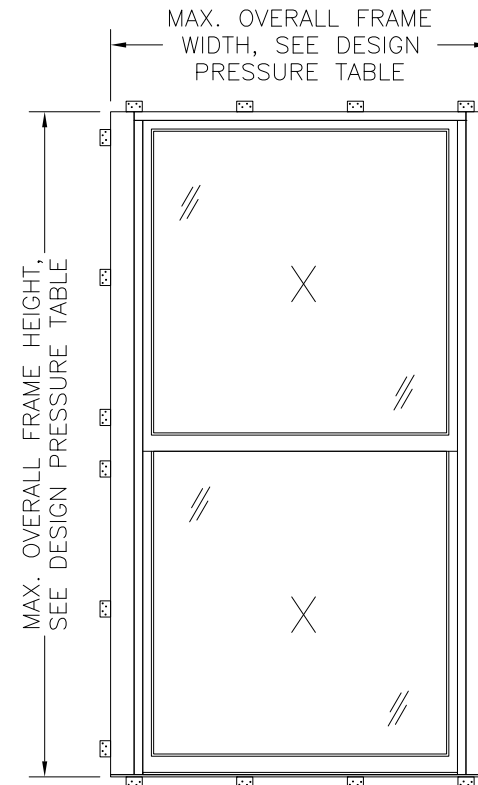


SERIES 4000
DOUBLE HUNG WINDOW – WEIGHT AND CHAIN – "IMPACT"
BY OWW LLC

GENERAL NOTES

1. This product has been evaluated and is in compliance with the 8th Edition (2023) Florida Building Code (FBC) structural requirements including the "High Velocity Hurricane Zone" (HVHZ).
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment to base materials shall be beyond wall dressing or stucco. All anchors used shall be of a material or have a coating compatible with pressure treated wood if used, and all other window materials.
3. When used in the "HVHZ" this product complies with Section 1626 of the FBC and does not require an impact resistant covering.
4. The opening substrate materials (framing, masonry, bucks) are by others and must be properly designed and installed to transfer superimposed loads to the structure. For 2X stud framing construction, anchoring of these units shall be the same as that shown for 2X buck masonry construction. Wood bucks over masonry, if used, shall be pressure treated, with either a treatment or coating compatible with this product and anchors.
5. All window frame wood to be Specific Gravity of 0.55 min. (Sapele or similar).
6. Site conditions that deviate from the details of this drawing require further engineering analysis by a licensed engineer or registered architect.

This product has been laboratory tested to meet the water infiltration requirements for "HVHZ." Sealing and flashing strategies for overall water infiltration resistance of the field-installed product shall be the responsibility of others and are not addressed by this document.



DESIGN PRESSURE TABLE

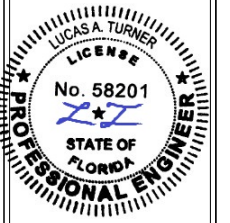
MAX. OVERALL FRAME SIZE	MAX. D.L.O. SIZE	GLASS TYPE	DESIGN PRESSURE RATING
56-3/8" X 111-3/8"	43" X 50-1/2"	A	+/-50 PSF
		B	+60/-65 PSF
47" X 78-1/2"	32-3/4" X 34"	A	+/-50 PSF
		B, C	+60/-65 PSF

TABLE 1. QUALIFIED ANCHOR INFORMATION

ID	SUBSTRATE	ANCHOR	MIN. EMBEDMENT	MIN. EDGE DISTANCE
A	SOLID UNCRACKED CONCRETE (3050 PSI MIN.)	1/4" DEWALT COATED CARBON STEEL ULTRACON+	1 3/8"	1"
B	GROUT-FILLED CMU (ASTM C-90) (JAMBS ONLY)	1/4" DEWALT COATED CARBON STEEL ULTRACON+	1 3/4"	2 1/2"
C	SOLID UNCRACKED CONCRETE (2000 PSI MIN.)	1/4" ITW COATED CARBON STEEL TAPCON W/ ADVANCED THREADFORM	1 1/2"	1 1/2"
D	HOLLOW CMU (117 PCF MIN.) (JAMBS ONLY)	1/4" ITW COATED CARBON STEEL TAPCON W/ ADVANCED THREADFORM	1"	2"
E	CONCRETE (3000 PSI MIN)	1/4" HILTI COATED CARBON STEEL KWIK-CON+	1"	2 1/2"
F	HOLLOW OR GROUT-FILLED CMU (ASTM C-90) (JAMBS ONLY)	1/4" HILTI COATED CARBON STEEL KWIK-CON+	1"	2 1/2"
G	2x MIN. SOUTHERN PINE WOOD (G=0.55 MIN)	#12 GRADE 5 WOOD SCREW	1 1/2"	1"
H	16 GAUGE (0.060") MIN. STEEL STUD (33 KSI YIELD MIN.) OR 1/8" MIN. ALUMINUM (6063-T5 MIN.)	#14 ITW TEKS SELF-DRILLING SCREW	FULL + 3 THREADS	1/2"

TABLE OF CONTENTS

SHEET #	DESCRIPTION
1	Typical elevation, design pressures & general notes
2	Elevations & glass builds
3	Horizontal and vertical sections
4	Horizontal and vertical sections
5	Horizontal and vertical sections
6	Frame details
7	Frame details
8	Buck and frame anchoring
9	Buck and frame anchoring
10	Components (47" X 78.5" Frame)
11	Components (56.375" X 111.375" Frame)
12	Bill of materials and glazing details



10/18/2023

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OWW LLC

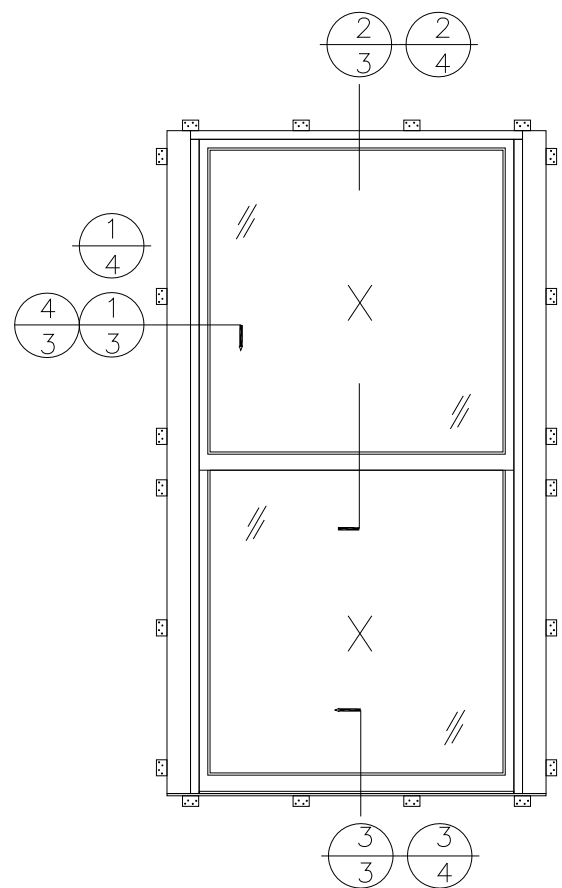
3001 Tuxedo Ave., West Palm Beach, Fl. 33405
Ph. 561-478-7233 Fax 561-478-7858

Product: SERIES 4000
DOUBLE HUNG WEIGHT AND CHAIN WINDOW

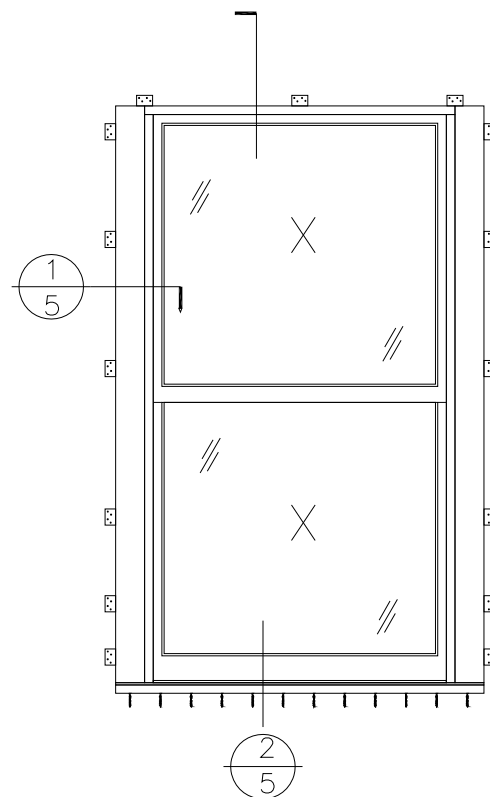
TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

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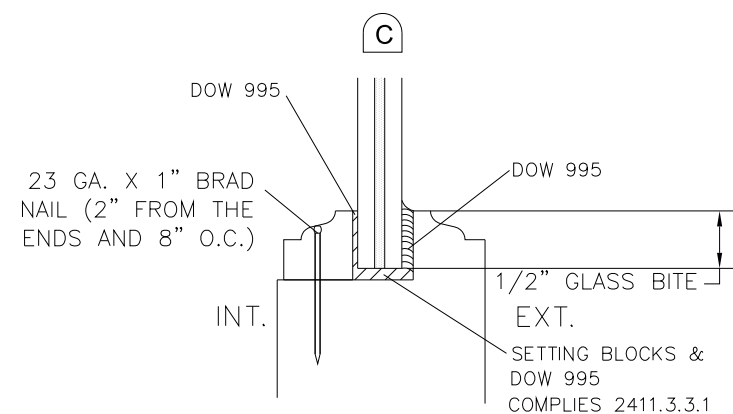
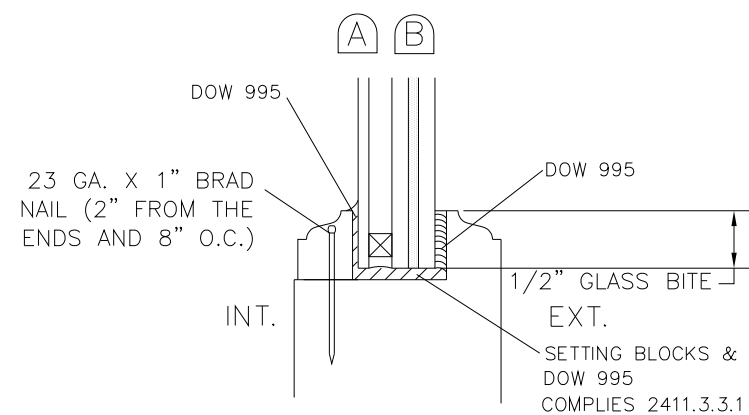
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FL34941.2
Sheet No.
1D OF 12



56.375" X 111.375" FRAME



47.0" X 78.5" FRAME



GLASS TYPES AND STRUCTURE

- A** 15/16" (NOM.) LAMINATED INSULATING GLASS
 3/16" ANNEALED OR TEMPERED INT. LITE /
 1/4" AIR SPACE WITH ALUMINUM SPACER /
 3/16" ANNEALED
 .090" INTERLAYER: SAFLEX HP BY
 EASTMAN CHEMICAL COMPANY /
 3/16" ANNEALED
- B** 15/16" (NOM.) LAMINATED INSULATING GLASS
 3/16" ANNEALED OR TEMPERED INT. LITE /
 1/4" AIR SPACE WITH ALUMINUM SPACER /
 3/16" ANNEALED
 .090" INTERLAYER: SENTRYGLAS BY KURARAY /
 3/16" ANNEALED
- C** 7/16" (NOM.) STORM GLASS
 3/16" HEAT STRENGTHENED /
 .075" INTERLAYER: SAFLEX CP BY
 EASTMAN CHEMICAL COMPANY /
 3/16" HEAT STRENGTHENED



