

APPROVED  
 BUREAU OF EXPLOSIVES  
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 DATE 3/16/67

# LOADING & BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF CANISTER, ANTIPERSONNEL MINE, XM2, PACKED IN A SKIDDED WOODEN BOX

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THIS DRAWING SUPERSEDES  
 "INTERIM PROCEDURES"  
 DRAWING D-SSMSV-4116.

DO NOT SCALE

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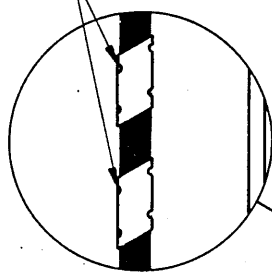
## GENERAL NOTES

- A. THE LOAD AS SHOWN ON PAGE 4 IS BASED ON A CLOSED OR OPEN TOP VAN TRAILER 38'-0" LONG X 7'-6" WIDE (INSIDE DIMENSION) HAVING A WOOD OR A WOOD AND METAL, OR A METAL FLOOR. THE DELINEATED PROCEDURES ARE ALSO APPLICABLE TO LONGER TRAILERS AND TO TRAILERS WHICH ARE FROM 86" THROUGH 93" WIDE. A 38'-0" LONG TRAILER IS THE MINIMUM LENGTH TRAILER WHICH CAN BE USED FOR SHIPPING A 27-UNIT LOAD.  
**CAUTION:** IF A TRAILER IS TO BE LOADED THROUGH THE REAR DOOR OPENING, THE HEIGHT OF THE DOOR OPENING, MEASURED FROM THE TRAILER FLOOR TO THE TOP FRAME MEMBER, MUST BE AT LEAST 91", TO ALLOW FOR THE PASSAGE OF 3-HIGH CONTAINER STACKS.
- B. THE OUTLOADING PROCEDURES SPECIFIED HEREIN ARE APPLICABLE TO THE XM2 ANTIPERSONNEL MINE CANISTER WHEN PACKAGED IN THE SKIDDED WOODEN BOX CONTAINER. SUBSEQUENT REFERENCE TO CONTAINER HEREIN MEANS THE SKIDDED BOX CONTAINER WITH CONTENTS.
- C. FOR DETAILS OF THE CONTAINER SEE DRAWING NO. 9212614:  
CONTAINER DIMENSIONS -- 91-11/16" LONG X 25-11/16" WIDE X 30-5/32" HIGH.  
GROSS WEIGHT ----- 650 POUNDS (APPROX).  
TARE WEIGHT ----- 200 POUNDS (APPROX).
- D. THIS ITEM IS AN ICC CLASS "A" EXPLOSIVE.
- E. THE "MONITORING" END OF CONTAINERS MUST BE POSITIONED WITHIN THE TRAILER AS SHOWN BY ARROWS ON THE ISOMETRIC VIEWS OF THE DEPICTED LOADS, TO FACILITATE MONITORING DURING TRANSIT.
- F. 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.
- G. THE NUMBER OF UNITS MAY BE ADJUSTED TO FIT THE SIZE OF TRAILER TO BE LOADED OR THE QUANTITY TO BE SHIPPED, AND COMBINATIONS OF THE OUTLOADING PROCEDURES SPECIFIED FOR THE VARIOUS LOADS SHOWN HEREIN MAY BE USED AS REQUIRED. HOWEVER, THE APPROVED METHODS SHOWN HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING AND STAYING OF THE DESIGNATED ITEM.
- H. 1-1/4" STEEL STRAPPING WILL BE USED TO UNITIZE STACKED CONTAINERS AS SHOWN ON PAGE 3. IT IS RECOMMENDED THAT CONTAINERS BE UNITIZED PRIOR TO PLACEMENT ABOARD THE TRAILER. SEE GENERAL NOTE "P" BELOW.
- J. WHEN ANY STRAP IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF TWO (2) SEALS WITH TWO (2) CRIMPS PER SEAL MUST BE USED.  
**CAUTION:** EXERCISE CARE DURING STRAP TENSIONING TO PREVENT DAMAGE TO CONTAINERS.
- K. FOR TRAILERS NOT EQUIPPED WITH REAR CORNER POSTS, REAR BLOCKING MUST BE EXTENDED TO CONTACT THE REAR DOORS WHEN THEY ARE CLOSED.
- L. OTHER TYPES OF LADING ITEMS MAY BE LOADED IN THE TRAILERS WHICH ARE PARTIALLY LOADED WITH THE DESIGNATED ITEM, PROVIDING THE TOTAL LOAD IS COMPATIBLE, EXISTING DIRECTIVES ARE NOT VIOLATED, INSPECTION/MONITORING DOOR OF THIS ITEM IS ACCESSIBLE, AND THE OTHER LADING ITEMS ARE BLOCKED AND BRACED TO EQUAL THE BLOCKING AND BRACING CRITERIA SPECIFIED HEREIN.
- M. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-5/8" THICK BY 3-5/8" WIDE AND 4" X 4" MATERIAL IS ACTUALLY 3-5/8" THICK BY 3-5/8" WIDE.
- N. PORTIONS OF THE SEMITRAILER BODIES DEPICTED WITHIN THIS PROCEDURAL DRAWING, SUCH AS ONE OF THE SIDE WALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- O. FOR SPECIFIC GUIDANCE, ATTENTION IS DIRECTED TO THE "UNITIZATION AND HANDLING PROCEDURES" ON PAGE 3 AND TO DELINEATED OUTLOADING METHODS CONTAINED HEREIN.
- P. IN SOME INSTANCES, CONTAINERS WILL ALREADY BE UNITIZED INTO STACKS WHEN OFFERED FOR LOADING. THESE UNITIZED STACKS SHOULD BE INSPECTED AND AS REQUIRED, LOOSE UNITIZING STEEL STRAPPING MUST BE REPLACED.

## MATERIAL SPECIFICATIONS

- LUMBER ----- : SEE TM 715-5500-1, 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 THE SAME SIZE.
- STRAPPING, STEEL: TYPE I OR IV, CLASS A OR B, FED SPEC QQ-5-781.
- WIRE ----- : FED SPEC QQ-W-461.

