

LOADING AND BRACING (TL & LTL) IN VAN TRAILERS[⊕] OF CBU ITEMS PACKED IN CNU-80/E CONTAINERS AND/OR MAU ITEMS PACKED IN CNU-203/E AND/OR CNU-152/E CONTAINERS

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⊕ CAUTION: THE OUTLOADING PROCEDURES SHOWN HEREIN ARE ONLY APPLICABLE TO HIGHWAY MOVEMENTS, NOT TRAILER-ON-FLATCAR MOVEMENTS.

U.S. ARMY MATERIEL COMMAND DRAWING			
APPROVED, U.S. ARMY INDUSTRIAL OPERATIONS COMMAND <i>David E. Stoeberich</i>	DRAFTSMAN	TECHNICIAN	ENGINEER
	S. WILSON	R. ARNOLD R. HAYNES	
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND <i>William F. Ernst</i>	VALIDATION ENGINEERING DIVISION	TRANSPORTATION ENGINEERING DIVISION	LOGISTICS ENGINEERING OFFICE
	<i>JMK</i>	<i>W. Eruech</i>	<i>T.J. Michels</i>
OCTOBER 1967			
U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL			
REVISION NO. 1	OCTOBER 1996	CLASS	DIVISION
		DRAWING	FILE
		19	48
		7038	SP11M3
SEE THE REVISION LISTING ON PAGE 2			

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 FOR CBU ITEMS PACKED IN CNU-80/E CONTAINERS AND MAU ITEMS INCLUDING MAU-157/B, MAU-157A/B, AND MAU-169/B PACKED IN CNU-152/E AND/OR CNU-203/E CONTAINERS. SUBSEQUENT REFERENCE TO CONTAINER HEREIN MEANS THE CONTAINER WITH CBU OR MAU ITEMS. SEE THE "CONTAINER STACK DETAIL" ON PAGE 3 AND 4 FOR DETAILS OF THE CONTAINER.
- C. THE OUTLOADING PROCEDURES DEPICTED WITHIN THIS DOCUMENT ARE APPLICABLE FOR SHIPMENTS IN CONVENTIONAL TYPE VAN TRAILERS AND APPLY TO TRAILERS HAVING WOOD, OR WOOD AND METAL, OR ALL METAL FLOORS. VAN TRAILERS WHICH ARE 45'-0" LONG BY 8'-2" AND 7'-8" 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 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 SPECIFIED BLOCKING AND BRACING FOR THE FULL LOADS IS ADEQUATE FOR THE RETENTION OF LOADS, UP TO 43,000 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 PALLET UNITS OF COMPLETE ROUNDS, PROVIDING THE TOTAL LOAD IS COMPATIBLE, EXISTING DIRECTIVES ARE NOT VIOLATED, AND THE OTHER LADING ITEMS ARE BLOCKED AND BRACED TO EQUAL THE BLOCKING AND BRACING CRITERIA SPECIFIED HEREIN.
- J. 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 17 FOR GUIDANCE.

