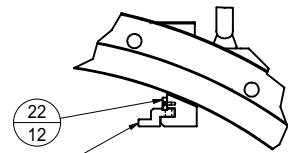
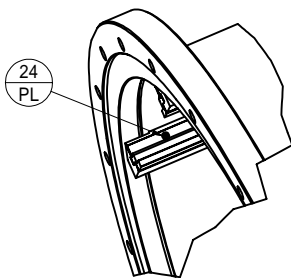
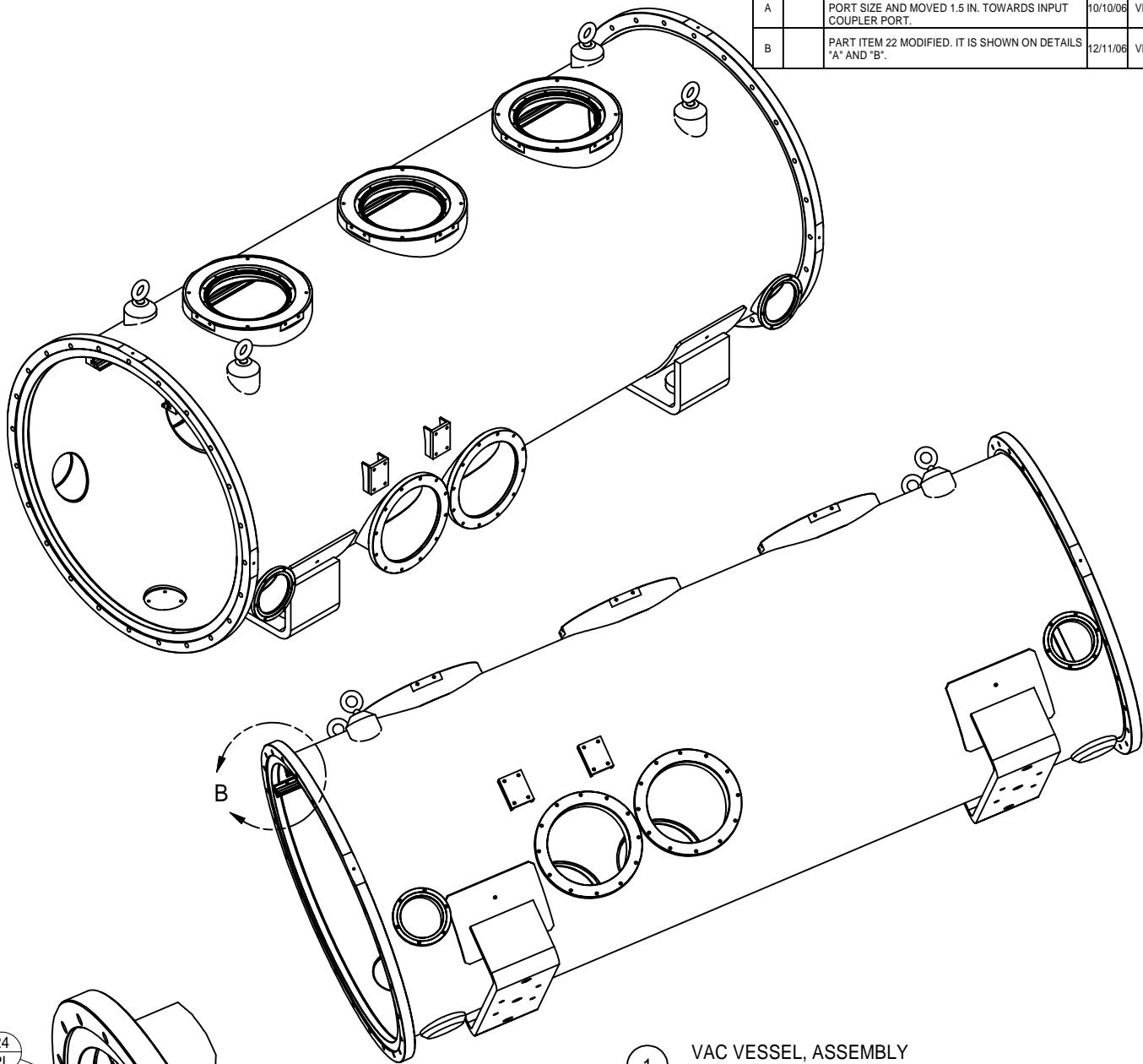
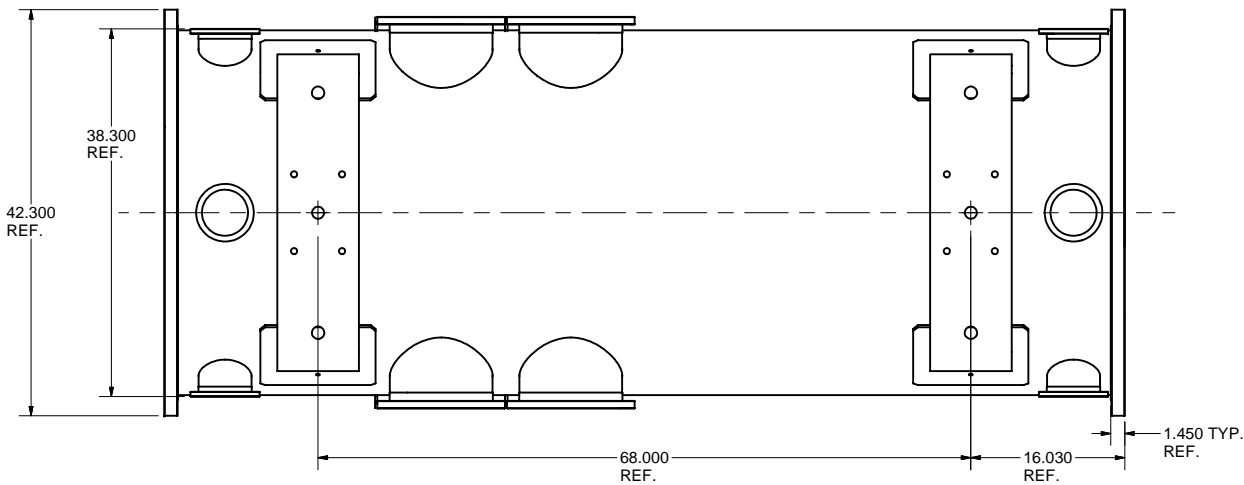
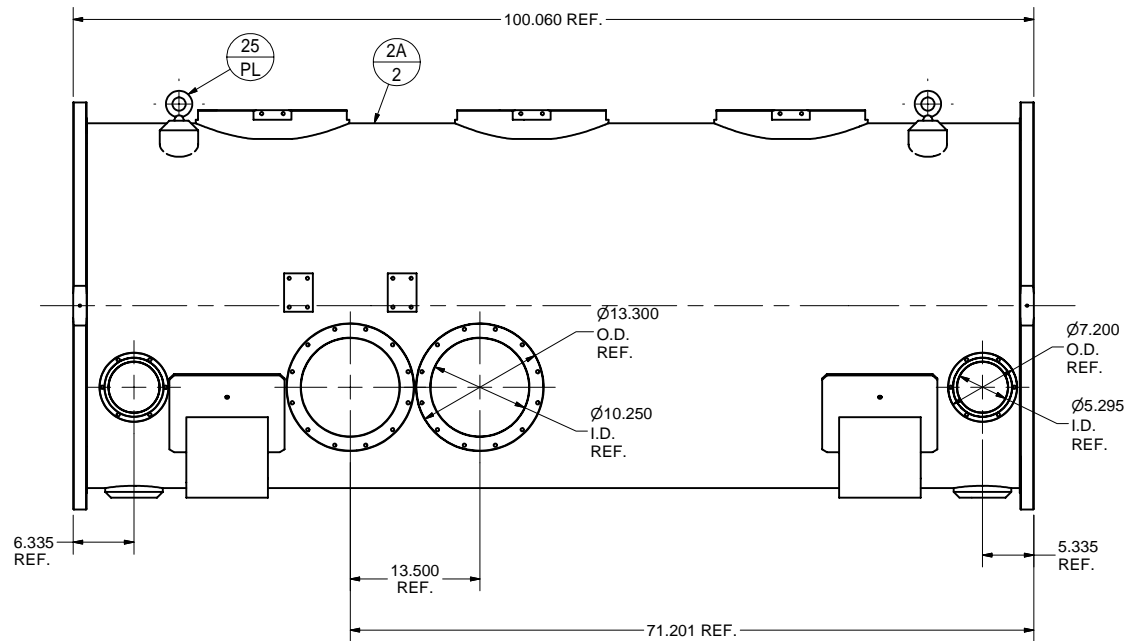
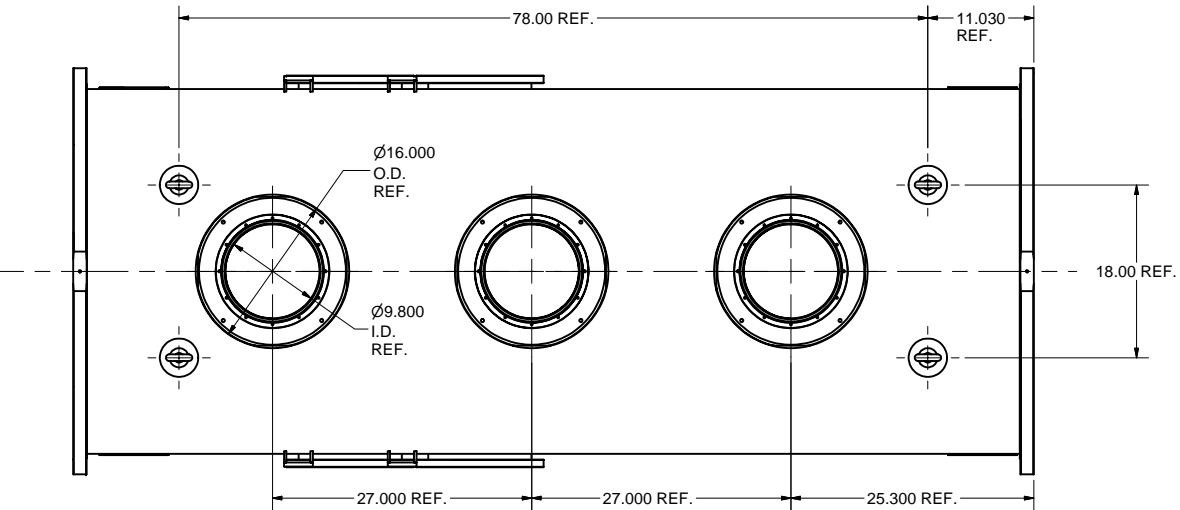
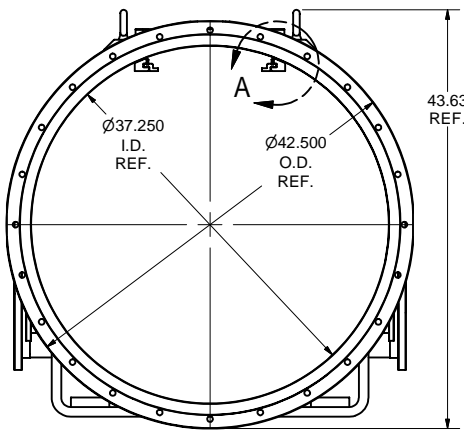


