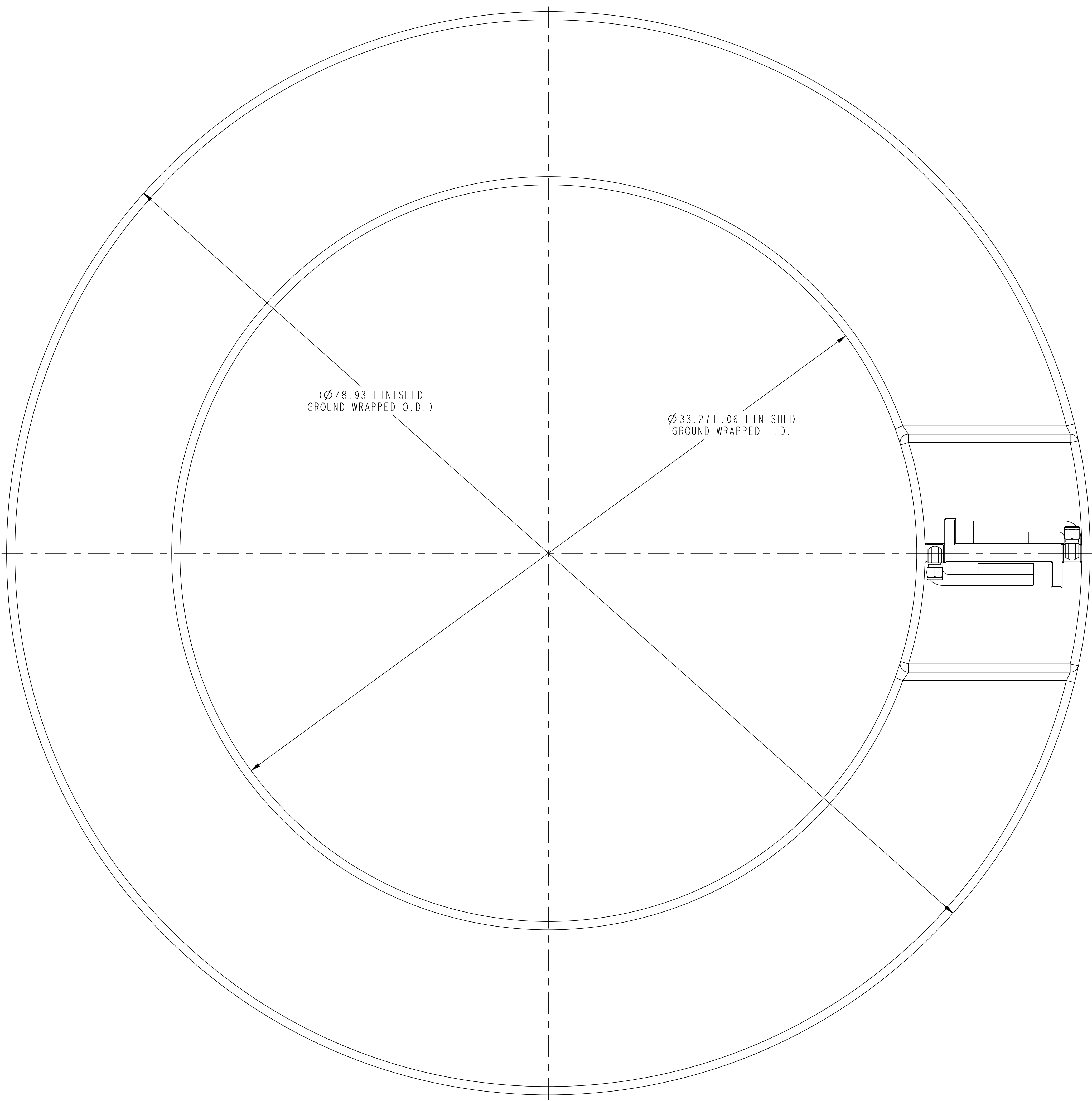


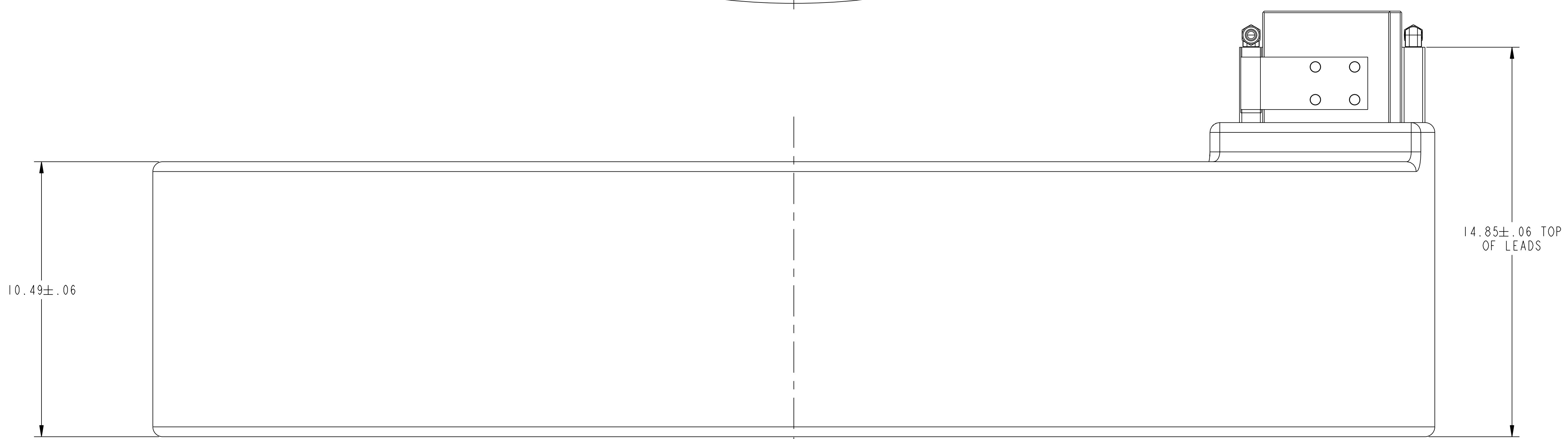
NO.	REVISION	BY	CH	SUP	APPROVED	DATE



GENERAL NOTES:

- TURN INSULATION (APPROX .049") THICK
1 (1/2 LAPPED) LAYER KAPTON/ADHESIVE TAPE
2 (1/2 LAPPED) LAYERS GLASS TAPE
SPEC. NO. NCSX-CSPEC-132-02 FOR TURN TO TURN DETAILS
- LONGITUDINAL SPLICING OF CONDUCTOR TO BE PREFORMED PER SPECIFICATION NO. NCSX-CSPEC-132-02 AND DRAWING SC132-039.
- VOIDS IN COIL AREAS BETWEEN CONDUCTORS GREATER THAN 1/8" TH'K ARE TO BE FILLED WITH G-11CR SPACE FILLERS PART NO. 11. ALL OTHER AREAS LESS THAN 1/8" TO BE FILLED WITH GLASS OR GLASS EPOXY.
- ONE LAYER OF GLASS TAPE TO BE APPLIED BETWEEN MATING G-11CR PARTS / SURFACES.
- DIAGNOSTIC-LOOP-WIRE PART NO. 12 TO BE INSTALLED PER SECTION A-A SHOWN ON SHEET 2 & ENGINEERING INSTRUCTION PRIOR TO LAST LAYER OF GROUND WRAP.
- FOR GROUND WRAP INSULATION AND VACUUM IMPREGNATION OF COIL SEE SPECIFICATION NO. NCSX-CSPEC-132-02

RELEASED FOR FABRICATION / INSTALLATION
PPPL Drafting



14	COMM	EPOXY	SEE NOTE 7	AR
13	COMM	GROUND WRAP S2 GLASS .015" TH'K X 2" WIDE (3/8" TOTAL THICKNESS)	SEE NOTE 7	AR
12	DIAGNOSTIC-LOOP-WIRE	ARI INDUSTRIES #32-IN-C	316SS SHEATH/COND	AR
11	THIS DWG	SPACE FILLERS SIZED BY VENDOR SEE NOTE 2	G-11 CR	AR
10	THIS DWG	FLAG LEAD INSULATION BLOCK (SEE DETAIL)	G-11 CR	1
9	THIS DWG	1/8" TH'K X 1-1/2" WD X LG TO SUIT BEND TO CONFORM TO 6 OR 7	G-11 CR	1
8	THIS DWG	Ø .50 NOM PIN LG TO SUIT	G-11 CR	4
7	THIS DWG	OUTER LEAD LOCK BLOCK (SEE DETAIL)	G-11 CR	1
6	THIS DWG	INNER LEAD LOCK BLOCK (SEE DETAIL)	G-11 CR	1
5	THIS DWG	2" X 2" X 1/2" NUT PLATE (SEE DETAIL)	316SS	2
4	THIS DWG	LEAD FLAG (SEE DETAIL)	ETPI10	2
3	SE131-013	COOLANT FITTING SEE DRAWING FOR DETAILS	SEE DWG	2
2	THIS DWG	.049 TURN TO TURN INSUL. SEE NOTE 1	SEE NOTE 1	AR
1	SE132-010	PF-5 CONDUCTOR APPROX. LENGTH = 862 FT.	SEE DWG	AR
PART NO.	DRAWING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL	QTY REQ'D

PARTS LIST

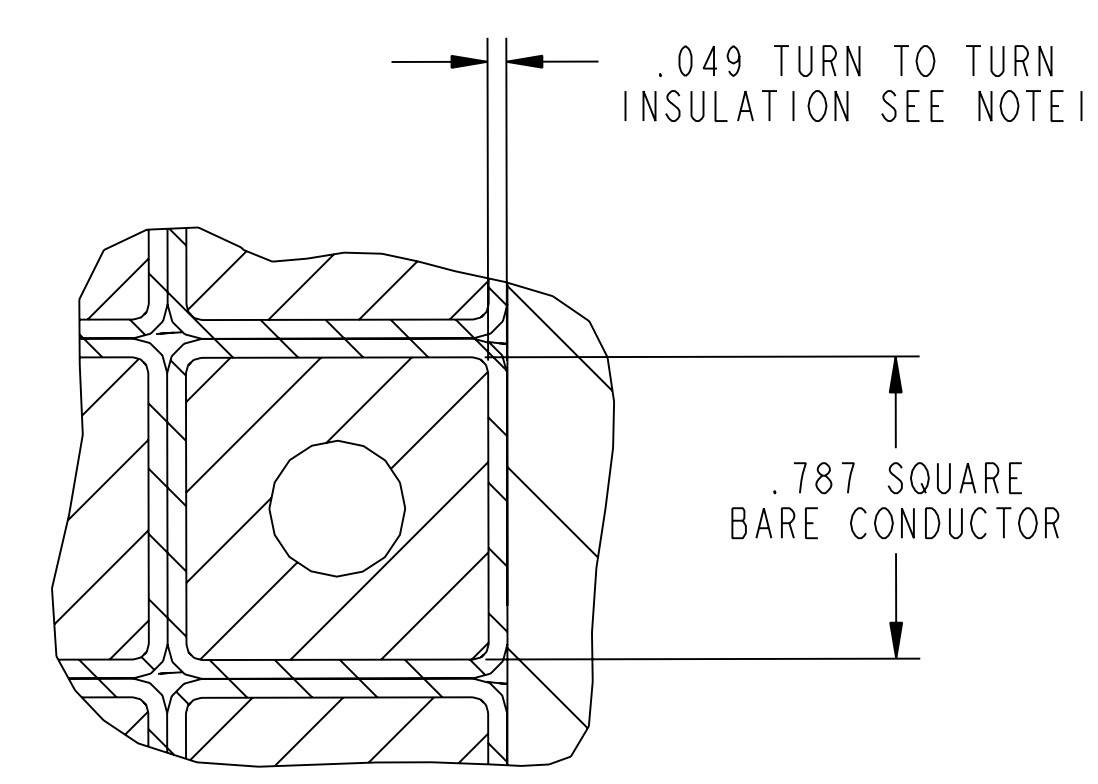
COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY			
Pro E	DIMENSIONS ARE IN INCHES MACHINE SURFACES UNLESS OTHERWISE SPECIFIED	NATIONAL COMPACT STELLARATOR EXPERIMENT			
DO NOT VERIFY INFORMATION BY SCALING DRAWING	BREAK SHARP EDGES .005/.020	STELLARATOR CORE CONVENTIONAL COILS PF-4 COIL WINDING ASSEMBLY / DETAILS			
TOLERANCES NON-CUMULATIVE	DSN: B. PAUL 2/12/08	DRAWING NO:			
DECIMAL-INCH FRACTIONS	CHK: M. KALISH 2/12/08	SE132-040			
NEXT ASSEMBLY	ENGR: J. CHRZANOWSKI 2/12/08				
WELDING ENGINEER: L. DUDEK 2/12/08	SUPV: J. SEIGEL 2/12/08				

**PF-4 COIL ASSEMBLY
NO REQUIRED = 2**

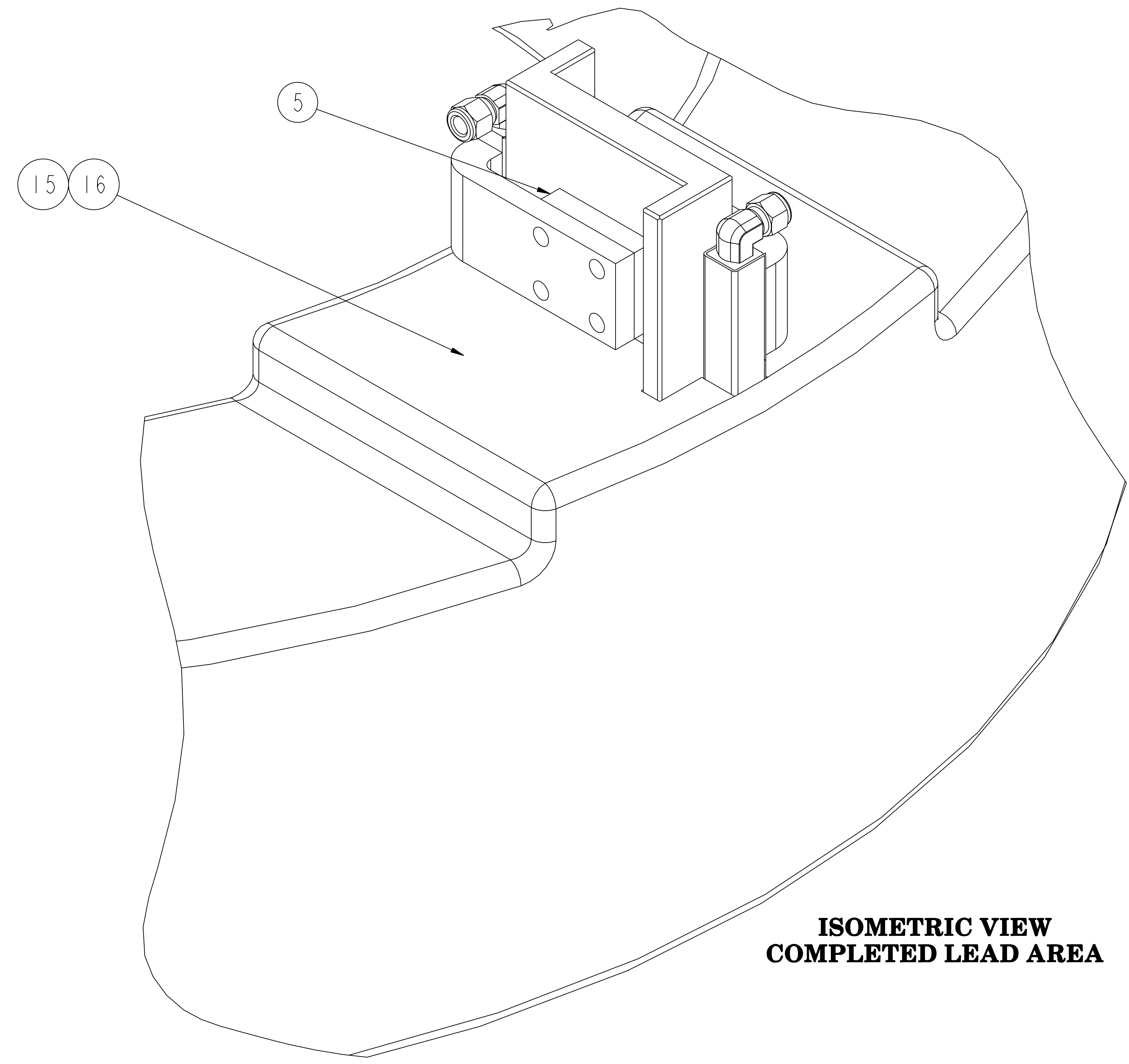
RELEASE LEVEL: Fabrication
DWG VERSION NO: 41

WEIGHT	1957.5 lbs
MODEL NAME	SE132-040

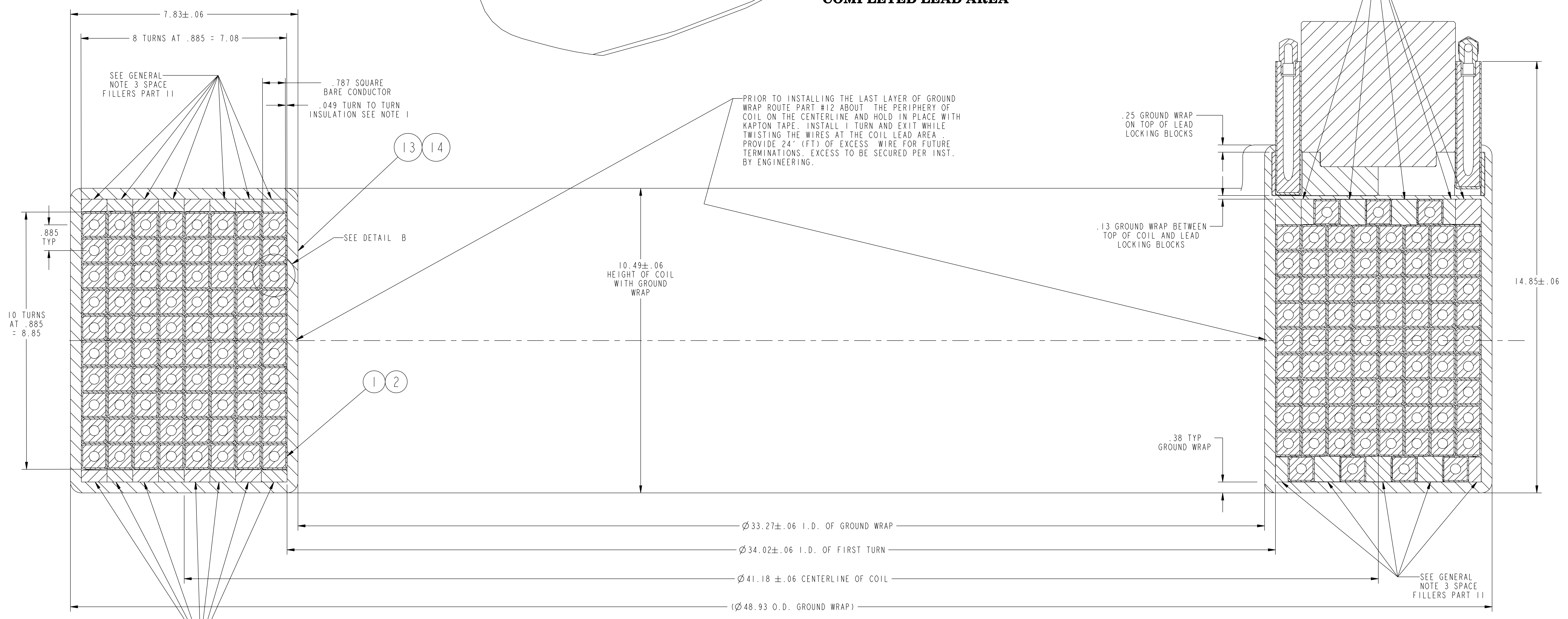
NO.	REVISION	BY	CH	SUP	APPROVED	DATE



DETAIL B
SCALE 2.000



**ISOMETRIC VIEW
COMPLETED LEAD AREA**



SECTION A-A

**RELEASED FOR
FABRICATION/INSTALLATION**
PPPL Drafting

WEIGHT
1957.5 lbs

MODEL NAME
SE132-040

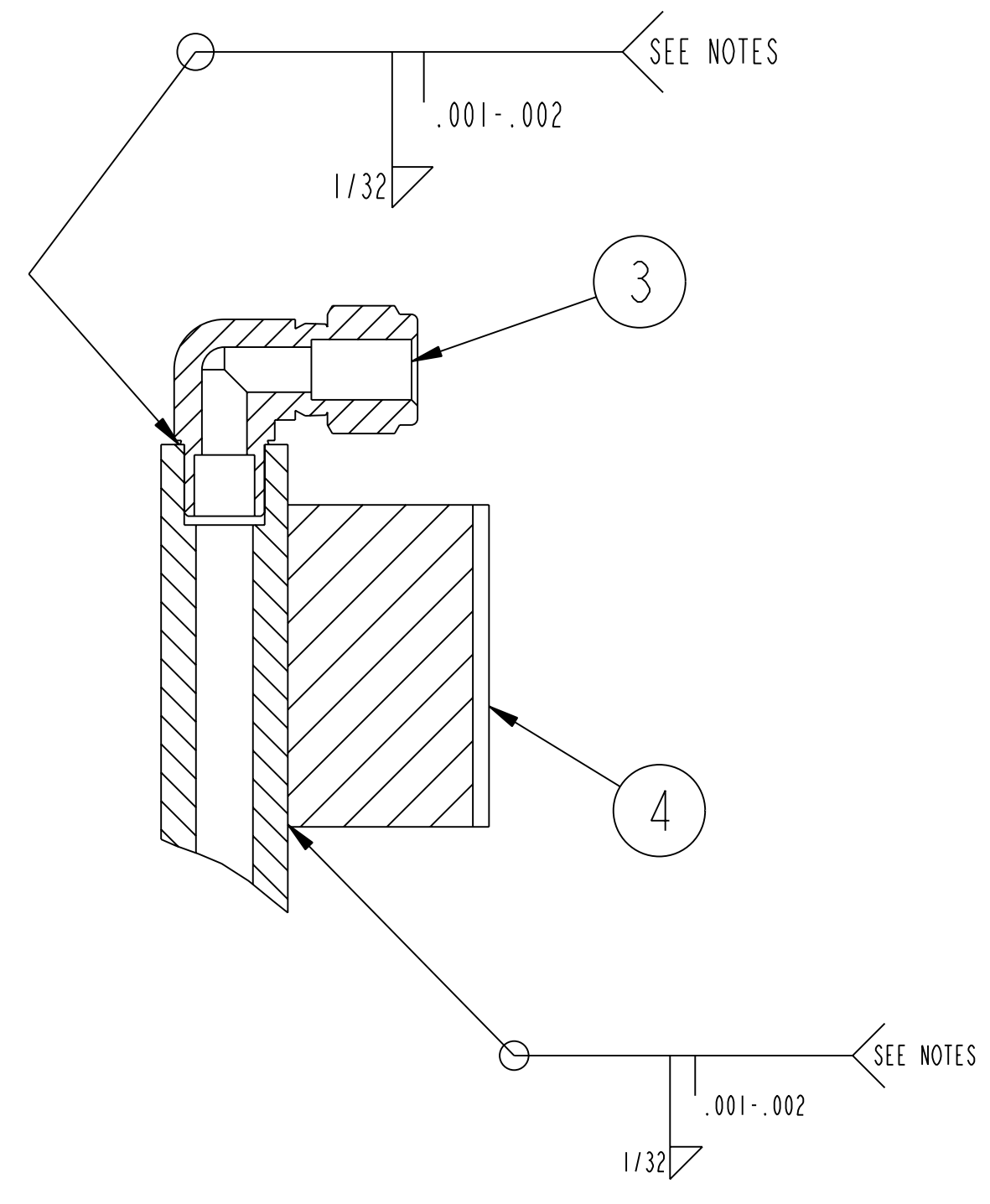
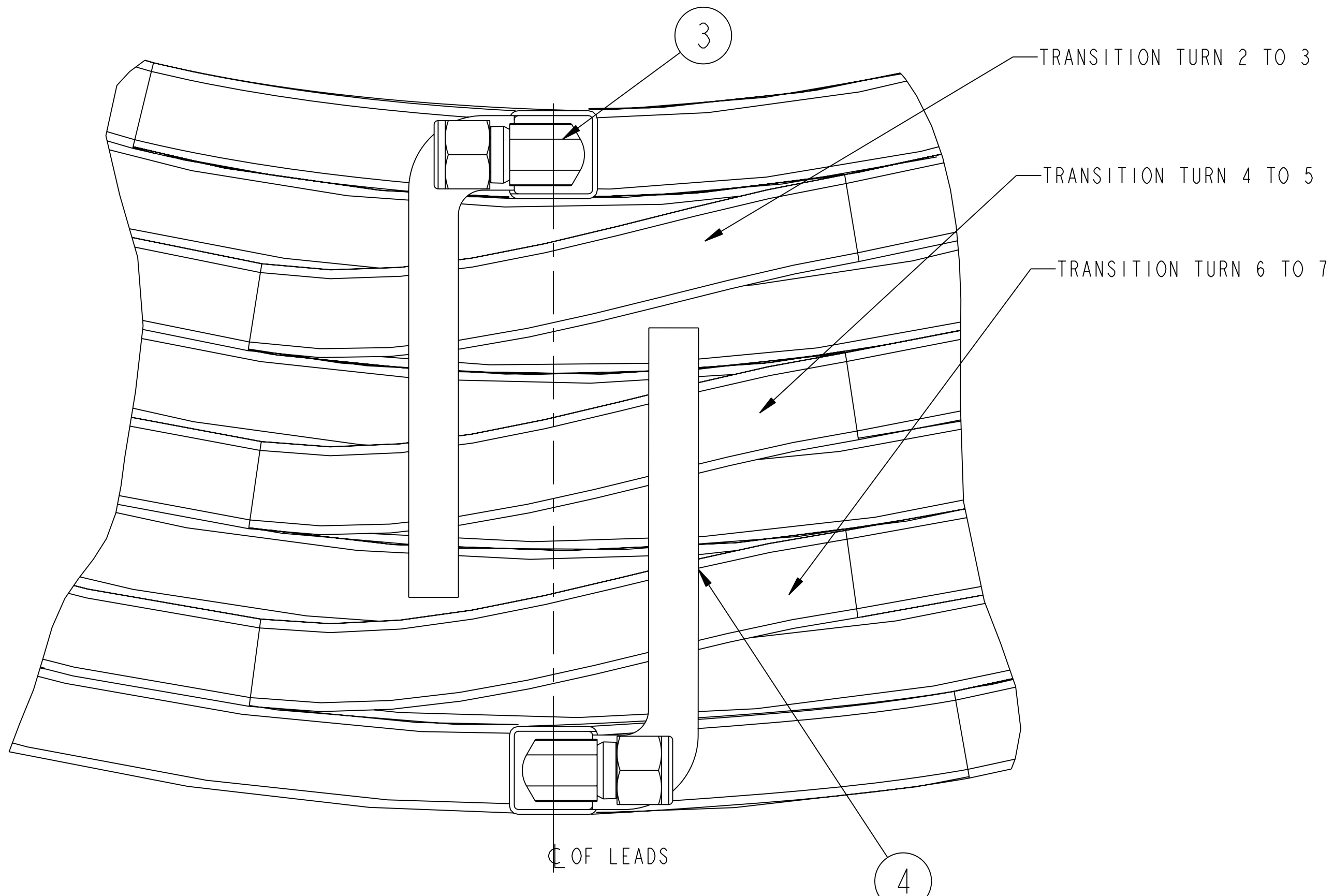
RELEASE LEVEL: Fabrication
DWG VERSION NO: 41

WELDING ENGINEER
L. DUDEK 2/12/08

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED Pro E DO NOT VERIFY INFORMATION BY SCALING DRAWING	CENTRAL FILES:	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY NATIONAL COMPACT STELLARATOR EXPERIMENT			
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES MACHINE SURFACES BREAK SHARP EDGES .005/.020	STELLARATOR CORE CONVENTIONAL COILS PF-4 COIL WINDING ASSEMBLY / DETAILS			
DO NOT VERIFY INFORMATION BY SCALING DRAWING	TOLERANCES NON-CUMULATIVE	DSN: B. PAUL	2/12/08	DRAWING NO:	
NEXT ASSEMBLY	DECIMAL-INCH FRACTIONS .XX ±.000 .XXX ±.005 ANGULAR ±.0°-15° OVER 120° ±.1°	CHK: M. KALISH	2/12/08	SE132-040	
		ENGR: J. CHRZANOWSKI	2/12/08	SHEET 2 OF 4	
		SUPV: J. SEIGEL	2/12/08	REV 0	

NCSX-SE132-040

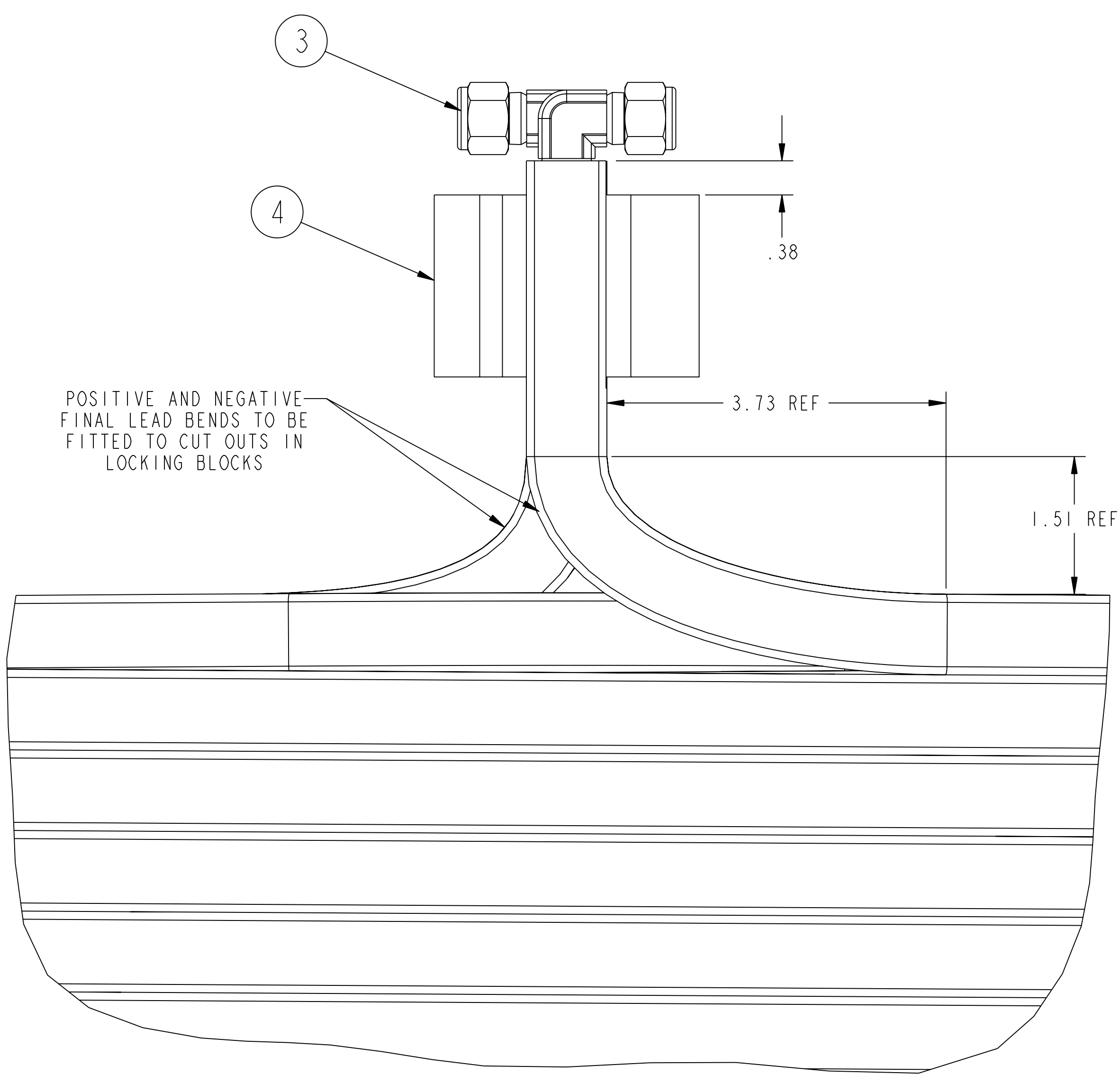
NO.	REVISION	BY	CH	SUP	APPROVED	DATE



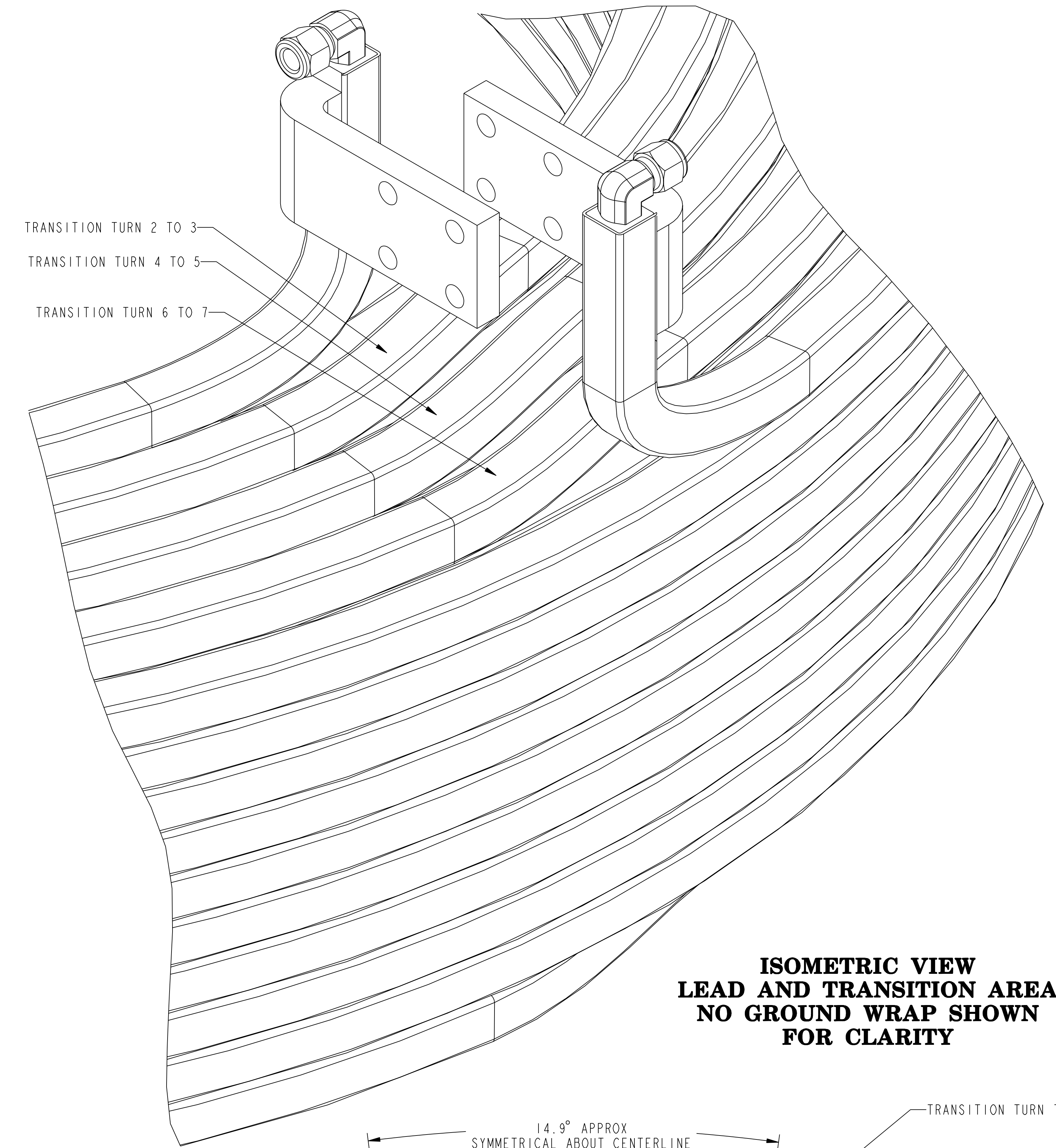
LEAD FLAG AND FITTING BRAZE NOTES

- 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
- FITTING (PART #3) TO BE BRAZED TO LEAD PRIOR TO GROUNDWRAP AND VPI.
- SEE SPEC. NO. NCSX-CSPEC-132-02 FOR QUALIFICATION AND TESTING REQUIREMENTS OF ALL BRAZE JOINTS.

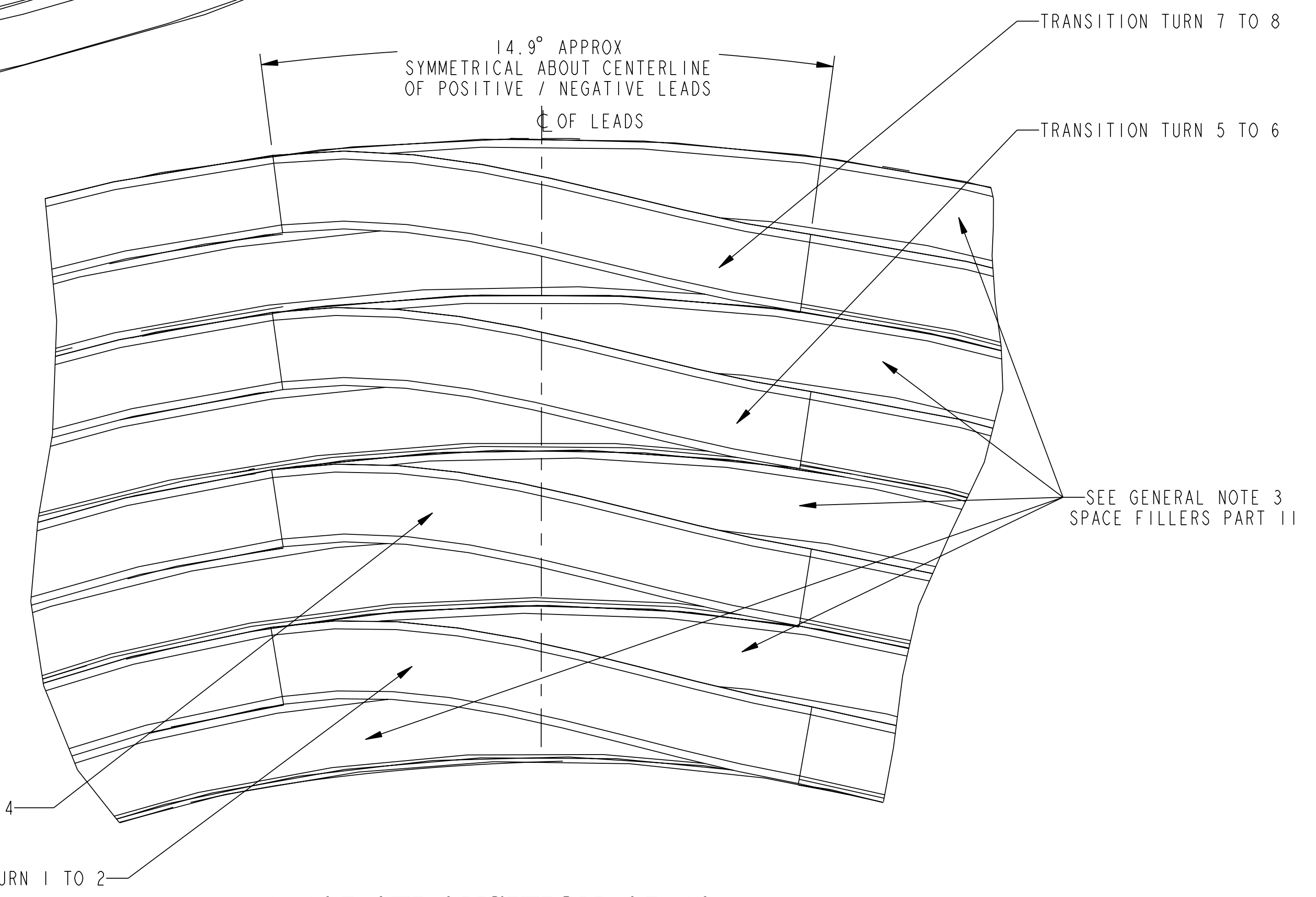
PLAN VIEW



**LEAD AREA ELEV. VIEW
NO GROUND WRAP SHOWN
FOR CLARITY**

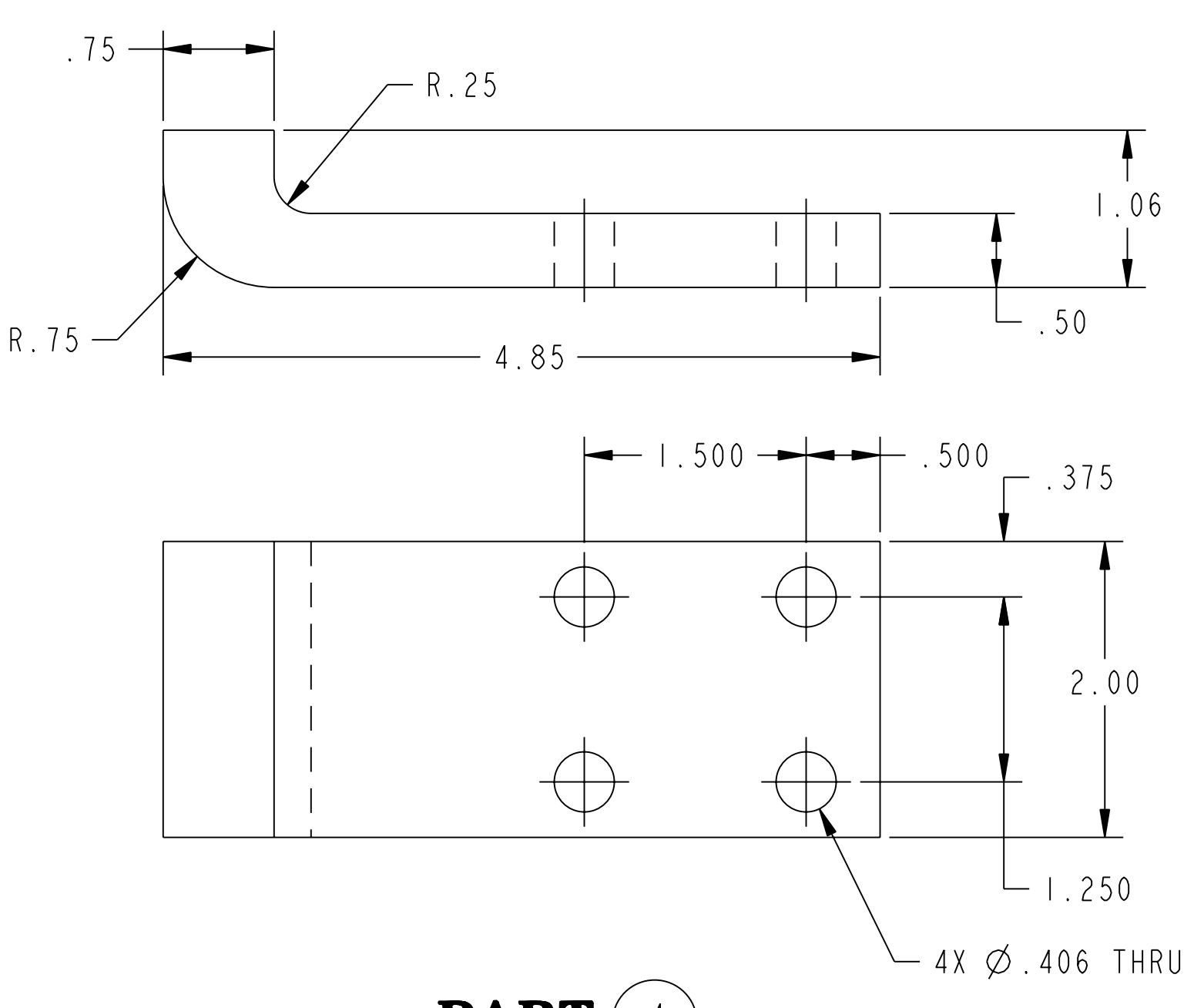


**ISOMETRIC VIEW
LEAD AND TRANSITION AREA
NO GROUND WRAP SHOWN
FOR CLARITY**

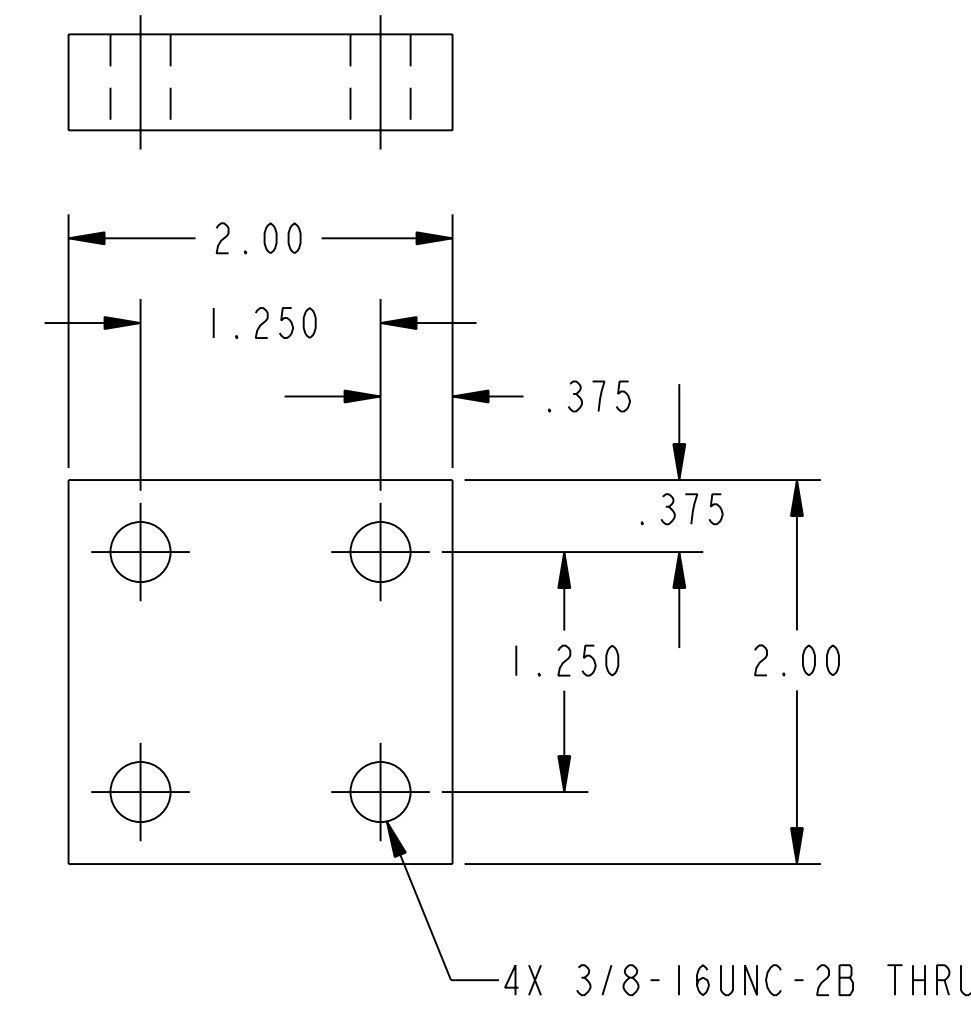


**LEAD / TRANSITION AREA
BOTTOM VIEW
NO GROUND WRAP SHOWN
FOR CLARITY**

RELEASED FOR FABRICATION / INSTALLATION
PPPL Drafting:



PART 4



PART 5

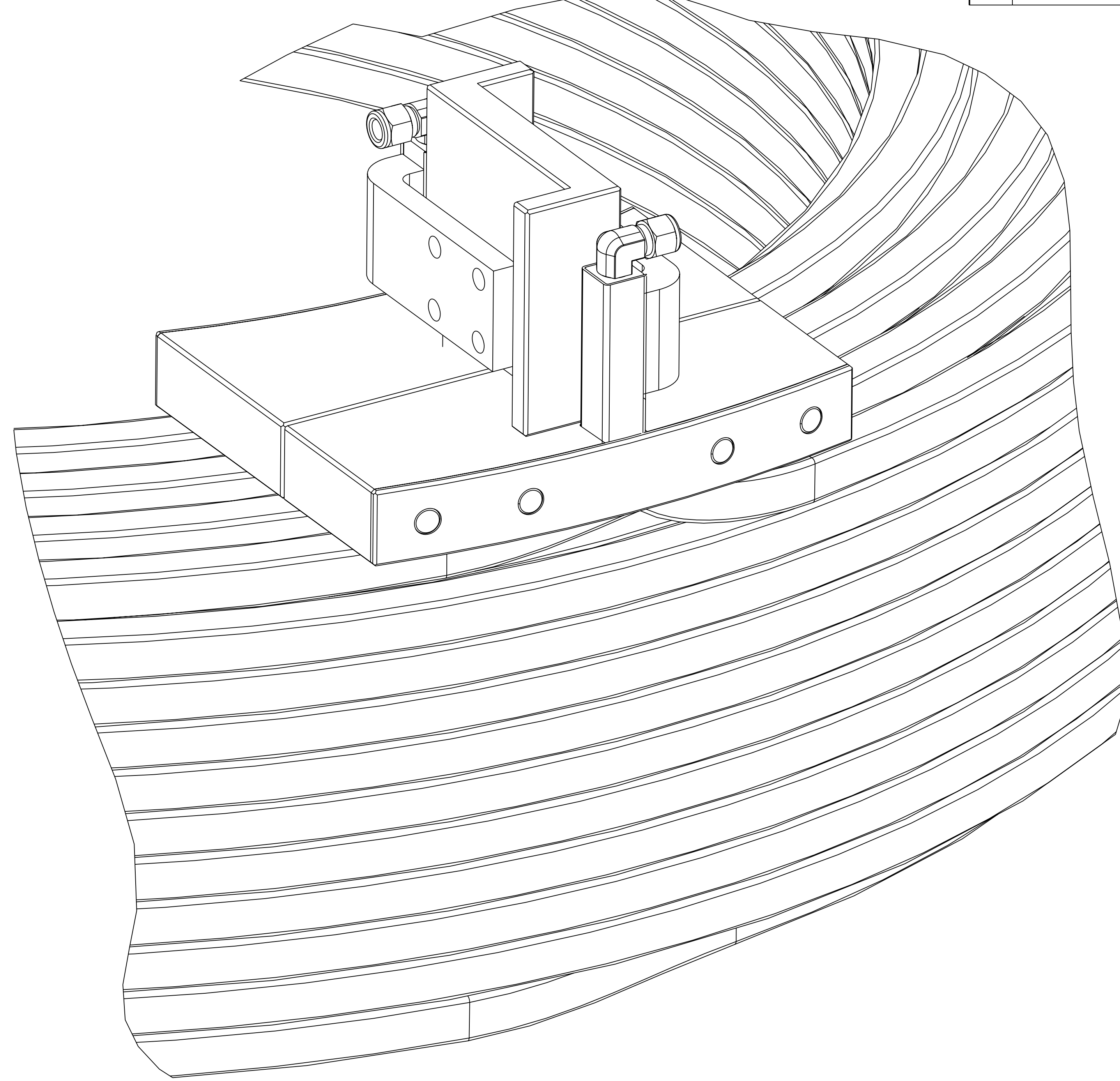
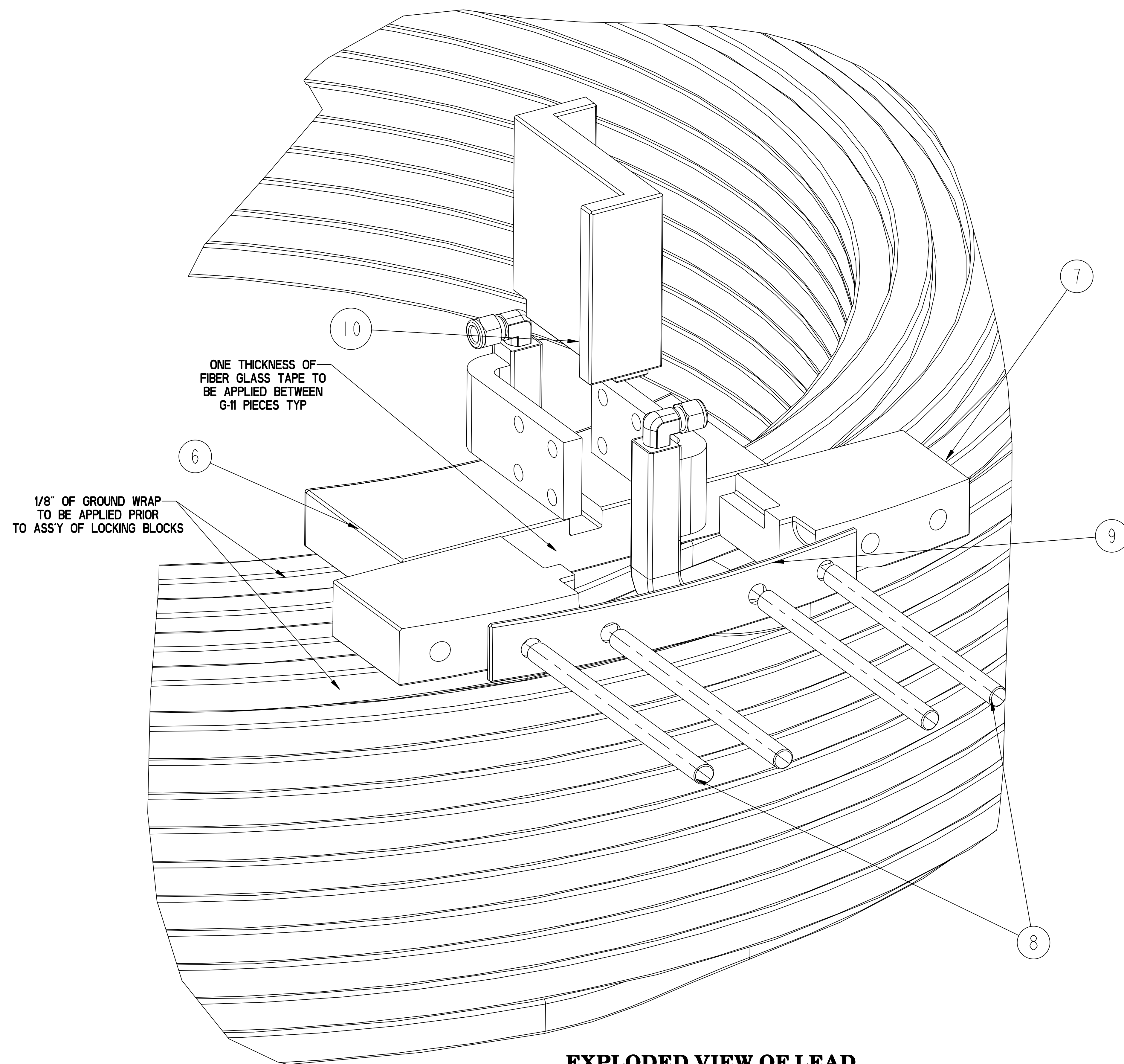
RELEASE LEVEL: Fabrication
DWG VERSION NO: 41

WEIGHT	1957.5 lbs
MODEL NAME	SE132-040
WELDING ENGINEER	L. DUDEK 2/12/08

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED Pro E	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES MACHINE SURFACES B. PAUL	PRINCETON PLASMA PHYSICS LABORATORY NATIONAL COMPACT STELLARATOR EXPERIMENT STELLARATOR CORE CONVENTIONAL COILS PF-4 COIL WINDING ASSEMBLY / DETAILS
DO NOT VERIFY INFORMATION BY SCALING DRAWING	TOLERANCES NON-CUMULATIVE DECIMAL-INCH FRACTIONS .X ±.0100 0°-120° ±.0100 .XX ±.0030 12°-120° ±.0100 .XXX ±.0015 72°-120° ±.0100 ANGULAR ±.0°-15° OVER 120° ±.0100	DSN: B. PAUL 2/12/08 CHK: M. KALISH 2/12/08 ENGR: J. CHRZANOWSKI 2/12/08 SUPV: J. SEIGEL 2/12/08
NEXT ASSEMBLY		DRAWING NO: SE132-040 SHEET 3 OF 4 REV 0

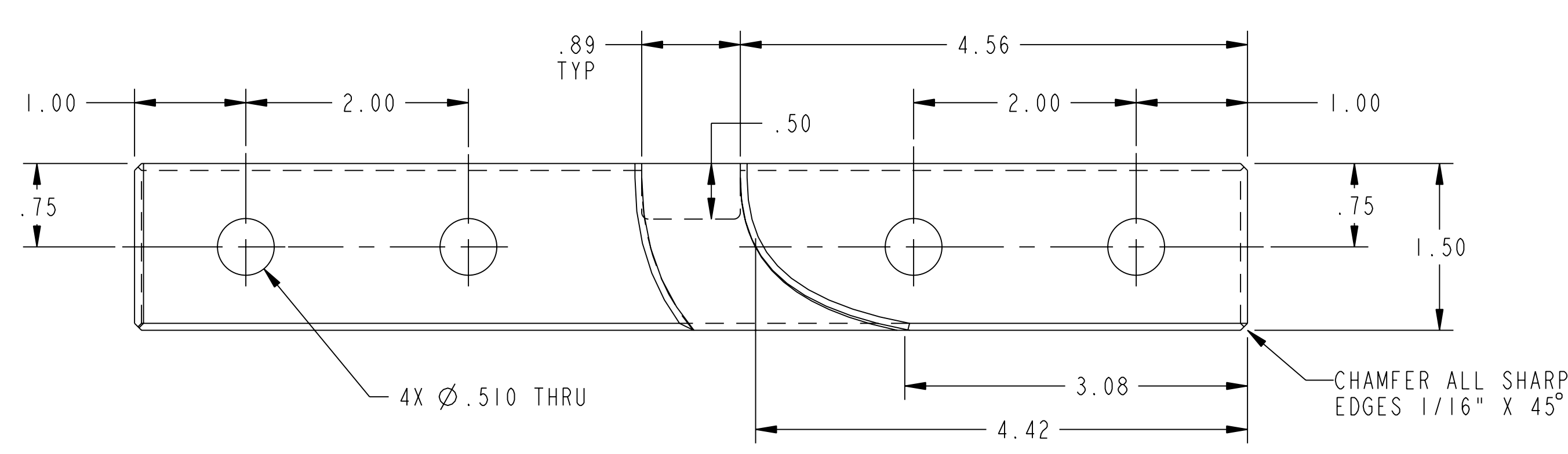
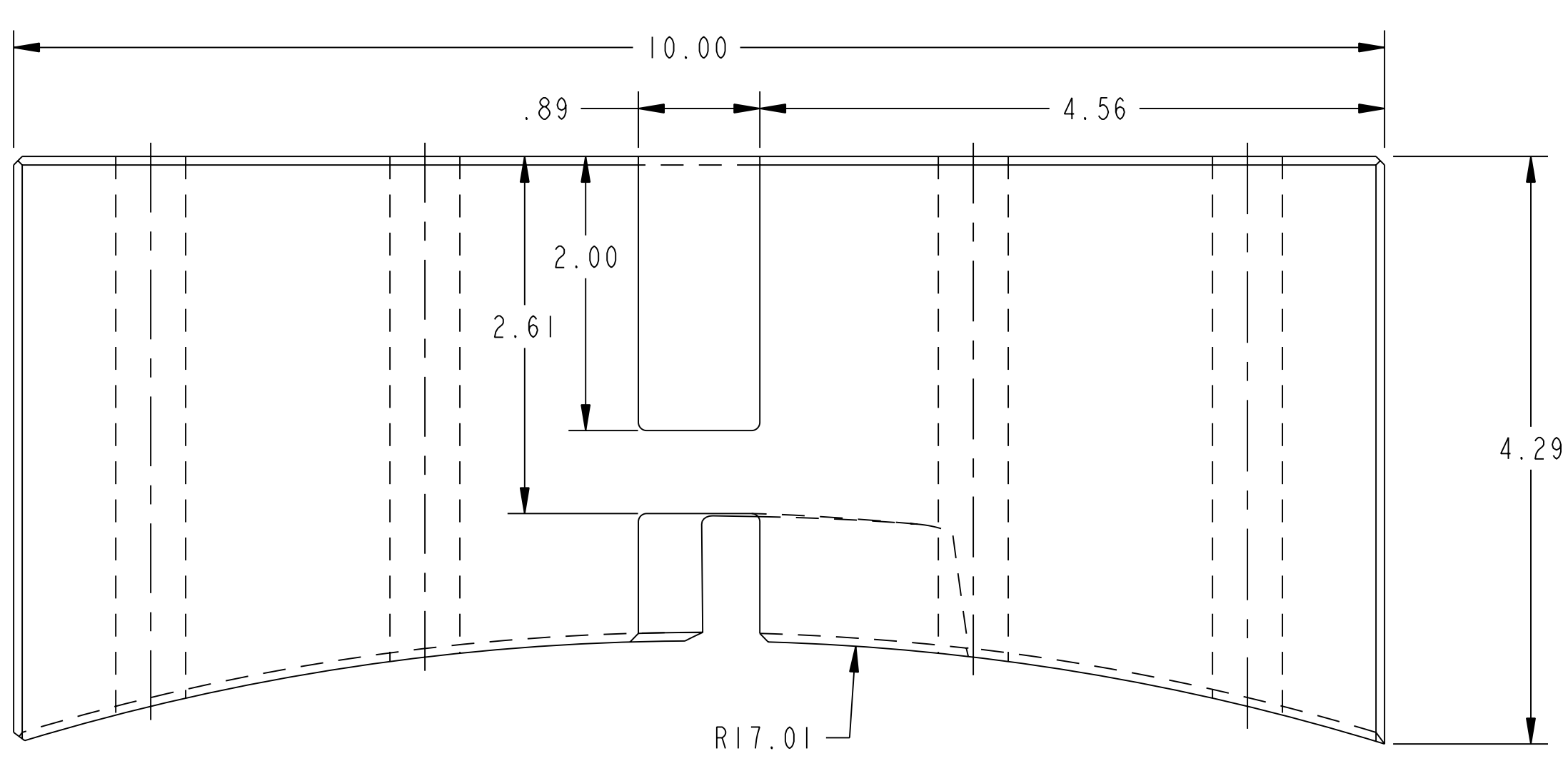
NCSX-SE132-040

NO.	REVISION	BY	CH	SUP	APPROVED	DATE

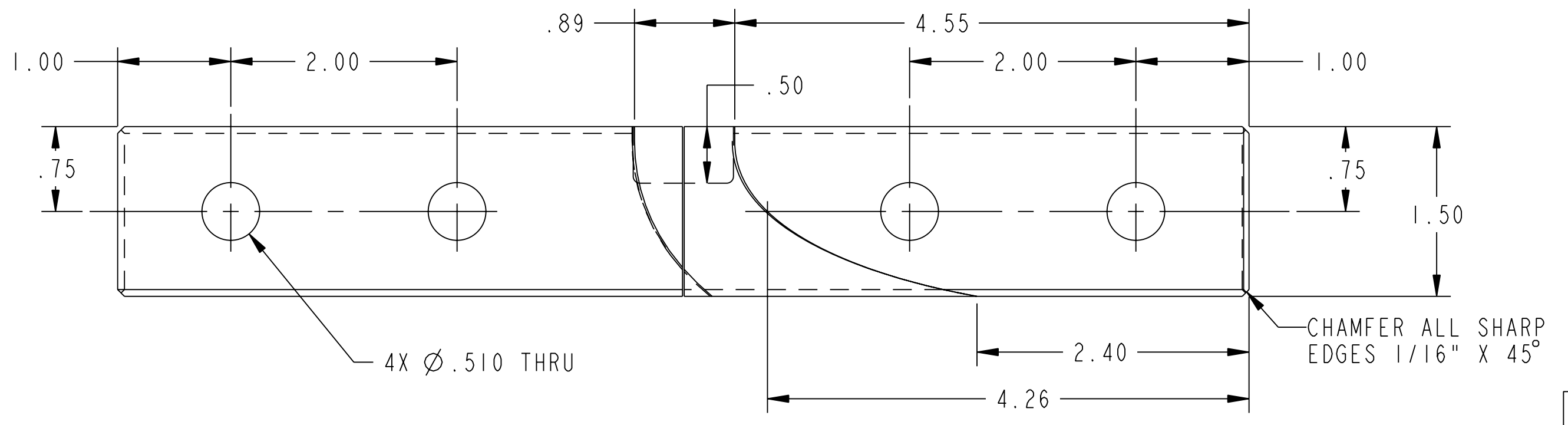
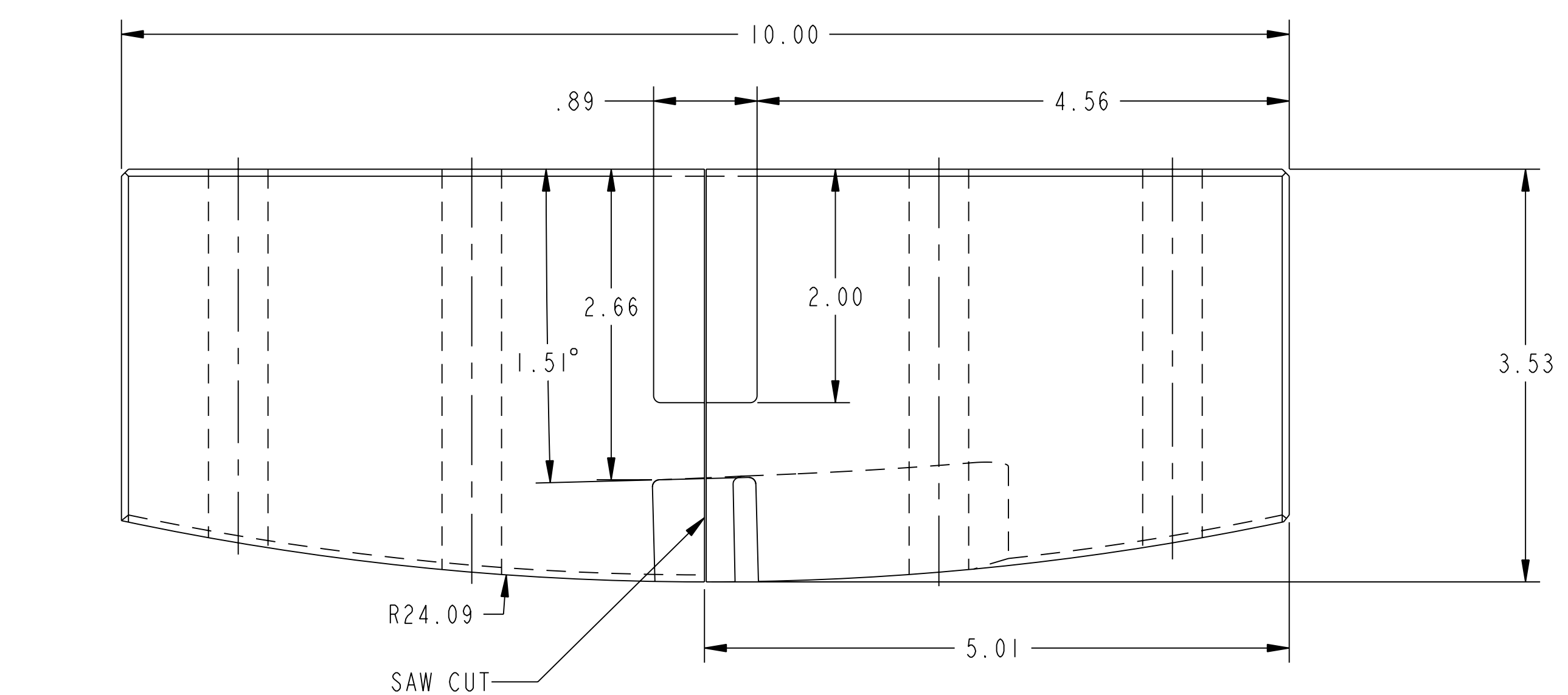


**VIEW OF LEAD LOCKING BLOCK ASSEMBLY
NO GROUND WRAP SHOWN**

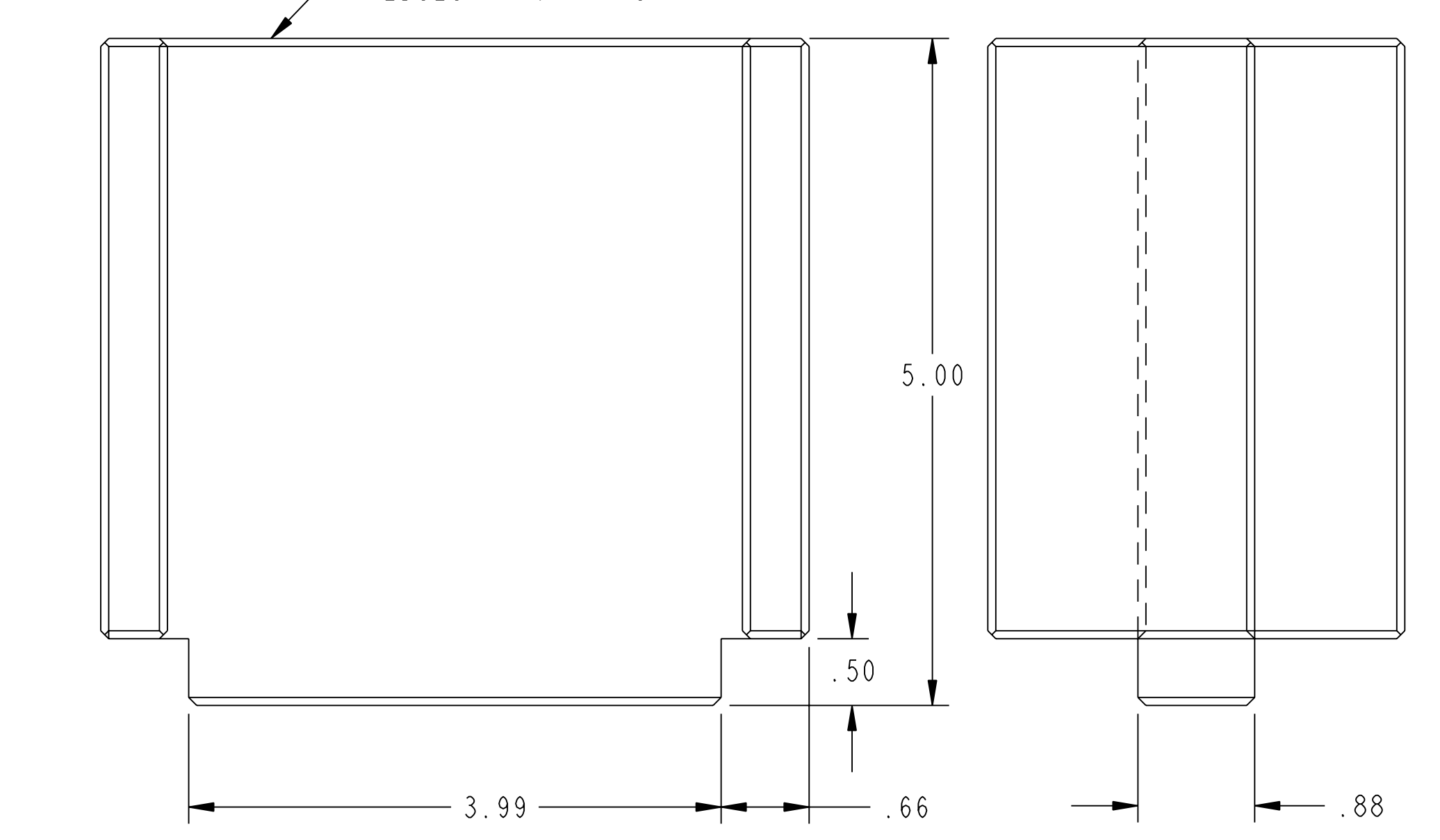
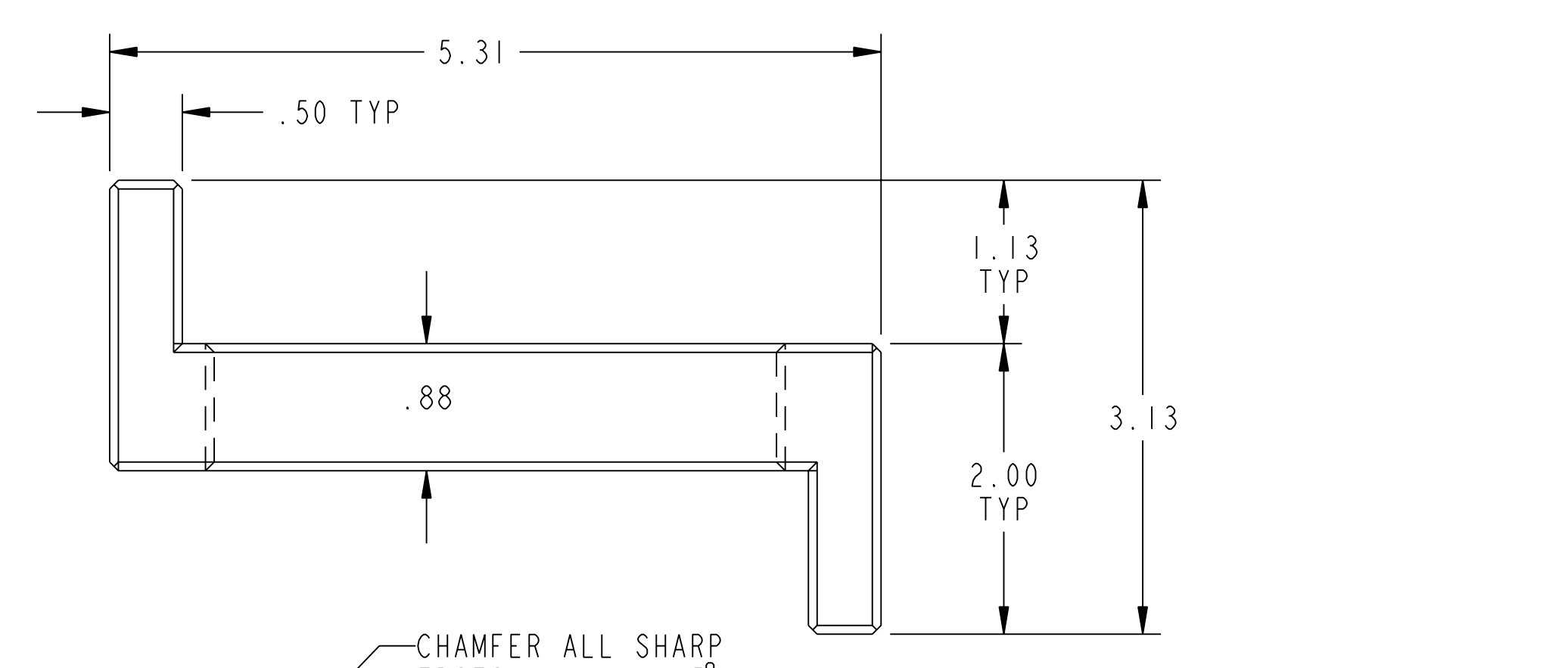
**EXPLODED VIEW OF LEAD
LOCKING BLOCK ASSEMBLY
NO GROUND WRAP SHOWN**



PART 6



PART 7



PART 10

RELEASED FOR FABRICATION/INSTALLATION
PPPL Drafting

RELEASE LEVEL: Fabrication
DWG VERSION NO: 41

WEIGHT	1957.5 lbs
MODEL NAME	SEI32-040
WELDING ENGINEER	L. DUDEK 2/12/08

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED Pro 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 STELLARATOR CORE CONVENTIONAL COILS LOCKING ASSEMBLY / DETAILS
DO NOT VERIFY INFORMATION BY SCALING DRAWING	TOLERANCES NON-CUMULATIVE DECIMAL-INCH FRACTIONS .XX ±.000 .XXX ±.005 ANGULAR ±.0°-15° OVER 120° ±.1°	DSN: B. PAUL 2/12/08 CHK: M. KALISH 2/12/08 ENGR: J. CHRZANOWSKI 2/12/08 SUPV: J. SEIGEL 2/12/08
NEXT ASSEMBLY		DRAWING NO: SEI32-040 SHEET 4 OF 4 REV 0

NCSX-SEI32-040