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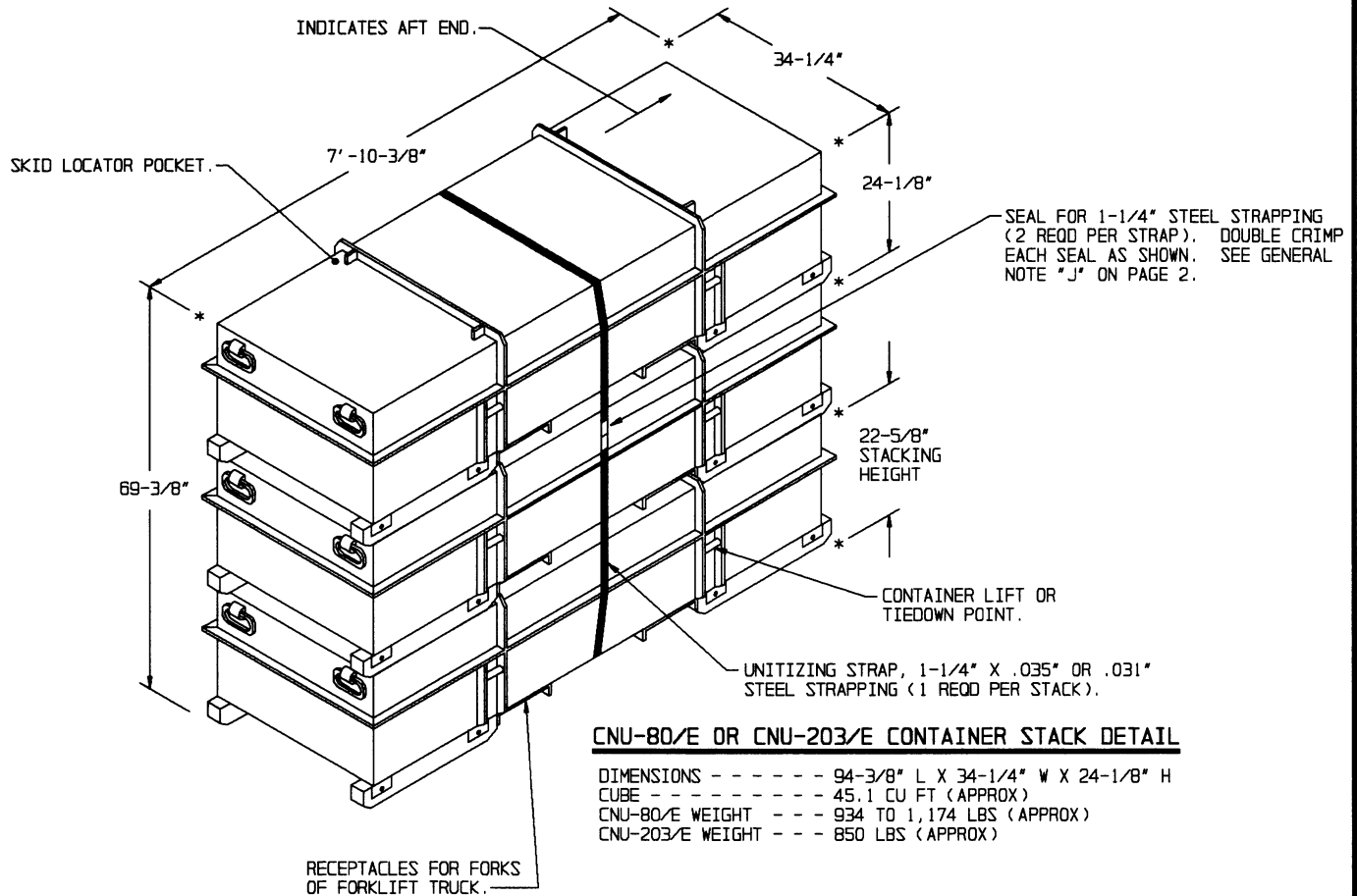
- K. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.
- L. NOTICE: A STAGGERED NAILING PATTERN WILL BE USED WHEREVER POSSIBLE WHEN NAILS ARE 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.
- M. 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.
- N. PORTIONS OF THE TRAILERS, SUCH AS SIDEWALLS, ENDWALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- O. 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 12". USE THE "REAR BLOCKING ASSEMBLY A" AS DEPICTED ON PAGE 16. IF THE VOID AT THE REAR OF THE LOAD IS 12" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY B", AS SHOWN ON PAGE 17.
- P. CAUTION: WHEN POWER OR PNEUMATIC NAILERS ARE BEING USED IN THE APPLICATION OF NAILED FLOORLINE BLOCKING OR BRACING, PALLET UNITS 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.
- Q. 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.

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.

REVISION

- REVISION NO. 1, DATED OCTOBER 1996, CONSISTS OF:
1. UPDATING DRAWING TO INCLUDE ADDITIONAL ITEMS AND CONTAINERS.
 2. UPDATING DRAWING TO INCLUDE NEWER LARGER SIZE VAN TRAILERS.
 3. UPDATING DRAWING FORMAT AND NOTES.



