

LOADING AND BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF MAVERICK (AGM-65) MISSILES IN CNU-399/E AND CNU-425/E SHIPPING AND STORAGE CONTAINERS

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● **CAUTION:** THE PROCEDURES SHOWN HEREIN ARE ONLY APPLICABLE
FOR HIGHWAY MOVEMENTS; NOT FOR TRAILER-ON-FLATCAR MOVEMENTS.

U.S. ARMY MATERIEL COMMAND DRAWING			
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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 FOR THE MAVERICK MISSILE PACKED IN THE CNU-399/E CONTAINER, AND THE CNU-425/E CONTAINER. SEE THE PICTORIAL VIEW ON PAGE 3 FOR SIZE AND WEIGHT. SUBSEQUENT REFERENCE TO CONTAINER MEANS THE CNU-399/E OR THE CNU-425/E CONTAINER WITH CONTENTS.
- C. THE OUTLOADING PROCEDURES DEPICTED WITHIN THIS DOCUMENT ARE APPLICABLE FOR SHIPMENTS IN CONVENTIONAL TYPE VAN TRAILERS, AND APPLY TO TRAILERS HAVING WOOD, OR WOOD AND METAL, OR ALL METAL FLOORS. VAN TRAILERS WHICH ARE 40'-0" LONG BY 7'-8-1/2" WIDE, AND 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) HAVE BEEN SHOWN, HOWEVER, THE PROCEDURES ARE ALSO APPLICABLE FOR TRAILERS WHICH ARE 89" THRU 99" IN WIDTH AND FOR TRAILERS OF OTHER LENGTHS FROM THE SHORTEST TO THE LONGEST AVAILABLE (REF: 24' TO 53'), AND FOR STRAIGHT TRUCK VANS. THE LOADING AND BRACING PROCEDURES SPECIFIED HEREIN ARE ALSO ADEQUATE (CONFIGURATION WISE AND STRENGTH WISE) FOR LOADS IN SHORTER OR LONGER VANS AND IN NARROWER OR WIDER VANS THAN SHOWN. THE SPECIFIED BRACING IS ADEQUATE FOR LOADS WEIGHING UP TO AND INCLUDING THE MAXIMUM WEIGHTS PERMITTED BY LAW.
- D. SELECTION OF A VEHICLE TO BE USED TO TRANSPORT THE DESIGNATED ITEM MUST COMPLY WITH AR 55-355, CHAPTER 29, FOR EXPLOSIVES AND OTHER DANGEROUS ARTICLES, IN FULL.
- E. THE GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT FOR A LOAD WILL BE THE RESPONSIBILITY OFF THE CARRIER. THE CARRIER WILL ADVISE THE SHIPPER OF THE APPLICABLE LOADING REQUIREMENTS, AND THE SHIPPER WILL LOAD ACCORDINGLY. THE TOTAL WEIGHT OF THE LADING, OF THE DUNNAGE, OF THE TRACTOR, AND OF THE SEMITRAILER CARRYING THE LADING MUST NOT EXCEED THE MAXIMUM GROSS WEIGHT ALLOWED FOR THE STATE OR STATES THRU WHICH THE LOAD IS TO BE TRANSPORTED BY MOTOR CARRIER. LIKEWISE, THE GROSS WEIGHT ON A SINGLE OR TANDEM AXLE MUST NOT EXCEED THE MAXIMUM ALLOWABLE WEIGHT. IF THERE IS ANY DOUBT AS TO WHETHER THE TOTAL GROSS WEIGHT OR AXLE WEIGHT EXCEEDS THE MAXIMUM ALLOWED, WEIGHT SHOULD BE VERIFIED BY ACTUALLY WEIGHING THE LOADED VEHICLE.
- F. **NOTICE:** A SHIPMENT WILL BE POSITIONED IN THE TRAILER CONSISTENT WITH STATE WEIGHT LAWS. THE NUMBER OF LADING UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE TRAILER TO BE LOADED OR THE QUANTITY TO BE SHIPPED. COMBINATIONS OF THE OUTLOADING PROCEDURES SPECIFIED MAY BE USED, HOWEVER, THE APPROVED METHODS SHOWN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE DESIGNATED ITEMS.
- G. THE "LOAD AS SHOWN" FOR MOST OF THE FULL LOADS DEPICTED HEREIN IS BASED ON AN APPROXIMATE LADING WEIGHT OF 42,000 POUNDS. THE SPECIFIED BLOCKING AND BRACING FOR THE FULL LOADS IS ADEQUATE FOR THE RETENTION OF HEAVIER LOADS, IF IT IS DESIRED TO INCREASE THE LADING WEIGHT.
- H. OTHER TYPES OF LADING ITEMS MAY BE LOADED INTO TRAILERS WHICH ARE PARTIALLY LOADED WITH THE DESIGNATED ITEM, 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.

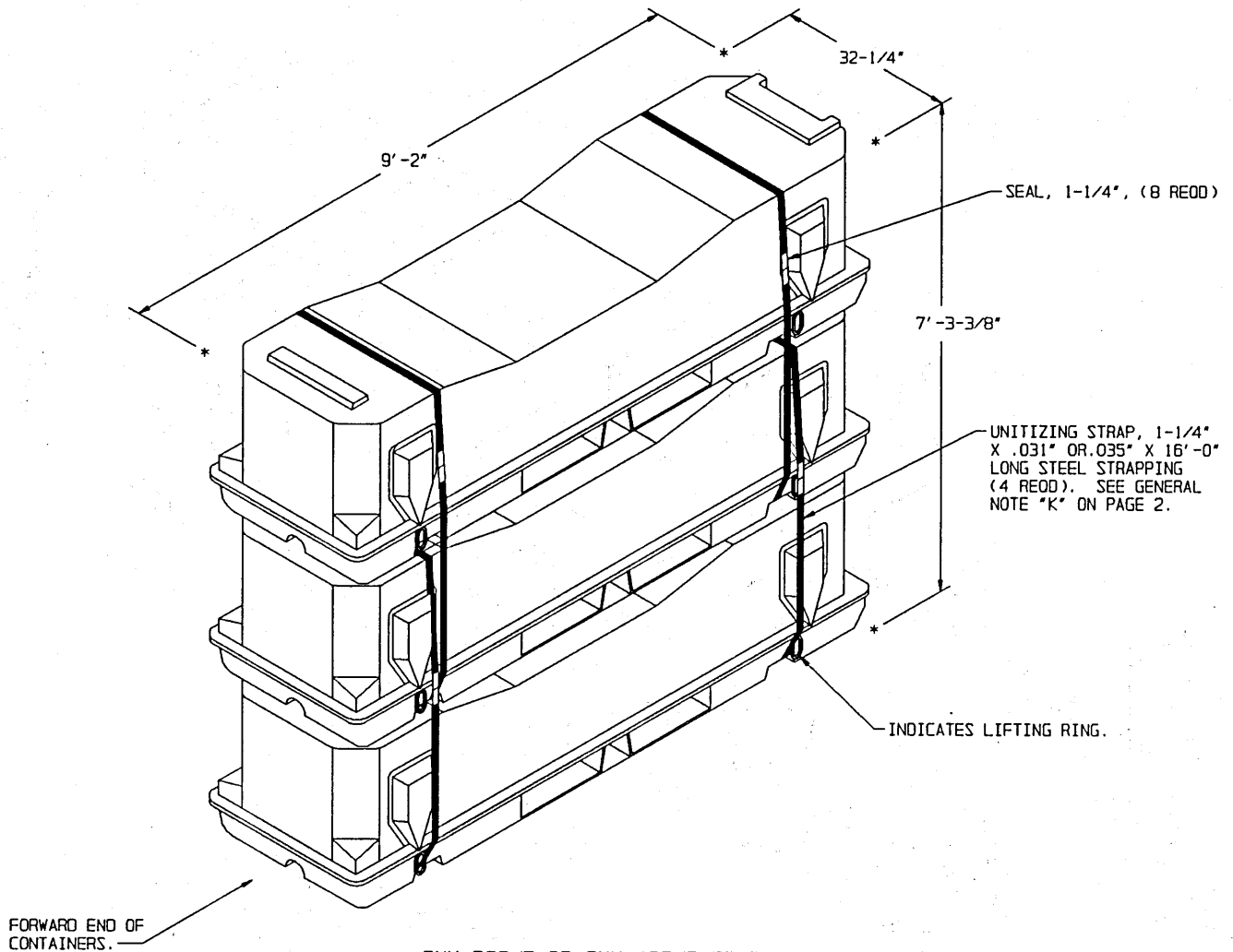
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MATERIAL SPECIFICATIONS

