© Diversified Window Solutions Inc. 2010 INSTALLATION NOTES:

- 1. ADJUSTABLE STORM PANEL AND COMBO WINDOW KIT. PATENTED, U.S. PATENT NO. 5,504,018, PATENT PENDING.
- THESE "INNOVATIVE NEW PRODUCT" EVALUATION DOCUMENTS REPRESENT A SHUTTER KIT AND GLASS WINDOW SYSTEM DESIGNED AND TESTED AS A LARGE MISSILE IMPACT PROTECTIVE SYSTEM IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, (I.B.C.) AND THE FLORIDA BUILDING CODE 2007. "CANNOT BE USED IN HIGH VELOCITY HURRICANE ZONES".
- 3. THIS COMBO WINDOW SHUTTER KIT HAS PASSED TESTING FOR ASTM-E 330 "UNIFORM STATIC AIR PRESSURE DIFFERENCE", ASTM- E 1996-05 "IMPACTED BY WINDBORNE DEBRIS" AND ASTM 1886-05 "IMPACTED BY MISSILES AND CYCLIC PRESSURE
- 4. GLASS THICKNESS BASED ON ASTM E 1300 GLASS CALCULATIONS CHART, GLASS SPECIFICATIONS CAN VARY DEPENDING ON SIZE OF GLAZED LITE AND OR LOAD. TESTING HAS SHOWN THAT 1/4" ANNEALED GLASS DOES NOT BREAK ON IMPACT.
- 5. UNIVERSAL "U" (0.090") KIT HEADER & (0.110") "F" TRACK KIT SILL.
- 6. COMBO WINDOW HEADER & SILL FASTENERS SHALL BE:
 - 2X WOOD FRAME (FIN): #10 WOOD SCREWS OR BETTER WITH A MINIMUM 1 1/2" EMBEDMENT
 - CONCRETE (FLANGE): 1/4" TAPCON SCREWS OR BETTER WITH A MINIMUM 1 1/4" EMBEDMENT
- 7. THE MINIMUM PANEL LENGTH IS 18" (POROSITY LIMITATIONS).
- 8. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- 9. ALL ALUMINUM EXTRUSIONS ARE ALLOY 6063-T5 WITH TYPICAL WALL THICKNESS OF 0.100".
- 10. USE HIGH QUALITY CAULK BEHIND KIT'S HEADER AND SILL, OSI. OR EQUIVLANT.
- 11 THE RESPONSIBILITY FOR SELECTION OF THESE PRODUCTS TO MEET ANY APPLICABLE LOCAL LAWS, BUILDING CODES, ORDINANCES OR OTHER SAFETY REQUIREMENTS RESTS SOLELY WITH THE ARCHITECT, BUILDER, OWNER OR CONTRACTOR.
- 12. THESE PRODUCT EVALUATION DOCUMENTS ARE VALID WHEN DATED & EMBOSSED SEALED AND OR A MASTER APPROVAL DOCUMENT IS ON FILE WITH A MUNICIPALITY OR OTHER GOVERNING AGENCY.
- 13. THESE PRODUCT EVALUATION DOCUMENTS ARE SUITABLE TO BE APPLIED BY THE CONTRACTOR PROVIDED THE CONTRACTOR DOES NOT DEVIATE FROM THE CONDITIONS DETAILED HEREIN AND THE CONTRACTOR VERIFIES THE EXISTING STRUCTURE IS CAPABLE OF SUPPORTING THE SUPERIMPOSED LOADS.
- 14. ALTERATIONS OR ADDITIONS TO THIS DOCUMENT ARE NOT PERMITTED.
- 15. WHEN THE SITE CONDITIONS DEVIATE FROM THESE PRODUCT EVALUATION DOCUMENTS, SITE SPECIFIC DOCUMENTS SHALL BE PREPARED BY A DULY LICENSED AND REGISTERED ENGINEER OR ARCHITECT.
- 16. A MINIMUM OF ONE LABEL PER OPENING OR A CERTIFICATE OF COMPLIANCE SHALL BE PROVIDED BY THE MANUFACTURER OR INSTALLER. WHERE LABELS ARE USED, THE LABEL SHALL READ AS REQUIRED BY THE QUALITY ASSURANCE AGENCY AND NAME OF MANUFACTURER.
- 17. STORM PANELS SHALL BE MARKED PATENTED, U.S. PATENT NO, 5,540,018. AND PATENT PENDING.
- 18. STORM PANELS SHALL BE 22/24 GUAGE STEEL CONFORMING TO ASTM A653 SQ GRADE 40, G60 GALVANIZED COATING AND BE LIMITED TO 103" SPAN ON THIS ENGINEERING.
- 19. PERMANENT FASTENER COMPONENTS MUST BE PROTECTED AGAINST CONTAMINATION & CORROSION.
- 20. WHERE SCREWS FASTEN TO NARROW FACE OF STUD FRAMING, FASTENER SHALL BE LOCATED IN CENTER OF NOMINAL 2" X 4" (MIN.) WOOD STUD (MIN. G=0.55). 3/4" EDGE DISTANCE IS OR GREATER DENSITY. FASTENERS MAY HAVE PHILLIPS, PAN HEAD OR HEX HEAD. CONTRACTOR MUST VERIFY THAT WOOD BUCK CONNECTION TO SUBSTRATE IS SUFFICIENT
- 21. EXISTING STRUCTURE MAY BE CONCRETE, HOLLOW BLOCK OR WOOD FRAMING.
- 22. CONCRETE COMPRESSIVE STRENGTH = 3,000 PSI AT 28 DAYS CURING TIME.
- 23. MINIMUM EDGE DISTANCE (E.D.) OF ANCHORS SHALL BE 1 1/4", IN HOLLOW BLOCK OR CONCRETE.
- 24. DETERMINE THE POSITIVE AND 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 ASCE 7-98
- 25. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT.
- 26. REFERENCED TEST REPORTS BY NCTL. ARE THE PROPERTY OF DWS.

DIVERSIFIED WINDOW SOLUTIONS, INC.

FIN & FLANGE HEADER & SILL KIT

PANEL INSTALLATION NOTES:

- INSERT 3/4" HEX HEAD 1/4" #20 BOLTS INTO THE BOTTOM TRACK, ONE BOLT FOR EACH HOLE IN THE BOTTOM OF THE PANELS.
- INSTALL PANELS FROM THE LEFT SIDE OF THE WINDOW OR SLIDING GLASS DOOR OPENING TOWARDS THE RIGHT SIDE OF THE OPENING. THE NARROW EDGE OF THE PANEL IS ON THE LEFT AND THE WIDER SIDE OF THE PANEL WITH THE ELONGATION HOLE TO THE RIGHT SIDE.
- 3. INSERT THE FIRST PANEL INTO THE UPPER "U" HEADER AND PLACE THE PREPUNCHED HOLES IN THE BOTTOM OF THE PANEL OVER THE BOLTS EXTENDING FROM THE BOTTOM "F" TRACK.
- 4. INSTALL THE MOLDED WING NUTS ON THE LEFT BOLT AND ON THE CENTER BOLT, DO NOT TIGHTEN THE WING NUTS AT THIS TIME.
- 5. INSTALL THE NEXT PANEL OVERLAPPING THE FIRST PANEL WITH THE NARROW SIDE OF THE SECOND PANEL OVERLAPPING THE WIDER RIGHT SIDE OF THE FIRST PANEL.
- 6. ON THE SECOND PANEL, INSTALL THE MOLDED WING NUTS ON THE LEFT BOLT AND ON THE CENTER BOLT, DO NOT TIGHTEN THE WING NUTS AT THIS TIME.
- 7. CONTINUE INSTALLING PANELS USING THIS METHOD UNTIL THE OPENING IS COVERED.
- 8. WITH THE WING NUTS LOOSE, THE PANELS MAY BE ADJUSTED TO THE RIGHT OR LEFT AS NEEDED. ONCE THIS IS DONE, TIGHTEN ALL WING NUTS TO PROPERLY SECURE THE PANELS TO THE LOWER "F" TRACK.
- 9. DO NOT STAND BEHIND WINDOWS DURING A STORM.

THE PANEL OVERLAP, SLIDE BOLT TRACK AND ELONGATED HOLE ALLOW PANEL WIDTH ADJUSTMENT

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SIZE & CONFIGURATION	DESIGN PRESSURE	MISSILE IMPACT RATING	
103" MAX. SPAN WIDTH	+60/-60 PSF	LARGE MISSILE IMPACT RATED	

Diversified Window Solutions, Inc.

215 PINEDA STREET UNIT 141 LONGWOOD, FL 32750

PH: 407-889-9440 FX:407-889-919

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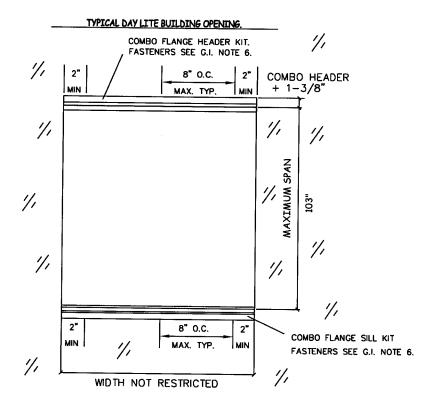
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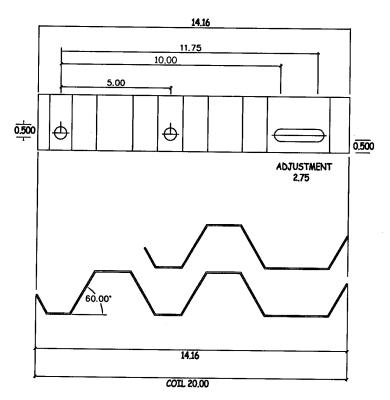
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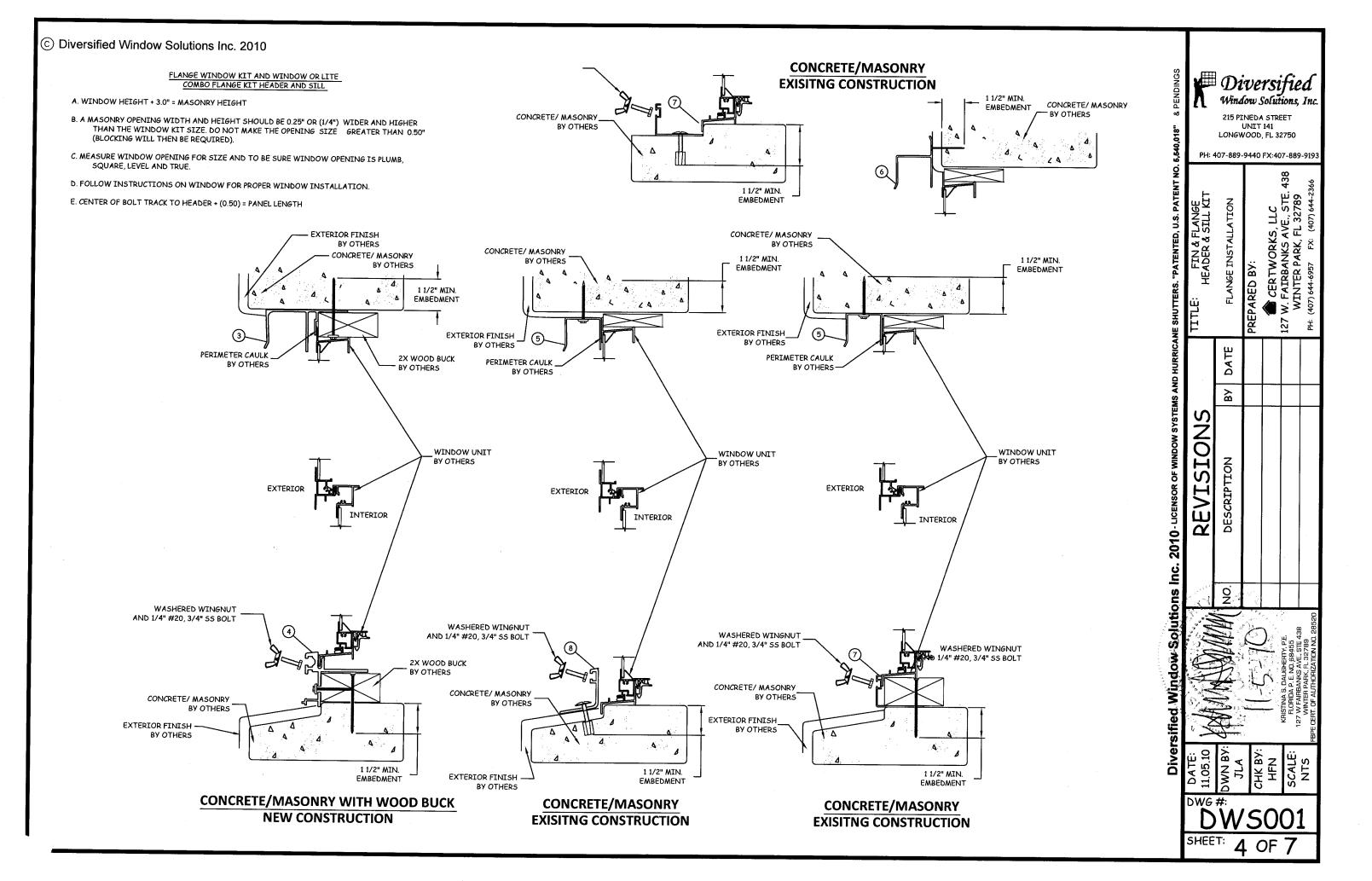
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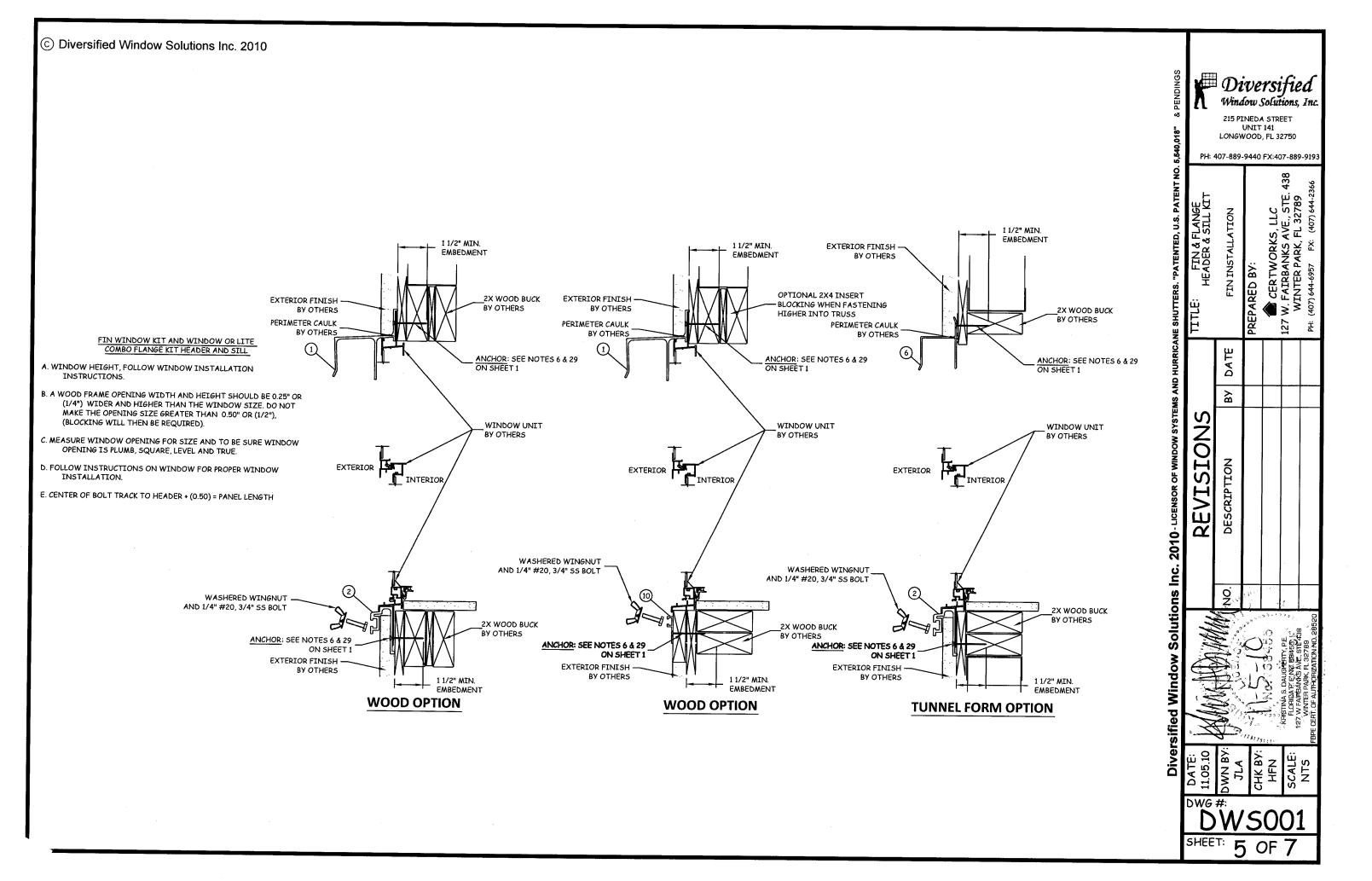




