

APPROVED BY U.S. COAST GUARD <i>L. H. Gibson</i>	APPROVED BY BUREAU OF EXPLOSIVES <i>L. J. Brassmuck</i> SUPERVISOR, MILITARY & INTERMOVAL SERVICES
DATE <i>5/1/79</i>	DATE <i>4/3/79</i>
REVISION NO 1 SIGNED <i>Robert Z. Strub</i> DATE <i>11-8-83</i>	REVISION NO 1 SIGNED <i>E. P. Batten</i> DATE <i>9/2/83</i>

STINGER

LOADING AND BRACING[Ⓛ] IN MILVAN CONTAINERS[⊕] OF THE COMPLETE ROUND PACKED IN WIREBOUND AND/OR ALUMINUM CONTAINER (UNITIZED AND UNUNITIZED OR PALLETIZED AND UNPALLETIZED)

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Ⓛ LOADING AND BRACING SPECIFICATIONS SET FORTH WITHIN THIS DRAWING ARE APPLICABLE TO LOADS THAT ARE TO BE SHIPPED BY TRAILER/CONTAINER-ON-FLAT-CAR (T/COFC) RAIL CARRIER SERVICE. THESE SPECIFICATIONS MAY ALSO BE USED FOR LOADS THAT ARE TO BE MOVED BY MOTOR OR WATER CARRIERS. SEE GENERAL NOTE "T" ON PAGE 2.

⊕ ONLY MILVAN CONTAINERS WHICH HAVE BEEN MODIFIED TO INCLUDE A MECHANICAL LOAD-BRACING SYSTEM THAT SATISFIES THE REQUIREMENTS OF THE BUREAU OF EXPLOSIVES PAMPHLET 6C WILL BE USED FOR THE MOVEMENT OF AMMUNITION BY T/COFC SERVICE. CAUTION: OTHER REQUIREMENTS OF PAMPHLET 6C ALSO APPLY.

REVISIONS				DRAFTSMAN 102 MAR 83	PROJ ENG JDS/MWD	CHKD BY DAK	DESIGNED BY LWS
1	JUN 83	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
				APPROVED, U.S. ARMY MISSILE MATERIEL READINESS COMMAND <i>William J. Hogan</i>			
				APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND (DMARCOS) <i>John L. Snyder</i> U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL			
U.S. ARMY DARCOM DRAWING							
JUNE 1979							
CLASS	DIVISION	DRAWING	FILE				
19	48	5948	GM 15SR 1				

DO NOT SCALE

GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1, AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE OUTLOADING PROCEDURES SPECIFIED IN THIS DRAWING ARE APPLICABLE TO THE STINGER GUIDED MISSILE PACKED IN WIREBOUND CONTAINER AND/OR ALUMINUM CONTAINER. SUBSEQUENT REFERENCE TO CONTAINER MEANS WIREBOUND CONTAINER AND/OR ALUMINUM CONTAINER WITH CONTENTS. ALSO, SUBSEQUENT REFERENCE TO SKIDDED UNIT MEANS THE SKIDDED UNIT OF NINE (9) WIREBOUND CONTAINERS WITH CONTENTS AND SUBSEQUENT REFERENCE TO PALLETIZED UNIT MEANS THE PALLETIZED UNIT OF NINE (9) ALUMINUM CONTAINERS WITH CONTENTS.
- C. FOR DETAILS OF THE WIREBOUND CONTAINER, SEE US ARMY MISSILE COMMAND DRAWING NO. 11509503 AND "CONTAINER" DETAIL ON PAGE 4.
- CONTAINER DIMENSIONS-- 67-1/4" LONG X 13-1/8" WIDE X 10-1/2" HIGH (APPROX).
GROSS WEIGHT----- 77 POUNDS (APPROX).
CUBE ----- 5.4 CUBIC FEET.
- D. FOR DETAILS OF THE ALUMINUM CONTAINER, SEE US ARMY MISSILE COMMAND DRAWING NO. 11486952 AND "CONTAINER" DETAIL ON PAGE 5.
- CONTAINER DIMENSIONS-- 65-9/16" LONG X 13" WIDE X 13-3/8" HIGH (APPROX).
GROSS WEIGHT----- 85-3/4 POUNDS (APPROX).
CUBE ----- 6.6 CUBIC FEET.
- E. FOR DETAILS OF THE UNITIZED WIREBOUND CONTAINERS, SEE US ARMY DARCOM DRAWING NO. 19-48-5239-GM20SR1 AND "SKIDDED UNIT" ON PAGE 4.
- SKIDDED UNIT DIMENSIONS- 39-3/8" LONG X 67-1/4" WIDE X 36-1/2" HIGH.
GROSS WEIGHT----- 749 POUNDS (APPROX).
CUBE ----- 55.9 CUBIC FEET.
- F. FOR DETAILS OF THE PALLETIZED ALUMINUM CONTAINERS, SEE US ARMY DARCOM DRAWING NO. 19-48-5239-GM20SR1 AND "PALLETIZED UNIT" ON PAGE 5.
- PALLETIZED UNIT DIMENSIONS ----- 42" LONG X 67-1/16" WIDE X 45-5/8" HIGH.
GROSS WEIGHT ----- 952 POUNDS (APPROX).
CUBE ----- 73.81 CUBIC FEET.

- G. THIS ITEM IS A DOT CLASS "A" EXPLOSIVE, AND A COAST GUARD CLASS X-C. THE OUTLOADING PROCEDURES SPECIFIED HEREIN CAN ALSO BE UTILIZED FOR THE SHIPMENT OF THE DEPICTED CONTAINERS WHEN THEY ARE LOADED WITH AN ITEM WHICH IS IDENTIFIED DIFFERENTLY BY NOMENCLATURE THAN THE ITEM DESIGNATED WITHIN THE DRAWING TITLE.
- H. OTHER TYPES OF LADING ITEMS MAY BE LOADED IN MILVAN CONTAINERS WHICH ARE PARTIALLY LOADED WITH THE DESIGNATED ITEMS, PROVIDING THE TOTAL LOAD IS COMPATIBLE, EXISTING DIRECTIVES ARE NOT VIOLATED, AND THE OTHER LADING ITEMS ARE BLOCKED AND BRACED TO EQUAL THE BLOCKING AND BRACING CRITERIA SPECIFIED HEREIN.
- J. THE LOADS AS SHOWN ARE BASED ON A 20' LONG BY 8' WIDE BY 8' HIGH MILVAN CONTAINER WITH INSIDE DIMENSIONS OF 19'-4" LONG BY 92" WIDE BY 87" HIGH. THE LOADS ARE DESIGNED FOR TRAILER/CONTAINER-ON-FLAT-CAR (T/COFC) SHIPMENT.
- K. THE SPECIFIED OUTLOADING PROCEDURES ARE FOR CONTAINERS EQUIPPED WITH SELF-CONTAINED MECHANICAL BRACING DEVICES AS DESCRIBED WITHIN BUREAU OF EXPLOSIVES PAMPHLET 6C. CROSS MEMBER ATTACHMENT FACILITIES WITHIN THESE CONTAINERS MUST PROVIDE FOR THE INSTALLATION OF LOAD BLOCKING CROSS MEMBERS AT THE HEIGHTS SPECIFIED. THE HEIGHT DIMENSIONS SPECIFIED WITHIN THIS DRAWING FOR THE INSTALLATION OF CROSS MEMBERS CONFORM WITH BUREAU OF EXPLOSIVES PAMPHLET 6C, WITH THE EXCEPTION THAT TWO (2) ADDITIONAL BELT RAILS HAVE BEEN SHOWN; ONE AT 72" AND ONE AT 83" HEIGHT FROM THE CONTAINER FLOOR. VOIDS LENGTHWISE WITHIN THE LOAD MUST BE HELD TO A MINIMUM. CROSS MEMBERS MUST BE PLACED AGAINST THE LADING AS TIGHTLY AS THE HOLE SPACING IN THE CROSS MEMBER ATTACHMENT FACILITY PERMITS. EACH CROSS MEMBER WILL BE INSTALLED WITH THE ENDS ATTACHED AS NEARLY AS POSSIBLE IN "MATED" POSITIONS (AT EQUAL HEIGHTS, AND AT EQUAL DISTANCES FROM THE END OF THE CONTAINER). CROSS MEMBERS IN EMPTY CONTAINERS AND THOSE NOT USED IN LOADED CONTAINERS MUST BE FASTENED INTO BELT RAILS FOR SHIPMENT. COMPONENTS ASSIGNED TO EACH CONTAINER MUST REMAIN THEREWITH EVEN THOUGH UNUSED DURING SOME SHIPMENTS. SEE "FILL DETAIL" ON PAGE 3 FOR THE DUNNAGING METHOD REQUIRED TO ELIMINATE AN EXCESSIVE LENGTHWISE VOID WITHIN A LOAD. THE LOAD BLOCKING COMPONENT DESIGNATED AS "CROSS MEMBER" HEREIN IS IDENTIFIED AS "BEAM ASSEMBLY" WITHIN TM 55-8115-200-24, DATED SEPTEMBER 1972. THE BEAM ASSEMBLY IS FURTHER IDENTIFIED AS NSN 8115-00-165-6623 (FSA 8115-165-6623).

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

- LUMBER ----- : SEE TM 743-200-1, DUNNAGE LUMBER; FED SPEC MM-L-751.
- NAILS ----- : FED SPEC FF-N-105, COMMON.
- STRAPPING, STEEL - : CLASS 1, TYPE I OR IV, HEAVY DUTY, FINISH A, B (GRADE 2), OR C; FED SPEC QQ-5-781.
- STRAP SEALS ----- : TYPE D, STYLE I, II, OR IV, CLASS H, FED SPEC QQ-5-781.
- WIRE ----- : FED SPEC QQ-W-461.

(GENERAL NOTES CONTINUED)

- L. VOIDS BETWEEN THE LADING OR HOLD-DOWN ASSEMBLY AND CROSS MEMBERS MUST NOT EXCEED ONE-HALF (1/2") INCH. ADDITIONAL MATERIAL MAY BE ADDED OR THINNER MATERIAL MAY BE USED TO ACHIEVE THE PROPER THICKNESS AS REQUIRED.
- M. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 1" X 6" MATERIAL IS ACTUALLY 3/4" THICK BY 5-1/2" WIDE AND 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE.
- N. NOTICE: A STAGGERED NAILING PATTERN WILL BE USED WHEREVER POSSIBLE WHEN NAILS ARE DRIVEN INTO JOINTS OF DUNNAGE ASSEMBLIES OR WHEN LAMINATING DUNNAGE. ADDITIONALLY, THE NAILING PATTERN FOR AN UPPER PIECE OF LAMINATED DUNNAGE WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL FOR THAT PIECE WILL NOT BE DRIVEN THROUGH ONTO OR RIGHT BESIDE A NAIL IN A LOWER PIECE.
- O. CAUTION: DO NOT NAIL DUNNAGE MATERIAL TO THE CONTAINER WALLS OR FLOOR. ALL NAILING WILL BE WITHIN THE DUNNAGE.
- P. PORTIONS OF THE CONTAINERS DEPICTED WITHIN THIS DRAWING, SUCH AS ONE OF THE SIDE WALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- Q. WHEN ANY STRAP IS SEALED AT AN END-OVER-END LAP JOINT, TWO (2) SEALS, BUTTED TOGETHER, WITH TWO (2) PAIR OF CRIMPS PER SEAL MUST BE USED TO SEAL THE JOINT. WHEN ANY STRAP IS INSTALLED AROUND A BELT RAIL OR A CROSS MEMBER WITH A LAP-BACK-ON-SELF JOINT, ONE (1) SEAL WITH TWO (2) PAIR OF CRIMPS WILL BE USED.
- R. MAXIMUM LOAD WEIGHT CRITERIA:

BECAUSE OF THE LIGHT WEIGHT OF THE DEPICTED ITEM, A LOAD WEIGHT WILL NEVER EXCEED ANY WEIGHT RESTRICTION CRITERIA. HOWEVER, THE LENGTHWISE CENTER OF GRAVITY OF A LOAD MUST BE WITHIN 12", IN EITHER DIRECTION, OF THE MIDPOINT IN A MILVAN.

S. REDUCED-LOAD PROVISIONS:

WHEN A CONTAINER IS TO BE LOADED WITH A REDUCED QUANTITY OF LADING UNITS, THE LENGTHWISE CENTER OF GRAVITY OF A LOAD MUST BE WITHIN 12", IN EITHER DIRECTION, OF THE MIDPOINT IN A MILVAN, AND THE FOLLOWING CRITERIA WILL APPLY:

- A. IF A LOAD IS REDUCED BY ONLY A SMALL AMOUNT, LADING UNITS NORMALLY MAY BE ELIMINATED FROM THE REAR OF THE LOAD. SEE US ARMY DARCOM DRAWING D-AMXAC-4262 FOR ADDITIONAL GUIDANCE.
- B. IF A LOAD IS REDUCED BY A LARGE AMOUNT, LADING UNITS SHOULD BE ELIMINATED FROM LOCATIONS WITHIN THE LOAD OR LADING UNITS SHOULD BE ELIMINATED AS REQUIRED AND THE TOTAL LOAD SHIFTED AS NECESSARY FORE OR AFT, TO ACHIEVE A SYMMETRICAL WEIGHT DISTRIBUTION. THE DEPICTED PROCEDURES WILL BE FOLLOWED AS CLOSELY AS POSSIBLE, MAKING ONLY THOSE ADJUSTMENTS TO THE DUNNAGE WHICH ARE REQUIRED TO ACCOMMODATE THE NUMBER OF UNITS TO BE SHIPPED.
- C. COMBINATIONS OF THE VARIOUS DEPICTED LOADING PATTERNS MAY BE USED TO SATISFY THE NUMBER OF UNITS TO BE SHIPPED. HOWEVER, EACH LOAD BAY WILL BE INDEPENDENTLY BLOCKED AS A SEPARATE LOAD BAY IN ACCORDANCE WITH THE DEPICTED PROCEDURES FOR THAT SPECIFIC LOADING PATTERN.

T. SPECIAL T/COFC NOTES:

1. CAUTION: LOADED CONTAINERS MUST BE ON CHASSIS EQUIPPED WITH TWO BOGIE ASSEMBLIES WHEN BEING MOVED IN TOFC SERVICE, REGARDLESS OF LOAD WEIGHT WITHIN THE CONTAINERS.
2. LOAD LIMITS OF T/COFC RAIL CARS MUST NOT BE EXCEEDED, NOR WILL A CAR BE LOADED SO THAT THE TRUCK UNDER ONE END OF THE CAR CARRIES MORE THAN ONE-HALF OF THE LOAD LIMIT FOR THAT CAR.
3. CHASSIS/CONTAINERS COUPLED INTO A 40-FOOT TRAILER CONFIGURATION MUST BE PLACED AT THE B-END OF A TOFC RAIL CAR. THE REAR END OF THE 40-FOOT UNIT WILL OVER-HANG THE END OF THE CAR IF IT IS PLACED AT THE A-END. TWENTY-FOOT AND 40-FOOT UNITS CAN BE LOADED ON THE SAME CAR.
- U. IN SOME INSTANCES CONTAINERS WILL ALREADY BE UNITIZED WHEN OFFERED FOR LOADING. THESE UNITS SHOULD BE INSPECTED AND, AS REQUIRED, LOOSE UNITIZING STEEL STRAPPING MUST BE REPLACED OR TIGHTENED.
- V. WHEN REFERRING TO THE PALLET UNIT LENGTH OR UNIT WIDTH, THE 40" DIMENSION OF THE PALLET BASE CONSTITUTES THE LENGTH AND THE 48" DIMENSION CONSTITUTES THE WIDTH. SEE THE PALLETIZED UNIT ON PAGE 5. WHEN REFERRING TO THE SKIDDED UNIT LENGTH OR WIDTH, THE 38-1/2" DIMENSION OF THE SKIDDED BASE CONSTITUTES THE LENGTH AND THE 66" DIMENSION CONSTITUTES THE WIDTH. SEE THE SKIDDED UNIT ON PAGE 4.
- W. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES, AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENTS MAY BE COMPUTED ON THE BASIS OF ONE INCH EQUALS 25.4 MM, AND ONE POUND EQUALS 0.454 KG.
- X. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "SPECIAL NOTES" SECTIONS WHICH ARE IMMEDIATELY ADJACENT TO THE DEPICTED OUTLOADING METHODS.

