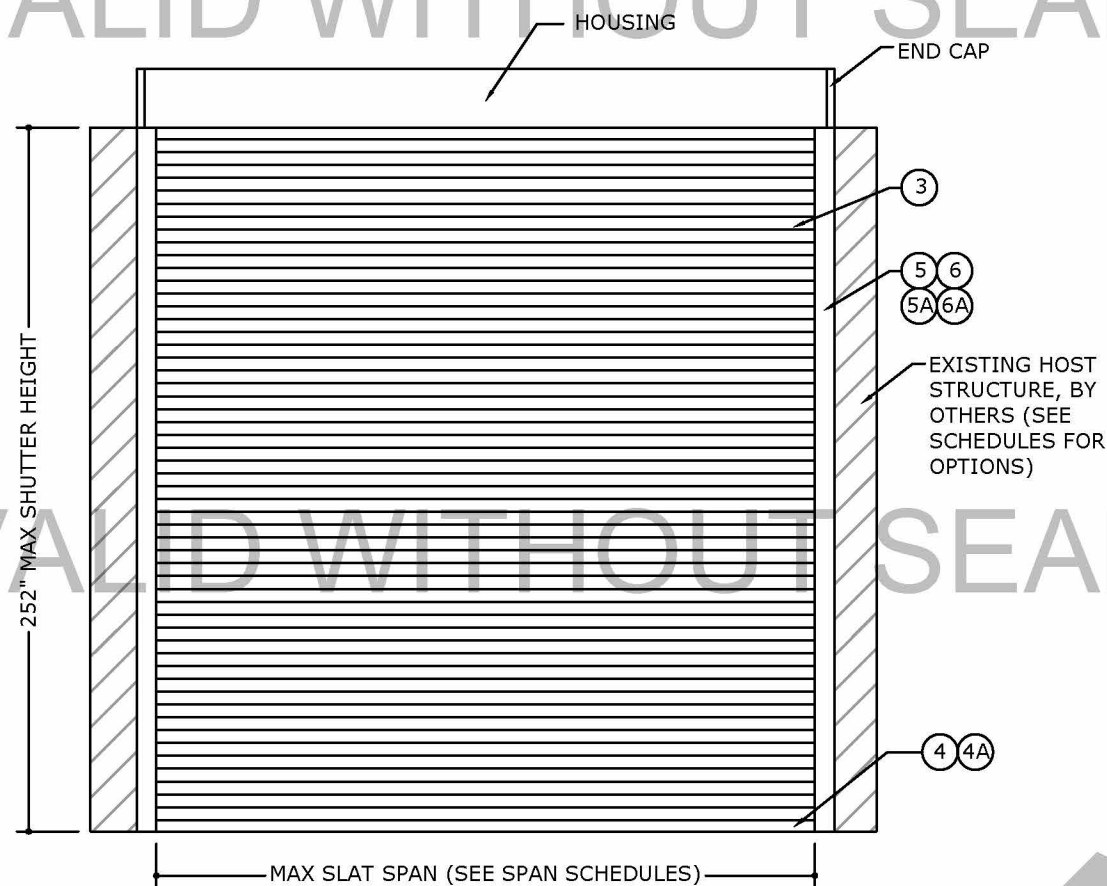


SINGLE WALL ROLL-UP HURRICANE SHUTTER



1 TYPICAL ROLL-UP SHUTTER
1 N.T.S. EXTERIOR ELEV
SEE REMAINING SHEETS FOR COMPLETE ELEVATION OPTIONS

VISIT ECALC.IO/31289

FOR ENGINEER CERTIFIED ORIGINALS
& MORE INFORMATION ABOUT THIS DOCUMENT
OR SCAN THE QR CODE TO THE RIGHT >

VISIT ENGINEERINGEXPRESS.COM/EASTERN
FOR ADDITIONAL PLANS, REPORTS & RESOURCES



GENERAL NOTES

1. THE SYSTEM DESCRIBED HEREIN HAS BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE, FOR USE INSIDE AND OUTSIDE OUTSIDE THE HIGH VELOCITY HURRICANE ZONE, PER ASTM E330, E1886, AND E1996 AND TAS 201, 202 & 203 STANDARDS. SEE PRODUCT APPROVAL EVALUATION FOR ADDITIONAL INFORMATION.
2. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM. WIND LOAD DURATION FACTOR $C_d=1.6$ HAS BEEN USED FOR WOOD ANCHOR DESIGN.
3. POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED PER SEPARATE ENGINEERING IN ACCORDANCE WITH THE GOVERNING CODE. PRESSURE REQUIREMENTS AS DETERMINED IN ACCORDANCE WITH ASCE 7 AND CHAPTER 1609 OF THE FLORIDA BUILDING CODE SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE ASD DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.
4. DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR.

