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LOADING AND BRACING IN END OPENING ISO CONTAINERS OF PROPELLING CHARGES PACKED IN CYLINDRICAL METAL CONTAINERS


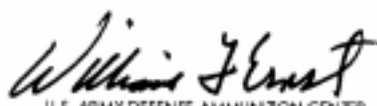
MK14 SERIES TANK

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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-FLATCAR (T/COFC) RAIL CARRIER SERVICE. THESE SPECIFICATIONS MAY ALSO BE USED FOR LOADS THAT ARE TO BE MOVED BY MOTOR OR WATER CARRIERS.

U.S. ARMY MATERIEL COMMAND DRAWING

APPROVED, U.S. ARMY INDUSTRIAL OPERATIONS COMMAND 	ENGINEER	BASIC	MICHAEL SARDONE	DO NOT SCALE			
		REV.		WEBSITE: HTTP://WWW.DAC.ARMY.MIL			
	TECHNICIAN	BASIC		APRIL 1998			
		REV.					
	DRAFTSMAN	BASIC					
		REV.					
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND 	TRANSPORTATION ENGINEERING DIVISION		<i>W. R. Jurek</i>				
	VALIDATION ENGINEERING DIVISION		<i>W. J. Ernst</i>	CLASS	DIVISION	DRAWING	FILE
	LOGISTICS ENGINEERING OFFICE		<i>William J. Ernst</i>	19	48	4154/ 28	15PM1002

GENERAL NOTES

(GENERAL NOTES CONTINUED)

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1 AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE SPECIFIED OUTLOADING PROCEDURES ARE APPLICABLE TO LOADS OF PROPELLING CHARGES PACKED IN MK14 SERIES METAL CONTAINERS. SUBSEQUENT REFERENCE TO PALLET UNIT HEREIN MEANS THE PALLET UNIT WITH AMMUNITION ITEMS. SEE PAGE 3 AND NAVY MIL-STD-1323-5 FOR DETAILS OF THE PALLET UNIT. CAUTION: REGARDLESS OF THE QUANTITY OF CONTAINERS TO BE SHIPPED, THE "MAXIMUM GROSS WEIGHT" OF THE END OPENING ISO CONTAINER MUST NOT BE EXCEEDED.
- C. THE LOAD AS SHOWN IS BASED ON A 4,700 POUND 20' LONG BY 8' WIDE BY 8'-6" HIGH END OPENING ISO CONTAINER WITH INSIDE DIMENSIONS OF 19'-4" LONG BY 92" WIDE BY 93" HIGH, WITH A MAXIMUM GROSS WEIGHT OF 52,910 POUNDS. OLDER/OTHER CONTAINERS MAY HAVE A TOTAL INSIDE HEIGHT OF 95", BUT A CLEAR HEIGHT UNDER THE ROOF BOWS OF 93", VERIFY INSIDE CONTAINER HEIGHT PRIOR TO FABRICATING DUNNAGE. THE LOAD IS DESIGNED FOR TRAILER/CONTAINER-ON-FLATCAR (T/COFC) SHIPMENT, HOWEVER, THE LOAD AS DESIGNED CAN ALSO BE MOVED BY OTHER SURFACE MODES OF TRANSPORT. NOTICE: OTHER CONTAINERS OF THE SAME DESIGN CONFIGURATION CAN BE USED.
- D. WHEN LOADING PALLET UNITS, THEY ARE TO BE POSITIONED SO AS TO ACHIEVE A TIGHT LOAD (TIGHT AGAINST THE DUNNAGE ASSEMBLIES). THE UNBLOCKED SPACE ACROSS THE WIDTH OF A LOAD BAY IS NOT TO EXCEED 1-1/2". EXCESSIVE SLACK CAN BE ELIMINATED FROM A LOAD BY LAMINATING ADDITIONAL PIECES OF APPROPRIATE THICKNESS TO THE VERTICAL PIECES ON THE SIDE FILL ASSEMBLIES. NAIL EACH ADDITIONAL PIECE W/1 APPROPRIATELY SIZED NAIL EVERY 12". ADDITIONALLY, THE THICKNESS AND/OR QUANTITY OF THE VERTICAL OR HORIZONTAL PIECES IN THE SIDE FILL ASSEMBLIES AND FILLER ASSEMBLIES MAY BE ADJUSTED AS REQUIRED TO FACILITATE VARIANCE IN THE SIZE OF THE PALLET UNIT.
- E. DUNNAGE LUMBER SPECIFIED IS OF NOMINAL SIZE. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.
- F. A STAGGERED NAILING PATTERN WILL BE USED WHENEVER 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.
- G. IN SOME CONTAINERS THERE IS A SLOT AT THE CORNERS OF THE FORWARD WALL. PIECES OF DUNNAGE MATERIAL MUST BE LAMINATED TO THE BUFFER PIECES ON THE FORWARD BLOCKING ASSEMBLY TO PROVIDE A FLAT SURFACE FOR THE BUFFER PIECES. A PIECE OF 2" X 4", 2" X 3" OR A SPECIAL WIDTH PIECE CUT-TO-FIT CAN BE USED. THIS FILL PIECE WILL BE NAILED WITH ONE APPROPRIATELY SIZED NAIL EVERY 12". NOTE THAT SOME CONTAINERS ARE EQUIPPED WITH "TIE-BARS" IN THE CORNER SLOT, WHICH PRECLUDE THE USE OF A FULL HEIGHT FILL PIECE. WHEN "TIE-BARS" ARE PRESENT, THE FILL PIECE MUST BE INSTALLED IN SEGMENTS DESIGNED TO FIT BETWEEN THE "TIE-BARS" VERTICALLY. THE FILL PIECE(S) IS NOT REQUIRED WHEN THE CORNER PORTIONS OF THE CONTAINER FORWARD WALL ARE SMOOTH AND FLAT. DO NOT ALLOW ANY DUNNAGE ASSEMBLY TO CONTACT THE CONTAINER FORWARD WALL, ONLY THE CORNER POSTS OF THE CONTAINER SHOULD BE USED FOR FORWARD LONGITUDINAL BLOCKING.
- H. WHETHER A CONTAINER IS FULL OR IS LOADED WITH A REDUCED QUANTITY OF LADING UNITS, THE LENGTHWISE CENTER OF GRAVITY OF THE LOAD MUST BE WITHIN 12", IN EITHER DIRECTION, OF THE MID-POINT OF THE CONTAINER.
- J. CAUTION: DO NOT NAIL DUNNAGE MATERIAL TO THE CONTAINER WALLS OR FLOOR. ALL NAILING WILL BE WITHIN THE DUNNAGE.
- K. PORTIONS OF THE CONTAINER DEPICTED WITHIN THIS DRAWING, SUCH AS THE SIDEWALL, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.

