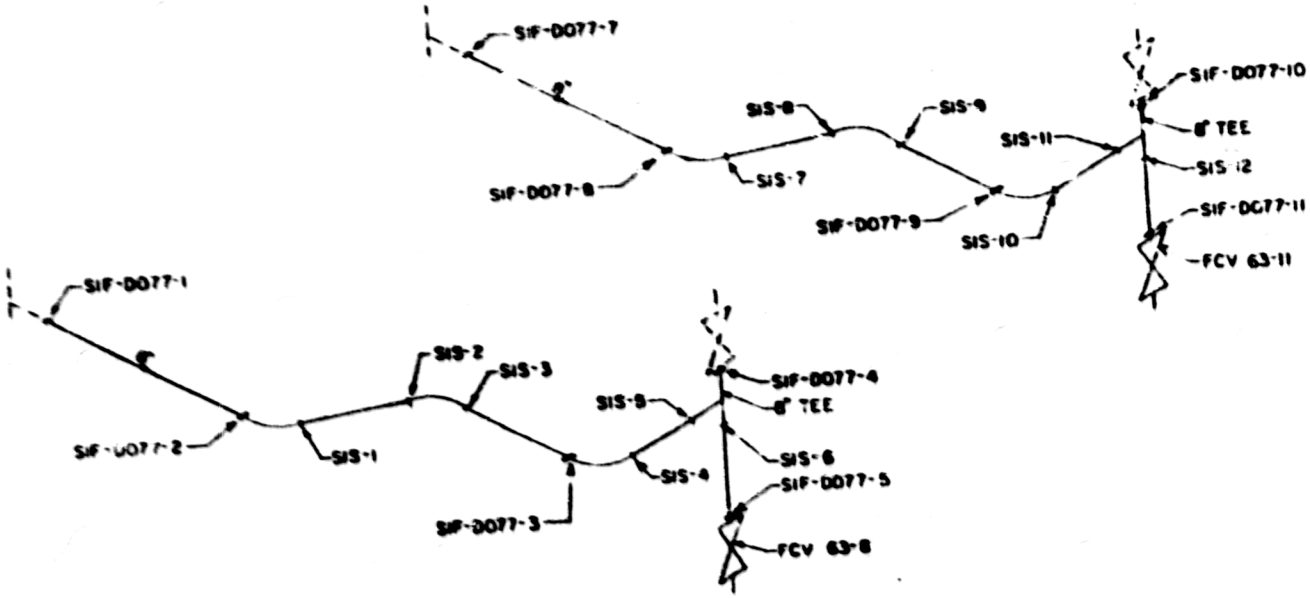


TVA CLASS B

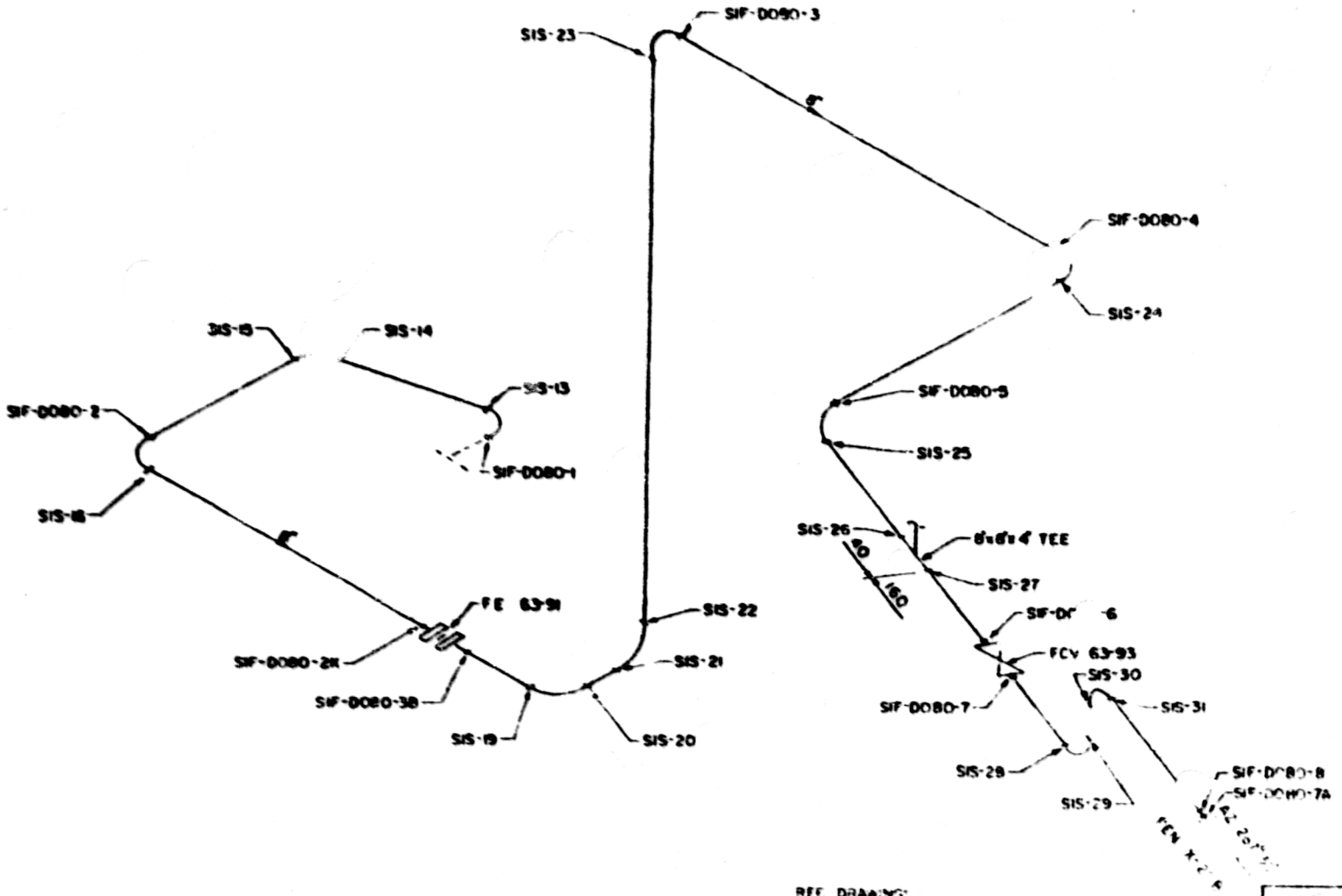
PIPE
8" SA-312 TP 304

FITTINGS
8" STD. WT. SA-403 WP 304 W/S

REF. DRAWING:
DRAWO E-2879 IC-77
47W435-1

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

WBNP
SAFETY INJECTION WELD MAP
UNIT 1



TVA CLASS B

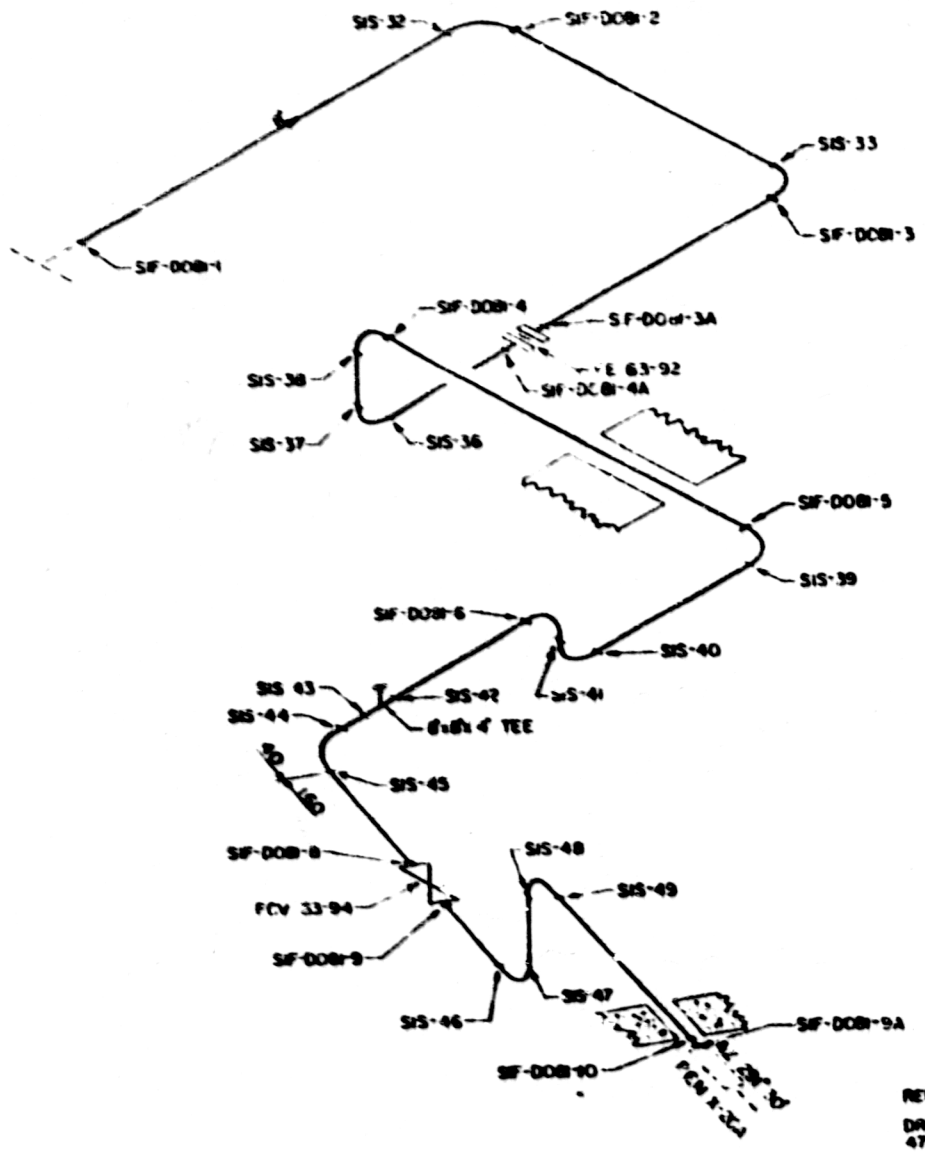
PIPE
8" SA-312 TP 304
8" SCH 160 SA-375 TP 304

FITTINGS
8" STD WT SA-403 WP 304 W/S
8" SCH 160 SA-403 WP 304 W/S

REF. DRAWING:
DRAWO E-2879 IC-80
47W435-1

TENNESSEE VALLEY AUTHORITY
DIVISION OF STATE PROTECTION

WBNP
SAFETY INJECTION WELD MAP
UNIT 1



TVA CLASS B

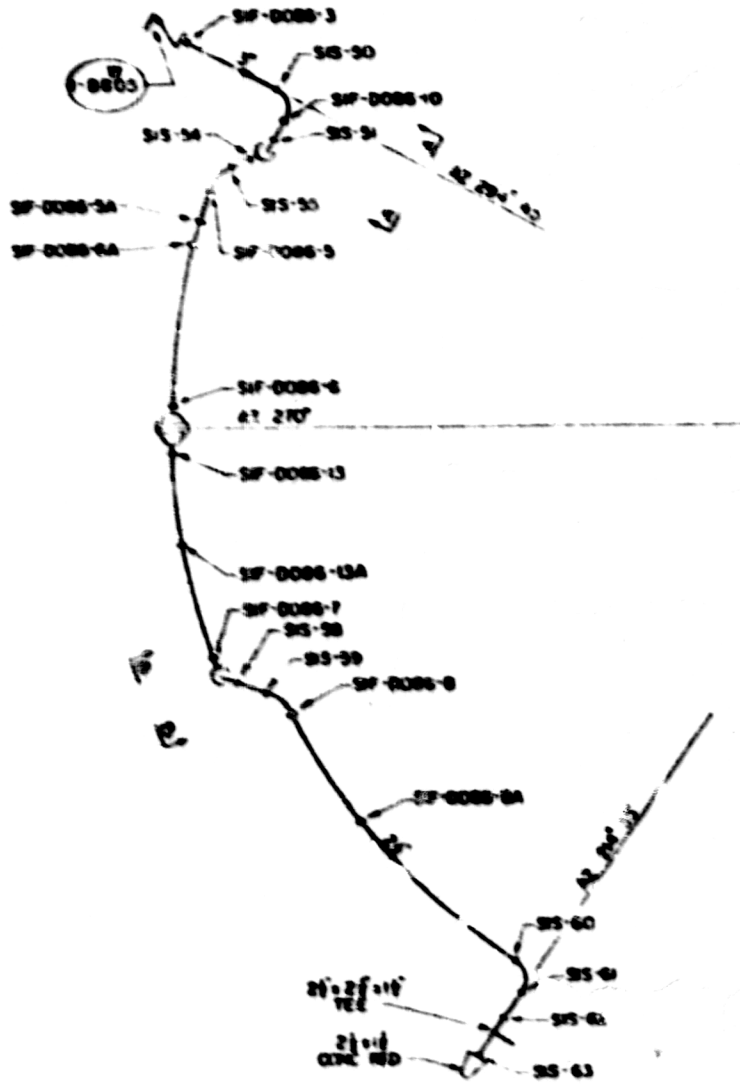
PIPE
8" SCH 160 SA-376 TP 304
8" STD WT SA-312 TP 304

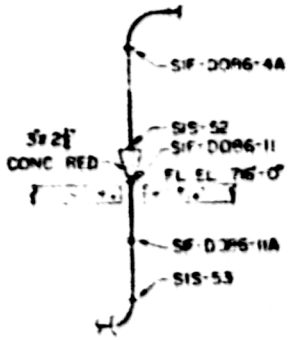
FITTINGS
8" SCH 160 SA-403 WP 304 W/S
8" STD WT SA-403 WP 304 W/S

REF. DRAWING:
DRAWO E-2879 IC-18
47W-35-1

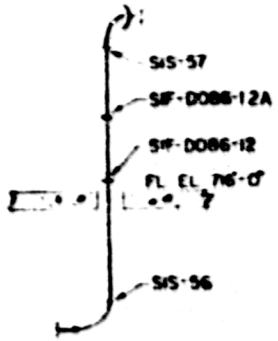
TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

WBNP
SAFETY INJECTION WELD MAP
UNIT 1





SEC A-A



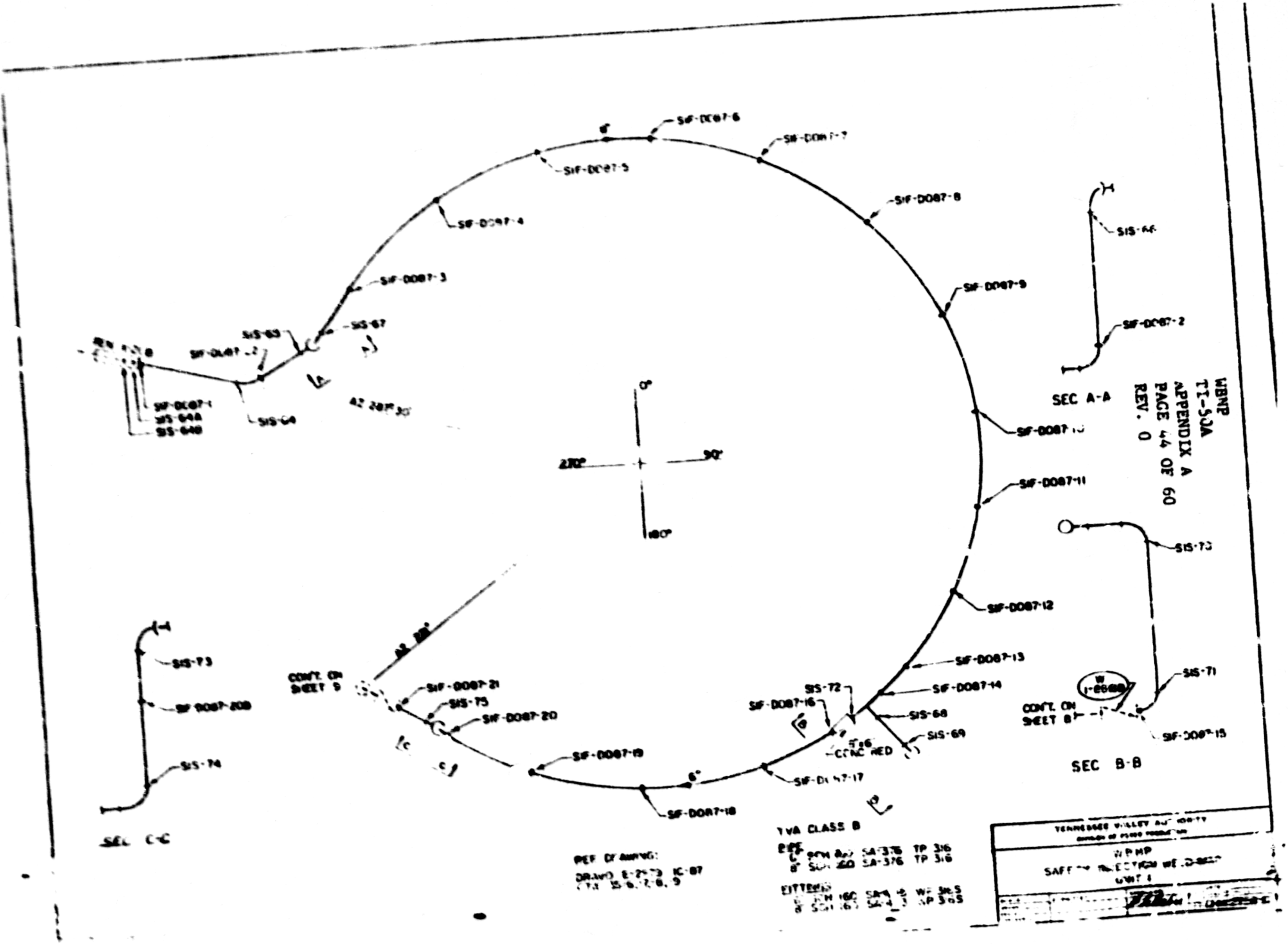
SEC B-B

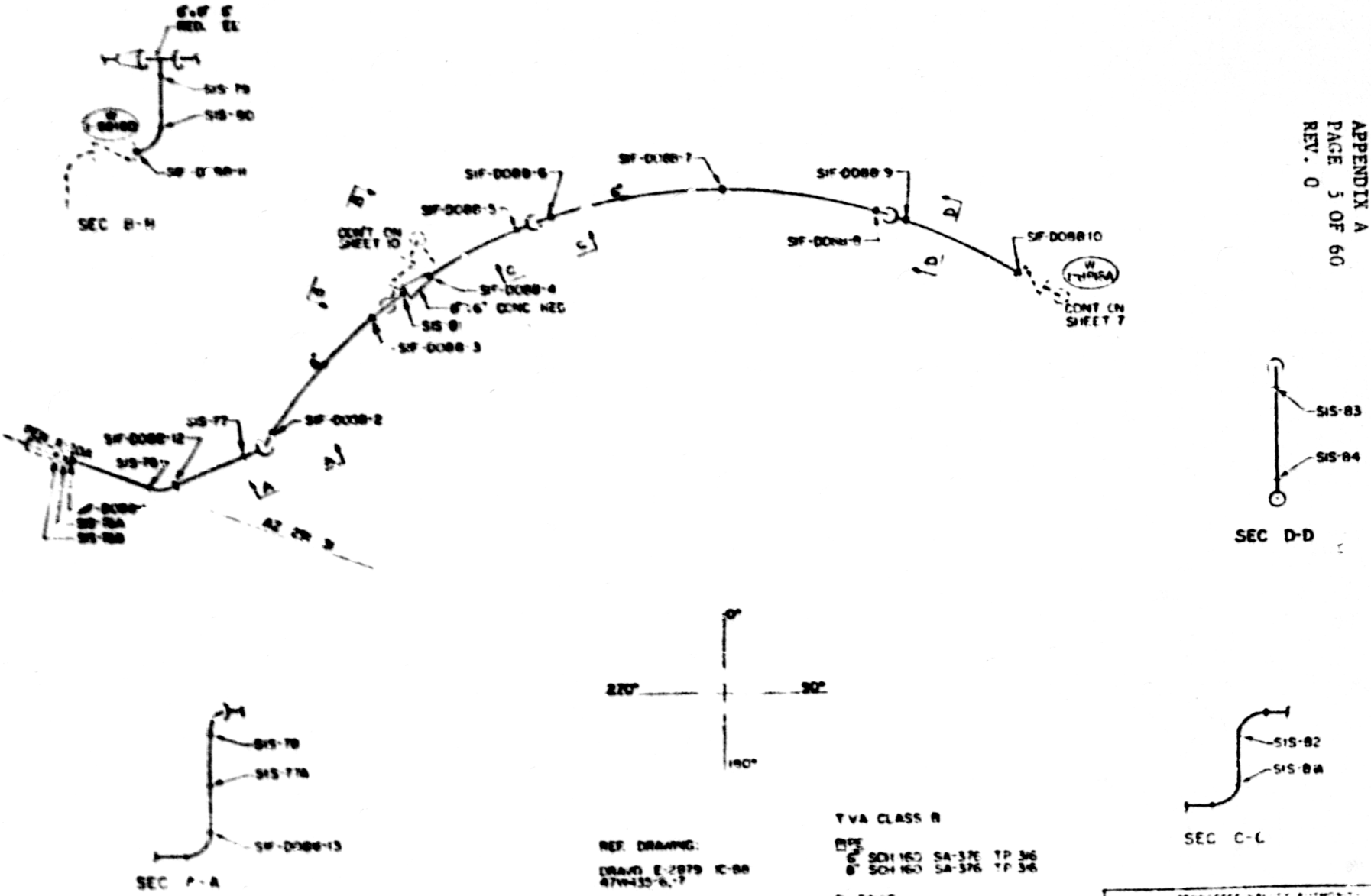
TVA CLASS A

PIPE
3" SCH 160 A-376 TP 304
2½" SCH 160 SA-376 TP 304

FITTINGS
3" SCH 160 SA-403 WP 304S
2½" SCH 160 SA-403 WP 304S

REF. DRAWING


SIF-D087-6
SIF-D087-7
SIF-D087-5
SIF-D087-8
SIF-D087-4
SIF-D087-3
SIF-D087-9
SIS-67
SIS-63
SIF-D087-1
SIS-64A
SIS-64B
SIS-64
SIS-66
SIF-D087-2
SEC A-A
SIF-D087-11
SIF-D087-12
SIS-73
SIF-D087-13
SIF-D087-14
SIS-71
SIF-D087-15
SEC B-B
SIS-72
SIF-D087-16
SIS-68
SIS-69
CONC RED
SIF-D087-17
SIF-D087-18
SIF-D087-19
SIF-D087-20
SIS-75
SIF-D087-21
CONT. ON SHEET 9
SIS-73
SIF-D087-20B
SIS-74
SEC C-C
0°
90°
180°
270°
TVA CLASS B
PIPE
FITTINGS
REF DRAWING:
TENNESSEE VALLEY AUTHORITY
WBNP



