

LOADING AND BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF CBU-58 AND CBU-71 DISPENSERS PACKED IN CNU-180/E AND CNU-180B/E CONTAINERS

INDEX

ITEM	PAGE (S)
GENERAL NOTES AND MATERIAL SPECIFICATIONS - - - - -	2
PALLET UNIT DETAIL - - - - -	3
TYPICAL FULL LOAD PROCEDURES - - - - -	4-11
TYPICAL LTL PROCEDURES - - - - -	12-15
DETAILS - - - - -	16-20
PROCEDURES FOR CONVENTIONAL VAN TRAILERS EQUIPPED WITH ROLL UP TYPE DOORS - - - - -	21

THIS DOCUMENT INCLUDES OUTLOADING 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: THE PROCEDURES SHOWN HEREIN, FOR BOTH TYPES OF TRAILERS, ARE ONLY APPLICABLE FOR HIGHWAY MOVEMENTS; NOT FOR TRAILER ON-FLAT-CAR 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 CBU-58 AND CBU-71 DISPENSERS PACKED IN CNU-180/E AND CNU-180B/E CONTAINERS. SEE THE PICTORIAL VIEWS ON PAGE 3 FOR CONTAINER SIZES AND WEIGHTS.
- C. THE OUTLOADING PROCEDURES DEPICTED WITHIN THIS DOCUMENT ARE APPLICABLE FOR SHIPMENTS IN CONVENTIONAL TYPE VAN TRAILERS, AND FOR SHIPMENTS IN VAN TRAILERS EQUIPPED WITH VARIOUS TYPES OF SELF-CONTAINED MECHANICAL BRACING DEVICES (CROSS MEMBERS AND WALL MEMBERS) AND APPLY TO TRAILERS HAVING WOOD, OR WOOD AND METAL, OR ALL METAL FLOORS. VAN TRAILERS WHICH ARE 40'-0" LONG BY 7'-6" TO 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. THE OUTLOADING PROCEDURES DEPICTED WITHIN THIS DOCUMENT FOR TRAILERS EQUIPPED WITH VARIOUS TYPES OF SELF-CONTAINED MECHANICAL BRACING DEVICES ARE LIMITED TO HIGHWAY MOVEMENTS ONLY. THE HEIGHT REQUIREMENTS SPECIFIED WITHIN THIS DRAWING FOR THE INSTALLATION OF CROSS MEMBERS ARE IDENTICAL WITH THOSE RECOMMENDED BY THE BUREAU OF EXPLOSIVES PAMPHLET 6C, AND APPENDICES THERETO. CAUTION: TRAILERS EQUIPPED WITH WALL MEMBERS WHICH DO NOT MEET THE LOCATION REQUIREMENTS MUST NOT BE USED.
1. PALLET UNITS SHOULD BE LOADED TIGHTLY AGAINST EACH OTHER AND/OR AGAINST INSTALLED CROSS MEMBERS. VOIDS LENGTHWISE WITHIN A LOAD SHOULD BE MINIMUM. CROSS MEMBERS MUST BE PLACED AGAINST THE LADING AS TIGHTLY AS THE WALL MEMBER LOCKING HOLE SPACING PERMITS. EACH CROSS MEMBER WILL BE INSTALLED WITH EACH END ATTACHED AS NEARLY AS POSSIBLE IN A "MATED" POSITION (AT EQUAL HEIGHTS, AND AT EQUAL DISTANCES FROM THE END OF THE TRAILER).
 2. CROSS MEMBERS IN EMPTY TRAILERS AND THOSE UNUSED IN LOADED TRAILERS MUST BE "SECURED" FOR SHIPMENT. COMPONENTS ASSIGNED TO EACH TRAILER MUST REMAIN THEREWITH EVEN THOUGH UNUSED DURING SOME SHIPMENTS.
 3. ONE CROSS MEMBER WILL BE REQUIRED FOR EACH 10,000 POUNDS OF LADING AND SHOULD NOT BE RELIED UPON TO RETAIN A GREATER WEIGHT. CROSS MEMBERS WILL NOT BE DOUBLED. THAT IS, TWO CROSS MEMBERS AT THE SAME HEIGHT LOCATION WILL NOT BE PLACED SIDE BY SIDE.
- E. 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.

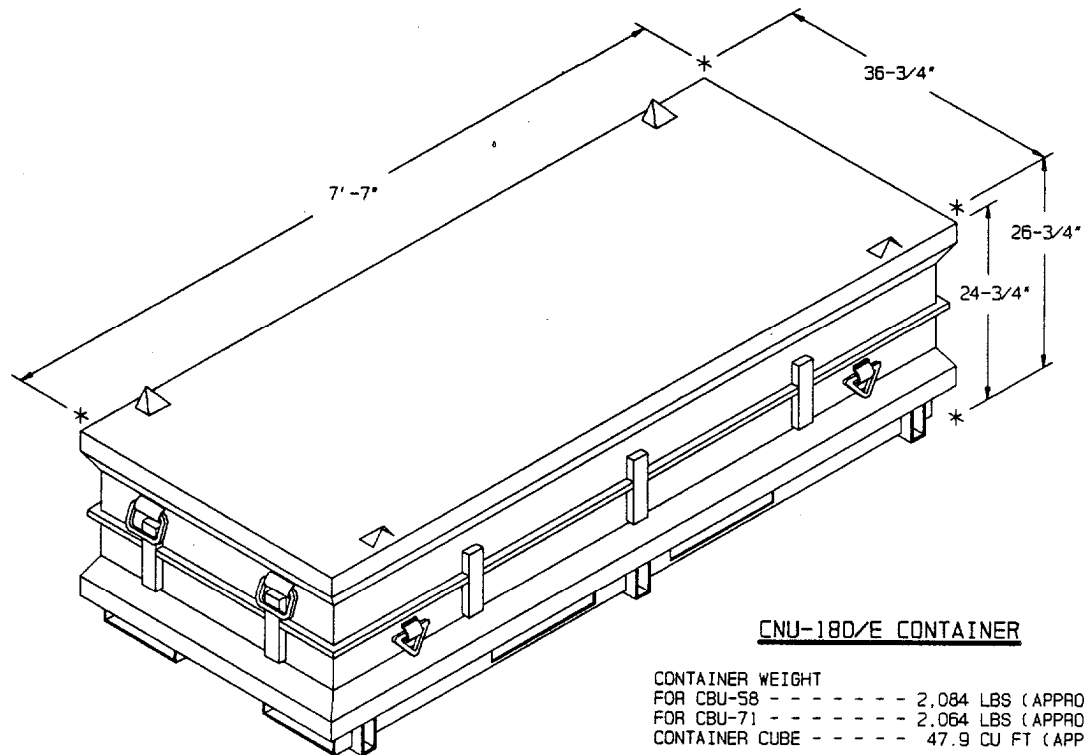
(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

LUMBER	SEE TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.
NAILS	FED SPEC FF-N-105; COMMON.
PLYWOOD	FED SPEC NN-P-530; GROUP B, 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.
STRAPPING, STEEL	ASTM D 3953; FLAT STRAPPING, TYPE 1 OR 2, HEAVY DUTY, COATED FINISH (ORGANIC), ZINC-COATED (GRADE 2), OR UNCOATED.
SEAL, STRAP	ASTM D 3953; CLASS H, FINISH A, B (GRADE 2), OR C, TYPE D, STYLE I, II, OR IV.
WIRE	FED SPEC QQ-W-461; ANNEALED, BLACK.

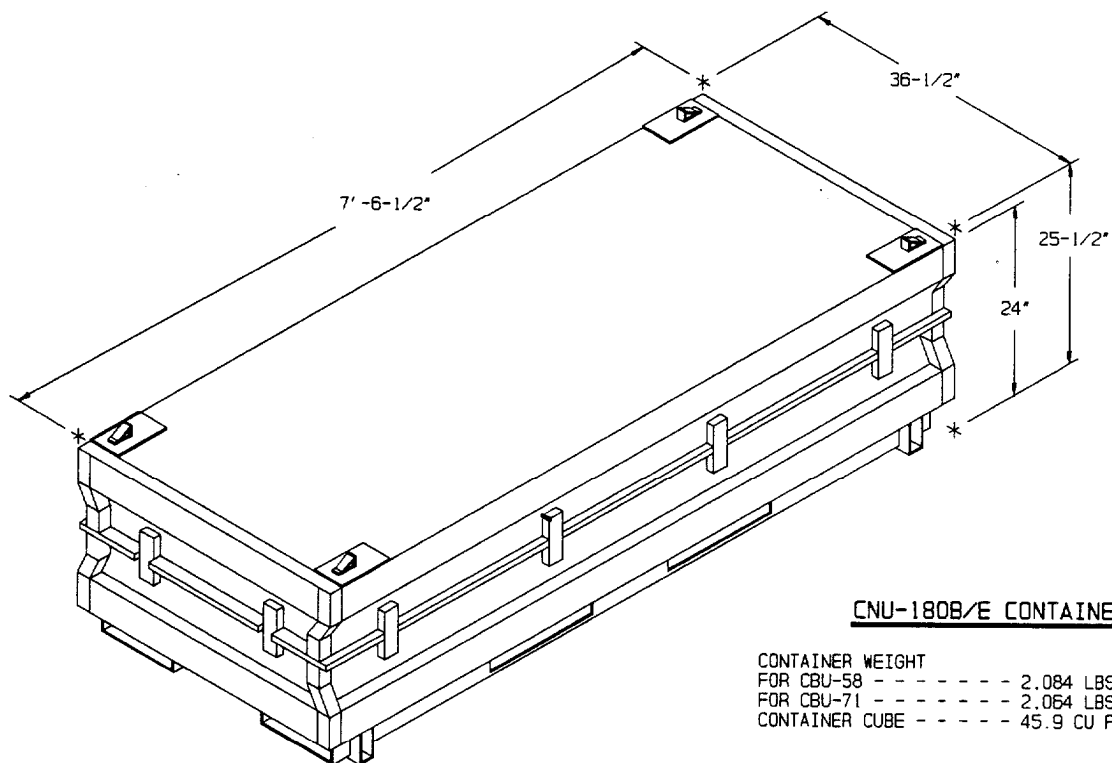
(GENERAL NOTES CONTINUED)

- F. 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. 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.
- G. 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.
- H. 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.
- J. 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.
- K. 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. OMIT CROSS MEMBERS IN THE FORWARD END OF MECHANICAL VAN TRAILERS HAVING A SQUARE FRONT.
- L. 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 20 FOR GUIDANCE.
- M. 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.
- N. 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, ONTO, OR RIGHT BESIDE A NAIL IN A LOWER PIECE.
- O. 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.
- P. PORTIONS OF THE TRAILERS, SUCH AS SIDEWALLS, END WALLS, 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.
- R. 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.



