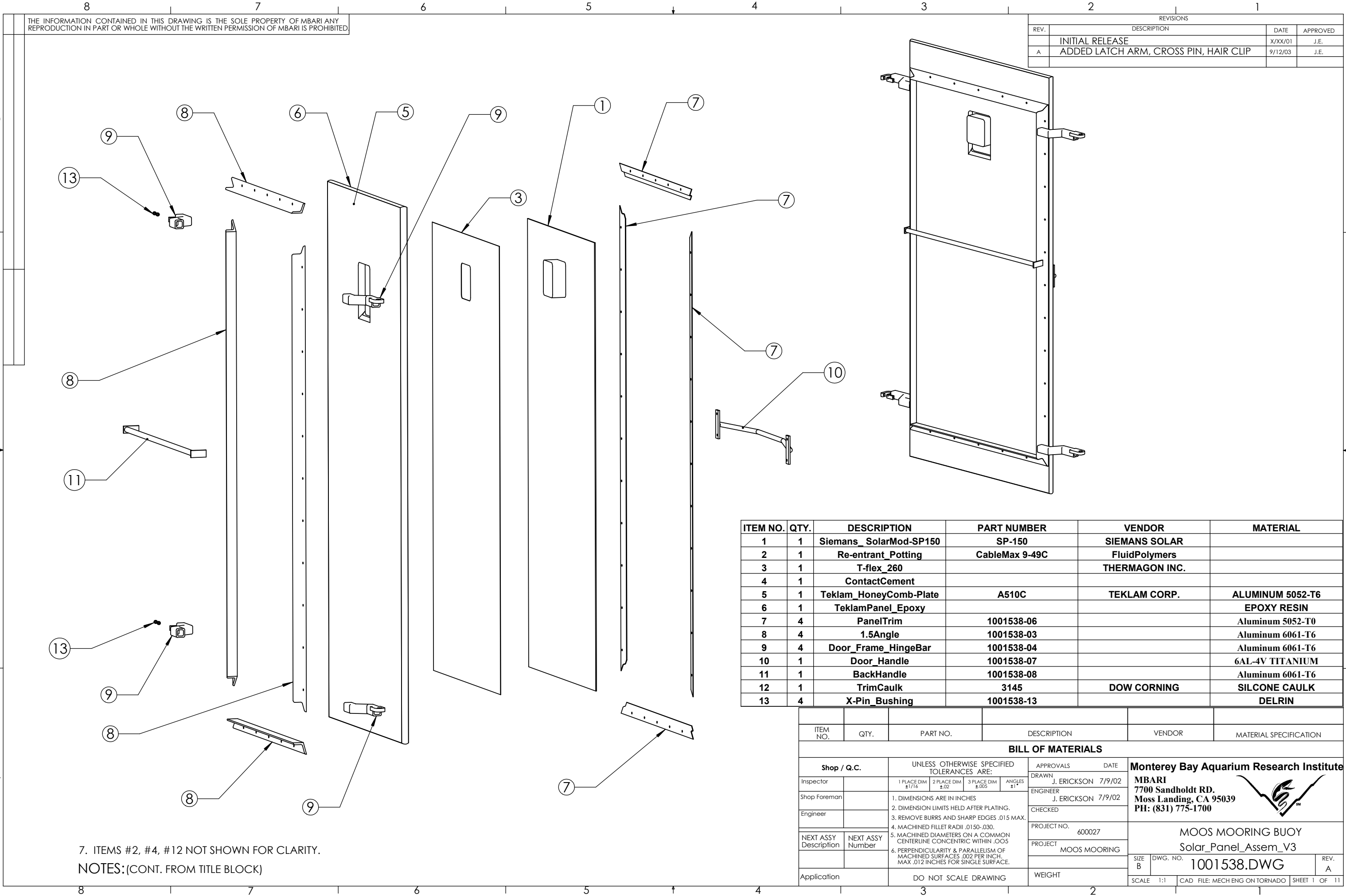




ITEM NO.	QTY.	DESCRIPTION	PART NUMBER	VENDOR	MATERIAL
1	1	Siemans_SolarMod-SP150	SP-150	SIEMANS SOLAR	
2	1	Re-entrant_Potting	CableMax 9-49C	FluidPolymers	
3	1	T-flex_260		THERMAGON INC.	
4	1	ContactCement			
5	1	Teklam_HoneyComb-Plate	A510C	TEKLAM CORP.	ALUMINUM 5052-T6
6	1	TeklamPanel_Epoxy			EPOXY RESIN
7	4	PanelTrim	1001538-06		Aluminum 5052-T0
8	4	1.5Angle	1001538-03		Aluminum 6061-T6
9	4	Door_Frame_HingeBar	1001538-04		Aluminum 6061-T6
10	1	Door_Handle	1001538-07		6AL-4V TITANIUM
11	1	BackHandle	1001538-08		Aluminum 6061-T6
12	1	TrimCaulk	3145	DOW CORNING	SILICONE CAULK
13	4	X-Pin_Bushing	1001538-13		DELIRIN

ITEM NO.	QTY.	PART NO.	DESCRIPTION	VENDOR	MATERIAL SPECIFICATION
BILL OF MATERIALS					
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS	DATE
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	DRAWN J. ERICKSON	7/9/02
Shop Foreman		3 PLACE DIM ±.005	ANGLES ±1°	ENGINEER J. ERICKSON	7/9/02
Engineer		1. DIMENSIONS ARE IN INCHES		CHECKED	
NEXT ASSY Description		2. DIMENSION LIMITS HELD AFTER PLATING.		PROJECT NO.	600027
NEXT ASSY Number		3. REMOVE BURRS AND SHARP EDGES .015 MAX.		PROJECT	MOOS MOORING
Application		4. MACHINED FILLET RADII .0150-.030.		WEIGHT	
		5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005		SIZE B	DWG. NO.
		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.		SCALE 1:1	1001538.DWG
		DO NOT SCALE DRAWING		CAD FILE: MECH ENG ON TORNADO	REV. A
				SHEET 1 OF 11	

Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

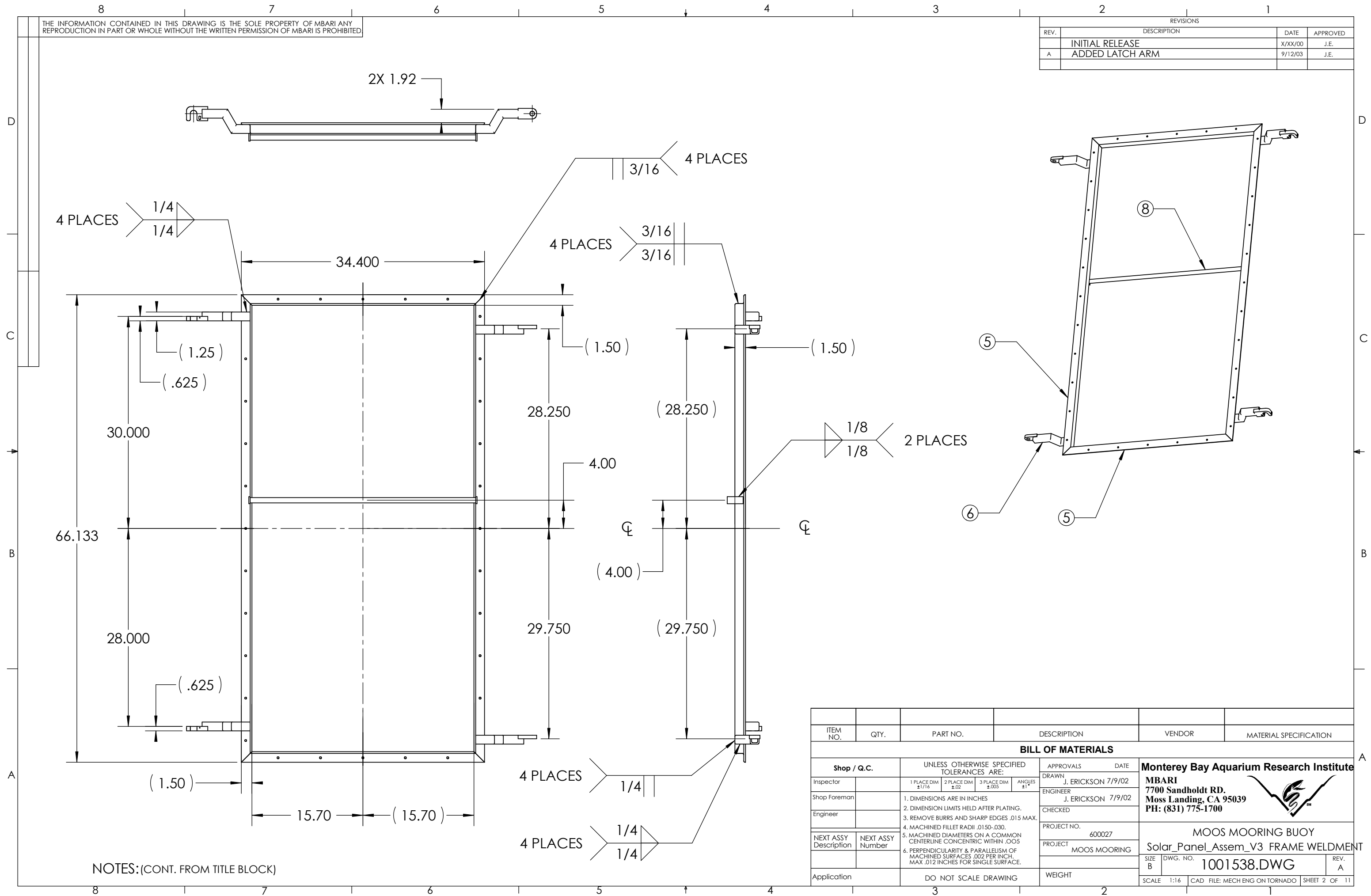


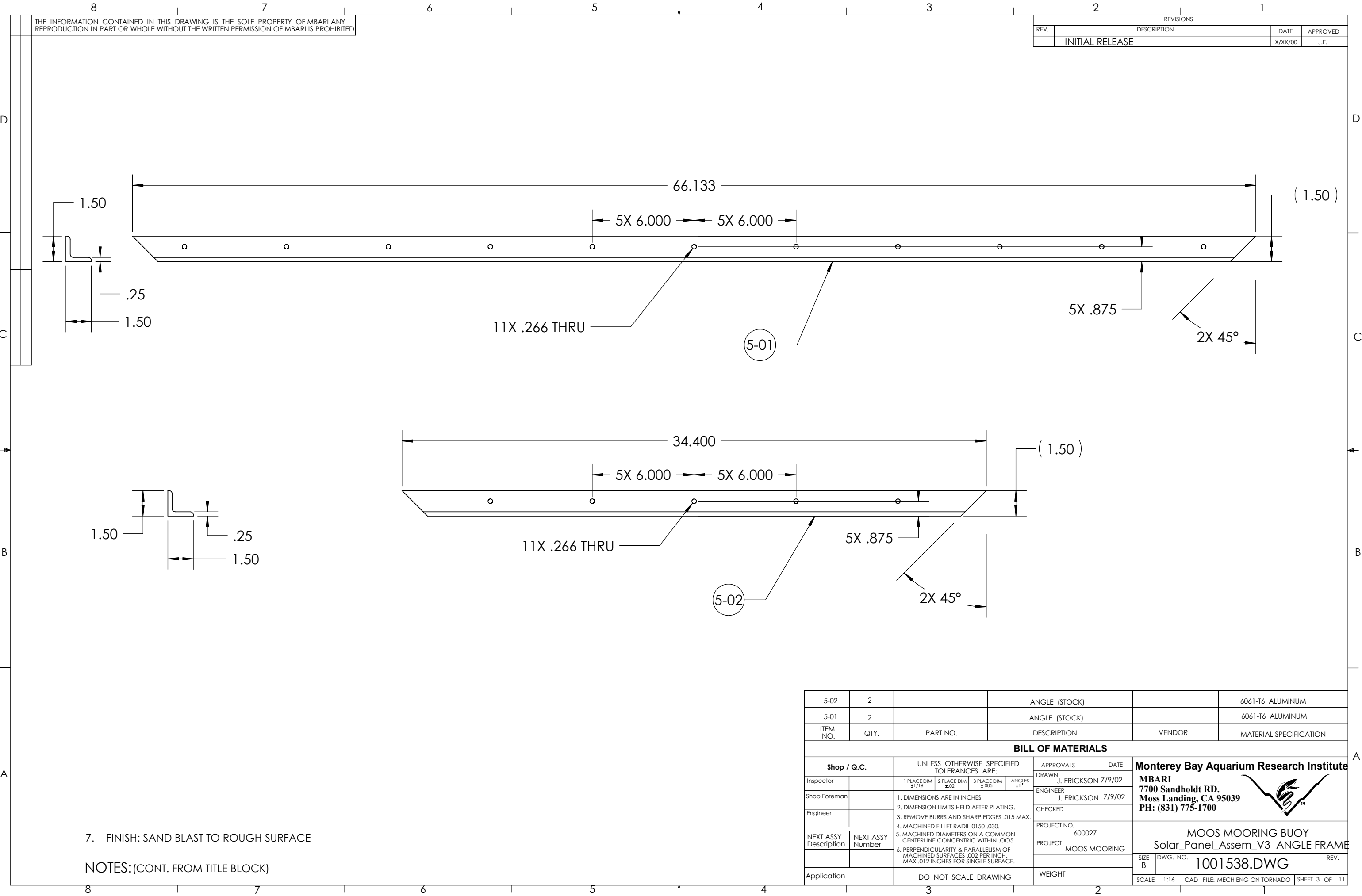
MOOS MOORING BUOY
Solar_Panel_Assem_V3

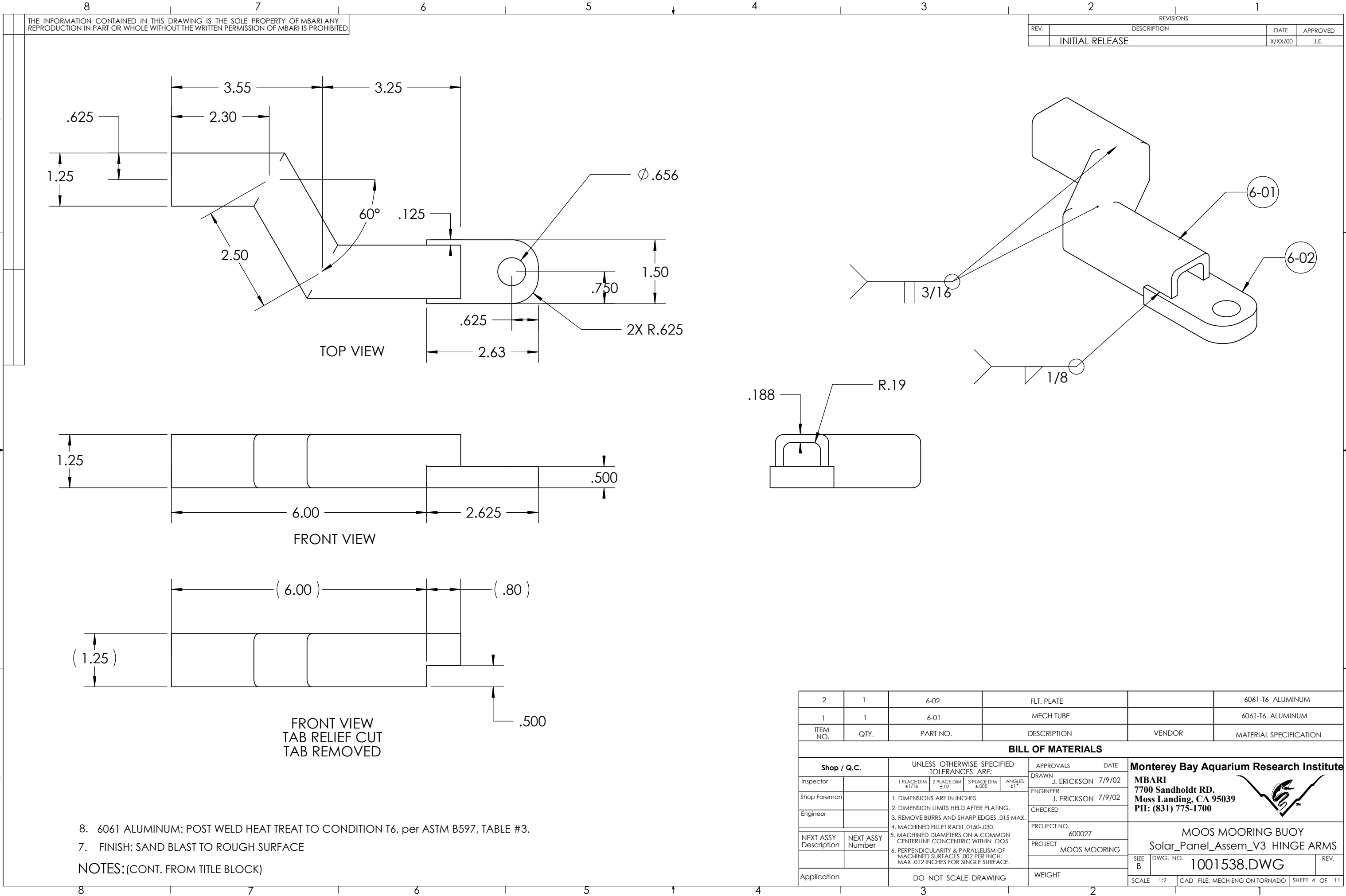