(CONTINUED AT LEFT)

L. MAXIMUM LOAD WEIGHT CRITERIA:

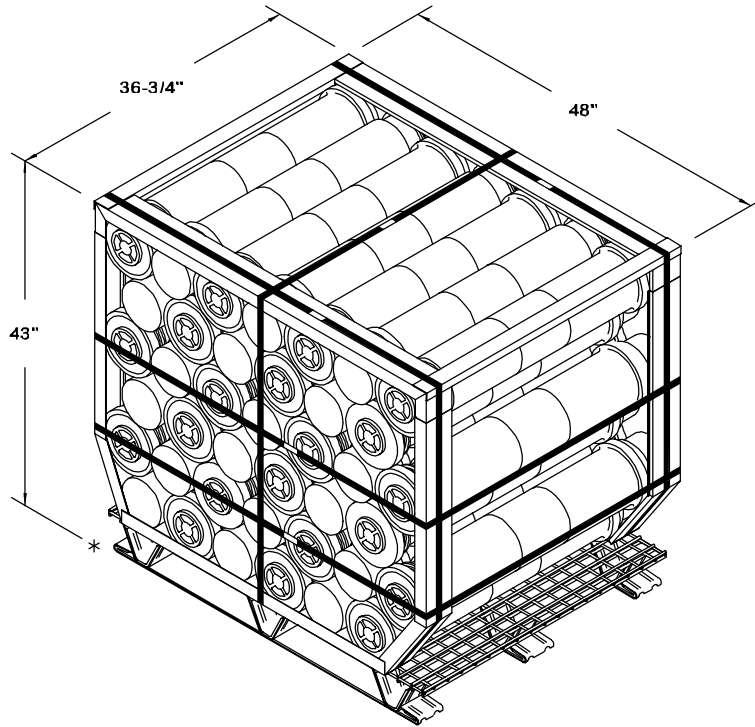
THE MAXIMUM LOAD WEIGHTS ARE CONTROLLED BY EQUIPMENT CAPABILITY FACTORS. ALTHOUGH THE HEAVIEST MAXIMUM LOADS ARE DELINEATED IN THE LOAD VIEWS, PROVISIONS ARE INCLUDED WITHIN THIS DRAWING SO THAT THE BASIC LOADS CAN BE ADJUSTED TO SATISFY A LESSER QUANTITY OF LADING UNITS. DEPENDING ON TRANSPORTATION ROUTING, IT MAY BE NECESSARY TO REDUCE THE LOAD WEIGHT TO SATISFY "WEIGHT LAWS" OF CERTAIN STATES. ALSO, IT MAY BE NECESSARY TO REDUCE THE LOAD WEIGHT TO SATISFY OTHER WEIGHT RESTRICTIONS IMPOSED ON THE INTERMODAL CONTAINER SYSTEM.

M. REQUIREMENTS CITED WITHIN THE ASSOCIATION OF AMERICAN RAILROADS (AAR) INTERMODAL LOADING GUIDE APPLY WHEN THE SHIPMENT MOVES BY TRAILER/CONTAINER-ON-FLATCAR (T/COFC). SPECIAL T/COFC NOTES FOLLOW:

- 1. A LOADED CONTAINER MUST BE ON A CHASSIS EQUIPPED WITH TWO BOGIE ASSEMBLIES WHEN BEING MOVED IN TOFC SERVICE.
 - 2. THE LOAD LIMIT OF A T/COFC RAILCAR 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.
- N. DURING INTRASTATE AND/OR INTERSTATE MOVES BY MOTOR CARRIER, A PROPER CHASSIS OR MODIFIED FLATBED TRAILER MUST BE USED TO PRECLUDE VIOLATION OF ONE OR MORE "WEIGHT LAWS" APPLICABLE TO THE STATE OR STATES INVOLVED.**
- O. 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 25.4MM AND ONE POUND EQUALS 0.454 KG.**
- P. THE QUANTITY OF PALLET UNITS SHOWN IN THE LOADS ON PAGES 4 AND 6 MAY BE REDUCED FOR SHIPMENT, IF DESIRED. SEE THE OMITTED UNIT ASSEMBLY ON PAGE 10. WHEN A CONTAINER IS TO BE LOADED WITH A REDUCED QUANTITY OF PALLETS, THE LENGTHWISE CENTER OF GRAVITY OF THE LOAD MUST BE WITHIN 12", IN EITHER DIRECTION, OF THE MID-POINT OF THE CONTAINER.**
- 1. IF A LOAD IS REDUCED BY ONLY A SMALL AMOUNT (ONE OR TWO LADING UNITS), LADING UNITS NORMALLY MAY BE ELIMINATED FROM THE CENTER OF THE LOAD.
 - 2. IF A LOAD IS REDUCED BY A LARGE AMOUNT (MORE THAN TWO LADING UNITS), LADING UNITS SHOULD BE ELIMINATED AS REQUIRED AND THE TOTAL LOAD SHIFTED FORE OR AFT, AS NECESSARY, 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.

MATERIAL SPECIFICATIONS

- LUMBER - - - - - :: SEE TM 743-200-1 (DUNNAGE LUMBER) AND VOLUNTARY PRODUCT STANDARD PS 20.
- NAILS - - - - - :: ASTM F1667; COMMON STEEL NAIL (NLCMS OR NLCMS).
- PLYWOOD - - - - - :: COMMERCIAL ITEM DESCRIPTION A-A-55057, INDUSTRIAL PLYWOOD, INTERIOR WITH EXTERIOR GLUE, GRADE C-D. IF SPECIFIED GRADE IS UNAVAILABLE, A BETTER INTERIOR OR AN EXTERIOR GRADE MAY BE SUBSTITUTED.
- WIRE, CARBON STEEL - - - - - :: ASTM A853; ANNEALED AT FINISH, BLACK OXIDE FINISH, .0800" DIA, GRADE 1006 OR BETTER.
- STEEL, STRUCTURAL - - - - - :: ASTM A501, STEEL STRUCTURAL TUBING; AND ASTM A570, STEEL, STRIP, HOT-ROLLED, GRADE 36 (MINIMUM).

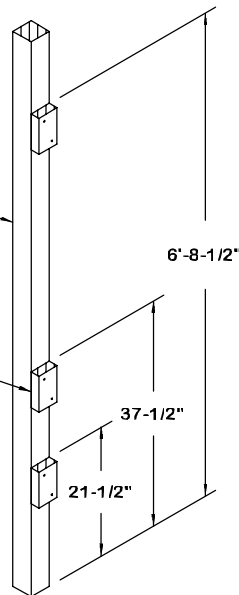


PALLET UNIT

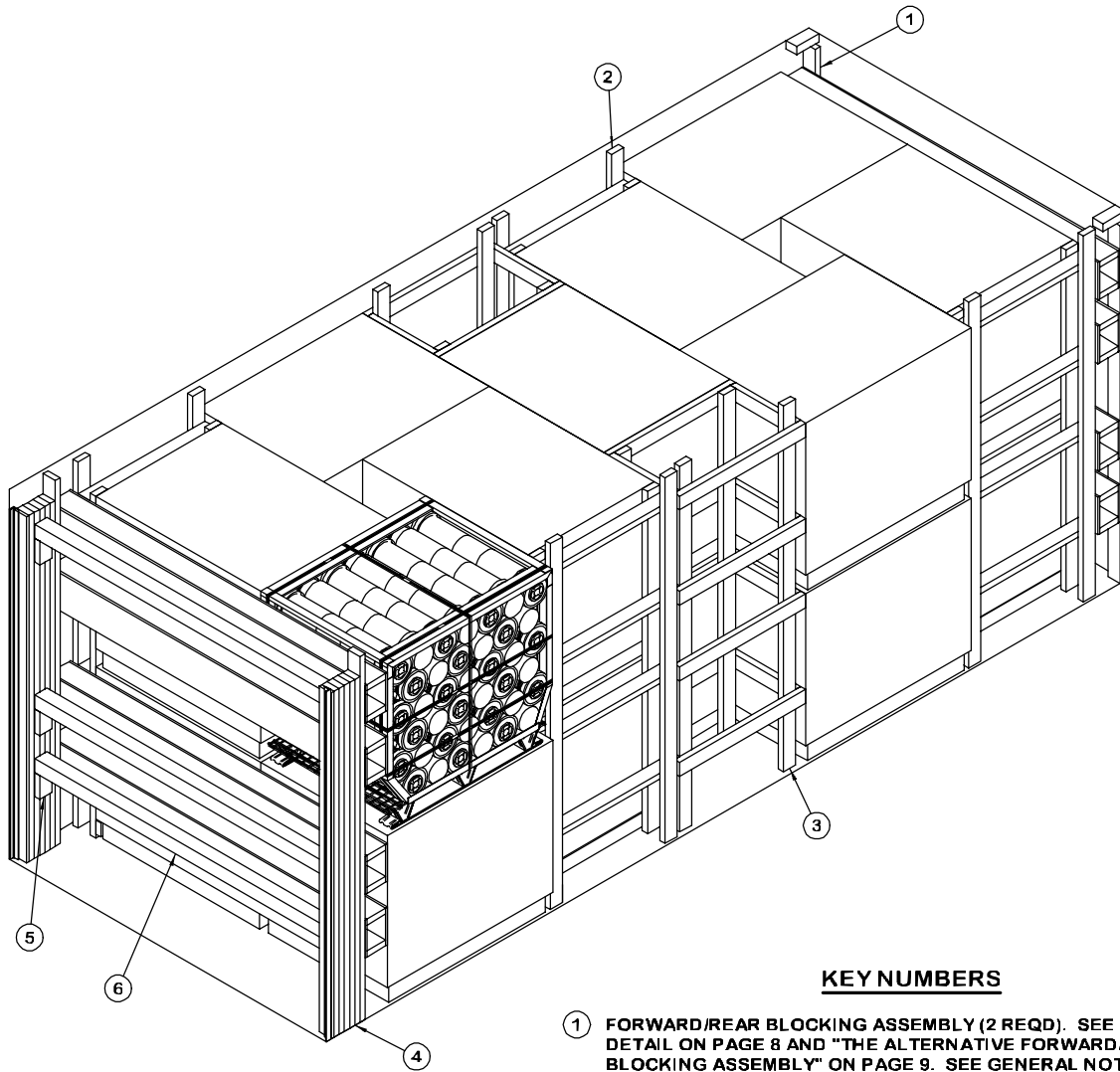
UNIT WEIGHT - - - - - 1,752 LBS (APPROX)
 CUBE - - - - - 43.9 CU FT (APPROX)