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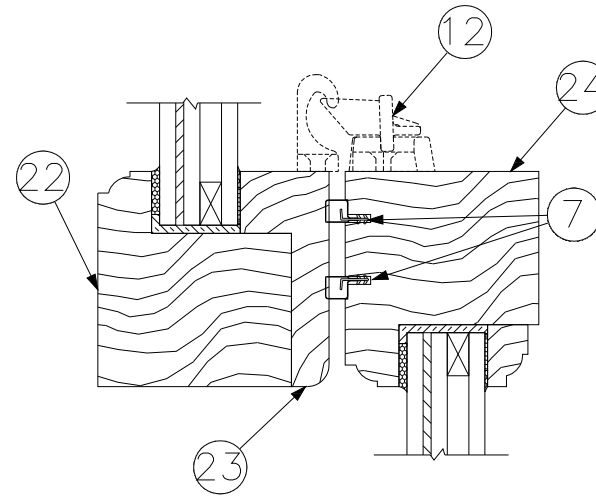
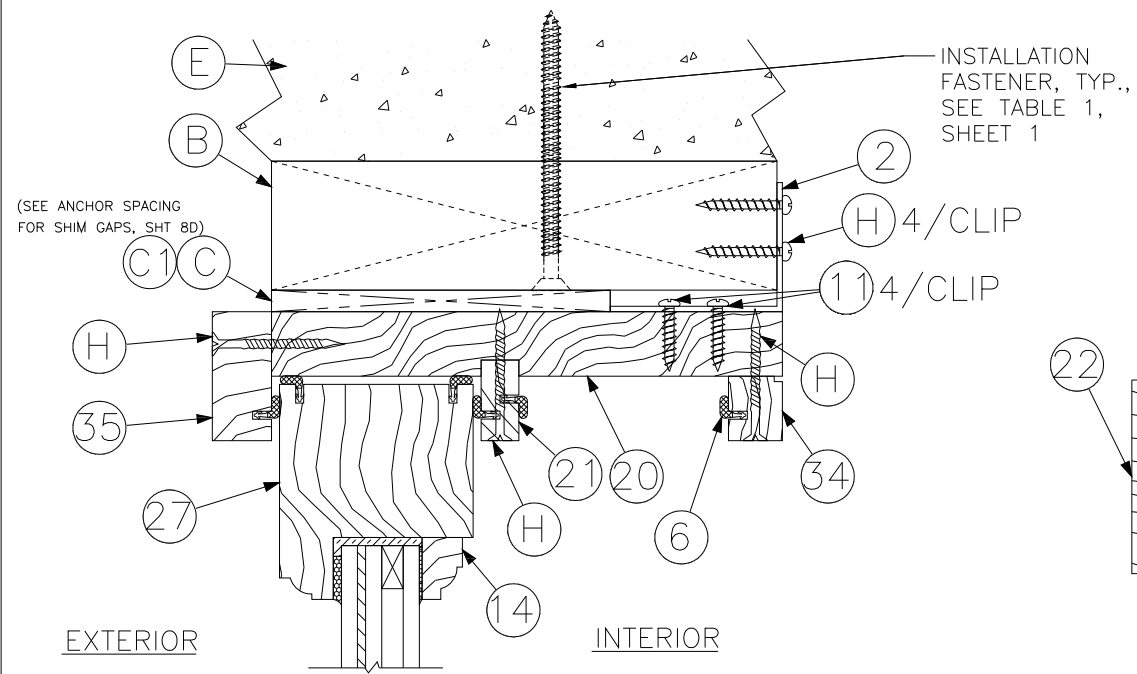
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 DOUBLE HUNG WEIGHT AND CHAIN WINDOW
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ELEVATIONS & GLASS BUILDS

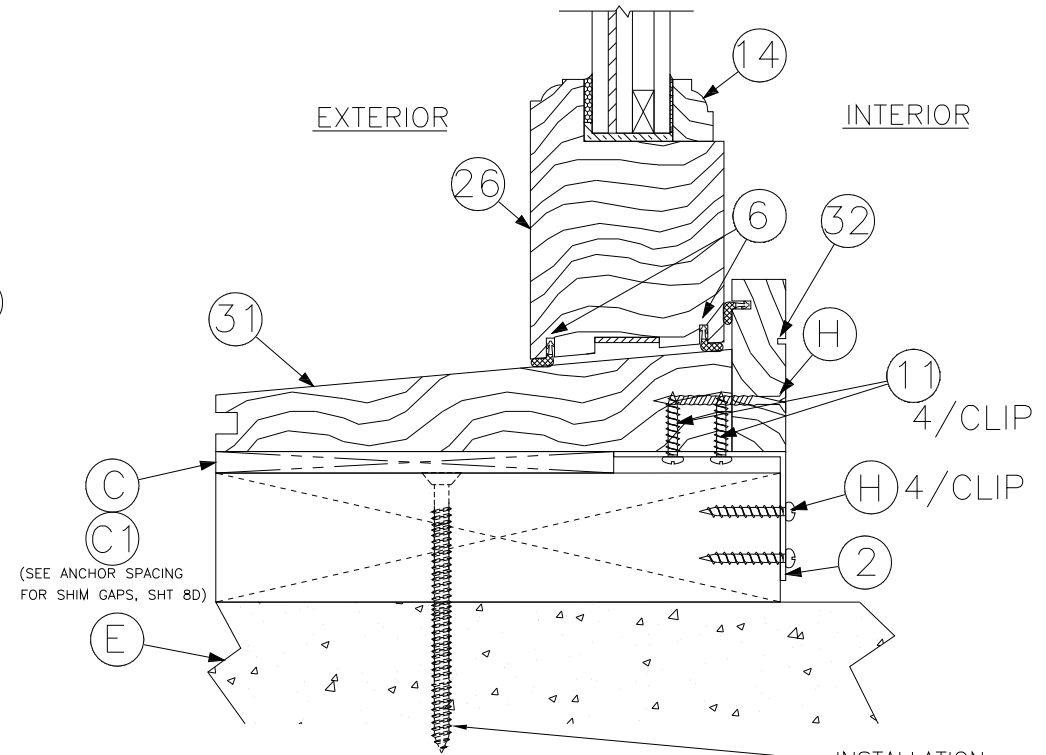
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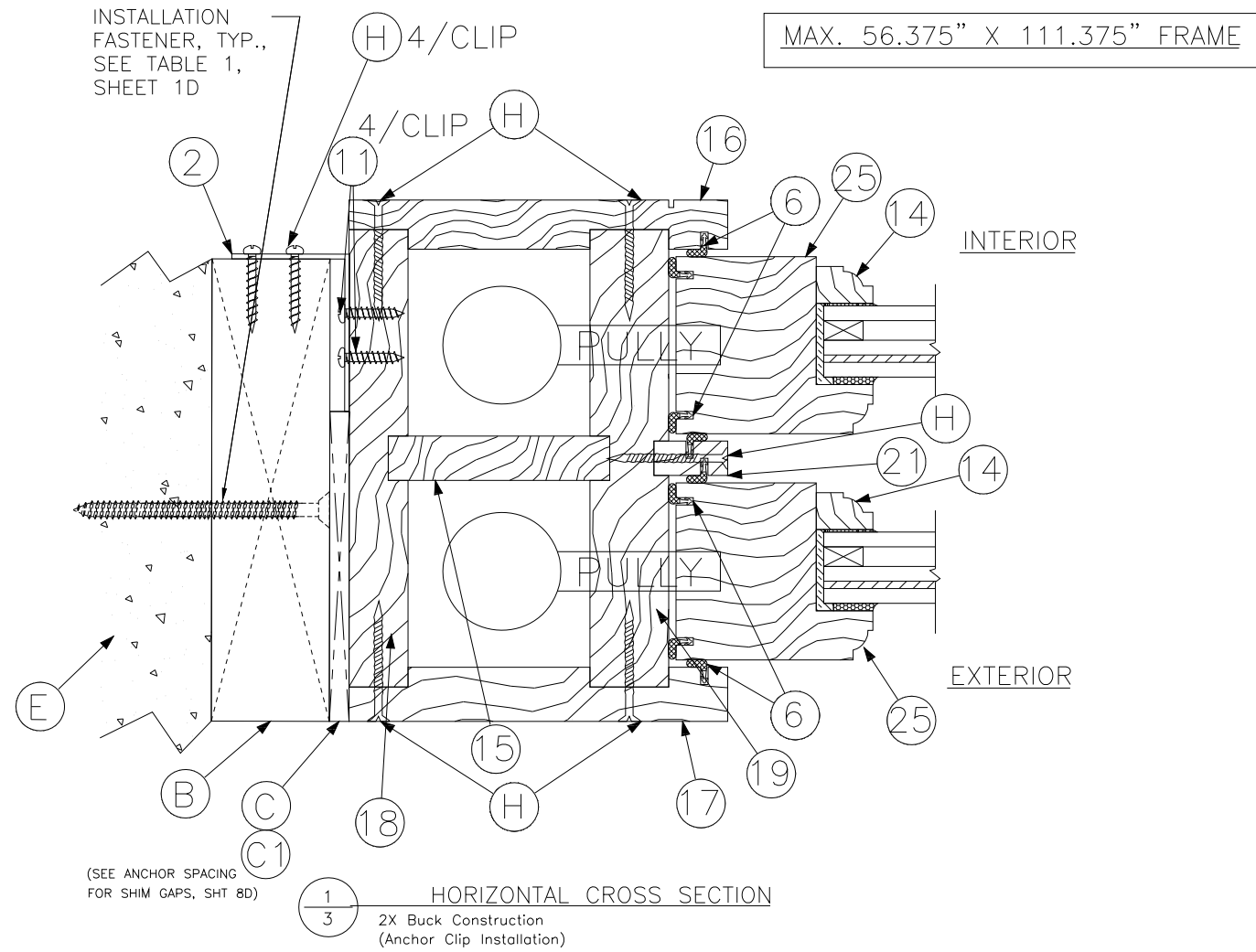
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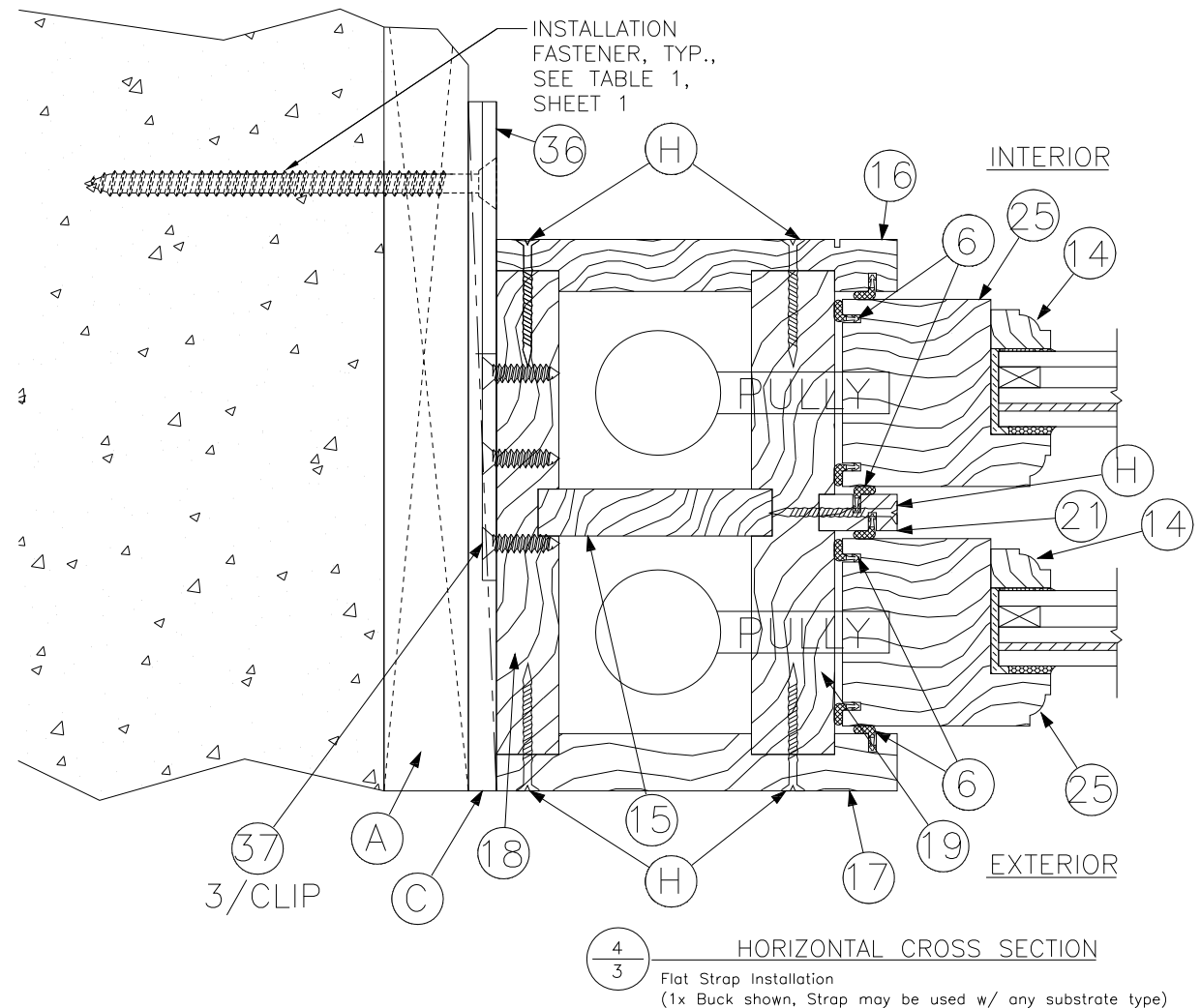
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2X Buck Construction
(Anchor Clip Installation)



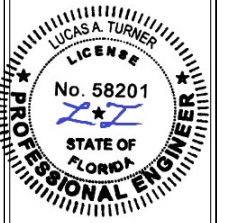
3
3
VERTICAL CROSS SECTION
2X Buck Construction
(Anchor Clip Installation)



1
3
HORIZONTAL CROSS SECTION
2X Buck Construction
(Anchor Clip Installation)



4
3
HORIZONTAL CROSS SECTION
Flat Strap Installation
(1x Buck shown, Strap may be used w/ any substrate type)