7. ITEMS #2, #4, #12 NOT SHOWN FOR CLARITY.
NOTES:(CONT. FROM TITLE BLOCK)

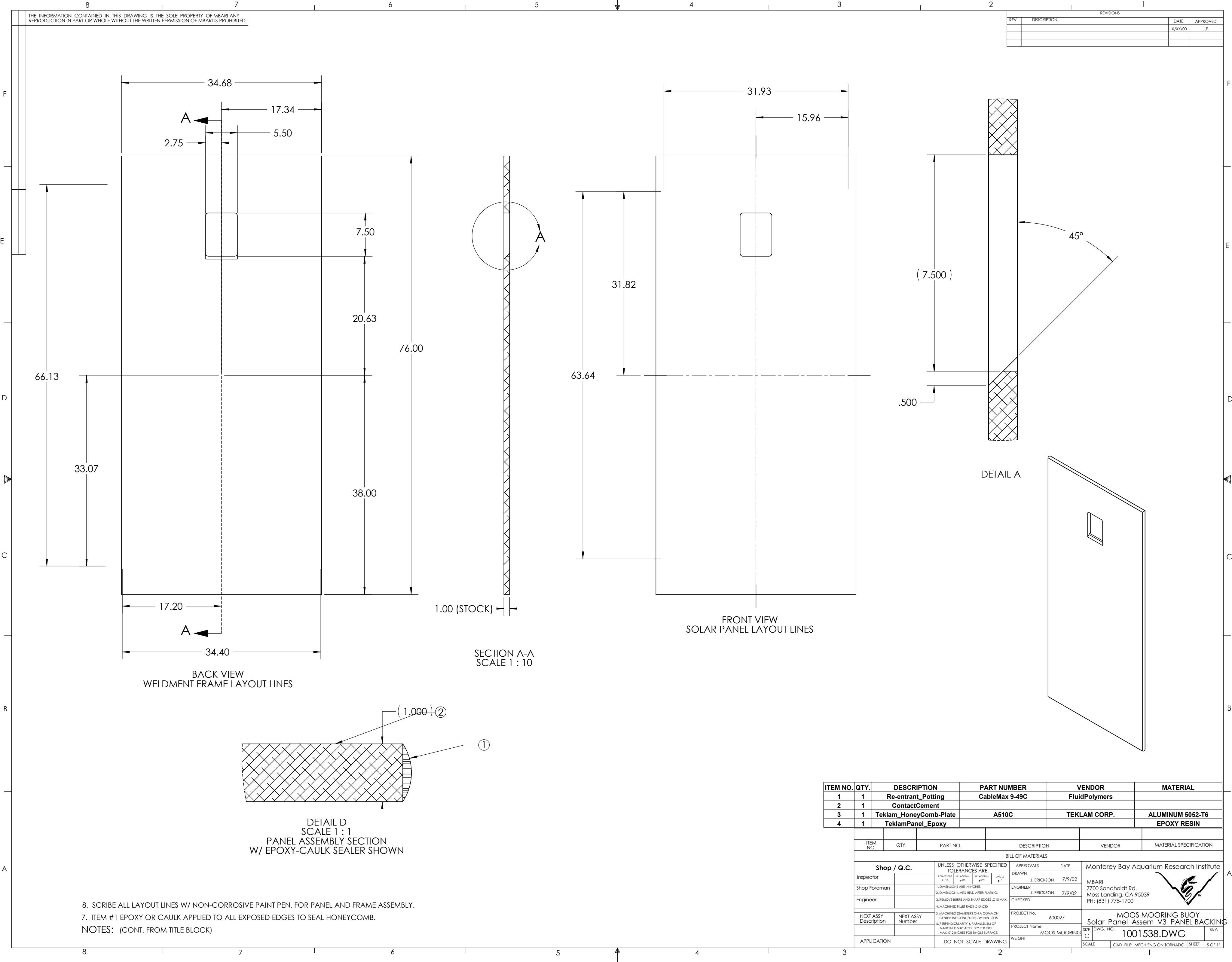
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF MBARI ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF MBARI IS PROHIBITED