SEAL FOR 1-1/4" X .035" STEEL STRAPPING (2 REQD PER STRAP).  
DOUBLE CRIMP EACH SEAL AS SHOWN. SEE GENERAL NOTE "J" ON PAGE 2.



INDICATES CONTAINER END WHICH  
HAS INSPECTION/MONITORING DOOR.  
SEE GENERAL NOTE "E" ON PAGE 2.

7'-7 1/8"

25 1/16"

CONTAINER TIE  
DOWN POINT.

CONTAINER INSPECTION/  
MONITORING DOOR. SEE  
GENERAL NOTE "E" ON  
PAGE 2.

7'-6 1/2"

1-1/4" X .035" UNITIZING  
STEEL STRAPPING (4 REQD  
PER STACK).

## UNITIZING AND HANDLING PROCEDURAL GUIDANCE

## STACK DETAIL

(UNITIZING AND HANDLING PROCEDURAL  
GUIDANCE CONTINUED)

### 1. STACKING CONTAINERS FOR UNITIZING.

- A. AN UPPER CONTAINER SHOULD BE PLACED AS CLOSE AS POSSIBLE IN VERTICAL ALIGNMENT WITH THE NEXT LOWER CONTAINER.
- B. POSITION THE INSPECTION/MONITORING DOOR OF AN UPPER CONTAINER ABOVE THE INSPECTION/MONITORING DOOR OF THE NEXT LOWER CONTAINER. SEE GENERAL NOTE "E" ON PAGE 2.

### 2. INSTALLATION OF 1-1/4" X .035" UNITIZING STEEL STRAPPING. SEE GENERAL NOTE "P" ON PAGE 2.

- A. EACH OF THE TWO SETS OF UNITIZING STRAPS SHOULD BE POSITIONED AROUND THE CONTAINERS AS SHOWN. PLACE STRAPPING NEAR THE INSIDE ENDS OF CONTAINER SKIDS AND SO THAT THE STRAPPING LAYS FLAT AND STRAIGHT WITH THE BODY SURFACES OF THE CONTAINERS; I.E., VERTICAL ALONG SIDES AND STRAIGHT ACROSS THE TOP AND BOTTOM OF THE STACK.
- B. STRAPPING WILL BE FIRMLY TENSIONED, AND EACH END-OVER-END LAP JOINT WILL BE SEALED WITH TWO DOUBLE CRIMPED STRAP SEALS AS SHOWN. THE LAP JOINT 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 INSURE THAT THE CONTAINERS ARE NOT DAMAGED. EXCESS STRAPPING (STRAP ENDS) SHOULD BE CUT OFF OR BROKEN OFF NEAR THE JOINT SEALS.

### 3. CONTAINER OR CONTAINER STACK HANDLING.

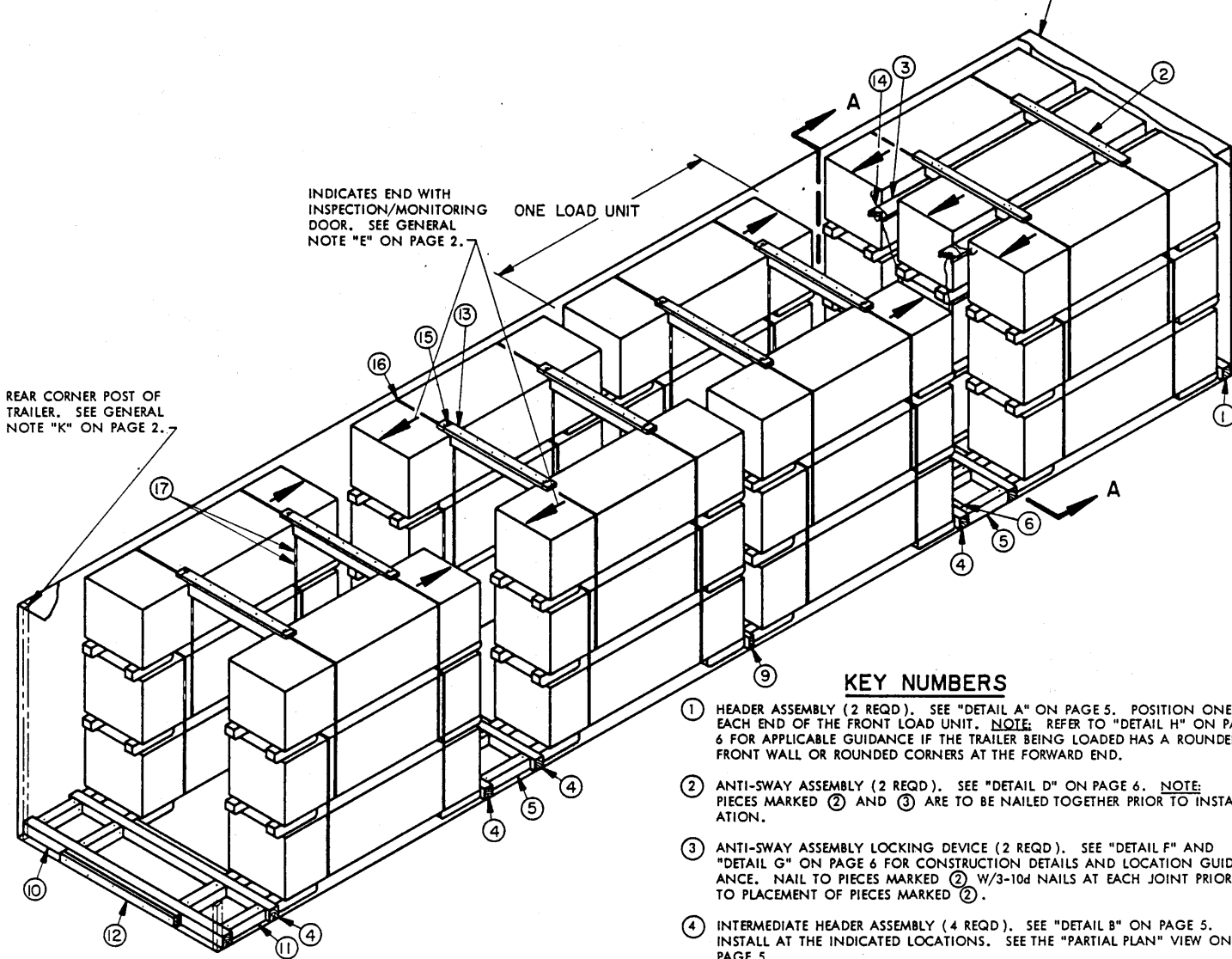
**NOTES:** (1) APPROVED MATERIALS HANDLING EQUIPMENT (FORKLIFT TRUCKS, CRANES, HAND TRUCKS, DOLLIES, ROLLER ASSEMBLIES, SLINGS, SPREADER BARS, ETC.) IS SPECIFIED ELSEWHERE.

