

APPROVED BY

BUREAU OF EXPLOSIVES


H. J. Grassmuck
MILITARY ASSISTANT

DATE *2/19/70*

LOADING AND BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF CBU ITEMS PACKED IN THE CNU-123/E CONTAINER

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 THIS DOCUMENT INCLUDES PROCEDURES FOR CONVENTIONAL TYPE TRAILERS AND FOR TRAILERS EQUIPPED WITH MECHANICAL BRACING DEVICES AS APPROVED BY THE BUREAU OF EXPLOSIVES, ASSOCIATION OF AMERICAN RAILROADS.

CAUTION:

PROCEDURES SHOWN HEREIN FOR MECHANICAL BRACING DEVICE EQUIPPED TRAILERS ARE ONLY APPLICABLE FOR HIGHWAY MOVEMENT; NOT FOR CONTAINER/TRAILER - ON-FLAT-CAR MOVEMENT.

DO NOT SCALE

DESIGNED BY <i>BB/CBE</i>	PROJ. ENG. <i>MMW/MLW</i>	APSA/ <i>ASH</i>	SUBMITTED <i>C.R. Felt, Col. Ord C.</i>
CHECKED <i>TYS/AM</i>	AMC AND CD <i>John Boyd</i>		COMMANDING OFFICER, SAVANNA ARMY DEPOT
REVISIONS			APPROVED <i>Dellin J. Martin</i>
			ARMY MISSILE COMMAND
			APPROVED BY ORDER OF COMMANDING GENERAL U. S. ARMY MATERIEL COMMAND
			<i>Paul Kern</i>
			U. S. ARMY MATERIEL COMMAND
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GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AMCR 740-13, AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE OUTLOADING PROCEDURES SPECIFIED HEREIN ARE APPLICABLE TO CBU ITEMS WHEN THEY ARE PACKAGED IN THE CNU-123/E CONTAINER. SUBSEQUENT REFERENCE TO CONTAINER HEREIN MEANS THE CNU-123/E CONTAINER WITH CONTENTS.
- C. DETAILS OF THE CNU-123/E CONTAINER:
CONTAINER DIMENSIONS ---- 149-1/8" LONG X 22-1/2" WIDE X 25" HIGH.
GROSS WEIGHT ----- 1,336 POUNDS (APPROX).
TARE WEIGHT ----- 350 POUNDS (APPROX).
- D. THE 27-UNIT LOAD SHOWN ON PAGES 4 AND 5 IS BASED ON A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) CLOSED OR OPEN TOP VAN TRAILER WHICH HAS A WOOD, OR A WOOD AND METAL, OR A METAL FLOOR. THE DELINEATED OUTLOADING PROCEDURES ARE ALSO APPLICABLE TO TRAILERS WHICH ARE EIGHTY-NINE INCHES (89") THROUGH NINETY-THREE INCHES (93") IN WIDTH.
- E. THE GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT FOR A LOAD WILL BE THE RESPONSIBILITY OF THE CARRIER. THE CARRIER WILL ADVISE THE SHIPPER OF THE APPLICABLE LOADING REQUIREMENTS, AND THE SHIPPER WILL LOAD ACCORDINGLY.
- F. THE NUMBER OF LADING UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE TRAILER TO BE LOADED OR THE QUANTITY TO BE SHIPPED; HOWEVER, THE APPROVED METHODS SHOWN HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE DESIGNATED ITEMS.
- G. THE OUTLOADING PROCEDURES SPECIFIED HEREIN CAN ALSO BE UTILIZED FOR THE SHIPMENT OF THE DEPICTED CONTAINERS WHEN THEY ARE EMPTY, OR LOADED WITH EMPTY DISPENSERS, OR LOADED WITH AN ITEM IDENTIFIED DIFFERENTLY BY NOMENCLATURE THAN THE ITEMS DESIGNATED WITHIN THE DRAWING TITLE.
- H. OTHER TYPES OF LADING ITEMS MAY BE LOADED INTO TRAILERS WHICH ARE PARTIALLY LOADED WITH THE DEPICTED 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.
- J. ONE AND ONE-QUARTER INCH (1-1/4") STEEL STRAPPING WILL BE USED TO UNITIZE STACKED CONTAINERS AS SHOWN ON PAGE 3, AND AS SPECIFIED BY THE OUTLOADING METHOD ON PAGES 4 AND 5. IF THE CAPACITY OF THE MATERIAL HANDLING EQUIPMENT USED TO LOAD THE CONTAINERS ABOARD THE TRAILER PERMITS, IT IS RECOMMENDED THAT THE CONTAINERS BE UNITIZED PRIOR TO PLACEMENT WITHIN THE TRAILER. **NOTICE:** IN SOME INSTANCES, CONTAINERS WILL ALREADY BE UNITIZED WHEN OFFERED FOR LOADING. THESE UNITIZED STACKS SHOULD BE INSPECTED AND AS REQUIRED, LOOSE UNITIZING STEEL STRAPPING MUST BE REPLACED.
- K. WHEN STEEL STRAPPING IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF TWO (2) SEALS, BUTTED TOGETHER, WITH TWO (2) PAIR OF CRIMPS PER SEAL MUST BE USED TO SEAL THE JOINT. **CAUTION:** EXERCISE CARE DURING TENSIONING TO PREVENT DAMAGE TO CONTAINERS.
- L. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-5/8" WIDE AND 2" X 4" MATERIAL IS ACTUALLY 1-5/8" THICK BY 3-5/8" 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. 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.

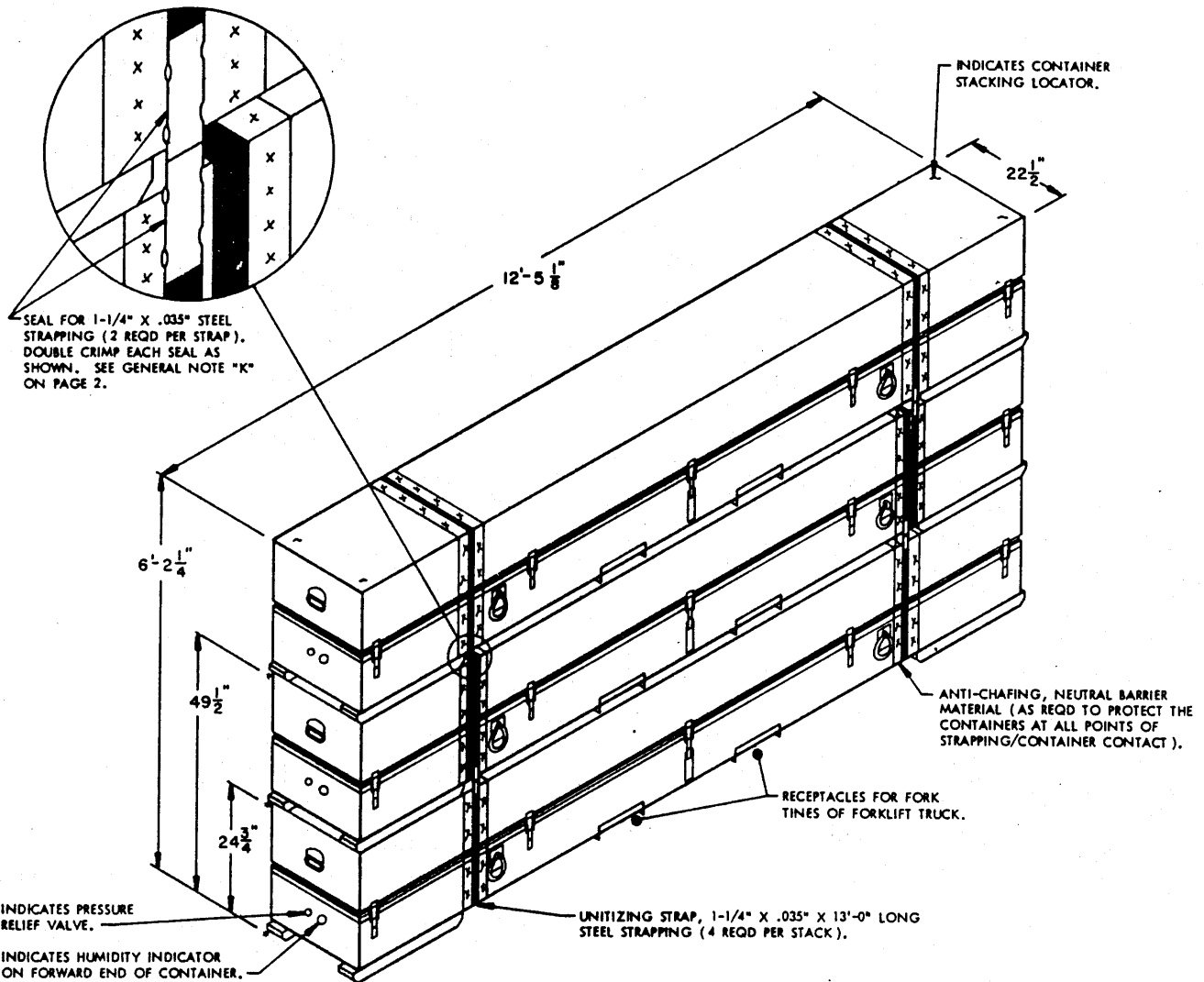
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(GENERAL NOTES CONTINUED)

