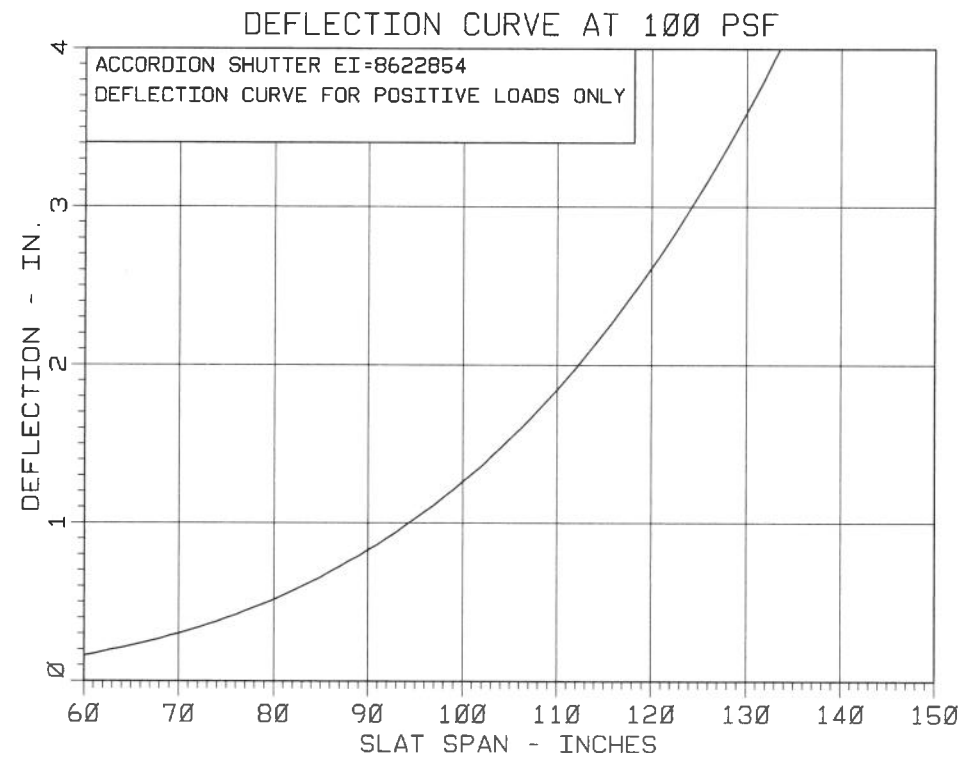
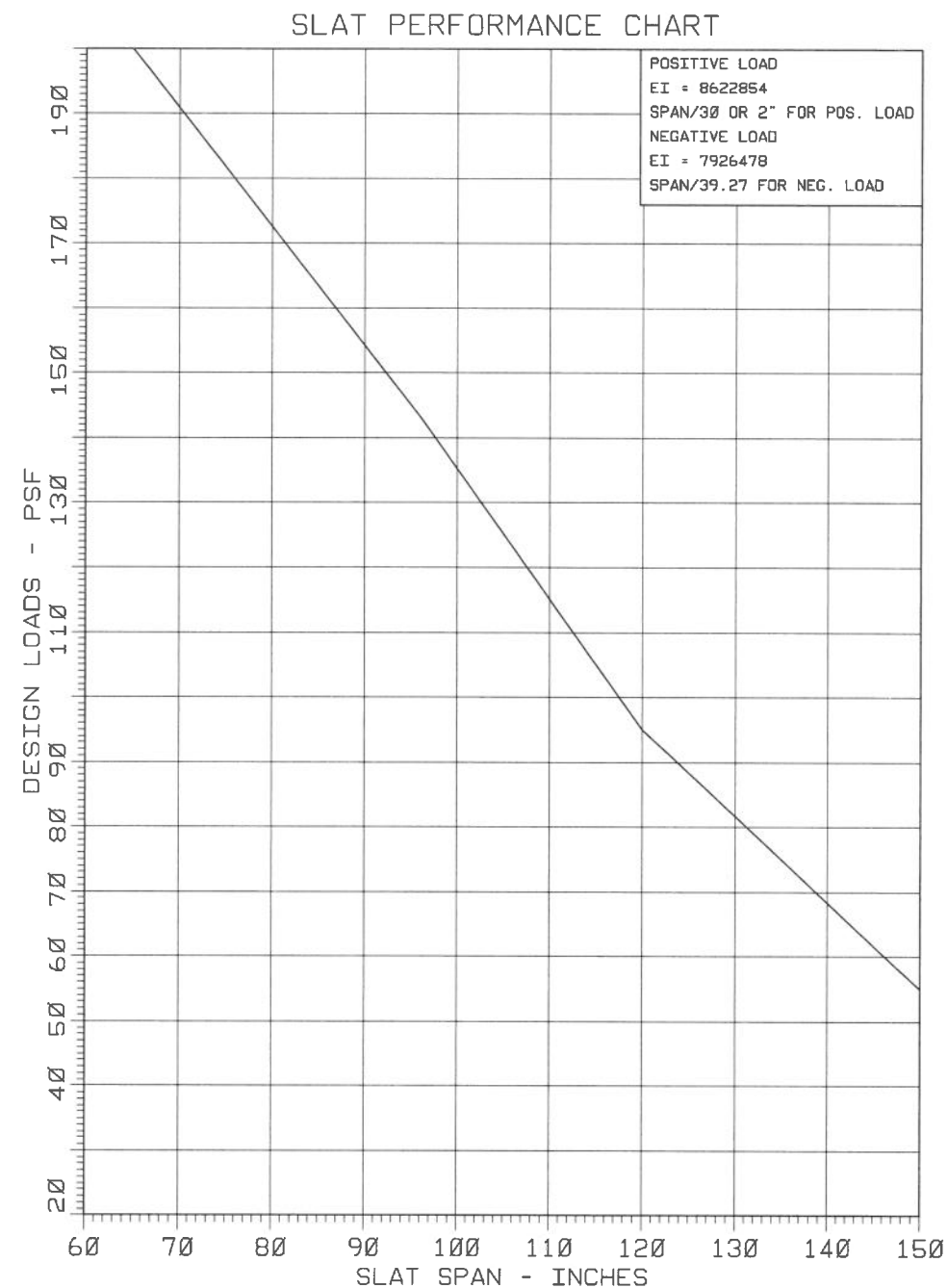




MINIMUM SEPARATION FROM GLASS				
SEPARATION REQD. DUE TO WIND LOAD			SEPARATION REQD. DUE TO LARGE MISSILE IMPACT	
SHUTTER SPAN = H =	IN.		FOR SLAT SPANS UPTO	SEPARATION
DESIGN LOAD = Pd =	PSF			
FACTOR = K = Pd/100 =	IN.		150"	3-1/2"
READING FROM SPAN D. CURVE = D =	IN.			
DEFLECTION AT Pd = K*D =	IN.			
MIN. SEPARATION REQD. = K*D+1" =	IN.			
FOR INSTALLATIONS UPTO 30' OF GRADE USE MAXIMUM OF WIND LOAD OR IMPACT LOAD REQUIREMENTS SHOWN ABOVE				
FOR INSTALLATIONS ABOVE 30' OF GRADE IGNORE LARGE MISSILE IMPACT REQUIREMENT.				
NOTE: NO PART OF SHUTTER SHALL BE UNDER 30' ABOVE GRADE TO WAIVE LARGE MISSILE IMPACT REQUIREMENT.				