VERTICAL PIECE, 4" X 4"
 BY INSIDE CONTAINER
 HEIGHT MINUS 1/2"
 (REF: 7'-4") (1 REQD).

STRUT LEDGER, 2" X 4"
 X 6" (3 REQD). NAIL TO
 THE VERTICAL PIECE
 W/2-10d NAILS.



DOOR POST VERTICAL



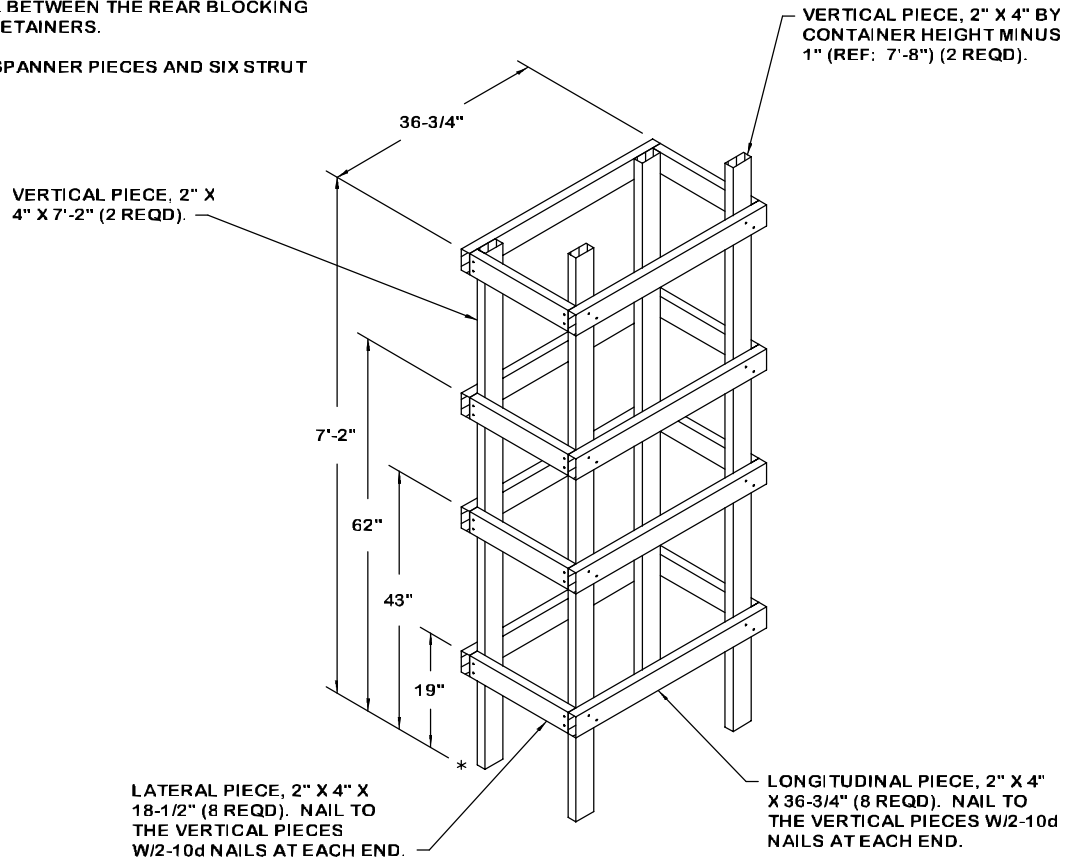
ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD/REAR BLOCKING ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 8 AND "THE ALTERNATIVE FORWARD/REAR BLOCKING ASSEMBLY" ON PAGE 9. SEE GENERAL NOTE "G" ON PAGE 2.
- ② SIDE FILL ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 8.
- ③ FILLER ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 5.
- ④ FILL MATERIAL, 4" WIDE BY 7'-3" LONG MATERIAL (AS REQD). NAIL THE FIRST PIECE TO THE REAR BLOCKING ASSEMBLY W/8 NAILS OF A SUITABLE SIZE (10d FOR 2" THICK MATERIAL). NAIL EACH ADDITIONAL PIECE TO THE PREVIOUS PIECE IN A SIMILAR MANNER. NOTE: MULTIPLE PIECES MAY BE LAMINATED TOGETHER FIRST AND THEN TOENAILED TO THE REAR BLOCKING ASSEMBLY.
- ⑤ STRUT LEDGER, 2" X 4" X 6" (6 SHOWN - OPTIONAL). INSTALL IF DESIRED TO AID IN THE INSTALLATION OF SPANNER PIECES. NAIL TO THE FILL MATERIAL W/2-10d NAILS.
- ⑥ DOOR SPANNER, 4" X 4" MATERIAL, CUT TO A LENGTH THAT WILL PROVIDE FOR A DRIVE FIT (REF: 7'-1-3/8") (3 REQD). TOE-NAIL TO THE FILL MATERIAL W/2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 9. NOTE THAT THESE PIECES ARE NOT REQUIRED IF THE SPACE BETWEEN THE REAR BLOCKING ASSEMBLY AND THE LOAD RETAINER IS NOT GREATER THAN 6". LOCATE SUCH THAT THE TOP OF THE UPPER DOOR SPANNER IS FLUSH WITH THE TOP OF THE UPPER BOX BEAM IN PIECE MARKED ①, AND THE BOTTOM OF THE LOWER DOOR SPANNER IS FLUSH WITH THE BOTTOM OF THE LOWER BOX BEAM. CENTER THE MIDDLE DOOR SPANNER BETWEEN THE UPPER AND LOWER DOOR SPANNERS.

RECOMMENDED SEQUENTIAL LOADING PROCEDURES

1. PRE-FABRICATE TWO FORWARD/REAR BLOCKING ASSEMBLIES, FOUR SIDE FILL ASSEMBLIES, AND TWO FILLER ASSEMBLIES.
2. INSTALL THE FORWARD BLOCKING ASSEMBLY.
3. INSTALL ONE SIDE FILL ASSEMBLY AND LOAD FOUR PALLET UNITS.
4. REPEAT STEP 3.
5. LOAD ONE FILLER ASSEMBLY.
6. LOAD TWO PALLET UNITS AND INSTALL THE SECOND FILLER ASSEMBLY.
7. REPEAT STEP 3 TWICE.
8. INSTALL THE REAR BLOCKING ASSEMBLY.
9. INSTALL THE FILL MATERIAL BETWEEN THE REAR BLOCKING ASSEMBLY AND THE LOAD RETAINERS.
10. INSTALL THE THREE DOOR SPANNER PIECES AND SIX STRUT LEDGERS (OPTIONAL).



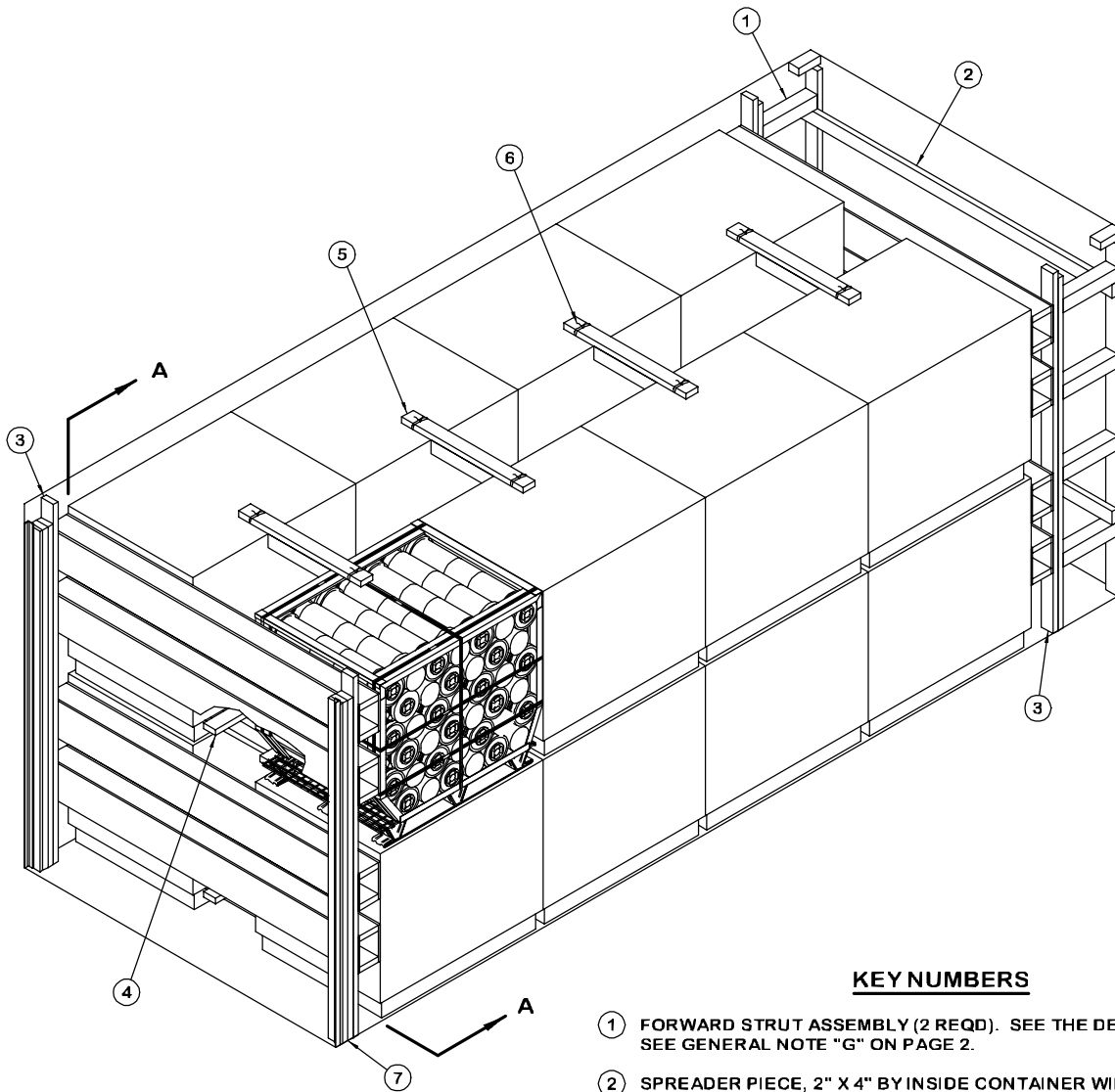
FILLER ASSEMBLY

FOR A ONE-HIGH LOAD, ELIMINATE THE TOP FOUR LATERAL AND LONGITUDINAL PIECES AND DECREASE THE HEIGHT OF THE SHORTER VERTICAL PIECES TO 43".

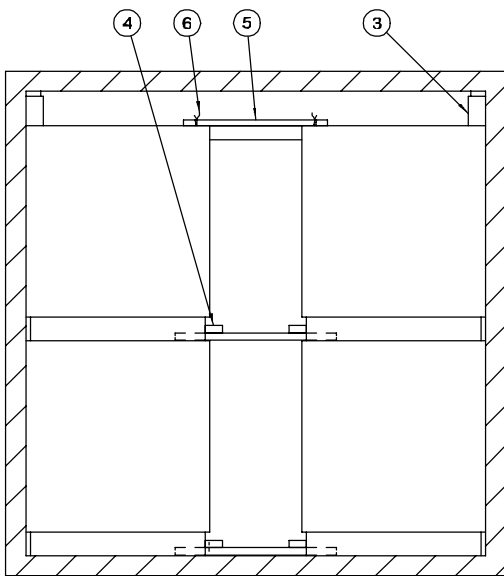
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	15	5
2" X 4"	410	274
2" X 6"	122	122
4" X 4"	22	30
NAILS	NO. REQD	POUNDS
6d (2")	368	2-1/4
10d (3")	424	6-3/4
12d (3-1/4")	12	1/4
PLYWOOD, 1/2" - - - 96.06 SQ FT REQD - - 132-1/4 LBS		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	18 - - - - -	31,536 LBS
DUNNAGE - - - - -	- - - - -	1,004 LBS
CONTAINER - - - - -	- - - - -	4,700 LBS
TOTAL WEIGHT - - - - -		37,240 LBS (APPROX)



ISOMETRIC VIEW



SECTION A-A

KEY NUMBERS

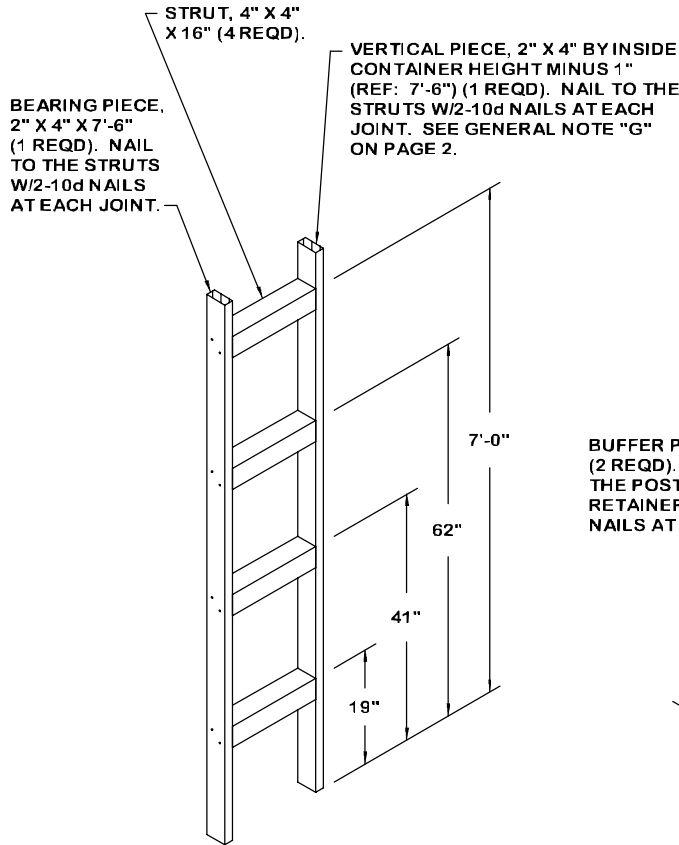
- ① FORWARD STRUT ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 7. SEE GENERAL NOTE "G" ON PAGE 2.
- ② SPREADER PIECE, 2" X 4" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (2 REQD). NAIL TO THE BUFFER PIECES OF PIECE MARKED ① W/2-10d NAILS AT EACH END.
- ③ FORWARD/REAR BLOCKING ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 8 AND THE "ALTERNATIVE FORWARD/REAR BLOCKING ASSEMBLY" ON PAGE 9. NAIL THROUGH THE BUFFER PIECES INTO THE VERTICAL PIECES OF PIECE MARKED ① W/6-10d NAILS.
- ④ ANTI-SWAY BRACE (8 REQD). SEE THE DETAIL ON PAGE 7.
- ⑤ TOP-OF-LOAD ANTI-SWAY BRACE (4 REQD). SEE THE DETAIL ON PAGE 9.
- ⑥ TIE WIRE, .0800" DIAMETER WIRE 24" LONG (8 REQD). INSTALL THE WIRE TO FORM A COMPLETE LOOP AROUND THE TOP SPACER AND ATTACH TO THE CENTER UNITIZING STRAP OF THE LADING UNIT.
- ⑦ FILL MATERIAL, 4" WIDE BY 7'-3" LONG MATERIAL (AS REQD). NAIL THE FIRST PIECE TO THE REAR BLOCKING ASSEMBLY W/6 NAILS OF A SUITABLE SIZE (10d FOR 2" THICK MATERIAL). NAIL EACH ADDITIONAL PIECE TO THE PREVIOUS PIECE IN A SIMILAR MANNER. NOTE: MULTIPLE PIECES MAY BE LAMINATED TOGETHER FIRST AND THEN TOENAILED TO THE REAR BLOCKING ASSEMBLY.

RECOMMENDED SEQUENTIAL LOADING PROCEDURES

1. PRE-FABRICATE TWO FORWARD STRUT ASSEMBLIES AND TWO FORWARD/REAR BLOCKING ASSEMBLIES.
2. INSTALL THE TWO FORWARD STRUT ASSEMBLIES.
3. INSTALL THE TWO SPREADER PIECES.
4. INSTALL THE FORWARD BLOCKING ASSEMBLY.
5. LOAD TWO PALLET UNITS AND INSTALL ONE ANTI-SWAY BRACE. (THIS ASSEMBLY MUST BE FABRICATED IN PLACE, BETWEEN THE PALLET UNITS.)
6. REPEAT STEP 5 SEVEN TIMES, INSTALLING TOP-OF-LOAD ANTI-SWAY BRACES AS LOADING PROGRESSES.
7. INSTALL THE REAR BLOCKING ASSEMBLY.
8. INSTALL THE FILL MATERIAL BETWEEN THE REAR BLOCKING ASSEMBLY AND THE LOAD RETAINERS.

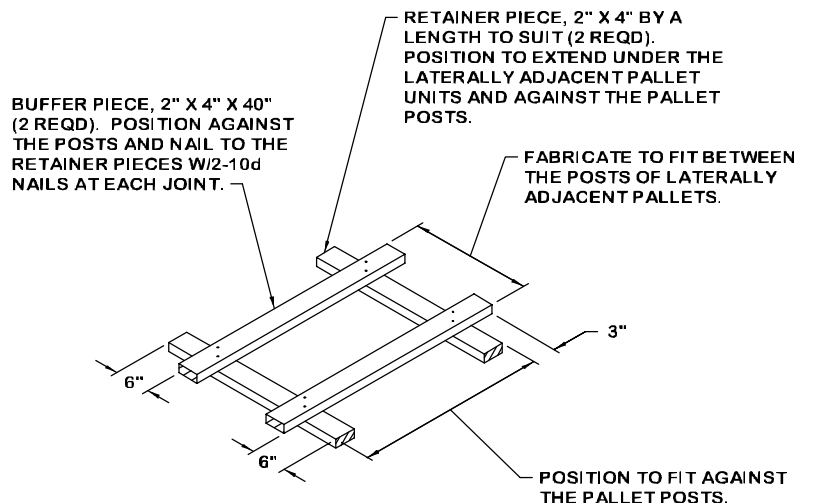
SPECIAL NOTES:

1. WHEN ASSEMBLING THE ANTI-SWAY BRACES BETWEEN PALLET UNITS THAT ARE POSITIONED WITH THE PALLET UNIT WIDTH PARALLEL TO THE CONTAINER SIDEWALL:
 - A. POSITION THE FIRST RETAINER PIECE BETWEEN THE CENTER PALLET POST AND THE POST WHICH IS FURTHEST AWAY. THE RETAINER PIECE IS TO SPAN THE VOID BETWEEN LATERALLY ADJACENT UNITS.
 - B. POSITION THE SECOND RETAINER PIECE AGAINST THE INSIDE OF THE NEAREST PALLET POST SO AS TO SPAN THE VOID BETWEEN LATERALLY ADJACENT PALLETS.
 - C. POSITION THE FIRST BUFFER PIECE AGAINST THE PALLET POSTS AND EXTENDING 4" BEYOND THE FURTHEST RETAINER PIECE. NAIL TO THE RETAINER PIECE W/2-10d NAILS.
 - D. POSITION THE SECOND BUFFER PIECE AGAINST THE PALLET POSTS ON THE OPPOSITE SIDE AND EXTENDING 4" BEYOND THE FURTHEST RETAINER PIECE. NAIL TO THE RETAINER PIECE W/2-10d NAILS.
 - E. PUSH THE PARTIAL ASSEMBLY FORWARD UNTIL THE FIRST RETAINER PIECE CONTACTS THE PALLET POST ON THE FAR SIDE OF THE PALLET. NAIL THE BUFFER PIECES TO THE SECOND RETAINER PIECE W/2-10d NAILS AT EACH JOINT.
2. IF BUFFER PIECES OF 2" X 4" LUMBER ARE OF AN INSUFFICIENT SIZE TO PERMIT ADEQUATE NAILING, 2" X 6" PIECES MAY BE USED INSTEAD.



FORWARD STRUT ASSEMBLY

FOR A ONE HIGH LOAD, REDUCE THE BEARING PIECE TO 47" AND ELIMINATE THE TOP TWO STRUTS.