- N. PORTIONS OF THE TRAILER BODIES DEPICTED WITHIN THIS PROCEDURAL DRAWING, SUCH AS ONE OF THE SIDE WALLS, HAVE BEEN OMITTED FROM THE LOAD VIEWS FOR CLARITY PURPOSES.
- O. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "UNITIZATION AND HANDLING PROCEDURES" ON PAGE 3, AND TO THE "SPECIAL NOTES" SECTIONS WHICH ARE IMMEDIATELY ADJACENT TO THE DEPICTED OUTLOADING METHODS.

MATERIAL SPECIFICATIONS

- LUMBER** ----- : SEE TM 743-200-1, DUNNAGE LUMBER. FED SPEC MM-L-751.
- NAILS** ----- : COMMON, CEMENT COATED OR CHEMICALLY ETCHED,
FED SPEC FF-N-105.
ALT: ANNULAR-RING TYPE NAIL OF SAME SIZE.
- STRAPPING, STEEL**: TYPE I OR IV, CLASS A OR B, FED SPEC QQ-5-781.
- STRAP SEAL** ----- : COMMERCIAL GRADE.



TYPICAL STACK DETAIL

UNITIZING AND HANDLING PROCEDURAL GUIDANCE

1. STACKING CONTAINERS FOR UNITIZING.
 - A. THE UPPER CONTAINER WILL BE FULLY SEATED ON THE CONTAINER STACKING LOCATORS OF THE NEXT LOWER CONTAINER AND AS NEARLY AS POSSIBLE IN VERTICAL ALIGNMENT.
 - B. POSITION THE FORWARD END OF AN UPPER CONTAINER ABOVE THE FORWARD END OF THE NEXT LOWER CONTAINER.
2. INSTALLATION OF 1-1/4" X .035" UNITIZING STEEL STRAPPING. SEE GENERAL NOTES "J" AND "K" ON PAGE 2.
 - A. EACH OF THE TWO SETS OF UNITIZING STRAPS SHOULD BE POSITIONED AROUND THE CONTAINERS AS SHOWN, AND PLACED SO THAT STRAPPING LAYS FLAT AND STRAIGHT WITH THE BODY SURFACES OF THE CONTAINERS; I.E., VERTICAL ALONG THE SIDES AND STRAIGHT ACROSS THE TOP AND BOTTOM OF THE CONTAINERS.
 - B. PLACE ANTI-CHAFING MATERIAL UNDER THE STRAPPING AT ALL POINTS OF STRAPPING/CONTAINER CONTACT, AND SECURE TO PREVENT DISLODGE MENT DURING AND AFTER STRAP APPLICATION. STRIPS OF ANTI-CHAFING MATERIAL MAY BE TAPED OR STRING-TIED TO THE CONTAINERS OR TO THE STRAPPING, OR IT CAN BE FORMED INTO STRAP ENCIRCLING TUBES BY WINDING THE MATERIAL AROUND AND AROUND THE STRAPPING TO FORM A SELF-HOLDING UNIT.
 - C. STRAPPING WILL BE FIRMLY TENSIONED, AND EACH END-OVER-END LAP JOINT WILL BE SEALED WITH TWO DOUBLE-CRIMPED STRAP SEALS AS SHOWN. THE STRAP JOINTS WILL BE MADE ALONG THE SIDE OF THE STACK SO THAT THE SEALS WILL NOT BE IN CONTACT WITH THE CONTAINERS. DURING STRAP TENSIONING, CARE SHOULD BE EXERCISED TO ENSURE THAT THE CONTAINERS ARE NOT DAMAGED. EXCESS STRAPPING (STRAP ENDS) SHOULD BE CUT OFF OR BROKEN OFF NEAR THE JOINT SEALS.

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(UNITIZING AND HANDLING PROCEDURAL GUIDANCE CONTINUED)

3. CONTAINER OR CONTAINER STACK HANDLING.

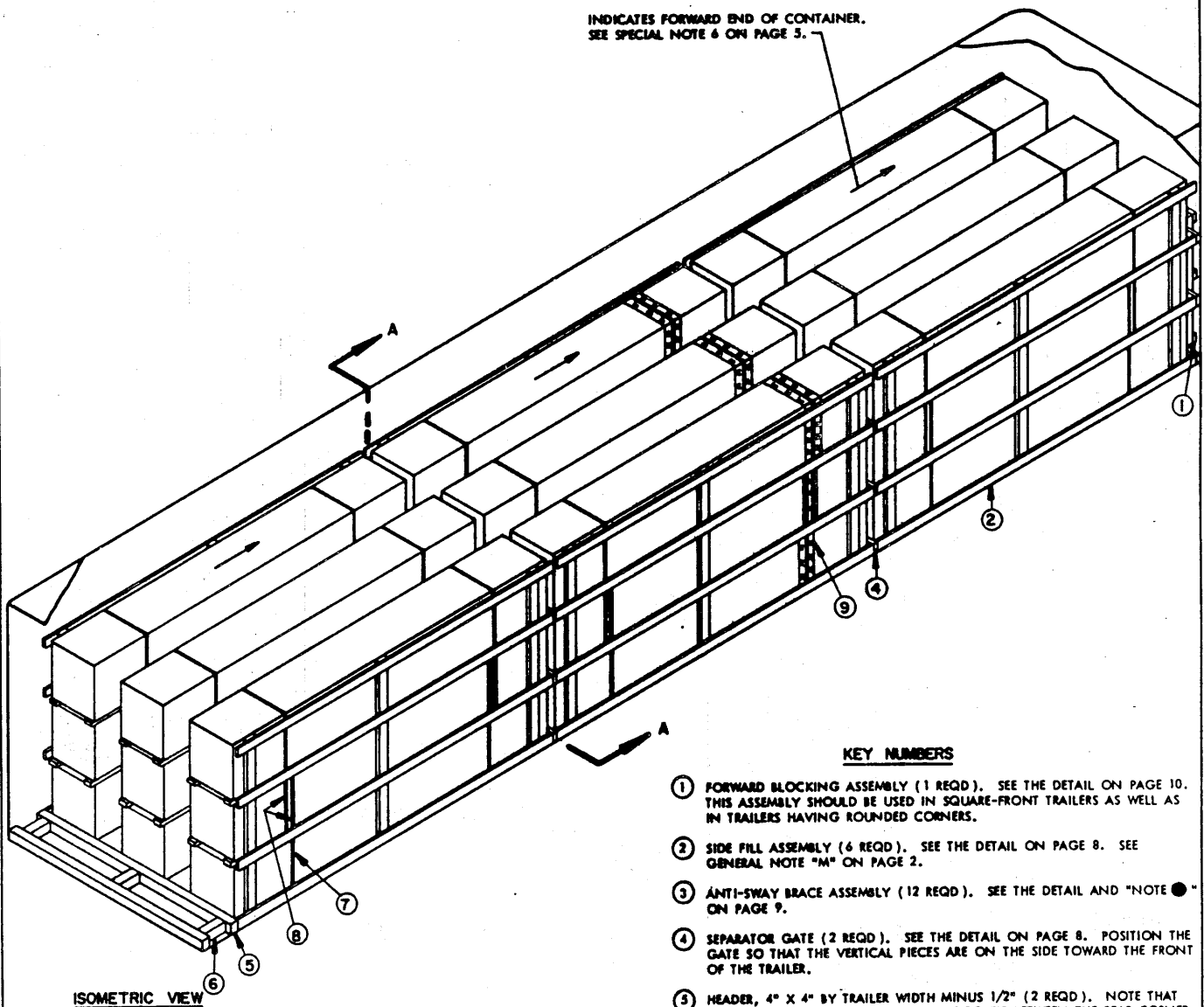
NOTES: (1) APPROVED MATERIALS HANDLING EQUIPMENT (FORKLIFT TRUCKS, CRANES, HAND TRUCKS, DOLLIES, ROLLER ASSEMBLIES, SLINGS, SPREADER BARS, ETC.) IS SPECIFIED ELSEWHERE THAN HEREIN.