GENERAL NOTES

- THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2023 (8TH EDITION)/2026 (9TH EDITION) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).
- DESIGN CRITERIA FOR ALUMINUM, MINIMUM MECHANICAL PROPERTIES, AND SAFETY FACTORS ARE IN ACCORDANCE WITH THE "ALUMINUM CONSTRUCTION MANUAL" LATEST EDITION.
- ALUMINUM ALLOYS: ALL EXTRUSIONS SHALL BE ALLOY AS SHOWN.
- MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2023/2026 FLORIDA BLDG. CODE & ADOPTED STANDARDS.
- ANCHORS SHALL BE CORROSION RESISTANT, SPACED AS SHOWN ON DETAILS AND INSTALLED PER MANUF'S INSTRUCTIONS. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
- ALL BOLTS SHALL BE STAINLESS STEEL, ALUMINUM ALLOY 2024-T4 OR 7075-T6, OR PLATED STEEL. WING NUTS TO BE OF ZINC ALLOY.
- DESIGN CRITERIA FOR SLATS: MAX DEFLECTION $\leq$ THE LESSER OF L/30 OR 2".
- THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR WATER INFILTRATION RESISTANCE ETC. CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY BUILDING OFFICIAL.
- A LOAD DURATION INCREASE IN ALLOWABLE STRESS IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.
- DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

FASTENERS AND CONNECTORS (AS APPLICABLE) SHOWN IN THIS APPROVAL MAY NOT MEET CORROSION RESISTANCE REQUIREMENTS FOR COASTAL OR SALT WATER EXPOSURE ZONES. COMPLIANCE WITH THESE CONDITIONS TO BE CHECKED PER FBC 1711.

USE SLAT PERFORMANCE CHART TO VERIFY SLAT CAPACITY FOR THE REQUIRED DESIGN LOAD FOR THE PARTICULAR LOCATION.

DESIGN LOADS SHALL BE CALCULATED AS PER REQUIREMENTS OF ASCE 7-10.

PRODUCT MARKING

A LABEL SHALL BE AFFIXED ON LOCKING MEMBER OF UNIT ABOVE LOCK WITH THE FOLLOWING STATEMENT.

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SELBYVILLE, DE. 19975

FOR INSTALLATION DETAILS SEE SHEETS 3 THRU 6.

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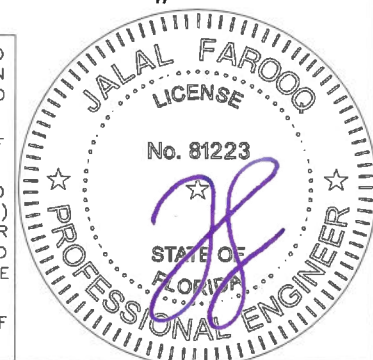
FL #15486

A- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.

B- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

C- SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.E.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

D- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.



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ALUTECH 'HD' ACCORDION SHUTTER

ALUTECH UNITED INC.

15 DIXON STREET

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revisions:

date: 04-30-09

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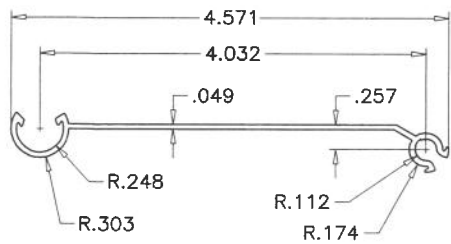
dr. by: TARIQ

chk. by:

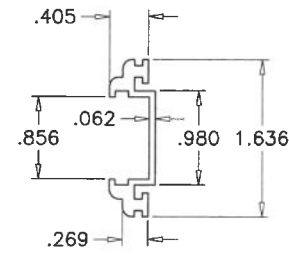
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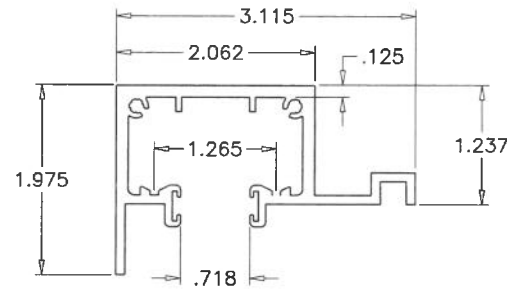
sheet 1 of 7



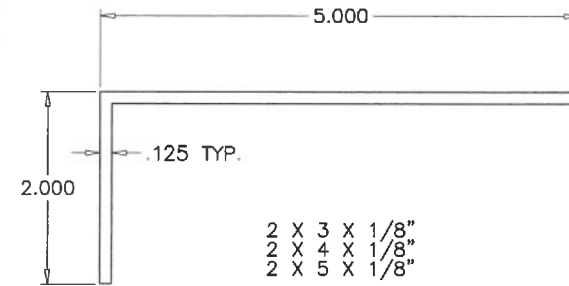
SLAT
6063-T6



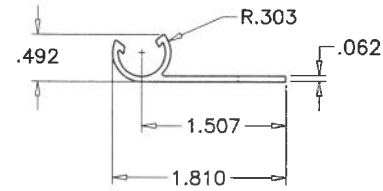
LOCKING SLAT INSERT
6063-T6



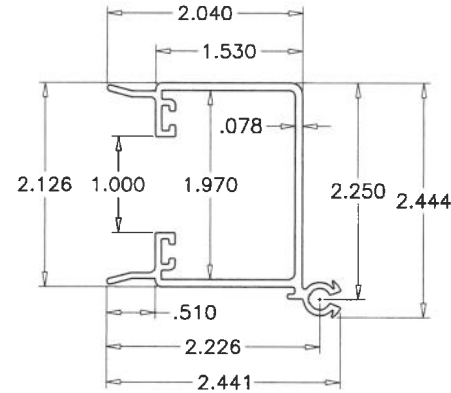
CEILING HEADER
6063-T6



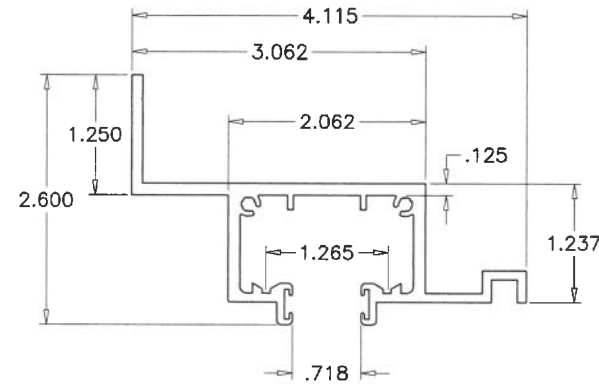
BUILT-OUT ANGLES
6063-T6



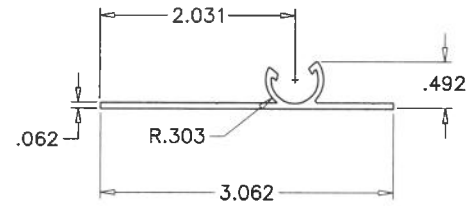
FEMALE END SLAT
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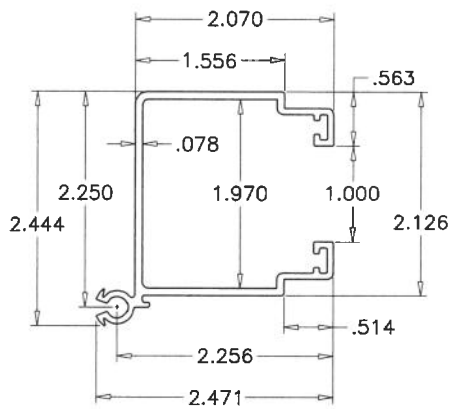
FEMALE LOCKING SLAT
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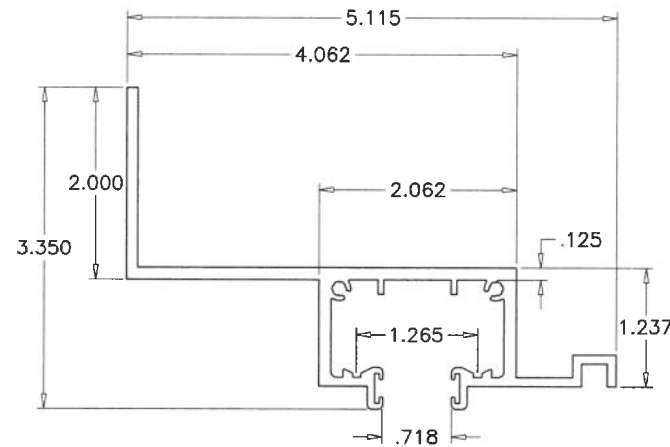
1" BUILT-OUT WALL HEADER
6063-T6