SINGLE WALL SLATS ③

SLAT SPAN SCHEDULE	
SLAT SPAN	ALLOWABLE DESIGN PRESSURE
76.5"	± 150.0 PSF
80.0"	± 143.1 PSF
83.5"	± 137.0 PSF
87.0"	± 131.7 PSF
90.5"	± 127.0 PSF
94.0"	± 122.7 PSF
97.5"	± 118.9 PSF
101.0"	± 115.5 PSF
104.5"	± 112.3 PSF
108.0"	± 109.4 PSF
111.5"	± 106.8 PSF
115.0"	± 104.3 PSF
118.5"	± 102.1 PSF
121.9"	± 100.0 PSF
134.0"	± 94.4 PSF
146.0"	± 88.9 PSF
158.0"	± 83.4 PSF
170.0"	± 77.9 PSF
182.0"	± 72.4 PSF
194.0"	± 66.8 PSF
206.0"	± 61.3 PSF
218.0"	± 55.8 PSF
230.0"	± 50.3 PSF
241.5"	± 45.0 PSF

GLASS SEPARATION SCHEDULE

SLAT SPAN	INSTALLATIONS ≤ 30' ABOVE GRADE	INSTALLATIONS > 30' ABOVE GRADE
76.5"	5.8"	4.9"
80.0"	7.0"	5.0"
83.5"	7.0"	5.2"
87.0"	7.0"	5.3"
90.5"	7.0"	5.5"
94.0"	7.0"	5.6"
97.5"	7.0"	5.8"
101.0"	7.0"	6.0"
104.5"	7.0"	6.1"
108.0"	7.2"	6.3"
111.5"	7.5"	6.6"
115.0"	7.7"	6.8"
118.5"	8.0"	7.1"
121.9"	8.3"	7.4"
134.0"	10.1"	7.5"
146.0"	10.1"	7.6"
158.0"	10.1"	7.7"
170.0"	10.1"	7.8"
182.0"	10.1"	7.9"
194.0"	10.1"	8.0"
206.0"	10.1"	8.1"
218.0"	10.1"	8.2"
230.0"	10.1"	8.3"
241.5"	10.1"	8.3"

SPAN SCHEDULE NOTES:

- SLAT SPAN IS DEFINED AS THE DISTANCE BETWEEN RAILS FOR SINGLE SPAN ASSEMBLIES.
- LINEAR INTERPOLATION BETWEEN SHUTTER SPANS IS NOT PERMITTED. FOR SPANS BETWEEN THOSE INDICATED ABOVE, THE DESIGN PRESSURES FOR THE NEXT HIGHER SPAN SHALL BE USED.
- FOR INSTALLATIONS TO WOOD FRAMING HOST, SEE SPAN CHARTS TO WOOD FRAMING (SHEET 4)

GLASS SEPARATION NOTES:

- SLAT SPAN IS DEFINED AS THE DISTANCE BETWEEN RAILS FOR SINGLE SPAN ASSEMBLIES
- SEPARATION FROM GLAZING IS REQUIRED **ONLY** IN ASTM ESSENTIAL FACILITIES AND WIND ZONE 4.
- LINEAR INTERPOLATION BETWEEN SHUTTER SPANS IS NOT PERMITTED. FOR SPANS BETWEEN THOSE INDICATED ABOVE, THE SEPARATION FROM GLASS FOR THE NEXT HIGHER SPAN SHALL BE USED.

5. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
6. ROLL-UP MECHANISM AND HOOD ASSEMBLY ARE NOT PART OF THIS APPROVAL.
7. THIS DOCUMENT CONTAINS INFORMATION RELEVANT TO THE NECESSARY STRUCTURAL REQUIREMENTS OF THE SYSTEM INSTALLATION. COMPONENTS AND FASTENERS NOT REFERENCED WHICH ARE PART OF THE INTERNAL FABRICATION OF THE SPECIFIED SYSTEMS OR ASSEMBLIES SHALL BE PER MANUFACTURER PUBLISHED SPECIFICATIONS.
8. THE STRUCTURAL ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS BY THIS SYSTEM SHALL BE VERIFIED BY OTHERS.

