

Miami-Dade Qualified Sightproof Louver

Application and Design

ESS-502D is an extruded aluminum sightproof louver designed to protect air intake and exhaust openings in building exteriors specifically for applications requiring extremely high structural design loadings. Design characteristics meet the performance criteria established by the Florida Building Code and Miami-Dade County. Tested in accordance with and passes TAS 201 (Large Missile Impact), TAS 202 (Uniform Static Air Pressure) and TAS 203 (Cyclic Wind Loading). The ESS-502D may be installed in a location where the space behind the louver is designed to accept water penetration and houses water resistant/water proof equipment, components or supplies.

Standard Construction

Frame Heavy gauge extruded 6063-T5 (head, sill) and 6105-T5 (jamb) aluminum, 5 in. x 0.081 in. nominal wall thickness

Blades Chevron style, heavy gauge 6105-T5 extruded aluminum, 0.081 in. nominal wall thickness, positioned on approximately 2 in. centers

Construction Welded and mechanically fastened

Birdscreen 3/4 in. x 0.051 flattened expanded aluminum in removable frame, inside mount (rear)

Finish Mill

Continuous Perimeter

Angles Ship loose, heavy gauge extruded aluminum, mill finish

Minimum Rough

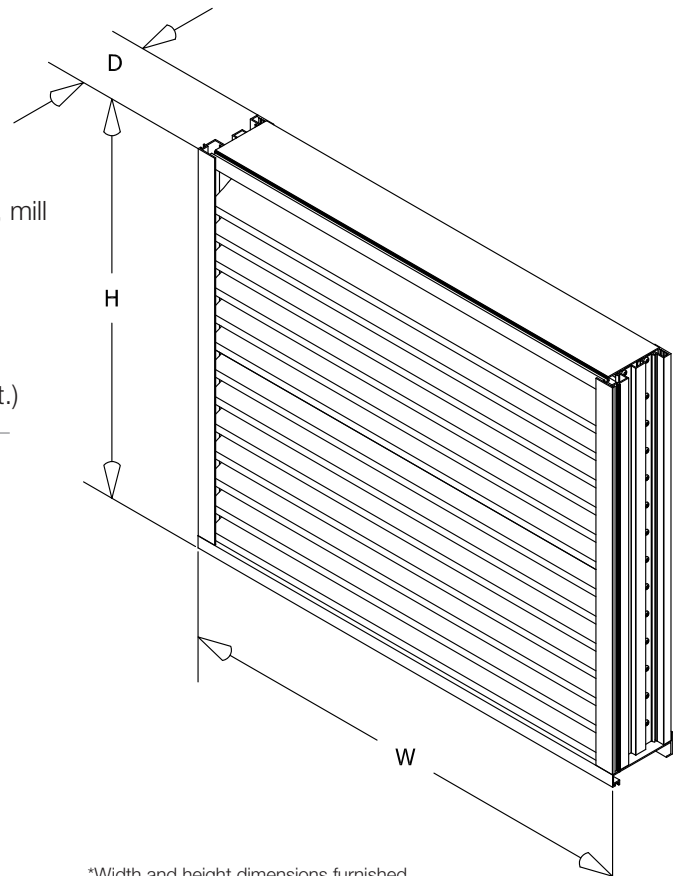
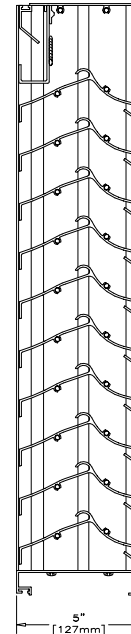
Opening Size . . . 8 in. W x 7 in. H

Maximum Single Section Rough

Opening Size . . . 144.5 in. W or 144.5 in. H (limited to 72 sq. ft.)

Options (at additional cost)

- A variety of bird and insect screens
- Blank-off panels
- Extended sill
- Filter racks
- Flanged frame
- A variety of architectural finishes including:
 - Clear anodize
 - Integral color anodize
 - Baked enamel
 - Kynar



*Width and height dimensions furnished approximately 1/2 inch under size.

PERFORMANCE DATA

ESS-502D


Florida Product Approval No: FL12941.1

Miami-Dade NOA No.: 09-0519.14

Maximum Wind-load: 110 PSF

Free Area Chart *Based on actual sizing

| Louver Height in Inches | Louver Width in Inches | | | | | | | | | | | |
|-------------------------|------------------------|-------|-------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 |
| 12 | 0.26 | 0.60 | 0.94 | 1.28 | 1.63 | 1.97 | 2.31 | 2.65 | 2.99 | 3.34 | 3.68 | 4.02 |
| 24 | 0.72 | 1.67 | 2.63 | 3.59 | 4.54 | 5.50 | 6.45 | 7.41 | 8.37 | 9.32 | 10.28 | 11.23 |
| 36 | 1.18 | 2.75 | 4.32 | 5.89 | 7.46 | 9.03 | 10.60 | 12.17 | 13.74 | 15.31 | 16.88 | 18.45 |
| 48 | 1.64 | 3.82 | 6.01 | 8.19 | 10.37 | 12.56 | 14.74 | 16.93 | 19.11 | 21.30 | 23.48 | 25.66 |
| 60 | 2.10 | 4.90 | 7.69 | 10.49 | 13.29 | 16.09 | 18.89 | 21.69 | 24.48 | 27.28 | 30.08 | 32.88 |
| 72 | 2.56 | 5.97 | 9.38 | 12.80 | 16.21 | 19.62 | 23.03 | 26.44 | 29.86 | 33.27 | 36.68 | 40.09 |
| 84 | 3.02 | 7.05 | 11.07 | 15.10 | 19.12 | 23.15 | | | | | | |
| 96 | 3.48 | 8.12 | 12.76 | 17.40 | 22.04 | 26.68 | | | | | | |
| 108 | 3.94 | 9.19 | 14.45 | 19.70 | 24.96 | 30.21 | | | | | | |
| 120 | 4.40 | 10.27 | 16.14 | 22.01 | 27.87 | 33.74 | | | | | | |
| 132 | 4.86 | 11.34 | 17.83 | 24.31 | 30.79 | 37.27 | | | | | | |
| 144 | 5.32 | 12.42 | 19.51 | 26.61 | 33.71 | 40.80 | | | | | | |

