

APPROVED BY
BUREAU OF EXPLOSIVES

J. H. Elshman
DATE 1/29/93

TOW

LOADING AND BRACING • WITH WOODEN
DUNNAGE IN END OPENING ISO
CONTAINERS OF GUIDED MISSILES,
PACKED ONE PER WIREBOUND BOX,
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 CARRIER.

U. S. ARMY MATERIEL COMMAND DRAWING			
APPROVED, U. S. ARMY MISSILE COMMAND <i>Tail w Honea</i>	DRAFTSMAN	TECHNICIAN	ENGINEER
		G. GUAY	G. WILLIS
APPROVED BY ORDER OF COMMANDING GENERAL, U. S. ARMY MATERIEL COMMAND <i>William F Ernst</i> U. S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL	VALIDATION ENGINEERING DIVISION	TRANSPORTATION ENGINEERING DIVISION	LOGISTICS ENGINEERING OFFICE
	<i>J. H. Elshman</i> <i>W. J. Merick</i> <i>T. J. Michel</i> MAY 1993		
	CLASS	DIVISION	DRAWING
	19	48	8192
			FILE
			GM15T03

DO NOT SCALE

GENERAL NOTES

(GENERAL NOTES CONTINUED)

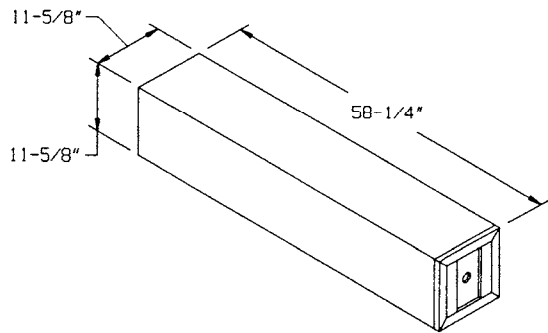
- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1 AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE SPECIFIED OUTLOADING PROCEDURES ARE APPLICABLE TO LOADS OF THE TOW GUIDED MISSILE PACKED ONE PER WIREBOUND CONTAINER (OVERPACK). SUBSEQUENT REFERENCE TO CONTAINER MEANS THE CONTAINER WITH MISSILE COMPONENTS. SUBSEQUENT REFERENCE TO PALLET UNIT MEANS THE 3-WIDE BY 4-HIGH PALLET UNIT OR THE 4-WIDE BY 3-HIGH PALLET UNIT WITH CONTENTS. CAUTION: REGARDLESS OF THE QUANTITY OF CONTAINERS OR PALLET UNITS TO BE SHIPPED, THE "MAXIMUM GROSS WEIGHT" OF THE END OPENING ISO CONTAINER MUST NOT BE EXCEEDED.
- C. FOR DETAILS OF THE WIREBOUND CONTAINER, SEE DRAWING NO. 10224699 AND THE "WIREBOUND CONTAINER" DETAIL ON PAGE 3.
CONTAINER DIMENSIONS - - - 58-1/2" LONG X 11-5/8" WIDE
X 11-5/8" HIGH (APPROX).
GROSS WEIGHT - - - - - 87 POUNDS (APPROX).
CUBE - - - - - 4.9 CUBIC FEET.
- D. FOR DETAILS OF THE PALLETIZED UNITS, SEE US ARMY MATERIEL COMMAND DRAWING NO. 19-48-5229-GM20T01 AND THE "PALLET UNIT" DETAILS ON PAGE 3.
3-WIDE BY 4-HIGH PALLET
UNIT DIMENSIONS - - - - - 35-1/4" LONG X 58-1/4" WIDE X
51-1/4" HIGH (APPROX).
GROSS WEIGHT - - - - - 1,112 POUNDS (APPROX).
CUBE - - - - - 60.9 CUBIC FEET.
4-WIDE BY 3-HIGH PALLET
UNIT DIMENSIONS - - - - - 58-1/4" LONG X 48" WIDE X
39-3/4" HIGH (APPROX).
GROSS WEIGHT - - - - - 1,126 POUNDS (APPROX).
CUBE - - - - - 64.3 CU FT (APPROX).
- E. THESE PROCEDURES CAN ALSO BE UTILIZED FOR THE SHIPMENT OF THE CONTAINERS WHEN THEY ARE LOADED WITH AN ITEM OTHER THAN THE SPECIFIED GUIDED MISSILE, OR WHEN THEY ARE EMPTY.
- F. 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 95" HIGH. THE LOAD IS DESIGNED FOR TRAILER/CONTAINER-ON-FLAT-CAR (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.
- G. WHEN LOADING MISSILE CONTAINERS OR PALLET UNITS, THEY ARE TO BE POSITIONED SO AS TO ACHIEVE A TIGHT LOAD (TIGHT AGAINST THE DUNNAGE ASSEMBLIES). ALTHOUGH A TOTAL OF 1-1/2" OF UNBLOCKED SPACE ACROSS THE WIDTH OF A LOAD BAY IS PERMITTED, LATERAL VOIDS WITHIN THE LOAD ARE TO BE HELD TO A MINIMUM. EXCESSIVE SLACK CAN BE ELIMINATED FROM A LOAD BY LAMINATING ADDITIONAL PIECES OF APPROPRIATE THICKNESS TO THE SIDE FILL ASSEMBLIES. NAIL EACH ADDITIONAL PIECE W/1 APPROPRIATELY SIZED NAIL EVERY 12". ADDITIONALLY, THE THICKNESS AND QUANTITY OF THE DUNNAGE LUMBER MAY BE ADJUSTED AS REQUIRED TO FACILITATE VARIANCE IN THE SIZE OF THE ITEM BEING LOADED.
- H. DUNNAGE LUMBER SPECIFIED IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE AND 4" X 4" MATERIAL IS ACTUALLY 3-1/2" THICK BY 3-1/2" WIDE.

- J. 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.
- K. IN SOME CONTAINERS, SUCH AS SOME ALL STEEL CONTAINERS, THERE IS A SLOT AT THE CORNERS OF THE FORWARD WALL. A PIECE OF DUNNAGE MATERIAL MUST BE LAMINATED TO THE BUFFER PIECES OF THE FORWARD STRUT ASSEMBLIES TO PROVIDE A FLAT SURFACE FOR THE 2" X 4" 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". THIS PIECE IS NOT REQUIRED WHEN THE ENDWALL OF THE CONTAINER IS SMOOTH AND FLAT.
- L. CAUTION: DO NOT NAIL DUNNAGE MATERIAL TO THE CONTAINER WALLS OR FLOOR. ALL NAILING WILL BE WITHIN THE DUNNAGE.
- M. PORTIONS OF THE CONTAINER DEPICTED WITHIN THIS DRAWING, SUCH AS ONE OF SIDE WALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- N. REQUIREMENTS CITED WITHIN THE BUREAU OF EXPLOSIVES PAMPHLET 6C APPLY WHEN THE SHIPMENT MOVES BY TRAILER/CONTAINER-ON-FLAT-CAR (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.
- O. DURING INTRASTATE AND/OR INTERSTATE MOVES BY MOTOR CARRIER, A PROPER CHASSIS OR MODIFIED FLAT BED TRAILER MUST BE USED TO PRECLUDE VIOLATION OF ONE OR MORE "WEIGHT LAWS" APPLICABLE TO THE STATE OR STATES INVOLVED.
- P. 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 0.454KG.