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	X/XX/00	J.E.
A	ADDED LATCH ARM	9/12/03	J.E.

[illegible]







THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF MBARI ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF MBARI IS PROHIBITED.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
		X/XX/00	J.E.

ITEM NO.	QTY.	DESCRIPTION	PART NUMBER	VENDOR	MATERIAL
1	1	Re-entrant_Potting	CableMax 9-49C	FluidPolymers	
2	1	ContactCement			
3	1	Teklam_HoneyComb-Plate	A510C	TEKLAM CORP.	ALUMINUM 5052-T6
4	1	TeklamPanel_Epoxy			EPOXY RESIN

ITEM NO.	QTY.	PART NO.	DESCRIPTION	VENDOR	MATERIAL SPECIFICATION
BILL OF MATERIALS					
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS DATE	
Inspector		1. PLACE DIM. $\pm .010$	2. DIMENSIONS ARE IN INCHES.	DRAWN J. ERICKSON	7/9/02
Shop Foreman		3. DIMENSION LIMITS HELD AFTER PLATING.	4. REMOVE BURRS AND SHARP EDGES .015 MAX.	ENGINEER J. ERICKSON	7/9/02
Engineer		5. MACHINED FILLET RADII .015-.020.	6. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005.	CHECKED	
NEXT ASSY Description	NEXT ASSY Number	PROJECT No. 600027		PROJECT Name MOOS MOORING	
APPLICATION		DO NOT SCALE DRAWING		SCALE	CAD FILE: MECH ENG ON TORNADO
				DWG. NO. 1001538.DWG	REV.
				SHEET 5 OF 11	

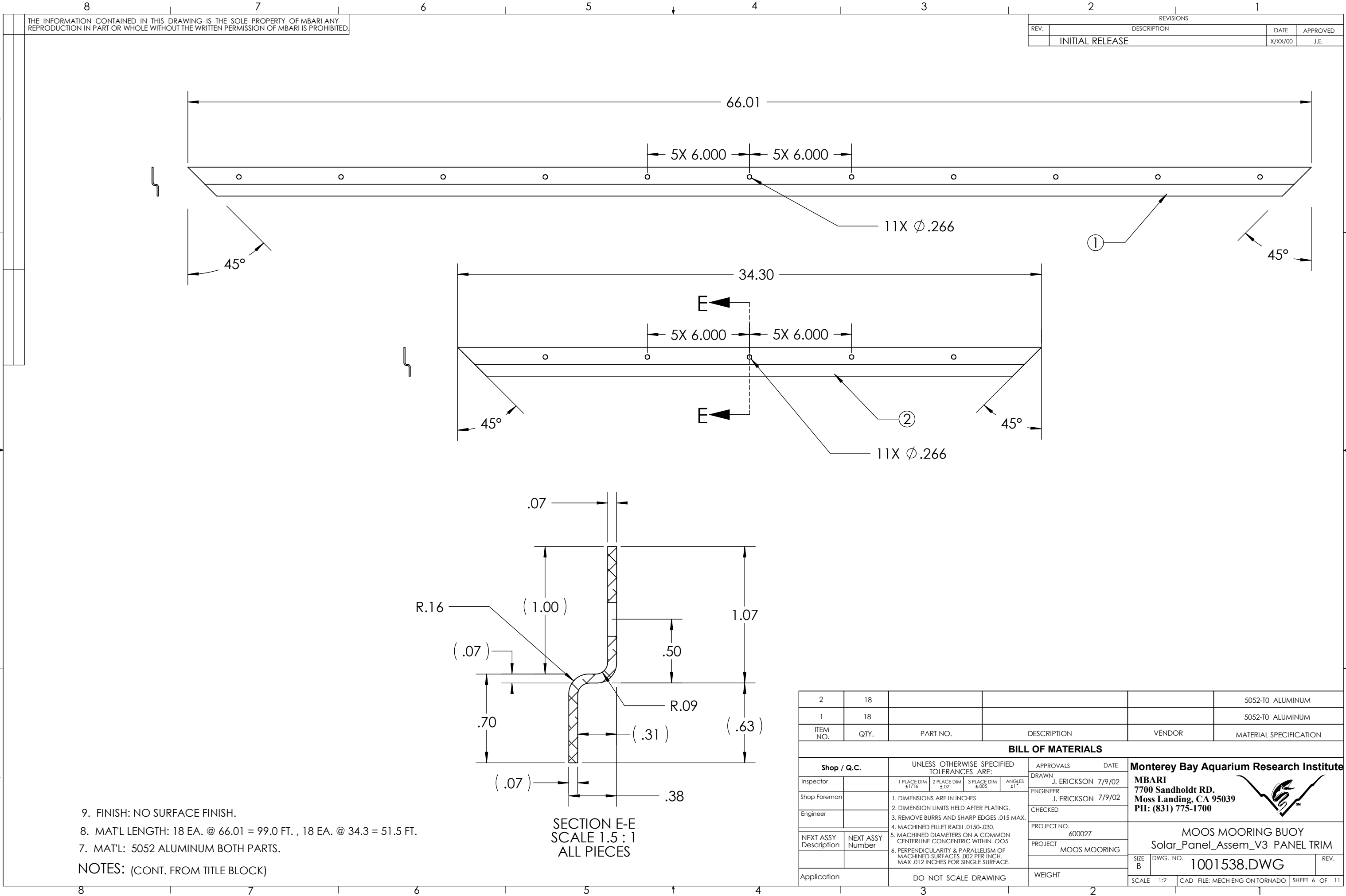
8. SCRIBE ALL LAYOUT LINES W/ NON-CORROSIVE PAINT PEN, FOR PANEL AND FRAME ASSEMBLY.

