

NOTICE OF INACTIVATION
FOR NEW DESIGN

INCH-POUND

MIL-STD-1325-157A(OS)
NOTICE 2
15 October 1992
SUPERSEDING
NOTICE 1
13 March 1991

MILITARY STANDARD

RAILCAR LOADING OF HAZARDOUS MATERIALS BOMB, 500 LB.
MK 82 MOD 2 (THERMALLY PROTECTED) ON PALLET,
MHU-122/E FLEET ISSUE UNIT LOAD

This notice should be filed in front of MIL-STD-1325-157A(OS) dated 7 September 1973.

MIL-STD-1325-157A(OS) is inactive for new design and is no longer used by the Navy except for replacement purposes.

Preparing activity:
Navy - OS

(Project 8140-N896)

AMSC N/A

FSC 8140

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

**NOTICE
OF VALIDATION**

INCH-POUND

MIL-STD-1325/157A
NOTICE 1
13 MARCH 1991

MILITARY STANDARD

**RAILCAR LOADING OF HAZARDOUS MATERIALS BOMB,
MK 82 MOD 2 (THERMALLY PROTECTED) ON PALLET,
MIU-122/E FLEET ISSUE UNIT LOAD**

MIL-STD-1325/157A, dated 7 September 1973, has been reviewed and determined to be valid for use in acquisition.

Preparing activity:
Navy-OS

AMSC N/A
DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

FSC 8140

MILITARY STANDARD

MIL-STD-1325-157 A

RAILCAR LOADING OF HAZARDOUS MATERIALS

(NAVY)

BOMB, 500 LB. MK 82 MOD 2 (THERMALLY PROTECTED)

ON PALLET, MHU-122/E

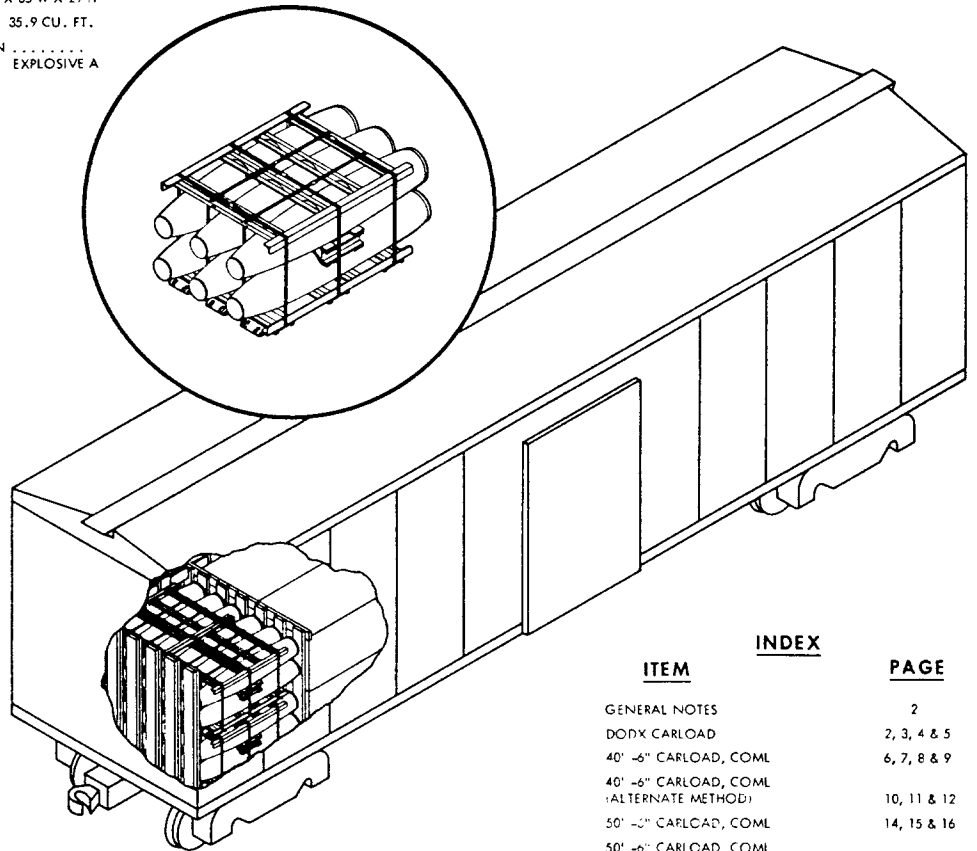
FLEET ISSUE UNIT LOAD

7 SEPTEMBER 1973

SUPERSEDING
MIL-STD-1325-157
9 JANUARY 1973

UNIT LOAD DATA

UNIT LOAD DRAWING WR-54/239
WEIGHT 3094 LBS. (EST.)
DIMENSIONS 61-3/8 L X 35 W X 29 H
CUBE 35.9 CU. FT.
DOT HAZARD CLASSIFICATION
..... EXPLOSIVE A



NOTES:

- UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
- FOR CROSS REFERENCE TO ASSOCIATED PALLETIZING, TRUCKLOADING AND CONTAINER LOADING MILITARY STANDARDS, REFER TO DS MIL-HDBK-236 (NAVY)

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FSC 8140

AUTHORIZED AND RELEASED FOR GENERAL USE.

APPROVED BY BUREAU OF EXPLOSIVES

C. F. [Signature]

DATE 8/1/73

M. S. [Signature] N. W. H. L. 8/27/73
SIGNATURE TECHNICAL DIRECTION AGENT (TDA) DATE

ORIGINATOR

[Signature] 1/24/73
SIGNATURE

J. E. Kelly 9/6/72
SIGNATURE (AIR) SYSTEM BY DIRECTION DATE

NAVAL WEAPONS HANDLING LABORATORY
N A D EARLE, NEW JERSEY

PAGE 1 OF 39

MIL-STD-1325-157 A (NAVY)

GENERAL NOTES

1. FOR GENERAL INFORMATION CONCERNING ORDERING, INSPECTING, AND PREPARING CARS, AND FOR DUNNAGING MATERIALS, DESIGN, AND INSTALLATION OF DUNNAGE SEE THE GENERAL DOCUMENT MIL-STD 1325 (NAVY).
2. WHEN PLANNING SHIPMENTS ORDER THE MINIMUM NUMBER OF CARS OF THE CAPACITY REQUIRED FOR THE SHIPMENT. UTILITY LOADER CARS SHALL BE SERIES DODX 28000.
3. LOADING PLANS SHOWN ARE FOR DODX UTILITY LOADER CAR WITH 50 FT 6 INCHES INSIDE LENGTH, 107 3/4 INCHES INSIDE WIDTH BETWEEN RAILS (111 INCHES INSIDE WIDTH BETWEEN SIDE WALLS), COMMERCIAL BOXCARS WITH 40 FT 6 INCHES INSIDE LENGTH, 110 INCHES INSIDE WIDTH, AND COMMERCIAL BOXCARS WITH 50 FT 6 INCHES INSIDE LENGTH, 110 INCHES INSIDE WIDTH.
4. THE "LOAD LIMIT" OF A CAR MUST NOT BE EXCEEDED NOR SHOULD THE RAILCAR BE LOADED SO THAT MORE THAN ONE-HALF OF THE "LOAD LIMIT" IS CARRIED BY ONE SET OF TRUCKS.
5. IF END WALLS OF CARS ARE NOT SQUARE THEY MUST BE SQUARED OFF BEFORE STARTING TO LOAD CAR.
6. THE LOAD CONSISTS OF 500 LB. MK B2 MOD 2 (THERMALLY PROTECTED) BOMBS PALLETIZED IN ACCORDANCE WITH WR-54/239.
7. THE UNIT LOADS ARE HANDLED AND LOADED WITH A SUITABLE FORK LIFT TRUCK.
8. UNLESS OTHERWISE SPECIFIED NAILING SHALL BE IN ACCORDANCE WITH MIL-STD-1325 (NAVY).
9. APPLICABLE MATERIAL SPECIFICATIONS:
 DUNNAGE LUMBER - FED. SPEC MM-L-751
 NAILS - FED. SPEC FF-N-105
 STRAPPING - FED. SPEC OO-S-781, TYPE I, HEAVY DUTY, CLASS A, DRY (UNLUBRICATED).
 SEALS - FED. SPEC OO-S-781, STYLE III, HEAVY DUTY
10. AFTER BLOCKING AND BRACING HAS BEEN INSPECTED ATTACH SHIPPING DOCUMENTS INSIDE THE CAR IN AN ACCESSIBLE AREA, CLOSE AND SEAL BOXCAR DOORS, AND ATTACH APPLICABLE PLACARDS TO THE OUTSIDE OF CAR AS PRESCRIBED IN OP 2165 (VOL 1).

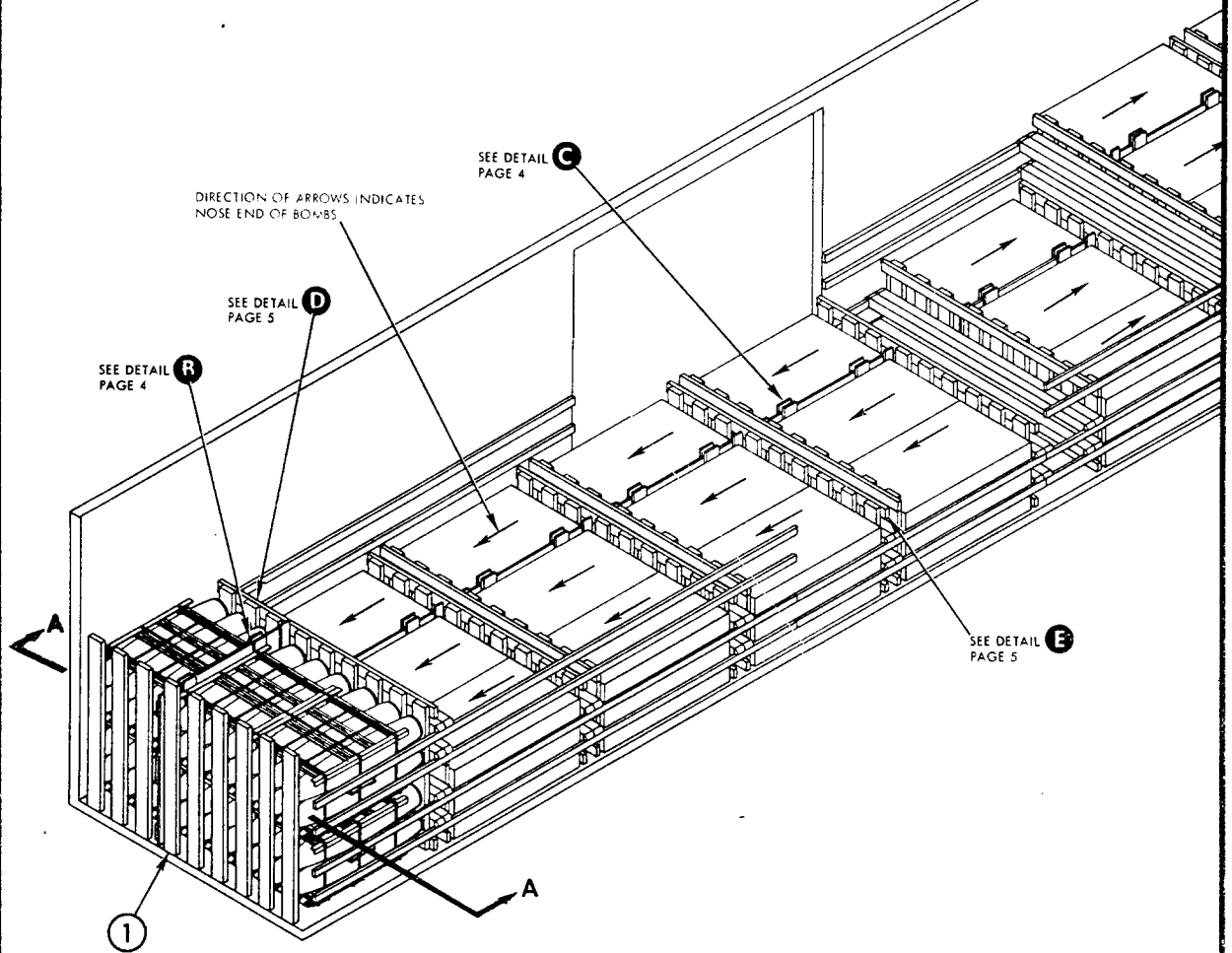
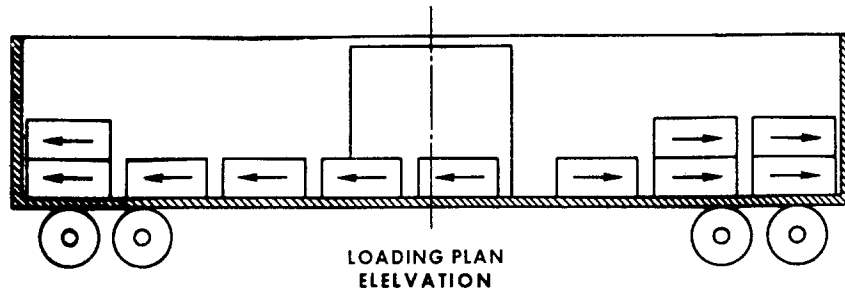
50 FT 6 IN. BOXCAR, DODX

1. THE CARLOAD CONSISTS OF 33 UNIT LOADS WHICH MUST BE LOADED AND DUNNAGED IN ACCORDANCE WITH THIS PROCEDURAL DRAWING. HOWEVER, THIS QUANTITY SHALL BE ADJUSTED BY SUBSTITUTING DUMMY UNIT LOADS (SEE PAGE 36) AS REQUIRED TO COMPLY WITH LOAD LIMIT OR WEIGHT DISTRIBUTION RULES OF THE AAR.
2. IF UNABLE TO LOAD DOORWAY STACK AS SHOWN, SEE DETAIL G, PAGE 5 FOR ALTERNATE DOORWAY STACK LOCATION.
3. A DETAILED DESCRIPTION AND OPERATING INSTRUCTIONS FOR THE UTILITY LOADER ARE CONTAINED IN OP 1750.
4. TO PREVENT UNUSED "DF" EQUIPMENT FROM BECOMING DISLODGED DURING TRANSIT OF DODX CARS SECURE IT AT ANY LOCATION IN THE BOXCAR WHICH WILL NOT INTERFERE WITH UNLOADING.
5. WHEN LESS THAN CARLOAD (LCL) QUANTITIES ARE REQUIRED TO BE SHIPPED IN DODX BOXCARS THE SAME PROCEDURES AND METHODS OF BLOCKING ARE APPLICABLE. ANY BAYS OR PORTION THEREOF MAY BE USED PROVIDING THE WEIGHT DISTRIBUTION REQUIREMENTS OF THE AAR ARE COMPLIED WITH (SEE MIL-STD-1325 (NAVY)). EACH CROSSMEMBER WILL BE USED IN SUCH A MANNER THAT IT WILL RETAIN NOT MORE THAN 2400 LBS OF THE LADING.

* CLINCHED

11	SWAY BRACE VERTICAL	1 x 4 x 34 1/2	20	10	3 PER JOINT	5d
10	SWAY BRACE HORIZONTAL	1 x 6 x 64	10	SEE 9	-	-
9	SWAY BRACE VERTICAL	1 x 4 x 34 1/2	10	10	3 PER JOINT	6d*
8	TIE PIECE	2 x 4 x 107	20	SEE 7	-	-
7	SEPARATOR GATE VERTICAL	2 x 6 x 36	90	8	3 PER JOINT	10d
6	TIE PIECE	2 x 4 x 107	8	SEE 5	-	-
5	SEPARATOR GATE VERTICAL	2 x 6 x 60	30	5	3 PER JOINT	10d
4	SWAY BRACE VERTICAL	1 x 6 x 63 1/2	12	3	3 PER JOINT	6d
3	SWAY BRACE HORIZONTAL	1 x 6 x 64	12	SEE 2	-	-
2	SWAY BRACE VERTICAL	1 x 4 x 63 1/2	6	3	3 PER JOINT	6d*
1	END WALL MEMBER	2 x 6 x 72	16	CAR WALL	1 PER FOOT	10d
PIECE NO.	DESCRIPTION	SIZE	NO. PCS REQD	NAIL TO	NUMBER	SIZE
						NAILS

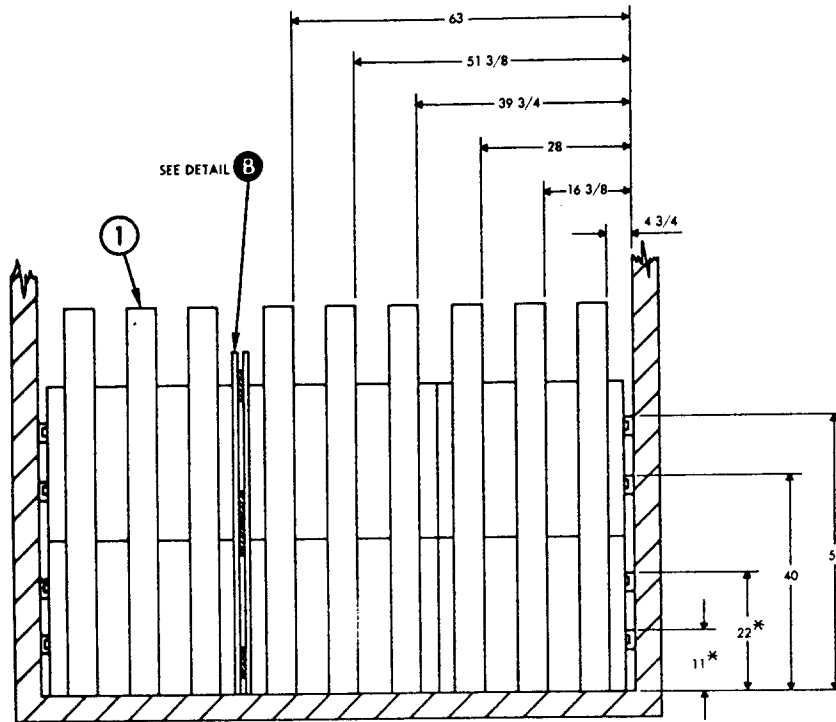
LIST OF MATERIALS AND NAILING DATA



CARLOAD DATA

NUMBER OF UNIT LOADS	33
NUMBER OF CROSSMEMBERS REQ'D	44
LOAD HEIGHT	102, 102 LBS. (EST.)
DUNNAGE WEIGHT	2,159 LBS.
CARLOAD WEIGHT	104,261 LBS. (EST.)