(CONTINUED AT RIGHT)

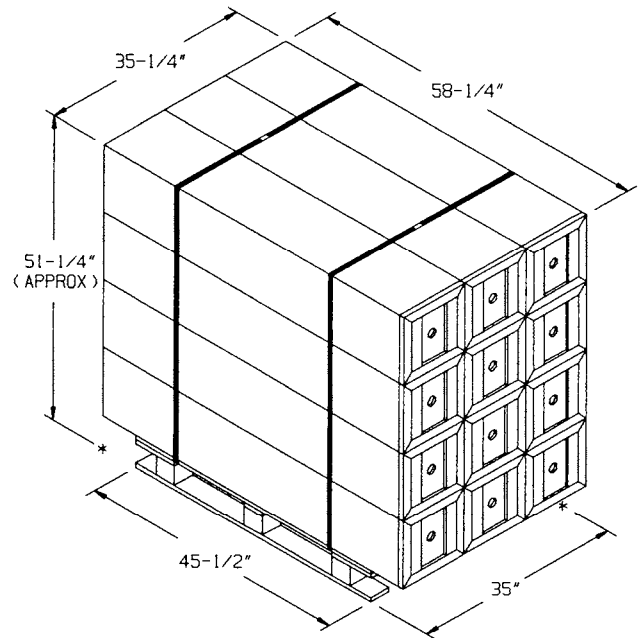
MATERIAL SPECIFICATIONS

- LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.
- NAILS - - - - - : FED SPEC FF-N-105; COMMON.
- PLYWOOD - - - - - : COMMERCIAL ITEM DESCRIPTION
A-A-55057, TYPE A, CONSTRUCTION AND INDUSTRIAL PLYWOOD, INTERIOR WITH EXTERIOR GLUE, GRADE C-D. IF SPECIFIED GRADE IS NOT AVAILABLE, A BETTER INTERIOR OR AN EXTERIOR GRADE MAY BE SUBSTITUTED.



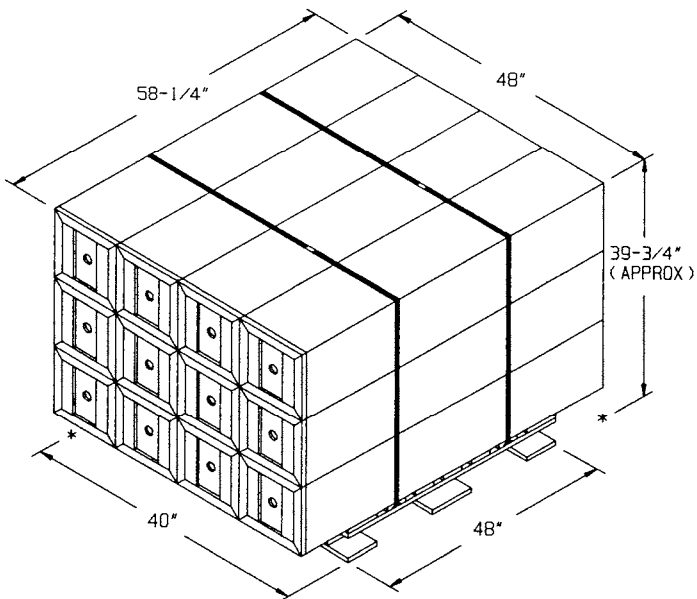
WIREBOUND CONTAINER

GROSS WEIGHT ----- 87 LBS (APPROX)
 CUBE ----- 4.9 CU FT (APPROX)



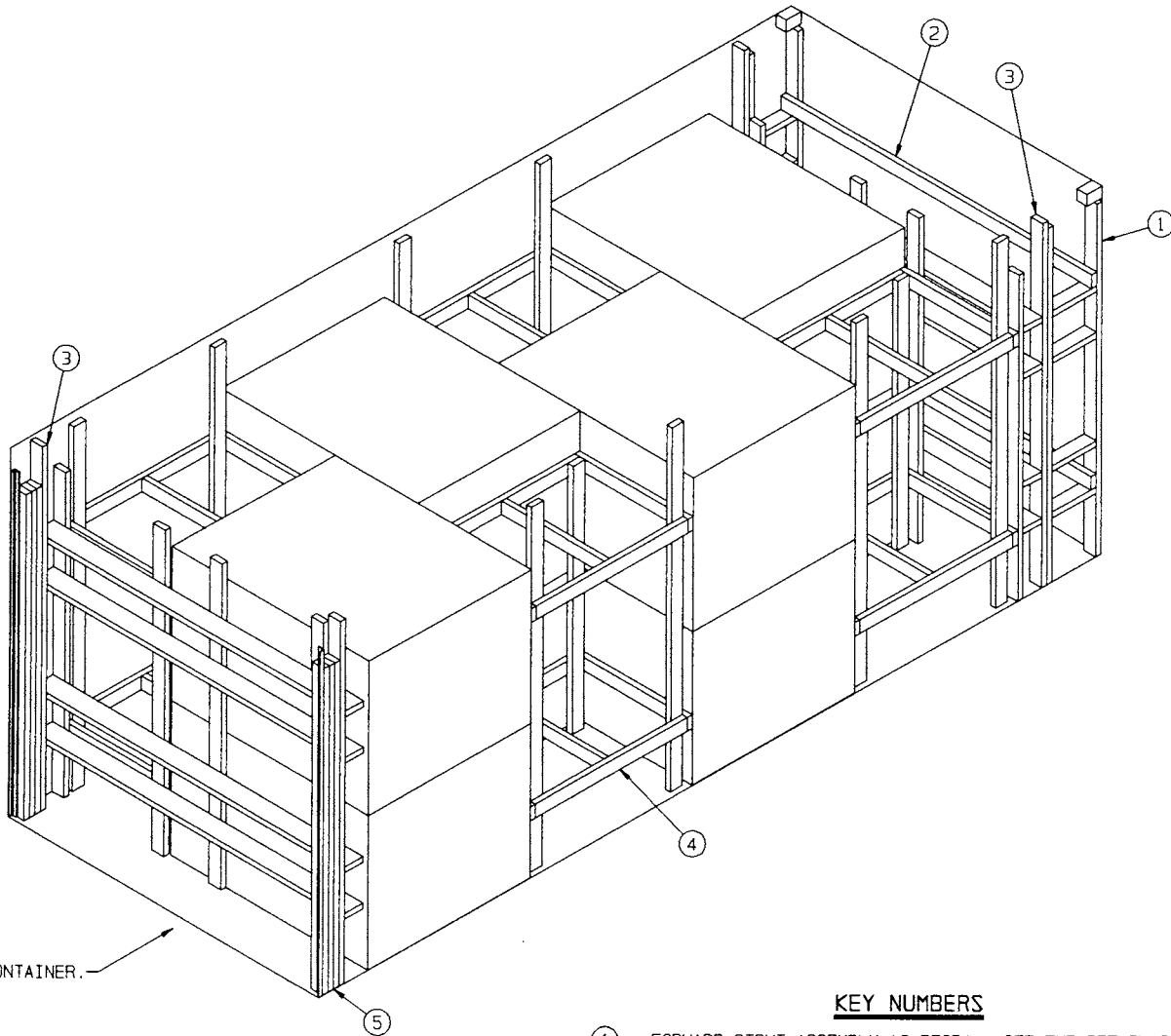
PALLET UNIT (3-WIDE BY 4-HIGH)

NUMBER OF CONTAINERS: -- 12
 UNIT WEIGHT ----- 1,112 LBS (APPROX)
 CUBE ----- 60.9 CU FT (APPROX)



PALLET UNIT (4-WIDE BY 3-HIGH)

NUMBER OF CONTAINERS: -- 12
 UNIT WEIGHT ----- 1,126 LBS (APPROX)
 CUBE ----- 64.3 CU FT (APPROX)



REAR OF CONTAINER.

ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD STRUT ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 11.
- ② SPREADER PIECE, 2" X 4" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (2 REQD). NAIL TO THE VERTICALS OF PIECE MARKED ① W/2-10d NAILS AT EACH END.
- ③ FORWARD/REAR BLOCKING ASSEMBLY (2 REQD). SEE THE "FORWARD/REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 10. NAIL TO EACH FORWARD STRUT ASSEMBLY, PIECE MARKED ①, W/5-10d NAILS.
- ④ SIDE FILL ASSEMBLY (4 REQD). SEE THE "SIDE FILL ASSEMBLY A" DETAIL ON PAGE 12.
- ⑤ FILL MATERIAL, 4" WIDE BY 7'-0" LONG MATERIAL (AS REQUIRED). NAIL THE FIRST PIECE TO THE REAR BLOCKING ASSEMBLY W/7 NAILS OF A SUITABLE SIZE (10d FOR 2" MATERIAL). LAMINATE EACH ADDITIONAL PIECE TO THE PREVIOUS PIECE IN A LIKE MANNER.

