

BORANO DOOR SERIES

OUTSWING WOOD DOORS

FLORIDA STATE APPROVAL

CODE VERSION: FLORIDA BUILDING CODE 2017 - 6th EDITION

APPROVED FOR USE INSIDE HVHZ AND OUTSIDE HVHZ

CATEGORY: EXTERIOR DOORS -- SUBCATEGORY: SWINGING EXTERIOR DOOR ASSEMBLY

IMPACT RESISTANT: LARGE MISSILE

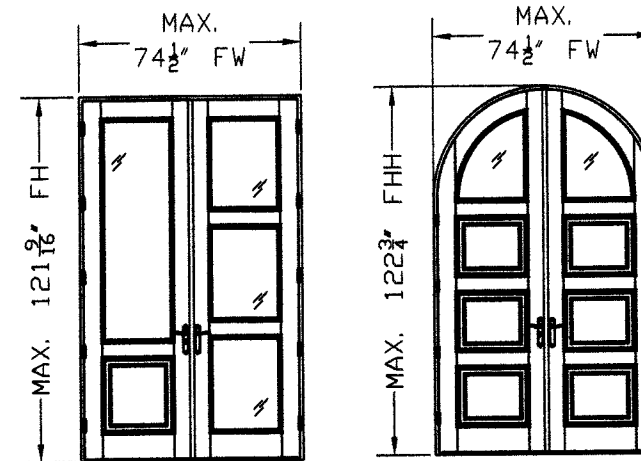
GENERAL NOTES:

- 1- CODE: THIS PRODUCT HAS BEEN TESTED UNDER PROTOCOLS TAS 201, 202 AND 203 AND DESIGNED IN ACCORDANCE WITH THE FBC 2017 6TH EDITION INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
- 2- DEFINITION: THIS PRODUCT IS AN EXTERIOR OUT SWING WOOD TYPE DOOR DESIGNED, CONSTRUCTED AND TESTED TO PROVIDE PROTECTION FROM HURRICANE FORCE WINDS AND WIND BORNE DEBRIS (LARGE & SMALL MISSILE) WITHIN THE ALLOWABLE DESIGNED PRESSURES AND LIMITATIONS STATED IN THIS APPROVAL.
- 3- POSTING: PRODUCT SHALL BE LABELED AS PER FBC SECTION 1703.5. THE PERMANENT LABEL, MARKING OR ETCHING SHALL PROVIDE TRACEABILITY TO THE MANUFACTURER AND PRODUCT.
- 4- LOADS: DESIGNED LOAD CALCULATED BASED ON THE ASCE 7-10 AND PROVIDED BY A PROFESSIONAL ARCHITECT OR ENGINEER FOR EACH SPECIFIC PROJECT. THE CALCULATED DESIGNED PRESSURE MUST NOT EXCEED THE ALLOWABLE PRESSURES HERE IN SPECIFIED. THE DESIGN PRESSURES, AS DETERMINED FROM ASCE 7-10, ARE PERMITTED TO BE MULTIPLIED BY 0.6 AS PER THE FLORIDA BUILDING CODE.
- 5- MATERIAL:
 - 5.1- ALL WOOD TO BE WITH MINIMUM 0.55 SPECIFIC GRAVITY CORRECTED FOR 12% MOISTURE CONTENT PER NDS 0.58 RAW. DENSITY OF BUTCHER BLOCK CONSTRUCTION WITH VENEER 0.535 g/cm³.
 - 5.2- GLAZING: LAMINATED IMPACTED RATED AS SPECIFIED IN THIS APPROVAL
- 6- FASTENERS: ASSEMBLY SCREWS AND ANCHORS SHALL BE AS SPECIFIED IN THE CURRENT SET OF DRAWINGS.
- 7- USE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, ARCHITECT OR ENGINEER OF RECORD TO VERIFY THE FOLLOWING:
 - 7.1- THE STABILITY OF THE STRUCTURE WHERE THE PRODUCT IS TO BE ATTACHED INSURING PROPER ANCHORAGE.
 - 7.2- THE SITE SPECIFIC PROJECT CRITERIA, SUCH AS BUT NOT LIMITED TO, LOCAL CODE REQUIREMENTS, DESIGNED PRESSURES ETC.
 - 7.3- THAT THIS APPROVAL IS ADEQUATE TO THE SPECIFIC PROJECT.

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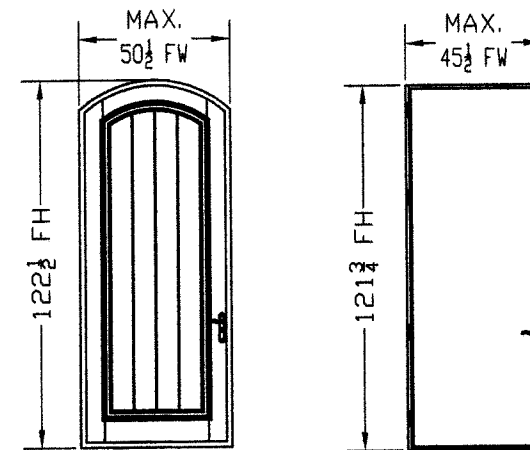
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TESTED UNITS



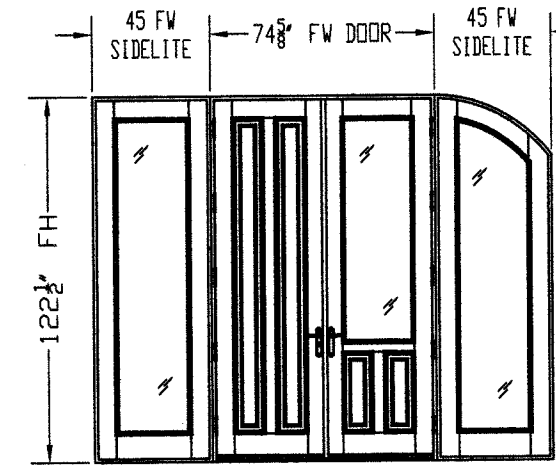
MODEL 1

MODEL 2



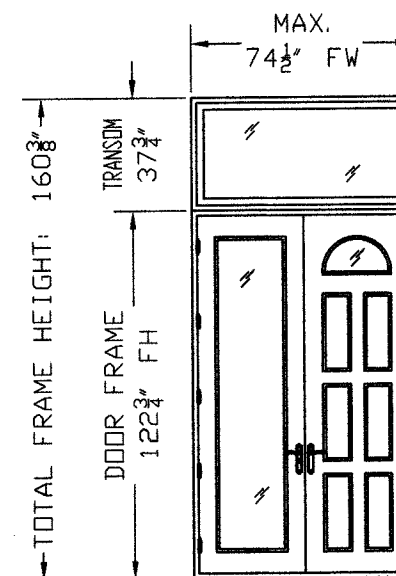
MODEL 4

MODEL 5



MODEL 3

WIND STRUCTURAL: PD= +65 PSF, -65 PSF
 WIND CYCLIC: PD= +65 PSF, -65 PSF
 IMPACT RATING: LARGE & SMALL MISSILE
 OPERATING FORCE
 WATER RESISTANCE: ASTM E331, 11.25 PSF
 (15% OF +75 PSF)
 AIR INFILTRATION: ASTM E283
 FORCE ENTRY: ASTM F588

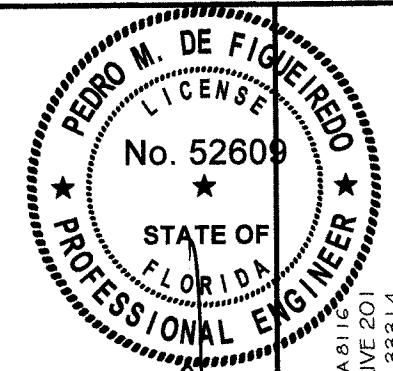


MODEL 6

WIND STRUCTURAL: PD= +65 ** PSF, -65 PSF
 WIND CYCLIC: PD= +65 PSF, -65 PSF
 IMPACT RATING: LARGE & SMALL MISSILE

** PRODUCT POSITIVE PRESSURE TO BE LIMITED TO +60 PSF FOR INSTALLATIONS WITHOUT AN OVERHANG MEETING THE OH ratio= OH length/ OH height DOOR COVERAGE (FBC 2017 SECTION 1709.5.1)

OPERATING FORCE
 WATER RESISTANCE: ASTM E331
 9 PSF -- (15% OF +60 PSF)
 AIR INFILTRATION: ASTM E283
 FORCE ENTRY: ASTM F588



10/31/17

PRODUCT: BORANO SERIES
 OUTSWING DOORS
 LARGE & SMALL MISSILE
 IMPACT RATED

MANUFACTURER: BORANO INC
 222 NE 27TH STREET
 MIAMI- FLORIDA- 33137
 TEL: (561) 939-3368
 FAX: (877) 839-2220

PK

DRAFTING & MORE INC.

SCALE: NA

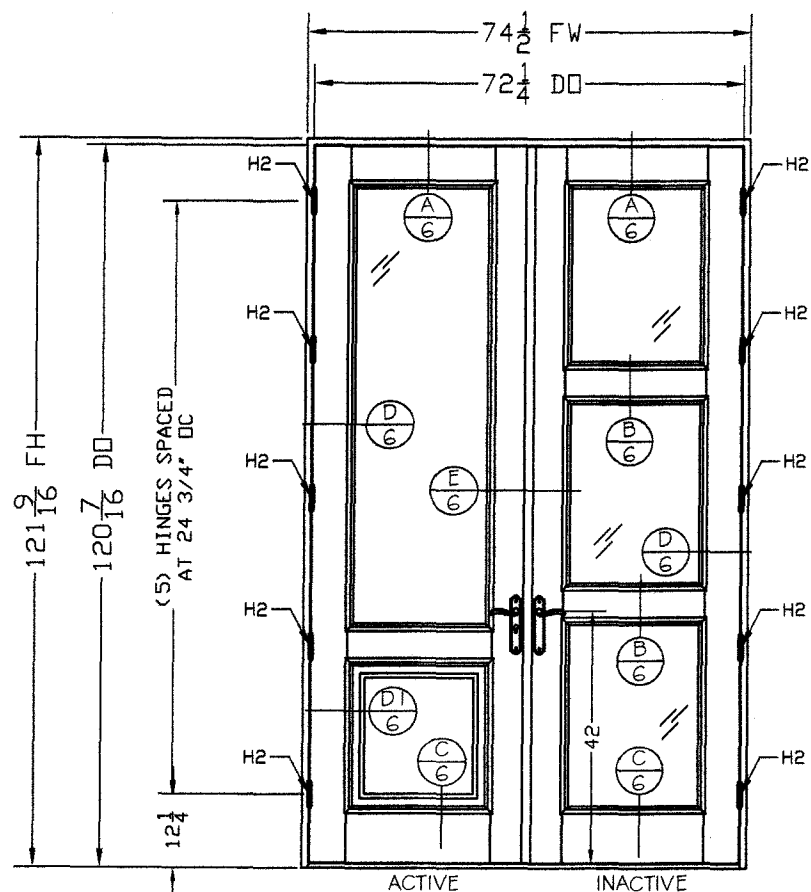
DATE: 10/31/2017

DRAWING # 17-707

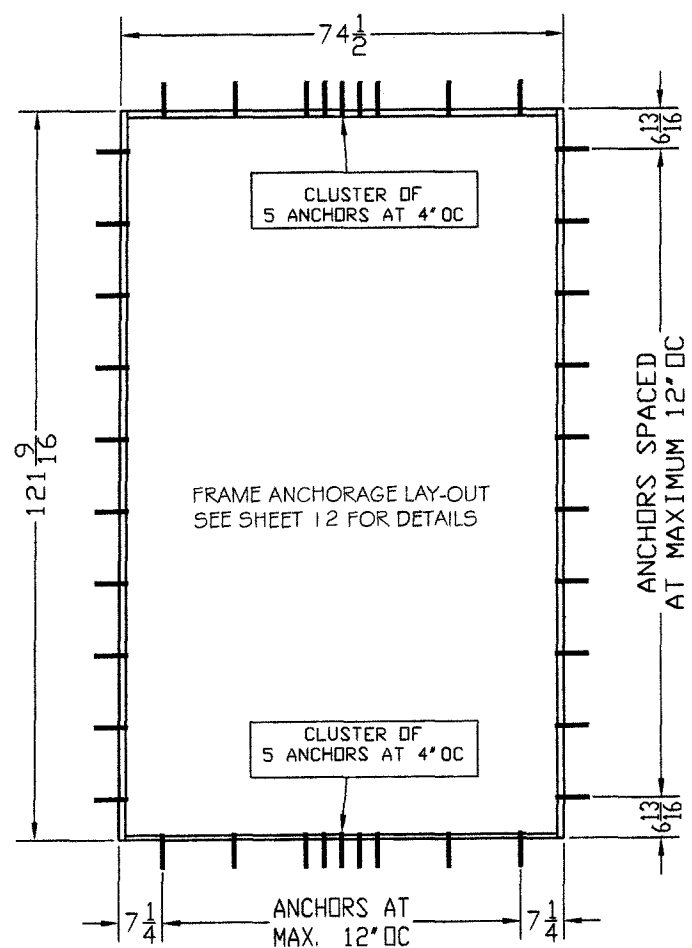
SHEET 1 OF 14

ENGINEERING SEAL
 PEDRO DE FIGUEIREDO
 PE 52609
 ENGINEERING
 ENGCO INC. - CA 8116
 5595 ORANGE DRIVE 201
 DAVIE - FLORIDA - 33314
 ENGCO@AOL.COM

MODEL 1

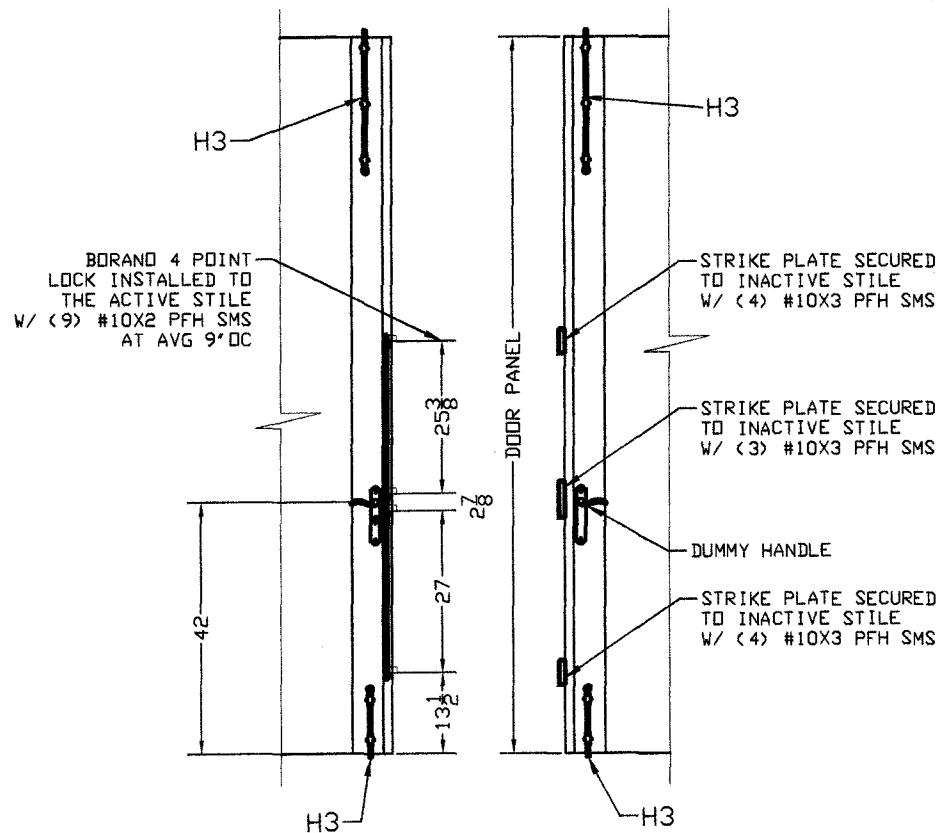


EXTERIOR SIDE ELEVATION
RECTANGULAR TYPE PAIR DOOR XX



SEE SHEET 12 TO SELECT ANCHOR OPTIONS

LOCK HARDWARE:



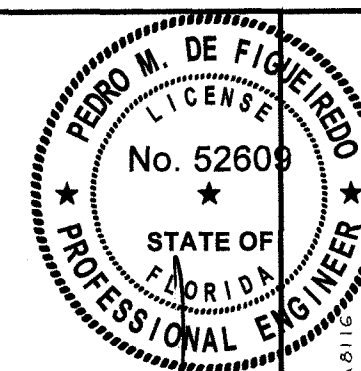
MODEL 1
RECTANGULAR SWING-OUT
PAIR DOOR XX: (MAX. 74 1/2" X 121 9/16")
SINGLE DOOR X: (MAX. 38 3/8" X 121 9/16")

PD= +65 PSF, -65 PSF

OPERATING FORCE
WATER RESISTANCE: ASTM E331, 11.25 PSF
(15% OF +75 PSF)
AIR INFILTRATION: ASTM E283
FORCE ENTRY: ASTM F588

HARDWARE NOTES:

- 1- SURFACE BOLTS: (4) SURFACE BOLTS BY BORANO PART #H-3 WERE INSTALLED IN THE ACTIVE AND INACTIVE LEAVES AT TOP AND BOTTOM.
THE BOTTOM SURFACE BOLTS WERE ATTACHED USING LOCK GUIDES FROM THE EDGE OF THE ASTRAGAL AT: 3 7/8", 5/8" AND 6 5/8" USING (2) #8X1 1/2" SS PFH SMS PER LOCATION.
THE TOP SURFACE BOLTS WERE ATTACHED USING LOCK GUIDES FROM THE TOP EDGE OF THE ASTRAGAL AT: 3 7/8", 5/8", 9" AND 18 1/2" USING (2) #8 X 1 1/2" SS PFH SMS PER LOCATION. A LOCK BAR REINF. GUIDE WAS INSTALLED USING (2) #12X3 SS PFH SMS.
- 2- STRIKE PLATES:
2.1- FRAME HEAD & SILL: A 1 1/8X2X1 1/4 GA THICK SS STRIKE PLATE WERE INSTALLED ON THE HEADER AND SILL USING (4) #12X3 SS PFH SMS. THE STRIKE PLATES WERE FLUSH WITH THE SURFACE OF THE SILL AND HEADER.
2.2- INACTIVE SASH: (3) STRIKE PLATES WERE INSTALLED IN THE INACTIVE LEAF AT CORRESPONDING POSITIONS AND WERE ATTACHED USING (4,3,4) #10X3 SS PFH SMS STARTING FROM BOTTOM OF THE LEAF
- 3- DOOR HANDLE: A DUMMY HANDLE WAS INSTALLED ON THE INACTIVE LEAF.
- 4- ACTIVE DOOR LOCK: A (3) POINT WITH AN ADDITIONAL LATCHING POINT, BORANO # H1 WAS INSTALLED IN THE ACTIVE DOOR LEAF AT 42" FROM THE BOTTOM OF THE ACTIVE DOOR LEAF. THE LOCKING POINTS WERE AT 13.5, 40.5, 43.375, 68.75 FROM THE BOTTOM OF THE ACTIVE LEAF. THE LOCK WAS INSTALLED USING (9) #10X2 SS PFH SMS AT 10" AND 9" OC AVERAGE FROM THE BOTTOM OF THE DOOR LEAF.
- 5- HINGES: (4) 4.5X4.5 SOLID BRASS HINGES BY BORANO PART# H-2 WERE ATTACHED TO THE DOOR FRAME AND DOOR LEAVES USING (2) #12X3 / (2) #12X 1 1/4 PFH SMS AND WERE ATTACHED TO THE DOOR LEAF USING (4) #12X3 PFH SMS.