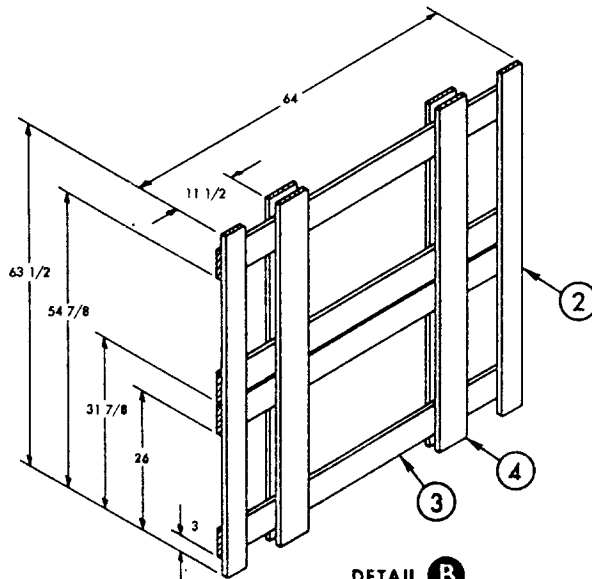
MIL-STD-1325-157 A (NAVY)



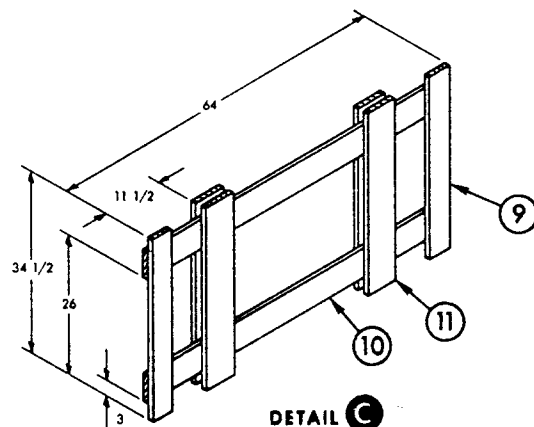
SECTION A-A

SHOWING LOCATION OF WALL MEMBERS
USED FOR CROSS MEMBERS
ALSO LOCATION OF END WALL MEMBERS

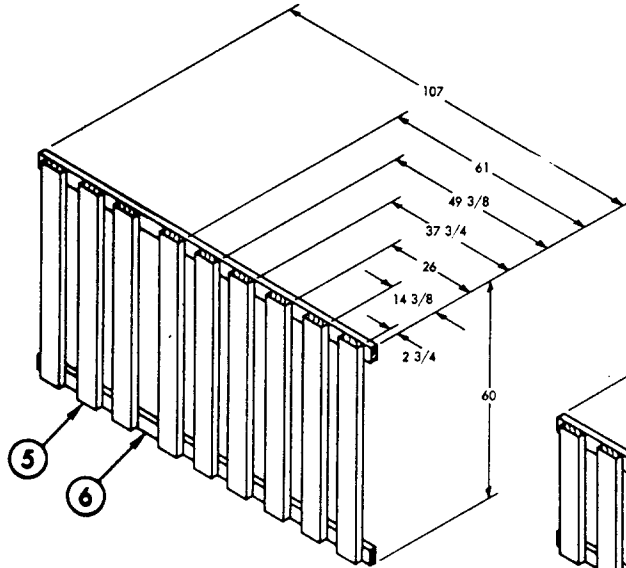
* DOORWAY MEMBER LOCATIONS



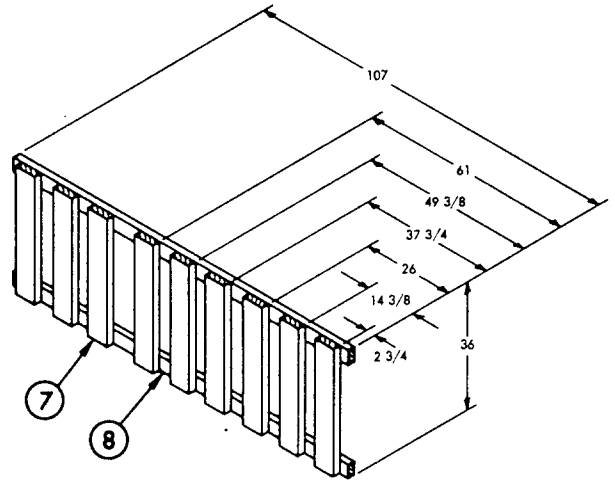
DETAIL B
SWAY BRACE FRAME
3 REQUIRED



DETAIL C
SWAY BRACE FRAME
5 REQUIRED

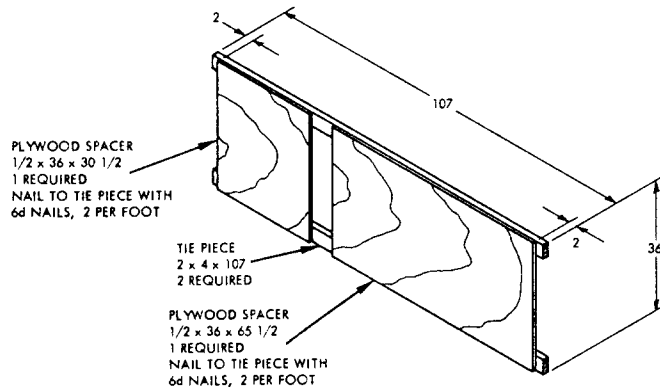


DETAIL D
SEPARATOR GATE
4 REQUIRED

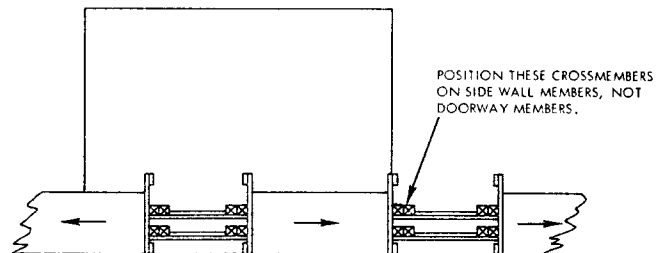


DETAIL E
SEPARATOR GATE
10 REQUIRED

SEE ALTERNATE SEPARATOR GATE, DETAIL F.



DETAIL F
ALTERNATE SEPARATOR GATE
10 REQUIRED

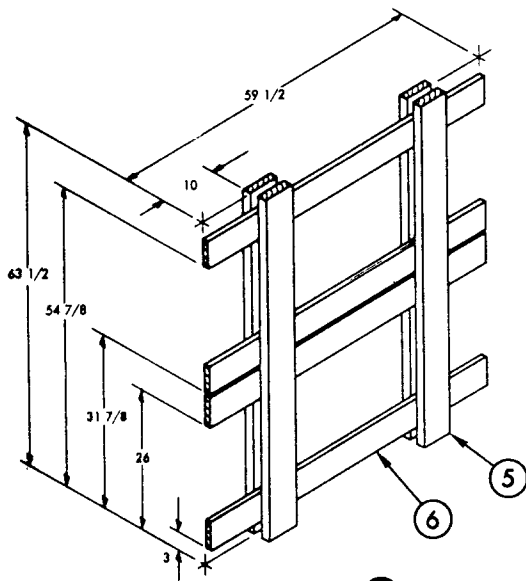


DETAIL G
ALTERNATE DOORWAY STACK LOCATION

MIL-STD-1325-157 A (NAVY)

40 FT 6 IN. BOXCAR, COMMERCIAL

1. THE CARLOAD CONSISTS OF 36 UNIT LOADS WHICH MUST BE LOADED AND DUNNAGED IN ACCORDANCE WITH THIS PROCEDURAL DRAWING.
2. WHEN LESS THAN CARLOAD (LCL) QUANTITIES ARE REQUIRED TO BE SHIPPED IN COMMERCIAL BOXCARS AND A PARTIAL LAYER RESULTS, THE PARTIAL LAYER OF LADING SHALL BE BRACED BY MEANS OF END BRACING AND/OR PARTIAL LAYER BRACING CONSTRUCTED IN ACCORDANCE WITH WR-52/100. SELECT THE TYPE OF BRACE TO COMPLY WITH THE WEIGHT OF THE UNITS TO BE RETAINED. THE CENTER GATE HEIGHT SHOULD BE ADJUSTED AS REQUIRED.
3. THE LOADS AS SHOWN ARE BASED ON CARS WHICH HAVE 6 FT WIDE DOORWAY OPENINGS AND ARE EQUIPPED WITH CONVENTIONAL SLIDING TYPE DOORS. THE DEPICTED PROCEDURES AND METHODS OF BLOCKING ARE APPLICABLE TO BOXCARS EQUIPPED WITH CONVENTIONAL SLIDING TYPE DOORS OTHER THAN 6 FT WIDE, PROVIDED DOORWAY PROTECTION WHEN REQUIRED IS INSTALLED IN ACCORDANCE WITH MIL-STD-1325 (NAVY).
4. WHEN LOADING BOXCARS WITH AN INSIDE WIDTH GREATER THAN 9 FT. 2 IN. USE ALTERNATE SWAY BRACE FRAMES SHOWN ON PAGE 38 IN PLACE OF DETAIL A.

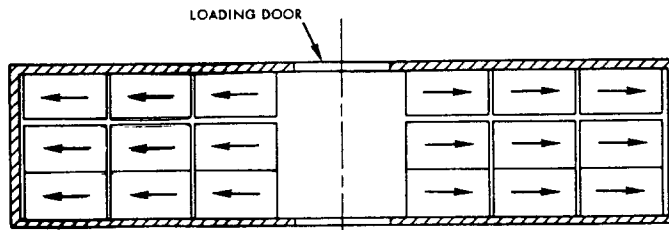


DETAIL A
SWAY BRACE FRAME
6 REQUIRED

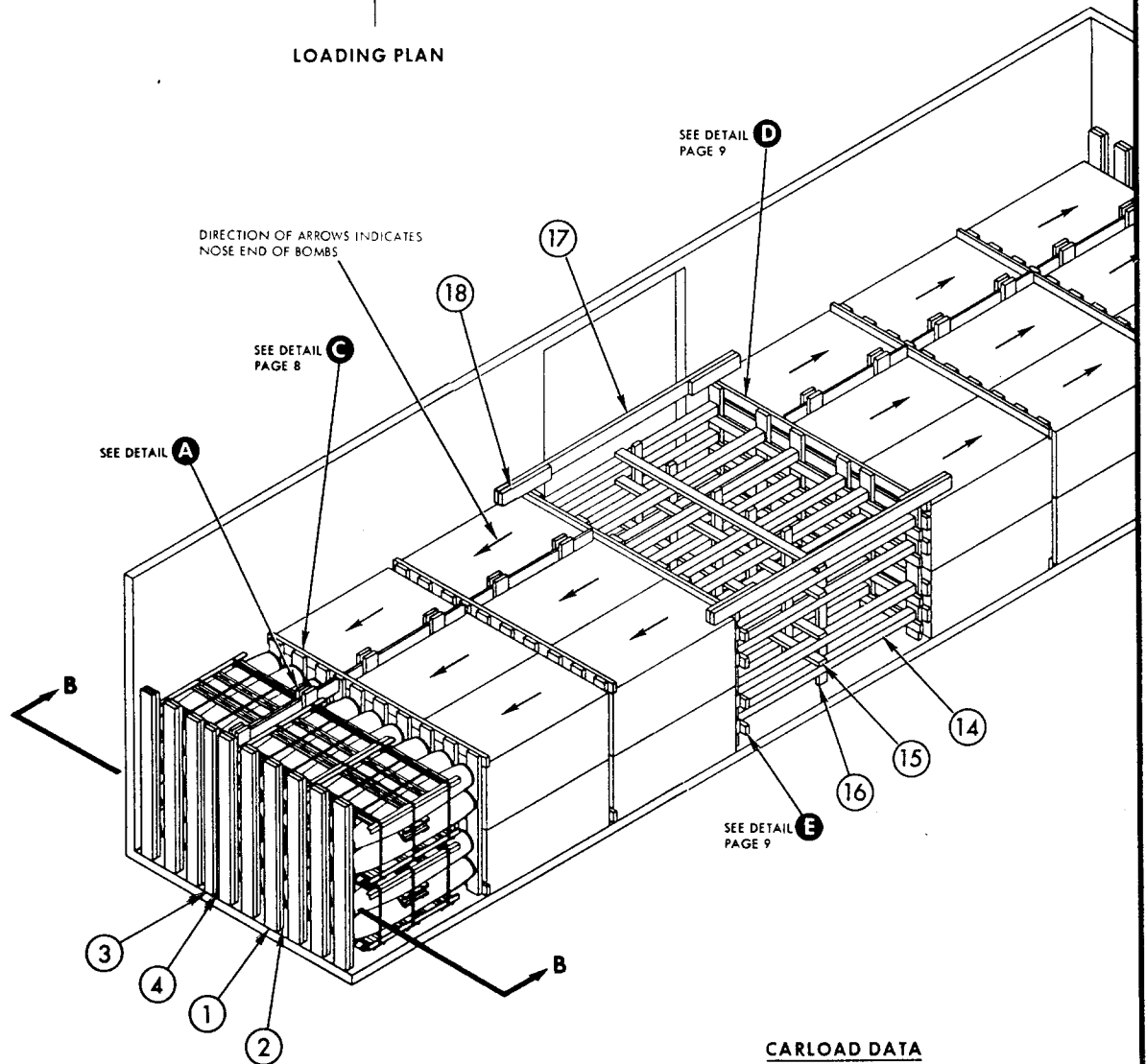
* 2 x 6 STRUTS DOUBLED AND LAMINATED WITH 10d NAILS
MAY BE SUBSTITUTED IN PLACE OF 4 x 4'S.

18	HOLD DOWN CLEAT	2 x 6 x 24	4	17	5	10d
17	GATE HOLD DOWN	2 x 6 x 10 FT.	2	CAR WALL	5 EACH END	10d
16	VERTICAL TIE BAR	2 x 4 x 10	5	14	2 PER JOINT	16d
15	HORIZONTAL TIE BAR	2 x 4 x CAR WIDTH-1	4	14	2 PER JOINT	16d
14	STRUT	4 x 4 x WEDGE FIT*	24	11	2 PER JOINT	16d
13	TOP HORIZONTAL	2 x 4 x CAR WIDTH-1	2	11	3 PER JOINT	10d
12	CENTER GATE STRUT CLEAT	2 x 4 x CAR WIDTH-1	8	11	3 PER JOINT	10d
11	CENTER GATE VERTICAL	2 x 6 x 60	12	SEE 10	-	-
10	CENTER GATE HORIZONTAL	2 x 6 x CAR WIDTH-1	8	11	3 PER JOINT	10d
9	SWAY BRACE STOP	2 x 4 x 10	4	SEE 5	-	-
8	SEPARATOR GATE HORIZONTAL	2 x 4 x CAR WIDTH-1	4	7, 9	3 PER JOINT	10d
7	SEPARATOR GATE VERTICAL	2 x 4 x 40	36	SEE 8	-	-
6	SWAY BRACE HORIZONTAL	1 x 6 x 59 1/2	24	SEE 5	-	-
5	SWAY BRACE VERTICAL	2 x 6 x 63 1/2	24	6	3 PER JOINT	10d
4	END WALL MEMBER	2 x 4 x 72	2	3	1 PER FOOT	10d
3	END WALL MEMBER	2 x 4 x 72	2	CAR WALL	1 PER FOOT	10d
2	END WALL MEMBER	2 x 6 x 72	18	1	1 PER FOOT	10d
1	END WALL MEMBER	2 x 6 x 72	18	CAR WALL	1 PER FOOT	10d
PIECE NO.	DESCRIPTION	SIZE	NO. PCS REQD	NAIL TO	NUMBER	SIZE
					NAILS	
LIST OF MATERIALS AND NAILING DATA						

MIL-STD-1325-157 A (NAVY)



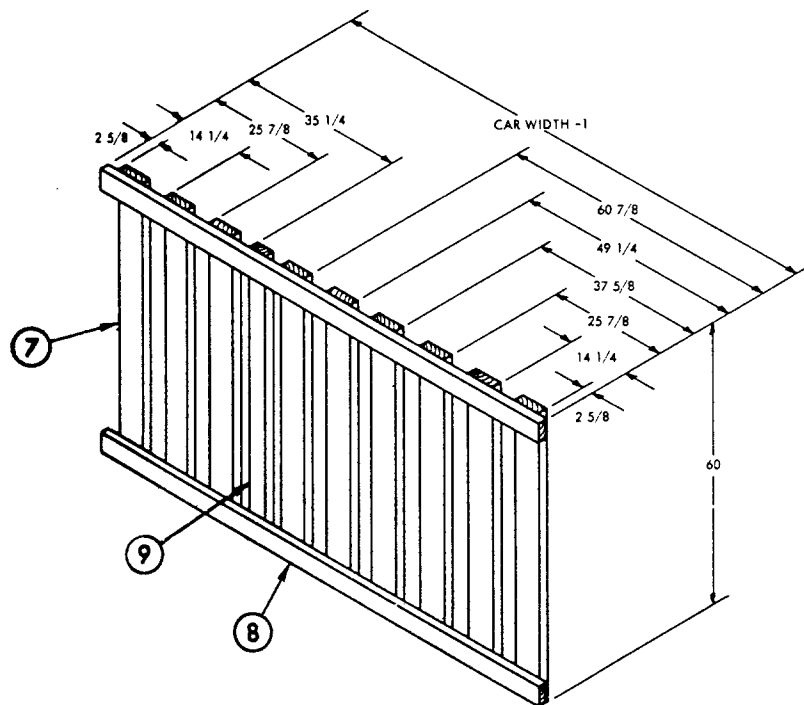
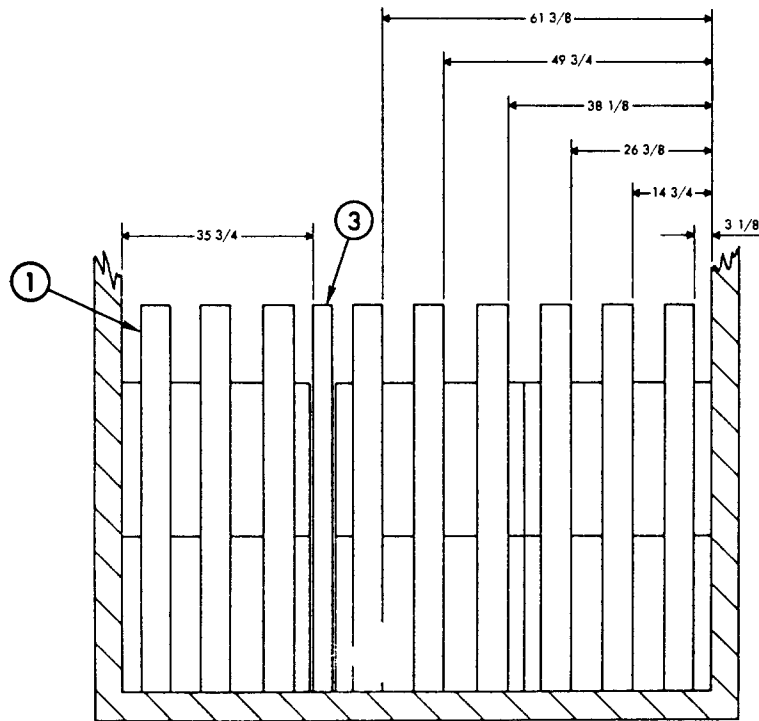
LOADING PLAN



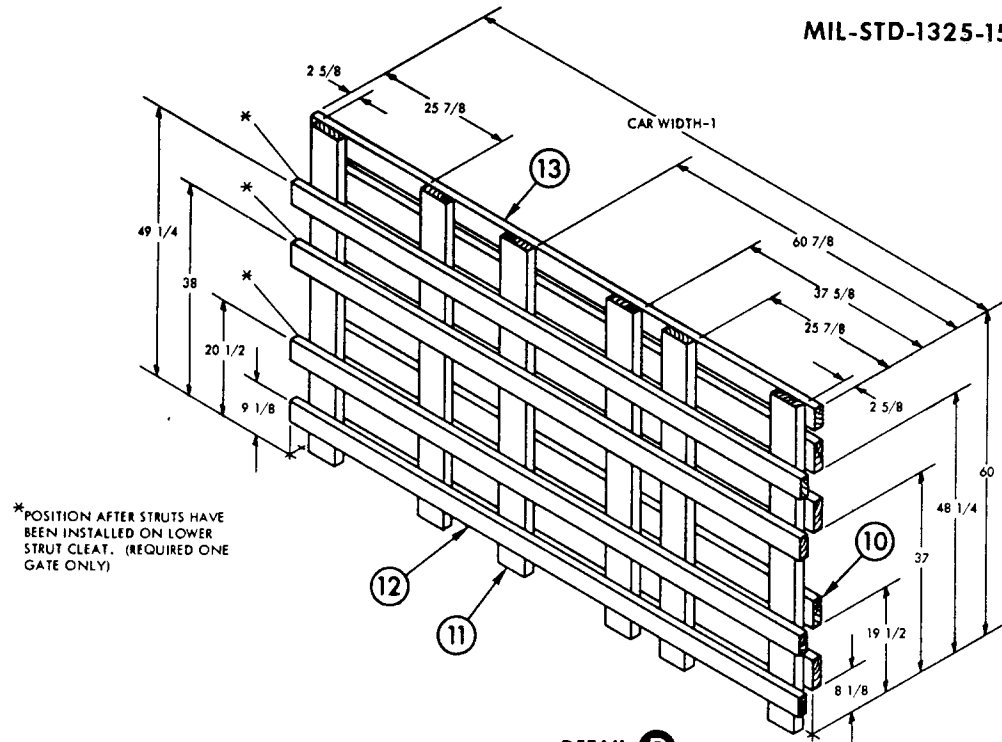
CARLOAD DATA

NUMBER OF UNIT LOADS	36
LOAD WEIGHT	111,364 LBS. (EST.)
DUNNAGE WEIGHT	2,945 LBS.
CARLOAD WEIGHT	114,329 LBS. (EST.)