CNU-80/E OR CNU-203/E CONTAINER STACK DETAIL

DIMENSIONS	-----	94-3/8" L X 34-1/4" W X 24-1/8" H
CUBE	-----	45.1 CU FT (APPROX)
CNU-80/E WEIGHT	---	934 TO 1,174 LBS (APPROX)
CNU-203/E WEIGHT	---	850 LBS (APPROX)

UNITIZATION, STACKING AND HANDLING GUIDANCE

(UNITIZATION AND HANDLING GUIDANCE CONTINUED)

1. STACKING CONTAINERS FOR UNITIZING.
 - A. UPPER CONTAINER SHOULD BE PLACED AS CLOSE AS POSSIBLY 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 IN THE SKID LOCATOR POCKETS ON THE COVER OF THE NEXT LOWER CONTAINER.
2. INSTALLATION OF 1-1/4" X .035" OR .031" UNITIZING STRAPPING.
 - A. THE UNITIZING STRAP SHOULD BE POSITIONED AROUND THE CONTAINERS AS SHOWN, SO THAT THE STRAPPING LAYS FLAT AND STRAIGHT WITH THE BODY SURFACES OF THE CONTAINERS; I.E., VERTICAL ALONG THE SIDES AND FLAT ACROSS THE TOP AND BOTTOM OF THE STACK.
 - B. THE STRAPPING WILL BE FIRMLY TENSIONED, AND EACH END-OVER-END LAP JOINT WILL BE SEALED WITH TWO DOUBLED CRIMPED STRAP SEALS AS SHOWN. THE LAP JOINTS WILL BE MADE ALONG THE SIDE OF THE STACK SO THAT THE SEALS WILL NOT BE IN CONTACT WITH THE CONTAINERS. DURING STRAP TENSIONING, CARE SHOULD BE EXERCISED TO ENSURE THAT THE CONTAINERS ARE NOT DAMAGED. EXCESS STRAPPING (STRAP ENDS) SHOULD BE CUT OFF OR BROKEN OFF NEAR THE JOINT SEAL.

