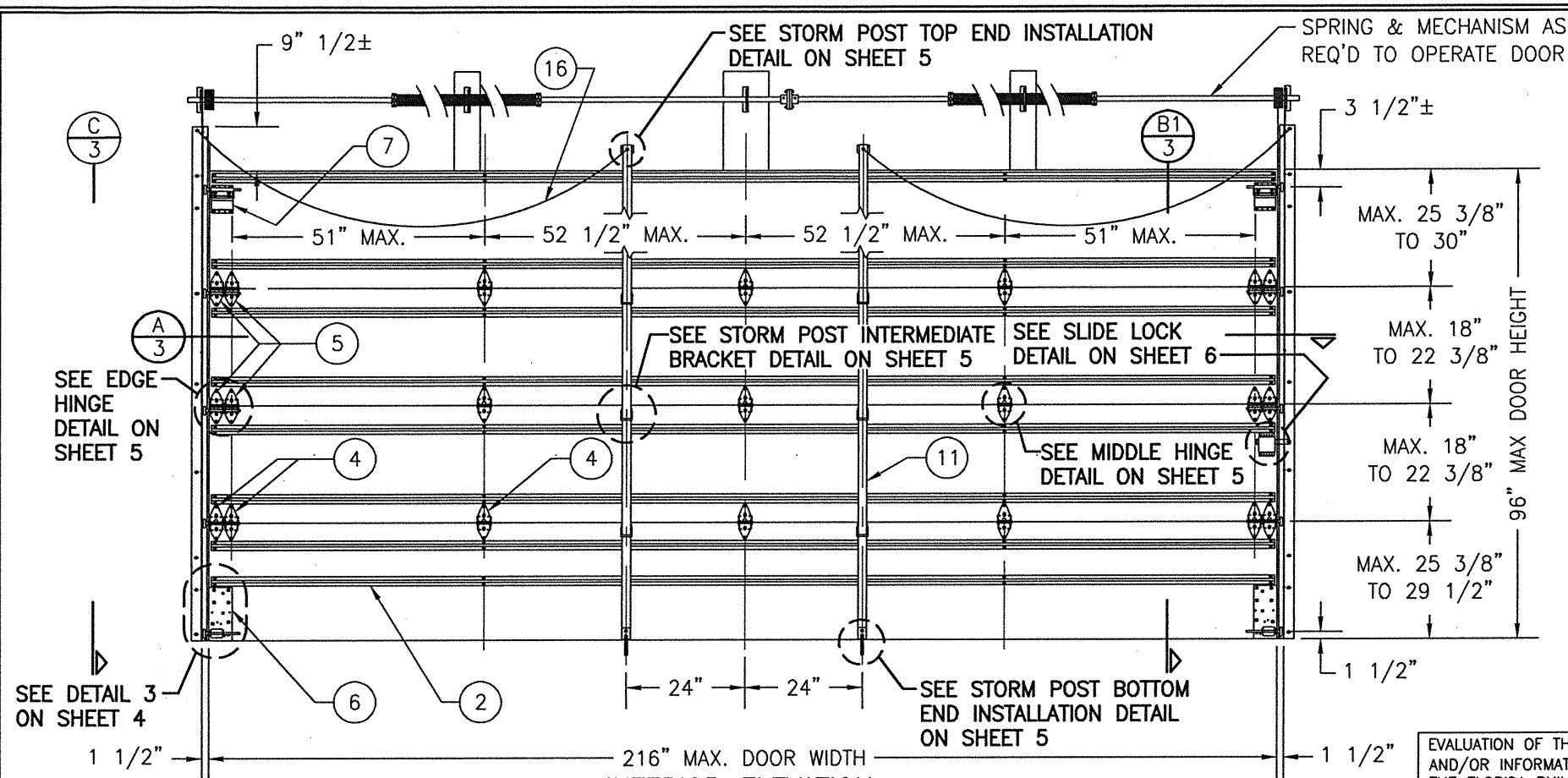
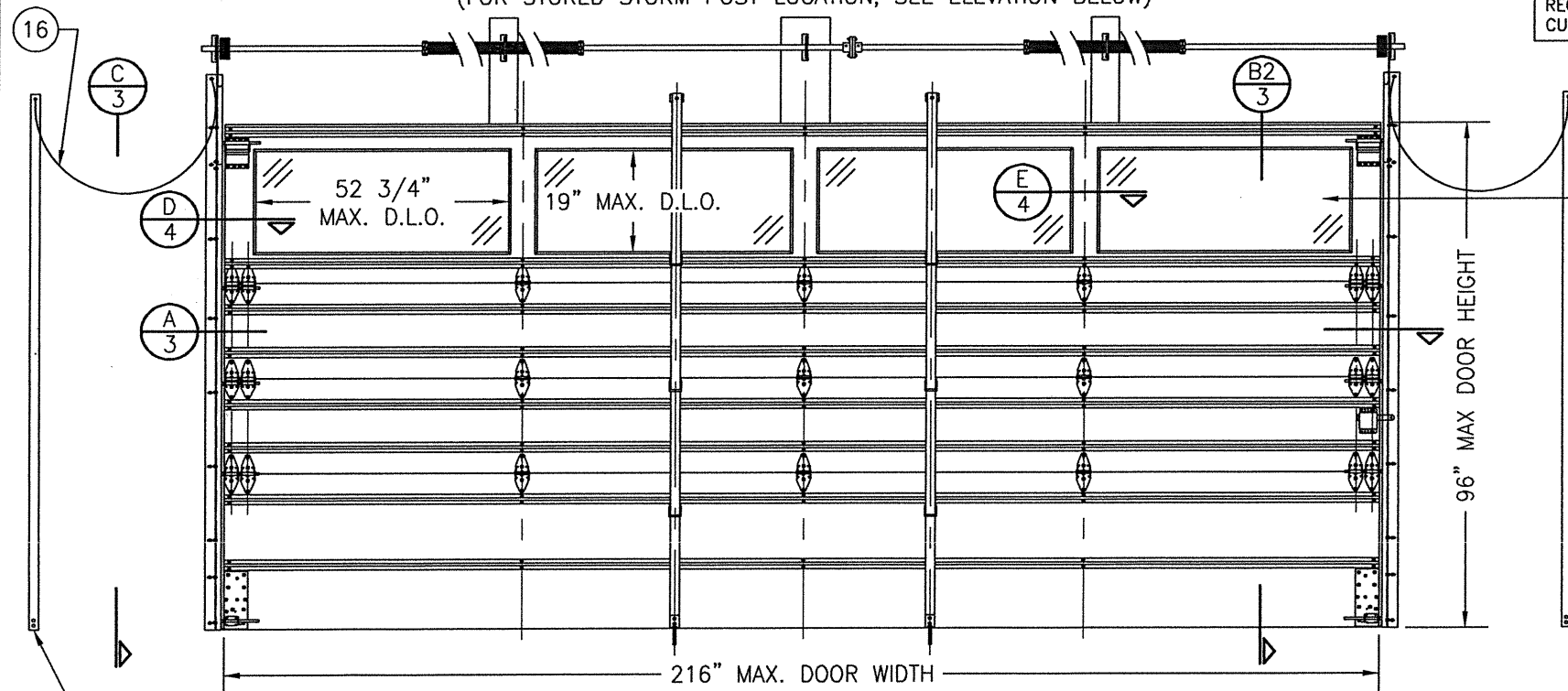




INTERIOR ELEVATION:
MODEL "H-3" FULLY WOOD PANELED GARAGE DOOR
 SCALE: 3/8" = 1'-0"
 (FOR STORED STORM POST LOCATION, SEE ELEVATION BELOW)



INTERIOR ELEVATION:
MODEL "H-4" PARTIALLY GLAZED GARAGE DOOR
 SCALE: 3/8" = 1'-0"
 (FOR DETAIL NOT SHOWN, SEE FULLY PANELED GARAGE DOOR ELEVATION ABOVE)

GENERAL NOTES:

1. THIS PRODUCT HAS BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S)".
2. OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. THIS PRODUCT HAS BEEN DESIGNED IN ACCORDANCE WITH AND MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ) & IS LARGE MISSILE IMPACT RATED.
5. IMPACT SHUTTERS ARE NOT REQUIRED WITH THIS PRODUCT.
6. ALL ANCHORS SECURING PRODUCT FRAMES TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
7. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF $K_d = 0.85$ MAY BE APPLIED PER THE ASCE-7 STANDARD.
8. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE.
9. TO THE BEST OF OUR KNOWLEDGE, THE PRODUCT SHOWN HEREIN IS QUALITY ASSURED BY A FLORIDA STATE APPROVED CERTIFICATION/QA ENTITY & SHALL BE LABELED IN ACCORDANCE WITH THE FBC AND THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION SPECIFICATIONS. THESE DRAWINGS SHOW ALL APPLICABLE ELEVATION, COMBINATION, INSTALLATION & COMPARATIVE ANALYSIS CONDITIONS AS DETERMINED THROUGH TESTING & ENGINEERING RATIONAL ANALYSIS. PRODUCT ASSEMBLY SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, THE MANUFACTURER'S QUALITY ASSURANCE SPECIFICATIONS & TESTING REPORTS.
10. CERTIFICATION OF THIS PRODUCT SHALL BE CONSIDERED VOID IF IT IS INSTALLED WITHOUT A BUILDING PERMIT FROM THE APPLICABLE LOCAL BUILDING DEPARTMENT OR IF IT IS INSTALLED BY ANYONE OTHER THAN A LICENSED CONTRACTOR EXPERIENCED WITH INSTALLATIONS OF THIS TYPE OF PRODUCT.
11. ALL WOOD MEMBERS OF THIS PRODUCT THAT MAY POSSIBLY COME INTO CONTACT WITH MASONRY OR CONCRETE SUBSTRATES, ARE SUBJECT TO MOISTURE &/OR ARE SUBJECT TO THE OUTSIDE ENVIRONMENT SHALL BE OF AN APPROVED DURABLE SPECIES OR BE TREATED IN AN APPROVED METHOD WITH AN APPROVED PRESERVATIVE PER FBC REQUIREMENTS.