REF. DRAWING:

DRAWN E-2879 IC-88
47W435-6,-7

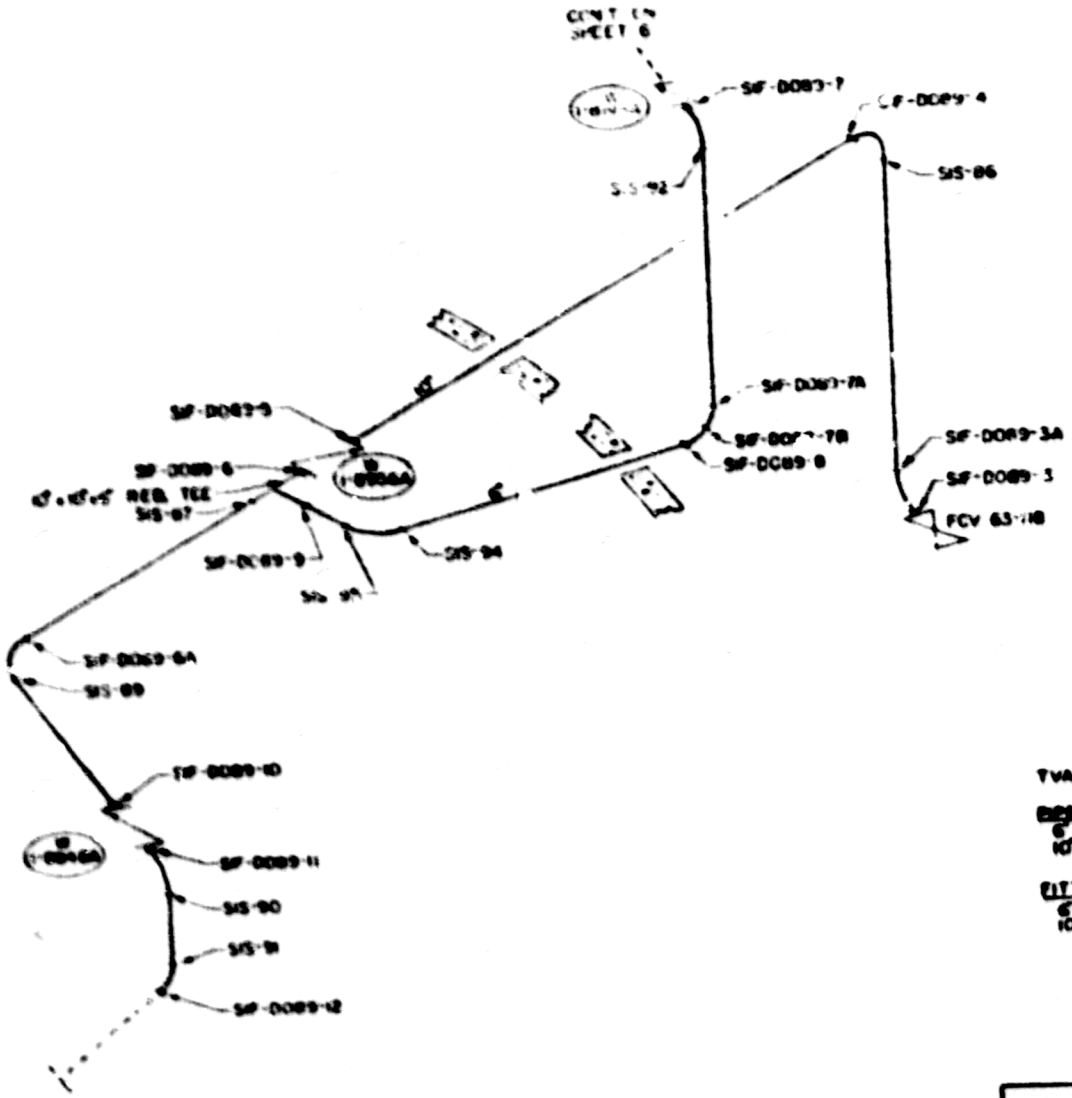
TVA CLASS B

PIPE
6" SCH 160 SA-376 TP 316
8" SCH 160 SA-376 TP 316

FITTINGS
6" SCH 160 SA-403 WP 316S
8" SCH 160 SA-403 WP 316S

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

WBNP
SAFETY INJECTION LEAK MAP
UNIT 1



TVA CLASS A

PIPE
6" SCH 160 SA-376 TP 316
10" SCH 140 SA-376 TP 316

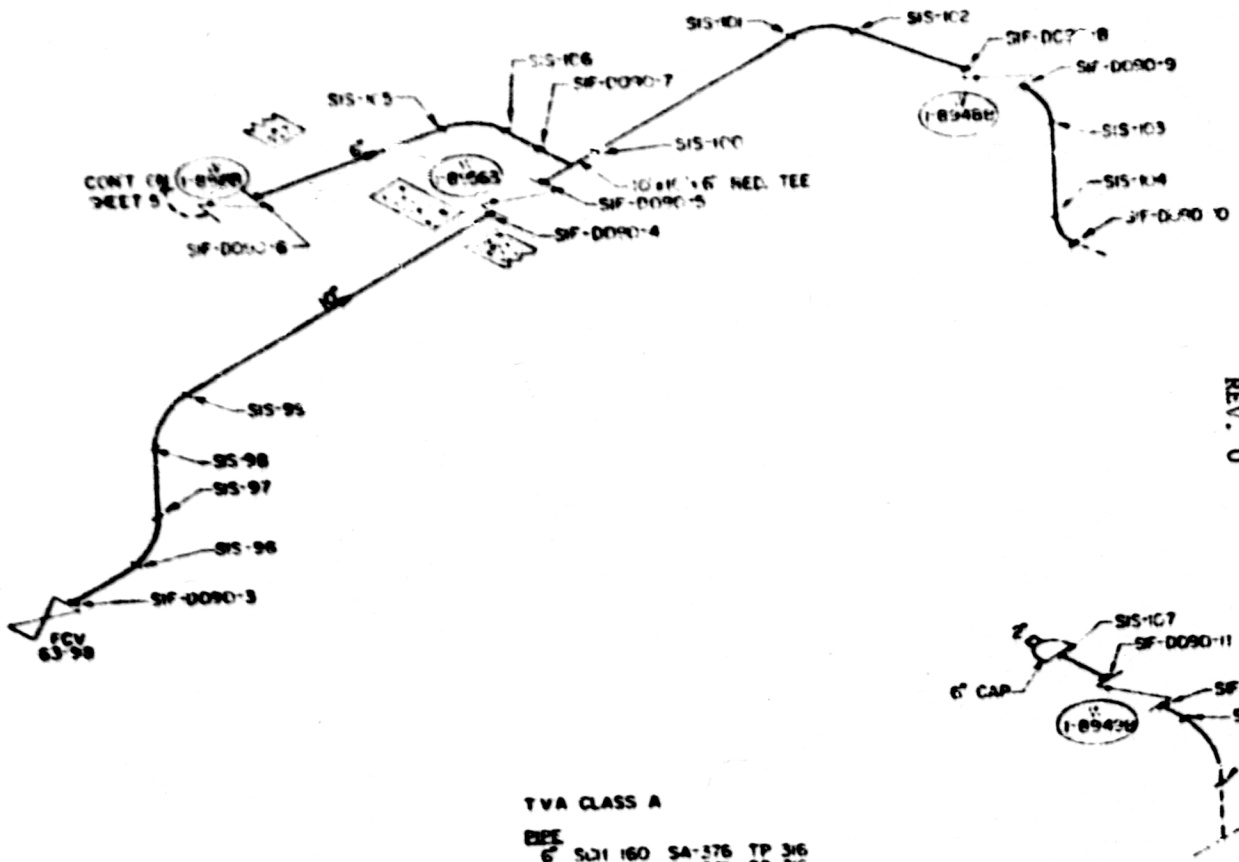
FITTINGS
6" SCH 160 SA-403 TP 316S
10" SCH 140 SA-403 TP 316L

REF. DRAWING:
DRAWG F-_879 IC-89
47W435-7

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

WBNP
SAFETY INJECTION FIELD MAP
UNIT 1

CHM-2258



TVA CLASS A

PIPE
6" SCH 160 SA-376 TP 316
10" SCH 140 SA-376 TP 316

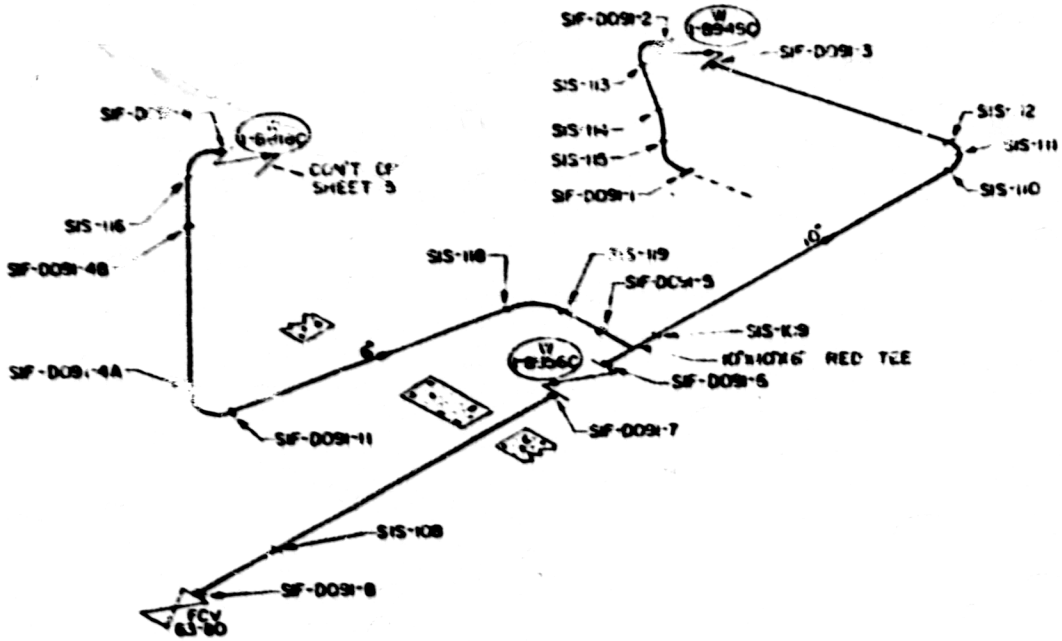
FITTINGS
6" SCH 160 SA-403 WP 316S
10" SCH 140 SA-403 WP 316S

REF. DRAWING

DRAWN E 2879 10-30
47 [illegible]

TENNESSEE VALLEY AUTHORITY
[illegible]

WBNP
SAFETY INJECTION WELD MAP
UNIT 1 [illegible]



TVA CLASS A

PIPE
6" SCH 160 SA-376 TP 316
10" SCH 140 SA-376 TP 316

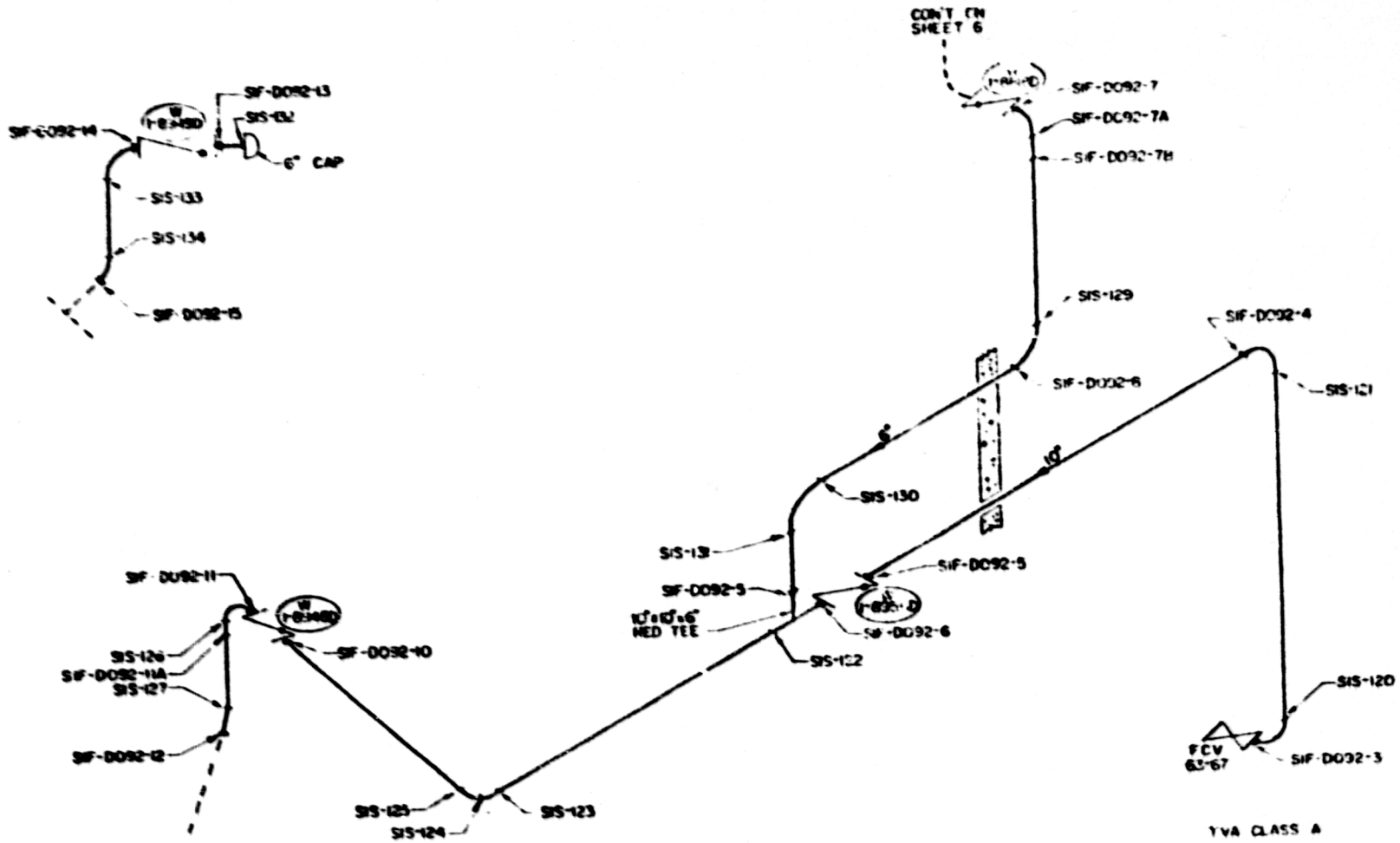
FITTINGS
6" SCH 160 SA-403 TP 316 WS
10" SCH 140 SA-403 TP 316 WS

REF. DRAWING:

