KOMMERLING USA, INC.

SERIES 76 MD BALCONY DOOR
L.M. IMPACT ANCHORAGE DETAILS

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

GENERAL NOTES:

1. THIS PRODUCT HAS BEEN EVALUATED TO COMPLY WITH THE CURRENT PROVISIONS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING THE HIGH VELOCITY HURRICANE ZONES (HVHZ) AND IS BASED ON TESTING CONDUCTED TO TAS 202, TAS 201 & TAS 203 TEST PROTOCOLS PER TEST REPORT NO. NCTL-210-4101-01

2. ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE, MASONRY AND 2X FRAMING AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.

3. 1X BUCK OVER MASONRY AND/OR CONCRETE IS OPTIONAL. WHERE 1X BUCK IS NOT USED, DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.

4. THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF THE INSTALLATION METHODS DEVIATE FROM THESE APPROVED DETAILS THIS WOULD REQUIRE FURTHER INVESTIGATION BY A LICENSED OR REGISTERED DESIGN PROFESSIONAL.

5. ALL SETTING BLOCKS AND GASKET MATERIALS SHALL BE IN COMPLIANCE WITH THE CURRENT EDITION OF THE FLORIDA BUILDING CODE. SETTING BLOCKS SHALL BE NEOPRENE WITH A 70 TO 90 SHORE A DUROMETER. GASKET MATERIALS SHALL BE EDPM WITH A MINIMUM 60 SHORE A DUROMETER.

6. IN HVHZ AND NON-HVHZ AREAS WHERE WINDBORNE DEBRIS PROTECTION REQUIREMENTS EXIST, USE OF AN IMPACT PROTECTIVE SYSTEM COMPLYING WITH THE FBC REQUIREMENTS FOR WINDBORNE DEBRIS REGIONS IS NOT REQUIRED FOR THE PRODUCT(S) HEREIN.

7. MATERIALS:
   7.1 FRAME:RIGID VINYL-PVC
   7.2 REINFORCEMENT (FRAME & SASH): GALVANIZED STEEL

8. GLAZING:
   8.1 GLASS MEETS THE REQUIREMENTS OF ASTM E1300-04e01.
   8.2 SEE GLAZING DETAIL ON SHEET 7 OF 8.
   8.3 GLASS SHALL MEET SAFETY GLAZING REQUIREMENTS PER CURRENT EDITION OF THE FLORIDA BUILDING CODE.
   8.4 INTERLAYER: KURARAY AMERICA SENTRYGLAS PER CURRENT MIAMI DADE NOTICE OF ACCEPTANCE (N.O.A.)

9. PANEL OPERABILITY DESIGNATIONS:
9.1. (X) SASH VENT IS OPERABLE PANEL.

ANCHOR NOTES:

1. SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH A LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".

2. FOR ANCHORING INSTALLATION CLIP AND THROUGH FRAME INTO MASONRY/CONCRETE USE 1/4" ITW ADVANCED THREADFORM TAPCONS, HEX HEAD (SHOWN) OF FLAT HEAD WITH SUFFICIENT LENGTH TO ACHIEVE THE FOLLOWING. SEE NOTE 4 FOR ACCEPTABLE ALTERNATE ANCHOR TYPE

   2.1. CONCRETE: 1-1/2" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 1-1/2" MINIMUM EDGE DISTANCE.
   2.2. CMU/MASONRY: 1" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2" MINIMUM EDGE DISTANCE.

3. FOR ANCHORING INSTALLATION CLIP AND THROUGH FRAME INTO WOOD FRAMING OR 2X BUCK USE #14 WOOD SCREWS, PAN HEAD (SHOWN) OR FLAT HEAD PER (ANSI B18.6.1) WITH MINIMUM GRADE 2 STRENGTH AND WITH SUFFICIENT LENGTH TO ACHIEVE 1-1/2" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 1" MINIMUM EDGE DISTANCE. SEE NOTE 4 FOR ACCEPTABLE ALTERNATE ANCHOR TYPE

4. FOR ANCHORING THROUGH FRAME INTO MASONRY, CONCRETE OR WOOD FRAMING OR 2X WOOD BUCK, THE WURTH AMO III SPACING ASSEMBLY SCREW 7.5mm DIA. TYPE 2 CYLINDER HEAD GALVANIZED STEEL WITH MINIMUM EMBEDMENT AND MINIMUM EDGE DISTANCE BELOW CAN BE USED AS SUBSTITUTES TO ANCHORS IN ITEM NO. 2 AND 3 ABOVE.

   4.1. CONCRETE: 1-1/2" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2" MINIMUM EDGE DISTANCE.
   4.2. CMU/MASONRY: 1" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2-1/2" MINIMUM EDGE DISTANCE.
   4.3. WOOD SUBSTRATE: 2-3/8" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2-1/2" MINIMUM EDGE DISTANCE.
   4.4. THESE ANCHORS SUPPLIED BY KOMMERLING WITH DOOR ASSEMBLY (ITEM NO. 12 IN BOM).

5. INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:
   5.1. WOOD - MINIMUM SPECIFIC GRAVITY OF 0.42 (NON-HVHZ) AND 0.55 (HVHZ).
   5.2. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI.
   5.3. MASONRY - STRENGTH CONFORMANCE TO ASTM C-90 MEDIUM WEIGHT WITH COMPRESSIVE STRENGTH OF 1900 psi (DENSITY > 117 PCF).