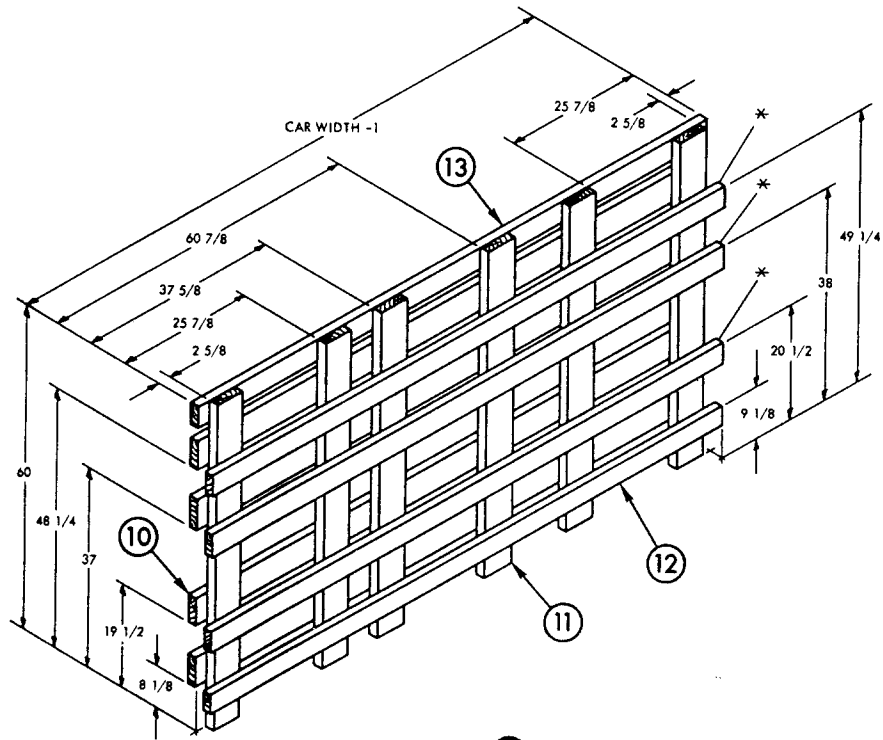
MIL-STD-1325-157 A (NAVY)



MIL-STD-1325-157 A (NAVY)



DETAIL D
CENTER GATE
1 REQUIRED

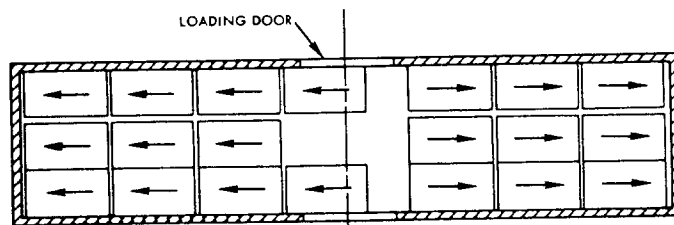


DETAIL E
CENTER GATE
1 REQUIRED

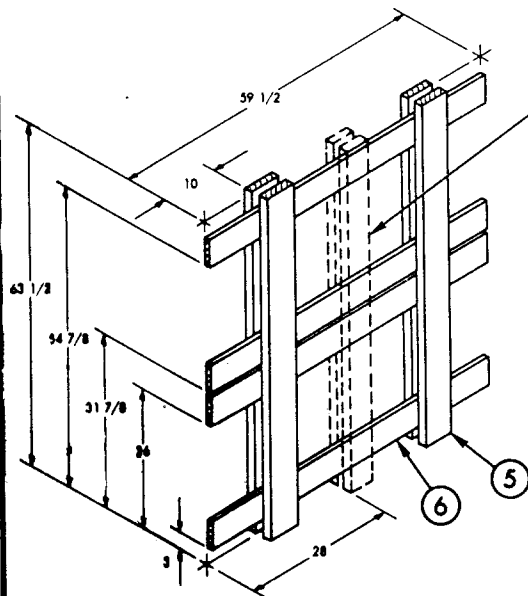
MIL-STD-1325-157 A (NAVY)

40 FT 6 IN. BOXCAR, COMMERCIAL (ALTERNATE METHOD)

1. THE CARLOAD CONSISTS OF 40 UNIT LOADS WHICH MUST BE LOADED AND DUNNAGED IN ACCORDANCE WITH THIS PROCEDURAL DRAWING.
2. WHEN LESS THAN CARLOAD (LCL) QUANTITIES ARE REQUIRED TO BE SHIPPED IN COMMERCIAL BOXCARS AND A PARTIAL LAYER RESULTS, THE PARTIAL LAYER OF LADING SHALL BE BRACED BY MEANS OF END BRACING AND/OR PARTIAL LAYER BRACING CONSTRUCTED IN ACCORDANCE WITH WR-52/100. SELECT THE TYPE OF BRACE TO COMPLY WITH THE WEIGHT OF THE UNITS TO BE RETAINED. THE CENTER GATE HEIGHT SHOULD BE ADJUSTED AS REQUIRED.
3. THE LOADS AS SHOWN ARE BASED ON CARS WHICH HAVE 6 FT. WIDE DOORWAY OPENINGS AND ARE EQUIPPED WITH CONVENTIONAL SLIDING TYPE DOORS. THE DEPICTED PROCEDURES AND METHODS OF BLOCKING ARE APPLICABLE TO BOXCARS EQUIPPED WITH CONVENTIONAL SLIDING TYPE DOORS OTHER THAN 6 FT. WIDE.
4. WHEN LOADING BOXCARS WITH AN INSIDE WIDTH GREATER THAN 9 FT. 2 IN. USE ALTERNATE SWAY BRACE FRAMES SHOWN ON PAGE 38 IN PLACE OF DETAIL A.



LOADING PLAN



DETAIL A
SWAY BRACE FRAME
7 REQUIRED

* 2 x 6 STRUTS DOUBLED AND LAMINATED WITH 10d NAILS MAY BE SUBSTITUTED IN PLACE OF 4 x 4'S.

NOTE:

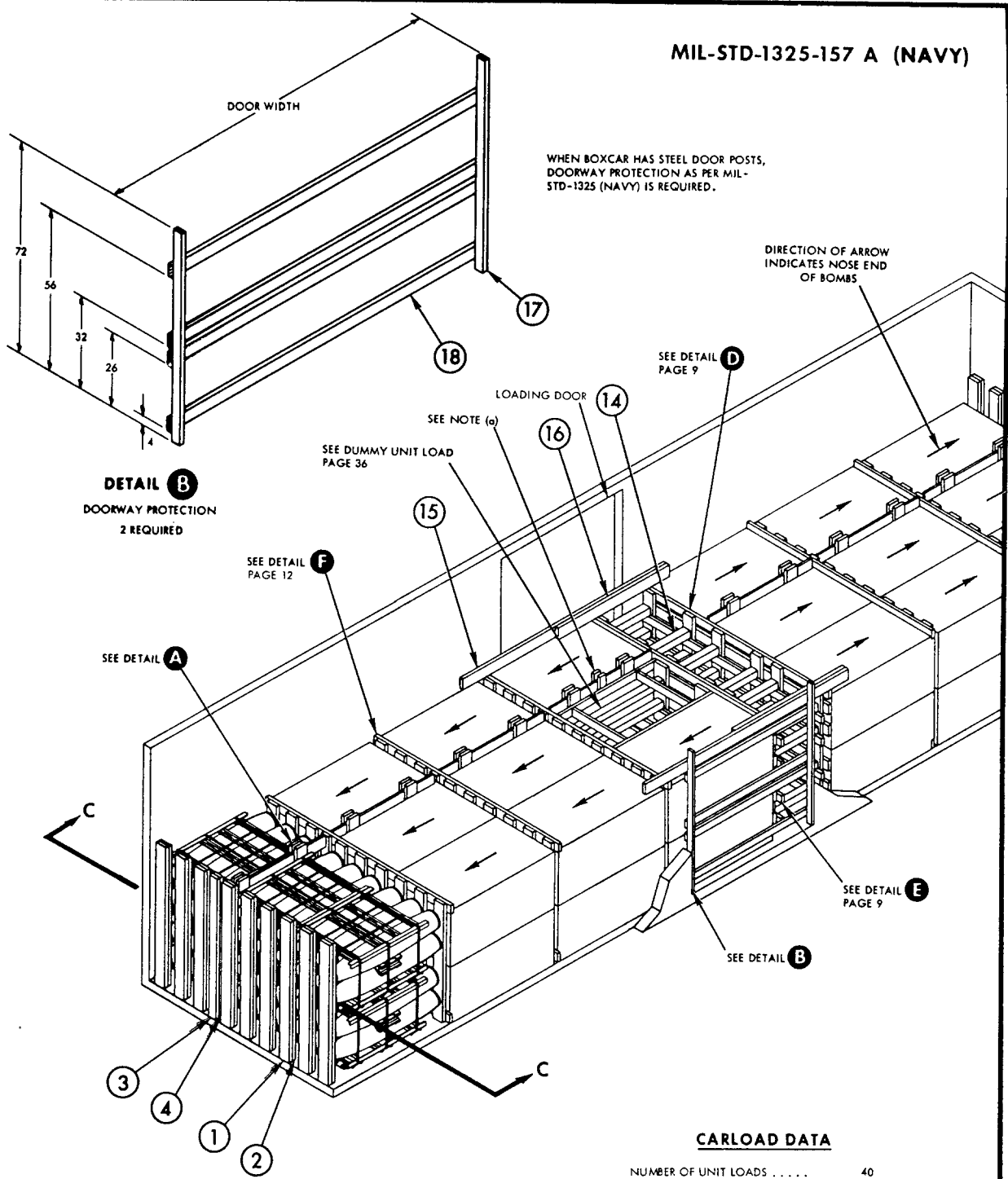
- (a) WHEN POSITIONING DUMMY LOAD NEXT TO SWAY BRACE FRAME, 2 x 4 SPACERS MUST BE INSTALLED ON EACH SIDE OF FRAME. THIS IS NOT REQUIRED WHEN 3 DUMMY LOADS ARE LOADED ACROSS THE CAR.

SPACER
2 x 4 x 63 1/2
SEE NOTE (a)

18	HORIZONTAL DOORWAY MEMBER	2 x 4 x DOOR WIDTH	2	17	2 PER JOINT	10d
17	VERTICAL DOORWAY MEMBER	2 x 3 x 72	4	DOOR POST	2 PER FOOT	20d
16	HOLD DOWN CLEAT	2 x 4 x 66	2	15	7 PER FOOT	10d
15	GATE HOLD DOWN	2 x 6 x 10 FT.	2	CAR WALL	5 EACH END	10d
14	STRUT	4 x 4 x WEDGE FIT*	24	11	2 PER JOINT	16d
13	TOP HORIZONTAL	2 x 4 x CAR WIDTH-1	2	11	3 PER JOINT	10d
12	CENTER GATE STRUT CLEAT	2 x 4 x CAR WIDTH-1	8	11	3 PER JOINT	10d
11	CENTER GATE VERTICAL	2 x 6 x 60	12	SEE 10	-	-
10	CENTER GATE HORIZONTAL	2 x 6 x CAR WIDTH-1	8	11	3 PER JOINT	10d
9	SWAY BRACE STOP	2 x 4 x 60	5	SEE 8	-	-
8	SEPARATOR GATE HORIZONTAL	2 x 4 x CAR WIDTH-1	10	7, 9	3 PER JOINT	10d
7	SEPARATOR GATE VERTICAL	2 x 6 x 60	45	SEE 8	-	-
6	SWAY BRACE HORIZONTAL	1 x 6 x 59 1/2	28	SEE 5	-	-
5	SWAY BRACE VERTICAL	2 x 6 x 63 1/2	28	6	3 PER JOINT	10d
4	END WALL MEMBER	2 x 4 x 72	2	3	1 PER FOOT	10d
3	END WALL MEMBER	2 x 4 x 72	2	CAR WALL	1 PER FOOT	10d
2	END WALL MEMBER	2 x 6 x 72	18	1	1 PER FOOT	10d
1	END WALL MEMBER	2 x 6 x 72	18	CAR WALL	1 PER FOOT	10d
PIECE NO.	DESCRIPTION	SIZE	NO. PCS REQD	NAIL TO	NUMBER	SIZE
					NAILS	

LIST OF MATERIALS AND NAILING DATA

MIL-STD-1325-157 A (NAVY)

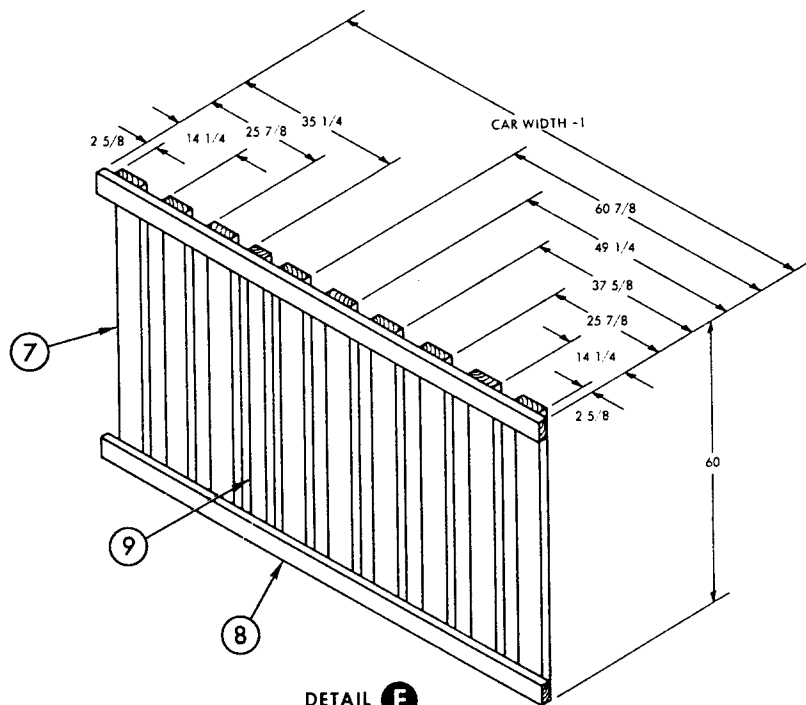
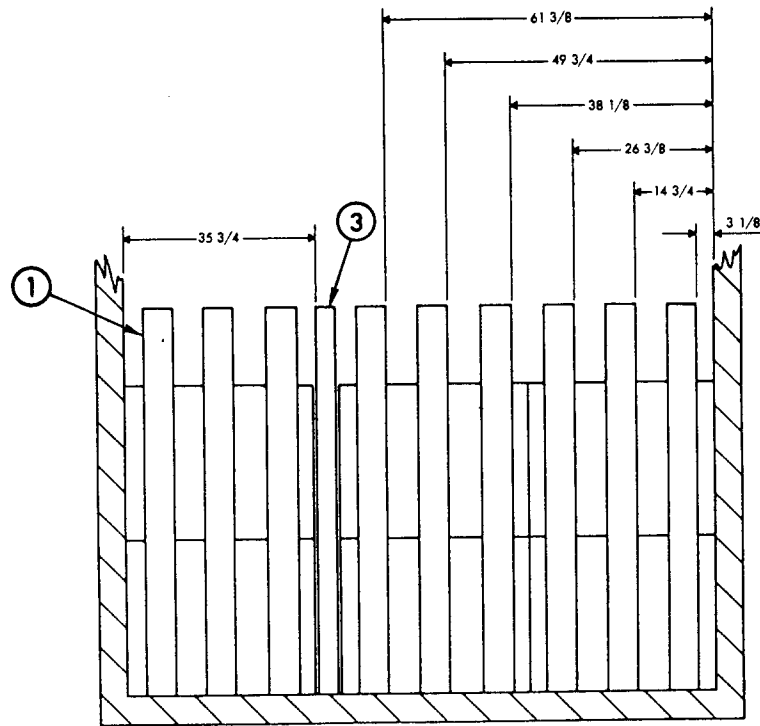


DETAIL B
DOORWAY PROTECTION
2 REQUIRED

CARLOAD DATA

NUMBER OF UNIT LOADS	40
LOAD WEIGHT	123,760 LBS. (EST.)
DUNNAGE WEIGHT	2,810 LBS.
CARLOAD WEIGHT	126,570 LBS. (EST.)