- LUMBER - - - - - : FED SPEC MM-L-751. SEE TM 743-200-1 (DUNNAGE LUMBER).
- NAILS - - - - - : FED SPEC FF-N-105; COMMON.
- STRAPPING, STEEL - - : ASTM D3953; FLAT STRAPPING, TYPE 1 OR 2, HEAVY DUTY, COATED FINISH (ORGANIC), ZINC-COATED (GRADE 2), OR UNCOATED.
- SEAL, STRAP - - - - : ASTM D3953; CLASS H, FINISH A, B (GRADE 2), OR C, TYPE D, STYLE I, II, OR IV.

(GENERAL NOTES CONTINUED)

- J. SOME LOADS ARE SHOWN IN TRAILERS HAVING ROUNDED CORNERS AT THE FORWARD END. IF THE CONVENTIONAL VAN TRAILER BEING USED IS EQUIPPED WITH A SQUARE FRONT OR WITH AN INSTALLED BULKHEAD, OMIT THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①, AND POSITION THE CONTAINERS DIRECTLY AGAINST THE FORWARD PORTION OF THE TRAILER.
- K. WHEN STEEL STRAPPING IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF ONE SEAL WITH TWO PAIR OF NOTCHES WILL BE USED TO SEAL THE JOINT WHEN A NOTCH-TYPE SEALER IS BEING USED. A MINIMUM OF TWO SEALS, BUTTED TOGETHER WITH TWO PAIR OF CRIMPS PER SEAL WILL BE USED TO SEAL THE JOINT WHEN A CRIMP-TYPE SEALER IS BEING USED. REFER TO THE "STRAP JOINT A" AND "STRAP JOINT B" DETAILS ON PAGE 12 FOR GUIDANCE.
- L. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.
- M. **NOTICE:** A STAGGERED NAILING PATTERN WILL BE USED WHEREVER POSSIBLE WHEN NAILS ARE DRIVEN INTO JOINTS OF DUNNAGE ASSEMBLIES. ALSO, A STAGGERED NAILING PATTERN WILL BE USED WHEN DUNNAGE IS NAILED TO THE FLOOR OF THE TRANSPORTING VEHICLE, OR WHEN LAMINATING DUNNAGE. THE NAILING PATTERN WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL DOES NOT PENETRATE INTO OR NEAR A CRACK BETWEEN FLOOR BOARDS. 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 THE PIECE ONTO OR RIGHT BESIDE A NAIL IN A LOWER PIECE.
- N. POWER DRIVEN STAPLES MAY BE USED AS ALTERNATIVE FASTENERS FOR NAILS WHEN CONSTRUCTING DUNNAGE ASSEMBLIES WHICH ARE TO BE USED IN THE DELINEATED TRAILER LOADS SHOWN THROUGHOUT THIS DRAWING. THE STAPLES TO BE USED MUST BE EQUAL IN LENGTH TO THE SPECIFIED NAIL SIZE AND MUST BE SUBSTITUTED ON A ONE STAPLE FOR ONE NAIL BASIS. STAPLES WHICH ARE 2-1/2" OR LESS IN LENGTH SHOULD BE IN ACCORDANCE WITH FEDERAL SPECIFICATION FF-N-105 AS NEARLY AS PRACTICABLE. STAPLES WHICH ARE LONGER THAN 2-1/2" WILL BE A COMMERCIAL GRADE, OF A QUALITY EQUIVALENT TO THOSE MANUFACTURED BY Senco PRODUCTS INCORPORATED. **NOTE:** STAPLES WILL NOT BE SUBSTITUTED FOR NAILS IN ANY LOAD RESTRAINING FLOOR DUNNAGE APPLICATION.
- O. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, THE NAILED-HEADER METHOD OF REAR BLOCKING MUST BE INSTALLED. SEE THE "PROCEDURES FOR CONVENTIONAL VAN TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS" ON PAGE 14 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD OF REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
- P. PORTIONS OF THE TRAILERS, SUCH AS SIDEWALLS, ENDWALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- Q. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "SPECIAL NOTES" SECTIONS WHICH ARE IMMEDIATELY ADJACENT TO THE DEPICTED OUTLOADING METHODS.