REVISIONS				
SYM.	ZONE	DESCRIPTION	DATE	APP.
A		TUNER PORT ENLARGED TO INPUT COUPLER PORT SIZE AND MOVED 1.5 IN. TOWARDS INPUT COUPLER PORT.	10/10/06	VM
B		PART ITEM 22 MODIFIED. IT IS SHOWN ON DETAILS "A" AND "B".	12/11/06	VM



DETAIL A
SCALE 1:4



DETAIL B
SCALE 1:4

1 VAC VESSEL, ASSEMBLY

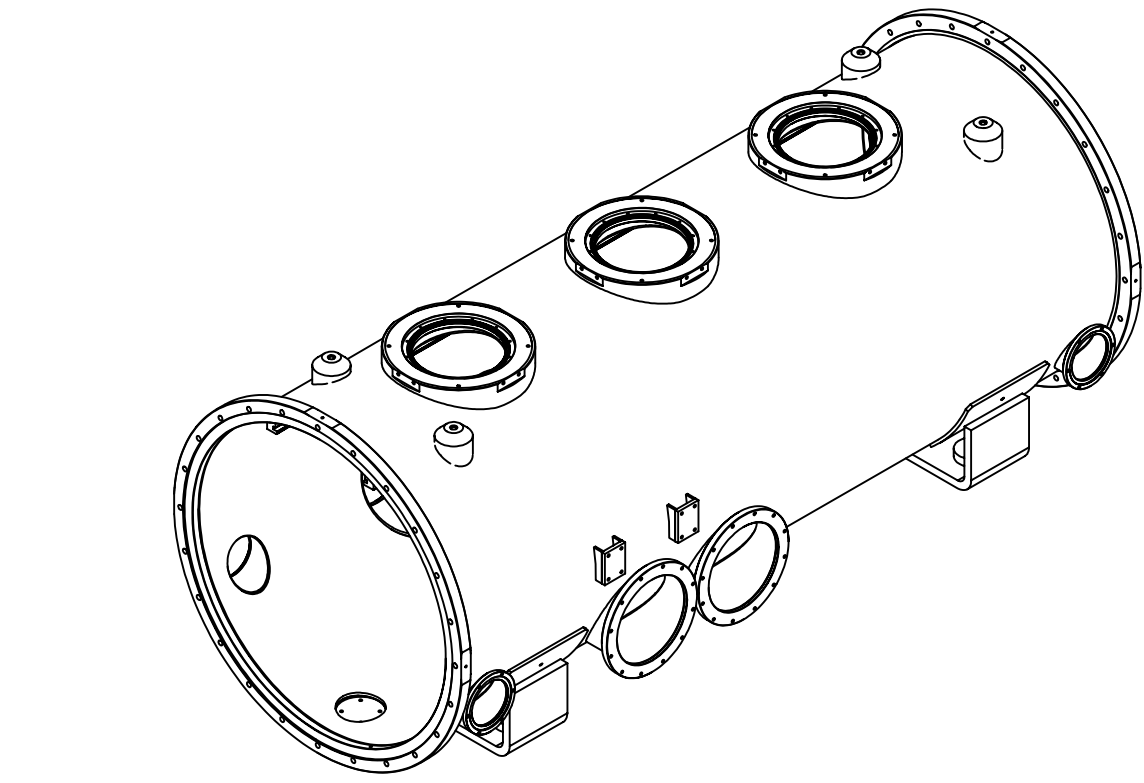
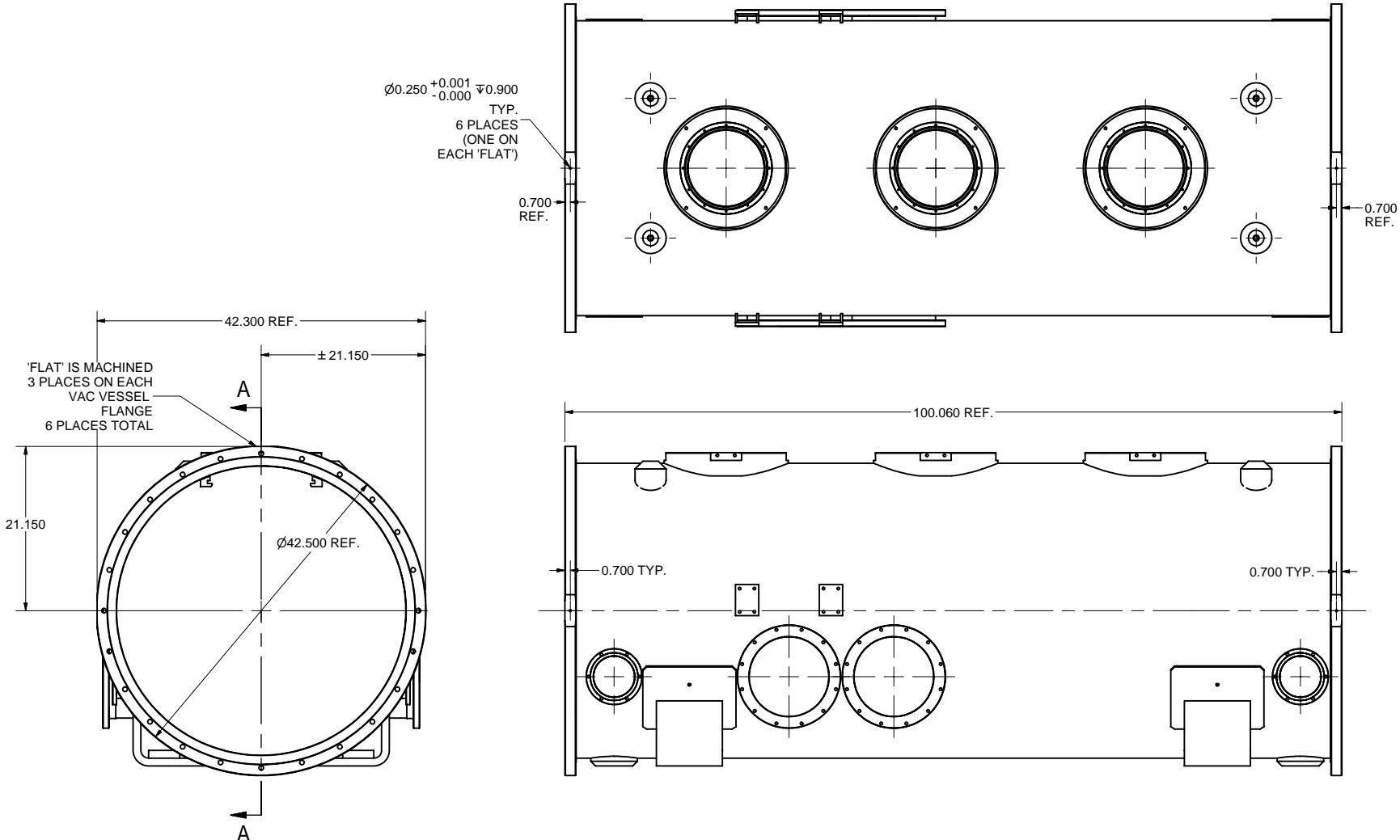
FILE NAME: 7110-003
SHEET NO.: 1
DFT. SCALE: 1:10
MATERIAL: AS NOTED
QTY: 1 REQ'D
NOTES:

25	SH.1	5/8-11UNC EYE BOLT	STN STL	4			PURCHASE
24	SH.1	#5-40UNC x .375 LG. FL HD CAP SCR.		18			PURCHASE - 316 STN STL
23	SH.12	VAC VESSEL RAIL		2			
22	SH.12	GUIDING STRIP		2			
2.1	SH.2	VAC VESSEL WELDMENT IV, MACHINING-A		1			
1	SH.1	HORIZONTAL TEST VACUUM VESSEL, ASM	X				

ITEM	DWG. NO.	DESCRIPTION	G1	G2	G3	REMARKS	REV.
			QUANTITY				
PRINT DISTR.	7110-003 SH. NO. 1 OF 12	CR-1	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES				
			CORNELL UNIVERSITY FLOYD R. NEWMAN LABORATORY ITHACA, NY 14853				
			ERL Horizontal Test Cryomodule - Vacuum Vessel Assembly				
CHECKED BY: VM		DRAWN BY: TMK	DRAWN FOR: VM	DATE: 7/7/2006	SCALE: D	7110-003 SH. NO. 1 OF 12	REV. B
APPROVED BY: ML							

FOR MACHINING LUBRICANT USE ONLY
ALKALINE DETERGENT LUBRICANT CIMSTAR 40
OR EQUIVALENT APPROVED BY CORNELL LEPP

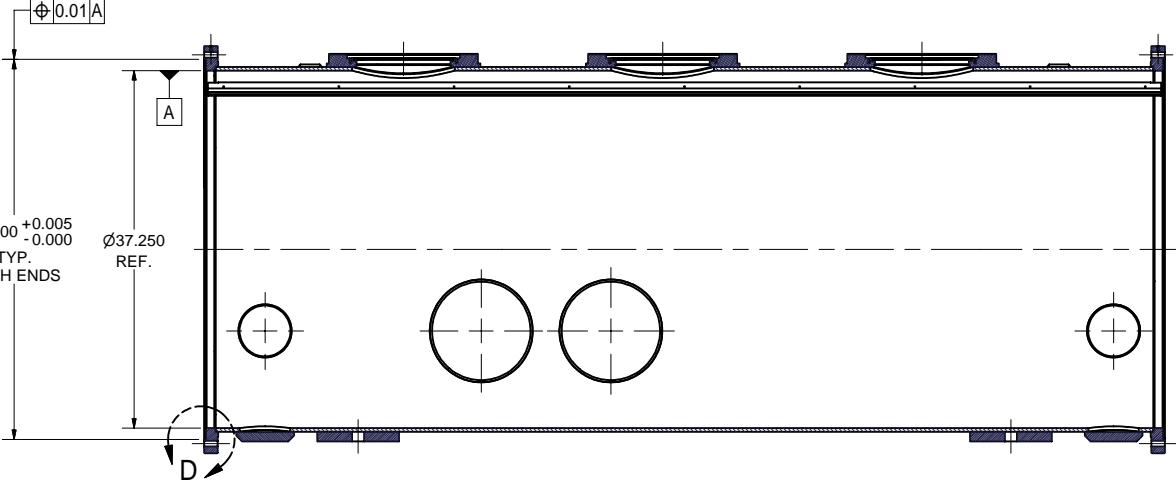
REVISIONS				
SYM.	ZONE	DESCRIPTION	DATE	APP.
A		NEW TUNER PORT IS SHOWN.	10/10/06	VM



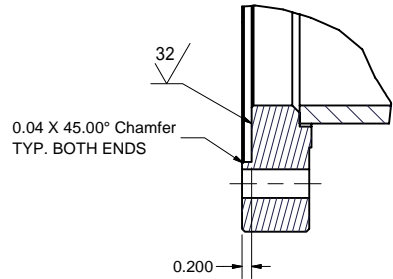
2.1 VAC VESSEL WELDMENT IV - MACHINING-A

FILE NAME: 7110-003
SHEET NO.: 2
DFT. SCALE: 1:10
MATERIAL: AS NOTED
QTY: 1 REQ'D
NOTES: MAKE FROM PART 2.2
MORE MACHINING DETAILED
ON NEXT SHEET