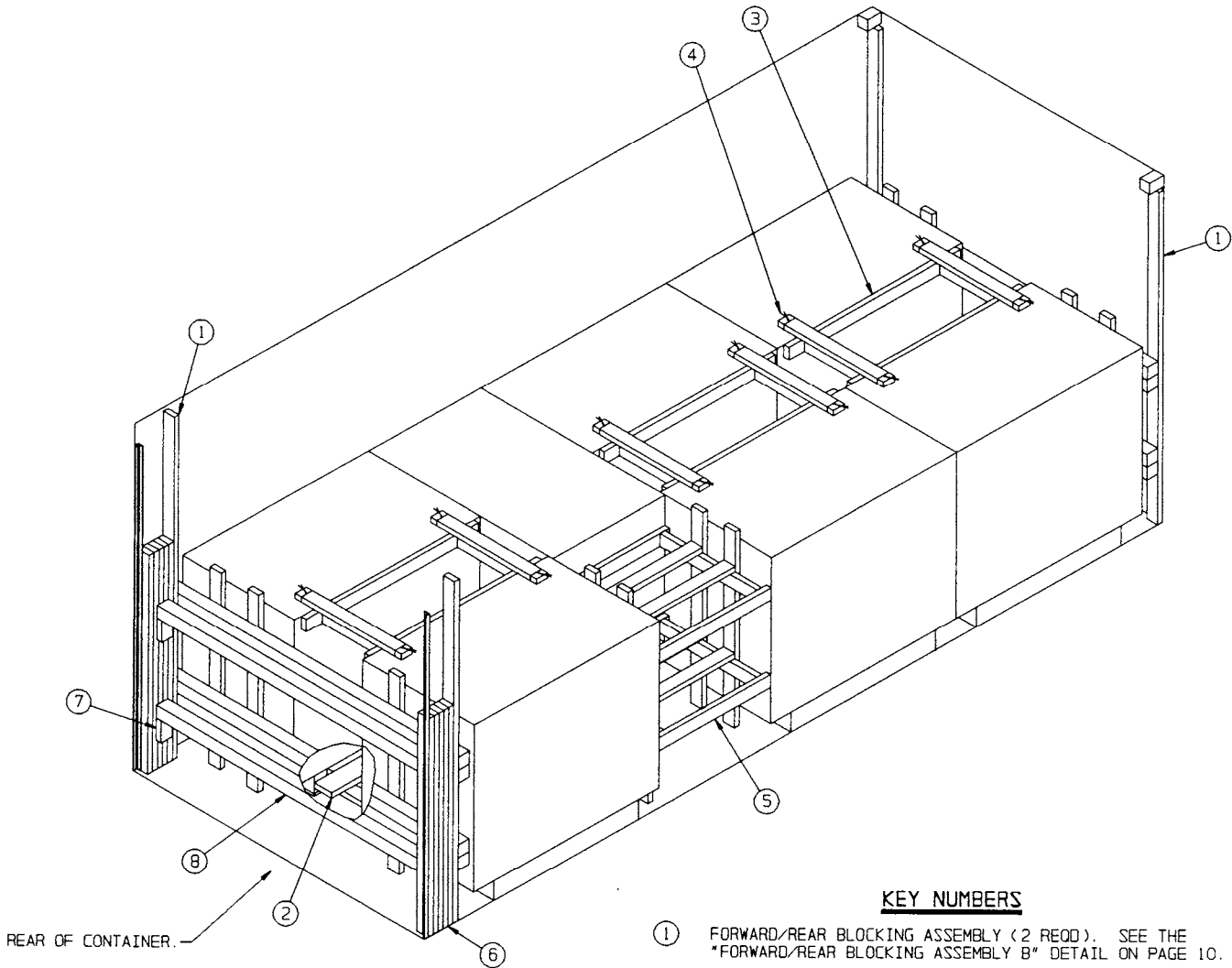
RECOMMENDED SEQUENTIAL LOADING PROCEDURES

1. PREFABRICATE TWO FORWARD STRUT ASSEMBLIES, TWO FORWARD/REAR BLOCKING ASSEMBLIES "A" AND FOUR SIDE FILL ASSEMBLIES "A".
2. INSTALL TWO FORWARD STRUT ASSEMBLIES AND TWO SPREADER PIECES.
3. INSTALL THE FORWARD BLOCKING ASSEMBLY.
4. LOAD TWO PALLET UNITS AND ONE SIDE FILL ASSEMBLY.
5. REPEAT STEP 4 THREE TIMES.
6. INSTALL THE REAR BLOCKING ASSEMBLY.
7. INSTALL THE FILL MATERIAL BETWEEN THE REAR BLOCKING ASSEMBLY AND THE LOAD RETAINER.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	419	279
2" X 6"	61	61
NAILS	NO. REQD	POUNDS
10d (3")	348	5-1/2

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
PALLET UNITS - - - - -	8 - - - - -	9,008 LBS
DUNNAGE - - - - -	- - - - -	686 LBS
CONTAINER - - - - -	- - - - -	4,700 LBS
TOTAL WEIGHT - - - - -		14,394 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD/REAR BLOCKING ASSEMBLY (2 REOD). SEE THE "FORWARD/REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 10.
- ② ANTI-SWAY BRACE (3 REOD). SEE THE DETAIL ON PAGE 14.
- ③ TOP ANTI-SWAY BRACE (3 REOD). SEE THE DETAIL ON PAGE 14.
- ④ TIE WIRE, NO. 14 GAGE WIRE 12" LONG (12 REOD). INSTALL THE WIRE TO FORM A COMPLETE LOOP AROUND THE LOAD STRAP OF THE UNIT AND THE RETAINER PIECE OF THE TOP ANTI-SWAY BRACE. BRING ENDS TOGETHER AND TWIST TAUT.
- ⑤ CRIB FILL ASSEMBLY (1 REOD). SEE THE "CRIB FILL ASSEMBLY A" DETAIL ON PAGE 13.
- ⑥ FILL MATERIAL, 4" WIDE BY 60" LONG MATERIAL (AS REQD). NAIL THE FIRST PIECE TO THE REAR BLOCKING ASSEMBLY W/5 NAILS OF A SUITABLE SIZE (10d FOR 2" MATERIAL). LAMINATE EACH ADDITIONAL PIECE TO THE PREVIOUS PIECE IN A LIKE MANNER.
- ⑦ STRUT LEDGER, 2" X 4" X 6" (4 REOD). INSTALL PRIOR TO INSTALLING THE SPANNER PIECES, PIECE MARKED ⑧. NAIL TO THE FILL MATERIAL, PIECE MARKED ⑥, W/2-10d NAILS.
- ⑧ SPANNER PIECE, 4" X 4" MATERIAL, CUT TO A LENGTH THAT WILL PROVIDE FOR A DRIVE FIT (REF: 7'-1-3/8") (2 REOD). INSTALL THE UPPER SPANNER PIECE SUCH THAT THE TOP EDGE OF THE SPANNER PIECE IS AT THE SAME HEIGHT AS THE TOP EDGE OF THE BEAM IN THE REAR BLOCKING ASSEMBLY, PIECE MARKED ①. INSTALL THE LOWER SPANNER PIECE SUCH THAT THE BOTTOM EDGE IS AT THE SAME HEIGHT AS THE BOTTOM EDGE OF THE LOWEST BEAM IN THE REAR BLOCKING ASSEMBLY. TOENAIL TO THE FILL MATERIAL, PIECE MARKED ⑥, W/2-12d NAILS AT EACH END. NOTE: PIECES MARKED ⑦ AND ⑧ ARE ONLY REQUIRED WHEN USING 6" OR MORE OF SOLID FILL MATERIAL.