TABLE OF CONTENTS

SHEET NO.	DESCRIPTION
1	GENERAL NOTES
2	ANCHOR ELEVATION & LAYOUT
3-5	INSTALLATION DETAILS
6	CROSS SECTIONS & COMPONENTS
7	BILL OF MATERIALS & GLAZING DETAIL
8	HARDWARE DETAIL

ROBERT J. AMORUSO
FL. P.E. NO. 49752

12472 LAKE
UNDERHILL RD
NO. 148
ORLANDO, FL 32828
robert.amoruso@
comcast.net

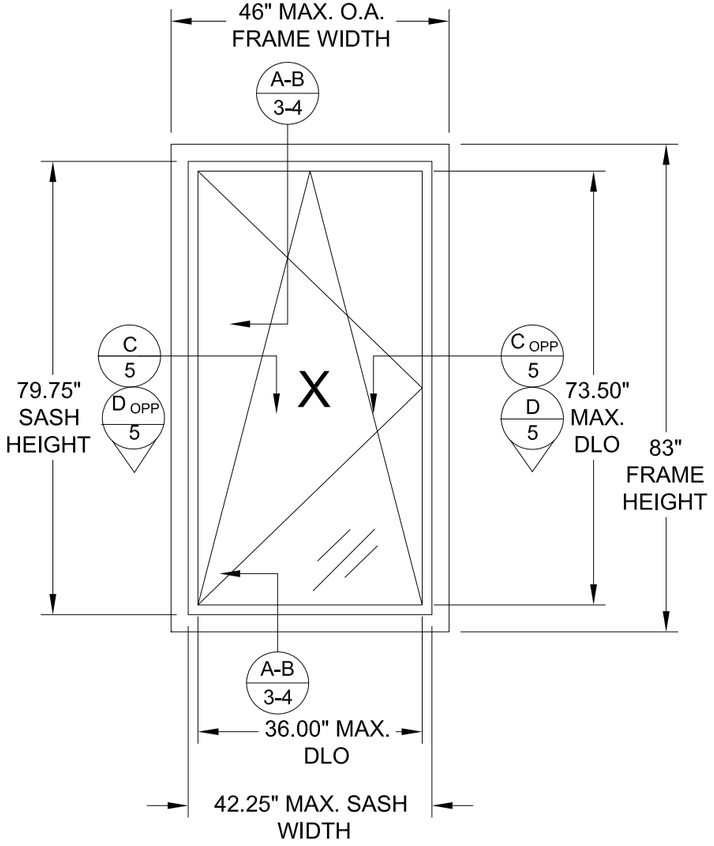
KOMMERLING USA, INC.
3402 STANWOOD BOULEVARD
HUNTSVILLE, AL 35811

SERIES 76 MD VINYL BALCONY DOOR
L.M. IMPACT
GENERAL NOTES

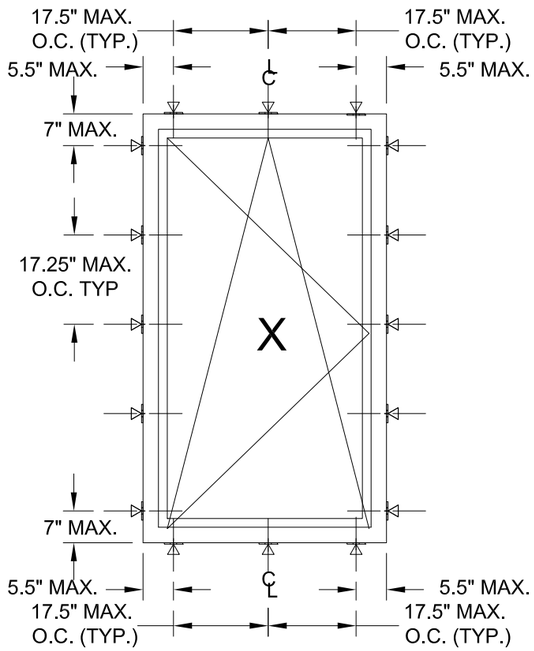
DRAWN:	DWG NO.	REV
JRM	NL-0101	–

SCALE	DATE	SHEET
NTS	12/19/2017	1 OF 8

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



SERIES 76 MD VINYLBALCONY DOOR
ELEVATION VIEW
INTERIOR VIEW



ANCHOR LAYOUT THROUGH FRAME
& STRAP ANCHOR INSTALLATION

INSTALLATION STRAP
AND THROUGH FRAME
ANCHOR LOCATIONS

ANCHORAGE INSTALLATION REQUIREMENTS TO MEET DESIGN PRESSURE OF +/-65 PSF

DESIGN PRESSURE RATING (PSF)		
L.M. IMPACT RATING		
MAX. OVERALL TESTED FRAME SIZE (IN)	MAX. DESIGN PRESSURE (PSF)	QUALIFIED CONFIGURATION
46" X 83"	+/- 65.0	X
SEE GLAZING DETAIL ON SHT. 7		

