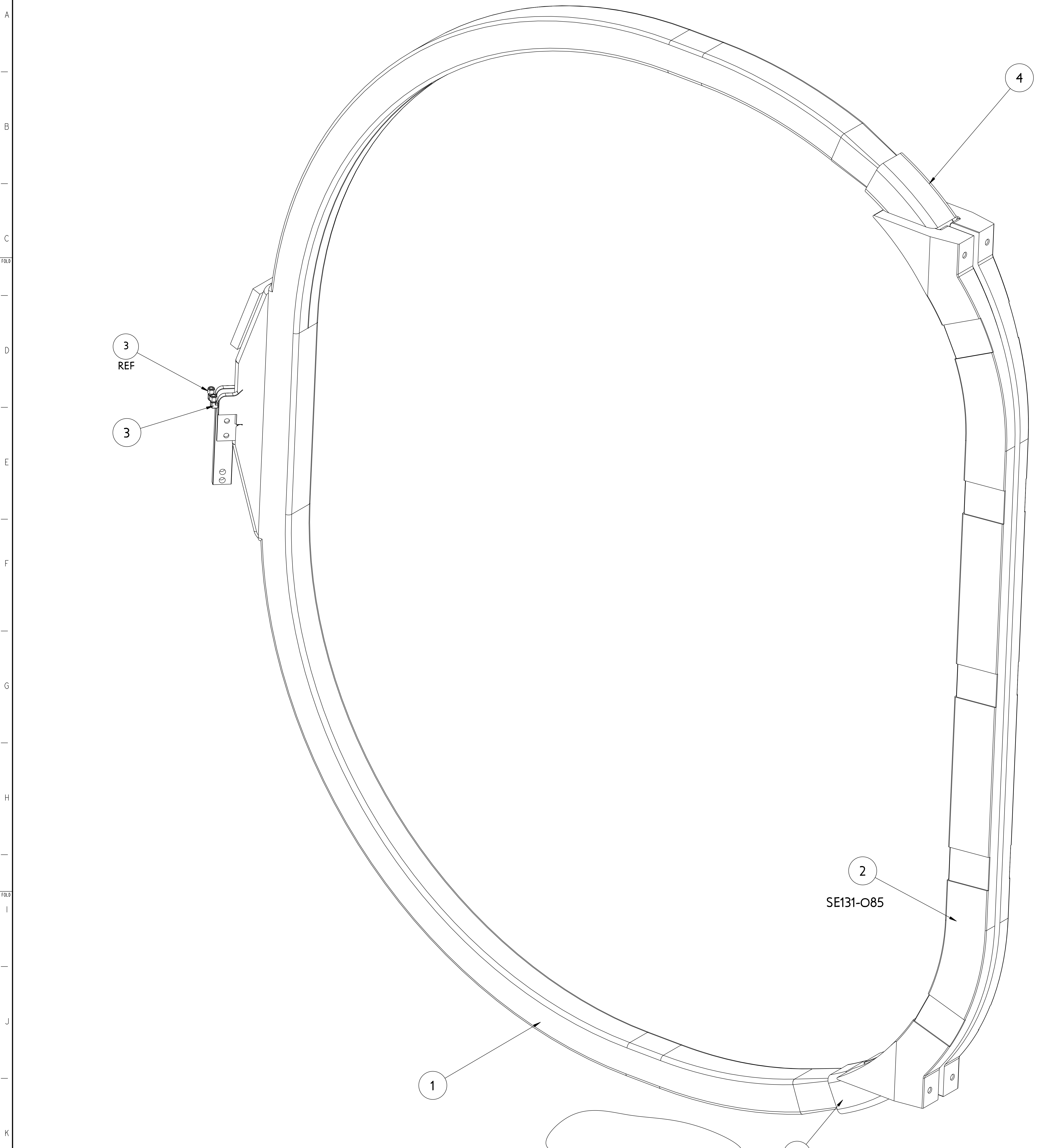


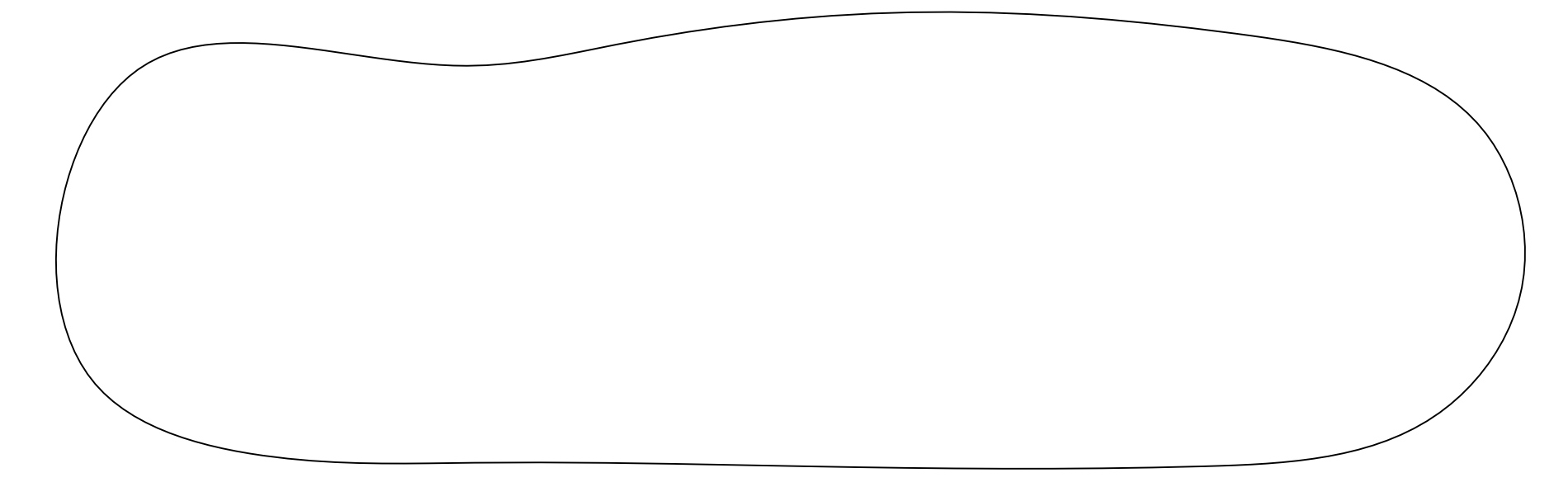
NO.	REVISION	BY	CH	SUP	APPROVED	DATE
1	REVISED PER ECN # 5103	JDR	MK	JS	M. KALISH	04/07/06



NOTE

1. SEE SPECIFICATION NCSX-CSPEC-131-01-00 FOR ADDITIONAL INFORMATION AND/OR MATERIAL REQUIREMENTS
2. DIMENSIONS ARE IN INCHES.
3. DRAWINGS PREPARED IN ACCORDANCE WITH ASME Y14.100-2000
4. INTERPRET DIMENSIONS & TOLERANCES PER ASME Y14.5M-1994

RELEASED FOR FABRICATION / INSTALLATION
PPPL Drafting:



PART NO.	DRAWING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	QTY RECD
6		EPOXY	EPOXY	CTD-101 K AS RECD
5		GLASS	S2 GLASS	GLASS AS RECD
4	SE131-077	RESTRAINING COLLAR	GLASS/EPOXY	2
3	SE131-013	SWAGELOM #B-600-9-6W 3/8 TUBE/WELD FITTING	BRASS	2
2	SE131-006	TF COIL WEDGE STRUCTURE (SE131-085 LEFT/RIGHT PAIR)	STN STL	1
1	SE131-005	TF COIL ASSEMBLY GROUNDWRAPPED	SEE DETAILS	1

PARTS LIST

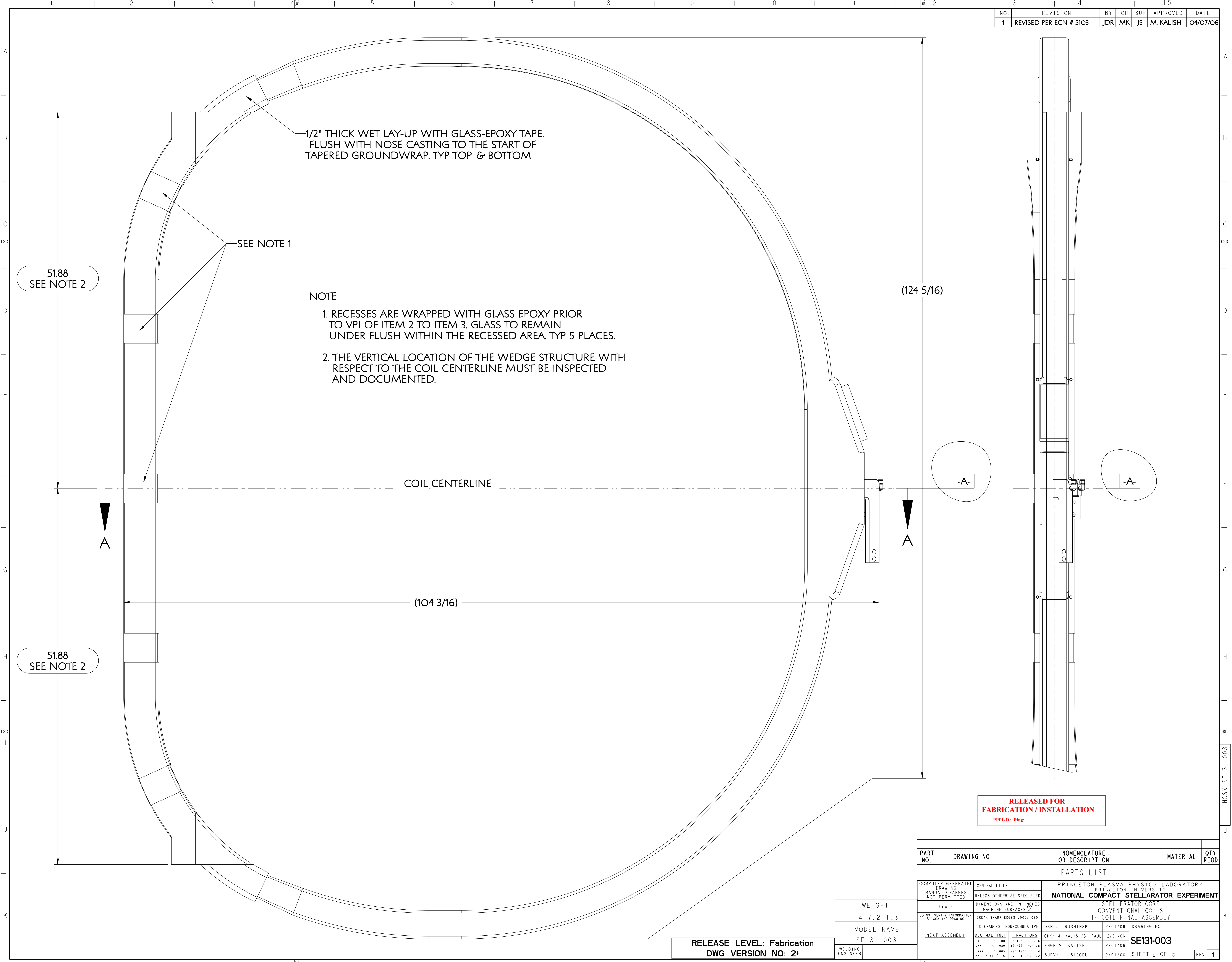
COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY		
Pro E	DIMENSIONS ARE IN INCHES MACHINE SURFACES	NATIONAL COMPACT STELLARATOR EXPERIMENT		
DO NOT VERIFY INFORMATION BY SCALING DRAWING	BREAK SHARP EDGES .005/.020	STELLARATOR CORE CONVENTIONAL COILS TF COIL FINAL ASSEMBLY		
	TOLERANCES NON-CUMULATIVE	DSN: J. RUSHINSKI	2/01/06	DRAWING NO:
	DECIMAL-INCH FRACTIONS	CHK: M. KALISH/B. PAUL	2/01/06	SE131-003
	NEXT ASSEMBLY	ENGR: M. KALISH	2/01/06	
	.XX +/- .030	SUPV: J. SIEGEL	2/01/06	SHEET 1 OF 5
	.XXX +/- .005			REV 1
	ANGULAR +/- .015			

RELEASE LEVEL: FABRICATION
DWG VERSION NO:

WEIGHT	1417.2 lbs
MODEL NAME	SE131-003
WELDING ENGINEER	

NCSX-SE131-003

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1/2" THICK WET LAY-UP WITH GLASS-EPOXY TAPE.
FLUSH WITH NOSE CASTING TO THE START OF
TAPERED GROUNDWRAP. TYP TOP & BOTTOM

SEE NOTE 1

51.88
SEE NOTE 2

NOTE

1. RECESSES ARE WRAPPED WITH GLASS EPOXY PRIOR TO VPI OF ITEM 2 TO ITEM 3. GLASS TO REMAIN UNDER FLUSH WITHIN THE RECESSED AREA. TYP 5 PLACES.
2. THE VERTICAL LOCATION OF THE WEDGE STRUCTURE WITH RESPECT TO THE COIL CENTERLINE MUST BE INSPECTED AND DOCUMENTED.

COIL CENTERLINE

(104 3/16)

(124 5/16)

51.88
SEE NOTE 2

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FABRICATION / INSTALLATION**
PPPL Drafting:

RELEASE LEVEL: Fabrication
DWG VERSION NO: 2

WEIGHT
1417.2 lbs

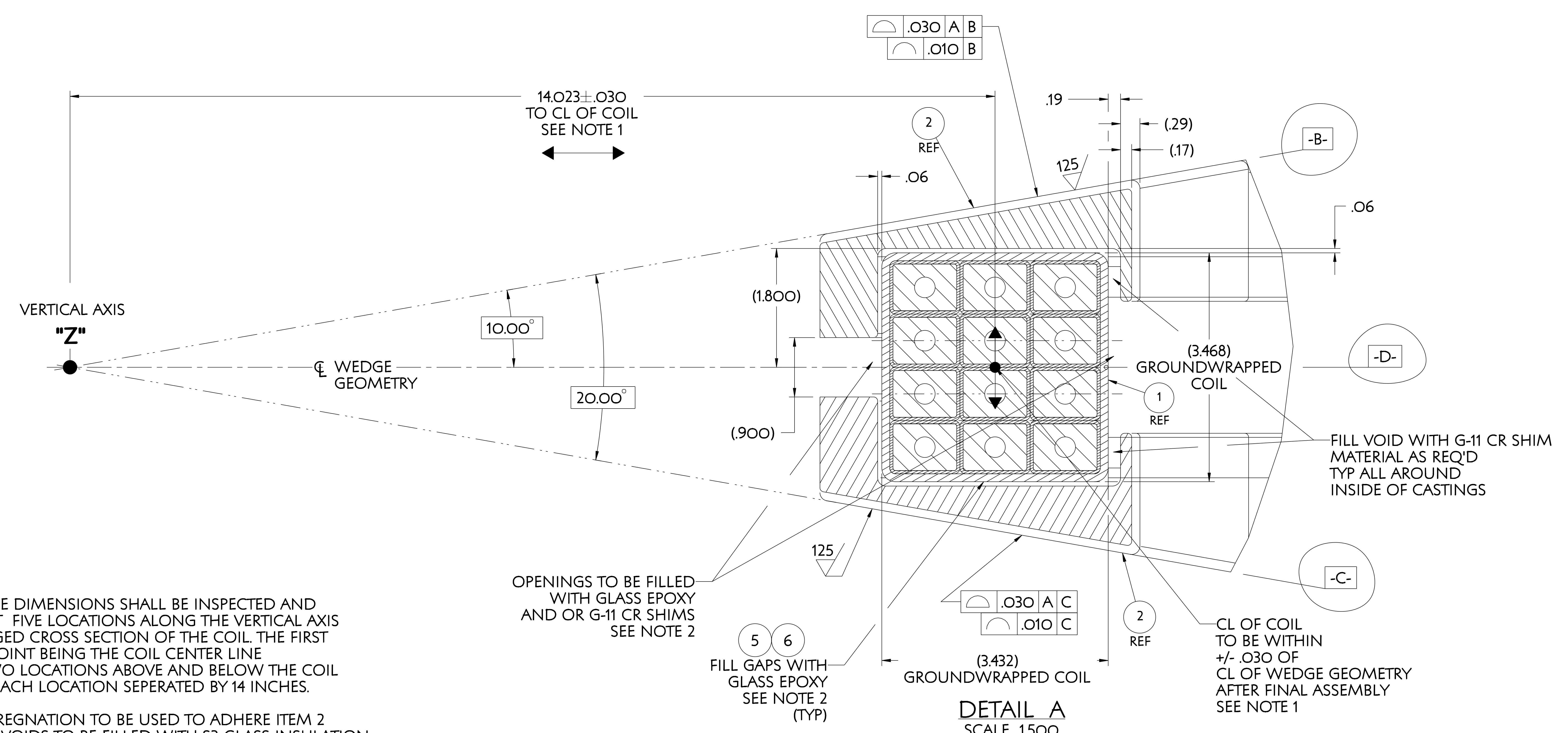
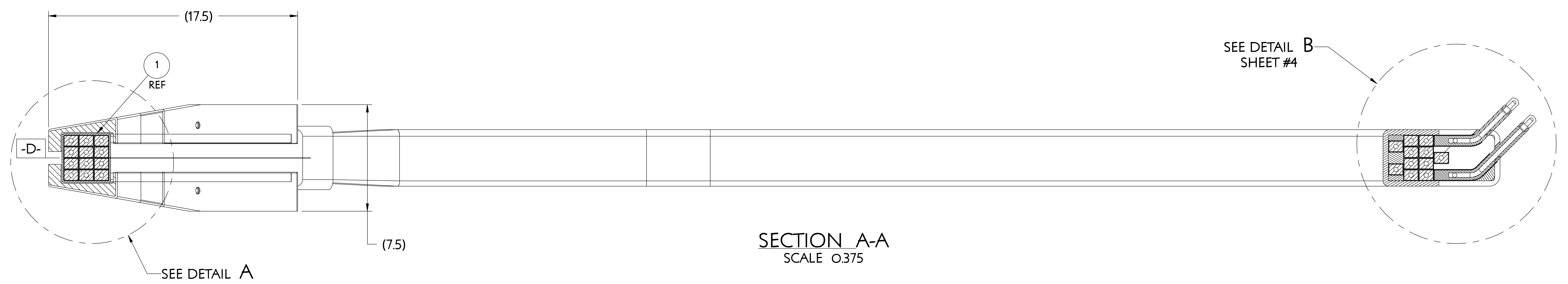
MODEL NAME
SE131-003

WELDING
ENGINEER

PART NO.	DRAWING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	QTY	RECD
PARTS LIST					
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DO NOT VERIFY INFORMATION BY SCALING DRAWING		DIMENSIONS ARE IN INCHES MACHINE SURFACES BREAK SHARP EDGES .005/.020	STELLARATOR CORE CONVENTIONAL COILS TF COIL FINAL ASSEMBLY		
NEXT ASSEMBLY		TOLERANCES NON-CUMULATIVE DECIMAL-INCH FRACTIONS .XX +/- .030 .XXX +/- .005 ANGULAR +/- 0°15'	DSN: J. RUSHINSKI CHK: M. KALISH/B. PAUL ENGR: M. KALISH SUPV: J. SIEGEL	2/01/06 2/01/06 2/01/06 2/01/06	DRAWING NO: SE131-003 SHEET 2 OF 5 REV 1

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NO.	REVISION	BY	CH	SUP	APPROVED	DATE
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- NOTE**
- AFTER VPI THESE DIMENSIONS SHALL BE INSPECTED AND RECORDED AT FIVE LOCATIONS ALONG THE VERTICAL AXIS OF THE WEDGED CROSS SECTION OF THE COIL. THE FIRST INSPECTION POINT BEING THE COIL CENTER LINE AND THEN TWO LOCATIONS ABOVE AND BELOW THE COIL CENTER LINE EACH LOCATION SEPERATED BY 14 INCHES.
 - VACUUM IMPREGNATION TO BE USED TO ADHERE ITEM 2 TO ITEM 1. ALL VOIDS TO BE FILLED WITH S2 GLASS INSULATION TO ELIMINATE RESIN RICH AREAS. GLASS THICKNESS INSIDE WEDGE STRUCTURE TO BE ADJUSTED TO ACHIEVE REQUIRED DIMENSIONS WITHIN TOLERANCE.
 - ITEM 2 WEDGE STRUCTURE AND COIL SURFACE TO BE ROUGHENED BEFORE VPI TO ENSURE BEST POSSIBLE ADHESION.
 - POCKETS IN ITEM 2 ON MATING SURFACES TO BE FILLED WITH GLASS TAPE PRIOR TO VPI.

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PPPL Drafting:

RELEASE LEVEL: Fabrication
DWG VERSION NO: 2

WEIGHT
1417.2 lbs

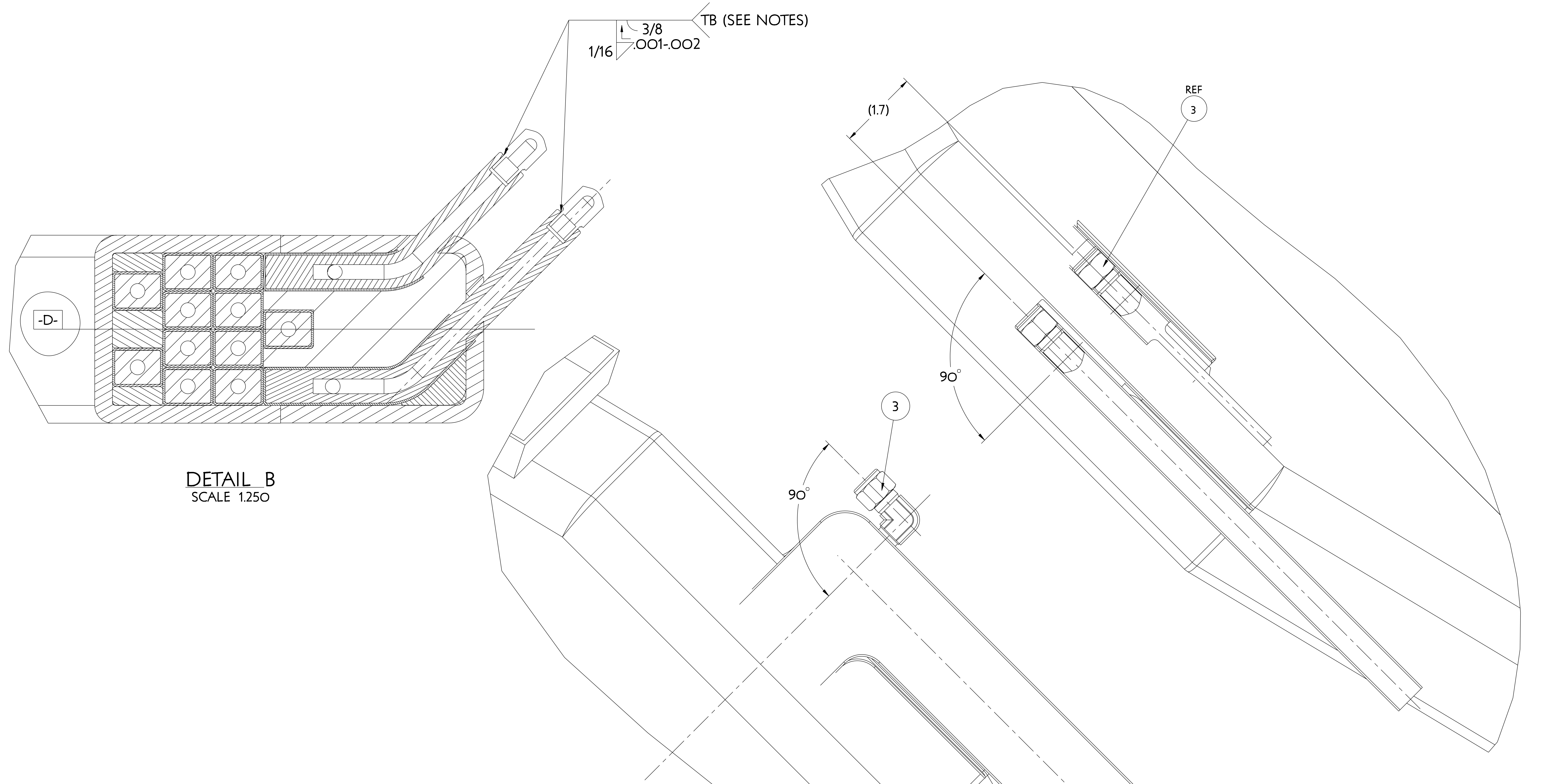
MODEL NAME
SE131-003

WELDING
ENGINEER

PART NO.	DRAWING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	QTY	REOD
PARTS LIST					
COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED P P O E	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES MACHINE SURFACES BREAK SHARP EDGES .005/.020	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY NATIONAL COMPACT STELLARATOR EXPERIMENT			
DO NOT VERIFY INFORMATION BY SCALING DRAWING	TOLERANCES NON-CUMULATIVE DECIMAL-INCH FRACTIONS .XX +/- .005 .XXX +/- .005 ANGULAR +/- 0°15'	DSN: J. RUSHINSKI CHK: M. KALISH/B. PAUL ENGR: M. KALISH SUPV: J. SIEGEL	2/01/06 2/01/06 2/01/06 2/01/06	DRAWING NO: SE131-003 SHEET 3 OF 5 REV 1	

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DETAIL B
SCALE 1.250

NOTES:

- CLEAN THE JOINT AREAS (LEADS) WITH SCOTCH-BRITE, THEN WASH WITH ACETONE PRIOR TO INSTALLATION OF FITTINGS.
- ASSEMBLE WITH CLEANED FITTINGS AND SIL-FOS WAFERS. (SEE SPECIFICATION FOR TYPE OF SIL-FOS.)
- HEAT ASSEMBLED JOINT AREA WITH TORCH. CONTINUE TO HEAT THE AREA UNTIL THE SIL-FOS STARTS TO MELT, THEN ADD ADDITIONAL SIL-FOS AS NEEDED, AND DO NOT MOVE THE FITTING DURING BRAZING & COOLING.
- FILE OR GRIND OFF EXCESS SIL-FOS FROM JOINT AREA. VISUAL INSPECTION OF BRAZE JOINT SHALL BE MADE TO INSURE THE COMPLETE FLOW OF SIL-FOS BRAZE MATERIAL INTO THE JOINTED AREA. JOINTS MUST BE FREE FROM CRACKS AND EXCESSIVE POROSITY.
- PROTECT TURN AND GROUNDWRAP INSULATION FROM DAMAGE DURING ALL TORCH BRAZING OPERATIONS
- SEE SPECIFICATION FOR QUALIFICATION AND TESTING REQUIREMENTS OF ALL BRAZE JOINTS.
- FITTING (PART #3) TO BE BRAZED TO LEAD PRIOR TO GROUNDWRAP AND VPI.

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PPPL Drafting:

RELEASE LEVEL: Fabrication
DWG VERSION NO: 2:

WEIGHT	1417.2 lbs
MODEL NAME	SE131-003
WELDING ENGINEER	

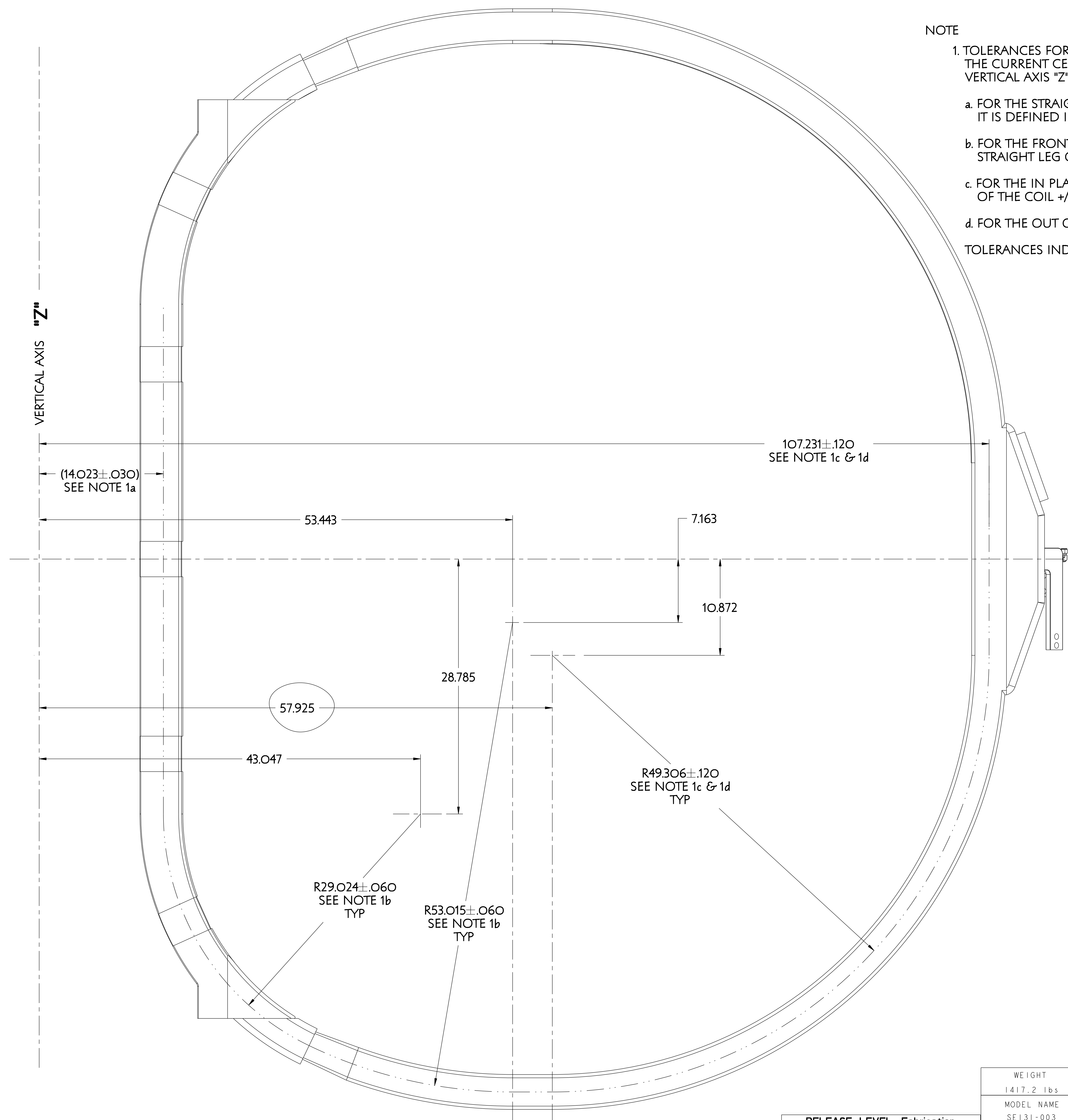
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PARTS LIST					
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DO NOT VERIFY INFORMATION BY SCALING DRAWING		DIMENSIONS ARE IN INCHES MACHINE SURFACES BREAK SHARP EDGES .005/.020	STELLARATOR CORE CONVENTIONAL COILS TF COIL FINAL ASSEMBLY		
NEXT ASSEMBLY		TOLERANCES NON-CUMULATIVE DECIMAL-INCH FRACTIONS .XX +/- .005 .XXX +/- .005 ANGULAR +/- .05	DSN: J. RUSHINSKI CHK M. KALISH/B. PAUL ENGR M. KALISH SUPV: J. SIEGEL	2/01/06 2/01/06 2/01/06 2/01/06	DRAWING NO: SE131-003 SHEET 4 OF 5 REV 1

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NOTE

1. TOLERANCES FOR THE NOMINAL POSITION OF THE CURRENT CENTROID WITH RESPECT TO VERTICAL AXIS "Z" ARE AS FOLLOWS:
 - a. FOR THE STRAIGHT LEG UNDER THE WEDGE STRUCTURE IT IS DEFINED IN DETAIL "A" ON SHEET 3.
 - b. FOR THE FRONT HALF OF THE COIL EXCLUSIVE OF THE STRAIGHT LEG OF THE WEDGE STRUCTURE +/- .060 INCHES.
 - c. FOR THE IN PLANE TOLERANCE ON THE BACK HALF (LEAD END) OF THE COIL +/- .12 INCHES.
 - d. FOR THE OUT OF PLANE BACK HALF (LEAD END) OF THE COIL +/- .06 INCHES.
- TOLERANCES INDICATED FOR THE COIL IN THE UN-RESTRAINED CONDITION.



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RELEASE LEVEL: Fabrication
DWG VERSION NO: 2

WEIGHT
1417.2 lbs

MODEL NAME
SE131-003

WELDING ENGINEER

PART NO.	DRAWING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	QTY	RECD
PARTS LIST					
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