MIL-STD-1325-157 A (NAVY)

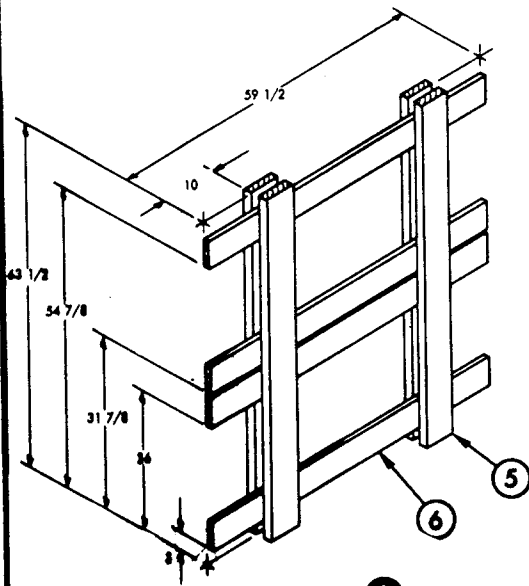


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MIL-STD-1325-157 A (NAVY)

50 FT 6 IN. BOXCAR, COMMERCIAL

1. THE CARLOAD CONSISTS OF 48 UNIT LOADS WHICH MUST BE LOADED AND DUNNAGED IN ACCORDANCE WITH THIS PROCEDURAL DRAWING.
2. WHEN LESS THAN CARLOAD (LCL) QUANTITIES ARE REQUIRED TO BE SHIPPED IN COMMERCIAL BOXCARS AND A PARTIAL LAYER RESULTS, THE PARTIAL LAYER OF LADING SHALL BE BRACED BY MEANS OF END BRACING AND OR PARTIAL LAYER BRACING CONSTRUCTED IN ACCORDANCE WITH WR-52/100. SELECT THE TYPE OF BRACE TO COMPLY WITH THE WEIGHT OF THE UNITS TO BE RETAINED. THE CENTER GATE HEIGHT SHOULD BE ADJUSTED AS REQUIRED.
3. THE LOADS AS SHOWN ARE BASED ON CARS WHICH HAVE 10 FT. WIDE DOORWAY OPENINGS AND ARE EQUIPPED WITH CONVENTIONAL SLIDING TYPE DOORS. THE DEPICTED PROCEDURES AND METHODS OF BLOCKING ARE APPLICABLE TO BOXCARS EQUIPPED WITH CONVENTIONAL SLIDING TYPE DOORS OTHER THAN 10 FT. WIDE PROVIDING THE LENGTH OF PIECE 17 IS ADJUSTED AS REQUIRED TO SUIT THE PARTICULAR DOORWAY OPENING.
4. THE DEPICTED PROCEDURES AND METHODS OF BLOCKING ARE ALSO APPLICABLE TO BOXCARS EQUIPPED WITH PLUG TYPE DOORS PROVIDING THE LENGTH OF PIECE 17 IS ADJUSTED AS REQUIRED TO SUIT THE PARTICULAR DOORWAY OPENING. DUNNAGE MATERIAL MUST NOT BE NAILED TO ANY PLUG DOOR, WHETHER MAIN OR AUXILIARY, EXCEPT WHEN THE CAR HAS A COMBINATION OF A CONVENTIONAL SLIDING TYPE DOOR AND A PLUG TYPE DOOR, AND AN ADEQUATE NAILING STRIP IS PROVIDED ON THE PLUG TYPE DOOR. IF LUMBER OF SUFFICIENT LENGTH TO SPAN PLUG DOORS IS NOT AVAILABLE, RANDOM LENGTH MATERIAL, DOUBLED AND SPLICED, BUT WITH JOINTS OF SPLICES OFFSET, MAY BE USED. STACKS WITH MORE THAN HALF OF THE UNIT LOAD IN THE DOORWAY AREA MUST BE UNITIZED WITH TWO LATERALLY APPLIED 1 1/4" STEEL STRAPS PER STACK, EACH TENSIONED AND SEALED WITH TWO DOUBLE CRIMPED SEALS. DOORWAY PROTECTION IS NOT REQUIRED WHEN PLUG DOOR EQUIPPED BOXCARS ARE USED, EXCEPT WHEN CAR HAS A COMBINATION OF PLUG DOOR AND CONVENTIONAL SLIDING DOOR. THEN DOORWAY PROTECTION IS REQUIRED FOR THE CONVENTIONAL DOOR. SECURELY CLOSE DOORS AND WIRE TOGETHER WITH A STRONG FLEXIBLE STEEL WIRE INSERTED THROUGH THE HOLES IN THE DOOR LATCH ASSEMBLY ONE OR MORE TIMES AND THE WIRE ENDS TWISTED TOGETHER.
5. WHEN LOADING BOXCARS WITH AN INSIDE WIDTH GREATER THAN 9 FT. 2 IN. USE ALTERNATE SWAY BRACE FRAMES SHOWN ON PAGE 38 IN PLACE OF DETAIL A.



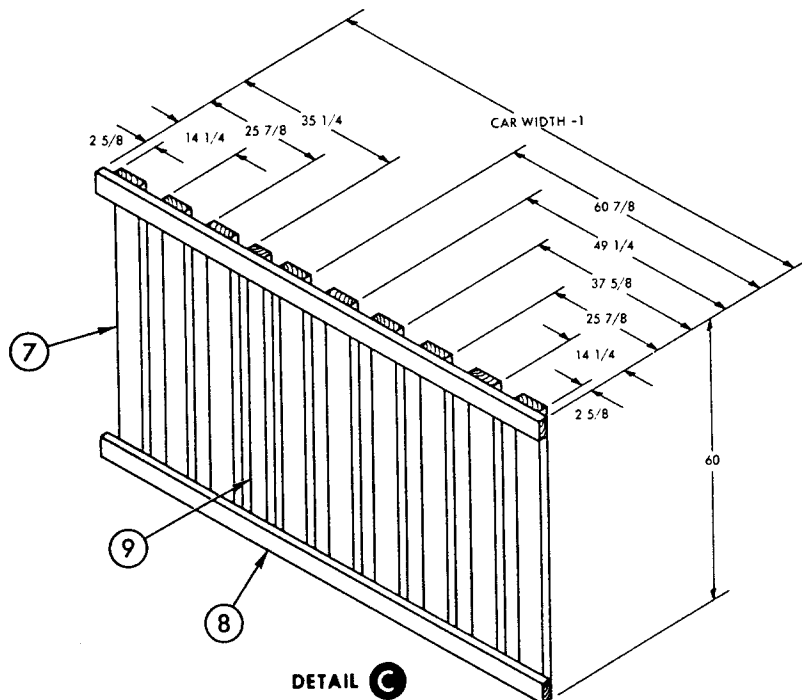
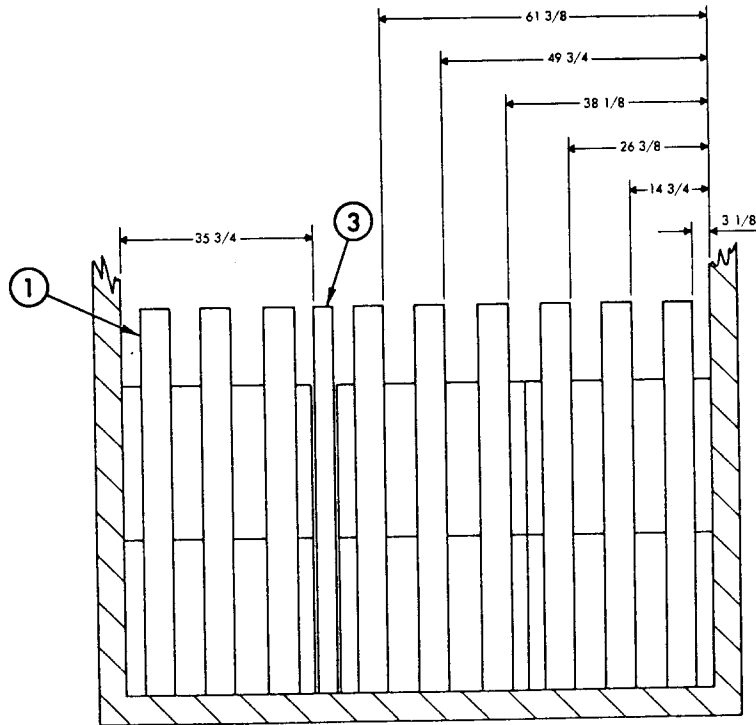
DETAIL A
SWAY BRACE FRAME
8 REQUIRED

* 2 X 6 STRUTS DOUBLED AND LAMINATED WITH 10d NAILS MAY BE SUBSTITUTED IN PLACE OF 4 X 4'S.

PIECE NO.	DESCRIPTION	SIZE	NO. PCS REQD	NAIL TO	NUMBER	SIZE
19	CENTER GATE SWAY BRACE	2 x 6 x 10 FT.	2	13	3 PER JOINT	16d
18	HOLD DOWN CLEAT	2 x 6 x 24	4	17	5	10d
17	GATE HOLD DOWN	2 x 6 x 14 FT.	2	CAR WALL	5 EACH END	10d
16	VERTICAL TIE BAR	2 x 4 x 60	6	14	2 PER JOINT	16d
15	HORIZONTAL TIE BAR	2 x 4 x CAR WIDTH-1	4	14	2 PER JOINT	16d
14	STRUT	4 x 4 x WEDGE FIT *	24	11	2 PER JOINT	16d
13	TOP HORIZONTAL	2 x 4 x CAR WIDTH-1	2	11	3 PER JOINT	10d
12	CENTER GATE STRUT CLEAT	2 x 4 x CAR WIDTH-1	8	11	3 PER JOINT	10d
11	CENTER GATE VERTICAL	2 x 6 x 50	12	SEE 10	-	-
10	CENTER GATE HORIZONTAL	2 x 6 x CAR WIDTH-1	8	11	3 PER JOINT	10d
9	SWAY BRACE STOP	2 x 4 x 60	6	SEE 8	-	-
8	SEPARATOR GATE HORIZONTAL	2 x 4 x CAR WIDTH-1	12	7, 9	3 PER JOINT	10d
7	SEPARATOR GATE VERTICAL	2 x 6 x 60	54	SEE 8	-	-
6	SWAY BRACE HORIZONTAL	1 x 6 x 59 1/2	32	SEE 5	-	-
5	SWAY BRACE VERTICAL	2 x 6 x 63 1/2	32	6	3 PER JOINT	10d
4	END WALL MEMBER	2 x 4 x 72	2	3	1 PER FOOT	10d
3	END WALL MEMBER	2 x 4 x 72	2	CAR WALL	1 PER FOOT	10d
2	END WALL MEMBER	2 x 6 x 72	18	1	1 PER FOOT	10d
1	END WALL MEMBER	2 x 6 x 72	18	CAR WALL	1 PER FOOT	10d

LIST OF MATERIALS AND NAILING DATA

MIL-STD-1325-157 A (NAVY)



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MIL-STD-1325-157 A (NAVY)

50 FT 6 IN. BOXCAR, COMMERCIAL (ALTERNATE METHOD)

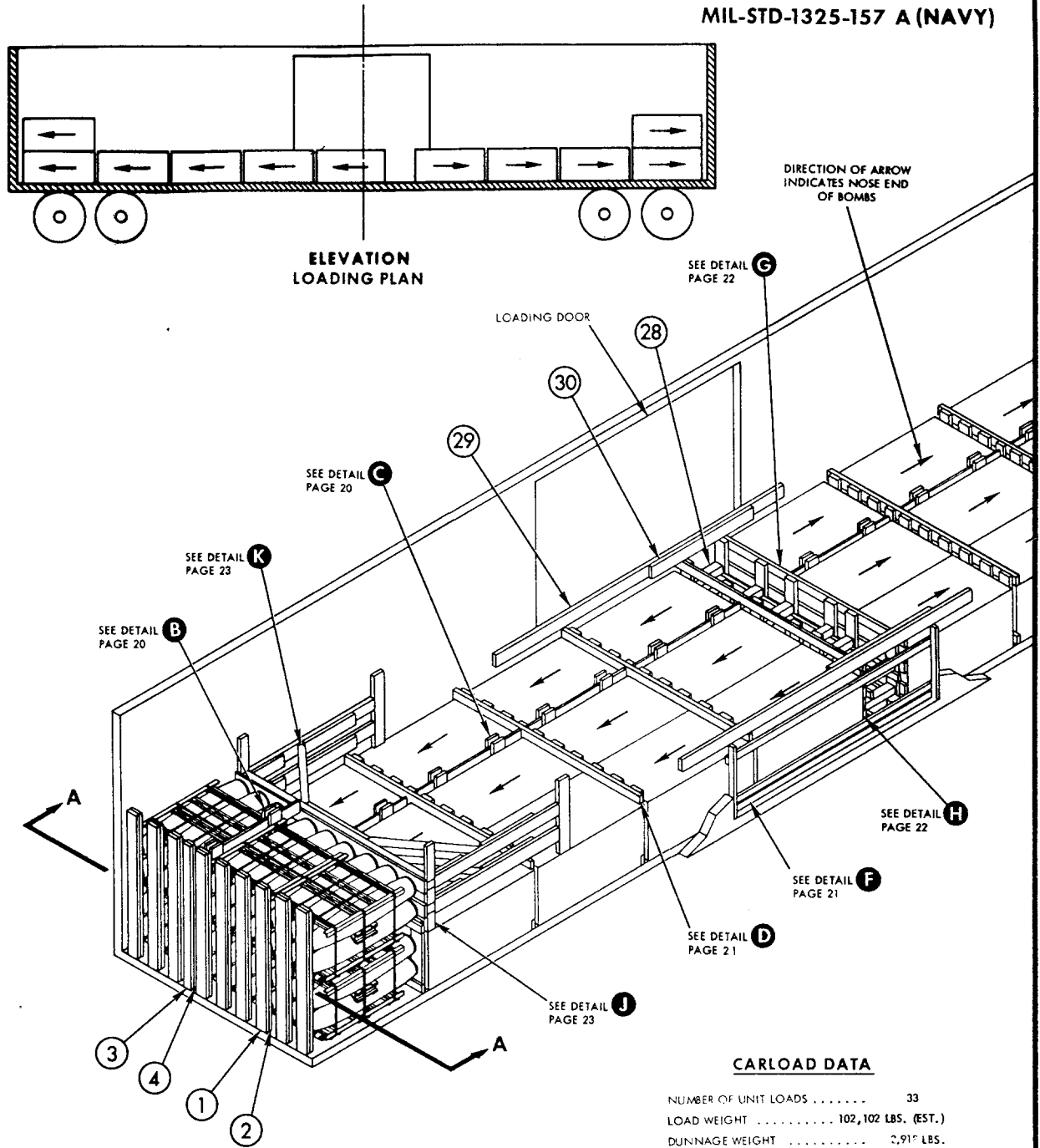
1. THE CARLOAD CONSISTS OF EITHER 33 UNIT LOADS WHICH MUST BE LOADED AND DUNNAGED IN ACCORDANCE WITH THIS PROCEDURAL DRAWING OR 27 UNIT LOADS COMPRISING THE FIRST LAYER ONLY OF THIS PROCEDURAL DRAWING.
2. WHEN LESS THAN CARLOAD (LCL) QUANTITIES ARE REQUIRED TO BE SHIPPED IN COMMERCIAL BOXCARS AND A PARTIAL LAYER RESULTS, THE PARTIAL LAYER OF LADING SHALL BE BRACED BY MEANS OF END BRACING AND OR PARTIAL LAYER BRACING CONSTRUCTED IN ACCORDANCE WITH WR-52/100. SELECT THE TYPE OF BRACE TO COMPLY WITH THE WEIGHT OF THE UNITS TO BE RETAINED.
3. THE LOADS AS SHOWN ARE BASED ON CARS WHICH HAVE 10 FT. WIDE DOORWAY OPENINGS AND ARE EQUIPPED WITH CONVENTIONAL SLIDING TYPE DOORS. THE DEPICTED PROCEDURES AND METHODS OF BLOCKING ARE APPLICABLE TO BOXCARS EQUIPPED WITH CONVENTIONAL SLIDING TYPE DOORS OTHER THAN 10 FT. WIDE PROVIDING THE LENGTH OF PIECE 29 IS ADJUSTED AS REQUIRED TO SUIT THE PARTICULAR DOORWAY OPENING.
4. THE DEPICTED PROCEDURES AND METHODS OF BLOCKING ARE ALSO APPLICABLE TO BOXCARS EQUIPPED WITH PLUG TYPE DOORS PROVIDING THE LENGTH OF PIECE 29 IS ADJUSTED AS REQUIRED TO SUIT THE PARTICULAR DOORWAY OPENING. DUNNAGE MATERIAL MUST NOT BE NAILED TO ANY PLUG DOOR, WHETHER MAIN OR AUXILIARY, EXCEPT WHEN THE CAR HAS A COMBINATION OF A CONVENTIONAL SLIDING TYPE DOOR AND A PLUG TYPE DOOR, AND AN ADEQUATE NAILING STRIP IS PROVIDED ON THE PLUG TYPE DOOR. IF LUMBER OF SUFFICIENT LENGTH TO SPAN PLUG DOORS IS NOT AVAILABLE, RANDOM LENGTH MATERIAL, DOUBLED AND SPLICED, BUT WITH JOINTS OF SPLICES OFFSET, MAY BE USED. STACKS WITH MORE THAN HALF OF THE UNIT LOAD IN THE DOORWAY AREA MUST BE UNITIZED WITH TWO LATERALLY APPLIED 1 1/4" STEEL STRAPS PER STACK, EACH TENSIONED AND SEALED WITH TWO DOUBLE CRIMPED SEALS AND DOORWAY PROTECTION, PIECES 31 AND 32, IS NOT REQUIRED WHEN PLUG DOOR EQUIPPED BOXCARS ARE USED, EXCEPT WHEN CAR HAS A COMBINATION OF PLUG DOOR AND CONVENTIONAL SLIDING DOOR. THEN DOORWAY PROTECTION IS REQUIRED FOR THE CONVENTIONAL DOOR. SECURELY CLOSE DOORS AND WIRE TOGETHER WITH A STRONG FLEXIBLE STEEL WIRE INSERTED THROUGH THE HOLES IN THE DOOR LATCH ASSEMBLY ONE OR MORE TIMES AND THE WIRE ENDS TWISTED TOGETHER.
5. WHEN LOADING BOXCARS WITH AN INSIDE WIDTH GREATER THAN 9 FT. 2 IN. USE ALTERNATE SWAY BRACE SHOWN ON PAGE 38 IN PLACE OF DETAIL B AND C.

* 2 X 6 STRUTS DOUBLED AND LAMINATED WITH 10d NAILS MAY BE SUBSTITUTED IN PLACE OF 4 X 4'S.

32	HORIZONTAL DOORWAY MEMBER	2 x 4 x DOOR WIDTH	6	31	2 PER JOINT	10d	16	CENTER GATE VERTICAL	2 x 6 x 36	12	SEE 15	-	-
31	VERTICAL DOORWAY MEMBER	2 x 3 x 36	4	DOOR POST	2 PER FOOT	20d	15	CENTER GATE HORIZONTAL	2 x 6 x CAR WIDTH-1	4	16	3 PER JOINT	10d
30	HOLD DOWN CLEAT	2 x 6 x 60	2	29	2 PER FOOT	10d	14	CROSS BRACE	4 x 4 x CAR WIDTH	4	SEE 13	-	-
29	GATE HOLD DOWN	2 x 6 x 14 FT.	2	CAR WALL	5 EACH END	10d	13	CROSS BRACE STIFFENER	2 x 6 x CAR WIDTH	4	14	2 PER FOOT	16d
28	STRUT	4 x 4 x WEDGE FIT *	12	16	2 PER JOINT	16d	12	LOWER WALL CLEAT	2 x 4 x 9	4	CAR WALL	3	10d
27	HORIZONTAL BACK-UP CLEAT	2 x 6 x 30	8	24	14	16d	11	SWAY BRACE HORIZONTAL	1 x 6 x 59 1/2	14	SEE 10	-	-
26	DIAGONAL BRACE	4 x 4 x 50	8	14,24	1 EACH END	60d	10	SWAY BRACE VERTICAL	2 x 6 x 34 1/2	28	11	3 PER JOINT	10d
25	HORIZONTAL POCKET CLEAT	2 x 6 x 18	8	24	7	16d	9	SWAY BRACE STOP	2 x 4 x 34	7	SEE 8	-	-
24	HORIZONTAL WALL CLEAT	2 x 6 x 72	8	CAR WALL	16	10d	8	SEPARATOR GATE HORIZONTAL	2 x 4 x CAR WIDTH-1	14	7, 9	3 PER JOINT	10d
23	CENTER CLEAT	2 x 4 x 36	4	14	7	16d	7	SEPARATOR GATE VERTICAL	2 x 6 x 34	63	SEE 8	-	-
22	UPPER WALL CLEAT	2 x 4 x 18	4	CAR WALL	4	10d	6	SWAY BRACE HORIZONTAL	1 x 6 x 59 1/2	8	SEE 5	-	-
21	VERTICAL BACK-UP CLEAT	2 x 6 x 36	4	CAR WALL	8	10d	5	SWAY BRACE VERTICAL	2 x 6 x 63 1/2	8	6	3 PER JOINT	10d
20	INTERMEDIATE WALL CLEAT	2 x 4 x 7 3/4	4	CAR WALL	3	10d	4	END WALL MEMBER	2 x 4 x 72	2	3	1 PER FOOT	10d
19	SWAY BRACE STOP	2 x 6 x 22	2	16	3 PER JOINT	10d	3	END WALL MEMBER	2 x 4 x 72	2	CAR WALL	1 PER FOOT	10d
18	TOP HORIZONTAL	2 x 4 x CAR WIDTH-1	2	16	3 PER JOINT	10d	2	END WALL MEMBER	2 x 6 x 72	18	1	1 PER FOOT	10d
17	CENTER GATE STRUT CLEAT	2 x 4 x CAR WIDTH-1	4	16	3 PER JOINT	10d	1	END WALL MEMBER	2 x 6 x 72	18	CAR WALL	1 PER FOOT	10d