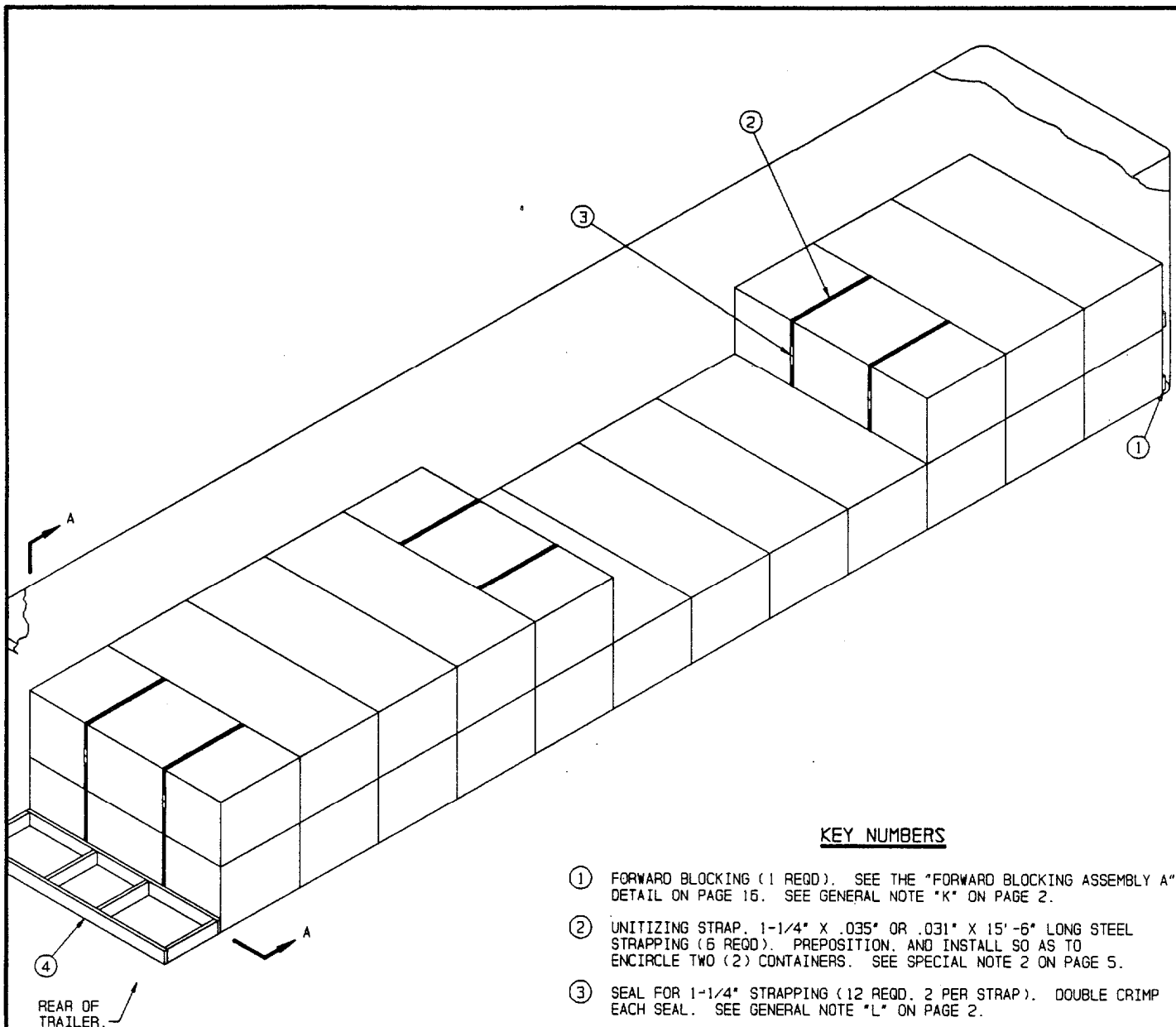
CNU-180/E CONTAINER

CONTAINER WEIGHT
 FOR CBU-58 - - - - - 2,084 LBS (APPROX)
 FOR CBU-71 - - - - - 2,064 LBS (APPROX)
 CONTAINER CUBE - - - - - 47.9 CU FT (APPROX)



CNU-180B/E CONTAINER

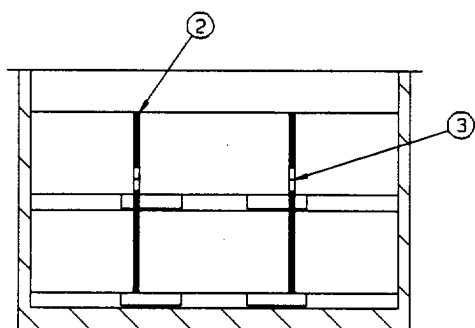
CONTAINER WEIGHT
 FOR CBU-58 - - - - - 2,084 LBS (APPROX)
 FOR CBU-71 - - - - - 2,064 LBS (APPROX)
 CONTAINER CUBE - - - - - 45.9 CU FT (APPROX)



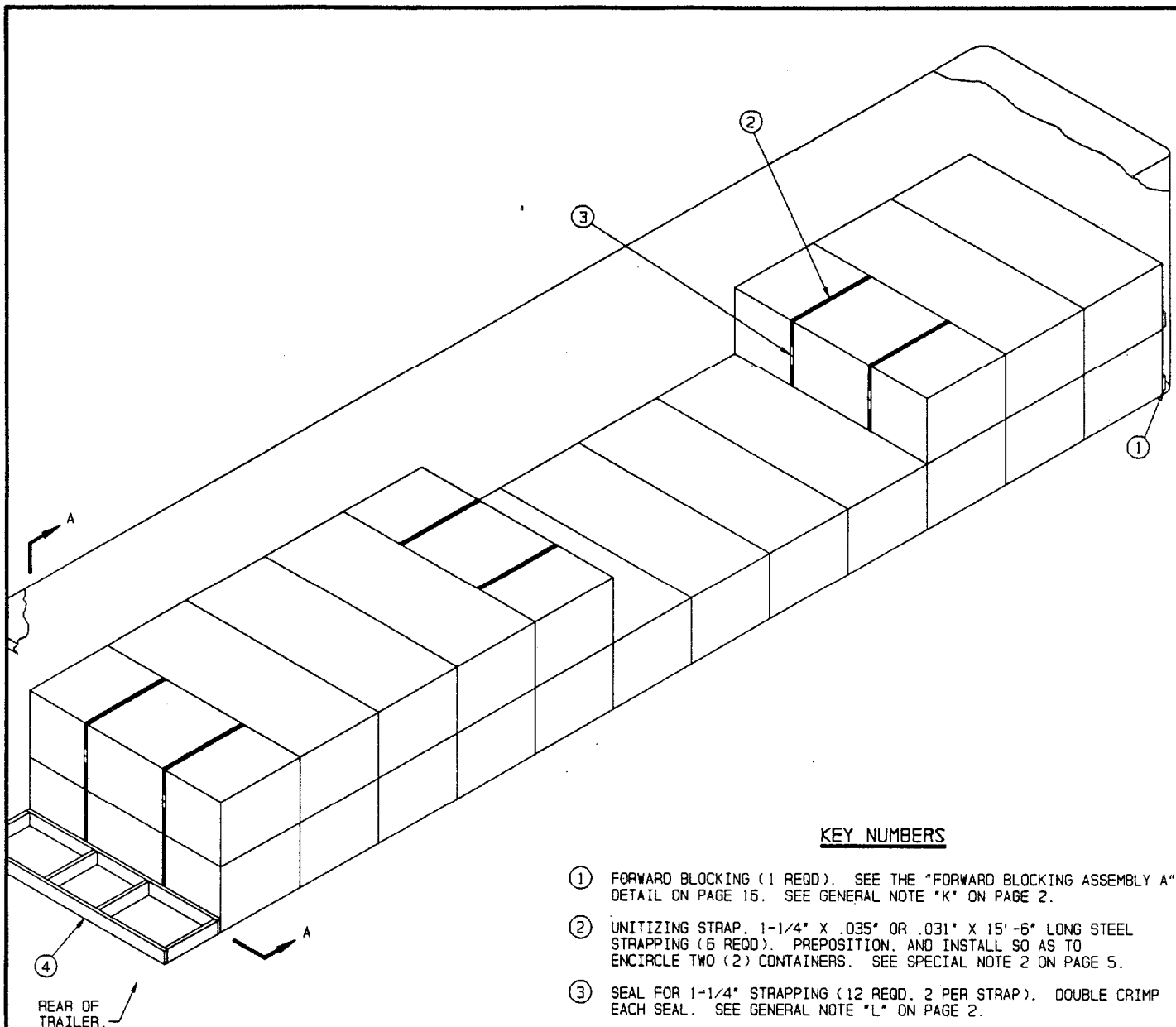
ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY A" DETAIL ON PAGE 16. SEE GENERAL NOTE "K" ON PAGE 2.
- ② UNITIZING STRAP, 1-1/4" X .035" OR .031" X 15'-6" LONG STEEL STRAPPING (6 REQD). PREPOSITION, AND INSTALL SO AS TO ENCIRCLE TWO (2) CONTAINERS. SEE SPECIAL NOTE 2 ON PAGE 5.
- ③ SEAL FOR 1-1/4" STRAPPING (12 REQD. 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "L" ON PAGE 2.
- ④ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 17. SEE SPECIAL NOTE 3 ON PAGE 5.