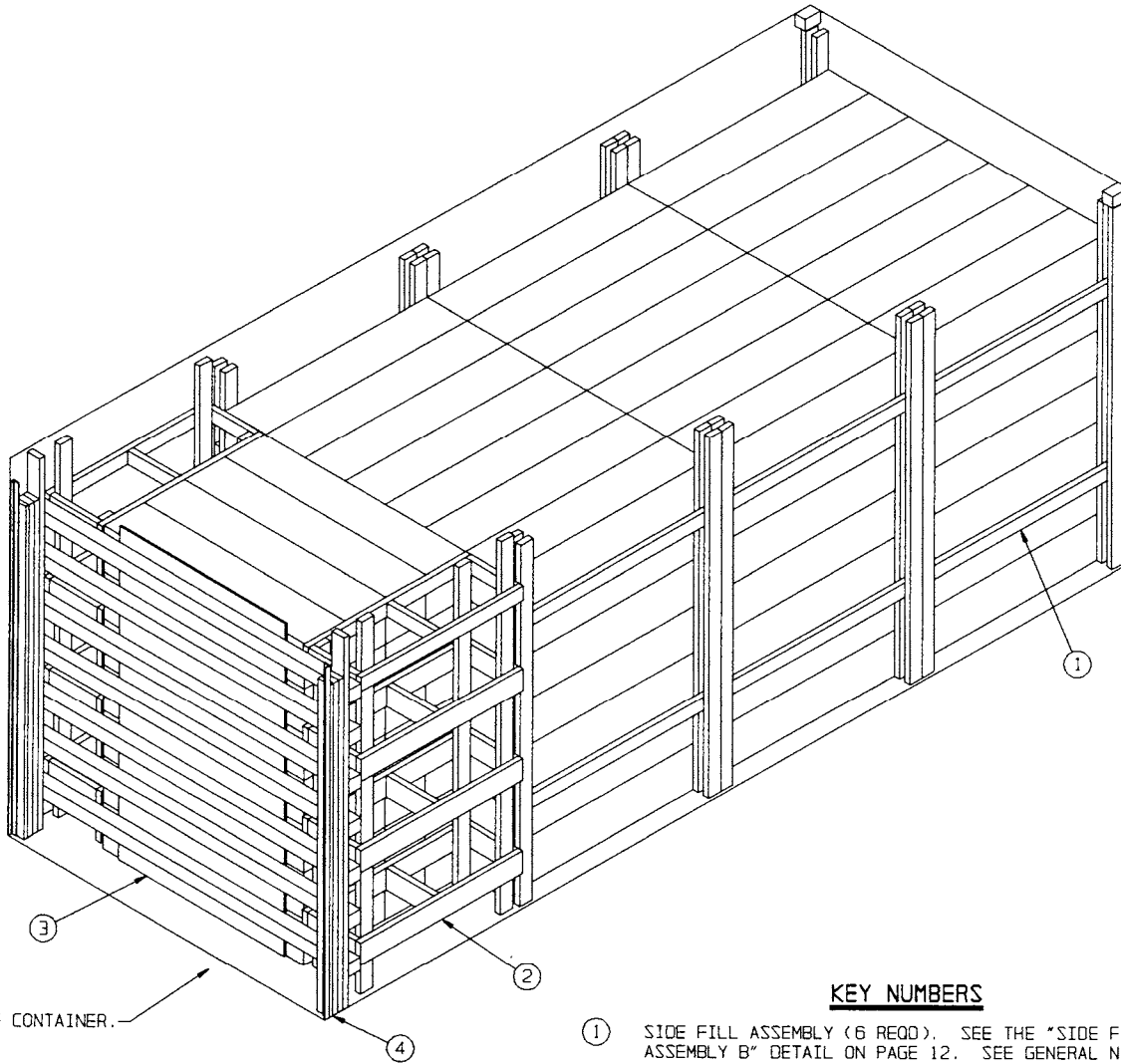
RECOMMENDED SEQUENTIAL LOADING PROCEDURES

1. PREFABRICATE TWO FORWARD/REAR BLOCKING ASSEMBLIES "B", THREE ANTI-SWAY BRACES, THREE TOP ANTI-SWAY BRACES AND ONE CRIB FILL ASSEMBLY.
2. INSTALL THE FORWARD BLOCKING ASSEMBLY.
3. LOAD TWO PALLET UNITS, ONE ANTI-SWAY BRACE AND ONE TOP ANTI-SWAY BRACE WITH TIE WIRES.
4. REPEAT STEP 3.
5. LOAD ONE PALLET UNIT AND INSTALL THE CRIB FILL ASSEMBLY.
6. REPEAT STEP 3.
7. INSTALL THE REAR BLOCKING ASSEMBLY.
8. INSTALL THE FILL MATERIAL BETWEEN THE REAR BLOCKING ASSEMBLY AND THE LOAD RETAINERS.
9. INSTALL THE FOUR STRUT LEDGERS AND TWO SPANNER PIECES.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	232	155
2" X 6"	32	32
4" X 4"	75	100
NAILS	NO. REOD	POUNDS
10d (3")	308	4-3/4
12d (3-1/4")	8	1/4
WIRE, NO. 14 GAGE	12' REOD	1/4 LB

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	7	7,784 LBS
DUNNAGE		579 LBS
CONTAINER		4,700 LBS
TOTAL WEIGHT		13,063 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① SIDE FILL ASSEMBLY (6 REQD). SEE THE "SIDE FILL ASSEMBLY B" DETAIL ON PAGE 12. SEE GENERAL NOTE "G" ON PAGE 2.
- ② CRIB FILL ASSEMBLY (2 REQD). SEE THE "CRIB FILL ASSEMBLY B" DETAIL ON PAGE 13.
- ③ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 11.
- ④ FILL MATERIAL, 4" WIDE MATERIAL BY 7'-0" LONG MATERIAL (AS REQD). NAIL THE FIRST PIECE TO THE REAR BLOCKING ASSEMBLY W/7 NAILS OF A SUITABLE SIZE (10d FOR 2" THICK MATERIAL). LAMINATE EACH ADDITIONAL PIECE TO THE PREVIOUS PIECE IN A LIKE MANNER.

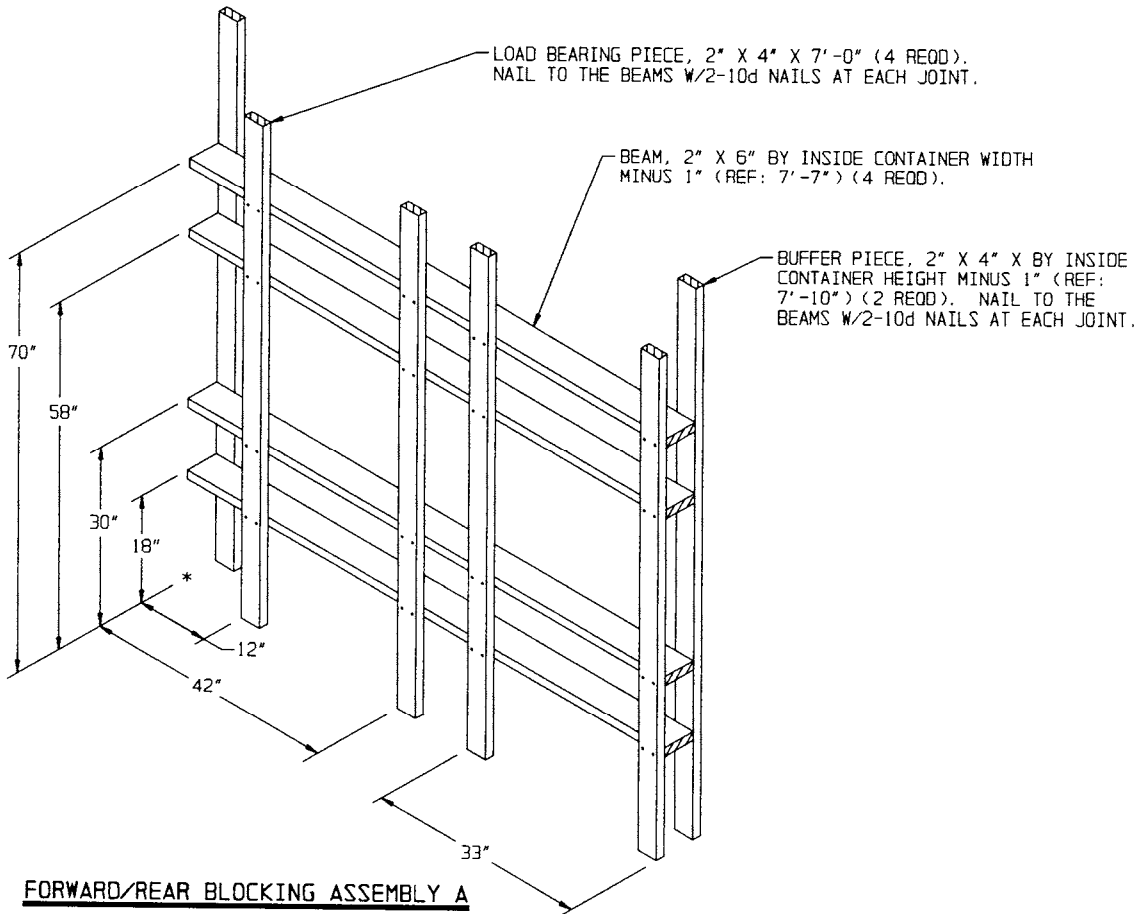
RECOMMENDED SEQUENTIAL LOADING PROCEDURES