9. ALL EXTRUSIONS SHALL BE MINIMUM 6063-T6 ALUMINUM ALLOY, UNLESS NOTED OTHERWISE.
10. EACH SHUTTER ASSEMBLY SHALL BEAR A PERMANENT LABEL ON THE BOTTOM OF THE HOOD FACING THE EXTERIOR, OR ANYWHERE ELSE ALLOWED PER SECTION 1709.9.3 OF THE FBC 2017 WITH THE FOLLOWING MINIMUM INFORMATION:
AMERICAN SHUTTER SYSTEMS ASSOC., INC.
WEST PALM BEACH, FL
MISSILE LEVEL D - ASTM E1886, E1996 & E330 - TAS 201, 202 & 203
FLORIDA PRODUCT APPROVAL NUMBER
11. ALL BOLTS & WASHERS SHALL BE ZINC COATED STEEL, GALVANIZED STEEL, OR STAINLESS STEEL WITH A MINIMUM TENSILE YIELD STRENGTH OF 60 KSI. ALL ALUMINUM 3/16"Ø OR 1/4"Ø POP RIVETS SHALL BE 7075-T6 OR STRONGER.
12. ALL STEEL IN CONTACT WITH ALUMINUM SHALL BE PAINTED OR PLATED AS PRESCRIBED IN THE ABOVE-NOTED BUILDING CODE.

09/16/2020

FL#31658.1

ENGINEERING EXPRESS
CORPORATE OFFICE:
160 SW 12th AVE, SUITE 106
DEERFIELD BEACH, FL 33442
(954) 354-0660 | (866) 396-9999
TEAM@ENGINEERINGEXPRESS.COM
ENGINEERINGEXPRESS.COM

EASTERN METAL SUPPLY

4268 WESTROADS DR
WEST PALM BEACH, FL
(800) 432-2204

SINGLE WALL ROLL-UP HURRICANE SHUTTER

PRODUCT APPROVAL #FL31658.1

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	GD	RWN	2/4/2020
2018 IBC UPDATE	JC	RWN	09/13/20

THIS DOCUMENT IS THE PROPERTY OF ENGINEERING EXPRESS, AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF ENGINEERING EXPRESS. ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION.