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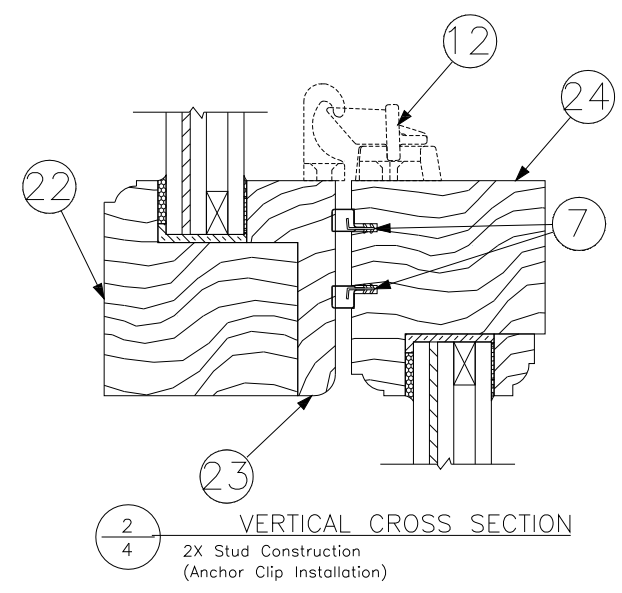
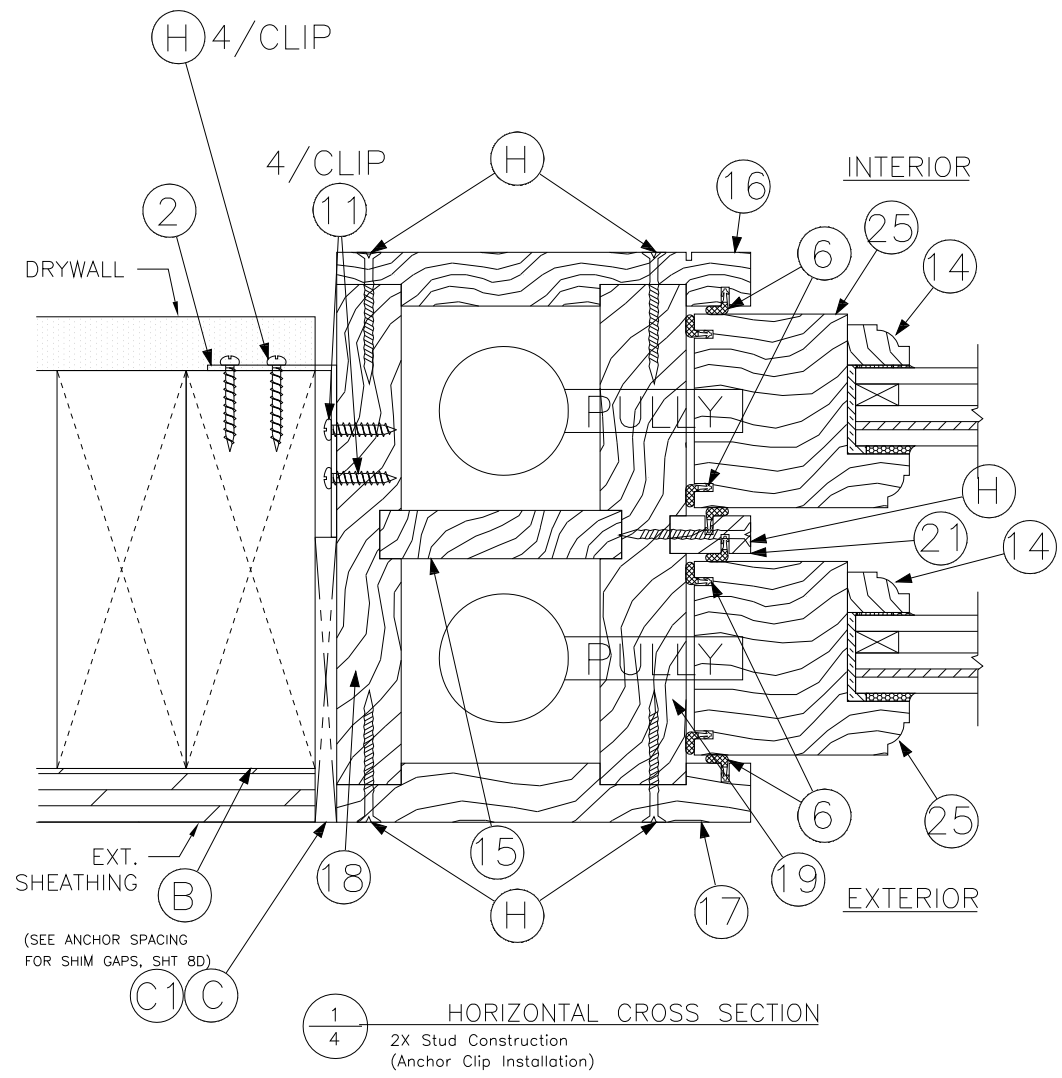
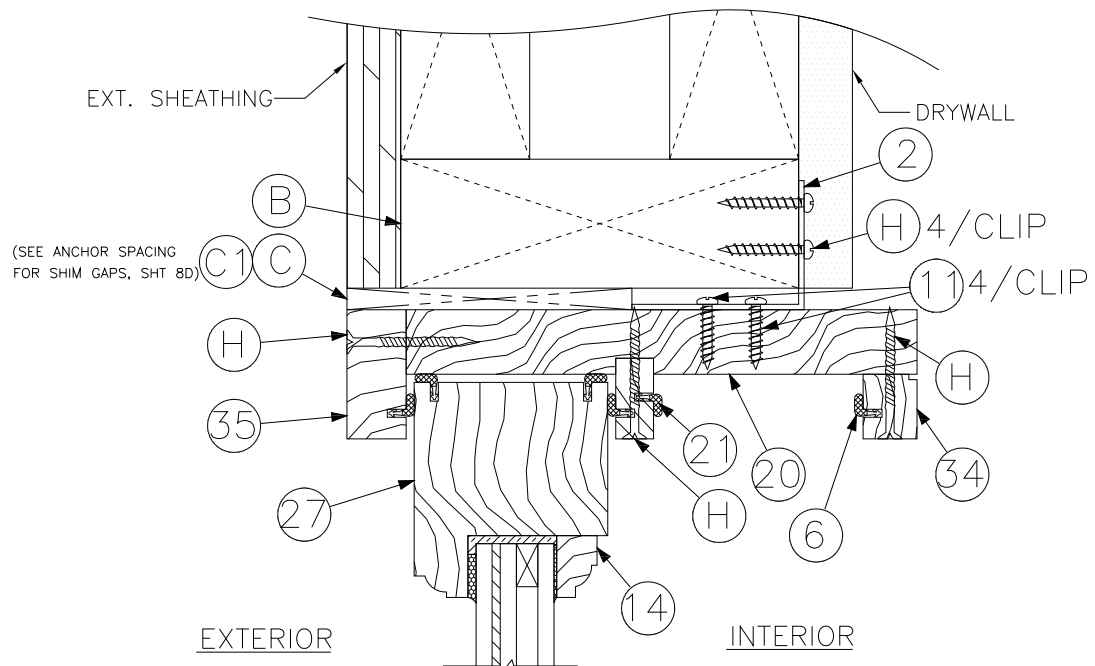
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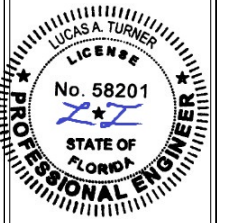
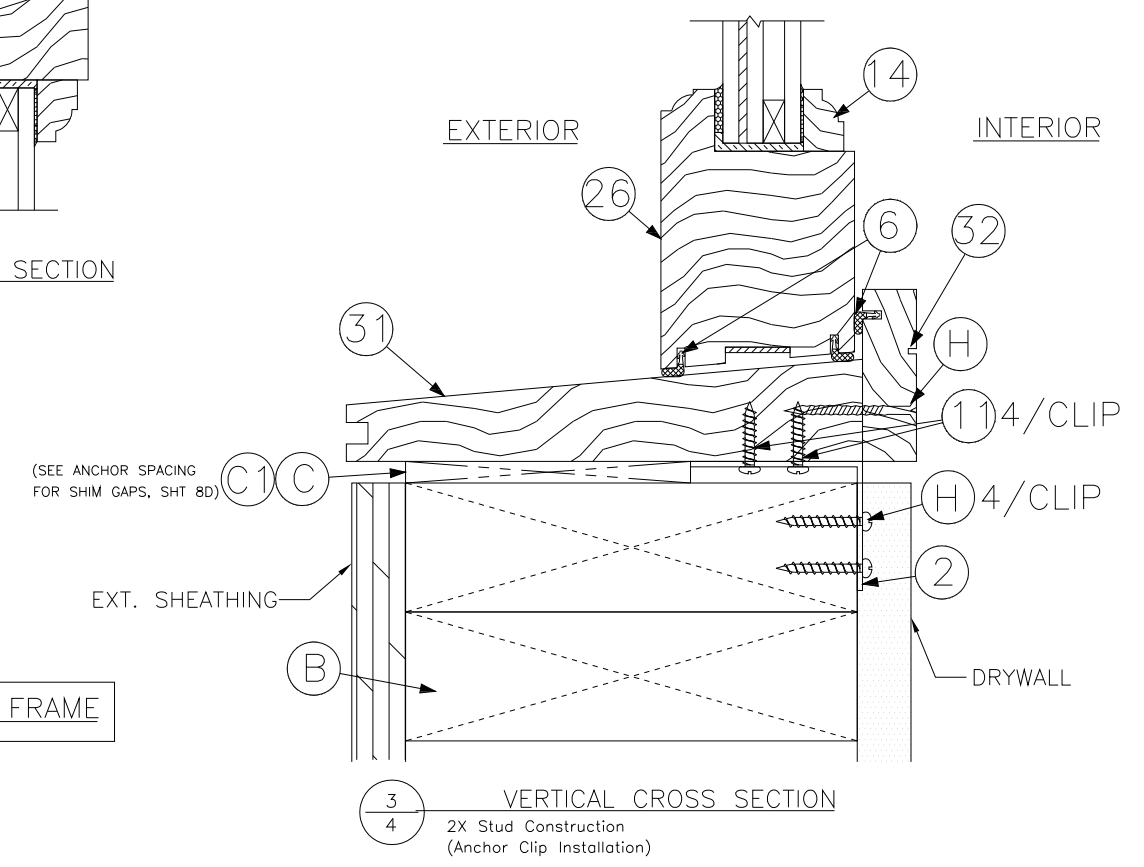
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DOUBLE HUNG WEIGHT AND CHAIN WINDOW
Date: 05-07-14
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FL34941.2
Sheet No.
3D OF 12