7. ITEM #1 EPOXY OR CAULK APPLIED TO ALL EXPOSED EDGES TO SEAL HONEYCOMB.

NOTES: (CONT. FROM TITLE BLOCK)



MOOS MOORING BUOY
Solar_Panel_Assem_V3 PANEL BACKING

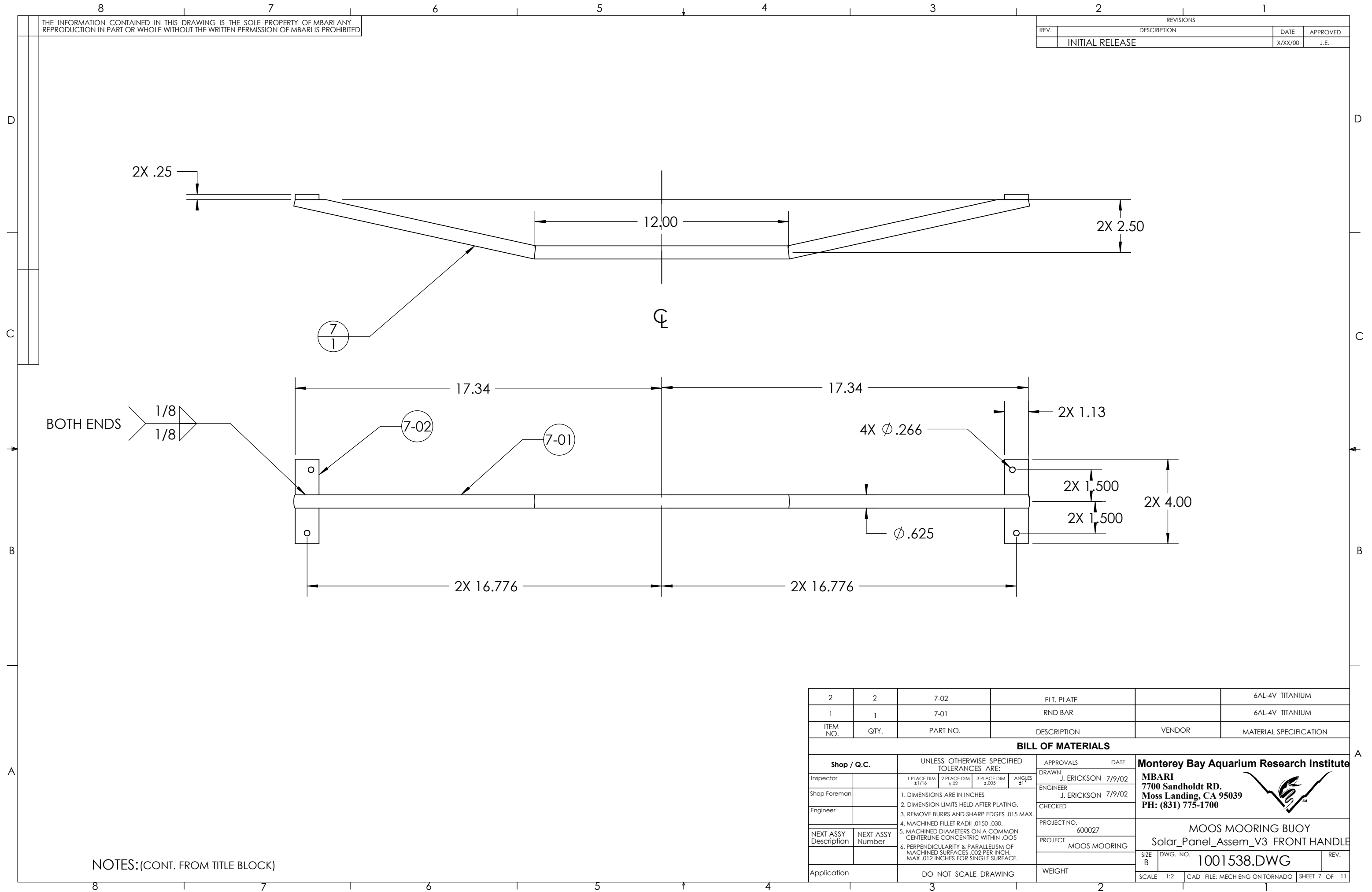


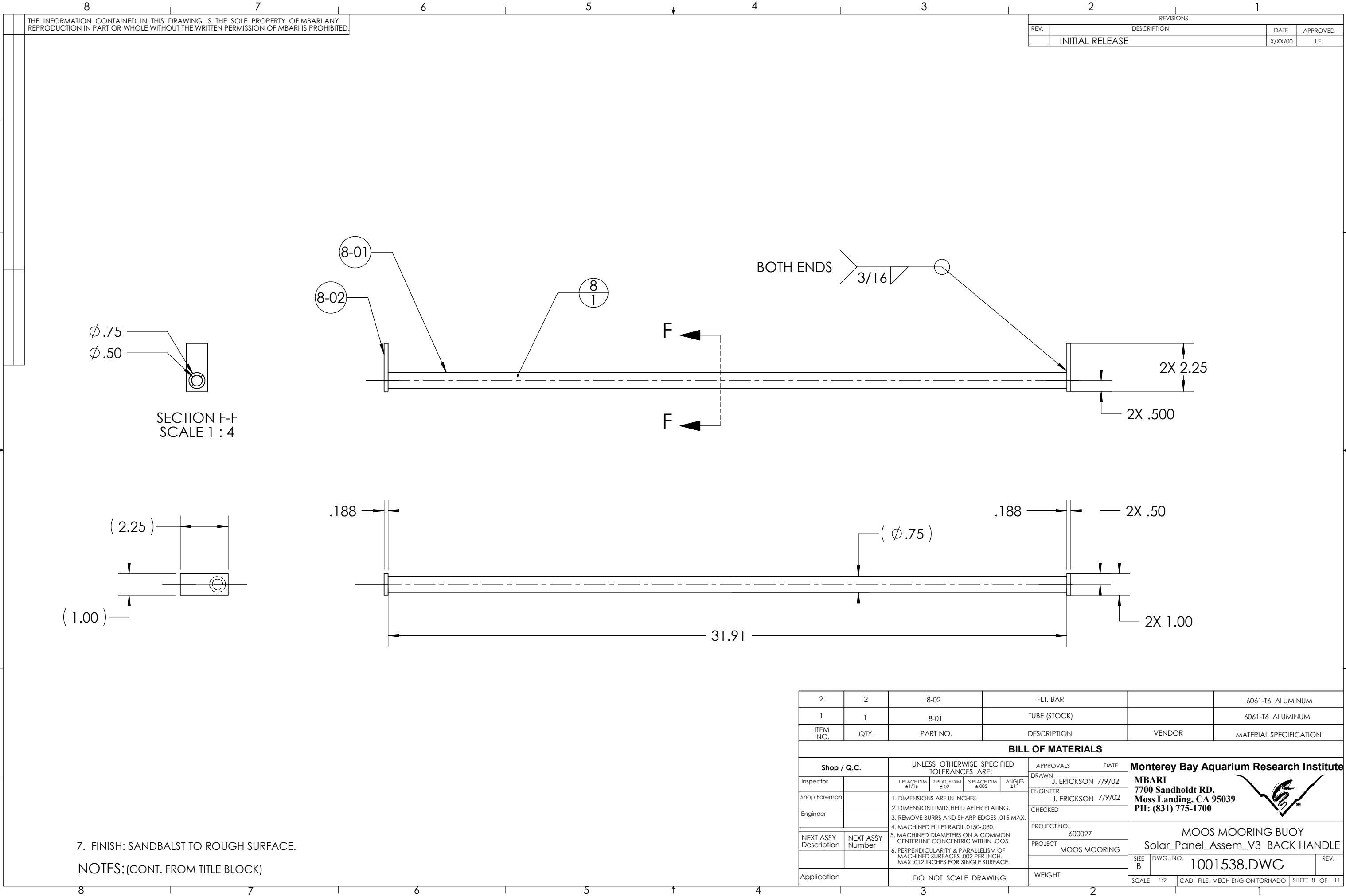
9. FINISH: NO SURFACE FINISH.
8. MAT'L LENGTH: 18 EA. @ 66.01 = 99.0 FT. , 18 EA. @ 34.3 = 51.5 FT.
7. MAT'L: 5052 ALUMINUM BOTH PARTS.
NOTES: (CONT. FROM TITLE BLOCK)