1. PREFABRICATE ONE REAR BLOCKING ASSEMBLY, SIX SIDE FILL ASSEMBLIES "B" AND TWO CRIB FILL ASSEMBLIES "B".
2. INSTALL TWO SIDE FILL ASSEMBLIES AND LOAD FORTY-NINE WIREBOUND CONTAINERS.
3. REPEAT STEP 3 TWO MORE TIMES.
4. LOAD TWENTY-EIGHT WIREBOUND CONTAINERS AND INSTALL THE TWO CRIB FILL ASSEMBLIES.
5. INSTALL THE REAR BLOCKING ASSEMBLY.
6. INSTALL THE FILL MATERIAL BETWEEN THE REAR BLOCKING ASSEMBLY AND THE LOAD RETAINERS.

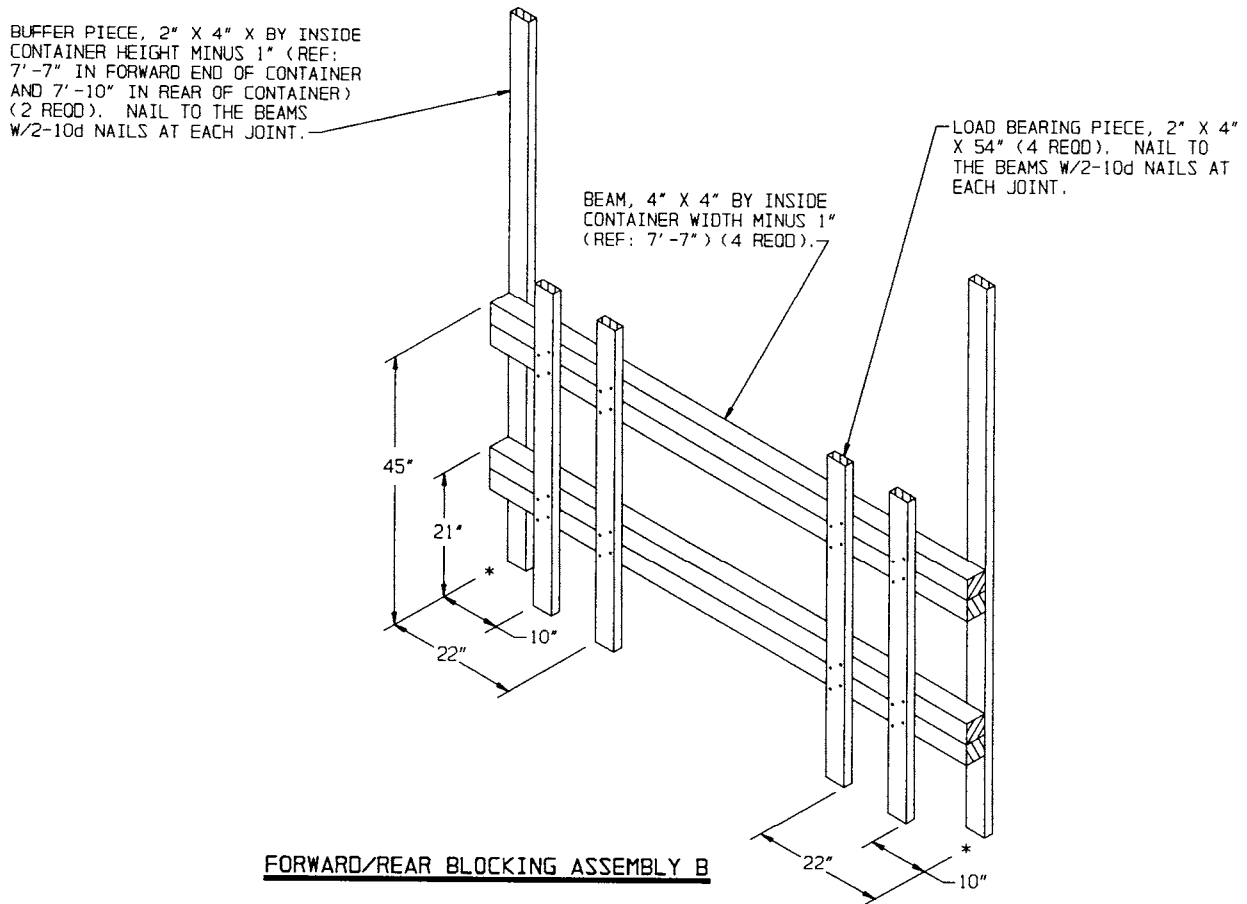
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	366	244
2" X 6"	67	67
4" X 4"	53	71
NAILS	NO. REQD	POUNDS
6d (2")	49	1/4
10d (3")	386	6
PLYWOOD, 1/2" - - -	28.00 SQ FT REQD - -	38.50 LBS

LOAD AS SHOWN

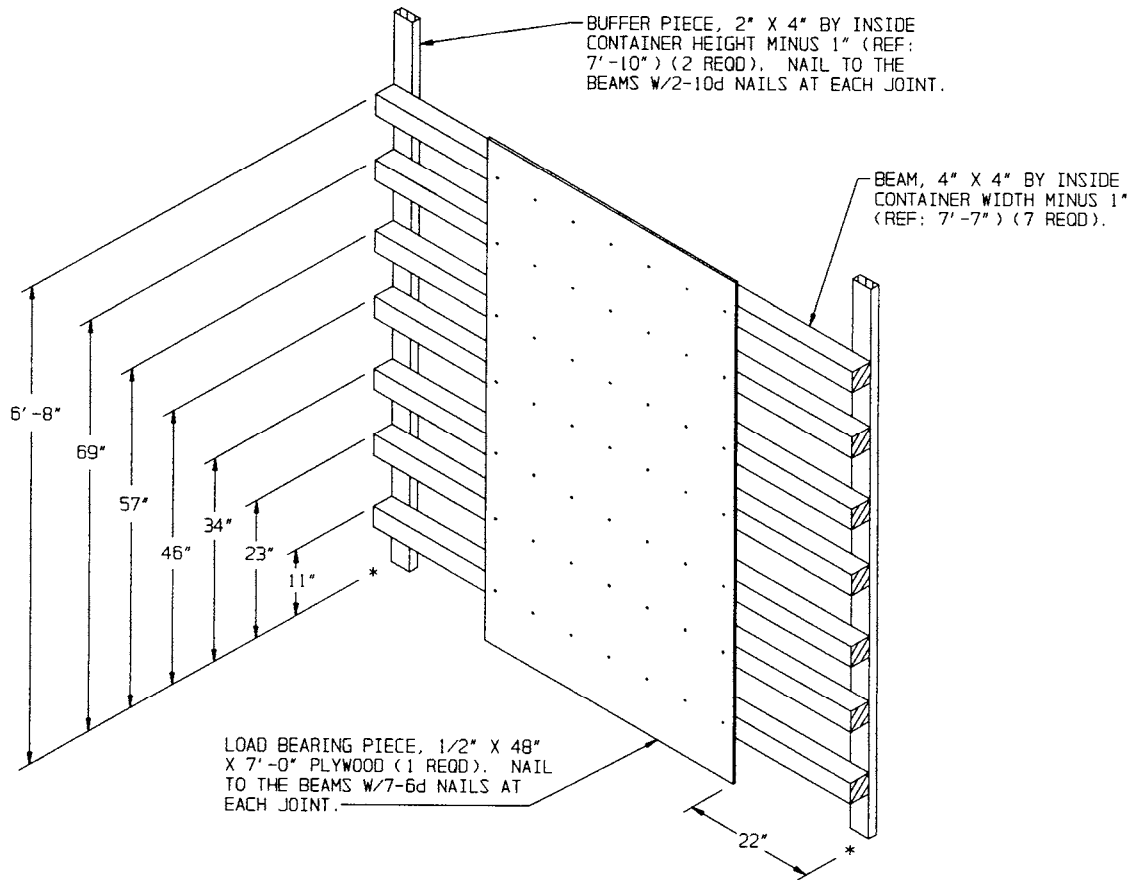
ITEM	QUANTITY	WEIGHT (APPROX)
WIREBOUND CONTAINER	- 175 - - - - -	15,225 LBS
DUNNAGE	- - - - -	809 LBS
CONTAINER	- - - - -	4,700 LBS
TOTAL WEIGHT - - - - -		20,734 LBS (APPROX)