MAX. 56.375" X 111.375" FRAME



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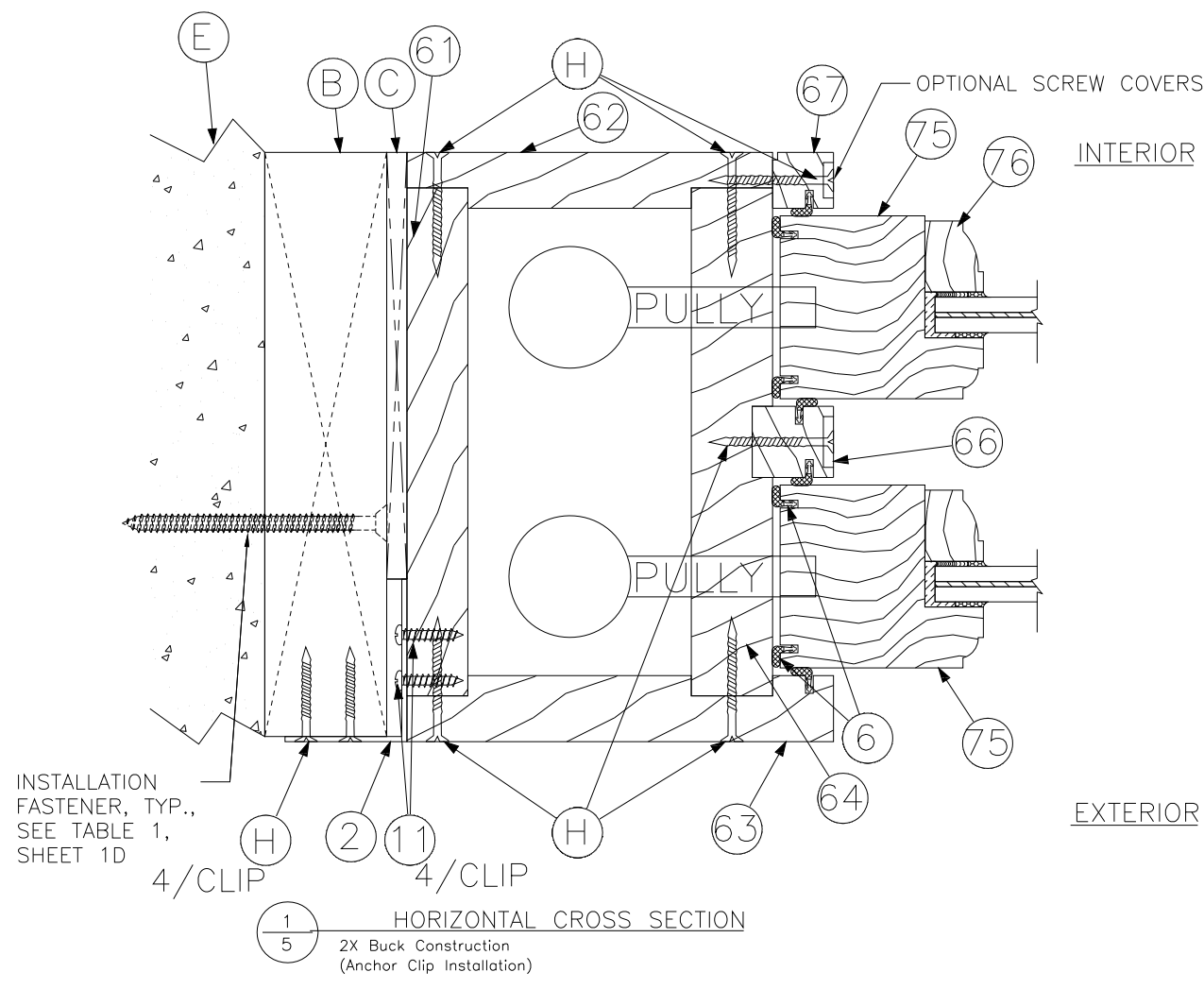
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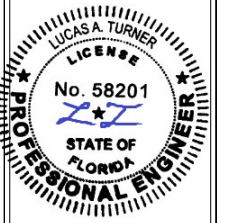
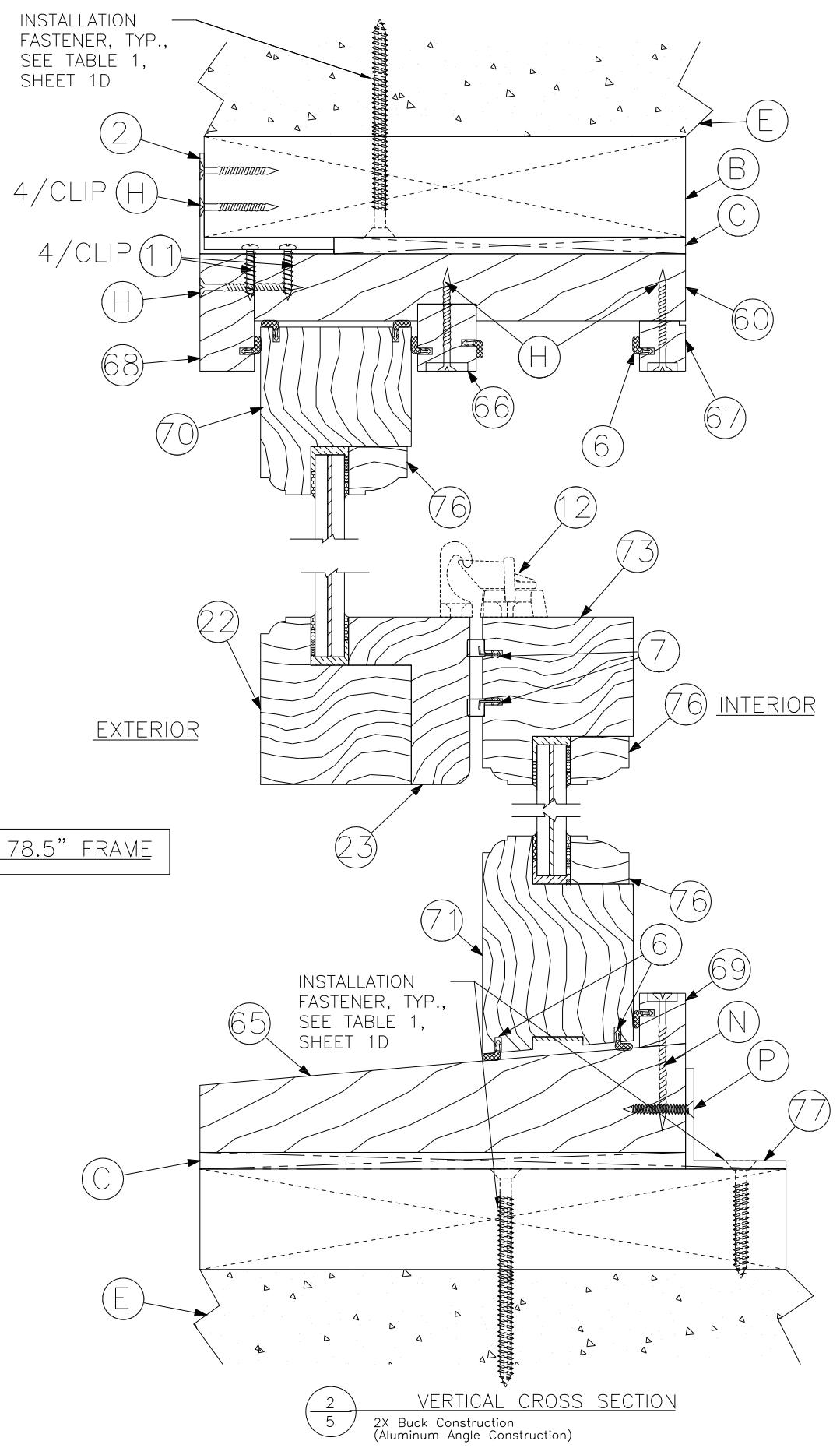
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FL34941.2
Sheet No.
4D OF 12



MAX. 47.0" X 78.5" FRAME



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HORIZONTAL AND VERTICAL
CROSS SECTIONS