CNU 399/E OR CNU 425/E CONTAINER

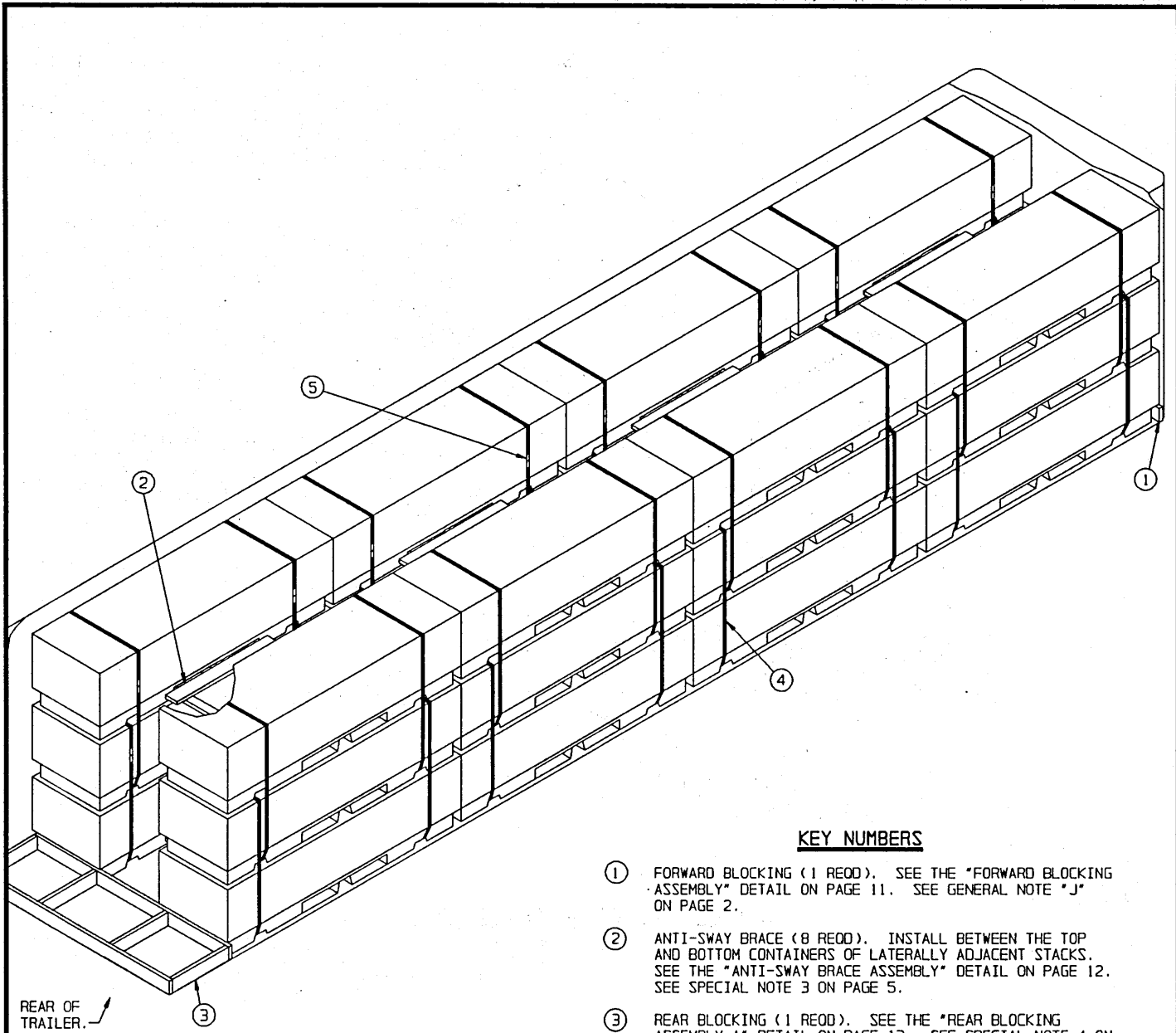
DIMENSIONS -- 9'-2" L X 32-1/4" W X 29" H
 CUBE ----- 61.6 CU FT (APPROX)
 GROSS WEIGHT ----- 1,015 LBS (APPROX)

UNITIZATION PROCEDURES:

1. WHEN STACKING CONTAINERS FOR UNITIZING, PLACE THE UPPER CONTAINER DIRECTLY ON TOP OF THE LOWER CONTAINER. POSITION THE FORWARD END OF THE UPPER CONTAINERS ABOVE THE FORWARD END OF THE LOWER ONES, AS SHOWN.
2. INSTALLATION OF 1-1/4" X .031" OR .035" UNITIZING STRAPS. SEE GENERAL NOTE *K* ON PAGE 2.
 - A. POSITION STRAPS TO ENCIRCLE THE CONTAINERS NEAR THE ENDS AS SHOWN IN THE ISOMETRIC VIEW AND SO THAT THE STRAPPING LAYS FLAT AND STRAIGHT WITH THE BODY SURFACES OF THE CONTAINERS; I.E., VERTICAL ALONG THE SIDES AND FLAT ACROSS THE TOP AND BOTTOM OF THE STACK.
 - B. THE STRAPPING WILL BE FIRMLY TENSIONED BUT NOT SO MUCH AS TO DAMAGE THE CONTAINERS. EACH END-OVER-END LAP JOINT WILL BE SEALED WITH TWO SEALS BUTTED TOGETHER, WITH TWO PAIR OF CRIMPS EACH SEAL, AS SHOWN IN THE "STRAP JOINT B" DETAIL ON PAGE 12. THE LAP JOINT WILL BE MADE ALONG THE SIDE OF THE STACK. EXCESS STRAPPING (STRAP ENDS) SHOULD BE CUT OFF OR BROKEN OFF NEAR THE JOINT SEAL. SEE GENERAL NOTE *K* ON PAGE 2.

CONTAINER OR STACK HANDLING PROCEDURES:

1. APPROVED MATERIALS HANDLING EQUIPMENT (MHE) IS SPECIFIED IN OTHER DOCUMENTS. MHE IS INTENDED TO MEAN EQUIPMENT SUCH AS FORKLIFT TRUCKS, CRANES, HAND TRUCKS, DOLLIES, ROLLER ASSEMBLIES, SLINGS AND SPREADER BARS.
2. PRECAUTIONARY HANDLING TECHNIQUES NORMALLY EMPLOYED OR AS SPECIFIED FOR THE TYPE OF COMMODITY INVOLVED WILL BE OBSERVED.
 - A. ONLY APPROVED AND APPROPRIATELY SIZED MATERIAL HANDLING EQUIPMENT WILL BE USED FOR HANDLING THE DEPICTED CONTAINERS.
 - B. IF HANDLING IS ACCOMPLISHED WITH A FORKLIFT TRUCK, THE CONTAINERS MUST BE HANDLED FROM A SIDE POSITION. CARE MUST BE EXERCISED WHEN INSERTING FORKS UNDER A CONTAINER, TO PREVENT DAMAGE TO A CONTAINER BY THE FORK TINES OR THE FORKLIFT PACKAGE GUARD.
 - C. IF A CONTAINER OR STACK OF CONTAINERS IS HANDLED BY SLINGING, THE SLING MUST BE OF SUCH A DESIGN THAT LIFTING IS DONE ON THE BOTTOM OF THE LOWER CONTAINER.



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING (1 REOD). SEE THE "FORWARD BLOCKING ASSEMBLY" DETAIL ON PAGE 11. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (8 REOD). INSTALL BETWEEN THE TOP AND BOTTOM CONTAINERS OF LATERALLY ADJACENT STACKS. SEE THE "ANTI-SWAY BRACE ASSEMBLY" DETAIL ON PAGE 12. SEE SPECIAL NOTE 3 ON PAGE 5.
- ③ REAR BLOCKING (1 REOD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 13. SEE SPECIAL NOTE 4 ON PAGE 5, AND GENERAL NOTE "O" ON PAGE 2.
- ④ UNITIZING STRAP, 1-1/4" X .031" OR .035" X 16'-6" LONG STEEL STRAPPING (32 REOD). INSTALL SO AS TO ENCIRCLE THE BOTTOM TWO AND THE TOP TWO CONTAINERS IN EACH STACK AS SHOWN. SEE THE "UNITIZATION AND HANDLING" PROCEDURES ON PAGE 3.
- ⑤ SEAL FOR 1-1/4" STEEL STRAPPING (64 REOD, 2 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF CRIMPS. SEE THE "END-OVER-END LAP JOINT" DETAILS ON PAGE 12 AND GENERAL NOTE "K" ON PAGE 2.

