

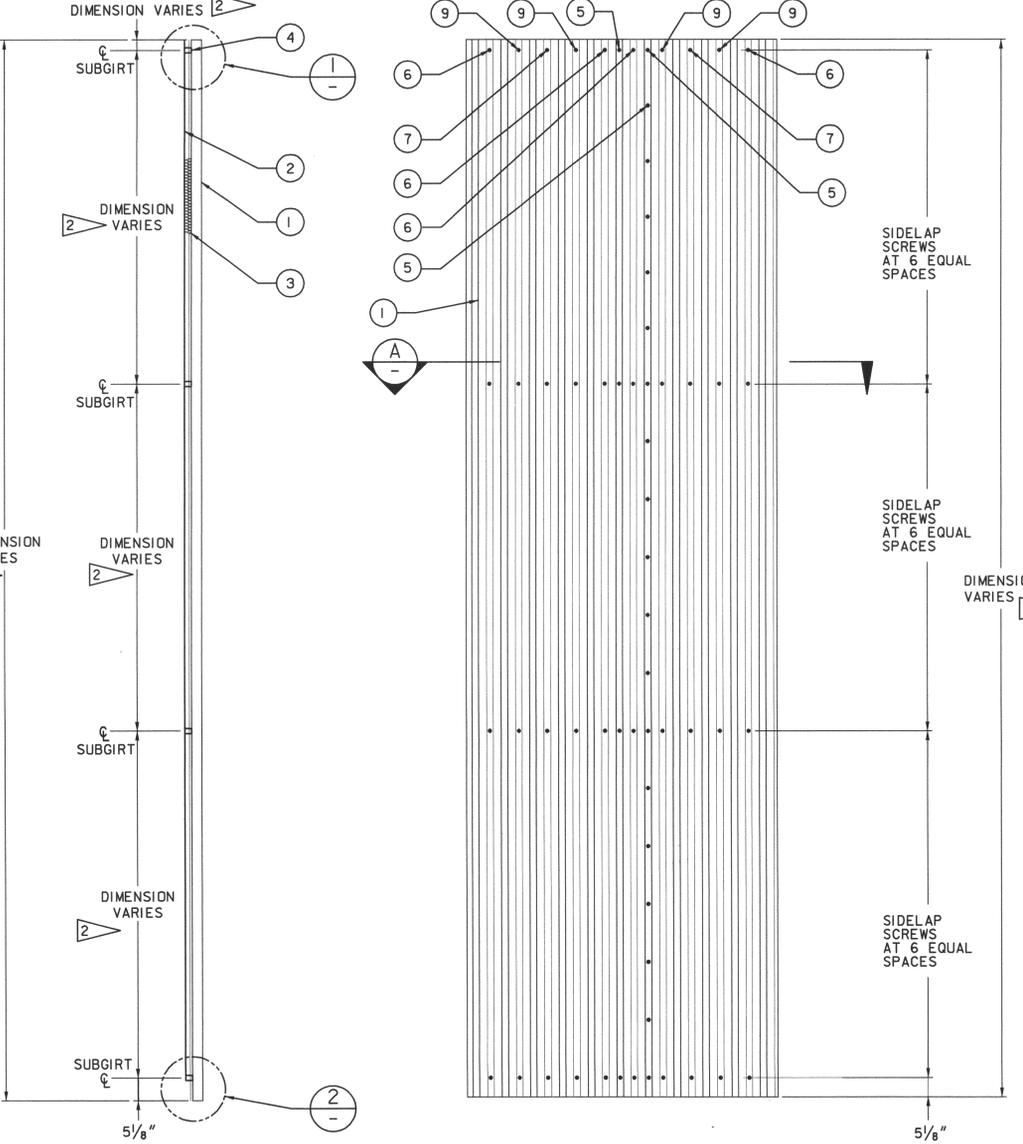
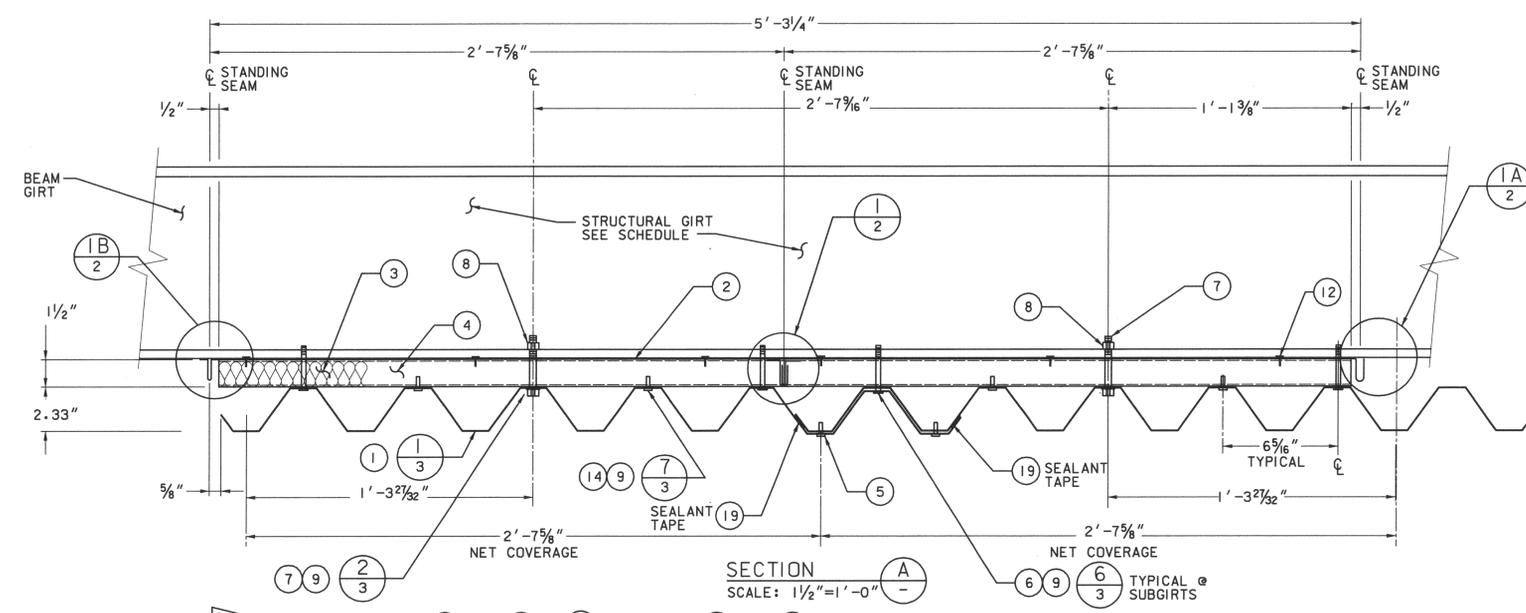
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BILL OF MATERIALS