(2) PRECAUTIONARY HANDLING TECHNIQUES NORMALLY EMPLOYED OR AS SPECIFIED FOR THE TYPE OF COMMODITY INVOLVED WILL BE OBSERVED.

 - A. ONLY APPROVED AND APPROPRIATELY SIZED MATERIALS HANDLING EQUIP- MENT WILL BE USED FOR HANDLING THE DEPICTED CONTAINERS.
 - B. IF HANDLING IS ACCOMPLISHED WITH A FORKLIFT, THE CONTAINERS SHOULD BE HANDLED FROM A SIDE POSITION WHENEVER POSSIBLE. **CAUTION:** THE USUALLY APPLIED END-HANDLING IS NOT PERMITTED; HOW- EVER, FORK TINES MAY BE PLACED UNDER THE SKIDS FROM AN END POSI- TION. CARE MUST BE EXERCISED WHEN INSERTING FORKS UNDER A CONTAINER TO PREVENT DAMAGE TO THE CONTAINER BY THE FORK TINES OR THE FORKLIFT PACKAGE GUARD. FOR VERY SHORT "INCHING" SPEED MOVEMENTS, SUCHAS WILL BE EXPERIENCED DURING TRAILER LOADING, A UNITIZED TWO OR THREE-HIGH CONTAINER STACK MAY BE HANDLED BY INSERTING THE FORKS OF A FORKLIFT TRUCK UNDER THE SECOND-LAYER CONTAINER.
 - C. IF ONE CONTAINER IS HANDLED BY SLINGING, THE SLING MAY BE ATTACHED TO THE LIFTING POINTS ON THE CONTAINER. HOWEVER, IF A TWO OR THREE-HIGH STACK IS HANDLED BY SLINGING, **DO NOT** ATTACH THE SLING TO THE LIFTING POINTS ON A CONTAINER. THE SLING USED MUST BE OF SUCH A DESIGN THAT THE LIFTING IS DONE ON THE BOTTOM OF THE LOWEST CONTAINER.

UNITIZATION AND HANDLING PROCEDURES

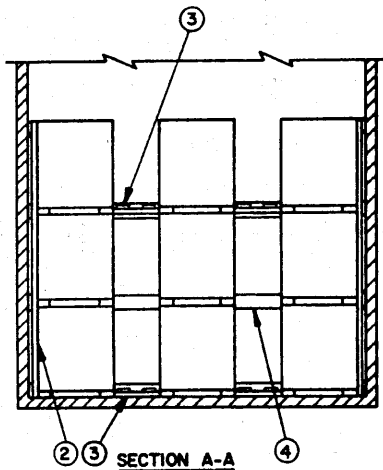
INDICATES FORWARD END OF CONTAINER.
SEE SPECIAL NOTE 6 ON PAGE 3.



ISOMETRIC VIEW

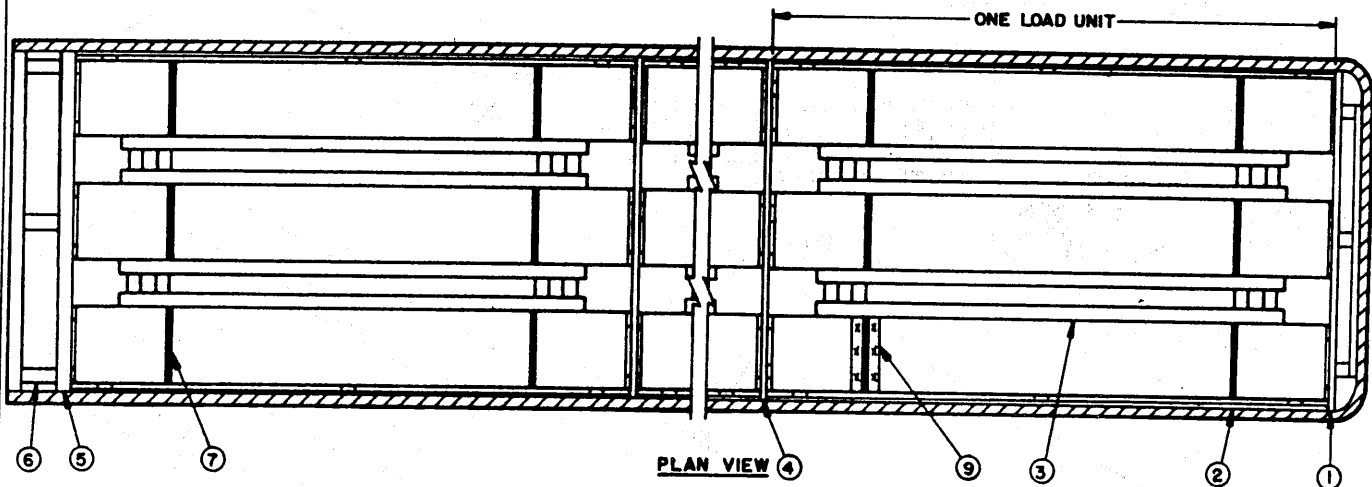
KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 10. THIS ASSEMBLY SHOULD BE USED IN SQUARE-FRONT TRAILERS AS WELL AS IN TRAILERS HAVING ROUNDED CORNERS.
- ② SIDE FILL ASSEMBLY (6 REQD). SEE THE DETAIL ON PAGE 8. SEE GENERAL NOTE "M" ON PAGE 2.
- ③ ANTI-SWAY BRACE ASSEMBLY (12 REQD). SEE THE DETAIL AND "NOTE ●" ON PAGE 9.
- ④ SEPARATOR GATE (2 REQD). SEE THE DETAIL ON PAGE 8. POSITION THE GATE SO THAT THE VERTICAL PIECES ARE ON THE SIDE TOWARD THE FRONT OF THE TRAILER.
- ⑤ HEADER, 4" X 4" BY TRAILER WIDTH MINUS 1/2" (2 REQD). NOTE THAT THE REARMOST HEADER SHOULD BE CUT TO FIT BETWEEN THE REAR CORNER POSTS, IF THE TRAILER IS SO EQUIPPED.
- ⑥ STRUT, 4" X 4" BY CUT TO FIT (3 REQD). POSITION THE OUTWARD PIECES TO ALIGN WITH CONTAINER SKIDS AND CENTER THE REMAINING PIECE ON THE MIDDLE ROW AS SHOWN. TOENAIL TO PIECES MARKED ③ W/2-16d NAILS AT EACH END. SEE SPECIAL NOTES 2 AND 3 ON PAGE 5.
- ⑦ UNITIZING STRAP, 1-1/4" X .035" X 13'-0" STEEL STRAPPING (36 REQD). SEE THE "UNITIZING AND HANDLING PROCEDURAL GUIDANCE" ON PAGE 3 AND GENERAL NOTES "J" AND "K" ON PAGE 2.
- ⑧ SEAL FOR 1-1/4" STRAPPING (72 REQD, 2 PER STRAP).
- ⑨ ANTI-CHAFING, NEUTRAL BARRIER MATERIAL (AS REQD). POSITION UNDER STEEL STRAPPING, PIECE MARKED ⑦, AT ALL POINTS OF STRAPPING/CONTAINER CONTACT.



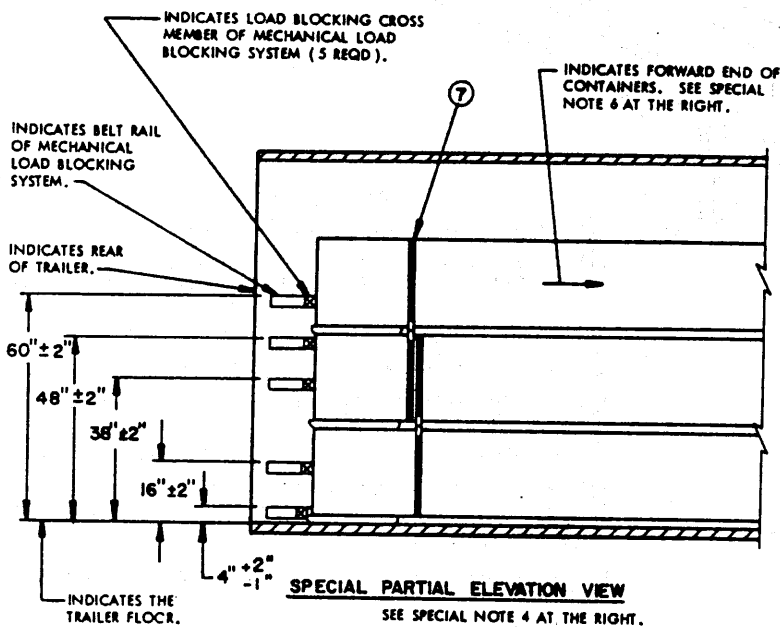
SECTION A-A

27-UNIT LOAD IN A 40'-0" LONG TRAILER



SPECIAL NOTES:

1. A 27-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) TRAILER THAT HAS ROUNDED CORNERS AT THE FORWARD END AND IS NOT EQUIPPED WITH REAR CORNER POSTS AT THE REAR END. A TRAILER WITH REAR CORNER POSTS CAN BE USED. ALSO, A WIDER OR NARROWER TRAILER MAY BE USED OR A SHORTER TRAILER MAY BE USED. HOWEVER, 27 UNITS CANNOT BE LOADED INTO A TRAILER WHICH IS SHORTER THAN 39'-0" LONG.
2. IF THE DISTANCE BETWEEN THE REAR OF THE LOAD AND THE REAR DOORS OF THE TRAILER, WHEN THEY ARE CLOSED, MEASURES 12" OR LESS, SOLID FILL MATERIAL 4" WIDE BY TRAILER WIDTH MINUS 1/2" AND/OR CUT TO FIT BETWEEN REAR CORNER POSTS, IF THE TRAILER IS SO EQUIPPED, BY THE REQUIRED THICKNESS WILL BE USED IN LIEU OF THE DEPICTED REAR BLOCKING. IF THE DISTANCE MEASURES 60" OR MORE, THE "K-BRACE" TYPE OF REAR BLOCKING AS SHOWN IN THE LOAD VIEW ON PAGE 6 MAY BE USED.
3. IF THE STRUTS, PIECE MARKED ④, MEASURE 7'-0" OR LONGER, A STRUT BRACE, SHOWN AS PIECE MARKED ⑫ ON PAGE 6, MUST BE USED FOR EVERY 7'-0" OF STRUT LENGTH.
4. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, SUCH AS WALL BELT RAILS AND LOAD BLOCKING CROSS MEMBERS WHICH CONFORM TO SPECIFICATIONS SET FORTH WITHIN THE BUREAU OF EXPLOSIVES PAMPHLET 6C AND THE APPENDICES THERETO, THE MECHANICAL DEVICES MAY BE USED AT THE REAR OF THE LOAD IN LIEU OF PIECES MARKED ③ AND ④. POSITION CROSS MEMBERS TIGHTLY AGAINST THE CONTAINERS. SEE THE "SPECIAL PARTIAL ELEVATION VIEW" AT THE LEFT FOR CROSS MEMBER LOCATION AND THE NUMBER OF CROSS MEMBERS REQUIRED. THE MECHANICAL SYSTEM LENGTH MUST BE AT LEAST 38'-5" LONG AS MEASURED FROM THE FRONT WALL OF THE TRAILER. NOTE THAT THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①, IS REQUIRED AT THE FRONT OF ALL TRAILERS, WHETHER THEY ARE THE SQUARE-FRONT OR ROUNDED-CORNER TYPE.
5. THE DEPICTED LOAD CONFIGURATION MAY BE ADJUSTED TO SATISFY THE QUANTITY OF ITEMS TO BE SHIPPED BY OMITTING AN ENTIRE LOAD UNIT OF NINE (9) CONTAINERS, OR BY OMITTING MULTIPLES OF THREE (3) CONTAINERS FROM THE TOP LAYER OF ONE OR MORE LOAD UNITS, PROGRESSING FROM THE REAR TO THE FRONT OF THE LOAD. NOTE THAT THE ANTI-SWAY BRACE ASSEMBLIES, PIECES MARKED ⑩, MUST BE INSTALLED TO BRACE AGAINST THE SKIDS OF THE CONTAINERS IN THE SECOND LAYER WHEN A LOAD UNIT DOES NOT CONTAIN A THIRD LAYER. ADDITIONAL ADJUSTMENT MAY BE MADE BY OMITTING THE TOP CONTAINER FROM THE MIDDLE CONTAINER STACK OF THE REARMOST ONE OR TWO LOAD UNITS. SEE THE "SPECIAL SECTION VIEW" ON PAGE 10 FOR GUIDANCE IN THE BRACING OF A LOAD UNIT OF EIGHT (8) CONTAINERS.
6. ALL CONTAINERS SHOULD BE POSITIONED IN THE TRAILER WITH THE FORWARD END FACING TOWARD THE FRONT OF THE TRAILER TO PREVENT CONTACT BETWEEN THE VERTICAL PIECES OF THE SEPARATOR GATES AND THE HUMIDITY INDICATORS AND/OR PRESSURE RELIEF VALVES ON THE CONTAINERS. THIS POSITIONING OF THE CONTAINERS WILL ALSO PREVENT THE CROSS MEMBERS OF A MECHANICAL-LOAD-BRACING-EQUIPPED TRAILER FROM DAMAGING THESE ITEMS.



SPECIAL PARTIAL ELEVATION VIEW

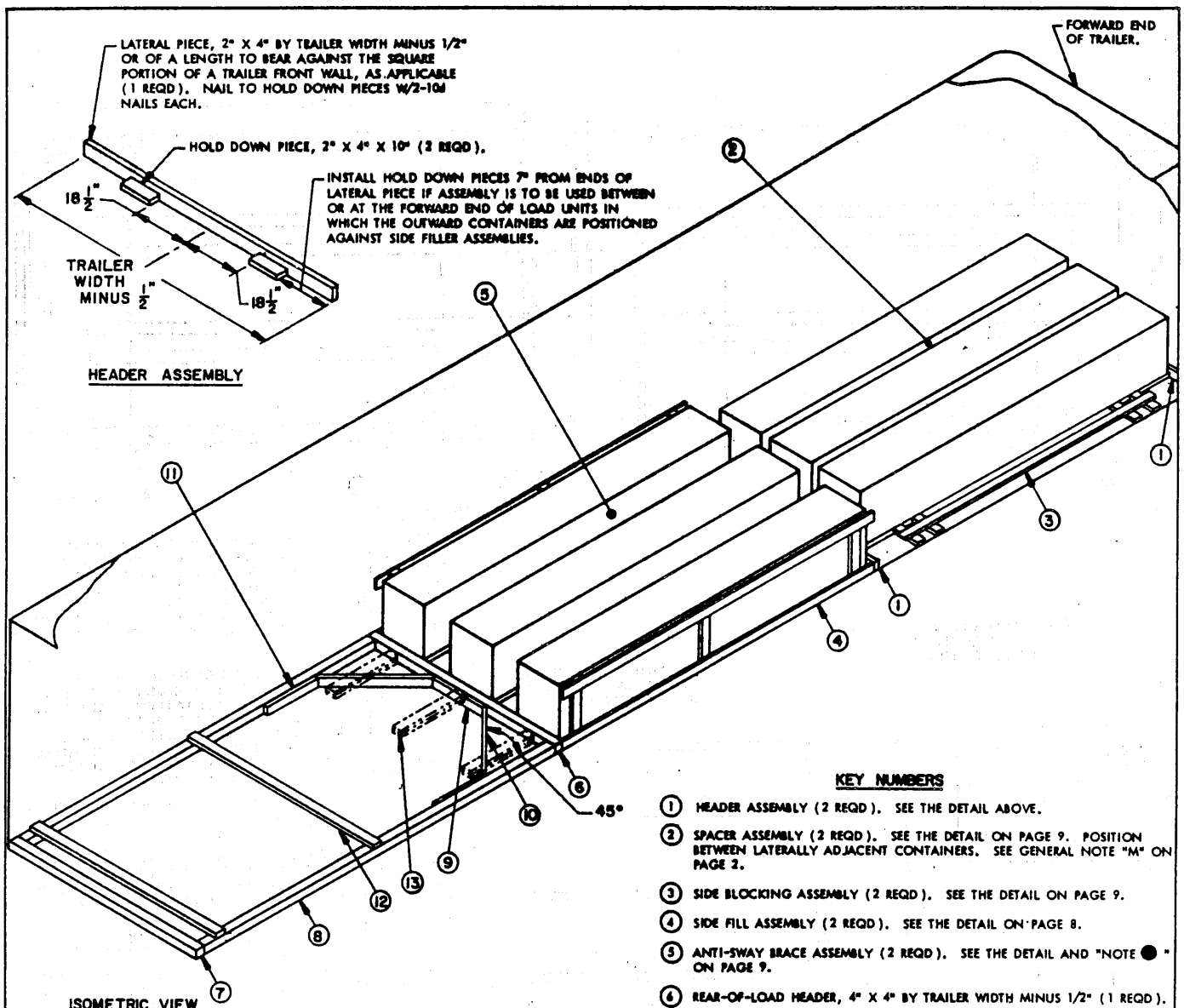
SEE SPECIAL NOTE 4 AT THE RIGHT.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	556	186
2" X 2"	2	1-1/3
2" X 4"	254	170
4" X 4"	31	42
NAILS		POUNDS
6d (2")	558	3-1/2
10d (3")	66	1
16d (3-1/2")	24	1/2
STEEL STRAPPING, 1-1/4" X .035"	468 ⁸ REQD	67 LBS
SEAL FOR 1-1/4" STRAPPING	72 REQD	4 LBS
ANTI-CHAFING MATERIAL	AS REQD	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-123/E CONTAINER		
W/CBU ITEMS	27	36,072 LBS
DUNNAGE		1,076 LBS
TOTAL WEIGHT		37,148 LBS

