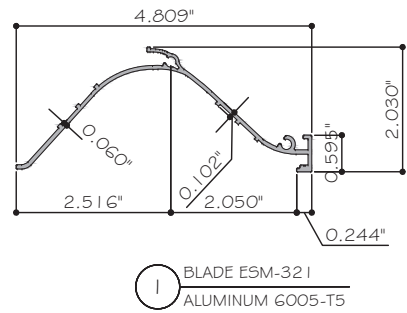
12781 MIRAMAR PARKWAY #301

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P. 305 588 5224

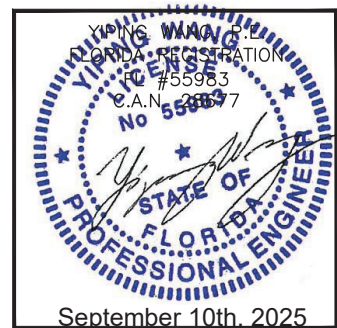
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## BILL OF MATERIALS

| BILL OF MATERIALS |           |                 |               |
|-------------------|-----------|-----------------|---------------|
| ITEM              | PART#     | DESCRIPTION     | MATERIAL      |
| 1                 | ESM-321   | BLADE           | ALUM. 6005-T5 |
| 2                 | ESM-146   | BLADE           | ALUM. 6063-T6 |
| 3                 | ESM-144   | JAMB            | ALUM. 6063-T6 |
| 4                 | ESM-143   | HEAD            | ALUM. 6063-T6 |
| 5                 | ESM-325   | SILL            | ALUM. 6005-T5 |
| 6                 | ESM-147   | ANGLE           | ALUM. 6006-T6 |
| 7                 | ALU-P-019 | PLATE           | ALUM. 6063-T6 |
| 8                 | ESM-148   | FLANGE          | ALUM. 6063-T6 |
| 9                 | ESM-149   | ANGLE ANCHORAGE | ALUM. 6006-T5 |
| 10                | ESM-150   | COVER           | ALUM. 6063-T6 |
| 11                | -         | ANGLE           | ALUM. 6063-T6 |

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