EVALUATION OF THIS PRODUCT IS BASED ON APPLICABLE STANDARDS AND/OR INFORMATION & RESULTS FROM APPLICABLE TEST REPORTS. THE FLORIDA BUILDING CODE VERSION CONSIDERED WITH THIS EVALUATION WAS THAT IN FORCE AT THE TIME OF THE EVALUATION. IN THE EVENT OF CODE VERSION CHANGES/UPDATES OR IN THE EVENT THAT NEW OR ADDITIONAL TESTING IS COMPLETED ON THIS PRODUCT, PRIOR TO STATING CODE COMPLIANCE WITH THE STATE, THE MANUFACTURER SHALL CONFIRM WITH THE EVALUATION ENGINEER OF RECORD THAT EVERYTHING SPECIFIED HERE-IN IS CURRENT WITH ALL CURRENT TESTING, CODES AND APPLICABLE STANDARDS.

ANCHOR/SUBSTRATE EVALUATION NOTE:

ALL ANCHORS IN THEIR SPECIFIED SUBSTRATES HAVE BEEN ANALYZED IN ACCORDANCE WITH THEIR APPLICABLE STANDARD(S) AND ARE FOUND TO BE CAPABLE OF SUPPORTING ALL LOADS IMPOSED ON THEM UNDER THE GUIDELINES OF THIS DOCUMENT. ANY SUBSTRATES OR CONDITIONS OUTSIDE OF WHAT IS SHOWN HERE-IN SHALL BE SUBJECT TO JOB SPECIFIC ENGINEER'S REVIEW & CERTIFICATION.

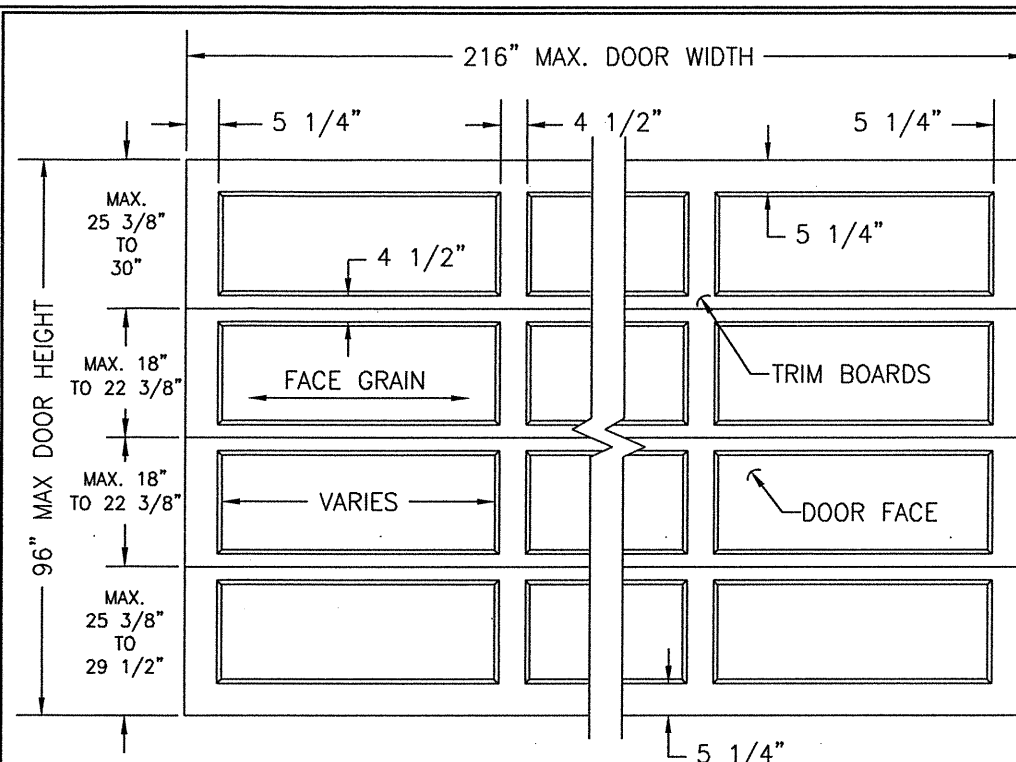
(4 D.L.O. CONDITIONS SHOWN. MORE THAN 4 D.L.O.'S MAY BE PLACED ACCROSS THE DOOR IN THE TOP OR TOP MIDDLE SECTION OF THE DOOR)

NOTE: ALL REMOVABLE STORM POST CONNECTORS SHALL BE LINKED TO THE DOOR OR THE DOOR TRACKS SUCH THAT WHEN REMOVED, THEY WILL NOT BE LOST OR MISPLACED & WILL BE STORED IN AN ACCESSIBLE LOCATION.

ALLOWABLE DESIGN PRESSURE
 (ALL DOOR CONDITIONS)
 +48/-65 PSF

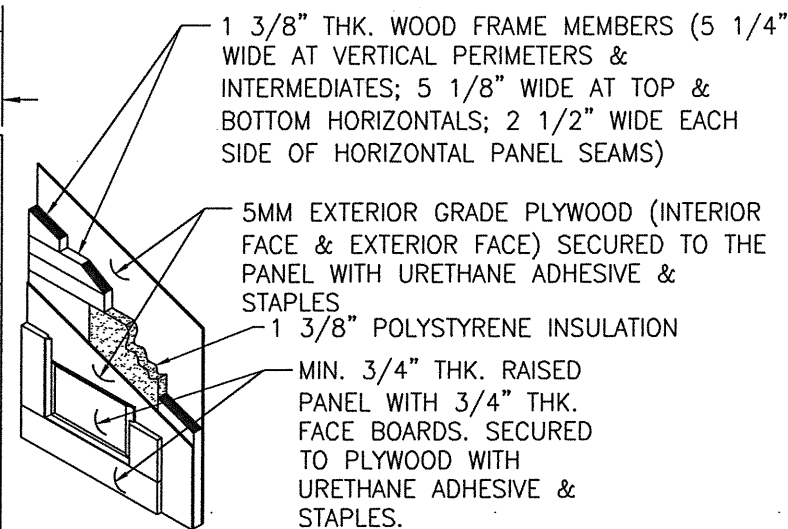
THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=32		DATE: 10/21/08	
DATE	11/15/10	11/12/14	07/06/17
BY	WWS	WWS	WWS
REVISION DESCRIPTION	ADD DUPONT BUTACITE GLASS	MANUFACTURER NAME CHANGE	MANUFACTURER NAME CHANGE
NO.	A1	B1	C1
	ADD DUPONT BUTACITE GLASS	MANUFACTURER NAME CHANGE	MANUFACTURER NAME CHANGE
		D1	E1
		CHANGE TO STATE APPROVAL	
18 FT. WIDE HURRICANE IMPACT WOOD GARAGE DOORS MANUFACTURER DESIGNER PRODUCTS, LLC dba CAMBEK DESIGNER DOORS 702 TROY ST. RIVER FALLS, WI 54022 800-241-0525			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION W. W. SCHAEFER LICENSE NO. 44135 P.E. NO. 44135			
DRAWING NO. 1618		REV. E	
SHEET NO. 1		OF 7	

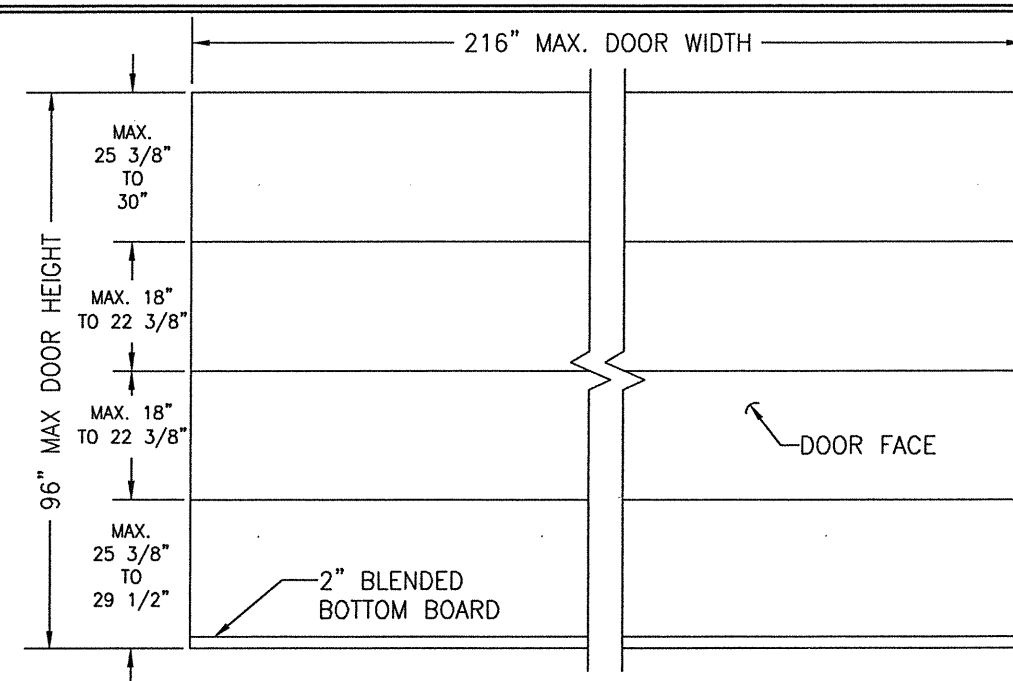


**EXTERIOR ELEVATION:
RAISED PANEL GARAGE DOOR**

SCALE: 3/8" = 1'-0"
(NON-GLAZED DOOR SHOWN, GLAZED DOOR IS SIMILAR)