SPECIAL NOTES:

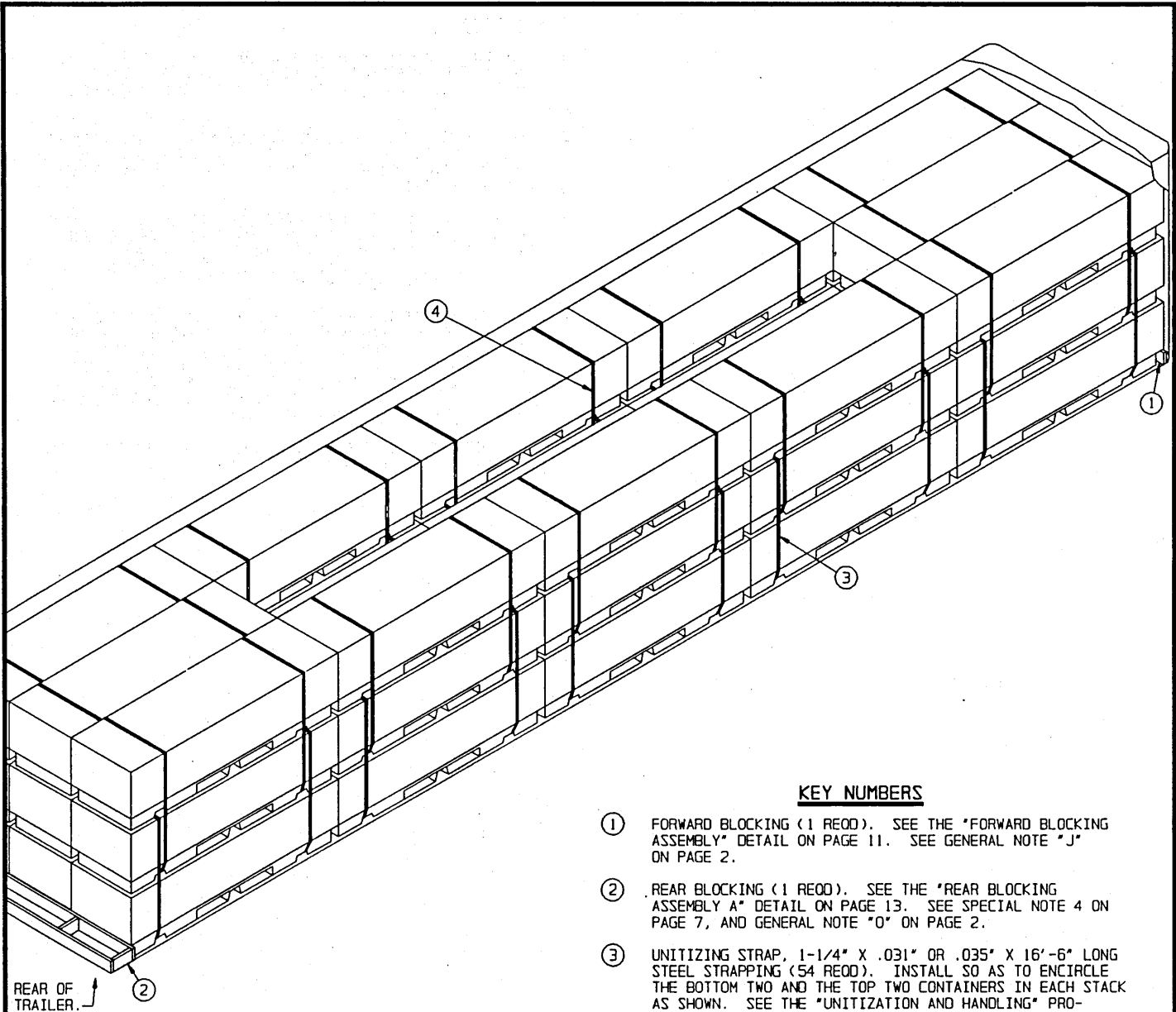
1. A 24-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8-1/2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED FRONT CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE DEPICTED LOAD CAN BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED, BY OMITTING THE TOP CONTAINER FROM A STACK. TO REDUCE THE LOAD BY A QUANTITY OF TWO, OMIT Laterally ADJACENT CONTAINERS.
3. IF ONE CONTAINER IS OMITTED FROM THE DEPICTED LOAD, THE TOP ANTI-SWAY BRACE MUST BE INSTALLED BETWEEN THE NEXT TWO LOWER CONTAINERS IN THAT LOAD UNIT. IF TWO Laterally ADJACENT CONTAINERS ARE OMITTED, OMIT THE TOP ANTI-SWAY BRACE, PIECE MARKED ②.
4. IF THE SPACE AT THE REAR OF THE LOAD, BETWEEN THE CONTAINERS AND THE REAR DOOR, MEASURES 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2", BUT LESS THAN 9", USE "REAR BLOCKING ASSEMBLY B" AS DETAILED ON PAGE 13. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE "REAR BLOCKING ASSEMBLY A" AS SHOWN.
5. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 8 THRU 10.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	7	4
2" X 4"	86	58
2" X 6"	82	82
NAILS	NO. REQD	POUNDS
6d (2")	5	NIL
10d (3")	135	2-1/4
STEEL STRAPPING, 1-1/4"		
X .031" OR .035"	528' REQD	76 LBS
SEAL FOR 1-1/4" STRAPPING	64 REQD	3 LBS

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER	24	24,360 LBS
DUNNAGE		370 LBS
TOTAL WEIGHT		24,730 LBS (APPROX)



REAR OF TRAILER. ↗

ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING (1 REOD). SEE THE "FORWARD BLOCKING ASSEMBLY" DETAIL ON PAGE 11. SEE GENERAL NOTE "J" ON PAGE 2.
- ② REAR BLOCKING (1 REOD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 13. SEE SPECIAL NOTE 4 ON PAGE 7, AND GENERAL NOTE "O" ON PAGE 2.
- ③ UNITIZING STRAP, 1-1/4" X .031" OR .035" X 16'-6" LONG STEEL STRAPPING (54 REOD). INSTALL SO AS TO ENCIRCLE THE BOTTOM TWO AND THE TOP TWO CONTAINERS IN EACH STACK AS SHOWN. SEE THE "UNITIZATION AND HANDLING" PROCEDURES ON PAGE 3.
- ④ SEAL FOR 1-1/4" STEEL STRAPPING (108 REOD, 2 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF CRIMPS. SEE THE "END-OVER-END LAP JOINT" DETAILS ON PAGE 12 AND GENERAL NOTE "K" ON PAGE 2.