Product:
SERIES 4000
DOUBLE HUNG WEIGHT AND CHAIN WINDOW

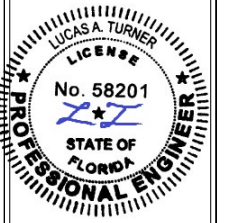
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Sheet No.
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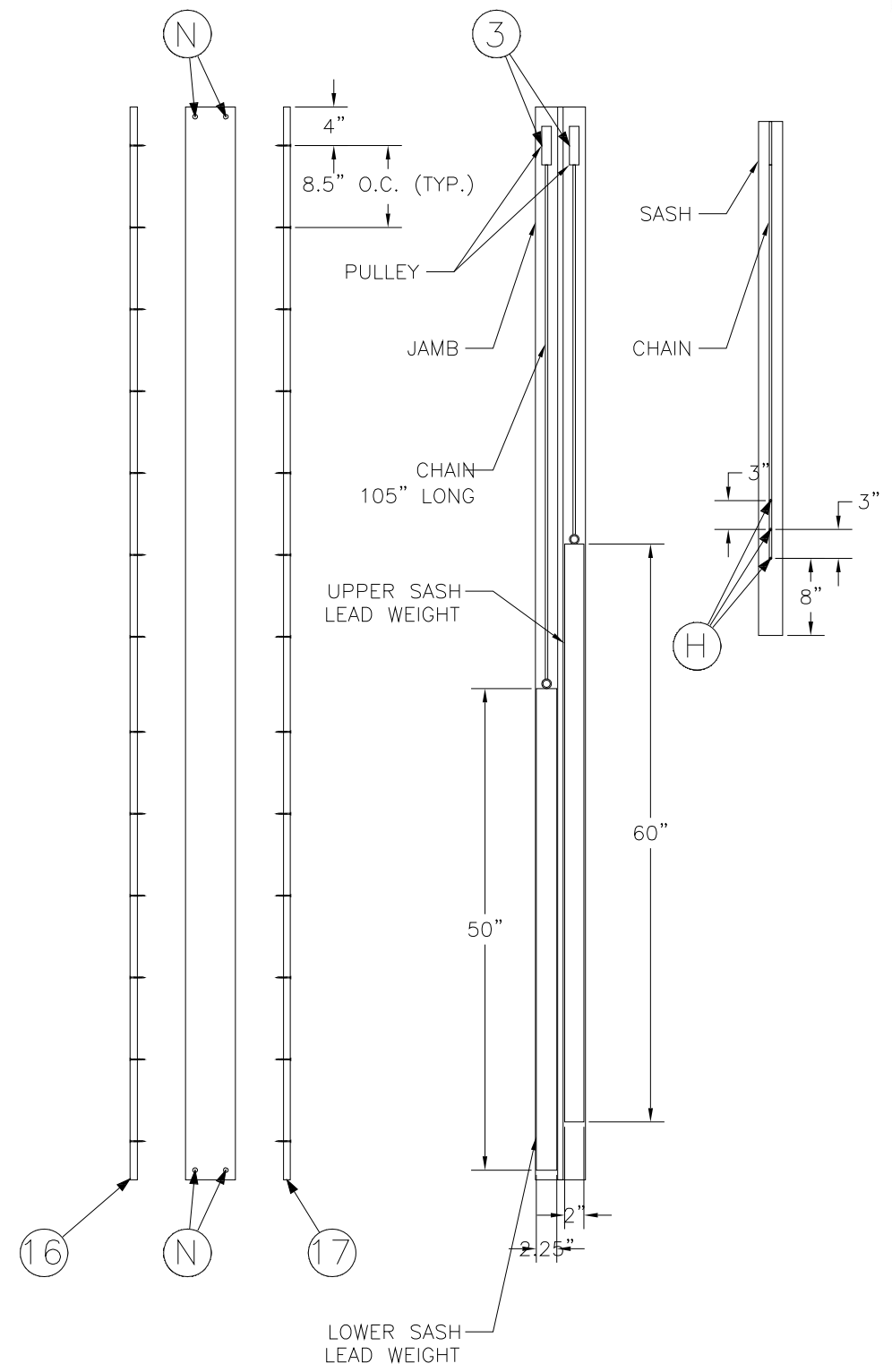
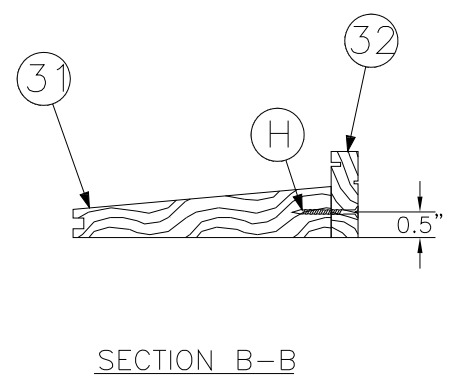
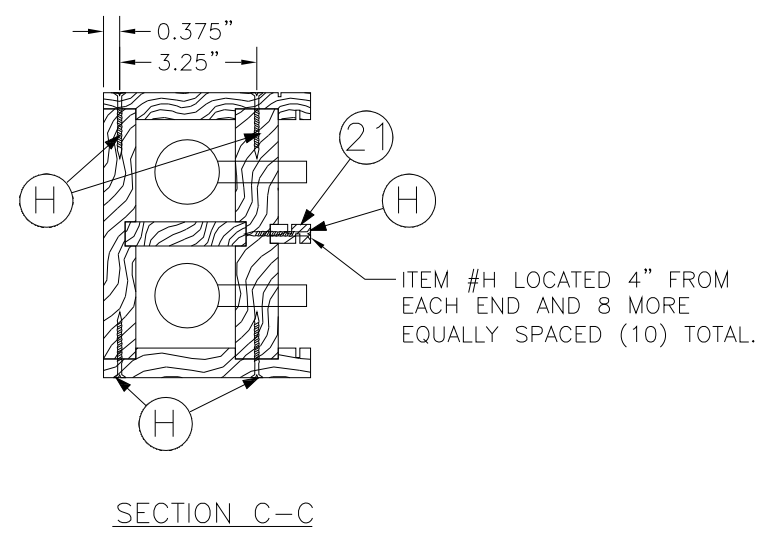
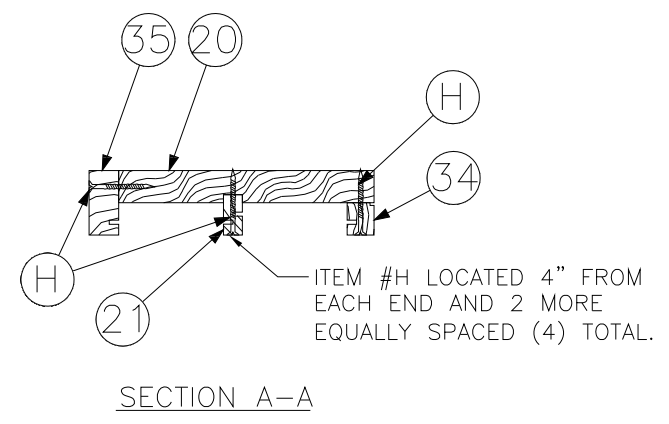
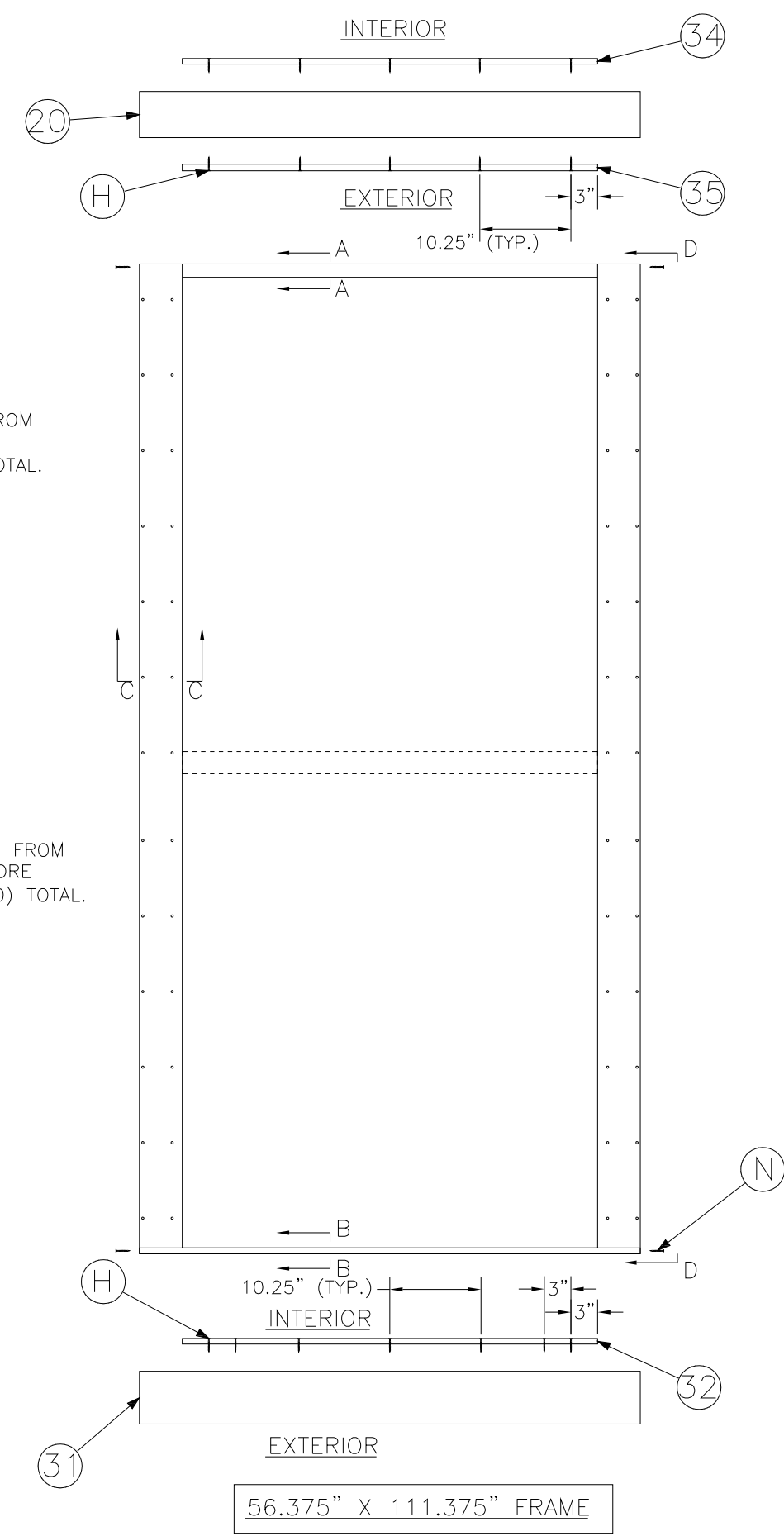
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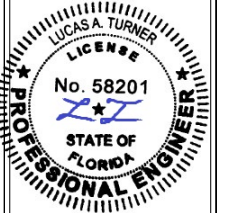
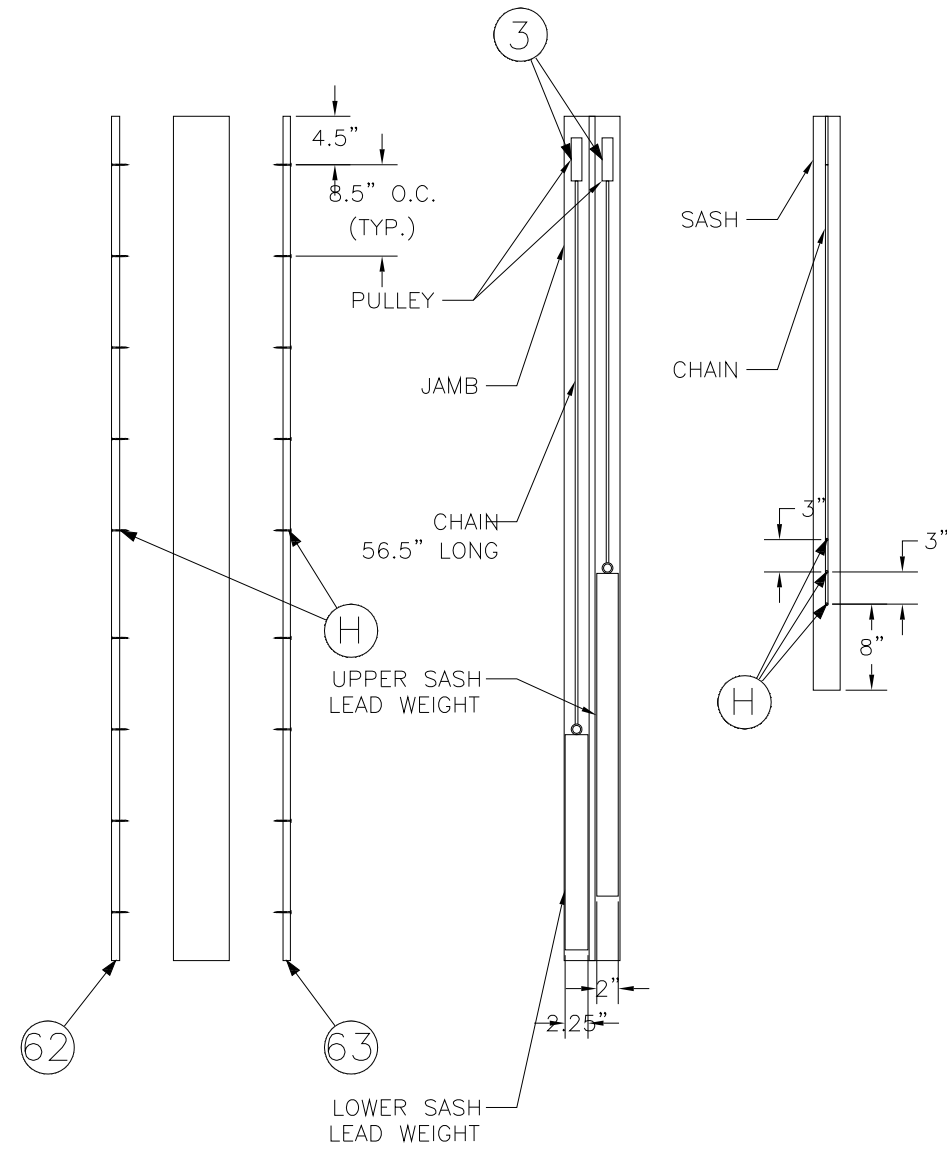
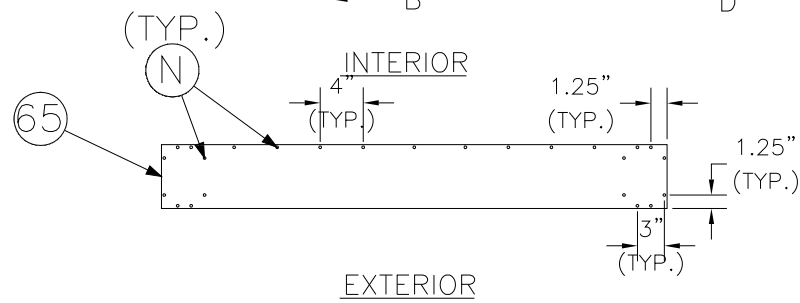
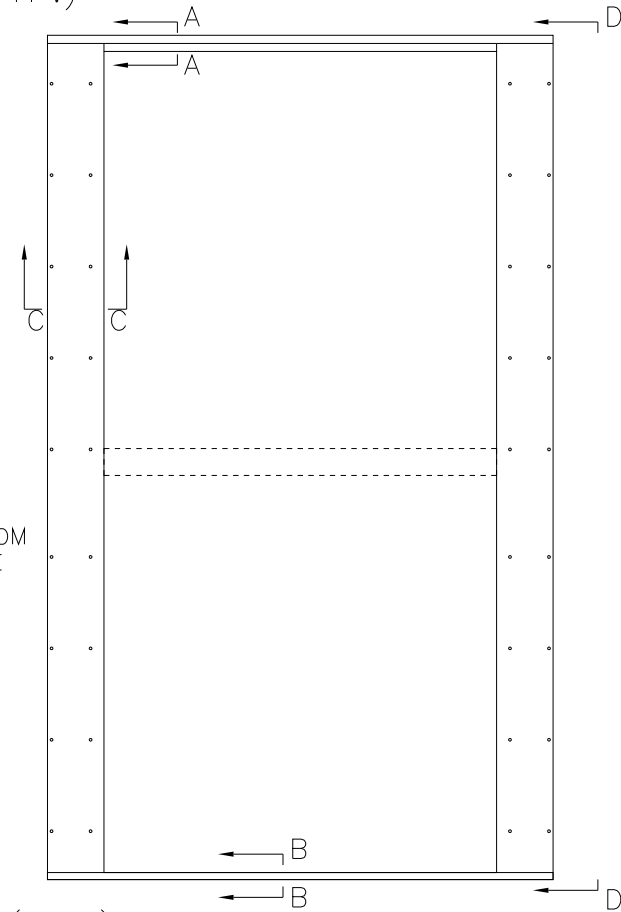
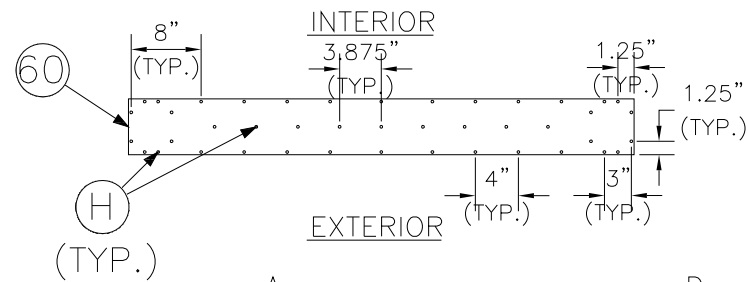
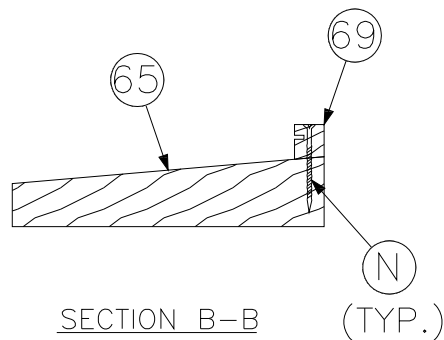
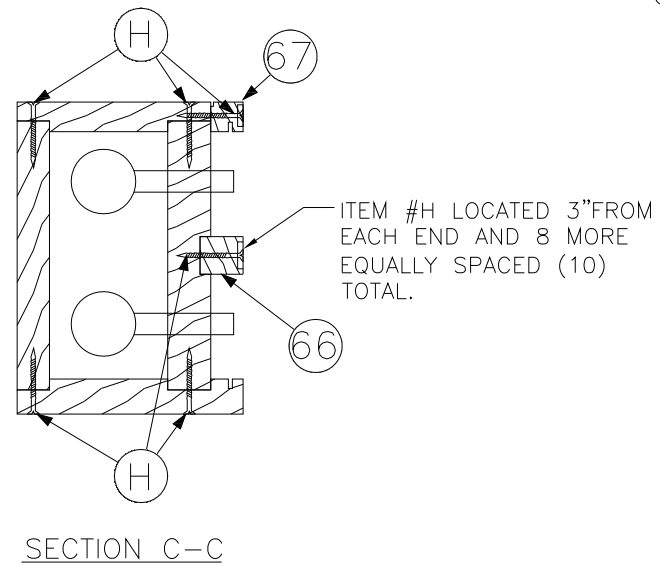
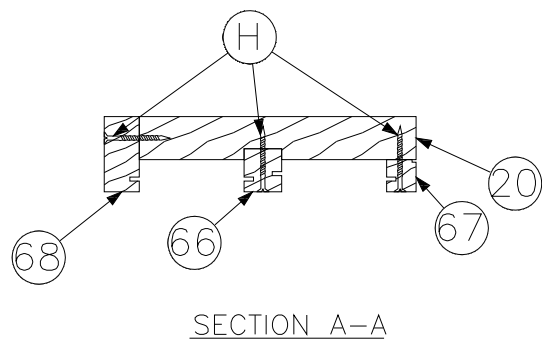
Product: SERIES 4000
 DOUBLE HUNG WEIGHT AND CHAIN WINDOW