2	18				5052-T0 ALUMINUM
1	18				5052-T0 ALUMINUM
ITEM NO.	QTY.	PART NO.	DESCRIPTION	VENDOR	MATERIAL SPECIFICATION
BILL OF MATERIALS					
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS	DATE
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	DRAWN	J. ERICKSON 7/9/02
Shop Foreman		3 PLACE DIM ±.005	ANGLES ±1°	ENGINEER	J. ERICKSON 7/9/02
Engineer		1. DIMENSIONS ARE IN INCHES		CHECKED	
		2. DIMENSION LIMITS HELD AFTER PLATING.		PROJECT NO.	600027
		3. REMOVE BURRS AND SHARP EDGES .015 MAX.		PROJECT	MOOS MOORING
NEXT ASSY Description	NEXT ASSY Number	4. MACHINED FILLET RADII .0150-.030.		WEIGHT	
		5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005		SCALE	1:2
		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.		DWG. NO.	1001538.DWG
Application		DO NOT SCALE DRAWING		REV.	
				CAD FILE: MECH ENG ON TORNADO	SHEET 6 OF 11

Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

MOOS MOORING BUOY
Solar_Panel_Assem_V3 PANEL TRIM





REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	X/XX/00	J.E.

ASSEMBLY NOTES:

- 1

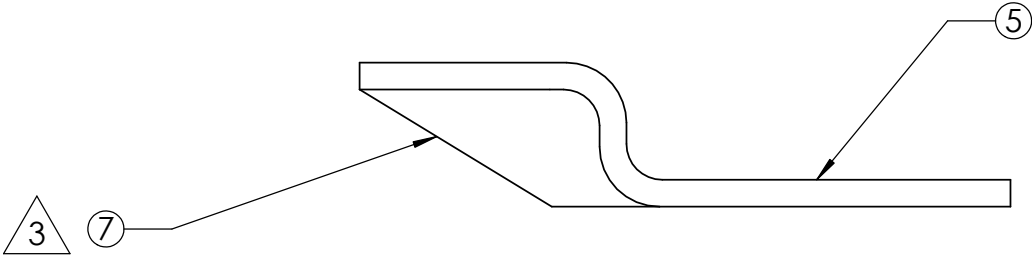
PRE-ASSEMBLE ANGLE FRAME WELDMENT (ITEM #8) TO TEKLAM PANEL LAYOUT LINES, MATCH DRILL BOLT HOLES THRU PANEL.
- 2

APPLY "T-flex" BACKING (ITEM #3) TO TEKLAM PANEL (ITEM #5) USING CONTACT CEMENT (ITEM #4) & LAYOUT LINES FOR REGISTER. APPLY SOLAR PANEL SP-150 TO BACKING USING CONTACT CEMENT (ITME #4) & LAYOUT LINES FOR REGISTER.
- 3

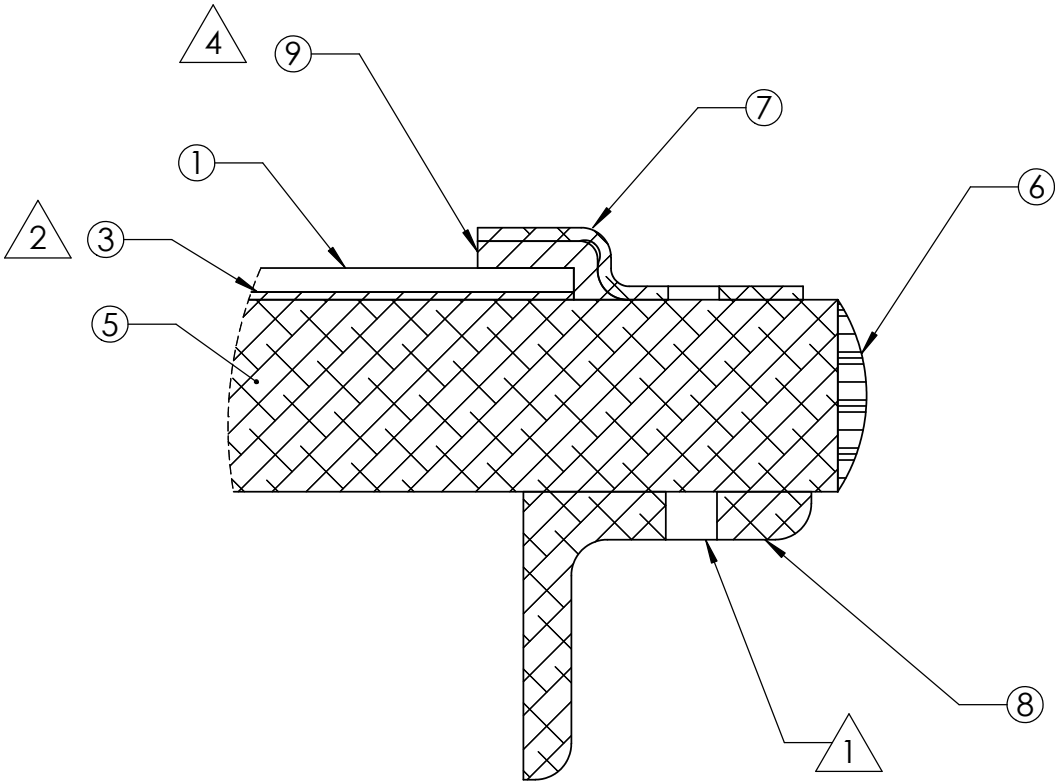
APPLY TRIM CAULK (ITEM #9) TO EACH "Z" CHANNEL PIECE SLIGHTLY OVERFILLING CORNER VOLUME.
- 4

ON ASSEMBLY, TOOL TRIM CAULK (ITEM #9) TO A SMOOTH FINISH.
- 5

THRU BOLT: "Z" CHANNEL, TEKLAM PANEL, & ANGLE FRAME WELDMENT, TO COMPLETE ASSEMBLY.