10/31/17

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BORANO SERIES
OUTSWING DOORS
LARGE & SMALL MISSILE
IMPACT RATED

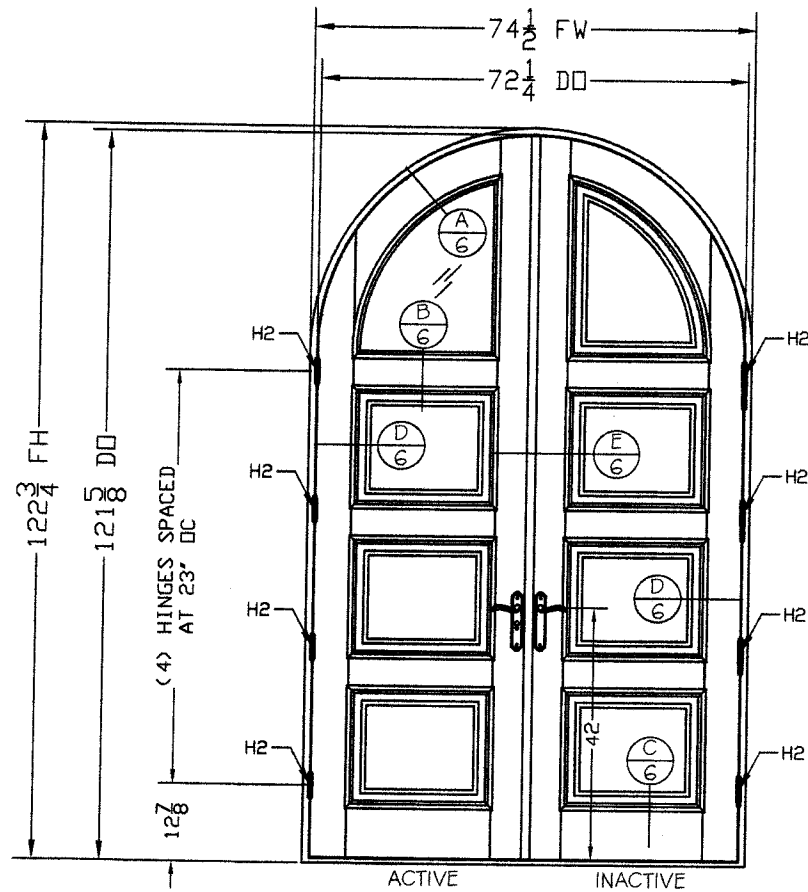
MANUFACTURER:
BORANO INC
222 NE 27TH STREET
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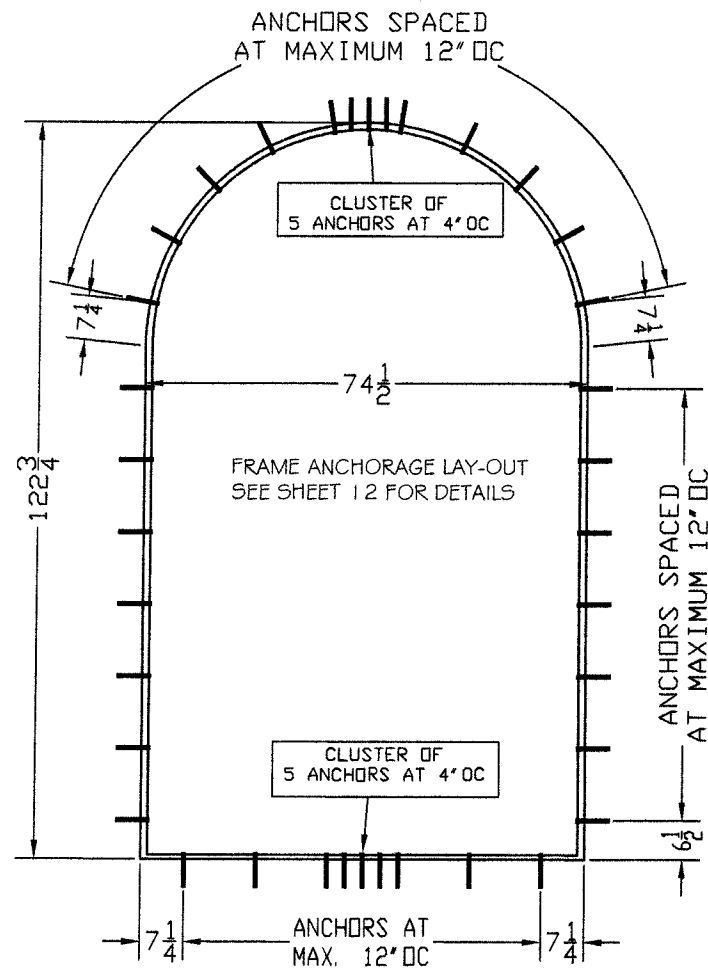
SCALE:
NA
DATE:
10/31/2017
DRAWING #
17-707
SHEET
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ENGINEERING SEAL
PEDRO DE FIGUEIREDO
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MODEL 2

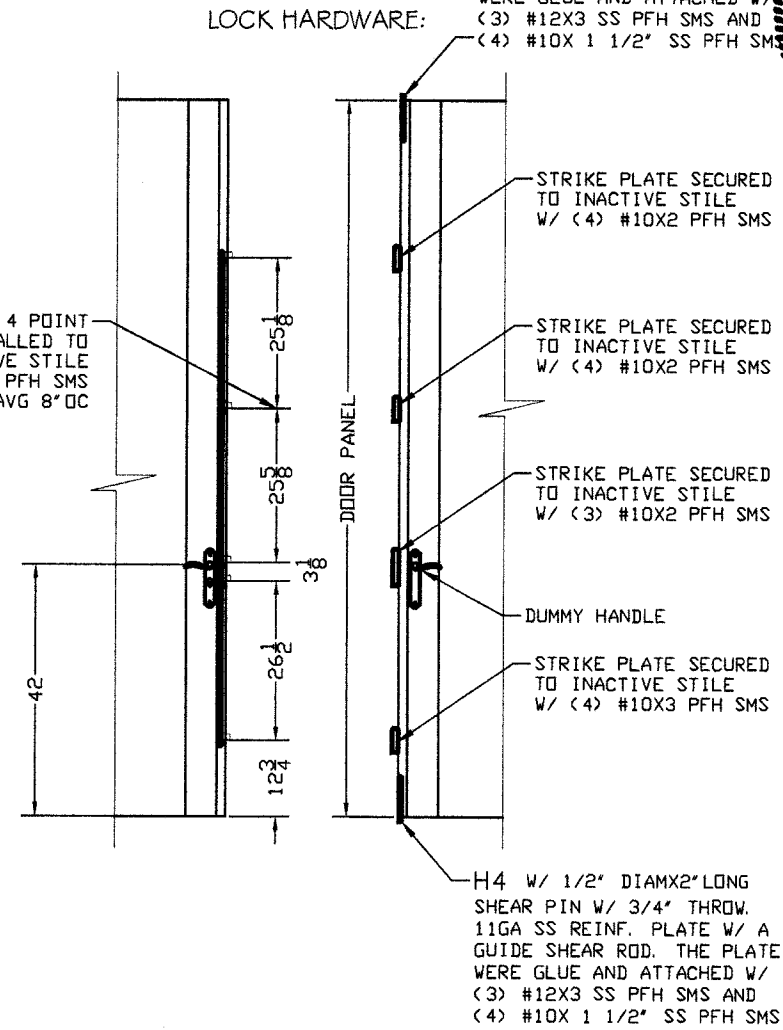


EXTERIOR SIDE ELEVATION
ARCHED TYPE PAIR DOOR XX



SEE SHEET 12 TO SELECT ANCHOR OPTIONS

BORANO 4 POINT
LOCK INSTALLED TO
THE ACTIVE STILE
W/ (13) #10X2 PFH SMS
AT AVG 8" OC



H4 W/ 1/2" DIAMX2" LONG
SHEAR PIN W/ 3/4" THROW.
11GA SS REINF. PLATE W/ A
GUIDE SHEAR ROD. THE PLATE
WERE GLUE AND ATTACHED W/
(3) #12X3 SS PFH SMS AND
(4) #10X 1 1/2" SS PFH SM

LOCK HARDWARE:

STRIKE PLATE SECURED
TO INACTIVE STILE
W/ (4) #10X2 PFH SMS

STRIKE PLATE SECURED
TO INACTIVE STILE
W/ (4) #10X2 PFH SMS

STRIKE PLATE SECURED
TO INACTIVE STILE
W/ (3) #10X2 PFH SMS

DUMMY HANDLE

STRIKE PLATE SECURED
TO INACTIVE STILE
W/ (4) #10X3 PFH SMS

H4 W/ 1/2" DIAMX2" LONG
SHEAR PIN W/ 3/4" THROW.
11GA SS REINF. PLATE W/ A
GUIDE SHEAR ROD. THE PLATE
WERE GLUE AND ATTACHED W/
(3) #12X3 SS PFH SMS AND
(4) #10X 1 1/2" SS PFH SMS

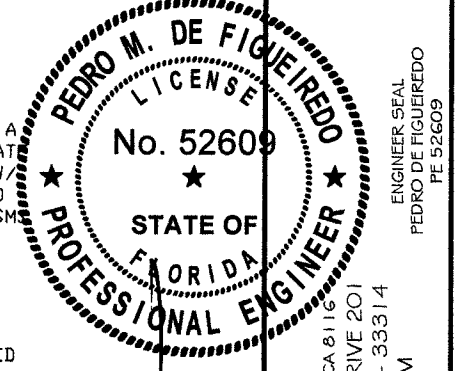
MODEL 2
RECTANGULAR SWING-OUT
PAIR DOOR XX: (MAX. 74 1/2" X 122 3/4")
SINGLE DOOR X: (MAX. 38 3/8" X 122 3/4")

PD= +65 PSF, -65 PSF

OPERATING FORCE
WATER RESISTANCE: ASTM E331, 11.25 PSF
(15% OF +75 PSF)
AIR INFILTRATION: ASTM E283
FORCE ENTRY: ASTM F588

HARDWARE NOTES:

- 1- FLUSH BOLTS: THE INACTIVE DOOR LEAF CONTAINED A CONCEALED FLUSH BOLT BORANO PART # H4 WITH 1/2" DIAMX2" LONG SHEAR PIN WITH 3/4" THROW AT TOP AND BOTTOM. THE LOCK CONTAINED AN 11GA SS REINFORCEMENT PLATE WITH A GUIDE SHEAR ROD AT TOP & BOTTOM. THE REINF. PLATE WERE GLUE USING ASHALAND ISOGRIIP SP 3030 D AND WERE ATTACHED USING (3) #12X3 SS PFH SMS FROM BOTTOM AND (4) #10X 1 1/2" SS PFH SMS FROM INTERIOR EDGE.
- 2- STRIKE PLATES:
 - 2.1- FRAME HEAD & SILL: 1X2X0.244 THICK SS STRIKE PLATE WERE INSTALLED ON THE HEADER AND SILL USING (4) #12X3 SS PFH SMS. THE STRIKE PLATES WERE FLUSH WITH THE SURFACE OF THE SILL AND HEADER.
 - 2.2- INACTIVE SASH: (4) 0.8X6.9" LONG STRIKE PLATE WERE INSTALLED IN THE INACTIVE LEAF EACH USING (4) #10X2 PFH SMS. THE STRIKE PLATE WERE INSTALLED TO MATCH THE LOCK POINTS FROM THE BOTTOM OF THE LEAF. THE SECOND STRIKE PLATE HAS TWO CUT-OUTS
- 3- DOOR HANDLE: A DUMMY HANDLE WAS INSTALLED ON THE INACTIVE LEAF.
- 4- ACTIVE DOOR LOCK: A (4) POINT WITH AN ADDITIONAL LATCHING POINT, BORANO # H1A WAS INSTALLED IN THE ACTIVE DOOR LEAF AT 42" FROM THE BOTTOM OF THE ACTIVE DOOR LEAF. THE LOCKING POINTS WERE AS INDICATED IN THE ILLUSTRATION ABOVE FROM THE BOTTOM OF THE ACTIVE LEAF. THE LOCK WAS INSTALLED USING (13) #10X2 SS PFH SMS AT 9 3/8" FROM THE BOTTOM OF THE DOOR AND 8" OC AVERAGE.
- 5- HINGES: (4) 4.5X4.5 SOLID BRASS HINGES BY BORANO PART# H-2 WERE ATTACHED TO THE DOOR FRAME AND DOOR LEAVES USING (4) #12X3 PFH SMS AND WERE ATTACHED TO THE DOOR LEAF USING (4) #12X3 PFH SMS.



10/31/17

PRODUCT:
BORANO SERIES
OUTSWING DOORS
LARGE & SMALL MISSILE
IMPACT RATED

MANUFACTURER:
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FAX: (877) 839-2220

PK

DRAFTING & MORE INC.

SCALE:
NA

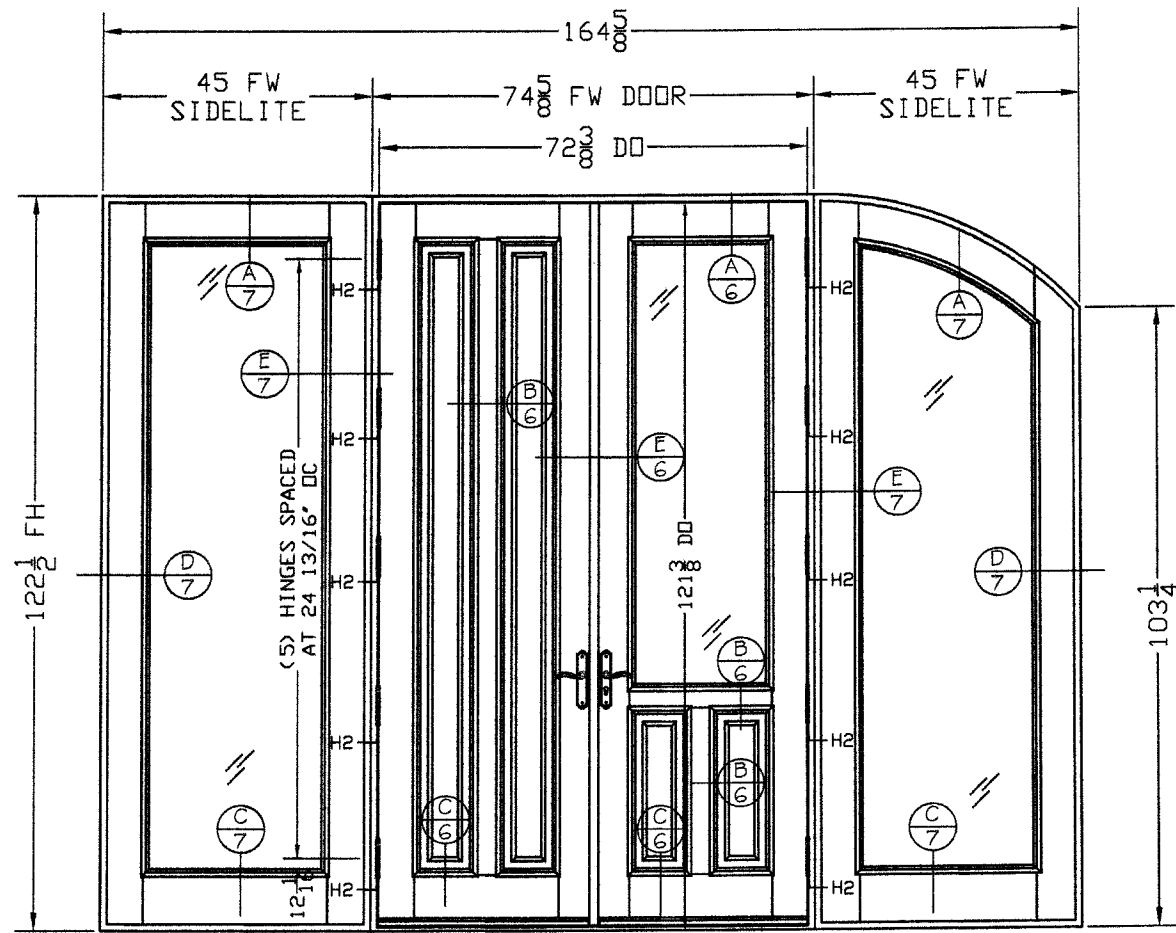
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17-707

SHEET
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MODEL 3



EXTERIOR SIDE ELEVATION
RECTANGULAR PAIR DOOR
O-XX-O WITH SIDELITES

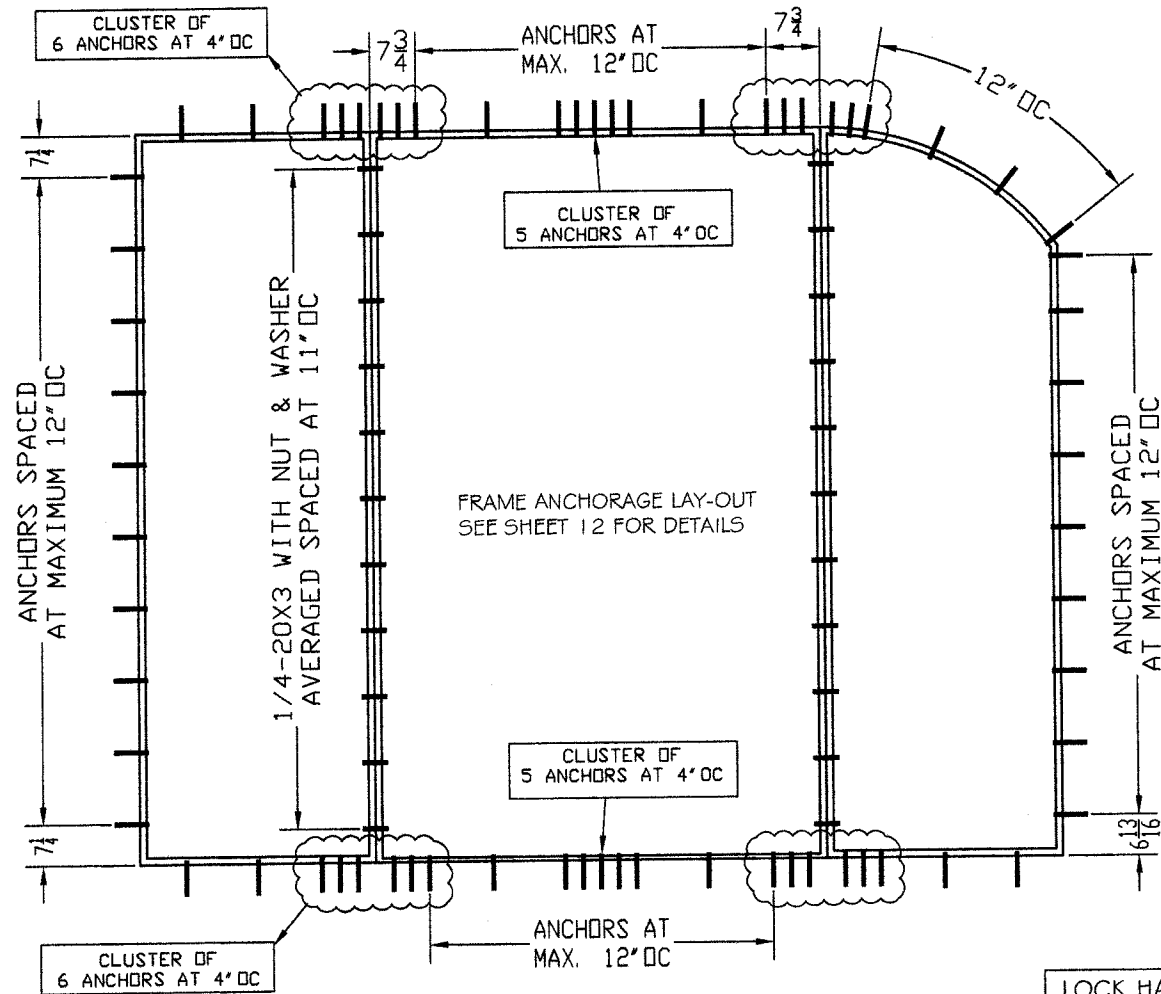
MODEL 3
RECTANGULAR SWING-OUT W/ SIDELITES
PAIR DOOR XX: (MAX. 74 5/8" X 122 1/2")
SINGLE DOOR X: (MAX. 38 7/16" X 122 1/2")
SIDELITE O: (MAX. 45" X 122 1/2")

PD= +65 PSF, -65 PSF

OPERATING FORCE
WATER RESISTANCE: ASTM E331, 11.25 PSF
(15% OF +75 PSF)
AIR INFILTRATION: ASTM E283
FORCE ENTRY: ASTM F588

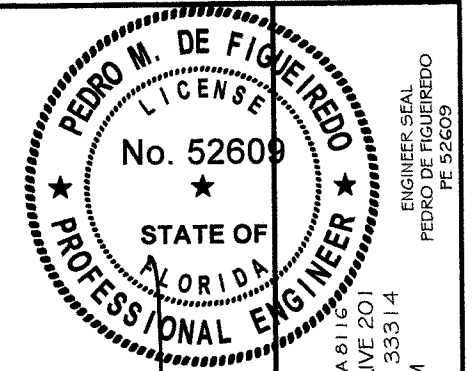
SASH CONSTRUCTION:

THE DOOR LEAF CORNERS AND INTERMEDIATE CONNECTIONS WERE RABBET BUTT JOINED USING MORTISE AND TENON CONNECTIONS.
BOTTOM RAIL TO VERTICAL STILE: 6 3/4 X 3/4 X 1 7/8" TENON INTO THE STILE
TOP RAIL TO VERTICAL STILE: 4 1/4 X 3/4 X 1 7/8" LONG TENON INTO THE STILE
INTERMEDIATE RAIL TO VERTICAL STILE: 4 1/4 X 3/4 X 1 7/8" LONG TENON INTO THE STILE
INTERMEDIATE RAIL TO HORIZONTAL RAILS: 4 1/4 X 3/4 X 1 7/8" LONG TENON INTO RAILS
THE ASTRAGAL WAS ATTACHED TO THE DOOR SASH USING (11) #8X1 WOOD SCREWS AT 11"OC.



