

LOADING AND BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF TRI-SERVICE STANDOFF ATTACK MISSILES (TSSAM) PACKED IN CNU-446/E SHIPPING AND STORAGE CONTAINERS

INDEX

<u>ITEM</u>	<u>PAGE(S)</u>
GENERAL NOTES AND MATERIAL SPECIFICATIONS - - - - -	2
CNU-446/E DETAIL - - - - -	3
12-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE TRAILER - - - - -	4,5
11-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE TRAILER - - - - -	6,7
12-UNIT LOAD IN A 45'-0" LONG BY 7'-8" WIDE TRAILER - - - - -	8,9
EIGHT-UNIT LOAD IN A 40'-0" LONG BY 8'-2" WIDE TRAILER - - - - -	10,11
TYPICAL LTL (FOUR-UNIT LOAD) - - - - -	12,13
TYPICAL LTL (ONE-UNIT LOAD) - - - - -	14
DETAILS - - - - -	15-17
PROCEDURES FOR VAN TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS - - - - -	18

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

U.S. ARMY MATERIEL COMMAND DRAWING			
APPROVED, U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND <i>Timothy R. Fore</i>	DRAFTSMAN	TECHNICIAN	ENGINEER L. FIEFFER
	VALIDATION ENGINEERING DIVISION	TRANSPORTATION ENGINEERING DIVISION <i>W. F. Ernst</i>	LOGISTICS ENGINEERING OFFICE
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND <i>Allen L. Beyer</i>	SEPTEMBER 1994		
U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL	CLASS	DIVISION	DRAWING
	19	48	8589
			FILE SP11J31

DO NOT SCALE

GENERAL NOTES

(GENERAL NOTES CONTINUED)

A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1 AND AUGMENTS TM 743-200-1 (CHAPTER 5).

B. THE OUTLOADING PROCEDURES SPECIFIED IN THIS DRAWING ARE APPLICABLE TO LOADS OF TRI-SERVICE STANDOFF ATTACK MISSILES (TSSAM) PACKED IN CNU-446/E CONTAINERS. SUBSEQUENT REFERENCE TO CONTAINER HEREIN MEANS THE CONTAINER WITH MISSILE INSTALLED. SEE PAGE 3 FOR DETAIL OF THE CONTAINER.

CONTAINER DIMENSIONS -- 178" LONG X 43" WIDE
X 30-3/4" HIGH (APPROX)
GROSS WEIGHT ----- 3,350 POUNDS (APPROX)
CUBE ----- 136.2 CUBIC FEET (APPROX)

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. REGARDLESS OF THE DIMENSIONS OF THE VAN TRAILERS SHOWN, THE PROCEDURES ARE ALSO APPLICABLE FOR TRAILERS WHICH ARE 89" THRU 99" IN WIDTH AND FOR TRAILERS OF 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 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.

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 LOADS, UP TO 45,000 POUNDS, 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 CNU-446/E CONTAINERS, 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.

(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.

STRAPPING, STEEL --: ASTM D3953; FLAT STRAPPING, TYPE 1, HEAVY DUTY, FINISH A, B (GRADE 2), OR C.

SEAL, STRAP ----: ASTM D3953; CLASS H, FINISH A, B (GRADE 2), OR C, DOUBLE NOTCH TYPE, STYLE I, II, OR IV.

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 (APPLICABLE ONLY IF THE VOID ACROSS THE WIDTH OF THE TRAILER IS 6" OR LESS). SEE THE SPECIAL NOTES ADJACENT TO EACH LOAD.

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 5 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. PORTIONS OF THE TRAILERS, SUCH AS SIDEWALLS, ENDWALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.

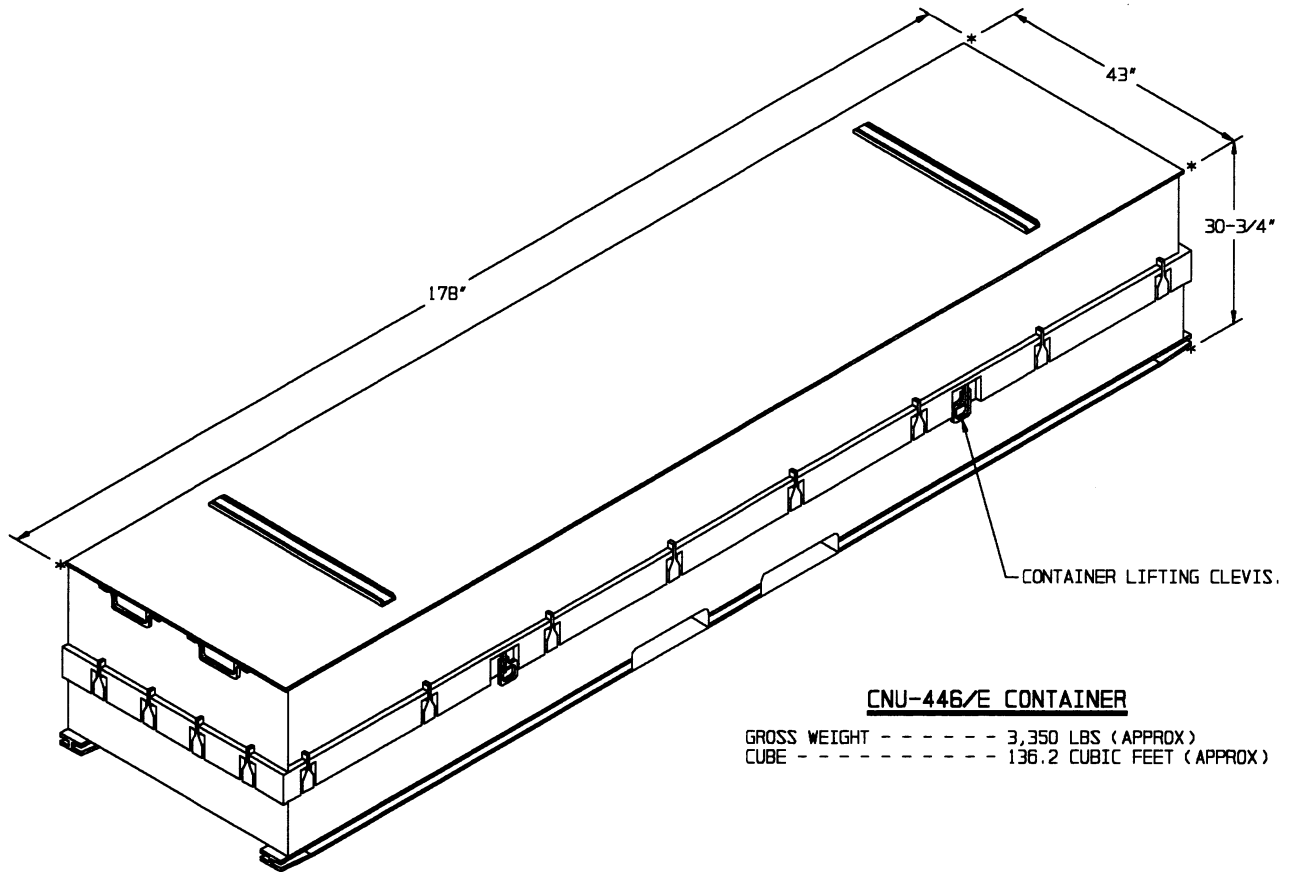
P. THE UNBLOCKED SPACE ACROSS THE WIDTH OF A LOAD BAY IS NOT TO EXCEED 6". IF THE LATERAL VOID IN A LOAD EXCEEDS 6", LATERAL BRACING PIECES MUST BE INSTALLED ON THE DUNNAGE ASSEMBLIES ADJACENT TO THE CNU-446/E CONTAINERS, SUCH AS THE FORWARD BLOCKING AND HEADER ASSEMBLIES, AS DEPICTED IN THE LOAD ON PAGE 4.

Q. 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 THE 9", USE THE "REAR BLOCKING ASSEMBLY B" AS DEPICTED ON PAGE 17. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY A" AS SHOWN ON PAGE 16.

R. CAUTION: WHEN POWER OR PNEUMATIC NAILERS ARE BEING USED IN THE APPLICATION OF NAILED FLOORLINE BLOCKING OR BRACING, CONTAINERS BEING LOADED INTO THE CONVEYANCE MUST BE POSITIONED TO ALLOW A CLEAR PATH OF EXIT FOR THE OPERATOR AT ALL TIMES, SHOULD AN EMERGENCY EXIT BECOME NECESSARY.

S. THESE PROCEDURES CAN ALSO BE UTILIZED FOR THE SHIPMENT OF THE CNU-446/E CONTAINERS WHEN THEY ARE LOADED WITH AN ITEM OTHER THAN THE SPECIFIED GUIDED MISSILE, OR WHEN THEY ARE EMPTY.

T. 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 25.4 MM AND ONE POUND EQUALS 0.454 KG.



CNU-446/E CONTAINER

GROSS WEIGHT - - - - - 3,350 LBS (APPROX)
 CUBE - - - - - 136.2 CUBIC FEET (APPROX)

UNITIZING AND HANDLING GUIDANCE

(UNITIZING AND HANDLING 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 AFT END OF AN UPPER CONTAINER ABOVE THE AFT END OF THE NEXT LOWER CONTAINER.
- C. THE CONTAINER SKIDS OF AN UPPER CONTAINER SHOULD BE FULLY SEATED AGAINST THE SKID LOCATOR PIECES ON THE COVER OF THE NEXT LOWER CONTAINER.

2. INSTALLATION OF 1-1/4" X .035" OR .031" UNITIZING STRAPPING.

- A. EACH OF THE TWO SETS OF UNITIZING STRAPS SHOULD BE POSITIONED AROUND THE CONTAINERS AS SHOWN IN THE LOAD DETAILS. PLACE STRAPPING THROUGH FORK RECEPTACLES OF A LOWER CONTAINER, AND SO THAT STRAPPING LAYS FLAT AND STRAIGHT WITH THE BODY SURFACES OF THE CONTAINERS; I.E., VERTICAL ALONG SIDES AND STRAIGHT ACROSS TOP AND BOTTOM OF THE STACK.
- B. STRAPPING WILL BE FIRMLY TENSIONED, AND EACH END-OVER-END LAP JOINT WILL BE SEALED WITH ONE SEAL WITH TWO PAIR OF NOTCHES AS SHOWN IN THE LOAD DETAILS, OR TWO DOUBLE CRIMPED STRAP SEALS AS SHOWN IN THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 5. THE LAP JOINTS WILL BE MADE ALONG THE SIDE OF THE STACK. 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.

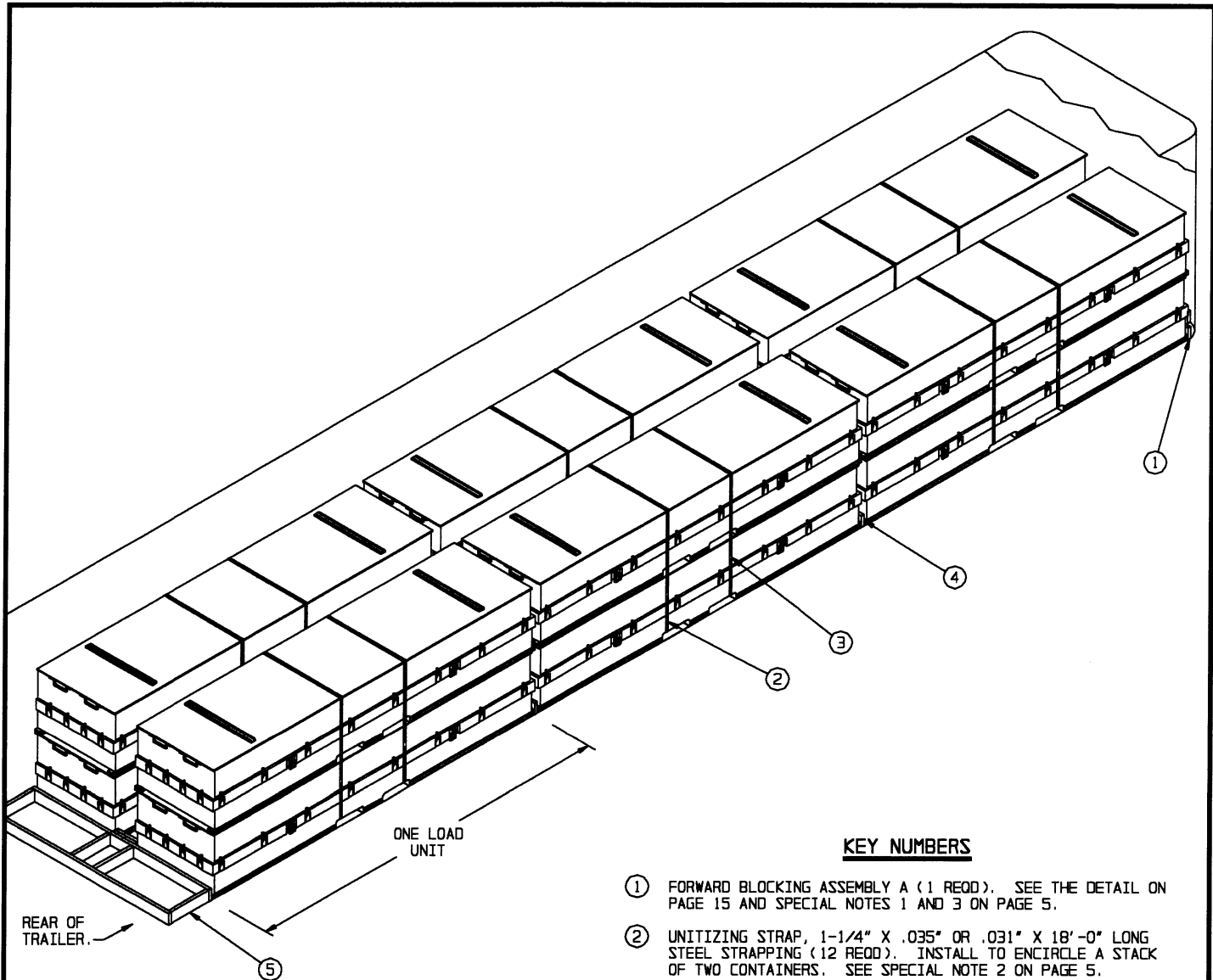
(CONTINUED AT RIGHT)

3. CONTAINER OR CONTAINER STACK HANDLING.

NOTES: (1) APPROVED MATERIAL 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.

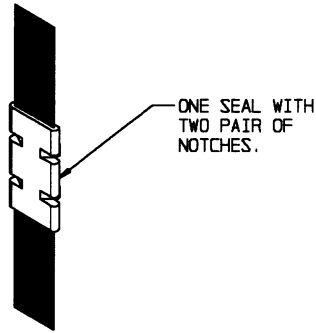
- A. ONLY APPROVED AND APPROPRIATELY SIZED MATERIALS HANDLING EQUIPMENT WILL BE USED FOR HANDLING THE DEPICTED CONTAINERS.
- B. IF HANDLING IS ACCOMPLISHED WITH A FORKLIFT TRUCK, THE CONTAINERS SHOULD BE HANDLED FROM A SIDE POSITION AS MUCH AS POSSIBLE. CARE MUST BE EXERCISED WHEN INSERTING FORKS UNDER 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 CONTAINER STACK MAY BE HANDLED BY INSERTING THE FORKS OF A FORKLIFT TRUCK INTO THE FORK RECEPTACLES OF AN UPPER CONTAINER. 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.
- C. WHEN UNLOADING CONTAINERS, REMOVE THE LATERAL DUNNAGE, AND SHIFT THE NEAR END OF THE CONTAINER STACK TOWARDS THE CENTER OF THE TRAILER. ATTACH A CHAIN FROM THE CONTAINER LIFTING CLEVIS ON ONE SIDE OF THE CONTAINER, AROUND THE FORKLIFT MAST, TO THE CONTAINER LIFTING CLEVIS ON THE OPPOSITE SIDE OF THE CONTAINER. SLIGHTLY ELEVATE AND INSERT THE FORK TINES UNDER THE END OF THE CONTAINER STACK AND SLOWLY DRAG THE CONTAINER STACK REARWARD UNTIL IT CAN BE HANDLED FROM THE SIDE, TAKING CARE NOT TO DAMAGE THE CONTAINERS.



ISOMETRIC VIEW

KEY NUMBERS

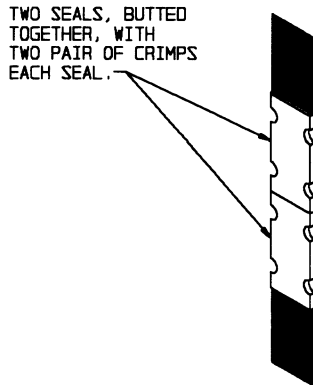
- ① FORWARD BLOCKING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 15 AND SPECIAL NOTES 1 AND 3 ON PAGE 5.
- ② UNITIZING STRAP, 1-1/4" X .035" OR .031" X 18'-0" LONG STEEL STRAPPING (12 REQD). INSTALL TO ENCIRCLE A STACK OF TWO CONTAINERS. SEE SPECIAL NOTE 2 ON PAGE 5.
- ③ SEAL FOR 1-1/4" STRAPPING (12 REQD). CRIMP WITH TWO PAIR OF NOTCHES. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 5.
- ④ HEADER ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 16 AND SPECIAL NOTE 3 ON PAGE 5.
- ⑤ REAR BLOCKING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 16 AND SPECIAL NOTES 3 AND 4 ON PAGE 5.



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

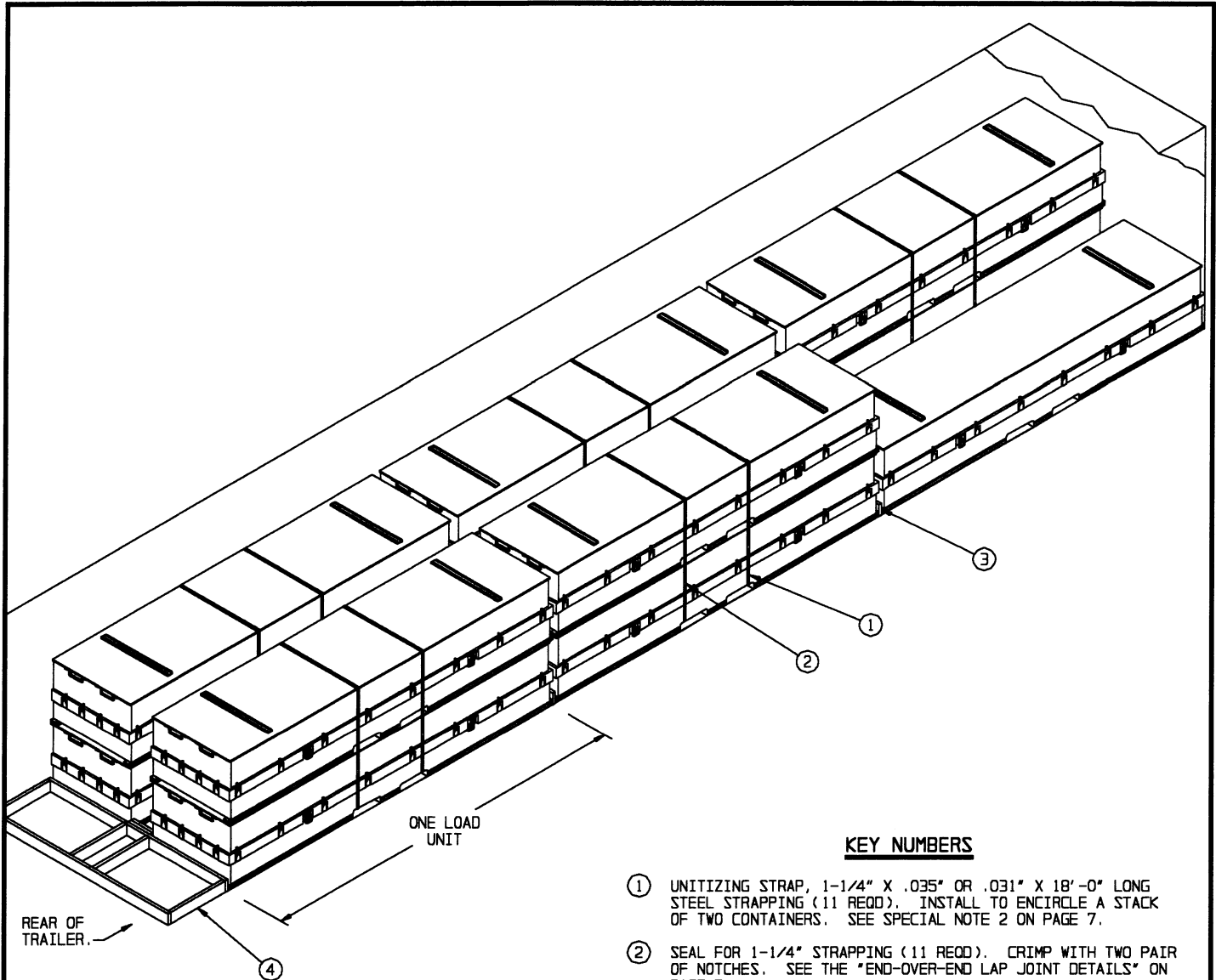
SPECIAL NOTES:

1. A 12-UNIT LOAD IS SHOWN IN A 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSIONS) VAN TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED. THE TRAILER IS SHOWN WITH ROUNDED FRONT CORNERS. HOWEVER, THE FORWARD BLOCKING ASSEMBLY IS TO BE USED EVEN IF THE TRAILER TO BE LOADED HAS A SQUARE FRONT WALL OR AN INSTALLED BULKHEAD. THE USE OF THE ASSEMBLY WILL SHIFT THE LOAD TO THE REAR ENOUGH TO PROVIDE FOR PROPER WEIGHT DISTRIBUTION. SEE SPECIAL NOTE 3 BELOW.
2. CONTAINERS MUST BE UNITIZED INTO STACKS OF TWO CONTAINERS PRIOR TO LOADING INTO THE VAN TRAILER. THE STACKS WILL BE FORMED AT THE REAR OF THE TRAILER BY POSITIONING THE CONTAINERS WITH ONE END RESTING JUST INSIDE THE REAR OF THE TRAILER. ONE CONTAINER WILL BE POSITIONED ON TOP OF ANOTHER, THE UNITIZING STRAP WILL BE INSTALLED, AND THE STACK CAN THEN BE PARTIALLY LIFTED FROM THE REAR AND PUSHED INTO THE TRAILER. USE CAUTION SO AS NOT TO DAMAGE THE CONTAINERS.
3. IF THE SPACE BETWEEN LATERALLY ADJACENT CONTAINERS IS 6" OR LESS, AS MEASURED FROM SKID TO SKID, THE HEADER ASSEMBLY, PIECE MARKED ④, MAY BE REPLACED WITH A 2" X 6" BY TRAILER WIDTH MINUS 1" HEADER, I.E., OMIT THE LATERAL BRACING FROM THE HEADER ASSEMBLY. ALSO, OMIT THE LATERAL BRACING FROM THE REAR BLOCKING ASSEMBLY, PIECE MARKED ⑤, AND THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①.
4. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" OR LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 17. IF THE SPACE AT THE REAR OF THE LOAD EXCEEDS 9", USE REAR BLOCKING ASSEMBLY "A" AS SHOWN.
5. IF THE TRAILER HAS SUFFICIENT NAILING AREA AT THE REAR OF THE LOAD, A NAILED HEADER MAY BE USED IN LIEU OF A REAR BLOCKING ASSEMBLY. SEE PIECE MARKED ④ ON PAGE 8 FOR GUIDANCE. THE HEADER WILL BE NAILED W/17-10d NAILS IN THE FIRST LAYER AND 17-20d NAILS IN THE SECOND LAYER. SEE THE "HEADER NAILING CHART" ON PAGE 9.
6. THE DEPICTED 12-UNIT LOAD CAN BE TRANSPORTED PROVIDING THE TRACTOR "DRIVE" AXLES DO NOT WEIGH MORE THAN 15,650 POUNDS. THIS WEIGHT IS FURNISHED FOR GUIDANCE PURPOSES, ACTUAL EQUIPMENT USED AND ACTUAL WEIGHT OF THE CONTAINERS WILL DETERMINE THE AXLE WEIGHT LIMITATIONS.
7. THE DEPICTED LOAD CAN BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED. A TWO-TIER LOAD CAN BE REDUCED BY A MULTIPLE OF FOUR CONTAINERS BY OMITTING ONE OR MORE FULL LOAD UNITS FROM THE LOAD; OR, THE ENTIRE TOP TIER CAN BE LEFT OFF; OR, ONE OR MORE CONTAINERS CAN BE OMITTED FROM THE TOP TIER.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 6"	68	46
NAILS	NO. REQD	POUNDS
10d (3")	96	1-1/2
STEEL STRAPPING, 1-1/4"	216' REQD	30.86 LBS
SEAL FOR 1-1/4" STRAPPING	12 REQD	0.55 LBS

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-446/E	12	40,200 LBS
DUNNAGE		125 LBS
TOTAL WEIGHT		40,325 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① UNITIZING STRAP, 1-1/4" X .035" OR .031" X 18'-0" LONG STEEL STRAPPING (11 REQD). INSTALL TO ENCIRCLE A STACK OF TWO CONTAINERS. SEE SPECIAL NOTE 2 ON PAGE 7.
- ② SEAL FOR 1-1/4" STRAPPING (11 REQD). CRIMP WITH TWO PAIR OF NOTCHES. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 5.
- ③ HEADER ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 16 AND SPECIAL NOTE 3 ON PAGE 7.
- ④ REAR BLOCKING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 16 AND SPECIAL NOTES 3 AND 4 ON PAGE 7.

SPECIAL NOTES:

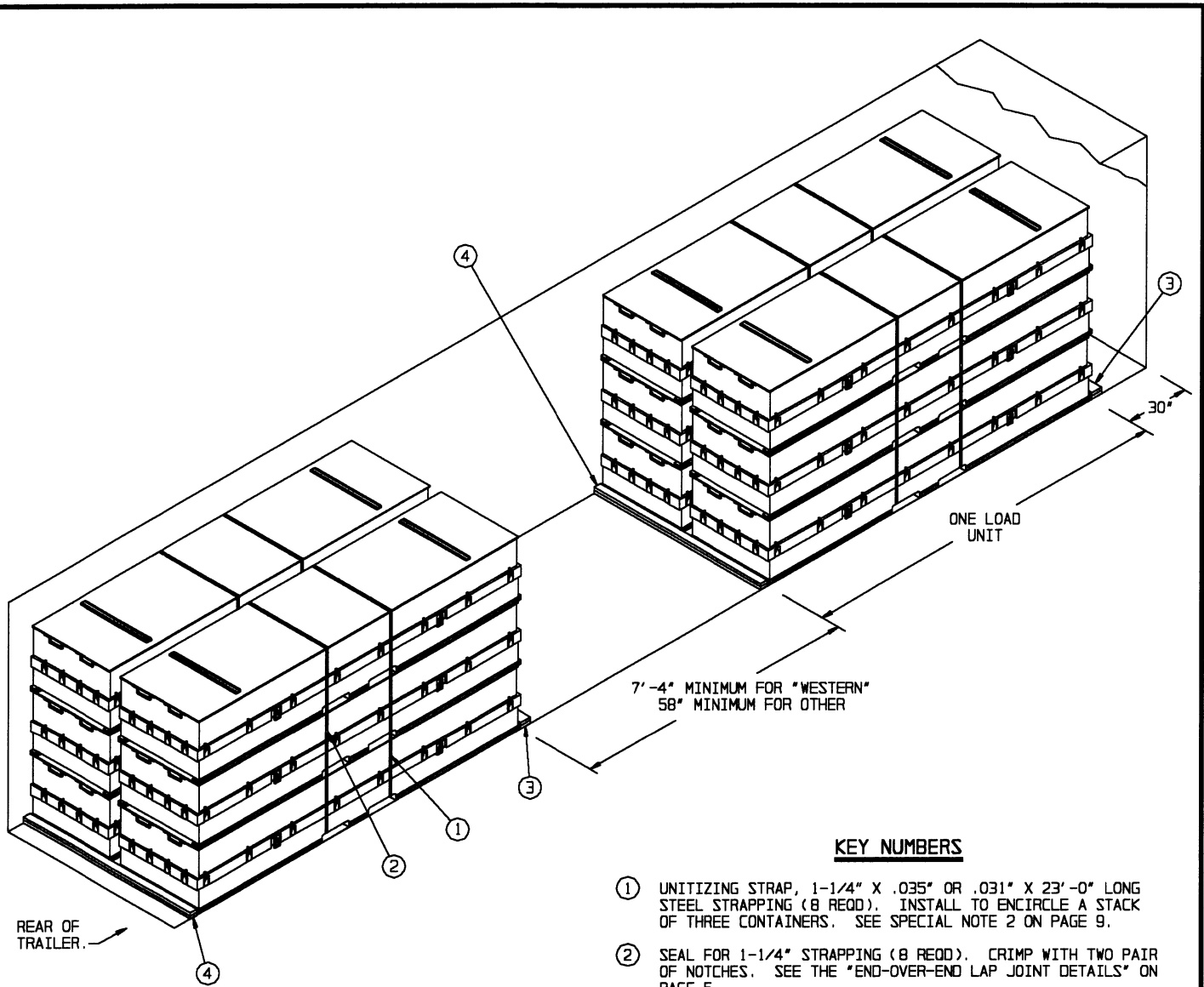
1. AN 11-UNIT LOAD IS SHOWN IN A 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSIONS) VAN TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED. THE LOAD AS SHOWN ON PAGE 6 REQUIRES A VAN EQUIPPED WITH A SQUARE FRONT OR WITH AN INSTALLED BULKHEAD, WHEN LOADED AS SHOWN. IF A TRAILER WITH ROUNDED CORNERS IS TO BE LOADED, A FORWARD BLOCKING ASSEMBLY "A", AS DEPICTED ON PAGE 15, WILL BE REQUIRED. SEE SPECIAL NOTE 3 BELOW.
2. CONTAINERS MUST BE UNITIZED INTO STACKS OF TWO CONTAINERS PRIOR TO LOADING INTO THE VAN TRAILER. THE STACKS WILL BE FORMED AT THE REAR OF THE TRAILER BY POSITIONING THE CONTAINERS WITH ONE END RESTING JUST INSIDE THE REAR OF THE TRAILER. ONE CONTAINER WILL BE POSITIONED ON TOP OF ANOTHER, THE UNITIZING STRAP WILL BE INSTALLED, AND THE STACK CAN THEN BE PARTIALLY LIFTED FROM THE REAR AND PUSHED INTO THE TRAILER. USE CAUTION SO AS NOT TO DAMAGE THE CONTAINERS.
3. IF THE SPACE BETWEEN LATERALLY ADJACENT CONTAINERS IS 6" OR LESS, AS MEASURED FROM SKID TO SKID, THE HEADER ASSEMBLY, PIECE MARKED ③, MAY BE REPLACED WITH A 2" X 6" BY TRAILER WIDTH MINUS 1" HEADER, I.E., OMIT THE LATERAL BRACING FROM THE HEADER ASSEMBLY. ALSO, OMIT THE LATERAL BRACING FROM THE REAR BLOCKING ASSEMBLY, PIECE MARKED ④.
4. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" OR LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 17. IF THE SPACE AT THE REAR OF THE LOAD EXCEEDS 9", USE REAR BLOCKING ASSEMBLY "A" AS SHOWN.
5. IF THE TRAILER HAS SUFFICIENT NAILING AREA AT THE REAR OF THE LOAD, A NAILED HEADER MAY BE USED IN LIEU OF A REAR BLOCKING ASSEMBLY. SEE PIECE MARKED ④ ON PAGE 8 FOR GUIDANCE. THE HEADER WILL BE NAILED W/15-10d NAILS IN THE FIRST LAYER AND 15-20d NAILS IN THE SECOND LAYER. SEE THE "HEADER NAILING CHART" ON PAGE 9.
6. THE DEPICTED LOAD CAN BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED. A TWO-TIER LOAD CAN BE REDUCED BY A MULTIPLE OF FOUR CONTAINERS BY OMITTING ONE OR MORE FULL LOAD UNITS FROM THE LOAD; OR, THE ENTIRE TOP TIER CAN BE LEFT OFF; OR, ONE OR MORE CONTAINERS CAN BE OMITTED FROM THE TOP TIER.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 6"	52	35
NAILS	NO. REQD	POUNDS
10d (3")	64	1
STEEL STRAPPING, 1-1/4" -- 198' REQD -- 28.29 LBS		
SEAL FOR 1-1/4" STRAPPING -- 11 REQD -- 0.50 LBS		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-446/E	11	36,850 LBS
DUNNAGE		100 LBS
TOTAL WEIGHT		36,950 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① UNITIZING STRAP, 1-1/4" X .035" OR .031" X 23'-0" LONG STEEL STRAPPING (8 REQD). INSTALL TO ENCIRCLE A STACK OF THREE CONTAINERS. SEE SPECIAL NOTE 2 ON PAGE 9.
- ② SEAL FOR 1-1/4" STRAPPING (8 REQD). CRIMP WITH TWO PAIR OF NOTCHES. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 5.
- ③ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (2 REQD). POSITION AGAINST THE FORWARD END OF THE LOAD UNITS. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/9-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/9-10d NAILS.
- ④ HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (2 REQD). POSITION AGAINST THE REAR OF THE LOAD UNITS. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/9-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/9-10d NAILS.

HEADER NAILING CHART *	
# NAILS	MAX. LOAD WEIGHT (LBS)
4	10,000
5	12,500
6	15,000
7	17,500
8	20,000
9	22,500
10	25,000
11	27,500
12	30,000
13	32,500
14	35,000
15	37,500
16	40,000
17	42,500
18	45,000

* THE NUMBER OF NAILS INDICATED ABOVE REFERS TO THE NUMBER OF 10d NAILS USED IN EACH LAMINATION OF A HEADER, FOR EXAMPLE 8 NAILS MEANS THE FIRST BOARD IS NAILED TO THE TRAILER FLOOR W/8-10d NAILS, AND THE SECOND BOARD IS LAMINATED TO THE FIRST W/8-10d NAILS, FOR A TOTAL OF 16 NAILS.

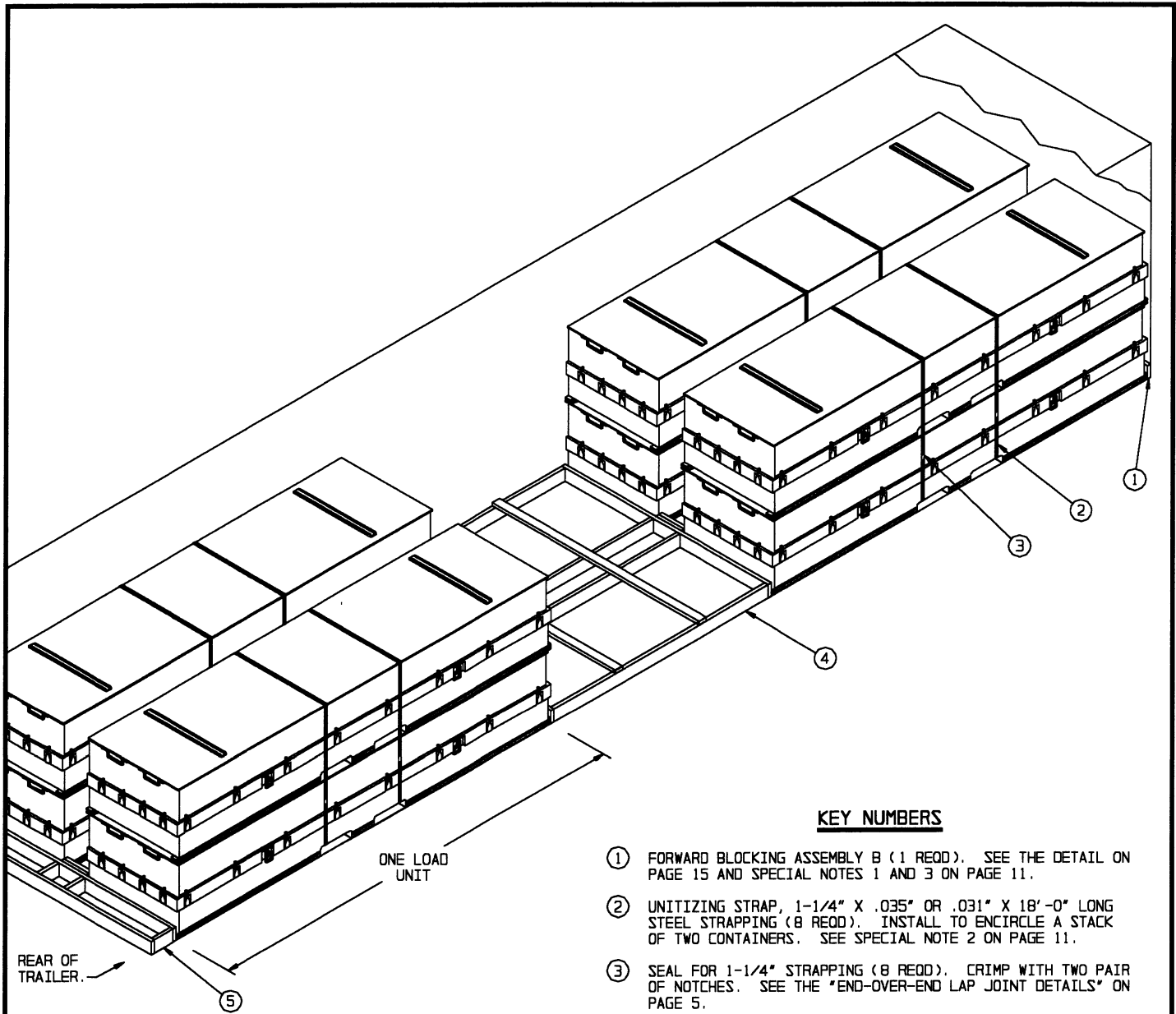
SPECIAL NOTES:

1. A 12-UNIT LOAD IS SHOWN IN A 45'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSIONS) VAN TRAILER WITH DOORWAY HEIGHT GREATER THAN 93". TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED. DO NOT LOAD AGAINST THE FORWARD WALL.
2. CONTAINERS MUST BE UNITIZED INTO STACKS OF THREE CONTAINERS PRIOR TO LOADING INTO THE VAN TRAILER. THE STACKS WILL BE FORMED AT THE REAR OF THE TRAILER BY POSITIONING THE CONTAINERS WITH ONE END RESTING JUST INSIDE THE REAR OF THE TRAILER. TWO CONTAINERS WILL BE POSITIONED ON TOP OF THE FIRST, CREATING A STACK OF THREE. THE UNITIZING STRAP WILL THEN BE INSTALLED, AND THE STACK CAN THEN BE PARTIALLY LIFTED FROM THE REAR AND PUSHED INTO THE TRAILER. USE CAUTION SO AS NOT TO DAMAGE THE CONTAINERS.
3. IF THE SPACE BETWEEN LATERALLY ADJACENT CONTAINERS GREATER THAN 6", AS MEASURED FROM SKID TO SKID, INSTALL TWO 2" X 6" LATERAL BRACING PIECES ON THE NAILED DOWN HEADERS, LOCATED BETWEEN ADJACENT CONTAINERS. NAIL THE FIRST PIECE TO THE HEADER W/4-10d NAILS, AND NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE PIECE MARKED ⑤ IN THE LOAD ON PAGE 12, FOR AN EXAMPLE.
4. A REAR BLOCKING ASSEMBLY MAY BE USED AT THE REAR OF THE LOAD IN PLACE OF THE NAILED HEADER, IF DESIRED. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" OR LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 17. IF THE SPACE AT THE REAR OF THE LOAD EXCEEDS 9", USE REAR BLOCKING ASSEMBLY "A" AS DETAILED ON PAGE 16.
5. THE DEPICTED LOAD CAN BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED. A THREE-TIER LOAD CAN BE REDUCED BY A MULTIPLE OF SIX CONTAINERS BY OMITTING ONE OR MORE FULL LOAD UNITS FROM THE LOAD; OR, THE ENTIRE TOP TIER OR TIERS CAN BE LEFT OFF; OR, ONE OR MORE CONTAINERS CAN BE OMITTED FROM THE TOP TIER.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	31	21
2" X 6"	31	31
NAILS	NO. REQD	POUNDS
10d (3")	72	1-1/4
STEEL STRAPPING, 1-1/4"	-- 184' REQD --	26.29 LBS
SEAL FOR 1-1/4" STRAPPING	-- 8 REQD --	0.37 LBS

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-446/E	12	40,200 LBS
DUNNAGE		132 LBS
TOTAL WEIGHT		40,332 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY B (1 REQD). SEE THE DETAIL ON PAGE 15 AND SPECIAL NOTES 1 AND 3 ON PAGE 11.
- ② UNITIZING STRAP, 1-1/4" X .035" OR .031" X 18'-0" LONG STEEL STRAPPING (8 REQD). INSTALL TO ENCIRCLE A STACK OF TWO CONTAINERS. SEE SPECIAL NOTE 2 ON PAGE 11.
- ③ SEAL FOR 1-1/4" STRAPPING (8 REQD). CRIMP WITH TWO PAIR OF NOTCHES. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 5.
- ④ SPACER ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 17 AND SPECIAL NOTES 3 AND 5 ON PAGE 11.
- ⑤ REAR BLOCKING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 16 AND SPECIAL NOTES 3 AND 4 ON PAGE 11.

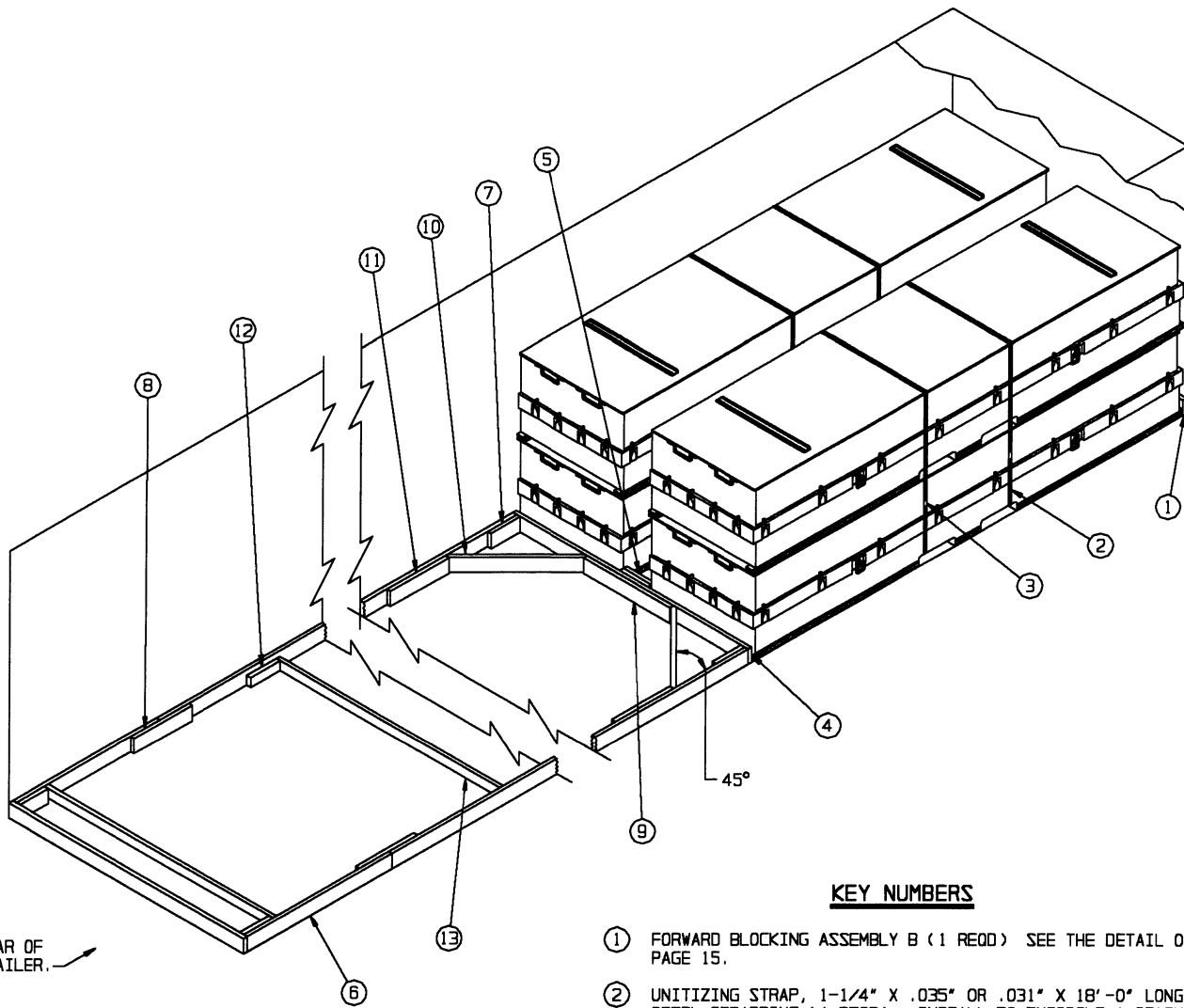
SPECIAL NOTES:

1. AN EIGHT-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 8'-2" (INSIDE DIMENSIONS) VAN TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED. THE LOAD AS SHOWN ON PAGE 10 REQUIRES A VAN EQUIPPED WITH A SQUARE FRONT OR WITH AN INSTALLED BULKHEAD, WHEN LOADED AS SHOWN. IF A TRAILER WITH ROUNDED CORNERS IS TO BE LOADED, A FORWARD BLOCKING ASSEMBLY "A", AS DEPICTED ON PAGE 15, WILL BE USED AT THE FORWARD END OF THE TRAILER. SEE SPECIAL NOTE 3 BELOW.
2. CONTAINERS MUST BE UNITIZED INTO STACKS OF TWO CONTAINERS PRIOR TO LOADING INTO THE VAN TRAILER. THE STACKS WILL BE FORMED AT THE REAR OF THE TRAILER BY POSITIONING THE CONTAINERS WITH ONE END RESTING JUST INSIDE THE REAR OF THE TRAILER. ONE CONTAINER WILL BE POSITIONED ON TOP OF ANOTHER, THE UNITIZING STRAP WILL BE INSTALLED, AND THE STACK CAN THEN BE PARTIALLY LIFTED FROM THE REAR AND PUSHED INTO THE TRAILER. USE CAUTION SO AS NOT TO DAMAGE THE CONTAINERS.
3. IF THE SPACE BETWEEN LATERALLY ADJACENT CONTAINERS IS 6" OR LESS, AS MEASURED FROM SKID TO SKID, THE 2" X 6" LATERAL BRACING PIECES, ON PIECES ④ AND ⑤, MAY BE OMITTED. THE FORWARD BLOCKING ASSEMBLY MAY BE TOTALLY OMITTED FOR LOADS WITH 6" OR LESS OF LATERAL VOID, PROVIDED THE FORWARD WALL OF THE TRAILER IS NOT ROUNDED.
4. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" OR LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 17. IF THE SPACE AT THE REAR OF THE LOAD EXCEEDS 9", USE REAR BLOCKING ASSEMBLY "A" AS SHOWN.
5. THE SPACER ASSEMBLY, SHOWN AS PIECE MARKED ④ IN THE LOAD ON PAGE 10, IS TO BE USED FOR THE PURPOSE OF PROVIDING FOR PROPER WEIGHT DISTRIBUTION, AND IS SHOWN AS TYPICAL ONLY. IF THE TRAILER TO BE LOADED IS LONGER THAN 40', THE STRUT LENGTHS MAY BE DIFFERENT FROM WHAT IS SHOWN. NOTE THAT THE SPACER ASSEMBLY MUST NOT BE POSITIONED ADJACENT TO THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①.
6. IF THE TRAILER HAS SUFFICIENT NAILING AREA AT THE REAR OF THE LOAD, A NAILED HEADER MAY BE USED IN LIEU OF A REAR BLOCKING ASSEMBLY. SEE PIECE MARKED ④ ON PAGE 8 FOR GUIDANCE. THE HEADER WILL BE NAILED W/11-10d NAILS IN THE FIRST LAYER AND 11-20d NAILS IN THE SECOND LAYER. SEE THE "HEADER NAILING CHART" ON PAGE 9.
7. THE DEPICTED LOAD CAN BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED. A TWO-TIER LOAD CAN BE REDUCED BY A MULTIPLE OF FOUR CONTAINERS BY OMITTING ONE OR MORE FULL LOAD UNITS FROM THE LOAD; OR, THE ENTIRE TOP TIER CAN BE LEFT OFF; OR, ONE OR MORE CONTAINERS CAN BE OMITTED FROM THE TOP TIER.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	17	12
2" X 6"	85	85
NAILS	NO. REQD	POUNDS
10d (3")	96	1-1/2
STEEL STRAPPING, 1-1/4" -- 144' REQD -- 20.58 LBS		
SEAL FOR 1-1/4" STRAPPING -- 8 REQD -- 0.37 LBS		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-446/E	8	26,800 LBS
DUNNAGE		217 LBS
TOTAL WEIGHT		27,017 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY B (1 REQD) SEE THE DETAIL ON PAGE 15.
- ② UNITIZING STRAP, 1-1/4" X .035" OR .031" X 18'-0" LONG STEEL STRAPPING (4 REQD). INSTALL TO ENCIRCLE A STACK OF TWO CONTAINERS. SEE SPECIAL NOTE 2 ON PAGE 13.
- ③ SEAL FOR 1-1/4" STRAPPING (4 REQD). CRIMP WITH TWO PAIR OF NOTCHES. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 5.
- ④ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD).
- ⑤ LATERAL BRACING, 2" X 6" BY CUT TO FIT MINUS 1" (DOUBLED) (1 REQD). NAIL THE FIRST PIECE TO THE FORWARD HEADER, PIECE MARKED ④, W/4-10d NAILS. LAMINATE THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ⑥ SIDE STRUT, 2" X 6" BY CUT TO FIT BETWEEN THE FORWARD AND REAR HEADERS, PIECES MARKED ④ (2 REQD). SEE SPECIAL NOTE 4 ON PAGE 13.
- ⑦ POCKET CLEAT, 2" X 6" X 12" (4 REQD). NAIL TO A SIDE STRUT, PIECE MARKED ⑥, W/3-10d NAILS. TOENAIL TO THE ADJACENT HEADER, PIECE MARKED ④, W/3-12d NAILS.
- ⑧ SPLICE PIECE, 2" X 6" X 24" (AS REQD). CENTER ON JOINT OF PIECES MARKED ⑥ AND NAIL TO SIDE STRUT MARKED ⑥ W/4-10d NAILS AT EACH END. SEE SPECIAL NOTE 4 ON PAGE 13.
- ⑨ CENTER CLEAT, 2" X 6" X 30" (1 REQD). NAIL TO A HEADER, PIECE MARKED ④, W/6-10d NAILS.

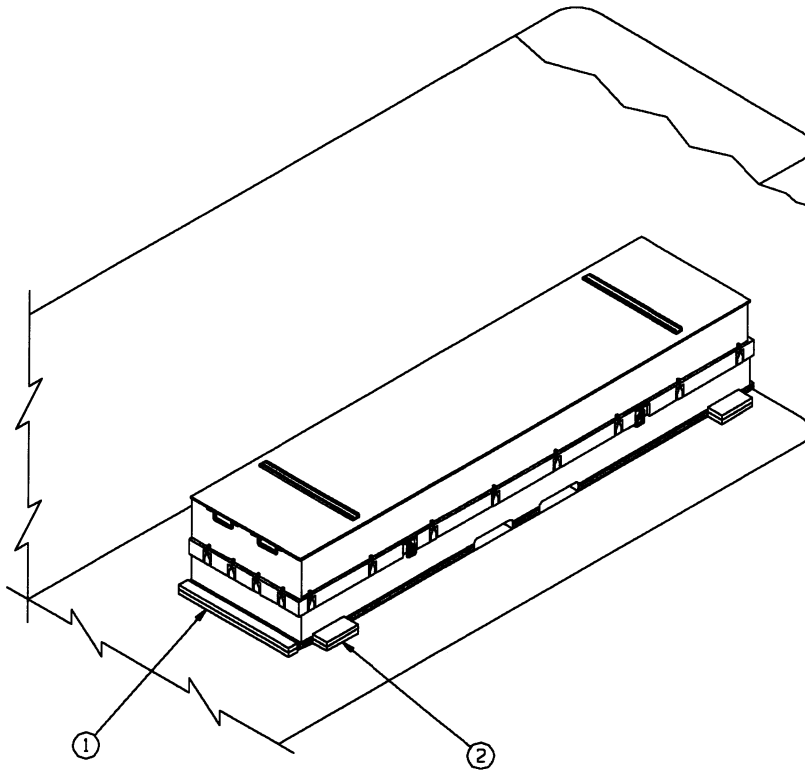
(KEY NUMBERS CONTINUED)

- ⑩ 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 AND SIDE STRUT, PIECES MARKED ④ AND ⑥, W/2-16d NAILS AT EACH END.
- ⑪ BACK-UP CLEAT, 2" X 6" X 24" (2 REQD). NAIL TO A SIDE STRUT, PIECE MARKED ⑥, W/8-10d NAILS.
- ⑫ STRUT BRACE RETAINING CLEAT, 2" X 4" X 12" (AS REQD). NAIL TO A SIDE STRUT, PIECE MARKED ⑥, W/3-10d NAILS. SEE SPECIAL NOTE 4 ON PAGE 13.
- ⑬ STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 3" IN LENGTH (MINIMUM OF ONE REQUIRED). NAIL TO THE POCKET CLEATS, PIECES MARKED ⑦, AND/OR TO THE STRUT BRACE RETAINING CLEATS, PIECES MARKED ⑫, W/2-12d NAILS AT EACH END. SEE SPECIAL NOTE 4 ON PAGE 13.

(CONTINUED AT LEFT)

SPECIAL NOTES:

1. A 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED. THE LOAD AS SHOWN ON PAGE 12 REQUIRES A VAN EQUIPPED WITH A SQUARE FRONT OR WITH AN INSTALLED BULKHEAD, WHEN LOADED AS SHOWN. IF A TRAILER WITH ROUNDED CORNERS IS TO BE LOADED, A FORWARD BLOCKING ASSEMBLY "A", AS DEPICTED ON PAGE 15, WILL BE USED IN PLACE OF THE FORWARD BLOCKING ASSEMBLY "B", PIECE MARKED ①. SEE SPECIAL NOTE 3 BELOW.
2. CONTAINERS MUST BE UNITIZED INTO STACKS OF TWO CONTAINERS PRIOR TO LOADING INTO THE VAN TRAILER. THE STACKS WILL BE FORMED AT THE REAR OF THE TRAILER BY POSITIONING THE CONTAINERS WITH ONE END RESTING JUST INSIDE THE REAR OF THE TRAILER. ONE CONTAINER WILL BE POSITIONED ON TOP OF ANOTHER, THE UNITIZING STRAP WILL BE INSTALLED, AND THE STACK CAN THEN BE PARTIALLY LIFTED FROM THE REAR AND PUSHED INTO THE TRAILER. USE CAUTION SO AS NOT TO DAMAGE THE CONTAINERS.
3. IF THE SPACE BETWEEN LATERALLY ADJACENT CONTAINERS IS 6" OR LESS, AS MEASURED FROM SKID TO SKID, THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①, MAY BE ELIMINATED IN A TRAILER WITH A SQUARE FRONT. ALSO, OMIT THE LATERAL BRACING, PIECE MARKED ⑤, IF THE LATERAL VOID IS 6" OR LESS.
4. DEPENDING ON THE NUMBER OF UNITS BEING LOADED, EACH OF THE SIDE STRUTS, PIECES MARKED ⑥, MAY NEED TO BE FORMED FROM MORE THAN ONE PIECE OF MATERIAL. IF SUCH IS THE CASE, THE SIDE STRUTS MUST BE SPLICED. SPLICING CAN BE ACCOMPLISHED BY CENTERING A 2" X 6" X 24" PIECE ON THE JOINT OF THE SIDE STRUTS AND NAILING IT TO THE SIDE STRUTS W/4-10d NAILS AT EACH END. NOTE: IF DESIRED, THE STRUT BRACE PIECE(S), PIECE MARKED ⑬, MAY BE NAILED TO THE SPLICE PIECES IN LIEU OF USING ADDITIONAL STRUT BRACE RETAINING CLEATS, PIECE MARKED ⑫.
5. ALL LTL LOADS, REGARDLESS OF THEIR SIZE, REQUIRE ONE STRUT BRACE POSITIONED AT THE REAR OF THE TRAILER AND NAILED TO PIECE MARKED ⑦. IF THE SIDE STRUTS, PIECE MARKED ⑥, ARE LONGER THAN 7'-0", AN ADDITIONAL STRUT BRACE, PIECE MARKED ⑬, AND TWO STRUT BRACE RETAINING CLEATS, PIECE MARKED ⑫, MUST BE APPLIED FOR EVERY 7'-0" OF SIDE STRUT LENGTH.
6. THE "K-BRACE" BLOCKING, SHOWN AS PIECES MARKED ④ AND ⑤ THRU ⑬, IS ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD OF 20,000 POUNDS.
7. 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 18 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD OF REAR BLOCKING MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS AND NAILABLE FLOORS, AND MAY BE USED IN LIEU OF PIECES MARKED ④ AND ⑤ THRU ⑬ WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS.



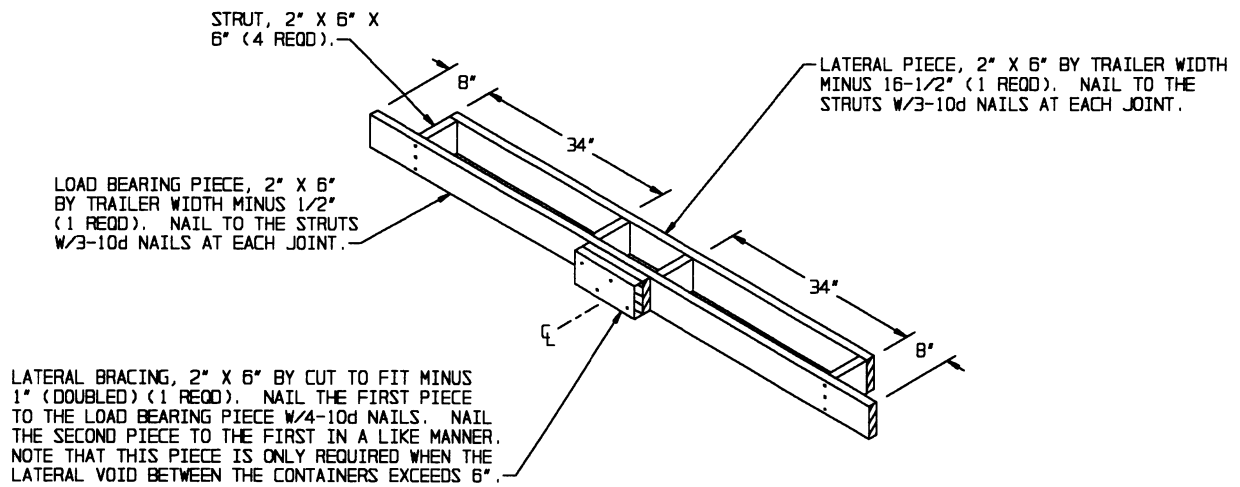
ISOMETRIC VIEW

SPECIAL NOTES:

1. A ONE-UNIT LOAD IS SHOWN IN A 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER. TRAILERS OF OTHER WIDTHS MAY BE USED.
2. IF MORE THAN ONE CONTAINER IS TO BE TRANSPORTED, THE LOAD SHOULD BE FORMED IN ROWS, WITH THE CONTAINERS POSITIONED AGAINST THE OPPOSITE SIDEWALLS, AS SHOWN IN THE LOAD DEPICTED ON PAGE 8.
3. IF THE TRAILER BEING LOADED HAS A SQUARE FRONT, THE CONTAINER MAY BE LOADED WITH ONE OF ITS SIDES IN TIGHT CONTACT WITH THE TRAILER SIDEWALL. IF LOADING A CONTAINER IN THIS MANNER, ELIMINATE TWO OF THE SIDE BLOCKING PIECES.

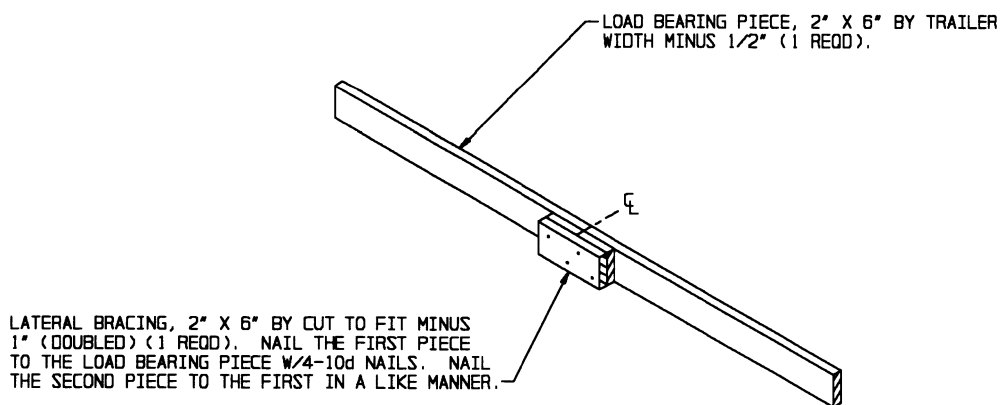
KEY NUMBERS

- ① HEADER, 2" X 4" X 43" (DOUBLED) (1 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/3-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ② SIDE BLOCKING, 2" X 6" X 12" (DOUBLED) (4 REQD). POSITION NEAR END OF CONTAINER AND NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/4-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.



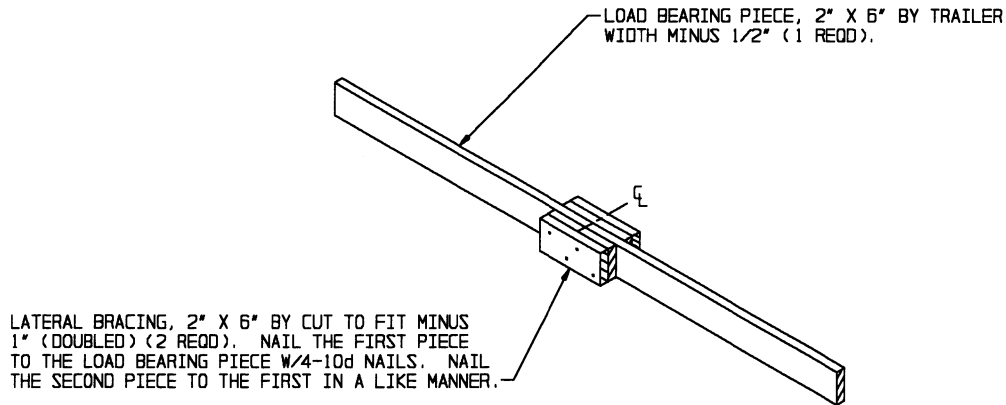
FORWARD BLOCKING ASSEMBLY A

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 GREATER THAN 6-1/2", INCREASE THE LENGTH OF THE STRUTS PROPORTIONALLY.



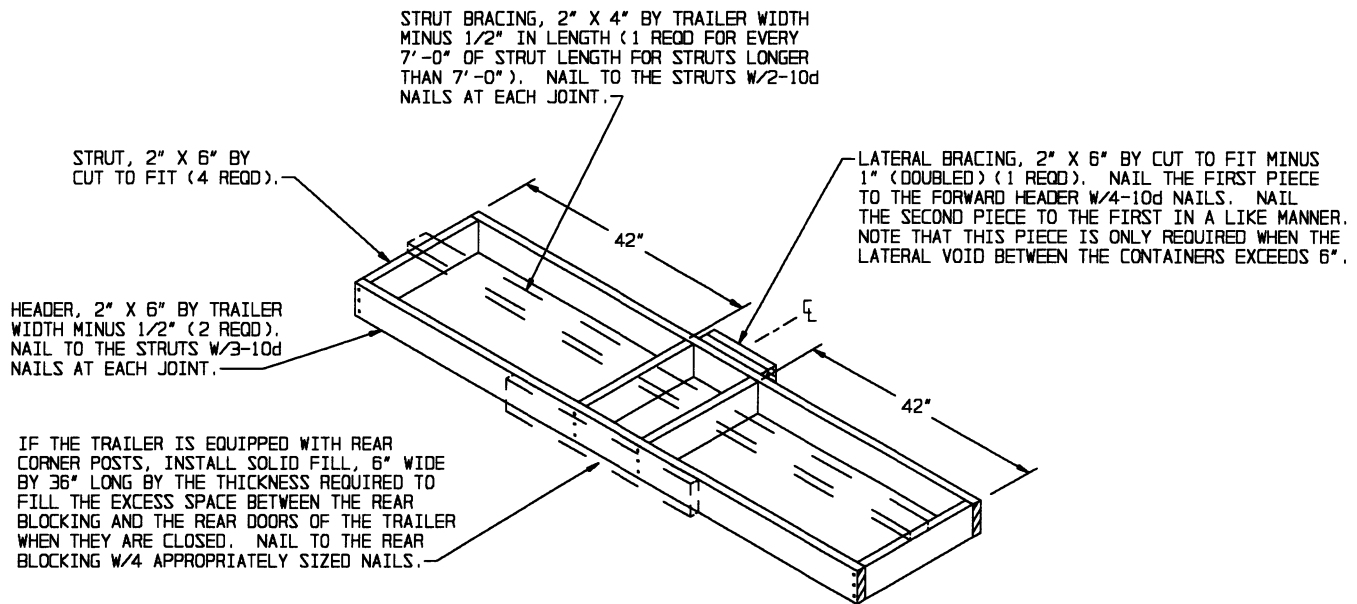
FORWARD BLOCKING ASSEMBLY B

THIS ASSEMBLY IS DESIGNED FOR USE AT THE FRONT END OF A TRAILER HAVING A SQUARE FRONT, AND IS ONLY APPLICABLE FOR LOADS WHERE THE LATERAL VOID BETWEEN THE CONTAINERS IS GREATER THAN 6".



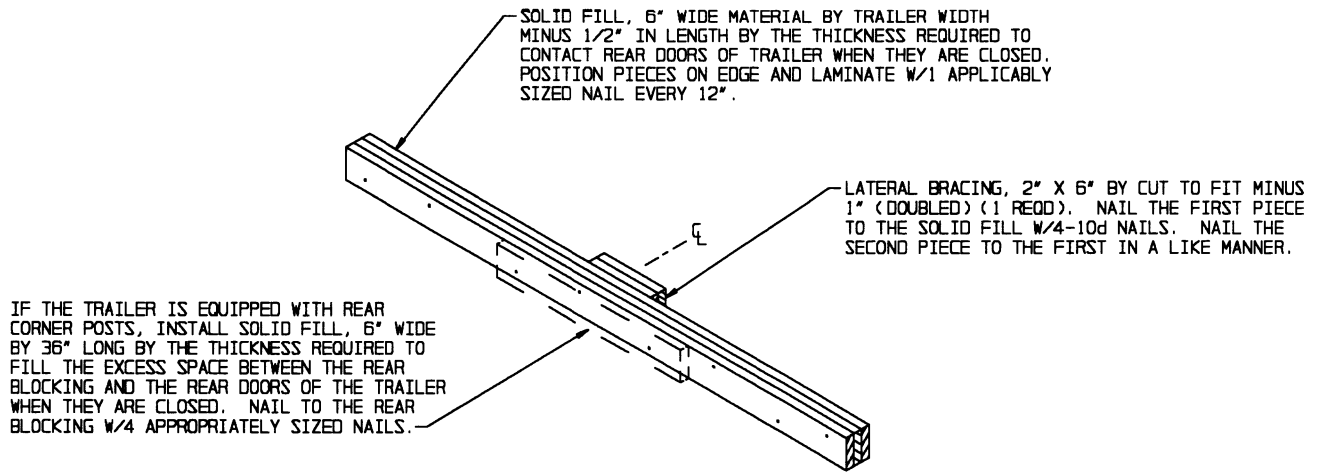
HEADER ASSEMBLY

THIS ASSEMBLY IS DESIGNED FOR USE BETWEEN LONGITUDINALLY ADJACENT CONTAINERS. FOR LOADS WHERE THE LATERAL VOID BETWEEN THE CONTAINERS IS 6" OR LESS, THE LATERAL BRACING WILL BE ELIMINATED.



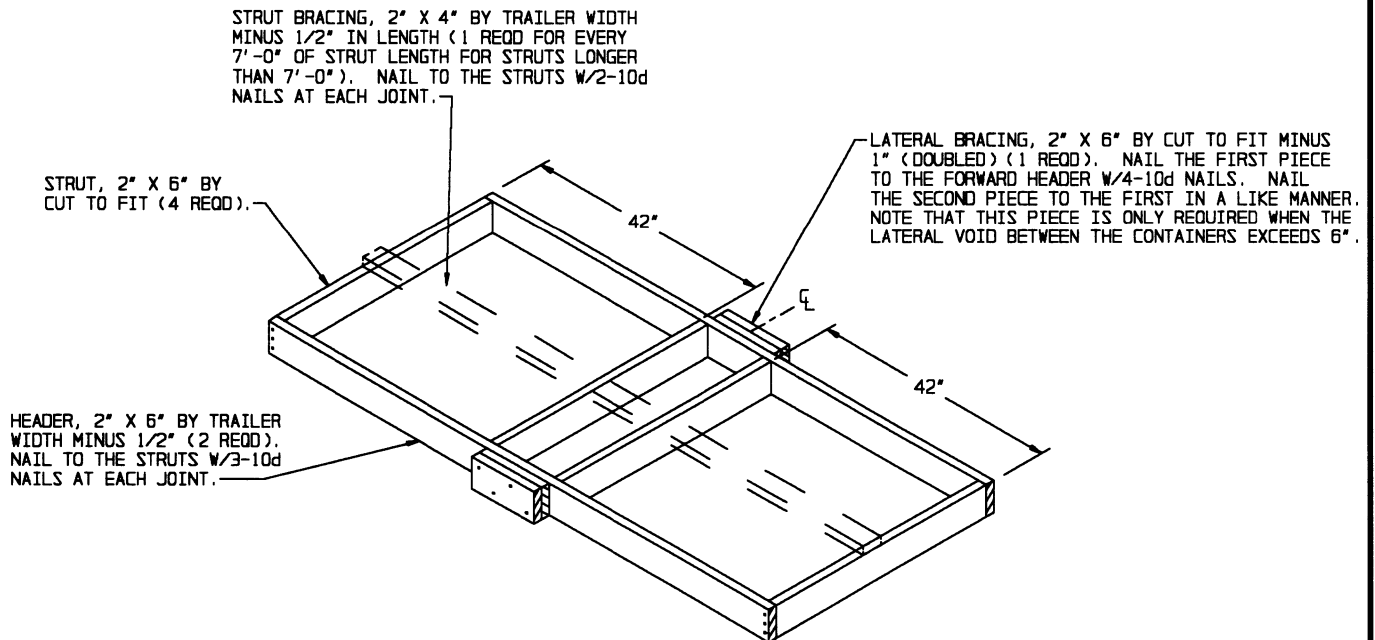
REAR BLOCKING ASSEMBLY A

THIS ASSEMBLY IS DESIGNED FOR USE AT THE REAR OF A LOAD WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOOR IS MORE THAN 9".



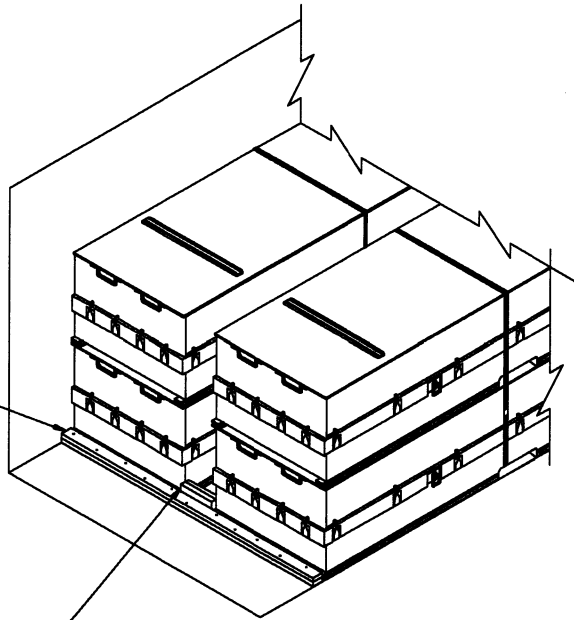
REAR BLOCKING ASSEMBLY B

THIS ASSEMBLY IS DESIGNED FOR USE AT THE REAR OF A LOAD WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOOR IS GREATER THAN 1-1/2" OR LESS THAN 9".



SPACER ASSEMBLY

HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (DOUBLED) (1 REOD). POSITION AGAINST THE CONTAINER SKIDS. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/11-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 2 BELOW.



LATERAL BRACING, 2" X 6" BY CUT TO FIT MINUS 1" (DOUBLED) (1 REOD). NAIL THE FIRST PIECE TO THE HEADER W/4-10d NAILS. LAMINATE THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.

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 DEPICTED ABOVE IS ADEQUATE FOR THE RETENTION OF 27,500 POUNDS. FOR LOADS OF GREATER OR LESS WEIGHT, SEE THE "HEADER NAILING CHART" ON PAGE 9 TO DETERMINE THE QUANTITY OF NAILS REQUIRED.
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