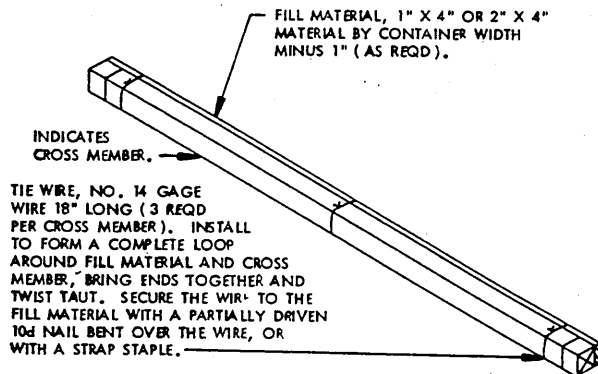
REVISIONS

REVISION NO. 1, DATED JUNE 1983, CONSISTS OF:

1. CHANGING THE DUNNAGE ASSEMBLIES AND STRAPPING ON THE PALLETIZED UNIT OF ALUMINUM CONTAINERS.
2. UPDATING THE GENERAL NOTES AND DRAWING FORMAT.

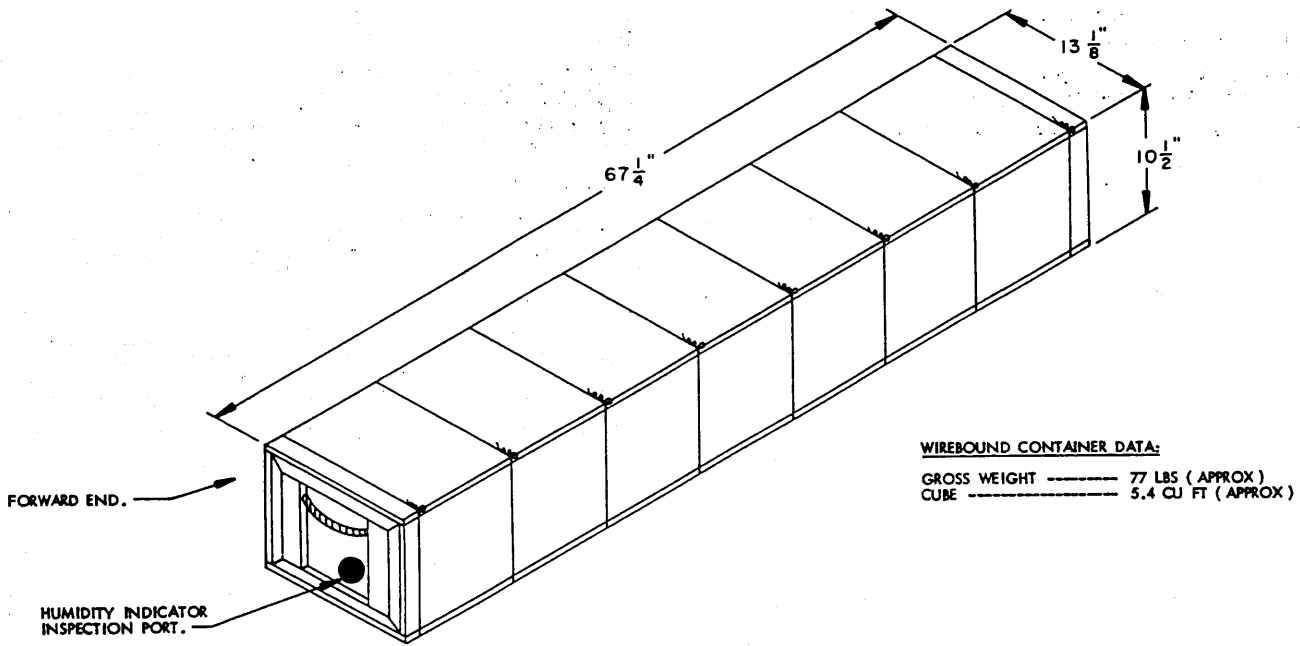
ITEMIZED INDEX

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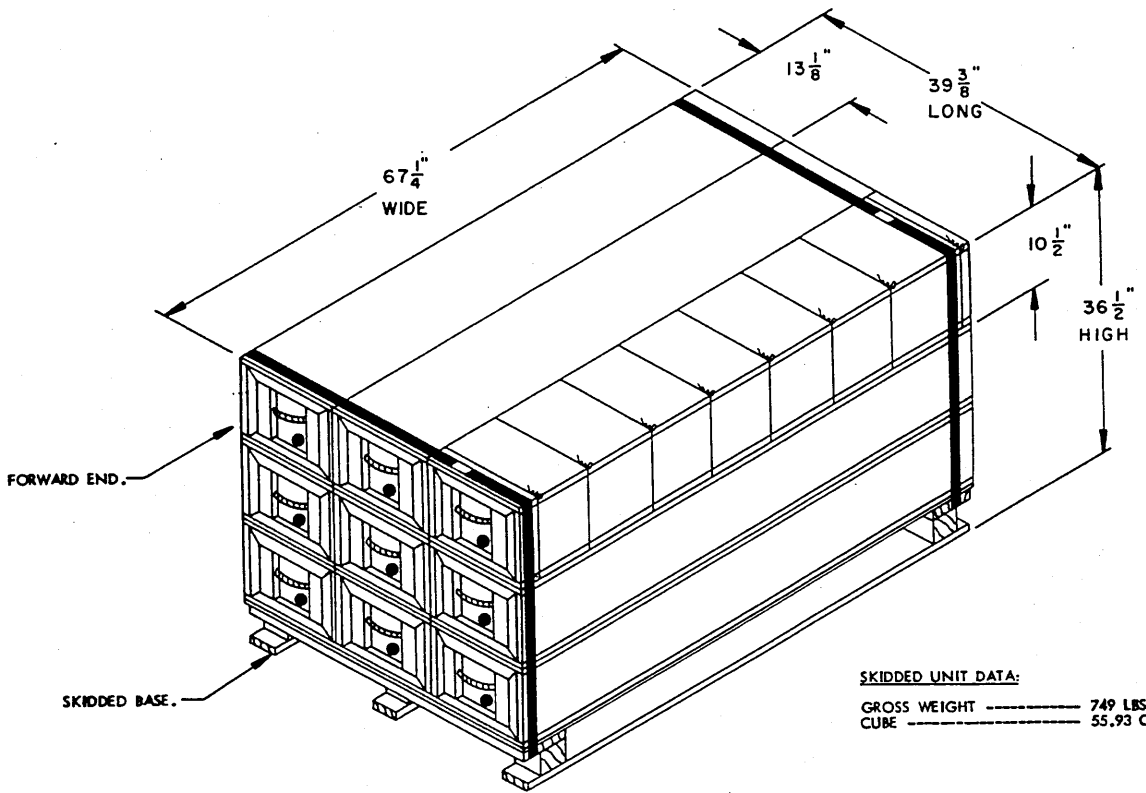
FILL DETAIL

THIS DETAIL DEPICTS METHOD OF POSITIONING FILL MATERIAL BETWEEN CROSS MEMBER AND LADING, WHEN THE VOID BETWEEN THE TWO IS GREATER THAN ONE INCH (1") FOR LONGITUDINAL BRACING.



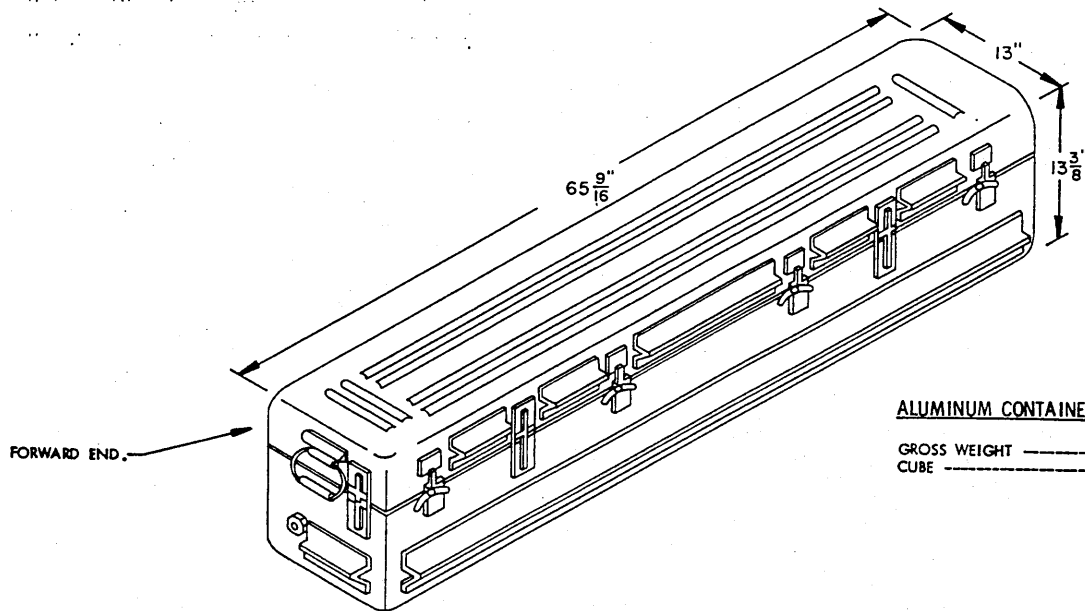
WIREBOUND CONTAINER DATA:
 GROSS WEIGHT ----- 77 LBS (APPROX)
 CUBE ----- 5.4 CU FT (APPROX)

WIREBOUND CONTAINER



SKIDDED UNIT DATA:
 GROSS WEIGHT ----- 749 LBS (APPROX)
 CUBE ----- 55.93 CU FT (APPROX)

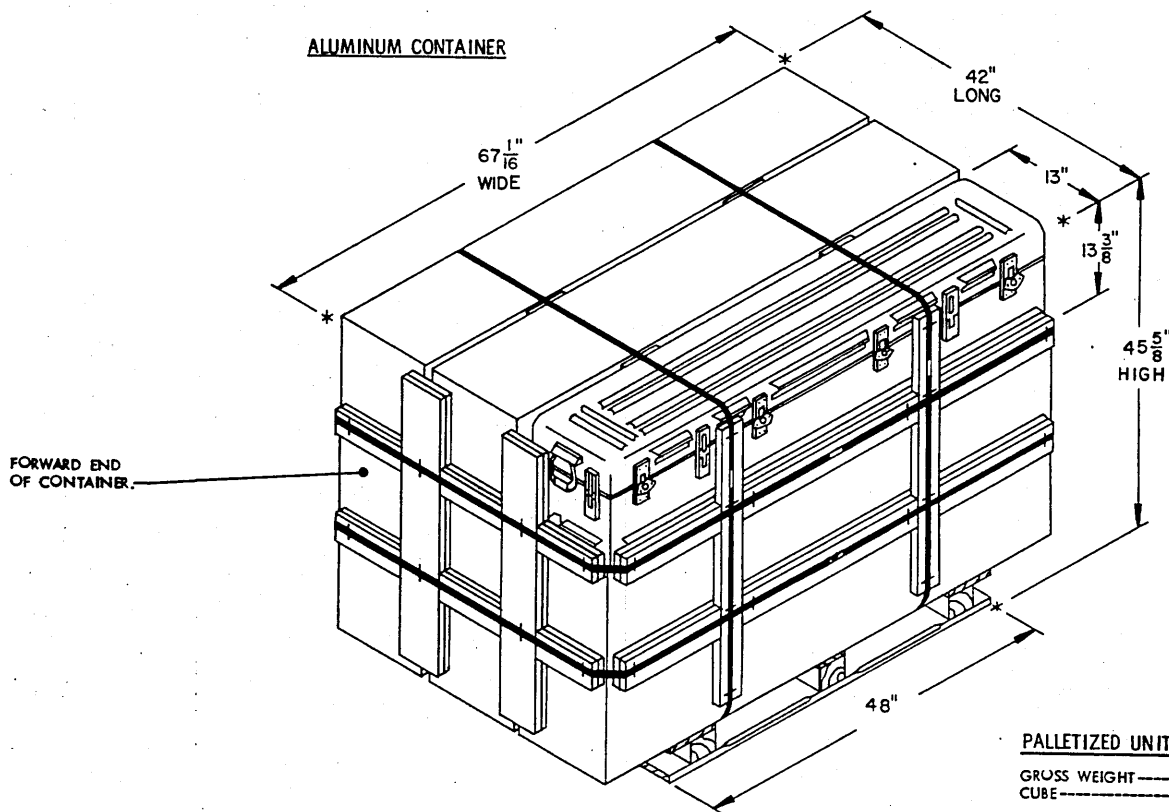
**SKIDDED UNIT OF NINE (9) GUIDED MISSILES,
 PACKED ONE (1) PER WIREBOUND (WOODEN) BOX**



ALUMINUM CONTAINER DETAIL:

GROSS WEIGHT ----- 85-3/4 LBS (APPROX)
 CUBE ----- 6.6 CU FT (APPROX)

ALUMINUM CONTAINER



PALLETIZED UNIT DATA

GROSS WEIGHT ----- 952 LBS (APPROX)
 CUBE ----- 73.81 CU FT (APPROX)

PALLETIZED UNIT OF NINE (9) GUIDED MISSILES,
 PACKED ONE (1) PER ALUMINUM CONTAINER

THIS STACK CONTAINS FOURTY-EIGHT (48) WIREBOUND CONTAINERS. SIX (6) ACROSS AT 13-1/8" AND EIGHT (8) HIGH AT 10-1/2".

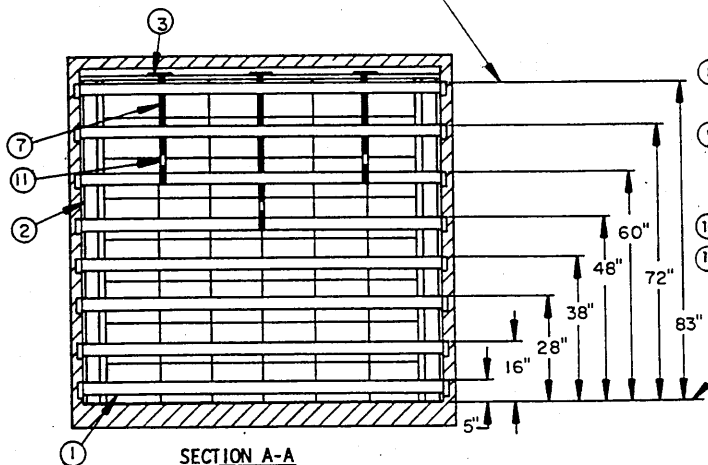
SEE SPECIAL NOTE 4 ON PAGE 7.

REAR OF MILVAN CONTAINER.

THIS STACK CONTAINS EIGHT (8) WIREBOUND CONTAINERS. EIGHT (8) HIGH AT 10-1/2".

ISOMETRIC VIEW

INDICATES THE TOP SURFACE OF A CROSS MEMBER. PLUS OR MINUS 2" IS PERMITTED FOR THE 5" THRU THE 72" DIMENSION, AND PLUS 1" MINUS 1/2" IS PERMITTED FOR THE 83" DIMENSION.



SECTION A-A

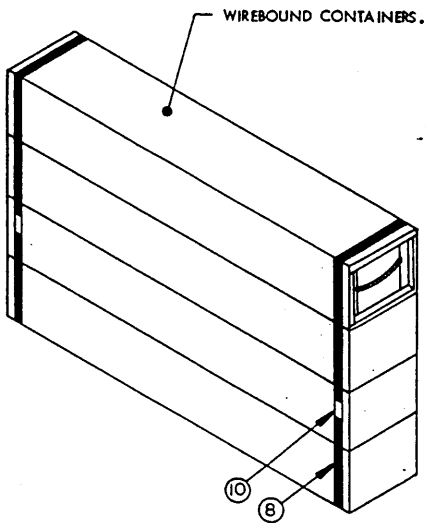
THIS STACK CONTAINS FOURTY-EIGHT (48) WIREBOUND CONTAINERS. SIX (6) ACROSS AT 13-1/8" AND EIGHT (8) HIGH AT 10-1/2".