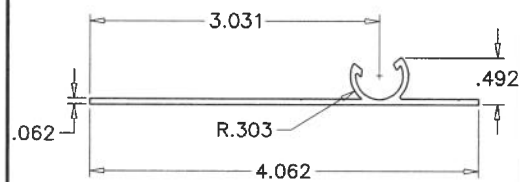
FEMALE END SLAT
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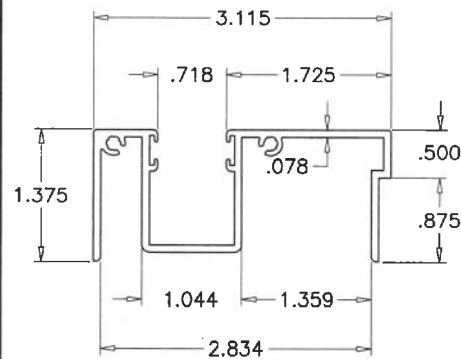
MALE LOCKING SLAT
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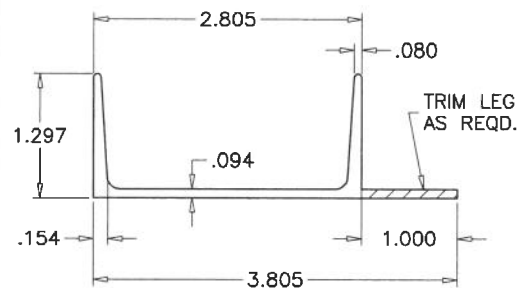
2" BUILT-OUT WALL HEADER
6063-T6



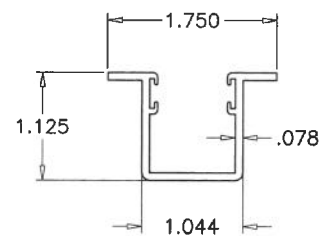
FEMALE END SLAT
6063-T6



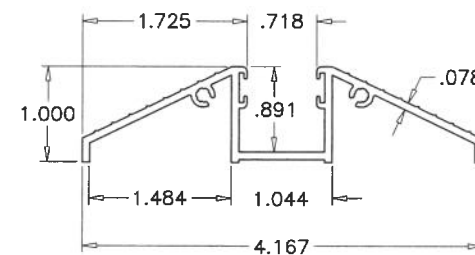
BOTTOM SILL TRACK
6063-T6



BOTTOM TRACK ADAPTER
6063-T6



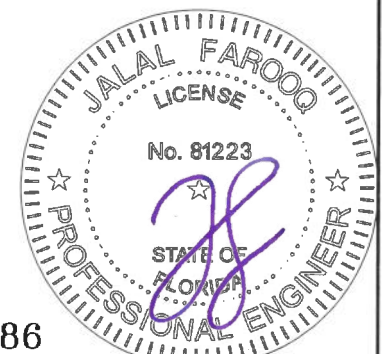
EMBEDDED TRACK
6063-T6



THRESHOLD TRACK
6063-T6

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ALUTECH 'HD' ACCORDION SHUTTER

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revisions:
no date by description

date: 04-30-09
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chk. by:

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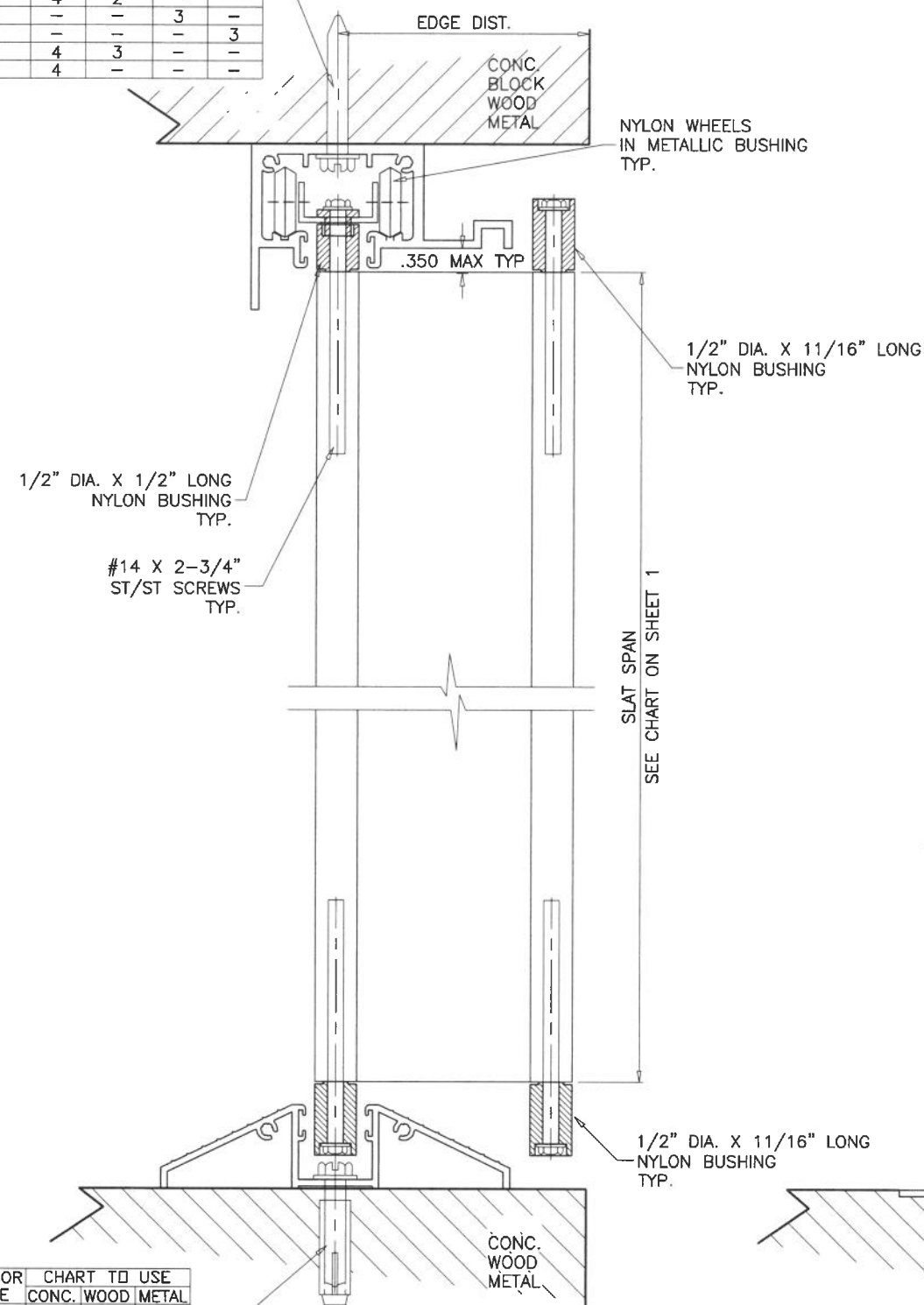
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sheet 2 of 7

ACCORDION/09-03AUI

ANCHOR TYPE	CHART TO USE			
	CONC.	BLOCK	WOOD	METAL
A	5	2	—	—
B	4	1	—	—
C	5	1	—	—
D	4	2	—	—
E	—	—	3	—
G	—	—	—	3
H	4	3	—	—
i	4	—	—	—