PIECE NO.	DESCRIPTION	SIZE	NO. PCS REQD	NAIL TO	NUMBER NAILS	SIZE	PIECE NO.	DESCRIPTION	SIZE	NO. PCS REQD	NAIL TO	NUMBER NAILS	SIZE
LIST OF MATERIALS AND NAILING DATA							LIST OF MATERIALS AND NAILING DATA						

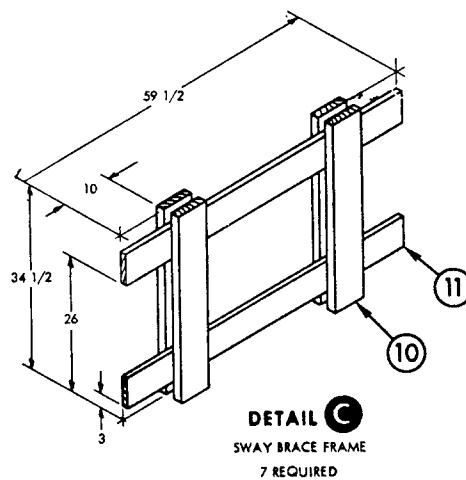
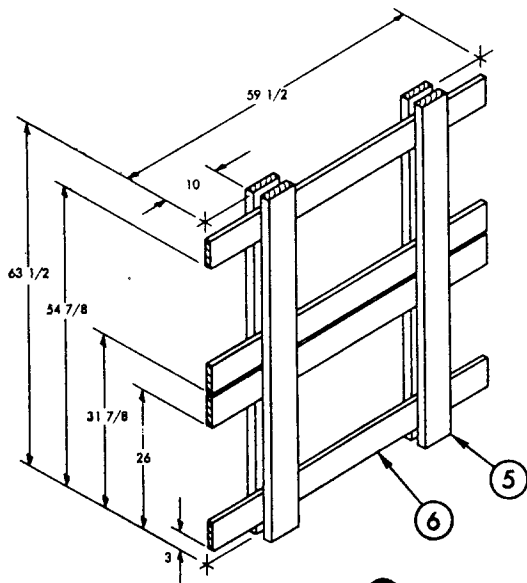
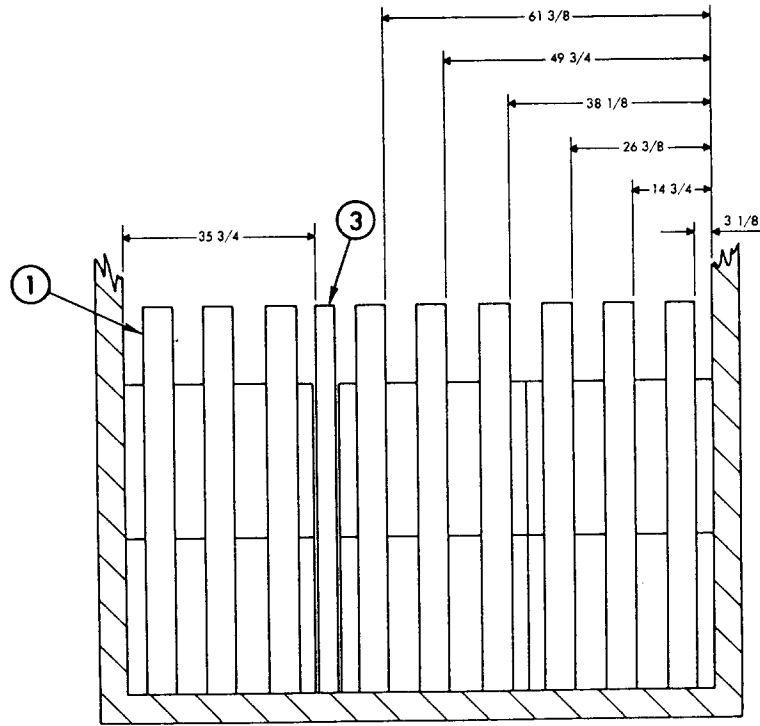
MIL-STD-1325-157 A (NAVY)



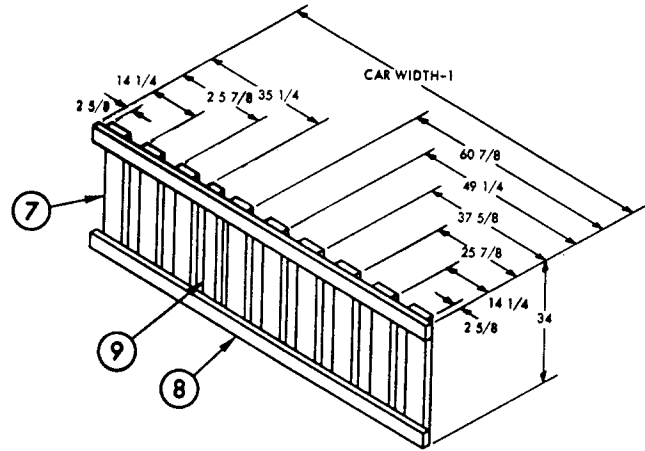
CARLOAD DATA

NUMBER OF UNIT LOADS	33
LOAD WEIGHT	102,102 LBS. (EST.)
DUNNAGE WEIGHT	2,918 LBS.
CARLOAD WEIGHT	105,020 LBS. (EST.)

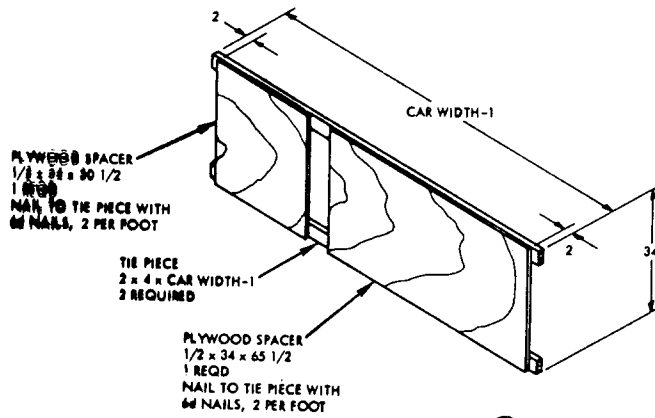
MIL-STD-1325-157 A (NAVY)



MIL-STD-1325-157 A (NAVY)

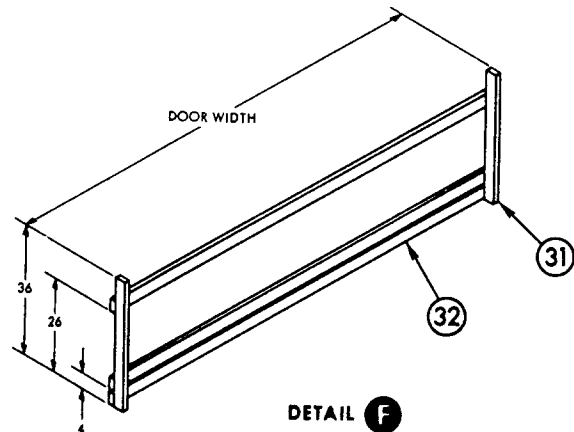


DETAIL D
SEPARATOR GATE
7 REQUIRED



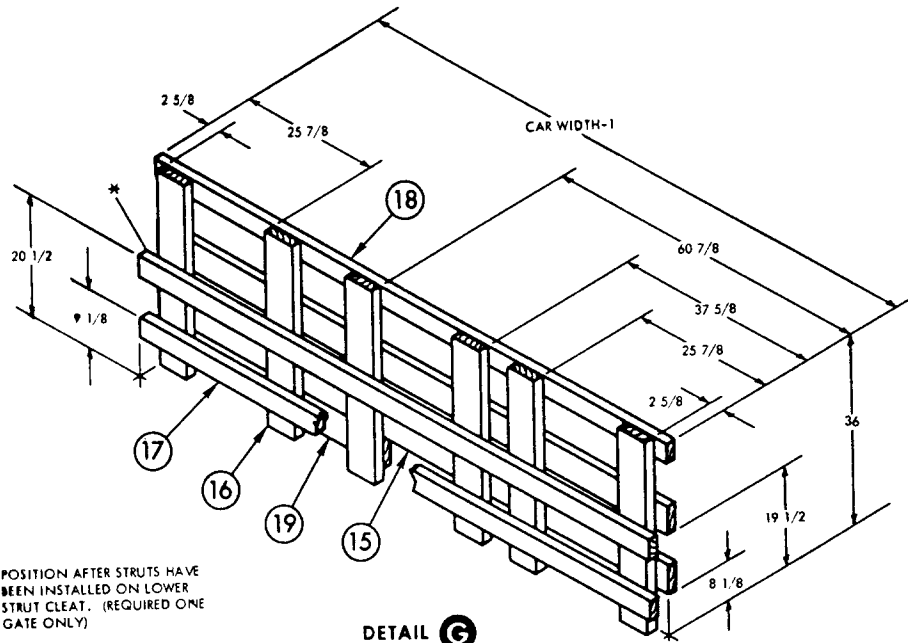
DETAIL E
ALTERNATE SEPARATOR GATE
7 REQUIRED

WHEN BOXCAR HAS STEEL DOOR POSTS
DOORWAY PROTECTION AS PER MIL-STD-1325
(NAVY) PAGE 46, FIG. 21 IS REQUIRED.



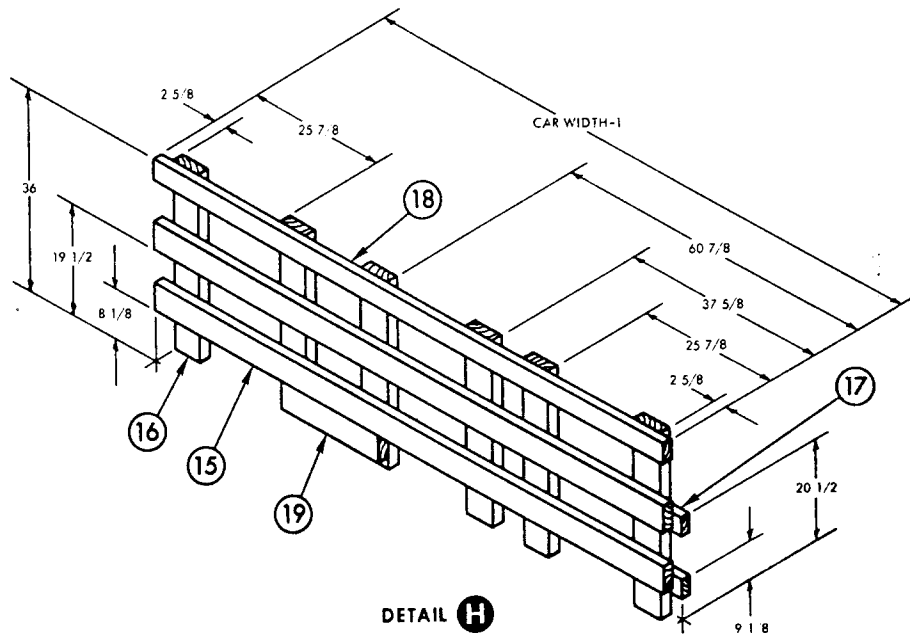
DETAIL F
DOORWAY PROTECTION
2 REQUIRED

MIL-STD-1325-157 A (NAVY)

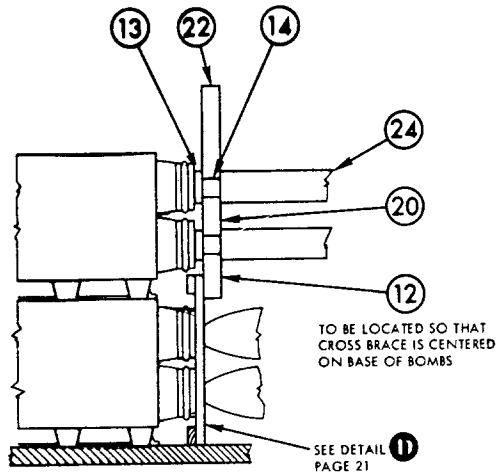


* POSITION AFTER STRUTS HAVE BEEN INSTALLED ON LOWER STRUT CLEAT. (REQUIRED ONE GATE ONLY)