SPECIAL NOTES:

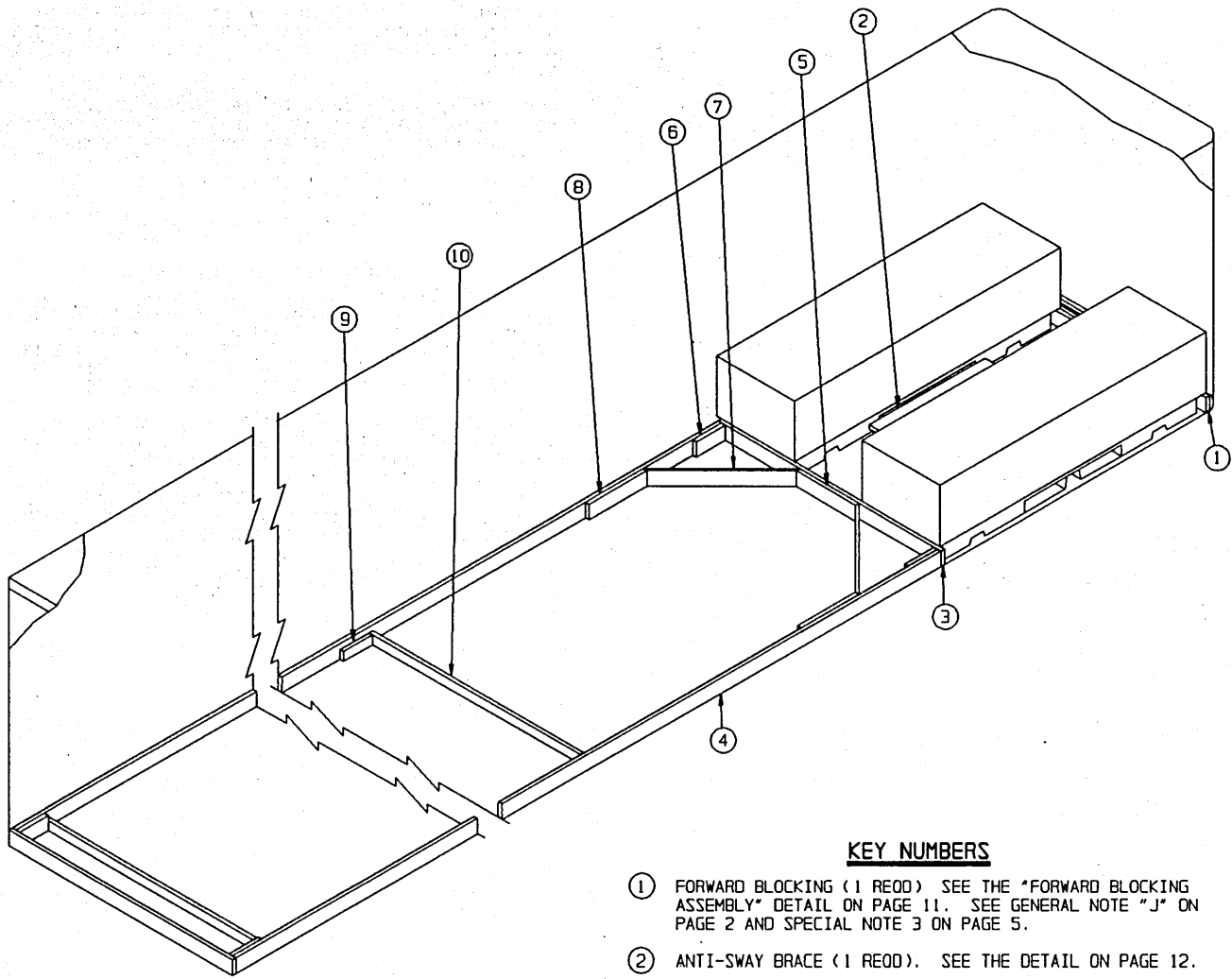
1. A 42-UNIT LOAD IS SHOWN IN A 40'-6" LONG BY 7'-8-1/2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED FRONT CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE DEPICTED LOAD QUANTITY MAY BE ADJUSTED TO COMPLY WITH THE MAXIMUM LOAD WEIGHT REQUIREMENT OR THE QUANTITY TO BE TRANSPORTED. CONTAINERS MAY BE ADDED TO THE 2-HIGH CONTAINER STACKS IN THE CENTER PORTION OF THE LOAD; OR CONTAINERS MAY BE OMITTED FROM THE 3-HIGH CONTAINER STACKS IN THE CENTER PORTION OF THE LOAD. TO FURTHER REDUCE A LOAD, CONTAINERS MAY BE OMITTED FROM THE 3-HIGH STACKS WHICH ARE AGAINST THE WALL.
3. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE CONTAINERS AND THE REAR DOOR MEASURES 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9", "USE REAR BLOCKING ASSEMBLY B", AS DETAILED ON PAGE 13. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE "REAR BLOCKING ASSEMBLY A", PIECE MARKED ②.
4. FOR THE DEPICTED LOAD IN A 40'-0" LONG TRAILER WHEN USING THE NAILED-HEADER METHOD, IT MAY BE NECESSARY TO OMIT THE TOP CONTAINERS FROM THE REAR LOAD UNIT, OR TO FORM FOUR LOAD UNITS INSTEAD OF FIVE, AS SHOWN. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN CONVENTIONAL VAN TRAILERS EQUIPPED WITH HINGED DOORS.
5. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 8 THRU 10.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	7	4
2" X 6"	51	51
NAILS	NO. REED	POUNDS
6d (2")	6	NIL
10d (3")	58	1
STEEL STRAPPING, 1-1/4"		
X .031" OR .035"	891' REED	128 LBS
SEAL FOR 1-1/4" STRAPPING	108 REED	5 LBS

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER	42	42,630 LBS
DUNNAGE		244 LBS
TOTAL WEIGHT		42,874 LBS (APPROX)