27-UNIT LOAD IN A 40'-0" LONG TRAILER



HEADER ASSEMBLY

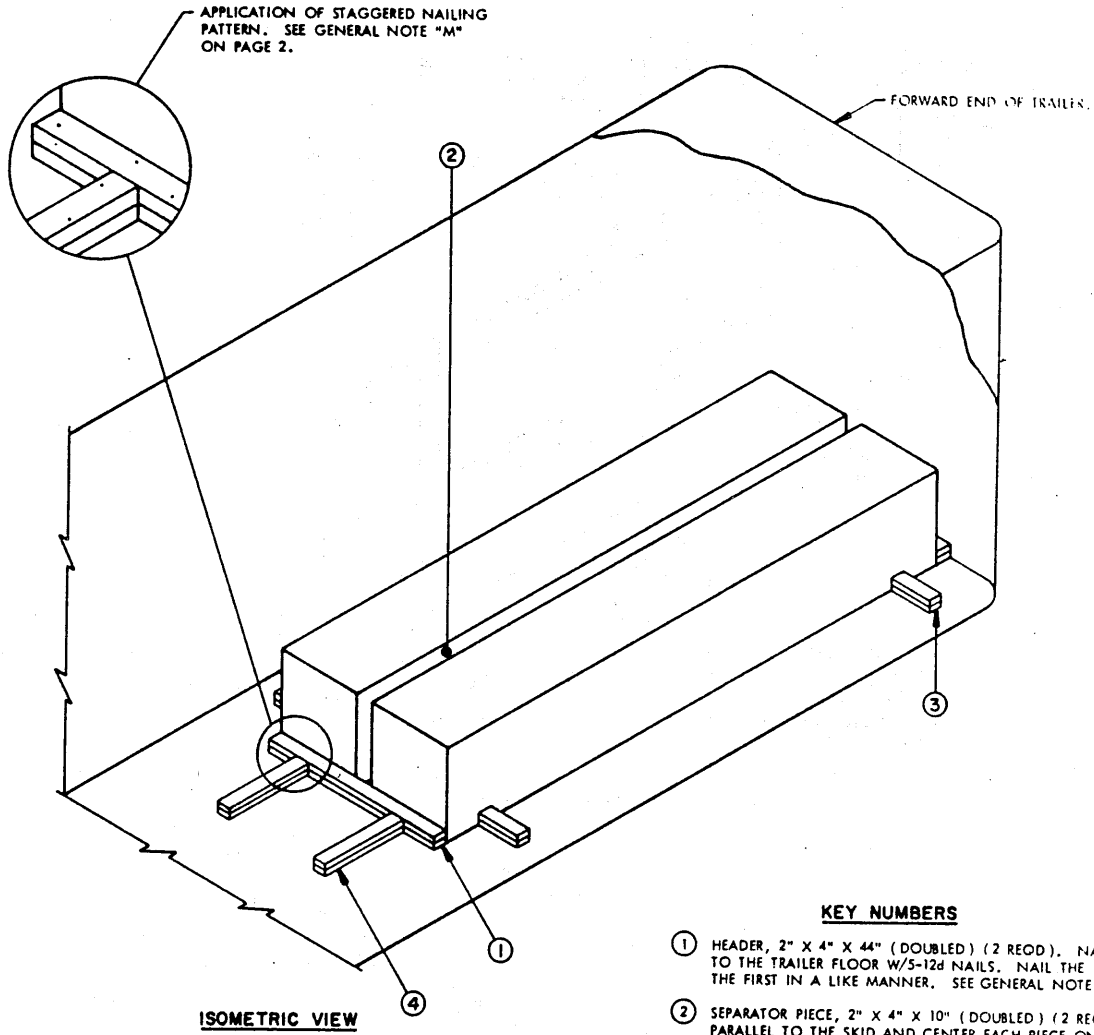
ISOMETRIC VIEW

KEY NUMBERS

- ① HEADER ASSEMBLY (2 REQD). SEE THE DETAIL ABOVE.
- ② SPACER ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 9. POSITION BETWEEN LATERALLY ADJACENT CONTAINERS. SEE GENERAL NOTE "M" ON PAGE 2.
- ③ SIDE BLOCKING ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 9.
- ④ SIDE FILL ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 8.
- ⑤ ANTI-SWAY BRACE ASSEMBLY (2 REQD). SEE THE DETAIL AND "NOTE ●" ON PAGE 9.
- ⑥ REAR-OF-LOAD HEADER, 4" X 4" BY TRAILER WIDTH MINUS 1/2" (1 REQD).
- ⑦ REAR HEADER, 4" X 4" BY TRAILER WIDTH MINUS 1/2" (1 REQD).
- ⑧ SIDE STRUT, 4" X 4" BY CUT TO FIT BETWEEN PIECES MARKED ⑥ AND ⑦. TOENAIL W/2-12d NAILS AT EACH END.
- ⑨ CENTER CLEAT, 2" X 4" X 24" (1 REQD). NAIL TO PIECE MARKED ⑥ W/3-12d NAILS.
- ⑩ DIAGONAL BRACE, 2" X 4" BY CUT TO FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT 45° ANGLE AS SHOWN AND NAIL TO PIECES MARKED ⑥ AND ⑦ W/2-16d NAILS AT EACH END.
- ⑪ BACK-UP CLEAT, 2" X 4" X 24" (2 REQD). NAIL TO A PIECE MARKED ⑥ W/6-12d NAILS.
- ⑫ STRUT BRACE, 2" X 4" BY TRAILER WIDTH (CUT TO FIT) (MIN 1 REQD). POSITION ONE (1) NEAR THE REAR OF THE TRAILER AND ONE (1) EVERY 7'-0" OF STRUT LENGTH. NAIL TO PIECE MARKED ⑥ W/2-12d NAILS AT EACH END.
- ⑬ BACK-UP CLEAT, 2" X 4" X 30" (DOUBLED) (3 REQD). POSITION TO ALIGN WITH THE CENTER OF EACH CONTAINER AND NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/7-12d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 5 AT THE LEFT.

SPECIAL NOTES:

1. THESE LTL OUTLOADING PROCEDURES DEPICT THE USE OF BOTH "K-BRACE" BLOCKING AND "NAILED, FLOOR-LINE" BLOCKING, FOR THE BRACING OF A PARTIAL LOAD SHIPMENT.
2. THE TYPICAL LOAD IS SHOWN FOR A 7'-6" WIDE (INSIDE DIMENSION) TRAILER THAT HAS ROUNDED CORNERS AT THE FORWARD END. WIDER OR NARROWER TRAILERS CAN BE USED. IF THE TRAILER BEING USED HAS A "SQUARE" FRONT WALL, THE SIDE BLOCKING ASSEMBLY MARKED AS PIECE ③ SHOULD NOT BE USED; POSITION AND BRACE THE FRONT LOAD UNIT OF CONTAINERS AS ILLUSTRATED FOR THE SECOND LOAD UNIT.
3. THE REAR BLOCKING IN THESE LTL PROCEDURES IS ALSO APPLICABLE FOR BRACING A LOAD CONSISTING OF MORE THAN ONE LAYER. REFER TO PAGES 4 AND 5 FOR PROCEDURES APPLICABLE FOR THE BRACING OF A SECOND OR THIRD LAYER.
4. THE "K-BRACE" BLOCKING, SHOWN AS PIECES MARKED ④ THRU ⑫, IS ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD OF EIGHTEEN (18) CONTAINERS.
5. THREE (3) BACK-UP CLEATS, SHOWN AS PIECE MARKED ⑬, ARE ADEQUATE FOR RETAINING NOT MORE THAN 15,000 POUNDS OF LADING (11 CONTAINERS). BACK-UP CLEATS ARE FOR USE IN A TRAILER WHICH HAS A NAILED FLOOR AND SHOULD BE USED, IF POSSIBLE, IN LIEU OF PIECES MARKED ⑦ THRU ⑫.



APPLICATION OF STAGGERED NAILING PATTERN. SEE GENERAL NOTE "M" ON PAGE 2.

FORWARD END OF TRAILER.