INSIDE MOUNTS



ANCHOR TYPE	CHART TO USE		
	CONC.	WOOD	METAL
A	6	—	—
B	5	—	—
C	6	—	—
D	5	—	—
E	—	4	—
G	—	—	5
H	5	—	—
i	5	—	—

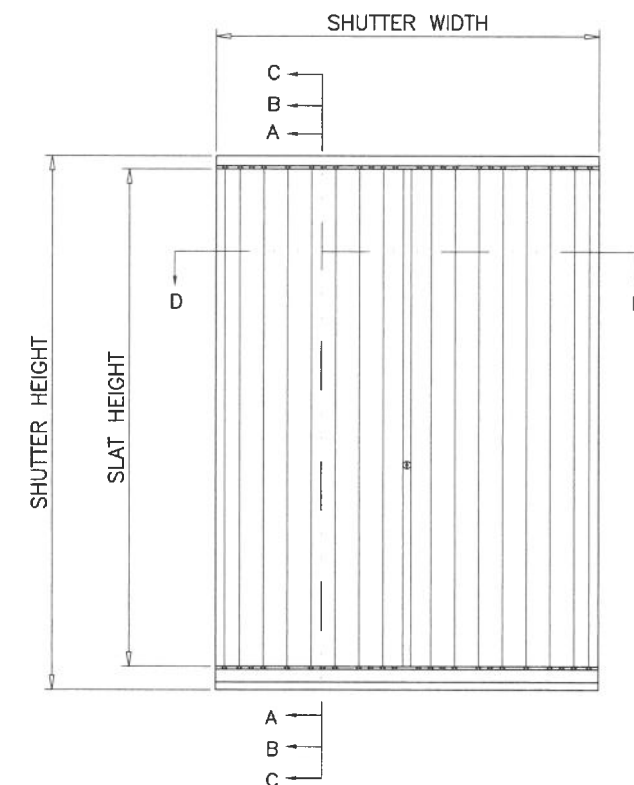
SECTION A-A

ANCHOR TYPE	CHART TO USE		
	CONC.	WOOD	METAL
A	7	—	—
B	7	—	—
C	8	—	—
D	7	—	—
E	—	5	—
G	—	—	7
H	8	—	—
i	7	—	—

FOR GENERAL NOTES AND EXTRUSION DETAILS SEE SHEETS 1 & 2.
FOR WOOD INSTALLATIONS SEE SHEET 6.

ANCHORS: EMBEDMENT & EDGE
DISTANCES SHOWN ARE BEYOND
THE WALL & FLOOR COVERING
(STUCCO, TILES, ETC.)

HEADER AND SILL DETAILS CAN BE USED IN ANY COMBINATIONS.



TYPICAL ELEVATION

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FL #15486



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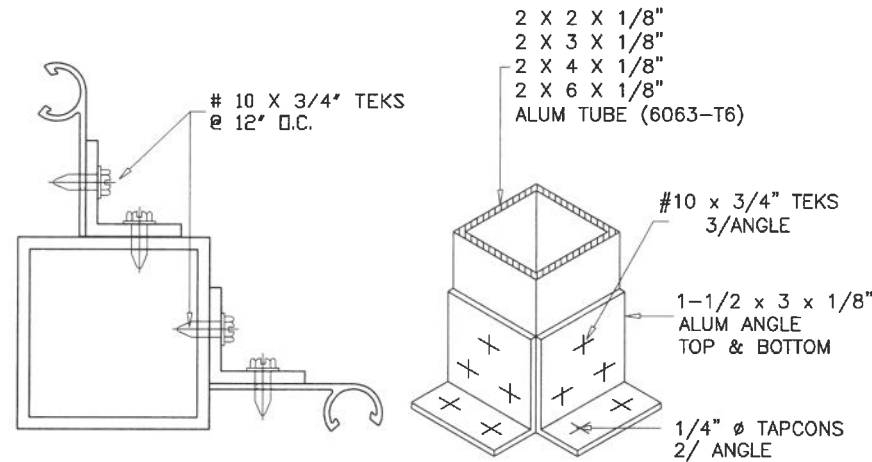
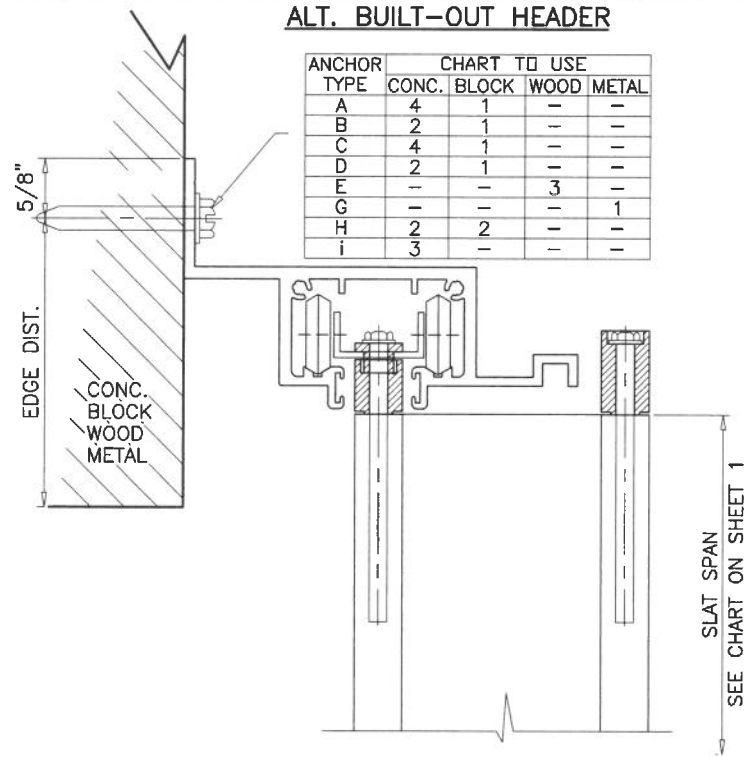
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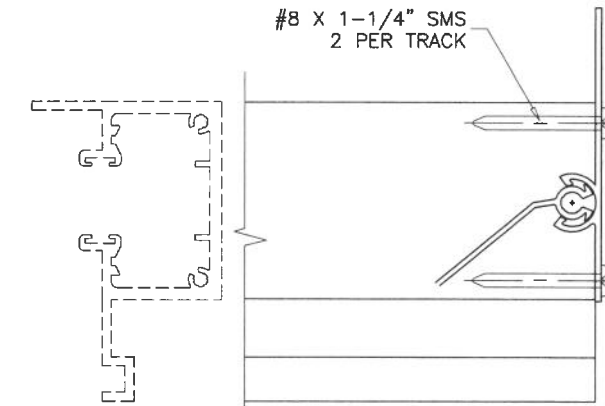
ACCORDION/09-03AUI

ALT. BUILT-OUT HEADER

ANCHOR TYPE	CHART TO USE	CONC.	BLOCK	WOOD	METAL
A	4	1	-	-	-
B	2	1	-	-	-
C	4	1	-	-	-
D	2	1	-	-	-
E	-	-	3	-	-
G	-	-	-	1	-
H	2	2	-	-	-
i	3	-	-	-	-