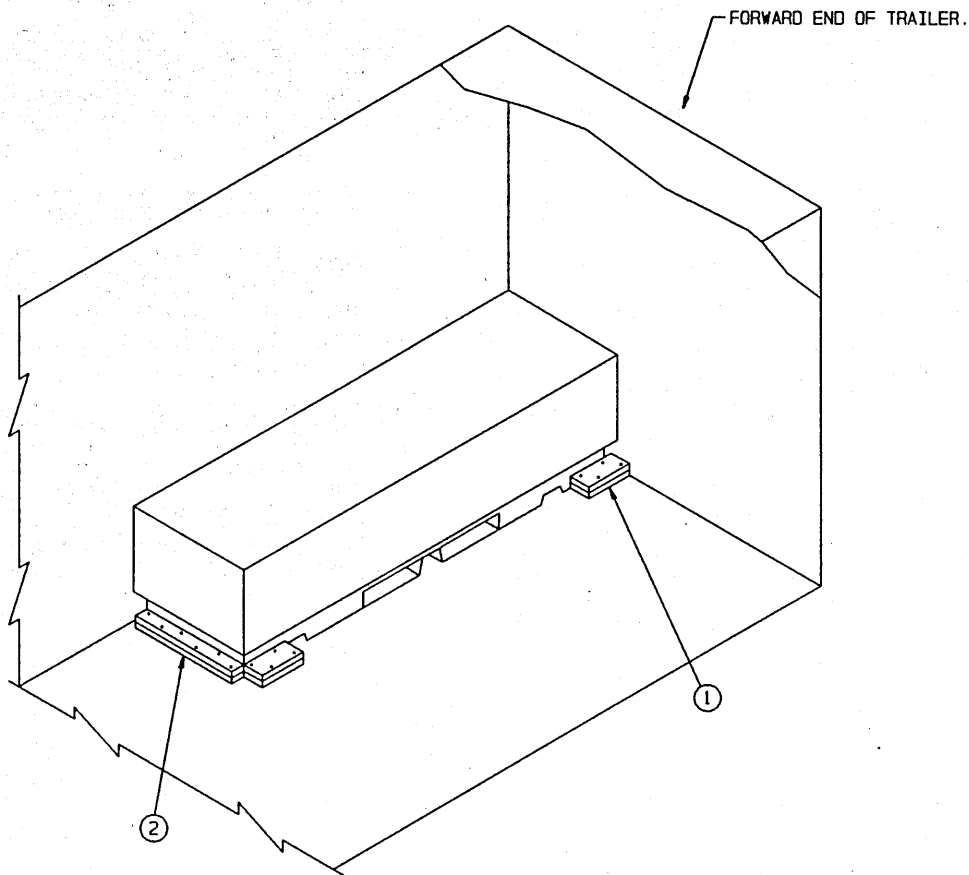
ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING (1 REOD) SEE THE "FORWARD BLOCKING ASSEMBLY" DETAIL ON PAGE 11. SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 3 ON PAGE 5.
- ② ANTI-SWAY BRACE (1 REOD). SEE THE DETAIL ON PAGE 12.
- ③ HEADER, 2" X 6" BY TRAILER WIDTH (CUT TO FIT) (2 REOD).
- ④ SIDE STRUT, 2" X 6" BY CUT TO FIT BETWEEN HEADERS, MARKED ③ (2 REOD). SEE SPECIAL NOTE 2 ON PAGE 9.
- ⑤ CENTER CLEAT, 2" X 6" X 30" (1 REOD). NAIL TO HEADER, PIECE MARKED ③, W/6-10d NAILS.
- ⑥ POCKET CLEAT, 2" X 6" X 12" (4 REOD). NAIL TO A SIDE STRUT, PIECE MARKED ④, W/5-10d NAILS. TOENAIL TO THE ADJACENT HEADER, PIECE MARKED ③, W/3-12d NAILS.
- ⑦ DIAGONAL BRACE, 2" X 6" BY CUT TO FIT (2 REOD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO THE ADJACENT HEADER, PIECE MARKED ③, AND SIDE STRUT, PIECE MARKED ④, W/2-16d NAILS AT EACH END.
- ⑧ BACK-UP CLEAT, 2" X 6" X 24" (2 REOD). NAIL TO A SIDE STRUT, PIECE MARKED ④, W/8-10d NAILS.
- ⑨ STRUT BRACE RETAINER CLEAT, 2" X 4" X 12" (AS REOD). NAIL TO A SIDE STRUT, PIECE MARKED ④, W/3-10d NAILS. SEE SPECIAL NOTE 4 ON PAGE 9.
- ⑩ STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 3" (CUT TO FIT) (MINIMUM OF ONE REOD). NAIL TO THE POCKET CLEATS, PIECES MARKED ⑥, AND/OR TO THE STRUT BRACE RETAINER CLEATS, PIECES MARKED ⑨, W/2-12d NAILS AT EACH END. SEE SPECIAL NOTE 4 ON PAGE 9.

SPECIAL NOTES:

1. A 7'-8-1/2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
2. IF THE SIDE STRUTS, SHOWN AS PIECE MARKED ④, ARE FORMED FROM MORE THAN ONE PIECE OF MATERIAL, THEY MAY BE SPLICED BY CENTERING A 2" X 6" X 24" PIECE ON THE JOINT OF THE SIDE STRUTS AND NAILING W/4-10d NAILS AT EACH END. IF DESIRED, THE STRUT BRACING PIECE(S), PIECES MARKED ⑩, MAY BE NAILED TO THE SPLICE PIECES IN LIEU OF USING ADDITIONAL STRUT BRACE RETAINER CLEATS, PIECE MARKED ⑨.
3. THE K-BRACE SHOWN AS PIECES MARKED ③ THRU ⑩ WILL RETAIN A MAXIMUM OF 20,000 POUNDS.
4. ALL LTL LOADS, REGARDLESS OF THEIR SIZE, REQUIRE ONE STRUT BRACE POSITIONED AT THE REAR OF THE TRAILER AND NAILED TO PIECE MARKED ⑥. IF THE SIDE STRUTS, PIECES MARKED ④, ARE LONGER THAN 7'-0" AN ADDITIONAL STRUT BRACE, PIECE MARKED ⑩, AND TWO STRUT BRACE RETAINER CLEATS, PIECE MARKED ⑨, MUST BE APPLIED FOR EVERY 7'-0" OF SIDE STRUT LENGTH.
5. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, THE NAILED HEADER METHOD OF REAR BLOCKING MUST BE INSTALLED IN LIEU OF THE "K-BRACE" TYPE BLOCKING. SEE THE "PROCEDURES FOR CONVENTIONAL VAN TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS" ON PAGE 14 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD OF REAR BLOCKING MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS, AND MAY BE USED IN LIEU OF PIECES MARKED ③ THRU ⑩ WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS.