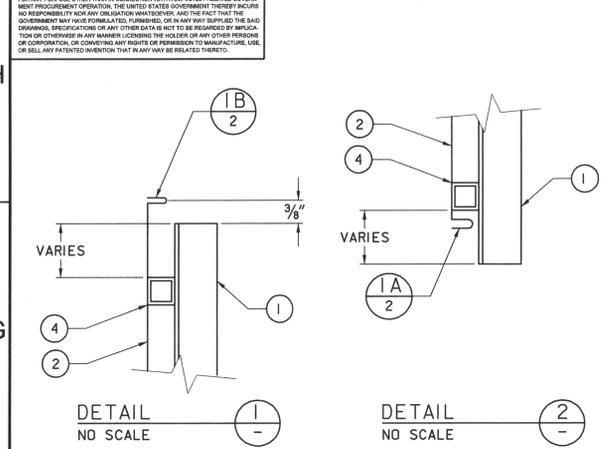
- 1 ALUMINUM SIDING - SEE DETAIL 1
- 2 LINER PANEL
LINER PANEL, 20 GAUGE THICKNESS, CARBON STEEL, PER ASTM A653, GRADE 33, FLAT SURFACE, 1 1/4 INCHES HIGH RAISED INTERLOCKING SEAM, HOT DIPPED GALVANIZED PER ASTM A 653, G165.
- 3 INSULATION
INSULATION, 1 1/2 INCHES THICK, SEMI-RIGID MINERAL FIBER, CONFORMING TO ASTM C612, TYPE 1A, CLASS A, WITHOUT FACING, WITH DENSITY NOT GREATER THAN 3.0 POUNDS PER CUBIC FOOT AND THERMAL CONDUCTIVITY (K) NOT GREATER THAN 0.26 BTU IN/HR FT2 DEGREE F AT MEAN TEMPERATURE OF 75 DEGREE F. INSTALL WITH SNUG FIT ALL AROUND.
- 4 SUB GIRTS
SUB GIRTS, 1 1/2" x 1 1/2" x 0.083" WALL, CARBON STEEL, CONFORMING TO ASTM A513, HOT DIPPED GALVANIZED PER ASTM A123, GRADE 45.
- 5 SIDE LAP SCREW
#12-14 X 5/8" LONG TYPE AB, HEX FLANGE HEAD WITH BONDED EPDM RUBBER SEAL, SELF DRILLING, 2024-T4 SCREW, ALUMINUM.
- 6 SELF-TAPPING SCREW
SCREW, SELF-TAPPING, 1/4"x14x3" LONG, PER ANSI B18.6.4, HEX FLANGE HEAD, BLUNT TIP, UNF THREADS, 1 1/2" LONG THREADS, TYPE 304 OR TYPE 305, EQUAL TO HILTI HH304SS BPTW. INSTALL IN 0.228" PREDRILLED HOLE USING STICK WAX TO PREVENT BINDING.
- 7 HEX FLANGE HEAD BOLT
HEX FLANGE HEAD BOLT, 3/8"x3 1/2" LONG, PER ANSI B18.2.1, ASTM F593, TYPE 304 OR TYPE 305, CONDITION A, UNC CLASS 2A THREADS.
- 8 LOCK NUT
LOCK NUTS, 3/8" HEX HEAD, ASTM F594, TYPE 304 OR TYPE 305, UNC CLASS 2A THREADS, WITH NYLON INSERTS.
- 9 INSULATING WASHER
INSULATING WASHER, 1 1/8" OD x 7/16" ID FOR 3/8" HEX FLANGE HEAD BOLTS AND 1 1/8" OD x 5/16" ID FOR 1/4" FASTENERS, TYPE 304 STAINLESS STEEL, 3/64" THICK, WITH 1/16" THICK TEFLON BONDED TO ONE SIDE OF WASHER. EQUAL TO PHOENIX SPECIALTY MFG. 1-800-378-3884.
- 10 SEALANT
SEALANT, BUTYL RUBBER SEALANT, SINGLE COMPONENT, A NON-DRYING, NON-SKIMMING SEALANT FOR BEDDING AND SEALING PANELS, SHEETS AND OTHER JOINTS.
- 11 ADHESIVE TAPE
ADHESIVE TAPE, 2" WIDE, CLOSED CELL POLYETHYLENE, WHITE, 63 MILS THICK, TEMPERATURE RANGE -20 TO +158 DEGREES F, EQUAL TO MCMASTER CARR #7598A58.
- 12 SELF-TAPPING SCREW
SCREW, #8x1/2", SPLIT POINT, SELF DRILLING, SELF-TAPPING, 18-8 STAINLESS STEEL, FLAT PHILLIPS HEAD, COUNTERSUNK TYPE.
- 13 RETAINING NUT
RETAINING NUT, 3/8" BOLT DIAMETER, NYLON MATERIAL, SPECIAL SHAPED CENTER FOR GRIPPING SHANK AND SCREW THREADS, 1/16" THICK, EQUAL TO MCMASTER CARR #91755A117.
- 14 SELF-TAPPING SCREW
SCREW, 1/4"x5/8", SPLIT POINT, SELF-DRILLING, SELF-TAPPING, TYPE 304 OR TYPE 305, HEX FLANGE HEAD WITH TEFLON WASHER.
- 15 BEVELED WASHER
BEVELED WASHER, 3/8" BOLT DIAMETER, ANSI B18.23.1, TYPE B, HOT DIPPED GALVANIZED TO ASTM A153, G90.
- 16 PLAIN WASHER
PLAIN WASHER, 3/8" STANDARD "W" SIZE, 0.083" THICKNESS, TYPE 304 STAINLESS STEEL, PER ANSI 18.22.1.
- 17 INSULATING WASHER SLEEVE
INSULATING WASHER SLEEVE, TEFLON MATERIAL, WITH INTEGRAL FLAT HEAD WASHER AND TUBE SHANK, 0.379" ID x 0.419" OD x 1 1/2" LONG FOR 3/8" BOLTS AND 0.252" ID x 0.292" OD x 1 1/2" LONG FOR 1/4" BOLTS, EQUAL TO NYLTITE CORP., S. PLAINFIELD, NJ.
- 18 INSULATING WASHER
INSULATING WASHER, TEFLON MATERIAL, 0.260" ID x 0.545" OD x 0.260" THICK, FOR 1/4" x 5/8" LONG SELF-TAPPING SCREW.
- 19 SEALANT TAPE
BUTYL SEALANT TAPE, 1/8" THICK X 1/2" WIDE, 100% SOLID PREFORMED SYNTHETIC POLYMER BASED ADHESIVE COMPLYING WITH AAMA 804-1, 806-1, AND 807-3 WITH REMOVABLE BACKING, COLOR GRAY, TEMPERATURE RANGE -60 TO +212 DEGREES F EQUAL TO MOREAU POLYSUL TAPE, MOREAU CO., WINSTON SALEM, NC 27127 (336) 764-5232.