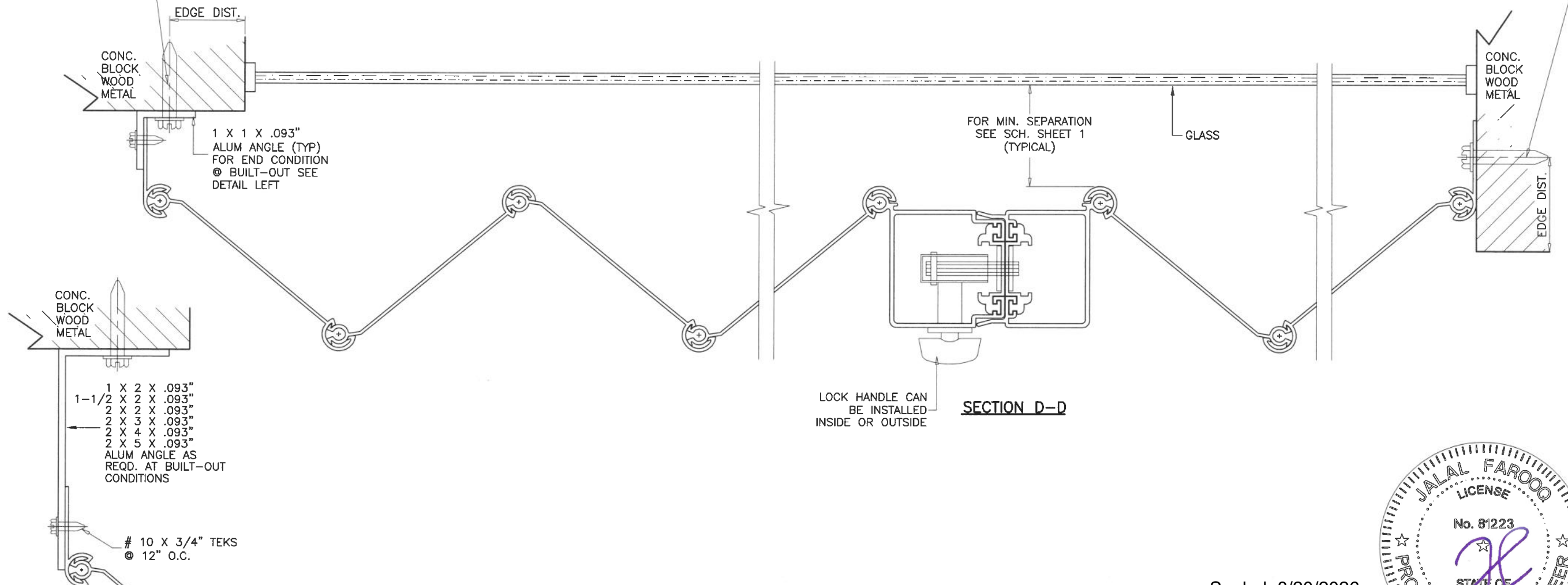


FIXED CORNER DETAIL



FEMALE END SLAT
MOUNTING TO HEAD/SILL TRACKS

ANCHORS TYPE
A, B, C, D, E, G, H OR i
AT 16" O.C. MAX.



ANCHORS TYPE
A, B, C, D, E, G, H OR i
AT 16" O.C. MAX.

CONC. BLOCK
WOOD
METAL
EDGE DIST.

FOR MIN. SEPARATION
SEE SCH. SHEET 1
(TYPICAL)

GLASS

LOCK HANDLE CAN
BE INSTALLED
INSIDE OR OUTSIDE

SECTION D-D

END CONDITION AT BUILT-OUT

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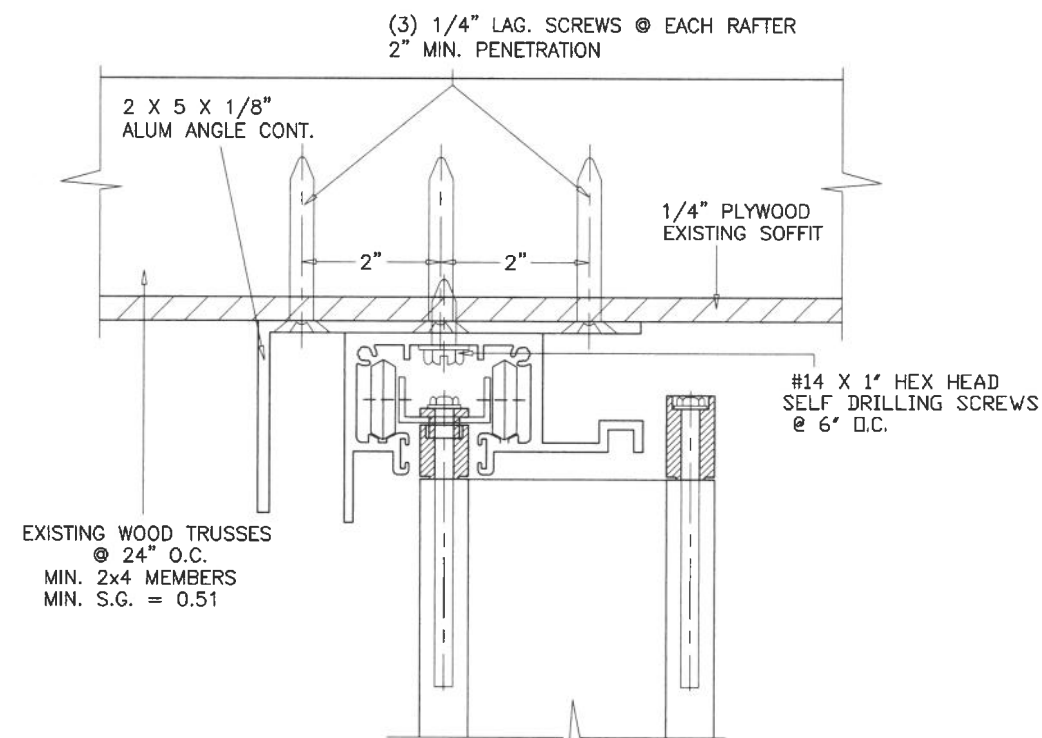


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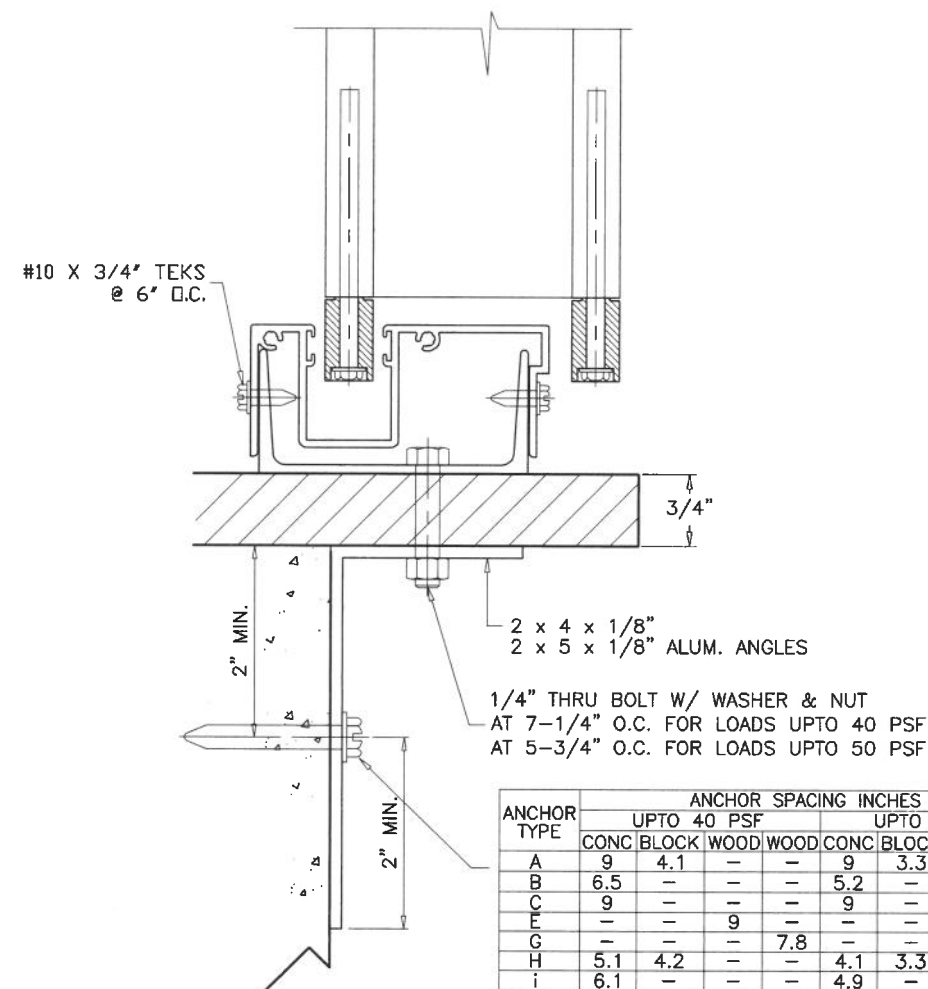
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sheet 5 of 7