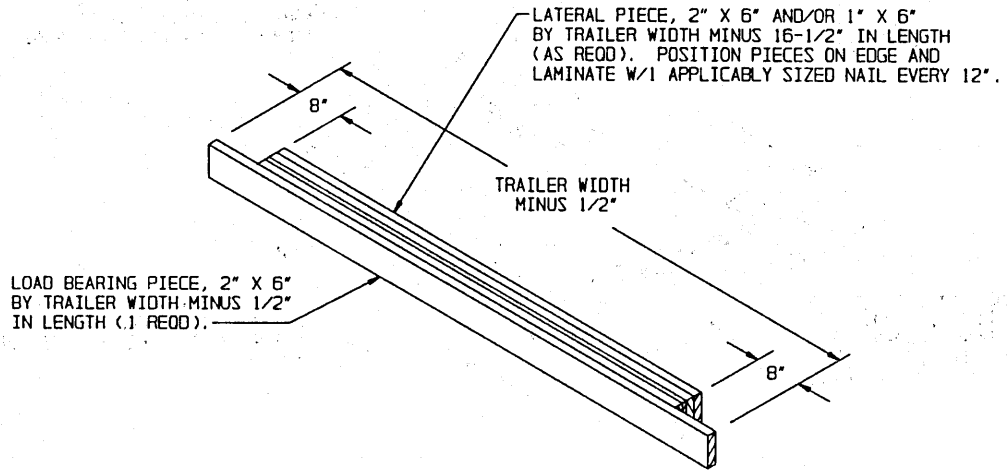
ISOMETRIC VIEW

SPECIAL NOTES:

1. A 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER WHICH HAS A NAILABLE FLOOR IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
2. IF MORE THAN ONE CONTAINER IS TO BE TRANSPORTED, THE LOAD SHOULD BE FORMED IN ROWS, WITH THE CONTAINERS POSITIONED AGAINST OPPOSITE SIDEWALLS. SIDE BLOCKING, SHOWN AS PIECE MARKED ① ABOVE, MUST BE INSTALLED BETWEEN LATERALLY ADJACENT CONTAINERS. IF THE TRAILER HAS ROUNDED CORNERS AT THE FORWARD END, MOVE THE CONTAINERS BACK A SUITABLE DISTANCE TO CLEAR THE CORNERS AND INSTALL AN ADDITIONAL HEADER, PIECE MARKED ②.

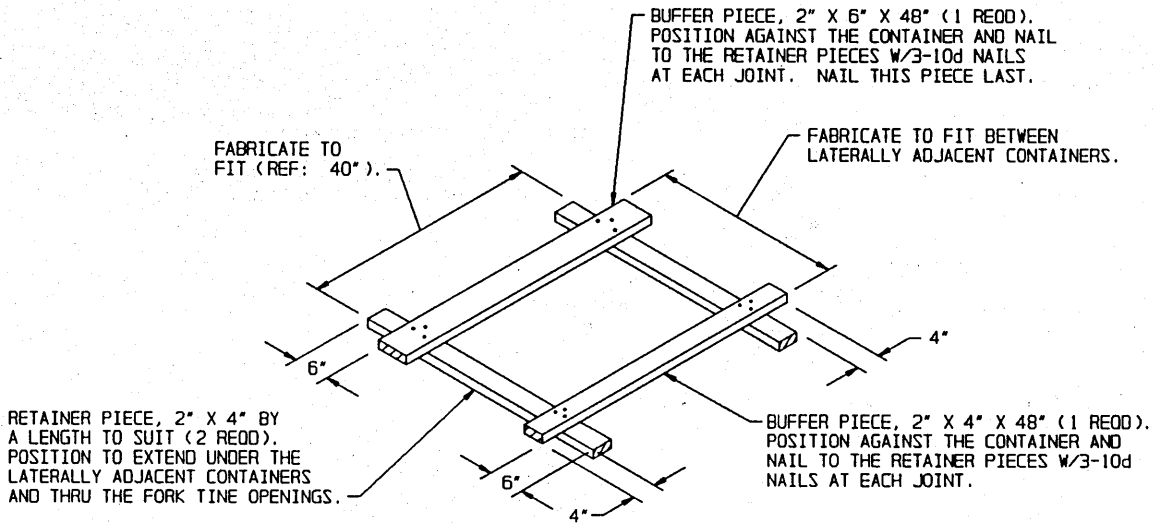
KEY NUMBERS

- ① SIDE BLOCKING, 2" X 6" X 12" (DOUBLED) (2 REOD). POSITION AGAINST THE CONTAINER AS SHOWN ABOVE. NAIL THE FIRST PIECE TO THE FLOOR W/4-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE GENERAL NOTE "M" ON PAGE 2.
- ② HEADER, 2" X 4" X 28" (DOUBLED) (1 REOD). POSITION AGAINST THE CONTAINER AS SHOWN ABOVE. NAIL THE FIRST PIECE TO THE FLOOR W/6-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 2 AT LEFT.



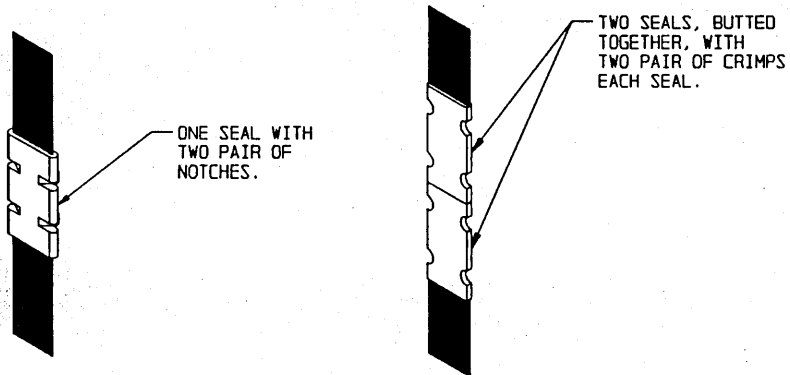
FORWARD BLOCKING ASSEMBLY

THIS ASSEMBLY IS DESIGNED FOR USE AT THE FRONT END OF A TRAILER HAVING ROUNDED CORNERS, AND IS APPLICABLE FOR A CORNER RADIUS OF NOT MORE THAN 6-1/2". IF THE RADIUS IS FROM 6-1/2" TO 8", ADDITIONAL FILL PIECES WILL BE USED.



ANTI-SWAY BRACE

THIS ASSEMBLY HAS A 2" X 6" BUFFER
 PIECE (APPLY LAST) ON ONE SIDE TO
 FACILITATE NAILING. BOTH BUFFER
 PIECES MAY BE 2" X 4" MATERIAL IF
 NAILING CAN BE ACCOMPLISHED.



STRAP JOINT A

METHOD OF SECURING A
 STRAP JOINT WHEN USING
 A NOTCH-TYPE SEALER.

STRAP JOINT B

METHOD OF SECURING A
 STRAP JOINT WHEN USING
 A CRIMP-TYPE SEALER.