COPYRIGHT ENGINEERING EXPRESS®

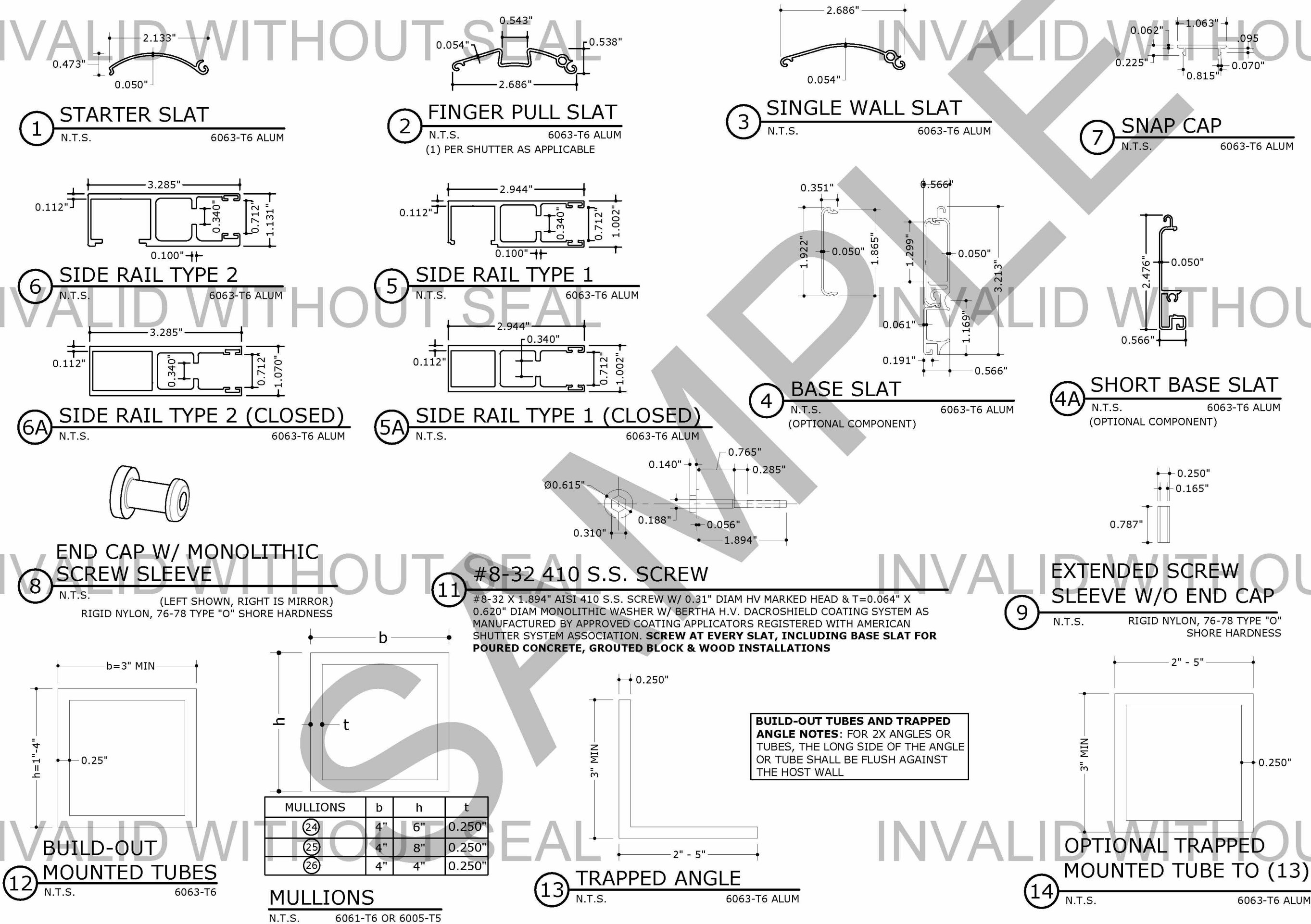
20-31289

SCALE: NTS UNLESS NOTED

1

13

C:\Users\Jonathan\Engineering\Express\Production - Documents\Projects\20-31289 EMS Approval Conversion to IBCWVP\Single Wall Roll Shutter\20-31289a-FL31658.1.dwg
09/16/2020 - 10:22pm Jonathan



09/16/2020
FL#31658.1

ENGINEERING EXPRESS
CORPORATE OFFICE:
160 SW 12th AVE, SUITE 106
DEERFIELD BEACH, FL 33442
(954) 354-0660 | (866) 396-9999
TEAM@ENGINEERINGEXPRESS.COM
ENGINEERINGEXPRESS.COM