- (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 EQUIPMENT WILL BE USED FOR HANDLING THE DEPICTED CONTAINERS.
- B. IF HANDLING IS ACCOMPLISHED WITH A FORKLIFT TRUCK, THE CONTAINERS SHOULD BE HANDLED FROM A SIDE POSITION AS MUCH AS POSSIBLE. 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, SUCH AS WILL BE EXPERIENCED DURING TRAILER LOADING, A UNITIZED TWO OR THREE CONTAINER STACK MAY BE HANDLED BY INSERTING THE FORKS OF A FORKLIFT TRUCK UNDER THE BODY OF AN UPPER CONTAINER. IF ONE CONTAINER IS HANDLED BY SLINGING, THE SLING MUST BE OF SUCH A DESIGN THAT THE LIFTING IS DONE ON THE BOTTOM OF THE CONTAINER. **CAUTION:** DO NOT ATTACH SLING TO THE CONTAINER TIE DOWN POINTS ON THE ENDS OF THE CONTAINER. IF A TWO OR THREE HIGH STACK IS HANDLED BY SLINGING, THE SLING MUST BE OF SUCH A DESIGN THAT THE LIFTING IS DONE ON THE BOTTOM OF THE LOWEST CONTAINER.

## UNITIZATION AND HANDLING PROCEDURES

FOR A ROUND-FRONT OR A ROUNDED CORNER TRAILER, SEE "DETAIL H" ON PAGE 6.



REAR CORNER POST OF TRAILER. SEE GENERAL NOTE "K" ON PAGE 2.

INDICATES END WITH INSPECTION/MONITORING DOOR. SEE GENERAL NOTE "E" ON PAGE 2.

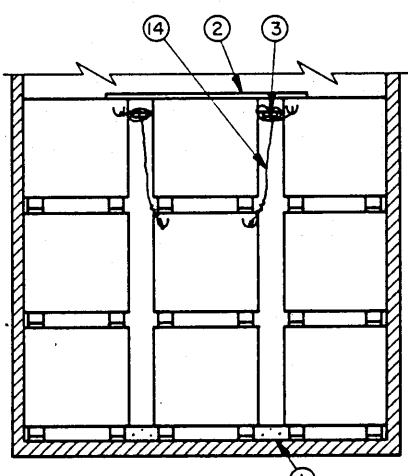
ONE LOAD UNIT

**KEY NUMBERS**

- ① HEADER ASSEMBLY (2 REQD). SEE "DETAIL A" ON PAGE 5. POSITION ONE AT EACH END OF THE FRONT LOAD UNIT. NOTE: REFER TO "DETAIL H" ON PAGE 6 FOR APPLICABLE GUIDANCE IF THE TRAILER BEING LOADED HAS A ROUNDED FRONT WALL OR ROUNDED CORNERS AT THE FORWARD END.
- ② ANTI-SWAY ASSEMBLY (2 REQD). SEE "DETAIL D" ON PAGE 6. NOTE: PIECES MARKED ② AND ③ ARE TO BE NAILED TOGETHER PRIOR TO INSTALLATION.
- ③ ANTI-SWAY ASSEMBLY LOCKING DEVICE (2 REQD). SEE "DETAIL F" AND "DETAIL G" ON PAGE 6 FOR CONSTRUCTION DETAILS AND LOCATION GUIDANCE. NAIL TO PIECES MARKED ② W/3-10d NAILS AT EACH JOINT PRIOR TO PLACEMENT OF PIECES MARKED ②.
- ④ INTERMEDIATE HEADER ASSEMBLY (4 REQD). SEE "DETAIL B" ON PAGE 5. INSTALL AT THE INDICATED LOCATIONS. SEE THE "PARTIAL PLAN" VIEW ON PAGE 5.
- ⑤ STRUT, 4" X 4" X 18" (MIN.) (8 REQD). ALIGN WITH A CONTAINER SKID, EXCEPT AS SHOWN IN THE "PARTIAL PLAN" VIEW ON PAGE 5. NOTE: WHEN USED IN CONJUNCTION WITH PIECES MARKED ⑥, ⑦, AND ⑧ AT THE REAR OF THE FRONT LOAD UNIT, ALIGN STRUTS AS SHOWN. TOENAIL TO THE ADJACENT PIECES MARKED ① AND ④ W/2-16d NAILS AT EACH END.
- ⑥ SIDE CLEAT, 2" X 4" X CUT TO FIT (14" APPROX) (2 REQD). SEE "PARTIAL PLAN" VIEW ON PAGE 5 FOR PROPER LOCATION. NAIL TO THE ADJACENT PIECE MARKED ④ W/4-10d NAILS.
- ⑦ CENTER CLEAT, 2" X 4" X 15-1/2" (1 REQD). SEE "PARTIAL PLAN" VIEW ON PAGE 5 FOR PROPER LOCATION. NAIL TO THE ADJACENT PIECE MARKED ① W/4-10d NAILS.
- ⑧ DIAGONAL BRACE, 4" X 4" X CUT TO FIT. DOUBLE BEVEL EACH END AS SHOWN (2 REQD). SEE "PARTIAL PLAN" VIEW ON PAGE 5. TOENAIL TO THE ADJACENT PIECES MARKED ① AND ④ W/1-16d NAIL AT EACH END.
- ⑨ SPACER/HEADER ASSEMBLY (1 REQD). SEE "DETAIL C" ON PAGE 5. POSITION BETWEEN THE SECOND AND THIRD LOAD UNITS.
- ⑩ REAR HEADER, 4" X 4" X TRAILER WIDTH (CUT TO FIT) (1 REQD).
- ⑪ REAR STRUT, 4" X 4" X CUT TO FIT (4 REQD). ALIGN WITH A CONTAINER SKID AND TOENAIL TO THE ADJACENT PIECES MARKED ④ AND ⑩ W/2-16d NAILS AT EACH END.
- ⑫ SOLID FILL, 4" WIDE X 52" LONG BY A THICKNESS AS REQUIRED TO FILL EXCESS SPACE BETWEEN PIECE MARKED ⑩ AND THE REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED. LAMINATE TO THE PIECE MARKED ⑩ AND/OR TOGETHER W/5-10d NAILS. THIS PIECE IS NOT REQUIRED FOR TRAILERS WITHOUT REAR CORNER POSTS. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑬ ANTI-SWAY ASSEMBLY (6 REQD). SEE "DETAIL E" ON PAGE 6.
- ⑭ ANTI-SWAY ASSEMBLY ANCHORING DEVICE, NO. 8 GAGE BLACK ANNEALED WIRE 60" LONG (2 REQD). SEE "DETAIL G" ON PAGE 6 FOR INSTALLATION GUIDANCE.

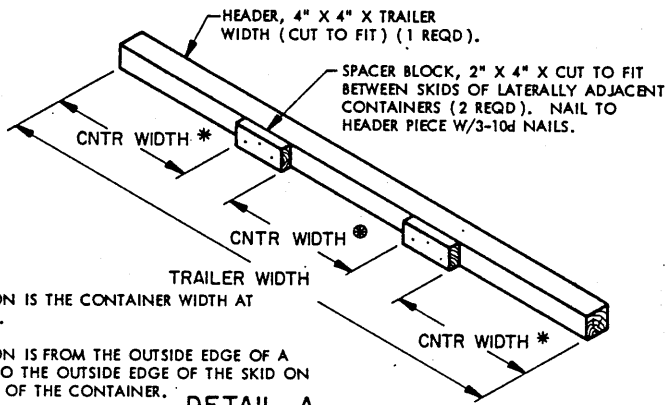
**ISOMETRIC VIEW**

A 27-UNIT LOAD IN A 38'-0" LONG TRAILER IS SHOWN. SEE "NOTE ■" ON PAGE 5.



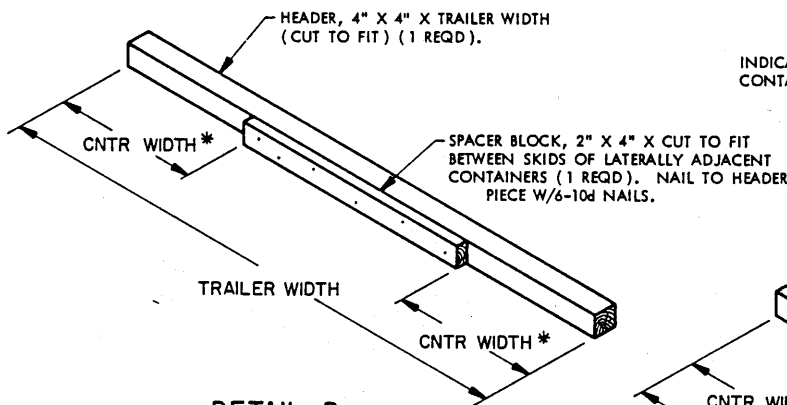
**SECTION A-A**

**27-UNIT LOAD IN A 38'-0" LONG TRAILER**



● THIS DIMENSION IS THE CONTAINER WIDTH AT THE SKID LINE.  
 \* THIS DIMENSION IS FROM THE OUTSIDE EDGE OF A CONTAINER, TO THE OUTSIDE EDGE OF THE SKID ON OPPOSITE SIDE OF THE CONTAINER.

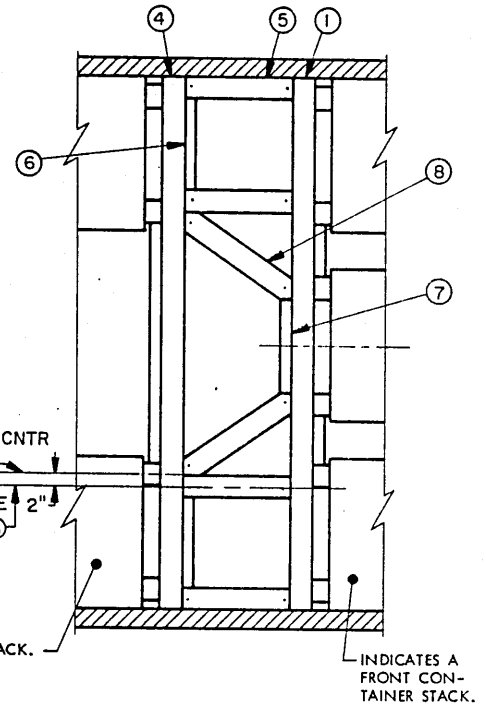
**DETAIL A**  
 HEADER ASSEMBLY



**DETAIL B**  
 INTERMEDIATE HEADER ASSEMBLY

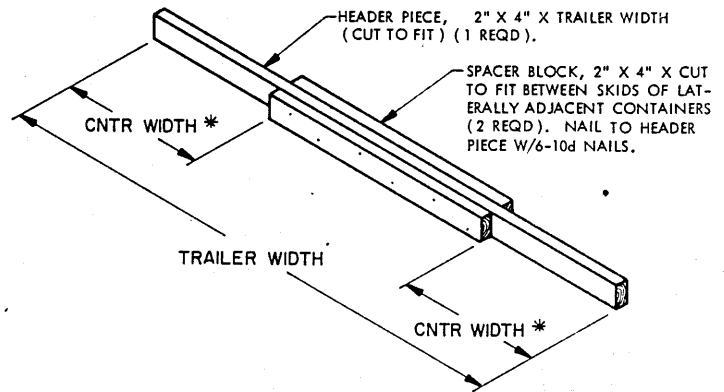
(KEY NUMBERS CONTINUED FROM PAGE 4)

- 15 ANTI-SWAY ASSEMBLY ANCHORING DEVICE, NO. 8 GAGE BLACK ANNEALED WIRE 12" LONG (12 REQD). INSTALL TO ENCIRCLE PIECES MARKED 13 AND 16. TWIST WIRE ENDS TOGETHER TO FORM A TIGHT WIRE TIE.
- 16 STEEL UNITIZING STRAP, 1-1/4" X .035" X 16'-0" (36 REQD). SEE "UNITIZATION AND HANDLING PROCEDURES" ON PAGE 3.
- 17 SEAL FOR 1-1/4" STRAPPING (72 REQD). DOUBLE CRIMP EACH SEAL.