SEE SHEET 12 TO SELECT ANCHOR OPTIONS

LOCK HARDWARE:
SAME AS SHEET 3



10/31/17

PRODUCT:
BORANO SERIES
OUTSWING DOORS
LARGE & SMALL MISSILE
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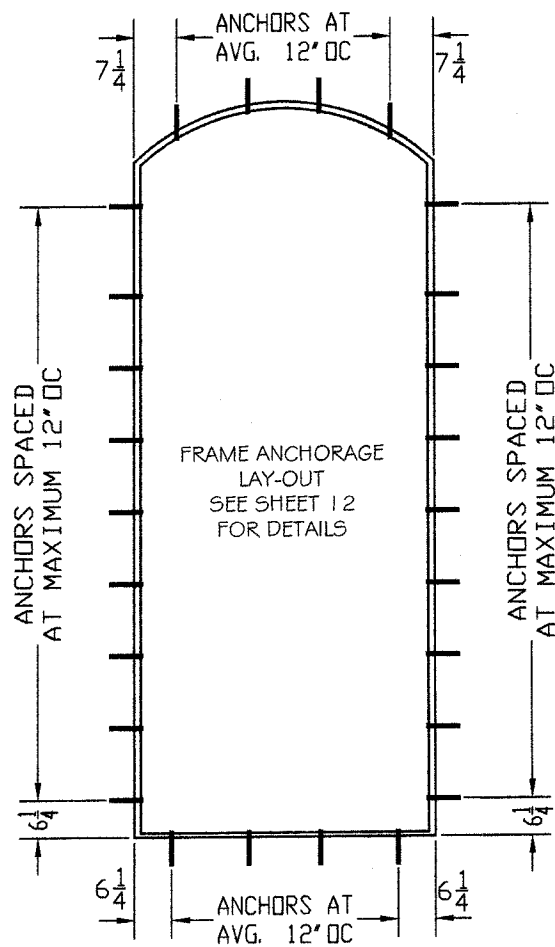
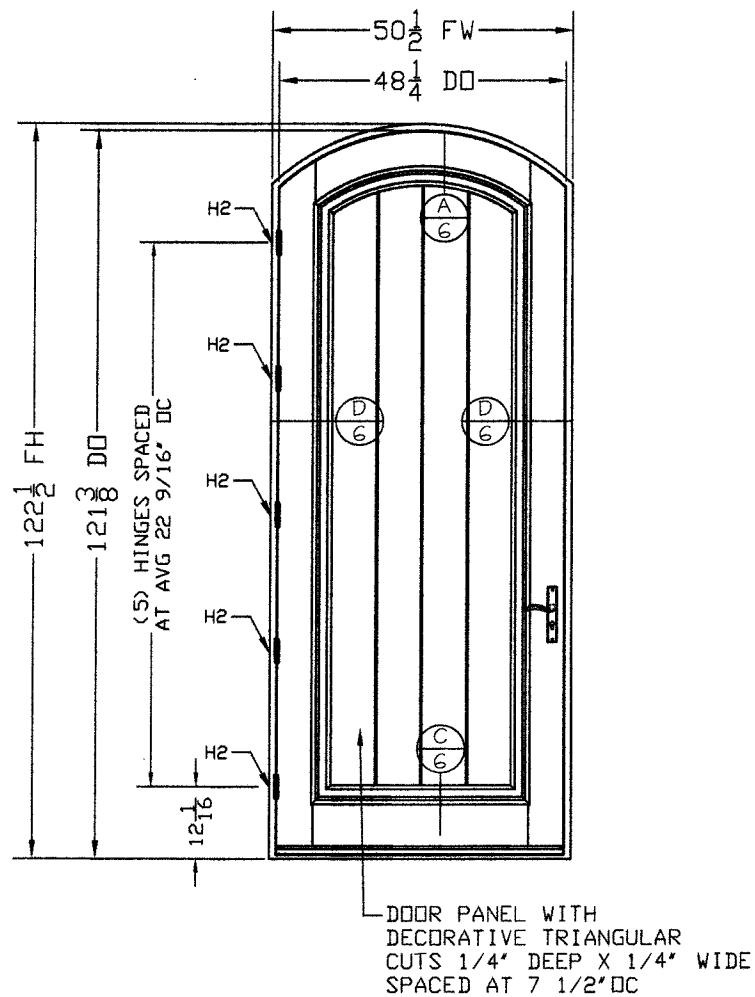
PK

DRAFTING & MORE INC.
SCALE:
NA
DATE:
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SHEET
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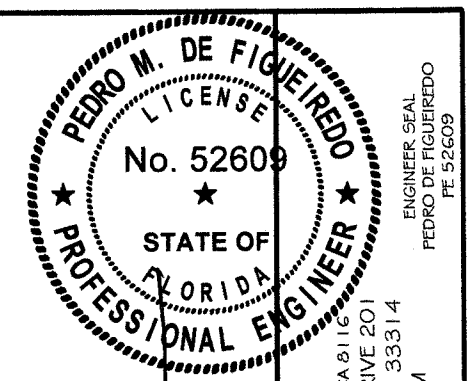
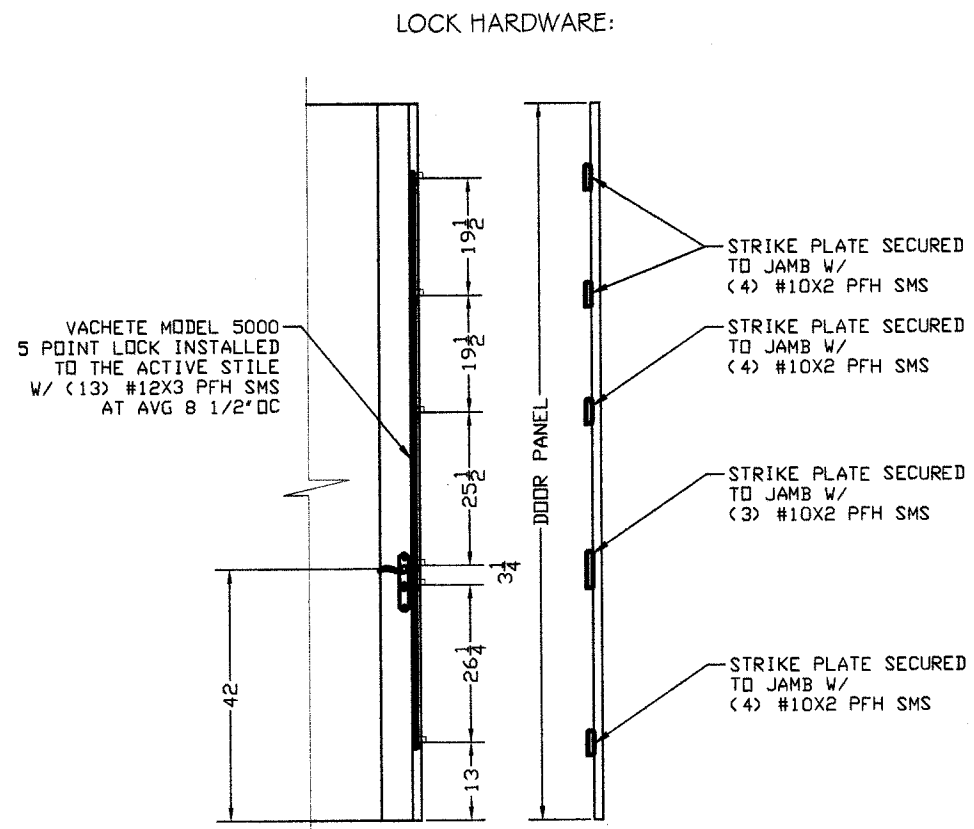
HARDWARE NOTES:

- 1- FLUSH BOLTS: THE INACTIVE DOOR LEAF CONTAINED A CONCEALED FLUSH BOLT BORANO PART # H4 WITH 1/2" DIAM X2" LONG SHEAR PIN WITH 3/4" THROW AT TOP AND BOTTOM. THE LOCK CONTAINED AN 11 GA SS REINFORCEMENT PLATE WITH A GUIDE SHEAR ROD AT TOP & BOTTOM. THE REINFORCING PLATE WERE ATTACHED USING (3) #12X3 SS PFH SMS FROM BOTTOM AND (4) #10X 1 1/2" SS PFH SMS FROM INTERIOR EDGE. THE FLUSH BOLTS WERE 2 5/8" FROM THE VERTICAL END OF THE LOCK STILE.
- 2- STRIKE PLATES:
 - 2.1- FRAME HEAD & SILL: A 1 1/2X3X1/4 THICK STEEL STRIKE PLATES WERE INSTALLED ON THE HEADER AND SILL USING (4) #12X3 PFH SMS. THE STRIKE PLATES WERE FLUSH WITH THE SURFACE OF THE SILL AND HEADER.
 - 2.2- INACTIVE SASH: (4) 0.8X6.9" LONG STRIKE PLATE WERE INSTALLED IN THE INACTIVE LEAF EACH USING (4) #10X2 PFH SMS, EXCEPT 2ND FROM THE BOTTOM WITH (3) SCREWS SAME TYPE. THE STRIKE PLATE WERE INSTALLED TO MATCH THE LOCK POINTS FROM THE BOTTOM OF THE LEAF. THE SECOND STRIKE PLATE HAS TWO CUT-OUTS
- 3- DOOR HANDLE: A DUMMY HANDLE WAS INSTALLED ON THE INACTIVE LEAF.
- 4- ACTIVE DOOR LOCK: A (4) POINT WITH AN ADDITIONAL LATCHING POINT, BORANO # H1A WAS INSTALLED IN THE ACTIVE DOOR LEAF AT 42" FROM THE BOTTOM OF THE ACTIVE DOOR LEAF. THE LOCKING POINTS WERE AS INDICATED IN THE ILLUSTRATION AS PER SHEET 3 OF 14 FROM THE BOTTOM OF THE ACTIVE LEAF. THE LOCK WAS INSTALLED USING (15) #10X2 SS PFH SMS AT 8 3/4" FROM THE BOTTOM OF THE DOOR AND 7 7/8" OC AVERAGE.
- 5- HINGES: (5) 4.5X4.5 SOLID BRASS HINGES BY BORANO PART# H-2 WERE ATTACHED TO THE DOOR FRAME AND DOOR LEAVES USING (4) #12X3 PFH SMS AND WERE ATTACHED TO THE DOOR LEAF USING (4) #12X3 PFH SMS.

MODEL 4



SEE SHEET 12 TO SELECT ANCHOR OPTIONS



10/31/17

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PK
DRAFTING & MORE INC.

SCALE:
NA

DATE:
10/31/2017

DRAWING #
17-707

SHEET
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MODEL 4
RECTANGULAR SWING-OUT 1 3/4"
SINGLE DOOR X: (MAX. 50 1/2" X 122 1/2")

PD= +65 PSF, -65 PSF

OPERATING FORCE
WATER RESISTANCE: ASTM E331, 11.25 PSF
(15% OF +75 PSF)
AIR INFILTRATION: ASTM E283
FORCE ENTRY: ASTM F588

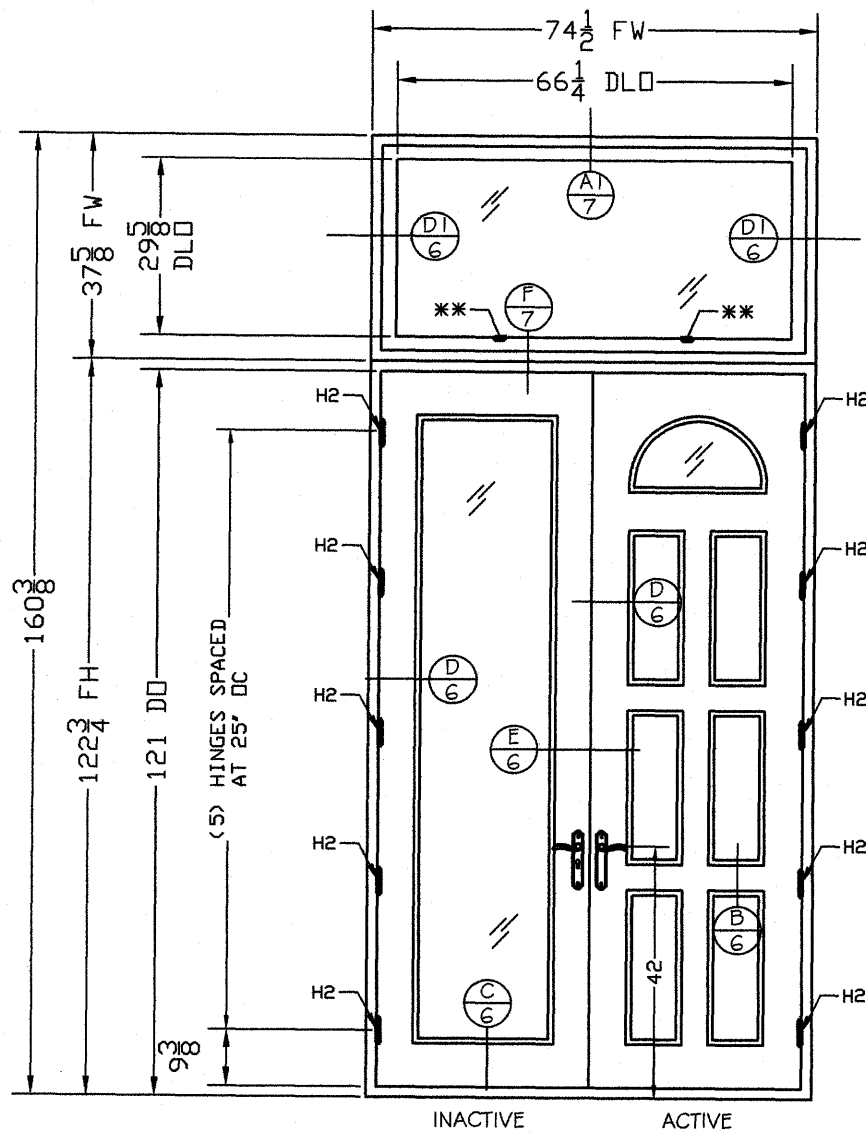
HARDWARE NOTES:

1- DOOR HANDLE: ACTIVATING THE LATCH WAS INSTALLED AT 42" FROM THE BOTTOM OF THE DOOR.

2- ACTIVE DOOR LOCK: A (5) POINT LOCKING MECHANISM WITH AN ADDITIONAL LATCH, # H1A - 5 POINT BY BORANO, WAS INSTALLED ON THE LEAF. EACH POINT LOCK PROTRUDED 1 3/16". THE CORRESPONDING (5) 6 7/8" X 0.80 X 0.112" PAINTED STEEL STRIKES PLATES WITH 1.73" X 0.50" SLOT WERE ATTACHED TO THE DOOR JAMB AS ILLUSTRATED ABOVE

3- HINGES: (5) 4.5X4.5 SOLID BRASS HINGES BY BORANO PART# H-2 WERE ATTACHED TO THE DOOR FRAME AND DOOR LEAVES USING (4) #1 2X3 PFH SMS AND WERE ATTACHED TO THE DOOR LEAF USING (4) #1 2X3 PFH SMS.