KOMMERLING USA, INC.
3402 STANWOOD BOULEVARD
HUNTSVILLE, AL 35811

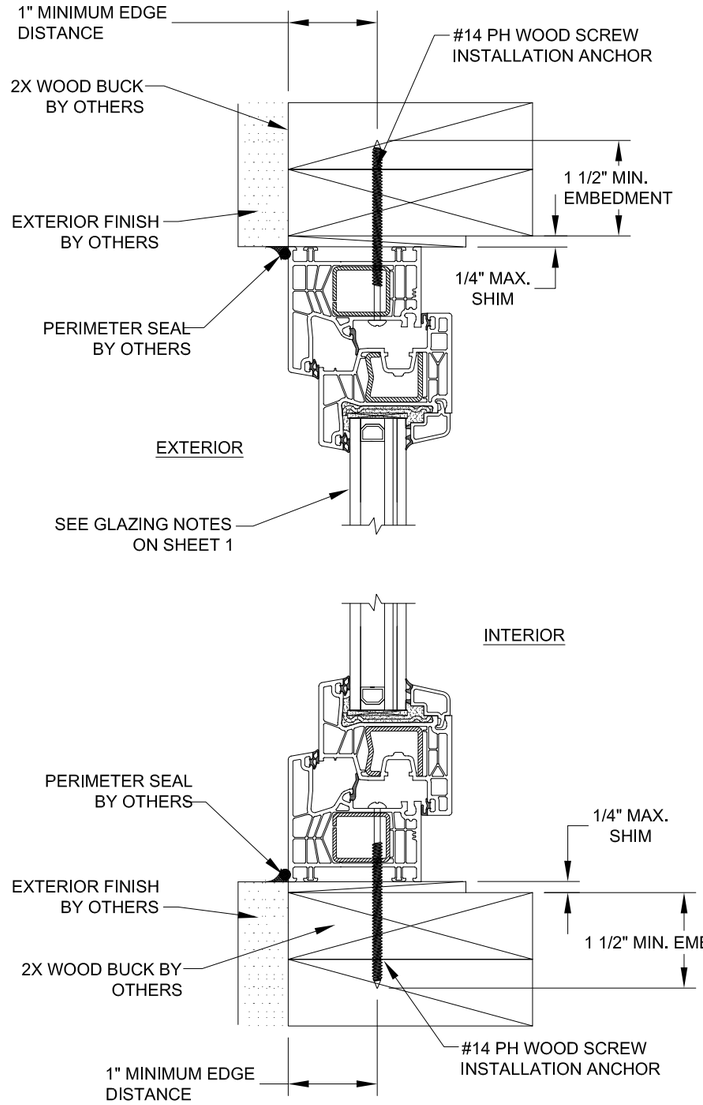
SERIES 76 MD VINYL BALCONY DOOR
L.M. IMPACT
ANCHOR ELEVATION & LAYOUTS

DRAWN:	DWG NO.	REV
JRM	NL–0101	–
SCALE NTS	DATE 12/19/2017	SHEET 2 OF 8

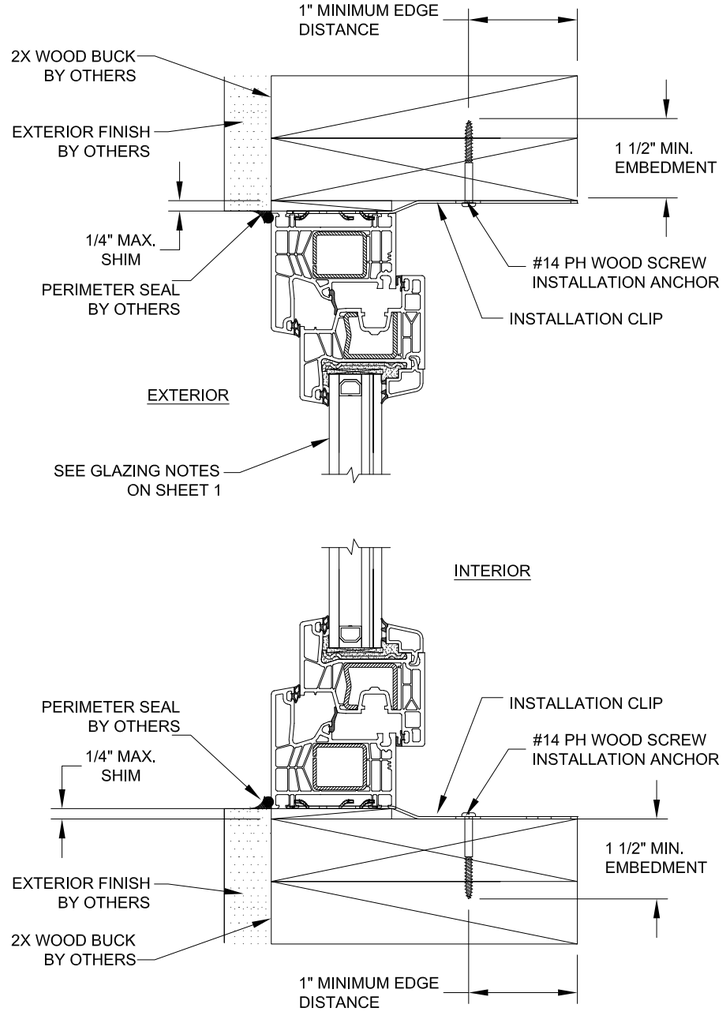
ROBERT J. AMORUSO
FL. P.E. NO. 49752

12472 LAKE
UNDERHILL RD
NO. 148
ORLANDO, FL 32828
robert.amoruso@
comcast.net

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



A/3 VERTICAL SECTION
2 X WOOD SUBSTRATE
FRAME INSTALLATION



B/3 VERTICAL SECTION
2X WOOD SUBSTRATE
INSTALLATION CLIP

ROBERT J. AMORUSO
FL. P.E. NO. 49752

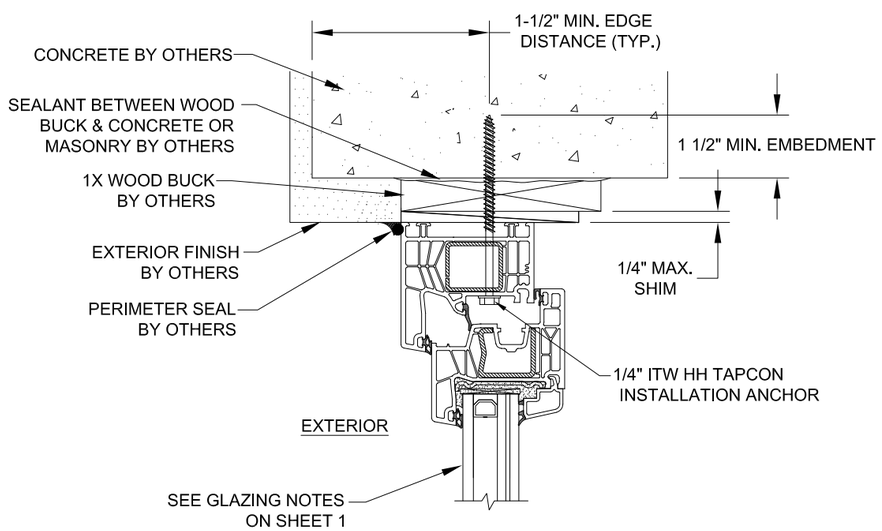
12472 LAKE
UNDERHILL RD
NO. 148
ORLANDO, FL 32828
robert.amoruso@
comcast.net

KOMMERLING USA, INC.
3402 STANWOOD BOULEVARD
HUNTSVILLE, AL 35811

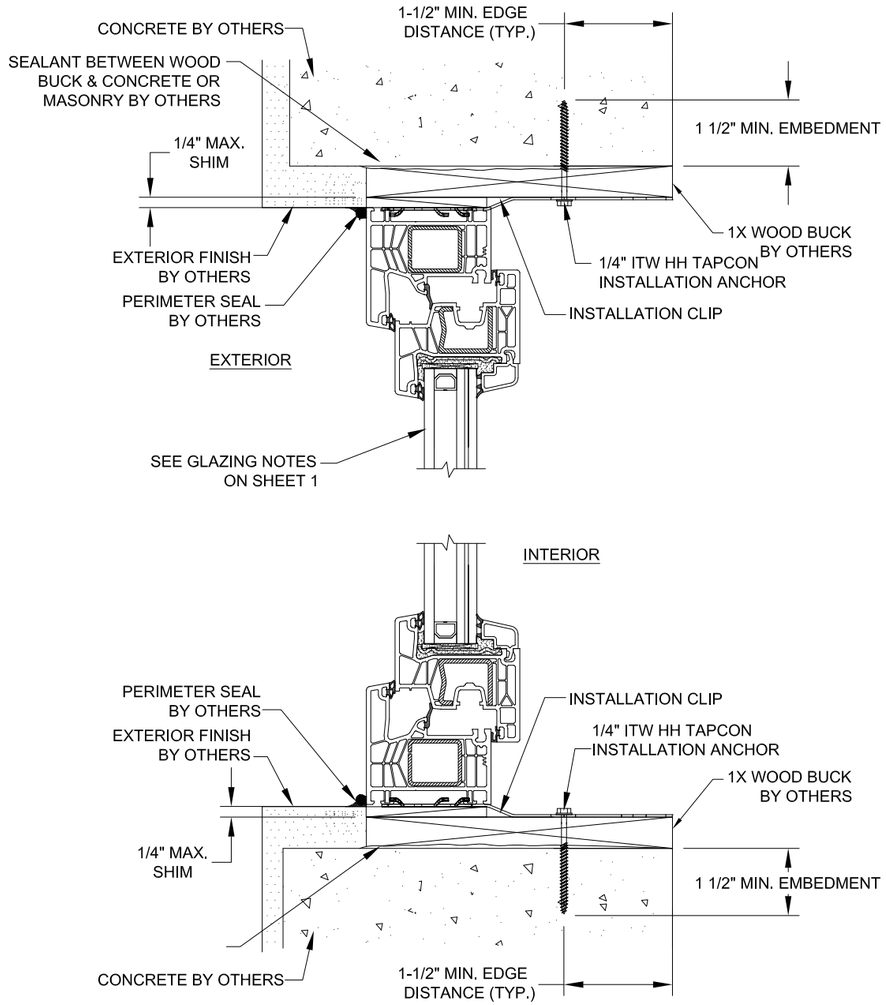
SERIES 76 MD VINYL BALCONY DOOR
L.M. IMPACT
VERT. INSTALLATION DETAILS–2X WOOD

DRAWN:	DWG NO.	REV
JRM	NL–0101	–
SCALE NTS	DATE 12/19/2017	SHEET 3 OF 8

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



A / 4 VERTICAL SECTION CONCRETE SUBSTRATE FRAME INSTALLATION



B / 4 VERTICAL SECTION CONCRETE SUBSTRATE INSTALLAION CLIP

KOMMERLING USA, INC.
3402 STANWOOD BOULEVARD