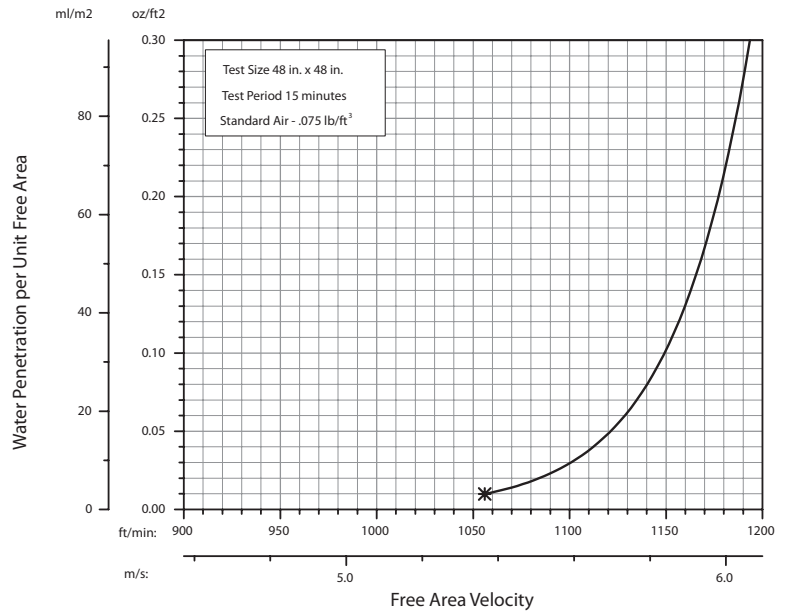
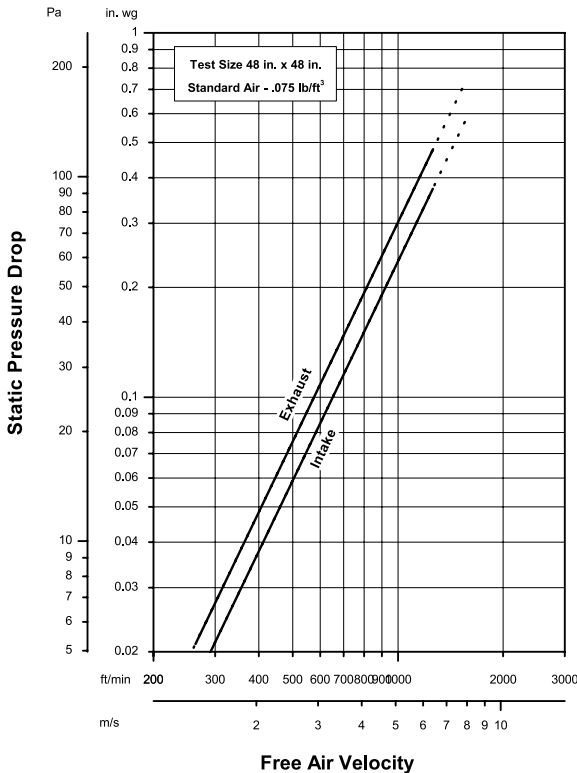


Greenheck Fan Corporation certifies that the ESS-502D louvers shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance and water penetration ratings.

Airflow Resistance (Standard Air - .075 lb/ft³)

Water Penetration (Standard Air - .075 lb/ft³)

Test size 48 in. x 48 in. Test duration of 15 min.



Model ESS-502D resistance to airflow (pressure drop) varies de12941.1 on louver application (air intake or air exhaust). Free area velocities (shown) are higher than average velocity through the overall louver size. See louver selection information.

The AMCA Water Penetration Test provides a method for comparing various louver models and designs as to their efficiency in resisting the penetration of rainfall under specific laboratory test conditions. The beginning point of water penetration is defined as that velocity where the water penetration curve projects through .01 oz. of water (penetration) per sq. ft. of louver free area. ***The beginning point of water penetration for Model ESS-502D is 1057 fpm free area velocity.** These performance ratings do not guarantee a louver to be weatherproof or stormproof and should be used in combination with other factors including good engineering judgement in selecting louvers.



PRODUCT/INSTALLATION DETAILS

ESS-502D

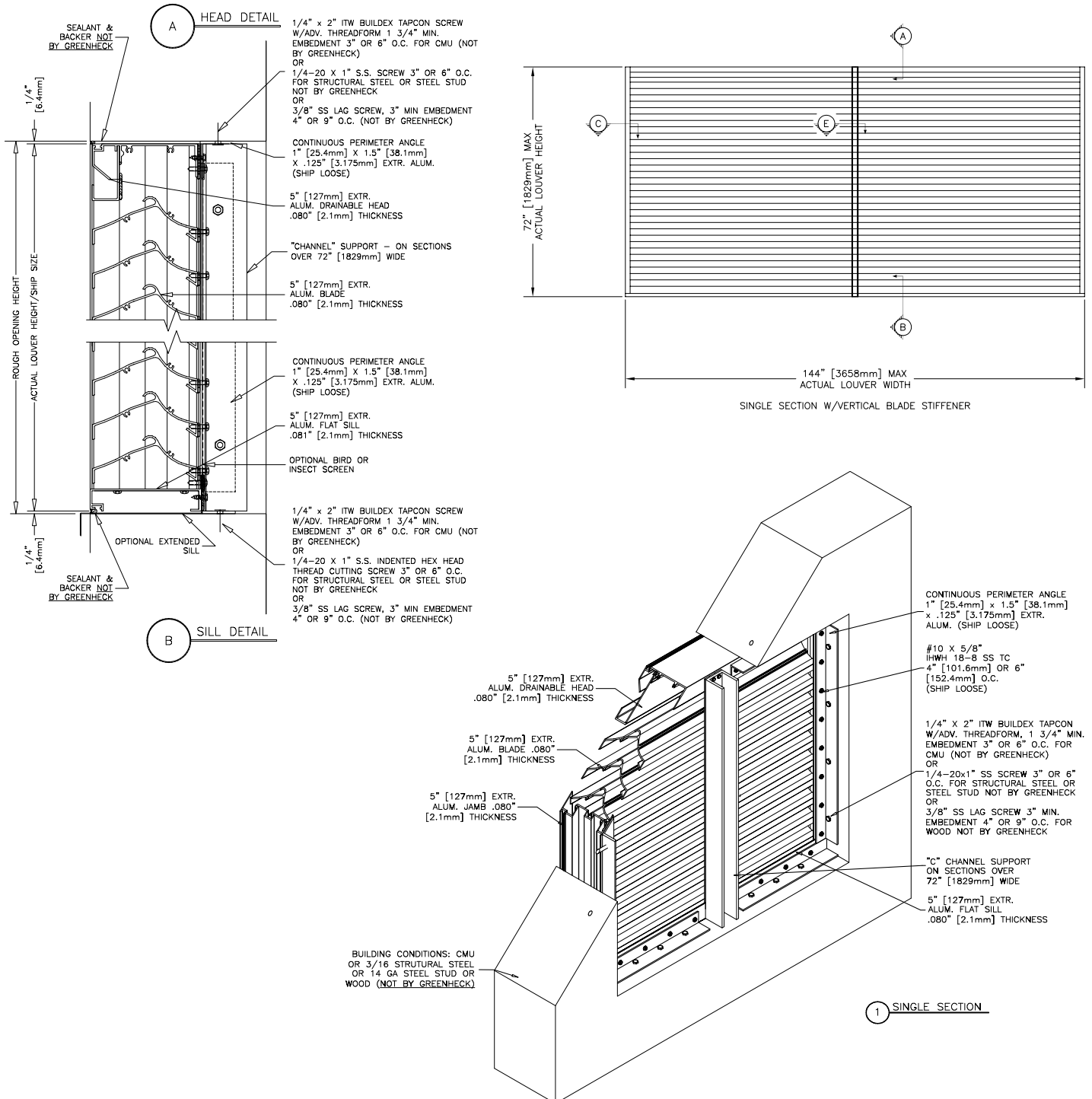
SINGLE SECTION

Florida Product Approval No: FL12941.1

Miami-Dade NOA No.: 09-0519.14

Maximum Wind-load: 110 PSF

Model ESS-502D is a Miami-Dade Qualified louver and must be installed in accordance with the installation instructions shown herein. Model ESS-502D is qualified for installation within concrete/masonry, structural steel, steel stud or wood framed building conditions. Model ESS-502D is structurally calculated to withstand positive and negative wind-loads up to 110 PSF. The maximum single section rough opening width is 144.5 in. The maximum single section rough opening height is 144.5 in. In accordance with installation instructions, the maximum opening width can be unlimited if there is only one section high and the maximum opening height can be unlimited if there is only one section wide.