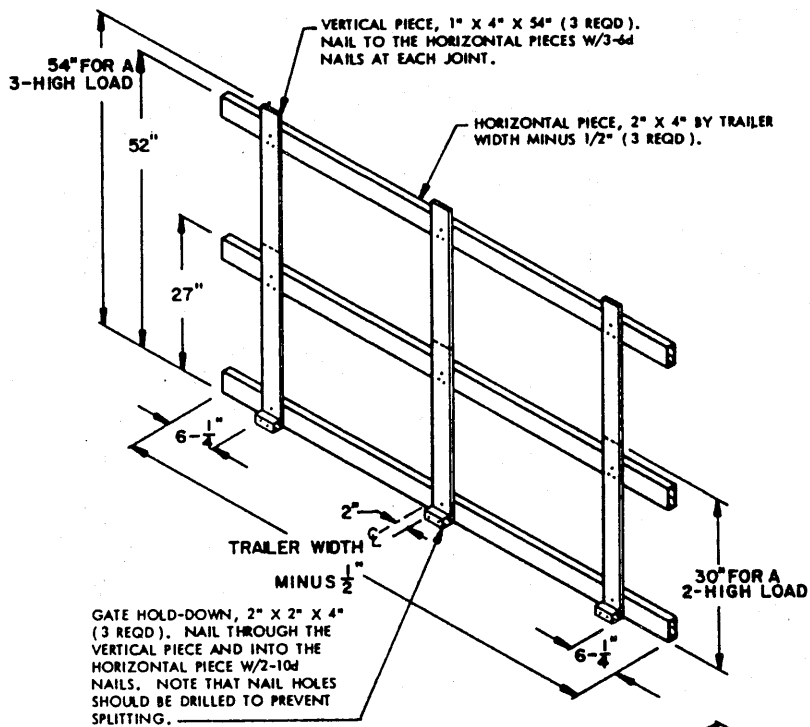
ISOMETRIC VIEW

KEY NUMBERS

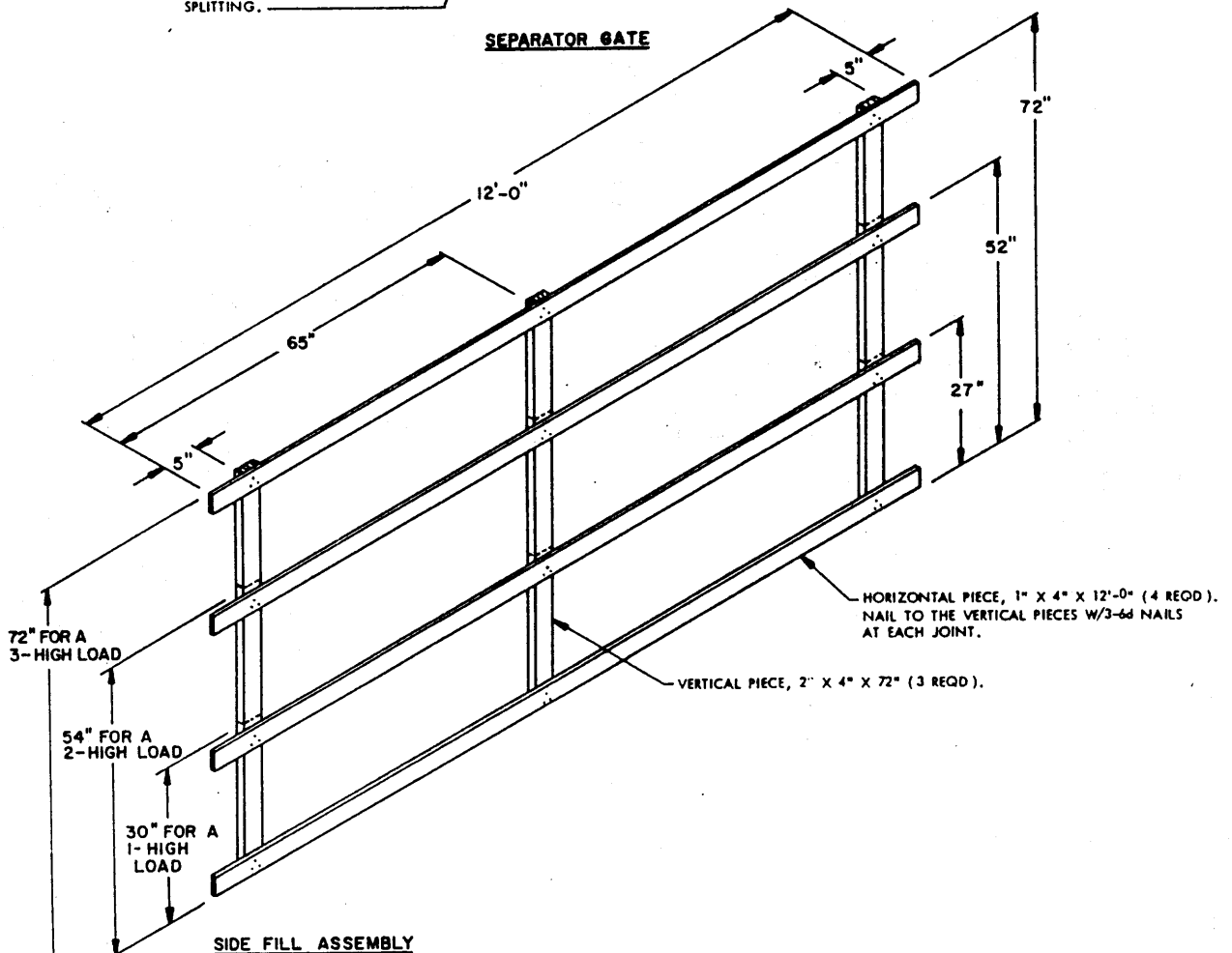
- ① HEADER, 2" X 4" X 44" (DOUBLED) (2 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/5-12d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE GENERAL NOTE "M" ON PAGE 2.
- ② SEPARATOR PIECE, 2" X 4" X 10" (DOUBLED) (2 REQD). POSITION PARALLEL TO THE SKID AND CENTER EACH PIECE ON A SKID LENGTH. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/3-12d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ③ SIDE BLOCKING, 2" X 4" X 12" (DOUBLED) (4 REQD). POSITION TO CENTER ON A CONTAINER SKID AND NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/3-12d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ④ BACK-UP CLEAT, 2" X 4" X 24" (DOUBLED) (2 REQD). POSITION TO CENTER ON A CONTAINER AND NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-12d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 3.

SPECIAL NOTES:

- 1. THESE LTL OUTLOADING PROCEDURES DEPICT THE USE OF BLOCKING THAT IS ONLY APPLICABLE TO TRAILERS WHICH HAVE NAILABLE FLOORS.
- 2. THE TYPICAL LOAD IS SHOWN FOR A 7'-6" WIDE (INSIDE DIMENSION) TRAILER THAT HAS ROUNDED CORNERS AT THE FORWARD END. WIDER OR NARROWER TRAILERS CAN BE USED. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR SQUARE-FRONT TRAILERS.
- 3. TWO (2) BACK-UP CLEATS, SHOWN AS PIECE MARKED ④, ARE ADEQUATE FOR RETAINING FOUR (4) CONTAINERS, LOADED TWO WIDE AND TWO LONG.