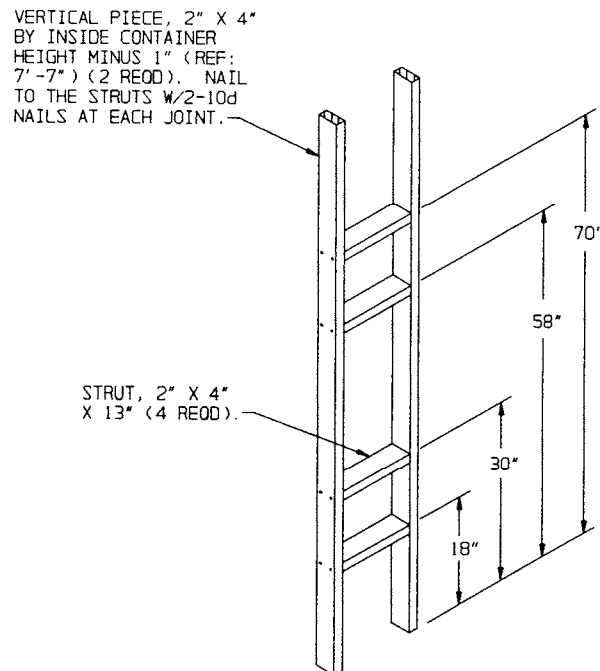
FORWARD/REAR BLOCKING ASSEMBLY A



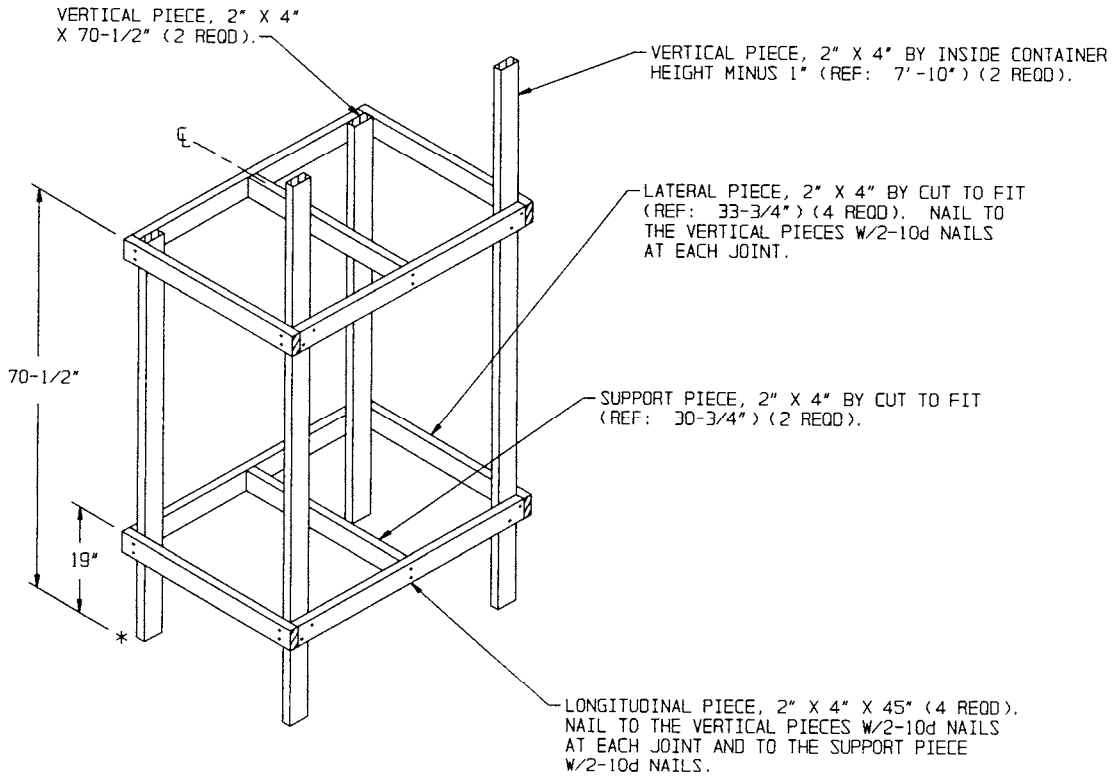
FORWARD/REAR BLOCKING ASSEMBLY B



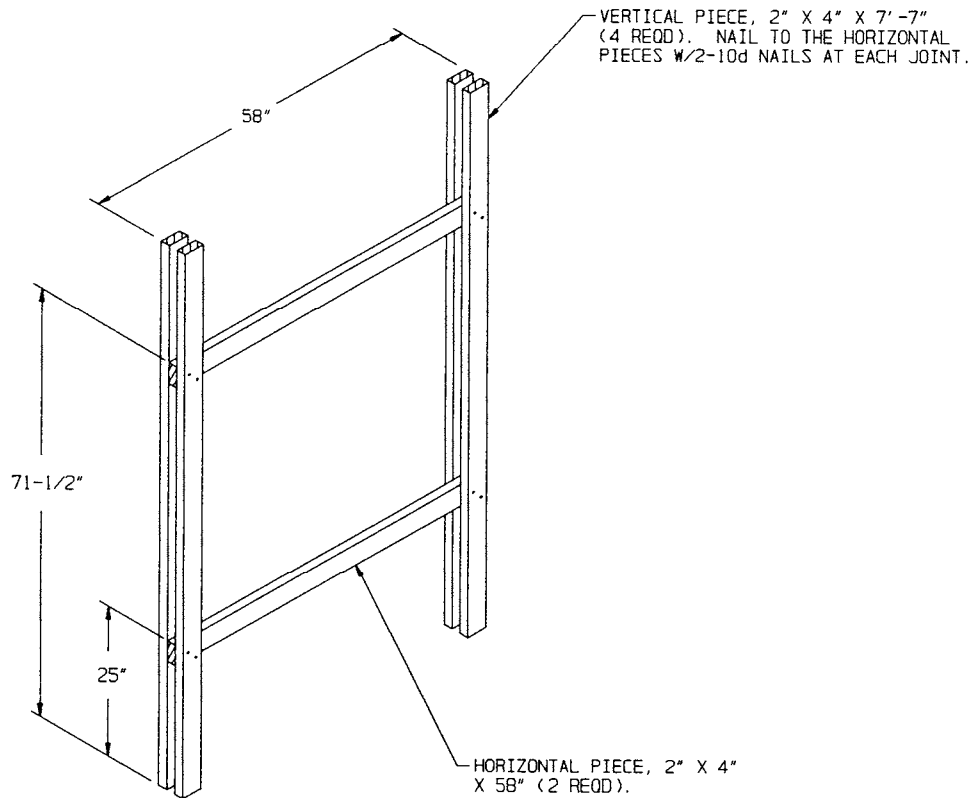
REAR BLOCKING ASSEMBLY



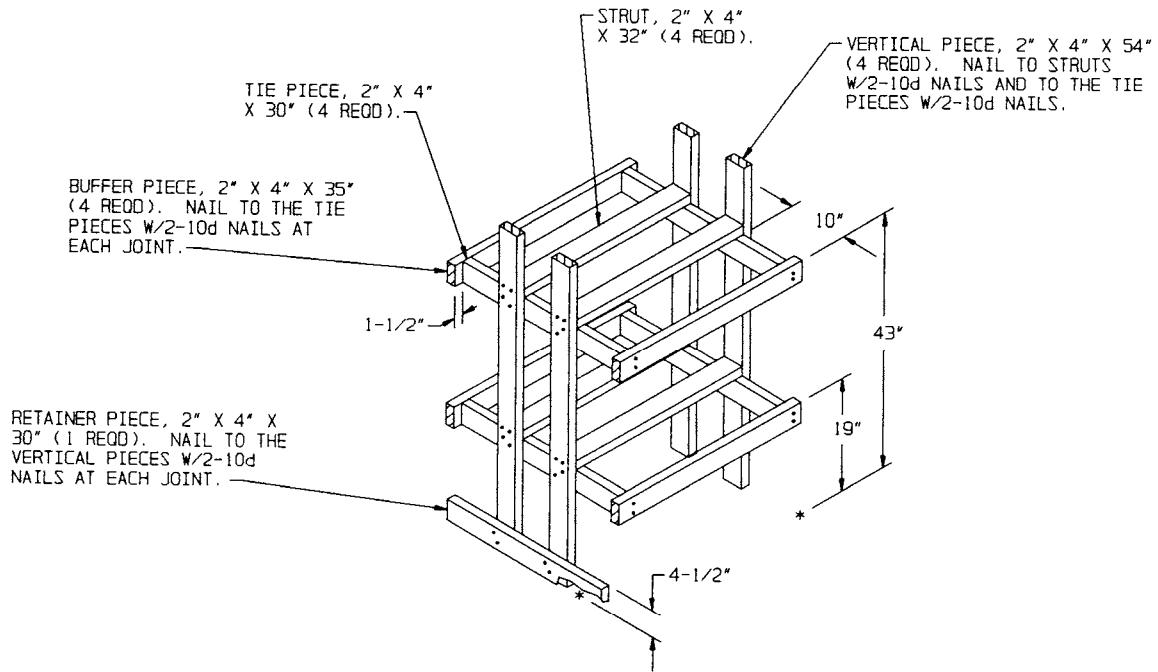
FORWARD STRUT ASSEMBLY



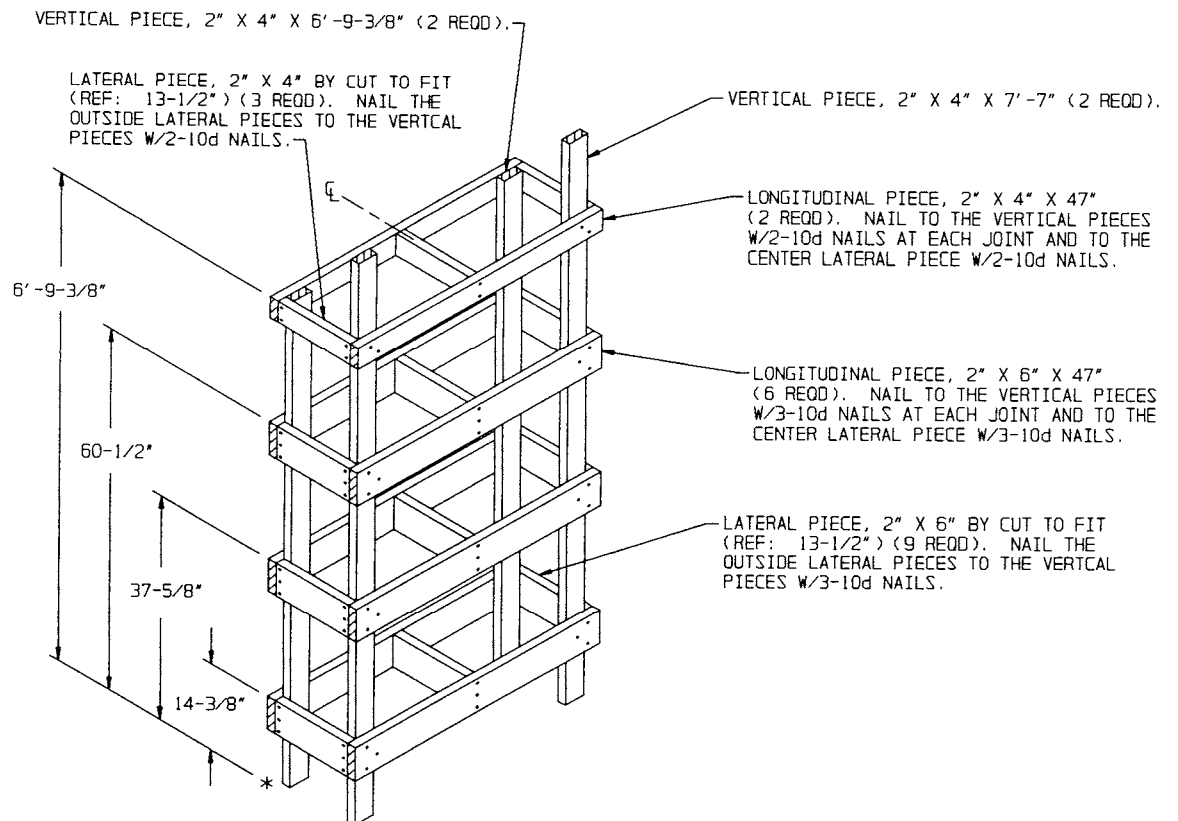
SIDE FILL ASSEMBLY A



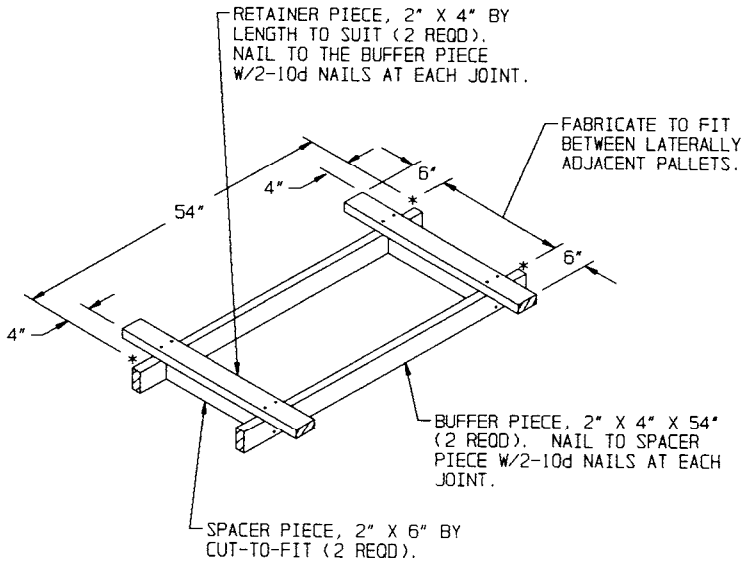
SIDE FILL ASSEMBLY B



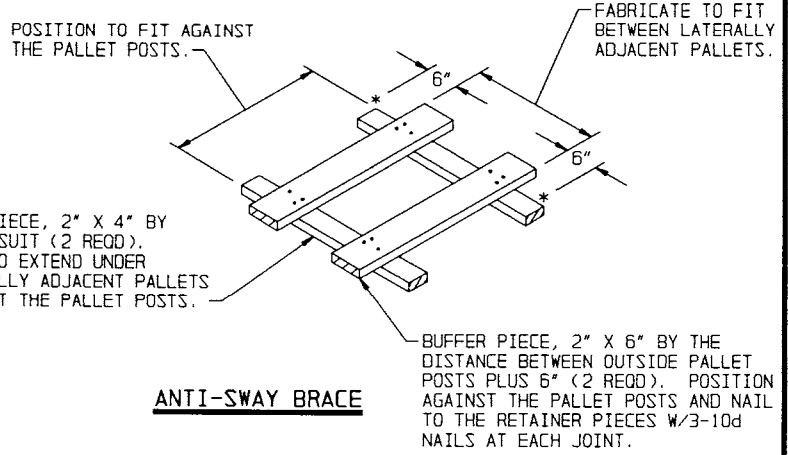
CRIB FILL ASSEMBLY A



CRIB FILL ASSEMBLY B

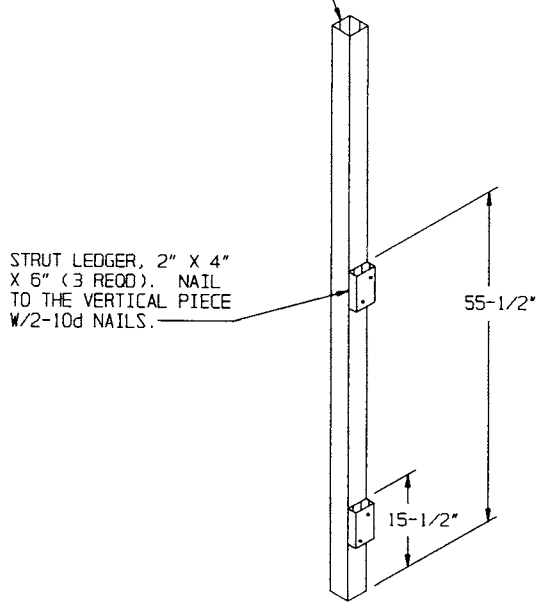


TOP ANTI-SWAY BRACE



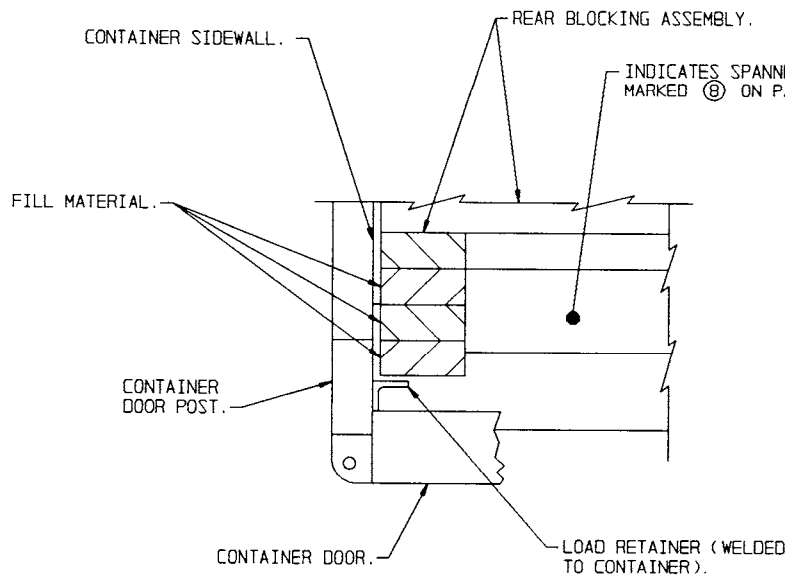
ANTI-SWAY BRACE