PRODUCT/INSTALLATION DETAILS

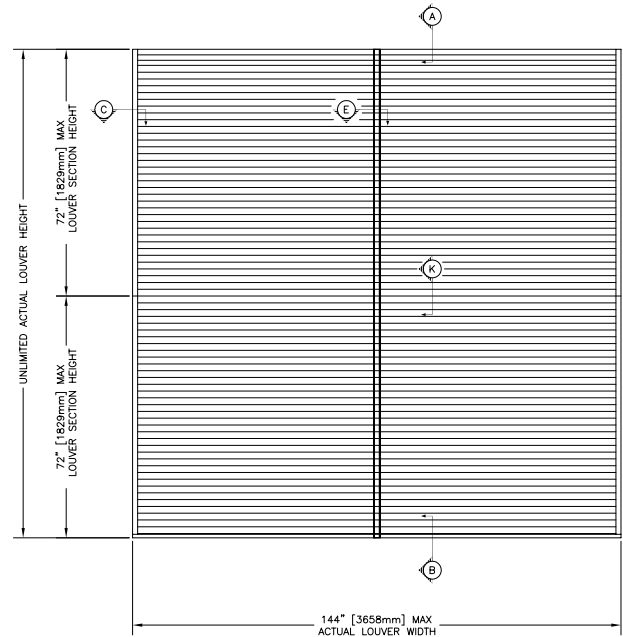
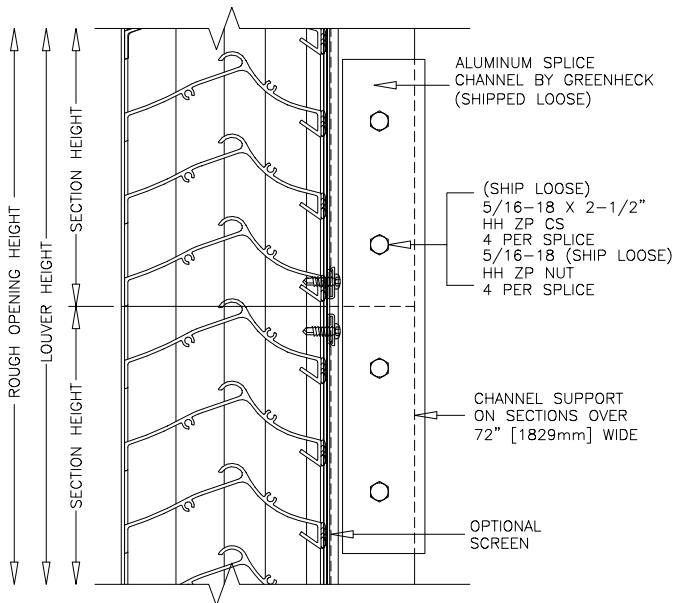
ESS-502D

MULTI-SECTION HIGH

Florida Product Approval No: FL12941.1

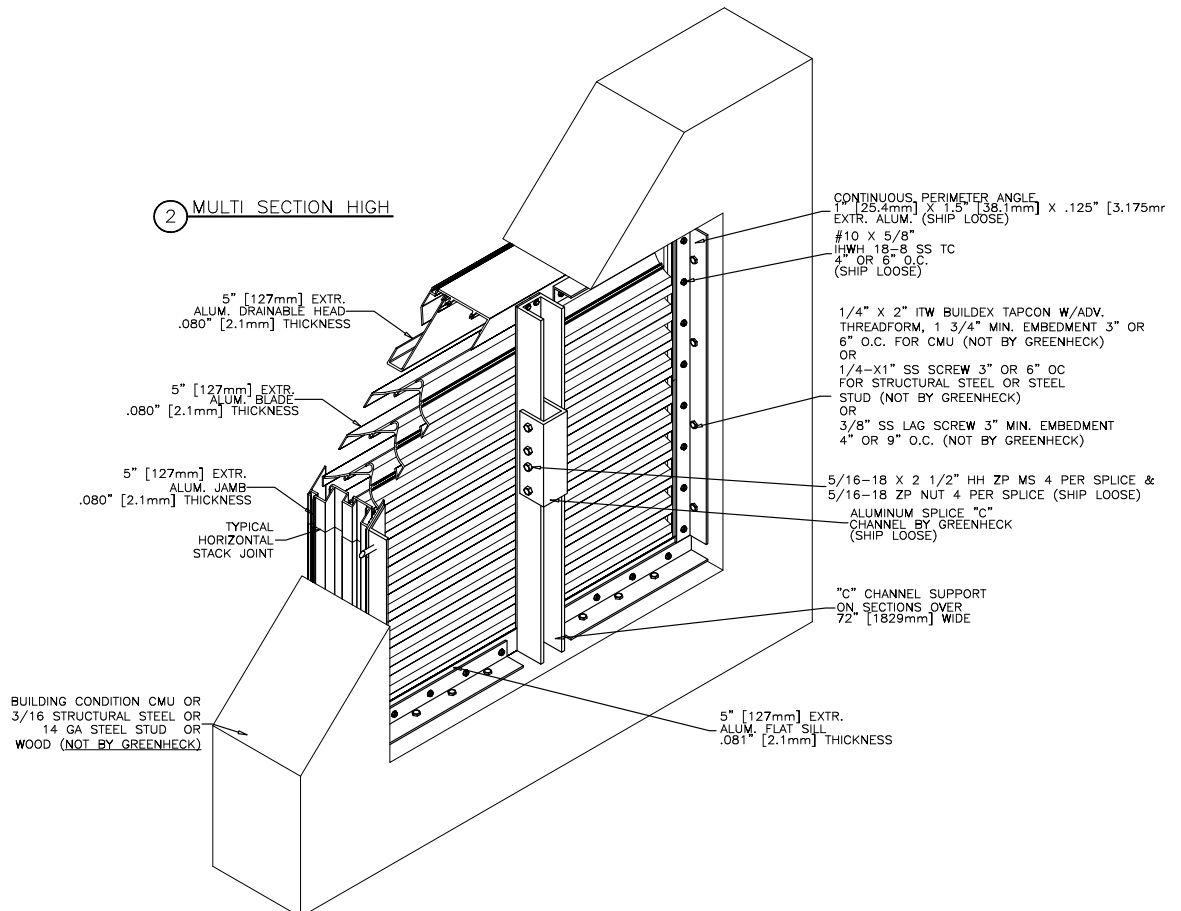
Miami-Dade NOA No.: 09-0519.14

Maximum Wind-load: 110 PSF



K CONCEALED JOINT DETAIL
MULTI SECTIONS HIGH
SINGLE SECTION WIDE

SINGLE SECTION WIDE X MULTIPLE SECTIONS HIGH W/ VERTICAL BLADE STIFFENERS AND HORIZONTAL CONCEALED JOINT.