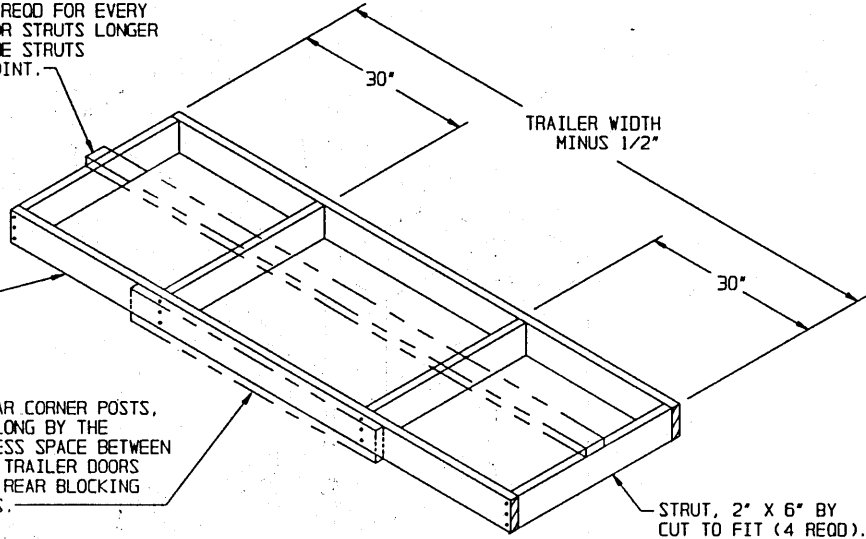
END-OVER-END LAP JOINT DETAILS

DETAILS

STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (1 REQD FOR EVERY 7'-0" OF STRUT LENGTH FOR STRUTS LONGER THAN 7'-0"). NAIL TO THE STRUTS W/2-12d NAILS AT EACH JOINT.

HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD). NAIL TO THE STRUTS W/3-10d NAILS AT EACH JOINT.

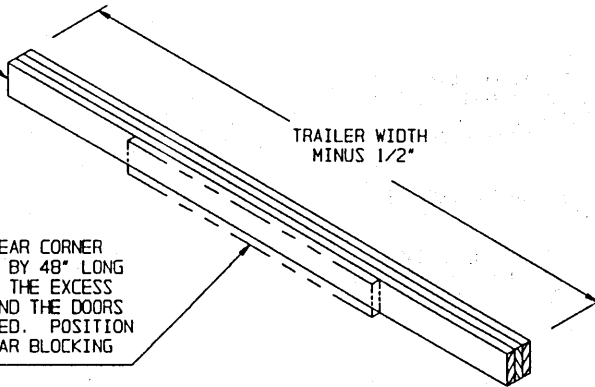
IF THE TRAILER IS EQUIPPED WITH REAR CORNER POSTS, INSTALL SOLID FILL 6" WIDE BY 48" LONG BY THE THICKNESS REQUIRED TO FILL THE EXCESS SPACE BETWEEN THE REAR BLOCKING ASSEMBLY AND THE TRAILER DOORS WHEN THEY ARE CLOSED. NAIL TO THE REAR BLOCKING ASSEMBLY W/4 APPLICABLY SIZED NAILS.



REAR BLOCKING ASSEMBLY A

THIS ASSEMBLY IS DESIGNED FOR USE AT THE REAR OF A LOAD WHEN THE EXCESS SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS 9" OR GREATER AS SHOWN IN THE LOAD ON PAGE 4.

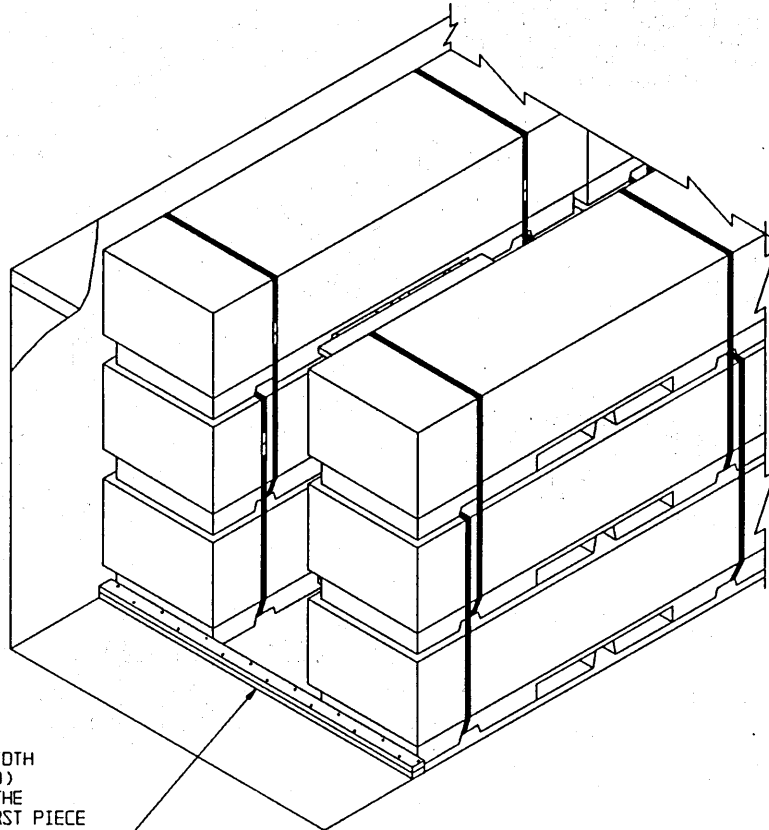
SOLID FILL, 6" WIDE MATERIAL BY TRAILER WIDTH MINUS 1/2" IN LENGTH BY THE THICKNESS REQUIRED TO CONTACT REAR CORNER POSTS OR TO CONTACT REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED. POSITION PIECES ON EDGE AND LAMINATE W/1 APPLICABLY SIZED NAIL EVERY 12".



IF THE TRAILER IS EQUIPPED WITH REAR CORNER POSTS, INSTALL SOLID FILL 6" WIDE BY 48" LONG BY THE THICKNESS REQUIRED TO FILL THE EXCESS SPACE BETWEEN THE REAR BLOCKING AND THE DOORS ON THE TRAILER WHEN THEY ARE CLOSED. POSITION PIECES ON EDGE AND NAIL TO THE REAR BLOCKING W/4 APPLICABLY SIZED NAILS.

REAR BLOCKING ASSEMBLY B

THIS REAR BLOCKING IS DESIGNED FOR USED AT THE REAR OF A LOAD WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9".



HEADER, 2" X 4" BY TRAILER WIDTH
MINUS 1/2" IN LENGTH (DOUBLED)
(1 REED). POSITION AGAINST THE
CONTAINER BASE. NAIL THE FIRST PIECE
TO THE TRAILER FLOOR W/15-10d NAILS
(1 EVERY 6"). NAIL THE SECOND PIECE
TO THE FIRST PIECE IN A LIKE MANNER.

NAILED-HEADER METHOD

SPECIAL NOTES:

1. THE NAILED-HEADER METHOD OF REAR BLOCKING DEPICTED ABOVE CAN ONLY BE USED IN TRAILERS HAVING A NAILABLE FLOOR AREA BETWEEN THE LADING AND THE METAL THRESHOLD, OR A THRESHOLD PLATE IF THE TRAILER IS SO EQUIPPED, OF AT LEAST 6".
2. THE NAILED-HEADER METHOD OF REAR BLOCKING IS ADEQUATE FOR THE RETENTION OF THE MAXIMUM WEIGHT LOAD.
3. THE NAILED-HEADER METHOD, ALTHOUGH DESIGNED ESPECIALLY FOR TRAILERS HAVING ROLL-UP TYPE DOORS, MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

NAILED-HEADER METHOD

PROCEDURES FOR CONVENTIONAL VAN TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS