MASTERGRAIN
16566 HIGHWAY 12 PO BOX 399 MIDLAND, ONTARIO, CANADA

# GLAZED FIBERGLASS SINGLE DOOR
## w/ or w/o SIDELITES
### INSWING / OUTSWING
### "NON-IMPACT"

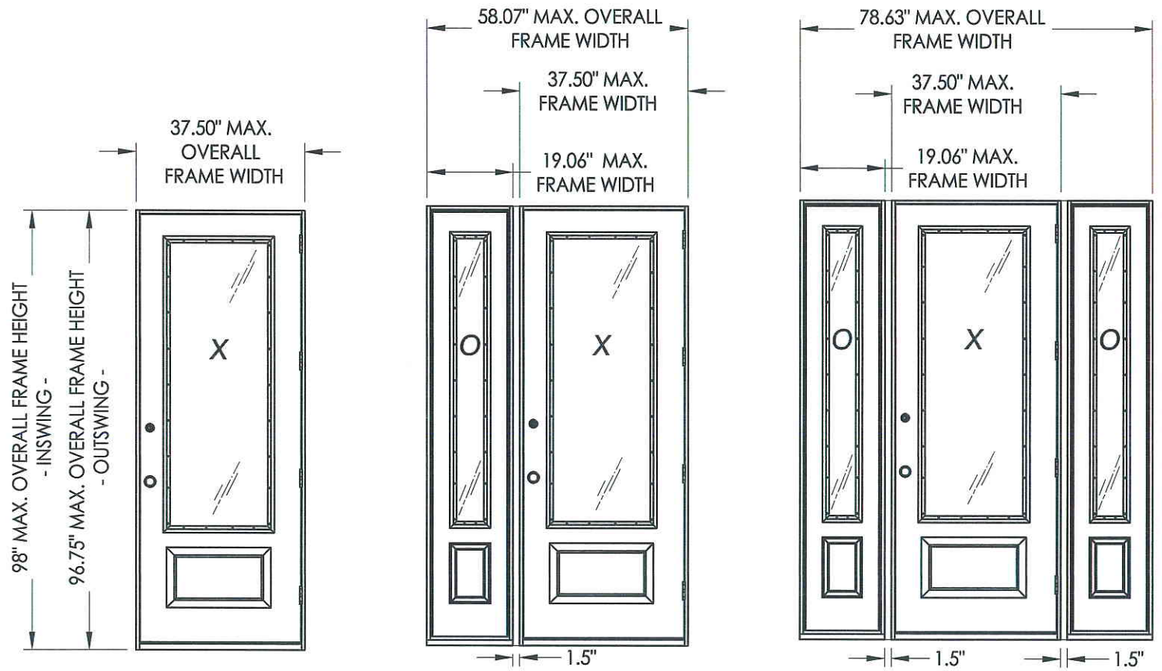
EVALUATED FOR USE IN THE STATE OF TEXAS

The Master Grain Fiberglass Door described herein complies with the 2006 International Residential Code (IRC), Sections R301 & R613 and the 2006 International Building Code (IBC), Sections 1405.12, 1609, 1714.5, 2403 and 2404 (including Texas revisions) subject to the following conditions:

1. Anchors shall be as listed and spaced as shown in the details. Anchor embedment to base material shall be beyond wall dressing or stucco.
2. When used in areas requiring wind-borne debris protection this product is required to be protected with an impact resistant covering that complies with Section R301.2.1.2 of the IRC and Section 1609.1.2 of the IBC.
3. Allowable design pressure requirements must be equal to or less than the design pressure rating shown in the design pressure chart, sheet 1 of this drawing.
4. Conditions not covered by this drawing are subject to further engineering analysis.

SUPPORTING DOCUMENTS & EVIDENCE

1. Testing per ASTM E330-02:
   Testing Evaluation Laboratories, Inc. test report(s) #: TEL 01680199
2. Calculations (Anchoring and Glass load resistance report ASTM E1300-04) prepared by Lyndon F. Schmidt, P.E.
   Certificate of Participation issued by the National Accreditation and Management Institute,
3. Inc., certifying that Therma-Tru Corp. is manufacturing products within a Quality Assurance program.




| CONFIGURATION | MAX. FRAME DIMENSION | MAX. D.L.O. DIMENSION | DESIGN PRESSURE (PSF) INSWING | | DESIGN PRESSURE (PSF) OUTSWING | |
|---|---|---|---|---|---|---|
| | | | POSITIVE | NEGATIVE | POSITIVE | NEGATIVE |
| X | 37.50" x 98.00" | 21.12" x 63.12" | +40.0 | -45.0 | +40.0 | -40.0 |
| OX / XO | 58.07" x 98.00" | 21.12" x 63.12" | +40.0 | -45.0 | +40.0 | -40.0 |
| OXO | 78.63" x 98.00" | 21.12" x 63.12" | +40.0 | -45.0 | +40.0 | -40.0 |

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STATE OF TEXAS * LYNDON F. SCHMIDT 104123 LICENSED PROFESSIONAL ENGINEER * 1.5.10


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TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852


PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

| NO. | DATE | BY | REVISIONS |
|---|---|---|---|

DATE: 01/04/10
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4044
SHEET 1 OF 10

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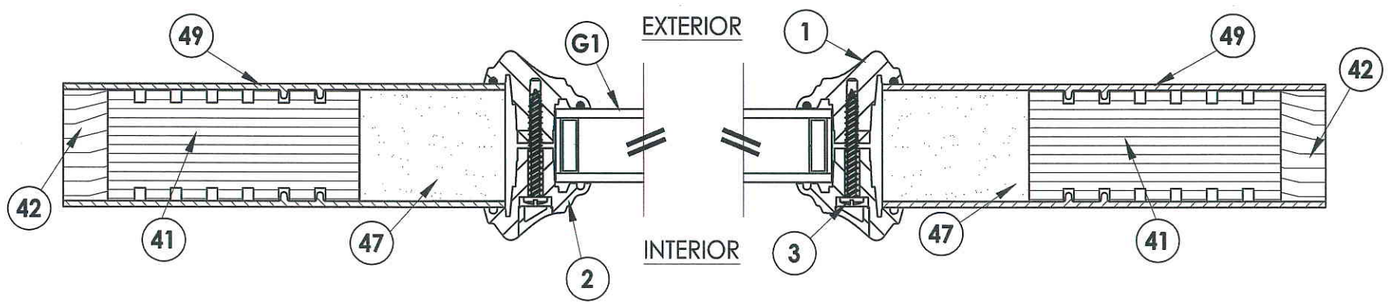
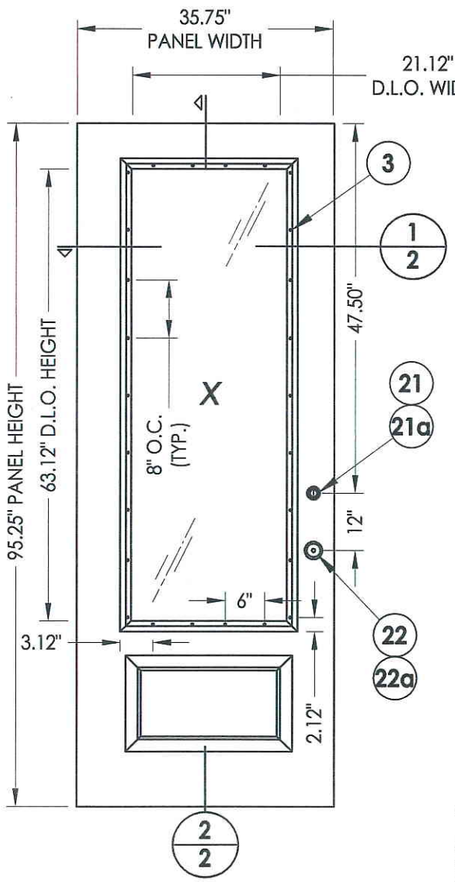
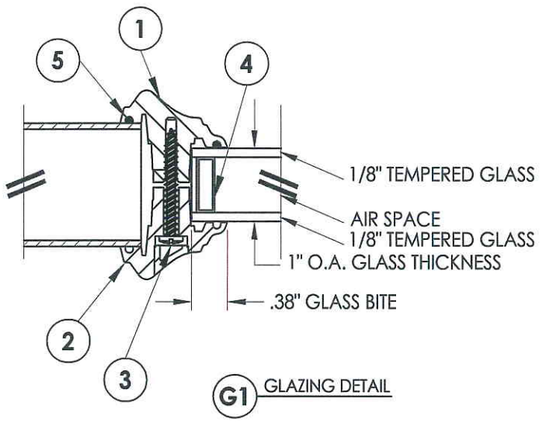


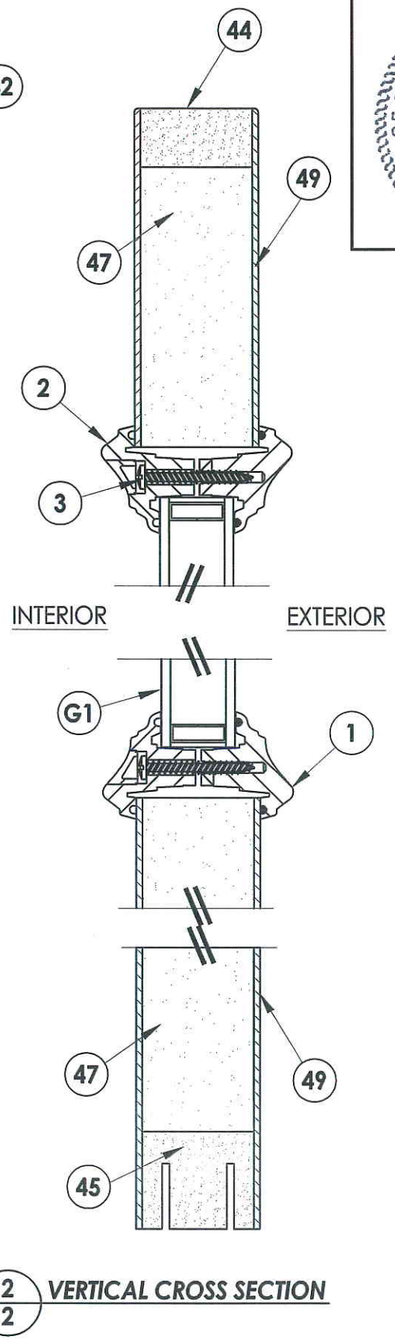

1/2 **HORIZONTAL CROSS SECTION**



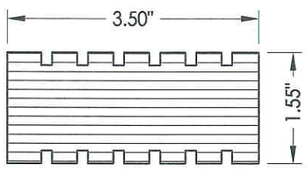

40 **DOOR PANEL**
Fiberglass



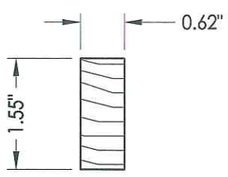

G1 GLAZING DETAIL



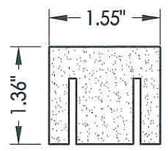

2/2 **VERTICAL CROSS SECTION**



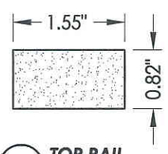

41 **HINGE AND LATCH STILE**
Reinforcement / LSL




42 **HINGE AND LATCH STILE**
Wood




45 **BOTTOM RAIL**
Composite




44 **TOP RAIL**
Composite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CERTIFICATE OF REGISTRATION # F-11852


STATE OF TEXAS
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LICENSED
PROFESSIONAL ENGINEER
1.5.10

PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: DOOR PANEL DETAILS AND GLAZING DETAIL

| NO. | DATE | REVISIONS | BY |
|---|---|---|---|

DATE: 01/04/10
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4044
SHEET 2 OF 10

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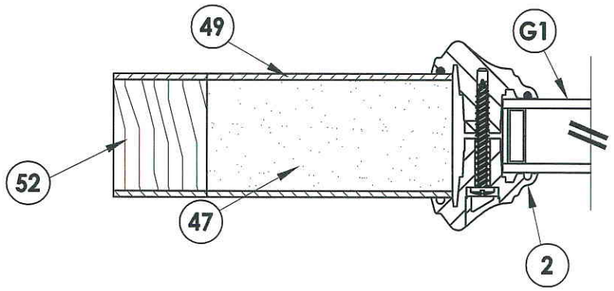
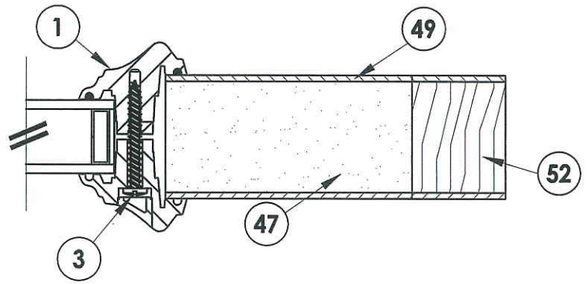
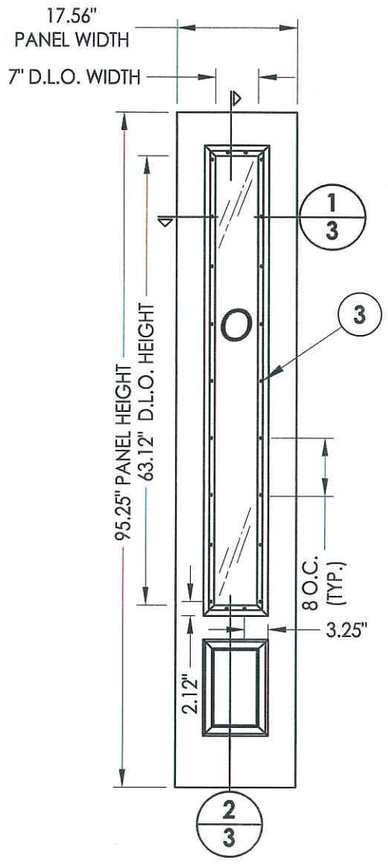



EXTERIOR

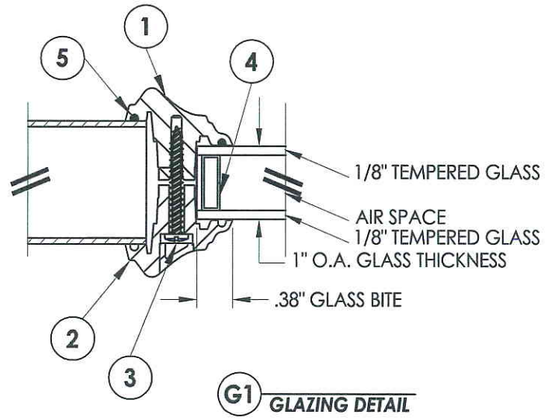
INTERIOR



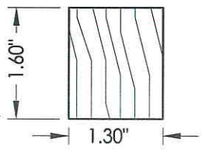

1/3 **HORIZONTAL CROSS SECTION**



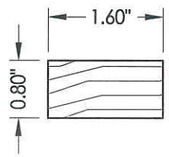

50 **SIDELITE PANEL**
Fiberglass



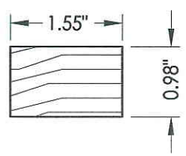

G1 **GLAZING DETAIL**



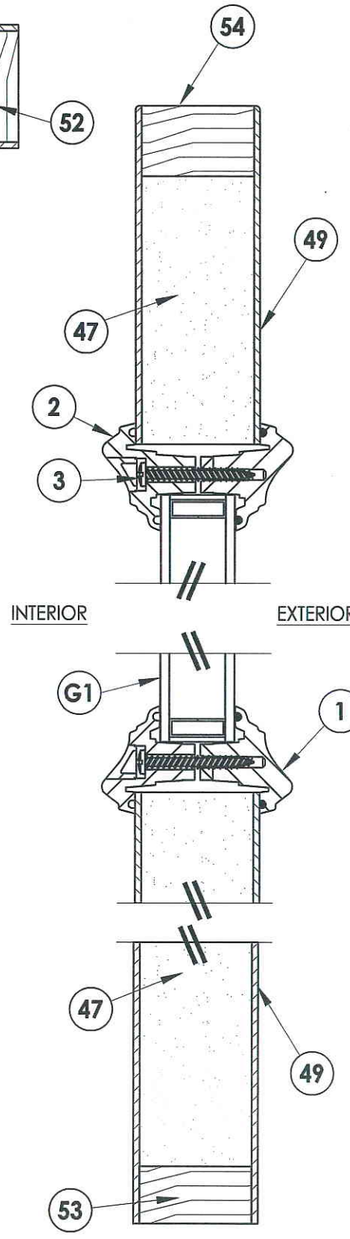

52 **SIDELITE STILE**
Wood




53 **SIDELITE BOTTOM RAIL**
Wood




54 **SIDELITE TOP RAIL**
Wood




2/3 **VERTICAL CROSS SECTION**

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CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: SIDELITE PANEL DETAILS AND GLAZING DETAIL

| NO. | DATE | REVISIONS | BY |
|---|---|---|---|

DATE: 01/04/10
SCALE: N.T.S.
DWG. BY: JK
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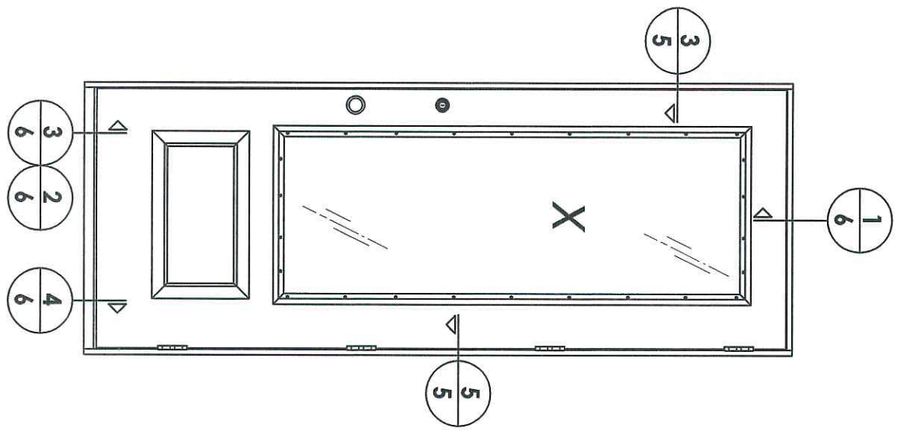
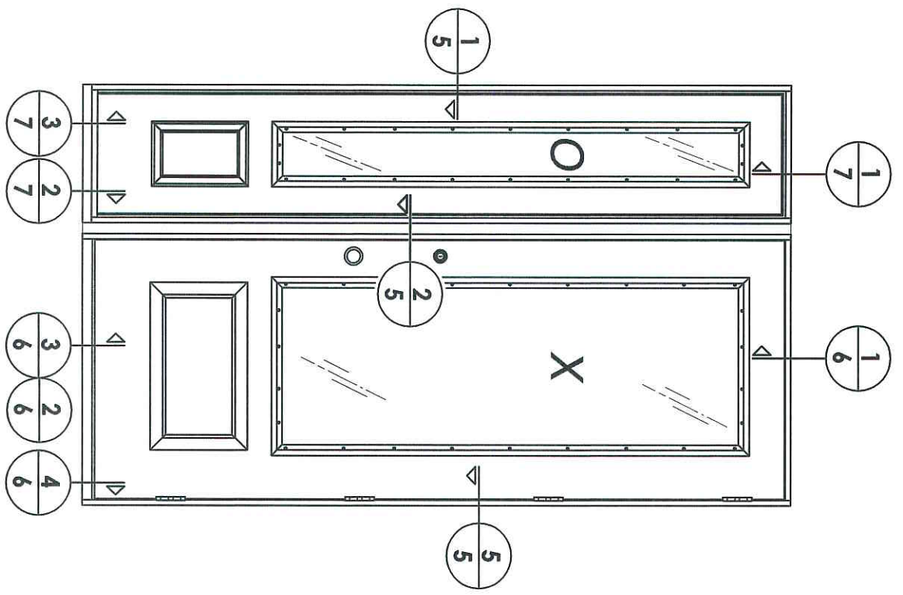
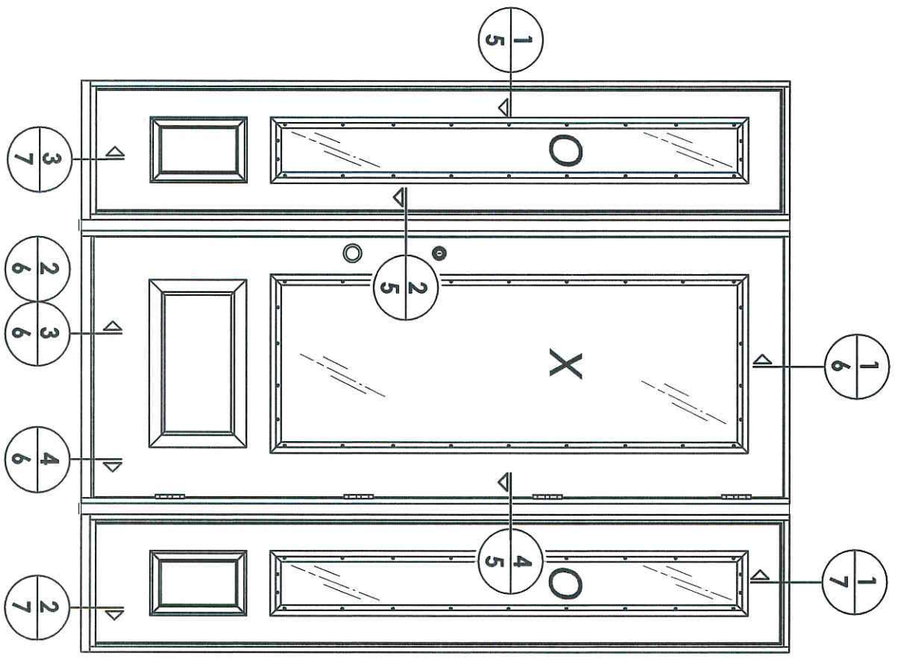
ELEVATION [X]




ELEVATION [OX / XO]




ELEVATION [OXO]

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7-5-10

| | | | |
|---|---|---|---|
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| DRAWING NO.: TX-4044 | | PART OR ASSEMBLY: ELEVATIONS | RW BUILDING CONSULTANTS, INC. P.O. Box 230 Valrico FL. 33595 Phone No.: 813.659.9197 |
| CHK. BY: LFS | | | TEXAS BOARD OF PROFESSIONAL ENGINEERS CERTIFICATE OF REGISTRATION # F-11852 |
| DWG. BY: JK | | | |
| SCALE: N.T.S. | | | |
| DATE: 01/04/10 | NO. DATE BY REVISIONS | | |

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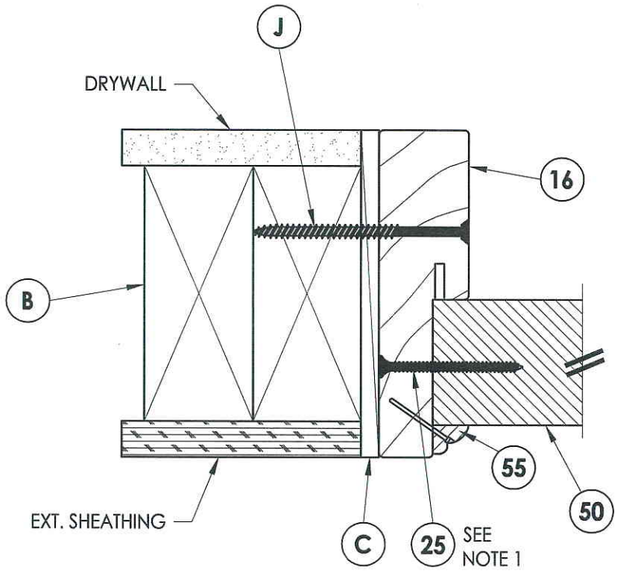
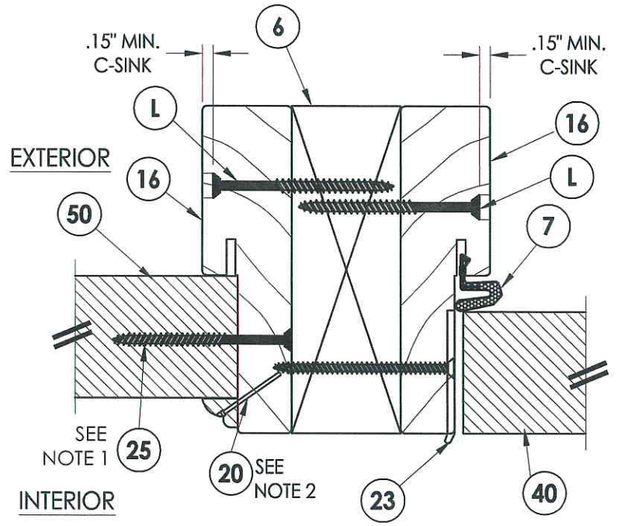


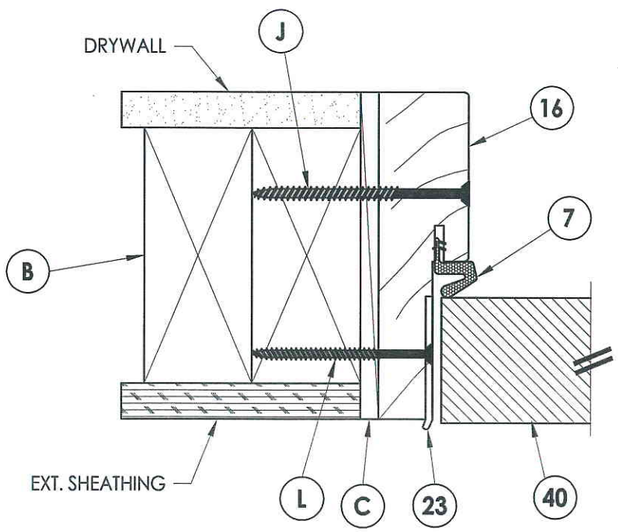

1/5 **HORIZONTAL CROSS SECTION**
Inswing shown - outswing also approved



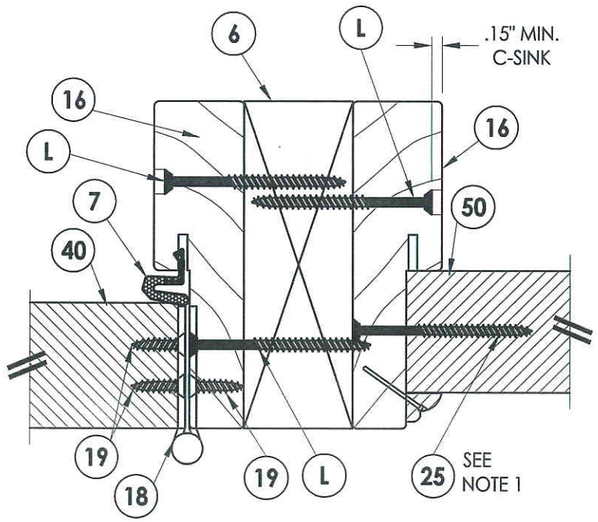

2/5 **HORIZONTAL CROSS SECTION**
Inswing shown - outswing also approved

NOTE:

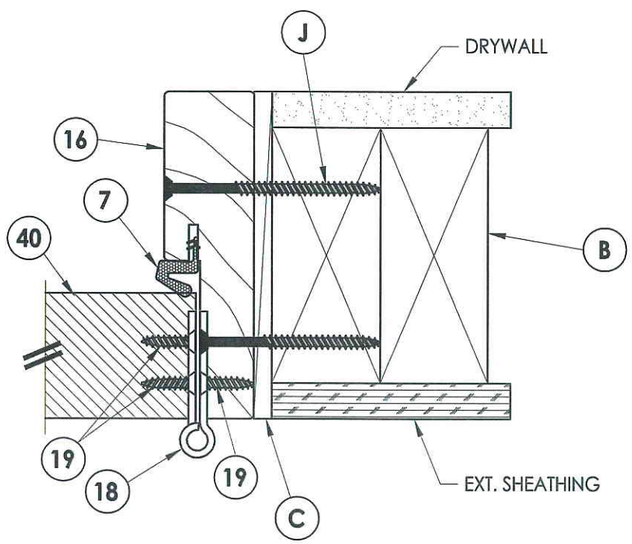
1. Sidelite ass'y fastener; 6" from each end and 6 more screws equally spaced between. (8 screws total per jamb.)
2. Trim secured with 1" Brad Nail @ 6" O.C. (TYP).




3/5 **HORIZONTAL CROSS SECTION**
Inswing shown - outswing also approved




4/5 **HORIZONTAL CROSS SECTION**
Inswing shown - outswing also approved




5/5 **HORIZONTAL CROSS SECTION**
Inswing shown - outswing also approved

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CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: *MASTERGRAIN FIBERGLASS DOOR*

PART OR ASSEMBLY: *HORIZONTAL CROSS SECTIONS*

| NO. | DATE | REVISIONS | BY |
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DATE: 01/04/10
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
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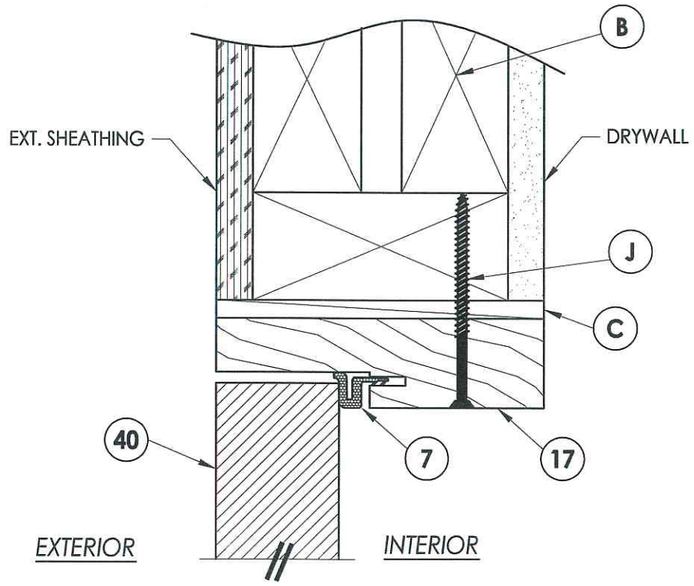
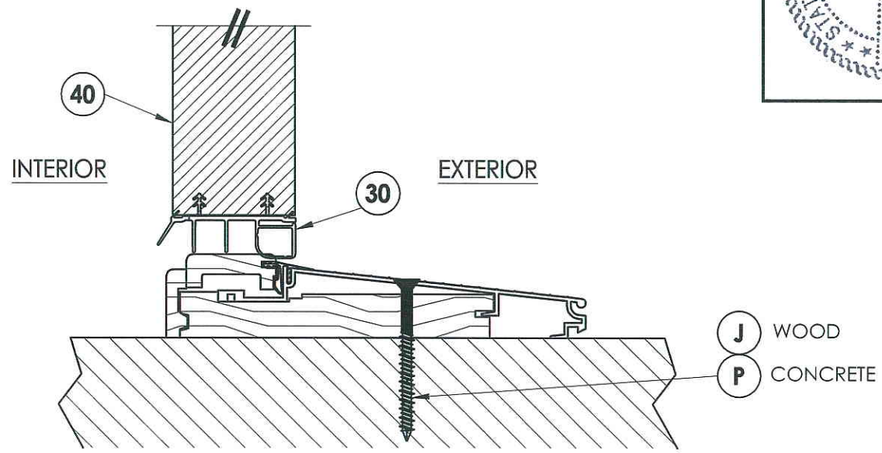
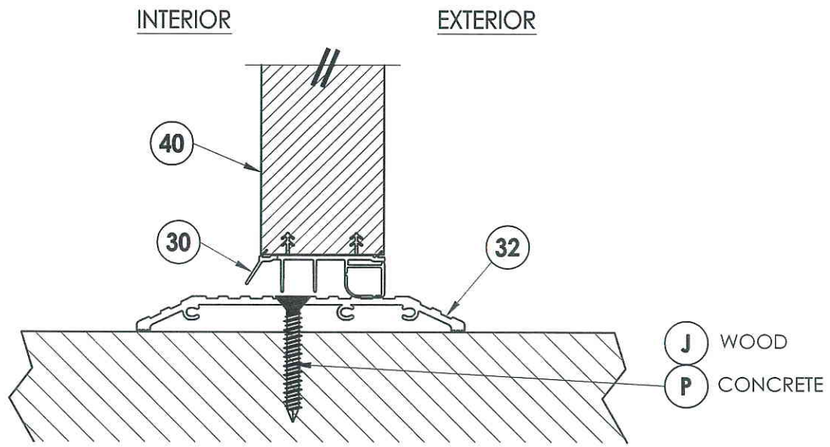


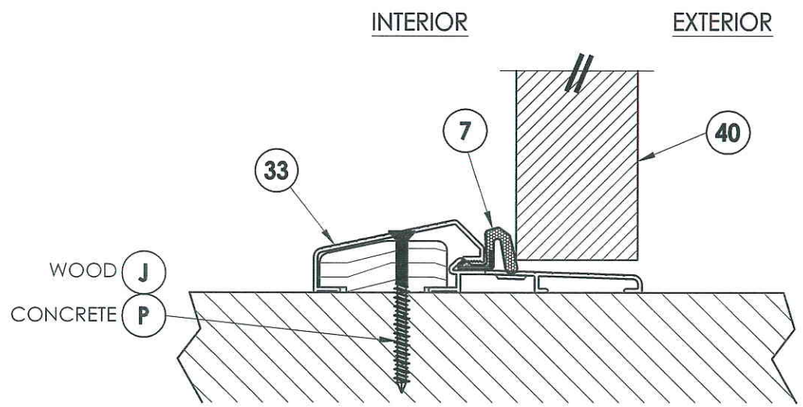

1/6 **VERTICAL CROSS SECTION**
Outswing shown
Inswing also approved




2/6 **VERTICAL CROSS SECTION**
Inswing configuration




3/6 **VERTICAL CROSS SECTION**
Shown w/ ADA threshold




4/6 **VERTICAL CROSS SECTION**
Outswing configuration

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TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: *MASTERGRAIN FIBERGLASS DOOR*

PART OR ASSEMBLY: *VERTICAL CROSS SECTIONS*

| NO. | DATE | BY |
|---|---|---|
| REVISIONS | | |

DATE: 01/04/10
SCALE: N.T.S.
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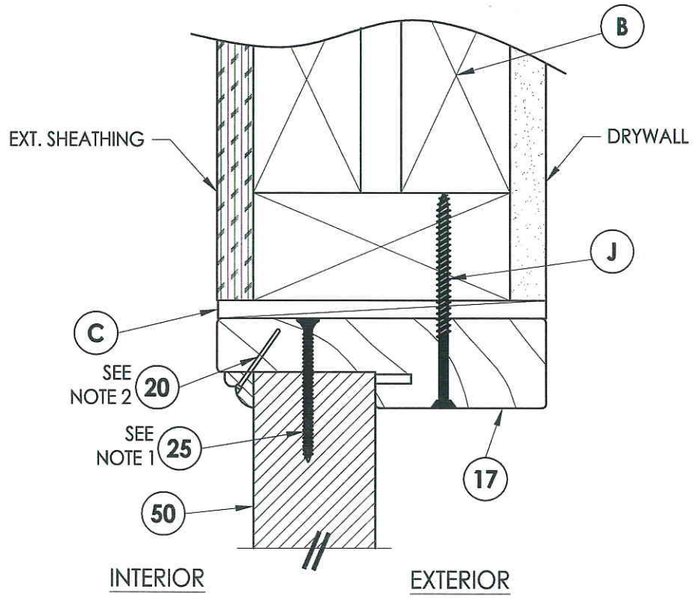
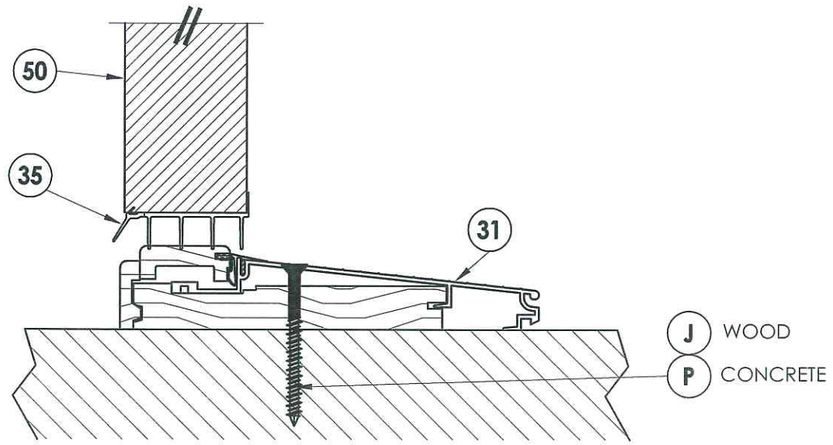


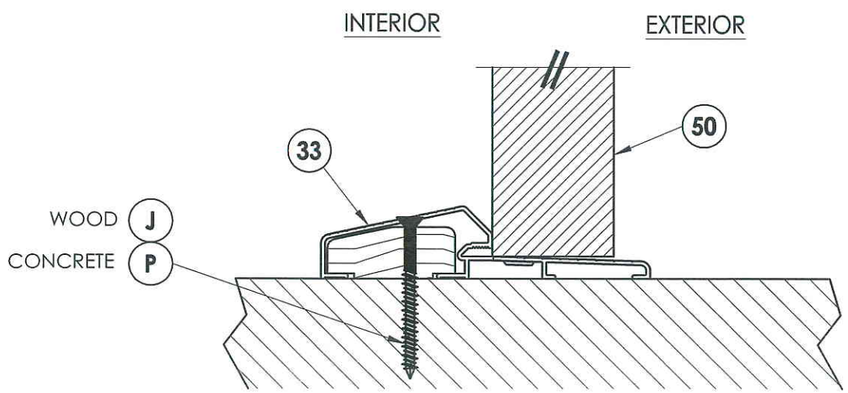

1/7 **VERTICAL CROSS SECTION**
Outswing shown
Inswing also approved

NOTE:

1. Screws thru head jamb located 3" from each end.
2. Trim secured with 1" Brad Nail @ 6" O.C. (TYP).




3/7 **VERTICAL CROSS SECTION**
Inswing configuration




2/7 **VERTICAL CROSS SECTION**
Outswing configuration

Documents Prepared By: Lyndon F. Schmidt, P.E.
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PRODUCT: *MASTERGRAIN FIBERGLASS DOOR*

PART OR ASSEMBLY: *VERTICAL CROSS SECTIONS*

| NO. | DATE | REVISIONS | BY |
|---|---|---|---|

DATE: 01/04/10
SCALE: N.T.S.
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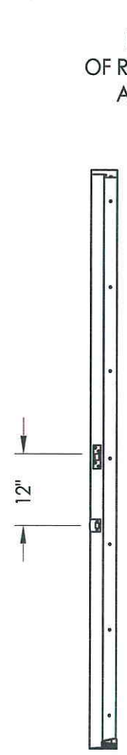
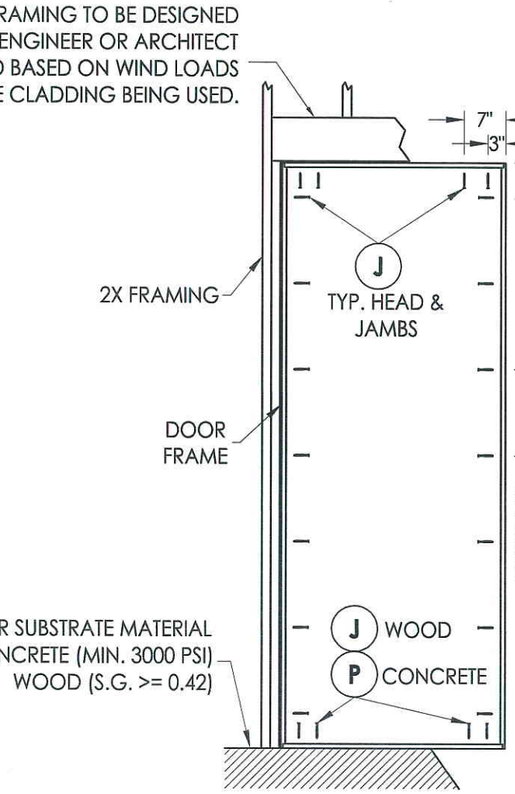
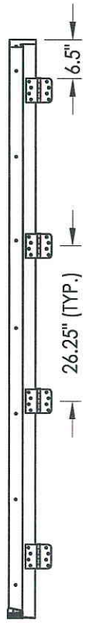


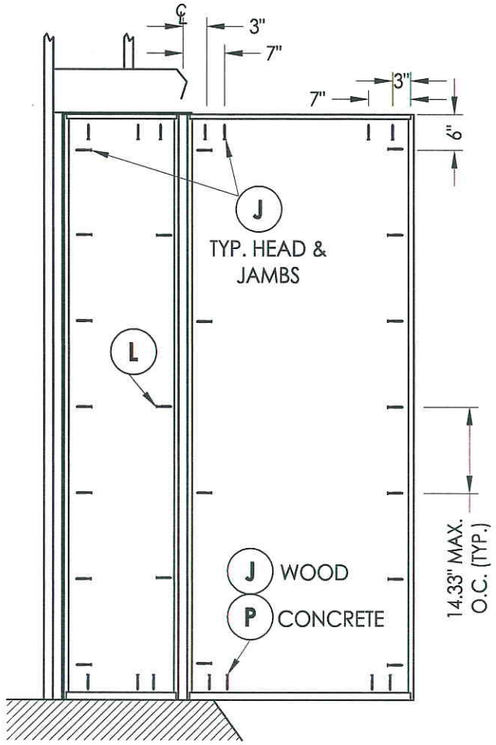

**STRIKE JAMB**



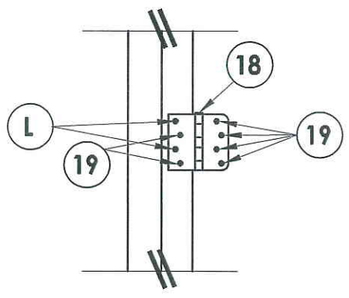

***FRAME ANCHORING***
Stud construction




***HINGE JAMB***




***FRAME ANCHORING***
Masonry construction

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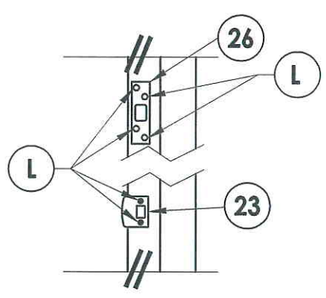


***LATCH & DEADBOLT DETAIL***
SECURITY STRIKE


STATE OF TEXAS
LYNDON F. SCHMIDT
104123
LICENSED PROFESSIONAL ENGINEER
1-5-10

Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

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P.O. Box 230 Valrico FL. 33595
Phone No.: 813.659.9197

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852


PRODUCT: *MASTERGRAIN FIBERGLASS DOOR*

PART OR ASSEMBLY: *FRAME ANCHORING*

| NO. | DATE | BY |
|---|---|---|
| | REVISIONS | |

DATE: 01/04/10
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4044
SHEET 8 OF 10

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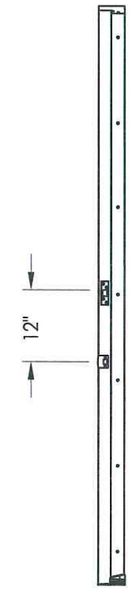
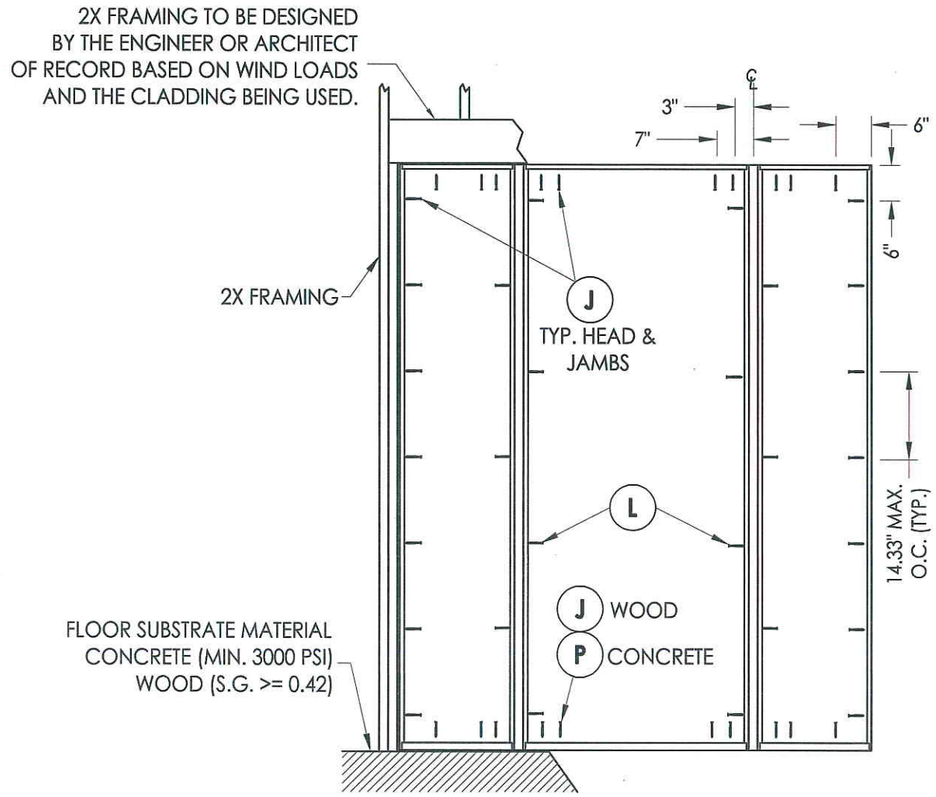
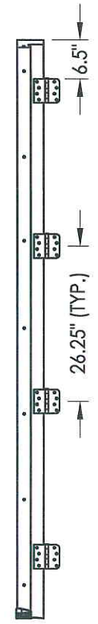



**STRIKE JAMB**




***FRAME ANCHORING***
Masonry construction

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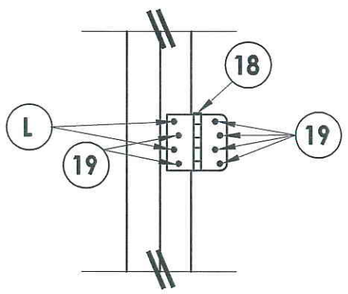