THIS STACK CONTAINS FOURTY-TWO (42) WIREBOUND CONTAINERS. SIX ACROSS AT 13-1/8" AND SEVEN (7) HIGH AT 10-1/2".

KEY NUMBERS

- ① CROSS MEMBER (LONGITUDINAL BRACING) (23 REQD). POSITION AT THE HEIGHTS SPECIFIED IN "SECTION A-A". SEE GENERAL NOTE "K" ON PAGE 2.
- ② SIDE FILLER ASSEMBLY (6 REQD). SEE THE "SIDE FILLER ASSEMBLY A" DETAIL ON PAGE 21. SEE SPECIAL NOTE 3 ON PAGE 7.
- ③ HOLD-DOWN ASSEMBLY (3 REQD). SEE THE DETAIL ON PAGE 22.
- ④ RISER ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 22.
- ⑤ CROSS MEMBER (HOLD-DOWN) (2 REQD). POSITION AT THE HEIGHT SPECIFIED IN "SECTION A-A". SEE GENERAL NOTE "L" ON PAGE 2.
- ⑥ SIDE FILLER ASSEMBLY (2 REQD). SEE THE "SIDE FILLER ASSEMBLY B" DETAIL ON PAGE 21.
- ⑦ HOLD-DOWN STRAP, 1-1/4" X .035" X 26'-0" LONG STEEL STRAPPING (3 REQD). PRE-POSITION. ATTACH TO THE 48" AND 60" HIGH CROSS MEMBERS AT THE FRONT OF THE LOAD, THREAD OVER THE HOLD-DOWN ASSEMBLY, UNDER THE 83" HIGH HOLD-DOWN CROSS MEMBERS, OVER THE HOLD-DOWN ASSEMBLY. THEN ATTACH TO THE 48" AND 60" HIGH CROSS MEMBERS AS SHOWN IN "SECTION A-A". SEE THE "STRAPPING DIAGRAM A" ON PAGE 7 AND GENERAL NOTE "Q" ON PAGE 2.
- ⑧ UNITIZING STRAP, 3/4" X .035" OR .031" X 10'-0" LONG STEEL STRAPPING (2 REQD). SEE THE "UNITIZATION DETAIL" AND SPECIAL NOTE 4 ON PAGE 7 AND GENERAL NOTE "Q" ON PAGE 2.
- ⑨ HOLD-DOWN STRAP, 1-1/4" X .035" X 10'-0" LONG STEEL STRAPPING (2 REQD). PRE-POSITION. ATTACH TO THE 48" HIGH CROSS MEMBER, THREAD OVER TOP OF WIREBOUND CONTAINERS NEAR OR ON TOP OF THE UNITIZING STRAPS, SHOWN AS PIECES MARKED ⑧, AND ATTACH TO THE 48" HIGH CROSS MEMBER AT THE REAR OF THE LOAD. SEE GENERAL NOTE "Q" ON PAGE 2.
- ⑩ SEAL FOR 3/4" STRAPPING (2 REQD, 1 PER STRAP).
- ⑪ SEAL FOR 1-1/4" STRAPPING (10 REQD, 2 PER STRAP). SEE GENERAL NOTE "Q" ON PAGE 2.

INDICATES MILVAN CONTAINER FLOOR.

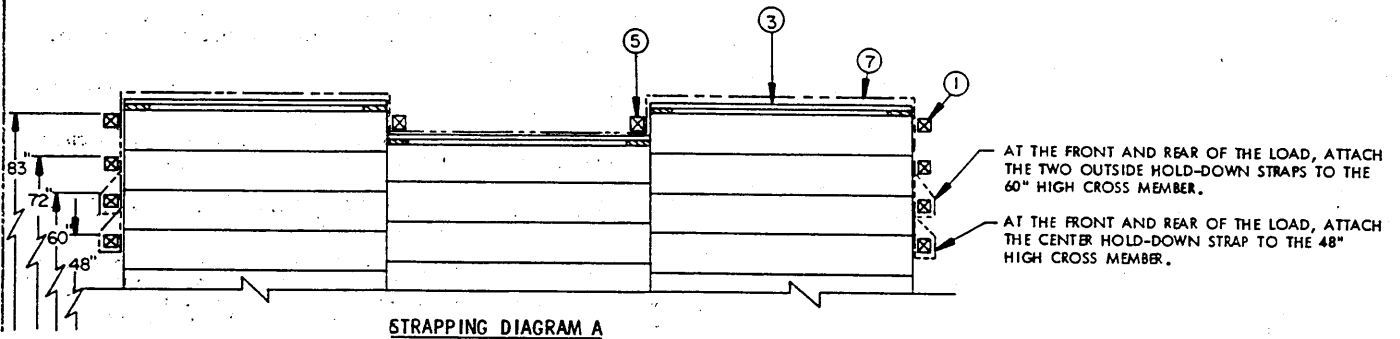


UNITIZATION DETAIL

THIS IS ONLY REQUIRED WHEN THE STACK AT THE REAR OF THE LOAD IS EIGHT (8) HIGH, AND THERE ARE ONLY SEVEN (7) CROSS MEMBERS AVAILABLE. SEE SPECIAL NOTE 4 ON THIS PAGE.

SPECIAL NOTES:

1. A FULL LOAD OF 146 WIREBOUND CONTAINERS IS SHOWN IN A MILVAN CONTAINER. SEE GENERAL NOTE "J" ON PAGE 2.
2. IF A MILVAN CONTAINER IS TO BE LOADED WITH LESS WIREBOUND CONTAINERS THAN SHOWN ON PAGE 6, USE A COMBINATION OF THE LOADS SHOWN ON PAGES 6 THRU 9. SEE GENERAL NOTE "S" ON PAGE 2.
3. THE SIDE FILLER ASSEMBLY SHOULD BE FABRICATED SO THAT IT CAN BE EASILY INSTALLED. HOWEVER, IT MUST FIT TIGHT ENOUGH SO AS NOT TO ALLOW MORE THAN ONE-HALF INCH (1/2") VOID ACROSS THE WIDTH OF A BRACED LOAD.
4. THE TOP FOUR (4) WIREBOUND CONTAINERS IN THE REAR STACK MUST BE UNITIZED AS SHOWN IN THE "UNITIZATION DETAIL" ON THIS PAGE. **NOTE:** FOR A REAR STACK OF SEVEN (7) OR LESS WIREBOUND CONTAINERS, POSITION THE REARMOST TOP CROSS MEMBER AT THE 72" HEIGHT AND OMIT THE UNITIZING STRAPS, SHOWN AS PIECES MARKED (10).



STRAPPING DIAGRAM A

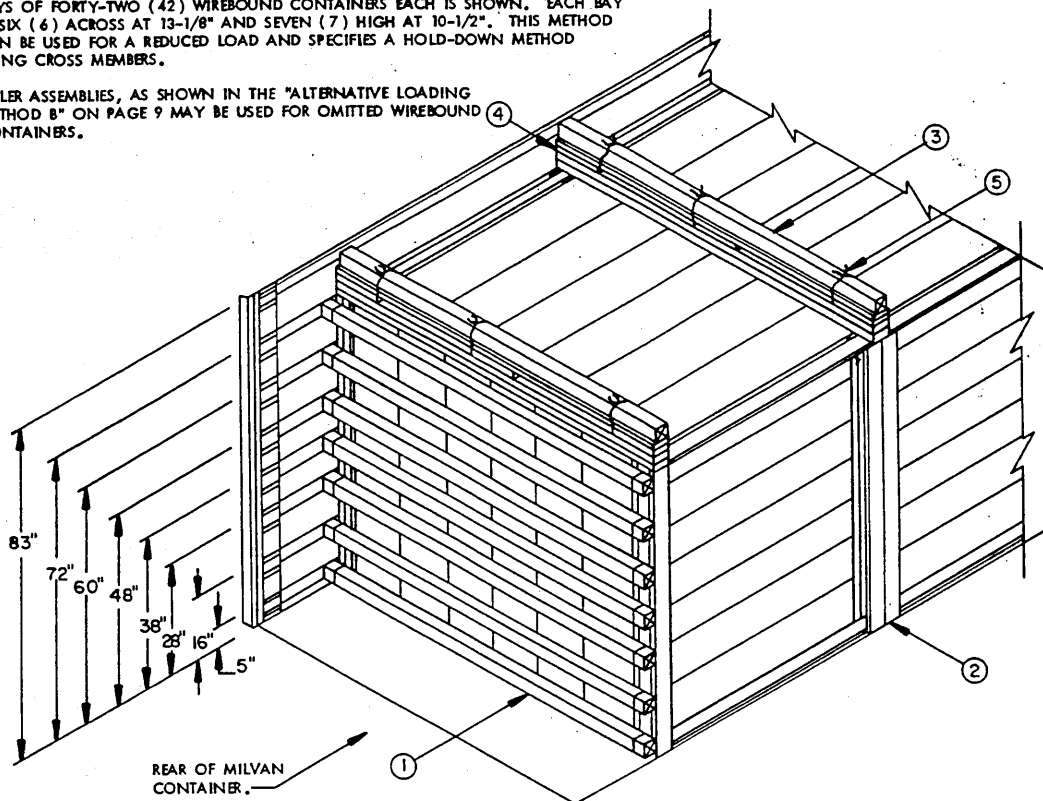
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	84	28
1" X 6"	51	26
2" X 4"	383	256
NAILS	NO. REQD	POUNDS
6d (2")	162	1
10d (3")	298	5
STEEL STRAPPING, 1-1/4" X .035"	98' REQD	14 LBS
STEEL STRAPPING, 3/4" X .035"	20' REQD	2 LBS
SEALS FOR 1-1/4" STRAPPING	10 REQD	NIL
SEALS FOR 3/4" STRAPPING	2 REQD	NIL
CROSS MEMBER	25 REQD	

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
WIREBOUND CONTAINER	146	11,242 LBS
DUNNAGE		642 LBS
MILVAN CONTAINER		5,700 LBS
TOTAL GROSS WEIGHT		17,584 LBS

SPECIAL NOTES:

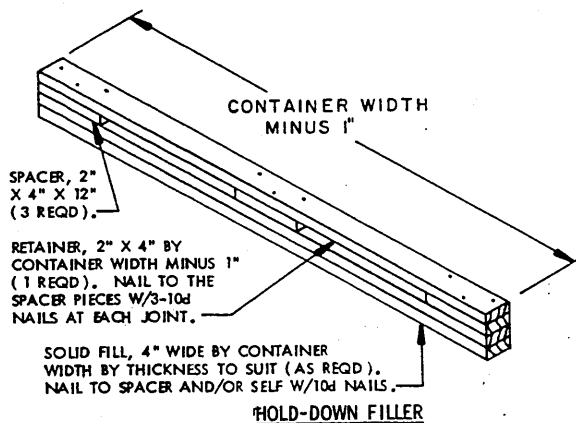
1. A LESS-THAN-FULL LOAD OF 126 WIREBOUND CONTAINERS IS SHOWN IN A MILVAN CONTAINER. ONLY A PARTIAL VIEW OF A TYPICAL LOAD CONSISTING OF THREE BAYS OF FORTY-TWO (42) WIREBOUND CONTAINERS EACH IS SHOWN. EACH BAY IS SIX (6) ACROSS AT 13-1/8" AND SEVEN (7) HIGH AT 10-1/2". THIS METHOD CAN BE USED FOR A REDUCED LOAD AND SPECIFIES A HOLD-DOWN METHOD USING CROSS MEMBERS.
2. FILLER ASSEMBLIES, AS SHOWN IN THE "ALTERNATIVE LOADING METHOD B" ON PAGE 9 MAY BE USED FOR OMITTED WIREBOUND CONTAINERS.



ALTERNATIVE LOADING METHOD A

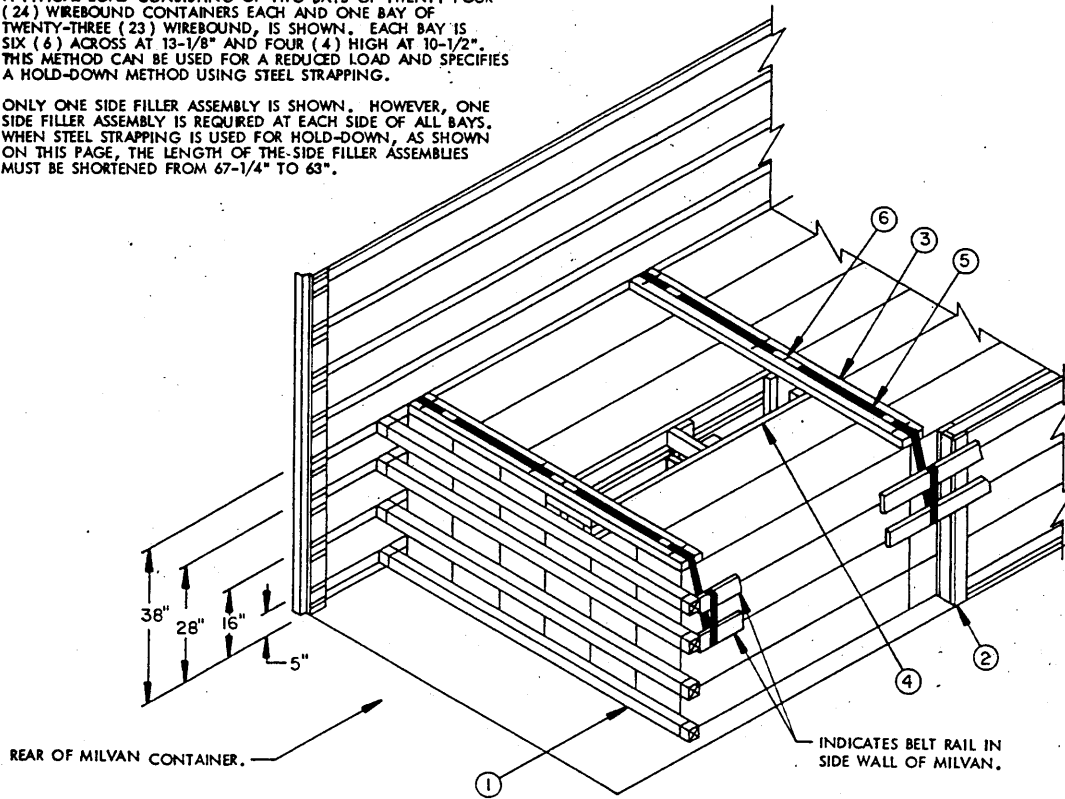
KEY NUMBERS

- ① CROSS MEMBER (LONGITUDINAL BRACING) (14 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE "ALTERNATIVE LOADING METHOD A". SEE GENERAL NOTE "K" ON PAGE 2.
- ② SIDE FILLER ASSEMBLY (6 REQD). SEE THE "SIDE FILLER ASSEMBLY A" DETAIL ON PAGE 21. SEE SPECIAL NOTE 3 ON PAGE 7.
- ③ CROSS MEMBER (HOLD-DOWN) (4 REQD). POSITION AT THE HEIGHT SPECIFIED IN THE "ALTERNATIVE LOADING METHOD A". SEE GENERAL NOTE "L" ON PAGE 2.
- ④ HOLD-DOWN FILLER (4 REQD). SEE THE DETAIL ON THIS PAGE. POSITION THE TWO CENTER HOLD-DOWN FILLERS TO CENTER ON THE JOINT BETWEEN STACKS. WIRE TIE TO THE CROSS MEMBER WITH PIECE MARKED ⑤.
- ⑤ TIE WIRE, NO. 14 GAGE WIRE 24" LONG (3 REQD PER EACH HOLD-DOWN FILLER). INSTALL TO FORM A COMPLETE LOOP AROUND THE HOLD-DOWN FILLER AND CROSS MEMBER, BRING THE ENDS TOGETHER AND TWIST TAUT. SECURE TO THE HOLD-DOWN FILLER WITH A PARTIALLY DRIVEN 10d NAIL BENT OVER THE WIRE, OR WITH A STAPLE.