MODEL 6



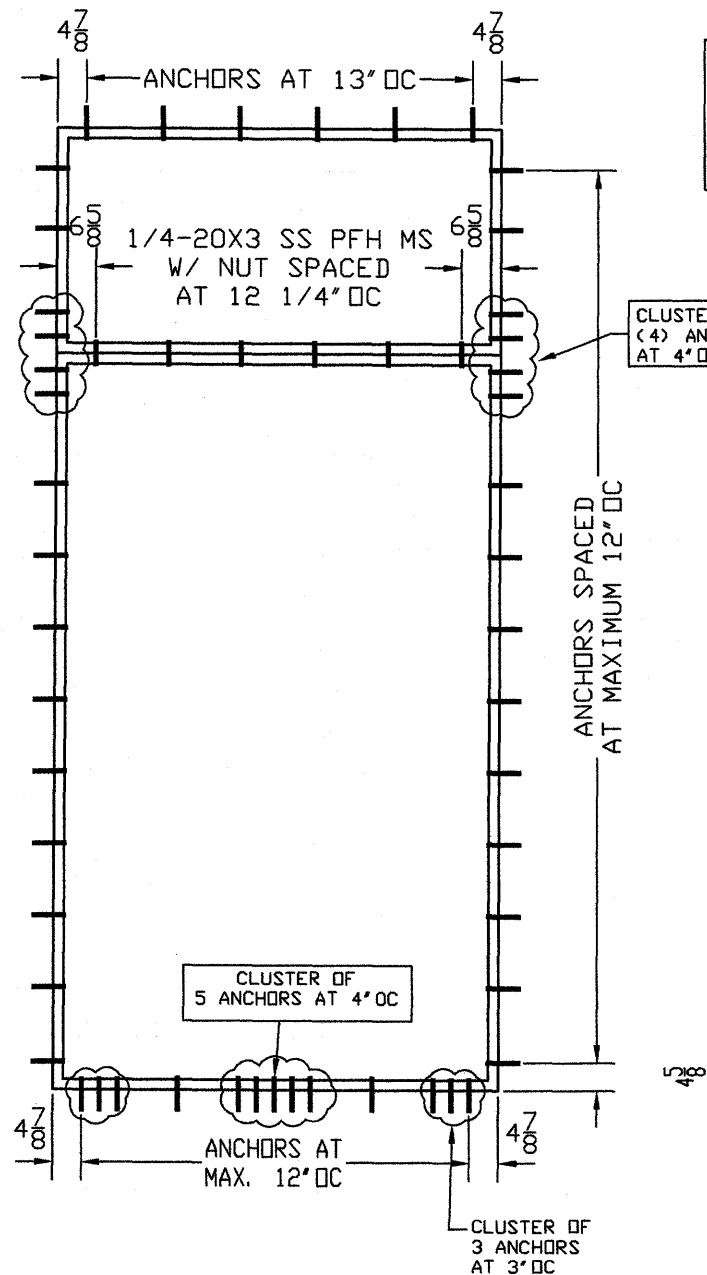
EXTERIOR SIDE ELEVATION
RECTANGULAR TYPE PAIR DOOR W/ TRANSOM XX-O

MODEL 6
RECTANGULAR W/ TRANSOM SWING-OUT
PAIR DOOR XX-O: (MAX. 74 1/2" X 160 3/8")
SINGLE DOOR X-O: (MAX. 38 3/8" X 160 3/8")

PD= +65 PSF, -65 PSF

** PRODUCT POSITIVE PRESSURE TO BE LIMITED TO
+60 PSF FOR INSTALLATIONS WITHOUT AN OVERHANG
MEETING THE OH ratio= OH length/ OH height
DOOR COVERAGE (FBC 2017 SECTION 1709.5.1)

OPERATING FORCE
WATER RESISTANCE: ASTM E331
9 PSF -- (15% OF +60 PSF)
AIR INFILTRATION: ASTM E283
FORCE ENTRY: ASTM F588



** FBC SECTION 2411.3.3.1 FOR EACH FIXED
GLASS SILL WITH WIDTH MORE THAN 3 FEET
TO HAVE TWO APPROVED NEOPRENE SETTING
BLOCKS 70-90 SHORE A DUROMETER
HARDNESS

CLUSTER OF
(4) ANCHORS
AT 4" OC

STRIKE PLATE SECURED
TO INACTIVE STILE
W/ (4) #12X1 1/2 PFH SMS

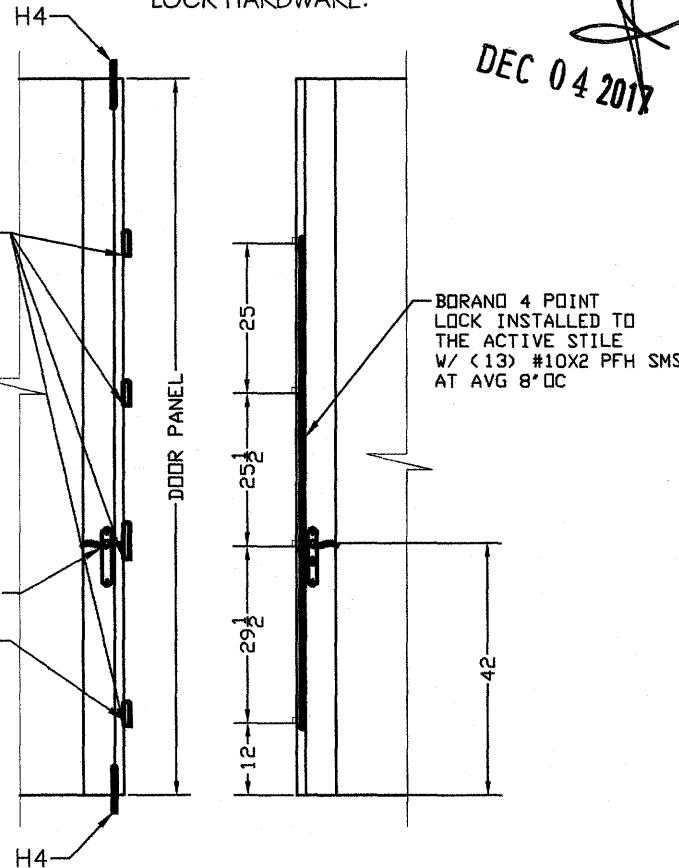
STRIKE PLATE SECURED
TO INACTIVE STILE
W/ (4) #12X1 1/2 PFH SMS

CLUSTER OF
5 ANCHORS
AT 4" OC

ANCHORS AT
MAX. 12" OC

CLUSTER OF
3 ANCHORS
AT 3" OC

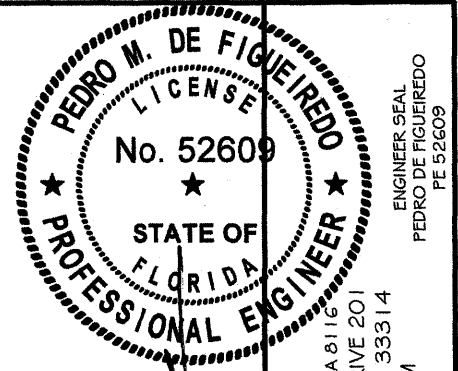
LOCK HARDWARE:



BORANO 4 POINT
LOCK INSTALLED TO
THE ACTIVE STILE
W/ (13) #10X2 PFH SMS
AT AVG 8" OC

HARDWARE NOTES:

- 1- FLUSH BOLTS: BORANO PART H-4 INSTALLED IN THE INACTIVE LEAF 17 1/4" FROM THE TOP AND 19 1/2" FROM THE BOTTOM OF THE SASH. THE LOCK CONTAINED AN 11 GA SS REINFORCEMENT PLATE WITH A GUIDE SHEAR ROD AT TOP AND BOTTOM. THE REINF. PLATE WERE GLUED USING ASHLAND ISOGRIIP 5P 3030D AND WERE ATTACHED USING (3) #12X3 SS PFH SMS FROM BOTTOM AND (4) #10X1 1/2" SS PFH SMS FROM THE INTERIOR EDGE.
- 2- STRIKE PLATES:
 - 2.1- FRAME HEAD & SILL: A 1X2X0.244 THICK SS STRIKE PLATE WERE INSTALLED ON THE HEADER AND SILL USING (4) #12X3 SS PFH SMS. THE STRIKE PLATES WERE FLUSH WITH THE SURFACE OF THE SILL AND HEADER.
 - 2.2- INACTIVE SASH: (4) 0.8X6.9" LONG STRIKE PLATES WERE INSTALLED IN THE INACTIVE LEAF USING (4) #12X1 1/2" PFH SMS.
- 3- DOOR HANDLE: A DUMMY HANDLE WAS INSTALLED ON THE INACTIVE LEAF.
- 4- ACTIVE DOOR LOCK: A (4) POINT WITH AN ADDITIONAL LATCHING POINT, BORANO # H1A WAS INSTALLED IN THE ACTIVE DOOR LEAF AT 42" FROM THE BOTTOM OF THE ACTIVE DOOR LEAF. THE LOCKING POINTS WERE AT 12, 41.5, 67 AND 92 FROM THE BOTTOM OF THE ACTIVE LEAF. THE LOCK WAS INSTALLED USING (13) #10X2 SS PFH SMS AT 9.375", 16.375, 25.25, 34.5, 46.375, 55.5, 64.5, 71.25, 78.75, 80.875, 90, 96.75, 105 FROM THE BOTTOM OF THE DOOR LEAF.
- 5- HINGES: (5) 4.5X4.5 SOLID BRASS HINGES BY BORANO PART# H-2 WERE ATTACHED TO THE DOOR FRAME AND DOOR LEAVES USING (4) #12X3 PFH SMS.



DEC 04 2017

PRODUCT:
BORANO SERIES
OUTSWING DOORS
LARGE & SMALL MISSILE
IMPACT RATED

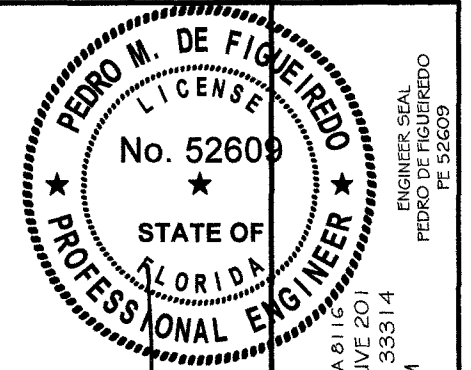
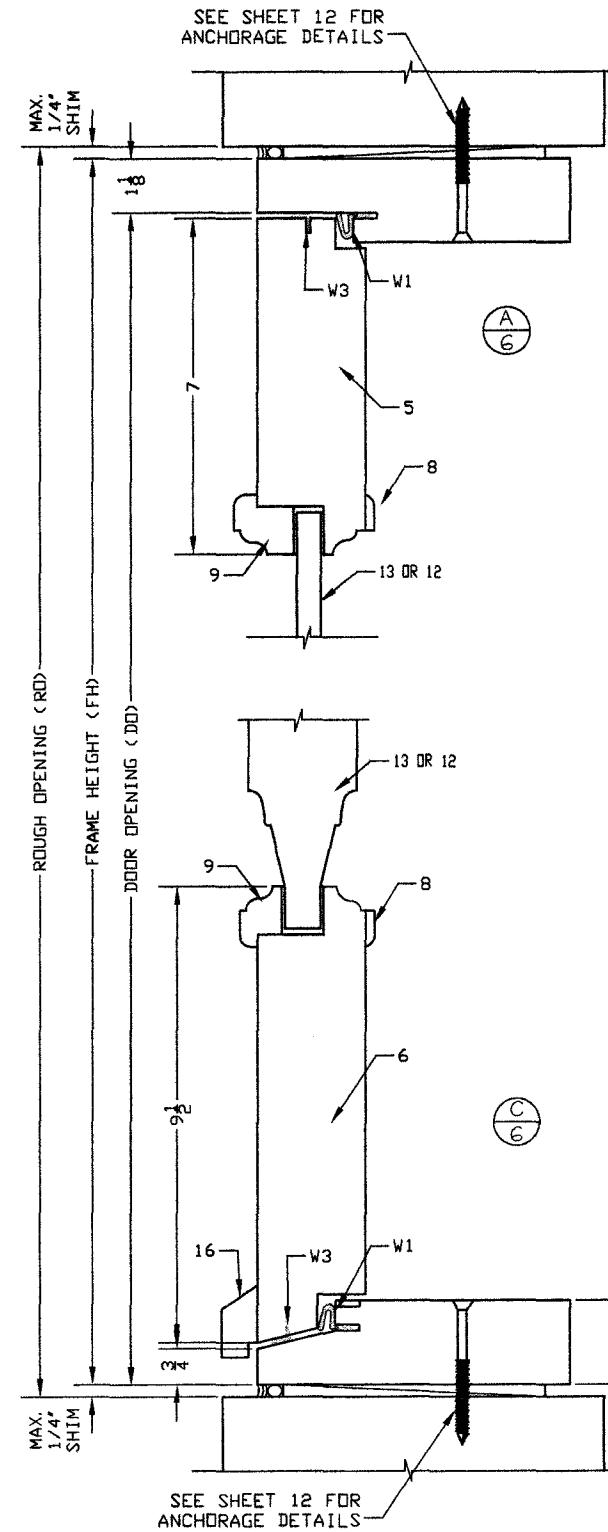
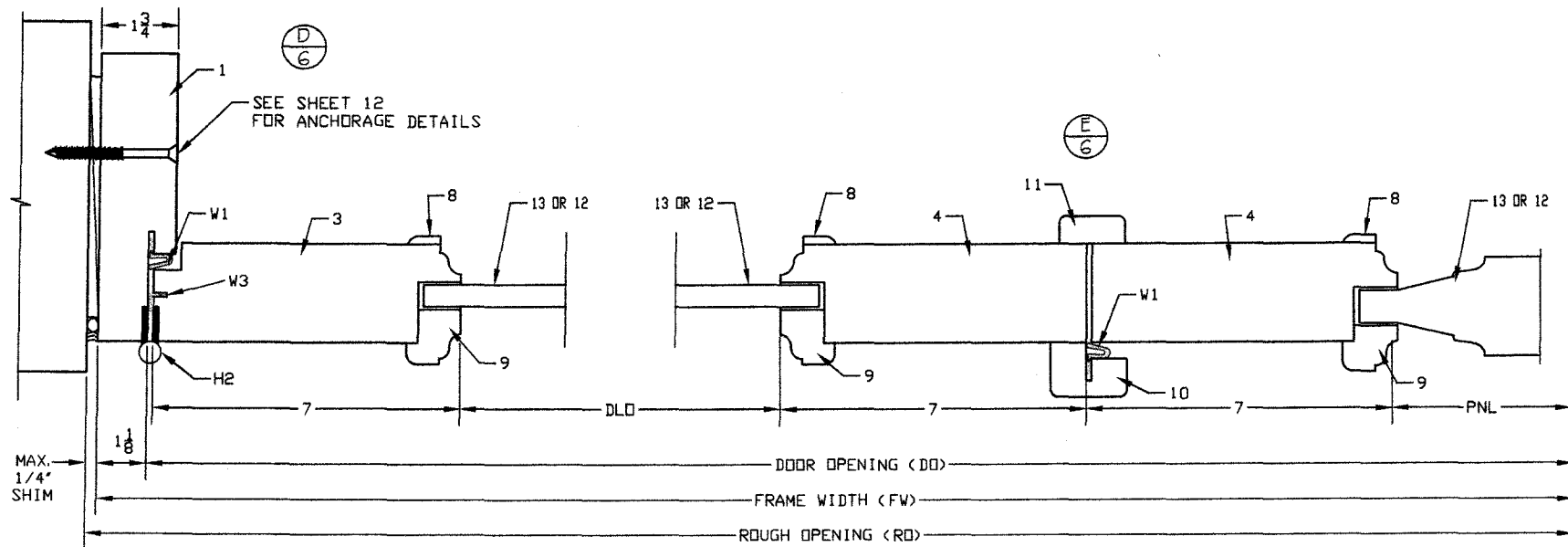
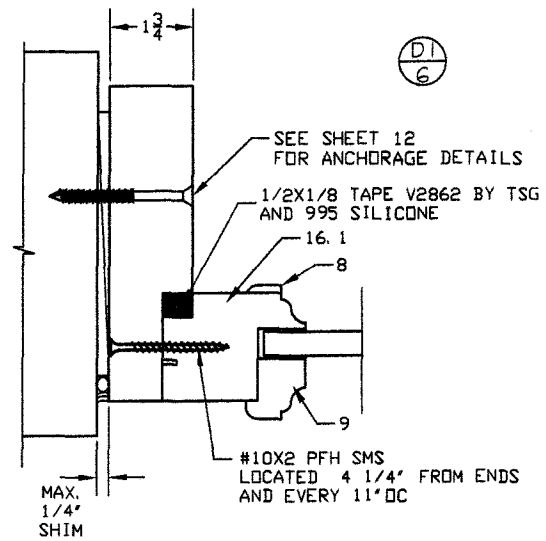
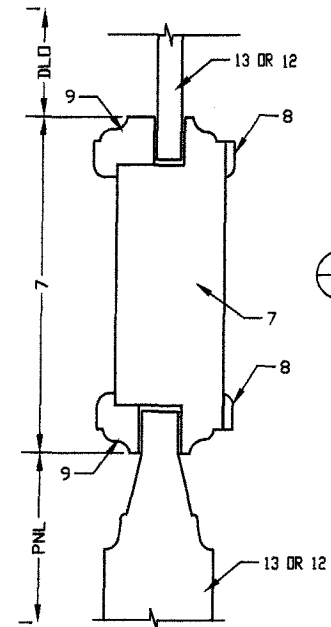
MANUFACTURER:
BORANO INC
222 NE 27TH STREET
MIAMI- FLORIDA- 33137
TEL: (561) 939-3368
FAX: (877) 839-2220

PK
DRAFTING & MORE INC.

SCALE:
NA
DATE:
10/31/2017
DRAWING #
17-707
SHEET
5.1 OF 14

ENGINEER SEAL
PEDRO DE FIGUEIREDO
PE 52609
ENGINEERING
ENGCO INC. - CA 8116
5595 ORANGE DRIVE 201
DAVIE - FLORIDA - 33314
ENGCO@AOL.COM

MODELS 1, 2, 3, 4 AND 6 - SECTIONS



10/31/17

ENGINEER SEAL
 PEDRO DE FIGUEIREDO
 PE 52609
 ENGINEERING
 ENGCO INC. - CA 81116
 5595 ORANGE DRIVE 201
 DAVIE - FLORIDA - 33314
 ENGCO@AOL.COM

PRODUCT:
BORANO SERIES
OUTSWING DOORS
 LARGE & SMALL MISSILE
 IMPACT RATED

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BORANO INC
 222 NE 27TH STREET
 MIAMI-FLORIDA- 33137
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PK

DRAFTING # MORE INC.