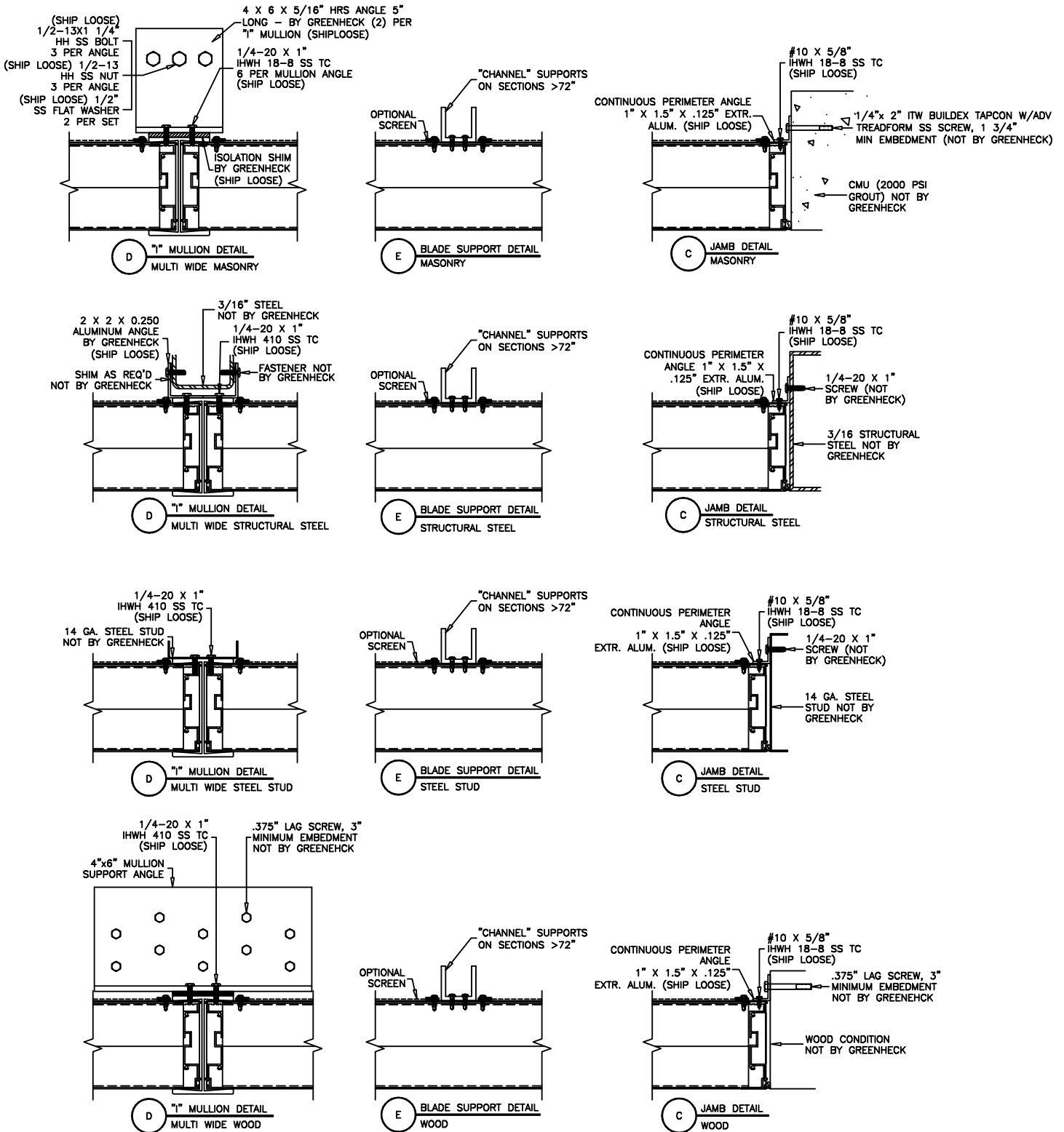
PRODUCT/INSTALLATION DETAILS

ESS-502D

Florida Product Approval No: FL12941.1

Miami-Dade NOA No.: 09-0519.14

Maximum Wind-load: 110 PSF



PRODUCT/INSTALLATION DETAILS

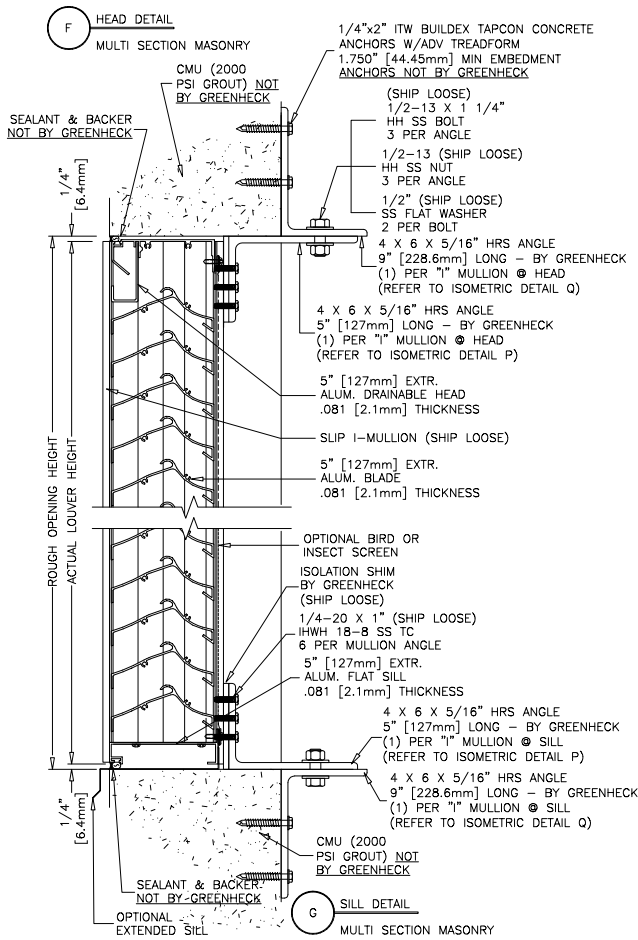
MULTI-SECTION WIDE CMU

ESS-502D

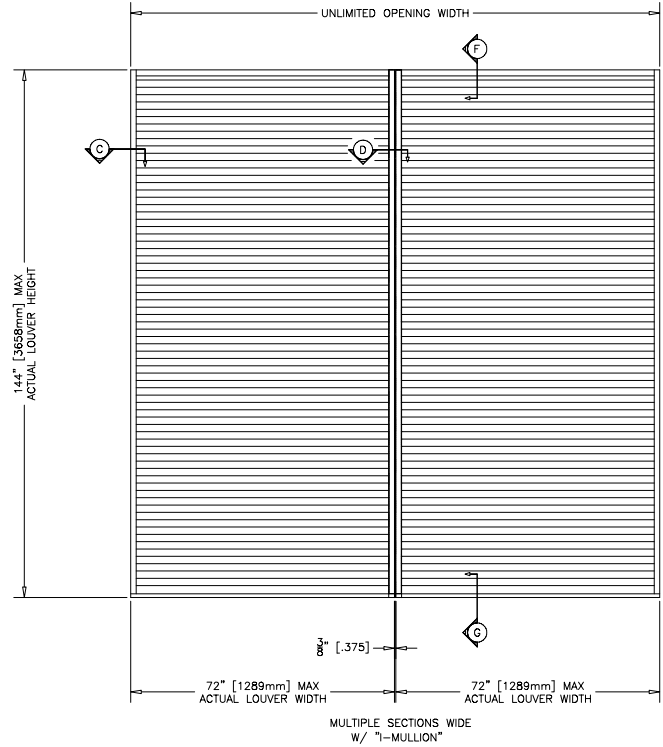
Florida Product Approval No: FL12941.1

Miami-Dade NOA No.: 09-0519.14

Maximum Wind-load: 110 PSF



*CONTINUOUS 1.00 X 1.50 PERIMETER ANGLE NOT SHOWN FOR CLARITY - REF TO DETAIL 1



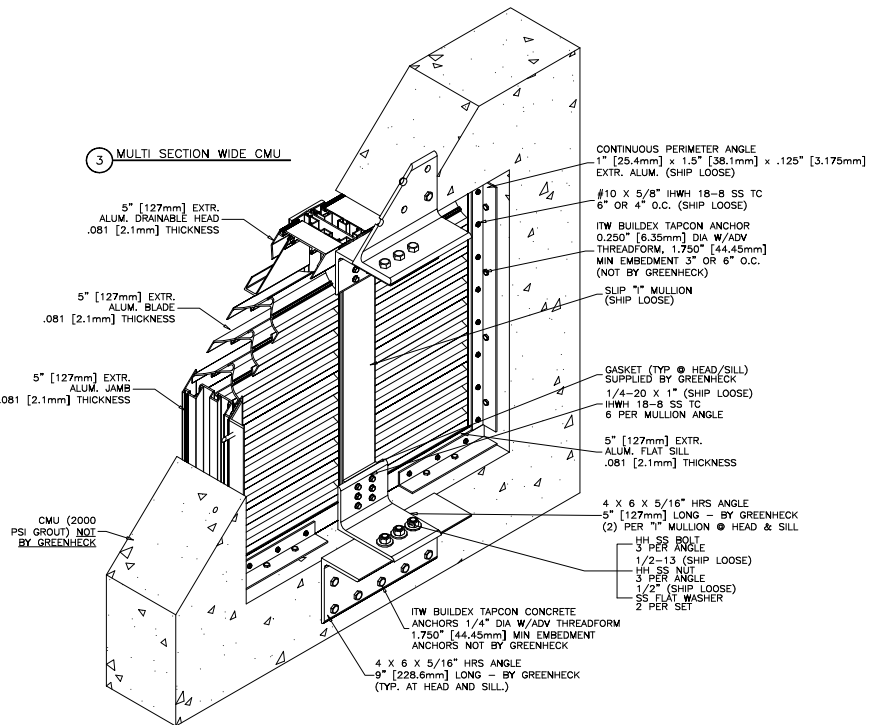
P ISOMETRIC ANGLE DETAIL
MULTI WIDE MASONRY

"I" MULLION ANCHOR ANGLE
4 X 6 X 5/16 HRS, 5" [127mm] LONG - PRIME PAINTED (SHIP LOOSE)

"I" MULLION ANCHOR ANGLE
4 X 6 X 5/16 HRS, 9" [228.6mm] LONG - PRIME PAINTED (SHIP LOOSE)

9/16" HOLES (3) FIELD DRILLED, NOT BY GREENHECK

Q ISOMETRIC ANGLE DETAIL
MULTI WIDE MASONRY



PRODUCT/INSTALLATION DETAILS

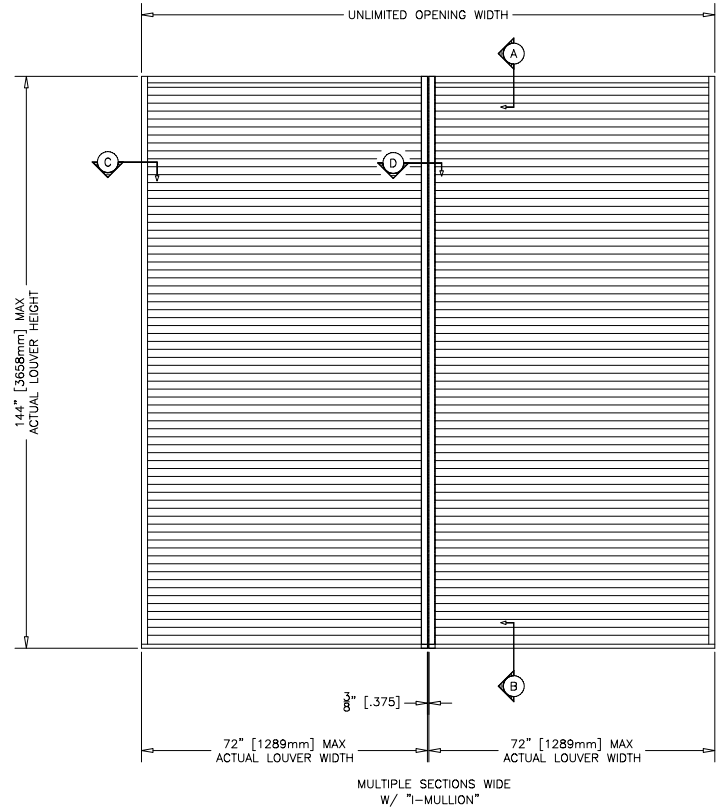
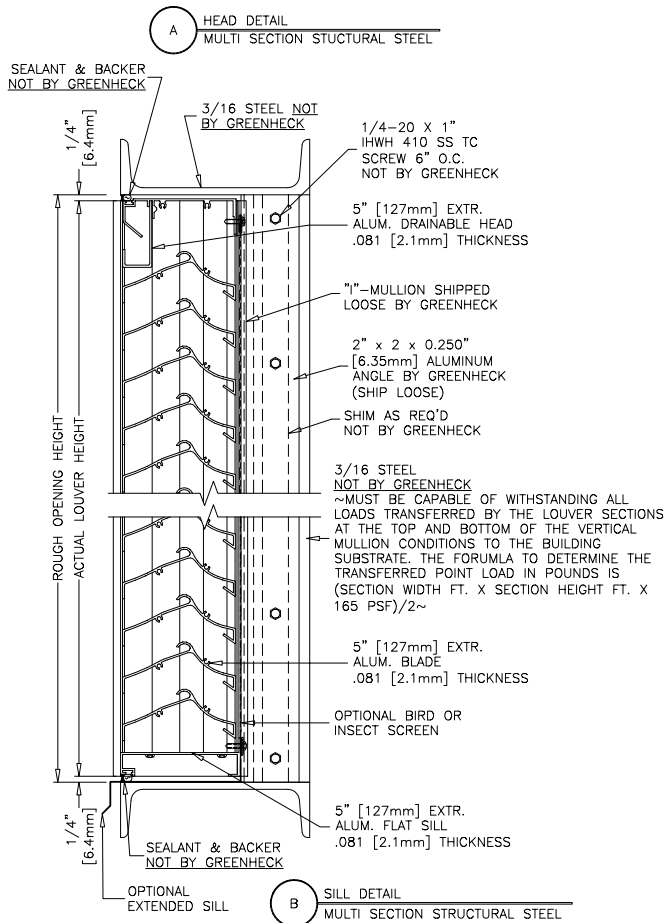
MULTI-SECTION WIDE STRUCTURAL STEEL