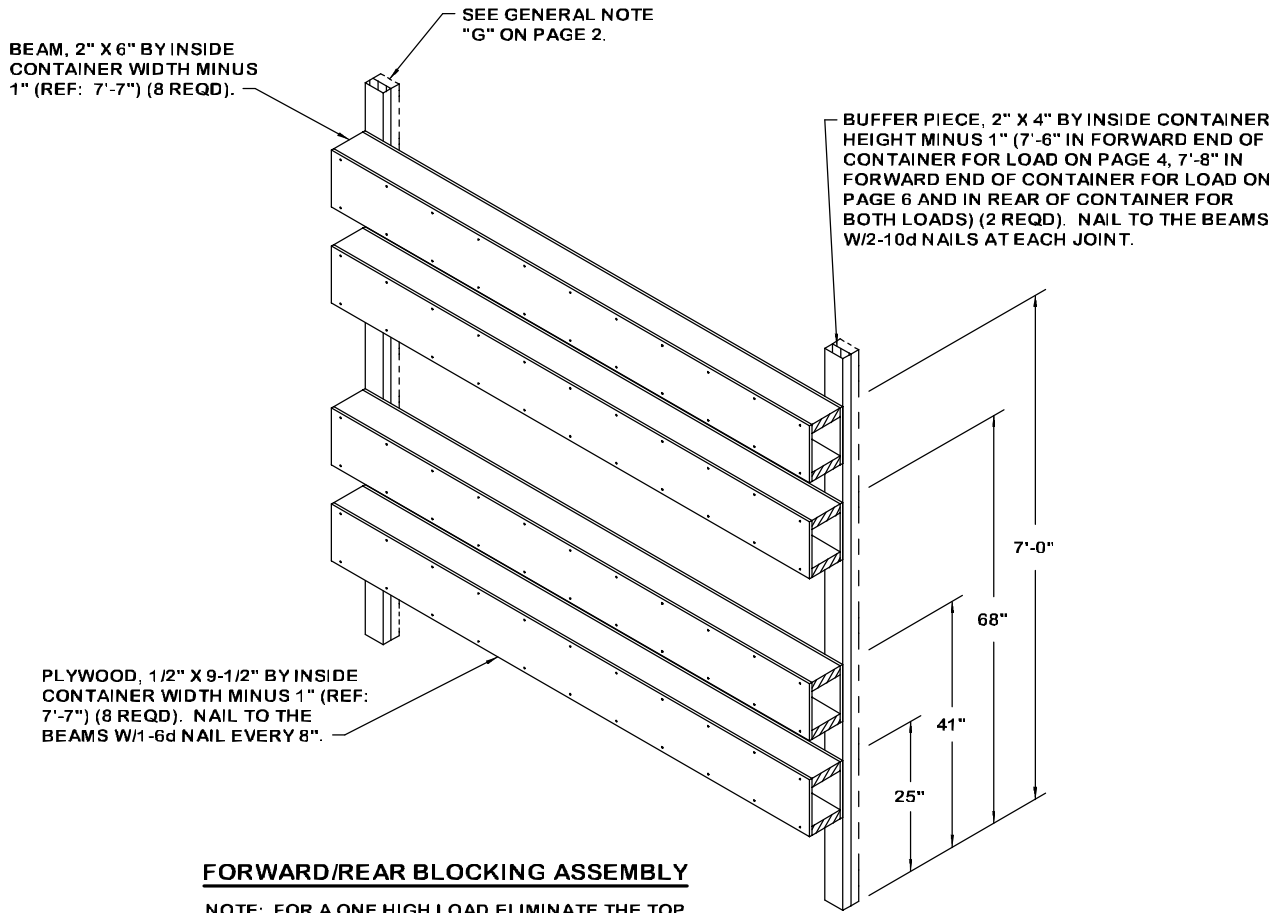
ANTI-SWAY BRACE

SEE THE SPECIAL NOTES ABOVE.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	15	5
2" X 4"	215	144
2" X 6"	122	122
4" X 4"	17	23
NAILS	NO. REQD	POUNDS
6d (2")	368	2-1/4
10d (3")	200	3-1/4
PLYWOOD, 1/2"	96.06 SQ FT REQD	132-1/4 LBS
WIRE, .0800" DIA	16' REQD	NIL

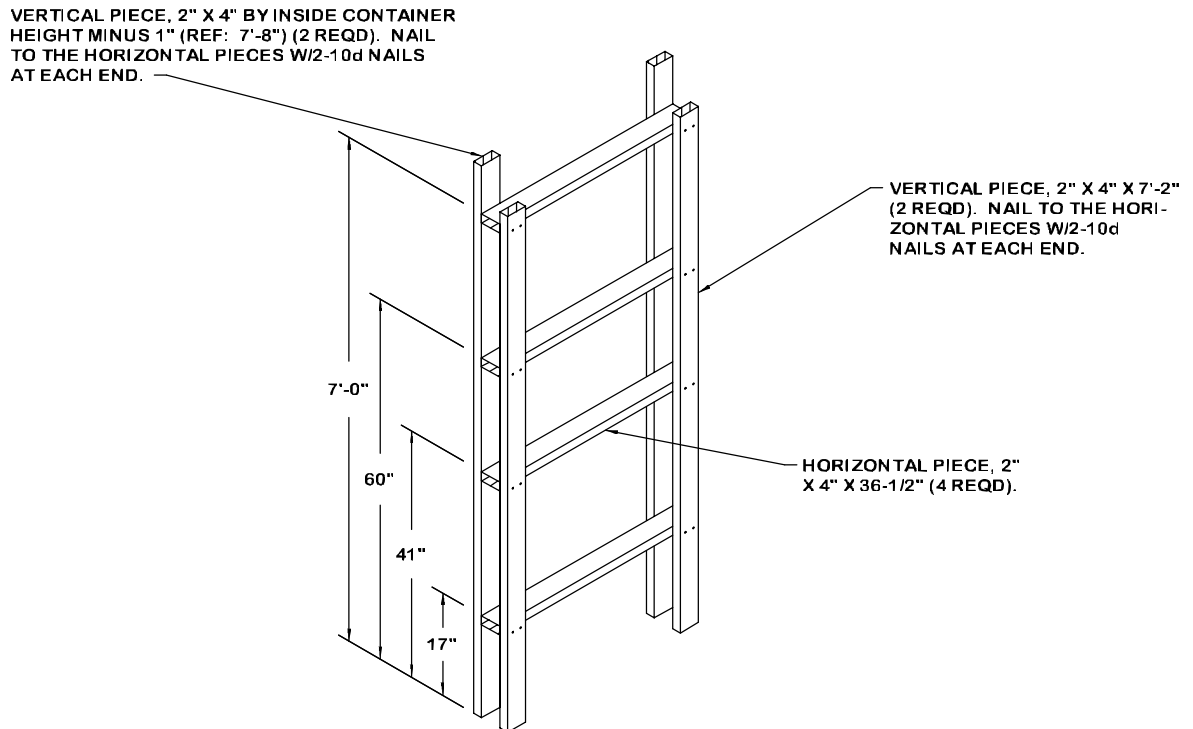
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	16	28,032 LBS
DUNNAGE		726 LBS
CONTAINER		4,700 LBS
TOTAL WEIGHT		33,458 LBS (APPROX)