SECTION THRU "Z" CHANNEL
SHOWING CAULKING (ITEM #6)
SCALE 2:1



DETAIL R
SCALE 1 : 1
SECTION THRU PANEL ASSEMBLY
WITH "Z" CHANNEL & CAULK SEALING
SOLAR PANEL

NOTES:(CONT. FROM TITLE BLOCK)

ITEM NO.	QTY.	DESCRIPTION	PART NUMBER	VENDOR	MATERIAL
1	1	Siemans_SolarMod-SP150	SP-150	SIEMANS SOLAR	
2	1	Re-entrant_Potting	CableMax 9-49C	FluidPolymers	
3	1	T-flex_260		THERMAGON INC.	
4	1	ContactCement			
5	1	Teklam_HoneyComb-Plate	A510C	TEKLAM CORP.	ALUMINUM 5052-T6
6	1	TeklamPanel_Epoxy			EPOXY RESIN
7	2	PanelTrim	1001538-06		Aluminum 5052-T0
8	1	1.5Angle	1001538-03		Aluminum 6061-T6
9	1	TrimCaulk	3145	DOW CORNING	SILCONE CAULK

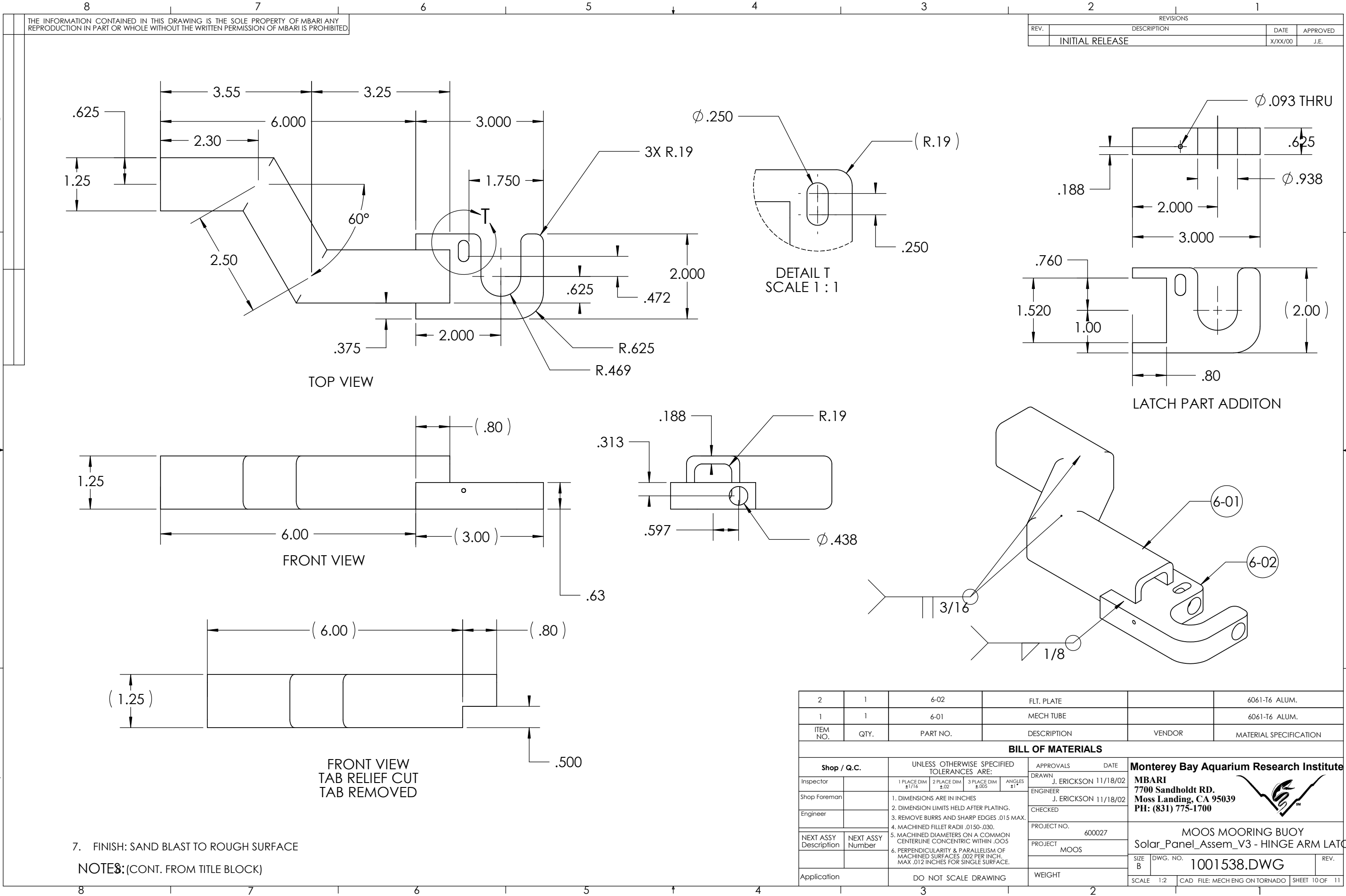
ITEM NO.	QTY.	PART NO.	DESCRIPTION	VENDOR	MATERIAL SPECIFICATION
BILL OF MATERIALS					
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS	DATE
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	DRAWN	J. ERICKSON 7/9/02
Shop Foreman		3 PLACE DIM ±.005	ANGLES ±1°	ENGINEER	J. ERICKSON 7/9/02
Engineer		1. DIMENSIONS ARE IN INCHES		CHECKED	
		2. DIMENSION LIMITS HELD AFTER PLATING.		PROJECT NO.	600027
		3. REMOVE BURRS AND SHARP EDGES .015 MAX.		PROJECT	MOOS MOORING
NEXT ASSY Description	NEXT ASSY Number	4. MACHINED FILLET RADII .0150-.030.		WEIGHT	
		5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005		SCALE	1:2
		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.		CAD FILE:	MECH ENG ON TORNADO
Application		DO NOT SCALE DRAWING		SHEET	9 OF 11

Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700



MOOS MOORING BUOY
Solar_Panel_Assem_V3 ASSEMBLY DETAIL

SIZE B DWG. NO. 1001538.DWG REV.



THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF MBARI ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF MBARI IS PROHIBITED

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	X/XX/00	J.E.

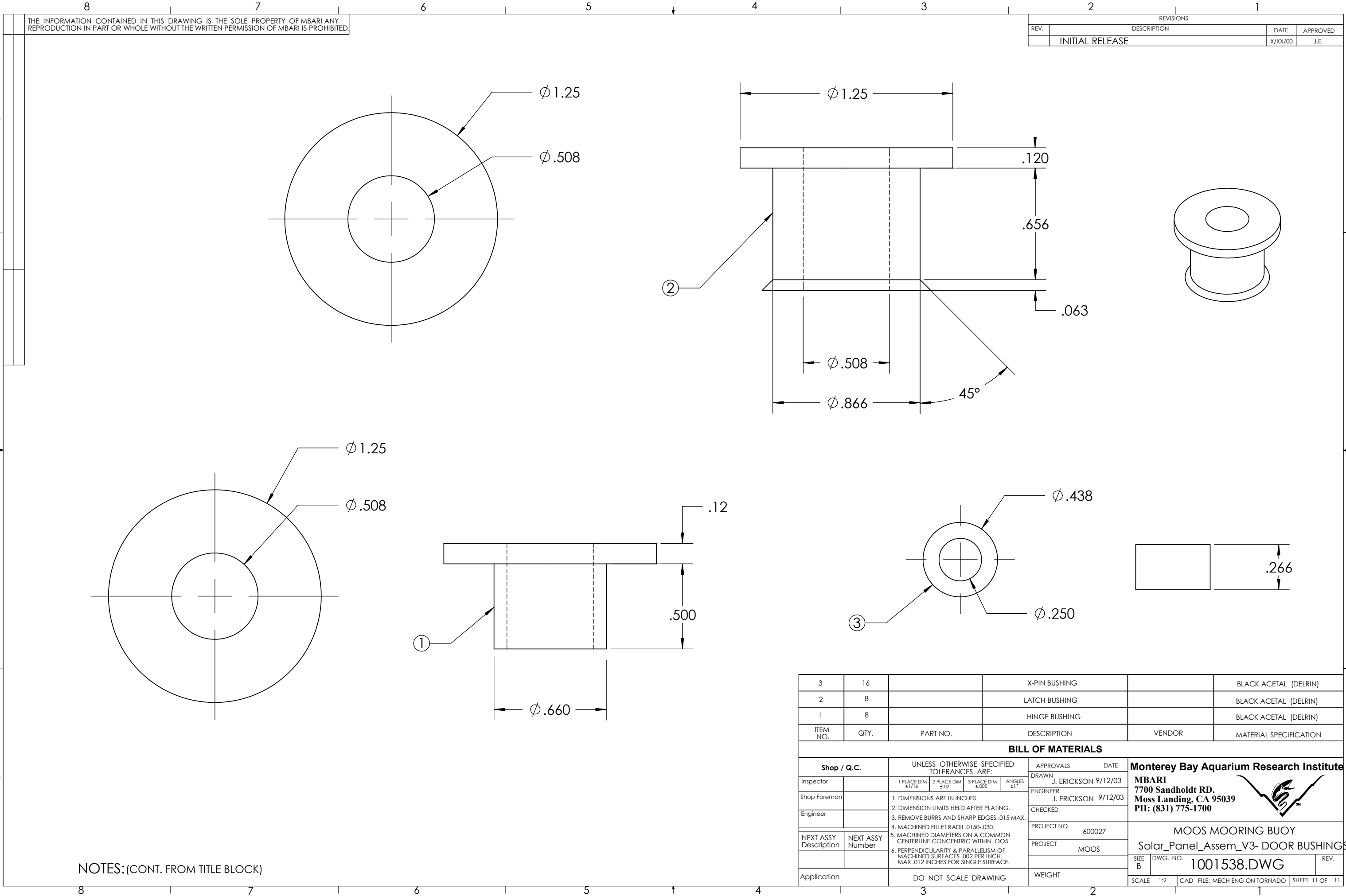
DETAIL T
SCALE 1 : 1

LATCH PART ADDITON

FRONT VIEW
TAB RELIEF CUT
TAB REMOVED

7. FINISH: SAND BLAST TO ROUGH SURFACE
NOTES:(CONT. FROM TITLE BLOCK)

2	1	6-02	FLT. PLATE		6061-T6 ALUM.
1	1	6-01	MECH TUBE		6061-T6 ALUM.
ITEM NO.	QTY.	PART NO.	DESCRIPTION	VENDOR	MATERIAL SPECIFICATION
BILL OF MATERIALS					
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS	DATE
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	DRAWN	J. ERICKSON 11/18/02
Shop Foreman		3 PLACE DIM ±.005	ANGLES ±1°	ENGINEER	J. ERICKSON 11/18/02
Engineer		1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADII .0150-.030. 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.			
NEXT ASSY Description	NEXT ASSY Number	PROJECT NO.		CHECKED	
		600027		PROJECT	MOOS
Application		DO NOT SCALE DRAWING		WEIGHT	
			Monterey Bay Aquarium Research Institute		
			MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700		
			MOOS MOORING BUOY Solar_Panel_Assem_V3 - HINGE ARM LATCH		
		SIZE B	DWG. NO.	REV.	
			1001538.DWG		
		SCALE 1:2	CAD FILE: MECH ENG ON TORNAO	SHEET 10 OF 11	



THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF MBARI ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF MBARI IS PROHIBITED

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	X/XX/00	J.E.

NOTES:(CONT. FROM TITLE BLOCK)

3	16		X-PIN BUSHING		BLACK ACETAL (DELRIN)
2	8		LATCH BUSHING		BLACK ACETAL (DELRIN)
1	8		HINGE BUSHING		BLACK ACETAL (DELRIN)
ITEM NO.	QTY.	PART NO.	DESCRIPTION	VENDOR	MATERIAL SPECIFICATION
BILL OF MATERIALS					
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS	DATE
Inspector		1 PLACE DIM $\pm 1/16$	2 PLACE DIM $\pm .02$	DRAWN	J. ERICKSON 9/12/03
Shop Foreman		3 PLACE DIM $\pm .005$	ANGLES $\pm 1^\circ$	ENGINEER	J. ERICKSON 9/12/03
Engineer		1. DIMENSIONS ARE IN INCHES		CHECKED	
		2. DIMENSION LIMITS HELD AFTER PLATING.		PROJECT NO.	600027
		3. REMOVE BURRS AND SHARP EDGES .015 MAX.		PROJECT	MOOS
NEXT ASSY Description	NEXT ASSY Number	4. MACHINED FILLET RADII .0150-.030.			
		5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005			
		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.			
Application		DO NOT SCALE DRAWING		WEIGHT	
				SCALE	1:2
				CAD FILE:	MECH ENG ON TORNADO
				SHEET	11 OF 11

Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700



MOOS MOORING BUOY
Solar_Panel_Assem_V3- DOOR BUSHINGS

SIZE B

DWG. NO. 1001538.DWG

REV.