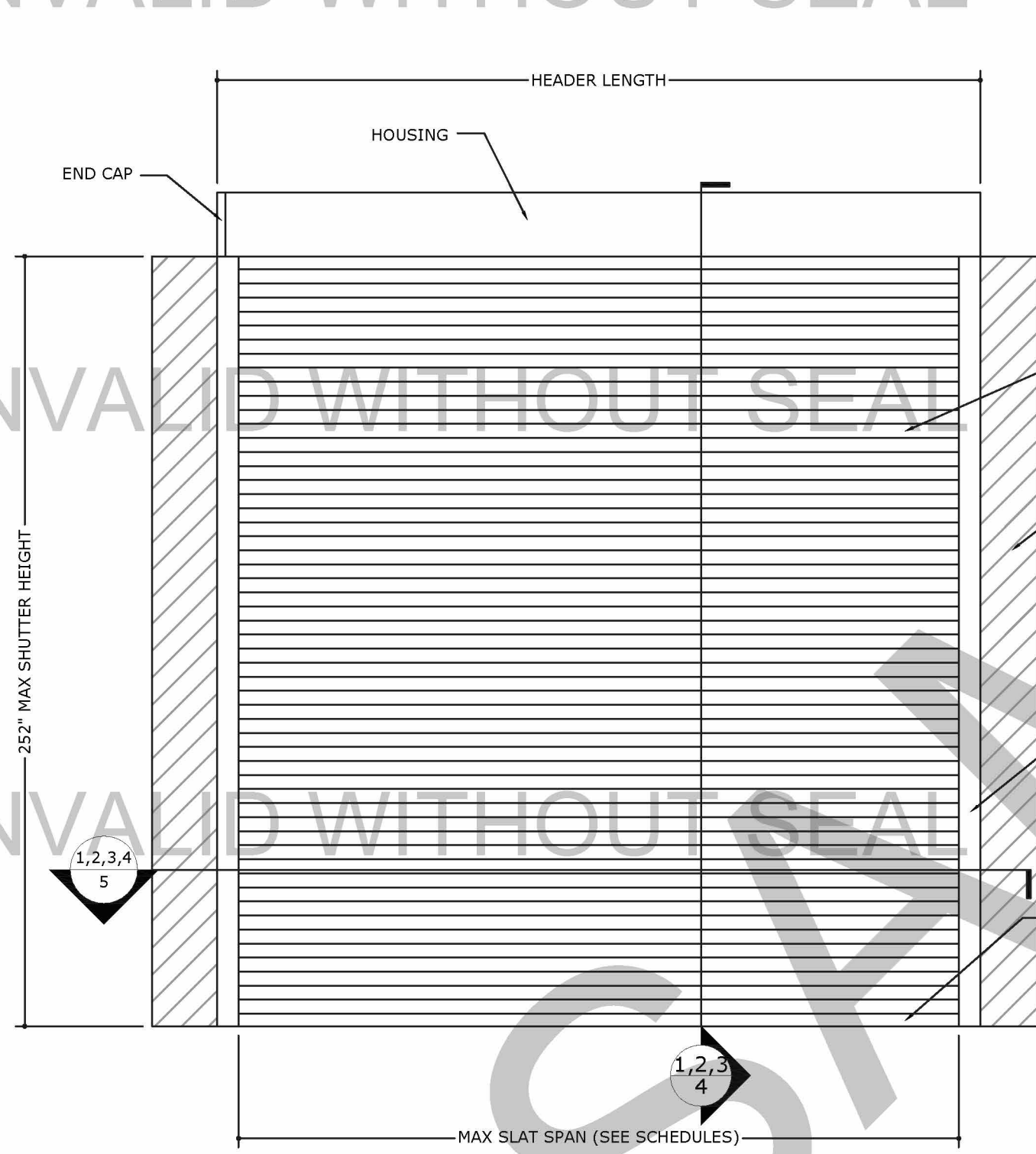
EASTERN METAL SUPPLY
4268 WESTROADS DR
WEST PALM BEACH, FL
(800) 432-2204
SINGLE WALL ROLL-UP HURRICANE SHUTTER
PRODUCT APPROVAL #FL31658.1

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	GD	RWN	2/4/2020
2018 IBC UPDATE	JC	RWN	09/13/20