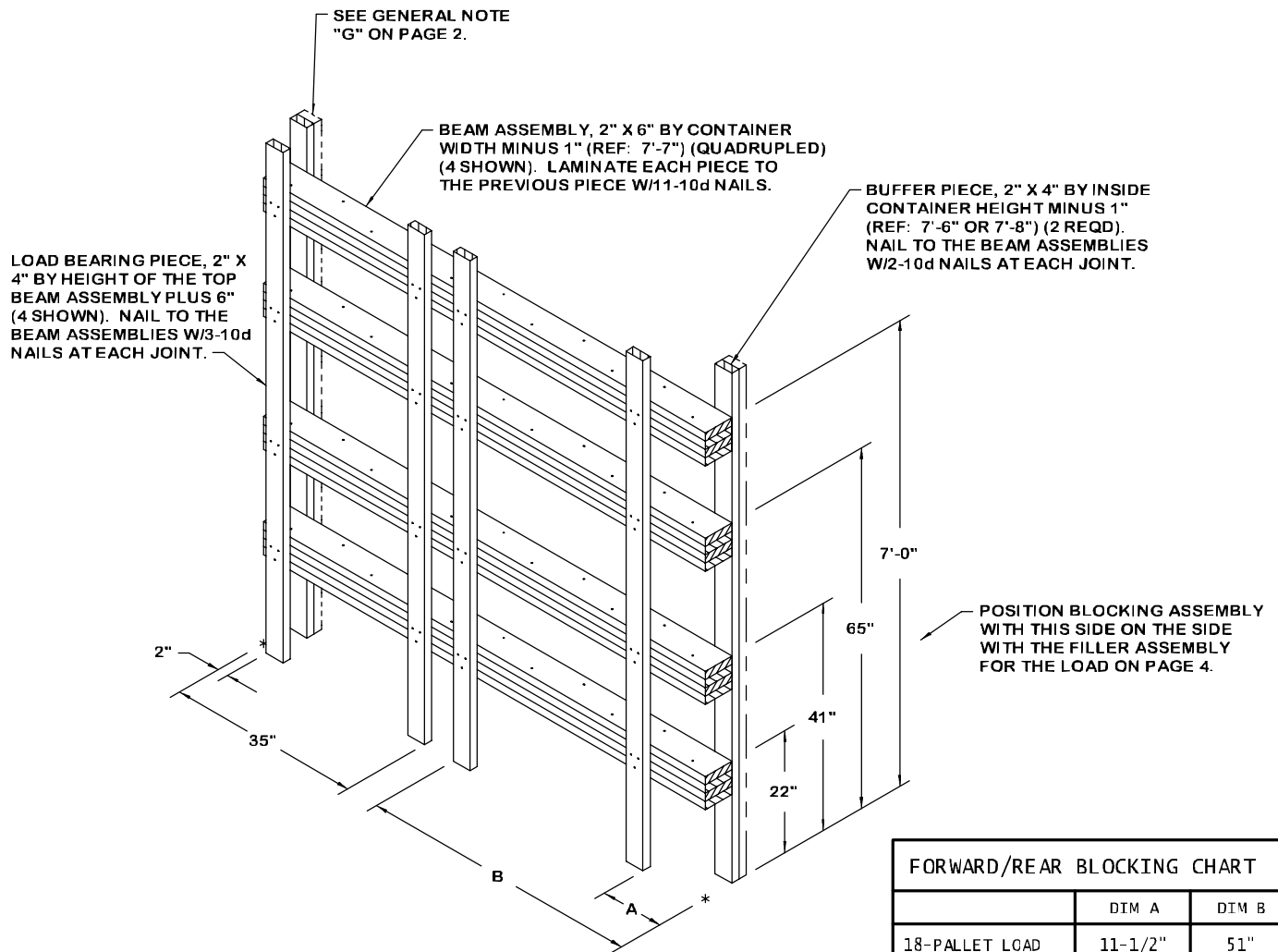
FORWARD/REAR BLOCKING ASSEMBLY

NOTE: FOR A ONE HIGH LOAD, ELIMINATE THE TOP TWO BOX BEAM ASSEMBLIES.



SIDE FILL ASSEMBLY

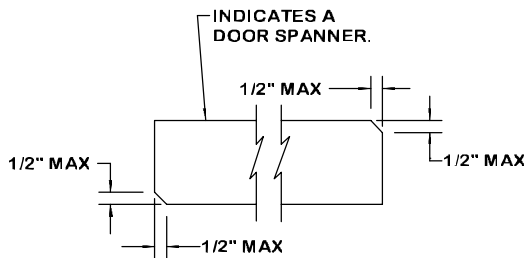
FOR A ONE-HIGH LOAD, ELIMINATE THE TOP TWO HORIZONTAL PIECES AND DECREASE THE HEIGHT OF THE SHORTER VERTICAL PIECES TO 44".



FORWARD/REAR BLOCKING CHART		
	DIM A	DIM B
18-PALLET LOAD	11-1/2"	51"
16-PALLET LOAD	2"	35"

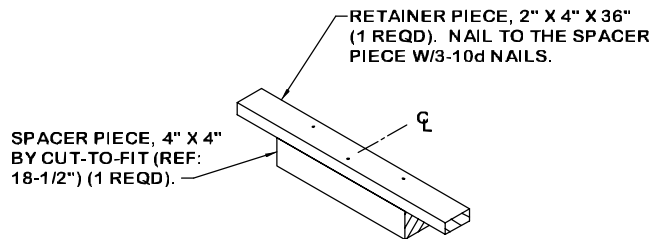
ALTERNATIVE FORWARD/REAR BLOCKING ASSEMBLY

NOTE: THE ALTERNATIVE FORWARD/REAR BLOCKING ASSEMBLY MAY BE USED IN PLACE OF THE FORWARD/REAR BLOCKING ASSEMBLY DEPICTED IN THE LOADS ON PAGES 4 AND 6, IF DESIRED. SEE THE FORWARD/REAR BLOCKING CHART ABOVE FOR PLACEMENT OF LOAD BEARING PIECES FOR EACH LOAD.



BEVEL-CUT

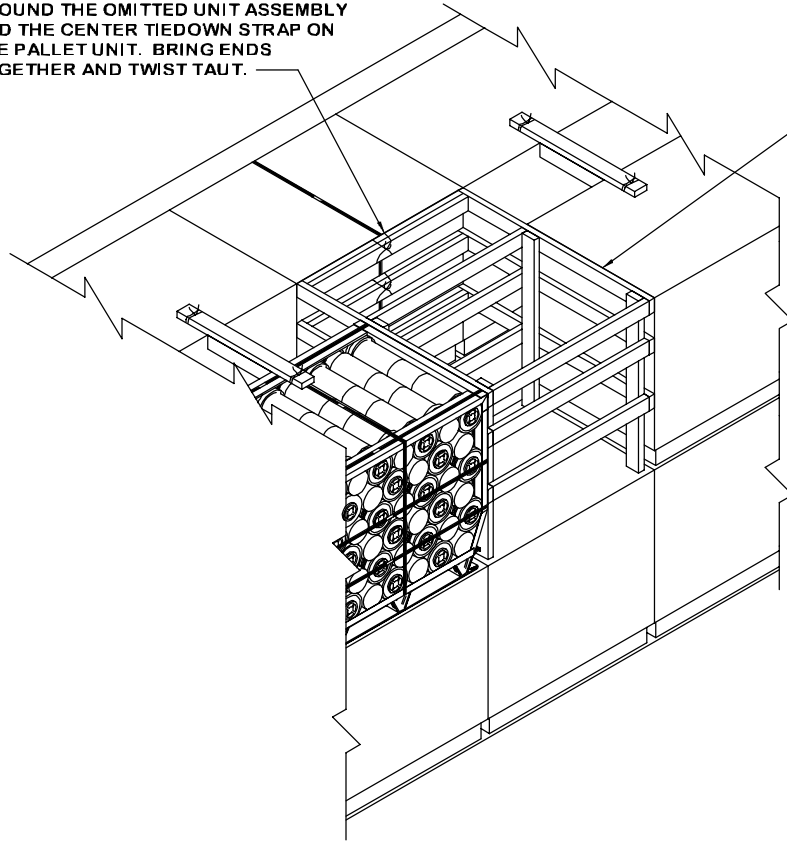
IF DESIRED, EACH END OF A DOOR SPANNER PIECE MAY BE BEVEL-CUT AS SHOWN ABOVE TO FACILITATE THE ACHIEVEMENT OF A TIGHT REAR OF LOAD FIT.



TOP-OF-LOAD ANTI-SWAY BRACE

TIE WIRE, .0800" DIAMETER WIRE 24" LONG (2 REQD PER OMITTED UNIT ASSEMBLY). INSTALL TO FORM A LOOP AROUND THE OMITTED UNIT ASSEMBLY AND THE CENTER TIEDOWN STRAP ON THE PALLET UNIT. BRING ENDS TOGETHER AND TWIST TAUT.

OMITTED UNIT ASSEMBLY (1 SHOWN). SEE THE DETAIL BELOW.



TYPICAL REDUCED LOAD

A 16-UNIT LOAD IS SHOWN AS TYPICAL ONLY. SEE GENERAL NOTE "P" ON PAGE 2.

FABRICATE TO FILL THE VOID BETWEEN THE CONTAINER SIDEWALL AND THE PALLET UNIT.

FILL PIECE, 2" X 4" X 42" (3 REQD). LAMINATE TO THE LONGITUDINAL PIECE W/6-10d NAILS.

UNIT WIDTH

UNIT LENGTH

UNIT HEIGHT

LATERAL PIECE, 2" X 4" BY LENGTH TO SUIT (6 REQD). NAIL TO THE VERTICAL PIECES, THE SECOND AND FOURTH LONGITUDINAL PIECES, AND TO THE FILL PIECE W/2-10d NAILS AT EACH JOINT.