**PARTIAL PLAN**

PIECES MARKED 3 AND 14 OMITTED FROM THIS VIEW FOR CLARITY PURPOSES.



**DETAIL C**

SPACER/HEADER ASSEMBLY

**NOTE ■:**  
 FOR THE SHIPMENT OF A QUANTITY WHICH IS LESS THAN THAT SHOWN, THE FOLLOWING IS APPLICABLE.

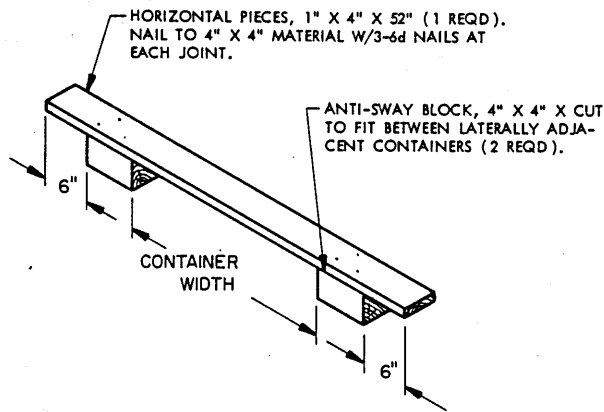
1. WHEN SHIPPING A 26-UNIT LOAD:
  - A. OMIT CENTER THIRD-LAYER CONTAINER AT FRONT OF TRAILER.
  - B. POSITION PIECES MARKED 2 TO TOP OF SECOND LAYER AND DELETE PIECES MARKED 3 AND 14.
  - C. USE FOUR ADDITIONAL PIECES MARKED 13 AND WIRE TIE THE PIECES MARKED 2 TO THE UNITIZING STRAPS ON TOP OF THE SECOND LAYER CONTAINER.
2. WHEN SHIPPING A 25 OR 23-UNIT LOAD:
  - A. OMIT THE TWO TOP CONTAINERS FROM A TWO-WIDE LOAD UNIT.
  - B. POSITION ANTI-SWAY ASSEMBLIES ON TOP OF SECOND LAYER CONTAINERS.
3. WHEN SHIPPING ANY OTHER QUANTITY LOAD, USE A COMBINATION OF 1 AND 2 ABOVE, OR OMIT A COMPLETE LOAD UNIT, OR OMIT THE CENTER STACK FROM THE FRONT LOAD UNIT WHICH THEN CAN BE BLOCKED AND BRACED LIKE THE OTHER TWO-WIDE LOAD UNITS.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER W/CANISTER	27	17,550 LBS
DUNNAGE		528 LBS
<b>TOTAL WEIGHT</b>		<b>18,078 LBS</b>

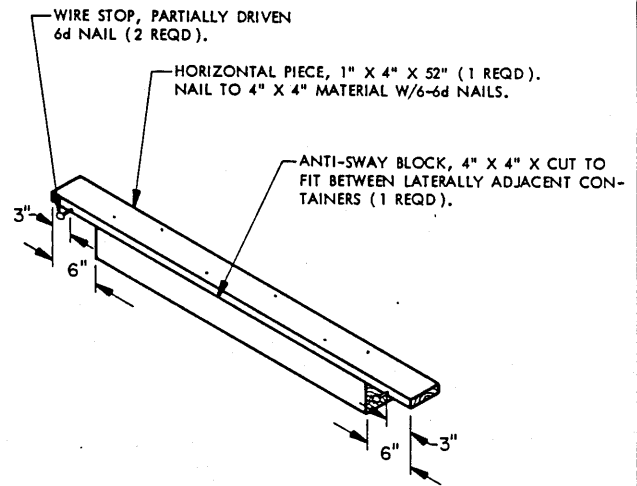
BILL OF MATERIAL		
LUMBER	LINEAR FT	BOARD FT
1" X 4"	51	17
2" X 4"	43	29
4" X 4"	97	129
NAILS	NO. REQD	POUNDS
6d (2")	60	1/2
10d (3")	82	1-1/4
16d (3-1/2")	52	1-1/4
STEEL STRAPPING, 1-1/4" X .035"	576' REQD	82 LBS
SEAL FOR 1-1/4" STRAPPING	72' REQD	3-1/2 LBS
NO. 8 GAGE WIRE	22' REQD	2 LBS

**27-UNIT LOAD IN A 38'-0" LONG TRAILER**



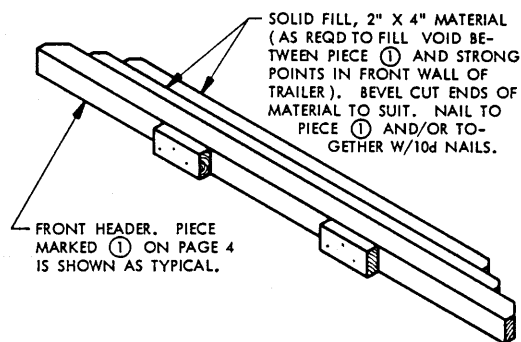
**DETAIL D**

ANTI-SWAY ASSEMBLY FOR USE IN THREE-CONTAINER-WIDE PORTION OF LOAD.



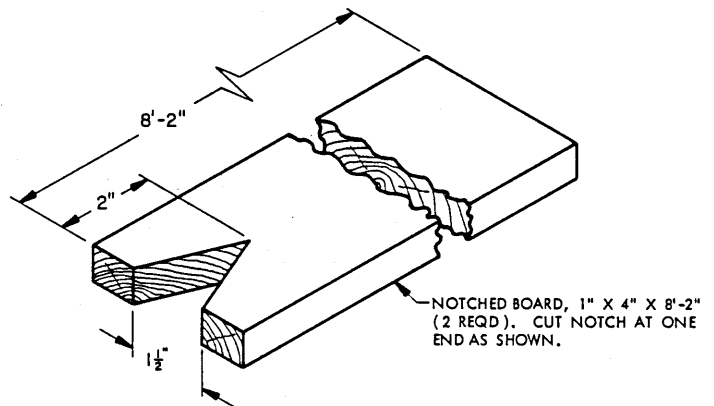
**DETAIL E**

ANTI-SWAY ASSEMBLY FOR USE IN TWO-CONTAINER-WIDE PORTION OF LOAD.



**DETAIL H**

FORWARD BLOCKING FOR USE IN A TRAILER WHICH HAS A ROUNDED FRONT WALL OR WHICH HAS ROUNDED CORNERS AT THE FORWARD WALL.



**DETAIL F**

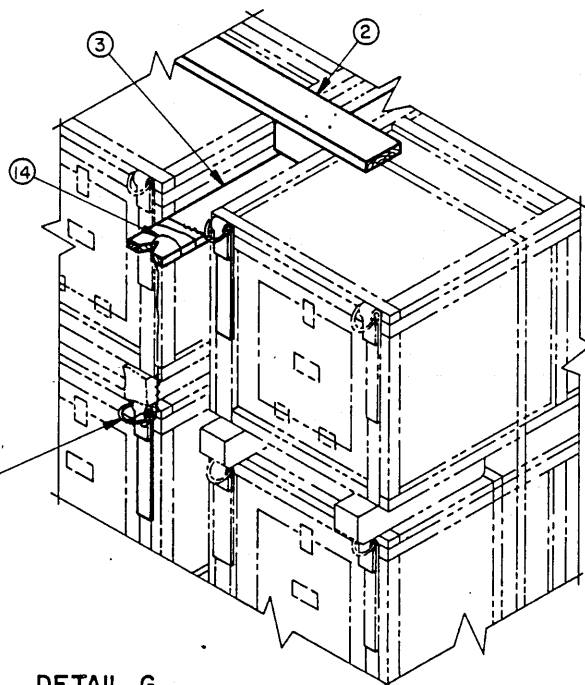
ANTI-SWAY ASSEMBLY LOCKING DEVICE. SEE "DETAIL G" BELOW FOR INSTALLATION GUIDANCE.

**NOTE 2:**

THE FOLLOWING PROCEDURES ARE APPLICABLE FOR THE SECUREMENTS OF THE ASSEMBLED PIECES MARKED ② AND ③.

1. TWIST-TIE WIRE MARKED ⑭ TO TOP CONTAINER TIE DOWN RING, AND BACK ON ITS SELF.
2. WRAP WIRE AROUND 1" X 4" ANTI-SWAY ASSEMBLY LOCKING DEVICE WITH TWO WRAPS.
3. BRING WIRE FROM TOP SIDE OF LOCKING DEVICE THRU "V" NOTCH.
4. RUN WIRE THROUGH A SECOND LAYER CONTAINER TIE DOWN RING AS SHOWN.
5. TWIST-TIE LOOSE END OF WIRE BACK ON ITS SELF.  
**CAUTION:** DO NOT OVER TENSION WIRE; IT SHOULD ONLY BE "SNUG" ENOUGH TO KEEP THE ANTI-SWAY ASSEMBLY FROM BECOMING DISPLACED LONGITUDINALLY AN EXCESSIVE AMOUNT DURING A SHIPMENT.

CONTAINER TIE DOWN RING.

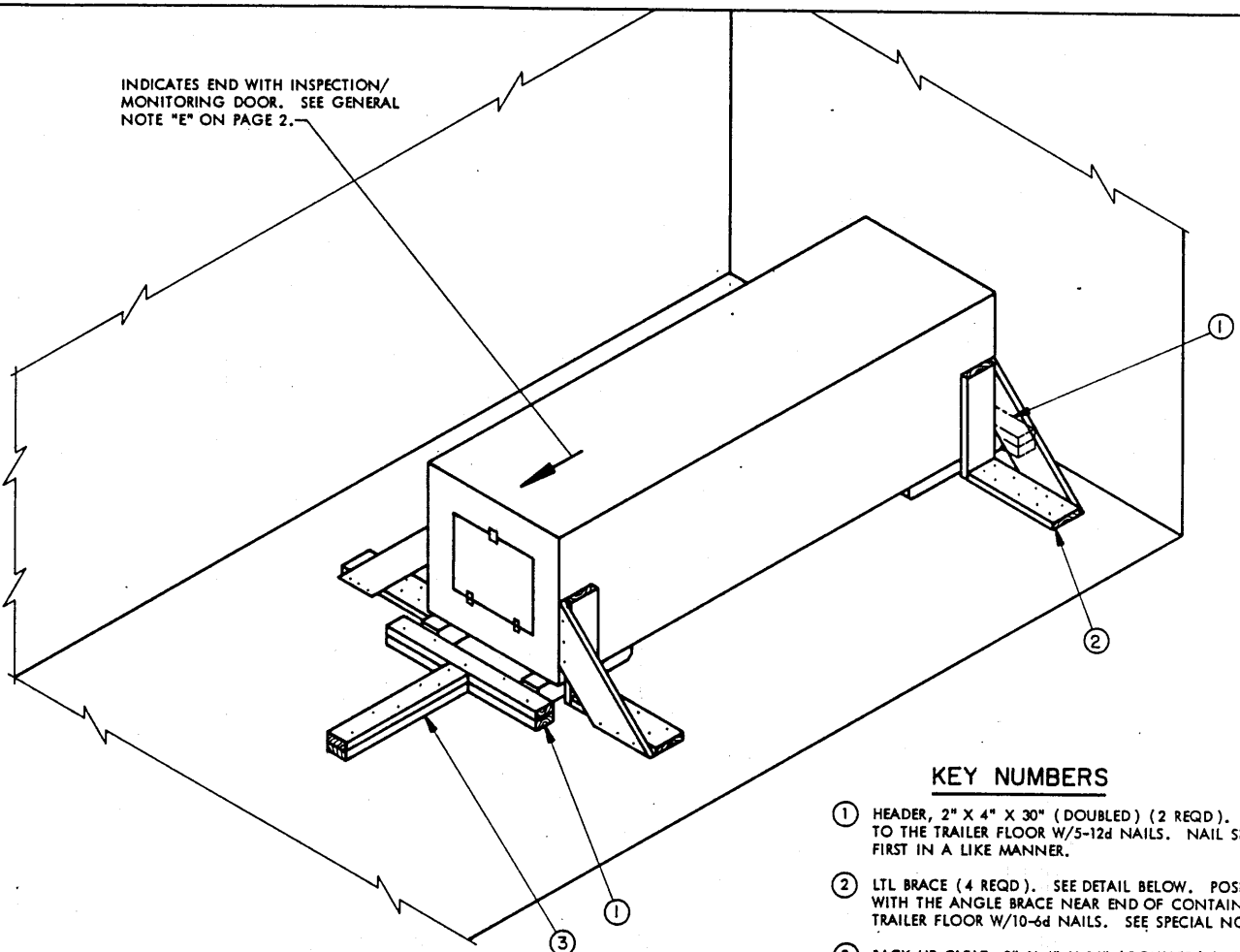


**DETAIL G**

SEE "NOTE 2" ABOVE.

**DETAILS**

INDICATES END WITH INSPECTION/  
MONITORING DOOR. SEE GENERAL  
NOTE "E" ON PAGE 2.



**KEY NUMBERS**

- ① HEADER, 2" X 4" X 30" (DOUBLED) (2 REQD). NAIL FIRST PIECE TO THE TRAILER FLOOR W/5-12d NAILS. NAIL SECOND PIECE TO FIRST IN A LIKE MANNER.
- ② LTL BRACE (4 REQD). SEE DETAIL BELOW. POSITION AS SHOWN WITH THE ANGLE BRACE NEAR END OF CONTAINER, AND NAIL TO TRAILER FLOOR W/10-6d NAILS. SEE SPECIAL NOTE 1 BELOW.
- ③ BACK-UP CLEAT, 2" X 4" X 24" (DOUBLED) (1 REQD). NAIL FIRST PIECE TO THE TRAILER FLOOR W/6-12d NAILS. NAIL SECOND PIECE TO FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 2 BELOW.

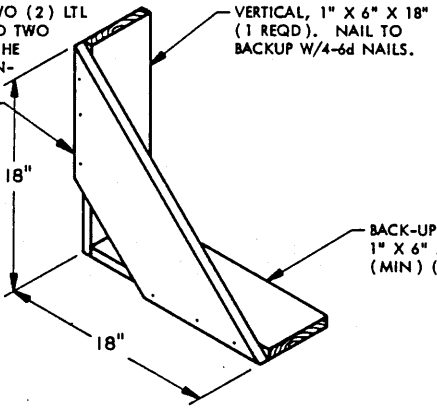
**TYPICAL LTL**

ONE-UNIT LOAD  
THE DEPICTED PROCEDURES ARE ONLY  
APPLICABLE TO TRAILERS THAT HAVE  
NAILED FLOORS.

**SPECIAL NOTES:**

- 1. IF DESIRED, THE LADING ITEM MAY BE LOADED AGAINST ONE OF THE SIDE WALLS OF THE TRAILER AND THUS ELIMINATE THE NEED FOR TWO (2) OF THE SPECIFIED LTL BRACES MARKED AS PIECE ②.
- 2. ONE BACK-UP CLEAT, SHOWN AS PIECE MARKED ③, IS ADEQUATE FOR RETAINING A ONE-CONTAINER LOAD ONLY. A PIECE MARKED ③ MAY ALSO BE INSTALLED AT THE FORWARD END OF THE LADING IF DESIRED.

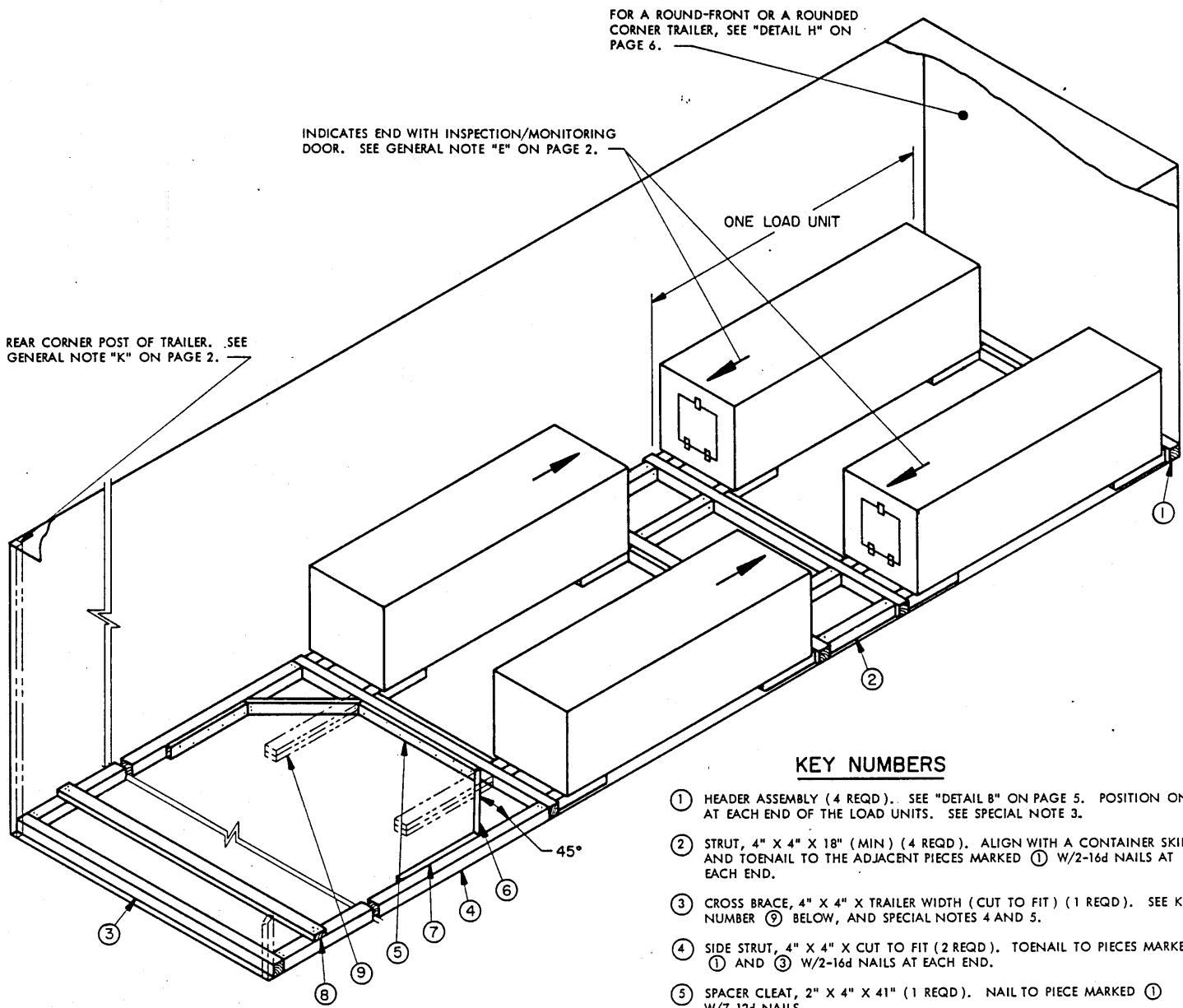
ANGLE BRACE, 1" X 6" X CUT TO FIT  
(1 REQD). NAIL W/3-6d NAILS AT  
EACH END. NOTE: TWO (2) LTL  
BRACES AS SHOWN AND TWO  
(2) LTL BRACES WITH THE  
ANGLE BRACE POSITIONED  
ON THE OTHER  
SIDE ARE REQUIRED.