FOR MACHINING LUBRICANT USE ONLY
ALKALINE DETERGENT LUBRICANT CIMSTAR 40
OR EQUIVALENT APPROVED BY CORNELL LEPP



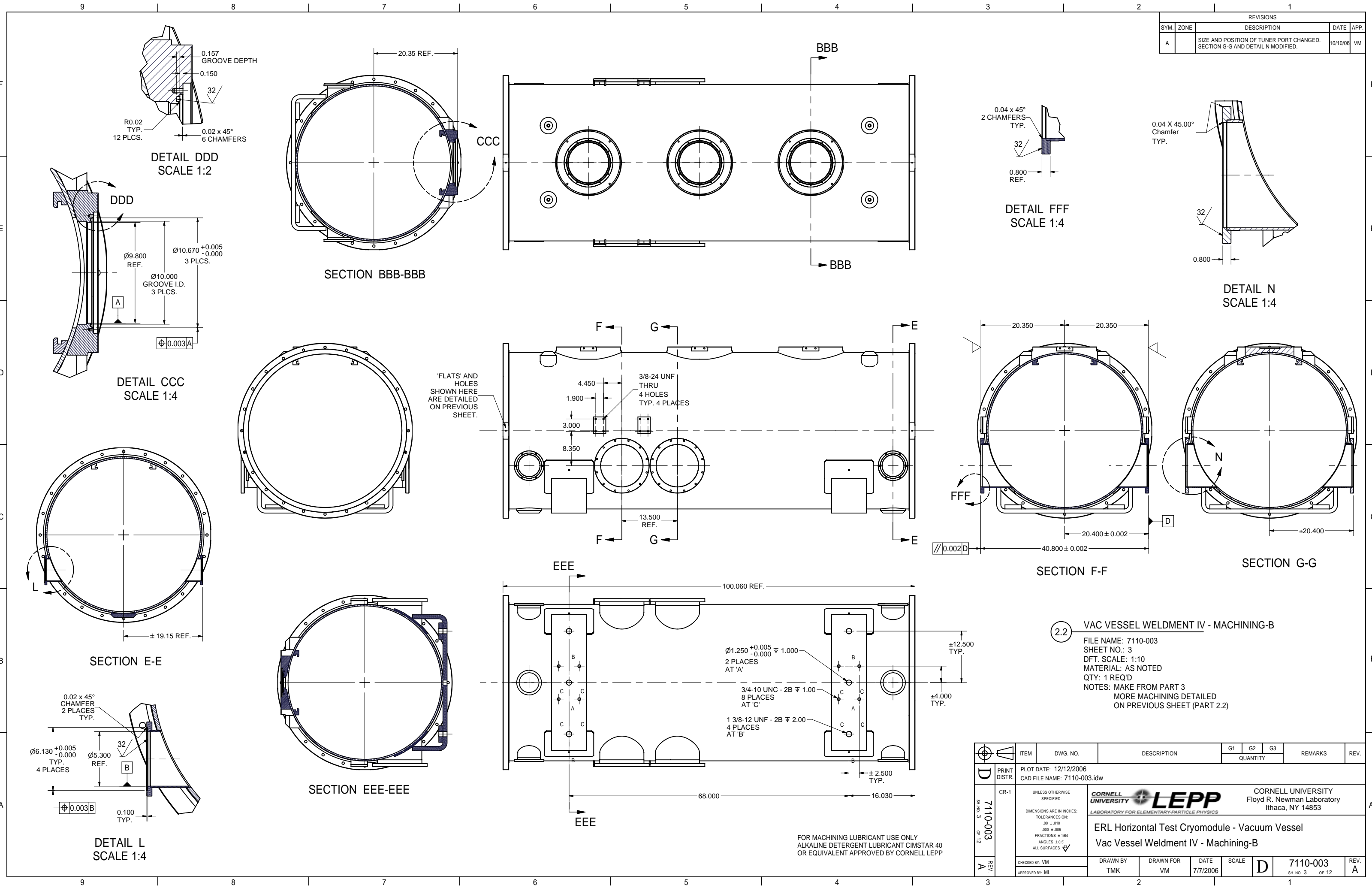
SECTION A-A







DETAIL D
SCALE 1:2

		ITEM	DWG. NO.	DESCRIPTION			G1	G2	G3	REMARKS	REV.
					QUANTITY						
	PRINT DISTR.	PLOT DATE: 12/12/2006 CAD FILE NAME: 7110-003.idw									
		CR-1	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES ✓		<div><div>CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853</div></div> <div>ERL Horizontal Test Cryomodule - Vacuum Vessel Vac Vessel Weldment IV - Machining - A</div>						
		CHECKED BY: VM APPROVED BY: ML			DRAWN BY TMK	DRAWN FOR VM	DATE 7/7/2006	SCALE		7110-003 SH. NO. 2 OF 12	REV. A

REVISIONS				
SYM.	ZONE	DESCRIPTION	DATE	APP.
A		SIZE AND POSITION OF TUNER PORT CHANGED. SECTION G-G AND DETAIL N MODIFIED.	10/10/06	VM

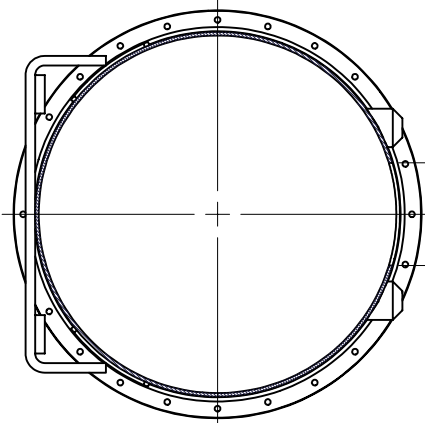


2.2 VAC VESSEL WELDMENT IV - MACHINING-B
FILE NAME: 7110-003
SHEET NO.: 3
DFT. SCALE: 1:10
MATERIAL: AS NOTED
QTY: 1 REQ'D
NOTES: MAKE FROM PART 3
MORE MACHINING DETAILED
ON PREVIOUS SHEET (PART 2.2)

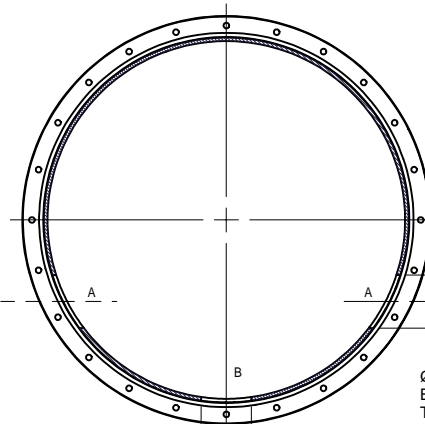
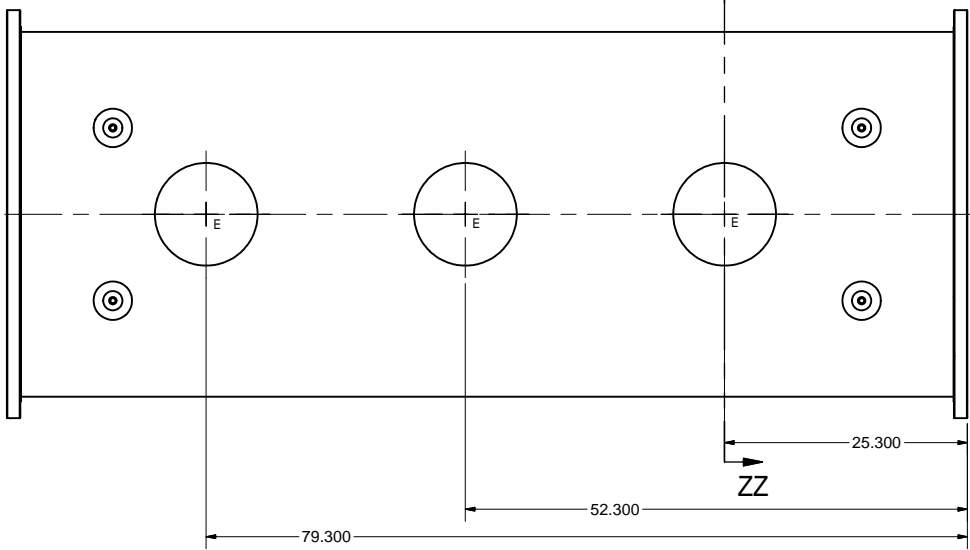
	ITEM	DWG. NO.	DESCRIPTION			G1	G2	G3	REMARKS	REV.
							QUANTITY			
	PLOT DATE: 12/12/2006 CAD FILE NAME: 7110-003.idw									
7110-003 SH. NO. 3 OF 12	CR-1	UNLESS OTHERWISE SPECIFIED:	 CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853							
		DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES 								
		ERL Horizontal Test Cryomodule - Vacuum Vessel Vac Vessel Weldment IV - Machining-B								
REV. A	CHECKED BY: VM		DRAWN BY TMK	DRAWN FOR VM	DATE 7/7/2006	SCALE D	7110-003 SH. NO. 3 OF 12		REV. A	
	APPROVED BY: ML									

FOR MACHINING LUBRICANT USE ONLY
ALKALINE DETERGENT LUBRICANT CIMSTAR 40
OR EQUIVALENT APPROVED BY CORNELL LEPP

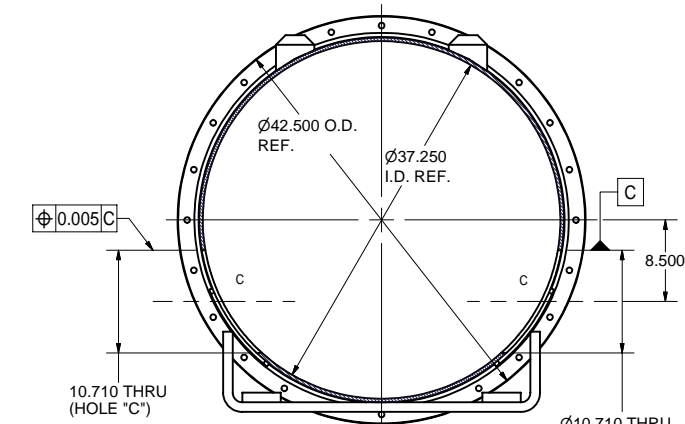
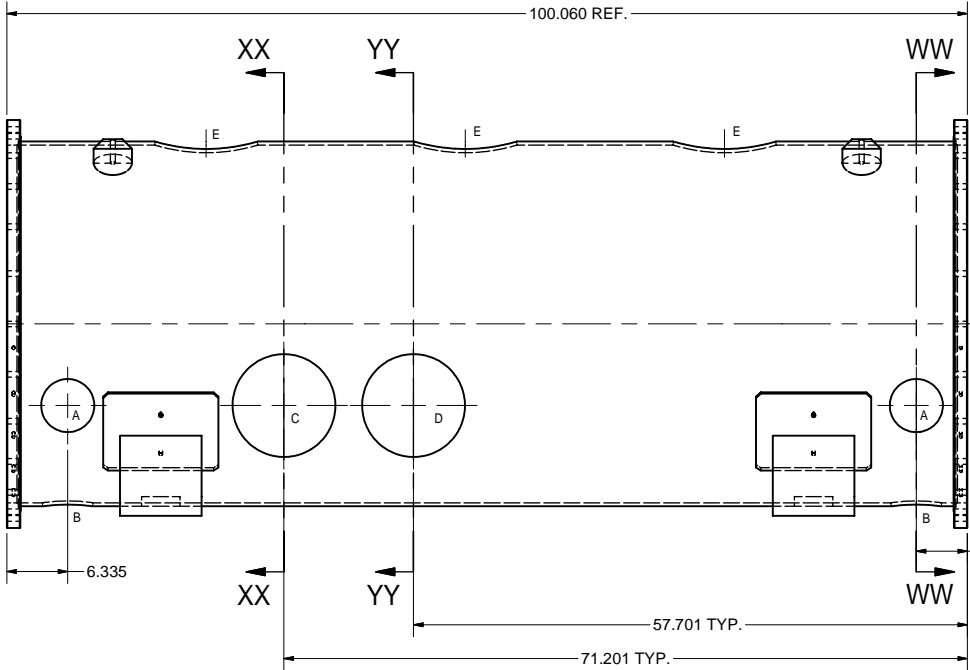
REVISIONS				
SYM.	ZONE	DESCRIPTION	DATE	APP.
A		SIZE AND POSITION OF TUNER PORT BORE (HOLES 'D') CHANGED. SECTION YY-YY MODIFIED.	10/10/06	VM