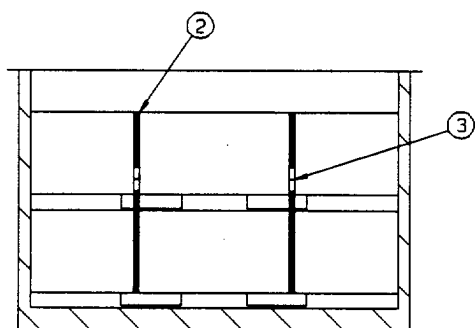
SECTION A-A



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY A" DETAIL ON PAGE 16. SEE GENERAL NOTE "K" ON PAGE 2.
- ② UNITIZING STRAP, 1-1/4" X .035" OR .031" X 15'-6" LONG STEEL STRAPPING (6 REQD). PREPOSITION, AND INSTALL SO AS TO ENCIRCLE TWO (2) CONTAINERS. SEE SPECIAL NOTE 2 ON PAGE 5.
- ③ SEAL FOR 1-1/4" STRAPPING (12 REQD. 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "L" ON PAGE 2.
- ④ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 17. SEE SPECIAL NOTE 3 ON PAGE 5.



SECTION A-A

SPECIAL NOTES:

1. A 20-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8-1/2" WIDE (INSIDE DIMENSION) CONVENTIONAL TYPE VAN TRAILER. TRAILERS OF OTHER DIMENSIONS CAN BE USED. IF THE TRAILER TO BE LOADED IS MORE THAN 7'-10" WIDE, REFER TO THE PROCEDURES DEPICTED ON PAGES 8 AND 9.
2. A CONTAINER AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A CONTAINER IN THE FIRST LAYER, UNLESS THEY ARE POSITIONED AGAINST THE FRONT WALL OF A SQUARE-FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE TRAILER. THE UNITIZING STRAPS, PIECE MARKED ②, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACKED CONTAINERS.
3. IF THE VOID 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 VOID AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9", USE "REAR BLOCKING ASSEMBLY C" AS DETAILED ON PAGE 18. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE "REAR BLOCKING ASSEMBLY A" AS SHOWN.
4. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 12 THRU 14.
5. 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 21 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD OF REAR BLOCKING MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

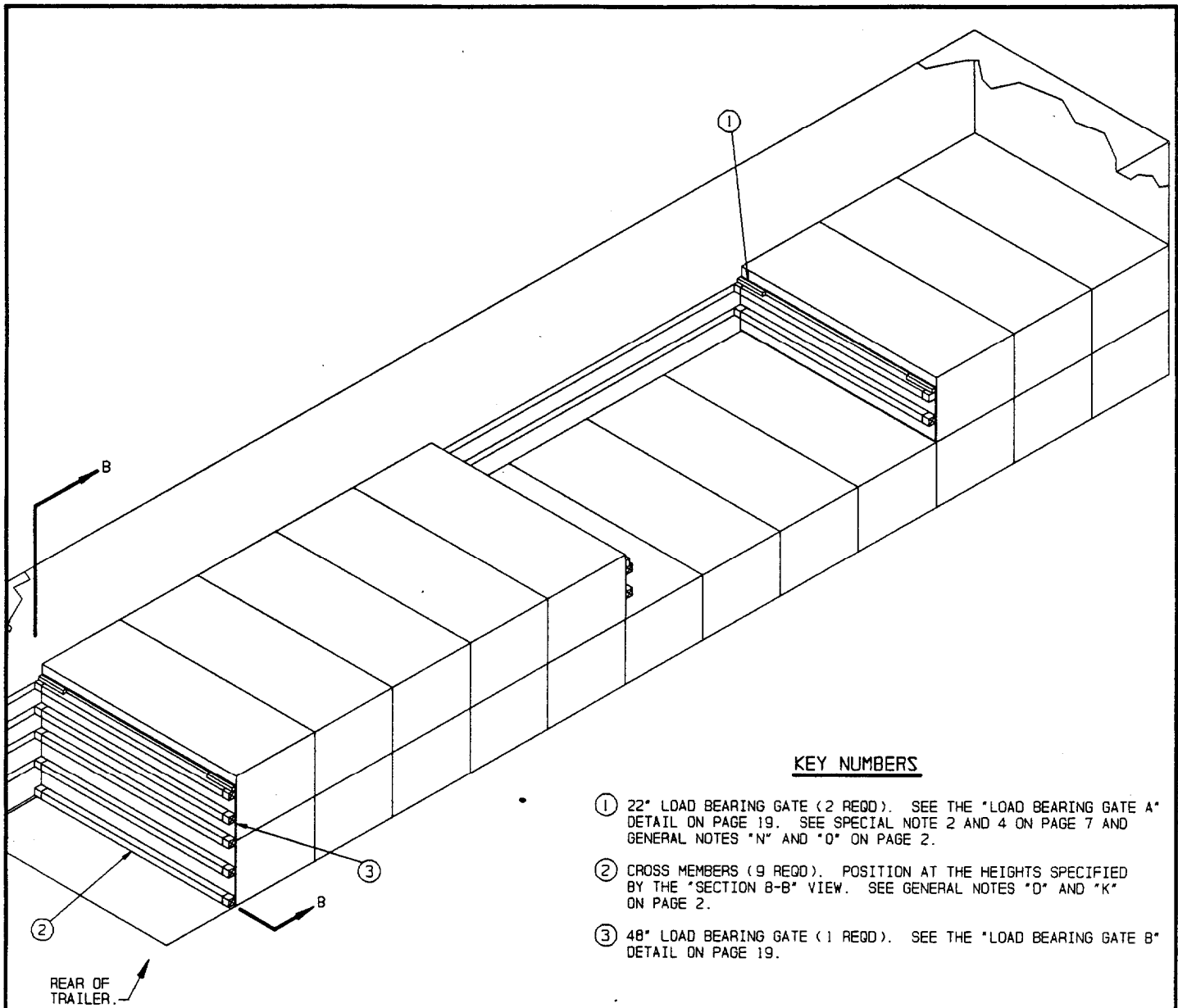
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER (W/CBU-58)	20	41,680 LBS
DUNNAGE		135 LBS
TOTAL WEIGHT		41,815 LBS (APPROX)

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER (W/CBU-71)	20	41,280 LBS
DUNNAGE		135 LBS
TOTAL WEIGHT		41,415 LBS (APPROX)

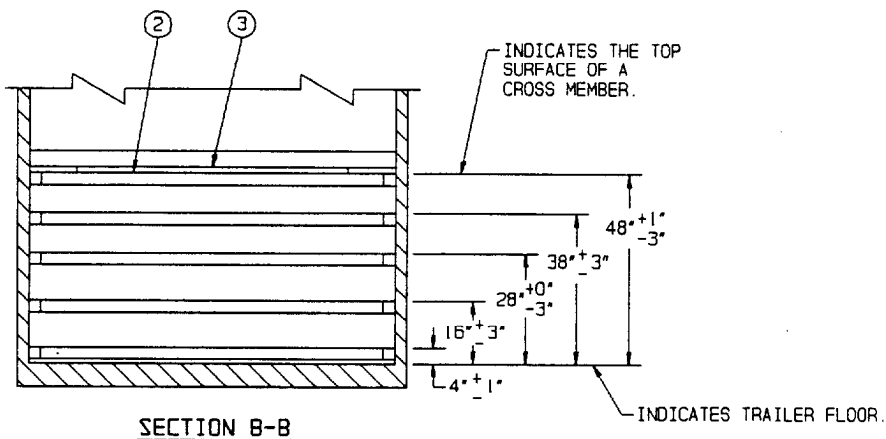
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	13	9
2" X 6"	51	51
NAILS	NO. REQD	POUNDS
10d (3")	62	1
STEEL STRAPPING, 1-1/4" - - - 93' REQD - - - 14 LBS		
SEAL FOR 1-1/4" STRAPPING - - 12 REQD - - - NIL		



ISOMETRIC VIEW

KEY NUMBERS

- ① 22" LOAD BEARING GATE (2 REQD). SEE THE "LOAD BEARING GATE A" DETAIL ON PAGE 19. SEE SPECIAL NOTE 2 AND 4 ON PAGE 7 AND GENERAL NOTES "N" AND "O" ON PAGE 2.
- ② CROSS MEMBERS (9 REQD). POSITION AT THE HEIGHTS SPECIFIED BY THE "SECTION B-B" VIEW. SEE GENERAL NOTES "O" AND "K" ON PAGE 2.
- ③ 48" LOAD BEARING GATE (1 REQD). SEE THE "LOAD BEARING GATE B" DETAIL ON PAGE 19.



SECTION B-B

2D-UNIT LOAD

PAGE 6 . IN A 40'-0" LONG BY 7'-8-1/2" WIDE TRAILER EQUIPED WITH MECHANICAL BRACING DEVICES

SPECIAL NOTES:

1. A 20-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8-1/2" WIDE (INSIDE DIMENSION) TRAILER EQUIPPED WITH MECHANICAL BRACING DEVICES. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. IF PLYWOOD IS NOT AVAILABLE FOR THE CONSTRUCTION OF LOAD BEARING GATES, OR IF DESIRED, PIECES MARKED ① AND ③ MAY BE CONSTRUCTED FROM 1" LUMBER. SEE THE "ALTERNATIVE LOAD BEARING GATE A" AND THE "ALTERNATIVE LOAD BEARING GATE B" DETAILS ON PAGE 19.
3. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGE 15.
4. IF DESIRED, PIECES MARKED ② AND ③ ON PAGE 4, MAY BE USED IN LIEU OF PIECES MARKED ① AND ② WITHIN THE CENTER PORTION OF THE LOAD.