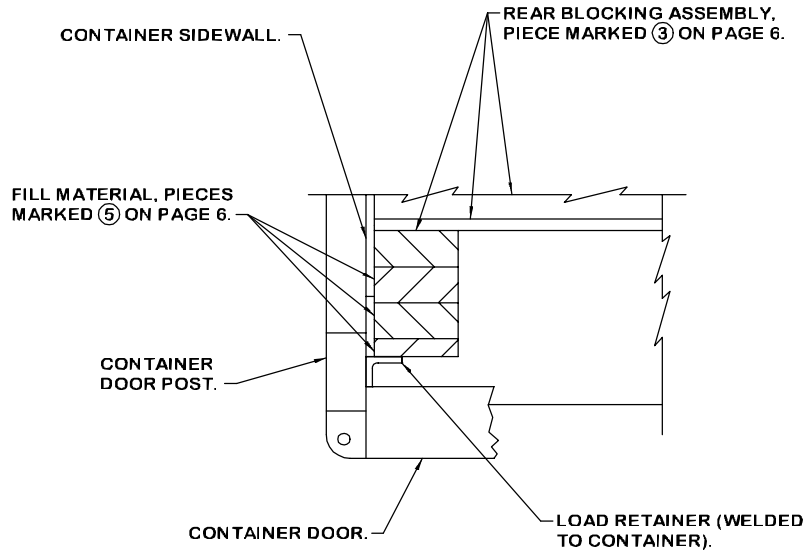
VERTICAL PIECE, 2" X 4" X 43" (4 REQD).

LONGITUDINAL PIECE, 2" X 4" X 45" (12 REQD). NAIL THE OUTER FOUR PIECES TO THE VERTICAL PIECES W/3-10d NAILS AT EACH END.

ORIENT WITH THIS SIDE AGAINST THE CONTAINER WALL.

TYPICAL OMITTED UNIT ASSEMBLY

THE ASSEMBLY DEPICTED ABOVE IS FOR USE IN PLACE OF AN OMITTED PALLET UNIT. NO MORE THAN THREE OMITTED UNIT ASSEMBLIES MAY BE USED PER TWO-HIGH LOAD. DO NOT INSTALL AN OMITTED UNIT ASSEMBLY IMMEDIATELY ADJACENT TO ANOTHER OMITTED UNIT ASSEMBLY.

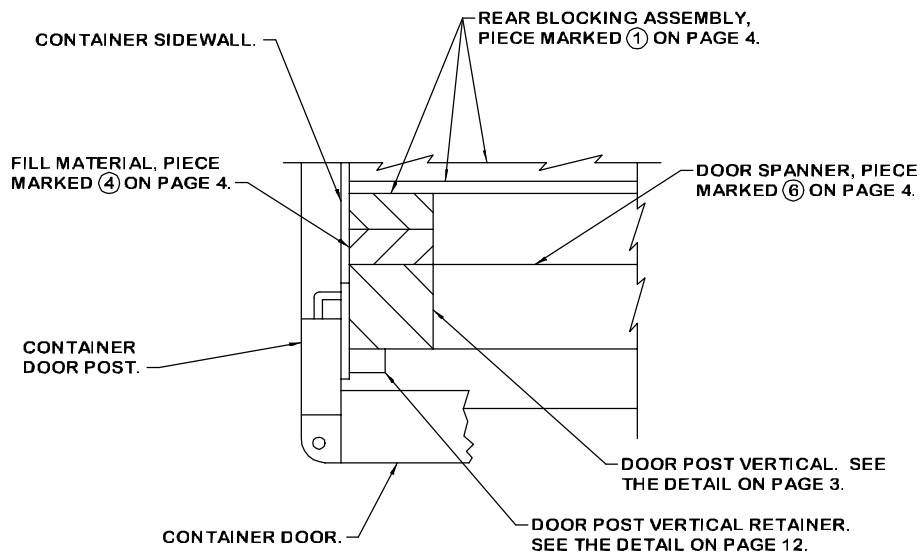


DETAIL A

A PARTIAL PLAN VIEW OF THE LEFT REAR PORTION OF THE CONTAINER IS SHOWN DEPICTING THE PROPER POSITION OF THE FILL MATERIAL AND ADJACENT DUNNAGE PIECES.

SPECIAL NOTE:

WHEN ISO CONTAINERS ARE NOT EQUIPPED WITH PRE-WELDED LOAD RETAINERS, AS DEPICTED IN "DETAIL A" ABOVE, DOOR POST VERTICALS, DOOR POST VERTICAL RETAINERS AND DOOR SPANNERS WILL BE REQUIRED FOR THE LOADS DEPICTED ON PAGES 4 AND 6. SEE VARIOUS LOADS WITHIN AMC DRAWING 19-48-4153-15PA1002 FOR EXAMPLES. SEE PAGE 12 FOR DETAILS OF THE METAL DOOR POST VERTICAL RETAINER.

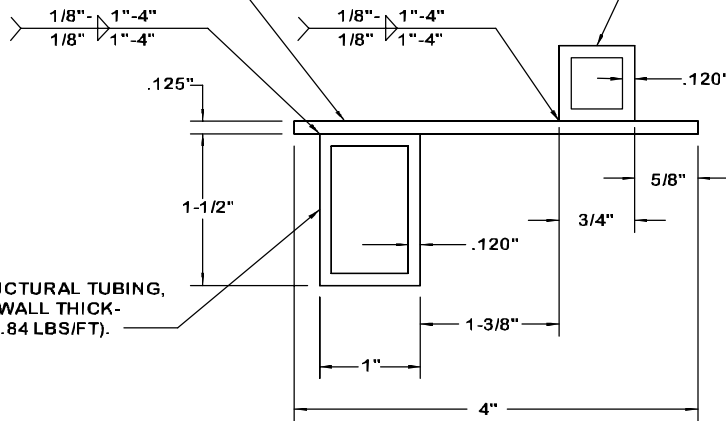


DETAIL B

A PARTIAL PLAN VIEW OF THE LEFT REAR PORTION OF THE CONTAINER IS SHOWN DEPICTING THE PROPER POSITION OF THE DOOR POST VERTICAL RETAINER AND ADJACENT DUNNAGE PIECES.

STEEL STRIP, 1/8" THICK BY 4" WIDE
BY 83" LONG (1.70 LBS/FT).

SQUARE STRUCTURAL TUBING, 3/4" SQUARE
BY .120" WALL THICKNESS BY 83" LONG
(1.03 LBS/FT). SEE SPECIAL NOTE BELOW.



RECTANGULAR STRUCTURAL TUBING,
1-1/2" BY 1" BY .120" WALL THICK-
NESS BY 83" LONG (1.84 LBS/FT).

VIEW A

SPECIAL NOTE:

IN MOST CORRUGATED STEEL CONTAINERS, LASHING OR TIE BARS WILL BE PRESENT IN THE SLOT WHERE THE 3/4" SQUARE STRUCTURAL TUBING IS TO BE INSTALLED. TO ENSURE PROPER ENGAGEMENT OF THE SQUARE TUBING AND THE CONTAINER DOOR POST, THE TUBING MUST BE NOTCHED AT THE TIE BAR LOCATIONS.

VIEW A
SQUARE STRUCTURAL TUBING,
3/4" SQUARE BY .120" WALL
THICKNESS BY 83" LONG
(1.03 LBS/FT).



RECTANGULAR STRUCTURAL TUBING,
1-1/2" BY 1" BY .120" WALL THICKNESS
BY 83" LONG (1.84 LBS/FT).

STEEL STRIP, 1/8" THICK BY 4" WIDE
BY 83" LONG (1.70 LBS/FT).

DOOR POST VERTICAL RETAINER

NOTE: THE ABOVE ASSEMBLY HAS BEEN SHOWN ROTATED 90° FROM THE ORIENTATION IN WHICH IT IS INSTALLED IN THE LEFT REAR CORNER OF THE CONTAINER. THE ASSEMBLY HAS BEEN ROTATED FOR HOLE LOCATION CLARITY.