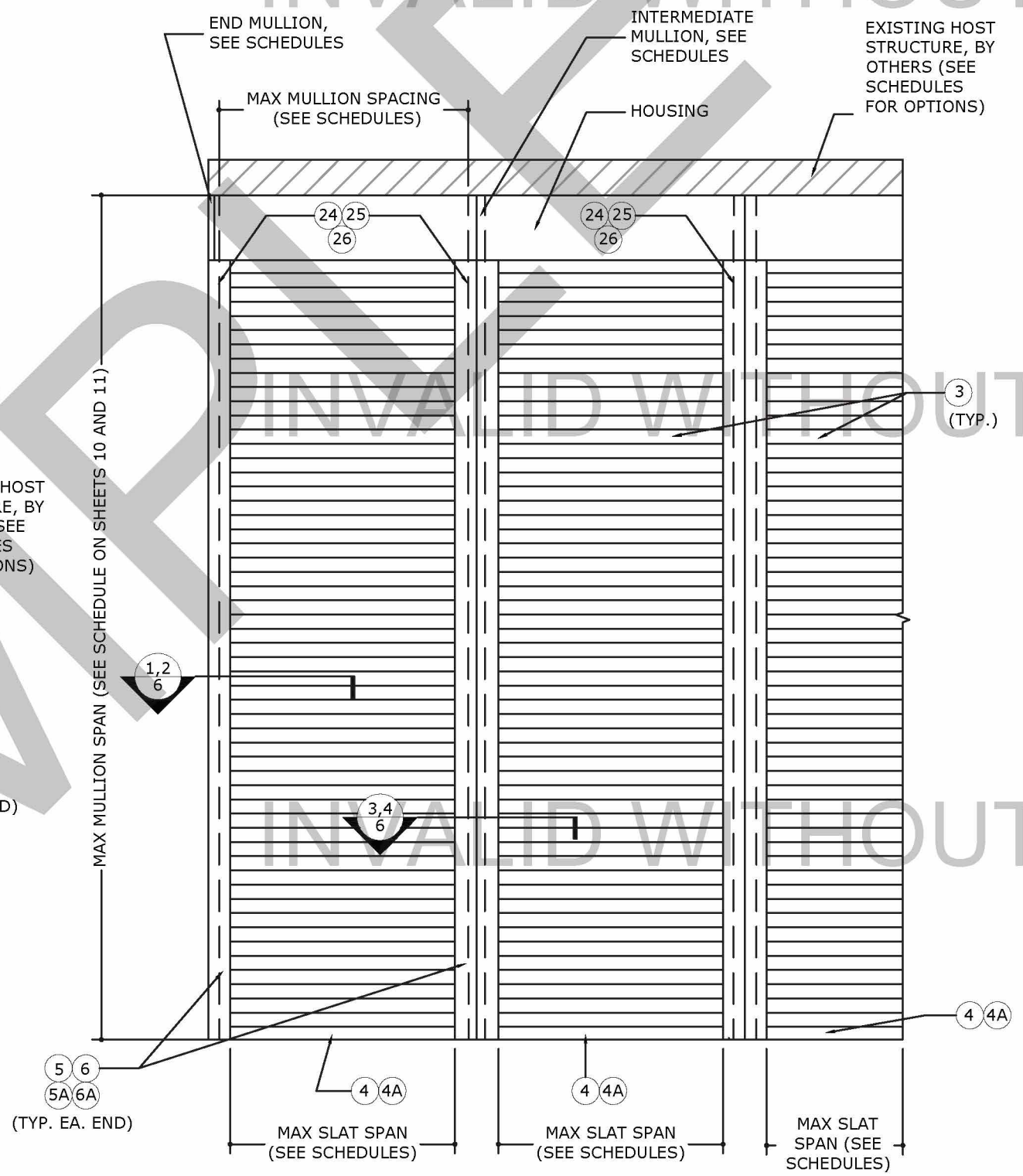
THIS DOCUMENT IS THE PROPERTY OF ENGINEERING EXPRESS, AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF ENGINEERING EXPRESS. ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION.

COPYRIGHT ENGINEERING EXPRESS®
20-31289
SCALE: NTS UNLESS NOTED
2
13

C:\Users\Jonathan\Engineering\Express\Production - Documents\Projects\20-31289 EMS Approval Conversion to IBCWVP\Single Wall Roll Shutter\20-31289a-FL31658.1.dwg
09/16/2020 - 10:22pm Jonathan



1
3
TYPICAL SINGLE UNIT
ELEVATION W/O MULLIONS
N.T.S. EXTERIOR ELEV



2
3
TYPICAL CONSECUTIVE SINGLE
UNIT ELEVATION WITH MULLIONS
N.T.S. EXTERIOR ELEV

09/16/2020

FL#31658.1

ENGINEERING EXPRESS
CORPORATE OFFICE:
160 SW 12th AVE, SUITE 106
DEERFIELD BEACH, FL 33442
(954) 354-0660 | (866) 396-9999
TEAM@ENGINEERINGEXPRESS.COM
ENGINEERINGEXPRESS.COM

EASTERN METAL SUPPLY
4268 WESTROADS DR
WEST PALM BEACH, FL
(800) 432-2204
SINGLE WALL ROLL-UP HURRICANE SHUTTER
PRODUCT APPROVAL #FL31658.1

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	GD	RWN	2/4/2020
2018 IBC UPDATE	JC	RWN	09/13/20

THIS DOCUMENT IS THE PROPERTY OF ENGINEERING EXPRESS, AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF ENGINEERING EXPRESS. ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION.

COPYRIGHT ENGINEERING EXPRESS®
20-31289
SCALE: NTS UNLESS NOTED