HUNTSVILLE, AL 35811

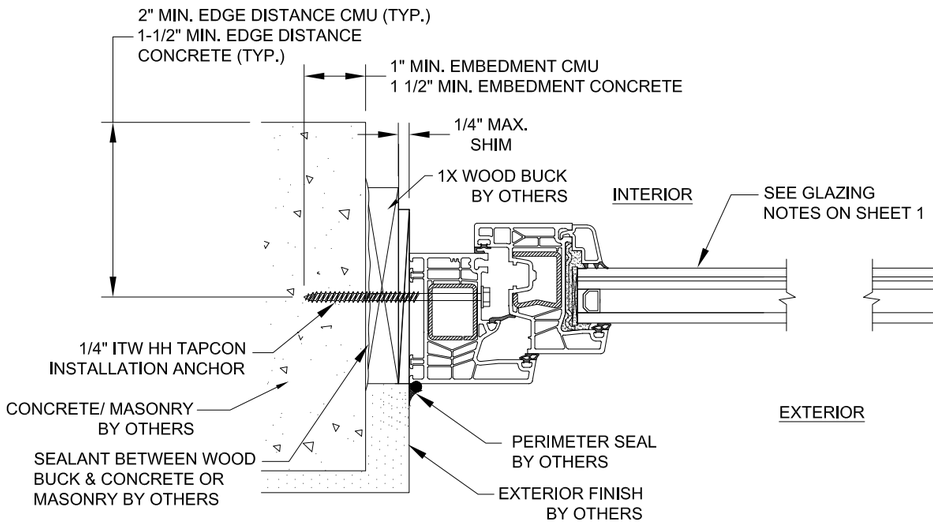
SERIES 76 MD VINYL BALCONY DOOR
L.M. IMPACT
VERT. INSTALLATION DETAILS–CONCRETE

DRAWN:	DWG NO.	REV
JRM	NL–0101	–
SCALE NTS	DATE 12/19/2017	SHEET 4 OF 8

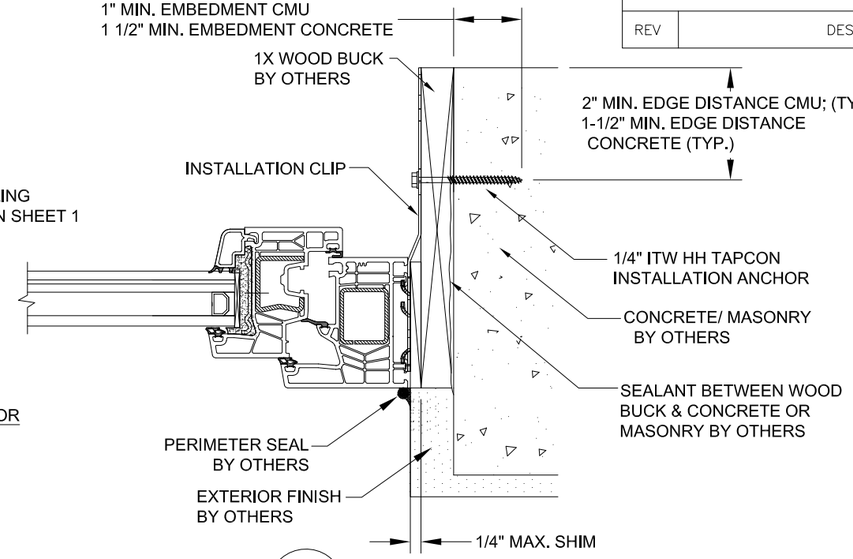
ROBERT J. AMORUSO
FL. P.E. NO. 49752

12472 LAKE
UNDERHILL RD
NO. 148
ORLANDO, FL 32828
robert.amoruso@
comcast.net

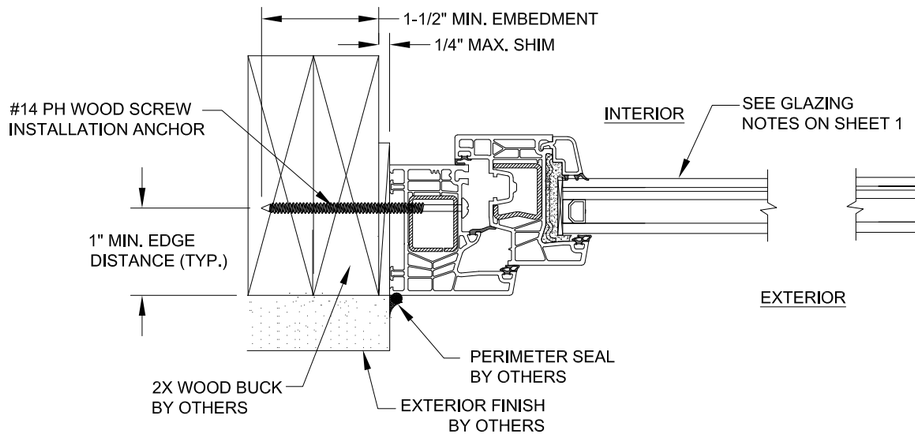
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



