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SHIPBOARD MEDICAL BACKPACK: ENGINEERING DRAWINGS(U)
NAVAL OCEAN SYSTEMS CENTER SAN DIEGO CA R W KATAOKA
JUN 83 NOSC/TD-603

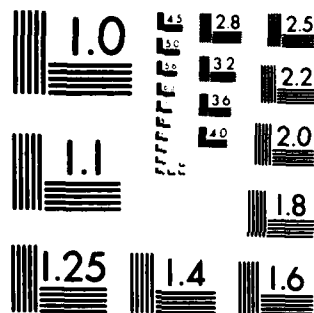
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NOSC TD 603

NOSC TD 603

Technical Document 603

SHIPBOARD MEDICAL BACKPACK: ENGINEERING DRAWINGS

R. W. Kataoka

June 1983

Prepared for
Naval Medical Research and Development Command
(Code 45)
Bethesda, MD, 20014

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NOSC

NAVAL OCEAN SYSTEMS CENTER
San Diego, California 92152

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NAVAL OCEAN SYSTEMS CENTER, SAN DIEGO, CA 92152

AN ACTIVITY OF THE NAVAL MATERIAL COMMAND

JM PATTON, CAPT, USN

Commander

HL BLOOD

Technical Director

ADMINISTRATIVE INFORMATION

This report is one in a series on the Shipboard Medical Backpack sponsored by the Naval Medical Research and Development Command (Code 45) under program element 64771N, subproject M0933-PN (NOSC work unit FA40). Principal investigator for this project is R.W. Kataoka of the Naval Ocean Systems Center (NOSC), Bioengineering Branch (Code 5143), under the direction of Dr. W.T. Rasmussen, Head, Code 5143.

Released by
L.W. Bivens, Head
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Under authority of
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19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Shipboard Medical Backpack Naval medicine Engineering drawings		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Engineering drawings for the Shipboard Medical Backpack are presented.		

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S/N 0102- LF-014-6601

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CONTENTS

Introduction . . . page 3

Parts List for Drawing No. 55910-0106716 . . . 5
(2 sheets)

Medical Backpack, Drawing No. 55910-0106716 . . . 9
(5 sheets)

Shipboard Medical Backpack Pack Module,
Drawing No. 55910-0106717 . . . 19
(2 sheets)

Oxygen Cylinder Carrying Case, Drawing No.
55910-0106718 . . . 23
(3 sheets)

Life Pak 5 ECG-Monitor/Defibrillator Carrying
Case, Drawing No. 55910-0106719 . . . 29
(3 sheets)



Section For	
THIS DRAWING	☒
REVISIONS	☐
Unannounced	☐
Classification	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A1	

INTRODUCTION

The mission of the shipboard medical backpack is to permit corpsmen to carry medical equipment and supplies to an injury site aboard ship while keeping both hands free to negotiate ladders and passageways.

The medical backpack unit is a combination of the new softpack design and the standard military All-Purpose Lightweight Carrying Equipment (ALICE) frame. The softpack is compatible with the ALICE frame and attaches to the frame in the same manner as existing Marine Corps softpacks. The shipboard-model backpack incorporates design features that are necessary for emergency treatment in the shipboard environment and that are not found in traditional backpacks. These features include: quick access to the contents, compactness, functional carrying capacity, and emergency quick release.

The medical backpack is 24 by 12 by 6 inches. It has two pockets on the interior of the front panel, a small pocket for a rope on top of the pack, compression straps for securing the contents, and carrying handles and interior straps for securing oxygen cylinders. The backpack will accept various combinations of standard medical equipment to be transported to a medical emergency, such as a D-size oxygen cylinder, Laerdal suction unit, Unit One medical kit, or Life Pak 5 ECG monitor/defibrillator.

The shipboard feasibility tests of the backpack were completed in FY79. Five shipboard medical departments evaluated the initial prototypes. These tests showed that the backpack improved shipboard medical care. The backpack also provided a means of transporting definitive medical equipment to the injury site with greater safety. These initial tests showed that the concept of the backpack carrying medical equipment and supplies was useful but that design changes were required to make it more functional (ref 1).

Two varieties of Advanced Development Model (ADM) backpacks were tested during FY81 to determine a functional design. The backpacks were evaluated by medical departments of eight ships. The ADM backpack, incorporating the military ALICE frame, was determined to be acceptable as a medical backpack for shipboard use (ref 2).

The preproduction-model backpacks based on the ADM backpack were evaluated by the medical departments aboard 29 ships and were found to

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be acceptable as medical backpacks (ref 3). An assembly and operating instruction manual was also evaluated during the preproduction test and approved for use by the evaluators (ref 4).

→ This report contains the engineering drawing of the softpacks. Drawings of a pack module, oxygen cylinder carrying case, and Life Pak 5 ECG monitor/defibrillator case developed with the backpack are also included.

REFERENCES

1. Shipboard Medical Backpack Test and Evaluation Report, TH-1-78, RW Kataoka, NOSC TD 246, March 1979.
2. Shipboard Medical Backpack: Advanced Development Model Test and Evaluation Report, RW Kataoka, NOSC TR 663, August 1980.
3. Shipboard Medical Backpack: Preproduction Model Test and Evaluation, RW Kataoka and FR Borkat, NOSC TR 737, June 1982.
4. Shipboard Medical Backpack Assembly and Operating Instructions, RW Kataoka and FR Borkat, NOSC TM 446, June 1982.

PARTS LIST		NAVAL OCEAN SYSTEMS CENTER SAN DIEGO, CALIFORNIA 92152		FSCM NO. 55910		DRAWING NO. PL 0106716		REV LTR A	
LIST TITLE		SHIPBOARD MEDICAL BACK PACK		RELEASE DATE		PROJECT NO. FA9051		REVISION DATE	
ITEM NO.		QUANTITY REQUIRED		FSCM NO.		PART NUMBER		DESCRIPTION	
1	1	-1				-101		BODY	MAKE FROM P/N CORDURA 11 OZ, RUST FSCM NO.----- HOME AND BAINBRIDGE 816 PRODUCTION BEACH NEWPORT BEACH CA 92663
2	1					-102		SIDE, LEFT	
3	1					-103		SIDE, RIGHT	
4	1					-104		FLAP, BACK	
5	1					-105		POCKET, TOP	
6	1					-106		ENVELOPE, FRAME, INSIDE	
7	1					-107		ENVELOPE, FRAME, OUTSIDE	
8	1					-108		FLAP	
9	1					-109		POCKET, INSIDE, UPPER	
10	1					-110		POCKET, INSIDE, LOWER	
11	1					-111		FLAP INNER	
12	1					-112		FOAM 4" X 13" LG 9/16 THK EVAZOTE	* MAKE FROM P/N 010011 FSCM NO. 18121
13	AR					V-92		THREAD DACRON POLYESTER BROWN	STANDARD COOSA 2129 SEAMAN AVE EL MONTE, CA 91733
14	1					-113		HOOKS VELCRO 1.0 X 1.75	** MAKE FROM P/N 100-080-330-0199-AA FSCM NO. 11153
15									
16	2					-115		HOOKS VELCRO 1.0 X 6.0	** MAKE FROM P/N 200-080-330-0199-AA FSCM NO. 11153
17	4					-116		HOOKS VELCRO 1.0 X 7.0	
18	4					-117		HOOKS VELCRO 2.0 X 2.0	** MAKE FROM P/N 200-080-330-0199-AA FSCM NO. 11153
19	2					-118		HOOKS VELCRO 2.0 X 6.0	
20	1					-119		HOOKS VELCRO 2.0 X 10.0	
21									
22	1					-120		LOOPS VELCRO 1.0 X 2.0	** MAKE FROM P/N 100-001-330-0199-AA FSCM NO. 11153
23	2					-121		LOOPS VELCRO 1.0 X 6.0	
24	4					-122		LOOPS VELCRO 1.0 X 7.0	** MAKE FROM P/N 100-001-330-0199-AA FSCM NO. 11153
25	1					-123		LOOPS VELCRO 2.0 X 9.25	
26	2					-124		LOOPS VELCRO 2.0 X 12.0	** MAKE FROM

20	1	-119	HOOKS VELCRO 2.0 X 10.0	FSCM NO.11153
21				
22	1	-120	LOOPS VELCRO 1.0 X 2.0	MAKE FROM
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24	4	-122	LOOPS VELCRO 1.0 X 7.0	FSCM NO.11153
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26	2	-124	LOOPS VELCRO 2.0 X 12.0	P/N 200-001-330-0199-AA
27	2	-125	LOOPS VELCRO 2.0 X 23.0	FSCM NO.11153
28		-126	LOOPS VELCRO 2.0 X 2.0	
29				
30	3	-127	WEB 1.0 X 3.0	MAKE FROM
31	2	-128	1.0 X 4.0	P/N 258
32	2	-129	1.0 X 12.0	JOHN HOWARD CO.
33	4	-130	1.0 X 23.0	407 W. MAPLE
34	1	-131	WEB 1.0 X 30.0	HONOLULU, CA 91016
REV				
SHEET				
REV STATUS, OF SHEETS	REV			
	A B			
	SHEET	1 2		
REVISIONS				
LTR	DESCRIPTION	DATE	APP	LTR
A	ITEM 30 WAS 5 REQ'D; ITEM 31 WAS 4 REQ'D			

1100 - NSC 3010/24 (5-77)

PARTS LIST			CONTINUATION SHEET			FSCM NO.	DRAWING NO.	REV. LTR
						55910	PL 0106716	B
						SMT 2		
ITEM NO.	QUANTITY REQUIRED		FSCM NO.	PART NUMBER	DESCRIPTION	MATL/ MANUFACTURER		
	-1							
35	1			-132	WEB 2.0 X 4.0	MAKE FROM MURDOCK WEBBING, 27 FOUNDRY ST, CENTRAL FALLS, RI. 02863 FSCM NO. 83219 P/N 10642		
36								
37	2			-134	2.0 X 10.50			
38	2			-135	WEB 2.0 X 23.50			
39								
40								
41	2			3739	BUCKLE, TABLER UNITEX LOWER PACK SECURING	UNITED TEXTILE & SUPPLY 1641 N ALLESANDRO ST. LOS ANGELES, CA 90026		
42								
43								
44								
45	2			699	LOOP, 2.00 UNITEX, COMPRESSION STRAP			
46								
47								
48								
49	2			#10 CF CHAIN	ZIPPER, #10 CF CHAIN(COIL BLACK) COLOR 580 .75 WIDE X 25 LONG	YKK ZIPPERS, 2821 S OLIVE, LOS ANGELES CA 90007		
50								
51	2			#10 CF SLIDE	ZIPPER, #10 CF SLIDE DFL (NONLOCKING) COLOR 580(BLACK)			
52								
53	AR				TAPE, BLACK, 1.0 NYLON MIL-T-5038, T-III			