FRAME DETAILS

Date: 05-07-14
 Scale: None
 Drawn: JDS

Dwg: DH-WC
 FL34941.2
 Sheet No.
 6D OF 12





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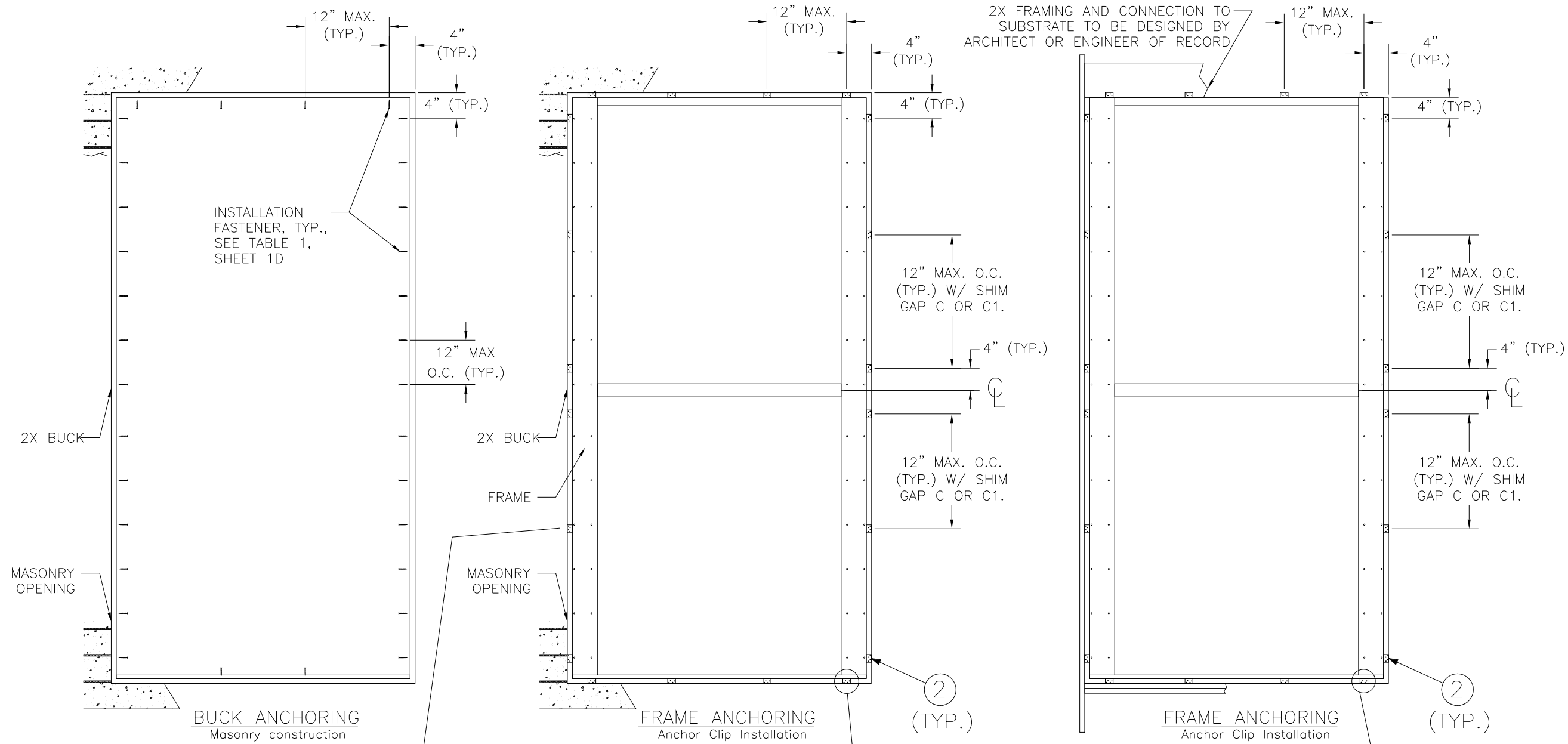
OWW LLC
3001 Tuwedo Ave., West Palm Beach, FL 33405
Ph. 561-478-7233 Fax 561-478-7858

Product: SERIES 4000
DOUBLE HUNG WEIGHT AND CHAIN WINDOW

FRAME DETAILS

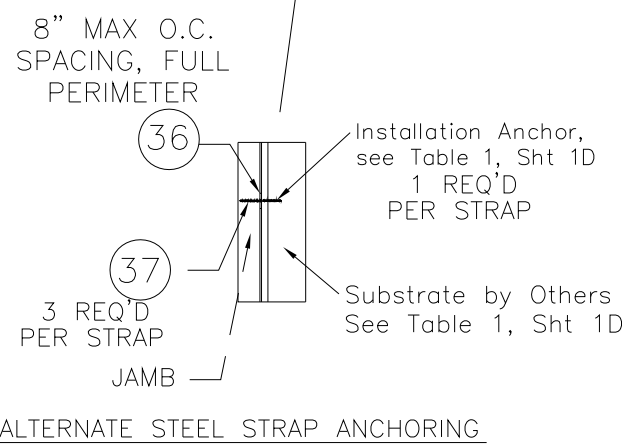
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FL34941.2
Sheet No.
7D OF 12

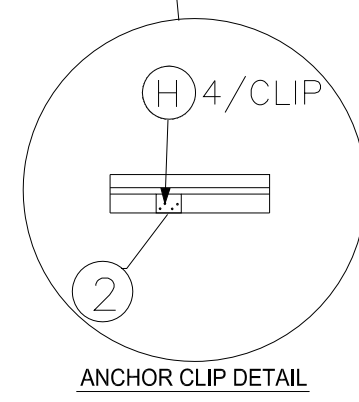


2X FRAMING AND CONNECTION TO SUBSTRATE TO BE DESIGNED BY ARCHITECT OR ENGINEER OF RECORD

NOTE: STAGGER ANCHORS AS NEEDED TO ENSURE 4" MIN. SEPARATION BETWEEN ANY TWO BUCK AND/OR FLAT STRAP ANCHORS, WHILE NOT EXCEEDING MAX. ANCHOR SPACINGS NOTED IN DETAILS (MAY NEED ADDITIONAL FASTENERS).

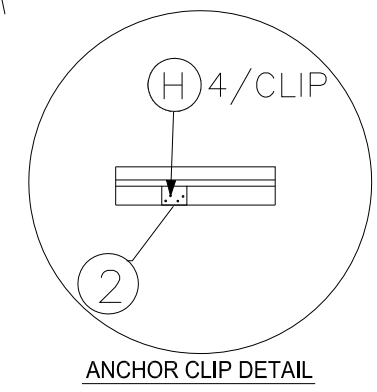


ALTERNATE STEEL STRAP ANCHORING

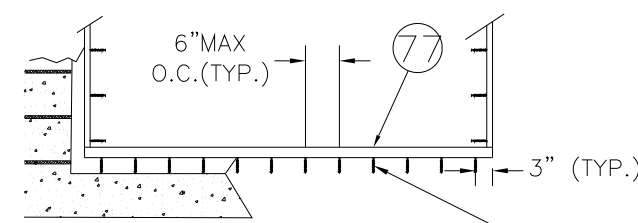


ANCHOR CLIP DETAIL

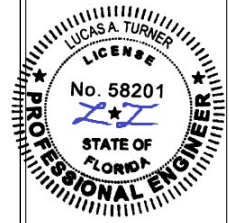
MAX. 56.375" X 111.375" FRAME



ANCHOR CLIP DETAIL



ALTERNATE ALUMINUM SILL ANCHORING
INSTALLATION FASTENER, TYP., SEE TABLE 1, SHEET 1D



10/18/2023

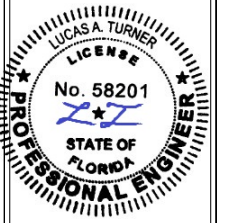
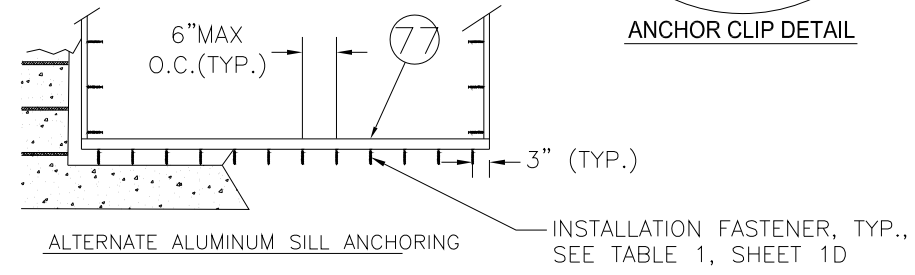
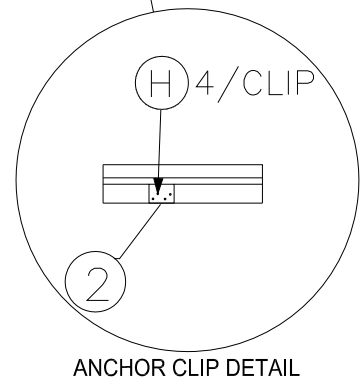
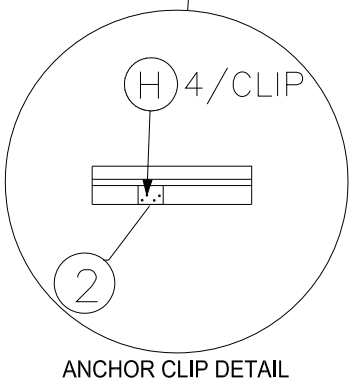
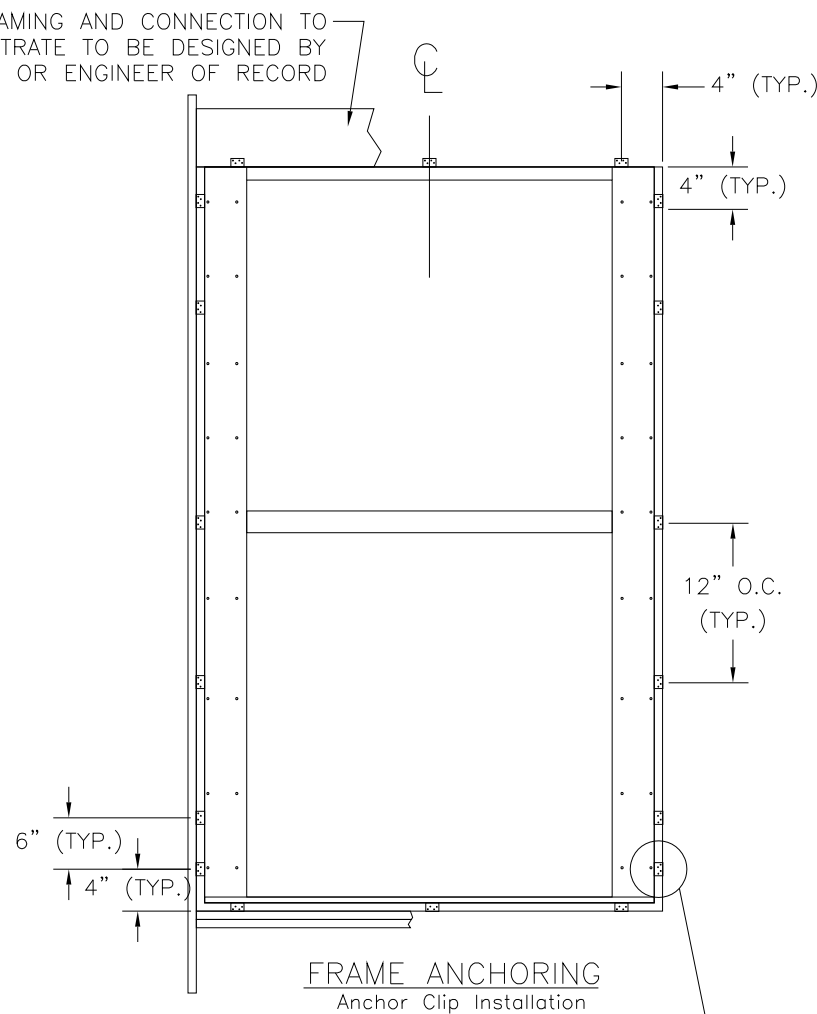
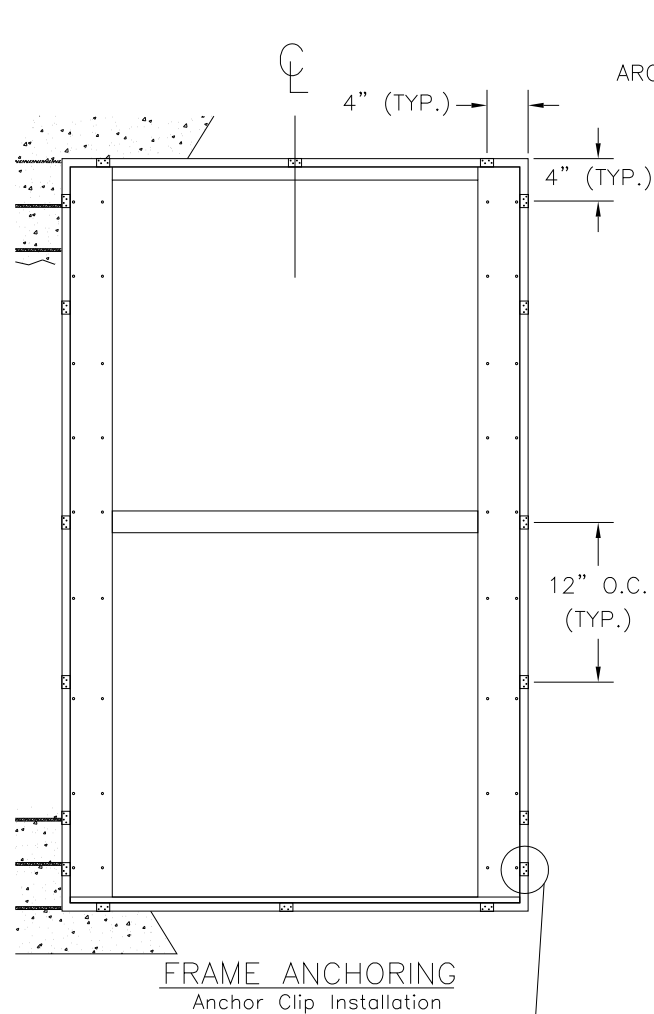
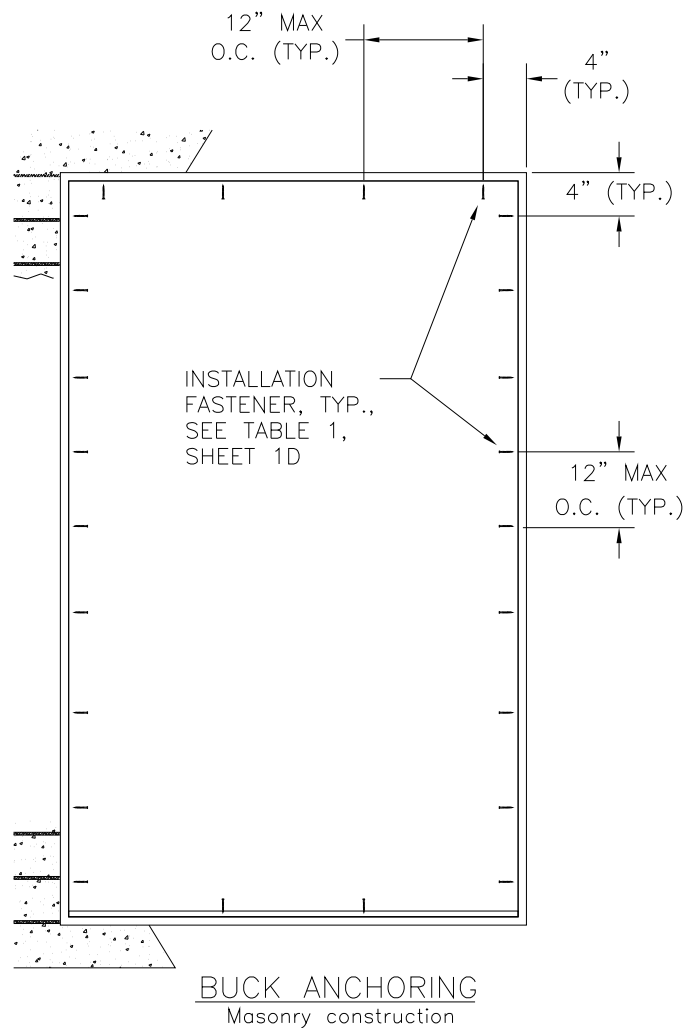
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TURNER ENGINEERING & CONSULTING, INC.
PH. 941-380-1574
2428 OLD NATCHEZ TRACE TRAIL
CAMDEN, TN 38320