ESS-502D

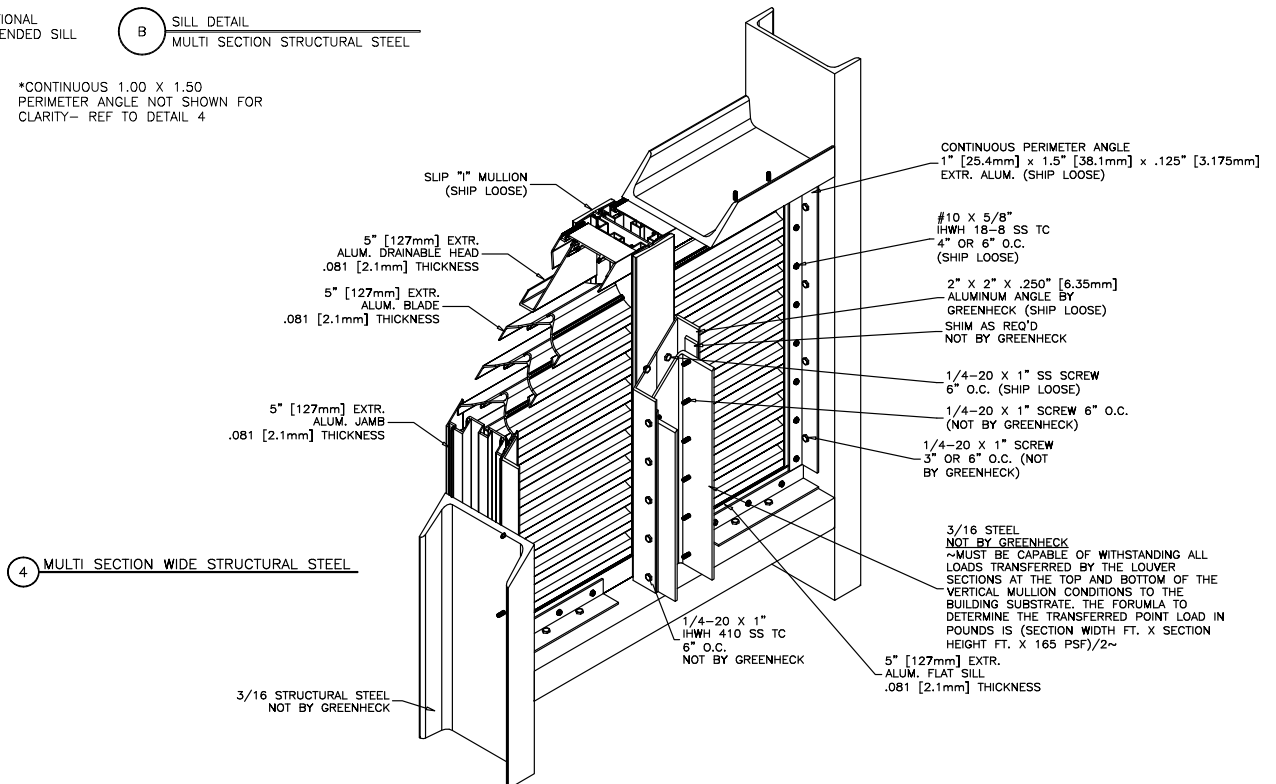
Florida Product Approval No: FL12941.1

Miami-Dade NOA No.: 09-0519.14

Maximum Wind-load: 110 PSF



*CONTINUOUS 1.00 X 1.50 PERIMETER ANGLE NOT SHOWN FOR CLARITY- REF TO DETAIL 4



PRODUCT/INSTALLATION DETAILS

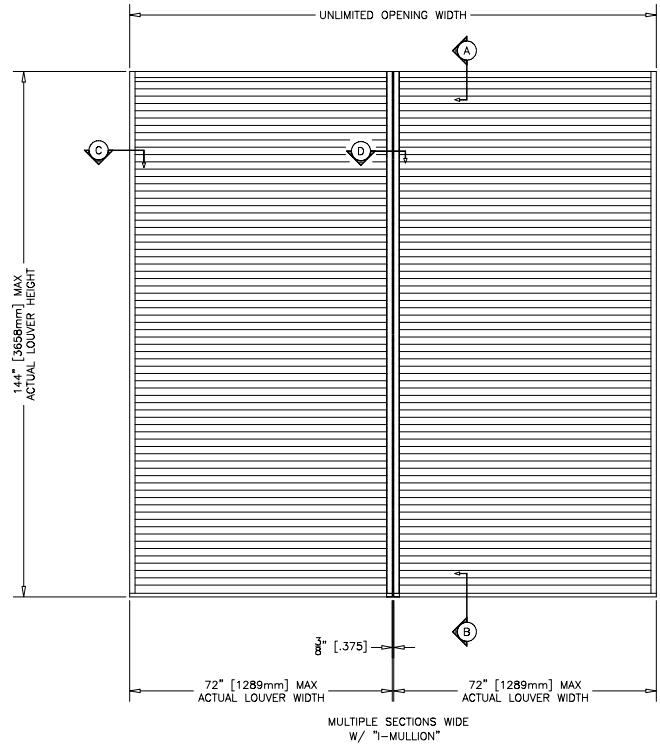
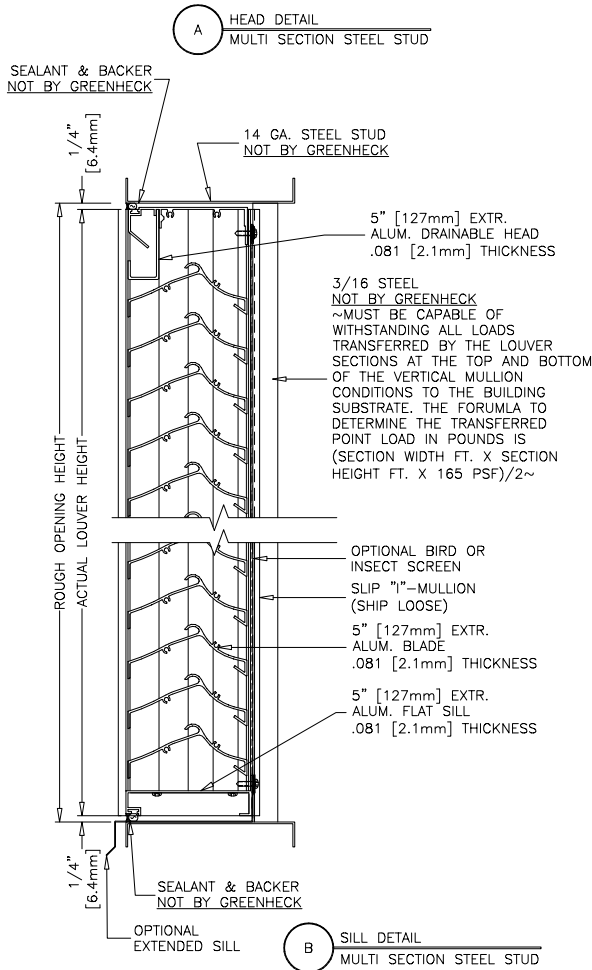
MULTI-SECTION WIDE STEEL STUD