SPECIAL NOTES:

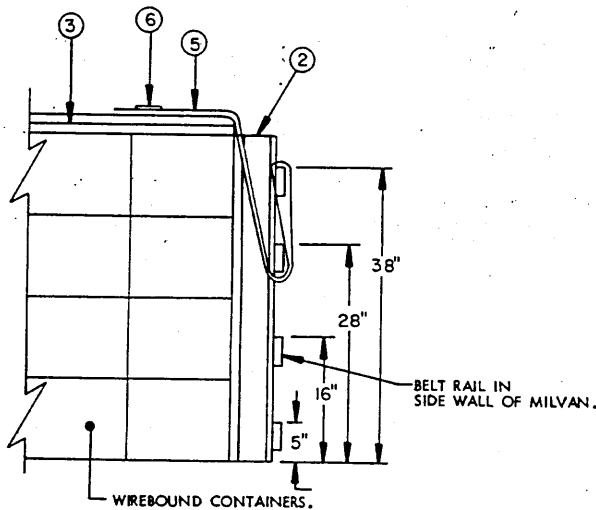
1. A LESS-THAN-FULL LOAD OF 72 WIREBOUND CONTAINERS IS SHOWN IN A MILVAN CONTAINER. ONLY A PARTIAL VIEW OF A TYPICAL LOAD CONSISTING OF TWO BAYS OF TWENTY-FOUR (24) WIREBOUND CONTAINERS EACH AND ONE BAY OF TWENTY-THREE (23) WIREBOUND, IS SHOWN. EACH BAY IS SIX (6) ACROSS AT 13-1/8" AND FOUR (4) HIGH AT 10-1/2". THIS METHOD CAN BE USED FOR A REDUCED LOAD AND SPECIFIES A HOLD-DOWN METHOD USING STEEL STRAPPING.
2. ONLY ONE SIDE FILLER ASSEMBLY IS SHOWN. HOWEVER, ONE SIDE FILLER ASSEMBLY IS REQUIRED AT EACH SIDE OF ALL BAYS. WHEN STEEL STRAPPING IS USED FOR HOLD-DOWN, AS SHOWN ON THIS PAGE, THE LENGTH OF THE SIDE FILLER ASSEMBLIES MUST BE SHORTENED FROM 67-1/4" TO 63".



ALTERNATIVE LOADING METHOD B

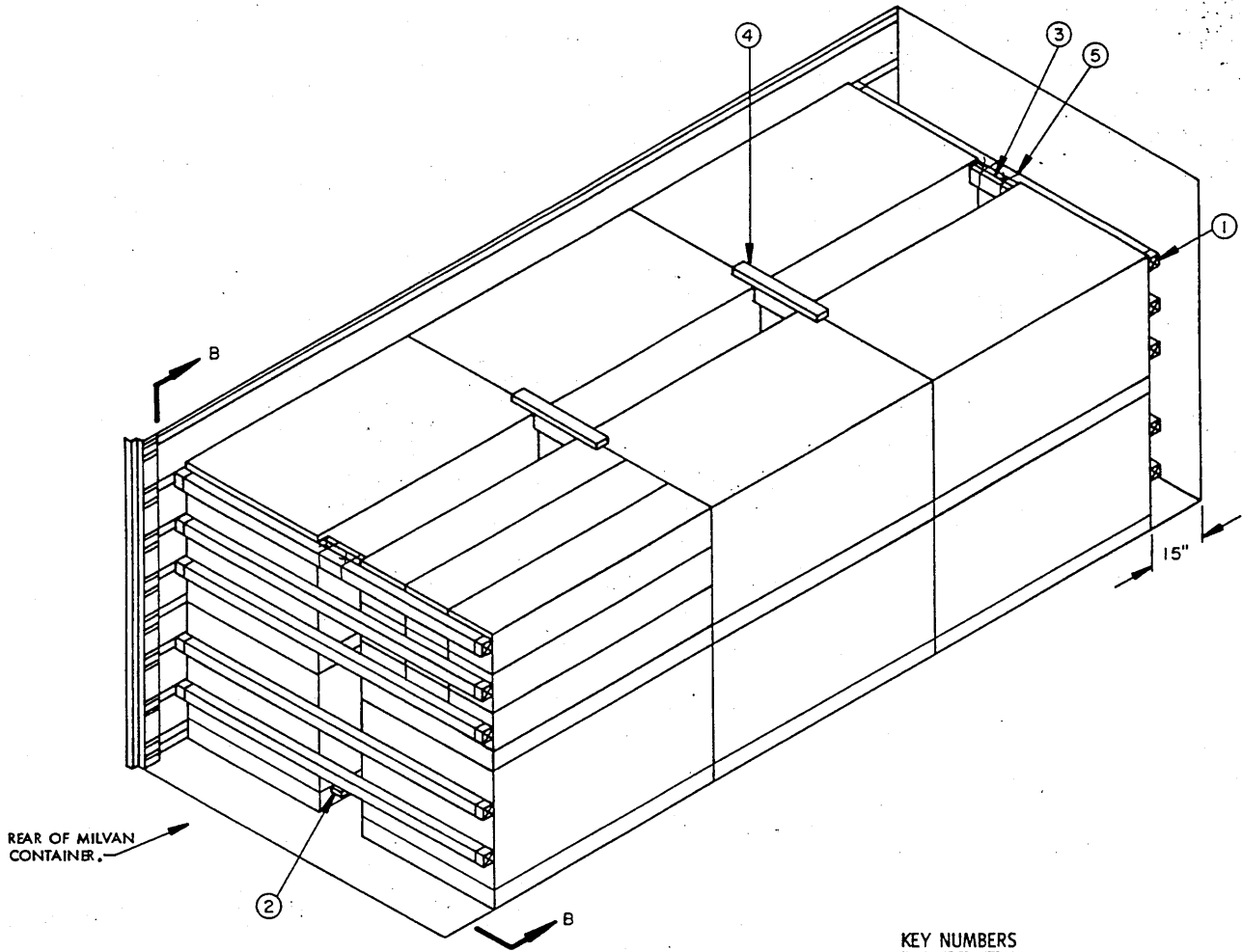
KEY NUMBERS

- 1 CROSS MEMBER (LONGITUDINAL BRACING) (8 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE "ALTERNATIVE LOADING METHOD B". SEE GENERAL NOTE "K" ON PAGE 2.
- 2 SIDE FILLER ASSEMBLY (6 REQD). SEE THE "SIDE FILLER ASSEMBLY A" DETAIL ON PAGE 21. WIRE TIE TO BELT RAIL IN THE MILVAN CONTAINER WITH NO. 14 GAGE WIRE. SEE SPECIAL NOTE 2 ON THIS PAGE.
- 3 STRAPPING BOARD, 2" X 6" BY LADING WIDTH (4 REQD). POSITION THE TWO CENTER STRAPPING BOARDS TO CENTER ON THE JOINTS BETWEEN WIREBOUND CONTAINERS.
- 4 FILLER ASSEMBLY (1 REQD). SEE THE "FILLER ASSEMBLY A" DETAIL ON PAGE 23.
- 5 HOLD-DOWN STRAP, 1-1/4" X .035" BY LENGTH-TO-SUIT STEEL STRAPPING (4 REQD). INSTALL IN TWO (2) PIECES. ATTACH TO THE 38" HIGH BELT RAIL AT EACH SIDE OF THE MILVAN CONTAINER, PASSING OVER THE STRAPPING BOARD WHERE IT IS TENSIONED AND SEALED WITH TWO (2) SEALS. STAPLE TO THE STRAPPING BOARD W/3-1/8" X 3/4" STAPLES. SEE THE "STRAPPING DIAGRAM B" DETAIL ON THIS PAGE AND GENERAL NOTE "Q" ON PAGE 2.
- 6 SEAL FOR 1-1/4" STRAPPING (4 REQD PER STRAP). SEE GENERAL NOTE "Q" ON PAGE 2.



STRAPPING DIAGRAM B

THREAD ONE END OF THE STRAP UNDER AND BEHIND THE 28" HIGH BELT RAIL, UP AND AROUND THE 38" HIGH BELT RAIL, DOWN AND BEHIND THE 28" HIGH BELT RAIL, UP AND CENTERED ON THE STRAPPING BOARD. SEAL WITH ONE SEAL AS SHOWN.



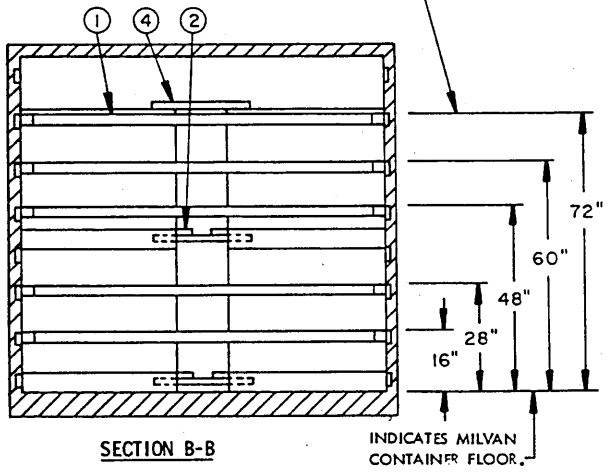
ISOMETRIC VIEW

KEY NUMBERS

- ① CROSS MEMBER (LONGITUDINAL BRACING) (10 REQD). POSITION AT THE HEIGHTS SPECIFIED IN "SECTION B-B". SEE GENERAL NOTE "K" ON PAGE 2.
- ② ANTI-SWAY BRACE ASSEMBLY (6 REQD). SEE THE DETAIL ON PAGE 23. INSTALL BETWEEN LATERALLY ADJACENT UNITS.
- ③ TOP-OF-LOAD ANTI-SWAY BLOCK, 2" X 4" BY CUT-TO-FIT BETWEEN LATERALLY ADJACENT UNITS (DOUBLED) (2 REQD). LAMINATE W/2-10d NAILS AND WIRE TIE TO THE TOP CROSS MEMBER WITH PIECE MARKED ⑤.
- ④ TOP-OF-LOAD ANTI-SWAY BRACE ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 11. WIRE TIE IN PLACE AS SHOWN BY THE "POSITIONING OF TOP-OF-LOAD ANTI-SWAY BRACE ASSEMBLY" ON PAGE 11.
- ⑤ TIE WIRE, NO. 14 GAGE WIRE 24" LONG (4 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND THE TOP-OF-LOAD ANTI-SWAY BLOCK AND CROSS MEMBER, BRING THE ENDS TOGETHER AND TWIST TAUT. SECURE WITH A PARTIALLY DRIVEN 10d NAIL BENT OVER THE WIRE, OR WITH A STAPLE.

REAR OF MILVAN CONTAINER.

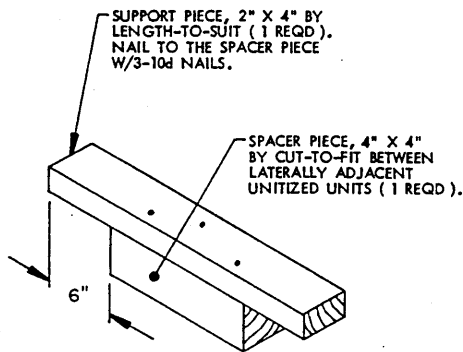
INDICATES THE TOP SURFACE OF A CROSS MEMBER. PLUS OR MINUS 2" IS PERMITTED.



SECTION B-B

INDICATES MILVAN CONTAINER FLOOR.

UNITIZED WIREBOUND CONTAINERS (FULL LOAD)

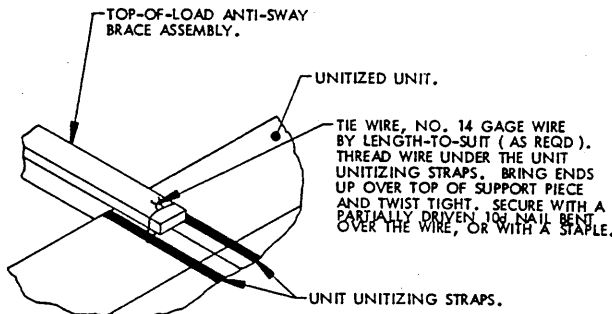


TOP-OF-LOAD ANTI-SWAY BRACE ASSEMBLY

THIS ASSEMBLY IS DESIGNED FOR USE BETWEEN THE TOP OF LATERALLY ADJACENT UNITIZED UNITS OF WIREBOUND CONTAINERS TO PREVENT THE UNITS FROM TOPPLING INTO THE VOID AREA. SEE THE "POSITIONING OF TOP-OF-LOAD ANTI-SWAY BRACE ASSEMBLY" BELOW.

SPECIAL NOTES:

1. A FULL LOAD OF TWELVE (12) UNITIZED UNITS OF WIREBOUND CONTAINERS IS SHOWN IN A MILVAN CONTAINER. SEE GENERAL NOTE "J" ON PAGE 2.
2. IF A MILVAN CONTAINER IS TO BE LOADED WITH LESS UNITIZED UNITS THAN SHOWN ON PAGE 10, USE A COMBINATION OF THE LOADS SHOWN ON PAGES 10 THRU 13. SEE GENERAL NOTE "S" ON PAGE 2.



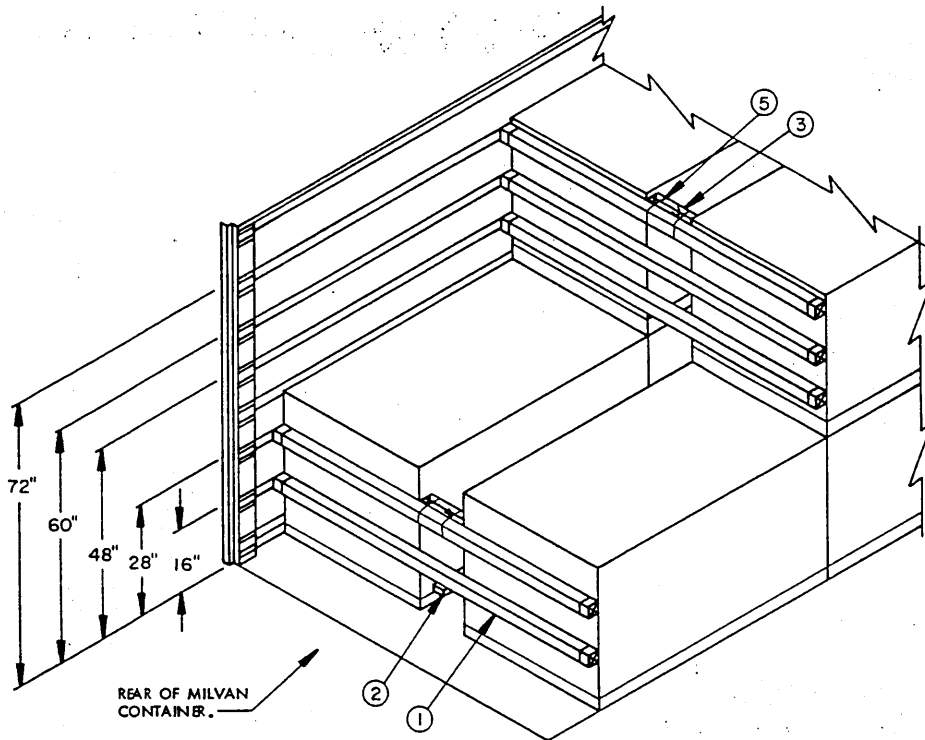
POSITIONING OF TOP-OF-LOAD ANTI-SWAY BRACE ASSEMBLY

POSITION THE TOP-OF-LOAD ANTI-SWAY BRACE ASSEMBLY TO CENTER ON THE JOINT BETWEEN LONGITUDINALLY ADJACENT UNITS AS SHOWN ABOVE.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	28	19
2" X 6"	66	66
4" X 4"	3	4
NAILS	NO. REQD	POUNDS
10d (3")	82	1-1/4
WIRE, NO. 14 GAGE	AS REQD	NIL
CROSS MEMBER		10 REQD

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
UNITIZED UNITS	12	8,988 LBS
DUNNAGE		178 LBS
MILVAN CONTAINER		5,700 LBS
TOTAL GROSS WEIGHT		14,866 LBS