DRAWG E-2879 IC-91
47W435-9

TENNESSEE VALLEY AUTHORITY
DIVISION OF CONSTRUCTION

WBNP
SAFETY INJECTION WELD MAP
UNIT 1 LOOP 3

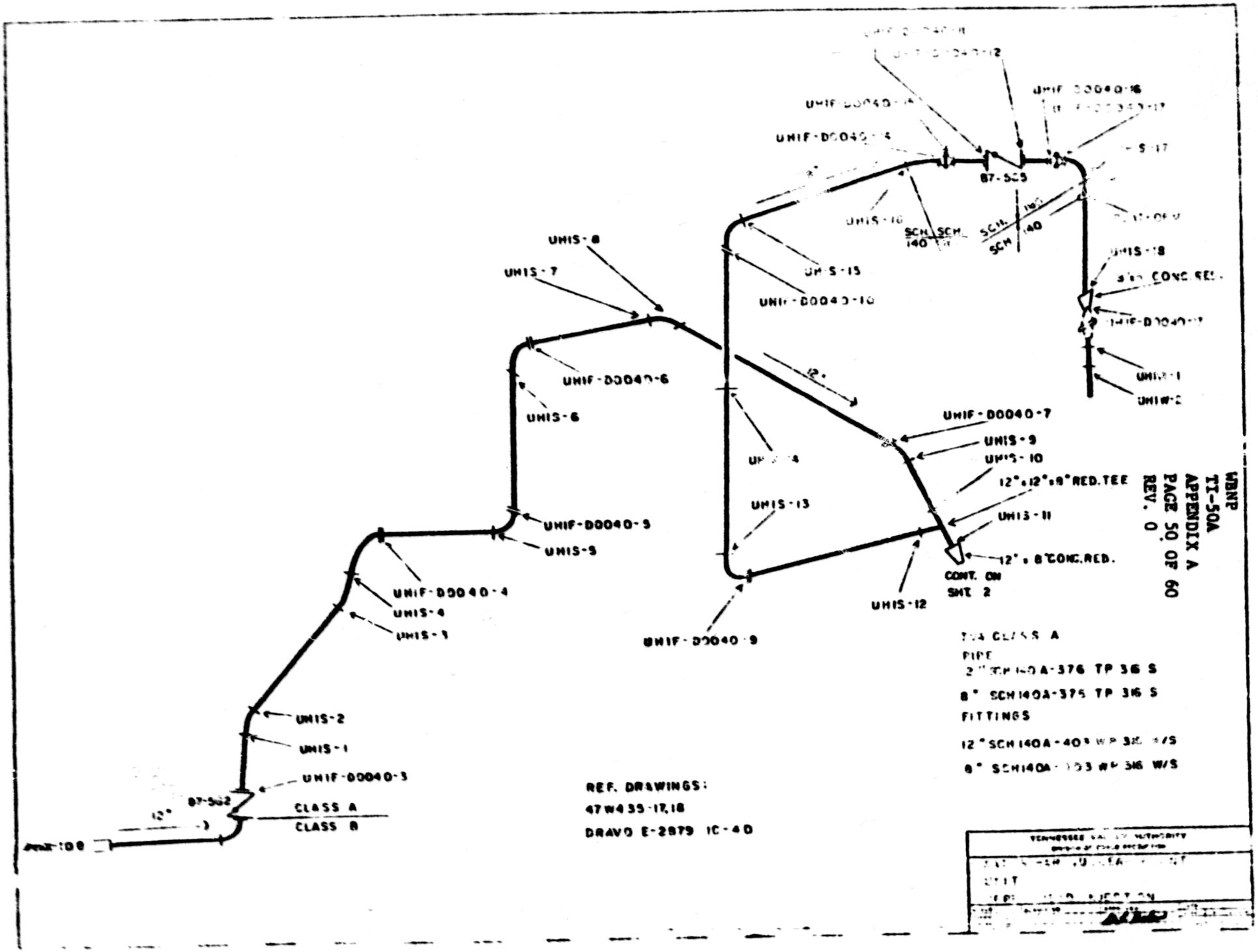


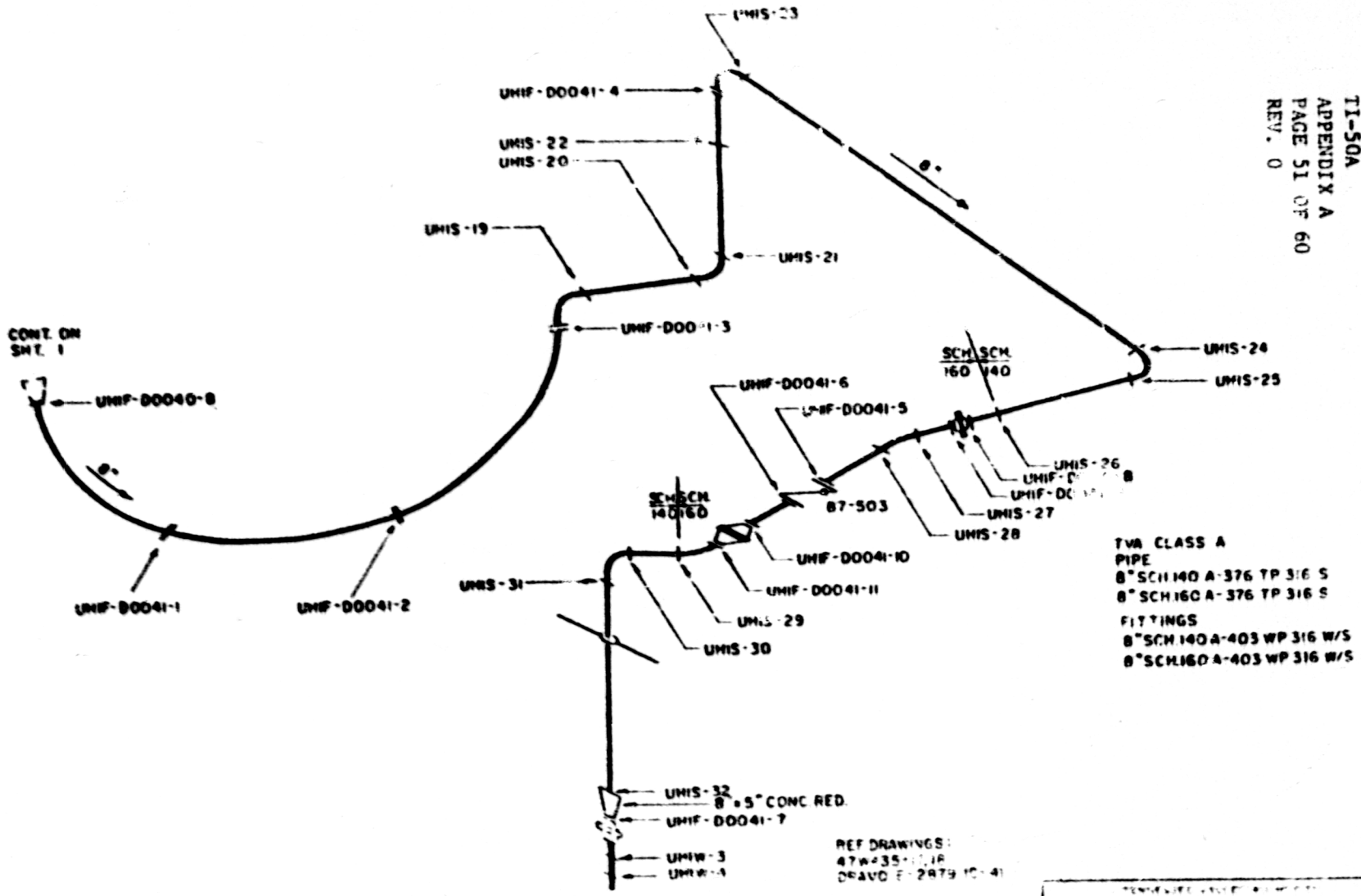
YVA CLASS A

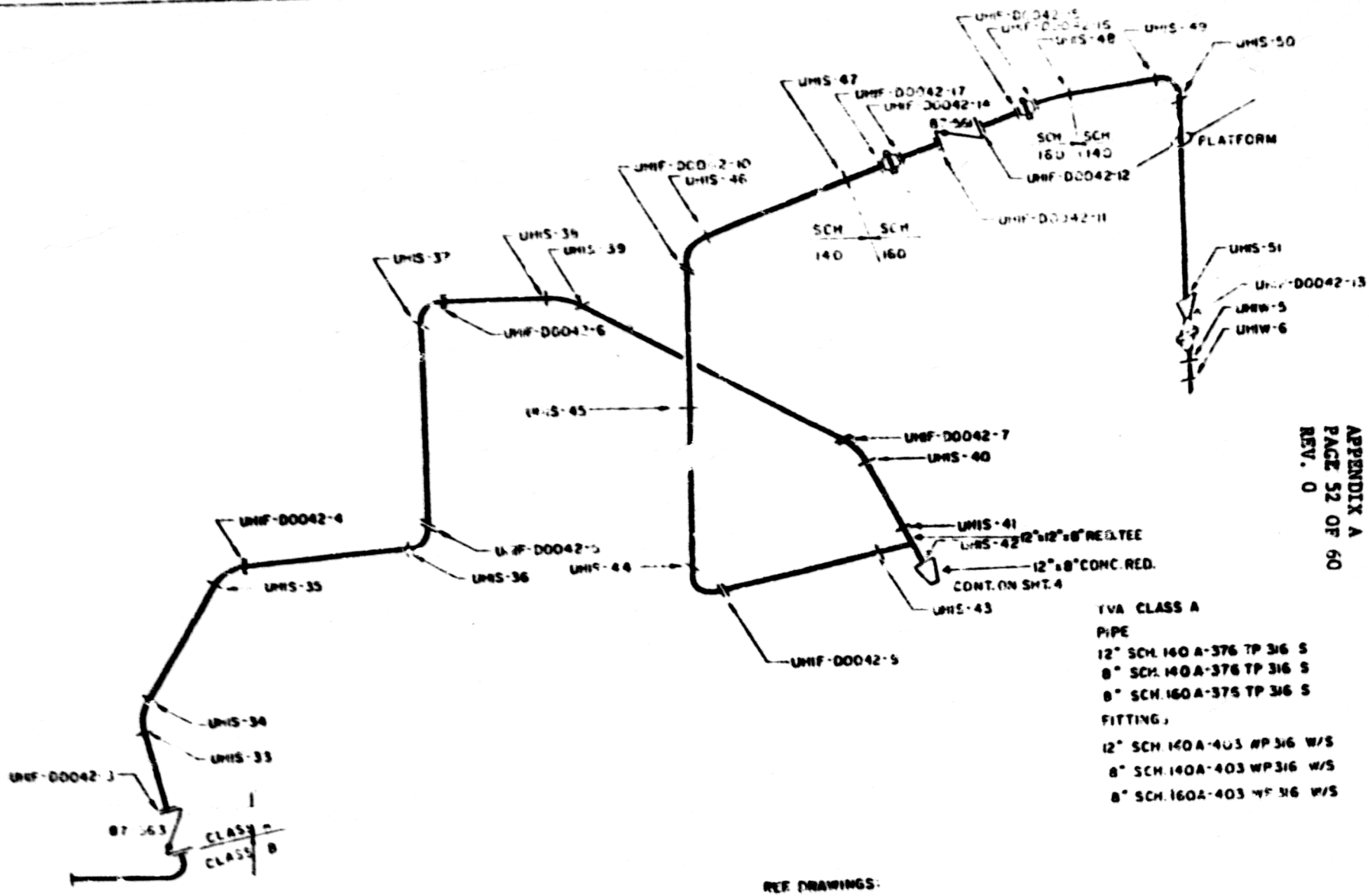
TYPE
6" SCH 160 SA-376 TP 316
10" SCH 140 SA-376 TP 316

FITTINGS
6" SCH 160 SA-403 WP 316S
10" SCH 140 SA-403 WP 316S

REF. DRAWING:
DRAWING F-2673 10-92


UHIF-D0040-16
UHIF-D0040-14
UHIF-D0040-4
B7-505
UHIS-16
SCH 140
SCH 140
UHIS-18
CONC RED.
UHIF-D0040-17
UHIS-8
UHIS-7
UHIS-15
UHIF-D0040-10
UHIF-D0040-6
UHIS-6
12"
UHIF-D0040-7
UHIS-9
UHIS-10
12"x12"x8" RED. TEE
UHIS-13
UHIS-11
12" x 8" CONC. RED.
CONT. ON SHT 2
UHIS-12
UHIF-D0040-9
UHIF-D0040-5
UHIS-5
UHIF-D0040-4
UHIS-4
UHIS-3
UHIS-2
UHIS-1
UHIF-D0040-3
B7-502
12"
CLASS A
CLASS B
CLASS A
PIPE
2" SCH 140A-376 TP 316 S
8" SCH140A-375 TP 316 S
FITTINGS
12" SCH 140A-403 WP 316 W/S
8" SCH140A-403 WP 316 W/S
REF. DRAWINGS:
47W435-17,18
DRAWO E-2879 IC-4D
WBNP
TI-50A
APPENDIX A
PAGE 50 OF 60
REV. 0


UHIS-23
UHIF-D0041-4
UHIS-22
UHIS-20
UHIS-19
UHIS-21
UHIF-D0041-3
CONT. ON
SHT. 1
UHIF-D0040-8
UHIF-D0041-1
UHIF-D0041-2
UHIS-24
UHIS-25
SCH SCH
160 140
UHIF-D0041-6
UHIF-D0041-5
UHIS-26
UHIS-27
UHIS-28
87-503
SCH SCH
140 160
UHIF-D0041-10
UHIF-D0041-11
UHIS-31
UHIS-29
UHIS-30
UHIS-32
8"x5" CONC RED.
UHIF-D0041-7
UHIW-3
UHIW-4
TVA CLASS A
PIPE
8" SCH 140 A-376 TP 316 S
8" SCH 160 A-376 TP 316 S
FITTINGS
8" SCH 140 A-403 WP 316 W/S
8" SCH 160 A-403 WP 316 W/S
REF DRAWINGS:



TVA CLASS A

PIPE

12" SCH. 140 A-376 TP 316 S

8" SCH. 140 A-376 TP 316 S

8" SCH. 160 A-376 TP 316 S

FITTINGS

12" SCH. 140 A-403 WP 316 W/S

8" SCH. 140 A-403 WP 316 W/S

8" SCH. 160 A-403 WP 316 W/S

REF DRAWINGS:

47W43[illegible]-17,18

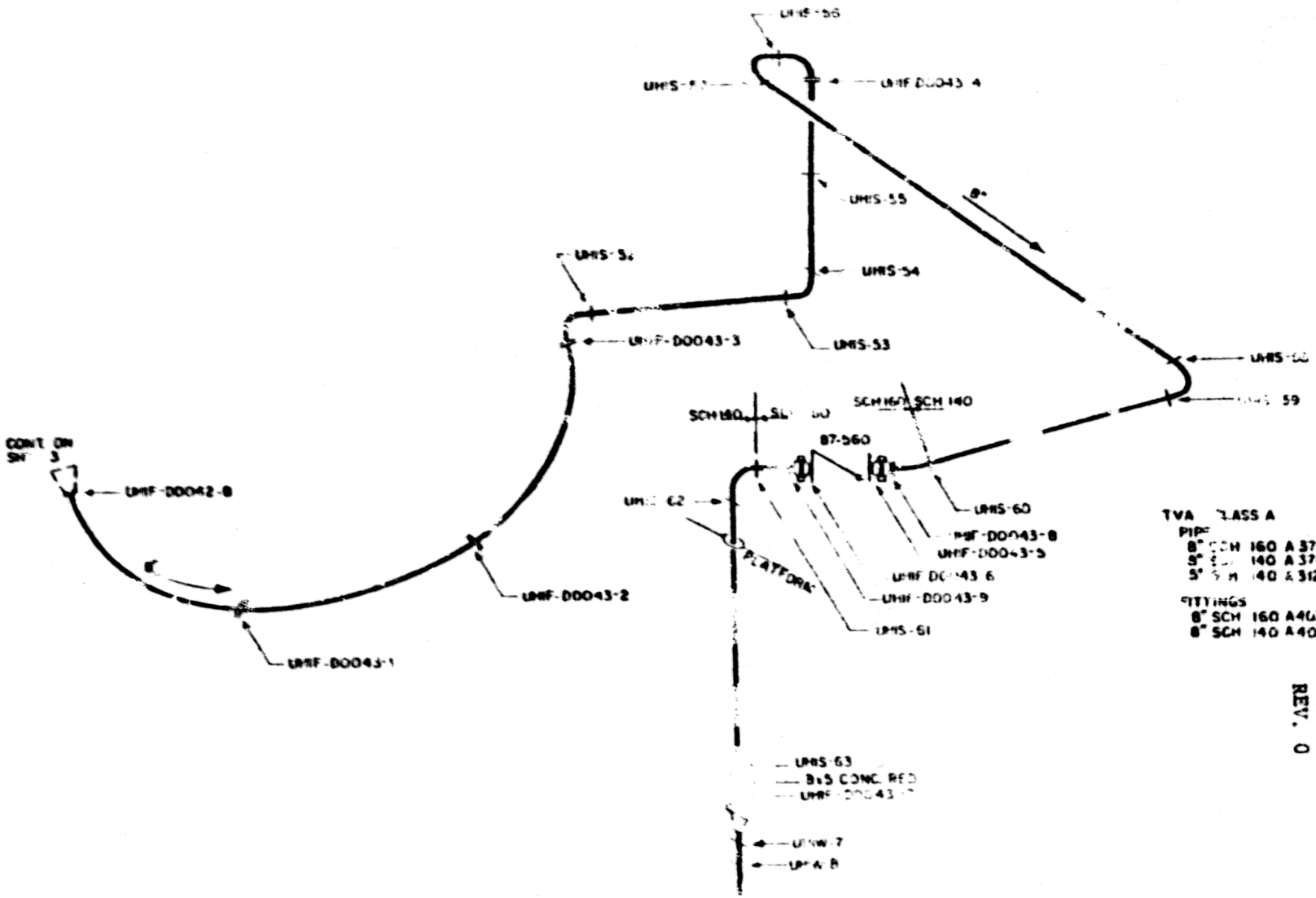
[illegible] E-287[illegible] IC-42

TENNESSEE VALLEY AUTHORITY

WATTS BA[illegible] PLANT

UNIT 1

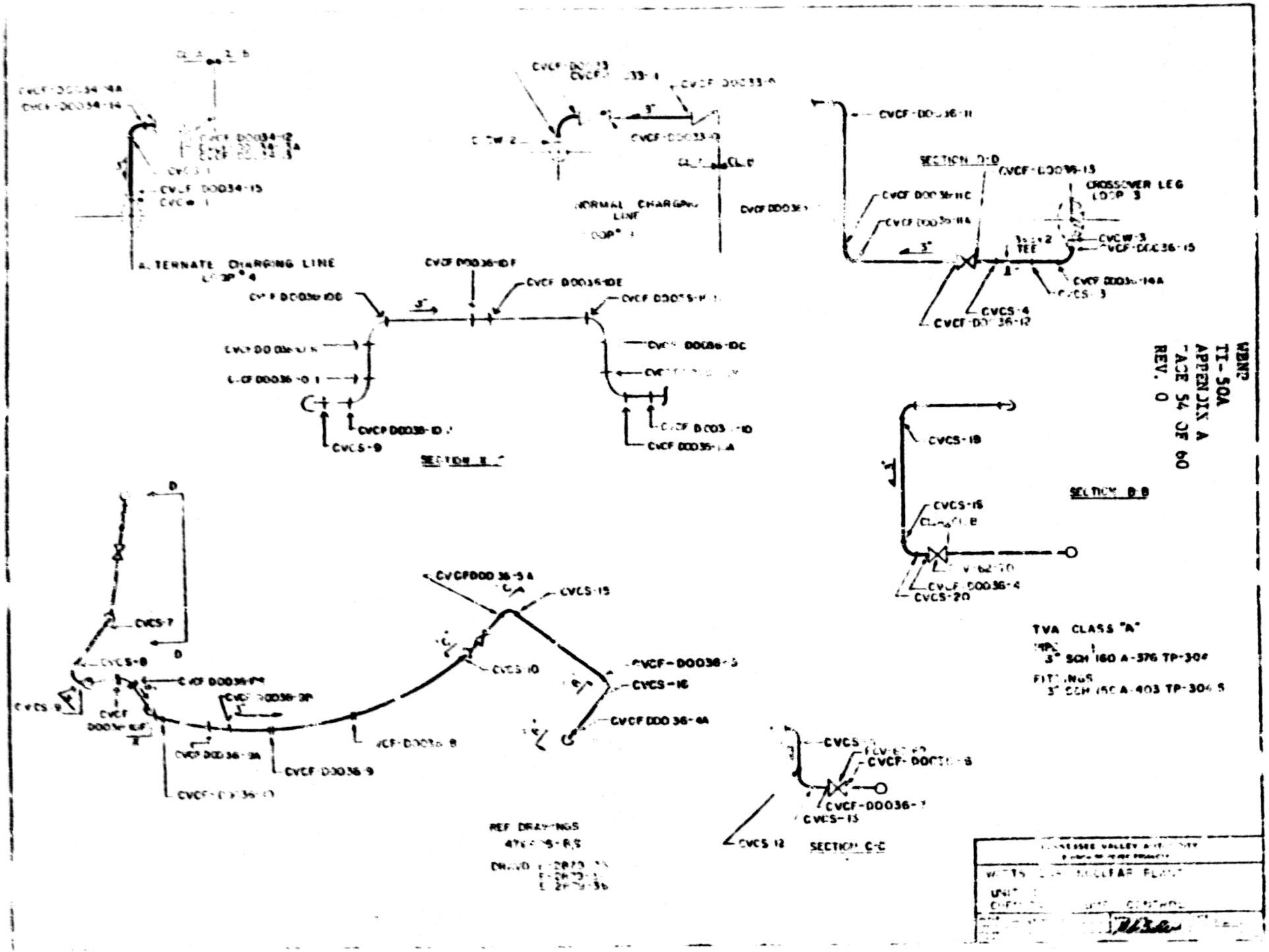
UPPER HEAD INJECTION

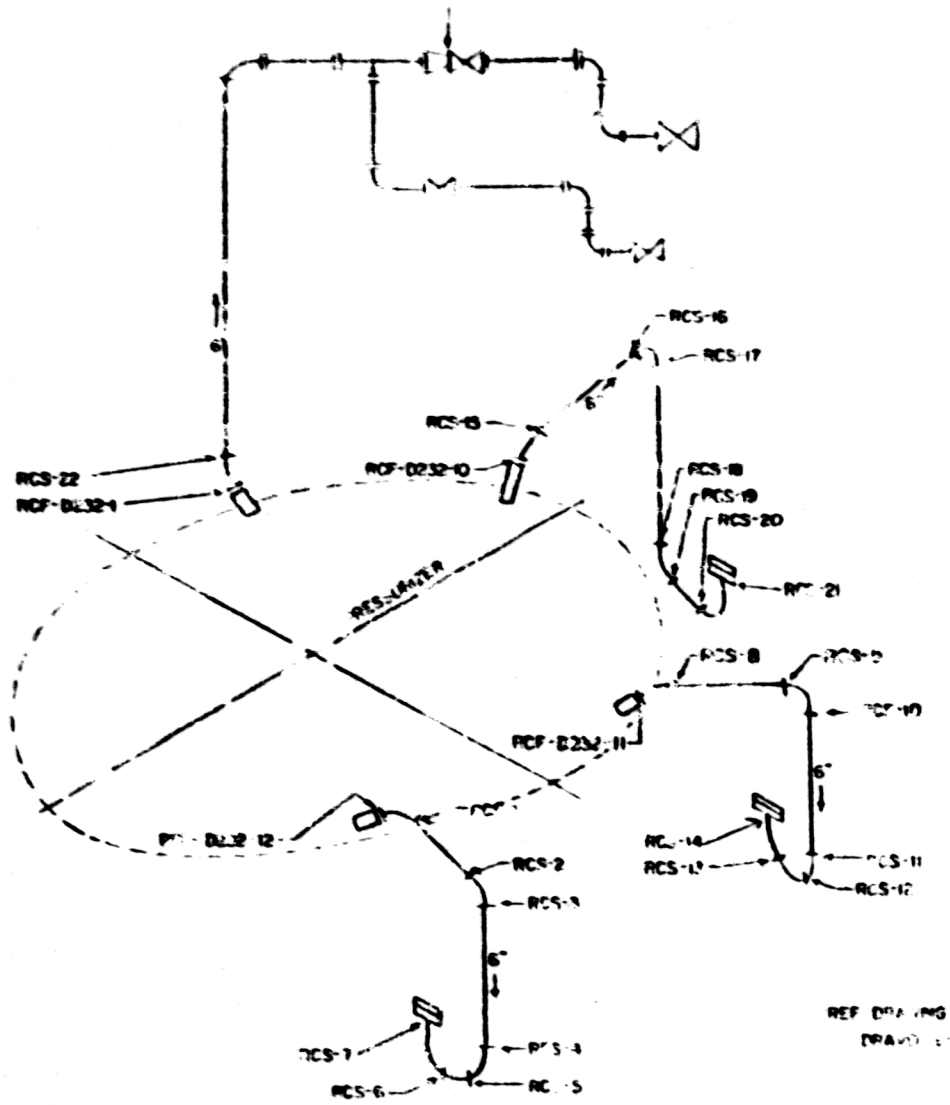


TVA CLASS A
PIPE
8" SCH 160 A 376 TP 316 S
8" SCH 140 A 376 TP 316 S
5" SCH 140 A 312 TP 304
FITTINGS
8" SCH 160 A403 WP 316 W/S
8" SCH 140 A403 WF 316 W/S

WBNP
TI-50A
APPENDIX A
PAGE 53 OF 60
REV. 0

TENNESSEE VALLEY AUTHORITY
WATTS BAR NUCLEAR PLANT
UNIT
UPPER HEAD INJECTION

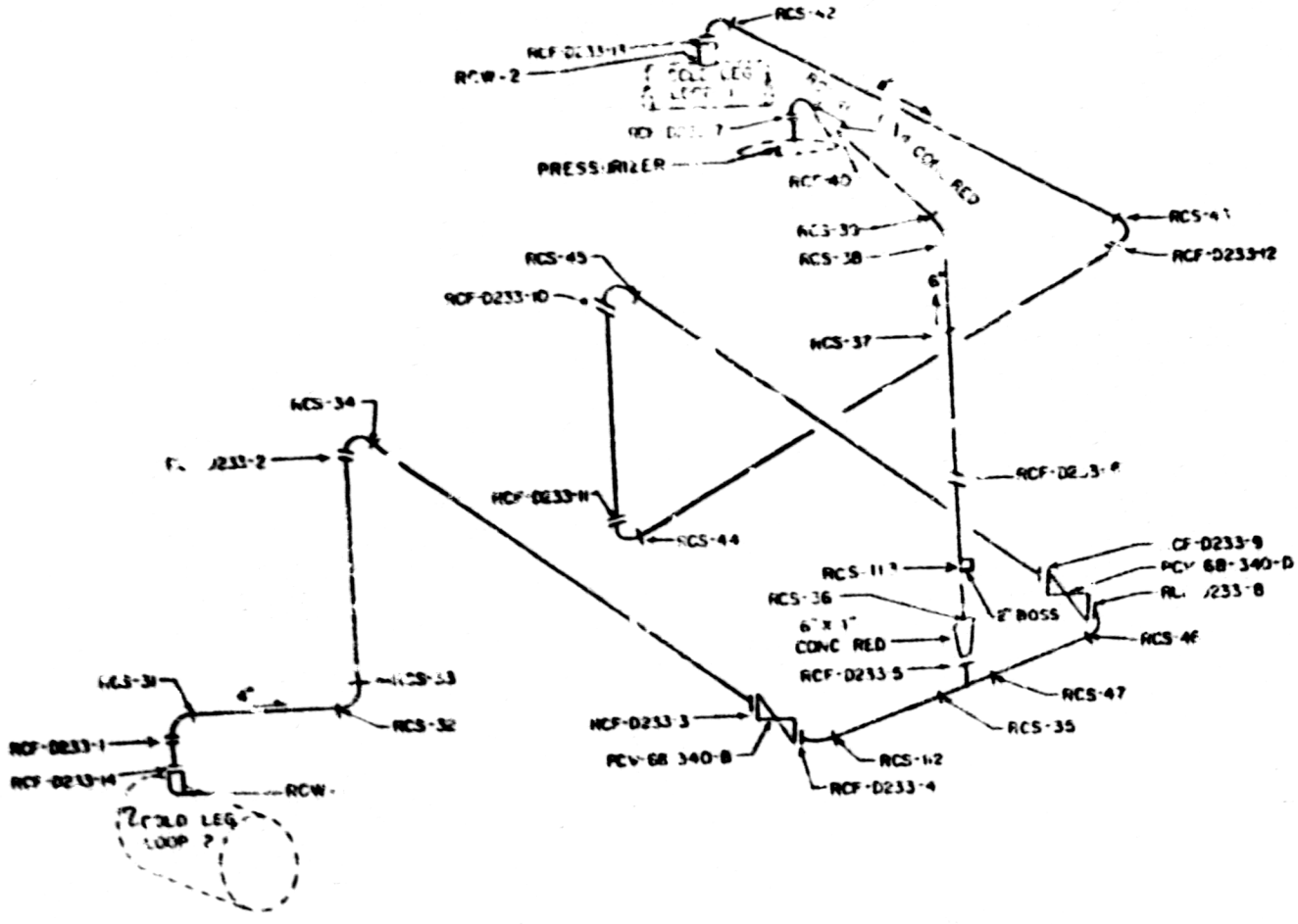

WBN2
TI-50A
APPENDIX A
PAGE 54 OF 60
REV. 0
NORMAL CHARGING LINE
ALTERNATE CHARGING LINE
SECTION D-D
CROSSOVER LEG LOOP 3
SECTION B-B
SECTION C-C
TVA CLASS "A"
3" SCH 160 A-376 TP-304
FITTINGS
3" SCH 160 A-403 TP-304
REF DRAWINGS