VERTICAL PIECE, 4" X 4" BY INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-10-1/2") (1 REQD).



DOOR POST VERTICAL

TWO DOOR POST VERTICALS ARE REQUIRED WITHIN THE LOADS SHOWN ON PAGES 4, 6, AND 8 WHEN THE ISO CONTAINER IS NOT EQUIPPED WITH PRE-WELDED LOAD RETAINERS. THE DOOR POST VERTICALS MUST BE NAILED TO THE DOOR POST VERTICAL RETAINER. NAIL THROUGH THE HOLES IN THE DOOR POST VERTICAL RETAINER INTO THE DOOR POST VERTICAL W/4-10d NAILS. SEE "DETAIL B" AND THE SPECIAL NOTE ON PAGE 15.

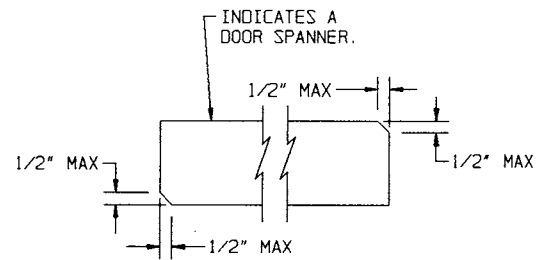


DETAIL A

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.

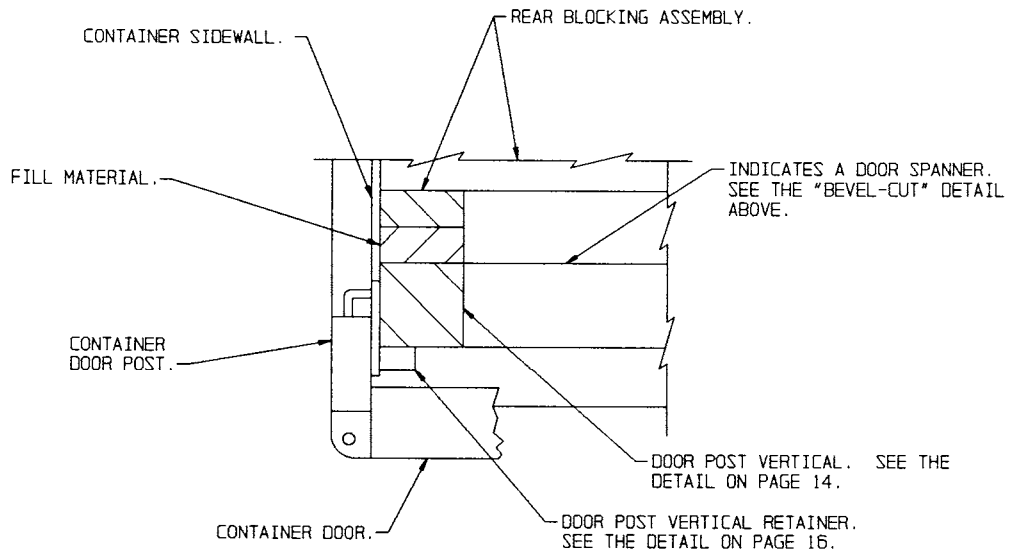
SPECIAL NOTE:

WHEN COMMERCIAL 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 LOAD DEPICTED ON PAGE 2. SEE VARIOUS LOADS WITHIN AMC DRAWING 19-48-4153-15PA1002 FOR EXAMPLES. SEE PAGE 8 FOR DETAILS OF THE METAL DOOR POST VERTICAL RETAINER.



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 DOOR-POST-TO-DOOR-POST FIT.

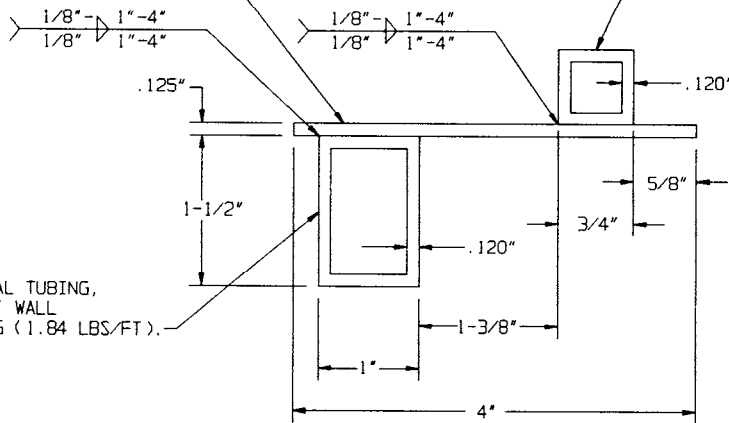


DETAIL B

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).



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

VIEW A

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).

DRILL 5/32", 4 HOLES.

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

DOOR POST VERTICAL RETAINER