ESS-502D

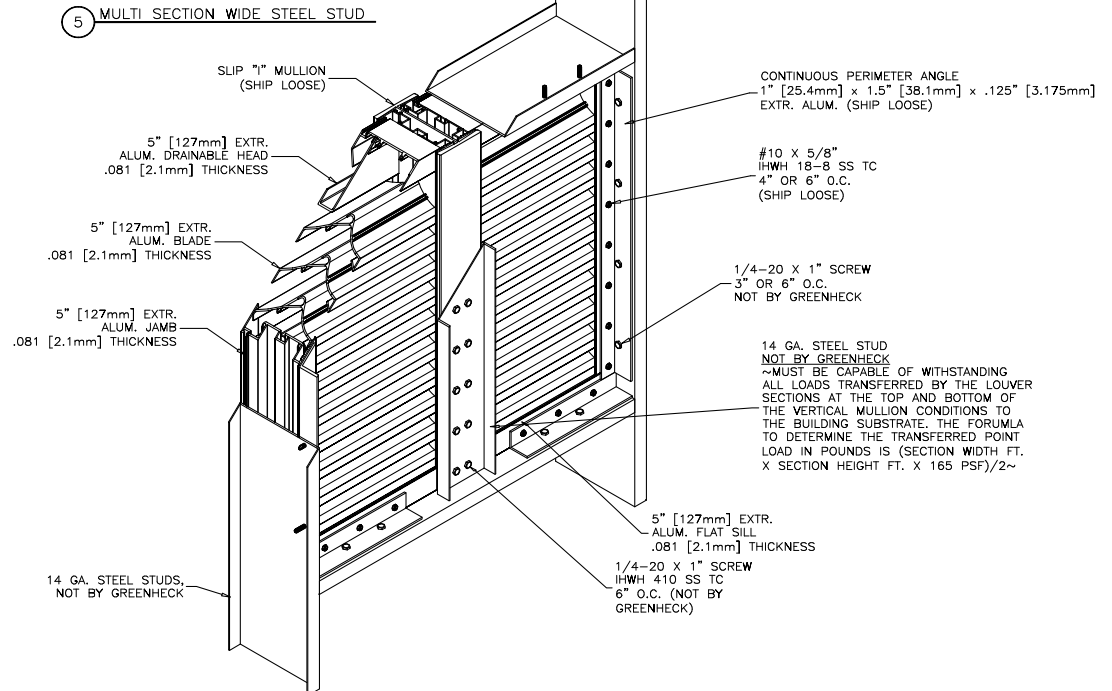
Florida Product Approval No: FL12941.1

Miami-Dade NOA No.: 09-0519.14

Maximum Wind-load: 110 PSF



*CONTINUOUS 1.00 X 1.50 PERIMETER ANGLE NOT SHOWN FOR CLARITY- REF TO DETAIL 5



PRODUCT/INSTALLATION DETAILS

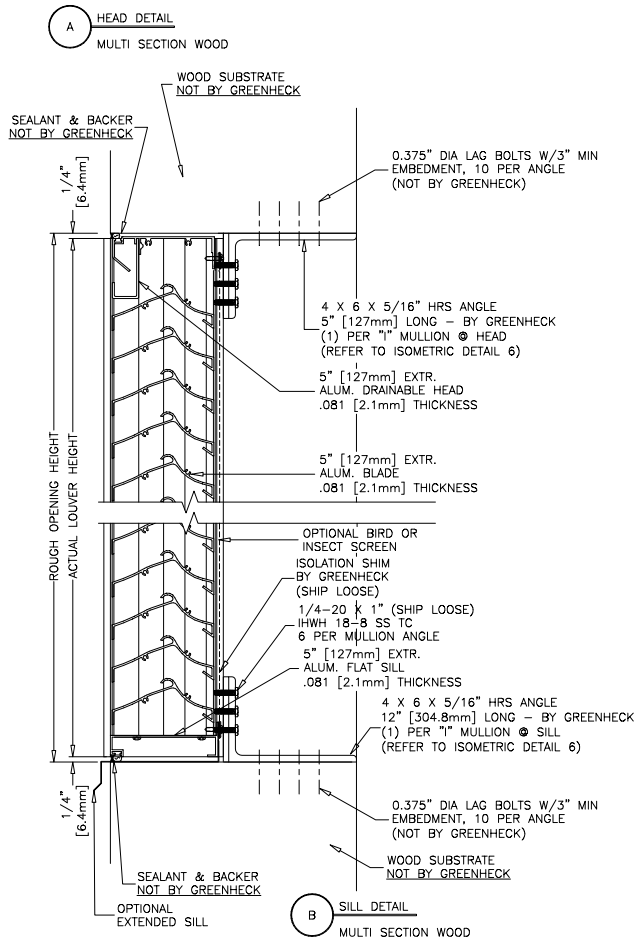
ESS-502D

MULTI-SECTION WIDE WOOD

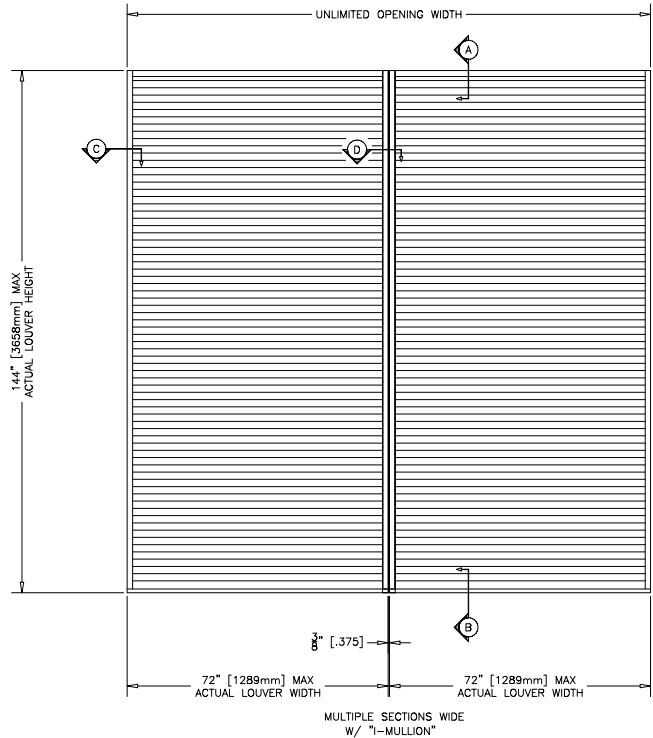
Florida Product Approval No: FL12941.1

Miami-Dade NOA No.: 09-0519.14

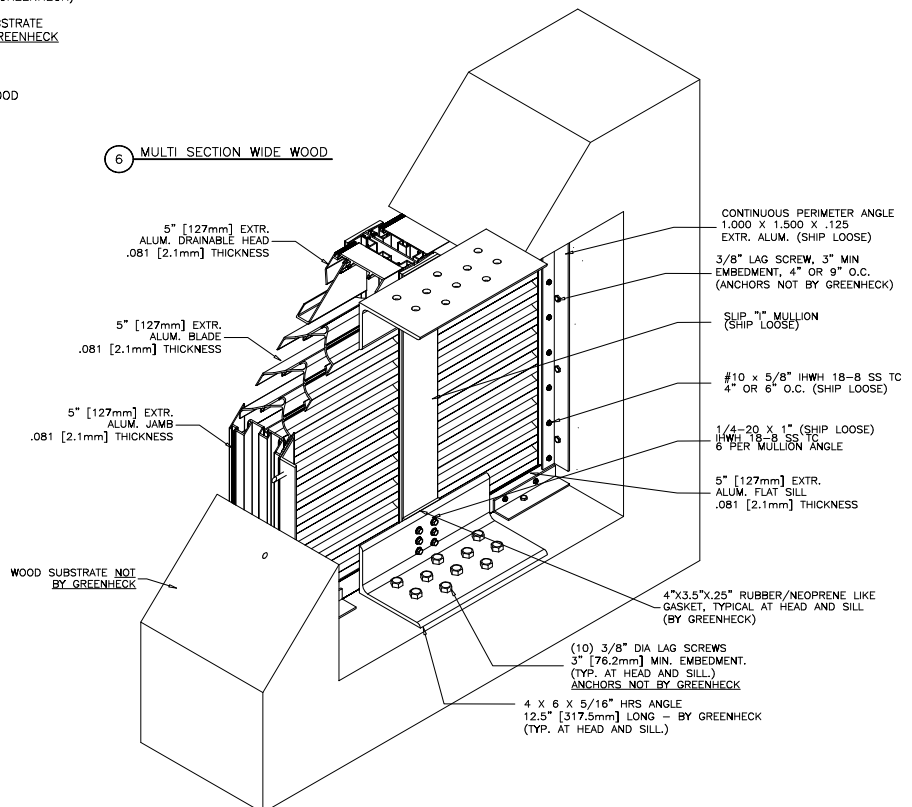
Maximum Wind-load: 110 PSF



*CONTINUOUS 1.00 X 1.50 PERIMETER ANGLE NOT SHOWN FOR CLARITY- REF TO DETAIL 6



6 MULTI SECTION WIDE WOOD



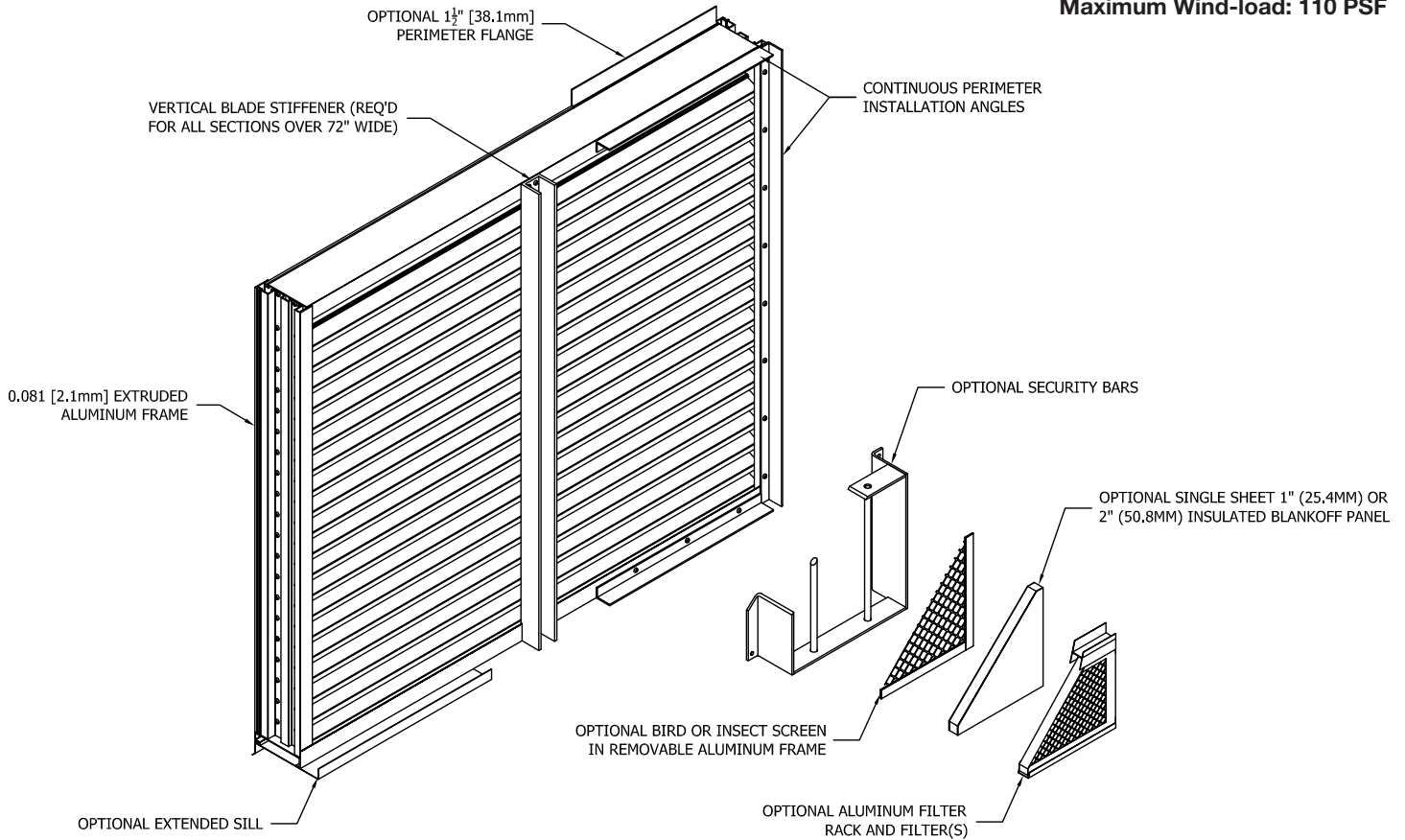
OPTION DRAWINGS

ESS-502D

Florida Product Approval No: FL12941.1

Miami-Dade NOA No.: 09-0519.14

Maximum Wind-load: 110 PSF



FINISHES

| Finish Type | Description/Application | Color Selection | Standard Warranty (Aluminum) |
|---|--|---|---|
| 2-coat 70% KYNAR 500®/HYLAR 5000® AAMA 2605 – Dry film thickness 1.2 mil. (AKA: Duranar®, Fluoropon®, Trinar®, Flouropolymer, Polyvinylidene Fluoride, PVDF2) | “Best.” The premier finish for extruded aluminum. Tough, long-lasting coating has superior color retention and abrasive properties. Resists chalking, fading, chemical abrasion and weathering. | Standard Colors: Any of the 24 standard colors shown can be furnished in 70% or 50% KYNAR 500®/HYLAR 5000® or Baked Enamel. 2-Coat Mica: Greenheck offers 9 standard 2-coat Mica colors. Other colors are available. Consult Greenheck for possible extra cost when selecting non-standard colors or special finishes. | 10 Years (Consult Greenheck for availability of extended warranty) |