OWW LLC
3001 Tuwedo Ave., West Palm Beach, Fl. 33405
Ph. 561-478-7233 Fax 561-478-7858

Product: SERIES 4000
DOUBLE HUNG WEIGHT AND CHAIN WINDOW
Date: 05-07-14
Scale: None
Drawn: JDS

BUCK AND FRAME ANCHORING

Dwg: DH-WC
FL34941.2
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8D OF 12



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Product: SERIES 4000
DOUBLE HUNG WEIGHT AND CHAIN WINDOW

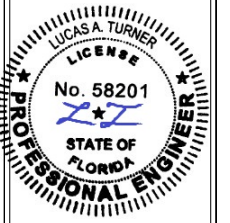
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BUCK AND FRAME ANCHORING

Dwg: DH-WC

FL34941.2

Sheet No.
9D OF 12



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 2428 OLD NATCHEZ TRACE TRAIL
 CAMDEN, TN 38320

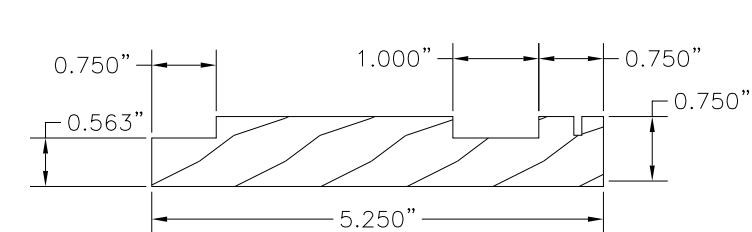
OWW LLC
 3001 Tuxedo Ave., West Palm Beach, Fl. 33405
 Ph. 561-478-7233 Fax 561-478-7858

Product: SERIES 4000
 DOUBLE HUNG WEIGHT AND CHAIN WINDOW

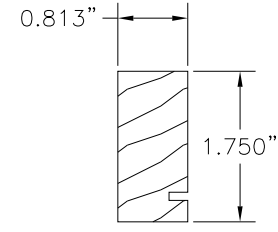
COMPONENTS
 (47" X 78.5" FRAME)

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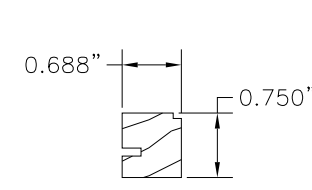
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 Sheet No.
 10D OF 12