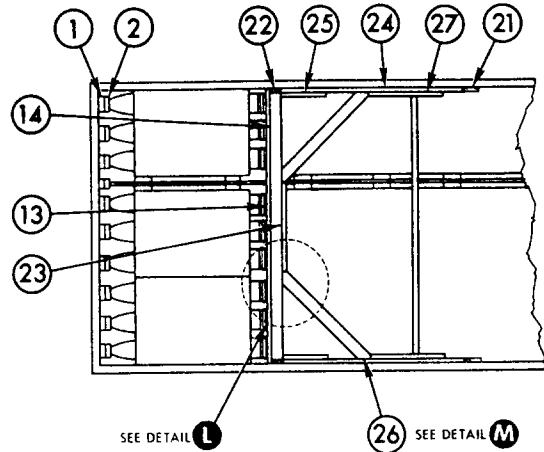
DETAIL G
CENTER GATE
1 REQUIRED



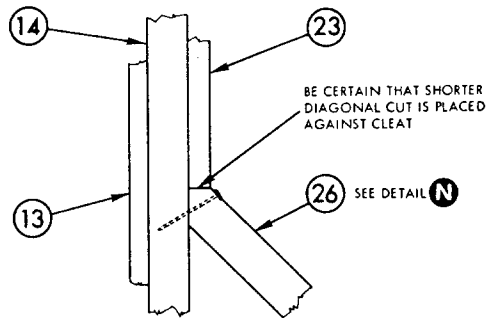
DETAIL H
CENTER GATE
1 REQUIRED



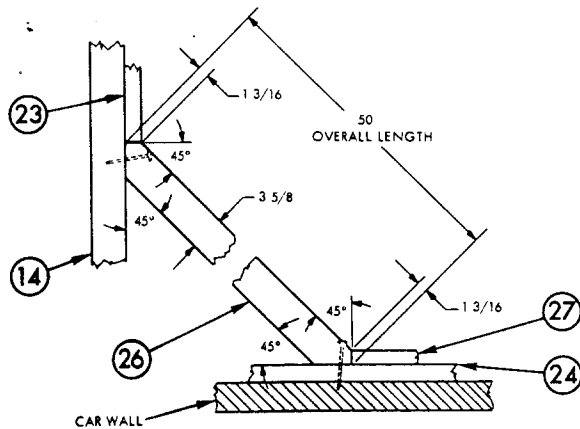
DETAIL J



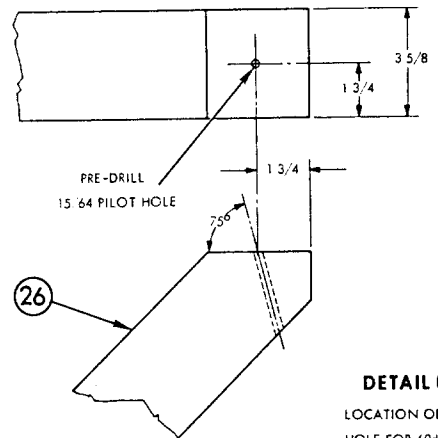
DETAIL K
PARTIAL LAYER BRACING



DETAIL L
POSITIONING OF DIAGONAL BRACE



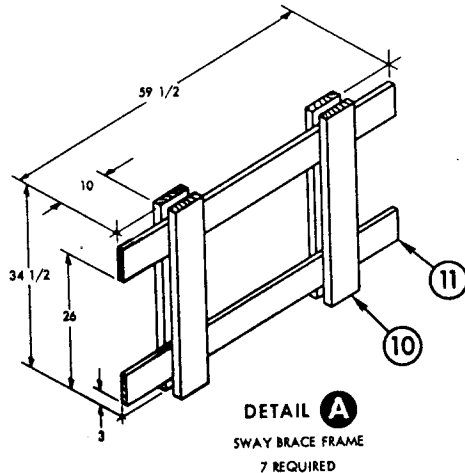
DETAIL M
POSITIONING OF
DIAGONAL BRACE



DETAIL N
LOCATION OF PILOT
HOLE FOR 60d NAIL

50 FT 6 IN. BOXCAR, COMMERCIAL (ALTERNATE METHOD)

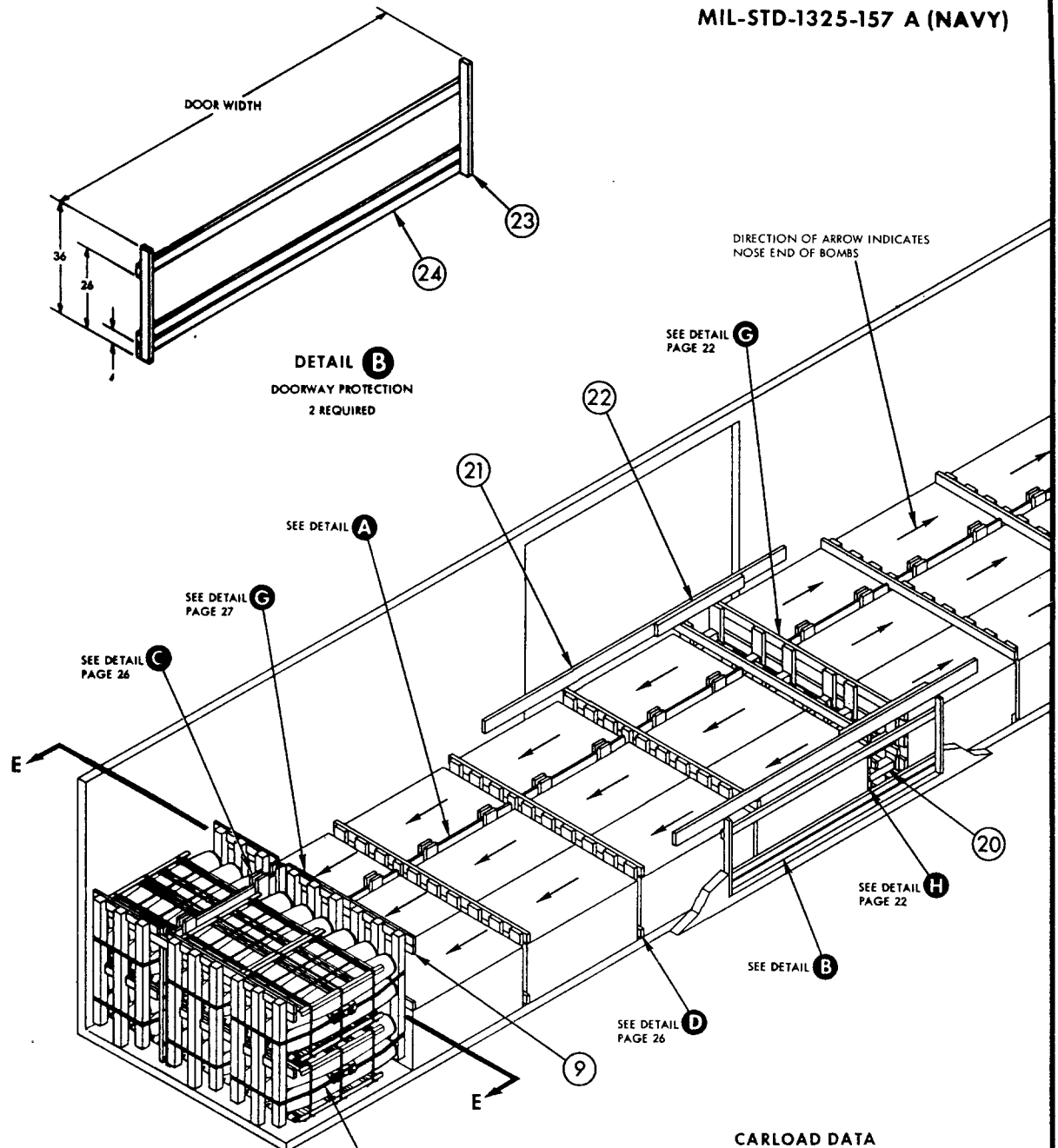
1. THE CARLOAD CONSISTS OF EITHER 33 UNIT LOADS WHICH MUST BE LOADED AND DUNNAGED IN ACCORDANCE WITH THIS PROCEDURAL DRAWING, OR 39 UNIT LOADS IN ACCORDANCE WITH THE ALTERNATE PLAN AND DETAILS DEPICTED ON PAGES 28 & 29 OF THIS PROCEDURAL DRAWING.
2. WHEN LESS THAN CARLOAD (LCL) QUANTITIES ARE REQUIRED TO BE SHIPPED IN COMMERCIAL BOXCARS AND A PARTIAL LAYER RESULTS, THE PARTIAL LAYER OF LADING SHALL BE BRACED BY MEANS OF END BRACING AND/OR PARTIAL LAYER BRACING CONSTRUCTED IN ACCORDANCE WITH WR-52/100. SELECT THE TYPE OF BRACE TO COMPLY WITH THE WEIGHT OF THE UNITS TO BE RETAINED.
3. THE LOADS AS SHOWN ARE BASED ON CARS WHICH HAVE 10 FT. WIDE DOORWAY OPENINGS AND ARE EQUIPPED WITH CONVENTIONAL SLIDING TYPE DOORS. THE DEPICTED PROCEDURES AND METHODS OF BLOCKING ARE APPLICABLE TO BOXCARS EQUIPPED WITH CONVENTIONAL SLIDING TYPE DOORS OTHER THAN 10 FT. WIDE PROVIDING THE LENGTH OF PIECE 21 IS ADJUSTED AS REQUIRED TO SUIT THE PARTICULAR DOORWAY OPENING.
4. THE DEPICTED PROCEDURES AND METHODS OF BLOCKING ARE ALSO APPLICABLE TO BOXCARS EQUIPPED WITH PLUG TYPE DOORS PROVIDING THE LENGTH OF PIECE 21 IS ADJUSTED AS REQUIRED TO SUIT THE PARTICULAR DOORWAY OPENING. DUNNAGE MATERIAL MUST NOT BE NAILED TO ANY PLUG DOOR, WHETHER MAIN OR AUXILIARY, EXCEPT WHEN THE CAR HAS A COMBINATION OF A CONVENTIONAL SLIDING TYPE DOOR AND A PLUG TYPE DOOR, AND AN ADEQUATE NAILING STRIP IS PROVIDED ON THE PLUG TYPE DOOR. IF LUMBER OF SUFFICIENT LENGTH TO SPAN PLUG DOORS IS NOT AVAILABLE, RANDOM LENGTH MATERIAL, DOUBLED AND SPLICED, BUT WITH JOINTS OF SPLICES OFFSET, MAY BE USED. STACKS WITH MORE THAN HALF OF THE UNIT LOAD IN THE DOORWAY AREA MUST BE UNITIZED WITH TWO LATERALLY APPLIED 1 1/4" STEEL STRAPS PER STACK, EACH TENSIONED AND SEALED WITH TWO DOUBLE CRIMPED SEALS AND DOORWAY PROTECTION, PIECES 23 AND 24, IS NOT REQUIRED WHEN PLUG DOOR EQUIPPED BOXCARS ARE USED, EXCEPT WHEN CAR HAS A COMBINATION OF PLUG DOOR AND CONVENTIONAL SLIDING DOOR. THEN DOORWAY PROTECTION IS REQUIRED FOR THE CONVENTIONAL DOOR. SECURELY CLOSE DOORS AND WIRE TOGETHER WITH A STRONG FLEXIBLE STEEL WIRE INSERTED THROUGH THE HOLES IN THE DOOR LATCH ASSEMBLY ONE OR MORE TIMES AND THE WIRE ENDS TWISTED TOGETHER.
5. WHEN LOADING BOXCARS WITH AN INSIDE WIDTH GREATER THAN 9 FT. 2 IN. USE ALTERNATE SWAY BRACE FRAMES SHOWN ON PAGE 38 IN PLACE OF DETAIL A AND C.



PIECE NO.	DESCRIPTION	SIZE	NO. PCS REQD	NAIL TO	NUMBER	SIZE
25	SPACER	2 x 4 x 8 1/4	48	3	3	10d
24	HORIZONTAL DOORWAY MEMBER	2 x 4 x DOOR WIDTH	6	23	2 PER JOINT	10d
23	VERTICAL DOORWAY MEMBER	2 x 3 x 36	4	DOOR POST	2 PER FOOT	20d
22	HOLD DOWN CLEAT	2 x 6 x 48	2	21	2 PER FOOT	10d
21	GATE HOLD DOWN	2 x 6 x 14 FT.	2	CAR WALL	5 EACH END	10d
20	STRUT	4 x 4 x WEDGE FIT	12	16	2 PER JOINT	16d
19	SWAY BRACE STOP	2 x 6 x 22	2	16	3 PER JOINT	10d
18	TOP HORIZONTAL	2 x 4 x CAR WIDTH-1	2	16	3 PER JOINT	10d
17	CENTER GATE STRUT CLEAT	2 x 4 x CAR WIDTH-1	4	16	3 PER JOINT	10d
16	CENTER GATE VERTICAL	2 x 6 x 36	12	SEE 15	-	-
15	CENTER GATE HORIZONTAL	2 x 4 x CAR WIDTH-1	4	16	3 PER JOINT	10d
14	SWAY BRACE STOP	2 x 4 x 34	5	SEE 13	-	-
13	SEPARATOR GATE HORIZONTAL	2 x 4 x CAR WIDTH-1	10	12, 14	3 PER JOINT	10d
12	SEPARATOR GATE VERTICAL	2 x 6 x 34	45	SEE 13	-	-
11	SWAY BRACE HORIZONTAL	1 x 6 x 59 1/2	14	SEE 10	-	-
10	SWAY BRACE VERTICAL	2 x 6 x 34 1/2	28	11	3 PER JOINT	10d
9	TIE PIECE	2 x 4 x CAR WIDTH-1	4	1, 2	1 PER JOINT	16d
8	SWAY BRACE HORIZONTAL	1 x 6 x 63	8	SEE 6	-	-
7	SWAY BRACE VERTICAL	2 x 6 x 63 1/2	8	8	3 PER JOINT	10d
6	SWAY BRACE VERTICAL	2 x 4 x 63 1/2	8	8	3 PER JOINT	10d
5	SEAL	1 1/4	24	-	-	-
4	STRAP	1 1/4 x .035 x 19 FT.	12	-	-	-
3	TIE PIECE	2 x 4 x 35	24	1, 2	2 PER JOINT	16d
2	UPRIGHT	4 x 4 x 59	24	SEE 3	-	-
1	UPRIGHT	4 x 4 x 64	12	SEE 3	-	-

LIST OF MATERIALS AND NAILING DATA

MIL-STD-1325-157 A (NAVY)

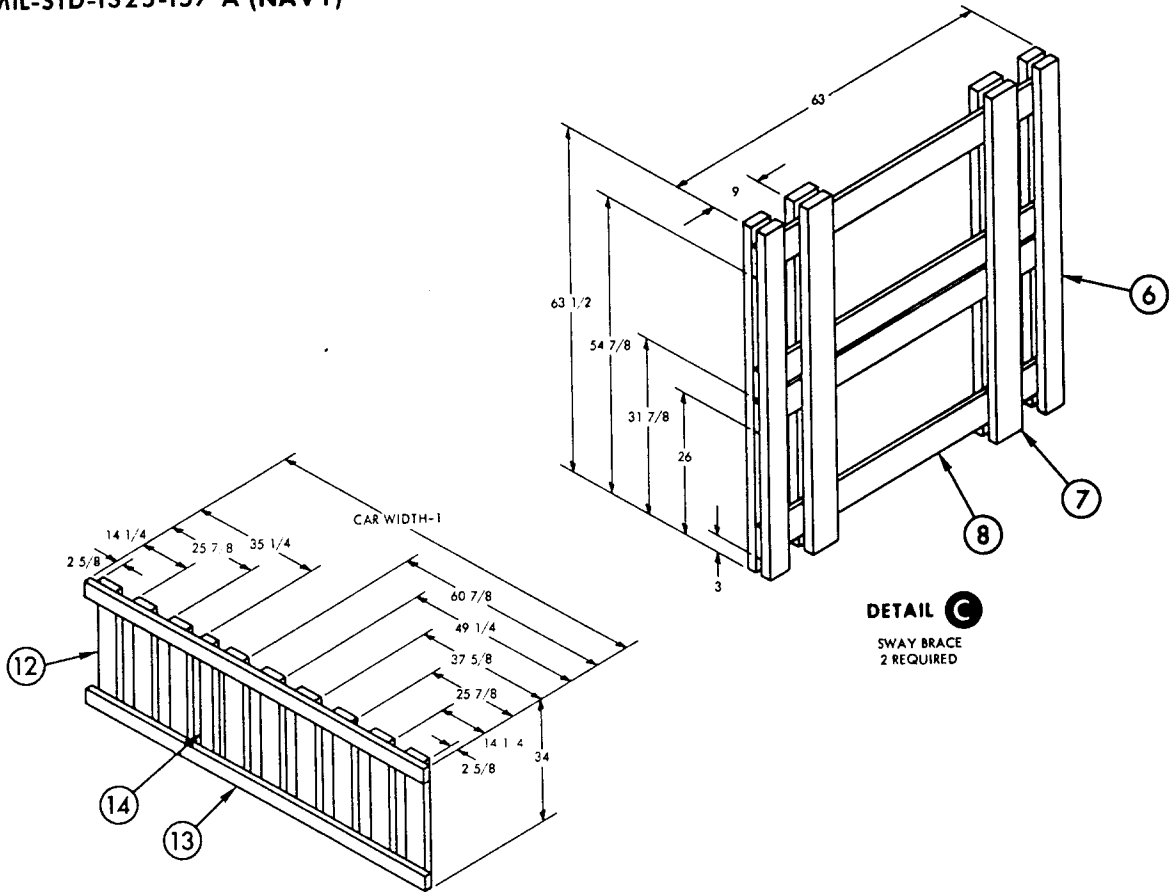


CARLOAD DATA

NUMBER OF UNIT LOADS	33
LOAD WEIGHT	102,102 LBS. (EST.)
EMPTY FRAME WEIGHT	2,389 LBS.
CARLOAD WEIGHT	104,491 LBS. (EST.)

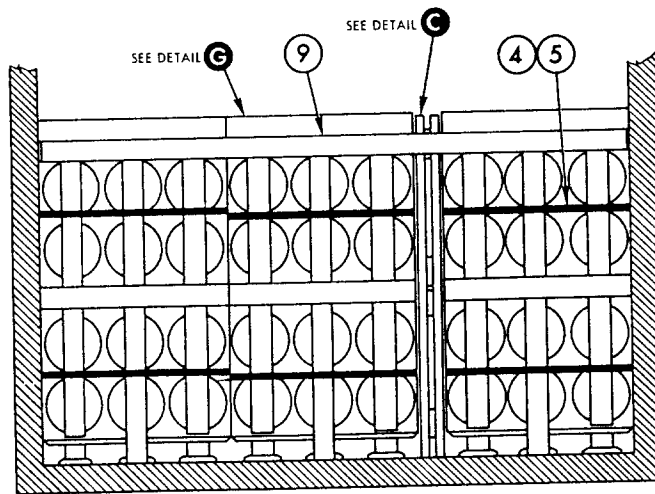
4 5
(SEE UNITIZING DETAIL,
PAGE 27)

MIL-STD-1325-157 A (NAVY)

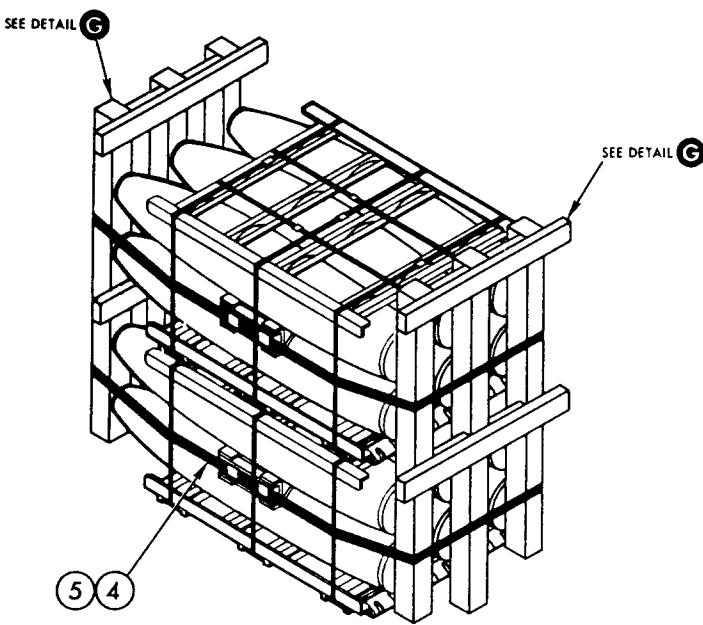


DETAIL C
SWAY BRACE
2 REQUIRED

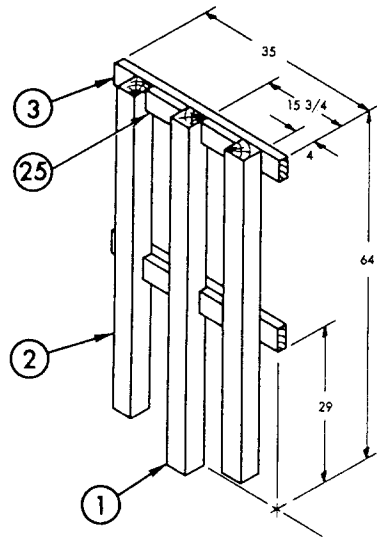
DETAIL D
SEPARATOR GATE
5 REQUIRED
(SEE ALTERNATE SEPARATOR GATE,
DETAIL E, PAGE 21)



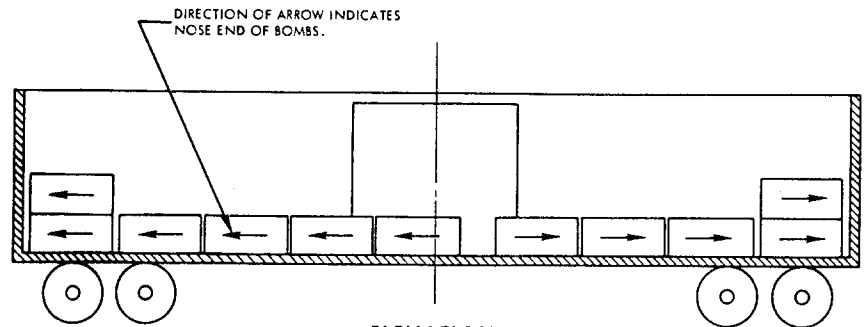
SECTION E-E



DETAIL F
 UNITIZING DETAIL
 TENSION AND SEAL WITH TWO DOUBLE
 CRIMPED SEALS PER STRAP

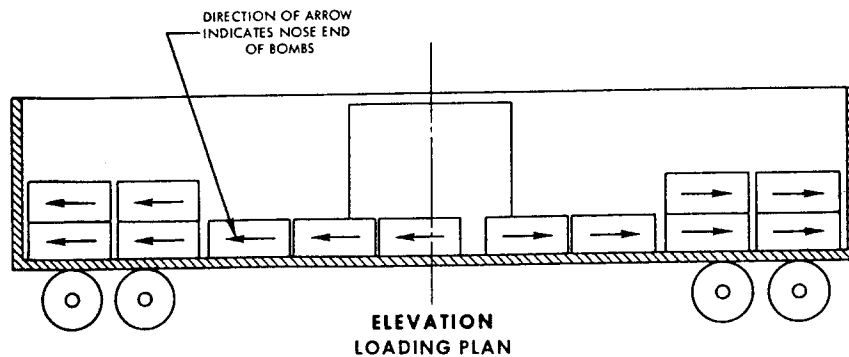
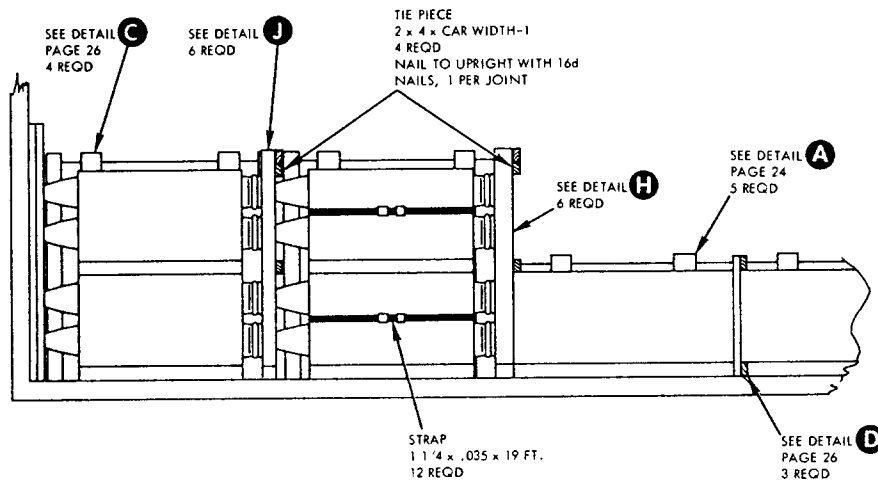
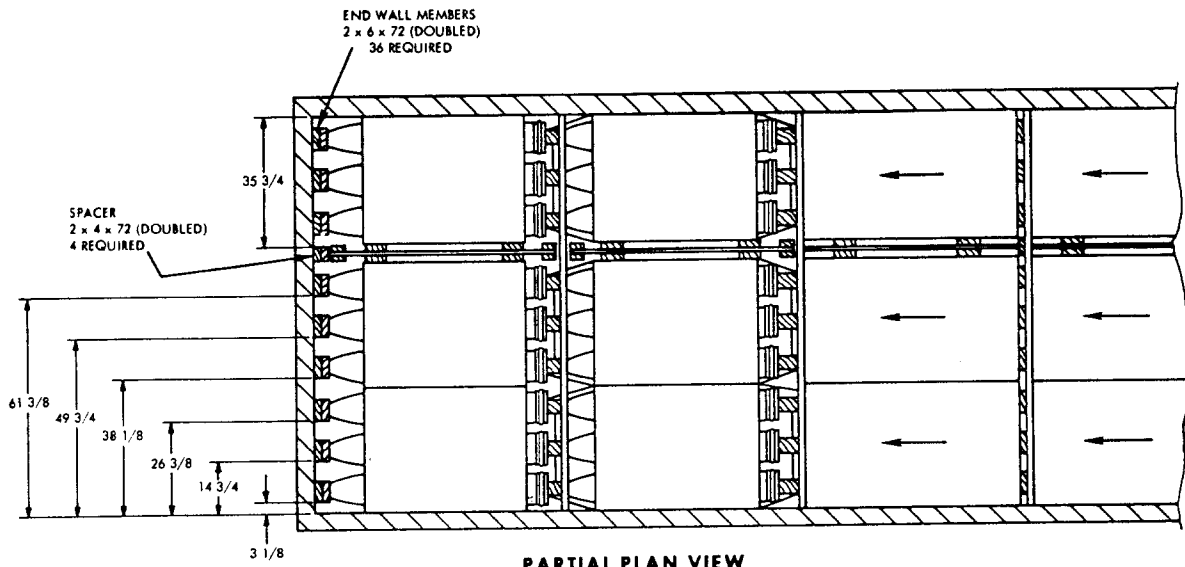