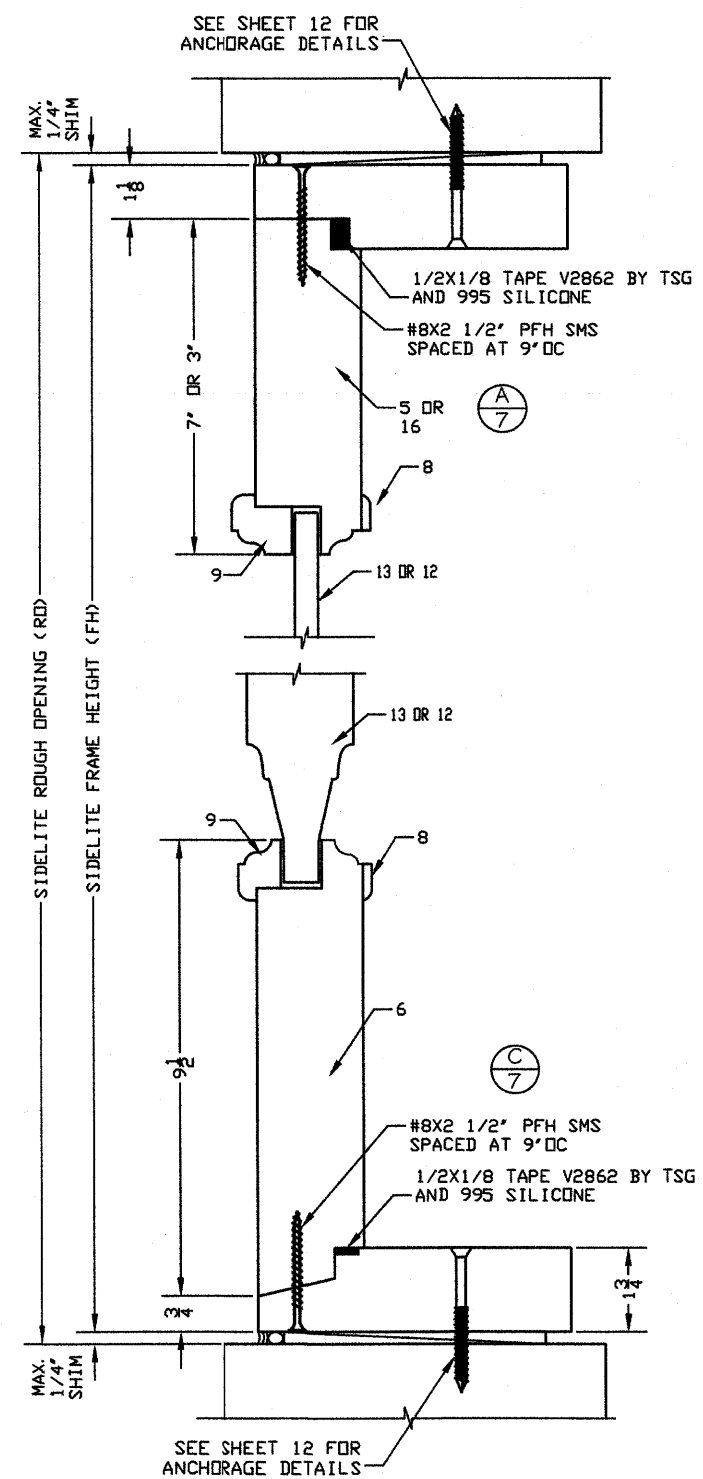
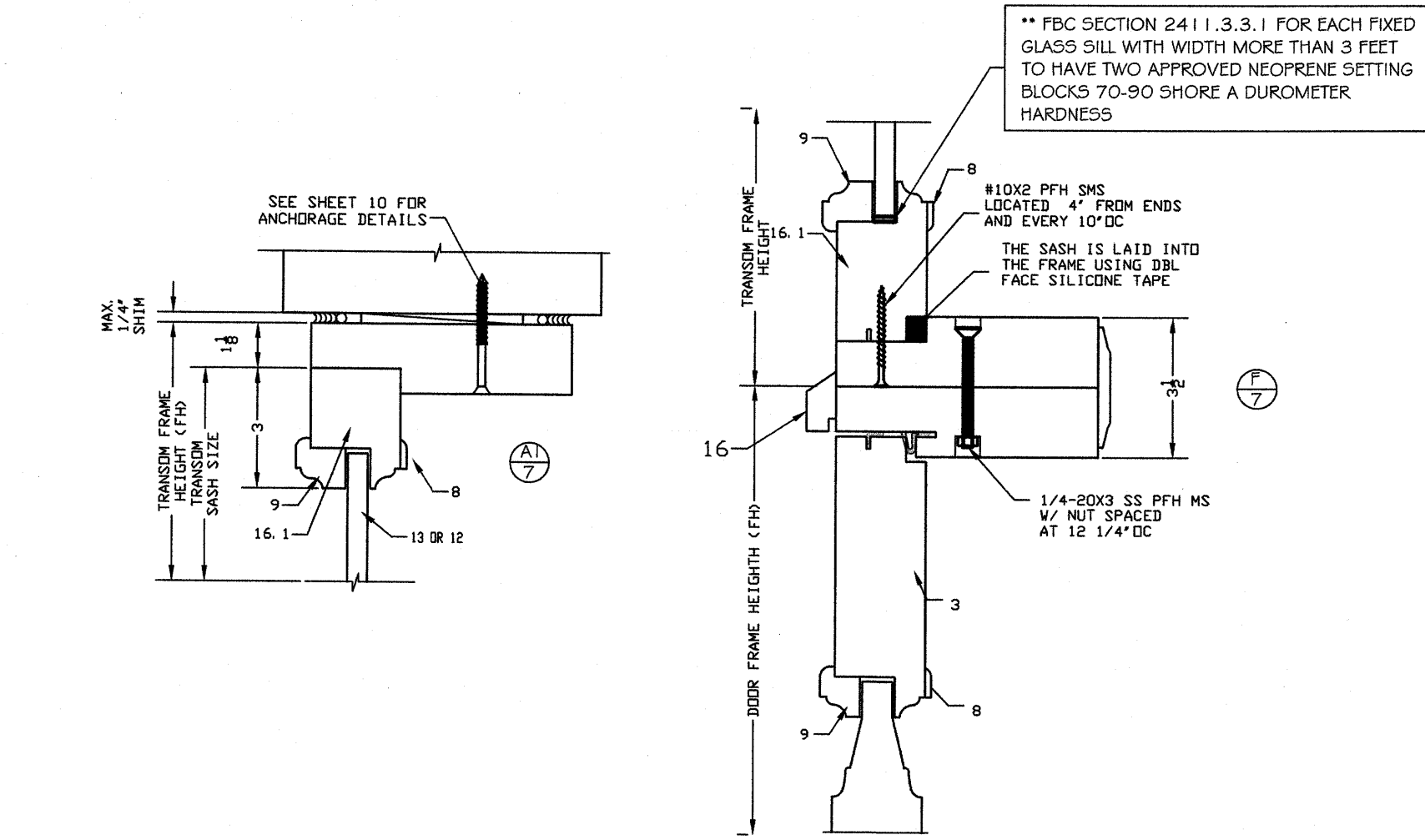
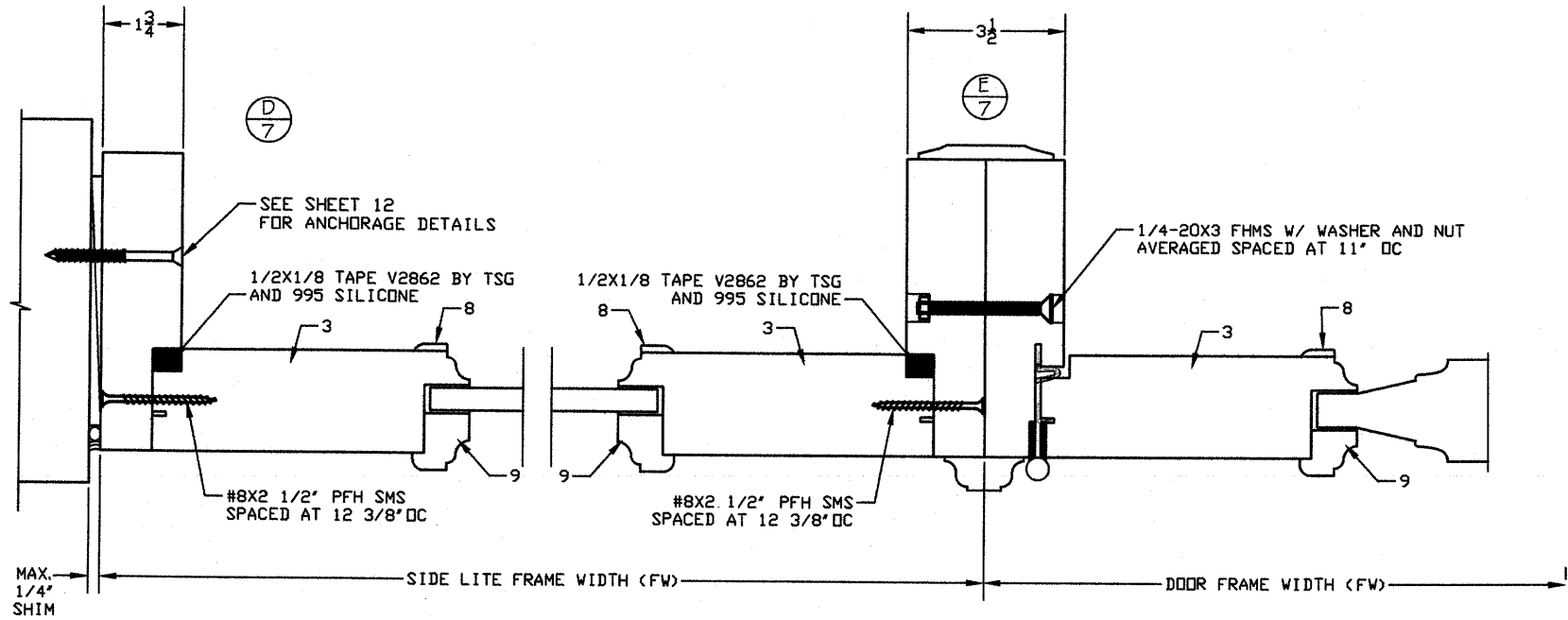
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DATE:
 10/31/2017

DRAWING #
 17-707

SHEET
 6 OF 14

MODELS 3 AND 6 - SECTIONS



PEDRO M. DE FIGUEIRO
 LICENSE
 No. 52609
 STATE OF
 FLORIDA
PROFESSIONAL ENGINEER

DEC 04 2017

PRODUCT:
BORANO SERIES
OUTSWING DOORS
 LARGE & SMALL MISSILE
 IMPACT RATED

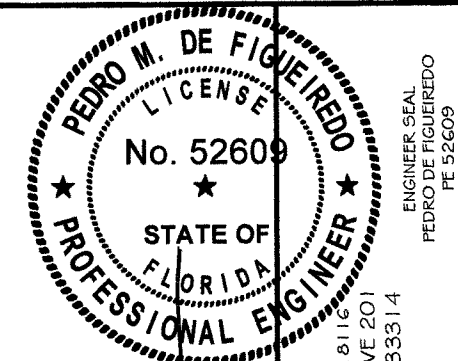
MANUFACTURER:
BORANO INC
 222 NE 27TH STREET
 MIAMI-FLORIDA- 33137
 TEL: (561) 939-3368
 FAX: (877) 839-2220

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DRAFTING & MORE INC.
 SCALE:
 NA
 DATE:
 10/31/2017
 DRAWING #
 17-707
 SHEET
 7 OF 14

ENGINEERING
ENCO INC. - CA 8116
 5595 ORANGE DRIVE 201
 DAVIE - FLORIDA - 33314
 ENCO@AOL.COM
 ENGINEER SEAL
 PEDRO DE FIGUEIRO
 PE 52609

MODELS 1, 2, 3 AND 4 - BILL OF MATERIALS & GLAZING DETAILS



10/31/17

ENGINEERING SEAL
 PEDRO DE FIGUEIREDO
 PE 52609
 ENGINEERING
 ENGCO INC. - CA 8116
 5595 ORANGE DRIVE 201
 DAVIE - FLORIDA - 33314
 ENGCO@AOL.COM

PRODUCT:
BORANO SERIES
OUTSWING DOORS
 LARGE & SMALL MISSILE
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MANUFACTURER:
BORANO INC
 222 NE 27TH STREET
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DRAFTING & MORE INC.

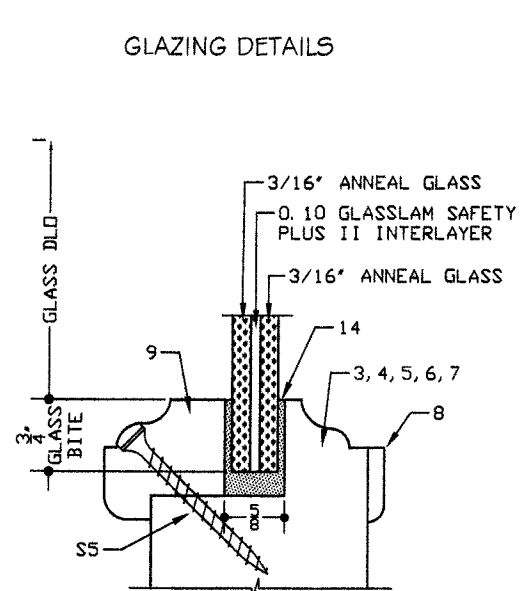
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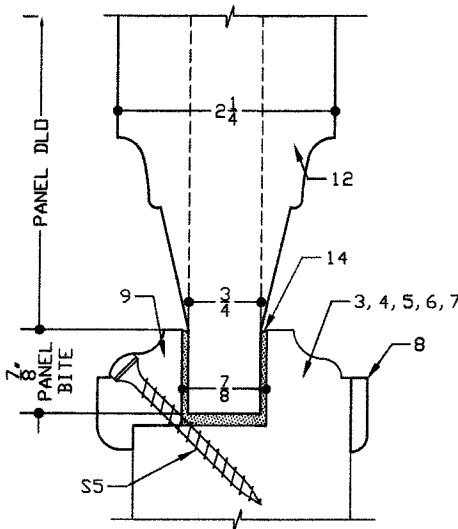
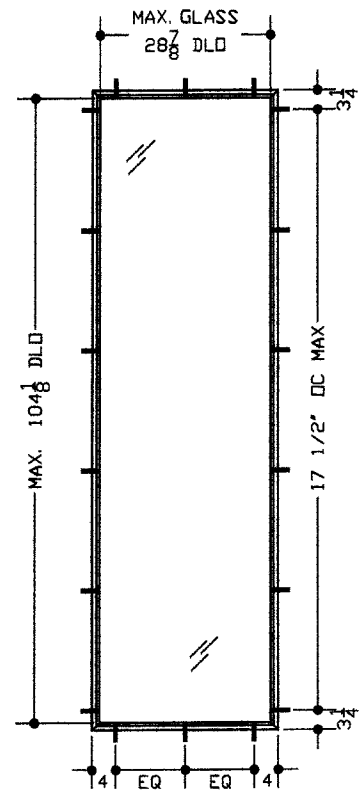
DRAWING #
 17-707

SHEET
 8 OF 14

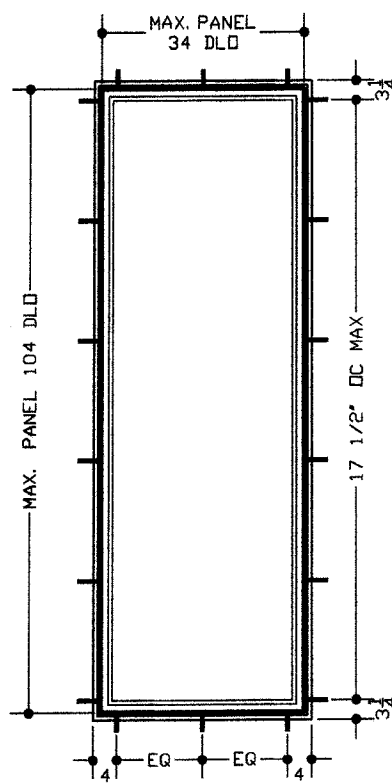
GLAZING DETAILS



GLASS GLAZING METHOD:
 GLASS AND GLAZING STOP WERE WET GLAZED
 USING DOW 995 SILICONE AND FURTHER
 ATTACHED USING #8X2 PPH SMS.



WOOD PANEL GLAZING METHOD:
 PANEL AND GLAZING STOP WERE WET GLAZED
 USING DOW 995 SILICONE AND FURTHER
 ATTACHED USING #8X2 PPH SMS.



BILL OF MATERIALS:

PART#	DESCRIPTION	MATERIAL
1	6 5/8 X 1 3/4 HEADER/ JAMB	LAMINATED WOOD
2	6 5/8 X 1 3/4 SILL	SOLID WOOD
3	7 X 2 1/4 HINGE STILE	BUTCHED BLOCK W/ VENEER
4	7 X 2 1/4 LOCK STILE	BUTCHED BLOCK W/ VENEER
5	7 X 2 1/4 TOP RAIL	BUTCHED BLOCK W/ VENEER
6	9 3/8 X 2 1/4 BOTTOM RAIL	BUTCHED BLOCK W/ VENEER
7	7 X 2 1/4 INTERMEDIATE RAIL	BUTCHED BLOCK W/ VENEER
8	3/4 X 3/16 INSIDE MOULDING	SOLID WOOD
9	1 1/4 X 1 1/8 GLAZING STOP	SOLID WOOD
10	1 1/2 X 5/8 INACTIVE ASTRAGAL	SOLID WOOD
11	1 3/4 X 1 1/4 ACTIVE ASTRAGAL	LAMINATED WOOD
12	2 1/4" LAMINATED WD PANEL	LAMINATED WOOD
13	1/2" IMPACT GLASS	LAMINATED ANNEAL GLASS
14	DOW CORNING 995	STRUCTURAL SILICONE
15	1.22X.51 WEAR STRIP	ALUMINUM
16	1 1/2 X 3/4 DRIP CAP	SOLID WOOD
16.1	2.3X3 TRANSOM SASH	BUTCHED BLOCK W/ VENEER

ASSEMBLY SCREWS & NAILS:

PART#	DESCRIPTION	MATERIAL
S1	#10 X 3" PPH SMS	ZINC PLATED STEEL
S2	#6 X 1 1/4" PPH SMS	ZINC PLATED STEEL
S3	18 GA X 1" BRAD NAIL	GALVANIZED STEEL
S4	#6 X 1 1/2" PPH SMS	ZINC PLATED STEEL
S5	#8 X 2" PPH SMS	ZINC PLATED STEEL
S6	#12 X 1 1/4" PPH SMS	ZINC PLATED STEEL
S7	#12 X 3" PPH SMS	ZINC PLATED STEEL
S8	#8 X 1 1/2" PPH SMS	ZINC PLATED STEEL
S9	#10 X 2" PPH SMS	ZINC PLATED STEEL

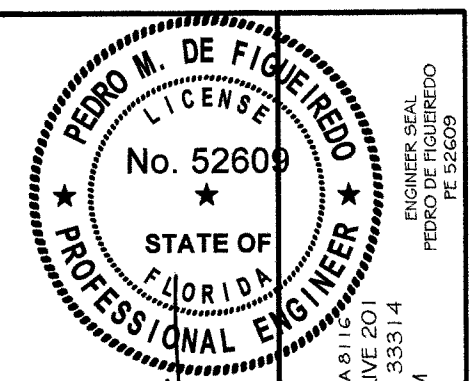
DOOR HARDWARE:

PART#	DESCRIPTION	MATERIAL
H1	BORANO 4 POINT LOCK	STEEL
H2	4.5X4.5 BORANO HINGES	SOLID BRASS
H3	BORANO SURFACE BOLTS	STEEL
H4	1 1/8"X2"X1 1/4 GA STRIKE PLATE	STAINLESS STEEL

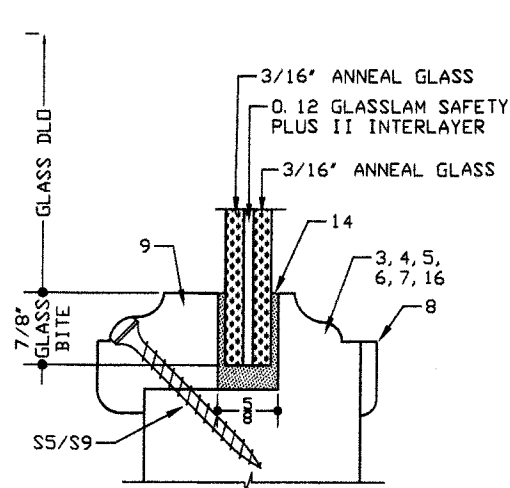
DOOR WEATHER STRIPPING:

PART#	DESCRIPTION	MATERIAL
W1	QEBD 650 KERF	BY SCHLEGEL
W2	BULB VINYL	NEOPRENE
W3	QEZD 320 FLAT	BY SCHLEGEL

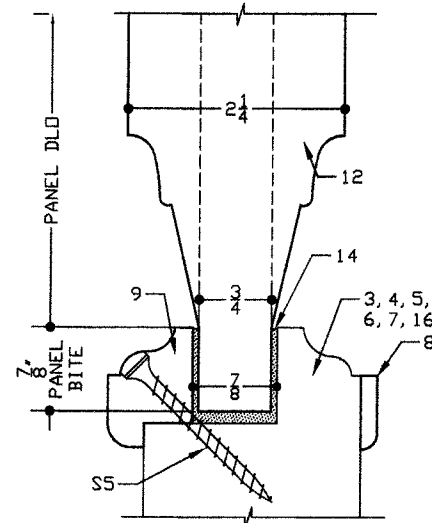
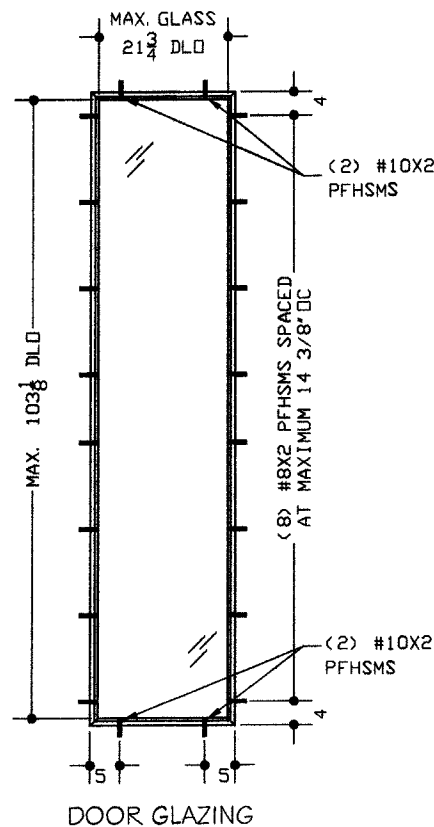
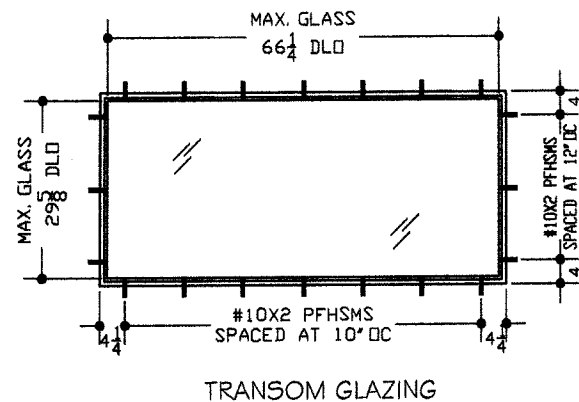
MODELS 6 - BILL OF MATERIALS & GLAZING DETAILS



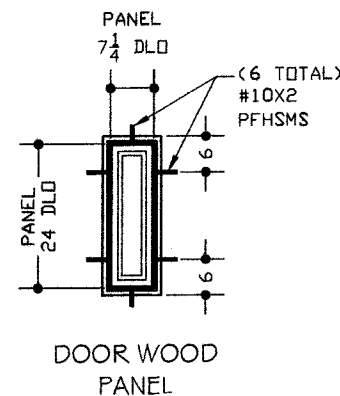
GLAZING DETAILS



GLASS GLAZING METHOD:
GLASS AND GLAZING STOP WERE WET GLAZED USING DOW 995 SILICONE AND FURTHER ATTACHED USING #8X2 PFH SMS.



WOOD PANEL GLAZING METHOD:
PANEL AND GLAZING STOP WERE WET GLAZED USING DOW 995 SILICONE AND FURTHER ATTACHED USING #8X2 PFH SMS.



BILL OF MATERIALS:

PART#	DESCRIPTION	MATERIAL
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12	2 1/4" LAMINATED WD PANEL	LAMINATED WOOD
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14	DOW CORNING 995	STRUCTURAL SILICONE
15	1.22X.51 WEAR STRIP	ALUMINUM
16	1 1/2 X 3/4 DRIP CAP	SOLID WOOD
16.1	2.3X3 TRANSOM SASH	BUTCHED BLOCK W/ VENEER

ASSEMBLY SCREWS & NAILS:

PART#	DESCRIPTION	MATERIAL
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S2	#6 X 1 1/4" PFH SMS	ZINC PLATED STEEL
S3	18 GA X 1" BRAD NAIL	GALVANIZED STEEL
S4	#6 X 1 1/2" PFH SMS	ZINC PLATED STEEL
S5	#8 X 2" PFH SMS	ZINC PLATED STEEL
S6	#12 X 1 1/4" PFH SMS	ZINC PLATED STEEL
S7	#12 X 3" PFH SMS	ZINC PLATED STEEL
S8	#8 X 1 1/2" PFH SMS	ZINC PLATED STEEL
S9	#10 X 2" PFH SMS	ZINC PLATED STEEL

DOOR HARDWARE:

PART#	DESCRIPTION	MATERIAL
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H2	4.5X4.5 BORANO HINGES	SOLID BRASS
H3	BORANO SURFACE BOLTS	STEEL
H4	1 1/8"X2"X1 1/2" GA STRIKE PLATE	STAINLESS STEEL

DOOR WEATHER STRIPPING:

PART#	DESCRIPTION	MATERIAL
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W2	BULB VINYL	NEOPRENE
W3	QEZD 320 FLAT	BY SCHLEGEL

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MANUFACTURER:
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TEL: (561) 939-3368
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PK

DRAFTING # MORE INC.

SCALE:

NA

DATE:

10/31/2017

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17-707

SHEET

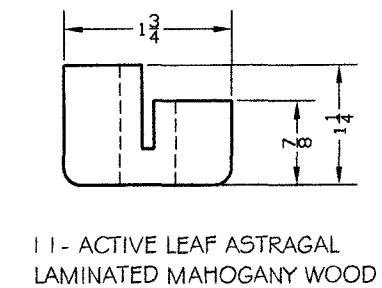
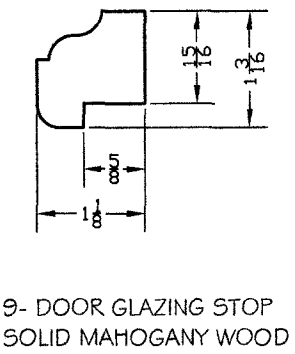
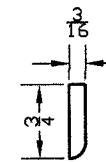
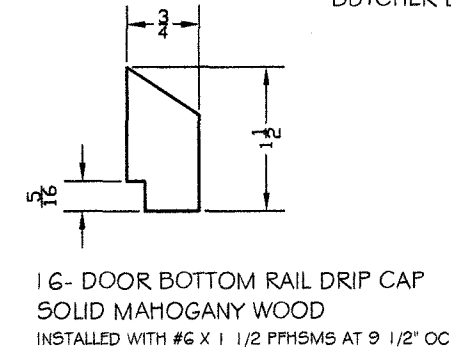
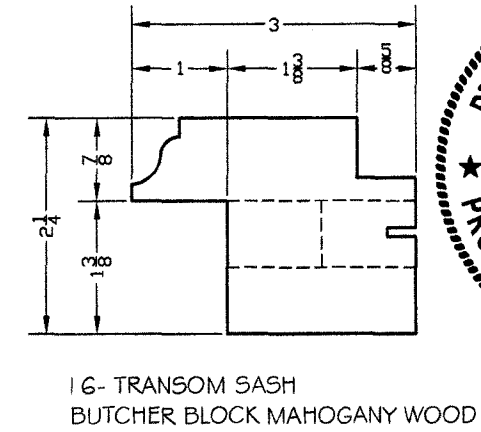
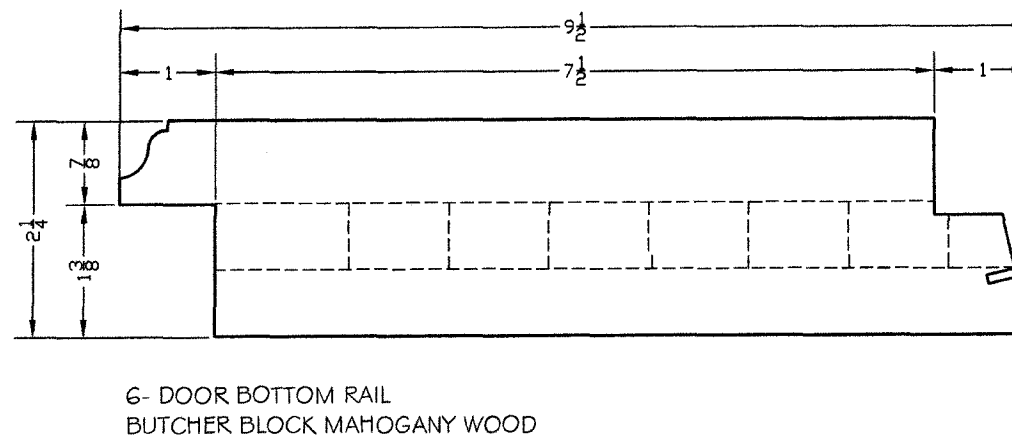
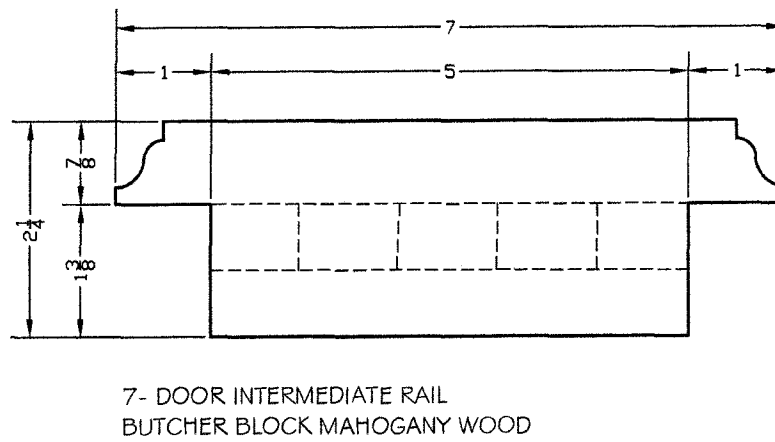
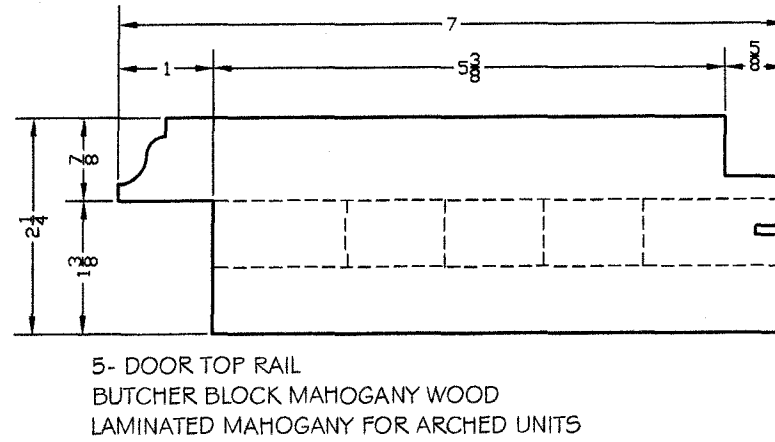
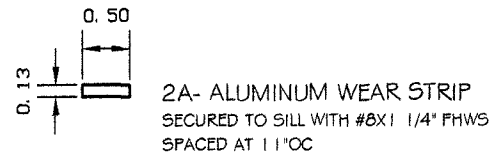
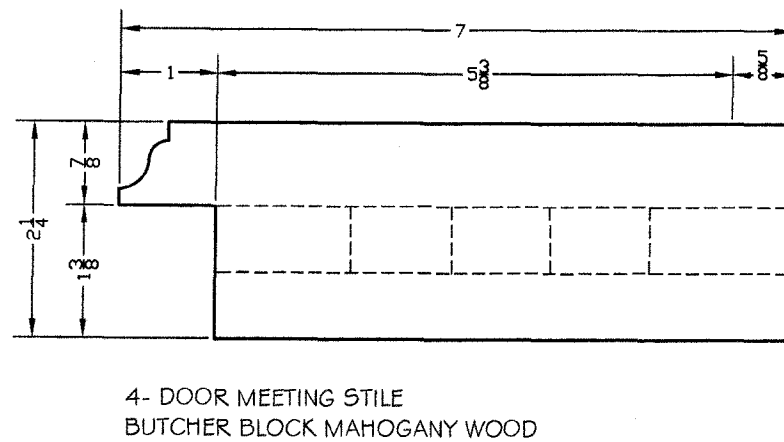
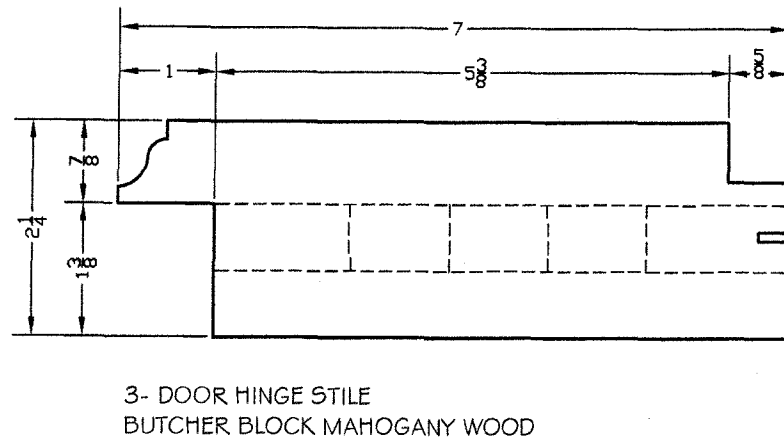
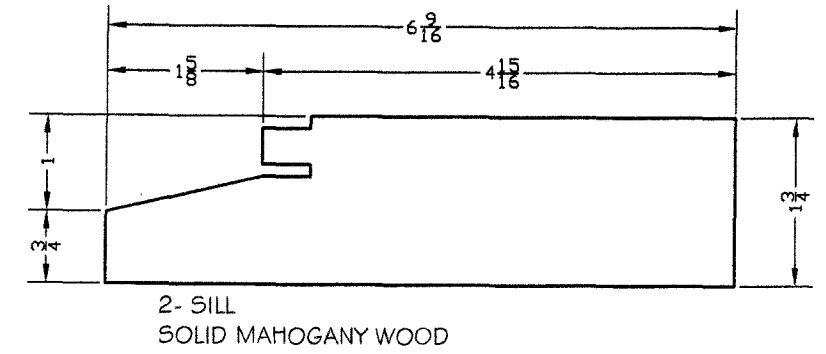
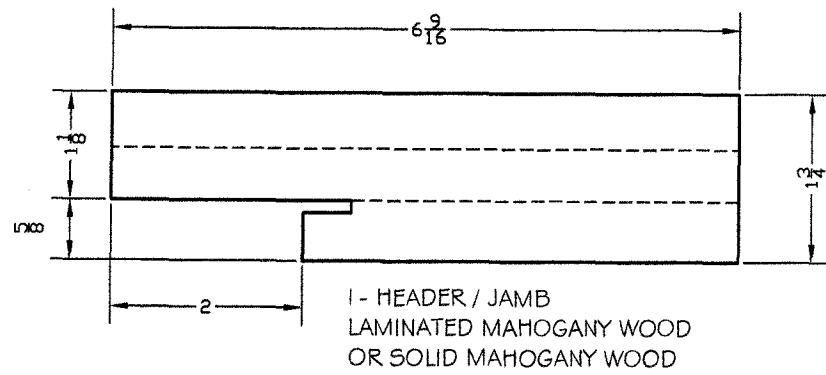
8.1 OF 14

ENGINEERING
ENGCO INC. - CA 8116
5595 ORANGE DRIVE 201
DAVIE - FLORIDA - 33314
ENGCO@AOL.COM

ENGINEER SEAL
PEDRO DE FIGUEIREDO
PE 52609

10/31/17

MODELS 1, 2, 3, 4 AND 6 - COMPONENTS



10/31/17

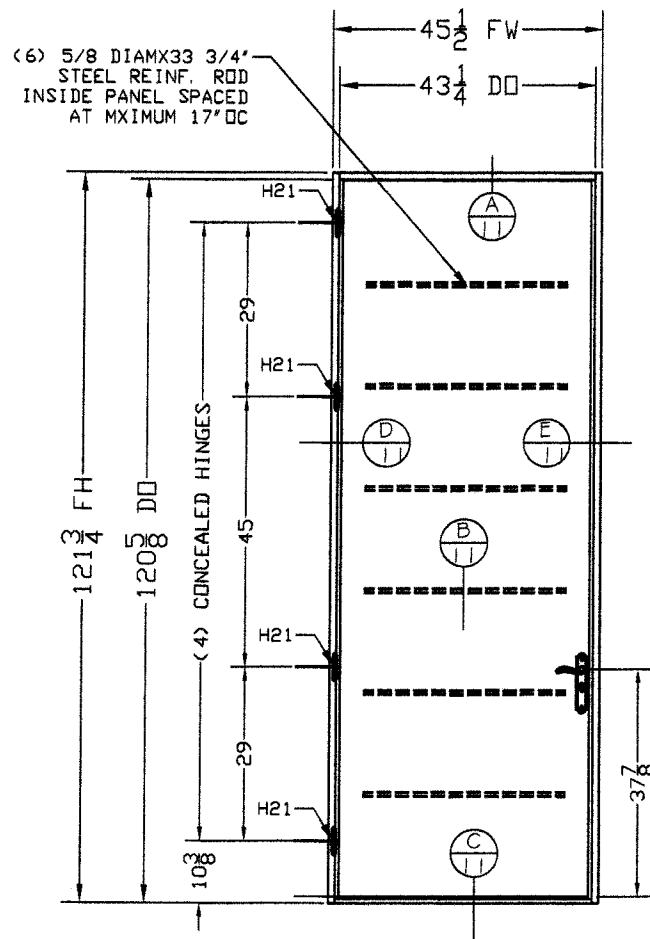
PRODUCT:
BORANO SERIES
OUTSWING DOORS
LARGE & SMALL MISSILE
IMPACT RATED

MANUFACTURER:
BORANO INC
222 NE 27TH STREET
MIAMI-FLORIDA- 33137
TEL: (561) 939-3368
FAX: (877) 839-2220

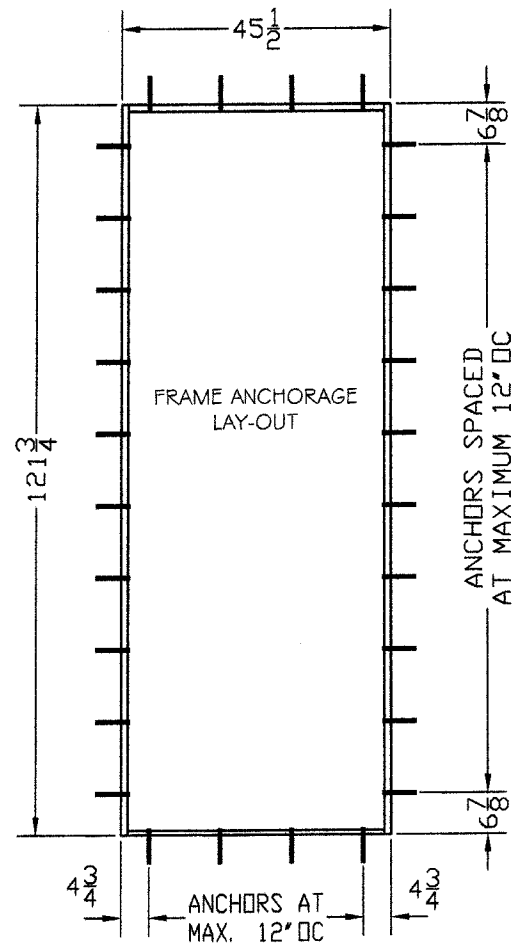
PK
DRAFTING # MORE INC.
SCALE:
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9 OF 14

ENGINEERING SEAL
PEDRO DE FIGUEIREDO
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ENGINEER
ENGCO INC. - CA 8116
5595 ORANGE DRIVE 201
DAVIE - FLORIDA - 33314
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MODEL 5

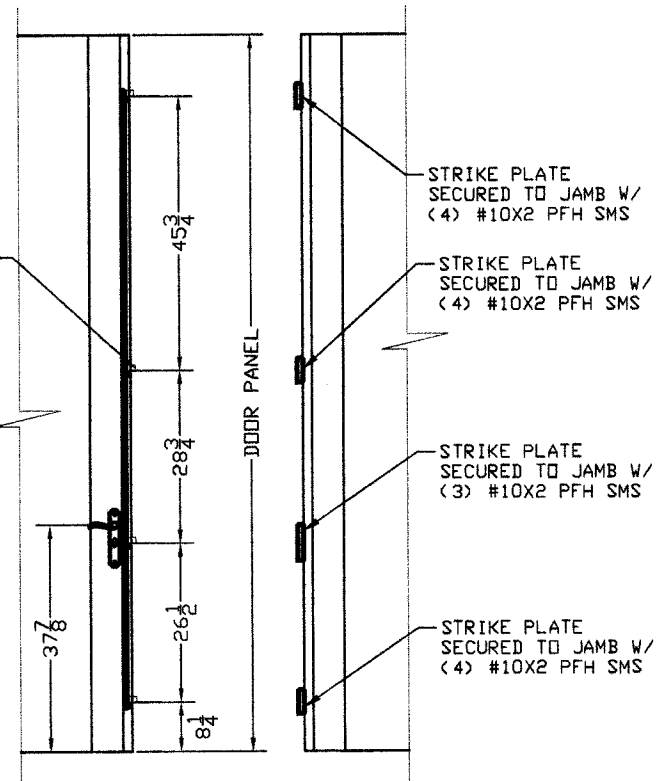


EXTERIOR SIDE ELEVATION
RECTANGULAR TYPE SINGLE DOOR X
BUTCHER BLOCK ONE SLAB CONSTRUCTION



SEE SHEET 12 TO SELECT ANCHOR OPTIONS

4 POINT LOCK MODEL 5000 BY VACHETTE INSTALLED TO THE ACTIVE LEAF. THE MAIN LOCK WAS LOCATED AT 37 7/8" FROM THE BOTTOM. LOCK WAS SECURED BY (15) #6X2 PFH SMS SPACED AT 8" OC AVERAGE.



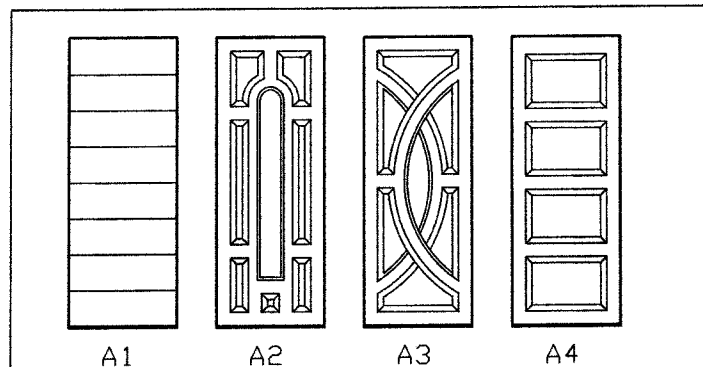
STRIKE PLATE SECURED TO JAMB W/ (4) #10X2 PFH SMS
STRIKE PLATE SECURED TO JAMB W/ (4) #10X2 PFH SMS
STRIKE PLATE SECURED TO JAMB W/ (3) #10X2 PFH SMS
STRIKE PLATE SECURED TO JAMB W/ (4) #10X2 PFH SMS

HARDWARE NOTES:

- 1- DOOR LOCK: A (4) POINT LOCKING MECHANISM MODEL 5000 BY VACHETTE, WAS INSTALLED ON THE LEAF. EACH POINT LOCK PROTRUDED 1 3/16" AND WERE LOCATED AS PER ILLUSTRATION ABOVE. THE MAIN LATCH WAS LOCATED AT 37 7/8" FROM THE BOTTOM OF THE LEAF. THE FOUR POINT LOCK ASSEMBLY WAS ATTACHED TO THE LEAF USING (15) #6X2 PFH SMS 1 1/2" FROM THE BOTTOM AND 7 5/8" OC AVERAGE.
- 2- STRIKE PLATES: THE STRIKE PLATES WERE INSTALLED AT THE LOCATIONS CORRESPONDING TO THE LOCK POINTS. EACH STRIKE PLATE WAS ATTACHED TO THE FRAME JAMB USING (4) #10X2" PFH SMS EXCEPT THE STRIKE PLATE CORRESPONDING TO THE LATCH LOCK OR 2ND POINT FROM THE BOTTOM WHICH ONLY USED (3) #10X2" PFH SMS
- 3- HINGES: (4) PIVOTA DX 300 3-D CP SAFE HINGES BY BASYS WERE ATTACHED TO THE DOOR LEAF AS PER ELEVATION. THE HINGES WERE SECURED TO THE DOOR JAMBS WITH (4) SCREWS ((2) #12X1 1/2" PFH SMS AND (2) 1/4 X 3 1/4") AND SECURED TO THE LEAF WITH (4) 1/4X2 1/2" PFH SMS.
- 4- REINFORCEMENT: (6) 5/8" DIAMETER X 33 3/4" LONG STEEL RODS LOCATED AS PER ELEVATION INSTALLED IN THE BUTCHER BLOCK CONSTRUCTED AREA.

MODEL 4
RECTANGULAR BUTCHER BLOCK SLAB SWING-OUT
SINGLE DOOR X: (MAX. 45 1/2" X 121 3/4")
PD= +65 PSF, -65 PSF

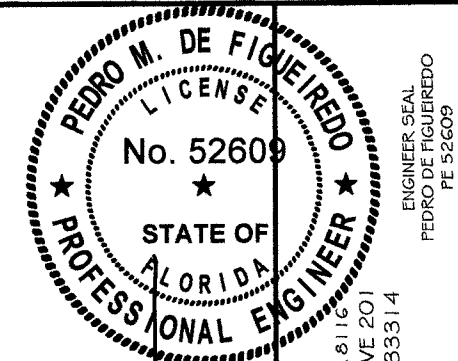
OPERATING FORCE
WATER RESISTANCE: ASTM E331, 11.25 PSF
(15% OF +75 PSF)
AIR INFILTRATION: ASTM E283
FORCE ENTRY: ASTM F588



ALTERNATE DOOR PANELS

NOTES:

- 1- ILLUSTRATED ABOVE IS JUST FOR A FEW VARIATIONS OF MANY POSSIBLE COMBINATIONS.
- 2- COMBINATIONS OF ALTERNATE DOOR PANELS ARE ACCEPTABLE IF DESIGN ARE MADE WITH SURFACE APPLIED MOLDING OVER THE MAIN 2-1/4" BUTCHER BLOCK SLAB OR VENEER GROOVING.



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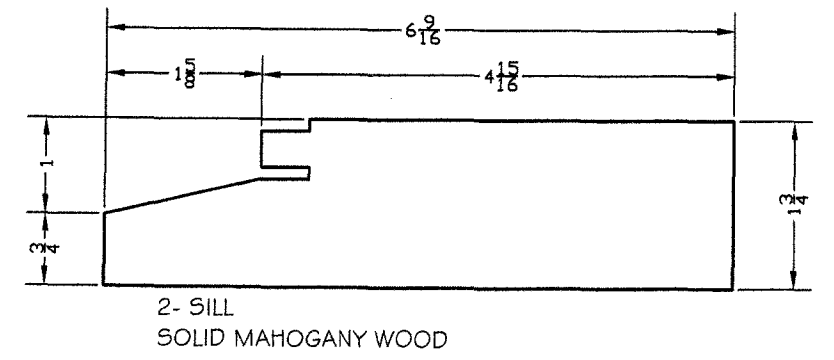
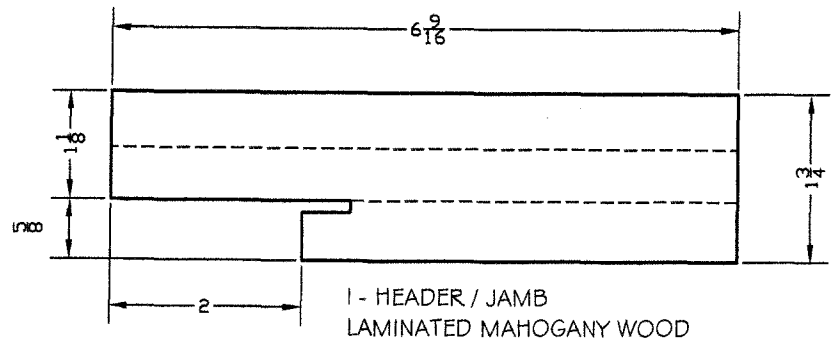
PRODUCT:
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OUTSWING DOORS
LARGE & SMALL MISSILE
IMPACT RATED

MANUFACTURER:
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222 NE 27TH STREET
MIAMI-FLORIDA- 33137
TEL: (561) 939-3368
FAX: (877) 839-2220

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ENGINEER SEAL
PEDRO DE FIGUEIREDO
PE 52609

MODEL 5 - SECTIONS, BILL OF MATERIALS AND COMPONENTS



BILL OF MATERIALS:

PART#	DESCRIPTION	MATERIAL
1	6 5/8 X 1 3/4 HEADER/ JAMB	LAMINATED WOOD
2	6 5/8 X 1 3/4 SILL	SOLID WOOD
12.1	2 1/4" BUTCHER BLOCK PANEL	BUTCHER BLOCK WOOD
15	1.22 X .51 WEAR STRIP	ALUMINUM

ASSEMBLY SCREWS & NAILS:

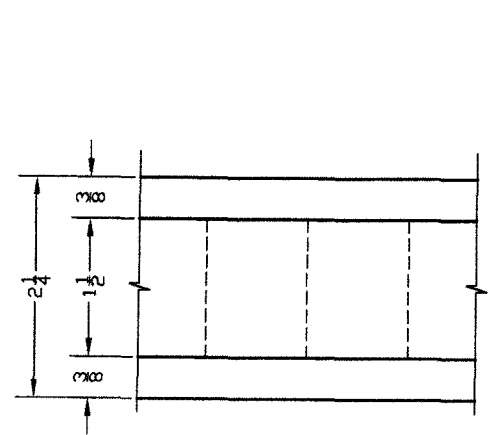
PART#	DESCRIPTION	MATERIAL
S1	#10 X 3" PFH SMS	ZINC PLATED STEEL
S9	#10 X 2" PFH SMS	ZINC PLATED STEEL
S10	#12 X 1 1/2" PFH SMS	ZINC PLATED STEEL
S11	1/4" X 3 1/4" PFH SMS	ZINC PLATED STEEL
S12	1/4" X 2 1/2" PFH SMS	ZINC PLATED STEEL
S13	#6 X 2" PFH SMS	ZINC PLATED STEEL

DOOR HARDWARE:

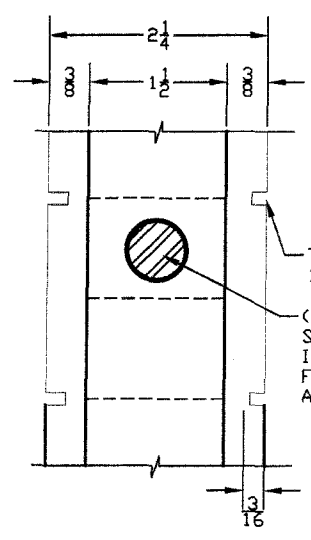
PART#	DESCRIPTION	MATERIAL
H11	MODEL 5000 BY VACHETTE	STEEL
H21	PIVOTA DX 300 3-D CP HINGES	BY BASYS

DOOR WEATHER STRIPPING:

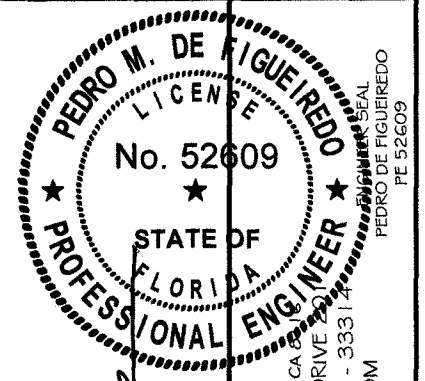
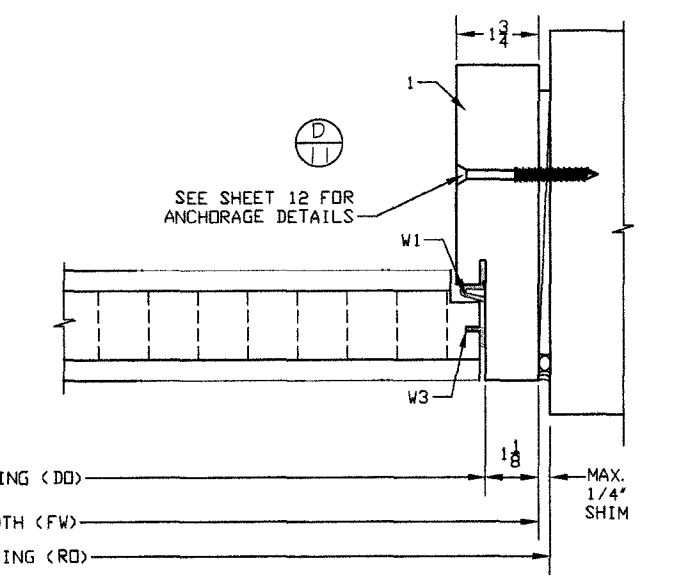
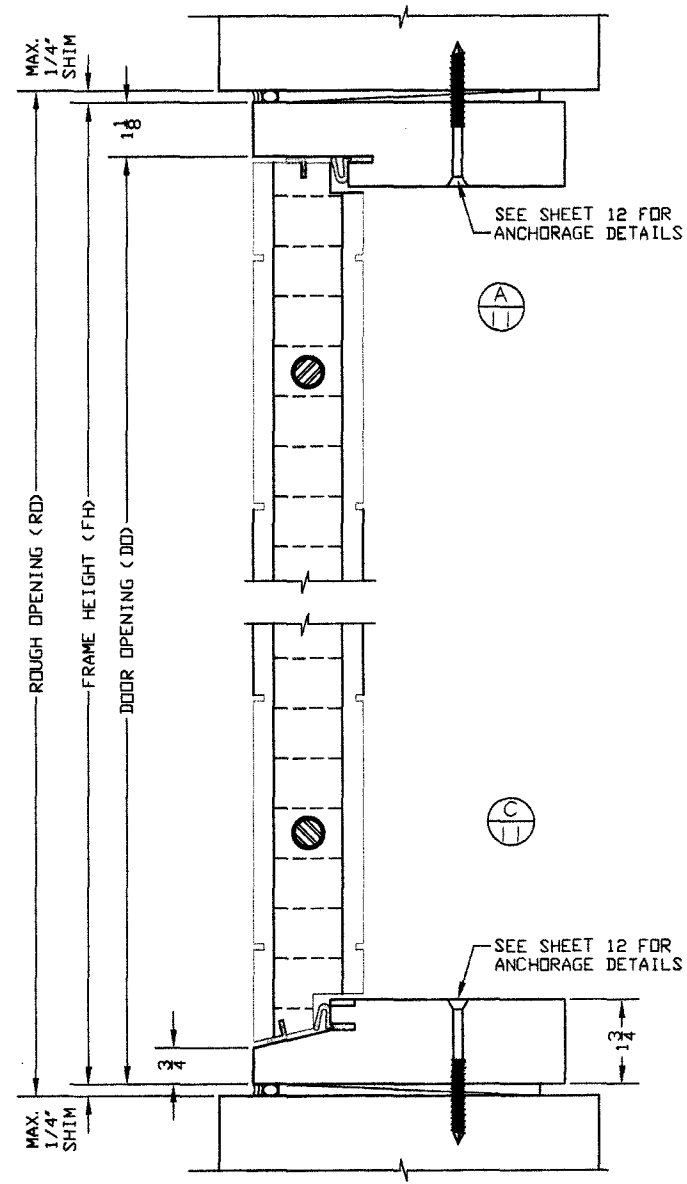
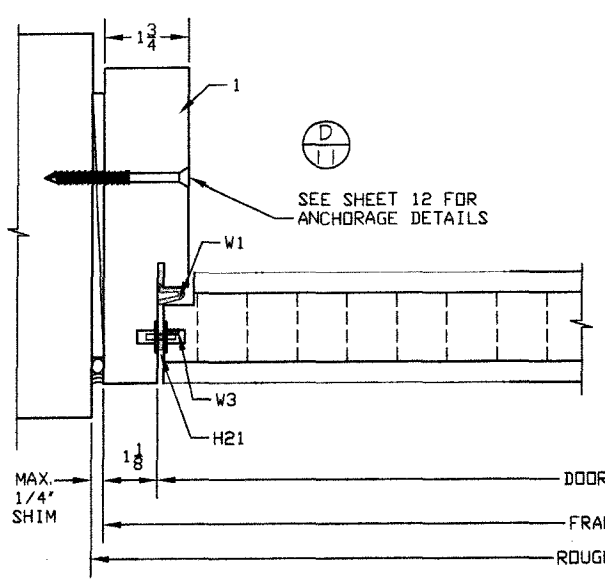
PART#	DESCRIPTION	MATERIAL
W1	QEBD 650 KERF	BY SCHLEGEL
W3	QEZD 320 FLAT	BY SCHLEGEL



12.1 - DOOR PANEL W/OUT RAILS/ STILES
WOOD PANEL CONSTRUCTION
CENTER 1 3/8" BUTCHED BLOCK
EXTERIOR/ INTERIOR MAHOGANY VENEER



TYPICAL HORIZONTAL
1/8" X 3/16" GROOVE
(6) 5/8 DIAM X 33 3/4"
STEEL REINFORCEMENT ROD
INSIDE PANEL STARTING AT 17"
FROM THE BOTTOM AND SPACED
AT MAXIMUM 17" OC



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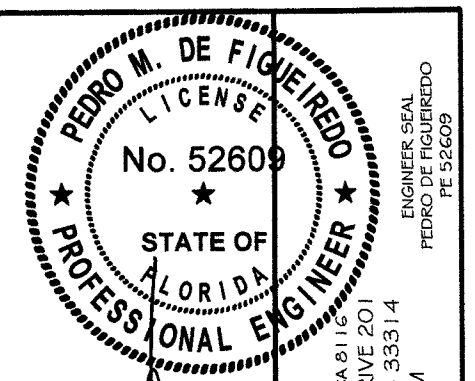
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MODELS 1, 2, 3, 4, 5 AND 6 - FRAMING ANCHORAGE

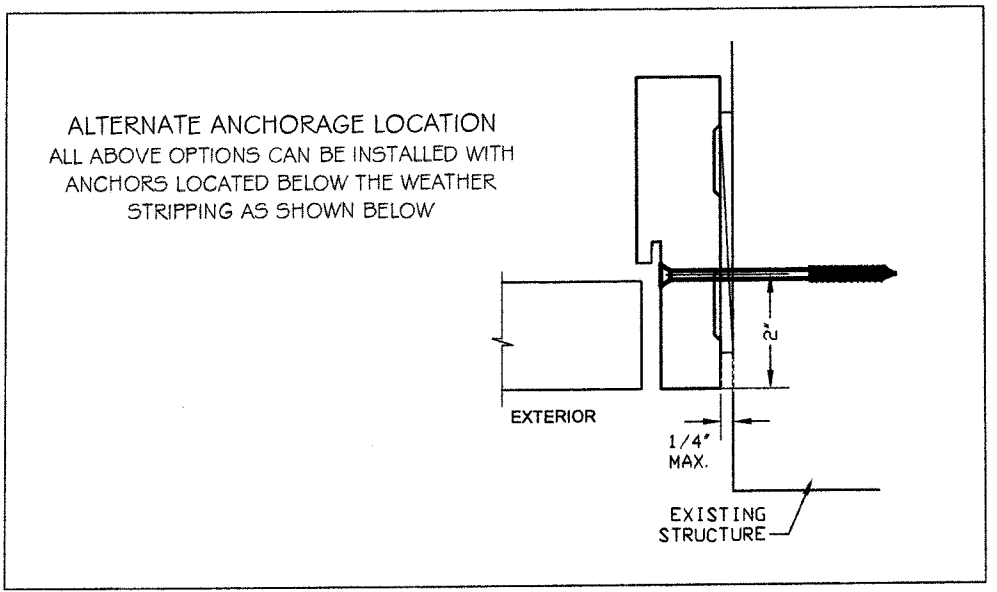


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FRAMING ANCHORAGE DETAILS

<p>OPTION 1 FRAME MOUNTED DIRECTLY INTO SUBSTRATE WITH MAXIMUM 1/4" SHIM AND 1/4" ULTRACONS BY ELCO WITH 1 3/4" MIN. EMBEDMENT INTO GROUT FILLED MASONRY (JAMBS) OR INTO 3000 PSI CONCRETE (REFER TO ELEVATIONS FOR ANCHORS QTY. AND LAY-OUT)</p>	<p>OPTION 2 FRAME MOUNTED WITH MAXIMUM 1/4" SHIM AND MAXIMUM 1X PT CONTINUOUS WOOD SPACER SECURED BY 1/4" ULTRACONS BY ELCO WITH 1 3/4" MIN. EMBEDMENT INTO GROUT FILLED MASONRY (JAMBS) OR INTO 3000 PSI CONCRETE. FOR INSTALLATION INTO METAL STRUCTURES USE 1/4"-20 HWH GRADE 5 SDS (REFER TO ELEVATIONS FOR ANCHORS QTY. AND LAY-OUT) 1X BUCK TO BE PROPERLY DESIGNED BY OTHERS.</p>	<p>OPTION 3 FRAME MOUNTED DIRECTLY INTO 2X PT WOOD BUCK (SG >= 0.55) W/ MAX. 1/4" SHIM AND SECURED BY #14 S5 WOOD SCREWS OR 1/4" ULTRACONS WITH 1 3/8" MIN. EMBEDMENT. (REFER TO ELEVATIONS FOR ANCHORS QTY. AND LAY-OUT) 2X BUCK TO BE PROPERLY DESIGNED BY OTHERS.</p>	<p>OPTION 4 FRAME MOUNTED DIRECTLY INTO METAL STRUCTURES W/ MAX. 1/4" SHIM, 1/4"-20 PFH SDS GR 5 INTO MIN. 1/8" A36 STEEL OR 6063-T6 ALUMINUM. (REFER TO ELEVATIONS FOR ANCHORS QTY. AND LAY-OUT)</p>

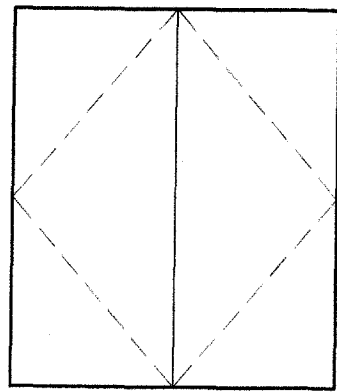


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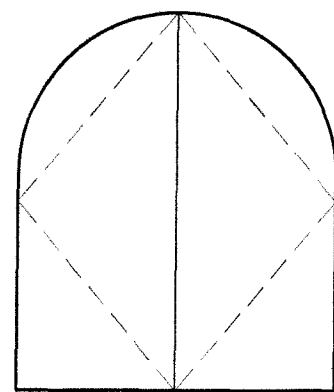
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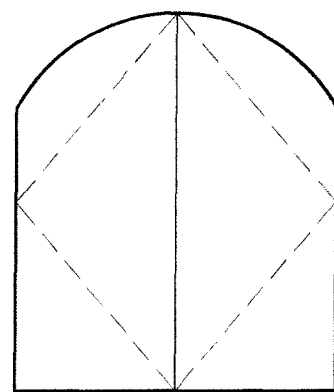
QUALIFIED FRAME AND PANELS CONFIGURATIONS



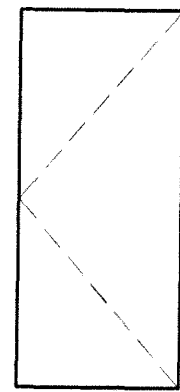
RECTANGULAR XX
74X122



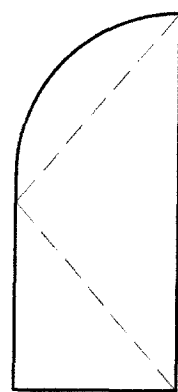
ARCHED XX
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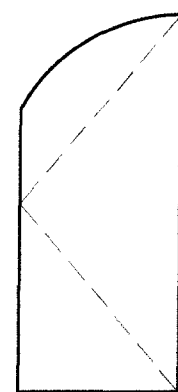
ELLIPTICAL XX
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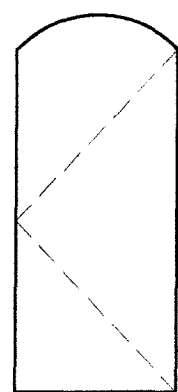
RECTANGULAR X
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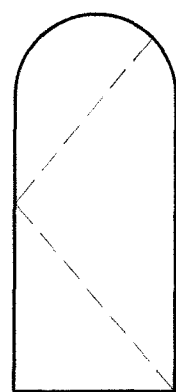
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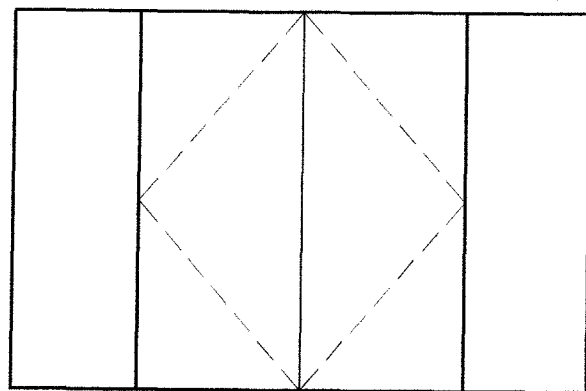
1/2 ELLIPTICAL X
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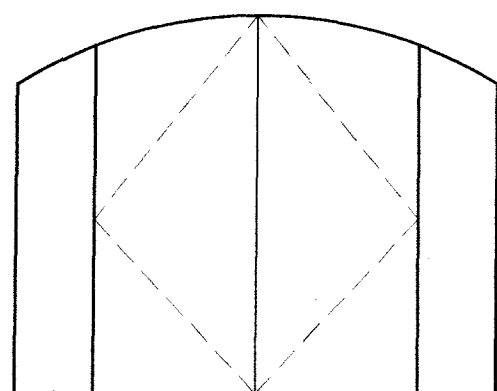
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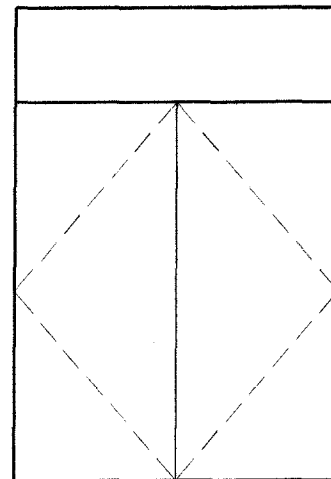
ARCHED X
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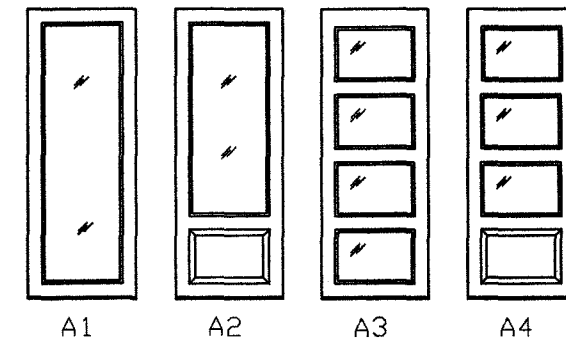
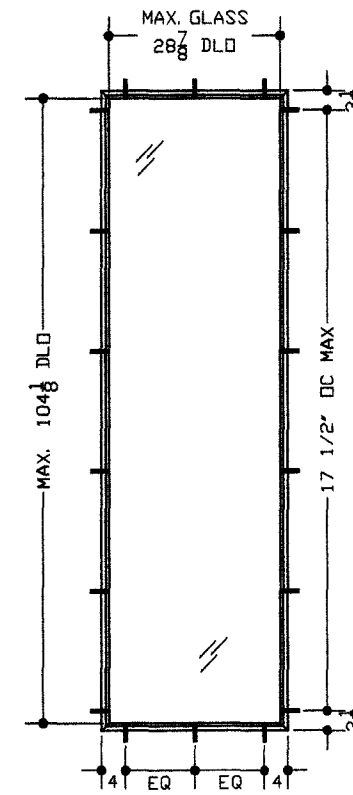
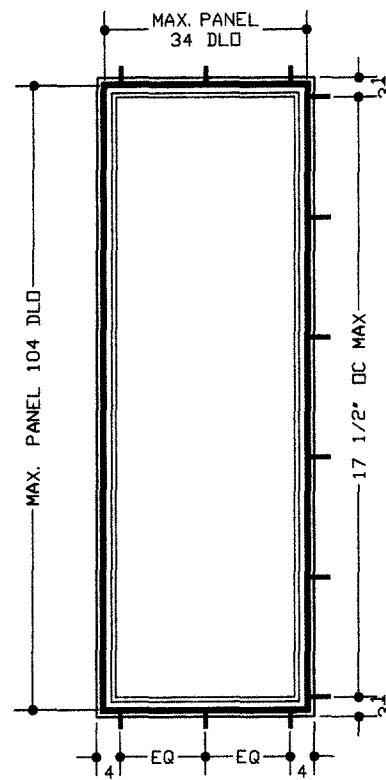
RECTANGULAR
PAIR O-XX-O -154X122
SINGLE O-X-O -118X122



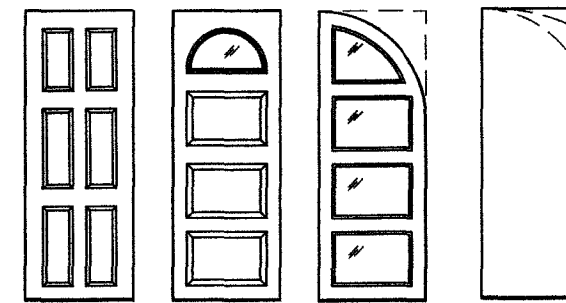
ARCHED OR ELLIPTICAL O-XX-O
PAIR O-XX-O -154X122
SINGLE O-X-O -118X122



RECTANGULAR W/ TRANSM
PAIR XX-O -74 1/2 X160 3/8
SINGLE X-O -38 3/8 X160 3/8



A1 A2 A3 A4

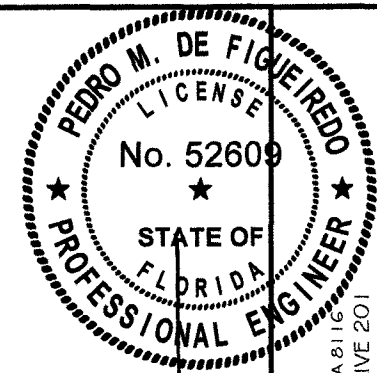


A5 A6 A7 A8 SOLID SLAB

ALTERNATE DOOR PANELS

NOTES:

- 1- THESE ARE JUST FOR A FEW VARIATIONS OF MANY POSSIBLE COMBINATIONS.
- 2- COMBINATIONS OF ALTERNATE DOOR PANELS ARE ACCEPTABLE IF GLASS DLO AREA AND DLO WOOD PANEL AREA NOT TO EXCEED THE SIZES LISTED ABOVE:



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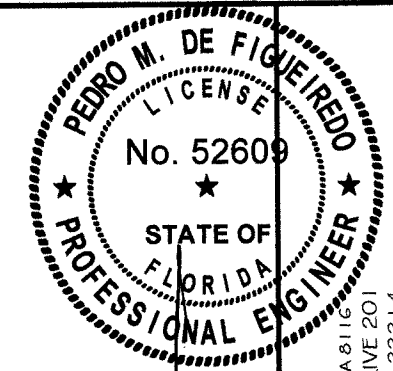
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DOOR SASH AND FRAME ASSEMBLY



10/31/17

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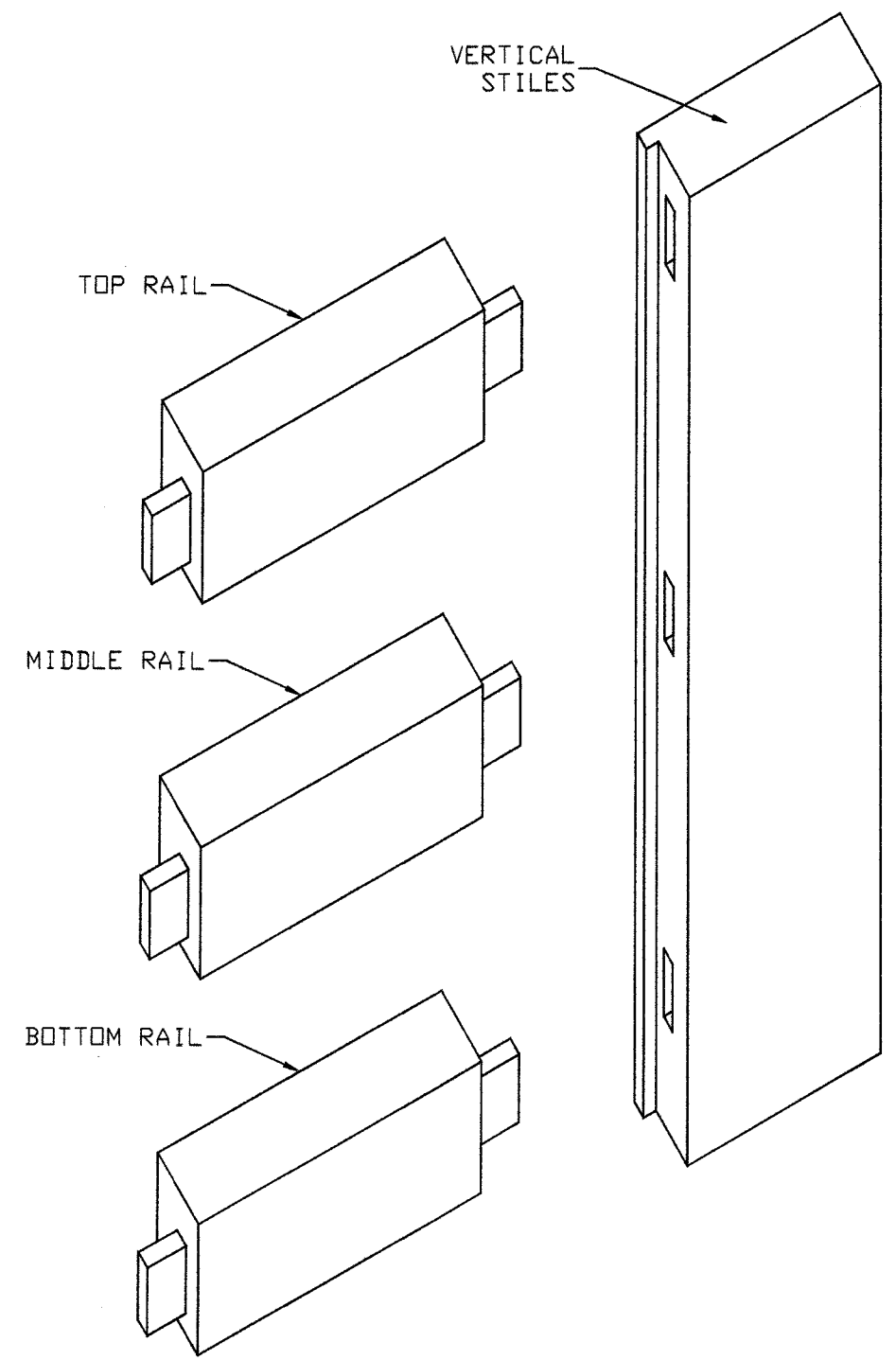
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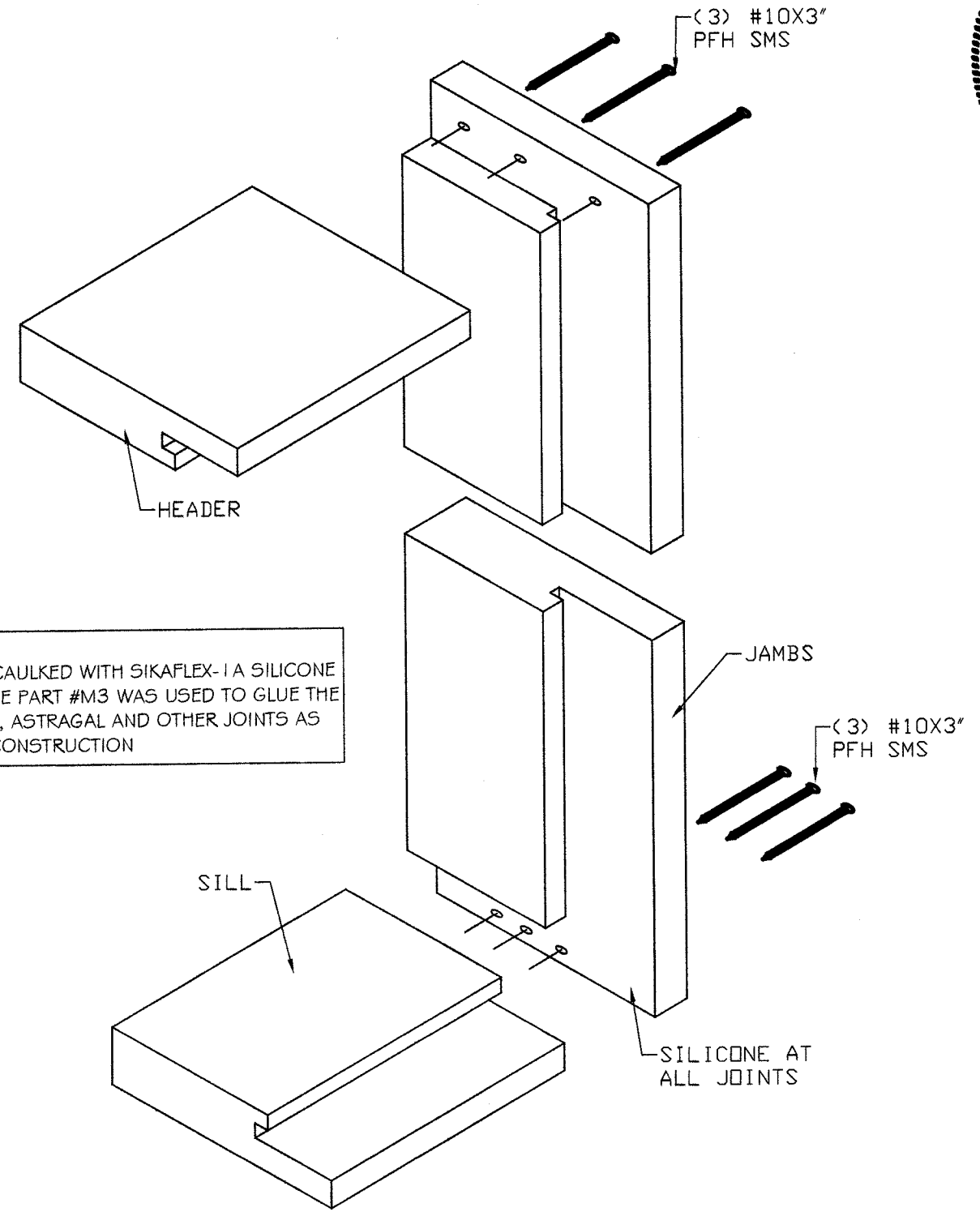
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SASH CONSTRUCTION:

THE TOP, BOTTOM AND INTERIOR RAILS WERE RABBET AND BUTT JOINED WITH A 5 X 0.70X2" LONG MORTISE AND (5" - 8 1/2") X 3/4 X (2"-2 7/8") LONG TENON TO THE HINGE AND LOCK STILES USING GLUE. THE ASTRAGAL FOR INACTIVE LEAF WAS FIRST NAILED USING 18GA X1" BRAD NAILS AND GLUE FURTHER SECURED TO THE LOCK STILE USING (9) #6X1 1/2 PPH SMS AT 13 1/2"OC IN THE FIELD. THE ASTRAGAL FOR ACTIVE LEAF WAS FIRST NAILED USING 18GA X1" BRAD NAILS AND GLUE FURTHER SECURED TO THE LOCK STILE USING (10) #8X2" PPH SMS AT 12"OC IN THE FIELD. A DECORATIVE MOLDING WAS ATTACHED AROUND THE INTERIOR GLAZING AREAS USING 18GA X1" BRAD NAILS. THE RECESSES WERE MADE TO ACCEPT WEATHER STRIP AS DESCRIBED LATER IN THE REPORT.



FRAME CONSTRUCTION:

THE JAMBS WERE RABBET AND BUTT JOINED WITH SILL AND HEADER USING (3) #10X3" PPHSMS IN EACH CORNER AND SEALED USING SILICONE. THE JAMBS, HEADER AND SILL HAD A NOTCH CUT-OUT TO ALLOW THE PLACEMENT OF THE WEATHERSTRIPPING. AN ALUMINUM BAR WAS ATTACHED TO THE SILL TOWARD THE EXTERIOR EDGE AS WEAR STRIP AND ATTACHED BY USING #6X1 1/4" SS PPHSMS AT 6 1/4" OC

SEALANT:
 EXTERIOR PERIMETER WAS CAULKED WITH SIKAFLEX-1A SILICONE SEALANT. THE BORANO GLUE PART #M3 WAS USED TO GLUE THE MORTISE AND TENON JOINT, ASTRAGAL AND OTHER JOINTS AS WELL AS BUTCHER BLOCK CONSTRUCTION