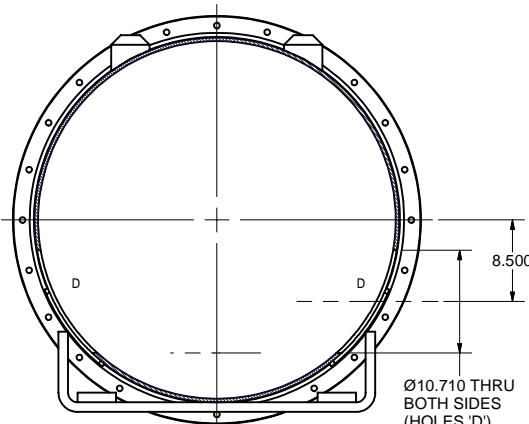
SECTION ZZ-ZZ



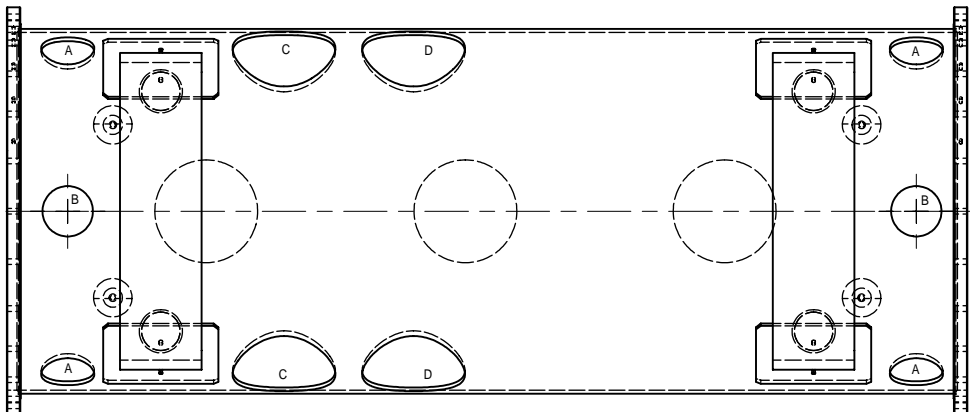
SECTION WW-WW



SECTION XX-XX









SECTION YY-YY

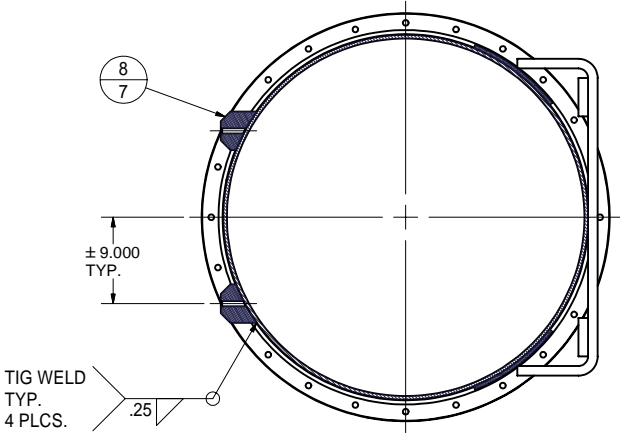
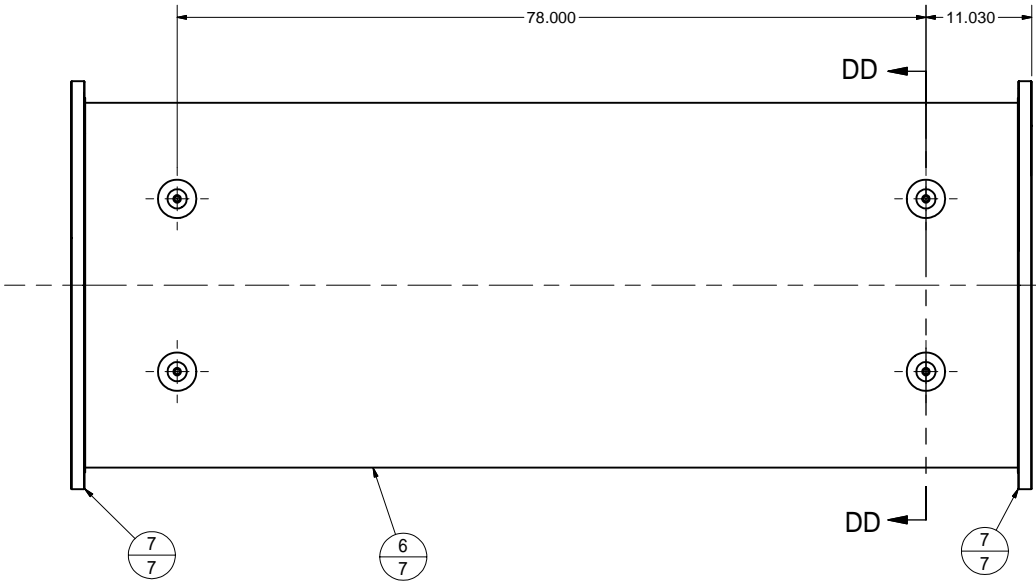


4 POST WELDMENT I, MACHINING
FILE NAME: 7110-003
SHEET NO.: 5
DFT. SCALE: 1:10
MATERIAL: AS NOTED
QTY: 1 PER SUB-ASM
NOTES: MAKE FROM PART 5

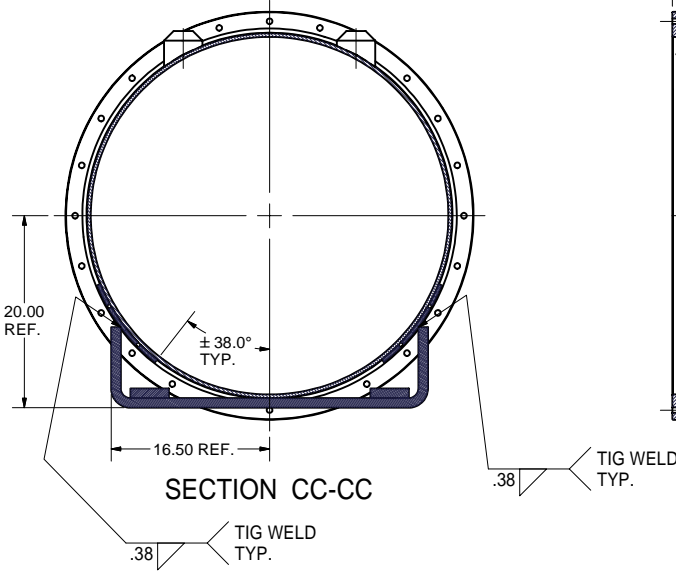
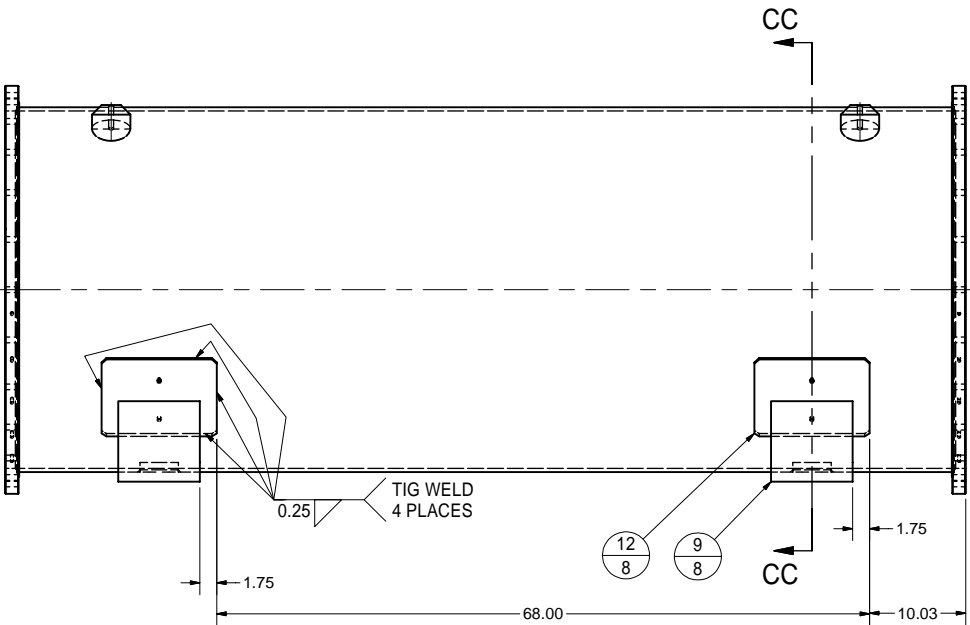
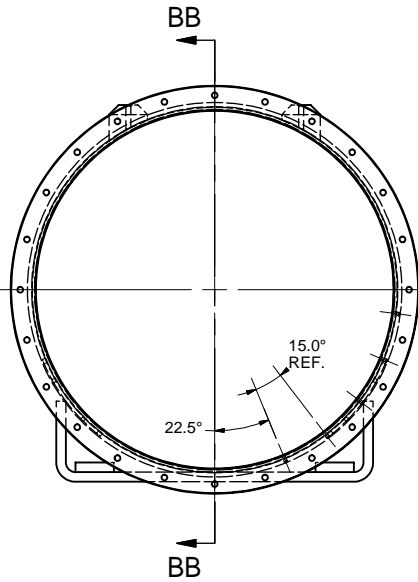
FOR MACHINING LUBRICANT USE ONLY
ALKALINE DETERGENT LUBRICANT CIMSTAR 40
OR EQUIVALENT APPROVED BY CORNELL LEPP

		ITEM	DWG. NO.		DESCRIPTION			G1	G2	G3	REMARKS	REV.
								QUANTITY				
	PRINT DISTR.	PLOT DATE: 12/12/2006 CAD FILE NAME: 7110-003.idw										
		CR-1	<div>UNLESS OTHERWISE SPECIFIED:</div> <div>DIMENSIONS ARE IN INCHES:</div> <div>TOLERANCES ON:</div> <div>.00 ± .010</div> <div>.000 ± .005</div> <div>FRACTIONS ± 1/64</div> <div>ANGLES ± 0.5°</div> <div>ALL SURFACES </div>			<div> LEPP</div> <div>CORNELL UNIVERSITY</div> <div>Floyd R. Newman Laboratory</div> <div>Ithaca, NY 14853</div> <div>LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS</div>						
ERL Horizontal Test Cryomodule - Vacuum Vessel Post Weldment I Machining												
	REV.	CHECKED BY: VM	DRAWN BY		DRAWN FOR		DATE	SCALE		7110-003	REV.	
	A	APPROVED BY: ML	TMK		VM		7/7/2006			SH. NO. 5 OF 12		

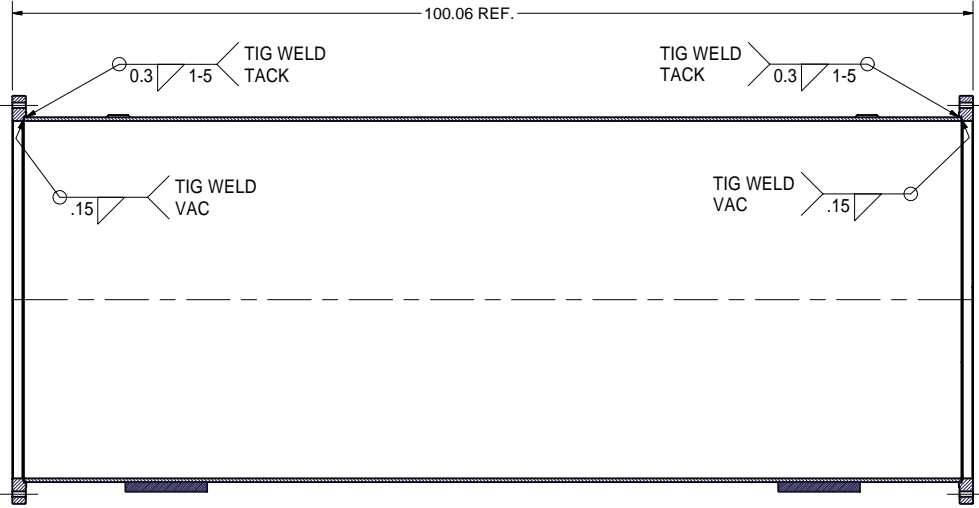
REVISIONS				1
SYM.	ZONE	DESCRIPTION	DATE	APP.



SECTION DD-DD



SECTION CC-CC



SECTION BB-BB

NOTE:
1. HOLES IN BOTH FLANGES TO BE
ALIGNED WITH ONE ANOTHER WITHIN 0.1°
AND LOCATED AS SHOWN ABOVE.
2. 3/8-16UNC HOLES IN BOTH FLANGES
MUST BE ALIGNED AS SHOWN ABOVE.

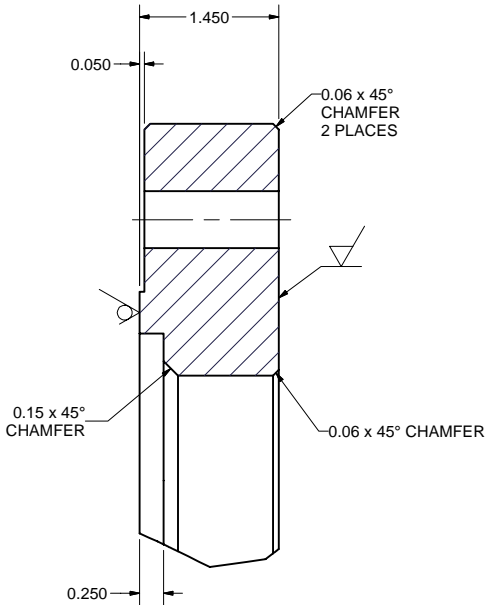
5 HORIZONTAL TEST VAC VESSEL, WELDMENT I
FILE NAME: 7110-003
SHEET NO.: 6
DFT. SCALE: 1:10
MATERIAL: AS NOTED
QTY: 1 PER SUB-ASM
NOTES:

FOR MACHINING LUBRICANT USE ONLY
ALKALINE DETERGENT LUBRICANT CIMSTAR 40
OR EQUIVALENT APPROVED BY CORNELL LEPP

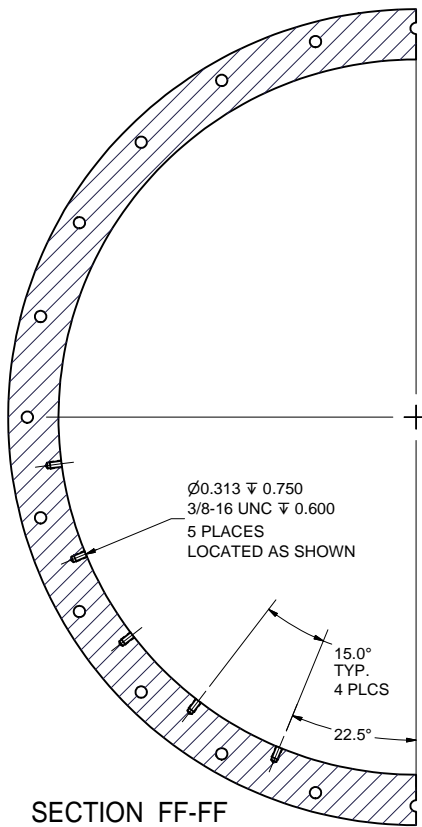
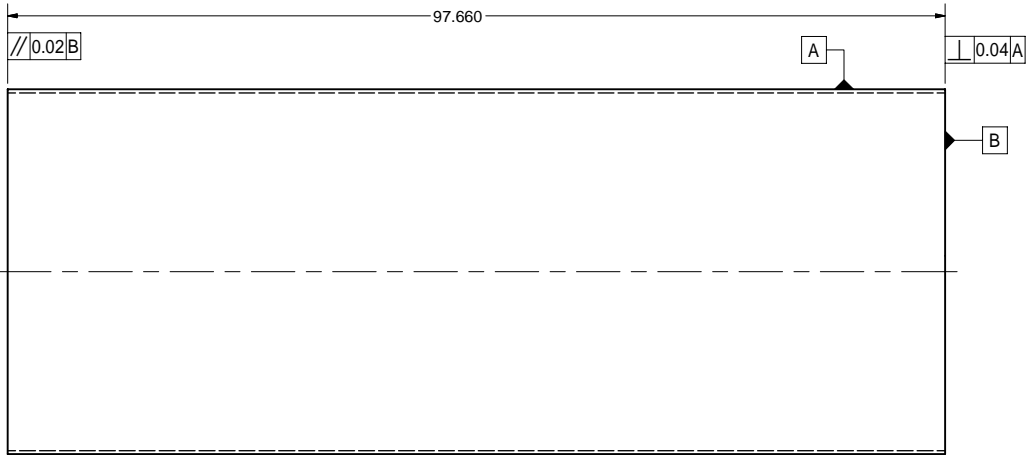
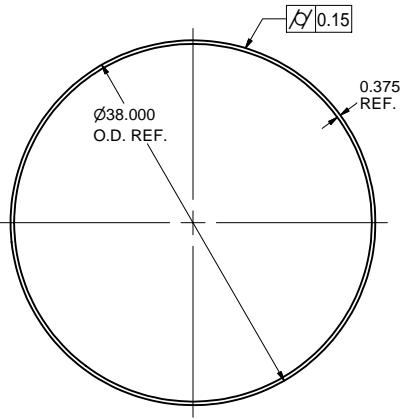
12	SH.8	CYLINDER PATCH		4		
9	SH.8	FOOT, SUB-ASM		2		
8	SH.7	EYE BOLT BOSS		4		
7	SH.7	HORIZ. TEST VAC VESSEL FLANGE		2		
6	SH.7	HORIZ. TEST VAC VESSEL CYLINDER		1		
5	SH.6	HORIZ. TEST VAC VESSEL, WELDMENT I	1	X		

ITEM	DWG. NO.	DESCRIPTION	G1	G2	G3	REMARKS	REV.
PLOT DATE: 12/12/2006 CAD FILE NAME: 7110-003.idw			QUANTITY				
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ±.010 .000 ±.005 FRACTIONS ±1/64 ANGLES ±0.5° ALL SURFACES			CORNELL UNIVERSITY FLOYD R. NEWMAN LABORATORY ITHACA, NY 14853			ERL Horizontal Test Cryomodule - Vacuum Vessel Horizontal Test Vac Vessel, Weldment I	
CHECKED BY: VM APPROVED BY: ML		DRAWN BY: TMK	DRAWN FOR: VM	DATE: 7/7/2006	SCALE: D	7110-003 SH. NO. 6 OF 12	REV.

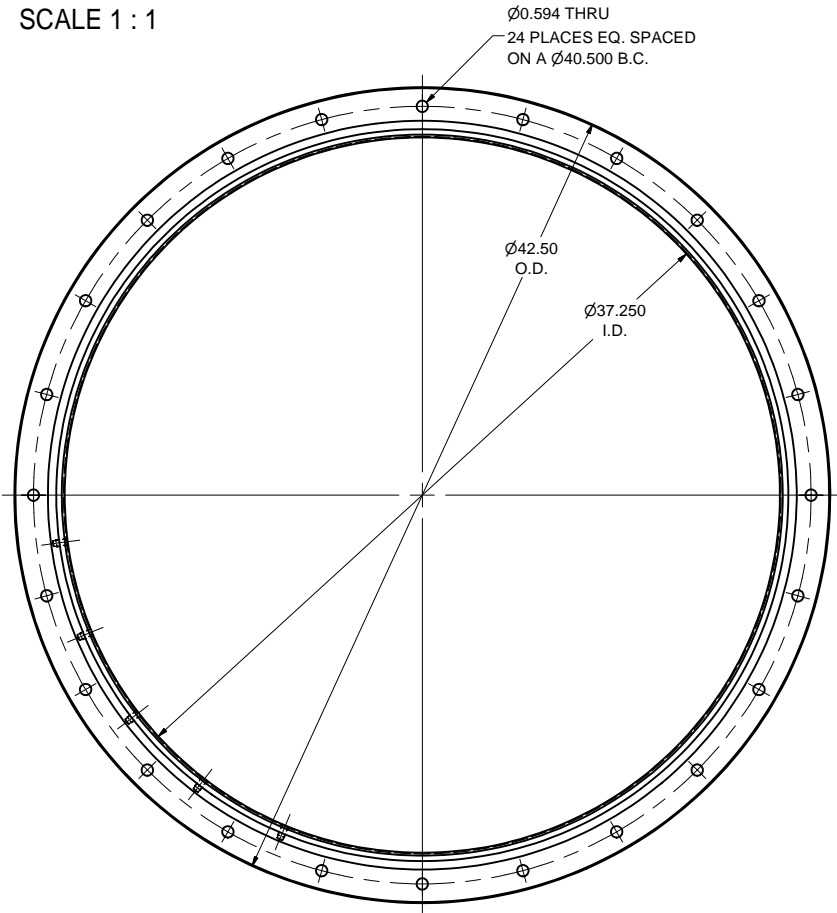
REVISIONS			
SYM.	ZONE	DESCRIPTION	DATE APP.



DETAIL GG
SCALE 1 : 1

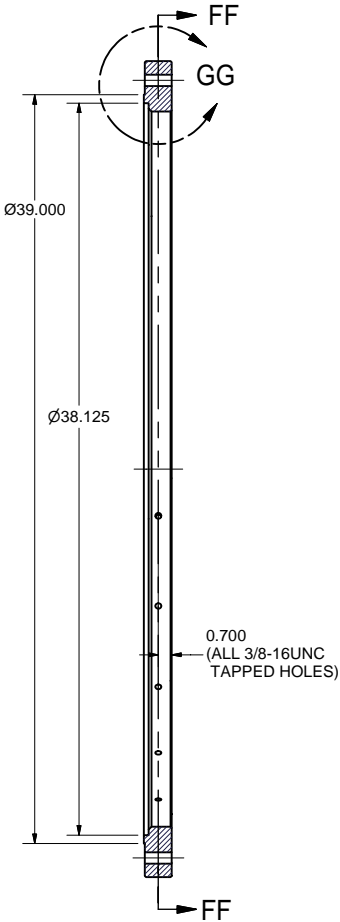


SECTION FF-FF



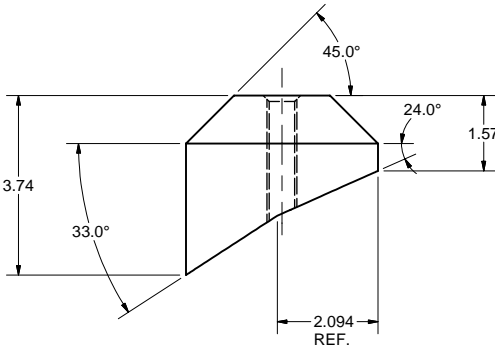
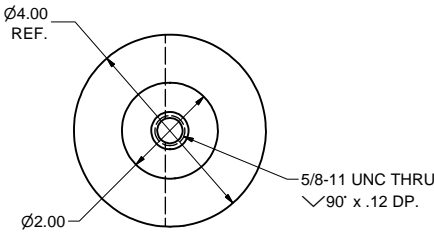
7 HORIZONTAL TEST VAC VESSEL FLANGE

FILE NAME: 7110-003
SHEET NO.: 7
DFT. SCALE: 1:5
MATERIAL: 1.50" 304L STN STL SHEET
QTY: 2 PER SUB-ASM
NOTES:



6 HORIZONTAL TEST VAC VESSEL CYLINDER


FILE NAME: 7110-003
SHEET NO.: 7
DFT. SCALE: 1:10
MATERIAL: 38.00"O.D. x 0.375" WALL 304L STN STL TUBE
QTY: 1 REQ'D
NOTES:



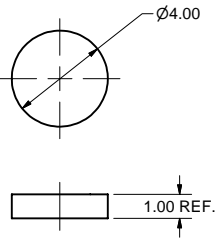
8 EYE BOLT BOSS

FILE NAME: 7110-003
SHEET NO.: 7
DFT. SCALE: 1:2
MATERIAL: 4"O.D. 304L STN STL ROD
QTY: 4 PER SUB-ASM
NOTES:

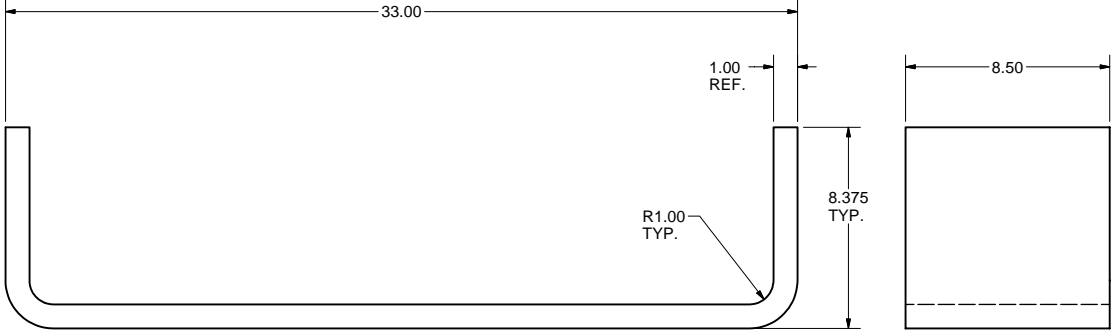
FOR MACHINING LUBRICANT USE ONLY
ALKALINE DETERGENT LUBRICANT CIMSTAR 40
OR EQUIVALENT APPROVED BY CORNELL LEPP

		ITEM	DWG. NO.		DESCRIPTION			G1	G2	G3	REMARKS		REV.
								QUANTITY					
D	PRINT DISTR.	PLOT DATE: 12/12/2006 CAD FILE NAME: 7110-003.idw											
	7110-003 SH. NO. 7 OF 12	CR-1	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES ✓		<div><div>LEPP</div><div>CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853</div><div>LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS</div></div>								
ERL Horizontal Test Cryomodule - Vacuum Vessel Vac Vessel Cylinder, Flanges + Eye Bolt Boss Details													
CHECKED BY: VM					DRAWN BY	DRAWN FOR	DATE	SCALE	D	7110-003	REV.		
APPROVED BY: ML					TMK	VM	7/7/2006					SH. NO. 7 OF 12	

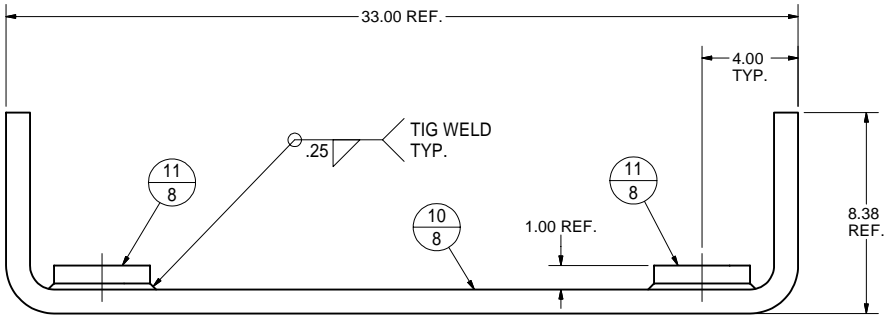
REVISIONS			
SYM.	ZONE	DESCRIPTION	DATE APP.



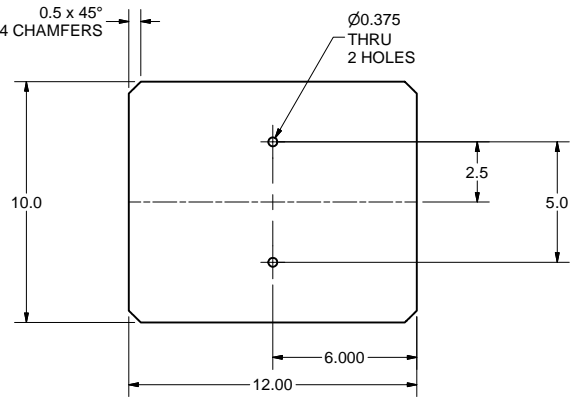
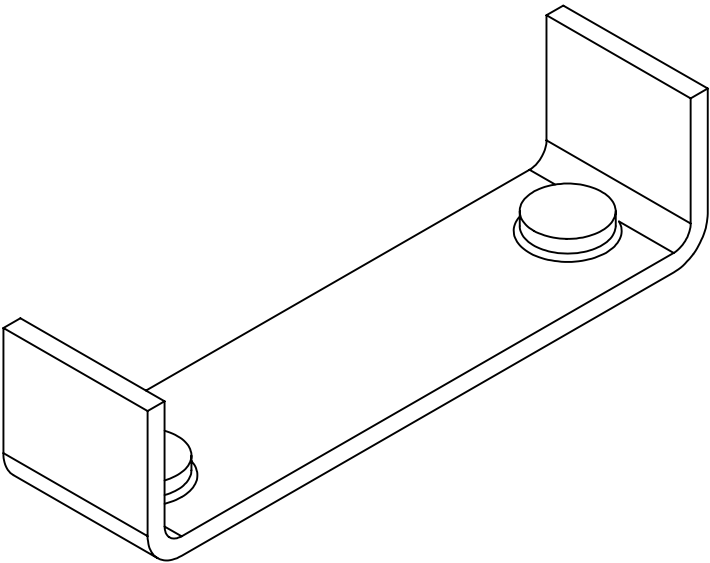
11 FOOT BOSS
FILE NAME: 7110-003
SHEET NO.: 8
DFT. SCALE: 1:4
MATERIAL: 304L STN STL 1" THK. PLATE
QTY: 2 PER SUB-ASM (4 TOTAL)
NOTES:



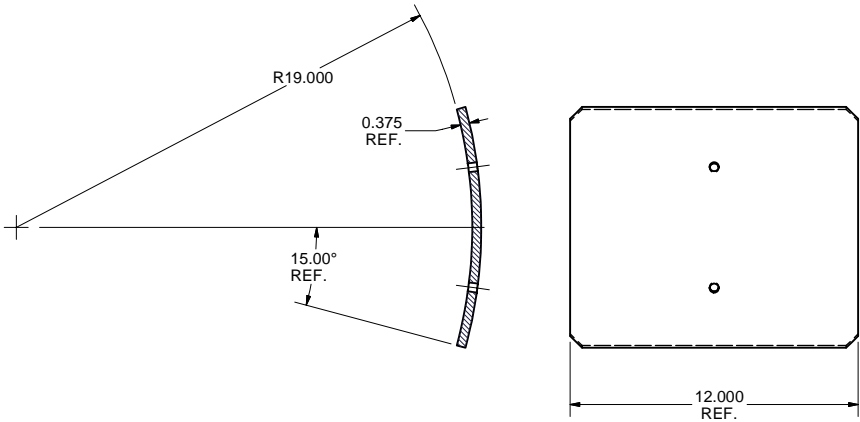
10 FOOT
FILE NAME: 7110-003
SHEET NO.: 8
DFT. SCALE: 1:4
MATERIAL: 304L STN STL 1" THK. PLATE
QTY: 1 PER SUB-ASM (2 TOTAL)
NOTES: DEVELOPED LENGTH = 46.274" LONG