LOAD AS SHOWN

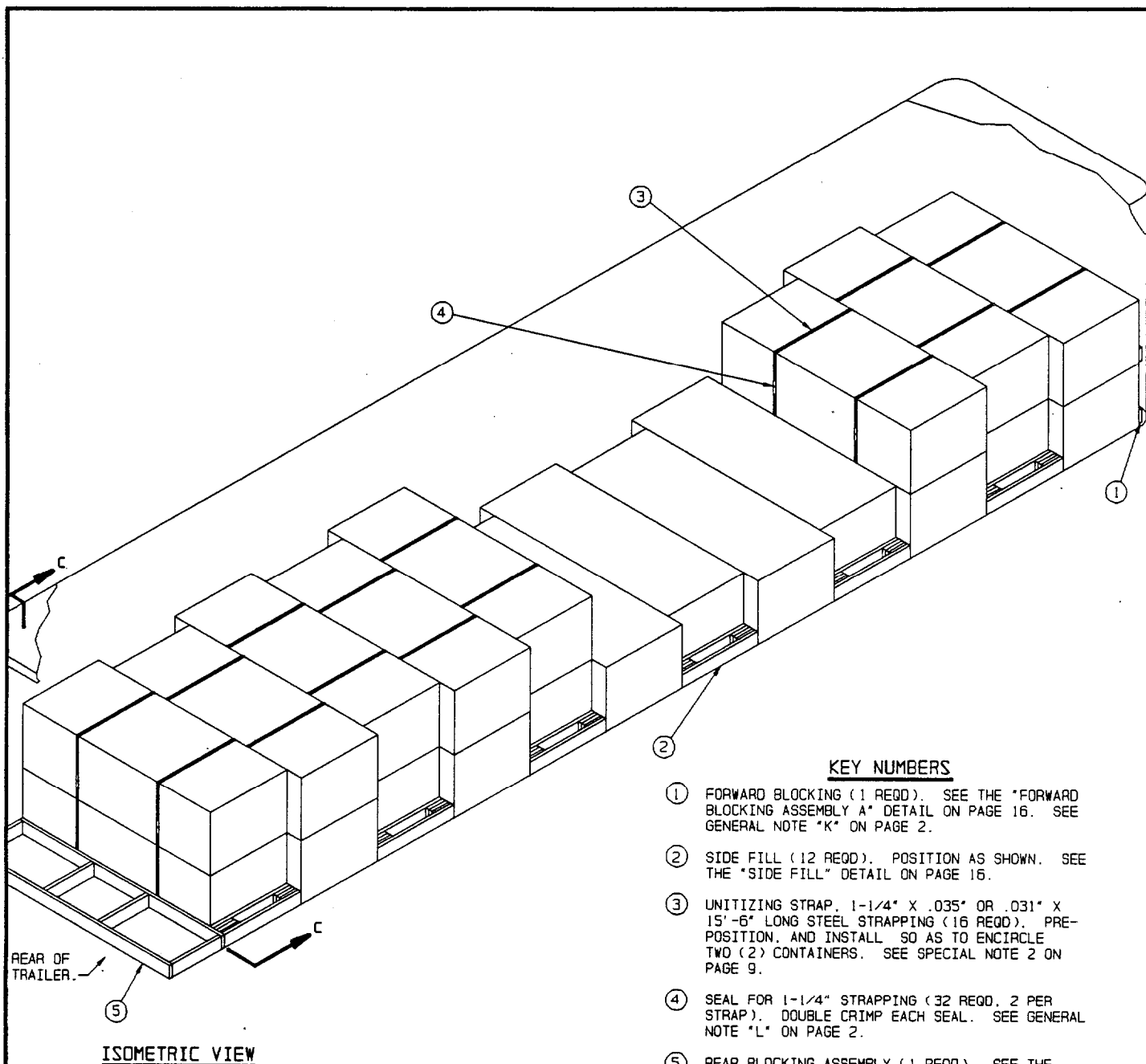
<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
CONTAINER (W/CBU-58)	20	41,680 LBS
DUNNAGE		85 LBS
TOTAL WEIGHT		41,765 LBS (APPROX)

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	5	2
NAILS	NO. REQD	POUNDS
6d (2")	18	NIL
PLYWOOD, 1/2"	59.00 SQ FT REQD	81.00 LBS
CROSS MEMBER	9 REQD	

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
CONTAINER (W/CBU-71)	20	41,280 LBS
DUNNAGE		85 LBS
TOTAL WEIGHT		41,365 LBS (APPROX)

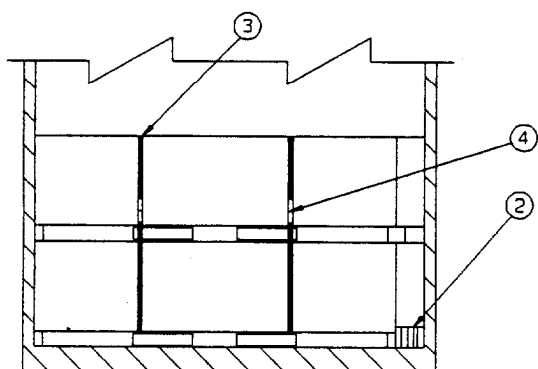
20-UNIT LOAD
IN A 40'-0" LONG BY 7'-8-1/2" WIDE TRAILER EQUIPPED WITH MECHANICAL BRACING DEVICES



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY A" DETAIL ON PAGE 16. SEE GENERAL NOTE "K" ON PAGE 2.
- ② SIDE FILL (12 REQD). POSITION AS SHOWN. SEE THE "SIDE FILL" DETAIL ON PAGE 16.
- ③ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 15'-6" LONG STEEL STRAPPING (16 REQD). PRE-POSITION, AND INSTALL SO AS TO ENCIRCLE TWO (2) CONTAINERS. SEE SPECIAL NOTE 2 ON PAGE 9.
- ④ SEAL FOR 1-1/4" STRAPPING (32 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "L" ON PAGE 2.
- ⑤ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 17. SEE SPECIAL NOTE 3 ON PAGE 9.



SECTION C-C

SPECIAL NOTES:

1. A 20-UNIT STAGGERED PATTERN LOAD IS SHOWN IN A 40'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED FRONT CORNERS.
2. ALL CONTAINERS IN THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A CONTAINER IN THE FIRST LAYER. THE UNITIZING STRAPS, PIECE MARKED ③, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACKED CONTAINERS.
3. IF THE VOID AT THE REAR OF THE LOAD BETWEEN THE CONTAINERS AND THE REAR DOORS MEASURES 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED. IF THE VOID AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9", USE "REAR BLOCKING ASSEMBLY C" AS DETAILED ON PAGE 18. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY A", PIECE MARKED ⑤ ON PAGE 8. SEE SPECIAL NOTE 7.
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 APPENDICIES THERETO, THEY MAY BE USED AT THE REAR OF THE LOAD AS SHOWN IN THE "SECTION B-B VIEW" ON PAGE 6.
5. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, A LOAD BEARING GATE "B" SHOWN AS PIECE MARKED ③ ON PAGE 6 MUST BE USED BETWEEN THE CROSS MEMBERS AND THE REAR CONTAINERS. IF THE TRAILER HAS ROUNDED FRONT CORNERS, INSTALL CROSS MEMBERS AT THE FRONT OF THE LOAD IN LIEU OF USING THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①. A LOAD BEARING GATE "B" MUST BE USED BETWEEN THE CROSS MEMBERS AND THE FRONT CONTAINERS.
6. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 12 THRU 15.
7. 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 21 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD OF REAR BLOCKING MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
CONTAINER		
(W/CBU-58) - - - - -	20 - - - - -	41,680 LBS
DUNNAGE - - - - -		375 LBS

TOTAL WEIGHT - - - - - 42,055 LBS (APPROX)

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
CONTAINER		
(W/CBU-71) - - - - -	20 - - - - -	41,280 LBS
DUNNAGE - - - - -		375 LBS