HEADER CONNECTION TO WOOD TRUSSES

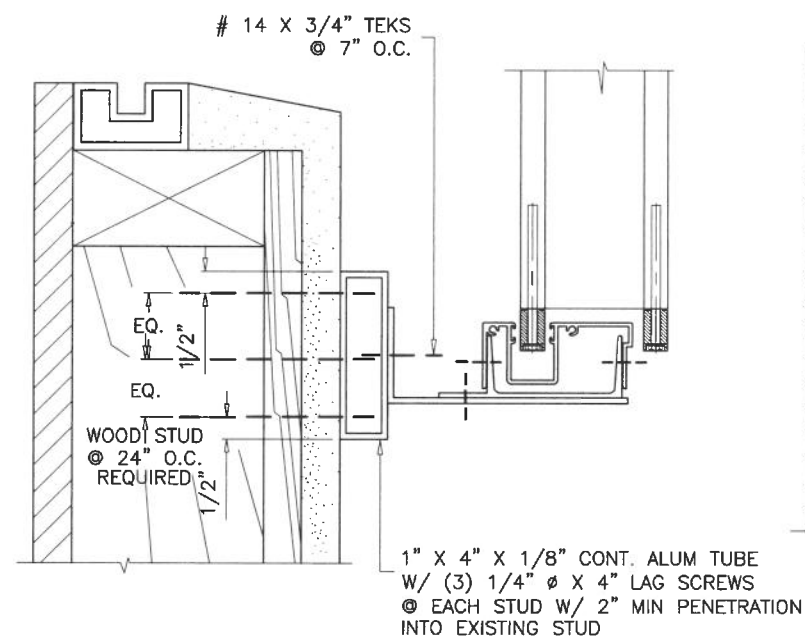
FOR SHUTTER HEIGHT OF 72" MAX. DESIGN LOAD = 88 PSF
 FOR SHUTTER HEIGHT OF 84" MAX. DESIGN LOAD = 75 PSF
 FOR SHUTTER HEIGHT OF 96" MAX. DESIGN LOAD = 66 PSF
 FOR SHUTTER HEIGHT OF 108" MAX. DESIGN LOAD = 58 PSF



COUNTER TOP CONDITION

(PASS THRU WINDOW)
 MAX SHUTTER HEIGHT = 6 FT.

ANCHOR TYPE	ANCHOR SPACING INCHES					
	UPTO 40 PSF			UPTO 50 PSF		
	CONC	BLOCK	WOOD	CONC	BLOCK	WOOD
A	9	4.1	—	9	3.3	—
B	6.5	—	—	5.2	—	—
C	9	—	—	9	—	—
E	—	—	9	—	—	9
G	—	—	—	7.8	—	6.3
H	5.1	4.2	—	4.1	3.3	—
I	6.1	—	—	4.9	—	—



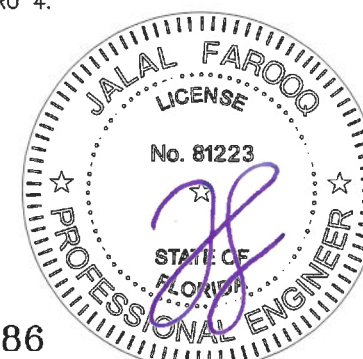
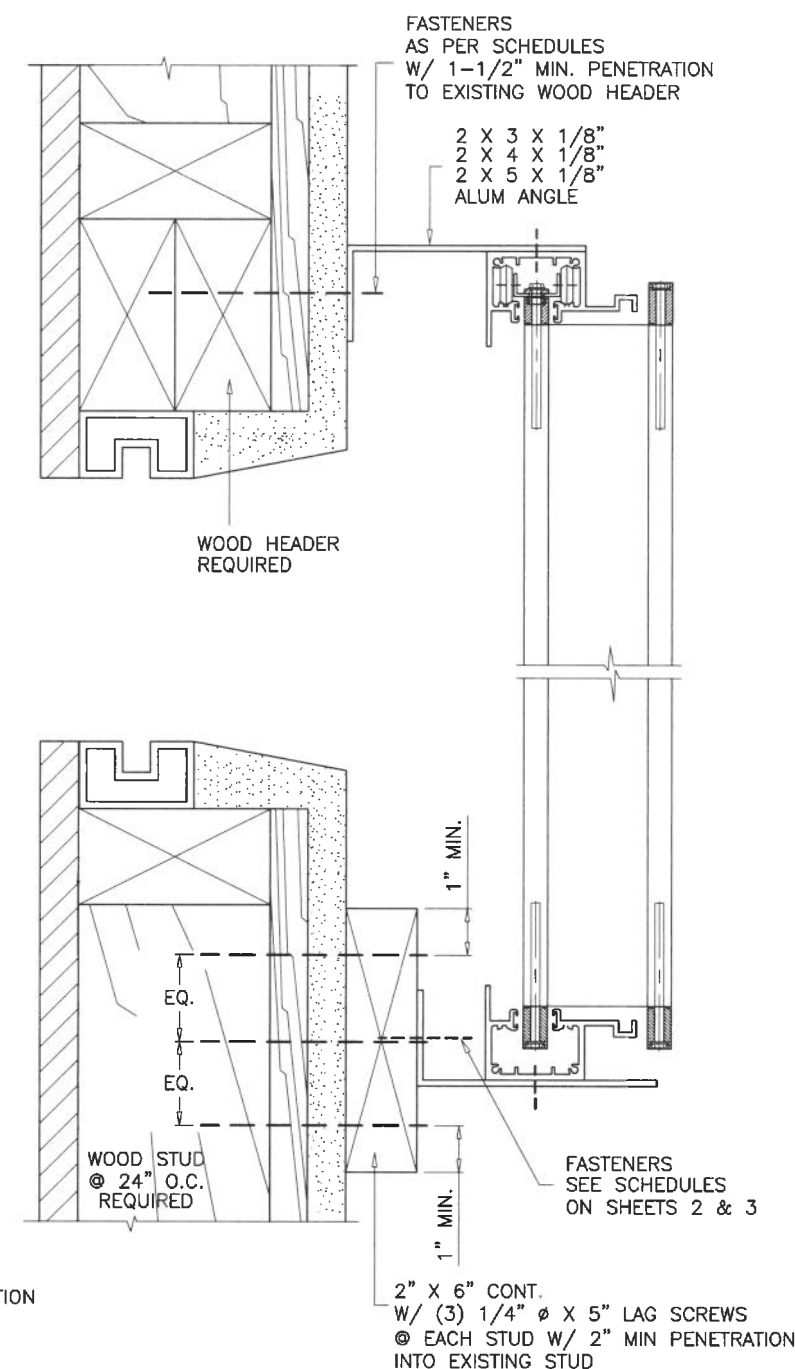
FOR SHUTTER HEIGHT OF 84" MAX. DESIGN LOAD = 80 PSF
 FOR SHUTTER HEIGHT OF 96" MAX. DESIGN LOAD = 70 PSF
 FOR SHUTTER HEIGHT OF 108" MAX. DESIGN LOAD = 62 PSF
 FOR SHUTTER HEIGHT OF 120" MAX. DESIGN LOAD = 56 PSF

INSTALLATION DETAIL ON EXISTING WOOD BUCKS

SCALE: 1/4"=1'

ABOVE DETAILS SHOWS CONNECTION OF 2X6 BUCK & 1X4 ALUM TUBE TO WOOD STUDS TO PROVIDE A CONTINUOUS SURFACE FOR SHUTTER INSTALLATION.

FOR INSTALLATION DETAILS OF HEADER/SILL TO CONTINUOUS WOOD MEMBERS SEE SHEETS 3 THRU 4.



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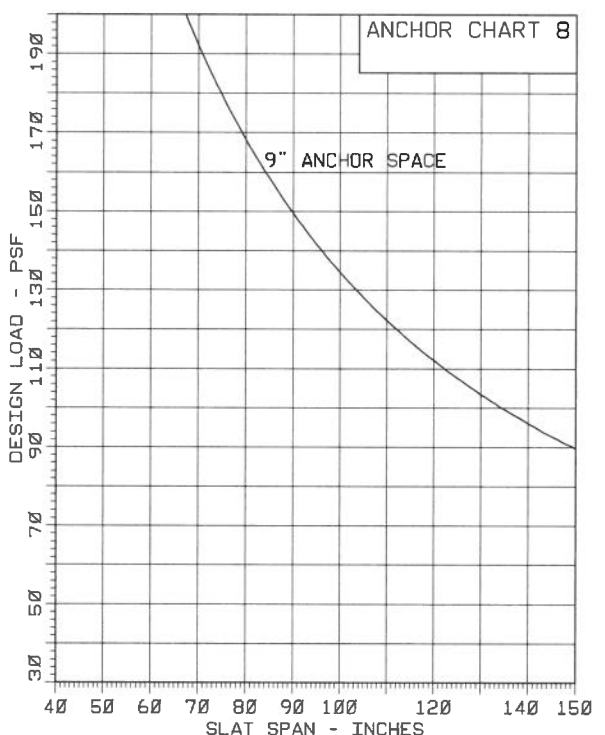
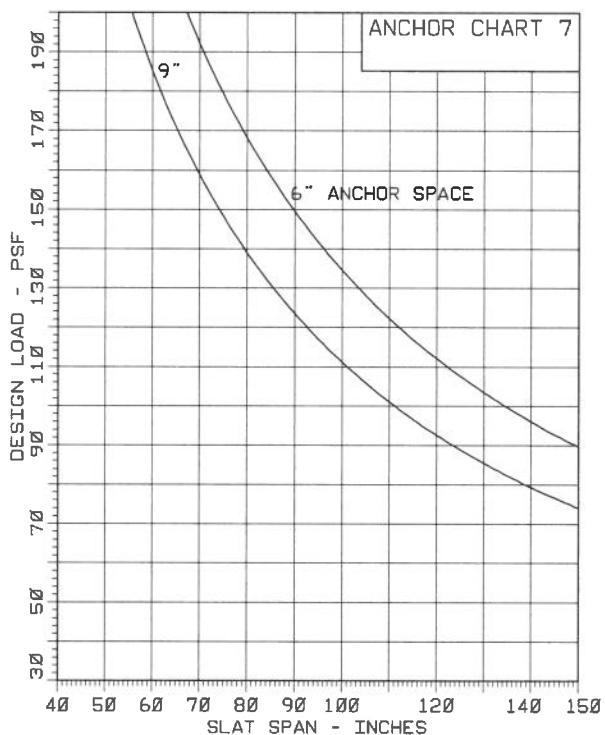
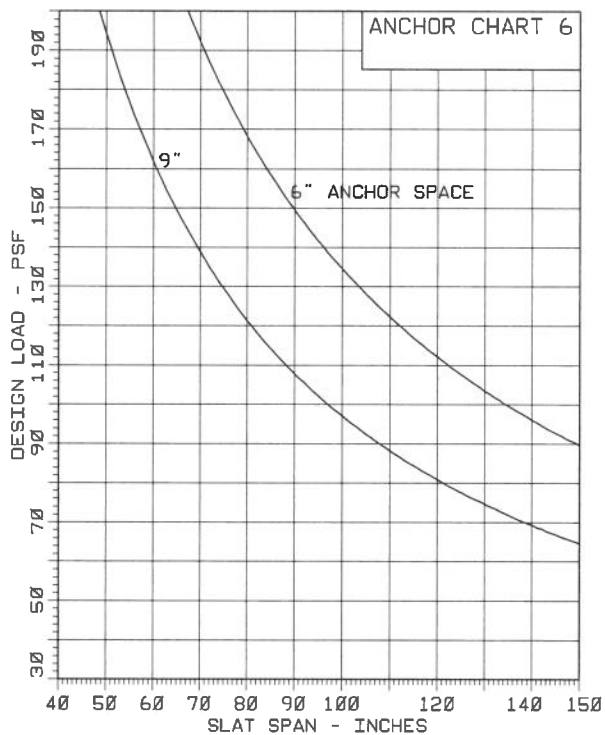
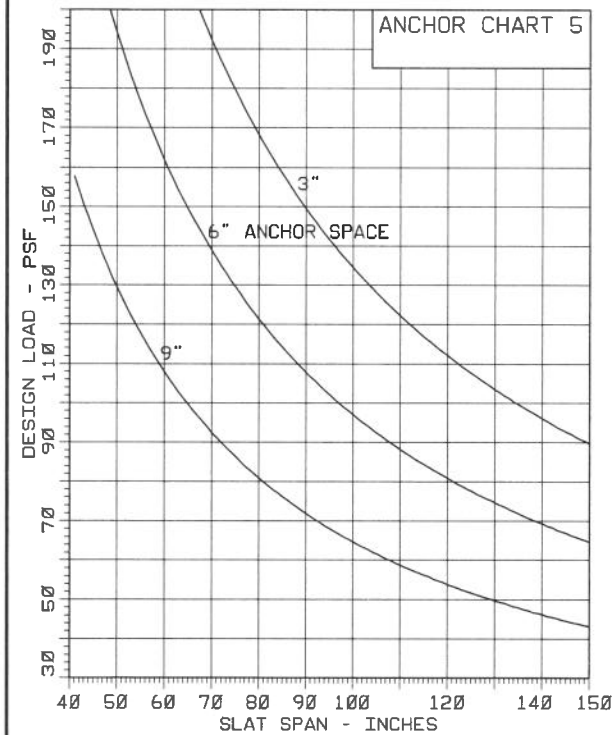
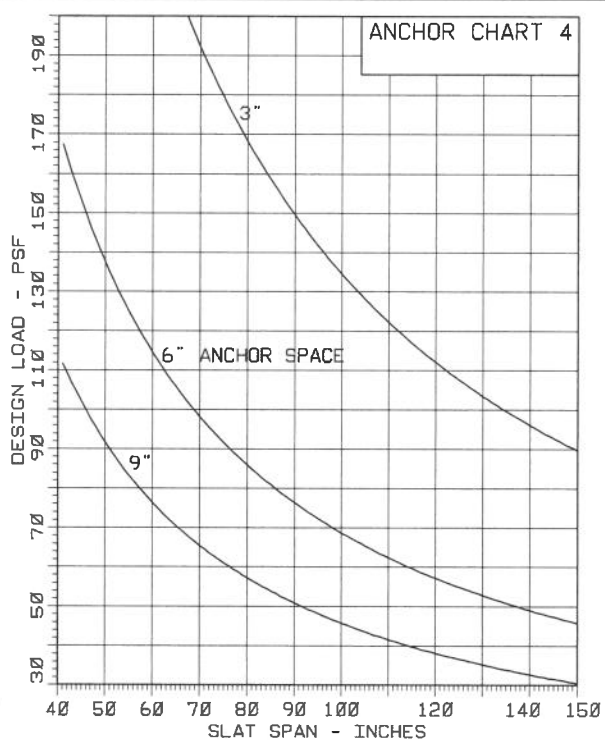
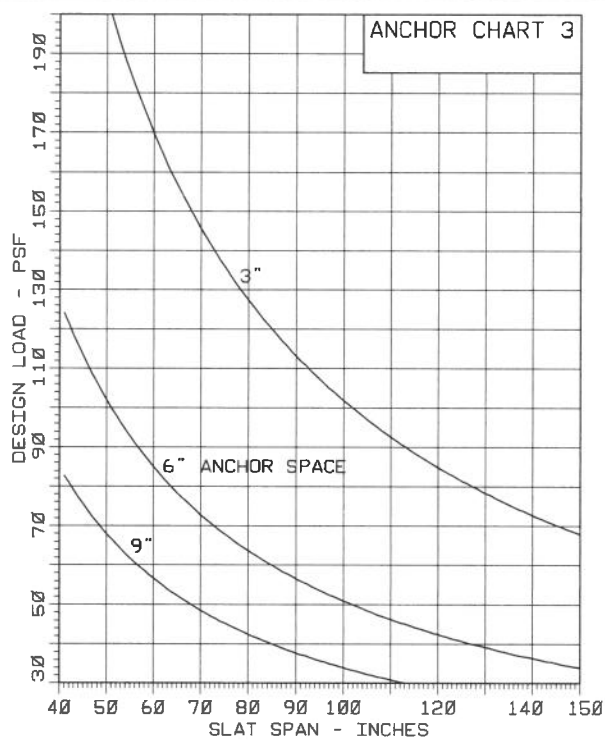
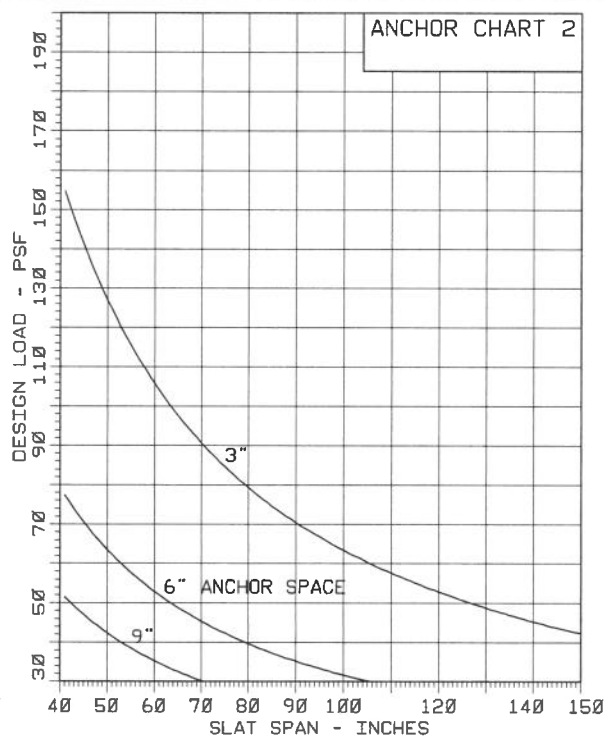
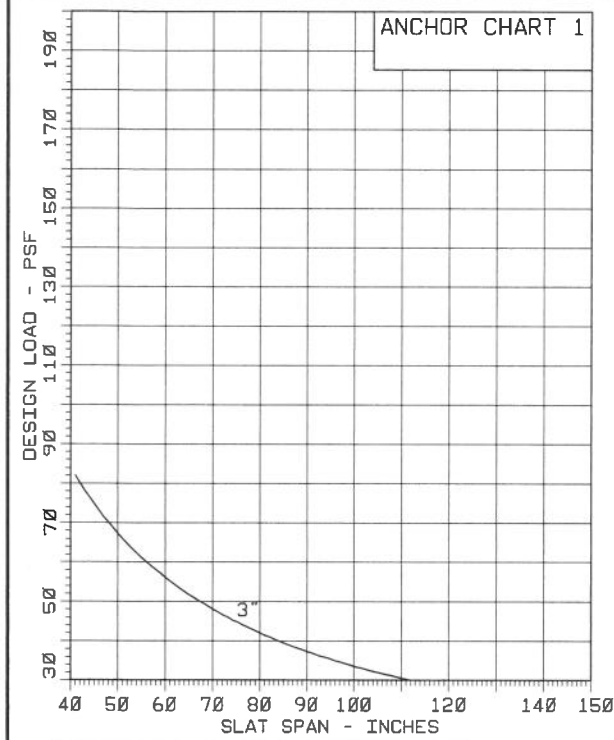
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09-03

sheet 6 of 7

ACCORDION/09-03AUI



TYPICAL ANCHORS:

- ANCHOR (A) = 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
1-3/4" EMBEDMENT INTO 3000 PSI CONC., 2-1/2" MIN. EDGE DIST.
1-1/4" EMBEDMENT INTO C-90 BLOCK, 2-1/2" MIN. EDGE DIST.
- ANCHOR (B) = 5/16" DIA. ULTRACON BY 'DEWALT' (Fu=177 KSI, Fy=155 KSI)
2" EMBEDMENT INTO 3000 PSI CONC., 3-1/8" MIN. EDGE DIST.
1-1/4" EMBEDMENT INTO C-90 BLOCK, 3-1/8" MIN. EDGE DIST.
- ANCHOR (C) = 1/4" DIA. TAPCON BY 'ITW' (Fu=125 KSI, Fy=100 KSI)
1-3/4" EMBEDMENT INTO 3000 PSI CONC., 2-1/2" MIN. EDGE DIST.
1-1/2" EMBEDMENT INTO GROUT FILLED C-90 BLOCK, 2" MIN. EDGE DIST.
- ANCHOR (D) = 1/4" DIA. CALK-IN ANCHOR BY 'DEWALT'
TOTAL ANCHOR BODY INTO 3000 PSI CONC., 3" MIN. EDGE DIST.
TOTAL ANCHOR BODY INTO C-90 BLOCK, 3" MIN. EDGE DIST.
- ANCHOR (E) = 1/4" DIA. LAG SCREWS
1-1/2" MIN PENETRATION INTO WOOD (S.G.=0.55), 1" MIN. EDGE DIST.

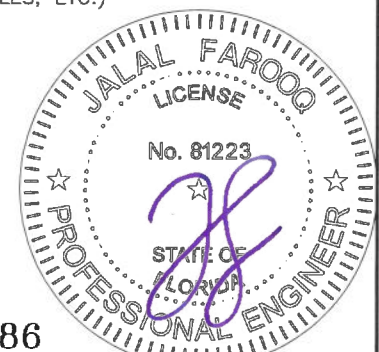
- ANCHOR (G) = 1/4" DIA. KWIK-FLEX SELF DRILLING SCREWS BY 'HILTI' (Fu=120 KSI, Fy=92 KSI)
INTO METAL STRUCTURES
(3) THREADS MIN. PENETRATION BEYOND SUBSTRATE
ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)
STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)
- ANCHOR (H) = 3/8" DIA. POWER STUD+ SD4/SD6 BY 'DEWALT' (304/316 ST. STEEL)
1-3/8" EMBEDMENT INTO 3000 PSI CONC., 3" MIN. EDGE DIST.
1-7/8" EMBEDMENT INTO GROUT FILLED C-90 BLOCK, 3" MIN. EDGE DIST.
- ANCHOR (i) = #14 SMS 304/305/316 ST. STEEL (Fu=100 KSI)
INTO METAL STRUCTURES
(3) THREADS MIN. PENETRATION BEYOND SUBSTRATE
ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)
STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

USE CHARTS 1 THRU 8 TO VERIFY ANCHOR REQUIREMENTS AND STRESS LIMITATIONS OF LOAD/SPAN COMBINATIONS FOR HEADER AND SILL.

NOTE: ANCHORS EMBEDMENT SHOWN IS BEYOND WALL & FLOOR COVERINGS (STUCCO, TILES, ETC.)

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revisions:

no	date	by	description

date: 04-30-09 scale: 1/2" = 1" dr. by: TARIQ chk. by:

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