| 2-coat 50% KYNAR 500®/HYLAR 5000® AAMA 2604 – Dry film thickness 1.2 mil. (AKA: Acroflur®, Acrynar®) | “Better.” Tough, long-lasting coating has excellent color retention and abrasive properties. Resists chalking, fading, chemical abrasion and weathering. | | 5 Years |
| Baked Enamel AAMA 2603 – Dry film thickness 0.8 mil. (AKA: Acrabond Plus®, Duracron®) | “Good.” Provides good adhesion and resistance to weathering, corrosion and chemical stain. | | 1 Year |
| Integral Color Anodize AA-M10C22A42 (>0.7 mil) | “Two-step” anodizing is produced by following the normal anodizing step with a second, colorfast process. | Light, Medium or Dark Bronze; Champagne; Black | 5 years |
| Clear Anodize 215 R-1 AA-M10C22A41 (>0.7 mil) | Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack. | Clear | 5 years |
| Clear Anodize 204 R-1 AA-M10C22A31 (0.4-0.7 mil) | Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack. | Clear | 1 Year |
| Industrial coatings | Greenheck offers a number of industrial coatings such as Hi-Pro Polyester, Epoxy, and Permatector®. Consult a Greenheck Product Specialist for complete color and application information. | | Consult Greenheck |
| Mill | Materials may be supplied in natural aluminum or galvanized steel finish when normal weathering is acceptable and there is no concern for color or color change. | | n/a |

Finishes meet or exceed AAMA 2605, AAMA 2604, and AAMA 2603 requirements. Please consult www.greenheck.com for complete information on standard and extended paint warranties. Paint finish warranties are not applicable to steel products.



ESS-502D

July 2009 Rev. 3

Copyright © 2009 Greenheck Fan Corporation

Greenheck Fan Corporation reserves the right to make product changes without notice.