NOTE
A 376 SEAMLESS STAINLESS STEEL PIPE
6" SCH 160 TP 304
3" SCH 160 TP 304

REF DRAWING
DRAWING 2079-10-232

WBNP
TI-50A
APPENDIX A
PAGE 56 OF 60
REV. 0

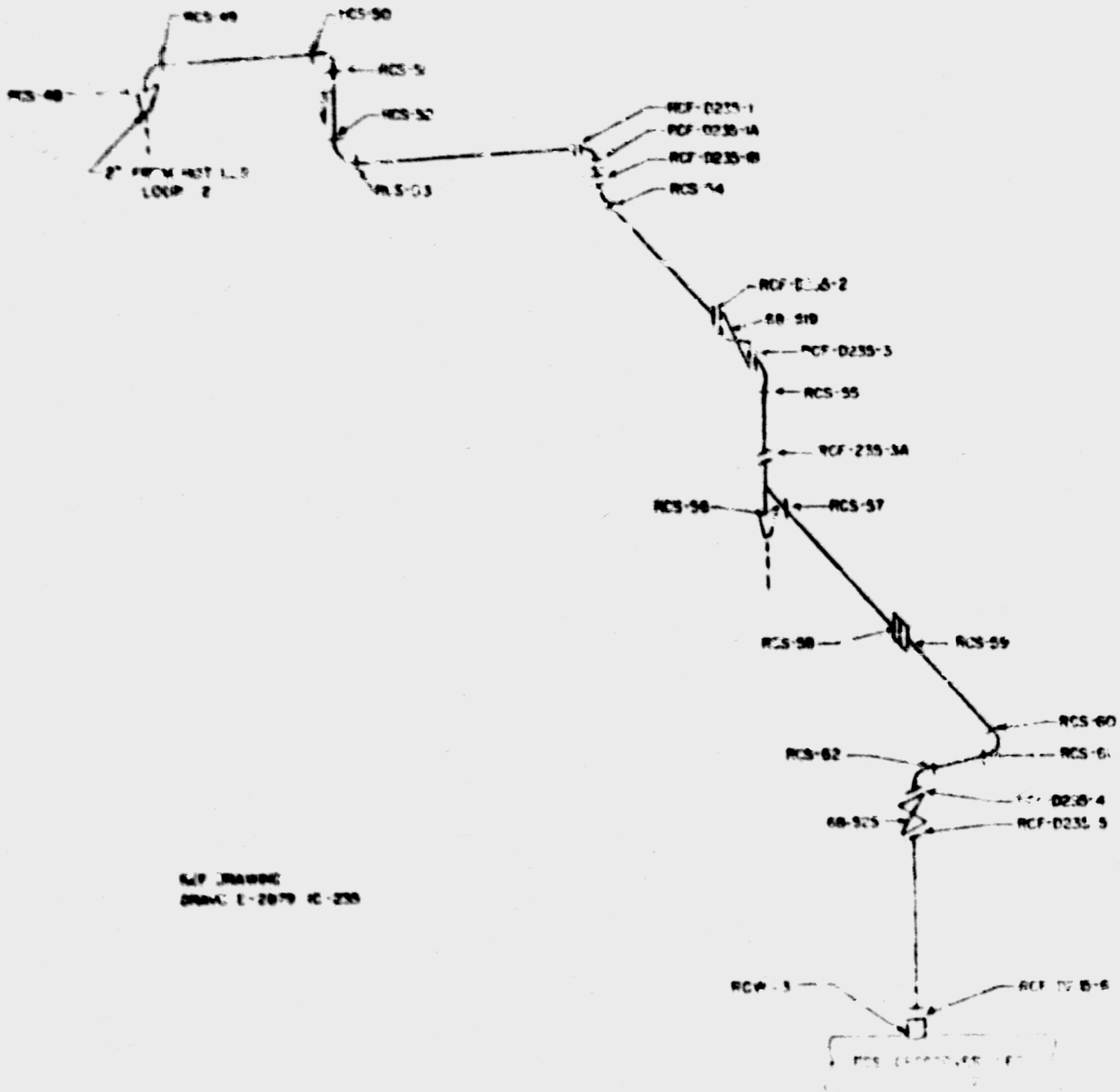


REF DRAWING
AVG E-2879 IC-233

NOTE
A 376 SEAML STN STL PIPE
6" SCH 160 TP 304
4" SCH 160 TP 304

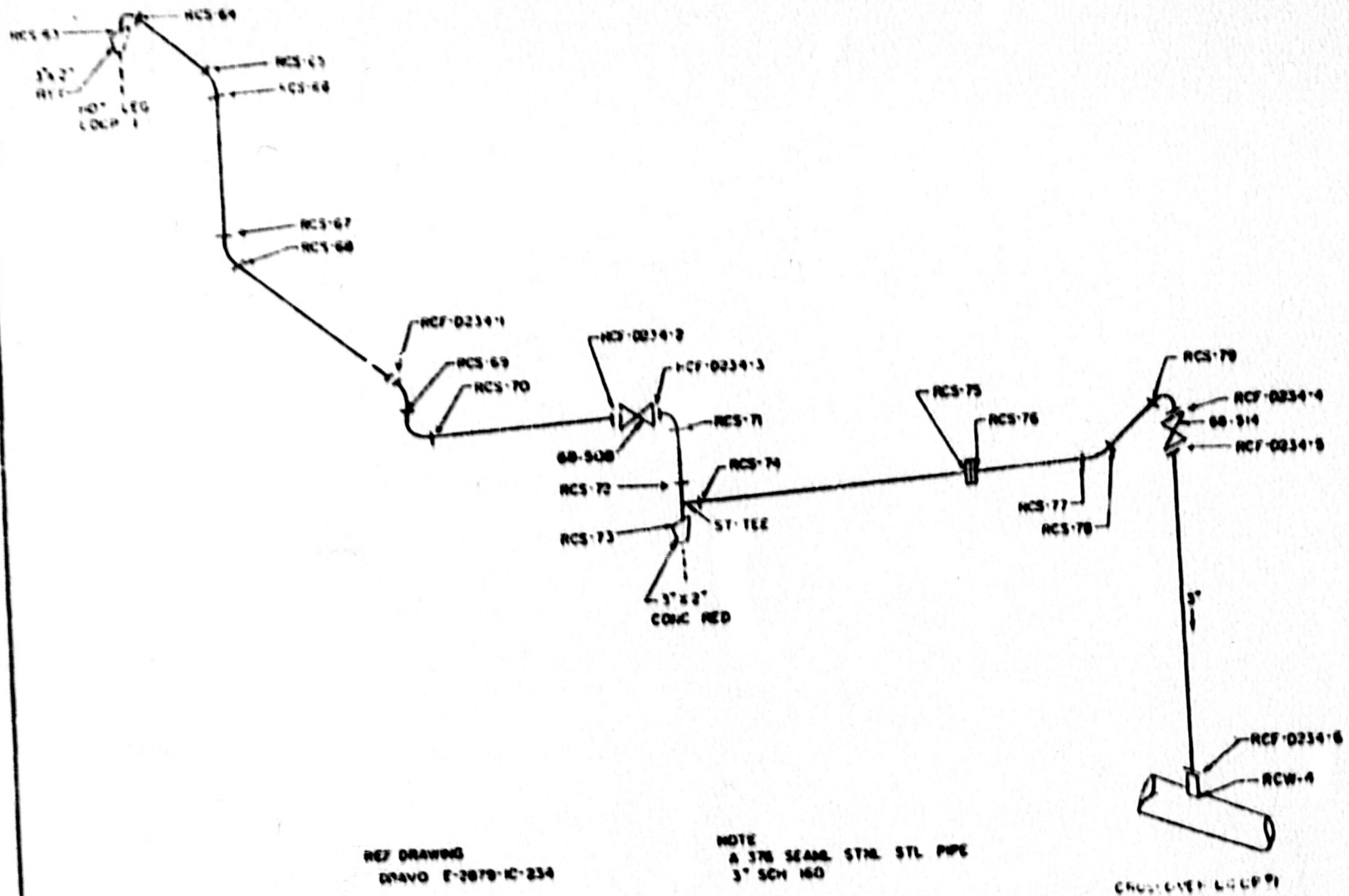
TENNESSEE VALLEY AUTHORITY
DIVISION OF HOUSE PRODUCTION

REACTOR COOLANT AUX S MISC
WATTS BAR NUCLEAR PLANT
UNIT 1



NOTE
A376 SEAML STNL STL
PIPE

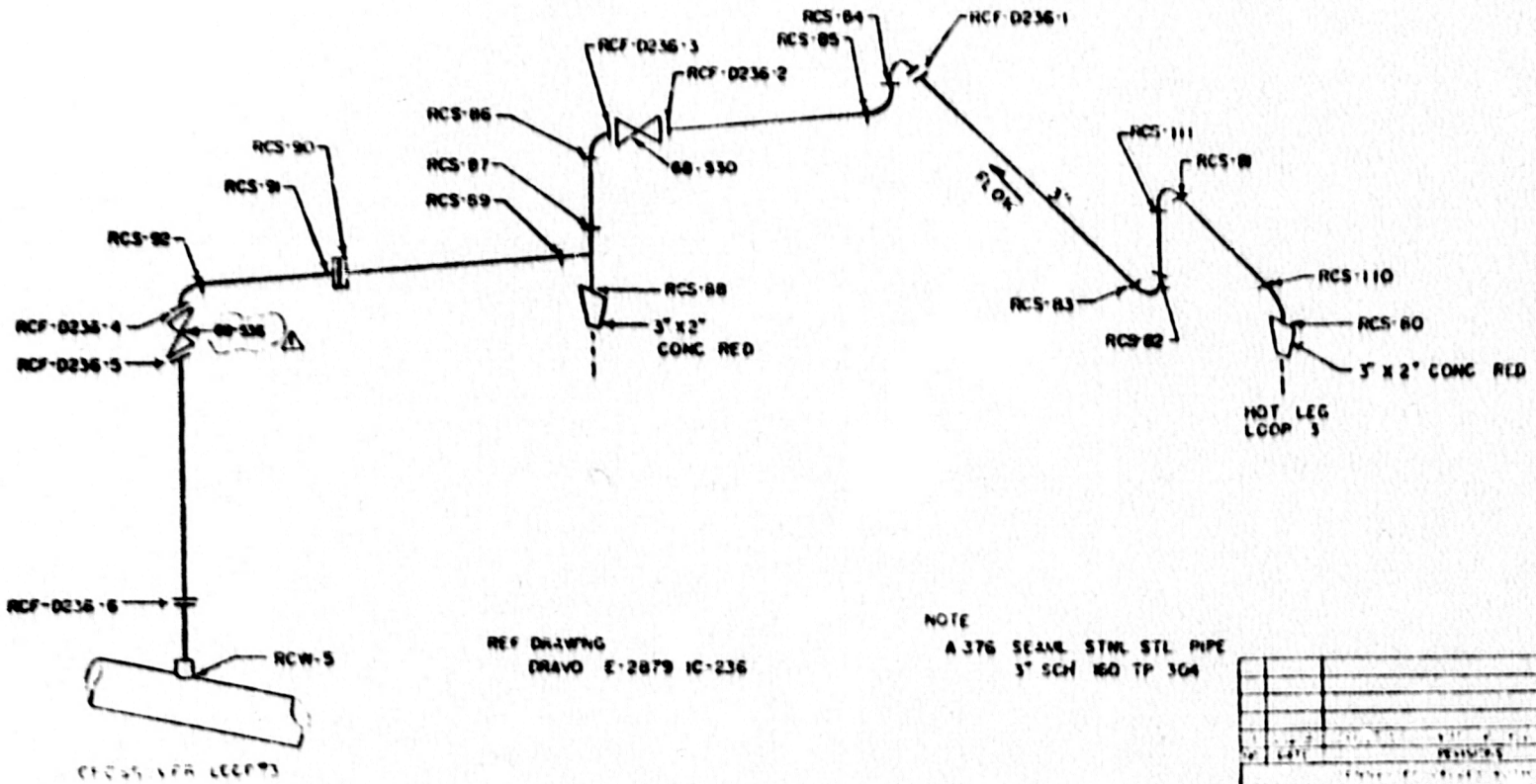
SCH 160 TP 304



REF DRAWING
DRAVO E-2879-IC-234

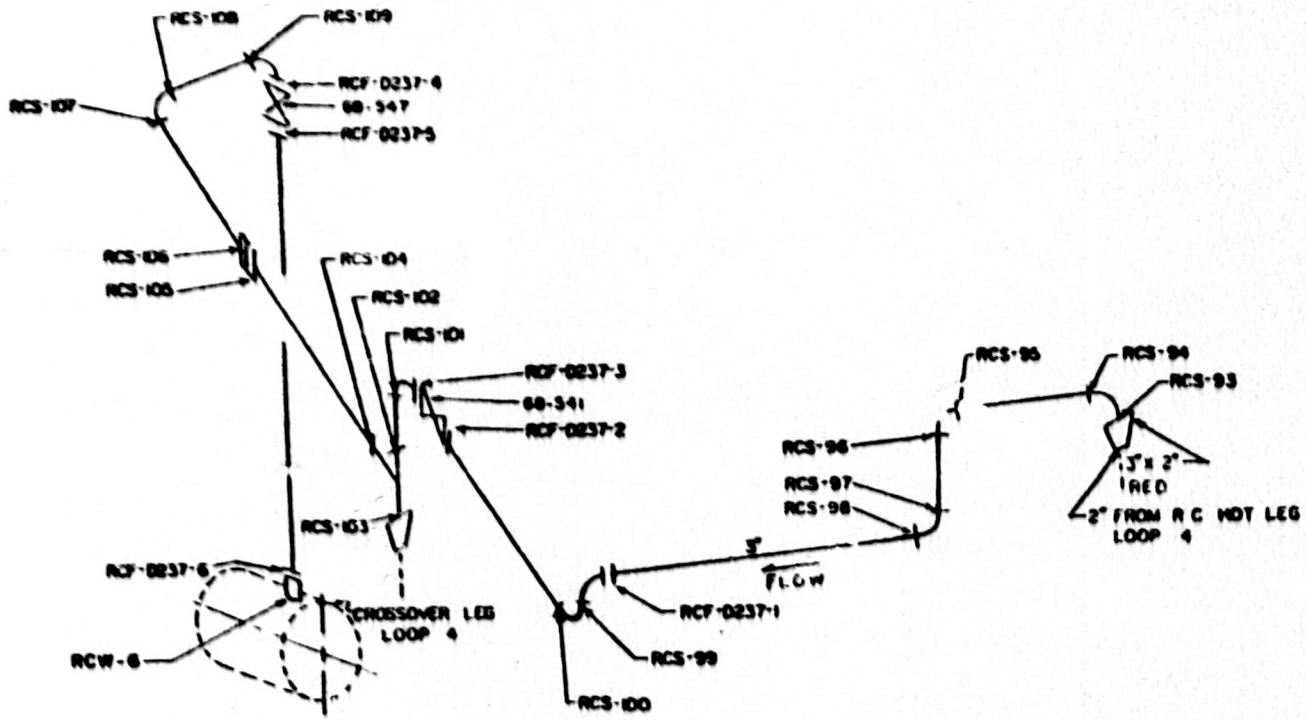
NOTE
A 376 SEAML STNL STL PIPE
3" SCH 160

TENNESSEE VALLEY AUTHORITY
[illegible]
REACTOR COOLANT AUX & MISC
WATTS BAR NUCLEAR PLANT
UNIT 1



REF DRAWING
DRAWO E-2879 IC-236

NOTE
A 376 SEAML STNL STL PIPE
3" SCH 160 TP 304



NOTE
A376 SEAML STNL STL PIPE
3" SCH 160 TP 304

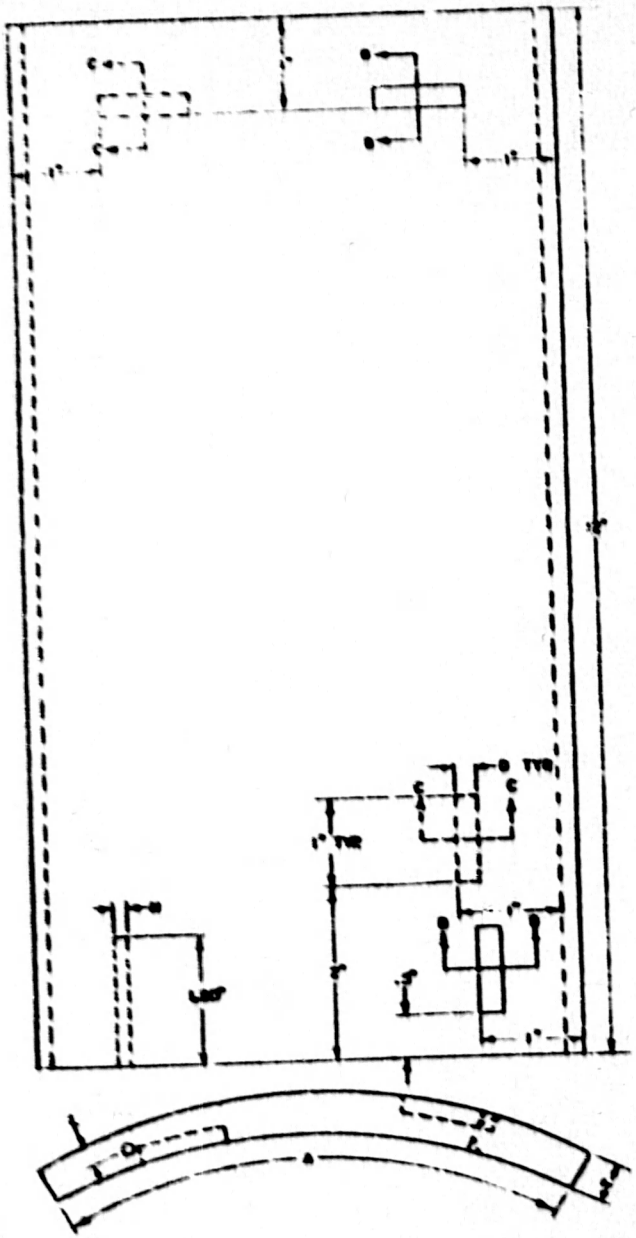
REF DRAWING
DRAWD E2879-IC-237

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

REACTOR COOLANT AUX & MISC
WATTS BAR NUCLEAR PLANT
UNIT 1

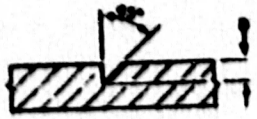
TABLE A
LIST OF CALIBRATION BLOCK DRAWINGS

BLOCK NO.	DRAWING NO.	APPENDIX B PAGE NO.
WB-1	CH-M-2445-C	1
WB-2	CH-M-2445-C	1
WB-3	CH-M-2445-C	1
WB-4	CH-M-2445-C	1
WB-5	CH-M-2445-C	1
WB-6	CH-M-2460-B	3
WB-7	CH-M-2507-C	4
WB-8	CH-M-2507-C	4
WB-9	CH-M-2507-C	4
WB-10	CH-M-2553-C	7
WB-11	CH-M-2593-C	11
WB-12	CH-M-2553-C	7
WB-13	CH-M-2571-C	8
WB-14	CH-M-2550-C	5
WB-15	CH-M-2552-C	6
WB-16	CH-M-2591-B	10
WB-17	CH-M-2571-C	8
WB-18	CH-M-2571-C	8
WB-19	CH-M-2571-C	8
WB-20	CH-M-2589-B	9
WB-21	CH-M-2571-C	8
WB-23	CH-M-2597-C	12
WB-24	CH-M-2597-C	12
WB-25	CH-M-2597-C	12
WB-26	CH-M-2597-C	12
WB-27	CH-M-2597-C	12
WB-29	CH-M-2591-B	10
WB-30	CH-M-2591-B	10
WB-31	CH-M-2597-C	12
WB-32	CH-M-2597-C	12
WB-33	CH-M-2638-C	
WB-34	CH-M-2638-C	
WB-35	CH-M-2597-C	12
WB-36	CH-M-2597-C	12
WB-37	CH-M-2678-B	13
WB-38	CH-M-2742-C	14
WB-39	CH-M-2771-C	15
WB-ET-1	CH-M-2447-B	2
7-1-8-CS-3-WAB	D-5420 032 (SWRI)	22
10.5-7-8-CS-4-WAB	D-5420 033 (SWRI)	23
16-59-2	D-5420 037 (SWRI)	25
IR-CSCL-2-WAB	D-5420 031 (SWRI)	21
NS-CSCL-1-WAB	D-5420 030 (SWRI)	20
Q-7053 1 of 2		
Q-7053 2 of 2	D-5420 035 (SWRI)	24
TO 4519		
TO 7216		
WAT-UT-01	D-5420 022 (SWRI)	17
WAT-UT-02	D-5420 026 (SWRI)	19
WAT-UT-03	D-5420 025 (SWRI)	18
WAT-UT-05	D-5420 021 (SWRI)	16
WAT-UT-06	2414 SH-7 (RDM)	26

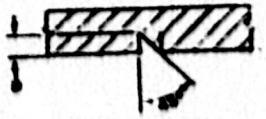


BLOCK NO.	DIA.	T	D	A	H	L
XX-1*	6	0.681	0.034	120°	3/32	1/2 T
XX-2	8	0.878	0.044	120°	3/32	1/2 T
XX-3	12	1.126	0.056	120°	1/8	1/4 T
XX-4	16	0.827	0.041	120°	3/32	1/2 T
XX-5	32	1.434	0.072	60°	1/8	1/4 T

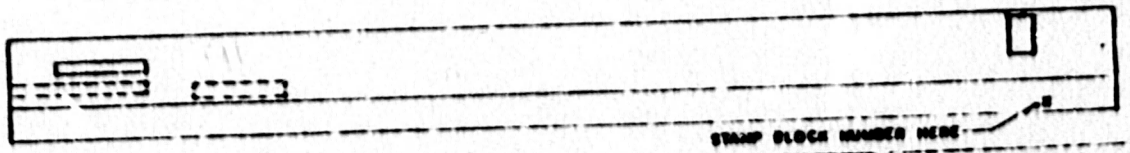
* NOTE:
SUBSTITUTE SQ FOR SEQUOYAH NUCLEAR PLANT OR WB FOR WATTS BAR NUCLEAR PLANT IN PLACE OF THE XX IN THE BLOCK NUMBER.