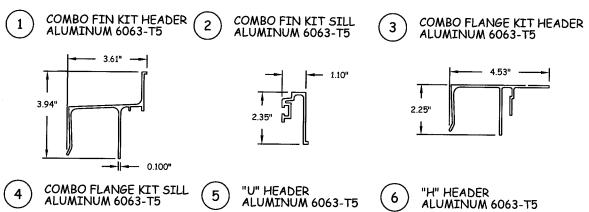
SHUTTER SOLUTIONS PATENTED AJUSTABLE STORM PANEL

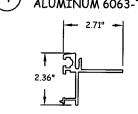
Diversified
Window Solutions, Inc. 215 PINEDA STREET UNIT 141 LONGWOOD, FL 32750 PH: 407-889-9440 FX:407-889-9193 Diversified Window Solutions Inc. 2010-licensor of window systems and hurricane shutters. "Patented, u.s. pate FIN & FLANGE HEADER & SILL KIT 8 REVISIONS DESCRIPTION



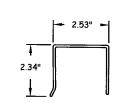


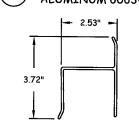
BILL OF MATERIALS								
ITEM NO.	DESCRIPTION	MATERIAL	MANUFACTURER					
1	COMBO FIN KIT HEADER	6063-T5	DIVERSIFIED WINDOWS					
2	COMBO FIN KIT SILL	6063-T5	DIVERSIFIED WINDOWS					
3	COMBO FLANGE KIT HEADER	6063-T5	DIVERSIFIED WINDOWS					
4	COMBO FLANGE KIT SILL	6063-T5	DIVERSIFIED WINDOWS					
5	"U" HEADER	6063-T5	DIVERSIFIED WINDOWS					
6	"H" HEADER	6063-T5	DIVERSIFIED WINDOWS					
7	"F" TRACK OUTSIDE 90 DEGREE	6063-T5	DIVERSIFIED WINDOWS					
8	"F" TRACK INSIDE 100 DEGREE	6063-T5	DIVERSIFIED WINDOWS					
9	"F" TRACK INSIDE 90 DEGREE	6063-T5	DIVERSIFIED WINDOWS					
10	"F" TRACK WALL MOUNT	6063-T5	DIVERSIFIED WINDOWS					



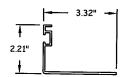


"F" TRACK INSIDE 90 DEGREE ALUMINUM 6063-T5

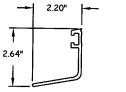


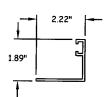


7 "F" TRACK OUTSIDE 90 DEGREE ALUMINUM 6063-T5



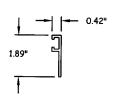
8 "F" TRACK INSIDE 100 DEGREE ALUMINUM 6063-T5





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10 "F" TRACK WALL MOUNT ALUMINUM 6063-T5



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Window Solutions, Inc. 215 PINEDA STREET UNIT 141 LONGWOOD, FL 32750 PH: 407-889-9440 FX:407-889-9193 Diversified Window Solutions Inc. 2010-licensor of window systems and hurricane shutters. "Patented, u.s. patent FIN & FLANG HEADER & SILL DATE B REVISION

FIN AND FLANGE INSTALLATION NOTES

A. ROUGH OPENING MASORY OR WOOD CONSTRUCTION.

- 1. CHECK TO ENSURE THE OPENING IS PROPER SIZE.
- 2. SILL PLATE MUST BE LEVEL.
- 3. PROVIDE 1/4 TO 1/2 INCH OF CLEARANCE ON BOTH HEIGHT AND WIDTH.
- 4. IN WOOD FRAME INSTALLATIONS COVER THE OUTSIDE FACE OF THE BUILDING OPENINGS WITH VAPOR BARRIER AND/OR OTHER MATERIAL AS PROVIDED BY OTHERS FOR THE BUILDER, INSTALL WINDOW, THE BOTTOM PEEL AND SEAL STRIP IS APPLIED OVER NAILING FIN THEN APPLY JAMB STRIPS. TOP STRIP IS APPLIED OVER NAILING FIN AFTER TWO SIDE STRIPS ARE APPLIED.
- 5. FOLLOW SITE SPECIFIC DETAILS FROM SEALED JOB PLANS IF PROVIDED.

B. CHECKING WINDOW UNIT.

- 1. OPEN AND OPERATE SASH AND CHECK THAT THE UNIT OPERATES PROPERLY BEFORE INSTALLING.
- 2. CLOSE AND LOCK SASH.

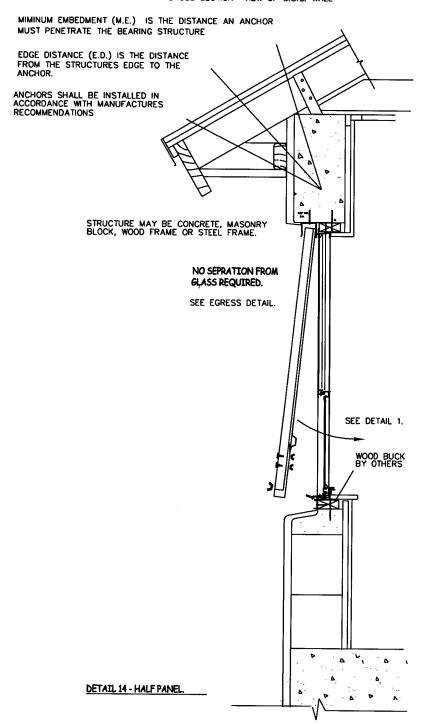
C. INSTALLATION PROCEDURE.

- 1A. IN WOOD FRAME CONSTRUCTION, APPLY A CONTINUOUS BEAD OF SEALANT (BEDDING JOINT) AROUND THE FULL PERIMETER OF THE BACKSIDE OF THE MOUNTING FIN. APPLY THE SEALANT IN LINE WITH ANY PRE-PUNCHED HOLES ON THE MOUNTING FIN.
- 18. IN MASONRY CONSTRUCTION, SEALANT MAY BE APPLIED AROUND THE ENTIRE BUCK AT THE POINT WHERE THE BACKSIDE (INTERIOR SURFACE) OF THE MOUNTING FLANGE WILL MAKE CONTACT WITH THE BUCK.
- 2. CENTER UNIT IN OPENING.
- 3. SELECT AND APPLY SHIMS.
- 4. ADJUST THE SHIMS AND CHECK THE WINDOW FOR LEVEL, PLUM, AND TRUE. ENSURE THE WINDOW IS NOT BOWED IN OR OUT. DISTANCE BETWEEN JAMBS AT MEETING RAIL SHOULD MEASURE THE SAME AS HEAD AND SILL.
- 5A. FOR WOOD FRAME INSTALLATIONS FASTEN THE UPPER CORNER IN PLACE THROUGH THE NAIL FIN. DO NOT DRIVE THE FASTENER IN TO TEN POINT OF BENDING THE FIN.
- 5B. FOR CONCRETE/MASONRY WALL INSTALLATIONS FASTEN THE UPPER CORNER IN PLACE THROUGH THE BALANCE CHANNEL. DO NOT DRIVE THE FASTENER IN TO THE POINT OF BENDING THE NAILING FIN.
- 6. ENSURE THE WINDOW IS SQUARE, OPERATES SMOOTHLY, AND OPERABLE SASHES ARE SITTING SQUARE IN THEIR OPENINGS.
- 7. FASTEN THE CORNER DIAGONALLY OPPOSITE THE UPPER CORNER THAT WAS FASTENED FIRST.
- 8. CONTINUE TO FASTEN SIDES, TOP, AND BOTTOM THROUGH THE MOUNTING FIN; RECHECKING THE UNIT TO ENSURE IT IS SET PLUMB, LEVEL, SQUARE, AND TRUE. FASTENER HEADS SHOULD NOT COMPRESS THE NAIL FIN WHEN PUT IN PLACE.
- 9. IF APPLYING ADDITIONAL INSULATION BEHIND JAMBS AND UNDER SILL, BE CAREFUL NOT
- 10. IN WOOD FRAME INSTALLATIONS, IF A TOP FLASHING STRIP IS USED, APPLY OVER HEADER NAILING FIN
- 11. CHECK THE OPERATION OF THE WINDOW AND ADJUST AS NECESSARY.
- 12. REFER TO ENGINEERING DRAWINGS FOR MORE SPECIFIC INSTALLATION DETAILS.

D. PANEL MEASUREMENTS.

1. MEASURE FROM THE INTERIOR TOP OF THE HEADER TO THE CENTER OF THE BOLT TRACK AND ADD 1/2" THIS WILL BE THE PANEL LENGTH.

DETAIL 12 - TYPICAL BLOCK WALL SECTION CROSS SECTION VIEW OF C.B.S. WALL



THIS WALL SECTION DEPICTS A VARIETY OF CONSTRUCTION STYLES. C.B.S. WITH TIE BEAM, C.B.S. WITH LINTEL AND PRECASTS ABOVE OR BELOW WINDOWS AND DOORS, AND PRECAST WALL STRUCTURES, ECT.

ANCHORING DETAIL.

WHEN ANCHORING INTO WOOD. THE WOOD SHALL BE A MINIMUM OF 2" X 4" AND EQUAL TO 2# SOUTHERN PINE OR CONSTRUCTION GRADE, STAMPED CONSTRUCTION GRADE AND BE PART OF THE FRAMING STRUCTURE OR SECURELY ATTACHED TO THE FRAMING STRUCTURE OR SUPPORTING JOISTS. 1/4" ANCHOR SCREW LENGTH REQUIRED FOR 1 1/2" EMBEDMENT

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Window Solutions, Inc.

215 PINEDA STREET **UNIT 141** LONGWOOD, FL 32750

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