NOTES:

1. SEE SPECIFICATION 16065 FOR BONDING AND GROUNDING REQUIREMENTS.
2. THE SUB-GIRT SPACING AND PANEL LENGTHS ARE TO BE DETERMINED BY THE LOCATION AND SIZE OF VAB STRUCTURAL GIRTS VERIFIED BY FIELD MEASUREMENTS PRIOR TO PANEL FABRICATION. TYPICAL REQUIREMENTS FOR THE SIDING ATTACHMENTS AND OVERLAPPING DIMENSIONS ARE SHOWN ON THE SIDING JOINT SCHEDULES.
3. INSTALL INSULATION WITH SNUG FIT ALL AROUND AT SUBGIRTS AND LINER PANEL SEAMS.
4. FOR SIDING PANEL INSTALLATION TO STRUCTURAL GIRTS SEE SHEET 2.
5. SEE SPECIFICATION 79K36159 FOR SIDING REQUIREMENTS.
6. RIGHT HAND PANEL DETAILS LEFT HAND LAPS TO LEFT.

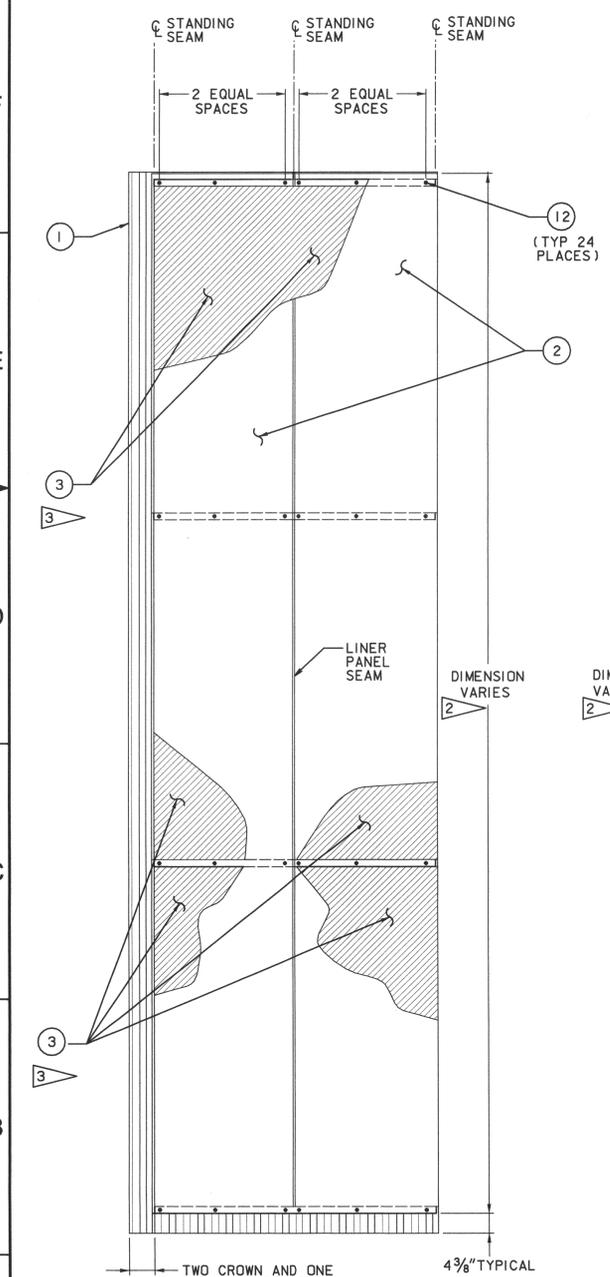


FRONT VIEW
SCALE: 3/4" = 1' - 0"

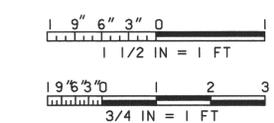


DETAIL 1
NO SCALE

DETAIL 2
NO SCALE



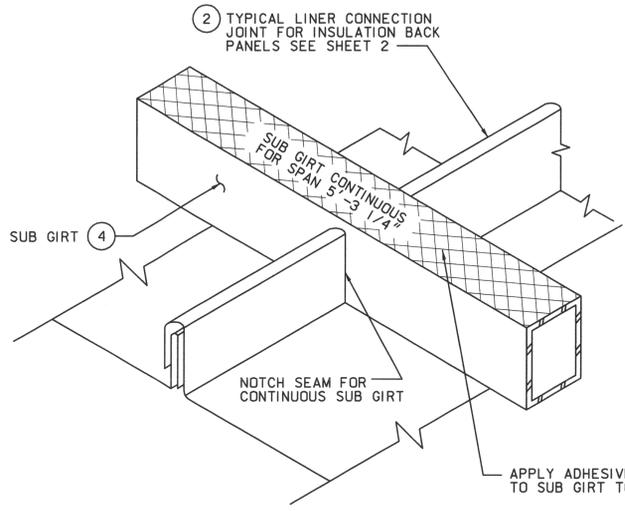
BACK VIEW
SCALE: 3/4" = 1' - 0"



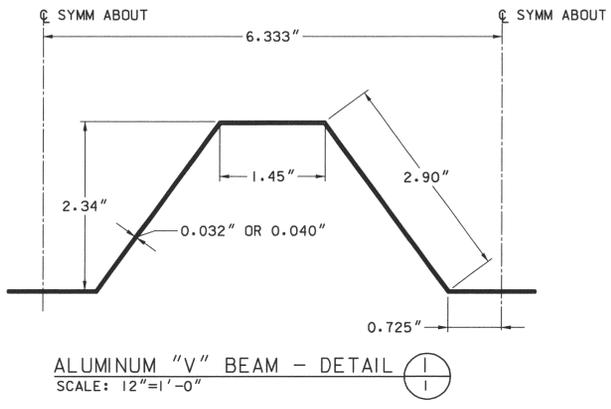
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DESIGNED		NATIONAL AERONAUTICS AND SPACE ADMINISTRATION		
DRAWN		JOHN F. KENNEDY SPACE CENTER, NASA KENNEDY SPACE CENTER, FLORIDA		
CHECKED		LAUNCH COMPLEX 39 VEHICLE ASSEMBLY BUILDING		
SUBMITTED		VAB SIDING INSTALLATION DETAILS - I		
APPROVED		FILE NO.	SIZE	DWG. NO.
APPROVED		302-3354-004	F	79K36086
APPROVED		PROJ. NO.	SHEET 1 OF 4	
APPROVED		97950		