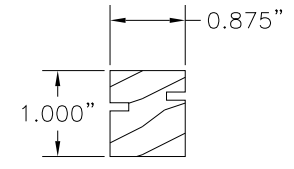
63 JAMB EXTERIOR SASH STOP



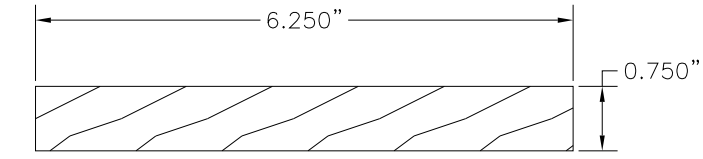
68 HEAD EXTERIOR SASH STOP



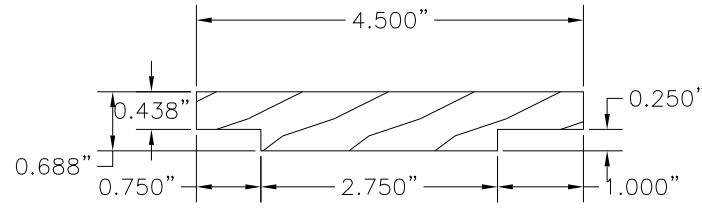
67 HEAD INTERIOR SASH STOP



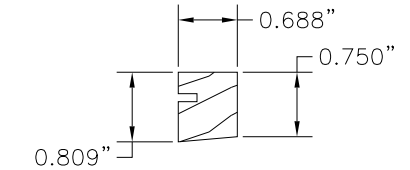
66 PARTING STOP



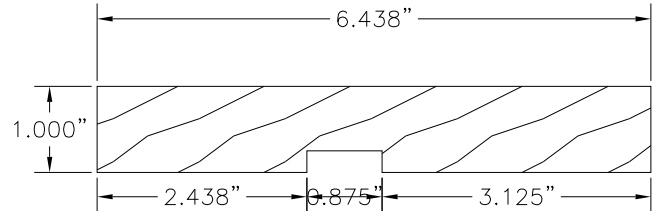
61 JAMB EXTENDER



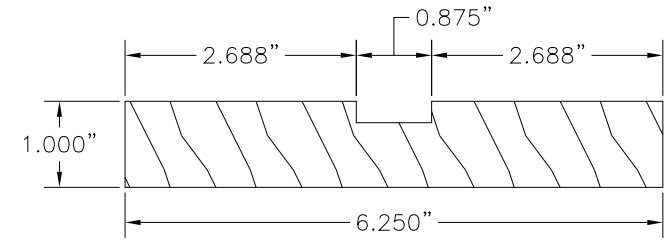
62 JAMB INTERIOR SASH STOP



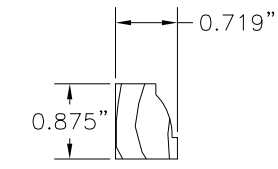
69 SILL EXTENDER



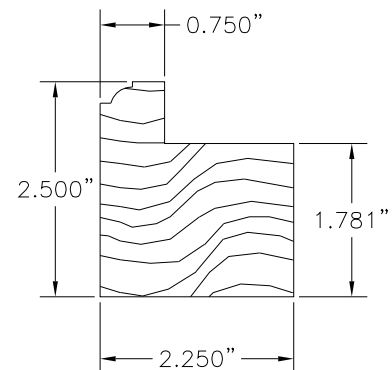
60 FRAME HEADER



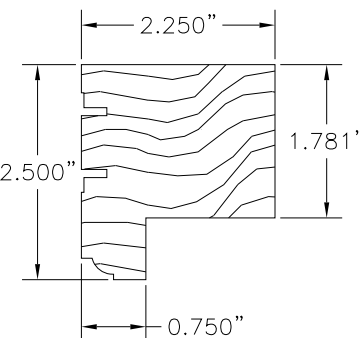
64 JAMB INTERIOR



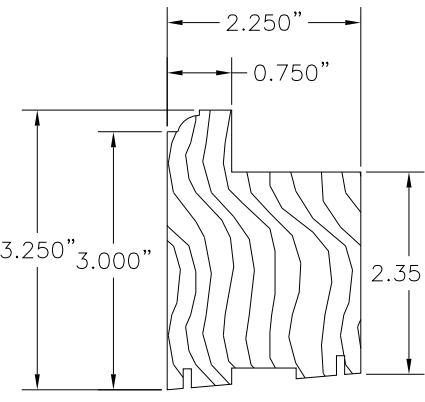
76 GLAZING STOP



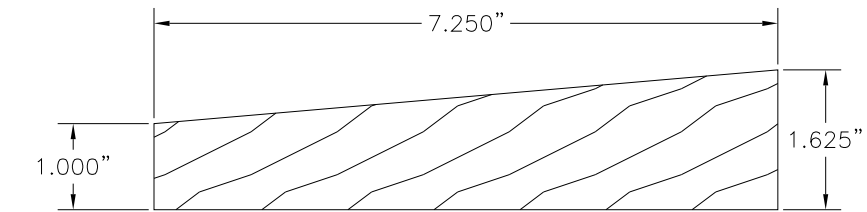
74 TOP SASH BOTTOM RAIL



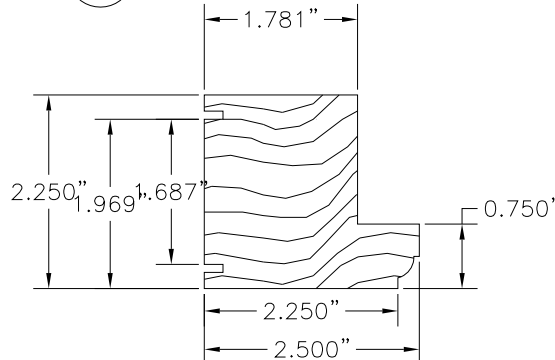
73 BOTTOM SASH TOP RAIL



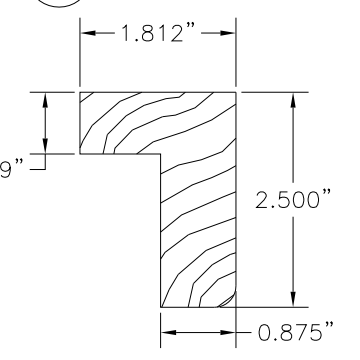
71 BOTTOM SASH BOTTOM RAIL



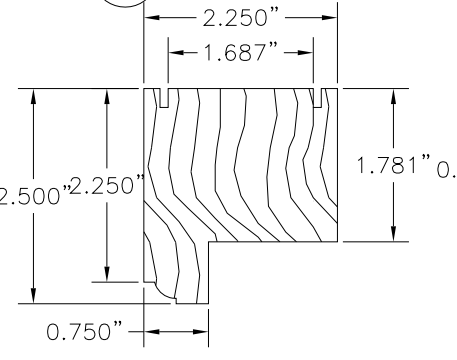
65 SILL



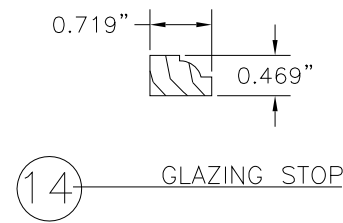
75 SASH STILE



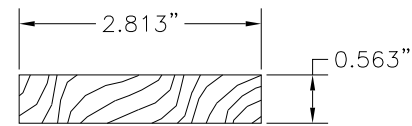
72 MEETING STILE



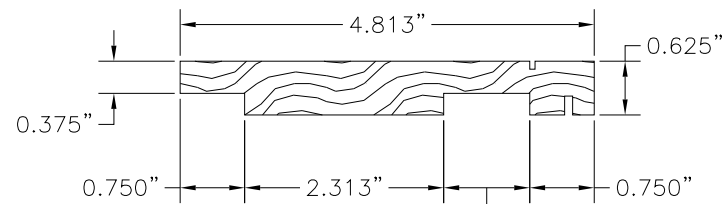
70 TOP SASH TOP RAIL



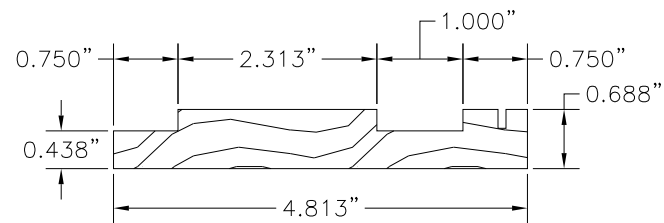
14 GLAZING STOP



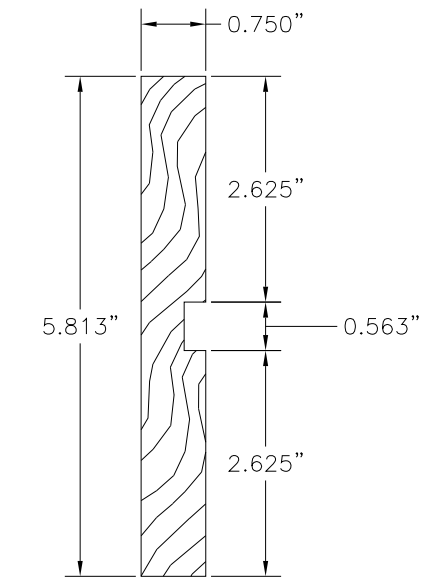
15 JAMB CONNECTOR



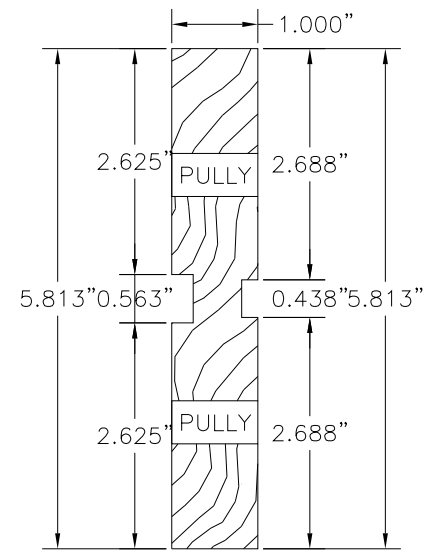
16 JAMB INTERIOR SASH STOP



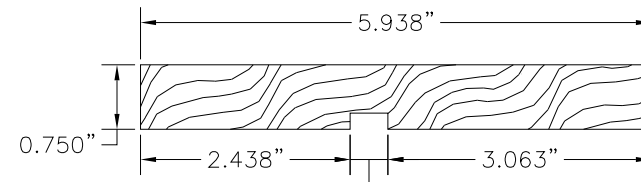
17 JAMB EXTERIOR SASH STOP



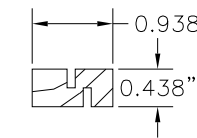
18 JAMB EXTERIOR



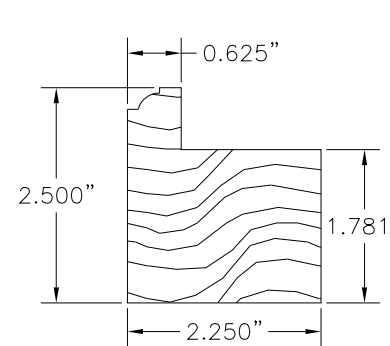
19 JAMB INTERIOR



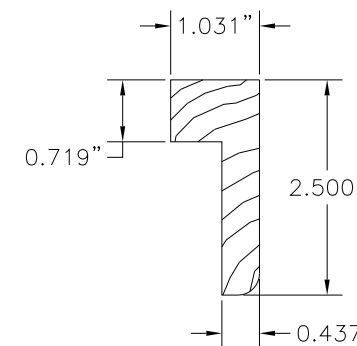
20 FRAME HEADER



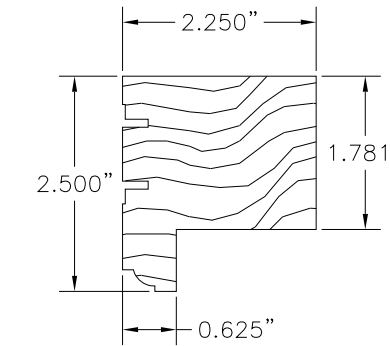
21 PARTING STOP



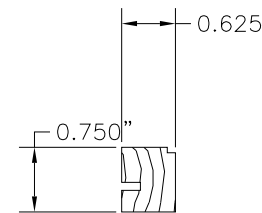
22 TOP SASH BOTTOM RAIL



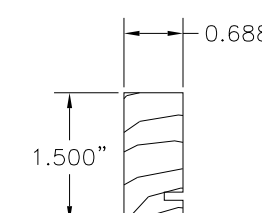
23 MEETING RAIL



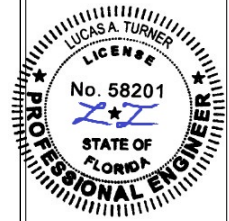
24 BOTTOM SASH TOP RAIL



34 HEADER INTERIOR SASH STOP



35 HEADER EXTERIOR SASH STOP



10/18/2023

TE&C
LUCAS A. TURNER, P.E. FL PE 58201
TURNER ENGINEERING & CONSULTING, INC.
PH. 941-380-1574
2428 OLD NATCHEZ TRACE TRAIL
CAMDEN, TN 38320

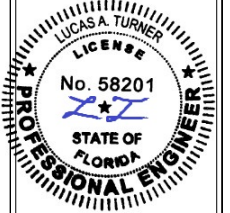
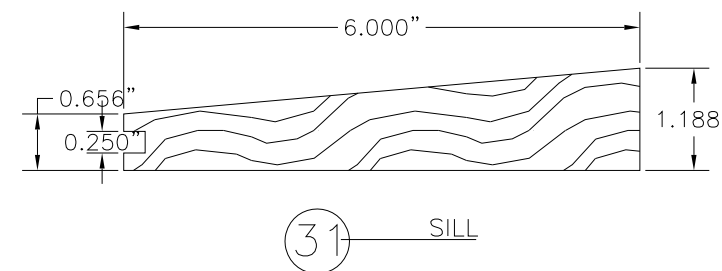
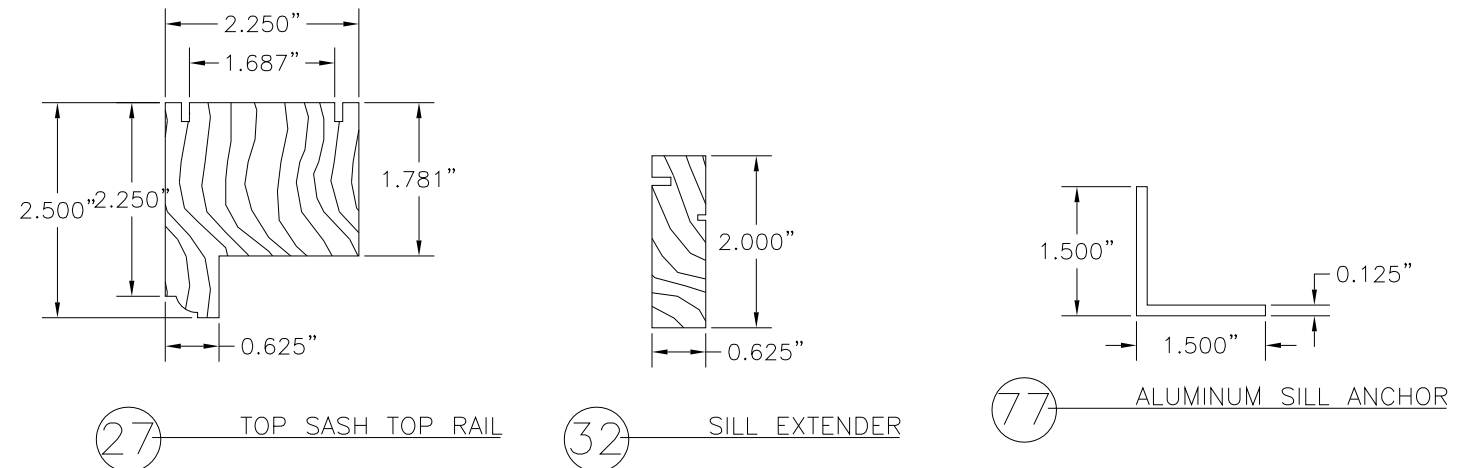
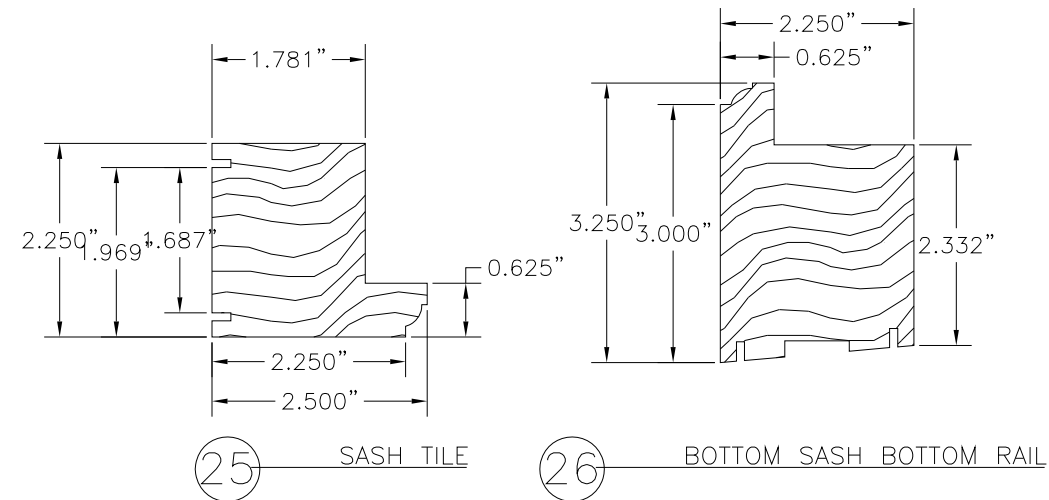
OWW LLC
3001 Tuwedo Ave., West Palm Beach, Fl. 33405
Ph. 561-478-7233 Fax 561-478-7858

Product: SERIES 4000 DOUBLE HUNG WEIGHT AND CHAIN WINDOW
Date: 05-07-14
Scale: None
Drawn: JDS
COMPONENTS (56.375" X 111.375" FRAME)

Dwg: DH-WC
FL34941.2
Sheet No. 11D OF 12

BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
B	2X BUCK (SG>=0.55)	WOOD
C	1/2" MAX.SHIM SPACE	-
C1	1/4" MAX.SHIM SPACE	-
E	SOLID CONCRETE CONFORMING TO ACI 301 OR CMU BLOCK CONFORMING TO ASTM C90 (SEE TABLE 1, SHT 1)	MASONRY
G	23GA X 1" BRAD	STEEL
H	#8 X 1-1/2" PFH WOOD SCREW	STEEL
N	#8 2-1/2" PFH WOOD SCREW	STEEL
P	#10 X 1-1/2" PFH WOOD SCREW	STEEL
2	METAL L-BRACKET A23Z BY SIMPSON STRONG-TIE	STEEL
3	SASH PULLEY (PHELPS MODEL SP250BBRE)	BRASS
6	WEATHERSTRIP QEZD100 BY SCHLEGEL	FOAM
7	WEATHERSTRIP QEZD260 BY SCHLEGEL	FOAM
11	#8 X 3/4" LATH SCREWS	STEEL
12	SASH LOCK (PHELPS MODEL LK381)	BRASS
14	GLAZING STOP	WOOD
15	JAMB CONNECTOR	WOOD
16	JAMB INTERIOR SASH STOP	WOOD
17	JAMB EXTERIOR SASH STOP	WOOD
18	JAMB EXTERIOR	WOOD
19	JAMB INTERIOR	WOOD
20	FRAME HEADER	WOOD
21	PARTING STOP	WOOD
22	TOP SASH BOTTOM RAIL	WOOD
23	MEETING RAIL	WOOD
24	BOTTOM SASH TOP RAIL	WOOD
25	SASH STILE	WOOD
26	BOTTOM SASH BOTTOM RAIL	WOOD
27	TOP SASH TOP RAIL	WOOD
31	SILL	WOOD
32	SILL EXTENDER	WOOD
34	HEADER INTERIOR SASH STOP	WOOD
35	HEADER EXTERIOR SASH STOP	WOOD
35	HEADER EXTERIOR SASH STOP	WOOD
36	STEEL ANCHOR STRAP 1-1/4" X 4" X 1/8"	STEEL
37	#10 X 3/4" PFH WOOD SCREW	STEEL
61	JAMB EXTERIOR	WOOD
62	JAMB INTERIOR SASH STOP	WOOD
63	JAMB EXTERIOR SASH STOP	WOOD
64	JAMB INTERIOR	WOOD
65	SILL	WOOD
66	PARTING STOP	WOOD
67	HEADER INTERIOR SASH STOP	WOOD
68	HEADER EXTERIOR SASH STOP	WOOD
69	SILL EXTENDER	WOOD
70	TOP SASH TOP RAIL	WOOD
71	BOTTOM SASH BOTTOM RAIL	WOOD
72	MEETING RAIL	WOOD
73	BOTTOM SASH TOP RAIL	WOOD
74	TOP SASH BOTTOM RAIL	WOOD
75	SASH STILE	WOOD
76	GLAZING STOP	WOOD
77	ALUMINUM SILL ANCHOR	ALUMINUM

NOTE: ALL WINDOW FRAME WOOD IS SG=0.55 MIN. (SAPELE OR SIMILAR)



10/18/2023

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Ph. 561-478-7233 Fax 561-478-7858

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Dwg: DH-WC
FL34941.2
Sheet No. 12D OF 12