ALTERNATIVE LOADING METHOD C

KEY NUMBERS

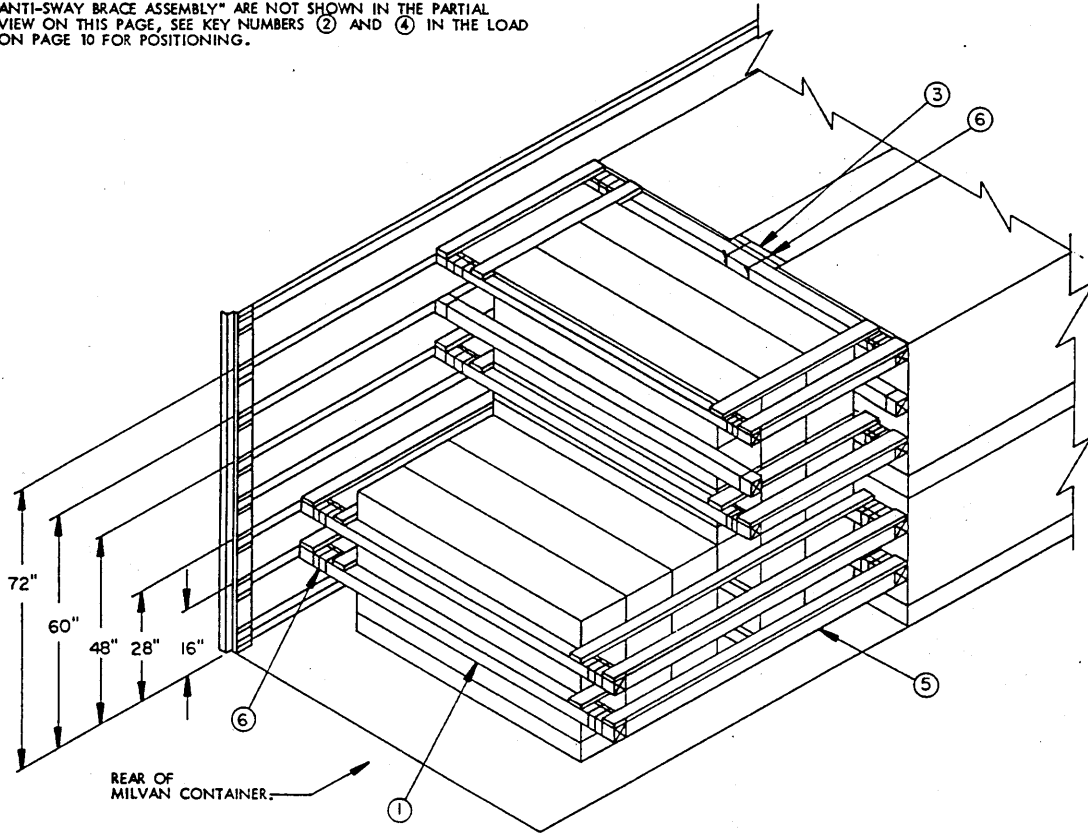
SPECIAL NOTES:

1. A LESS-THAN-FULL LOAD OF TEN (10) UNITIZED UNITS OF WIREBOUND CONTAINERS IS SHOWN IN A MILVAN CONTAINER. ONLY A PARTIAL VIEW OF A TYPICAL LOAD CONSISTING OF TWO BAYS OF FOUR (4) UNITS EACH AND ONE BAY OF TWO (2) UNITS IS SHOWN. THIS METHOD CAN BE USED FOR A REDUCED LOAD. SEE GENERAL NOTE "5" ON PAGE 2.
2. THE "TOP-OF-LOAD ANTI-SWAY BRACE ASSEMBLY" IS NOT SHOWN IN THE PARTIAL VIEW ABOVE. SEE KEY NUMBER ④ IN THE LOAD ON PAGE 10 FOR POSITIONING.

- ① CROSS MEMBER (LONGITUDINAL BRACING) (10 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE "ALTERNATIVE LOADING METHOD C". SEE GENERAL NOTE "K" ON PAGE 2.
- ② ANTI-SWAY BRACE ASSEMBLY (5 REQD). SEE THE DETAIL ON PAGE 23. INSTALL BETWEEN LATERALLY ADJACENT UNITS.
- ③ TOP-OF-LOAD ANTI-SWAY BLOCK, 2" X 4" BY CUT-TO-FIT BETWEEN LATERALLY ADJACENT UNITS (DOUBLED) (3 REQD). LAMINATE W/2-10d NAILS AND WIRE TIE TO THE CROSS MEMBERS WITH PIECE MARKED ⑤. SEE SPECIAL NOTE 2 ON THIS PAGE.
- ④ TOP-OF-LOAD ANTI-SWAY BRACE ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 11. WIRE TIE IN PLACE AS SHOWN BY THE "POSITIONING OF TOP-OF-LOAD ANTI-SWAY BRACE ASSEMBLY" ON PAGE 11. SEE SPECIAL NOTE 2 ON THIS PAGE.
- ⑤ TIE WIRE, NO. 14 GAGE WIRE 24" LONG (6 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND THE "TOP-OF-LOAD ANTI-SWAY BLOCK" AND CROSS MEMBER, BRING THE ENDS TOGETHER AND TWIST TAUT. SECURE WITH A PARTIALLY DRIVEN 10d NAIL BENT OVER THE WIRE, OR WITH A STRAP STAPLE.

SPECIAL NOTES:

1. A LESS-THAN-FULL LOAD OF ELEVEN (11) UNITIZED UNITS OF WIREBOUND CONTAINERS IS SHOWN IN A MILVAN CONTAINER. ONLY A PARTIAL VIEW OF A TYPICAL LOAD CONSISTING OF TWO BAYS OF FOUR (4) UNITS EACH AND ONE BAY OF THREE (3) UNITS IS SHOWN. THIS METHOD CAN BE USED FOR A REDUCED LOAD. SEE GENERAL NOTE "S" ON PAGE 2.
2. THE "ANTI-SWAY BRACE ASSEMBLY" AND THE "TOP-OF-LOAD ANTI-SWAY BRACE ASSEMBLY" ARE NOT SHOWN IN THE PARTIAL VIEW ON THIS PAGE, SEE KEY NUMBERS ② AND ④ IN THE LOAD ON PAGE 10 FOR POSITIONING.



ALTERNATIVE LOADING METHOD D

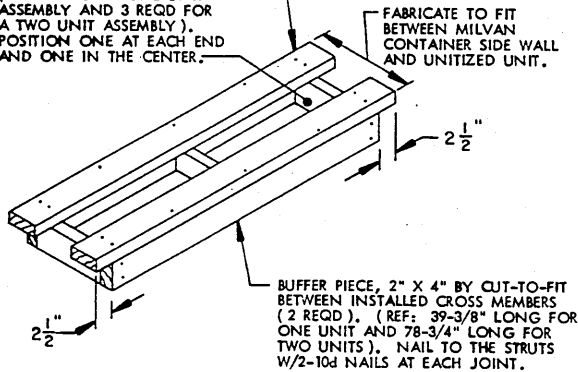
KEY NUMBERS

- ① CROSS MEMBER (LONGITUDINAL BRACING) (15 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE "ALTERNATIVE LOADING METHOD D". SEE GENERAL NOTE "K" ON PAGE 2.
- ② ANTI-SWAY BRACE ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 23. INSTALL BETWEEN LATERALLY ADJACENT UNITS. SEE SPECIAL NOTE 2 ON THIS PAGE.
- ③ TOP-OF-LOAD ANTI-SWAY BLOCK, 2" X 4" BY CUT-TO-FIT BETWEEN LATERALLY ADJACENT UNITS (DOUBLED) (2 REQD). LAMINATE W/2-10d NAILS AND WIRE TIE TO THE CROSS MEMBERS WITH PIECE MARKED ⑥.
- ④ TOP-OF-LOAD ANTI-SWAY BRACE ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 11. WIRE TIE IN PLACE AS SHOWN BY THE "POSITIONING OF TOP-OF-LOAD ANTI-SWAY BRACE ASSEMBLY" ON PAGE 11. SEE SPECIAL NOTE 2 ON THIS PAGE.
- ⑤ SPACER ASSEMBLY (8 REQD). SEE THE "SPACER ASSEMBLY A" DETAIL ON THIS PAGE.
- ⑥ TIE WIRE, NO. 14 GAGE WIRE 24" LONG (36 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND THE "TOP-OF-LOAD ANTI-SWAY BLOCK" AND CROSS MEMBER OR THE "SPACER ASSEMBLY A" AND CROSS MEMBER, BRING THE ENDS TOGETHER AND TWIST TAUT. SECURE WITH A PARTIALLY DRIVEN 10d NAIL BENT OVER THE WIRE, OR WITH A STAPLE.

RETAINER PIECE, 2" X 4" BY THE DISTANCE BETWEEN INSTALLED CROSS MEMBERS PLUS 5" (2 REQD). NAIL TO THE BUFFER PIECE W/1-10d NAIL EVERY 12" AND TO THE STRUTS W/1-10d NAIL AT EACH JOINT.

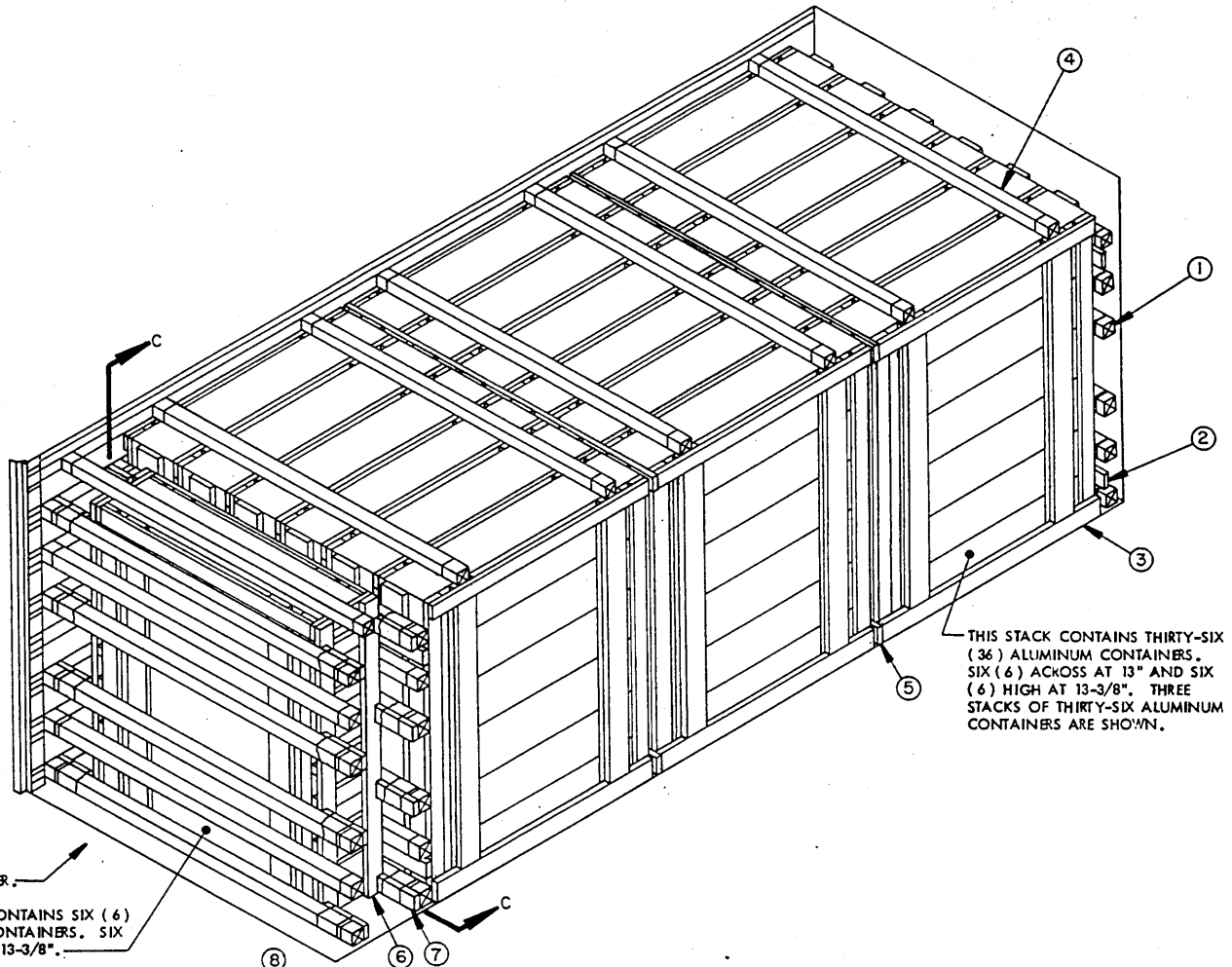
STRUT, 2" X 4" BY CUT-TO-FIT (2 REQD FOR A ONE UNIT ASSEMBLY AND 3 REQD FOR A TWO UNIT ASSEMBLY). POSITION ONE AT EACH END AND ONE IN THE CENTER.

FABRICATE TO FIT BETWEEN MILVAN CONTAINER SIDE WALL AND UNITIZED UNIT.



SPACER ASSEMBLY A

DO NOT FABRICATE FOR A DRIVE FIT. FABRICATE SO THAT IT CAN BE EASILY INSTALLED. HOWEVER, IT MUST FIT TIGHT ENOUGH SO AS TO NOT ALLOW MORE THAN ONE-HALF INCH (1/2") VOID ACROSS THE WIDTH OF A BRACED LOAD.



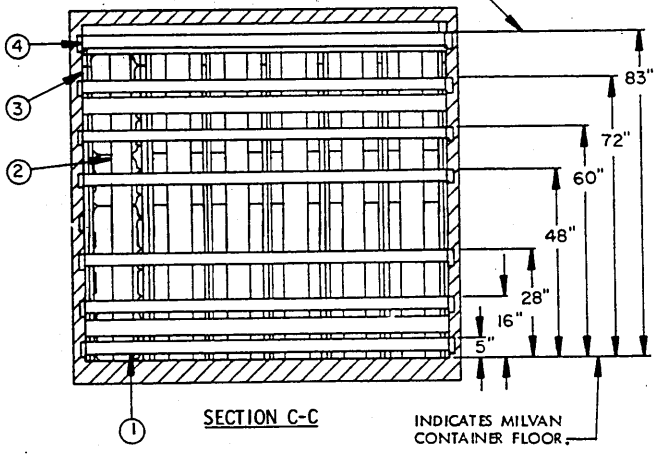
REAR OF MILVAN CONTAINER.

THIS STACK CONTAINS SIX (6) ALUMINUM CONTAINERS. SIX (6) HIGH AT 13-3/8".

THIS STACK CONTAINS THIRTY-SIX (36) ALUMINUM CONTAINERS. SIX (6) ACROSS AT 13" AND SIX (6) HIGH AT 13-3/8". THREE STACKS OF THIRTY-SIX ALUMINUM CONTAINERS ARE SHOWN.

ISOMETRIC VIEW

INDICATES THE TOP SURFACE OF A CROSS MEMBER. PLUS OR MINUS 2" IS PERMITTED FOR THE 5" THRU 72" DIMENSION, AND PLUS 1/2" MINUS 1/2" IS PERMITTED FOR THE 83" DIMENSION.

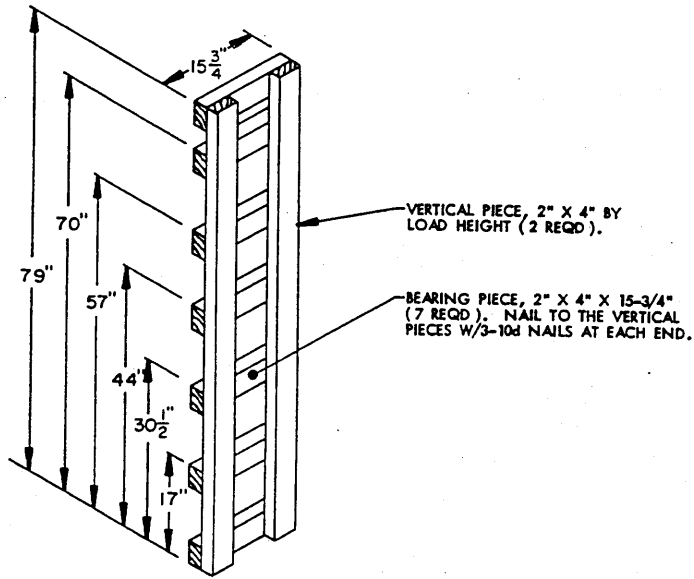


SECTION C-C

INDICATES MILVAN CONTAINER FLOOR.

KEY NUMBERS

- ① CROSS MEMBER (LONGITUDINAL BRACING) (18 REQD). POSITION AT THE HEIGHTS SPECIFIED IN "SECTION C-C". SEE GENERAL NOTE "K" ON PAGE 2.
- ② END BLOCKING ASSEMBLY (2 REQD). SEE THE "END BLOCKING ASSEMBLY A" DETAIL ON PAGE 17.
- ③ SPACER ASSEMBLY (23 REQD). SEE THE "SPACER ASSEMBLY B" DETAIL ON PAGE 24.
- ④ CROSS MEMBER (HOLD DOWN) (7 REQD). POSITION AT THE HEIGHT SPECIFIED IN "SECTION C-C". SEE GENERAL NOTE "L" ON PAGE 2.
- ⑤ SEPARATOR ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 24.
- ⑥ SIDE BLOCKING ASSEMBLY (2 REQD). SEE THE "SIDE BLOCKING ASSEMBLY A" DETAIL ON PAGE 15.
- ⑦ RETAINER BLOCK, 2" X 4" BY CUT-TO-FIT BETWEEN THE MILVAN SIDE WALL AND THE "SIDE BLOCKING ASSEMBLY A" (16 REQD). WIRE TIE WITH PIECE MARKED ⑧.
- ⑧ TIE WIRE, NO. 14 GAGE WIRE, 24" LONG (2 REQD PER EACH RETAINER BLOCK). INSTALL TO FORM A COMPLETE LOOP AROUND THE RETAINER BLOCK AND CROSS MEMBER, BRING THE ENDS TOGETHER AND TWIST TAUT. SECURE TO THE RETAINER BLOCK WITH A PARTIALLY DRIVEN 10d NAIL BENT OVER THE WIRE, OR WITH A STAPLE.



SIDE BLOCKING ASSEMBLY A

THIS ASSEMBLY IS DESIGNED FOR USE WITHIN LOADS OF UNPALLETIZED ALUMINUM CONTAINERS.

SPECIAL NOTES:

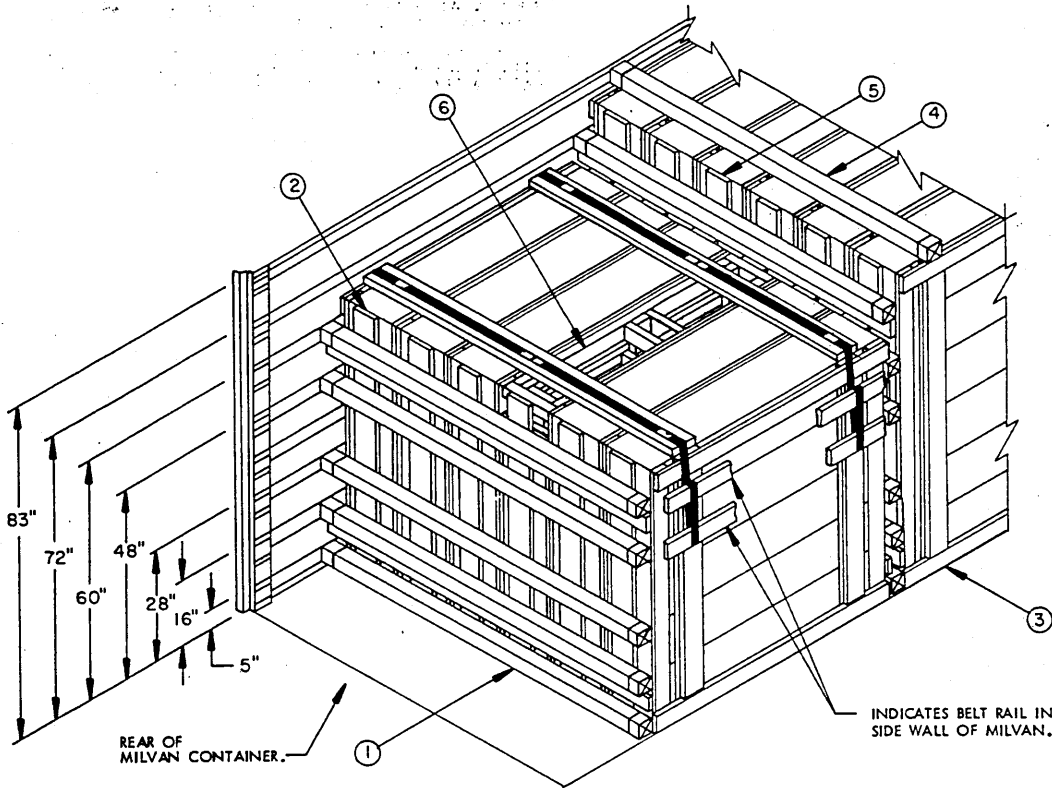
1. A FULL LOAD OF 114 ALUMINUM CONTAINERS IS SHOWN IN A MILVAN CONTAINER. SEE GENERAL NOTE "J" ON PAGE 2.
2. IF A MILVAN CONTAINER IS TO BE LOADED WITH LESS ALUMINUM CONTAINERS THAN SHOWN ON PAGE 14, USE A COMBINATION OF THE LOADS SHOWN ON PAGES 14 THRU 17. SEE GENERAL NOTE "S" ON PAGE 2.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	581	194
1" X 6"	722	361
2" X 4"	90	60
2" X 6"	80	80
NAILS	NO. REQD	POUNDS
6d (2")	1,030	6-1/4
10d (3")	156	2-1/2
NO. 14 GAGE WIRE	64' REQD	1 LB
CROSS MEMBER	25 REQD	

LOAD AS SHOWN

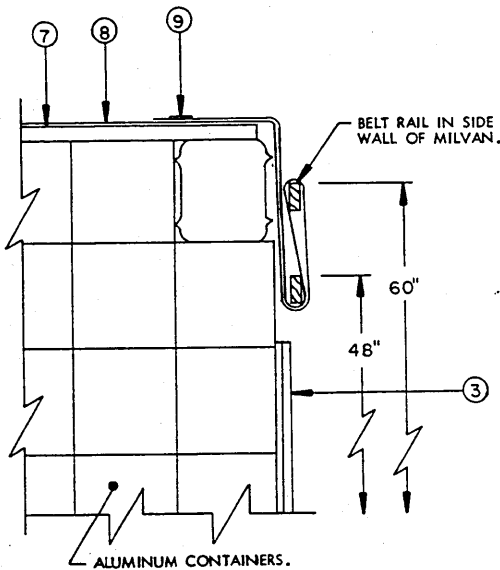
ITEM	QUANTITY	WEIGHT (APPROX)
ALUMINUM CONTAINERS	114	9,776 LBS
DUNNAGE		1,400 LBS
MILVAN CONTAINER		5,700 LBS
TOTAL GROSS WEIGHT		16,876 LBS



ALTERNATIVE LOADING METHOD E

KEY NUMBERS

- ① CROSS MEMBER (LONGITUDINAL BRACING) (17 REQD), POSITION AT THE HEIGHTS SPECIFIED IN THE "ALTERNATIVE LOADING METHOD E". SEE GENERAL NOTE "K" ON PAGE 2.
- ② END BLOCKING ASSEMBLY (4 REQD), SEE THE "END BLOCKING ASSEMBLY A" DETAIL ON PAGE 17.
- ③ SPACER ASSEMBLY (21 REQD), SEE THE "SPACER ASSEMBLY B" DETAIL ON PAGE 24.
- ④ CROSS MEMBER (HOLD DOWN) (4 REQD), POSITION AT THE HEIGHT SPECIFIED IN THE "ALTERNATIVE LOADING METHOD E". SEE GENERAL NOTE "L" ON PAGE 2.
- ⑤ SEPARATOR ASSEMBLY (2 REQD), SEE THE DETAIL ON PAGE 24.
- ⑥ FILLER ASSEMBLY (1 REQD), SEE THE "FILLER ASSEMBLY B" DETAIL ON PAGE 17.
- ⑦ STRAPPING BOARD, 2" X 6" BY LADING WIDTH MINUS 4" (2 REQD), POSITION IN LINE WITH THE VERTICAL PIECES ON THE SPACER ASSEMBLIES.
- ⑧ HOLD-DOWN STRAP, 1-1/4" X .035" BY LENGTH-TO-SUIT STEEL STRAPPING (2 REQD), INSTALL IN TWO (2) PIECES. ATTACH TO THE 60" HIGH BELT RAIL AT EACH SIDE OF THE MILVAN CONTAINER, PASSING OVER THE STRAPPING BOARD WHERE IT IS TENSIONED AND SEALED WITH TWO (2) SEALS. STAPLE TO THE STRAPPING BOARD W/3-1-3/8" X 3/4" STAPLES. SEE THE "STRAPPING DIAGRAM C" DETAIL ON THIS PAGE AND GENERAL NOTE "Q" ON PAGE 2.
- ⑨ SEAL FOR 1-1/4" STRAPPING (4 REQD PER STRAP), SEE GENERAL NOTE "Q" ON PAGE 2.

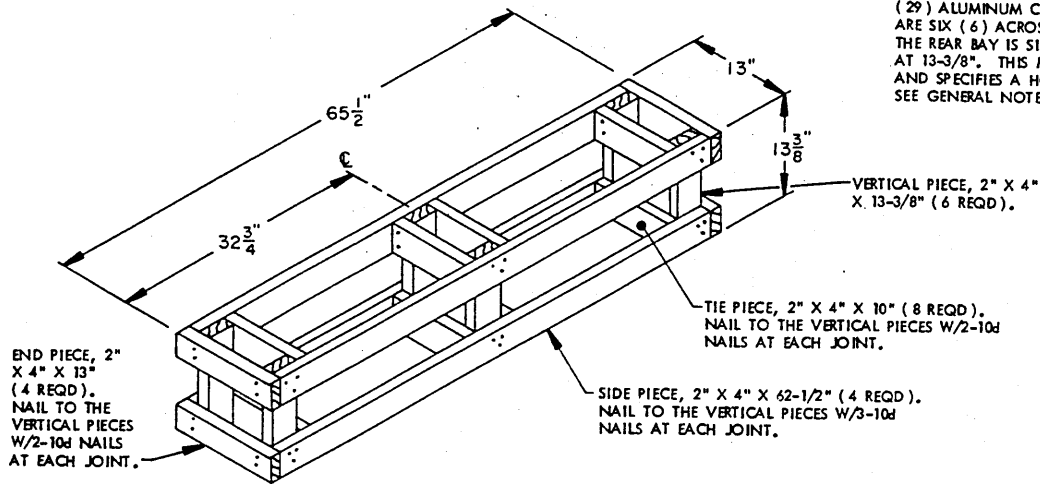


STRAPPING DIAGRAM C

THREAD ONE END OF THE STRAP UNDER AND BEHIND THE 48" HIGH BELT RAIL, UP AND AROUND THE 60" HIGH BELT RAIL, DOWN AND BEHIND THE 48" HIGH BELT RAIL, UP AND CENTERED ON THE STRAPPING BOARD. SEAL WITH ONE SEAL AS SHOWN.

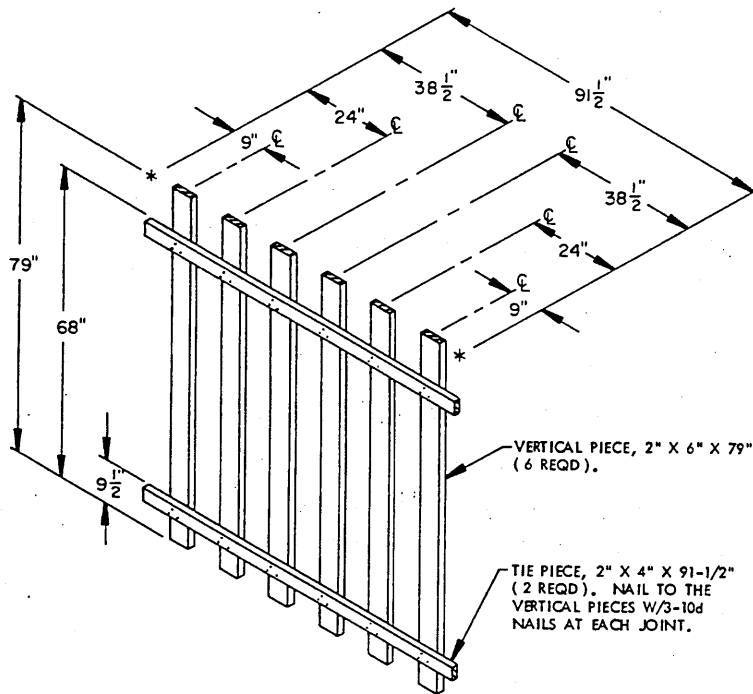
SPECIAL NOTE:

1. A LESS-THAN-FULL-LOAD OF 101 ALUMINUM CONTAINERS IS SHOWN IN A MILVAN CONTAINER. ONLY A PARTIAL VIEW OF A TYPICAL LOAD CONSISTING OF TWO BAYS OF THIRTY-SIX (36) ALUMINUM CONTAINERS EACH AND ONE BAY OF TWENTY-NINE (29) ALUMINUM CONTAINERS IS SHOWN. THE FIRST TWO BAYS ARE SIX (6) ACROSS AT 13" AND SIX (6) HIGH AT 13-3/8". THE REAR BAY IS SIX (6) ACROSS AT 13" AND FIVE (5) HIGH AT 13-3/8". THIS METHOD CAN BE USED FOR A REDUCED LOAD AND SPECIFIES A HOLD-DOWN METHOD USING STEEL STRAPPING. SEE GENERAL NOTE "5" ON PAGE 2.



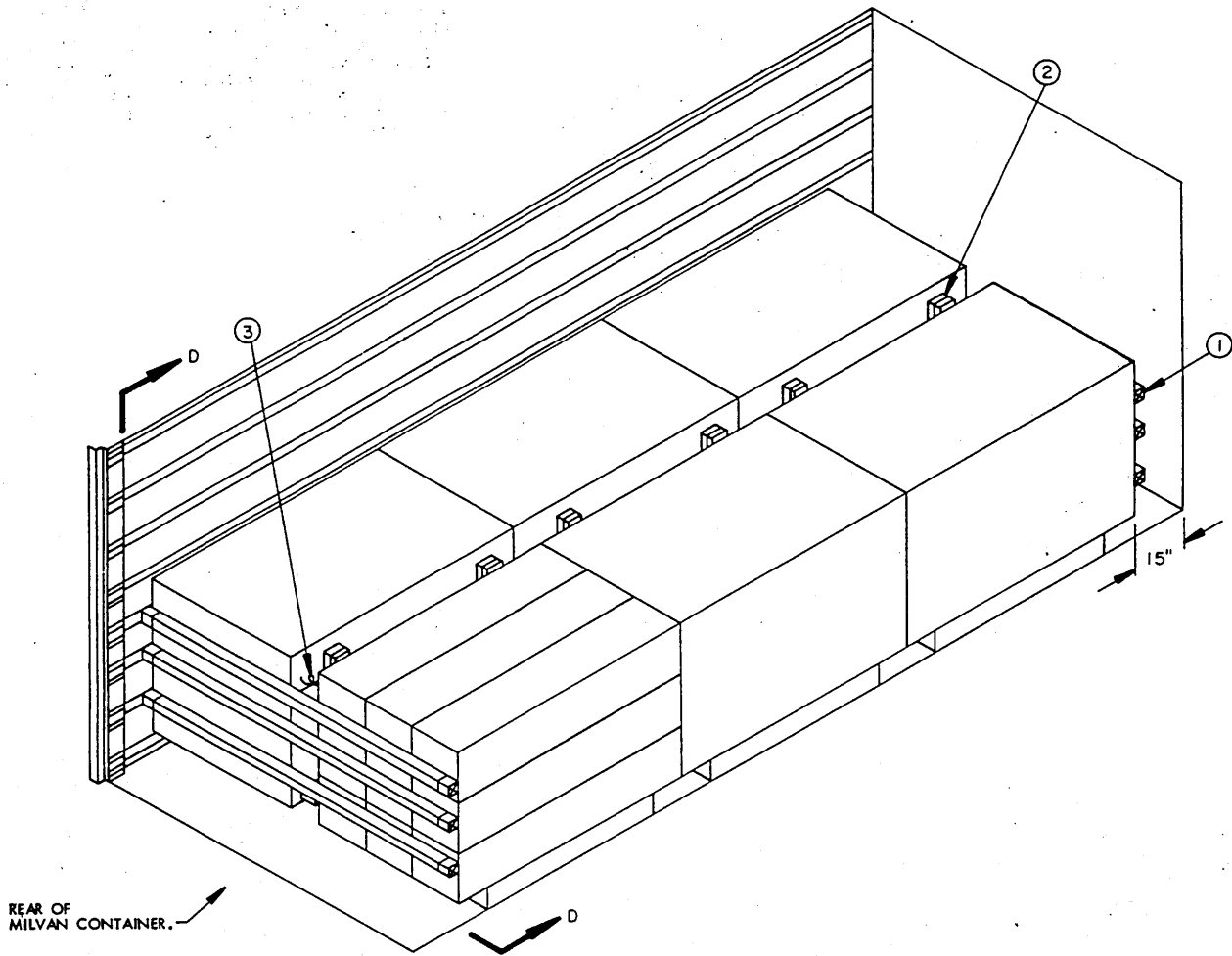
FILLER ASSEMBLY B

THE FILLER ASSEMBLY SHOWN ABOVE IS TO BE USED WITHIN LOADS TO TAKE THE PLACE OF AN OMITTED ALUMINUM CONTAINER. IT MUST BE USED IN THE TOP LAYER ONLY.



END BLOCKING ASSEMBLY A

THIS ASSEMBLY IS DESIGNED FOR USE WITHIN LOADS OF UNPALLETIZED ALUMINUM CONTAINERS.

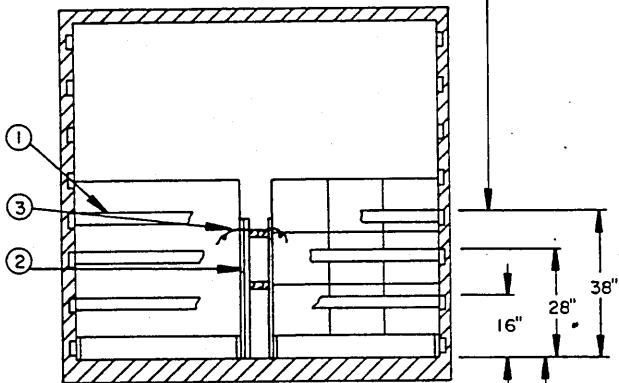


ISOMETRIC VIEW

KEY NUMBERS

- ① CROSS MEMBER (LONGITUDINAL BRACING) (6 REQD). POSITION AT THE HEIGHTS SPECIFIED IN "SECTION D-D". SEE GENERAL NOTE "K" ON PAGE 2.
- ② SPACER ASSEMBLY (3 REQD). SEE THE "SPACER ASSEMBLY C" DETAIL ON PAGE 19. WIRE TIE IN PLACE WITH PIECE MARKED ③ .
- ③ TIE WIRE, NO. 14 GAGE WIRE 36" LONG (6 REQD). INSTALL OVER TOP OF THE TIE PIECE ON THE SPACER ASSEMBLY AND LOOP THRU THE UNITIZING STRAPS ON THE PALLET UNIT. SECURE TO THE SPACER ASSEMBLY WITH ONE PARTIALLY DRIVEN 10d NAIL BENT OVER THE WIRE, OR WITH A STAPLE.

INDICATES THE TOP SURFACE OF A CROSS MEMBER. PLUS OR MINUS 2" IS PERMITTED.

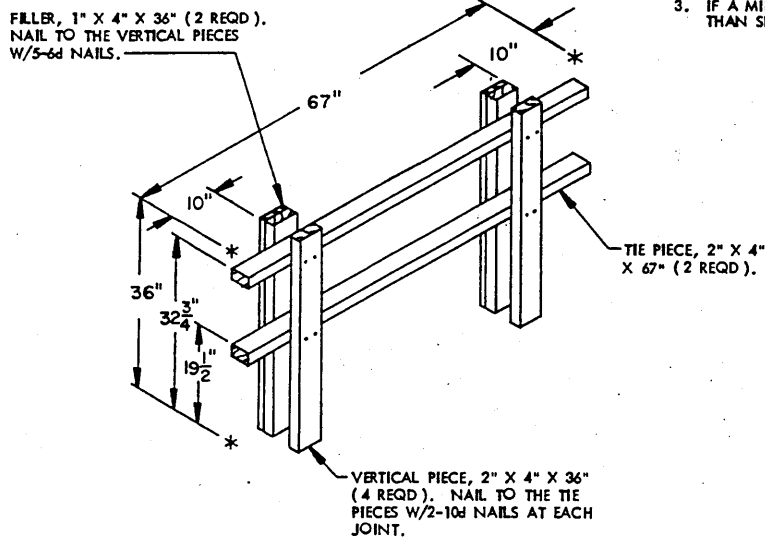


SECTION D-D

INDICATES MILVAN CONTAINER FLOOR.

SPECIAL NOTES:

1. A FULL LOAD OF SIX (6) PALLETIZED UNITS OF ALUMINUM CONTAINERS IS SHOWN IN A MILVAN CONTAINER. SEE GENERAL NOTE "J" ON PAGE 2.
2. DUE TO THE HEIGHT OF THE PALLETIZED UNIT, ONLY ONE LAYER CAN BE LOADED IN A MILVAN CONTAINER.
3. IF A MILVAN CONTAINER IS TO BE LOADED WITH LESS PALLETIZED UNITS THAN SHOWN ON PAGE 18, SEE THE LOAD ON PAGE 20.



SPACER ASSEMBLY C

THIS ASSEMBLY IS DESIGNED FOR USE WITHIN LOADS OF PALLETIZED ALUMINUM CONTAINERS.

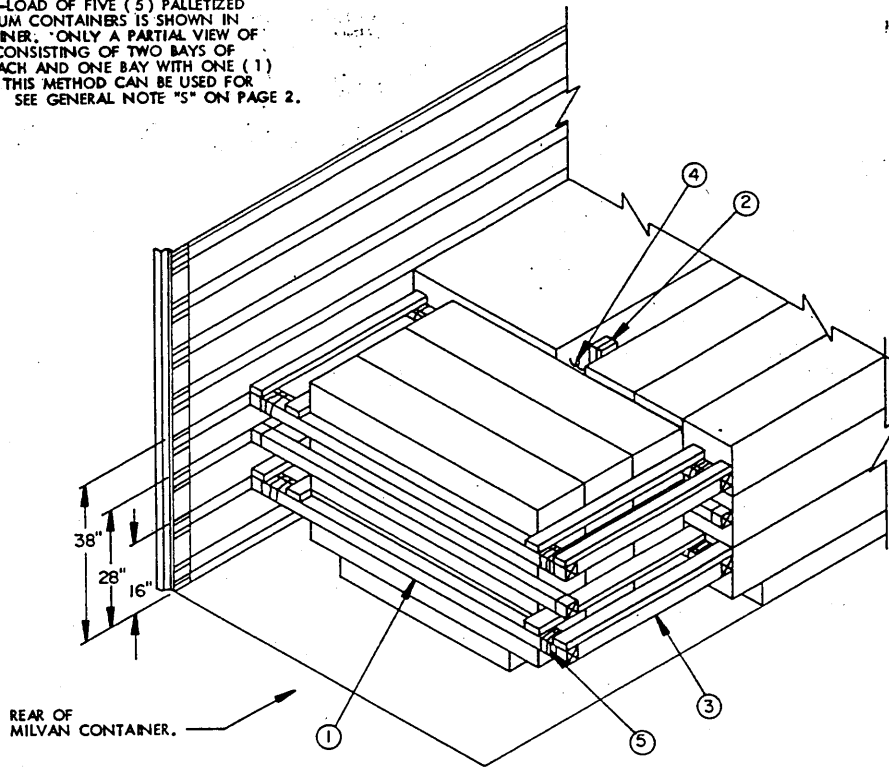
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	21	7
2" X 4"	76	51
NAILS	NO. REQD	POUNDS
6d (2")	30	1/4
10d (3")	48	3/4
NO. 14 GAGE WIRE	18' REQD	NIL
CROSS MEMBER		6 REQD

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLETIZED UNITS	6	5,712 LBS
DUNNAGE		117 LBS
MILVAN CONTAINER		5,700 LBS
TOTAL GROSS WEIGHT		11,529 LBS

SPECIAL NOTE:

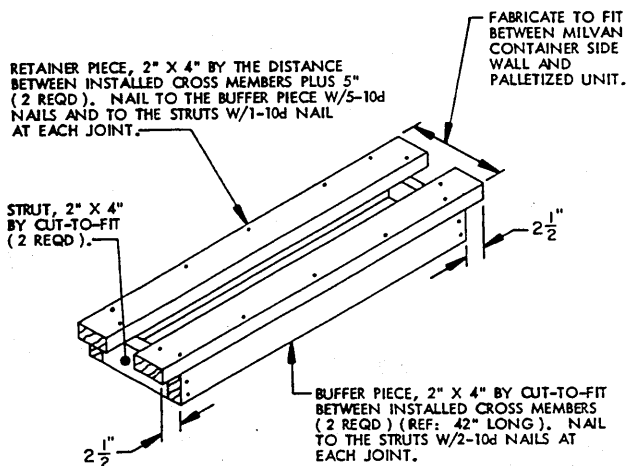
1. A LESS-THAN-FULL-LOAD OF FIVE (5) PALLETIZED UNITS OF ALUMINUM CONTAINERS IS SHOWN IN A MILVAN CONTAINER. ONLY A PARTIAL VIEW OF A TYPICAL LOAD CONSISTING OF TWO BAYS OF TWO (2) UNITS EACH AND ONE BAY WITH ONE (1) UNIT IS SHOWN. THIS METHOD CAN BE USED FOR A REDUCED LOAD. SEE GENERAL NOTE "5" ON PAGE 2.



ALTERNATIVE LOADING METHOD F

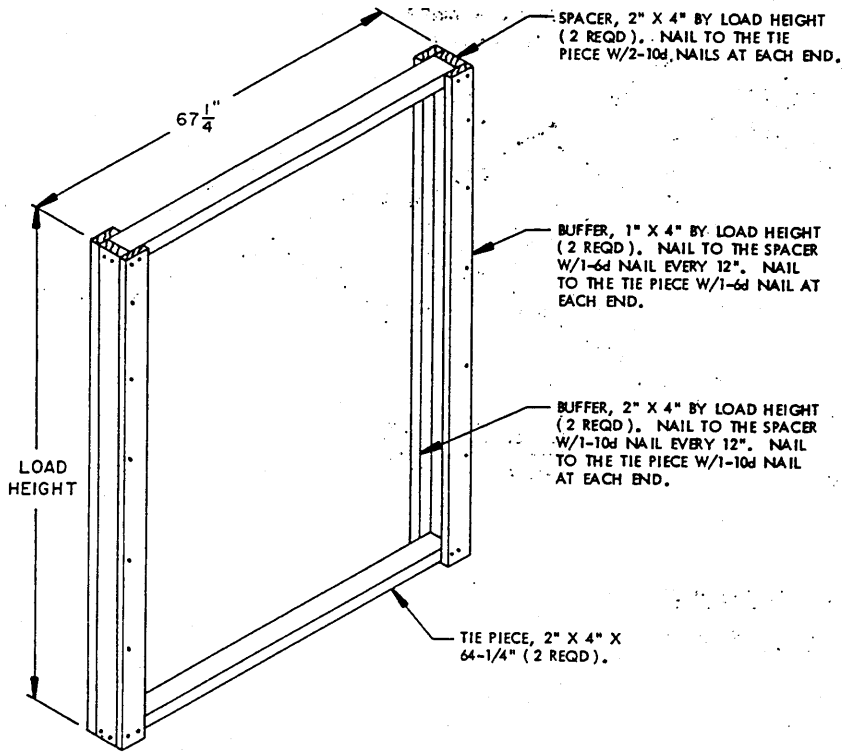
KEY NUMBERS

- 1 CROSS MEMBER (LONGITUDINAL BRACING) (9 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE "ALTERNATIVE LOADING METHOD F". SEE GENERAL NOTE "K" ON PAGE 2.
- 2 SPACER ASSEMBLY (2 REQD). SEE THE "SPACER ASSEMBLY C" DETAIL ON PAGE 19. WIRE TIE IN PLACE WITH PIECE MARKED 4.
- 3 SPACER ASSEMBLY (4 REQD). SEE THE "SPACER ASSEMBLY D" DETAIL ON THIS PAGE. WIRE TIE IN PLACE WITH PIECE MARKED 5.
- 4 TIE WIRE, NO. 14 GAGE WIRE 36" LONG (4 REQD). INSTALL OVER TOP OF THE TIE PIECE ON THE SPACER ASSEMBLY AND LOOP THRU THE UNITIZING STRAPS ON THE PALLET UNIT. SECURE TO THE SPACER ASSEMBLY WITH ONE PARTIALLY DRIVEN 10d NAIL BENT OVER THE WIRE, OR WITH A STAPLE.
- 5 TIE WIRE, NO. 14 GAGE WIRE 24" LONG (16 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND THE SPACER ASSEMBLY D AND THE CROSS MEMBER, BRING THE ENDS TOGETHER AND TWIST TIGHT. SECURE TO THE SPACER ASSEMBLY WITH A PARTIALLY DRIVEN 10d NAIL BENT OVER THE WIRE, OR WITH A STAPLE.



SPACER ASSEMBLY D

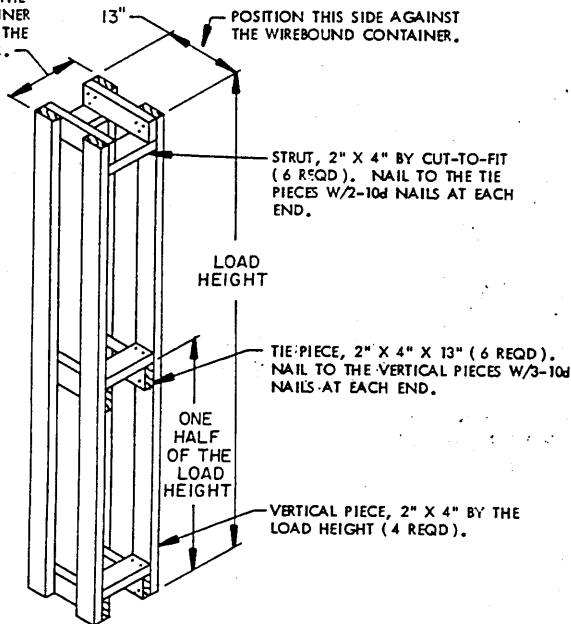
DO NOT FABRICATE FOR A DRIVE FIT. FABRICATE SO THAT IT CAN BE EASILY INSTALLED. HOWEVER, IT MUST FIT TIGHT ENOUGH SO AS NOT TO ALLOW MORE THAN ONE-HALF INCH (1/2") VOID ACROSS THE WIDTH OF A BRACED LOAD.