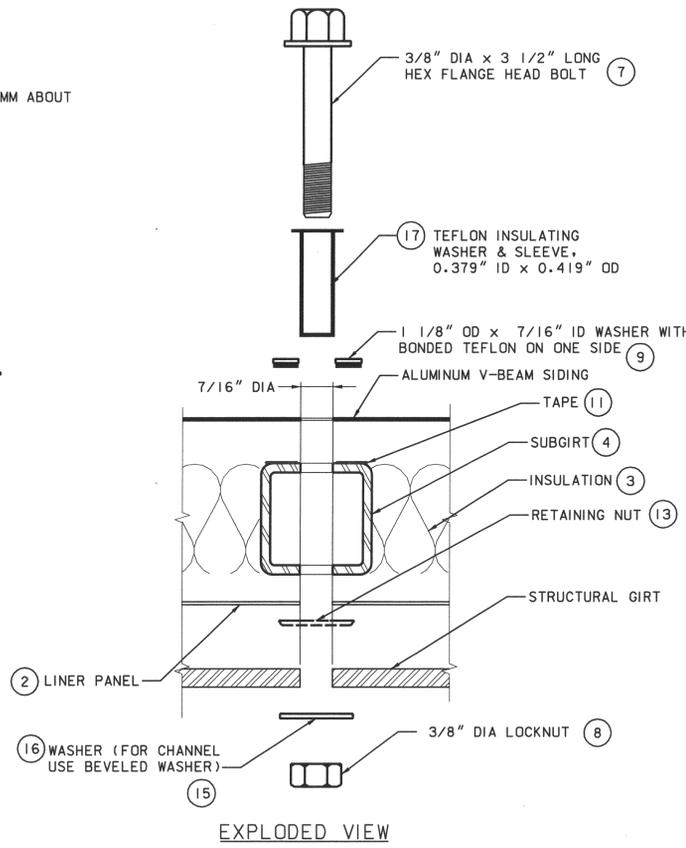
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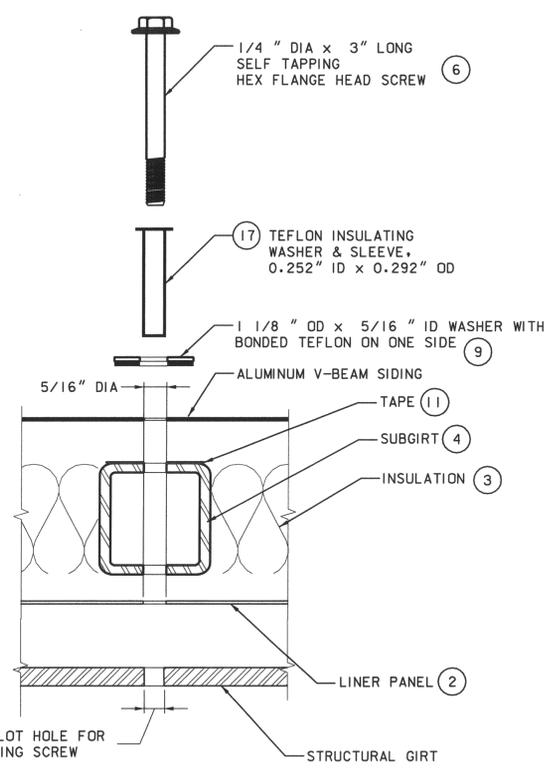
ISOMETRIC OF CONTINUOUS SUB GIRTS / LINER SEAM
 DETAIL 3
 SCALE: NONE 2



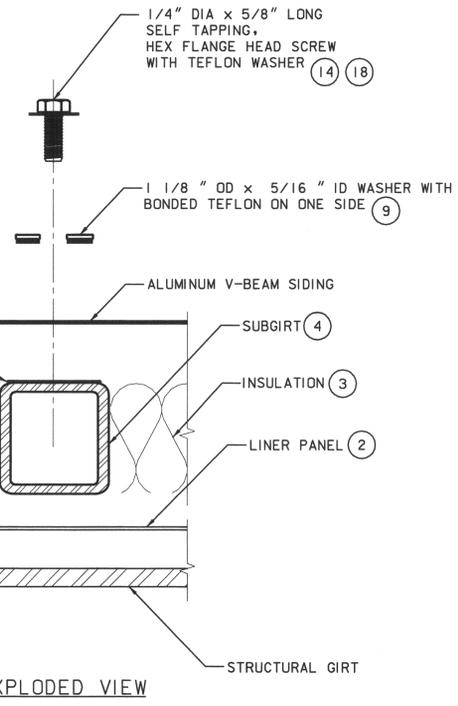
ALUMINUM "V" BEAM - DETAIL 1
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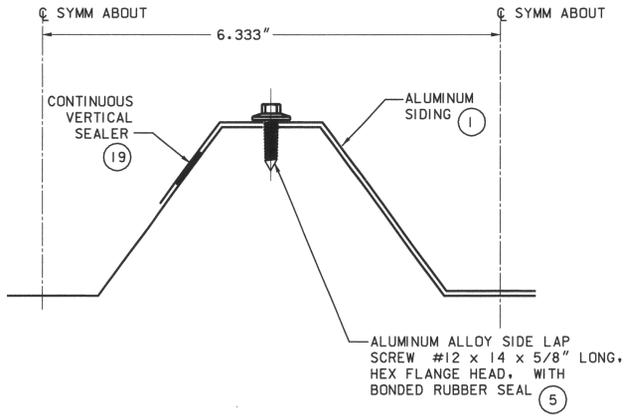
EXPLODED VIEW