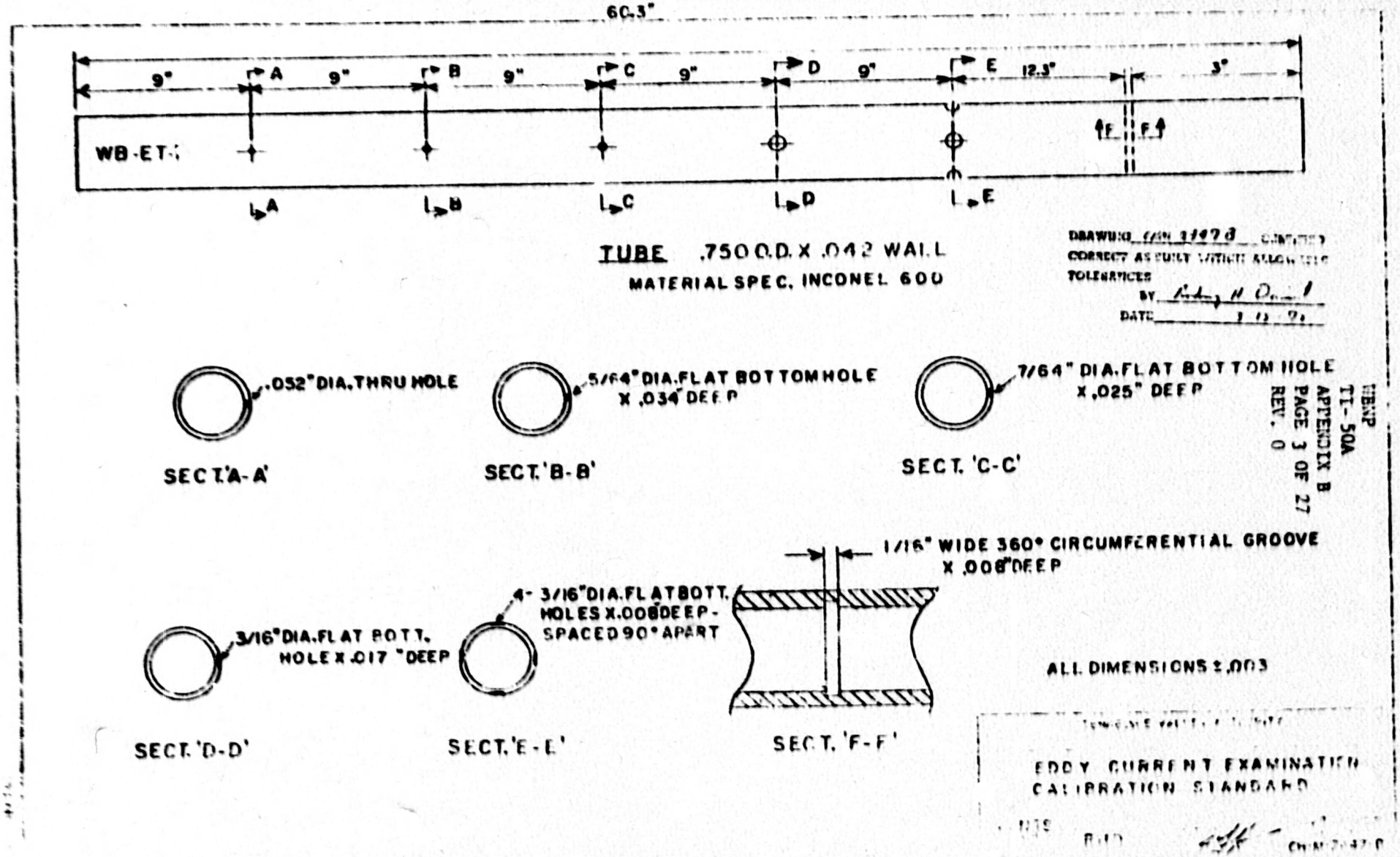
SECTION B-B



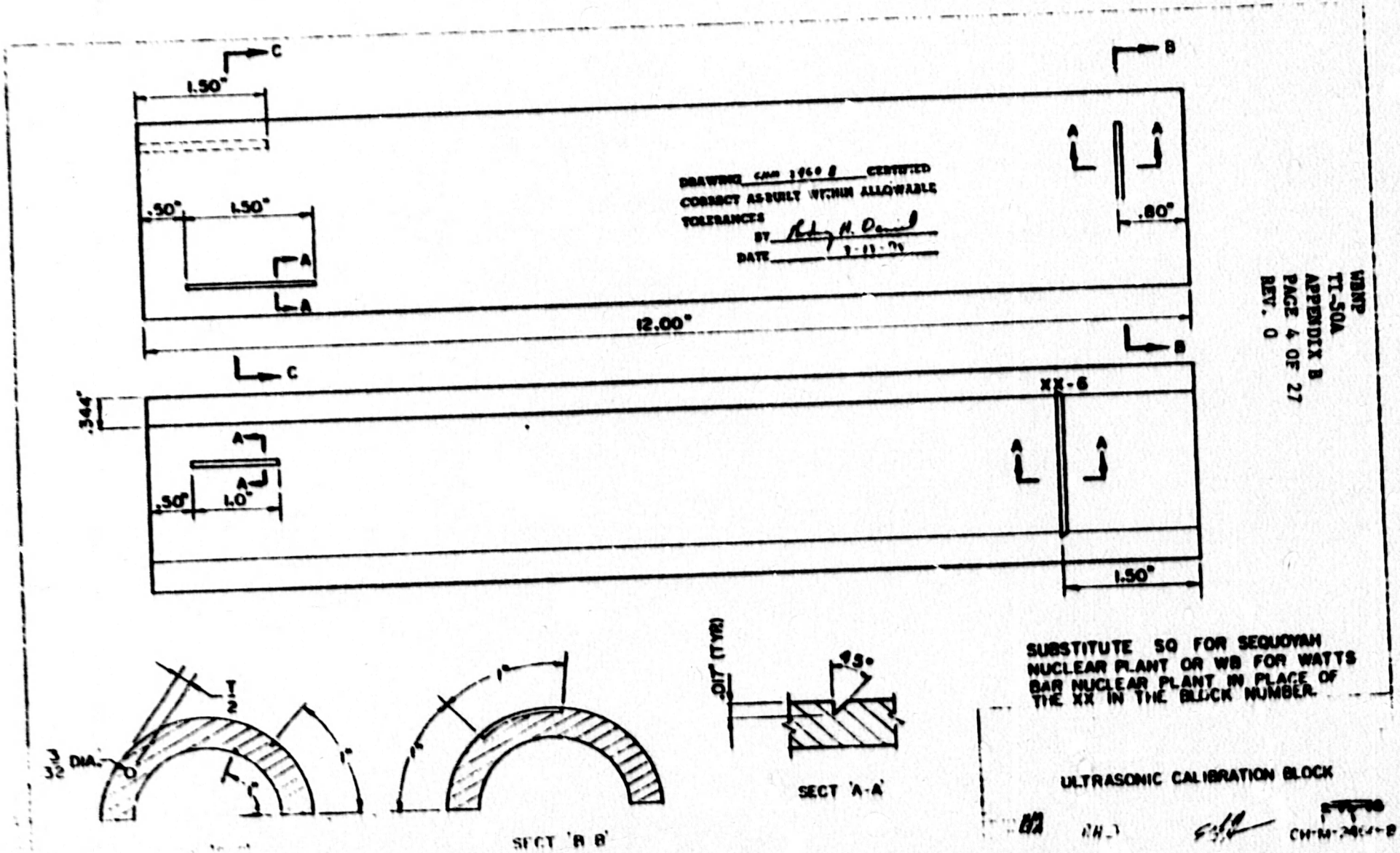
SECTION C-C



ULTRASONIC CALIBRATION BLOCKS



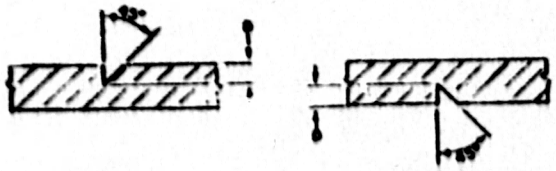
HBNP
TL-50A
APPENDIX B
PAGE 3 OF 27
REV. 0

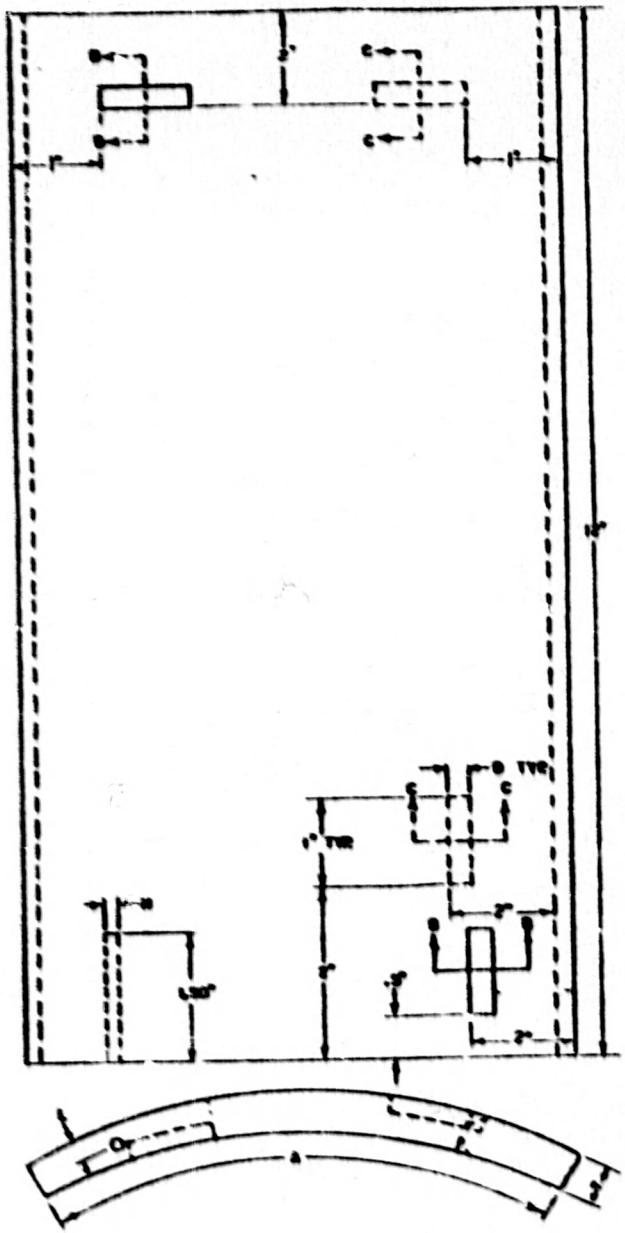


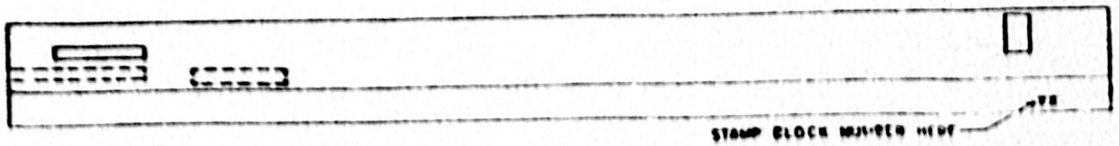
WBNP
TI-50A
APPENDIX B
PAGE 4 OF 27
REV. 0

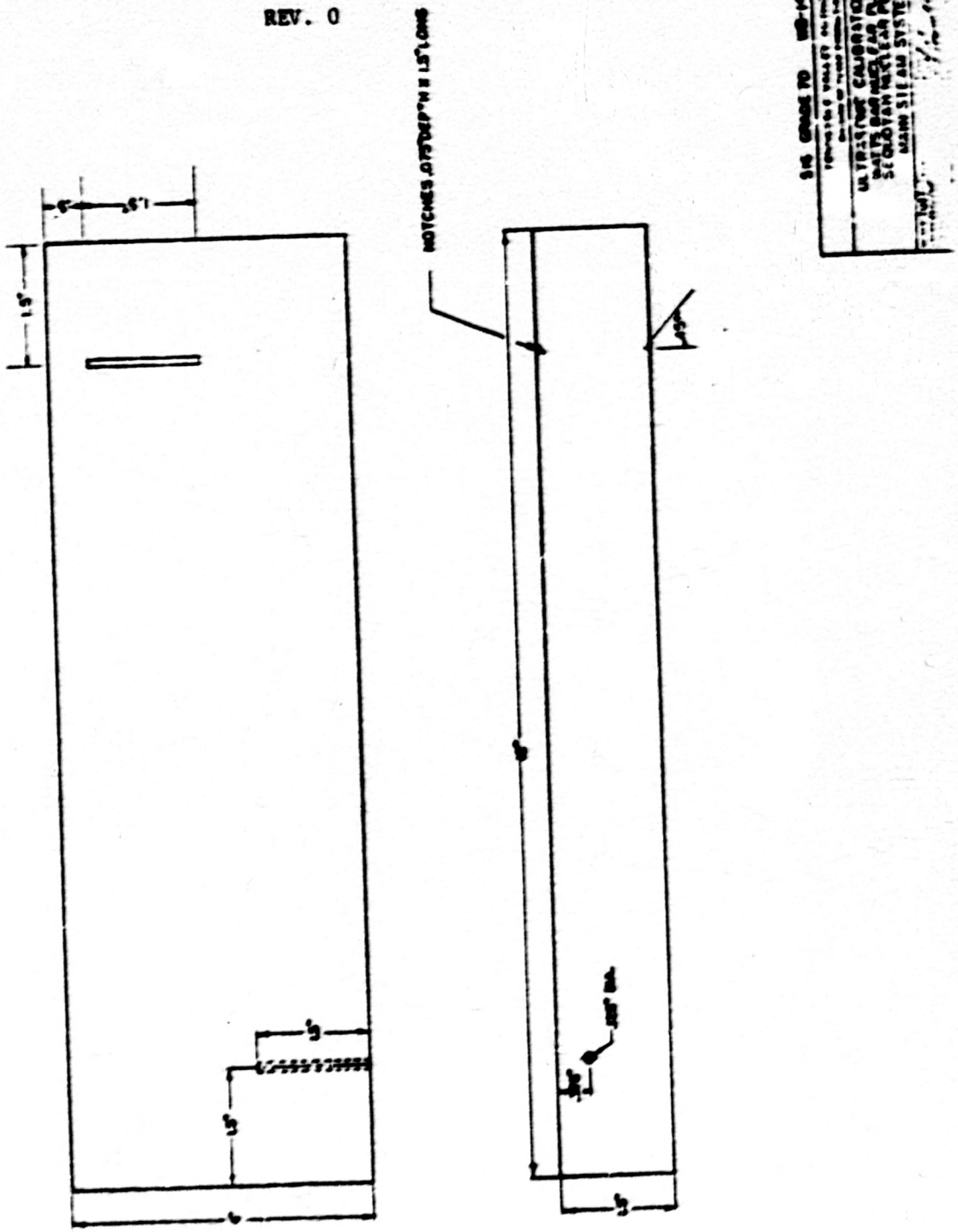
BLOCK NO	DIA	T	D	A	H	L
XX-7	8"	0.75	0.015	120°	3/32	1/2 T
XX-8	12"	0.75	0.015	120°	3/32	1/2 T
XX-9	8"	0.309	0.015	120°	3/32	1/2 T

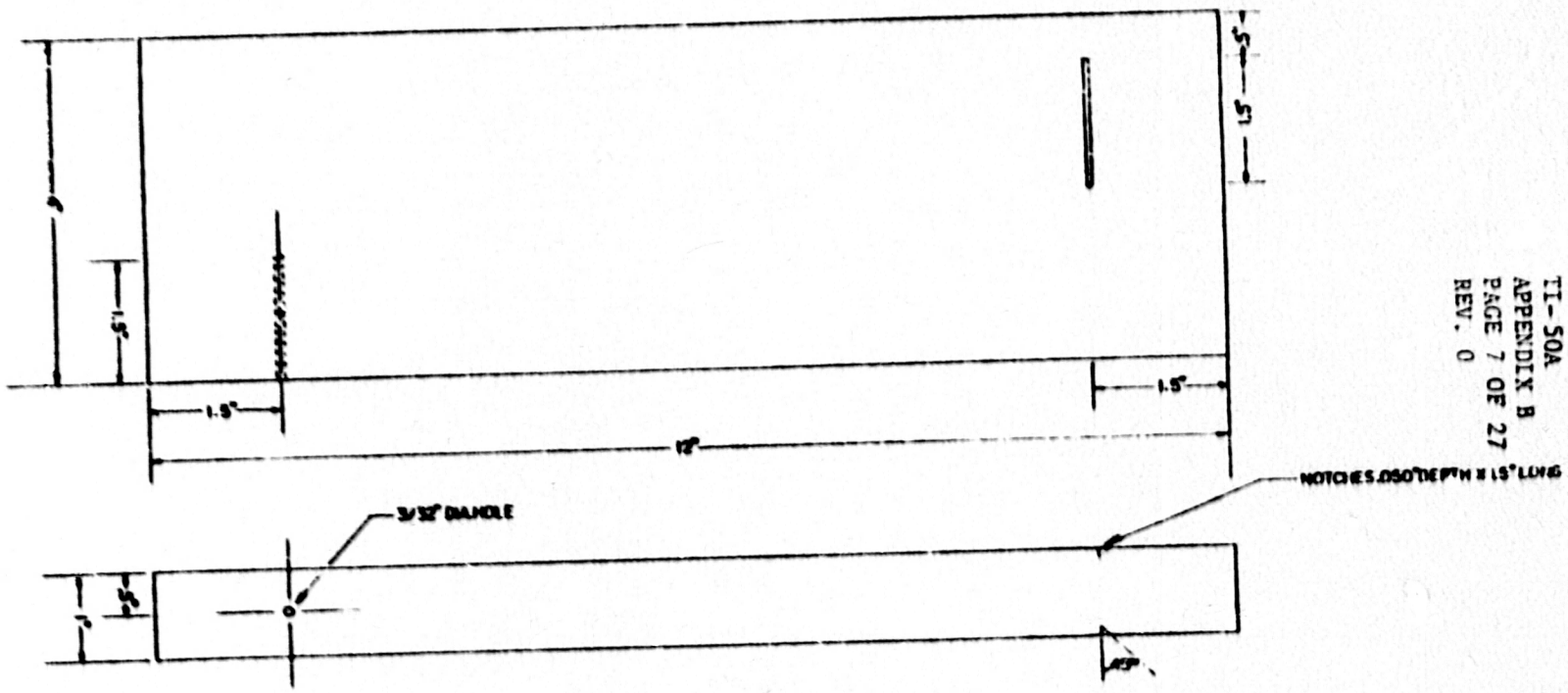
* NOTE:
SUBSTITUTE SQ FOR SEQUOYAH NUCLEAR PLANT OR WB FOR WATTS BAR NUCLEAR PLANT IN PLACE OF THE XX IN THE BLOCK NUMBER.





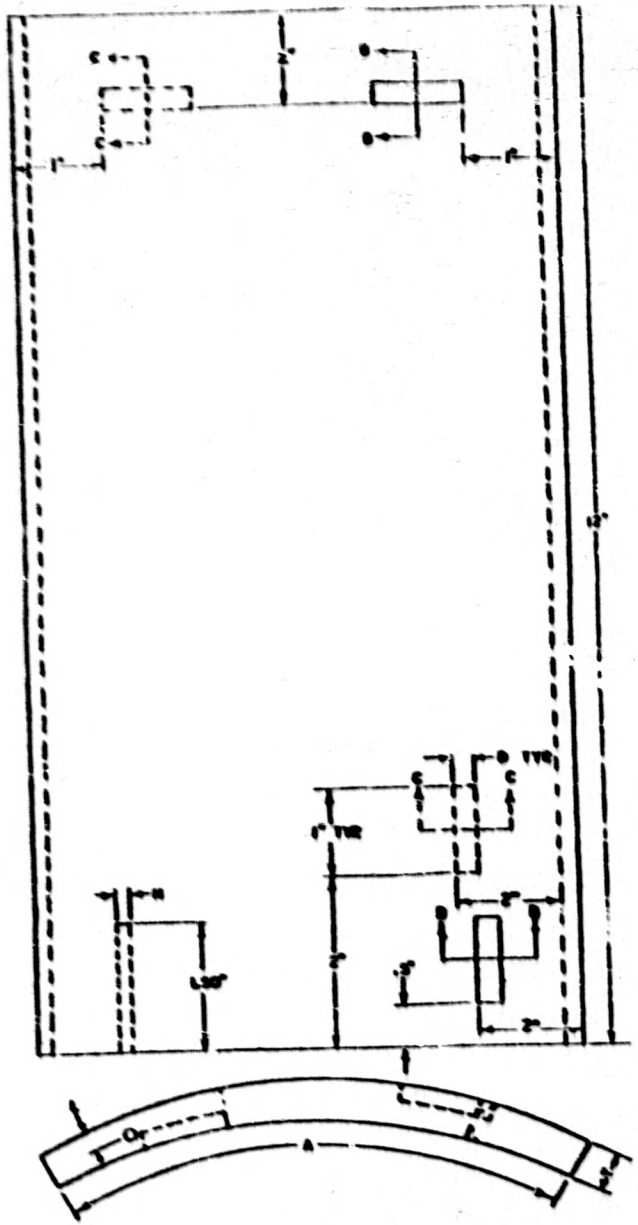



NOTCHES .075" DEPTH X 1.5" LONG
ULTRASONIC CALIBRATION BLOCK
WATTS BAR NUCLEAR PLANT &
SEQUOYAH NUCLEAR PLANT
MAIN STEAM SYSTEM



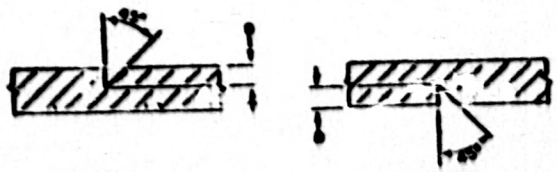
SS 304 WB-15 SD-15

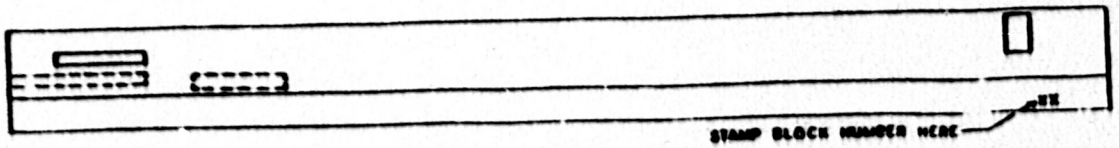
ULTRASONIC CALIBRATION BLOCK
WATTS BAR NUCLEAR PLANT B
SEQUOYAH NUCLEAR PLANT



BLOCK NO	DIA	T	D	A	H	L
XX-10	14"	1.362	0.069	120°	1/8	1/4T
XX-12	2 1/2"	0.415	0.021	16[illegible]°	[illegible]	1/2T

* NOTE:
SUBSTITUTE SQ FOR SEQUOYAH NUCLEAR PLANT OR WB FOR WATTS BAR NUCLEAR PLANT IN PLACE OF THE XX IN THE BLOCK NUMBER.

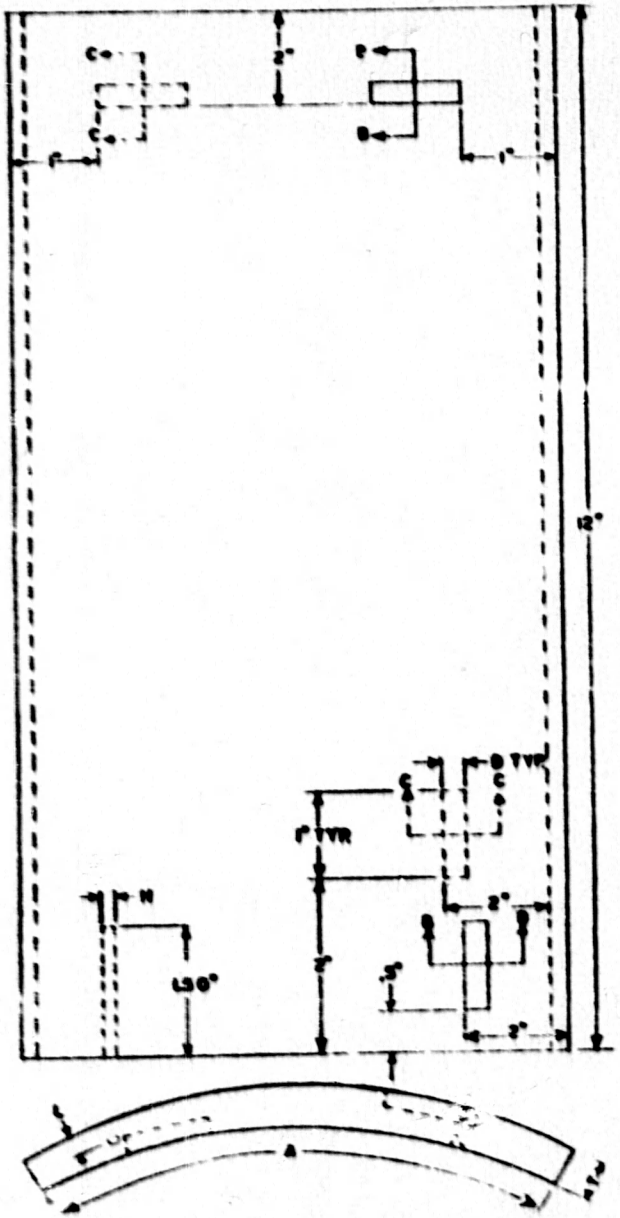




TENNESSEE VALLEY AUTHORITY

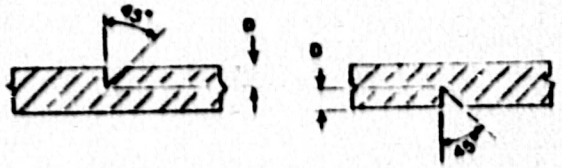
ULTRASONIC CALIBRATION BLOCKS

SCALE NTS | DRAWN | DATE 7-19-7[illegible]

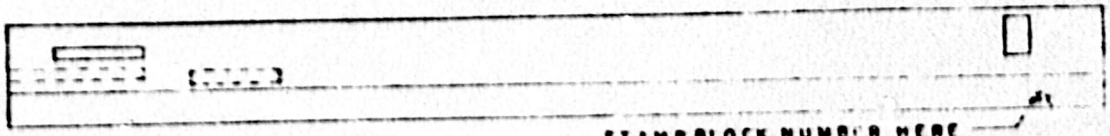


BLOCK NO	DIA	T	D	A	H	L
XX-13	4"	0.438	0.022	180°	3/32	1/2 T
XX-17	5"	0.625	0.031	180°	3/32	1/2 T
XX-18	18"	0.938	0.047	120°	3/32	1/2 T
XX-19	6"	0.864	0.043	180°	3/32	1/2 T
XX-21	10"	1.500	0.075	180°	1/8	1/4T

NOTE: SUBSTITUTE SQ FOR SEQUOYAH NUCLEAR PLANT OR WB FOR WATTS BAR NUCLEAR PLANT IN PLACE OF THE XX IN THE BLOCK NUMBER.

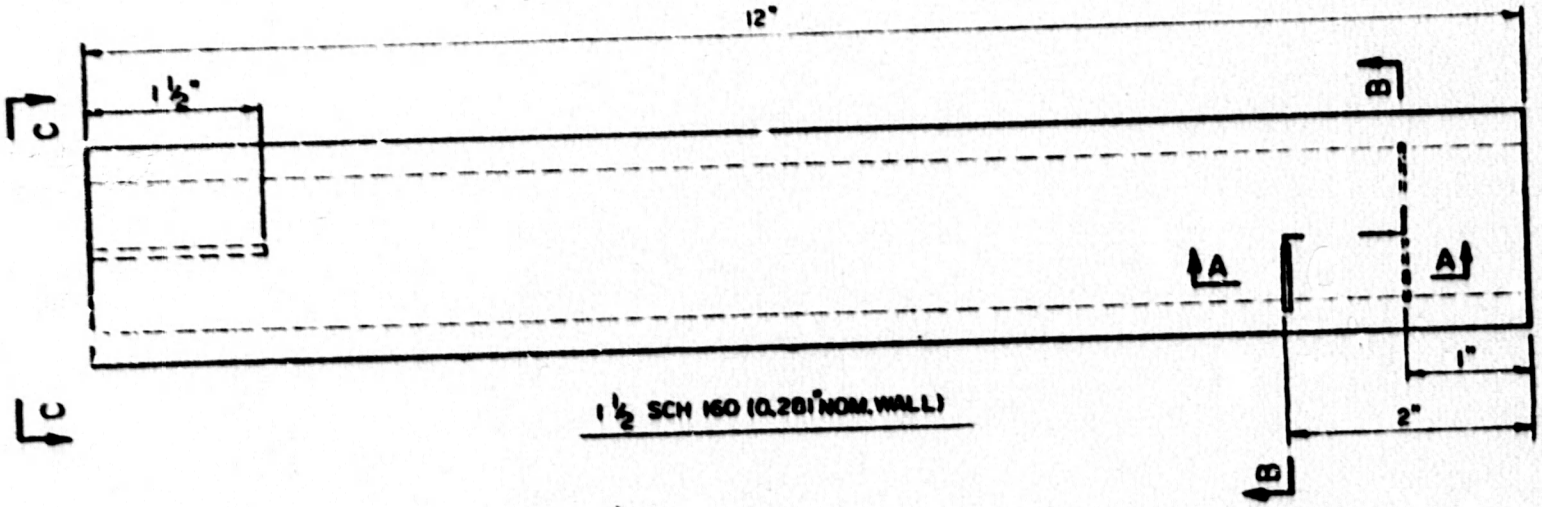


SECTION B-B SECTION C-C

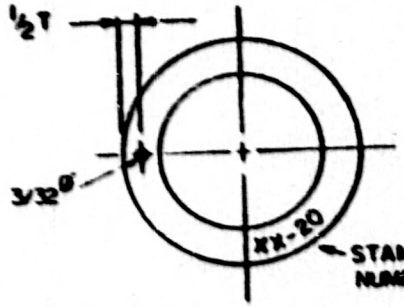


STAMP BLOCK NUMBER HERE

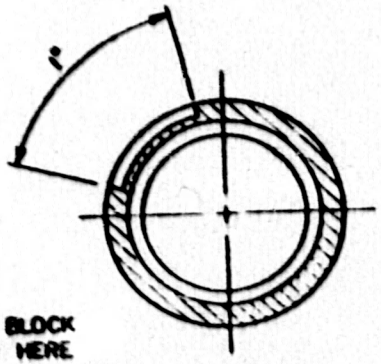
ULTRASONIC CALIBRATION BLOCKS



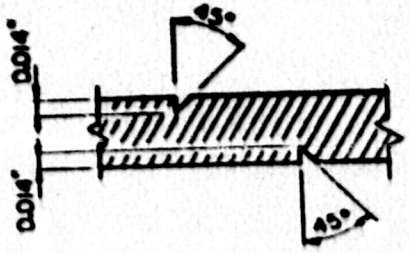
1 ½ SCH 160 (0.281" NOM. WALL)



C - C



B - B



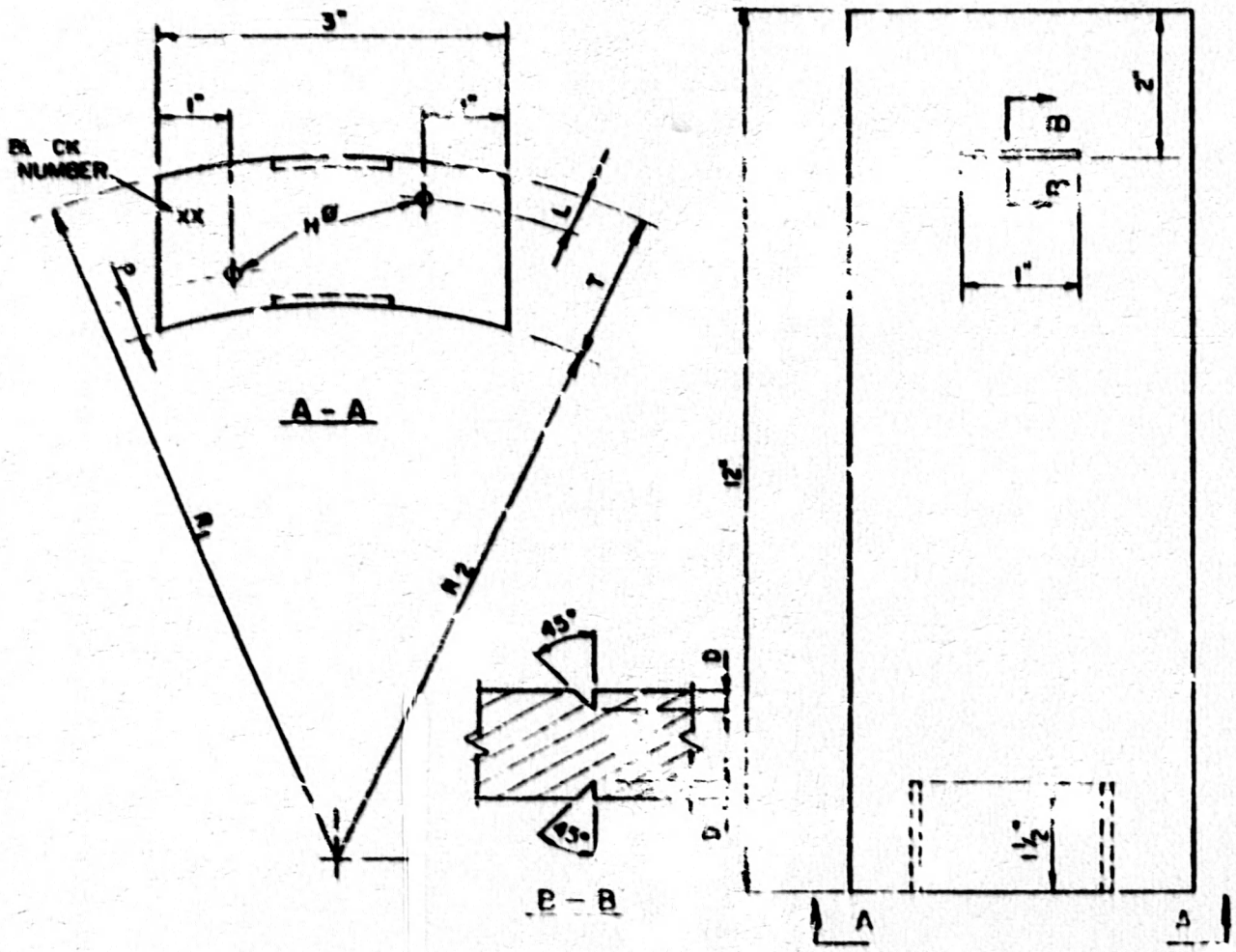
A - A

SUBSTITUTE SQ FOR SEQUOYAH NUCLEAR PLANT OR WB FOR WATTS BAR NUCLEAR PLANT IN PLACE OF THE XX IN THE BLOCK NUMBER.

TENNESSEE VALLEY AUTHORITY

ULTRASONIC CALIBRATION BLOCK

RHZ



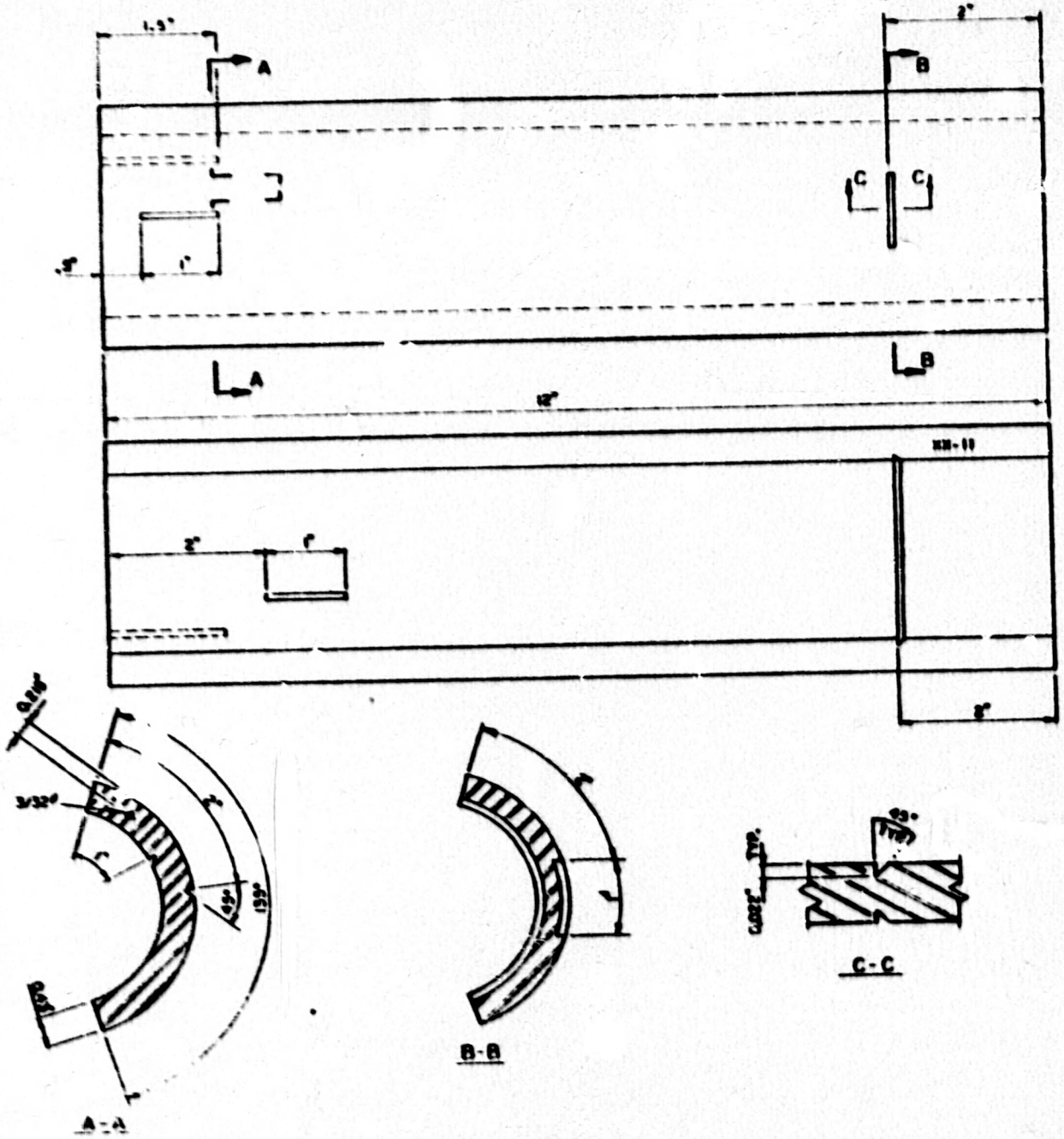
BLOCK NUMBER	R_1	R_2	D	T	L	H	P
XX-16	6.375	3.063	0.066	1.312	1/4 T	1/8	[illegible]
XX-29	4.200	3.000	0.060	1.200	1/4 T	1/8	1/4 T
XX-30	2.900	2.000	0.045	0.900	1/2 T	3/32	NA

SUBSTITUTE SQ FOR SEQUOYAH NUCLEAR PLANT OR WB FOR WATTS BAR NUCLEAR PLANT IN PLACE OF THE XX IN THE BLOCK NUMBER.

FABRICATE FROM S.S. PLATE.

ULTRASONIC CALIBRATION BLOCKS

NTS

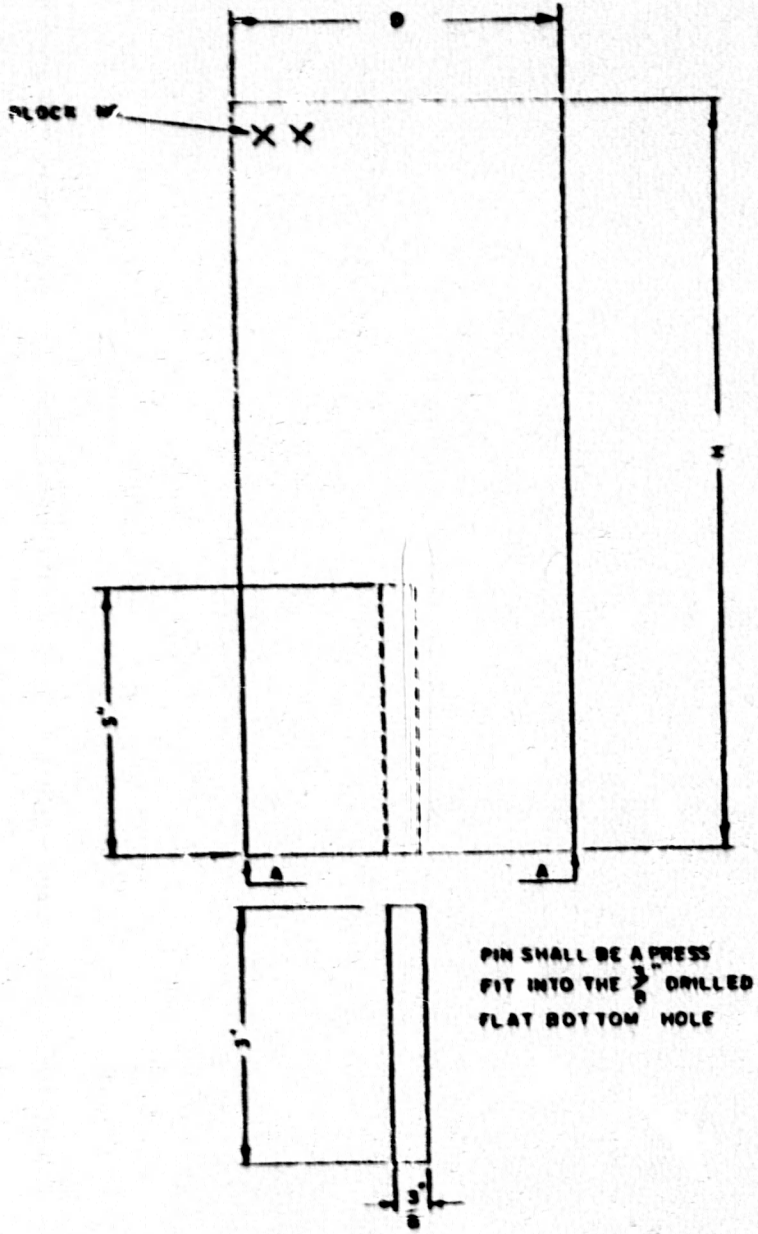


NOTES:

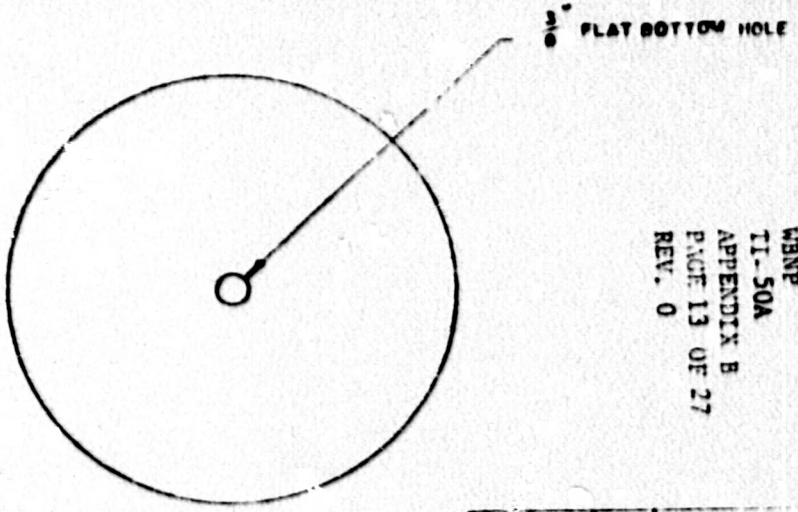
1. MAT'L: 3" SCH 160 PIPE SS.
2. SUBSTITUTE SQ FOR SEQUOYAH NUCLEAR PLANT OR WB FOR WATTS BAR NUCLEAR PLANT IN PLACE OF THE XX IN THE BLOCK NUMBER.

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER CONSTRUCTION

ULTRASONIC CALIBRATION BLOCK XX-11



PIN SHALL BE A PRESS FIT INTO THE 3/8" DRILLED FLAT BOTTOM HOLE

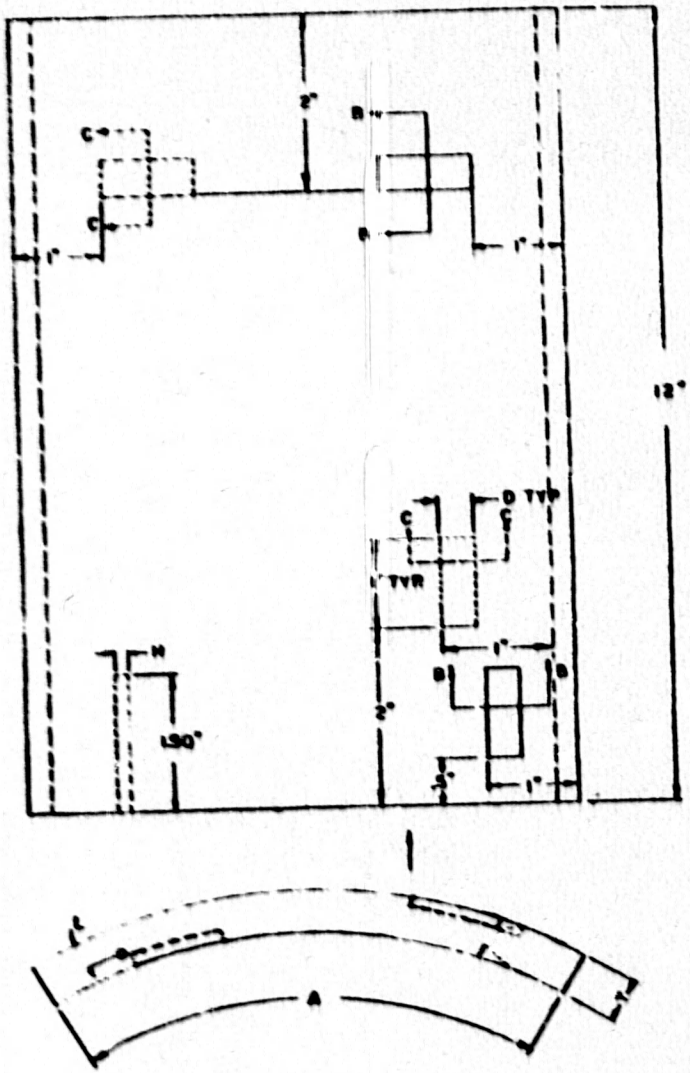


A - A

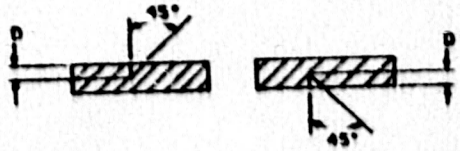
NOTE 1 PIN SHALL BE SAME MATERIAL AS ROLLED STOCK
2 SUBSTITUTE SQ FOR SEQUOYAH NUCLEAR PLANT OR WB FOR WATTS BAR NUCLEAR PLANT IN PLACE OF THE XX IN THE BLOCK NUMBER

BLOCK	D	H	MATERIAL
XX 23	1 3/8"	17"	50-03 0007
XX 24	1 1/8"	9"	50-03 0007
XX 25	1 1/8"	10 1/2"	50-03 0007
XX 26	0 5/8"	30 1/2"	50-03 0007
XX 27	2"	8"	50-03 0007
XX 31	1 1/8"	7 1/2"	0151-0100
XX 32	1 1/8"	10"	0151-0100
XX 33	1 1/8"	8"	0151-0100
XX 34	1 1/8"	11 1/2"	0151-0100

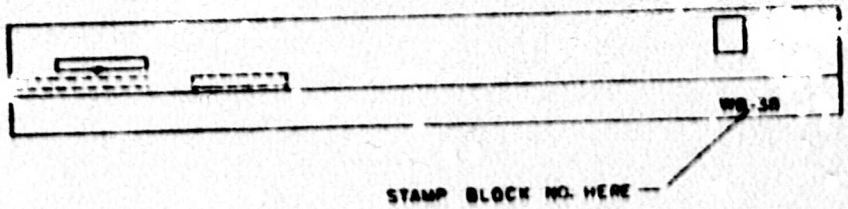
STUD AND BOLT CALIBRATION BLOCK



BLOCK NO.	DIA.	T	D	A	H	L
WB 38	8"	0.500	0.025	120°	3/32	1/2 T

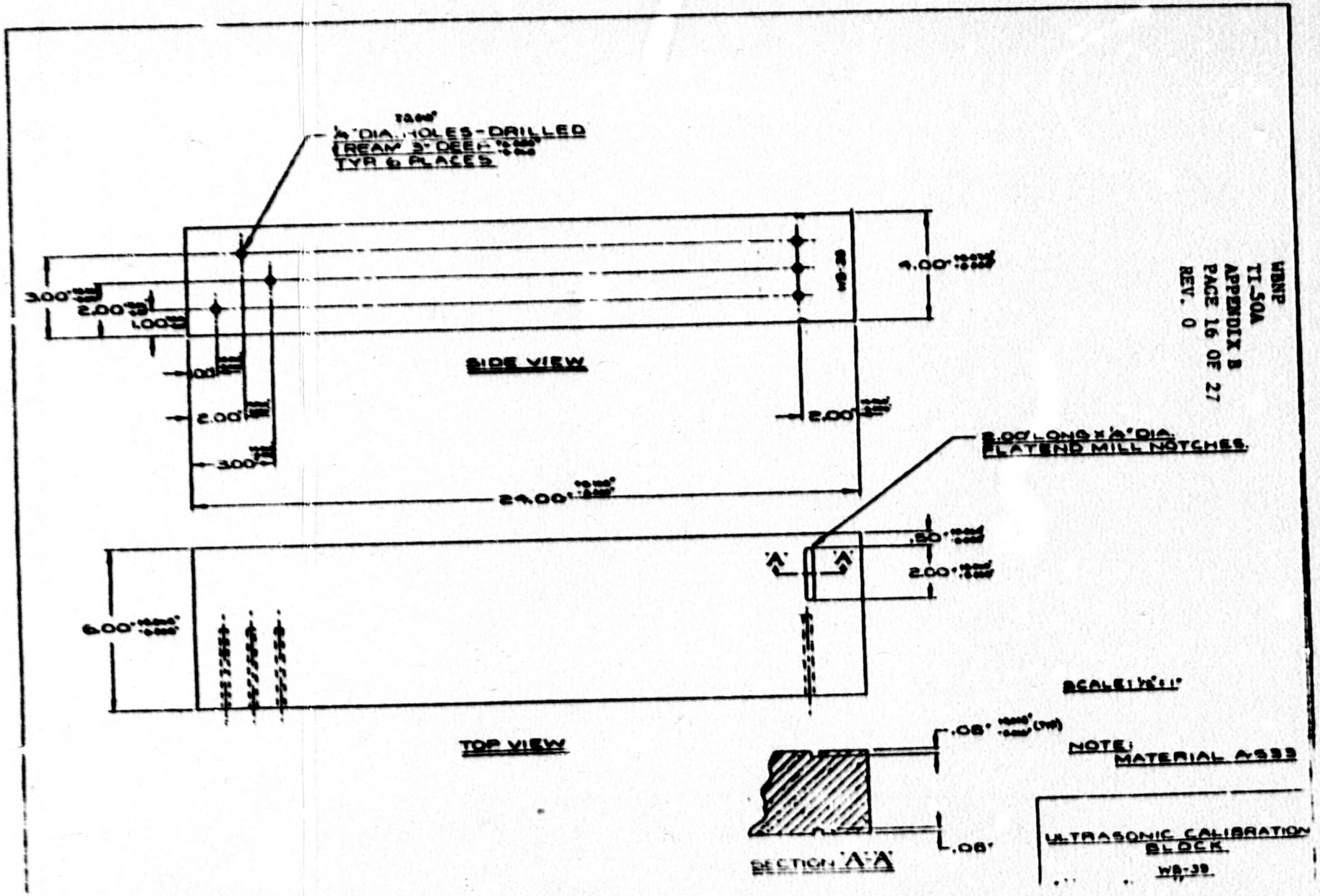


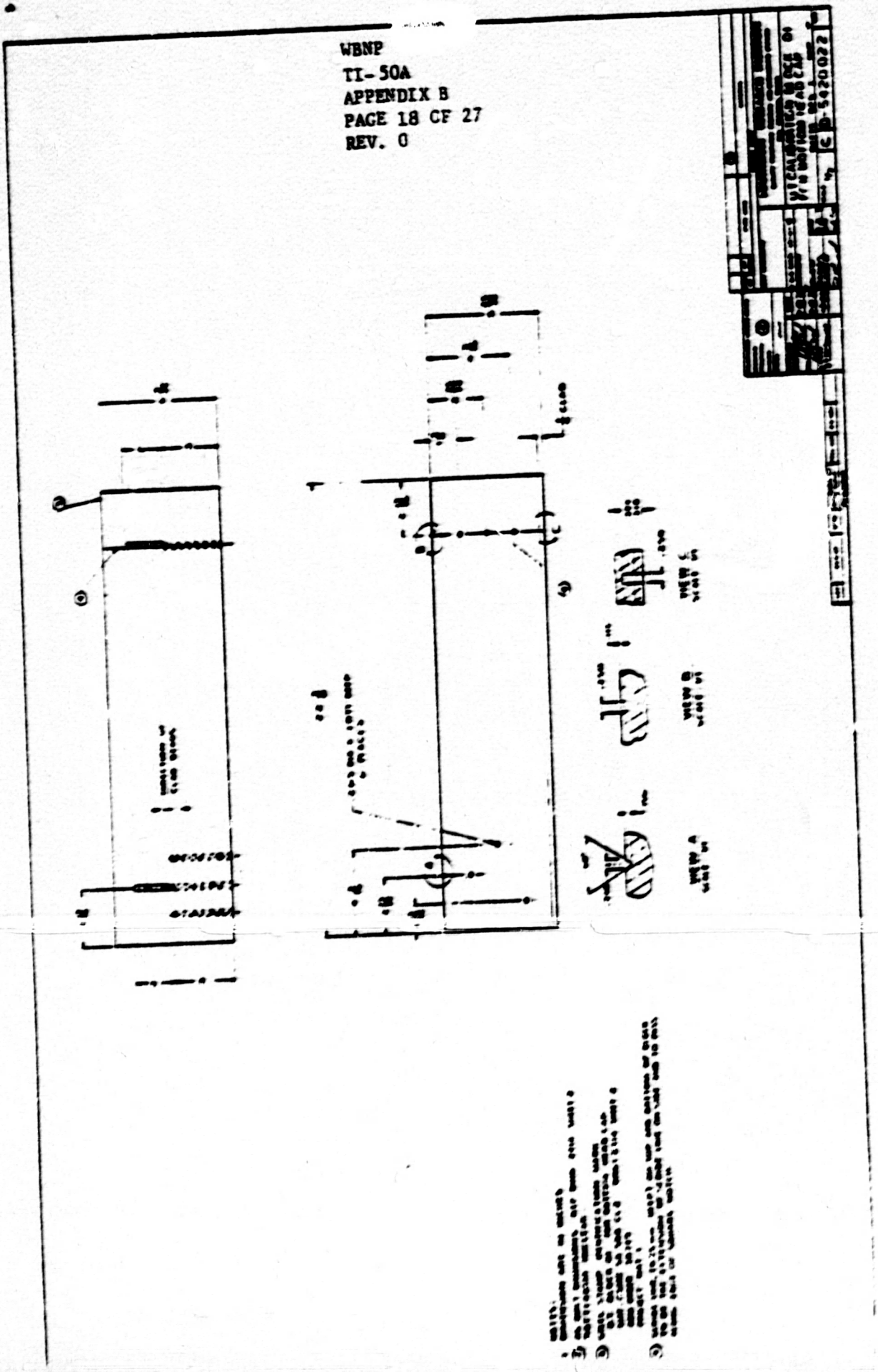
SECTION B-B SECTION C-C

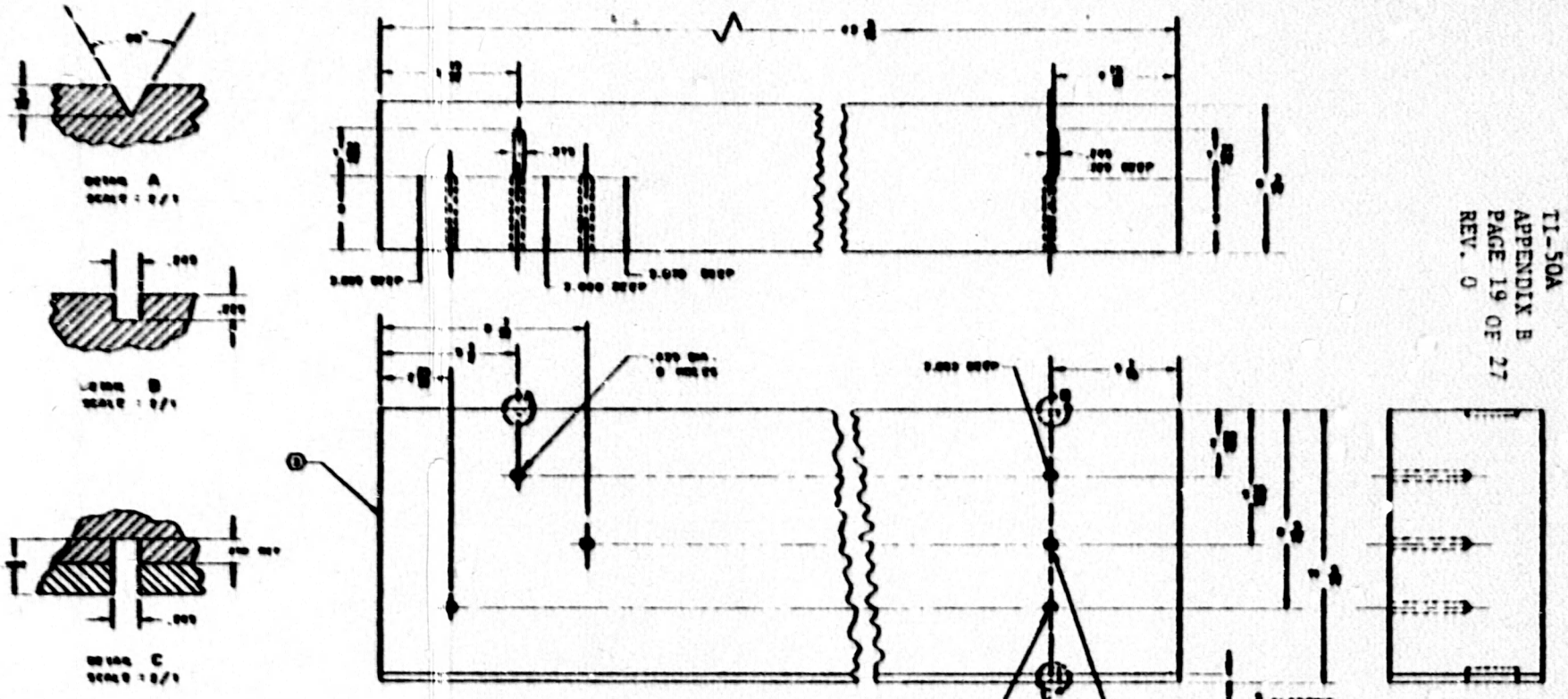


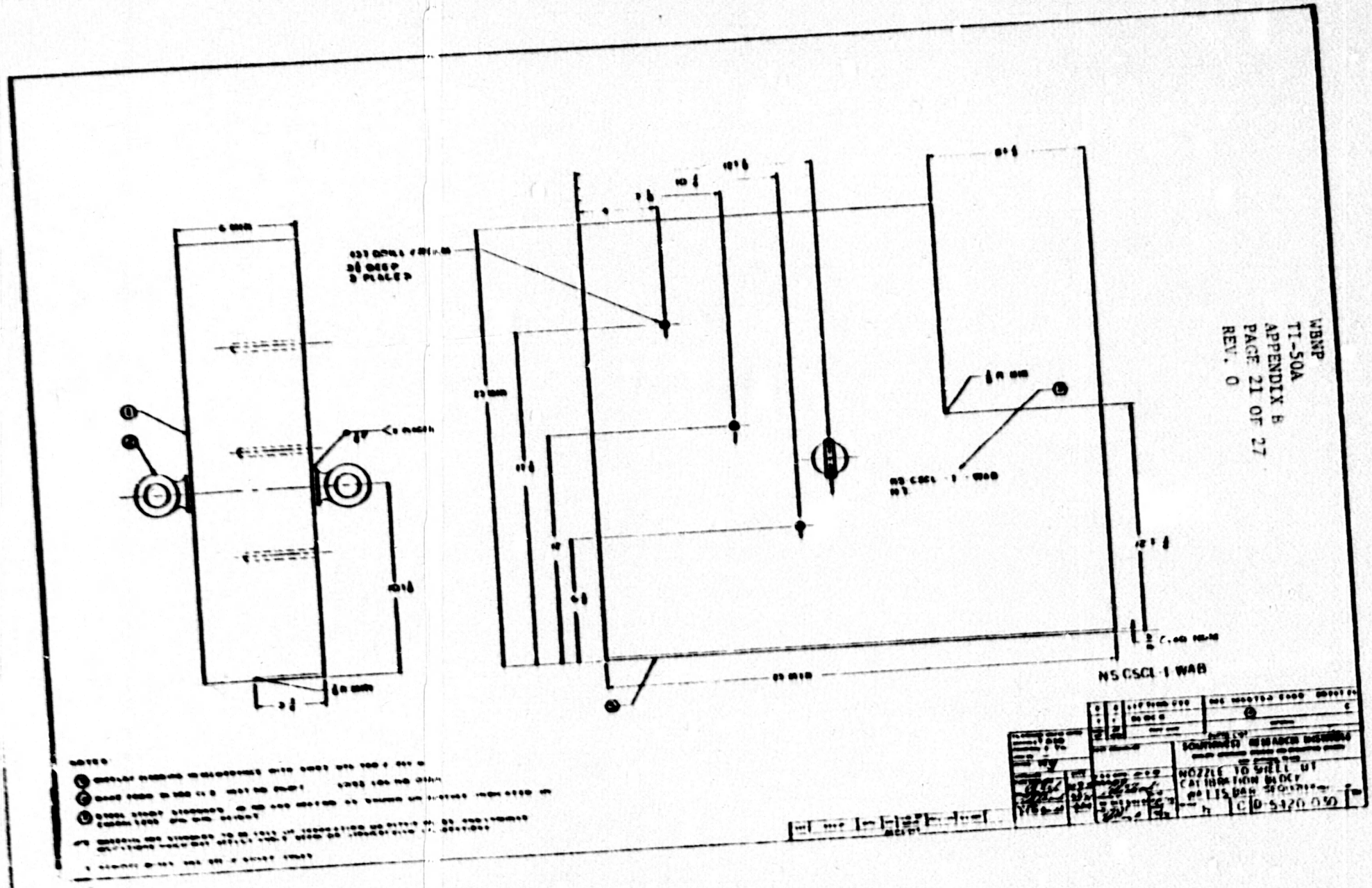
TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

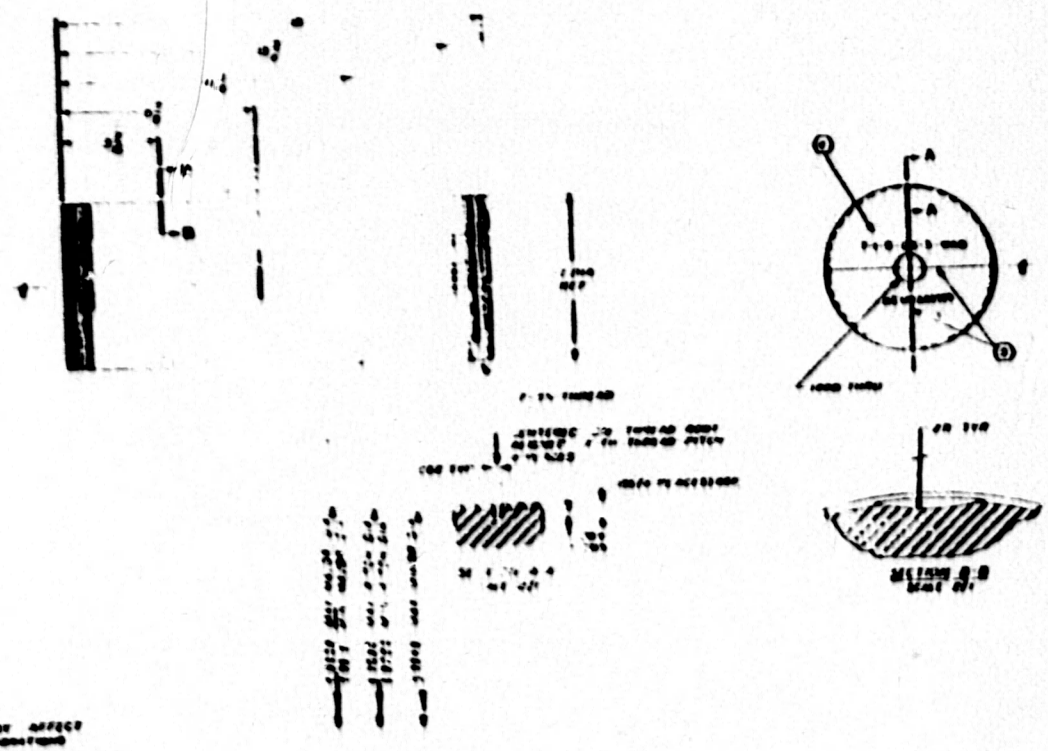
ULTRASONIC CALIBRATION BLOCK


1/4" DIA. HOLES-DRILLED
(REAM 3" DEEP
TYP 6 PLACES
3.00"
2.00"
1.00"
4.00"
SIDE VIEW
2.00"
3.00"
2.00"
24.00"
2.00" LONG x 1/4" DIA.
FLATEND MILL NOTCHES.
.50"
2.00"
'A'
'A'
6.00"
TOP VIEW
SCALE: 1/2" = 1"
.08"
.08"
SECTION 'A-A'
NOTE:
MATERIAL A533
ULTRASONIC CALIBRATION
BLOCK
WB-39



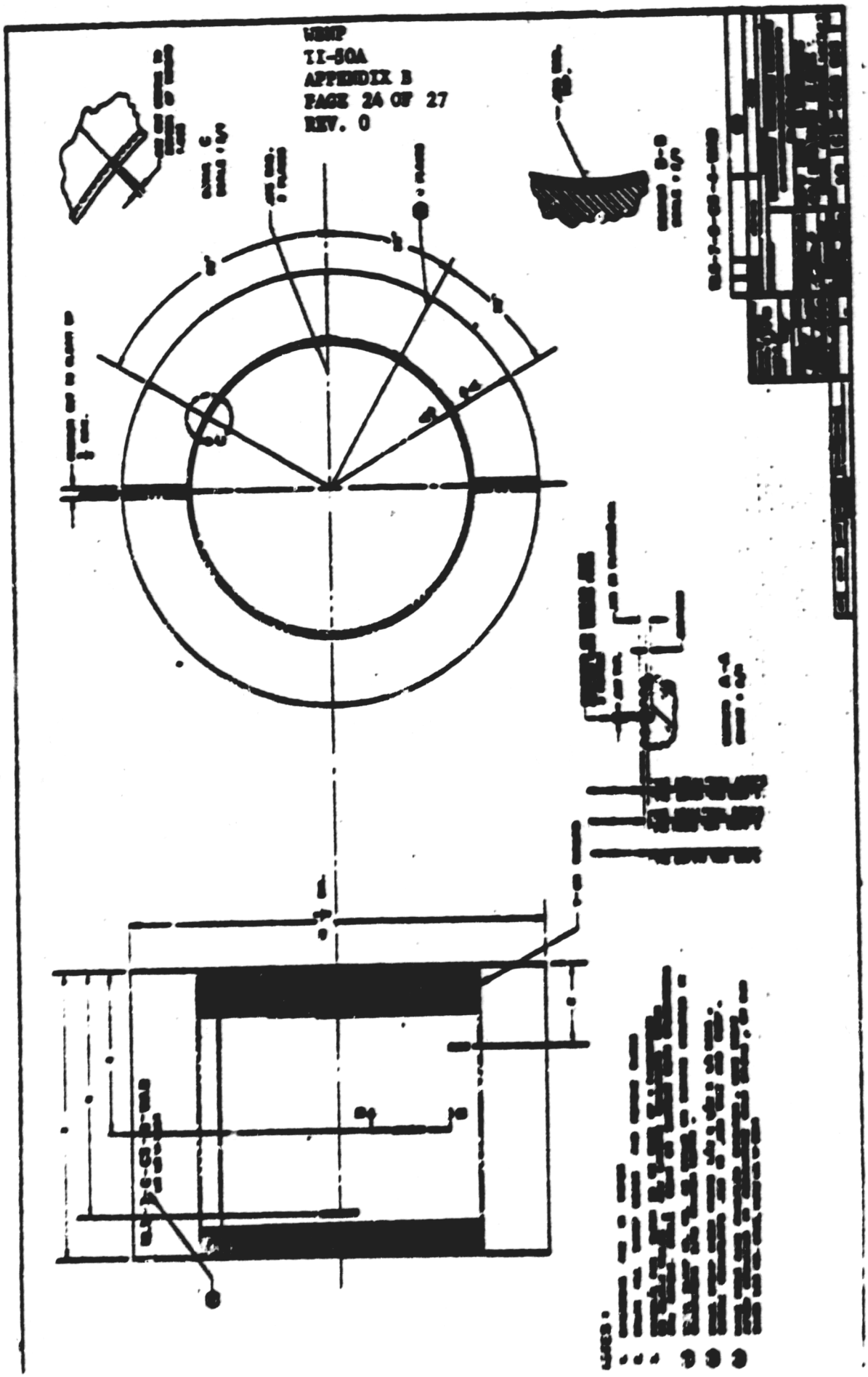

DETAIL A
SCALE : 2/1
DETAIL B
SCALE : 2/1
DETAIL C
SCALE : 2/1
NOTES:

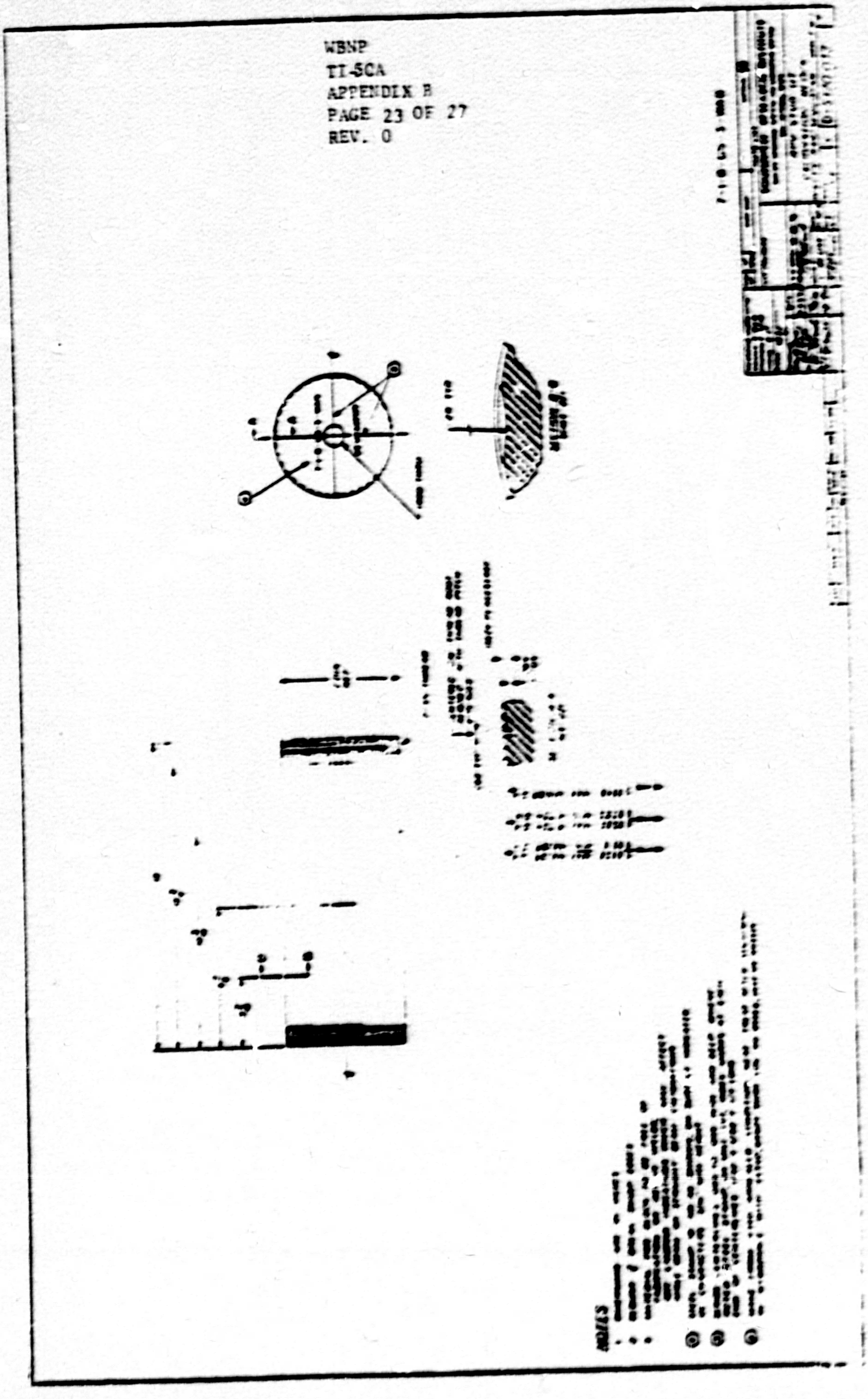

NS CSCL-1 WAB
NOZZLE TO SHELL UT
CALIBRATION BLOCK
WATTS BAR SEQUOYAH
C D-5420-030

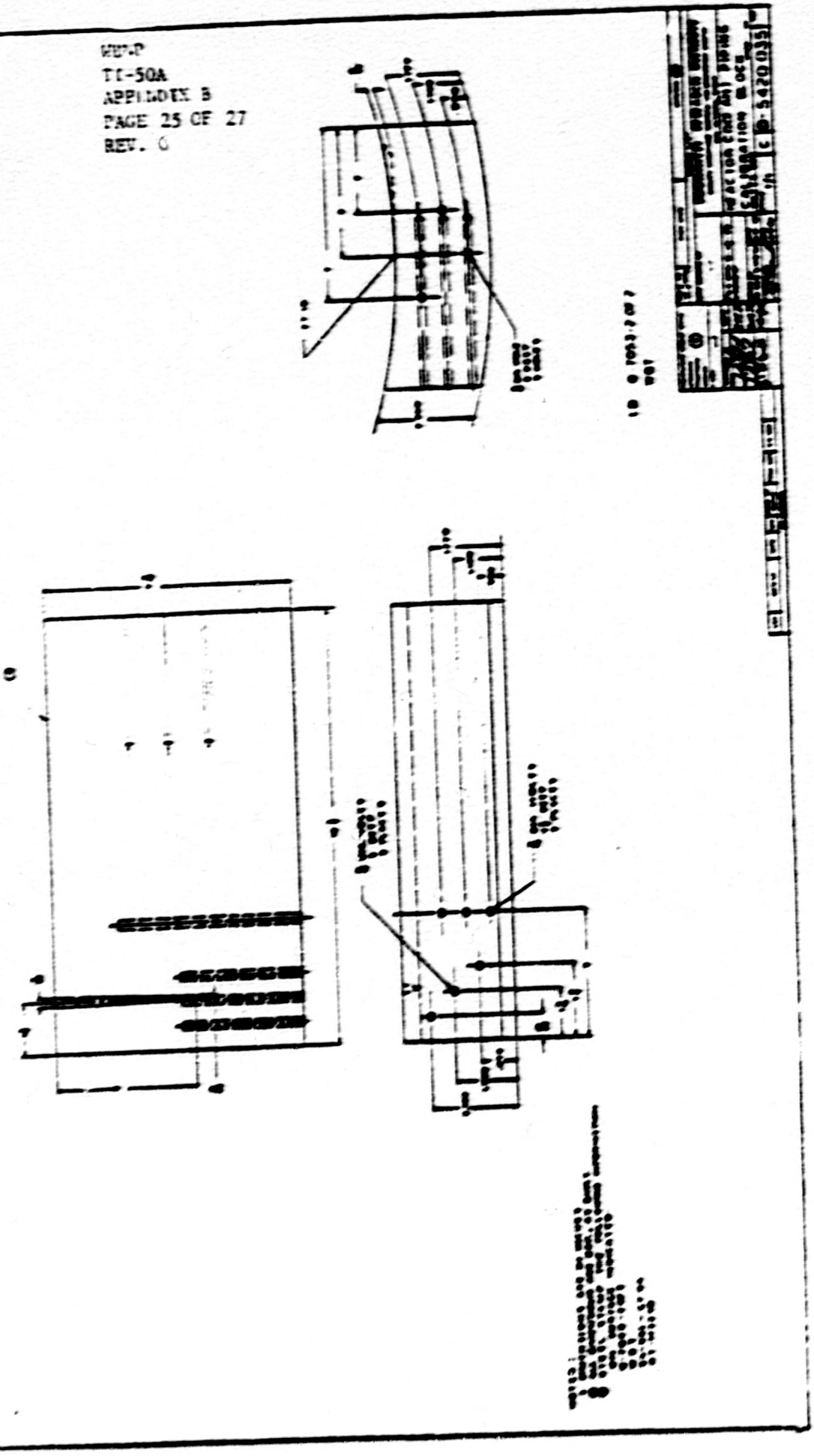


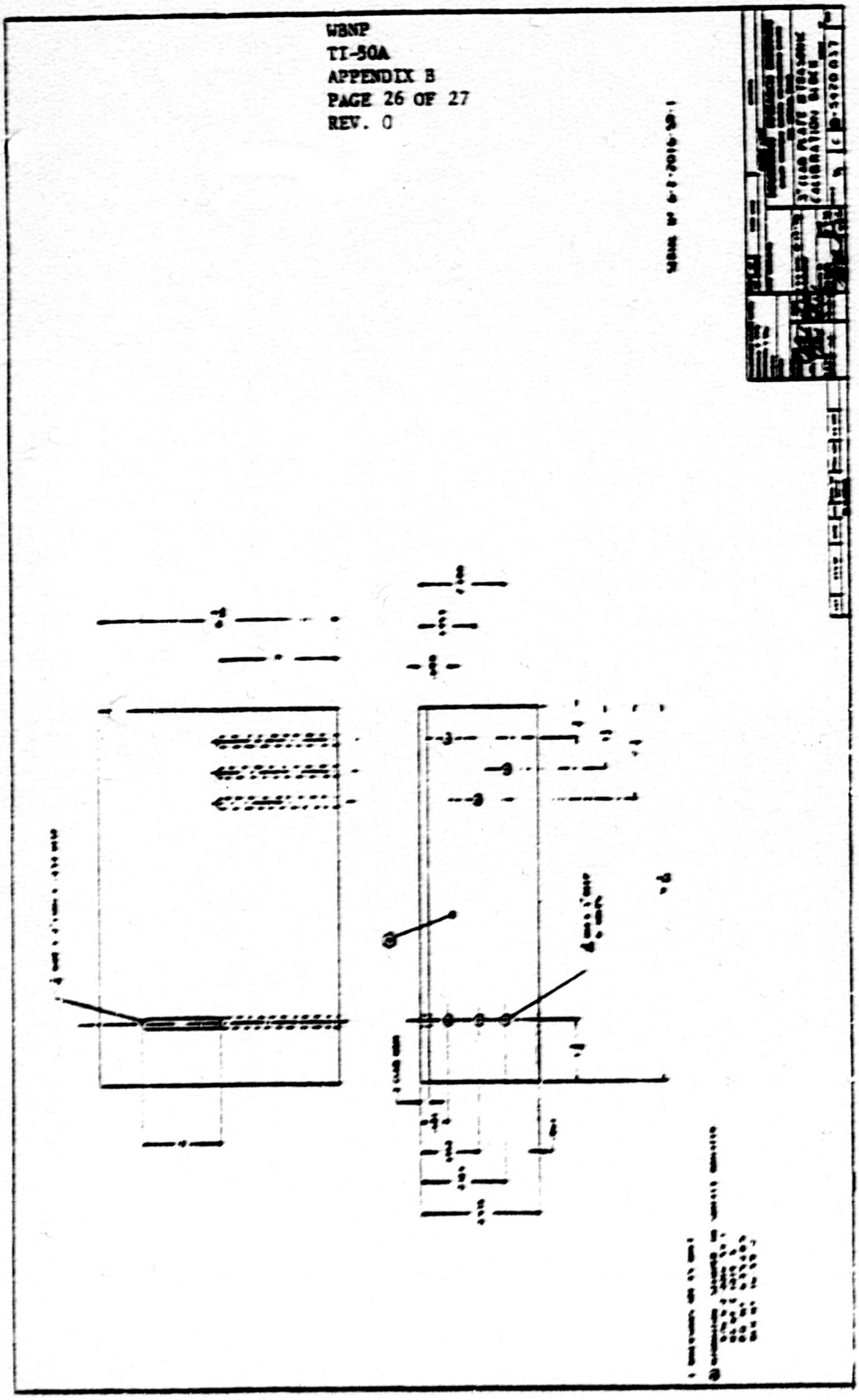
NOTES

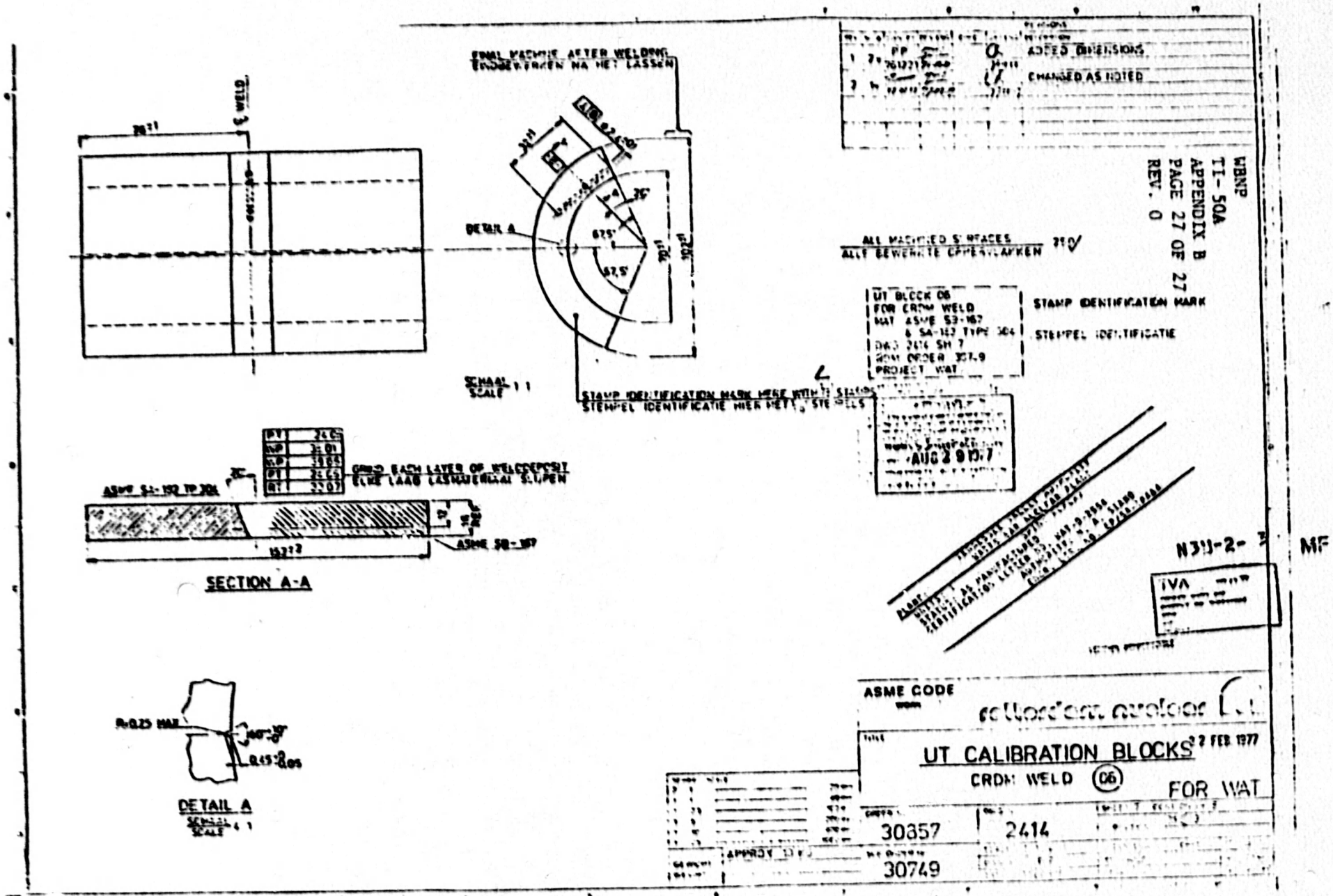
7-1-8-GS-3-WAB










WBNP
TI-50A
APPENDIX B
PAGE 27 OF 27
REV. 0
ADDED DIMENSIONS
CHANGED AS NOTED
FINAL MACHINE AFTER WELDING
EINDBEWERKEN NA HET LASSEN
DETAIL A
SCHAAL
SCALE 1:1
ALL MACHINED SURFACES
ALLE BEWERKTE OPPERVLAKKEN
UT BLOCK 06
FOR CRDM WELD
MAT ASME SB-167
& SA-182 TYPE 304
DWG 2414 SH 7
ROM ORDER 30749
PROJECT WAT
STAMP IDENTIFICATION MARK
STEMPEL IDENTIFICATIE
STAMP IDENTIFICATION MARK HERE WITH 7 STAMPS
STEMPEL IDENTIFICATIE HIER MET 7 STEMPELS
GRIND EACH LAYER OF WELDDEPOSIT
ELKE LAAG LASMATERIAAL SLIJPEN
ASME SA-182 TP 304
ASME SB-167
SECTION A-A
DETAIL A
SCHAAL
SCALE 4:1
N3U-2-
MF
TVA
ASME CODE
rotterdam nuclear
UT CALIBRATION BLOCKS
22 FEB 1977
CRDM WELD 06
FOR WAT
30857
2414
30749