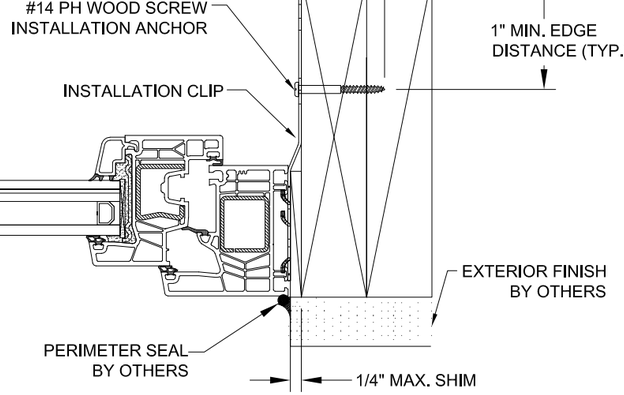
C/5 **HORIZONTAL SECTION**
CONCRETE/MASONRY SUBSTRATE
FRAME INSTALLATION



D/5 **HORIZONTAL SECTION**
CONCRETE/MASONRY SUBSTRATE
INSTALLATION CLIP



C/5 **HORIZONTAL SECTION**
2X WOOD SUBSTRATE
FRAME INSTALLATION



D/5 **HORIZONTAL SECTION**
2X WOOD SUBSTRATE
INSTALLATION CLIP

ROBERT J. AMORUSO
FL. P.E. NO. 49752

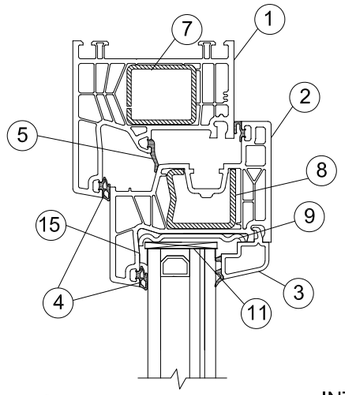
KOMMERLING USA, INC.
3402 STANWOOD BOULEVARD
HUNTSVILLE, AL 35811

SERIES 76 MD VINYL BALCONY DOOR
L.M. IMPACT
HORIZ. INSTALLATION DETAILS –WOOD/CONC./MAS.

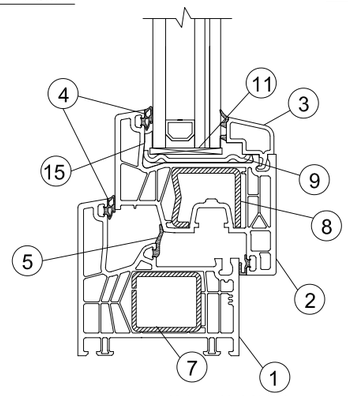
DRAWN:	DWG NO.	REV
JRM	NL–0101	–
SCALE NTS	DATE 12/19/2017	SHEET 5 OF 8

12472 LAKE
UNDERHILL RD
NO. 148
ORLANDO, FL 32828
robert.amoruso@
comcast.net

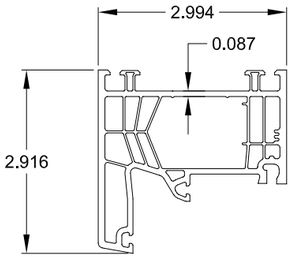
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



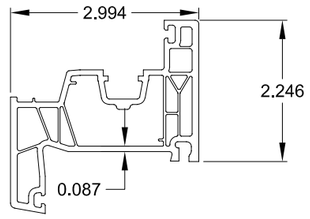
EXTERIOR INTERIOR



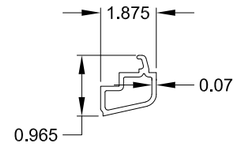
TYPICAL CROSS SECTION FOR PARTS IDENTIFICATION EQUAL LEG FRAME



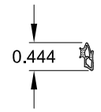
1 76171 MAIN FRAME EQUAL LEG RIGID VINYL



2 76271 MAIN SASH EQUAL LEG RIGID VINYL

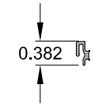


3 2435_2 32MM GLAZING BEAD RIGID VINYL

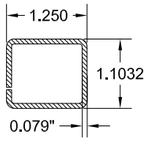


4 FRAME / GLAZING GASKET EPDM RUBBER 70 DUR.

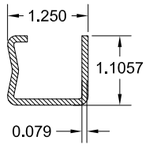
5 INT. FRAME GASKET EPDM RUBBER 70 DUR.



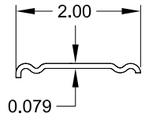
6 SASH GASKET EPDM RUBBER 70 DUR.



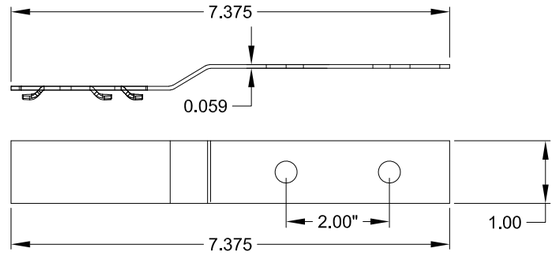
7 FRAME REINFORCMENT GALV. STL. 0.079" THICK V310



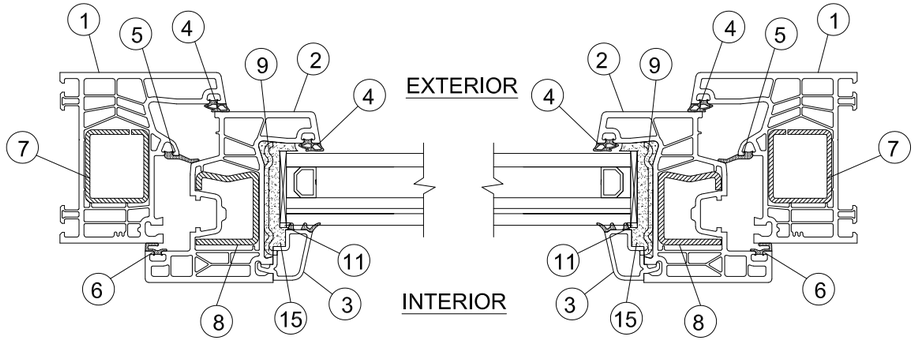
8 SASH REINFORCMENT GALV. STL. 0.079" THICK V308



9 SASH GLAZING REINFORCMENT GALV. STL. 0.079" THICK V280



10 GALVANIZED STEEL ANCHOR STRAP 16 GA. S04



TYPICAL CROSS SECTION FOR PARTS IDENTIFICATION EQUAL LEG

KOMMERLING USA, INC.
3402 STANWOOD BOULEVARD
HUNTSVILLE, AL 35811

SERIES 76 MD VINYL BALCONY DOOR
L.M. IMPACT
CROSS SECTIONS & COMPONENTS

DRAWN:	DWG NO.	REV
JRM	NL–0101	–
SCALE NTS	DATE 12/19/2017	SHEET 6 OF 8

ROBERT J. AMORUSO
FL. P.E. NO. 49752

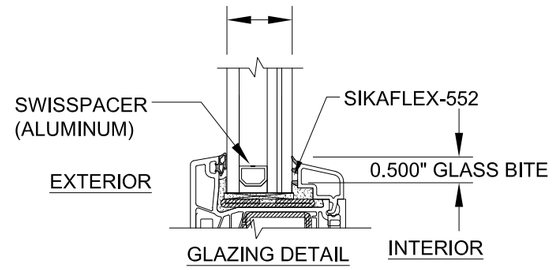
12472 LAKE
UNDERHILL RD
NO. 148
ORLANDO, FL 32828
robert.amoruso@
comcast.net

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

QTY.	PART NO.	DESCRIPTION	MANUFACTURER
1	76171	MAIN FRAME, RIGID VINYL	PROFINE
2	76271	SASH, RIGID VINYL	PROFINE
3	2435_2	1-1/4" I.G. LAMINATED GLAZING BEAD, RIGID VINYL	PROFINE
4	PURCHASE	FRAME/ GLAZING GASKET, EPDM RUBBER 70 DUR	PURCHASE
5	PURCHASE	INT. FRAME GASKET, EPDM RUBBER 70 DUR	PURCHASE
6	PURCHASE	SASH GASKET, EPDM RUBBER 70 DUR	PURCHASE
7	V310	1.00" X 1.00" X 0.079" FRAME REINF., GALV. STEEL	PROFINE
8	V308	1.00" X 1.035" X 0.079" SASH REINF., GALV. STEEL	PROFINE
9	V280	1.08" X 0.079" SASH GLAZING REINF., GALV. STEEL	PROFINE
10	S04	1.00" X 7.375" X 0.059" GALV. STL. ANCHOR STRAP	PROFINE
11	PURCHASE	ALUMINUM GLASS SPACER	SWISS
12	----------	AMO III 7.5MM DIA. CYLINDER HEAD SCREW, VARIABLE LENGTH BASED ON USAGE	WURTH *
13	PURCHASE	#14 PH OR FH WOOD SCREW	----
14	PURCHASE	1/4" DIAM. HH OR FH I.T.W. MASONRY ANCHOR	I.T.W.
15	PURCHASE	GLAZING SEALANT, SIKAFLEX 552	SIKA CORP.
16	PURCHASE	SEE GLAZING DETAIL	----------

* SUPPLIED BY DOOR MANUFACTURER KOMMERLING

1.20" O.A. INSULATED GLASS CONSISTING OF:
EXT. 1/4" TEMP. GLASS, 0.380" AIR-SPACER, LAMI:
3/16" H.S. GLASS, 0.090" KURARAY AMERICA SENTRYGLAS, 3/16" H.S. GLASS INT.



GLAZING DETAIL

KOMMERLING USA, INC.
3402 STANWOOD BOULEVARD
HUNTSVILLE, AL 35811

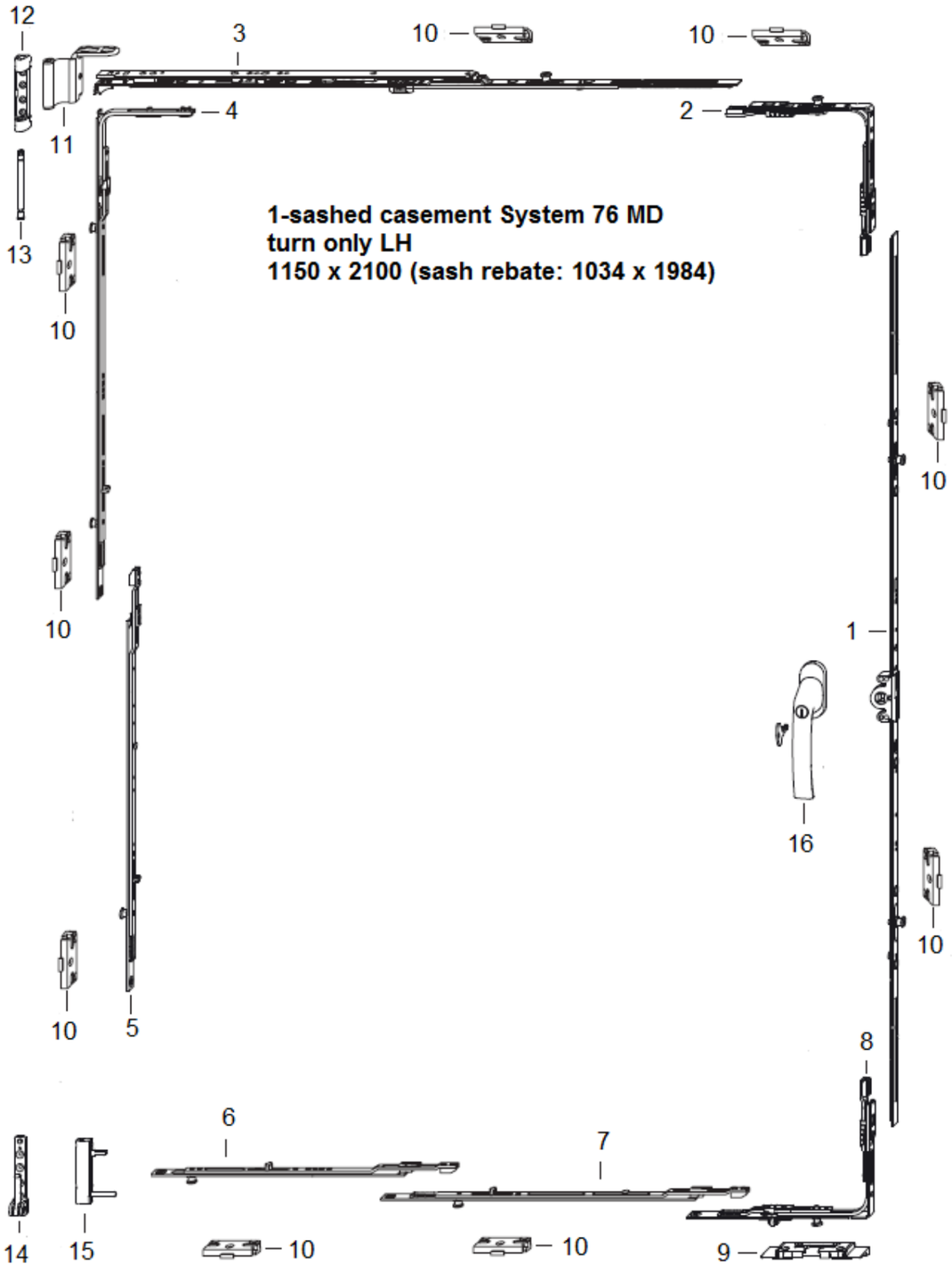
SERIES 76 MD VINYL BALCONY DOOR
L.M. IMPACT
B.O.M. AND GLAZING DETAILS

DRAWN:	DWG NO.	REV
JRM	NL-0101	–
SCALE NTS	DATE 12/19/2017	SHEET 7 OF 8

ROBERT J. AMORUSO
FL. P.E. NO. 49752

12472 LAKE
UNDERHILL RD
NO. 148
ORLANDO, FL 32828
robert.amoruso@
comcast.net

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



1-sashed casement System 76 MD
turn only LH
1150 x 2100 (sash rebate: 1034 x 1984)

Pos.	part description	part code
1	gear 15 AF sz.160 2RS 70	TGMK4170-…
2	corner drive AF VSO 1RS	TEUL4010-…
3	stay AF sz.3 1RS	TSKK2030-…
4	corn.drive BS/K3 sz 2+ 2RS	TEUL2390- …
5	linkage BS/FH sz 3+ 1RS	TZBS0300- …
6	extension sz 3+ 1RS	TVSL0330- …
7	linkage BS/FH sz 1+ 1RS	TZBS0180- …
8	corn.drive AF VSU/K+ FH 1S	TEUL5010- …
9	tilt lock bearing S-ES FH A4460	FRKA0100-…
10	striker plate S-RS 3SL A4460	TRSK0600-…
11	stay hinge 12/20-13 DH	TBWB6050-…
12	top hinge KF D6x24 DH	TBSL6140-…
13	top hinge pin poly	TBSB6020-…
14	bottom hinge KF D6x3/24	TBEL6120-…
15	corner hinge KF D6x16/36 D5 ADV	TBEB6140-…
16	handle Globe 35/12 ABS100 SEC	ZHGA0060-…

KOMMERLING USA, INC.
3402 STANWOOD BOULEVARD
HUNTSVILLE, AL 35811

SERIES 76 MD VINYL BALCONY DOOR
L.M. IMPACT
HARDWARE DETAILS

DRAWN:	DWG NO.	REV
JRM	NL–0101	–
SCALE NTS	DATE 12/19/2017	SHEET 8 OF 8

ROBERT J. AMORUSO
FL. P.E. NO. 49752

12472 LAKE
UNDERHILL RD
NO. 148
ORLANDO, FL 32828
robert.amoruso@
comcast.net