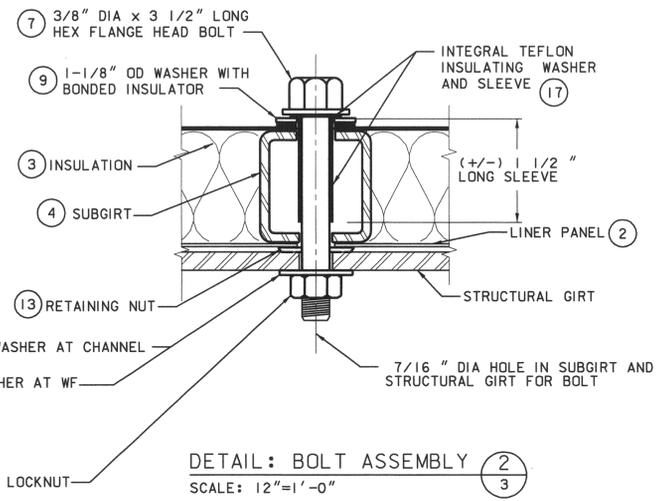
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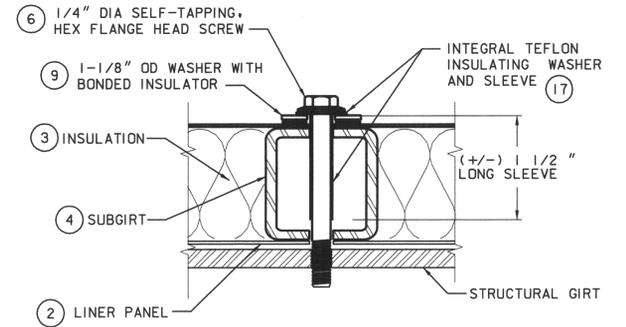
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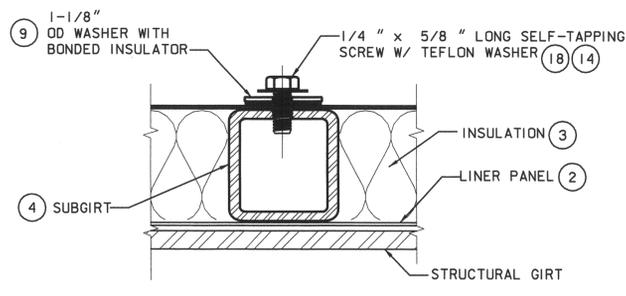
DETAIL: SCREW ASSEMBLY 8
 SCALE: 12"=1'-0"



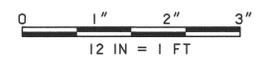
DETAIL: BOLT ASSEMBLY 2
 SCALE: 12"=1'-0"



DETAIL: BOLT ASSEMBLY 6
 SCALE: 12"=1'-0"



DETAIL: SCREW ASSEMBLY 7
 SCALE: 12"=1'-0"



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LAUNCH COMPLEX 39 VEHICLE ASSEMBLY BUILDING				
VAB SIDING INSTALLATION DETAILS -3				
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DESIGNED BEL	10-3-03			
DRAWN JTH	10-3-03			
CHECKED JAM/JCK	10-3-03			
SUBMITTED B.E. Smith	10-3-03			
APPROVED				
FILE NO.	302-3354-004	SIZE	DWG. NO.	REV
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PROJ. NO.	97950	SHEET 3		OF 4

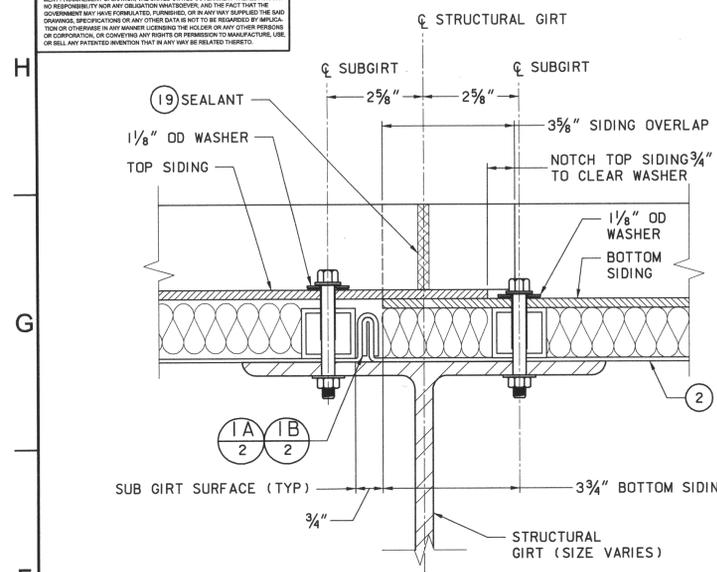
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SCHEDULE FOR NON-OVERLAP CONNECTIONS

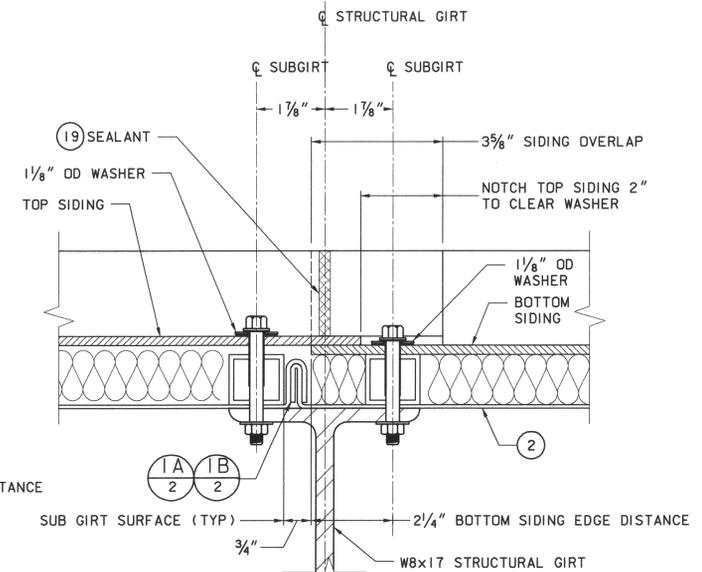
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MEMBER	FLANGE WIDTH	CONN. DETAIL	MEMBER	FLANGE WIDTH	CONN. DETAIL	MEMBER	FLANGE WIDTH	CONN. DETAIL	MEMBER	FLANGE WIDTH	CONN. DETAIL	MEMBER	FLANGE WIDTH	CONN. DETAIL
C5x6.7	1 3/4	6	C5	1 3/4	6	C5	1 3/4	6	TRUSS "A"	≥ 8"	7	C5x6.4	1 3/4	6
W8x24	6 1/2	7	W8x24	6 1/2	7	W8x24	6 1/2	7	TRUSS "B"	≥ 8"	7	W8x17	5 1/4	7
W27x44	10	7	W18x50	7 1/2	7	W27x145	14	7	TRUSS "C"	≥ 8"	7	W10x25	5 3/4	7
W27x145	14	7	-	-	-	W30x108	10 1/2	7	W36x230	16 1/2	7	W12x27	6 1/2	7
												W24x76	9	7