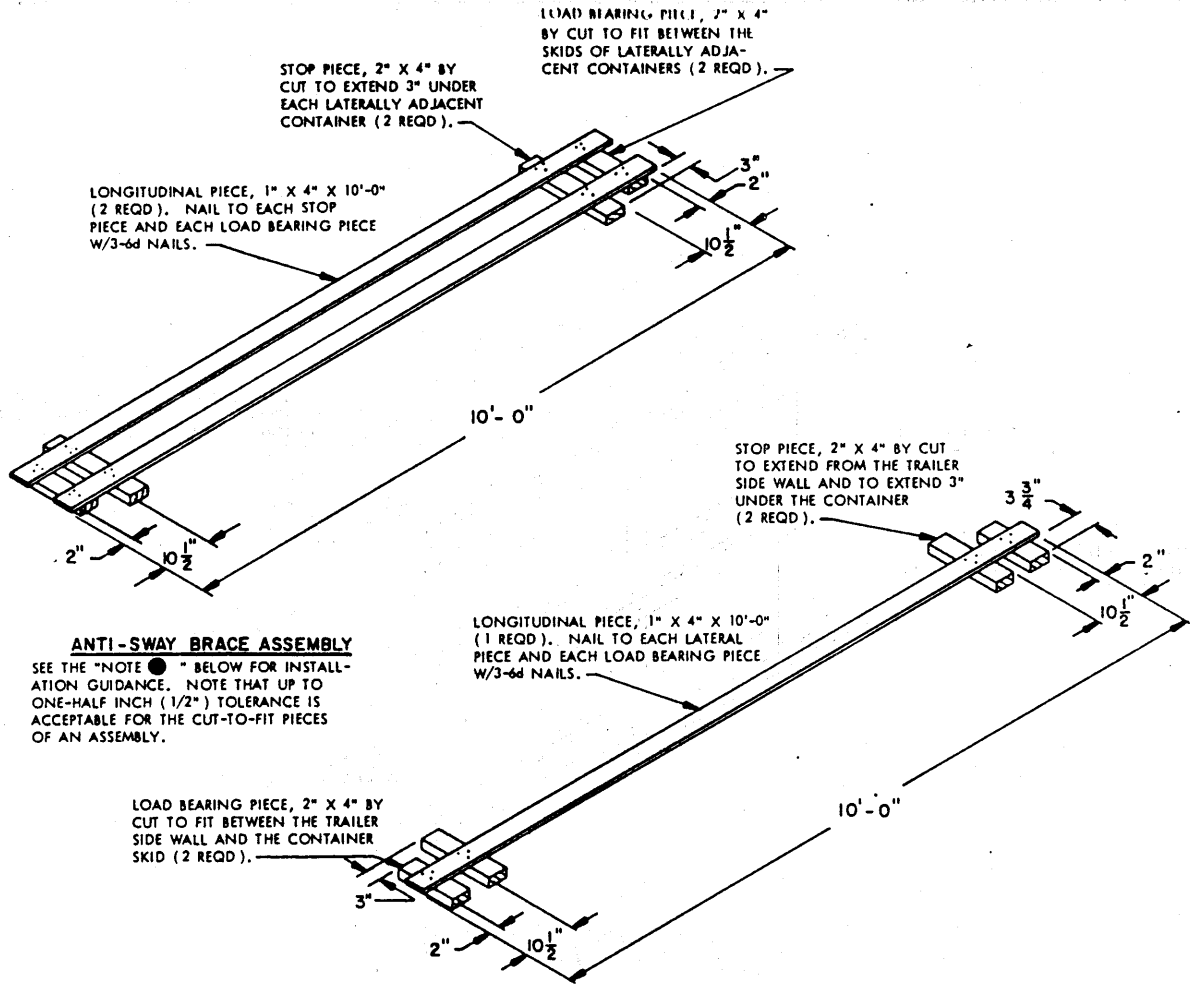


SEPARATOR GATE



SIDE FILL ASSEMBLY

DETAILS

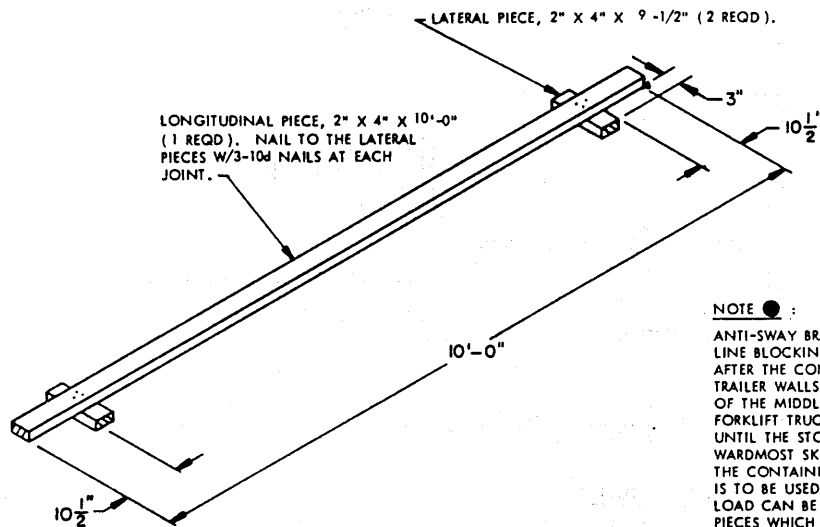


ANTI-SWAY BRACE ASSEMBLY

SEE THE "NOTE ●" BELOW FOR INSTALLATION GUIDANCE. NOTE THAT UP TO ONE-HALF INCH (1/2") TOLERANCE IS ACCEPTABLE FOR THE CUT-TO-FIT PIECES OF AN ASSEMBLY.

SIDE BLOCKING ASSEMBLY

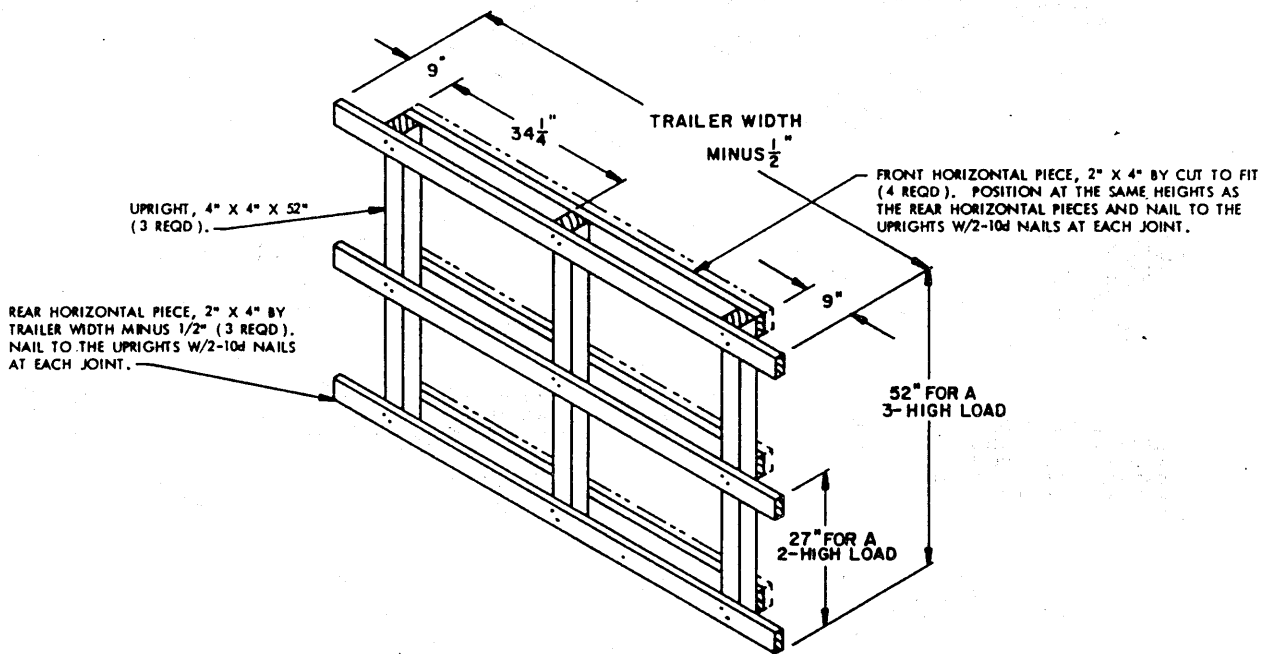
SEE SPECIAL NOTE 2 ON PAGE 6. NOTE THAT UP TO ONE-HALF INCH (1/2") TOLERANCE IS ACCEPTABLE FOR THE CUT-TO-FIT PIECES OF AN ASSEMBLY.



SPACER ASSEMBLY

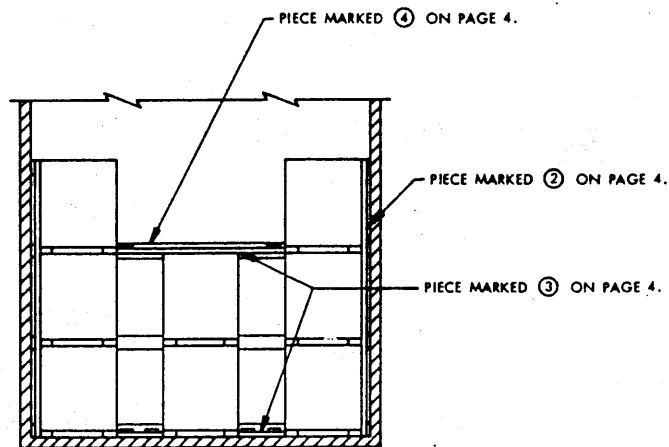
NOTE ● :

ANTI-SWAY BRACE ASSEMBLIES WHICH ARE TO BE USED FOR FLOORLINE BLOCKING MAY BE INSTALLED COMPLETELY FABRICATED AFTER THE CONTAINERS OR CONTAINER STACKS ADJACENT TO THE TRAILER WALLS HAVE BEEN POSITIONED. WITH THE REARWARD END OF THE MIDDLE CONTAINER(S) SUPPORTED ABOVE THE FLOOR BY A FORKLIFT TRUCK, AN ASSEMBLY CAN BE SLID BETWEEN THE ROWS UNTIL THE STOP PIECE OF THE ASSEMBLY CONTACTS THE FORWARDMOST SKIDS OF THE BOTTOM CONTAINERS. THEN, LOWER THE CONTAINER(S) INTO FINAL POSITION. AN ASSEMBLY WHICH IS TO BE USED BETWEEN CONTAINERS IN THE UPPER LAYER OF A LOAD CAN BE PREFABRICATED WITH THE EXCEPTION OF THE STOP PIECES WHICH MUST BE POSITIONED UNDER THE TOP CONTAINERS PRIOR TO POSITIONING AND NAILING THE REST OF THE ASSEMBLY.



FORWARD BLOCKING ASSEMBLY

FOR ROUNDED-CORNER TRAILERS WHERE THE RADIUS OF THE CORNER IS GREATER THAN 8", ADDITIONAL DUNNAGE OF A THICKNESS TO SUIT (AS SHOWN BY THE PHANTOM LINES) MUST BE LAMINATED TO THE FRONT HORIZONTAL PIECES OF THE ASSEMBLY.



SPECIAL SECTION VIEW

THIS VIEW DEPICTS PROCEDURES TO BE USED WHEN SHIPPING A LOAD UNIT OF EIGHT (8) CONTAINERS. SEE SPECIAL NOTE 5 ON PAGE 5.