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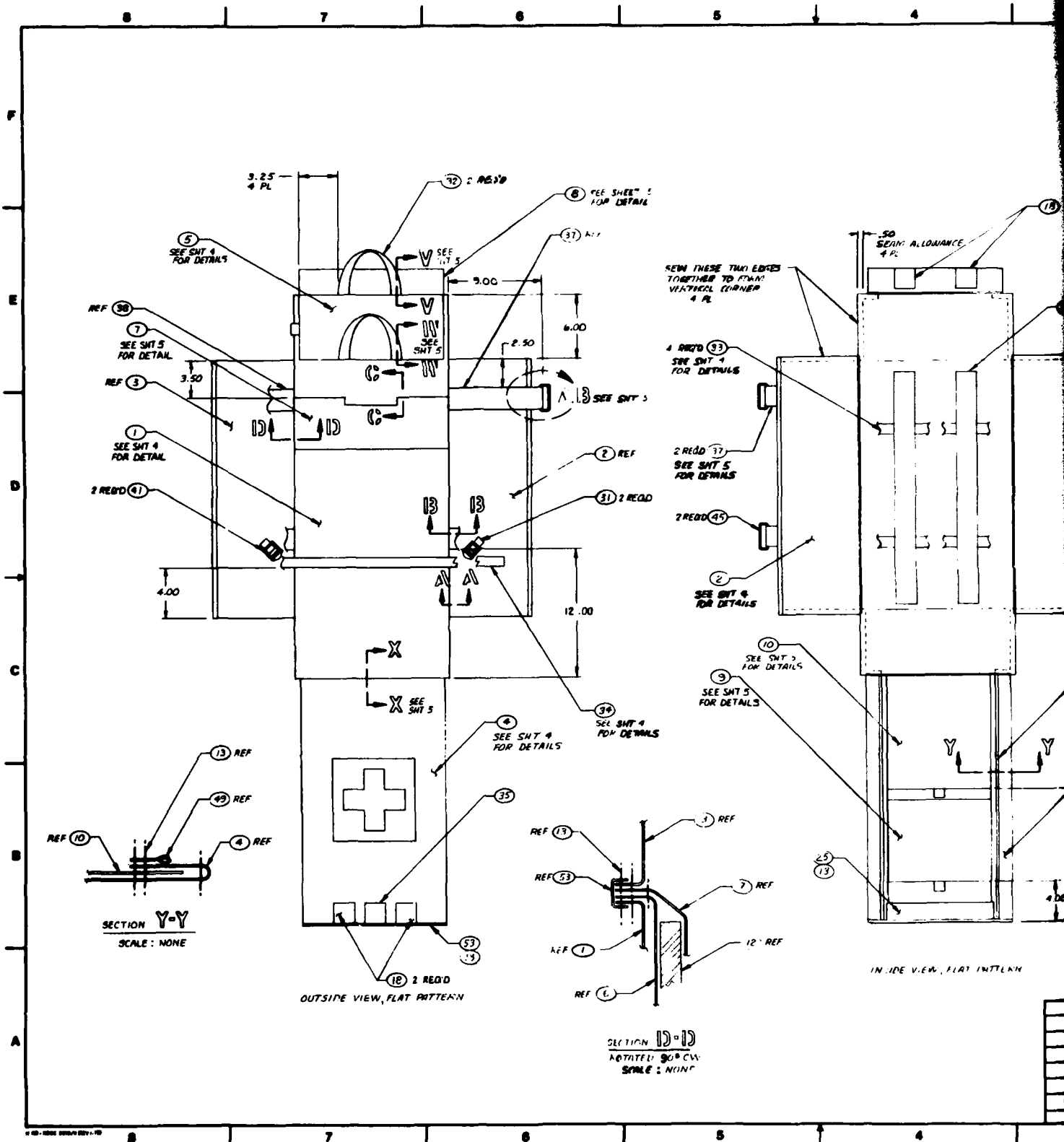
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* WILSHIRE FOAM
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CARSON CA 90745

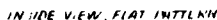
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MANCHESTER N.H.

REVISIONS				REVISIONS			
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B	ITEM 49 WAS 1 REQ'D ADDED 25" LONG TO DESCRIPTION						

11MB-R00C 3014/25 (8-77)

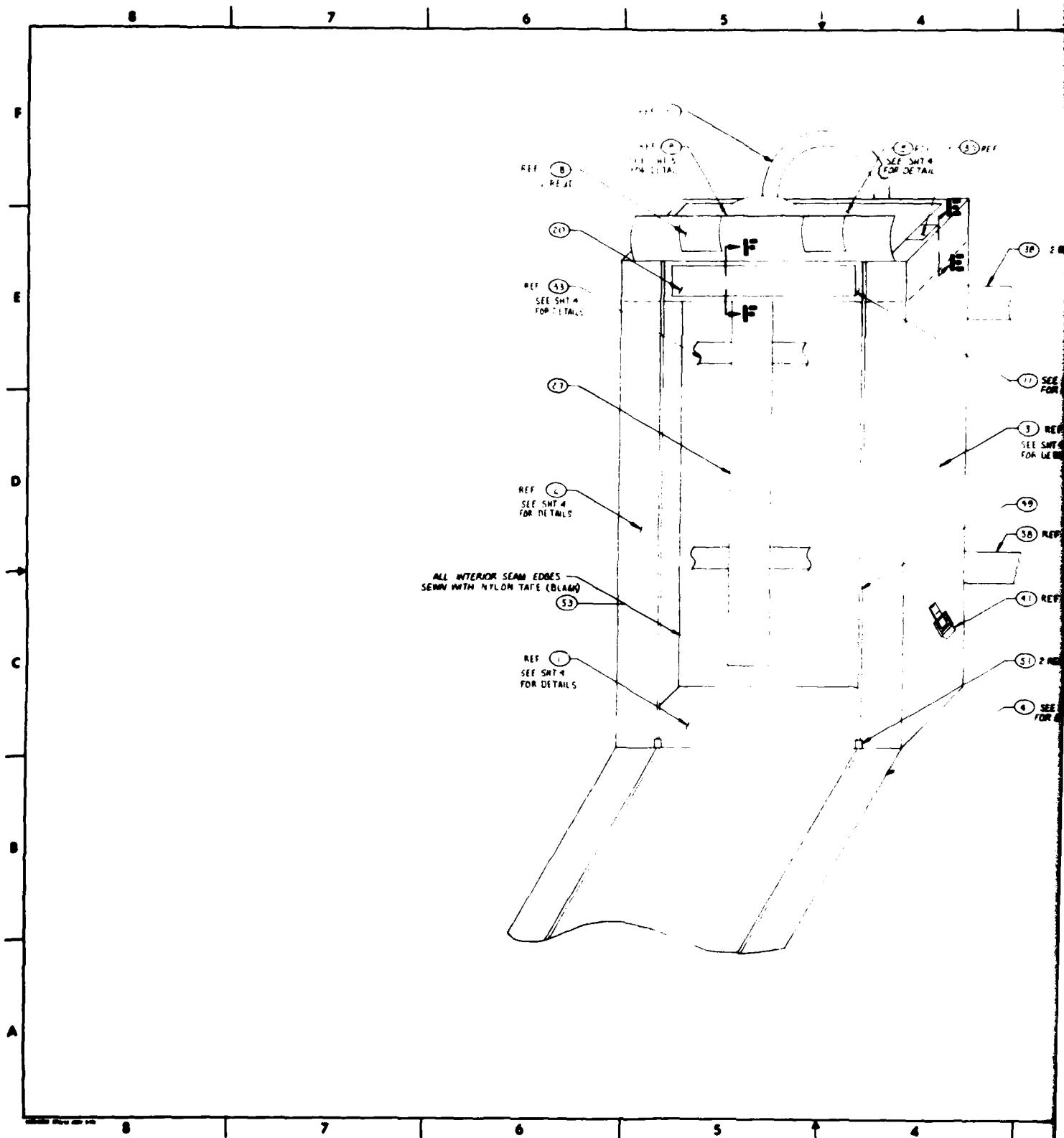


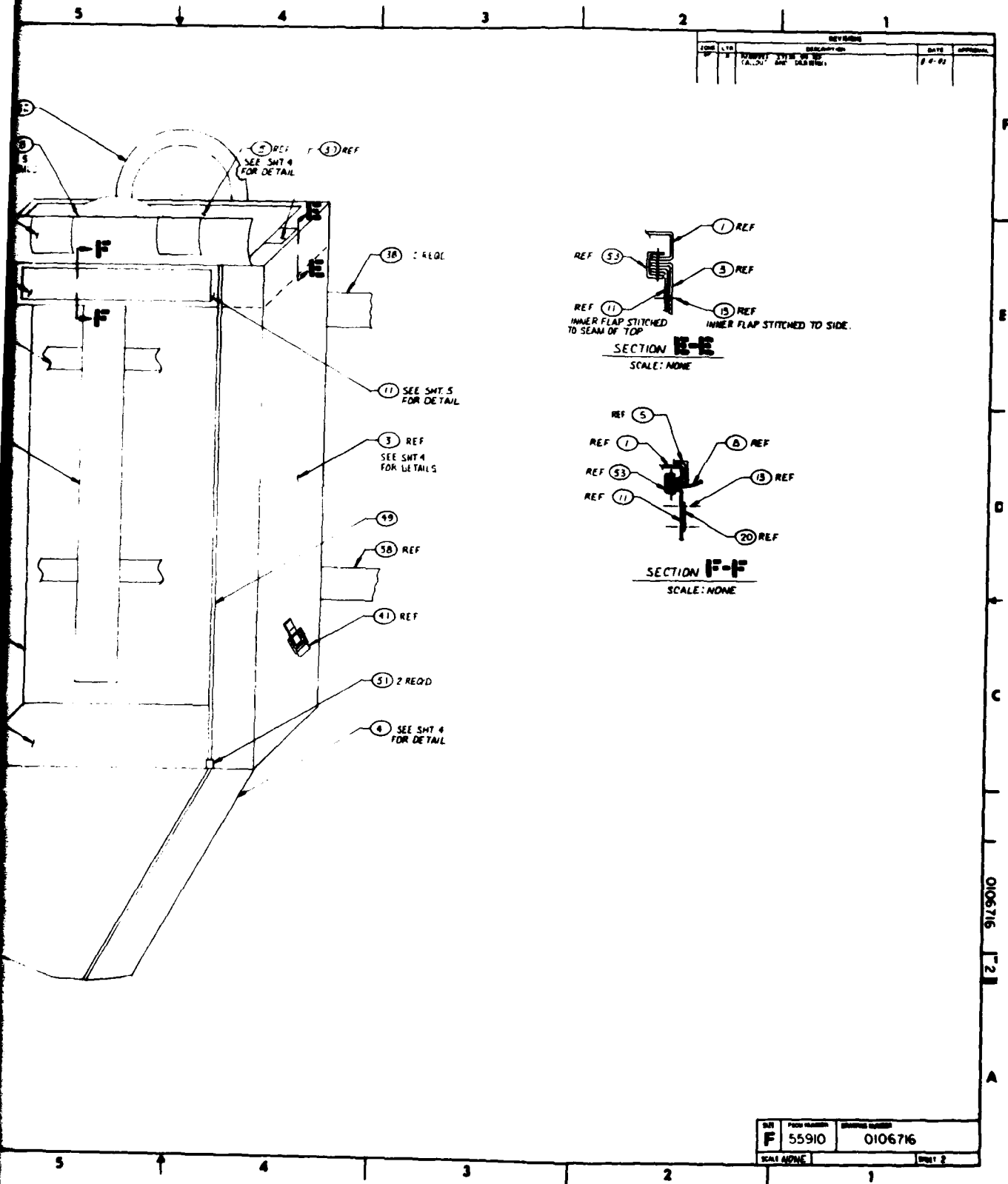
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2 REQ'D



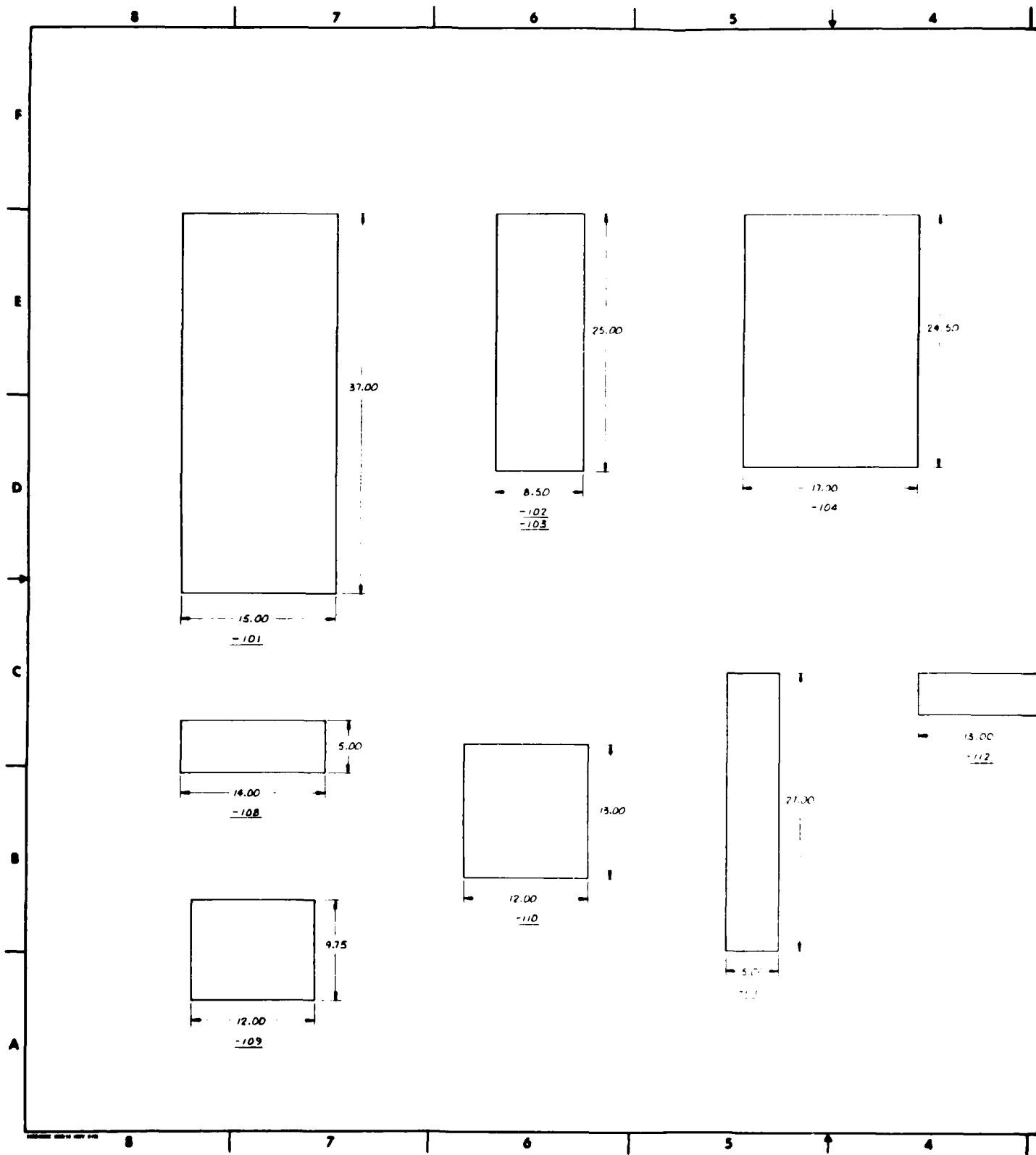
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PARTS LIST							
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DIMENSIONS SPECIFIED ON DRAWING ARE IN POUNDS PER SQUARE INCHES TOLERANCES ARE:					SHIPBOARD MEDICAL BACKPACK		
SEE 1 FILE NO. 101					APPROVED CONTR 567 101/101 PROJECT NUMBER 74-32 311 CONTRACT NO. 4123 APPROVED FOR		
NEXT ASBY USED ON APPLICATION					DRAWING NUMBER F 50000 0106716		
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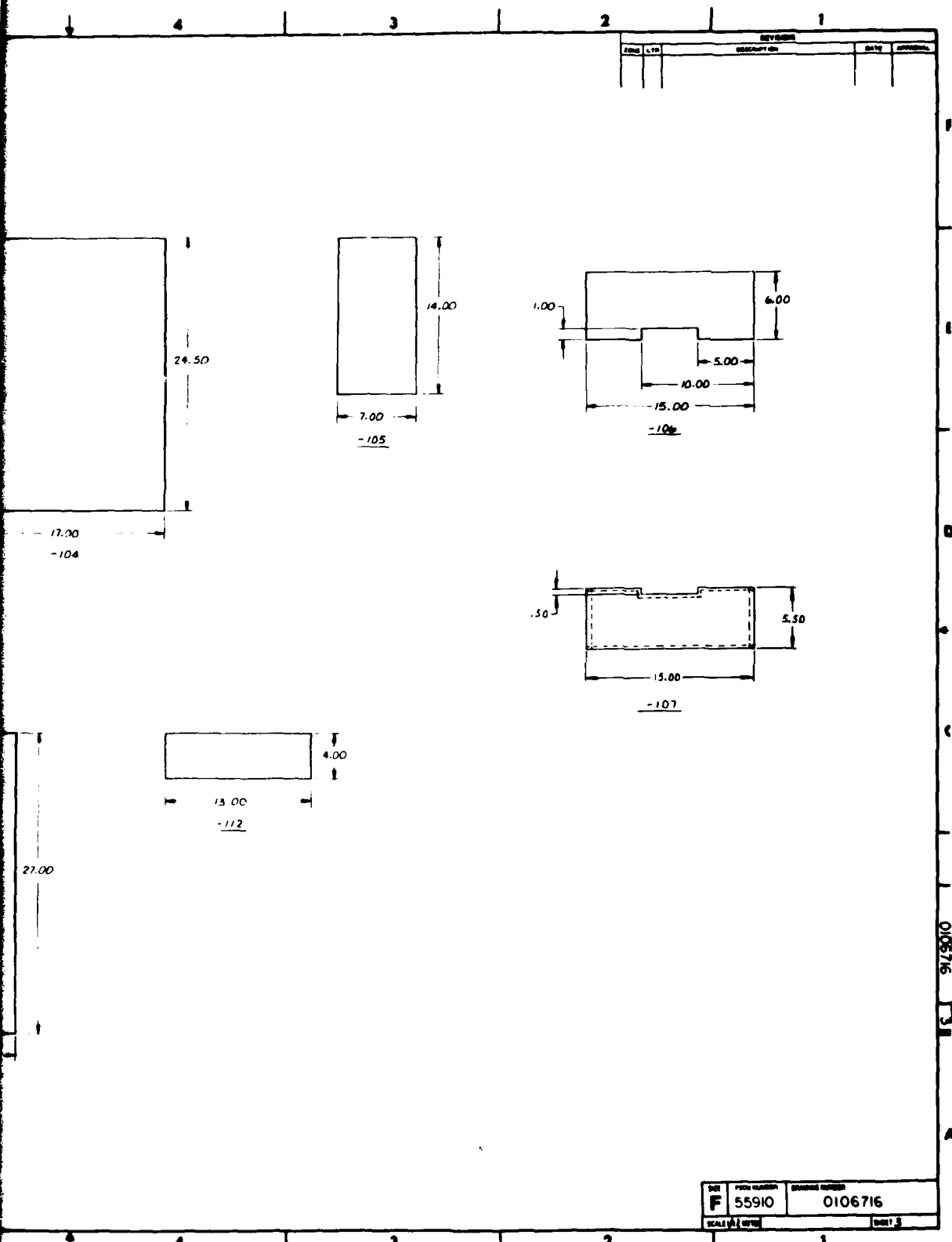
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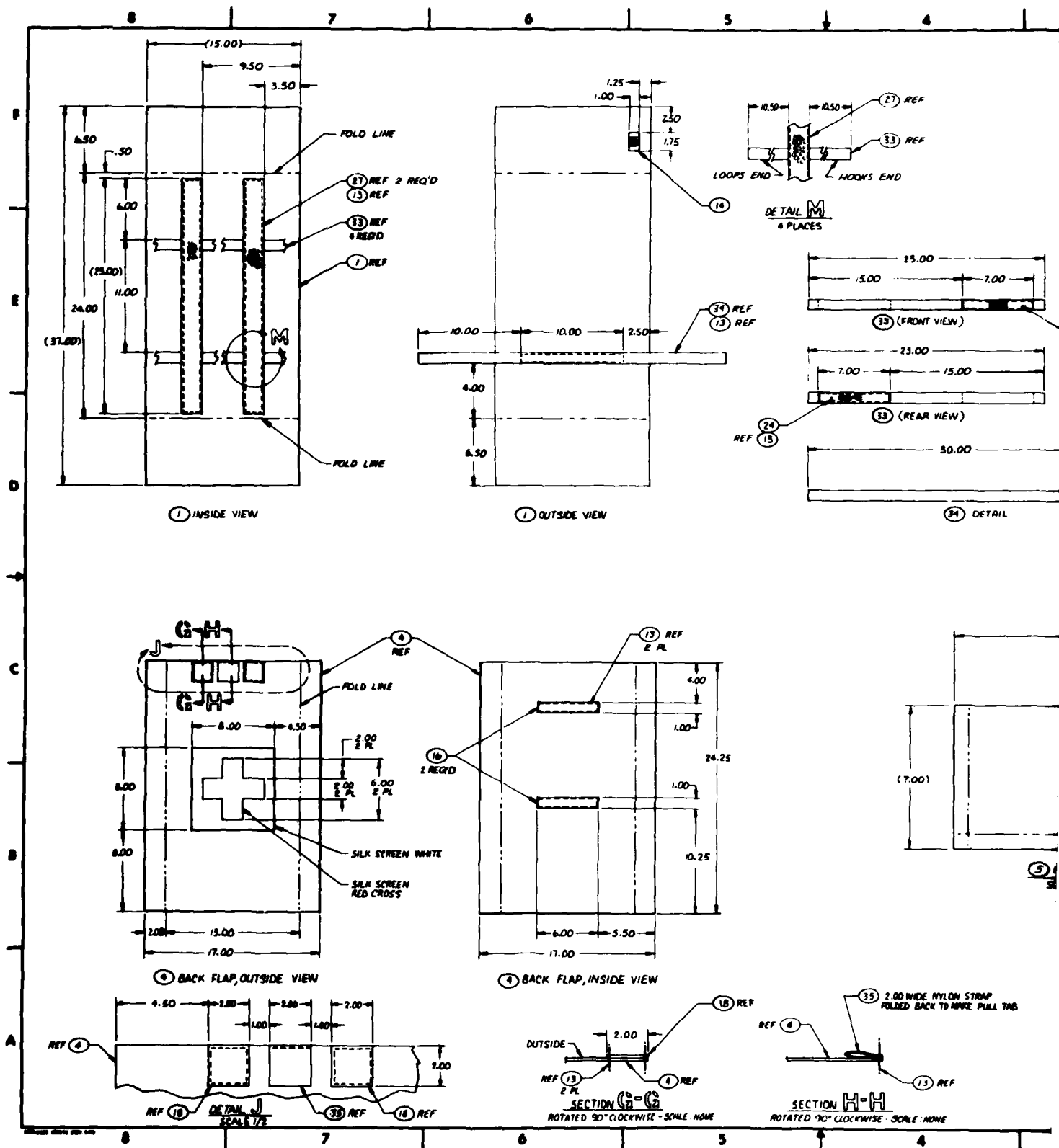


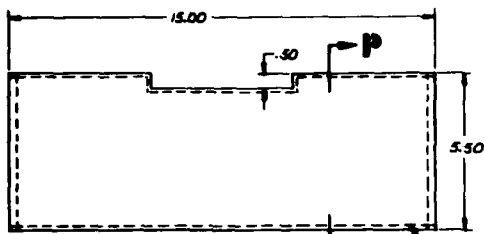


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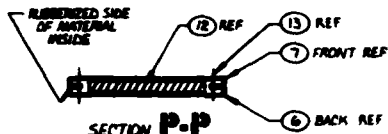




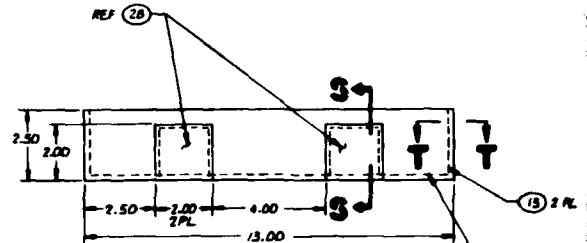


7 FRONT VIEW, SHOWING
8 REAR VIEW, OPPOSITE

13 REF

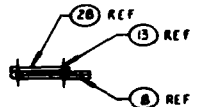


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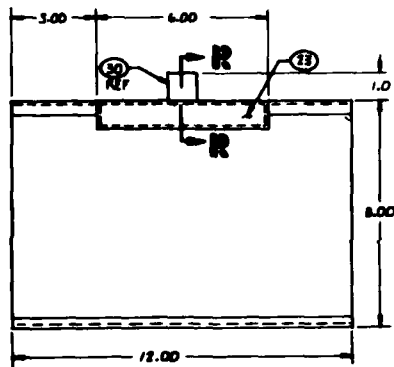


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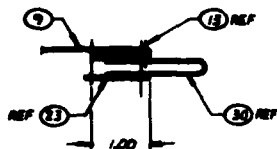
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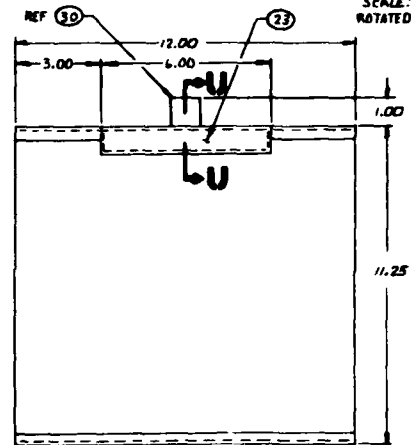
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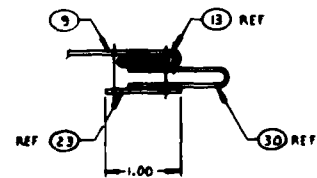
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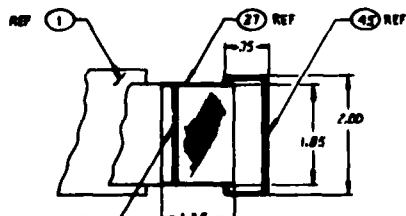
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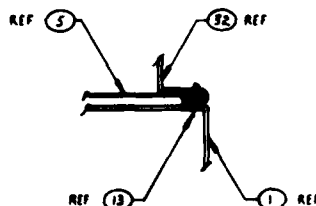
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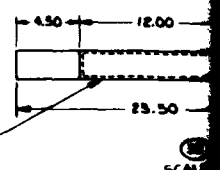
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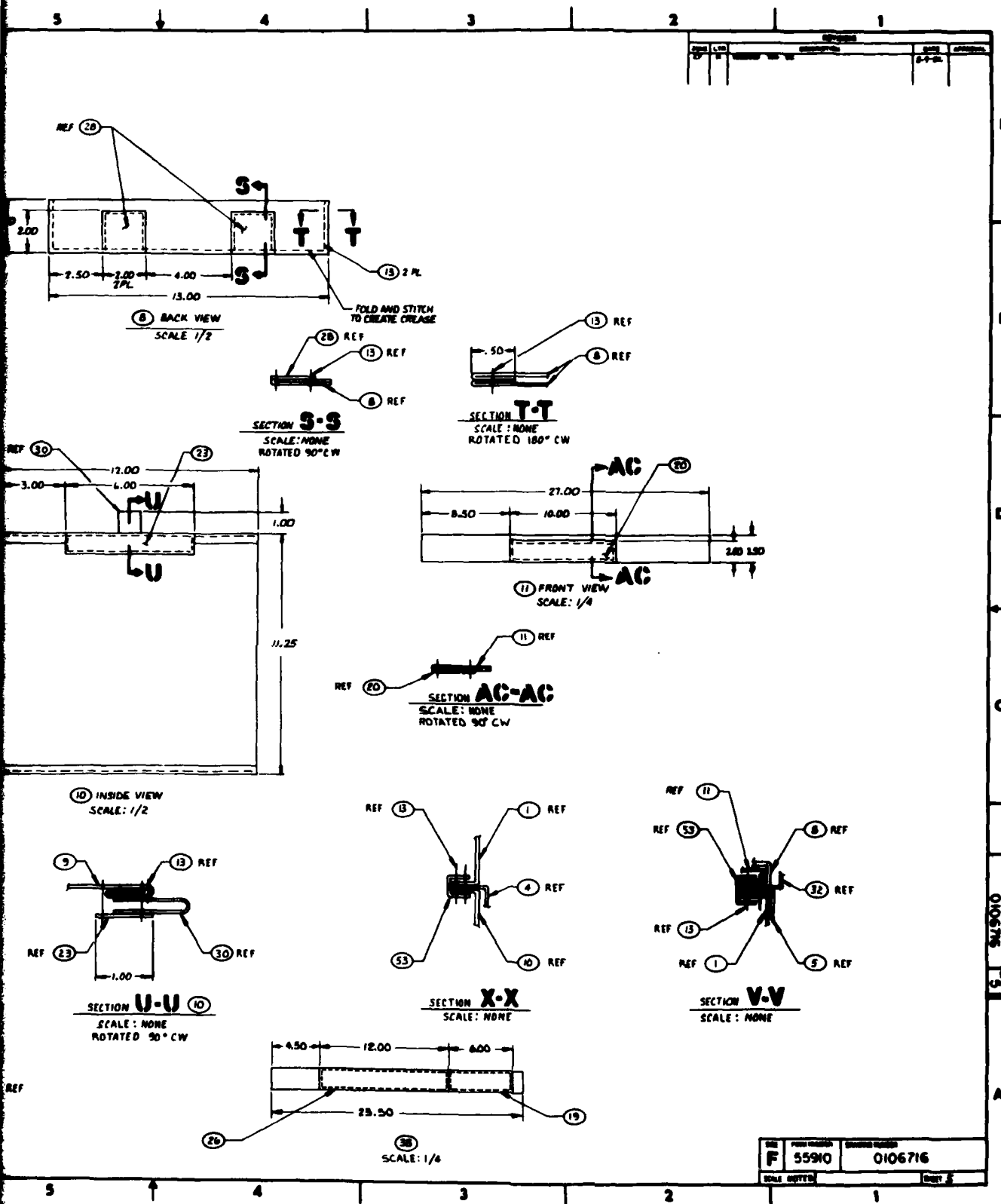
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SCALE



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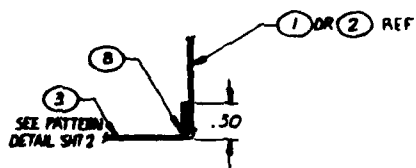
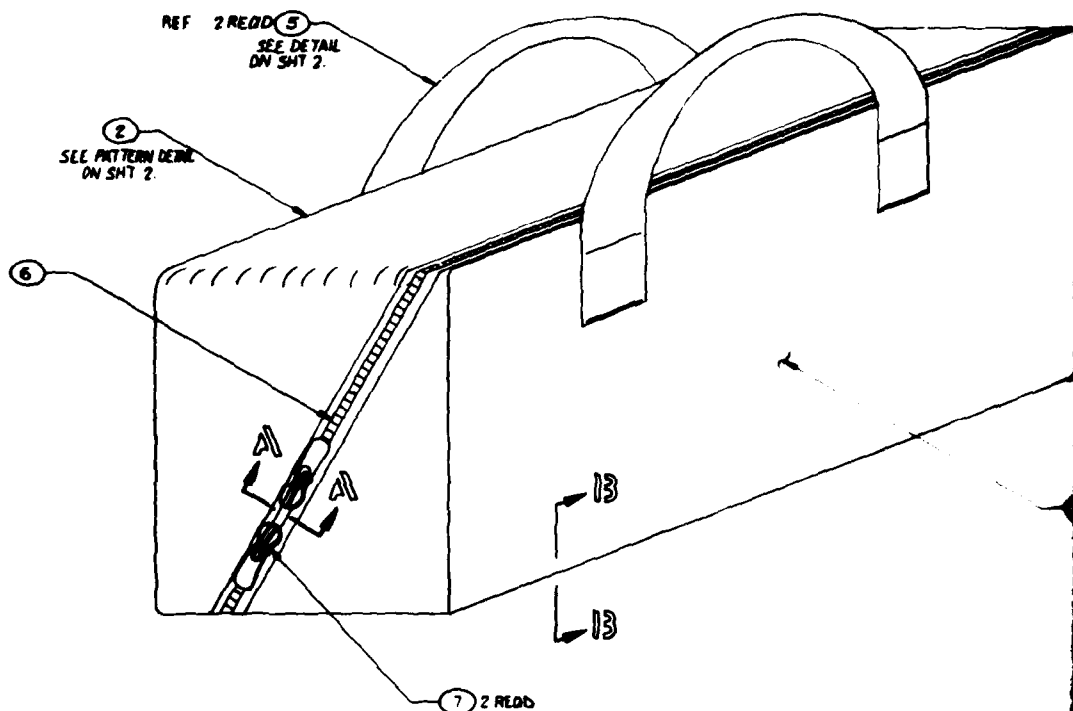
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LOS ANGELES, CA 90007

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216 PRODUCTION BEACH
NEWPORT BEACH, CA 92663

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P/N: 200-080-330-0199-AA
PSCN: 11153
VELCO FASTENING SYSTEMS
WINCHESTER, NH

4. PAGE FROM
P/R: 258
FSCN: -----
JOHN HOWARD CO.
487 N MAPLE
FERNVIA, CA 91016

STANDARD COBSA
2129 SEASIDE AVE
EL MONTE, CA 91733



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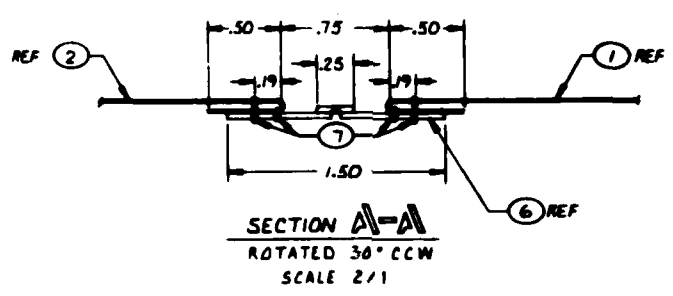
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0106717

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REVISIONS				
REV	DATE	DESCRIPTION	BY	APP

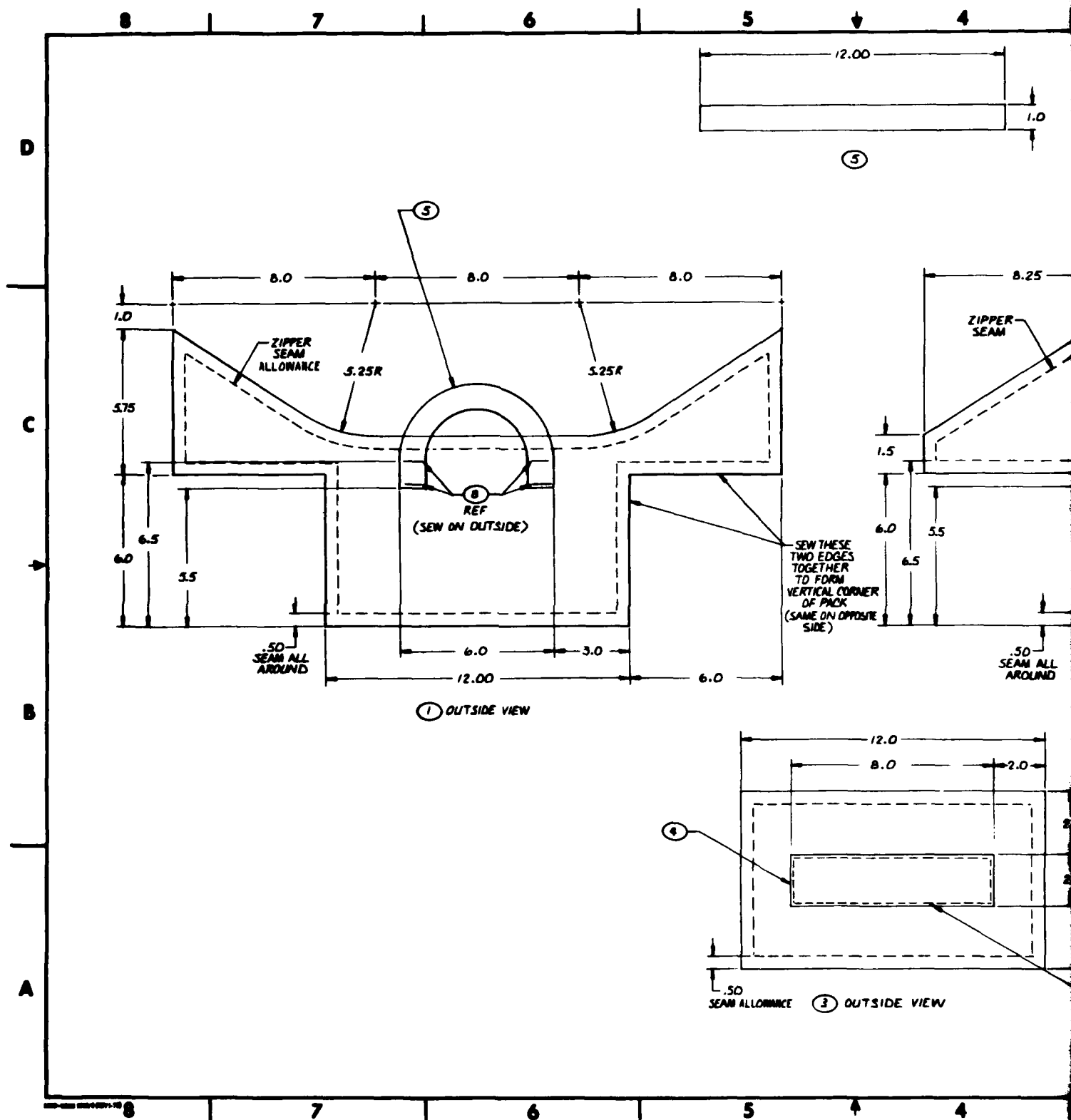


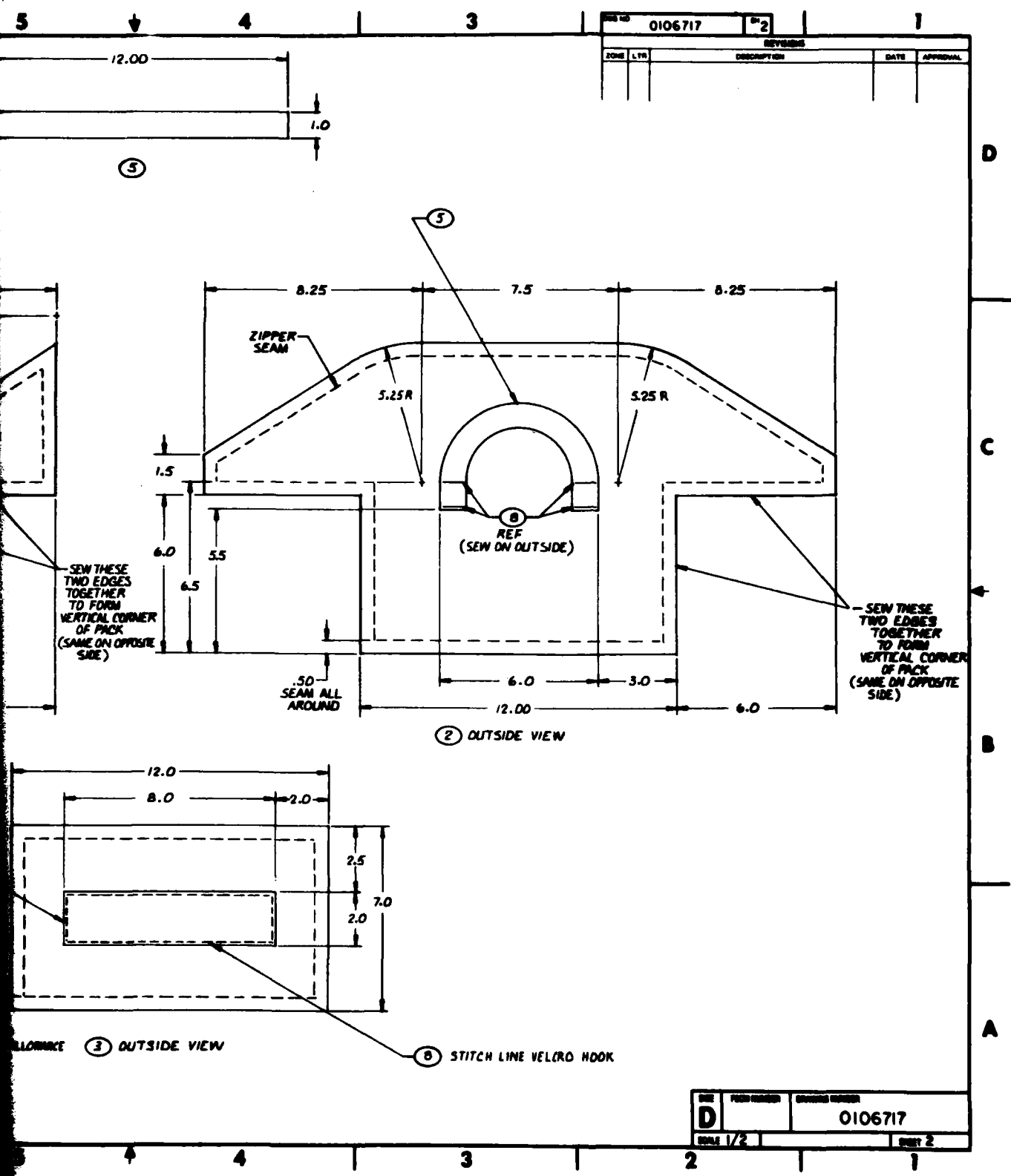
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1	1	V-92	THREAD MACHIN POLYESTER, BROWN		8
2	1	#7 CF SLIDE	ZIPPER. #7 CF SLIDE DFL (NONLOCKING), COLOR 580 (BLACK).		7
1	1	#7 CF CHAIN	ZIPPER. #7 CF CHAIN, COLOR 580 (BLACK). 5/8 WIDE (NYLON COIL WITH POLYESTER TAPE)		6
2		-105	HANDLE	1.0 X 1.0 INCH STRAP	3
1		-104	HOOKS, VELCRO	2.0 X 1.0 X 0.5 VELCRO	4
1		-103	BOTTOM		3
1		-102	SIDE 2		2
1		-101	SIDE 1		1

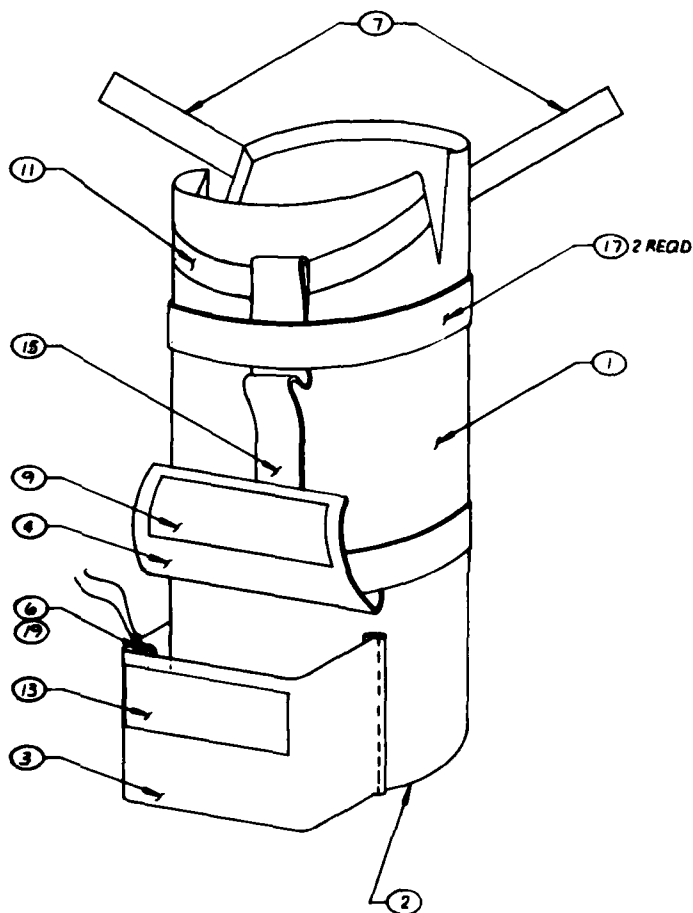
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(2)

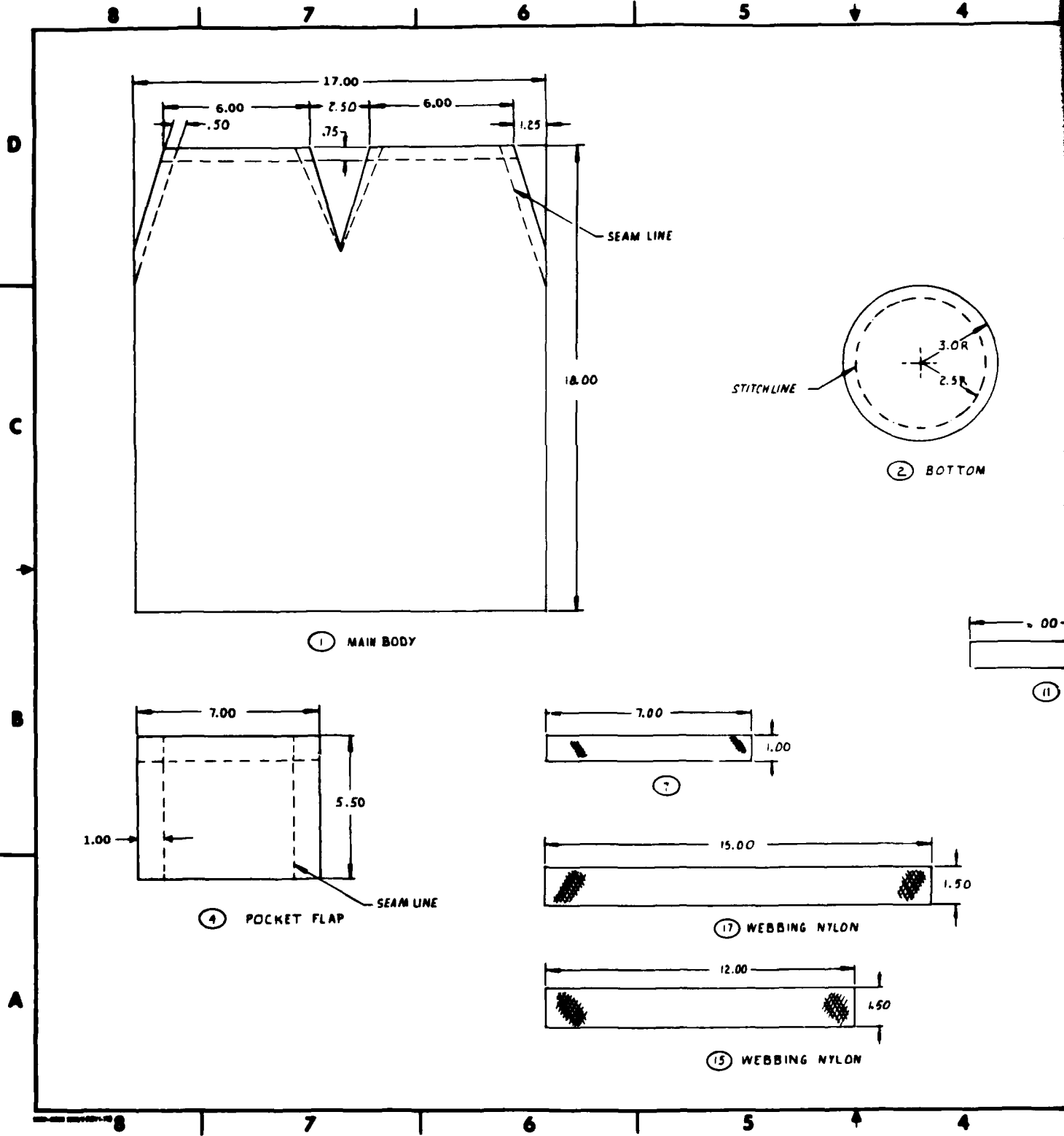




1. ALL SEAMS ARE .50
2. ALL STITCHING ZIG-ZAG
3. FSCM 11153, PN 200-001-330-0199AA
4. FSCM 11153, PN 100-001-330-0199AA
5. FSCM 11153, PN 200-080-330-0199AA
6. FSCM 11153, PN 100-080-330-0199AA
7. JOHN HOWARD CO
407 W. MAPLE
MONROVIA, CA 91016
8. STANDARD CODSA
2129 SEAMAN AVE
EL MONTE, CA 91733
9. MS 20230-A10

[illegible]

		INTERPRET DRAWING IN ACCORDANCE WITH MIL STD-100		PARTS LIST		NAVAL OCEAN SYSTEMS CENTER SAN DIEGO, CA 92152	
		DO NOT SCALE THIS DRAWING				OXYGEN CYLINDER CARRYING CASE	
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN DECIMAL INCHES REMOVE ALL DIMENSION TOLERANCES AND R X ANGLES PL. STD SURFACE FINISHES		APPROVED APPROVED CHECKED PREPARED (CONT. R SEI) <i>W/S</i> PROJECT NUMBER COORDINANT CODE APPROVED FOR			
NEXT ASSY		USED ON		BY DIRECTION		SIZE D 55010	
APPLICATION		RELEASED DATE				DRAWING NUMBER 0106718	
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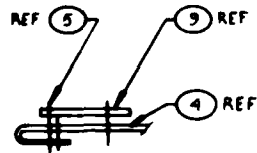
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D

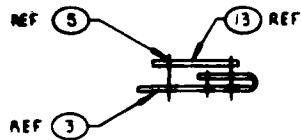
C

B

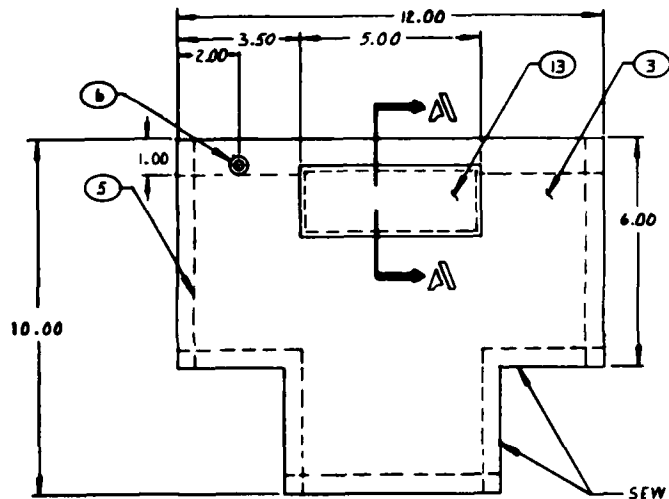
A



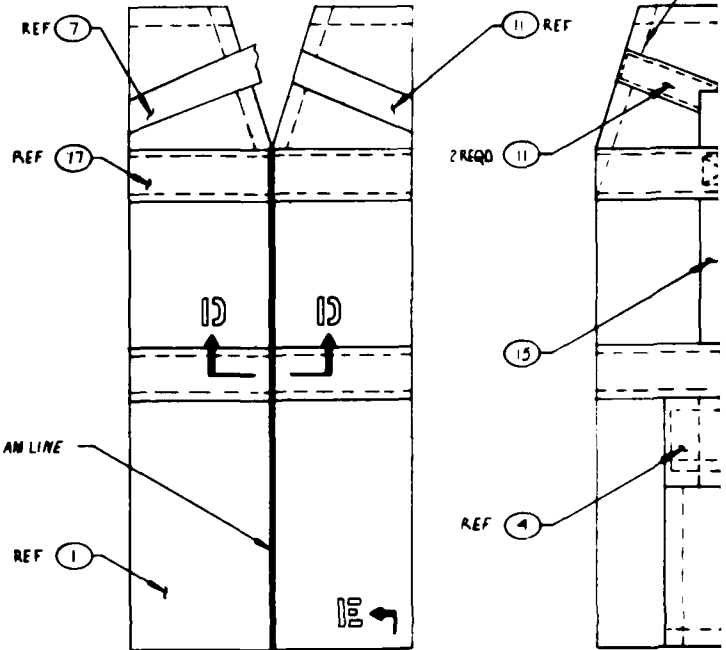
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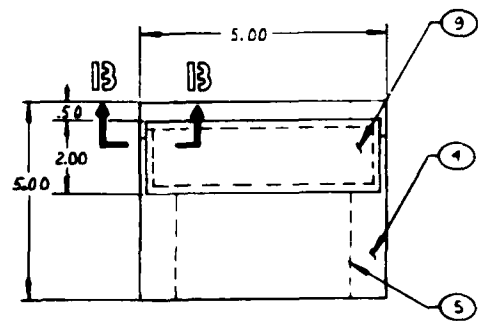
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SCALE: NONE
ROTATED 90° CW



3 POCKET DETAIL
SCALE: NONE



SIDE VIEW



1 POCKET FLAP DETAIL
SCALE: NONE

5

4

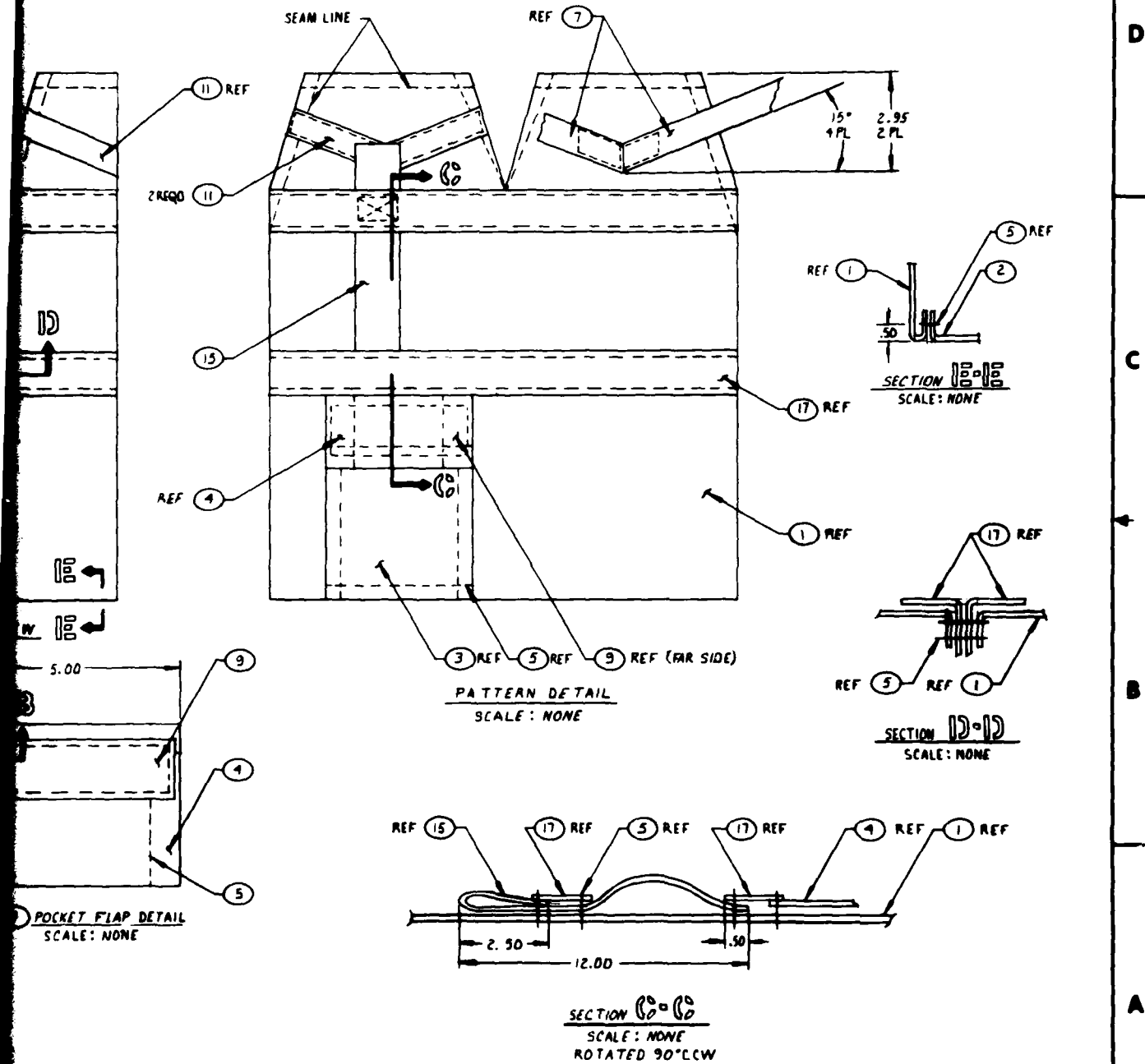
3

1

Dwg No 0106718

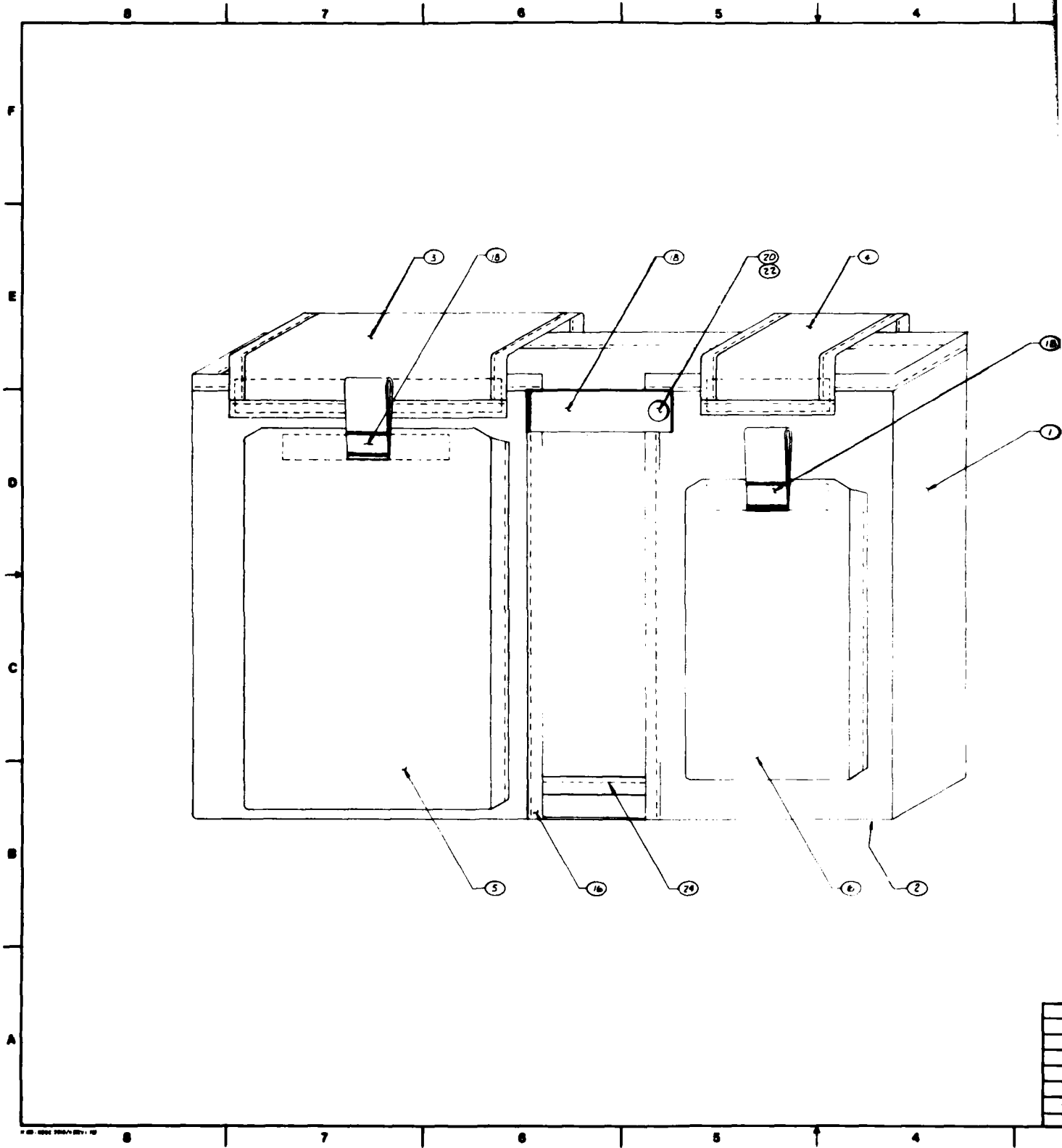
B 3

REVISING		DATE	APPROVAL
ZONE	LTR	DESCRIPTION	
A		ADD NOTE 1	

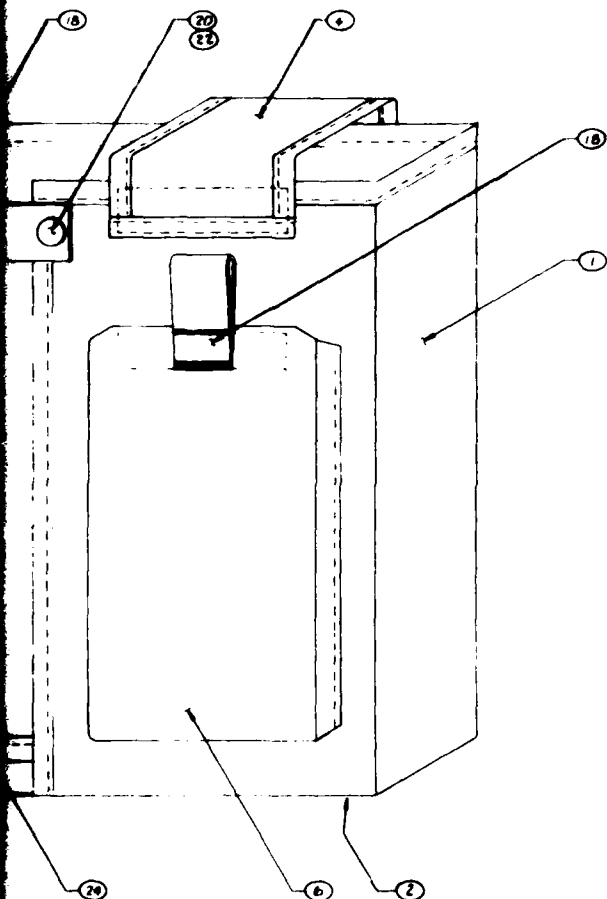


SIZE	PATCH NUMBER	QUANTITY NUMBER
D	55910	0106718
SCALE: NONE		SHEET 3

(2)



FORM	DATE	APPROVAL
ADDED NOTES	10/83	



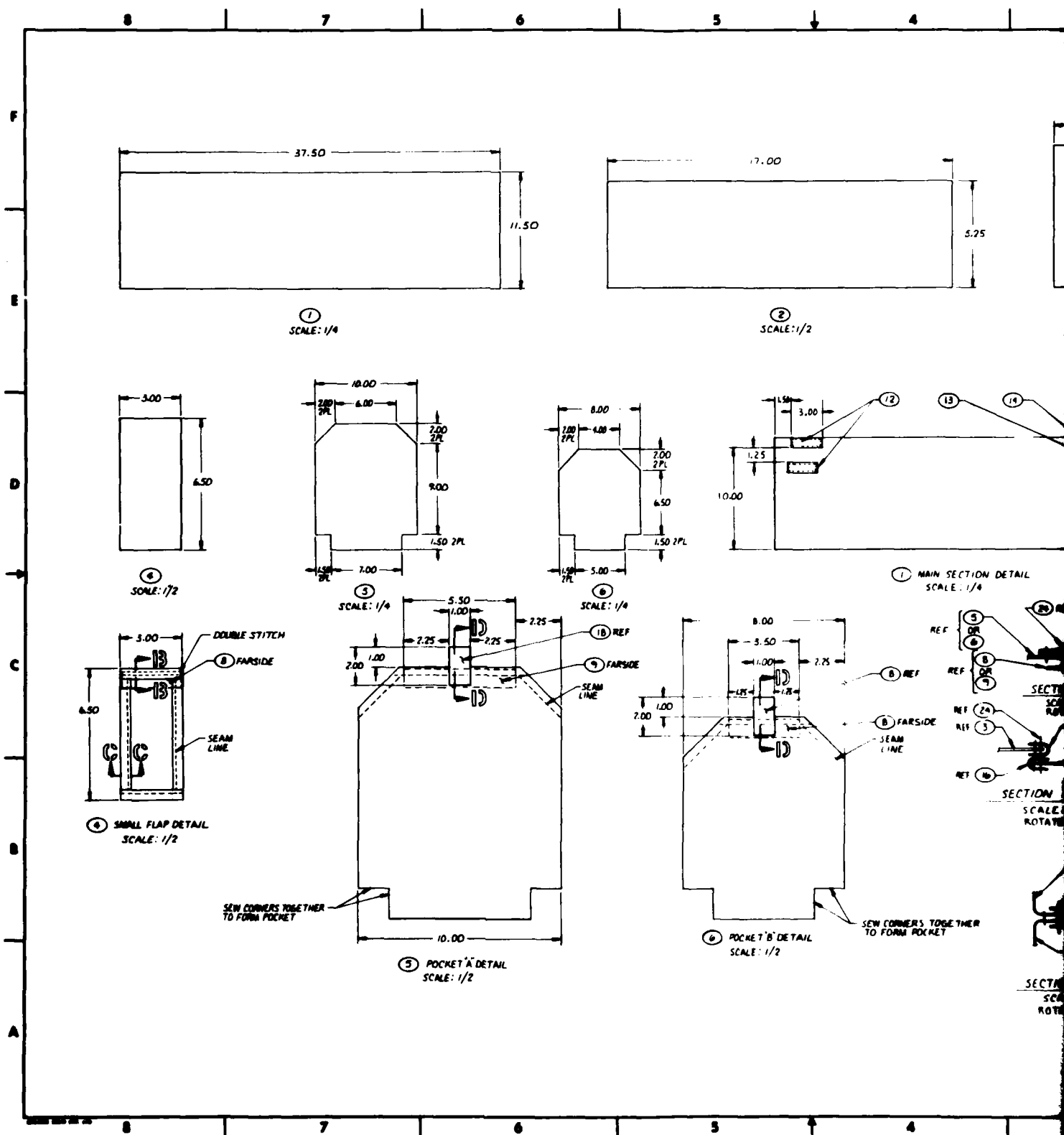
NOTE

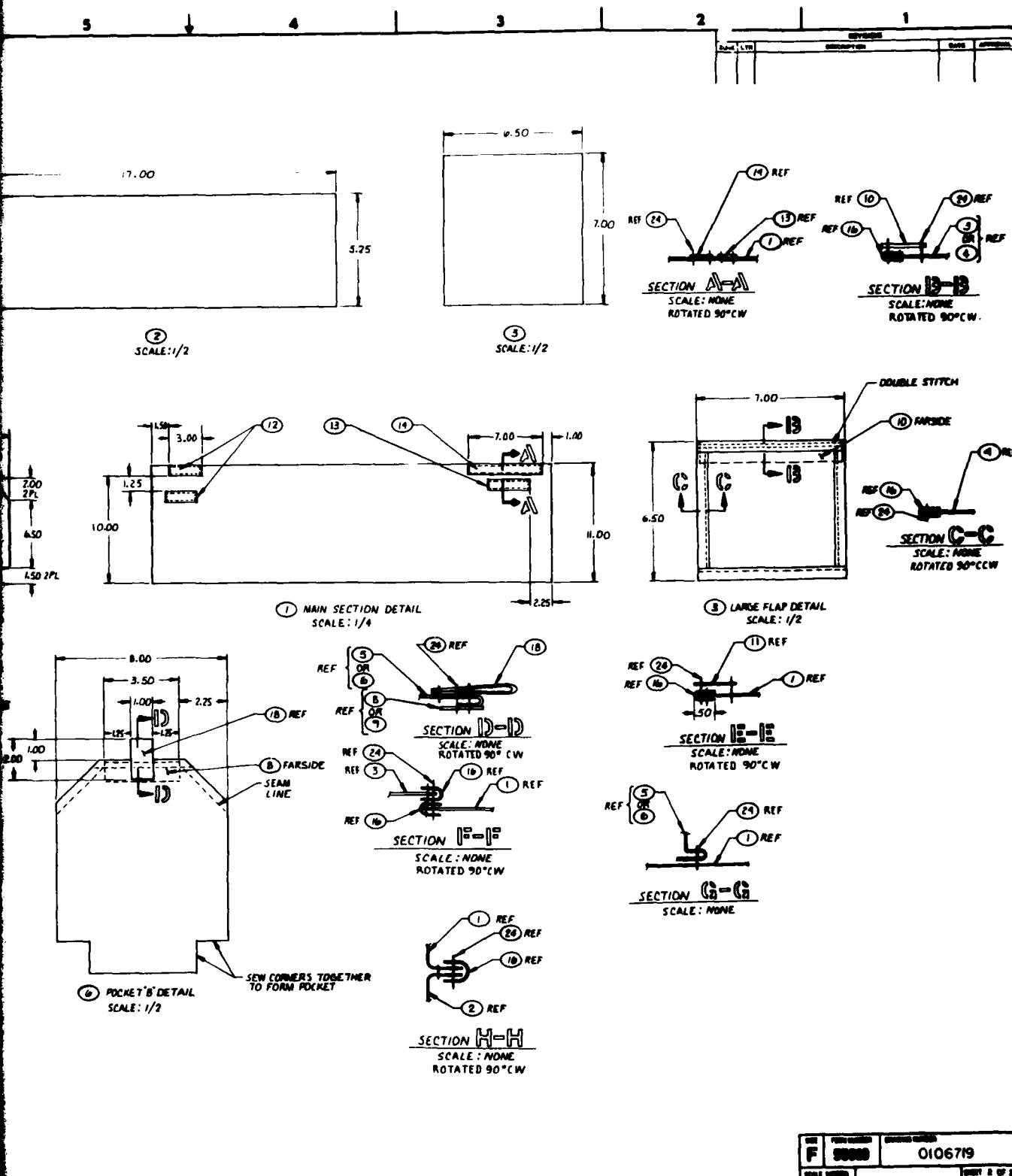
1. STANDARD CODSA
2129 SEAMAN AVE
EL MONTE, CA 91733
2. MS 27983-1N
3. MS 27983-2N
4. JOHN HOWARD CO.
407 W. MAPLE
MONROVIA, CA 91016
5. FSCM 11153, PN 100-080-330-0199AA
6. FSCM 11153, PN 100-100-330-0199AA
7. HOWE & BAINBRIDGE
816 PRODUCTION BEACH
NEWPORT BEACH, CA 92663

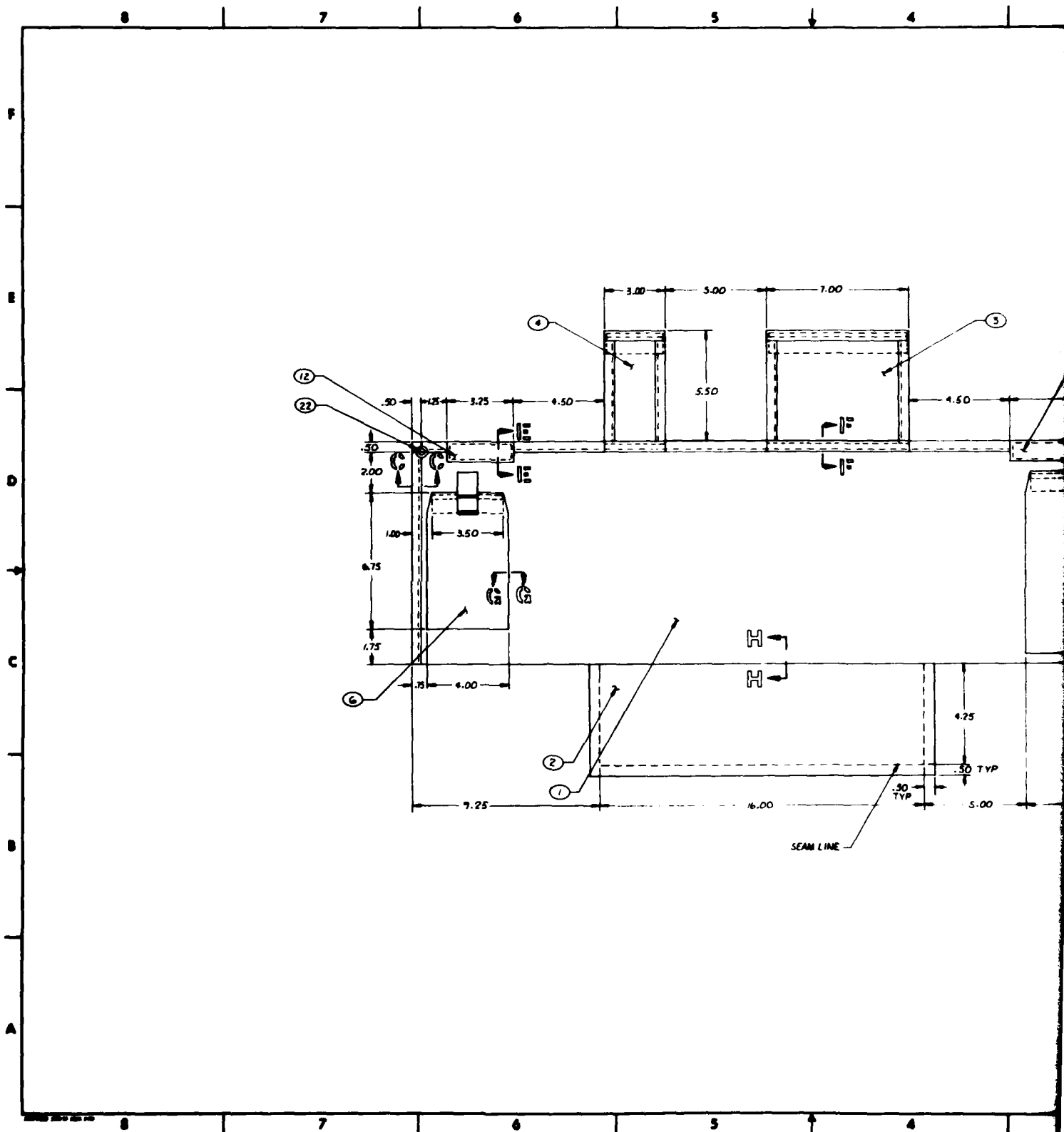
QTY	UNIT	DESCRIPTION OR REFERENCE	REMARKS	DATE
1	SEE NOTE 1	THREAD DACRON POLYESTER STITCHED CODSA FINISHER, 4-92		24
1	SEE NOTE 3	SNAP RECEPTACLE, 18201		23
1	SEE NOTE 2	SNAP, CAP, 18100		27
3	SEE NOTE 4	STRAP, NYLON, PN 258	1.0 x 4.0	20
1	MIL-T-5038	BINDING, NYLON	1.0 WIDE	19
1	SEE NOTE 5	HOOKS VELCRO	1.0 x 7.00 BLACK	18
1	"	HOOKS VELCRO	1.0 x 4.00	17
2	"	HOOKS VELCRO	1.0 x 3.00	16
1	SEE NOTE 6	LOOPS VELCRO	1.0 x 7.00	15
1	"	LOOPS VELCRO	1.0 x 4.00	14
2	"	LOOPS VELCRO	1.0 x 3.00 BLACK	13
1	SEE NOTE 7	POCKET "B"	CORDURA 110Z RUST	12
1	"	POCKET "A"		11
1	"	FLAP SMALL		10
1	"	FLAP LARGE		9
1	"	BOTTOM		8
1	"	MAIN SECTION	CORDURA 110Z RUST	7

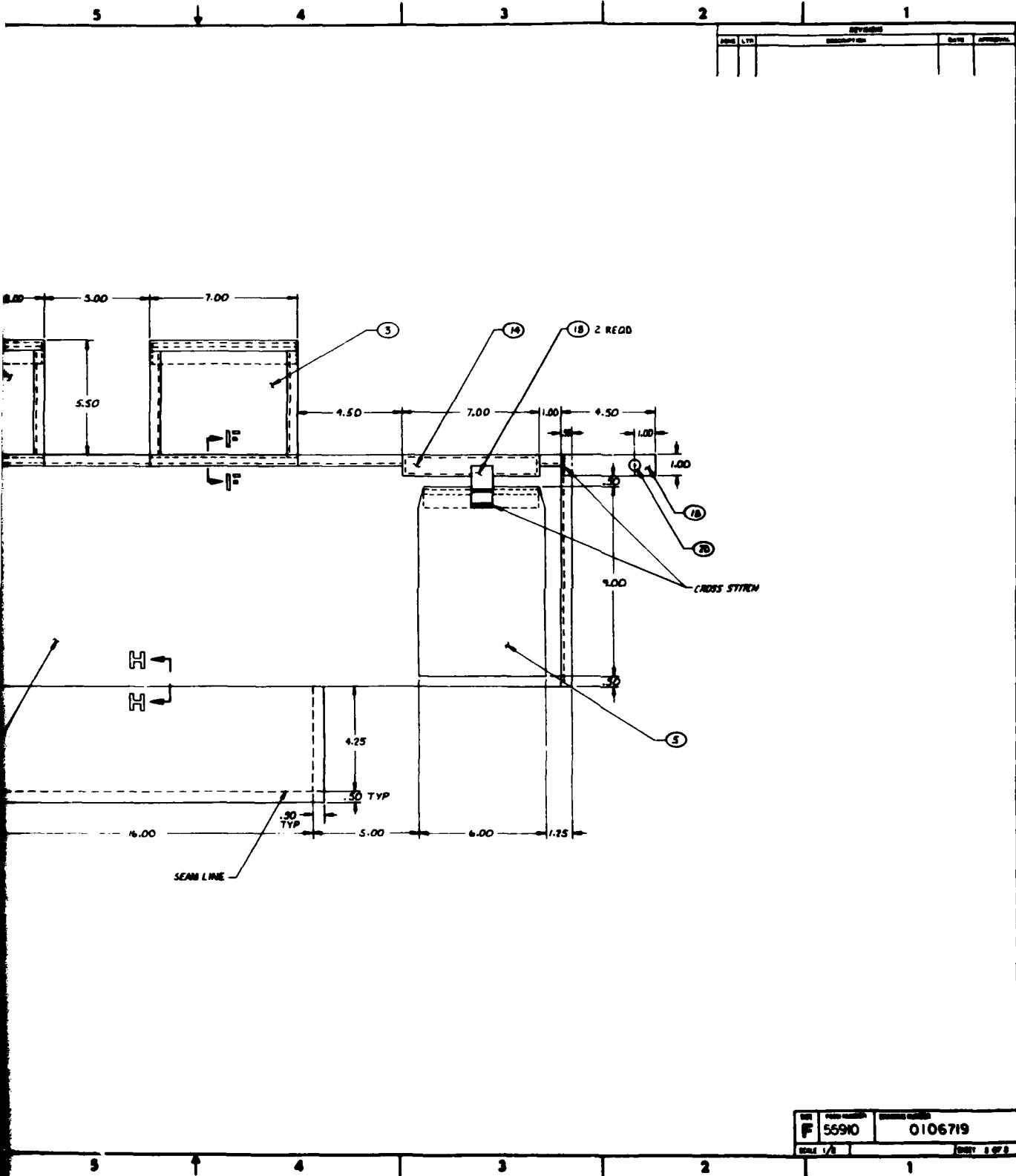
PARTS LIST		REMARKS	
QTY	UNIT	DESCRIPTION OR REFERENCE	REMARKS
1	SEE NOTE 1	THREAD DACRON POLYESTER STITCHED CODSA FINISHER, 4-92	
1	SEE NOTE 3	SNAP RECEPTACLE, 18201	
1	SEE NOTE 2	SNAP, CAP, 18100	
3	SEE NOTE 4	STRAP, NYLON, PN 258	1.0 x 4.0
1	MIL-T-5038	BINDING, NYLON	1.0 WIDE
1	SEE NOTE 5	HOOKS VELCRO	1.0 x 7.00 BLACK
1	"	HOOKS VELCRO	1.0 x 4.00
2	"	HOOKS VELCRO	1.0 x 3.00
1	SEE NOTE 6	LOOPS VELCRO	1.0 x 7.00
1	"	LOOPS VELCRO	1.0 x 4.00
2	"	LOOPS VELCRO	1.0 x 3.00 BLACK
1	SEE NOTE 7	POCKET "B"	CORDURA 110Z RUST
1	"	POCKET "A"	
1	"	FLAP SMALL	
1	"	FLAP LARGE	
1	"	BOTTOM	
1	"	MAIN SECTION	CORDURA 110Z RUST

2









(2)