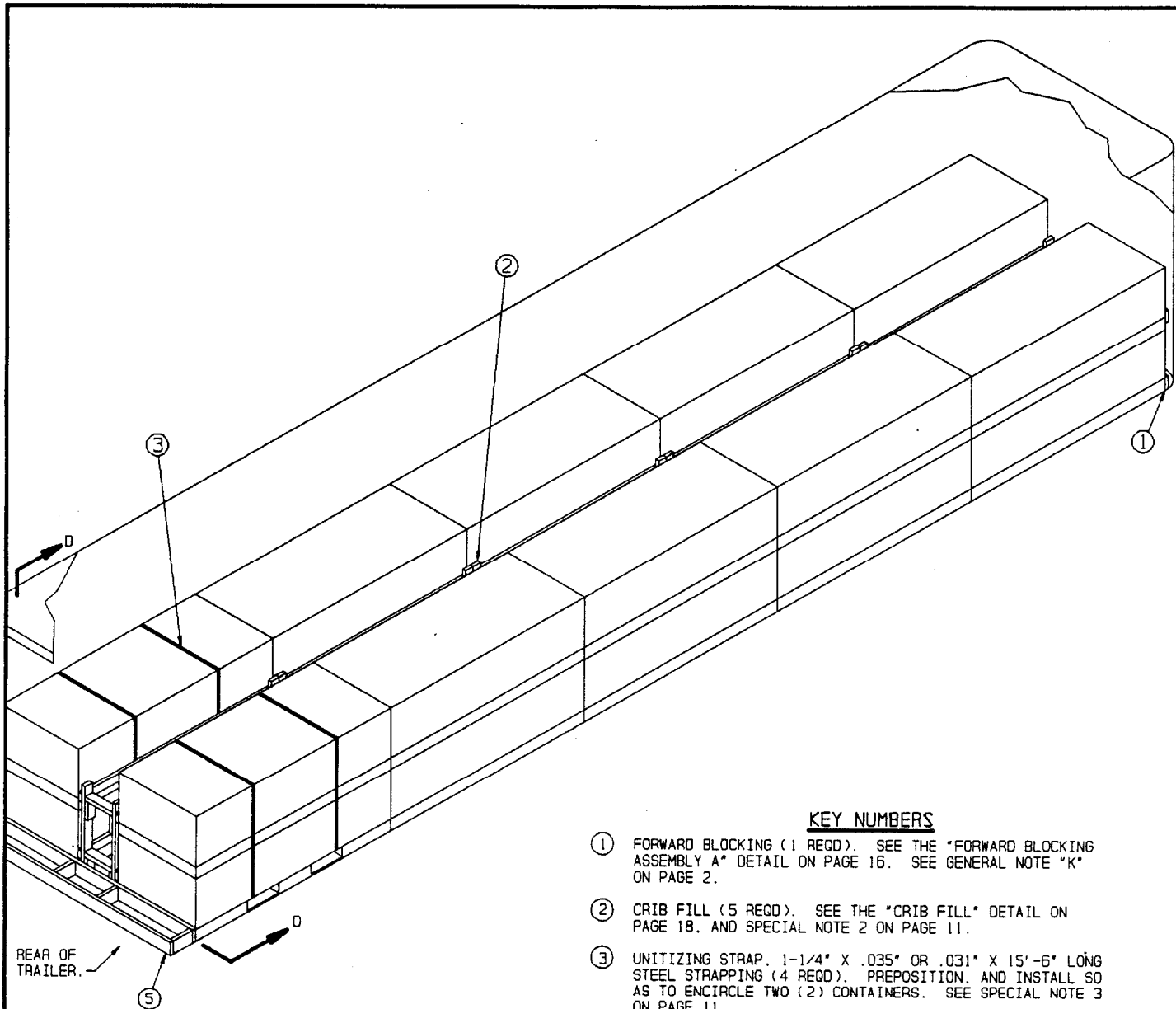
TOTAL WEIGHT - - - - - 42,655 LBS (APPROX)

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	13	9
2" X 6"	158	158
NAILS	NO. REQD	POUNDS
10d (3")	206	3-1/4
STEEL STRAPPING, 1-1/4" - 248.00' REQD - - - 35.5 LBS		
SEAL FOR 1-1/4" STRAPPING - - 32 REQD - - - 1.5 LBS		

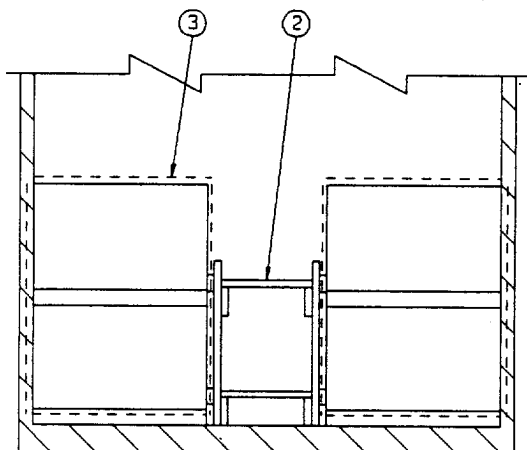
20-UNIT STAGGERED PATTERN LOAD IN A 40'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER

PAGE 9

PROJECT SP 180-90



ISOMETRIC VIEW



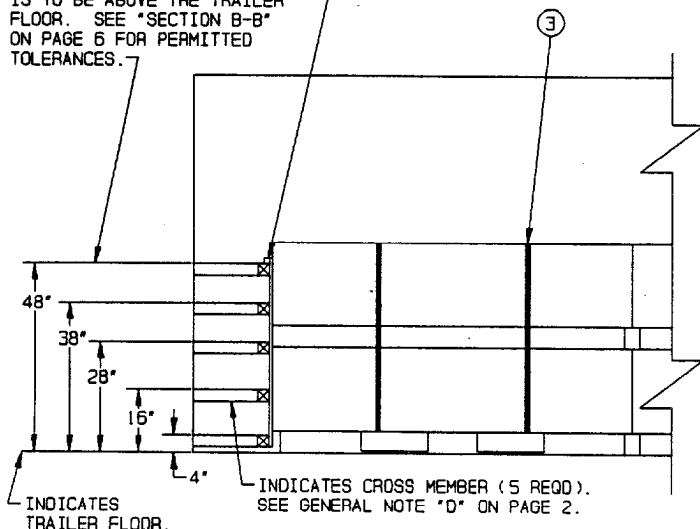
SECTION D-D

KEY NUMBERS

- ① FORWARD BLOCKING (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY A" DETAIL ON PAGE 16. SEE GENERAL NOTE "K" ON PAGE 2.
- ② CRIB FILL (5 REQD). SEE THE "CRIB FILL" DETAIL ON PAGE 18. AND SPECIAL NOTE 2 ON PAGE 11.
- ③ UNITIZING STRAP. 1-1/4" X .035" OR .031" X 15'-6" LONG STEEL STRAPPING (4 REQD). PREPOSITION, AND INSTALL SO AS TO ENCIRCLE TWO (2) CONTAINERS. SEE SPECIAL NOTE 3 ON PAGE 11.
- ④ SEAL FOR 1-1/4" STRAPPING (NOT SHOWN) (8 REQD. 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "L" ON PAGE 2.
- ⑤ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 17. SEE SPECIAL NOTE 4 ON PAGE 11.

THESE DIMENSIONED HEIGHTS SPECIFY THE DISTANCE THE TOP SURFACE OF A CROSS MEMBER IS TO BE ABOVE THE TRAILER FLOOR. SEE "SECTION 8-B" ON PAGE 6 FOR PERMITTED TOLERANCES.

INDICATES "LOAD BEARING GATE B" DETAILED ON PAGE 19.



PARTIAL ELEVATION VIEW

THE VIEW SHOWN ABOVE INDICATES THE REAR PORTION OF THE LOAD SHOWN ON PAGE 10. SEE SPECIAL NOTE 7 AND 8 AT RIGHT.

SPECIAL NOTES:

1. A 20-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER. HAVING ROUNDED FRONT CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. CRIB FILL, SHOWN AS PIECE MARKED ② IN THE LOAD VIEW ARE TO BE POSITIONED BETWEEN ALL LATERALLY ADJACENT CONTAINERS. NOTICE: IF A CONTAINER IS OMITTED FROM THE DEPICTED LOAD, THE CRIB FILL WHICH IS ADJACENT TO THE OMITTED CONTAINER WILL HAVE TO BE MODIFIED AS SHOWN BY THE "CRIB FILL" DETAIL ON PAGE 18.
3. IF THE SECOND LAYER OF THE LOAD IS NOT COMPLETE, A CONTAINER AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A CONTAINER IN THE FIRST LAYER, UNLESS THE STACKED CONTAINERS ARE AGAINST THE FRONT WALL OF A SQUARE-FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE TRAILER. UNITIZING STRAPS, PIECE MARKED ③ ON PAGE 10, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACKED CONTAINERS.
4. IF THE VOID 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 VOID AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9", USE "REAR BLOCKING ASSEMBLY C" AS DETAILED ON PAGE 18. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY, PIECE MARKED ⑤, ON PAGE 10. SEE SPECIAL NOTE 8.
5. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE "PROCEDURES FOR CONVENTIONAL VAN TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS" ON PAGE 21 FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
6. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 12 THRU 15.
7. 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 APPENDICES THERETO, THEY MAY BE USED AT THE REAR OF THE LOAD AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE.
8. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, A LOAD BEARING GATE "B" AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE MUST BE USED BETWEEN THE CROSS MEMBERS AND THE REAR CONTAINERS. IF THE TRAILER HAS ROUNDED FRONT CORNERS, INSTALL CROSS MEMBERS AT THE FRONT OF THE LOAD IN LIEU OF USING THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①. A LOAD BEARING GATE "B" MUST BE USED BETWEEN THE CROSS MEMBERS AND THE FRONT CONTAINERS.