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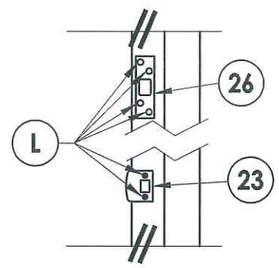


***LATCH & DEADBOLT DETAIL***
SECURITY STRIKE

STATE OF TEXAS
LYNDON F. SCHMIDT
104123
LICENSED PROFESSIONAL ENGINEER

1-5-10

Documents Prepared By: Lyndon F. Schmidt, P.E.
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TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: *MASTERGRAIN FIBERGLASS DOOR*

PART OR ASSEMBLY: *FRAME ANCHORING*

| NO. | DATE | BY |
|---|---|---|

REVISIONS

DATE: 01/04/10
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4044
SHEET 9 OF 10

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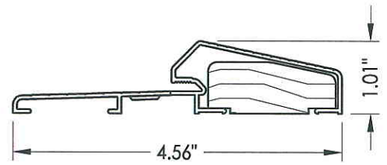
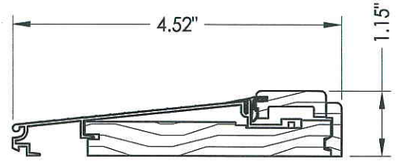
*CONCRETE ANCHOR NOTES:*

1. *Substitution of equal concrete anchors from a different supplier may have different edge distance and center distance requirements.*
2. *Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints. If concrete anchor locations noted as "MAX. ON CENTER" must be adjusted to maintain the min. edge distance to mortar joints, additional concrete anchors may be required to ensure the "MAX. ON CENTER" dimensions are not exceeded.*
3. *Concrete anchor table:*

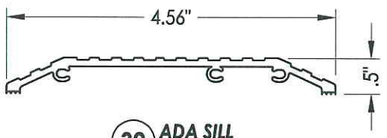
| ANCHOR TYPE | ANCHOR SIZE | MIN. EMBEDMENT | MIN. CLEARANCE TO MASONRY EDGE | MIN. CLEARANCE TO ADJACENT ANCHOR |
|---|---|---|---|---|
| ITW | 3/16" | 1-3/4" | 2-5/8" | 2-1/4" |
| ELCO | 3/16" | 1-3/4" | 1" | 3" |



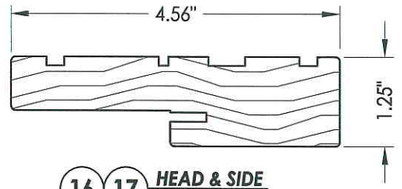

33 OUTSWING THRESHOLD



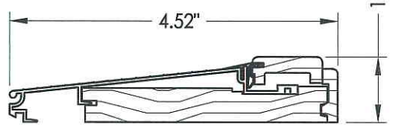

31 INSWING THRESHOLD



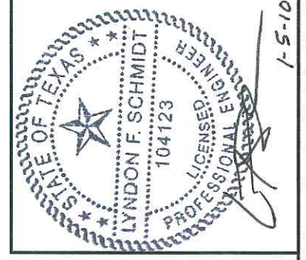

32 ADA SILL




16 17 HEAD & SIDE Jamb




34 SIDELITE THRESHOLD




**BILL OF MATERIALS**

| ITEM # | DESCRIPTION | MATERIAL |
|---|---|---|
| B | 2X FRAMING SG >= 0.42 | WOOD |
| C | 1/4" MAX. SHIM SPACE | - |
| J | #10 X 3" PFH WS | STEEL |
| K | #9 X 2-1/2" PFH WS | STEEL |
| L | #10 X 2-1/2" PFH WOOD SCREW | STEEL |
| P | 3/16" ELCO OR ITW PFH CONCRETE SCREW | STEEL |
| 1 | FEMALE LITE FRAME - MASTERGRAIN | POLYPROPYLENE |
| 2 | MALE LITE FRAME - MASTERGRAIN | POLYPROPYLENE |
| 3 | #8 X 1-3/4" PANHEAD SMS (LIGHT FRAME SCREW) | STEEL |
| 4 | ALUMINUM SPACER SYSTEM | ALUMINUM |
| 5 | SILICONE WEATHER SEAL MG #2500 | SILICONE |
| 6 | 2X MULLION SG > = 0.55 | WOOD |
| 7 | WEATHER STRIP | FOAM |
| 8 | #10 X 1-1/2" PFH | STEEL |
| 16 | SIDE JAMB SG > = 0.42 | WOOD |
| 17 | HEAD JAMB SG > = 0.42 | WOOD |
| 18 | 4" X 4" HINGE MIN 0.1" THICK | STEEL |
| 19 | #10 X 3/4" PFH WS | STEEL |
| 20 | 1" BRAD NAIL | STEEL |
| 21 | KWIKSET DEADBOLT -SERIES 690 CP | STEEL |
| 21A | COPPER CREEK DB2410 SC #8003 DEADBOLT | STEEL |
| 22 | KWIKSET LOCK -SERIES 690 CP PASSAGE | STEEL |
| 22A | COPPER CREEK BK2040 SC# 8379 PASSAGE | STEEL |

| | | |
|---|---|---|
| 23 | LATCH STRIKE PLATE | STEEL |
| 24 | DEADBOLT STRIKE PLATE | STEEL |
| 25 | #8 X 2-1/2" PFH WOOD SCREW | STEEL |
| 26 | SECURITY STRIKE PLATE | STEEL |
| 30 | DOOR BOTTOM SWEEP | VINYL |
| 31 | INSWING THRESHOLD | ALUM/COMP. |
| 32 | ADA THRESHOLD | ALUM. |
| 33 | OUTSWING THRESHOLD | ALUM./WOOD |
| 34 | SIDELITE THRESHOLD | ALUM./COMP. |
| 35 | SIDELITE SWEEP | VINYL |
| 40 | DOOR PANEL - SEE DOOR PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS | - |
| 41 | HINGE AND LATCH REINFORCMENT | WOOD |
| 42 | HINGE AND LATCH STILE - SG >= 0.42 | WOOD |
| 44 | TOP RAIL | COMP. |
| 45 | BOTTOM RAIL | COMP. |
| 47 | POLYEURETHANE FOAM | POLYEURETHANE |
| 49 | FIBERGLASS SKIN 0.08" MIN. THICKNESS | FIBERGLASS |
| 50 | SIDELITE PANEL - SEE SIDELITE PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS | - |
| 52 | SIDELITE STILE - SG>= 0.42 | WOOD |
| 53 | SIDELITE BOTTOM RAIL SG > = 0.42 | WOOD |
| 54 | SIDELITE TOP RAIL SG > = 0.42 | WOOD |
| 55 | SIDELITE TRIM | WOOD |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TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852


PRODUCT: MASTERGRAIN FIBERGLASS DOOR

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SHEET 10 OF 10

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