9 FOOT, SUB-ASM
FILE NAME: 7110-003
SHEET NO.: 8
DFT. SCALE: 1:4
MATERIAL: AS NOTED
QTY: 2 PER SUB-ASM
NOTES:







FLAT PATTERN



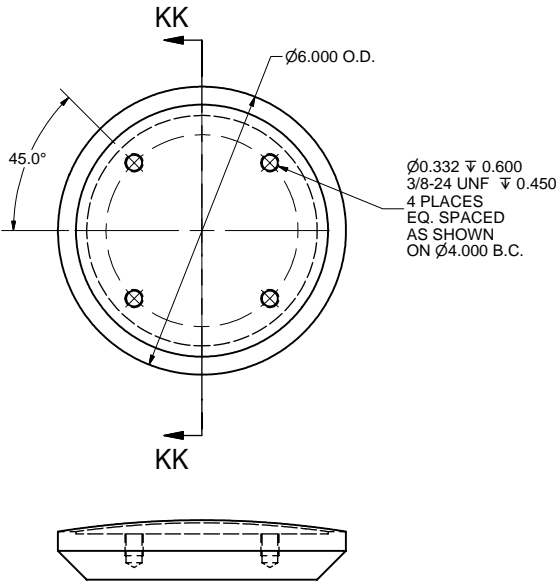
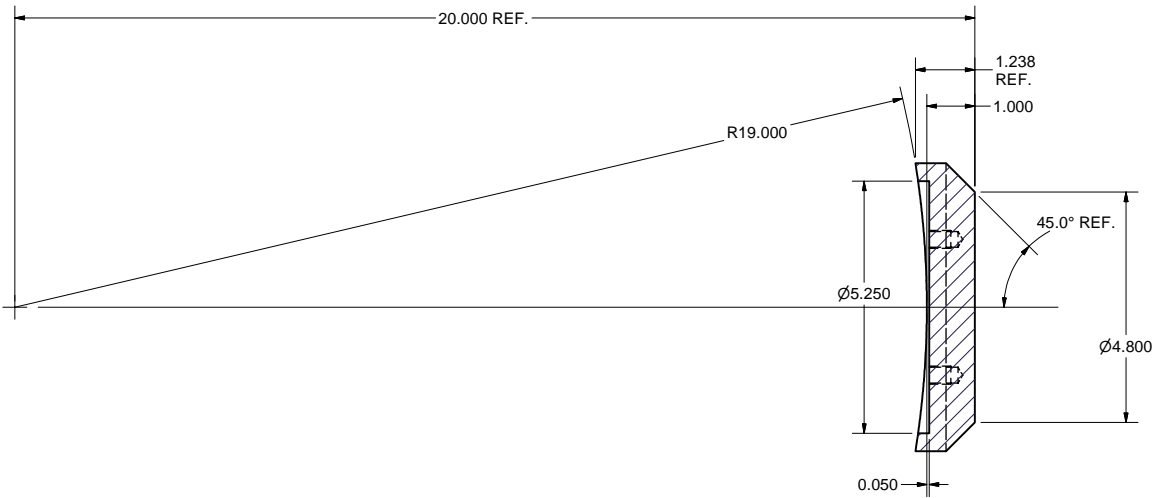
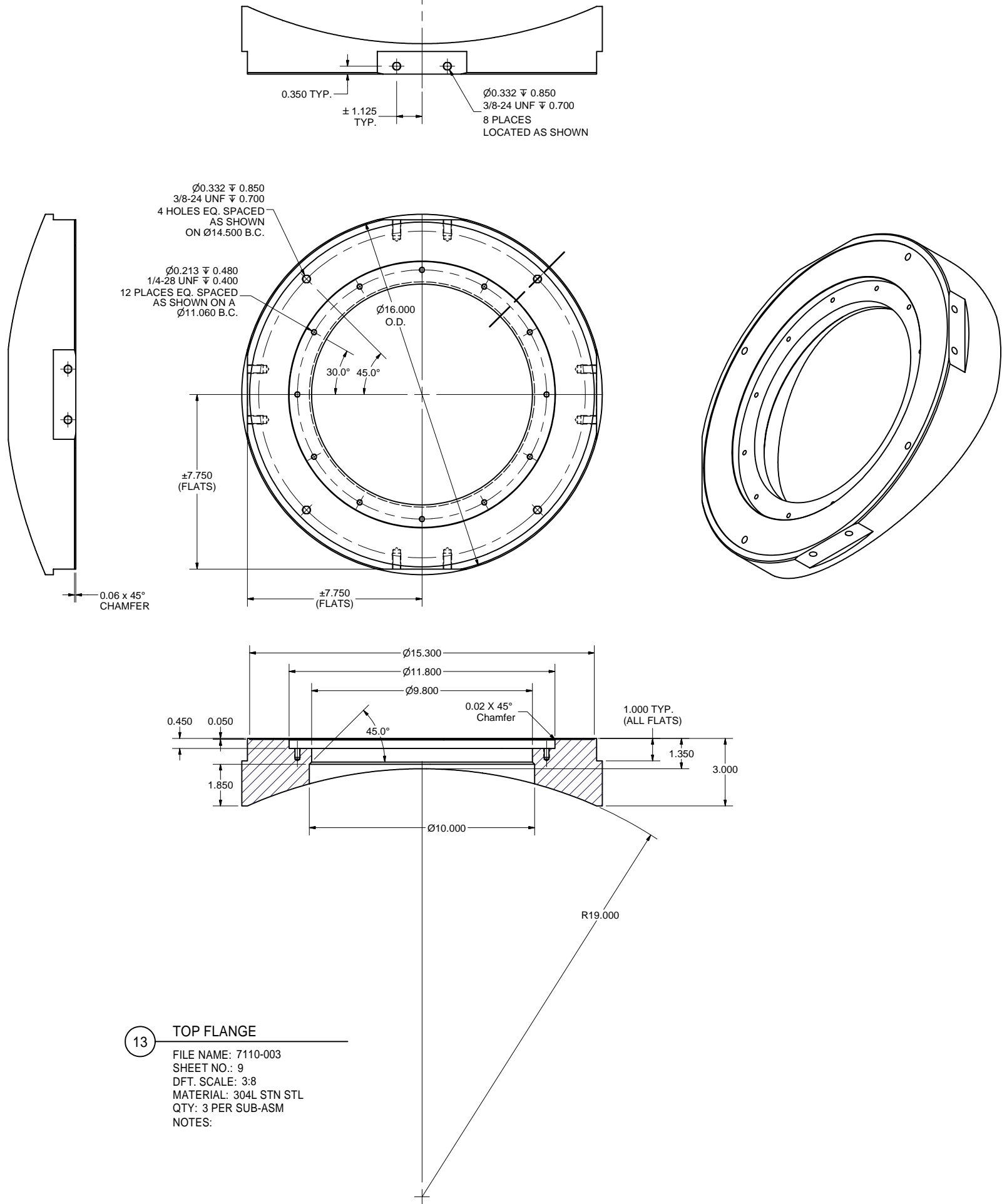
12 CYLINDER PATCH
FILE NAME: 7110-003
SHEET NO.: 8
DFT. SCALE: 1:4
MATERIAL: 304L STN STL 3/8" THK. PLATE
QTY: 4 PER SUB-ASM
NOTES:






11	SH.8	FOOT BOSS			2	
10	SH.8	FOOT			1	
9	SH.8	FOOT, SUB-ASM	2		X	

	ITEM	DWG. NO.	DESCRIPTION			G1	G2	G3	REMARKS	REV.
							QUANTITY			
	PRINT DISTR.	PLOT DATE: 12/12/2006 CAD FILE NAME: 7110-003.idw								
		7110-003 SH. NO. 8 OF 12	CR-1	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES ✓	<div><div>CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853</div></div> <div>ERL Horizontal Test Cryomodule - Vacuum Vessel Vac Vessel Foot Details + Sub-Asm</div>					
CHECKED BY: VM	DRAWN BY TMK				DRAWN FOR VM	DATE 7/7/2006	SCALE		7110-003 SH. NO. 8 OF 12	REV.
APPROVED BY: ML										

FOR MACHINING LUBRICANT USE ONLY
ALKALINE DETERGENT LUBRICANT CIMSTAR 40
OR EQUIVALENT APPROVED BY CORNELL LEPP

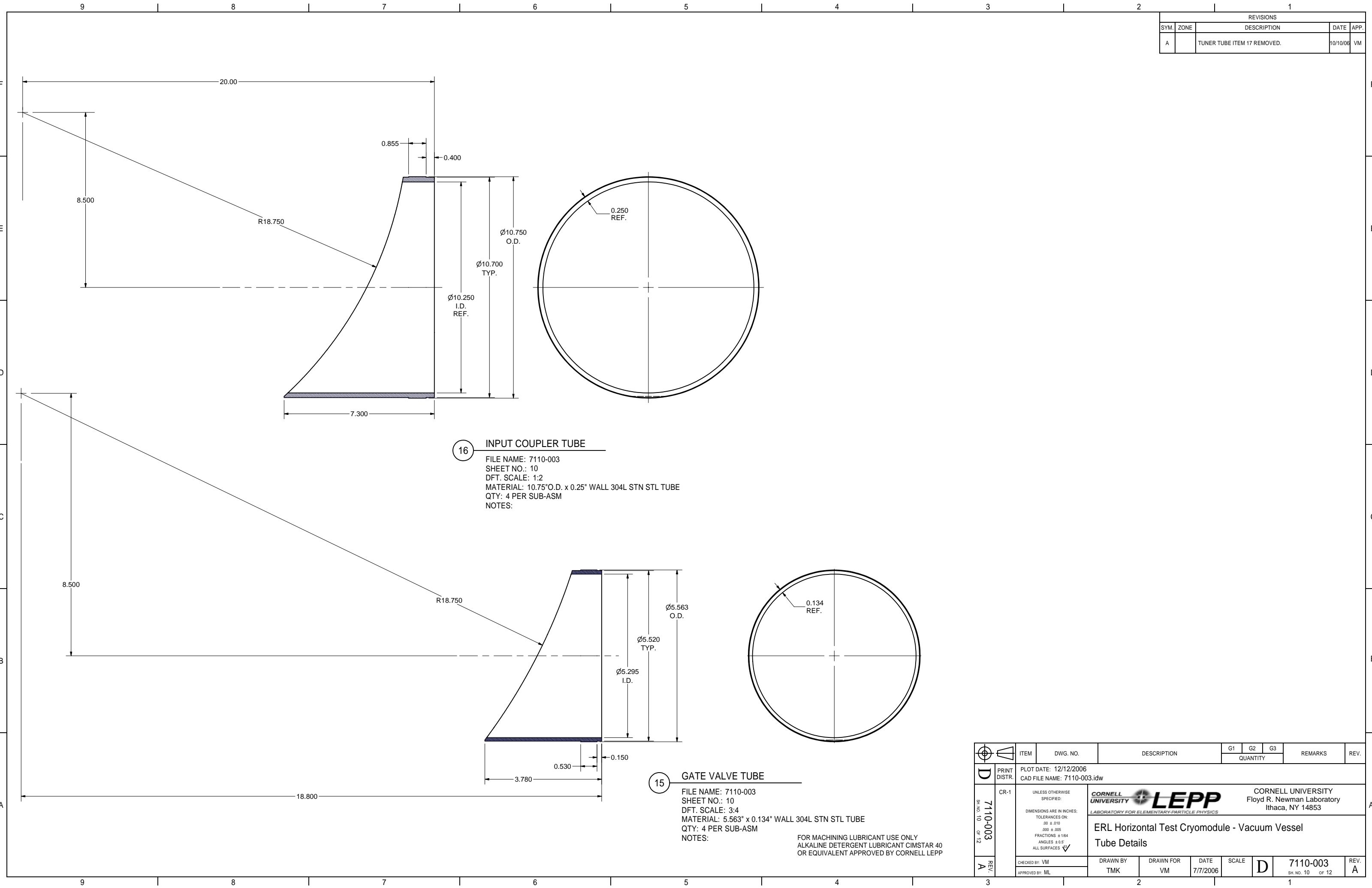
REVISIONS			
SYM.	ZONE	DESCRIPTION	DATE APP.



		ITEM	DWG. NO.	DESCRIPTION			G1	G2	G3	REMARKS	REV.
					QUANTITY						
	PRINT DISTR.	PLOT DATE: 12/12/2006 CAD FILE NAME: 7110-003.idw									
	7110-003 SH. NO. 9 OF 12	CR-1	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES ✓		<div><div></div><div>CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853</div></div> <div>ERL Horizontal Test Cryomodule - Vacuum Vessel Top Flange + Gate Valve Support Blank Details</div>						
CHECKED BY: VM APPROVED BY: ML			DRAWN BY TMK	DRAWN FOR VM	DATE 7/7/2006	SCALE		7110-003 SH. NO. 9 OF 12	REV.		




FOR MACHINING LUBRICANT USE ONLY
 ALKALINE DETERGENT LUBRICANT CIMSTAR 40
 OR EQUIVALENT APPROVED BY CORNELL LEPP

REVISIONS				
SYM.	ZONE	DESCRIPTION	DATE	APP.
A		TUNER TUBE ITEM 17 REMOVED.	10/10/06	VM

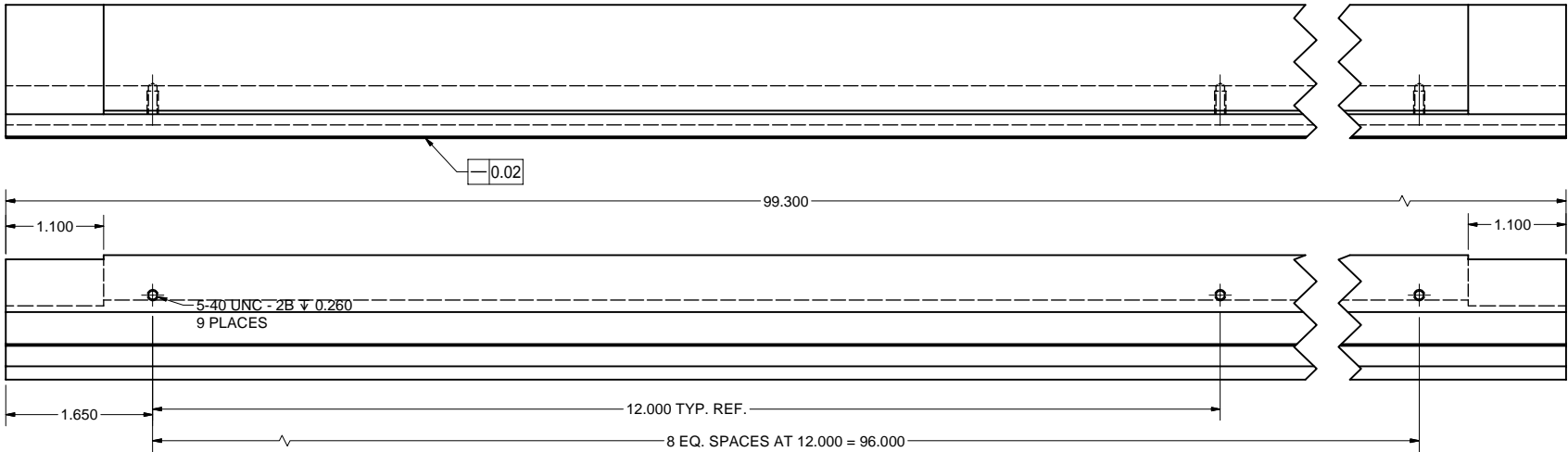
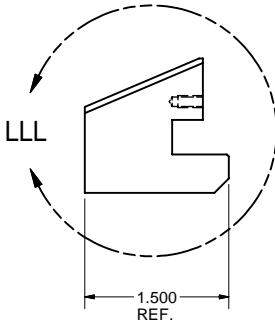


16 INPUT COUPLER TUBE
FILE NAME: 7110-003
SHEET NO.: 10
DFT. SCALE: 1:2
MATERIAL: 10.75"O.D. x 0.25" WALL 304L STN STL TUBE
QTY: 4 PER SUB-ASM
NOTES:

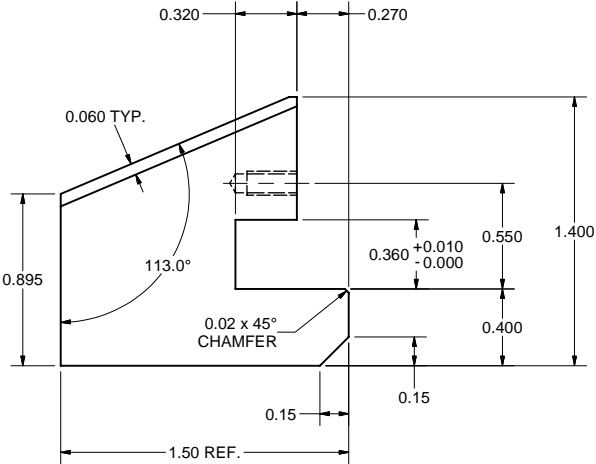
15 GATE VALVE TUBE
FILE NAME: 7110-003
SHEET NO.: 10
DFT. SCALE: 3:4
MATERIAL: 5.563" x 0.134" WALL 304L STN STL TUBE
QTY: 4 PER SUB-ASM
NOTES:
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OR EQUIVALENT APPROVED BY CORNELL LEPP

	ITEM	DWG. NO.	DESCRIPTION			G1	G2	G3	REMARKS	REV.
							QUANTITY			
	PRINT DISTR.	PLOT DATE: 12/12/2006 CAD FILE NAME: 7110-003.idw								
7110-003 SH. NO. 10 OF 12	CR-1	UNLESS OTHERWISE SPECIFIED:	<div><div>CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853</div></div> <div>ERL Horizontal Test Cryomodule - Vacuum Vessel Tube Details</div>							
		DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES ✓								
REV. A	CHECKED BY: VM	DRAWN BY	DRAWN FOR	DATE	SCALE	D	7110-003		REV. A	
	APPROVED BY: ML	TMK	VM	7/7/2006			SH. NO. 10 OF 12			

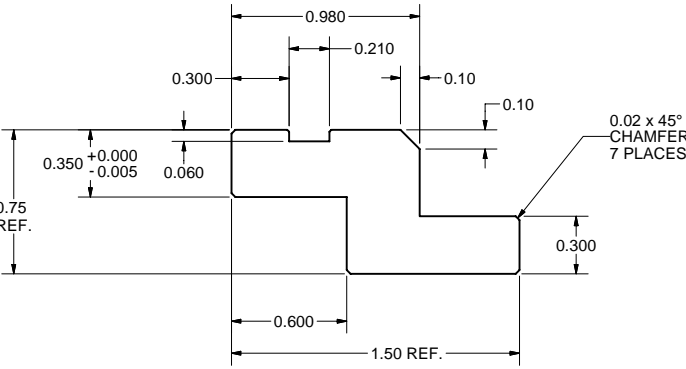
REVISIONS				
SYM.	ZONE	DESCRIPTION	DATE	APP.
B		PART ITEM 21 (DETAIL "LLL"): DIM. 0.550 WAS 0.488. PART ITEM 12: DIM 0.500 WAS 0.375, DIM. 0.250 WAS 0.188.	12/11/06	VM



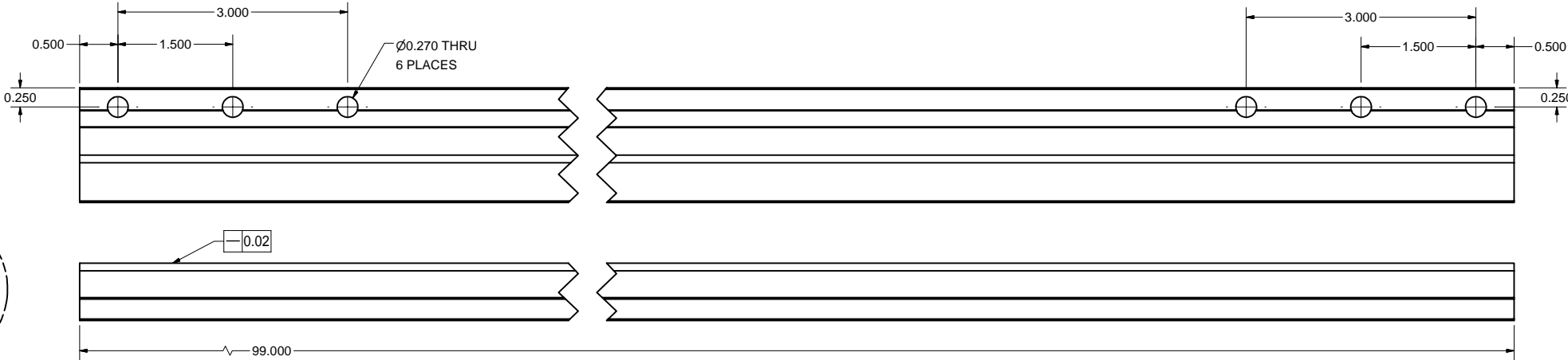
21 VAC VESSEL RAIL SUPPORT
FILE NAME: 7110-003
SHEET NO.: 12
DFT. SCALE: 1:1
MATERIAL: 1.50" x 1.50" 304L STN STL SQUARE BAR
QTY: 2 PER SUB-ASM
NOTES:



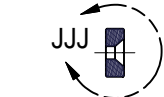
DETAIL LLL
SCALE 2:1



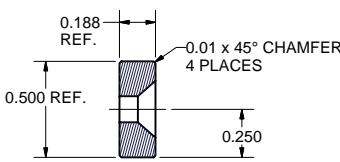
DETAIL KKK
SCALE 2 : 1



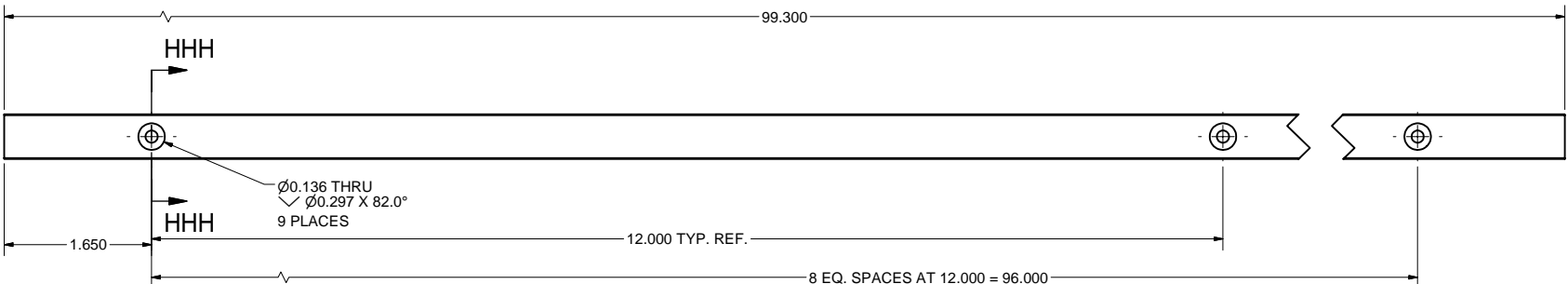
23 VAC VESSEL RAIL
FILE NAME: 7110-003
SHEET NO.: 12
DFT. SCALE: 1:1
MATERIAL: 0.75" x 1.50" 304L STN STL RECT. BAR
QTY: 2 PER ASM
NOTES:



SECTION HHH-HHH




DETAIL JJJ
SCALE 2 : 1



22 GUIDING STRIP
FILE NAME: 7110-003
SHEET NO.: 12
DFT. SCALE: 1:1
MATERIAL: 0.18" x 0.5" 304L STN STL RECT. BAR
QTY: 2 PER ASM
NOTES:

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		ITEM	DWG. NO.	DESCRIPTION			G1	G2	G3	REMARKS	REV.
					QUANTITY						
D	PRINT DISTR.	PLOT DATE: 12/12/2006 CAD FILE NAME: 7110-003.idw									
7110-003 SH. NO. 12 OF 12	CR-1	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES ✓		<div><div><div>CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853</div></div><div>ERL Horizontal Test Cryomodule - Vacuum Vessel Vac Vessel Rail Details</div></div>							
				CHECKED BY: VM		DRAWN BY	DRAWN FOR	DATE	SCALE	D	7110-003
B	REV.	APPROVED BY: ML		TMK	VM	7/7/2006				SH. NO. 12 OF 12	B