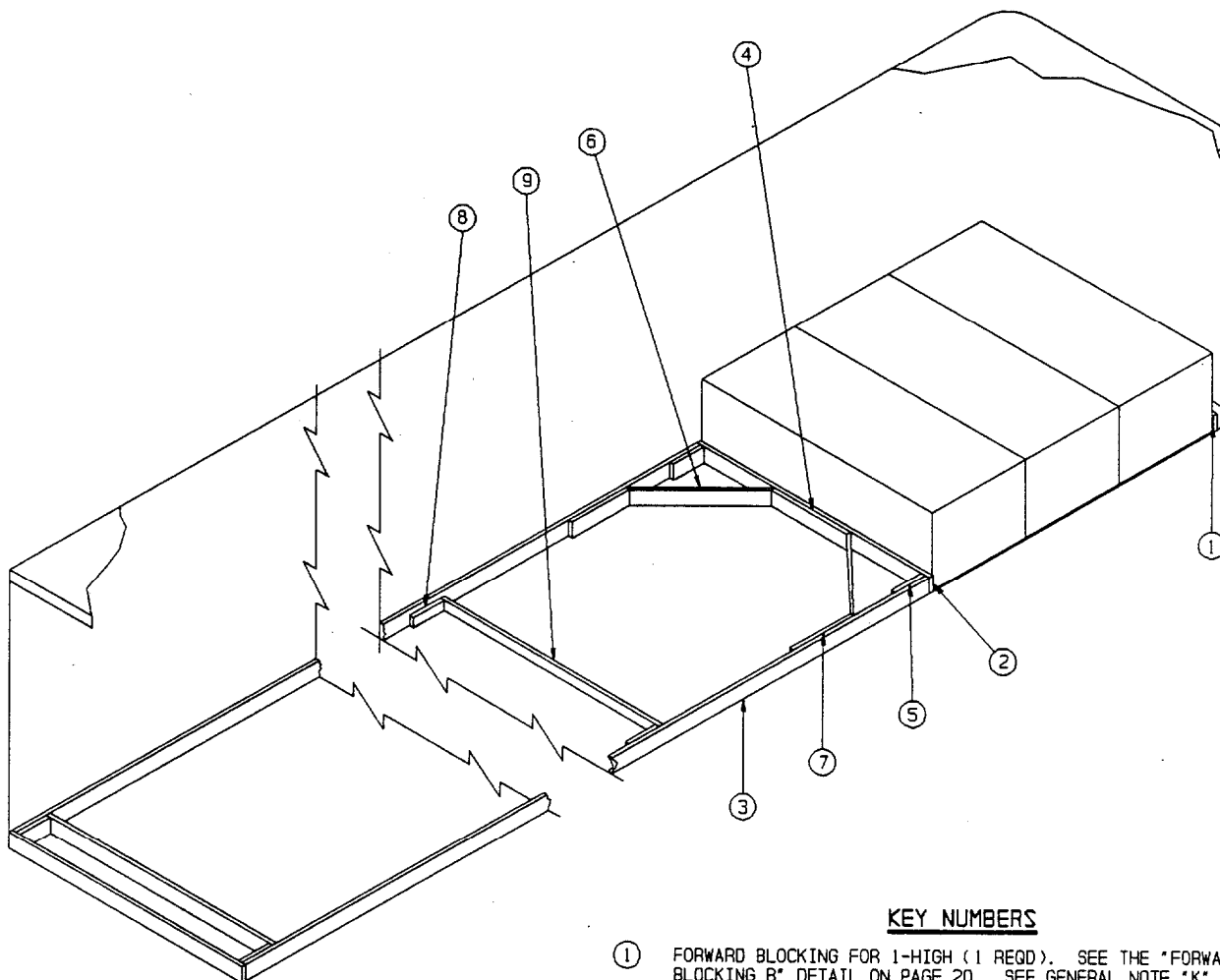
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER (W/CBU-58)	20	41,680 LBS
DUNNAGE		455 LBS
TOTAL WEIGHT		42,135 LBS (APPROX)

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	260	174
2" X 6"	46	46
NAILS	NO. REQD	POUNDS
10d (3")	342	5.25
STEEL STRAPPING, 1-1/4" - 62.00' REQD - - - 9.00 LBS		
SEAL FOR 1-1/4" STRAPPING - - 8 REQD - - - - - NIL		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER (W/CBU-71)	20	41,280 LBS
DUNNAGE		455 LBS
TOTAL WEIGHT		42,735 LBS (APPROX)



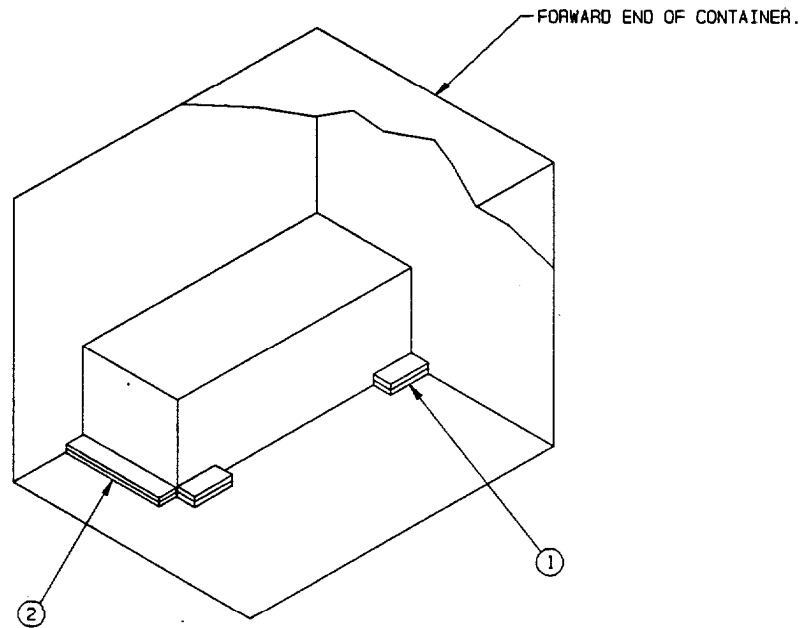
ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING FOR 1-HIGH (1 REQD). SEE THE "FORWARD BLOCKING B" DETAIL ON PAGE 20. SEE GENERAL NOTE "K" ON PAGE 2.
- ② HEADER, 2" X 6" BY TRAILER WIDTH (CUT TO FIT) (2 REQD).
- ③ SIDE STRUT, 2" X 6" BY CUT TO FIT BETWEEN HEADERS MARKED ② (2 REQD). SEE SPECIAL NOTE 2 ON PAGE 13.
- ④ CENTER CLEAT, 2" X 6" X 30" (1 REQD). NAIL TO HEADER, PIECE MARKED ②, W/6-10d NAILS.
- ⑤ POCKET CLEAT, 2" X 6" X 12" (4 REQD). NAIL TO SIDE STRUT, PIECE MARKED ③, W/5-10d NAILS. TOENAIL TO THE ADJACENT HEADER PIECE MARKED ②, W/3-12d NAILS.
- ⑥ DIAGONAL BRACE, 2" X 6" BY CUT TO FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO THE ADJACENT HEADER, PIECE MARKED ②, AND SIDE STRUT, PIECE MARKED ③, W/2-16d NAILS AT EACH END.
- ⑦ BACK-UP CLEAT, 2" X 6" X 24" (2 REQD). NAIL TO A SIDE STRUT, PIECE MARKED ③, W/8-10d NAILS.
- ⑧ STRUT BRACE RETAINER CLEAT, 2" X 4" X 12" (AS REQD). NAIL TO SIDE STRUT, PIECE MARKED ③, W/3-10d NAILS. SEE SPECIAL NOTE 4 ON PAGE 13.
- ⑨ STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 3" (CUT TO FIT) (MINIMUM OF ONE REQD). NAIL TO PIECES MARKED ⑧ W/2-12d NAILS AT EACH END. SEE SPECIAL NOTE 4 ON PAGE 13.

SPECIAL NOTES:

1. A 7'-8" (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
2. IF THE SIDE STRUTS SHOWN AS PIECE MARKED ③ 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), PIECE MARKED ④, MAY BE NAILED TO THE SPLICE PIECES IN LIEU OF USING ADDITIONAL STRUT BRACE RETAINING CLEATS, PIECES MARKED ⑧.
3. THE K-BRACE BLOCKING SHOWN AS PIECES MARKED ② THRU ⑨ 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 ⑤. IF THE SIDE STRUTS, PIECE MARKED ③, ARE LONGER THAN 7'-0" AN ADDITIONAL STRUT BRACE, PIECE MARKED ④, AND TWO (2) STRUT BRACE RETAINER CLEATS, PIECE MARKED ⑧, 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 21 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 ② THRU ⑨ WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS.
6. IF DESIRED, IN TRAILERS EQUIPPED WITH NAILABLE FLOORS, THE NAILED HEADER METHOD OF REAR BLOCKING MAY BE USED IN LIEU OF THE K-BRACE BLOCKING SHOWN AS PIECES MARKED ② THRU ⑨. REFER TO PAGE 21 FOR GUIDANCE.
7. THE DEPICTED PROCEDURES ARE APPLICABLE FOR BOTH OF THE CONTAINERS SHOWN ON PAGE 3 OF THIS DRAWING.



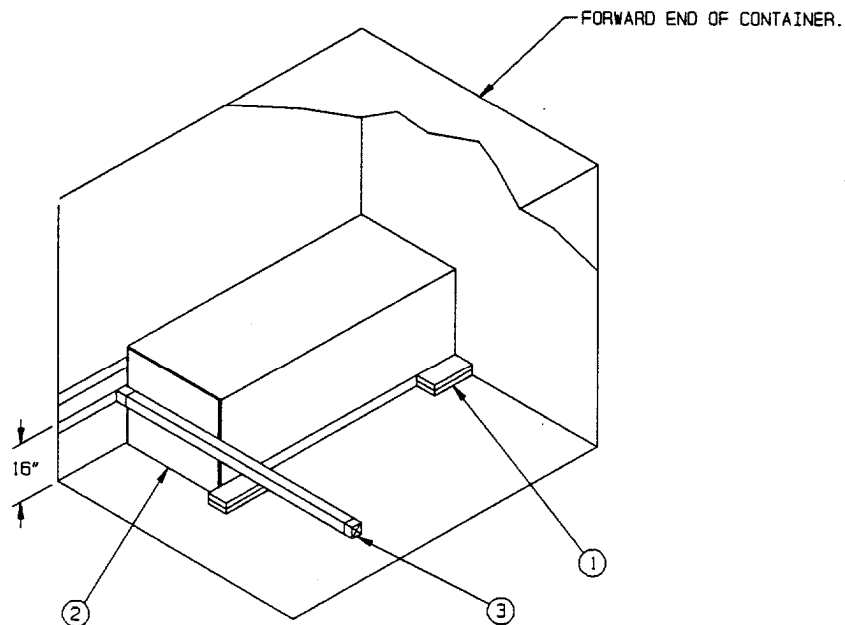
ISOMETRIC VIEW

KEY NUMBERS

- ① SIDE BLOCKING, 2" X 6" X 12" (DOUBLED) (2 REQD). POSITION AGAINST THE CONTAINER SKIDS AS SHOWN ABOVE. NAIL THE FIRST PIECE TO THE FLOOR W/3-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE GENERAL NOTE "N" ON PAGE 2.
- ② HEADER, 2" X 6" X 36" (DOUBLED) (1 REQD). POSITION AGAINST THE FORK LIFT OPENINGS OF 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 3.