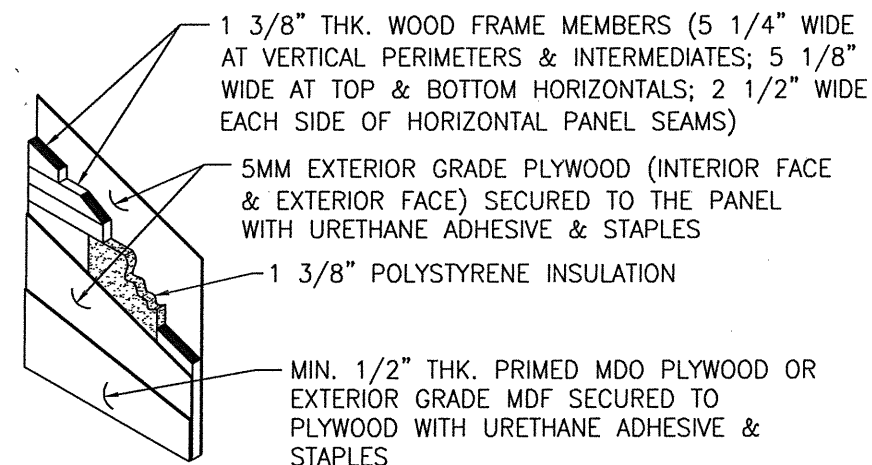


TYP. RAISED PANEL DETAIL
SCALE: N.T.S.

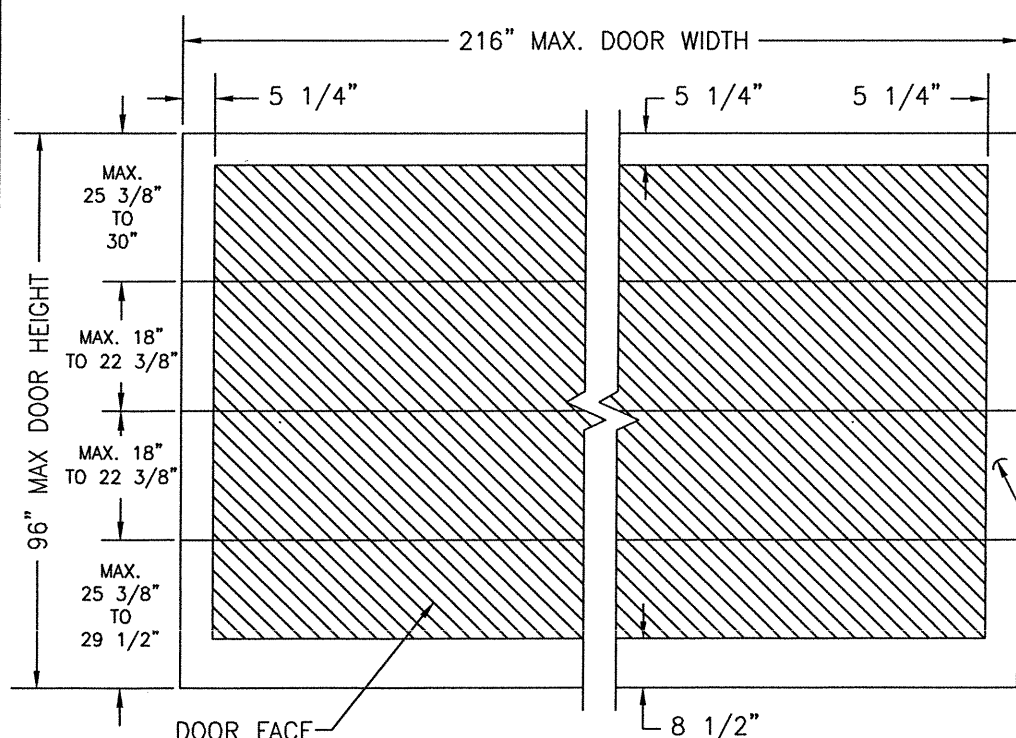


**EXTERIOR ELEVATION:
FLAT PANEL GARAGE DOOR**

SCALE: 3/8" = 1'-0"
(NON-GLAZED DOOR SHOWN, GLAZED DOOR IS SIMILAR)

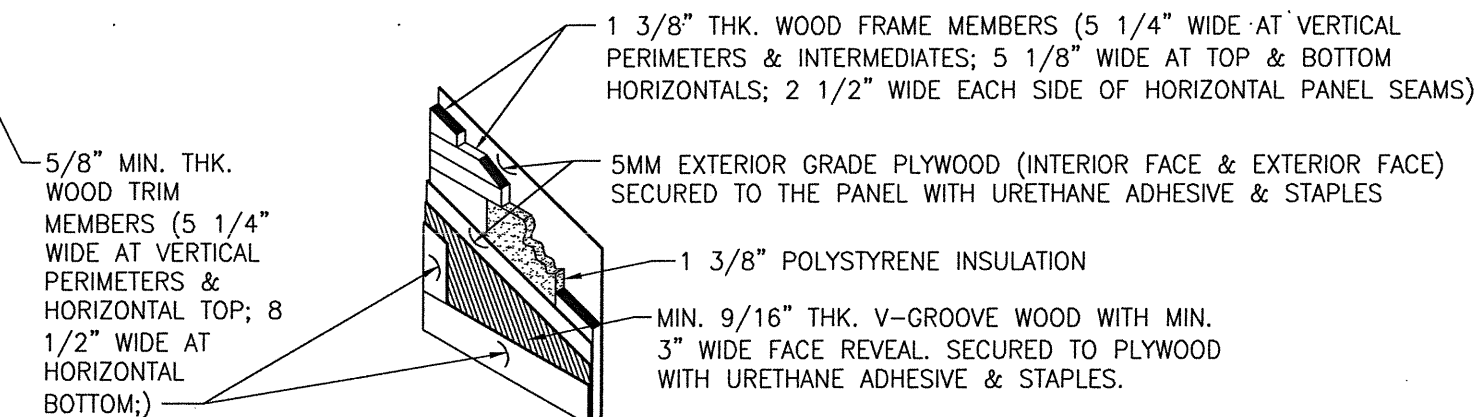


TYP. FLAT PANEL DETAIL
SCALE: N.T.S.



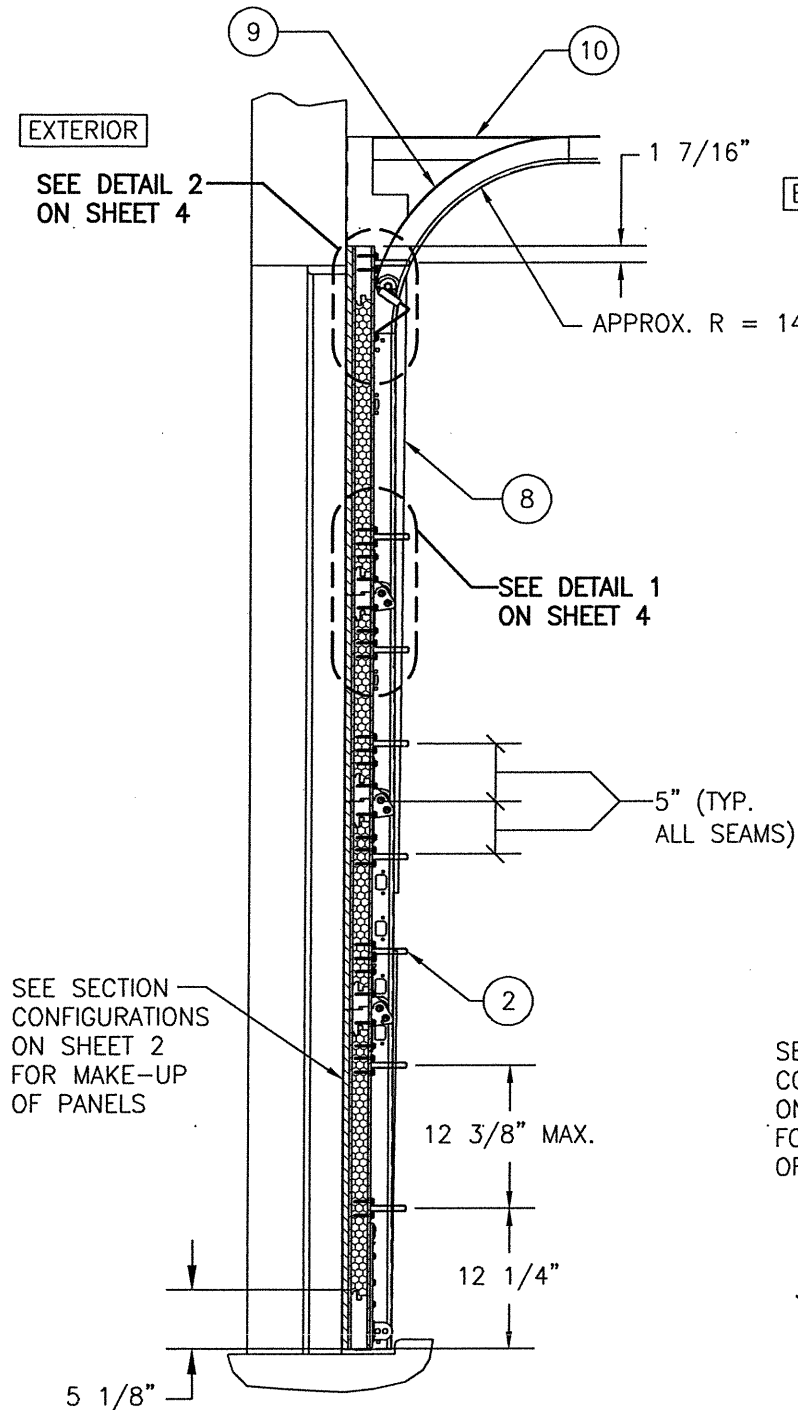
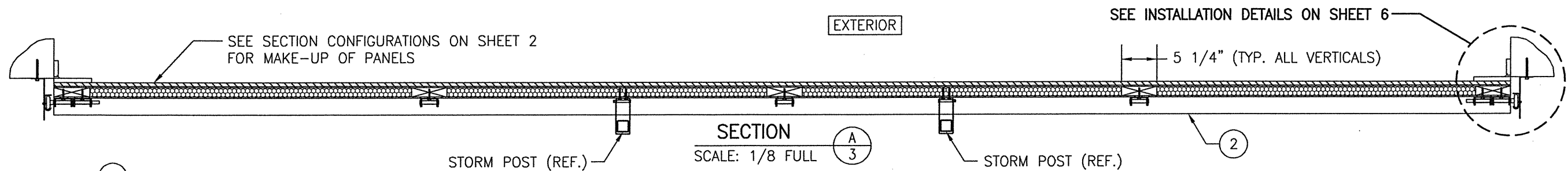
**EXTERIOR ELEVATION:
V-GROOVE PANEL GARAGE DOOR**

SCALE: 3/8" = 1'-0"
(V-GROOVE MAY RUN IN ANY DIRECTION)
(NON-GLAZED DOOR SHOWN, GLAZED DOOR IS SIMILAR)

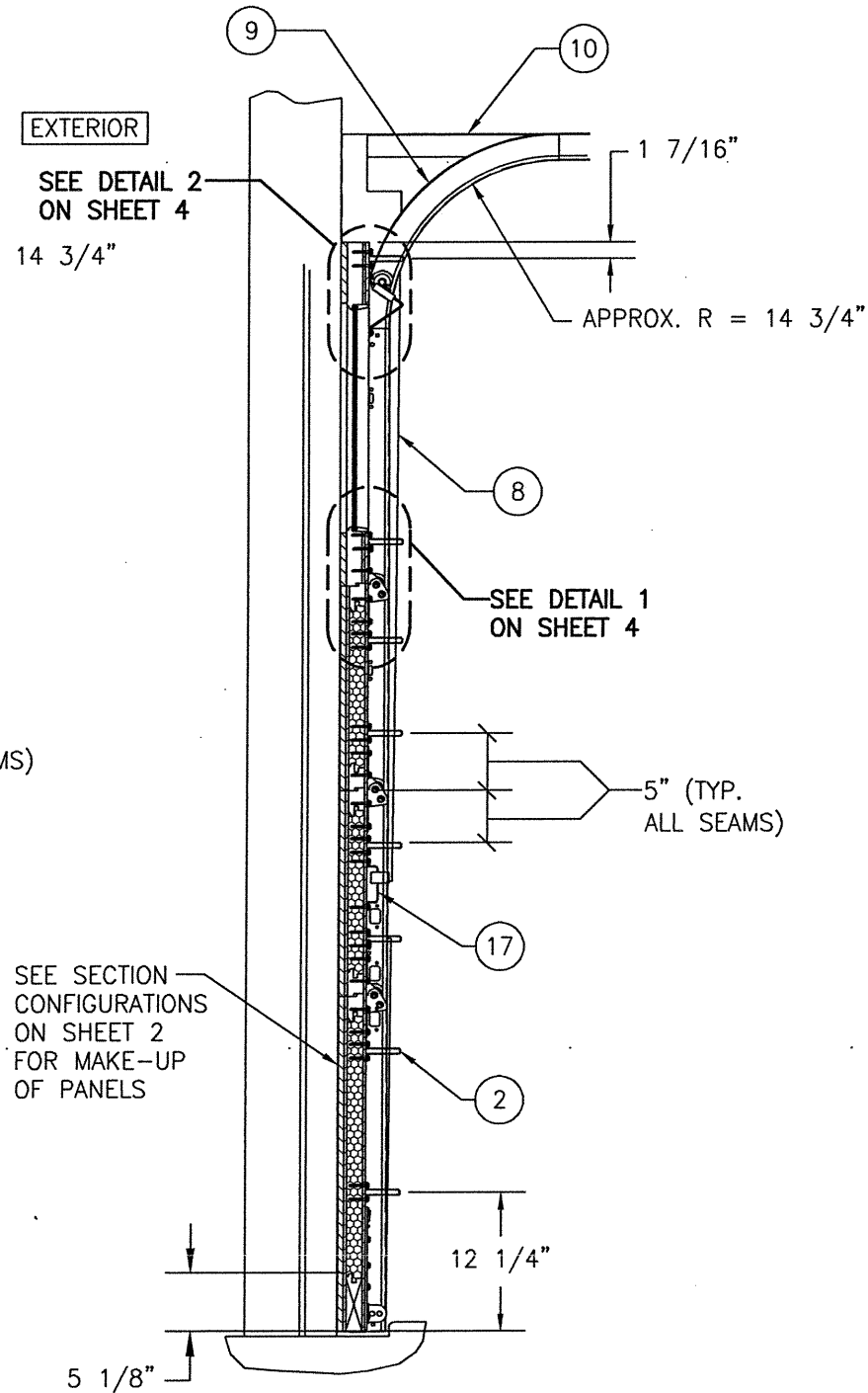


TYP. V-GROOVE PANEL DETAIL
SCALE: N.T.S.

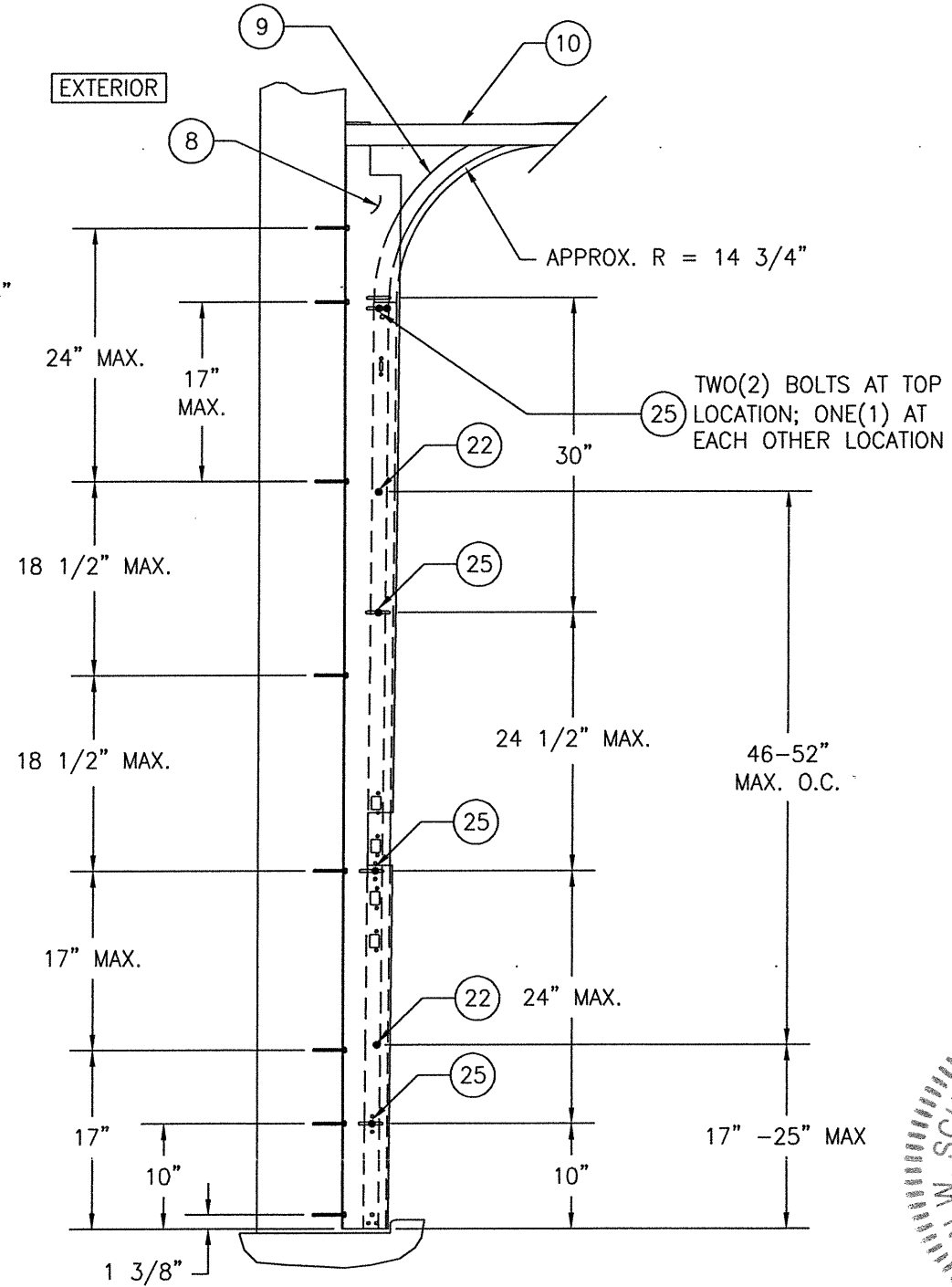
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SHEET NO. 2 OF 7				DRAWING TITLE 18 FT. WIDE HURRICANE IMPACT WOOD GARAGE DOORS							
				CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424				MANUFACTURER DESIGNER PRODUCTS, LLC dba CAMBEK DESIGNER DOORS 702 TROY ST. RIVER FALLS, WI 54022 800-241-0525			
NO.											



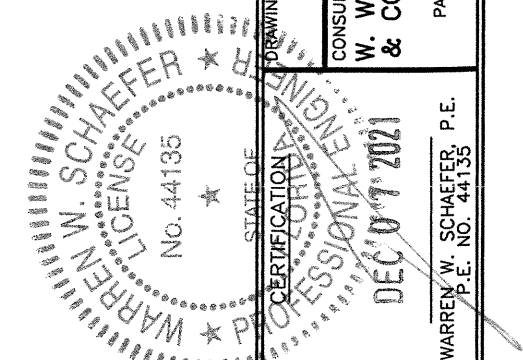
SECTION B1
SCALE: 1/8 FULL
(FULLY WOOD DOOR)



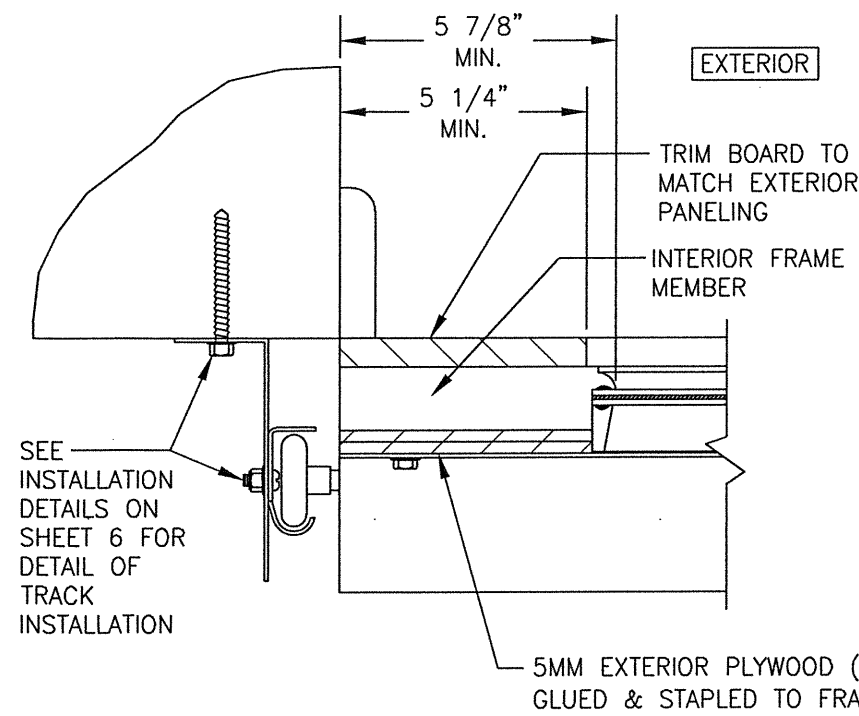
SECTION B2
SCALE: 1/8 FULL
(GLAZED DOOR)



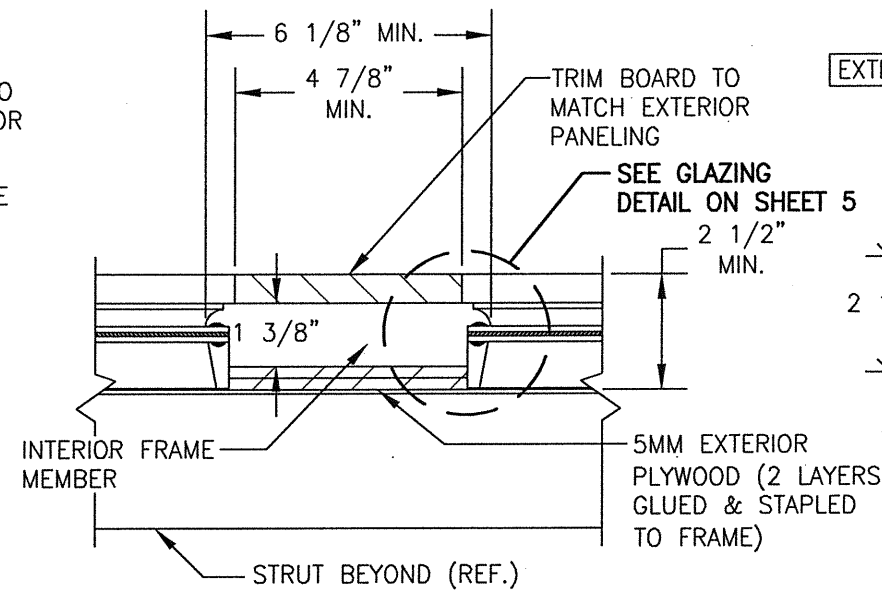
SECTION C
SCALE: 1/8 FULL



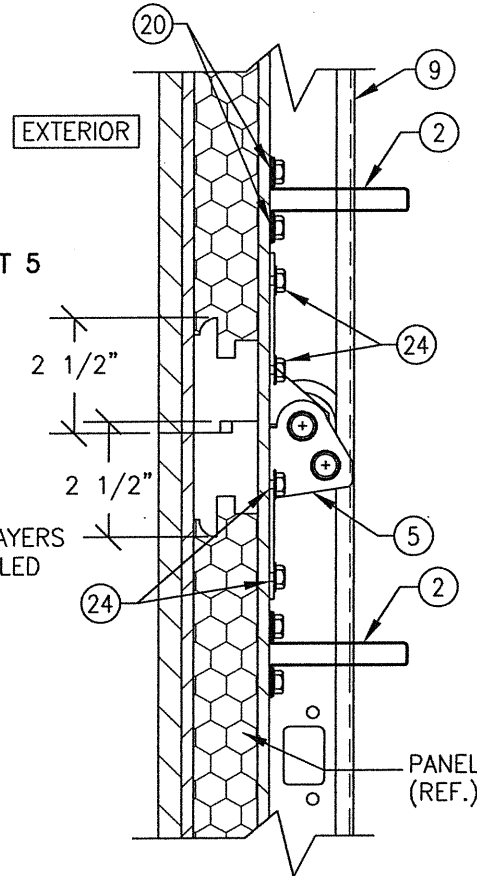
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PLOT: 1=16	DATE: 10/21/08
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE: 18 FT. WIDE HURRICANE IMPACT WOOD GARAGE DOORS MANUFACTURER: DESIGNER PRODUCTS, LLC dba CAMBEK DESIGNER DOORS 702 TROY ST. RIVER FALLS, WI 54022 800-241-0525 CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1618	REV. E
SHEET NO. 3	OF 7



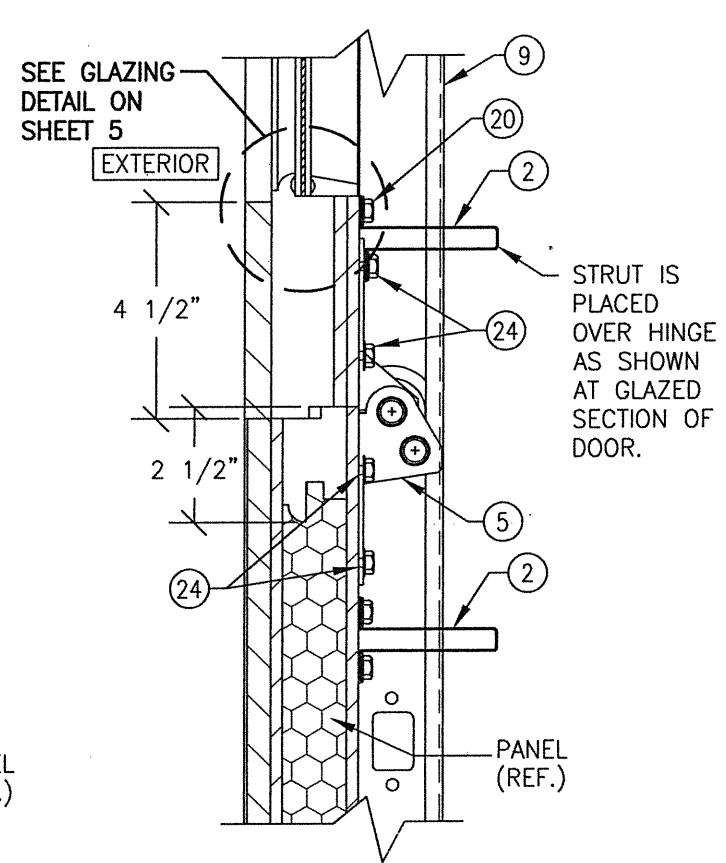
SECTION D
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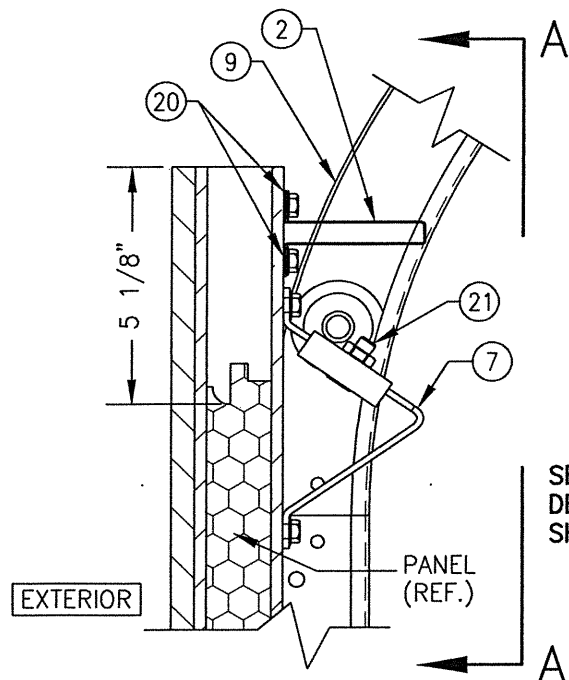
SECTION E
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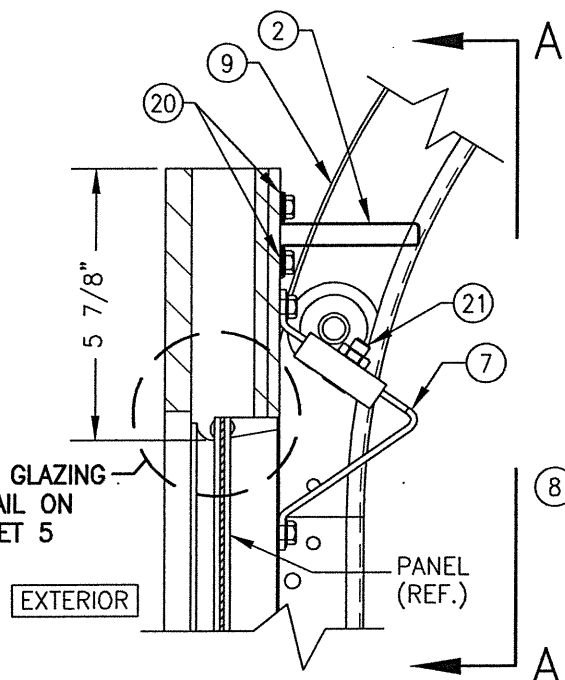
DETAIL 1
(UN-GLAZED CONDITION)



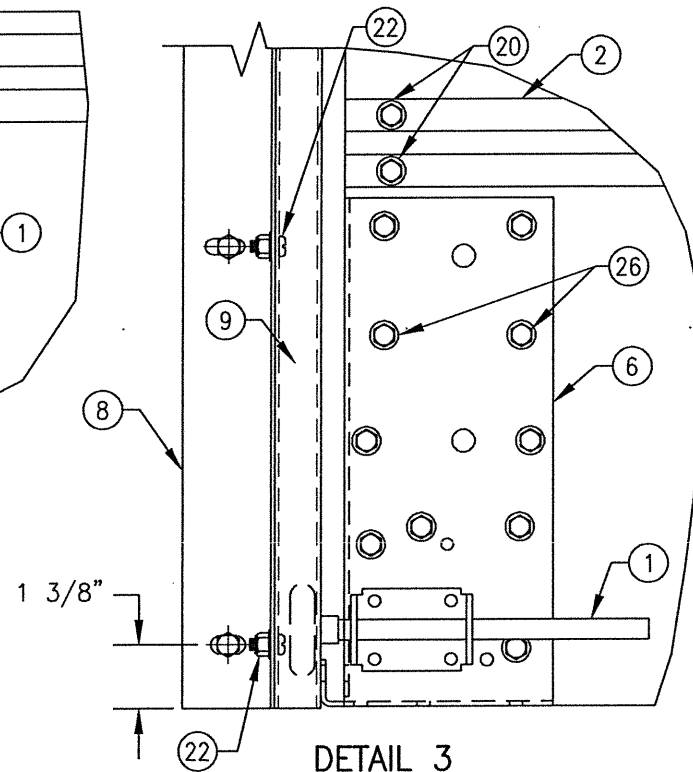
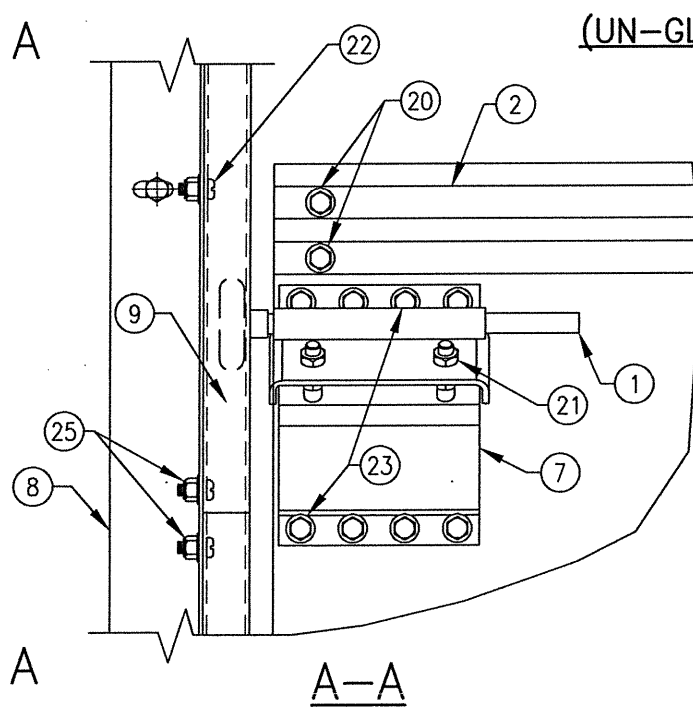
DETAIL 1
(GLAZED CONDITION)



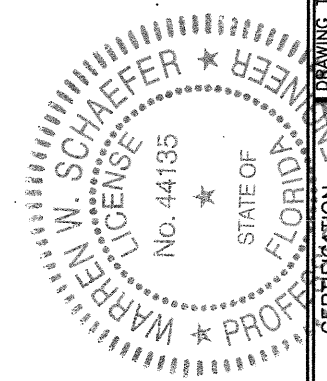
DETAIL 2
(UN-GLAZED CONDITION)



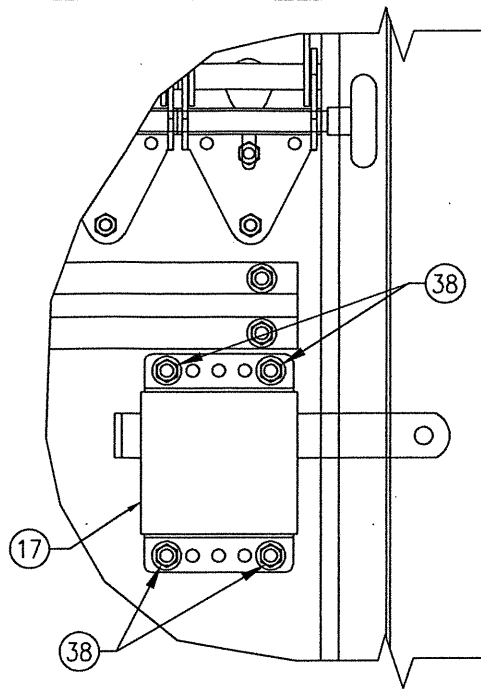
DETAIL 2
(GLAZED CONDITION)



DETAIL 3



DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 10/21/08
DATE	BY
REVISION DESCRIPTION	NO.
18 FT. WIDE HURRICANE IMPACT WOOD GARAGE DOORS MANUFACTURER DESIGNER PRODUCTS, LLC dba CAMBEK DESIGNER DOORS 702 TROY ST. RIVER FALLS, WI 54022 800-241-0525	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1618	REV. E
SHEET NO. 4	OF 7

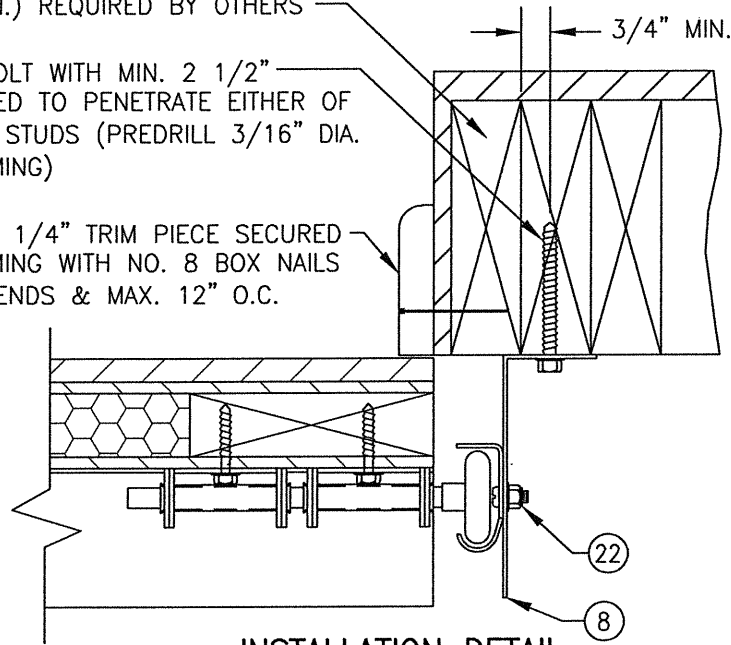


SIDE LOCK DETAIL
(MAY BE LOCATED AT EITHER
SIDE OF DOOR)

MIN. (4) 2X_ STUDS (SYP WITH
S.G.=0.55 MIN.) REQUIRED BY OTHERS

5/16" LAG BOLT WITH MIN. 2 1/2"
FRAMING EMBED TO PENETRATE EITHER OF
THE FRAMING STUDS (PREDRILL 3/16" DIA.
HOLE IN FRAMING)

MIN. 3/4" X 3 1/4" TRIM PIECE SECURED
TO WOOD FRAMING WITH NO. 8 BOX NAILS
WITHIN 3" OF ENDS & MAX. 12" O.C.

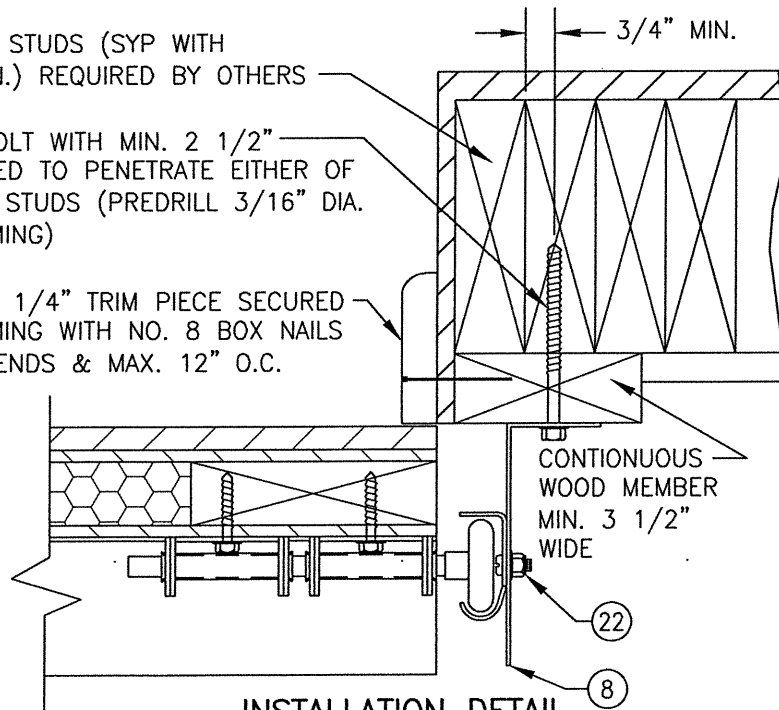


**INSTALLATION DETAIL
DIRECT TO WOOD FRAMING**

MIN. (4) 2X_ STUDS (SYP WITH
S.G.=0.55 MIN.) REQUIRED BY OTHERS

5/16" LAG BOLT WITH MIN. 2 1/2"
FRAMING EMBED TO PENETRATE EITHER OF
THE FRAMING STUDS (PREDRILL 3/16" DIA.
HOLE IN FRAMING)

MIN. 3/4" X 3 1/4" TRIM PIECE SECURED
TO WOOD FRAMING WITH NO. 8 BOX NAILS
WITHIN 3" OF ENDS & MAX. 12" O.C.



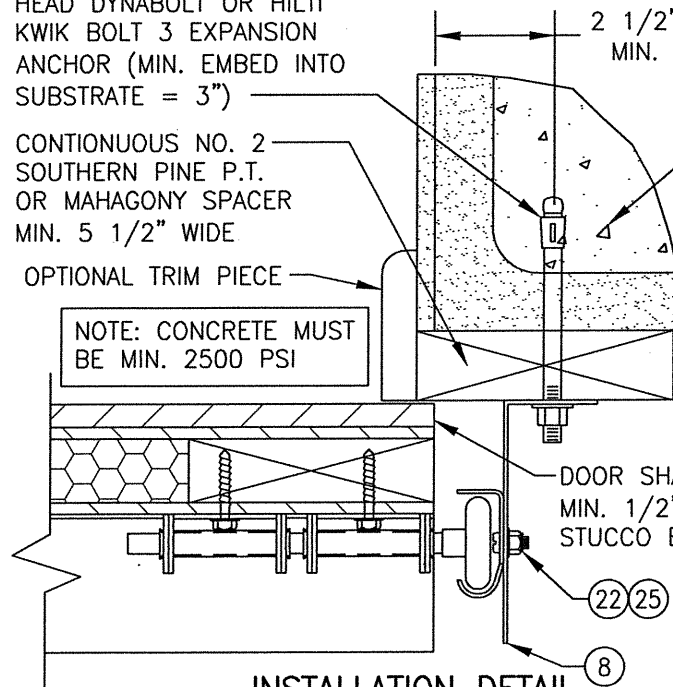
**INSTALLATION DETAIL
SHIMMED TO WOOD FRAMING**

3/8" DIA. RAWL
POWER-BOLT, RAMSET RED
HEAD DYNABOLT OR HILTI
KWIK BOLT 3 EXPANSION
ANCHOR (MIN. EMBED INTO
SUBSTRATE = 3")

CONTINUOUS NO. 2
SOUTHERN PINE P.T.
OR MAHAGONY SPACER
MIN. 5 1/2" WIDE

OPTIONAL TRIM PIECE

NOTE: CONCRETE MUST
BE MIN. 2500 PSI

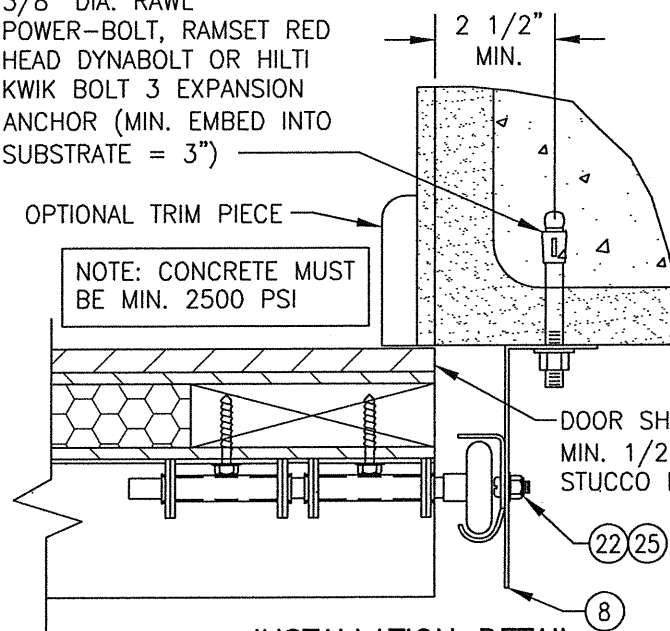


**INSTALLATION DETAIL
SHIMMED TO FILLED BLOCK
OR SOLID CONCRETE**

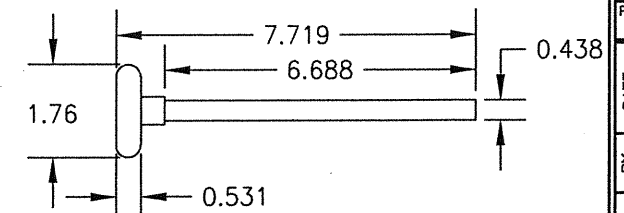
3/8" DIA. RAWL
POWER-BOLT, RAMSET RED
HEAD DYNABOLT OR HILTI
KWIK BOLT 3 EXPANSION
ANCHOR (MIN. EMBED INTO
SUBSTRATE = 3")

OPTIONAL TRIM PIECE

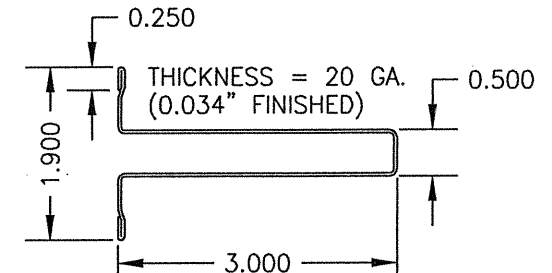
NOTE: CONCRETE MUST
BE MIN. 2500 PSI



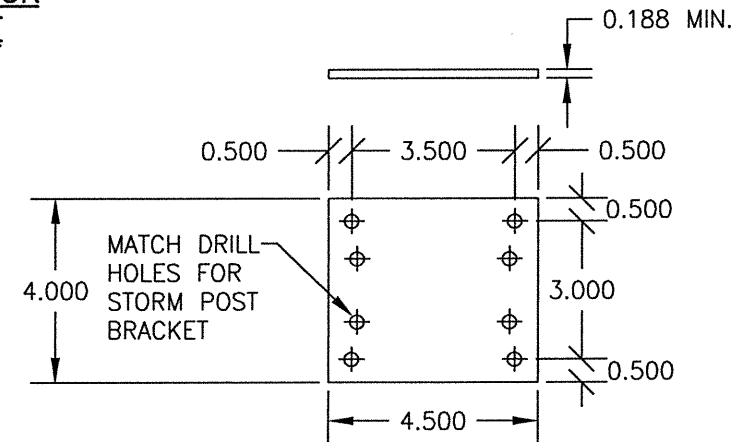
**INSTALLATION DETAIL
DIRECT TO FILLED BLOCK
OR SOLID CONCRETE**



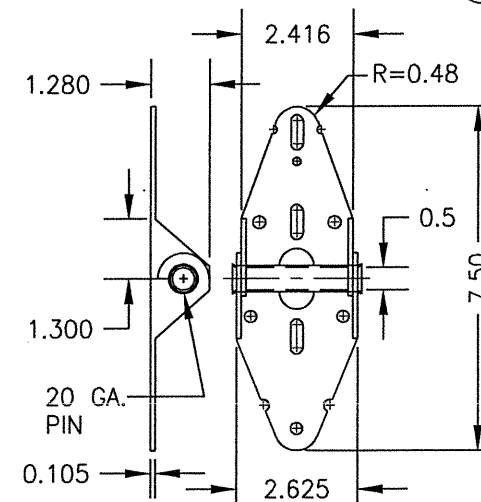
**1 NYLON ROLLER WITH
AISI STEEL ROD**



2 3" REINFORCING STRUT



3 ADAPTER PLATE



4 SINGLE PIN HINGE

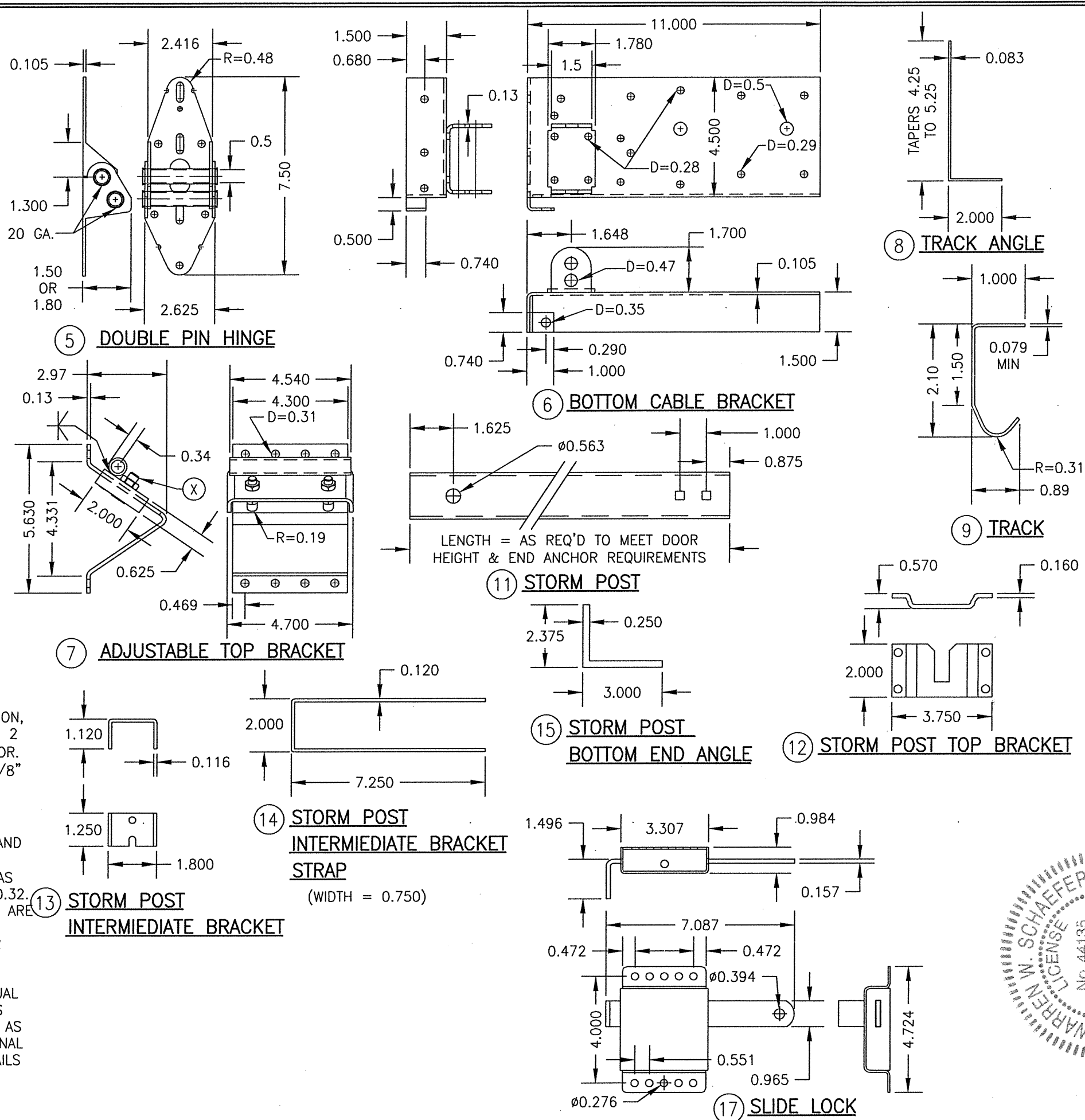


DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=4		DATE: 10/21/08	
NO.	REVISION	DESCRIPTION	DATE
1			
2			
3			
4			
DRAWING TITLE 18 FT. WIDE HURRICANE IMPACT WOOD GARAGE DOORS			
MANUFACTURER DESIGNER PRODUCTS, LLC dba CAMBEK DESIGNER DOORS 702 TROY ST. RIVER FALLS, WI 54022 800-241-0525			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
DEC 07 2021 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1618		REV. E	
SHEET NO. 6		OF 7	

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS & HARDWARE		
1	ROLLER	NYLON W/AISI 1045 STL. ROD
2	3" REINFORCING STRUT	GALV. 80 KSI STEEL
3	ADAPTER BRACKET	MIN. 3/16" A-36 STEEL
4	SINGLE ROLLER HINGE	GALV. 36 KSI STEEL
5	DOUBLE ROLLER HINGE	GALV. 36 KSI STEEL
6	BOTTOM CABLE BRACKET	GALV. 36 KSI STEEL
7	ADJUSTABLE TOP BRACKET	GALV. 36 KSI STEEL
8	TRACK ANGLE (TAPERED)	GALV. 33 KSI STEEL
9	VERTICAL TRACK (HORIZ. TRACK SIMILAR)	GALV. 33 KSI STEEL
10	HORIZONTAL REINFORCEMENT ANGLE	2" X 2" X 13GA GALV. 33 KSI STEEL
11	STORM POST	1 3/4" X 1 3/4" X 0.105" THICK GALV. 50 KSI STEEL
12	STORM POST TOP BRACKET	A-36 STEEL
13	STORM POST INTERMEDIATE BRACKET	A-36 STEEL
14	STORM POST INTERMEDIATE BRACKET STRAP	A-36 STEEL
15	STORM POST BOTTOM END ANGLE	A-36 STEEL
16	POST CABLE	Ø0.125" GALV. OR S.S.
17	SLIDE LOCK	STEEL 1018 ZINC PLATED
MISCELLANEOUS FASTENERS		
20	1/4 X 1 1/2 HEX WASHER HEAD LAG SCREW	ALIGNED WITH HINGES PER ELEVATIONS
21	3/8-16 BOLT	2 AT EACH TOP BRACKET
22	1/4-20 X 5/8 RIB NECK TRACK BOLT	2 PER TRACK (FIELD DRILLED & INSTALLED)
23	1/4 X 1 1/2 HEX WASHER HEAD LAG SCREW	8 PER TOP BRACKET
24	1/4 X 1 1/2 HEX WASHER HEAD LAG SCREW	4 PER HINGE
25	1/4-20 X 5/8 RIB NECK TRACK BOLT	5 PER TRACK
26	1/4 X 1 1/2 HEX WASHER HEAD LAG SCREW	10 PER BOTTOM CABLE BRACKET
27	1/4 X 1 1/2 HEX WASHER HEAD LAG SCREW	2 PER STORM POST INTERMEDIATE BRACKET
28	Ø0.031 X 2 1/2 CLEVIS PIN/CABLE ASSEMBLY	1 PER BRACKET; McMASTER CARR #98416A017
30	5/16-18 X 3/4 CARRIAGE BOLT	2 PER BOTTOM BRACKET CONNECTION
31	5/16-18 SERRATED FLANGE NUT	2 PER BOTTOM BRACKET CONNECTION
32	1/2" X 8" CARRIAGE BOLT (GRADE 5)	1 PER STORM POST TOP ASSEMBLY
33	1/2" SERRATED FLANGE NUT	2 PER STORM POST TOP ASSEMBLY
34	1/4-20 X 3/4" F.H. MACHINE SCREW	2 PER ADAPTER PLATE
35	1/4-20 X SERRATED FLANGE NUT	2 PER ADAPTER PLATE
36	Ø1/2" X 3 1/2" CLEVIS PIN	1 PER STORM POST BOTTOM END ANGLE
37	1/2" PUSH NUT RETAINER	1 PER BRACKET; McMASTER CARR #98807A034
38	1/4 X 1 1/2 HEX WASHER HEAD LAG SCREW	4 PER SLIDE LOCK

PANEL NOTES:

- HORIZONTAL & VERTICAL FRAME MEMBERS ARE EDGE COPED, BUTTED TOGETHER & GLUED WITH TYPE 1 WOOD GLUE. IN ADDITION, THE VERTICAL MEMBERS ARE SCREWED TO THE HORIZONTAL WITH 2 NO. 8 X 2" SCREWS ANGLED FROM THE BACK FACE OF THE DOOR.
- 5mm PLYWOOD IS STAPLED TO THE FRAME WITH 18 GA. X 5/8" X 1/4" STAPLES AND GLUED WITH DEGABOND 948 URETHANE ADHESIVE OR EQUIVALENT.
- THE EXTERIOR PANEL/STRIPS ARE ATTACHED TO THE 5mm PLYWOOD AND FRAME WITH 18 GA. X 1 1/2" X 1/4" STAPLES AND CHEMREX 948 URETHANE ADHESIVE.
- EXTERIOR FINISH WOOD (PANELS/STRIPS) USED IN TESTING WAS NO. 2 WESTERN RED CEDAR WITH A SPECIFIC GRAVITY OF $G = 0.32$. OTHER WOOD SPECIES APPLICABLE FOR USE WITH THIS PRODUCT ARE THOSE WITH A SPECIFIC GRAVITY OF 0.32 OR GREATER.
- ALL INTERIOR FRAME MEMBERS SHALL BE NO. 2 DOUGLAS FIR WITH $G = 0.49$.
- IT IS THE OPTION OF DESIGNER DOOR TO INCORPORATE AN INTERIOR FINISH FACE ON ANY DOOR. THIS FACE SHALL BE EQUAL TO THOSE EXTERIOR FACES APPROVED PER THE DETAILS ON THIS DRAWING AND BE SECURED TO THE DOOR IN THE SAME MANNER AS THE EXTERIOR FACE. THIS INTERIOR FACE SHALL BE AN ADDITIONAL LAYER AND SHALL NOT REPLACE ANY LAYER SHOWN IN THE DETAILS ON THIS SHEET. ALSO, ALL HARDWARE LAG SCREWS SHALL BE LENGTHENED TO MIN. 2 1/4" TO ALLOW FOR THE ADDITIONAL THICKNESS OF THE ADDED INTERIOR SKIN.



DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 10/21/08
DATE	BY
REVISION	DESCRIPTION
NO.	
DRAWING TITLE 18 FT. WIDE HURRICANE IMPACT WOOD GARAGE DOORS	
MANUFACTURER DESIGNER PRODUCTS, LLC dba CAMBEK DESIGNER DOORS 702 TROY ST. RIVER FALLS, WI 54022 800-241-0525	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION WARREN W. SCHAEFER P.E. NO. 44135 STATE OF FLORIDA DEC 07 2021	
DRAWING NO. 1618	REV. F
SHEET NO. 7	OF 7