**LTL BRACE**

TWO BRACES APPLIED FOR LATERAL BRACING  
AT ONE SIDE OF A LOAD AS SHOWN ABOVE  
WILL ALSO SUPPORT A TWO-CONTAINER  
WIDE LTL LOAD.

**TYPICAL LTL (1-UNIT LOAD)**



**TYPICAL LTL**  
A FOUR-UNIT LOAD IS SHOWN.

**KEY NUMBERS**

- ① HEADER ASSEMBLY (4 REQD). SEE "DETAIL B" ON PAGE 5. POSITION ONE AT EACH END OF THE LOAD UNITS. SEE SPECIAL NOTE 3.
- ② STRUT, 4" X 4" X 18" (MIN) (4 REQD). ALIGN WITH A CONTAINER SKID AND TOENAIL TO THE ADJACENT PIECES MARKED ① W/2-16d NAILS AT EACH END.
- ③ CROSS BRACE, 4" X 4" X TRAILER WIDTH (CUT TO FIT) (1 REQD). SEE KEY NUMBER ⑨ BELOW, AND SPECIAL NOTES 4 AND 5.
- ④ SIDE STRUT, 4" X 4" X CUT TO FIT (2 REQD). TOENAIL TO PIECES MARKED ① AND ③ W/2-16d NAILS AT EACH END.
- ⑤ SPACER CLEAT, 2" X 4" X 41" (1 REQD). NAIL TO PIECE MARKED ① W/7-12d NAILS.
- ⑥ DIAGONAL BRACE, 2" X 4" X CUT TO FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AS SHOWN, AND TOENAIL TO PIECES MARKED ① AND ④ W/2-16d NAILS AT EACH END.
- ⑦ SIDE CLEAT, 2" X 4" X 24" (2 REQD). NAIL TO A PIECE MARKED ④ W/6-12d NAILS.
- ⑧ STRUT BRACING, 2" X 4" X TRAILER WIDTH (CUT TO FIT) (MIN OF 1 REQD). POSITION EVERY 7'-0". NAIL TO THE PIECES MARKED ④ W/3-12d NAILS AT EACH END.
- ⑨ BACK-UP CLEAT, 2" X 4" X 30" (DOUBLED) (2 REQD). NAIL THE FIRST PIECE TO TRAILER FLOOR W/7-12d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 5.

**SPECIAL NOTES:**

- 1. ALTHOUGH A ONE-LAYER LOAD IS SHOWN, STACKED CONTAINERS CAN ALSO BE BLOCKED FOR SHIPMENT BY THE SPECIFIED PROCEDURES, PROVIDING THEY ARE UNITIZED IN A TWO OR THREE HIGH CONFIGURATION AS SHOWN ON PAGE 3, AND PROVIDING ANTI-SWAY BRACING IS USED AS SPECIFIED FOR THE LOAD ON PAGE 4, TO BLOCK THE STACKS.
- 2. WHEN SHIPPING A 7-UNIT ONE-LAYER LOAD IN A SHORT TRAILER, USE PIECE MARKED ① ON PAGE 4 IN LIEU OF PIECE MARKED ① AS SHOWN; ALSO, USE PIECES MARKED ④, ⑦, AND ⑧ AS SPECIFIED ON PAGE 4 AND AS SHOWN IN THE "PARTIAL PLAN" VIEW ON PAGE 5.
- 3. IF THE TRAILER BEING LOADED HAS A ROUNDED FRONT WALL OR ROUNDED CORNERS AT THE FORWARD END, REFER TO "DETAIL H" ON PAGE 6 FOR APPLICABLE GUIDANCE.
- 4. THE "K-BRACE" BLOCKING, SHOWN AS PIECES MARKED ③ THROUGH ⑧, IS ADEQUATE FOR RETAINING A MAXIMUM SIZE LTL LOAD.
- 5. PIECES MARKED ⑨ ARE FOR USE IN A TRAILER WHICH HAS A NAILABLE FLOOR AND SHOULD BE USED IF POSSIBLE, IN LIEU OF PIECES MARKED ③ THROUGH ⑧ WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS. TWO (2) BACK-UP CLEATS, SHOWN AS PIECES MARKED ⑨, ARE ADEQUATE FOR RETAINING A MAXIMUM SIZE LTL LOAD OF 10,000 POUNDS.

**TYPICAL LTL (4-UNIT LOAD)**