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. THE CONTAINER SHOWN HAS OVERALL DIMENSIONS OF 7'-7" LONG BY 36-3/4" WIDE BY 26-3/4" HIGH AND WEIGHS APPROXIMATELY 2,084 POUNDS.
- 3. THE HEADER SHOWN AS PIECE MARKED ② WILL NOT BE RELIED UPON TO RETAIN MORE THAN THREE CONTAINERS.
- 4. 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.
- 5. IF THE TRAILER TO BE USED IS AT LEAST 7'-8" WIDE, CONTAINERS MAY BE POSITIONED CROSSWISE INSTEAD OF LENGTHWISE AS SHOWN. USE THE "NAILED HEADER METHOD" SHOWN ON PAGE 21; OMIT THE REAR BLOCKING ASSEMBLY. IF THE TRAILER HAS ROUNDED CORNERS AT THE FORWARD END, MOVE CONTAINER BACK AND INSTALL AN ADDITIONAL HEADER.



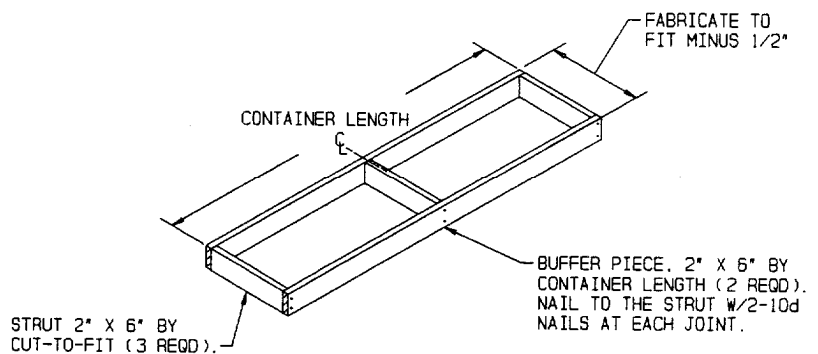
ISOMETRIC VIEW

SPECIAL NOTES:

1. A 7'-6" (INSIDE DIMENSION) VAN TRAILER WITH MECHANICAL BRACING DEVICES IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
2. A TYPICAL LTL LOAD OF ONE (1) CONTAINER IS SHOWN. IF TWO CONTAINERS ARE TO BE TRANSPORTED, POSITION TWO ACROSS THE WIDTH OF THE TRAILER AND BLOCK AS SHOWN.
3. IF THE TRAILER BEING USED HAS A NON-NAILABLE FLOOR, INSTALL THE ANTI-SWAY BRACE DETAILED BELOW. A CROSS MEMBER MUST BE INSTALLED AT THE 4" HEIGHT TO PREVENT DISPLACEMENT OF THE ANTI-SWAY BRACE.
4. IF THE WIDTH OF THE TRAILER PERMITS, THE CONTAINERS MAY BE POSITIONED CROSSWISE IN LIEU OF LENGTHWISE, AS SHOWN. A 1/2" PLYWOOD LOAD BEARING GATE WHICH IS TRAILER WIDTH MINUS 1/2" BY 24" HIGH, MUST BE INSTALLED.

KEY NUMBERS

- ① SIDE BLOCKING, 2" X 6" X 12" (DOUBLED) (2 REQD). POSITION AGAINST THE CONTAINER SKIDS AS SHOWN ABOVE. NAIL THE FIRST PIECE TO THE FLOOR W/3-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE GENERAL NOTE "N" ON PAGE 2, AND SPECIAL NOTE 3 AT LEFT.
- ② LOAD BEARING GATE, 1/2" PLYWOOD, 35" WIDE BY 24" HIGH (1 REQD).
- ③ CROSS MEMBER (1 REQD). POSITION AT THE HEIGHT SPECIFIED BY THE ISOMETRIC VIEW ABOVE. SEE GENERAL NOTES "D" AND "K" ON PAGE 2.



ANTI-SWAY BRACE

THIS ASSEMBLY IS DESIGNED FOR USE ON THE FLOOR BETWEEN LATERALLY ADJACENT CONTAINERS, OR BETWEEN A CONTAINER AND THE TRAILER SIDEWALL.

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.

TRAILER WIDTH MINUS 1/2"

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.

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.

STRUT, 2" X 6" BY CUT-TO-FIT (4 REQD).

RETAINER PIECE, 2" X 4" X 9" (2 REQD). NAIL TO THE HEADER W/3-10d NAILS.

REAR BLOCKING ASSEMBLY A

THIS ASSEMBLY IS DESIGNED FOR USE AT THE REAR OF A LOAD OF CROSSWISE POSITIONED CONTAINERS WHEN THE EXCESS SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS 9" OR GREATER. NOTE THAT THIS VIEW IS ROTATED 90° FROM THE POSITION IN WHICH THE ASSEMBLY WILL BE INSTALLED.

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.

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.

TRAILER WIDTH MINUS 1/2"

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.

RETAINER PIECE, 2" X 4" X 9" (2 REQD). NAIL TO THE HEADER W/3-10d NAILS.

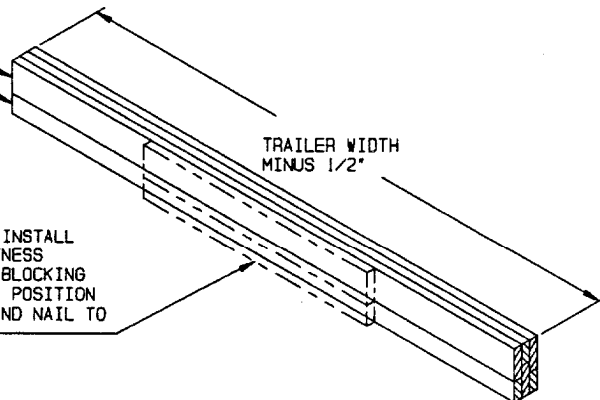
STRUT, 2" X 6" BY CUT-TO-FIT (4 REQD).

REAR BLOCKING ASSEMBLY B

THIS ASSEMBLY IS DESIGNED FOR USE AT THE REAR OF A LOAD OF LENGTHWISE POSITIONED CONTAINERS WHEN THE EXCESS SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS 9" OR GREATER. NOTE THAT THIS VIEW IS ROTATED 90° FROM THE POSITION IN WHICH THE ASSEMBLY WILL BE INSTALLED.

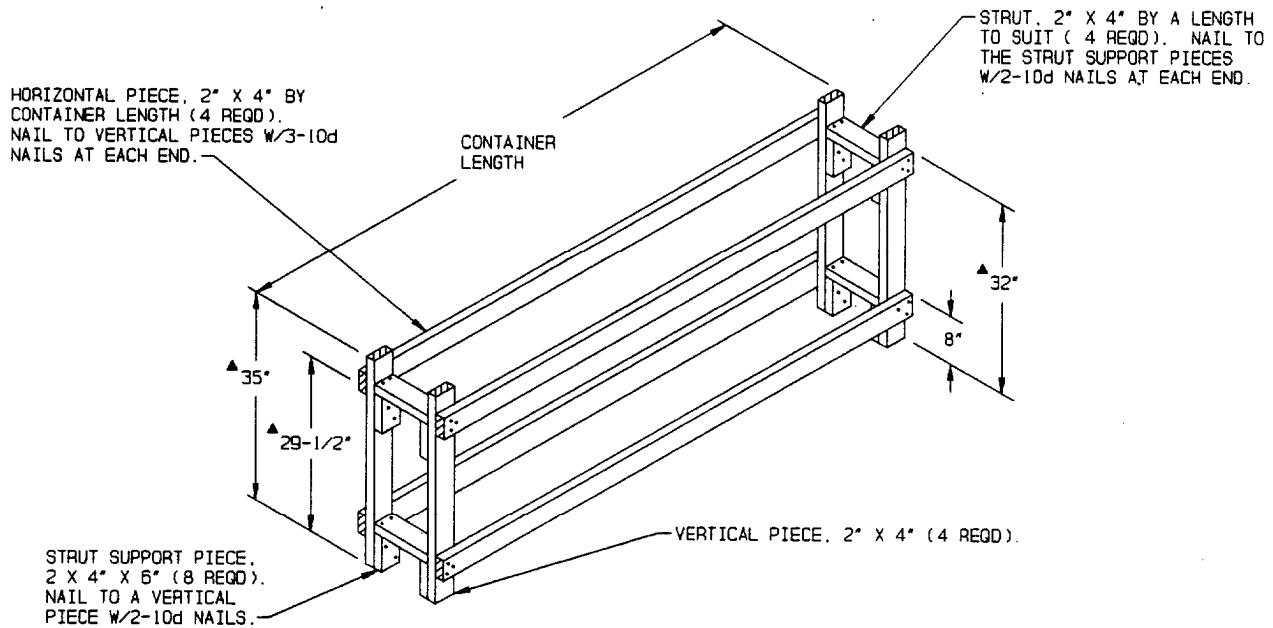
SOLID FILL, 4" AND 6" WIDE MATERIAL BY TRAILER WIDTH MINUS 1/2" IN LENGTH BY THE THICKNESS REQUIRED TO CONTACT REAR CORNER POSTS OR TO CONTACT REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED. POSITION PIECES ON EDGE, ONE ON TOP OF THE OTHER AS SHOWN, AND LAMINATE W/1-10d NAIL EVERY 12".

IF THE TRAILER IS EQUIPPED WITH REAR CORNER POSTS, INSTALL SOLID FILL, 4" AND 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, ONE ON TOP OF THE OTHER AS SHOWN, AND NAIL TO THE REAR BLOCKING W/4 APPLICABLY SIZED NAILS.



REAR BLOCKING ASSEMBLY C

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

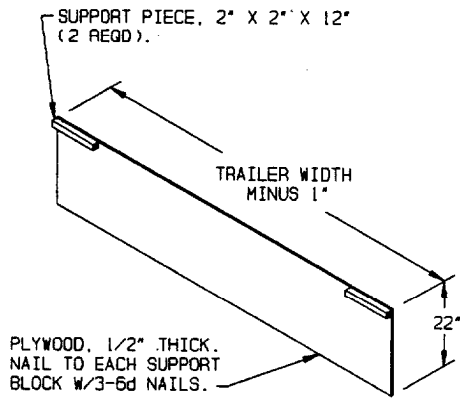


CRIB FILL

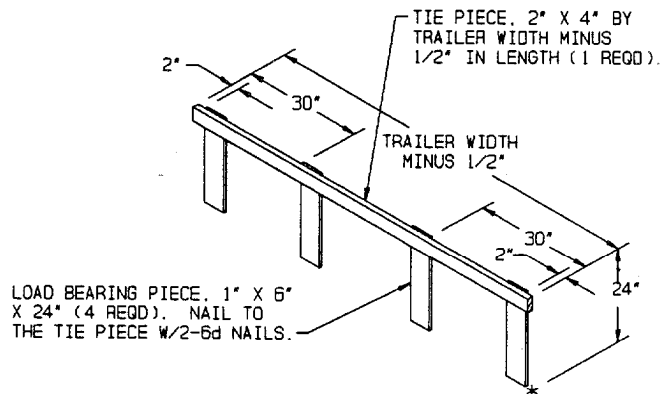
▲ THE 35", 29-1/2", AND 32" DIMENSIONS RESPECTIVELY, WILL BE 27", 21-1/2", AND 24" WHEN CRIB FILL IS INSTALLED ADJACENT TO AN OMITTED CONTAINER AS SPECIFIED BY SPECIAL NOTE 2 ON PAGE 11.

NOTE ●:

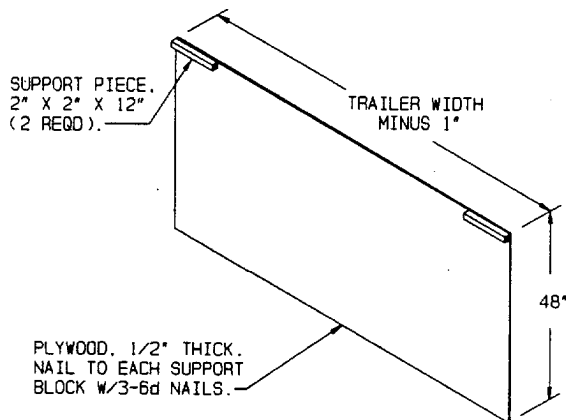
IF PLYWOOD IS NOT AVAILABLE, OR IF DESIRED, THE LOAD BEARING GATES MAY BE FABRICATED FROM NOMINAL ONE INCH AND/OR TWO INCH LUMBER. SEE THE "ALTERNATIVE LOAD BEARING GATES" BELOW.



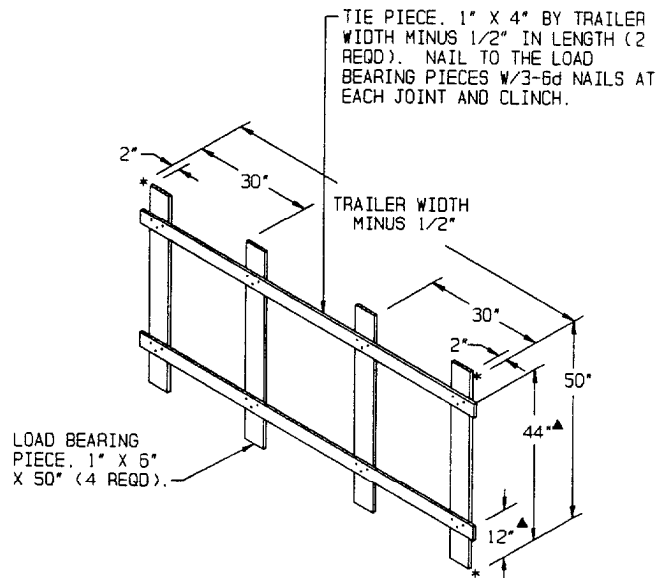
LOAD BEARING GATE A
SEE "NOTE ●" ABOVE.



ALTERNATIVE LOAD BEARING GATE A



LOAD BEARING GATE B
SEE "NOTE ●" ABOVE.



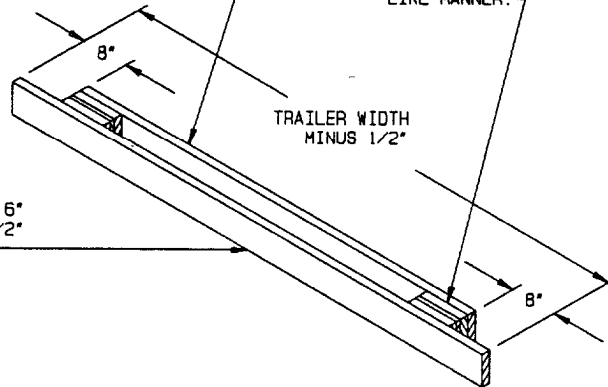
ALTERNATIVE LOAD BEARING GATE B

▲ THESE HEIGHTS MAY NEED TO BE ADJUSTED TO PROVIDE FOR CLEARANCE OF THE CROSS MEMBERS AT A MINUS INSTALLATION TOLERANCE.

LATERAL PIECE, 2" X 6" BY TRAILER WIDTH MINUS 16-1/2" IN LENGTH (1 REQD). NAIL TO THE FILL PIECES W/2-10d NAILS AT EACH END.

FILL PIECE, 2" X 6" AND/OR 1" X 6" X 8" (AS REQD). NAIL THE FIRST PIECE TO THE LOAD BEARING PIECE W/2-APPLICABLY SIZED NAILS. NAIL EACH ADDITIONAL PIECE IN A LIKE MANNER.

LOAD BEARING PIECE, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (1 REQD).



FORWARD BLOCKING ASSEMBLY B

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.



ONE SEAL WITH TWO PAIR OF NOTCHES.

STRAP JOINT A

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



TWO SEALS, BUTTED TOGETHER, WITH TWO PAIR OF CRIMPS EACH SEAL.

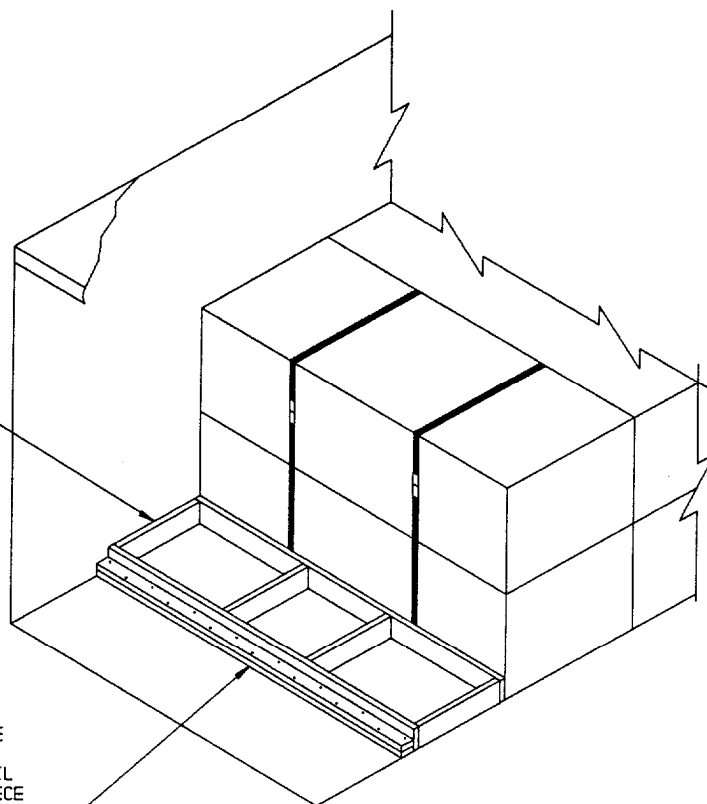
STRAP JOINT B

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

END-OVER-END LAP JOINT DETAILS

REAR BLOCKING ASSEMBLY
(1 REQD). SEE SPECIAL
NOTE 2 BELOW.

HEADER, 2" X 4" BY TRAILER WIDTH
MINUS 1/2" IN LENGTH (DOUBLED)
(1 REQD). POSITION AGAINST THE
REAR BLOCKING ASSEMBLY. 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 AND TOENAIL TO THE
REAR BLOCKING ASSEMBLY W/4-10d NAILS.



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 (14").
2. REAR BLOCKING ASSEMBLY "A" IS SHOWN FOR A TYPICAL INSTALLATION. CONSTRUCT THE ASSEMBLY USING 6" (MINIMUM) LONG STRUTS.
3. THE NAILED-HEADER METHOD OF REAR BLOCKING IS ADEQUATE FOR THE RETENTION OF THE MAXIMUM WEIGHT LOAD.
4. THE NAILED-HEADER METHOD, ALTHOUGH DESIGNED ESPECIALLY FOR TRAILERS HAVING ROLL-UP TYPE DOORS, MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
5. IF DESIRED, THE CONTAINERS MAY BE POSITIONED LENGTHWISE IN LIEU OF CROSSWISE AS SHOWN. INSTALL CRIB FILL AS SPECIFIED BY SPECIAL NOTE 2 ON PAGE 11.