SCHEDULE FOR OVERLAPPING HORIZONTAL JOINTS

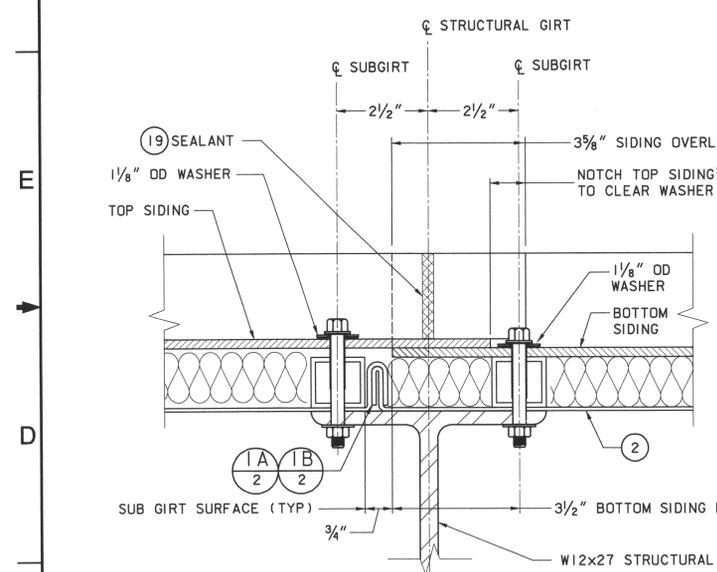
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MEMBER	FLANGE WIDTH	JOINT DETAIL	MEMBER	FLANGE WIDTH	JOINT DETAIL	MEMBER	FLANGE WIDTH	JOINT DETAIL	MEMBER	FLANGE WIDTH	JOINT DETAIL	MEMBER	FLANGE WIDTH	JOINT DETAIL
W27x94	10	1	C5/L3x2	3 3/4	5	W27x94	10	1	TRUSS "A"	≥ 8"	1	C5/L3x2	3 3/4	5
			W18x50	7 1/2	1				TRUSS "B"	≥ 8"	1	W8x17	5 1/4	4
									TRUSS "C"	≥ 8"	1	W10x25	5 3/4	3
												W12x27	6 1/2	2
												W24x76	9	1