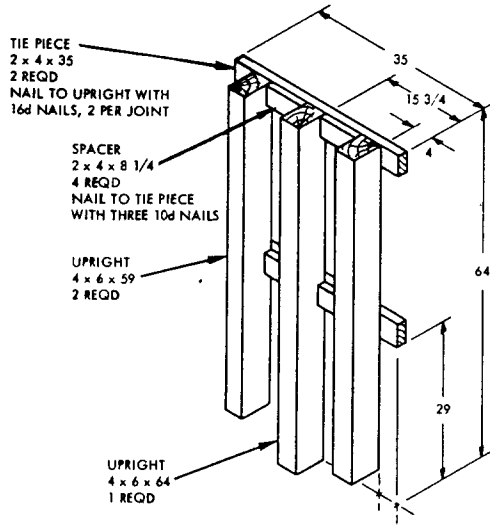
DETAIL G
 PARTIAL LAYER BLOCKING
 12 REQUIRED



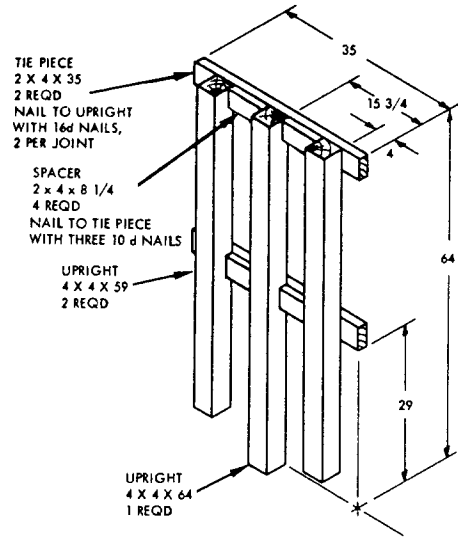
**ELEVATION
 LOADING PLAN**

ALTERNATE PLAN FOR 39 UNIT LOADS

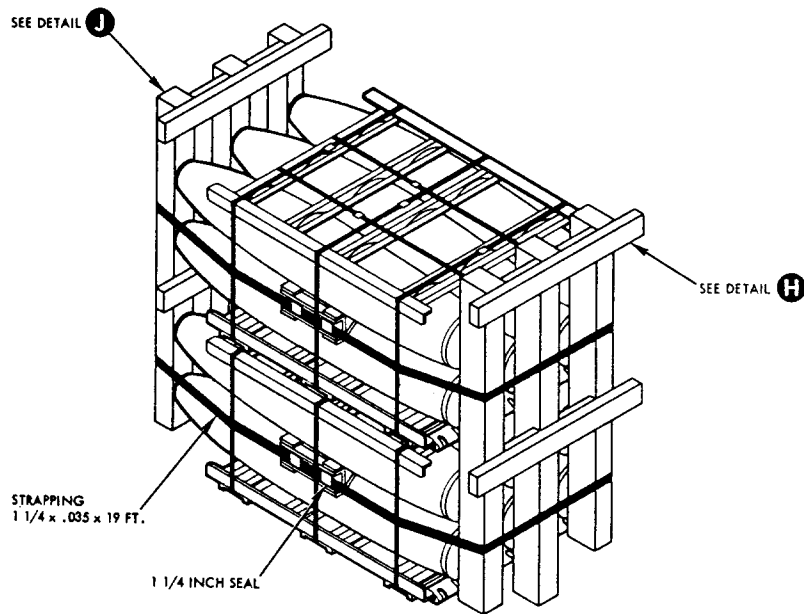




DETAIL H
PARTIAL LAYER BLOCKING
6 REQUIRED



DETAIL J
PARTIAL LAYER BLOCKING
6 REQUIRED



DETAIL K
UNITIZING DETAIL
TENSION AND SEAL WITH TWO DOUBLE
CRIMPED SEALS PER STRAP

50 FT 6 IN. BOXCAR, COMMERCIAL (USING LOAD DIVIDERS)

1. THESE PROCEDURES DEPICT THE METHOD OF LOADING THE FLEET ISSUE UNIT LOAD OF MK 82 BOMBS (THERMALLY PROTECTED) IN CUSHIONED BOXCARS WHICH ARE EQUIPPED WITH LOAD DIVIDERS AND WITH OR WITHOUT ADJUSTABLE SIDE FILLERS. ONLY CUSHIONED CARS THAT HAVE SLIDING CENTER SILL TYPE CUSHIONING DEVICES OR END-OF-CAR TYPE DEVICES WHICH HAVE AT LEAST 15 INCHES OF TRAVEL ARE ACCEPTABLE. (ONLY THOSE CUSHIONED BOXCARS EQUIPPED WITH LOAD DIVIDERS MANUFACTURED BY EVANS, EQUIPCO AND PRECO HAVE BEEN TESTED AND APPROVED BY THE AAR, BUX.) THE LOAD DIVIDERS WILL REPLACE THE CENTER GATE ASSEMBLY. A STRUT ASSEMBLY, DETAIL G, WILL BE REQUIRED BETWEEN THE LOAD DIVIDERS AS SHOWN IN THE LOAD VIEWS, IF EITHER LOAD DIVIDER IS REQUIRED TO RETAIN A LADING WEIGHT OF 50,000 POUNDS OR MORE.
2. BOXCARS EQUIPPED WITH ADJUSTABLE SIDE FILLERS THAT HAVE 3/8 INCH OR THICKER PANELS MAY BE USED. HOWEVER, THESE SIDE FILLERS MUST NOT BE USED FOR LATERAL BLOCKING. THEY MUST BE RETRACTED AND LOCKED AGAINST THE CAR SIDE WALL, AND A FILL PIECE INSTALLED IN THE VOID, IF ONE EXISTS, BETWEEN THE CAR SIDE WALL AND THE SIDE FILLER PANEL. (SEE DETAIL H, PAGE 34.)
3. PRIOR TO LOADING A CAR EQUIPPED WITH LOAD DIVIDERS, A VERY CAREFUL INSPECTION MUST BE MADE TO ENSURE THAT THE CAR AND THE CAR EQUIPMENT IS IN GOOD CONDITION. THE CONDITION OF THE LOAD DIVIDERS SHOULD BE CHECKED THOROUGHLY. BREAKS IN WELDING, BENT OR OTHERWISE DAMAGED LOCKING PINS, AND BENT OR DEFORMED BULKHEADS ARE REASONS FOR REJECTING CARS. AFTER THE LOAD DIVIDERS ARE POSITIONED AGAINST THE LADING, AND THE LOCKING PINS ARE ENGAGED IN THE HOLES OF THE RAILS, THE LOCKING PINS MUST BE INSPECTED TO ENSURE THAT THE PINS ARE FULLY ENGAGED IN THE LOCKING HOLES. IF THE LOWER PINS ARE NOT FULLY SEATED IN THE HOLES, THE LINKAGE MECHANISM SHOULD BE ADJUSTED AS REQUIRED SO THAT THE PINS WILL BE FULLY SEATED INTO THE LOCKING HOLES OF THE LOWER RAILS. IF PRESENT, DEBRIS MUST BE REMOVED FROM BENEATH THE LOCKING HOLES SELECTED FOR SECURING A DIVIDER.
4. THE CARLOAD CONSISTS OF 46 UNIT LOADS WHICH MUST BE LOADED AND DUNNAGED IN ACCORDANCE WITH THIS PROCEDURAL DRAWING. THERE ARE 23 UNIT LOADS AND ONE DUMMY UNIT LOAD IN EACH END OF THE CAR. THE DUMMY UNIT LOAD IS REQUIRED TO FILL OUT THE VOID SPACE AND MUST BE CONSTRUCTED AS SHOWN ON PAGE 36. (IF LOAD LIMIT OF CAR PERMITS, REPLACE DUMMY LOADS WITH BOMB LOADS.)
5. WHEN LESS THAN CARLOAD (LCL) QUANTITIES ARE REQUIRED TO BE SHIPPED IN COMMERCIAL BOXCARS, ENTIRE STACKS SHALL BE ELIMINATED WHERE POSSIBLE, OTHERWISE ADDITIONAL DUMMY UNIT LOADS SHALL BE USED TO FILL OUT THE VOIDS IN A STACK.
6. THE LOADS AS SHOWN ARE BASED ON CARS WHICH HAVE 10 FT WIDE DOORWAY OPENINGS AND ARE EQUIPPED WITH CONVENTIONAL SLIDING TYPE DOORS. THE DEPICTED PROCEDURES AND METHODS OF BLOCKING ARE APPLICABLE TO BOXCARS EQUIPPED WITH CONVENTIONAL SLIDING TYPE DOORS OTHER THAN 10 FT WIDE PROVIDING DOORWAY PROTECTION IS INSTALLED WHEN REQUIRED. (SEE DETAIL B, PAGE 11.)
7. THE DEPICTED PROCEDURES AND METHODS OF BLOCKING ARE ALSO APPLICABLE TO BOXCARS EQUIPPED WITH PLUG TYPE DOORS. DUNNAGE MATERIAL MUST NOT BE NAILED TO ANY PLUG DOOR, WHETHER MAIN OR AUXILIARY, EXCEPT WHEN THE CAR HAS A COMBINATION OF A CONVENTIONAL SLIDING TYPE DOOR AND A PLUG TYPE DOOR, AND AN ADEQUATE

NAILING STRIP IS PROVIDED ON THE PLUG TYPE DOOR. STACKS WITH MORE THAN HALF OF THE UNIT LOAD IN THE DOORWAY AREA MUST BE UNITIZED WITH TWO LATERALLY APPLIED 1 1/4 INCH STEEL STRAPS PER STACK, EACH TENSIONED AND SEALED WITH TWO DOUBLE CRIMPED SEALS. DOORWAY PROTECTION IS NOT REQUIRED WHEN PLUG DOOR EQUIPPED BOXCARS ARE USED, EXCEPT WHEN CAR HAS A COMBINATION OF PLUG DOOR AND CONVENTIONAL SLIDING DOOR. THEN DOORWAY PROTECTION IS REQUIRED FOR THE CONVENTIONAL DOOR. SECURELY CLOSE DOORS AND WIRE TOGETHER WITH A STRONG FLEXIBLE STEEL WIRE INSERTED THROUGH THE HOLES IN THE DOOR LATCH ASSEMBLY ONE OR MORE TIMES AND THE WIRE ENDS TWISTED TOGETHER.

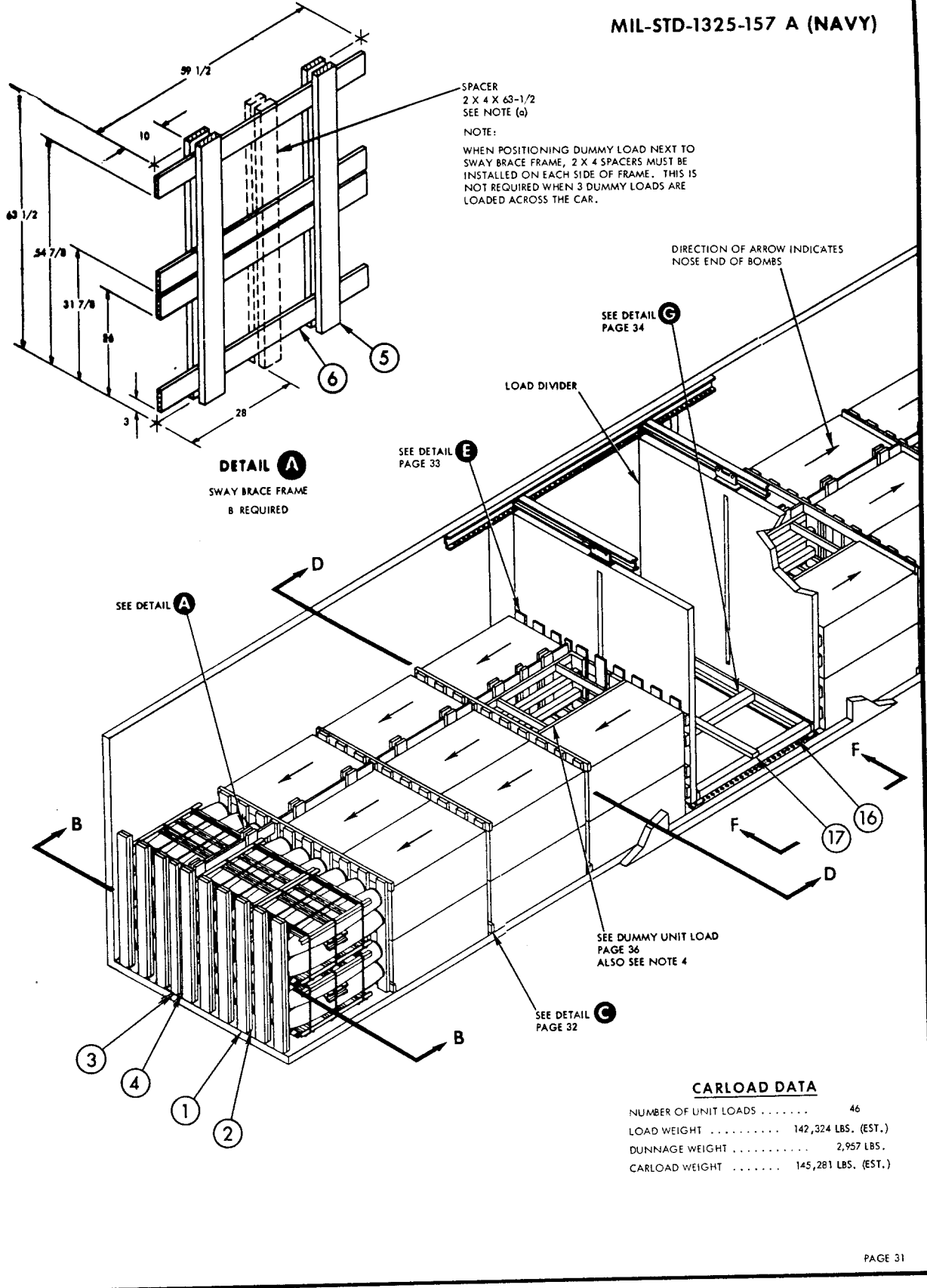
8. WHEN LOADING BOXCARS WITH AN INSIDE WIDTH GREATER THAN 9 FT. 2 IN. USE ALTERNATE SWAY BRACE FRAMES SHOWN ON PAGE 38 IN PLACE OF DETAIL A.

*"W" = DISTANCE BETWEEN LOCKING PINS AT EACH SIDE OF THE LOAD DIVIDER.

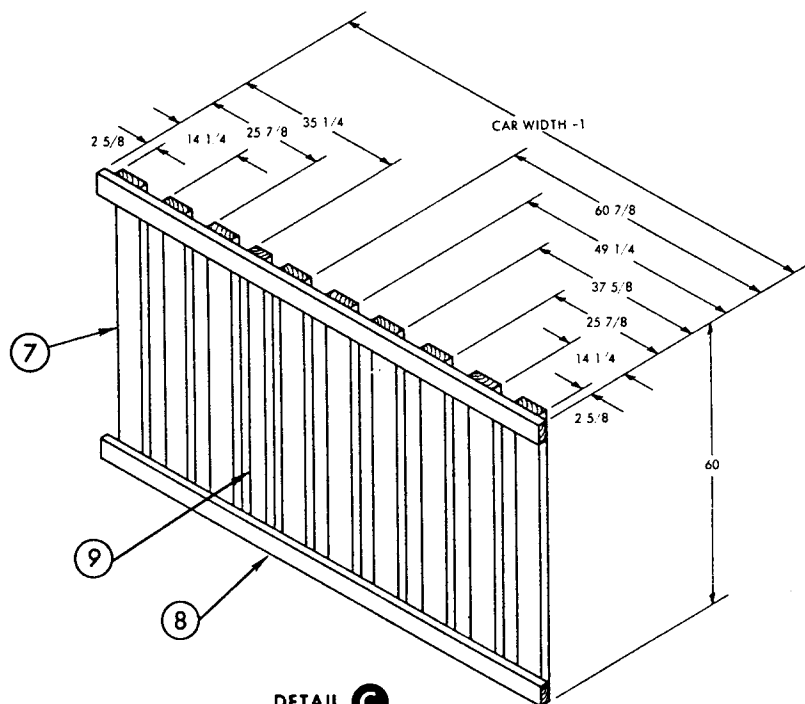
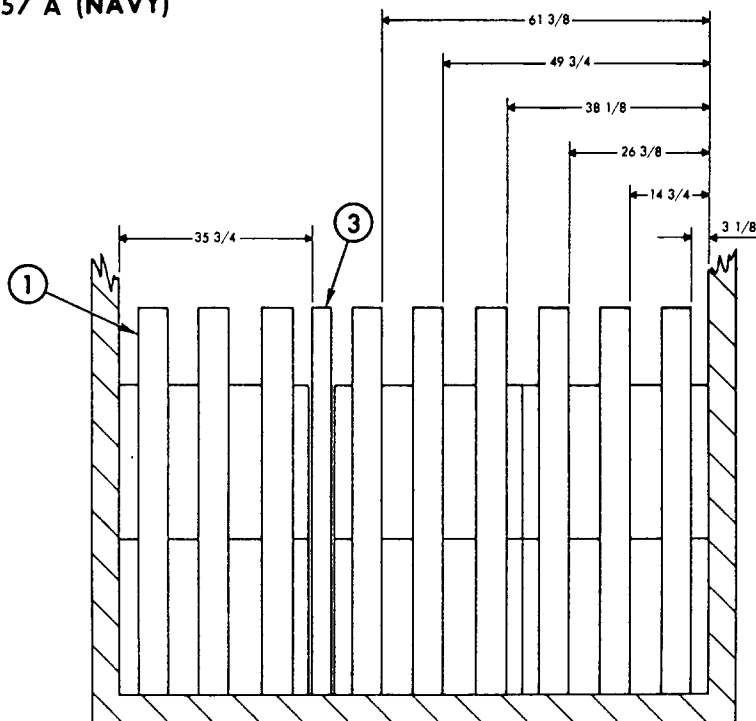
PIECE NO.	DESCRIPTION	SIZE	NO. PCS REQD	NAIL TO	NUMBER	SIZE
17	TIE BAR	2 x 4 x CAR WIDTH-1	1	16	3 PER JOINT	10d
16	STRUT	4 x 4 CUT TO FIT	4	15	2 EACH END	16d
15	BUFFER PIECE	2 x 4 x CAR WIDTH-1	2	SEE 14	-	-
14	STRUT LEDGER	2 x 4 x CAR WIDTH-1	2	15	1 PER FOOT	10d
13	HOLD DOWN	1 x 4 x "W" *	2	14	1 PER FOOT	6d
12	SWAY BRACE STOP	1 x 4 x 61 7/8	2	11	3 PER JOINT	6d
11	SEPARATOR GATE HORIZONTAL	2 x 6 x CAR WIDTH-1	8	SEE 10	-	-
10	SEPARATOR GATE VERTICAL	1 x 6 x 61 7/8	18	11	3 PER JOINT	6d
9	SWAY BRACE STOP	2 x 4 x 60	6	SEE 8	-	-
8	SEPARATOR GATE HORIZONTAL	2 x 4 x CAR WIDTH-1	12	7, 9	3 PER JOINT	10d
7	SEPARATOR GATE VERTICAL	2 x 6 x 60	54	SEE 8	-	-
6	SWAY BRACE HORIZONTAL	1 x 6 x 59 1/2	32	SEE 5	-	-
5	SWAY BRACE VERTICAL	2 x 6 x 63 1/2	32	6	3 PER JOINT	10d
4	END WALL MEMBER	2 x 4 x 72	2	3	1 PER FOOT	10d
3	END WALL MEMBER	2 x 4 x 72	2	CAR WALL	1 PER FOOT	10d
2	END WALL MEMBER	2 x 6 x 72	18	1	1 PER FOOT	10d
1	END WALL MEMBER	2 x 6 x 72	18	CAR WALL	1 PER FOOT	10d

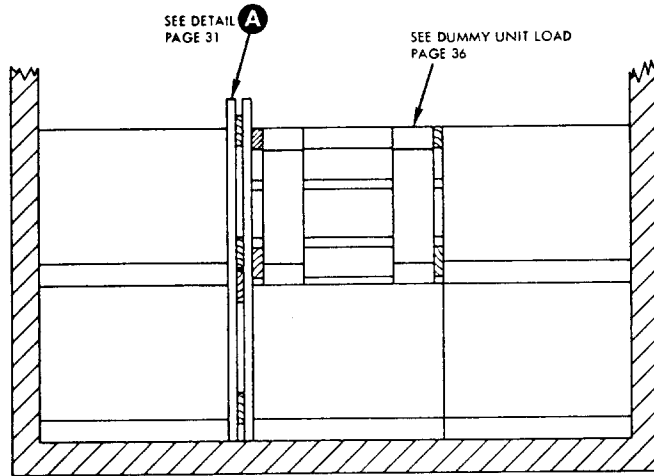
LIST OF MATERIALS AND NAILING DATA

MIL-STD-1325-157 A (NAVY)

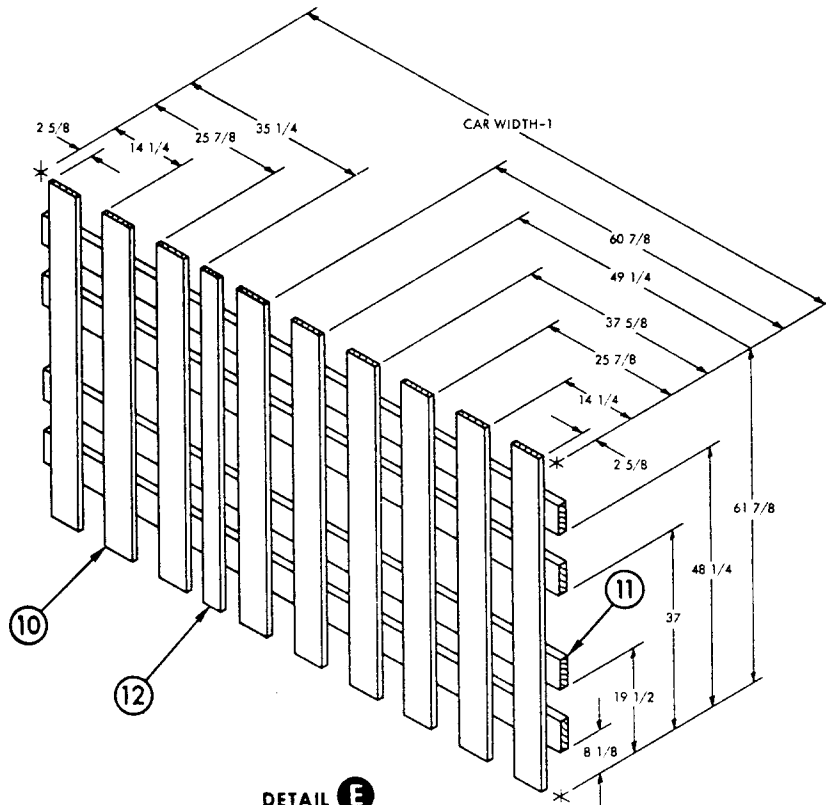


MIL-STD-1325-157 A (NAVY)



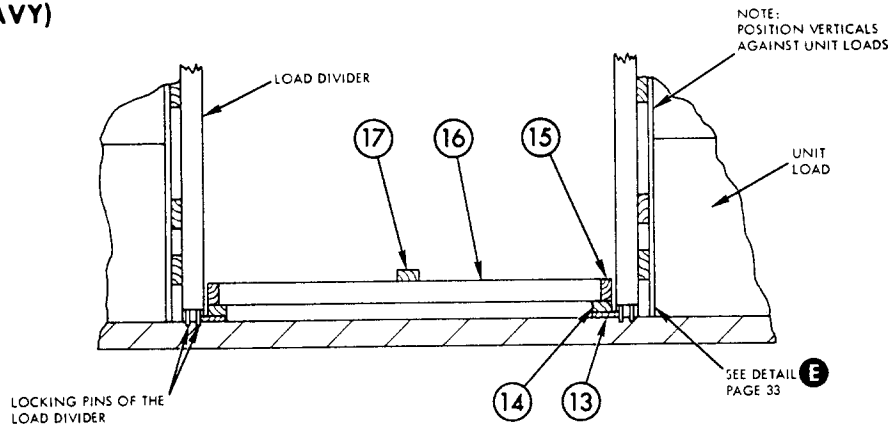


SECTION D-D

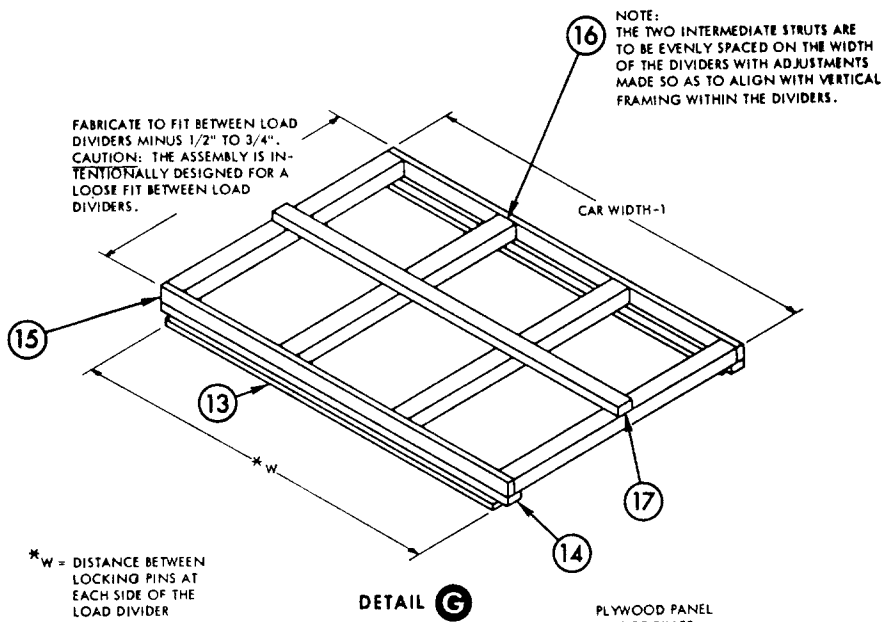


DETAIL E
SEPARATOR GATE
2 REQUIRED

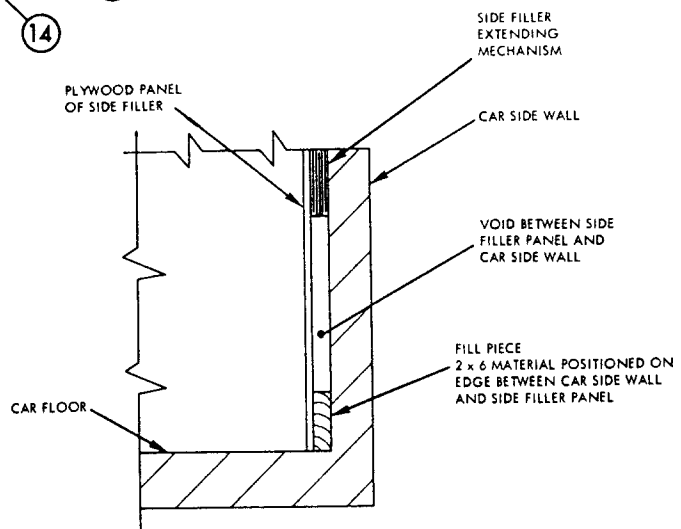
MIL-STD-1325-157 A (NAVY)



VIEW F-F
INSTALLATION OF STRUT ASSEMBLY



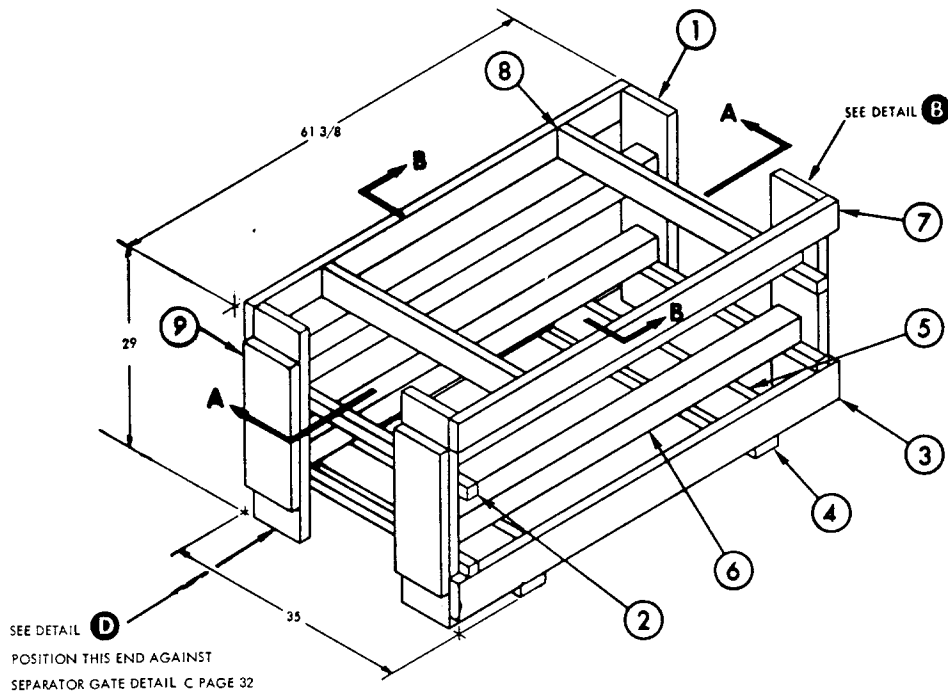
DETAIL G
STRUT ASSEMBLY
1 REQUIRED



DETAIL H
SHOWING REINFORCEMENT FOR
ADJUSTABLE SIDE FILLERS

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DUMMY UNIT LOAD

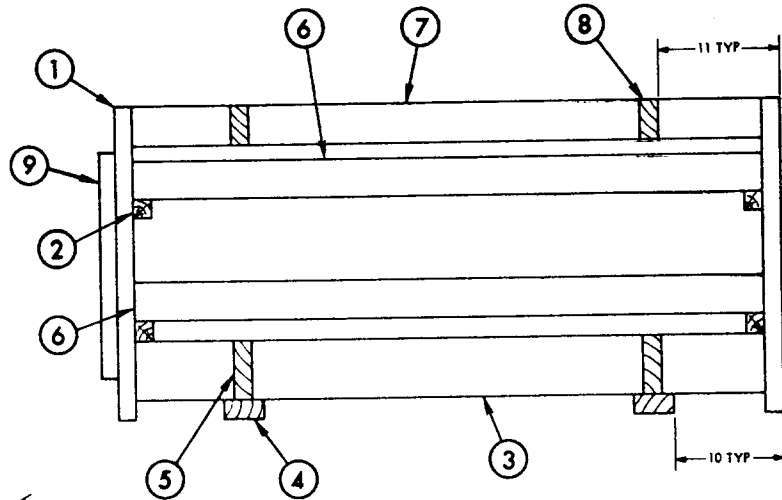


NOTES:

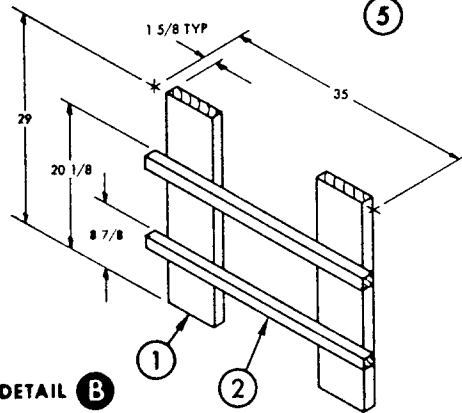
- (1) NAIL SUPPORT (PIECE 4) TO LONGITUDINAL (PIECE 3) WITH 16d NAILS, 2 PER JOINT, AND TO CROSS BRACE (PIECE 5) WITH 5-16d NAILS.
- (2) TOENAIL STRUT TO VERTICAL WITH 16d NAILS, 3 EACH END (TOP AND BOTH SIDES), ALSO END NAIL THROUGH VERTICAL WITH 16d NAILS, 2 EACH END.

9	VERTICAL CLEAT	2 x 8 x 21	2	1	4	10d
8	CROSS BRACE	2 x 4 x CUT TO FIT	2	SEE 7	-	-
7	LONGITUDINAL	2 x 4 x 59 7 8	2	1, 8	2 PER JOINT	16d
6	STRUT	4 x 4 x CUT TO FIT	4	1	SEE NOTE (2)	
5	CROSS BRACE	2 x 6 x CUT TO FIT	2	SEE 3	-	-
4	SUPPORT	2 x 4 x 35	2	3, 5	SEE NOTE (1)	
3	LONGITUDINAL	2 x 6 x 59 7 8	2	1, 5	3 PER JOINT	16d
2	STRUT CLEAT	2 x 2 x 35	4	1	3 PER JOINT	16d CLNHD
1	VERTICAL	2 x 8 x 29	4	SEE 2	-	-
PIECE NO.	DESCRIPTION	SIZE	NO. PCS REQD	NAIL TO	NUMBER NAILS	SIZE

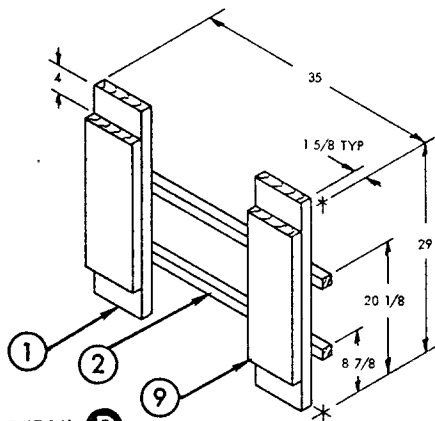
LIST OF MATERIALS AND NAILING DATA



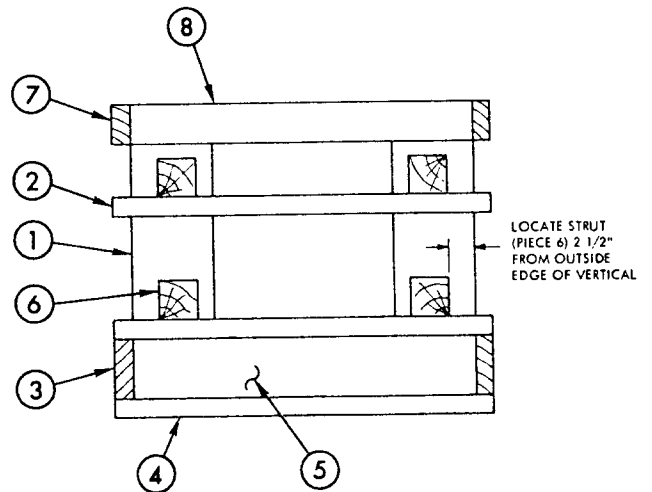
SECTION A-A



DETAIL B
END FRAME
1 REQUIRED



DETAIL D
END FRAME WITH CLEAT
1 REQUIRED

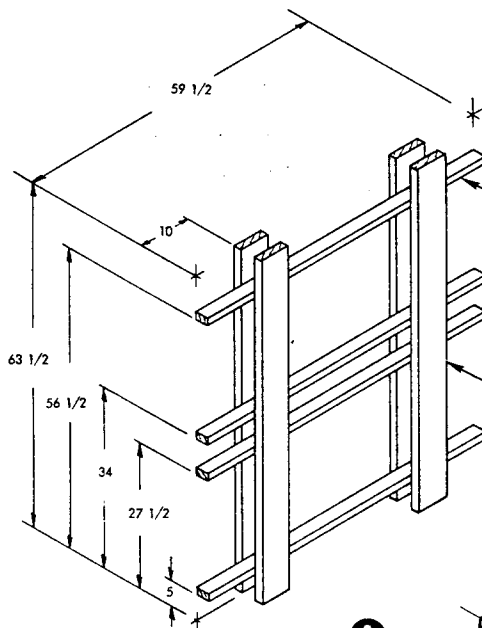


SECTION C-C

MIL-STD-1325-157 A (NAVY)

ALTERNATE SWAY BRACE FRAMES

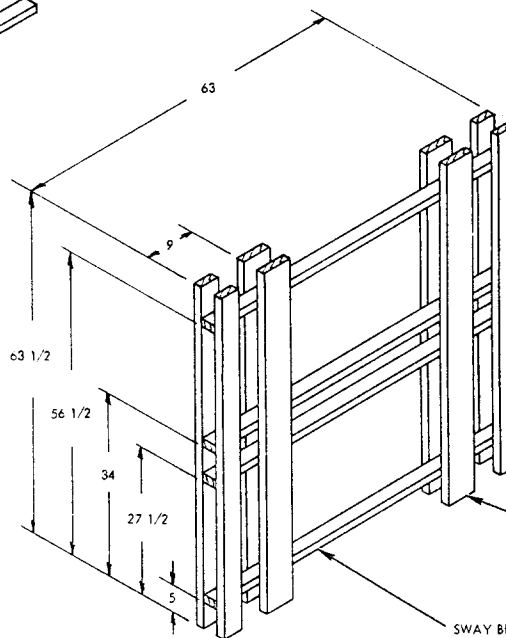
NOTE: THESE ALTERNATE SWAY BRACE FRAMES ARE FOR USE IN RAILCARS WITH AN INSIDE WIDTH OF 9' 4". IF RAILCAR TO BE LOADED IS OTHER THAN 9' 4" CUT HORIZONTAL MEMBER TO THE APPROPRIATE WIDTH.



DETAIL A

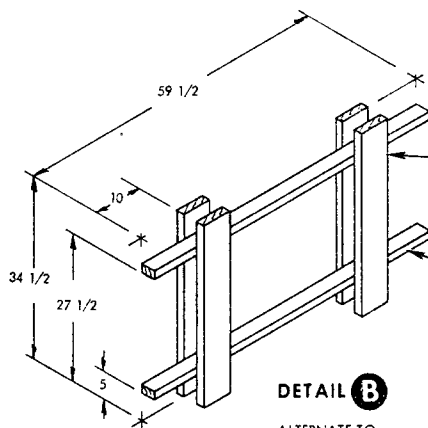
ALTERNATE TO

- DETAIL A - PAGE 6
- DETAIL A - PAGE 10 (ADD SPACER WHEN REQUIRED)
- DETAIL A - PAGE 14
- DETAIL B - PAGE 20
- DETAIL A - PAGE 31 (ADD SPACER WHEN REQUIRED)



DETAIL C

ALTERNATE TO
DETAIL C - PAGE 26



DETAIL B

ALTERNATE TO
DETAIL C - PAGE 20
DETAIL A - PAGE 24

REVIEW ACTIVITY

NAVY-OS, AS

PREPARING ACTIVITY:

NAVY-OS

(PROJECT NO. 8140-N200)