SIDE FILLER ASSEMBLY A

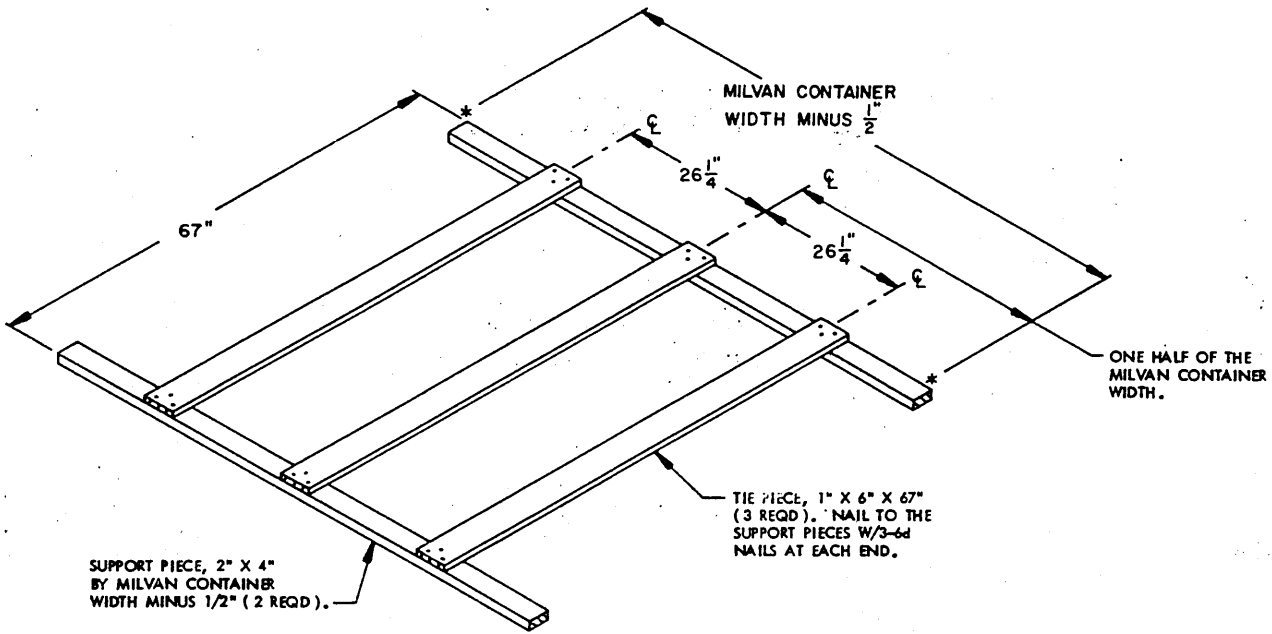
THIS ASSEMBLY IS DESIGNED FOR USE WITHIN LOADS OF UNUNITIZED WIREBOUND CONTAINERS. IF A WIDER ASSEMBLY IS REQUIRED, ADDITIONAL PIECES OF 4" WIDE BY LOAD HEIGHT BY THICKNESS TO SUIT MATERIAL MAY BE LAMINATED TO THE BUFFER PIECES. IF A NARROWER ASSEMBLY IS REQUIRED, USE 1" X 4" MATERIAL FOR ALL THE BUFFER PIECES.

DISTANCE BETWEEN THE WIREBOUND CONTAINER AND SIDE WALL OF THE MILVAN CONTAINER.



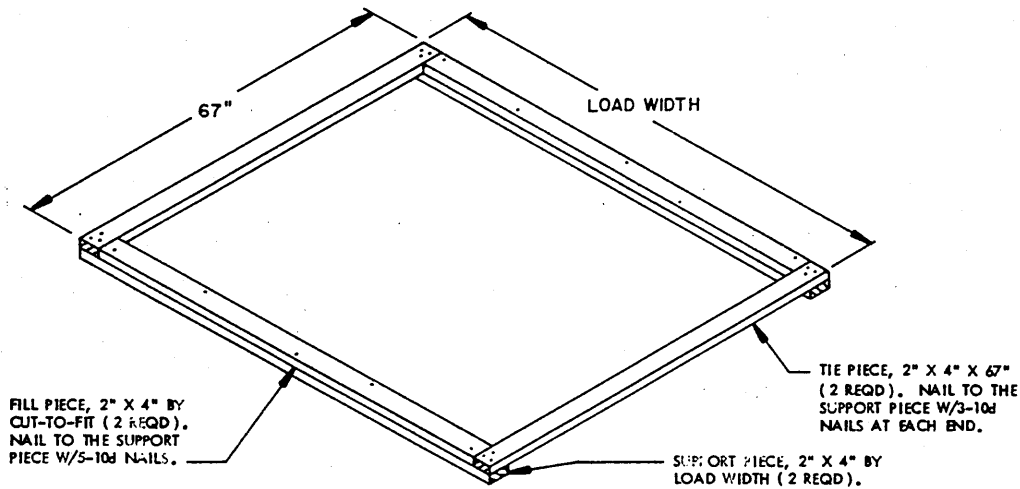
SIDE FILLER ASSEMBLY B

THIS ASSEMBLY IS DESIGNED FOR USE WITHIN LOADS OF WIREBOUND CONTAINERS.



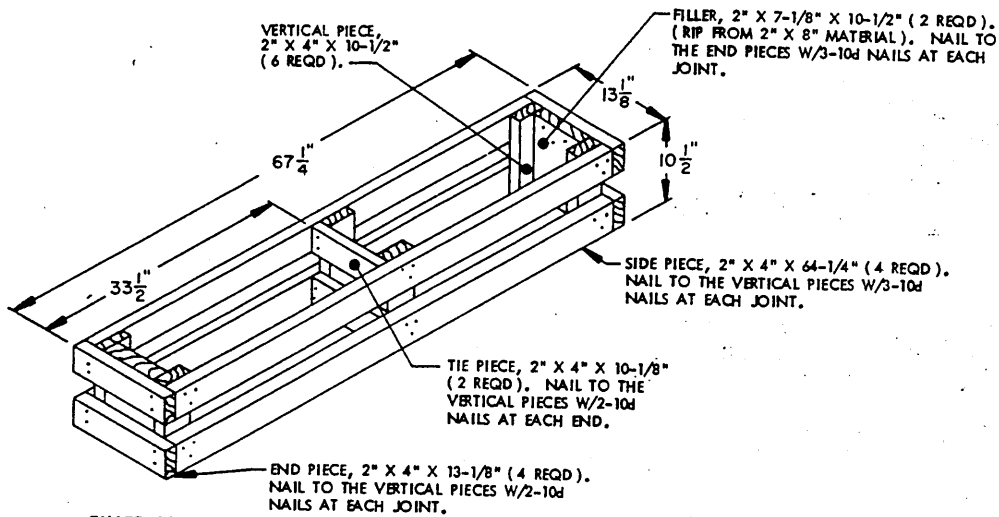
HOLD DOWN ASSEMBLY

THIS ASSEMBLY IS DESIGNED FOR USE WITHIN
FULL LOADS OF WIREBOUND CONTAINERS.



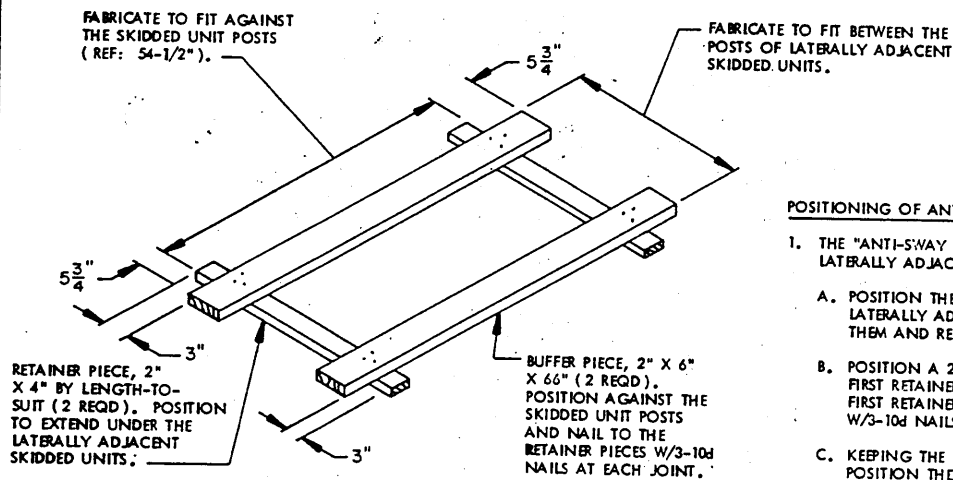
RISER ASSEMBLY

THIS ASSEMBLY IS DESIGNED FOR
USE WITHIN LOADS OF WIREBOUND
CONTAINERS.



FILLER ASSEMBLY A

THE FILLER ASSEMBLY SHOWN ABOVE IS TO BE USED WITHIN LOADS TO TAKE THE PLACE OF AN OMITTED WIREBOUND CONTAINER. IT MUST BE USED IN THE TOP LAYER ONLY.



ANTI-SWAY BRACE ASSEMBLY

THIS ANTI-SWAY BRACE IS DESIGNED FOR USE BETWEEN 1-TIER OR 2-TIER LOADS OF UNITIZED WIREBOUND CONTAINERS (SKIDDED UNITS). SEE THE "POSITIONING OF ANTI-SWAY BRACE ASSEMBLY A" ON THIS PAGE.

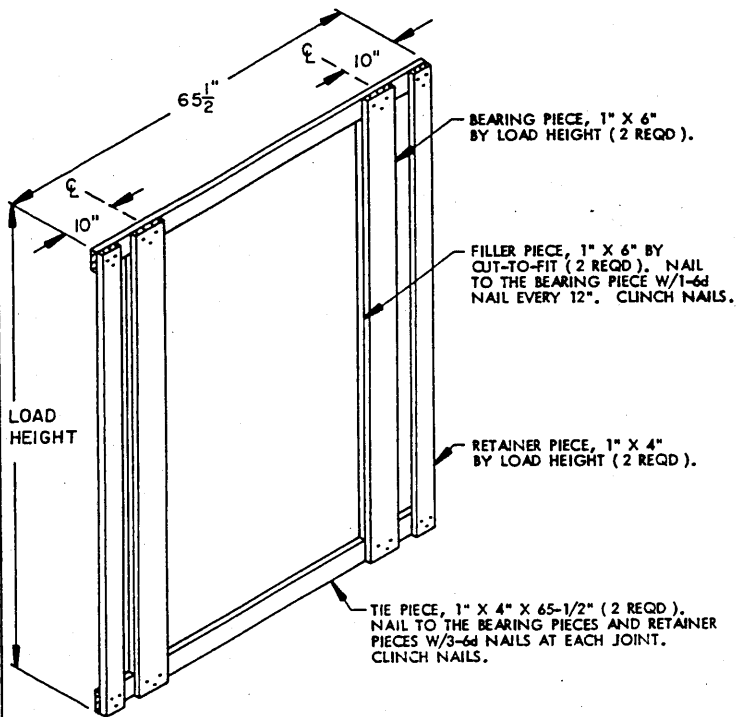
POSITIONING OF ANTI-SWAY BRACE ASSEMBLY:

1. THE "ANTI-SWAY BRACE ASSEMBLY" MUST BE FABRICATED IN PLACE BETWEEN LATERALLY ADJACENT SKIDDED UNITS.
 - A. POSITION THE FIRST RETAINER PIECE JUST BEHIND THE NEAR POSTS ON LATERALLY ADJACENT SKIDDED UNITS, SPANNING THE VOID BETWEEN THEM AND RESTING ON THE BOTTOM BOARDS OF THE SKIDDED UNITS.
 - B. POSITION A 2" X 4" X 66" BUFFER PIECE 6" FROM THE END OF THE FIRST RETAINER PIECE AND EXTENDING 5-3/4" BEYOND THE EDGE OF THE FIRST RETAINER PIECE. NAIL THE BUFFER PIECE TO THE RETAINER PIECE W/3-10d NAILS.
 - C. KEEPING THE FIRST BUFFER PIECE AGAINST THE SIDE OF A SKIDDED UNIT, POSITION THE SECOND BUFFER PIECE AGAINST THE SIDE OF THE LATERALLY ADJACENT SKIDDED UNIT AND EXTENDING 5-3/4" BEYOND THE EDGE OF THE FIRST RETAINER PIECE. NAIL THE BUFFER PIECE TO THE RETAINER PIECE W/3-10d NAILS.
 - D. HOLD THE ENDS OF BOTH BUFFER PIECES AND PUSH THE PARTIAL ASSEMBLY FORWARD UNTIL THE FIRST RETAINER PIECE CONTACTS THE SKIDDED UNIT POSTS ON THE FAR END. ...
 - E. POSITION THE SECOND RETAINER PIECE JUST BEHIND AND CONTACTING THE NEAR POSTS ON LATERALLY ADJACENT SKIDDED UNITS.
 - F. KEEP THE TWO BUFFER PIECES AGAINST THE SIDES OF THE LATERALLY ADJACENT SKIDDED UNITS AND NAIL EACH ONE TO THE SECOND RETAINER PIECE W/3-10d NAILS.

DETAILS

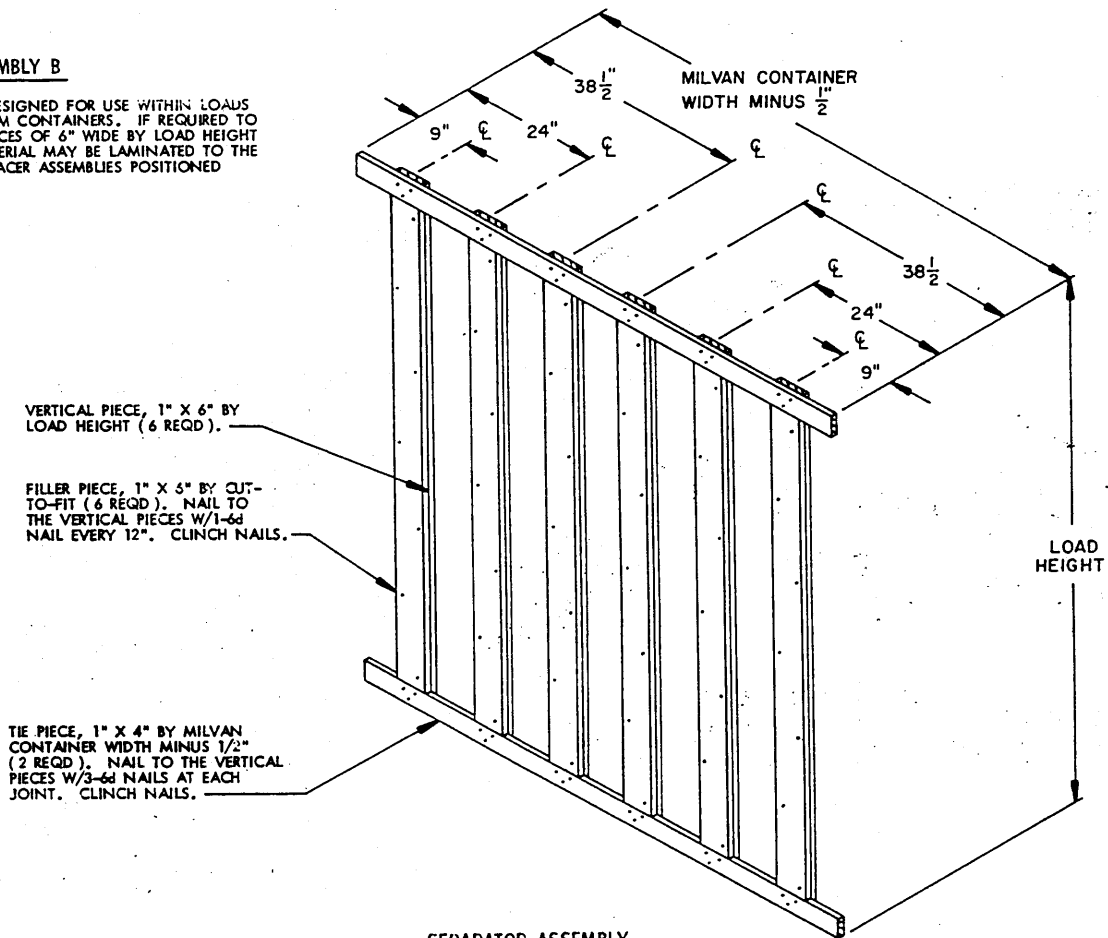
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PROJECT GM 676-75.



SPACER ASSEMBLY B

THIS SPACER ASSEMBLY IS DESIGNED FOR USE WITHIN LOADS OF UNPALLETIZED ALUMINUM CONTAINERS. IF REQUIRED TO FILL VOID, ADDITIONAL PIECES OF 6" WIDE BY LOAD HEIGHT BY THICKNESS TO SUIT MATERIAL MAY BE LAMINATED TO THE BEARING PIECES ON THE SPACER ASSEMBLIES POSITIONED AGAINST THE SIDE WALL.



SEPARATOR ASSEMBLY

THIS ASSEMBLY IS DESIGNED FOR USE WITHIN LOADS OF UNPALLETIZED ALUMINUM CONTAINERS.

DETAILS