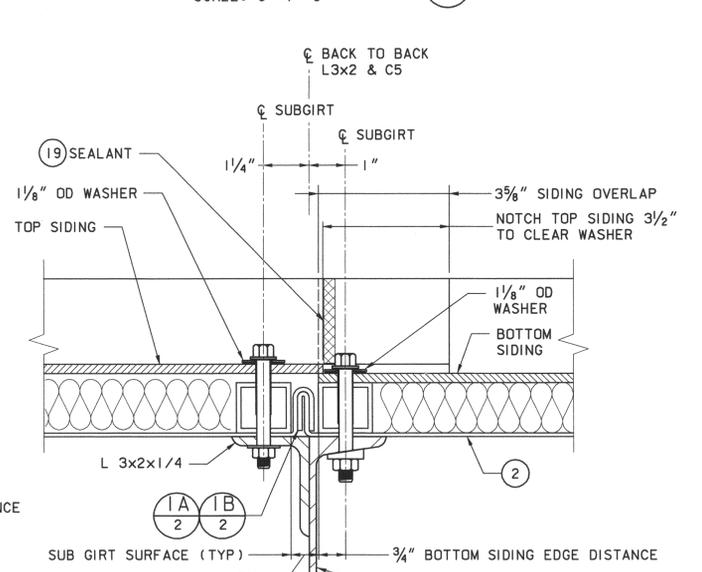
JOINT DETAIL 1
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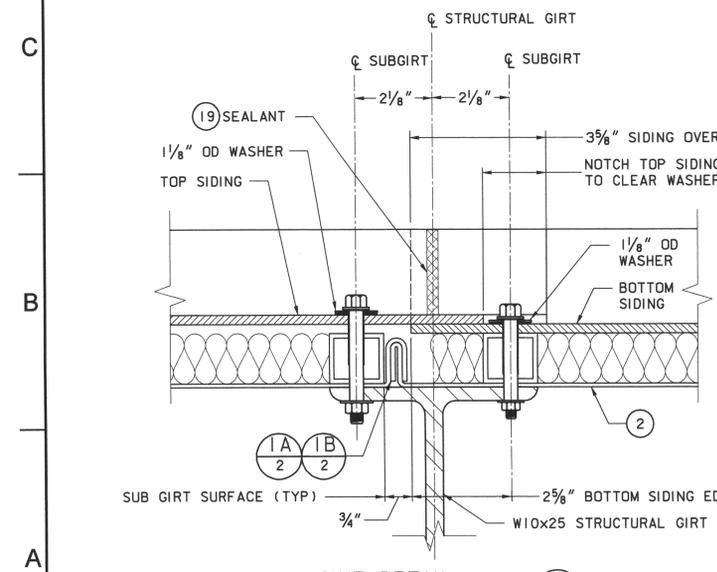
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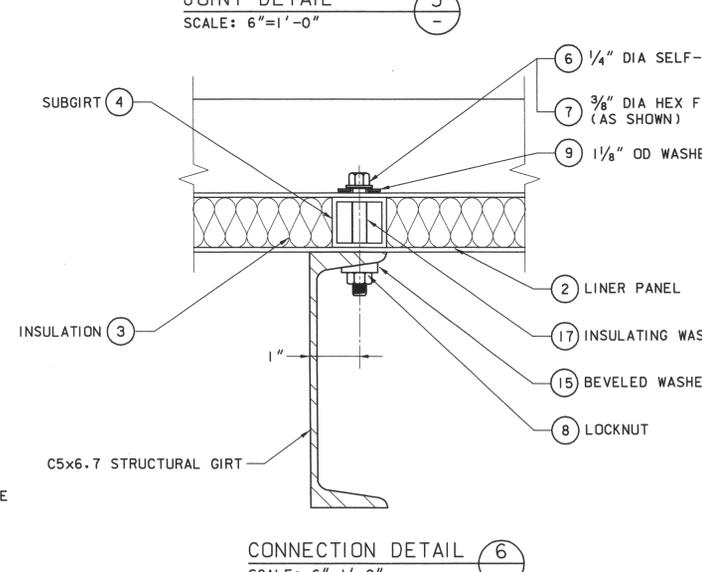
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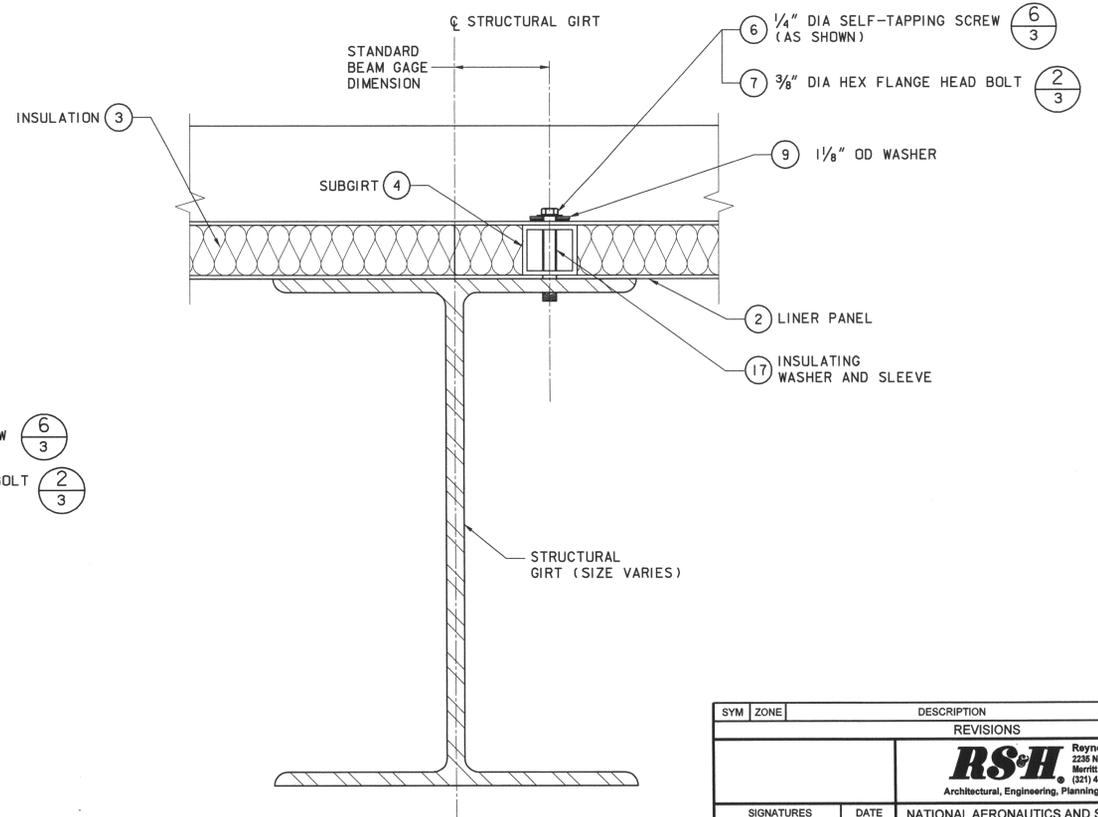
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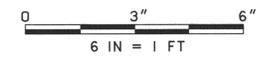
JOINT DETAIL 3
SCALE: 6"=1'-0"



CONNECTION DETAIL 6
SCALE: 6"=1'-0"



CONNECTION DETAIL 7
SCALE: 6"=1'-0"



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