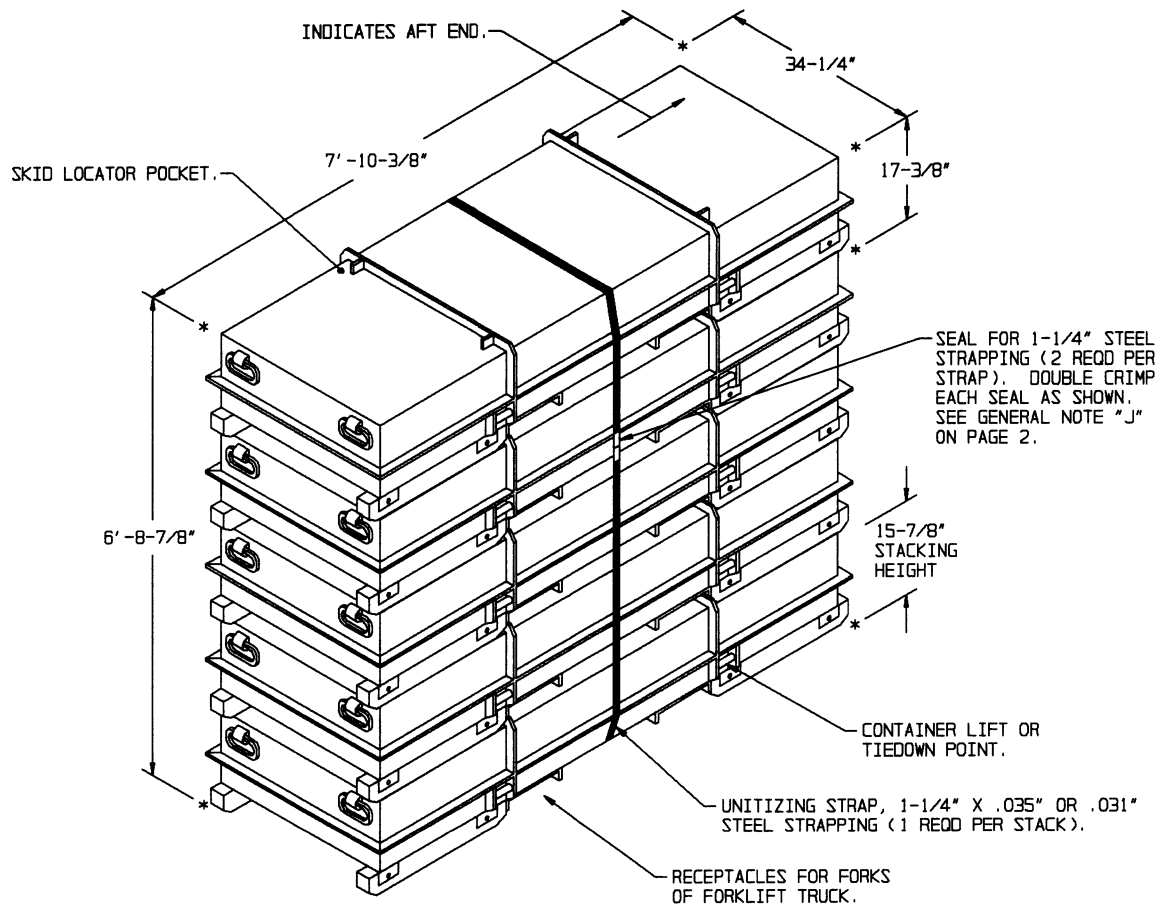
- A. ONLY APPROVED AND APPROPRIATELY SIZED MATERIAL HANDLING EQUIPMENT WILL BE USED FOR HANDLING THE DEPICTED CONTAINERS.
- B. IF HANDLING IS ACCOMPLISHED WITH A FORKLIFT TRUCK, THE CONTAINERS MUST BE HANDLED FROM A SIDE POSITION AS MUCH AS POSSIBLE. WHEN CONTAINERS ARE LOADED LENGTHWISE IN A TRAILER, THEY SHOULD BE POSITIONED WITH THE AFT END TOWARD THE FRONT OF THE TRAILER TO HELP PREVENT DAMAGE TO THE HUMIDITY INDICATOR AND AIR VENT DURING HANDLING. CARE MUST BE EXERCISED WHEN INSERTING FORKS UNDER A CONTAINER, TO PREVENT DAMAGE TO A CONTAINER BY THE FORK TINES OR THE FORKLIFT PACKAGE GUARD. FOR VERY SHORT "INCHING" SPEED MOVEMENTS, SUCH AS WILL BE EXPERIENCED DURING TRAILER LOADING, A UNITIZED TWO, OR THREE-HIGH CONTAINER STACK MAY BE HANDLED BY INSERTING THE FORKS OF A FORKLIFT TRUCK INTO THE FORK RECEPTACLES OF AN UPPER CONTAINER.
- C. IF ONE CONTAINER IS HANDLED BY SLINGING, THE SLING MAY BE ATTACHED TO THE LIFTING POINTS ON THE CONTAINER. HOWEVER, IF A TWO OR THREE-HIGH STACK IS HANDLED BY SLINGING, DO NOT ATTACH THE SLING TO THE LIFTING POINTS ON A CONTAINER. THE SLING USED MUST BE OF SUCH A DESIGN THAT THE LIFTING IS DONE ON THE BOTTOM OF THE LOWEST CONTAINER.
- D. WHEN LOADING A CONTAINER OR CONTAINER STACK, THE CONTAINER OR STACK WILL BE PARTIALLY PLACED INTO THE END OF THE TRAILER BY HANDLING WITH A FORKLIFT FROM THE SIDE. THE FORKLIFT THEN MUST INSERT ITS TINES FROM THE END OF THE CONTAINER OR STACK, LIFT THE END SLIGHTLY, THEN PROCEED TO PUSH THE CONTAINER OR STACK INTO ITS FINAL POSITION WITHIN THE TRAILER. CARE MUST BE EXERCISED TO AVOID DAMAGE TO THE CONTAINER ENDS, ETC., DURING PUSHING OPERATIONS.
- E. WHEN UNLOADING A CONTAINER OR CONTAINER STACK FROM THE TRAILER, THE FORKLIFT TINES WILL BE INSERTED UNDER THE LOWER CONTAINER, THE FORKLIFT WILL THEN ELEVATE THE END SLIGHTLY ABOVE THE FLOOR, AND BEGIN DRAGGING THE CONTAINER OR STACK FROM THE TRAILER AFTER ATTACHING A CHAIN OR WEB STRAP FROM A LOWER CONTAINER LIFT POINT AROUND THE FORKLIFT MAST TO A LOWER LIFT POINT ON THE OPPOSITE SIDE OF THE CONTAINER.

3. CONTAINER OR CONTAINER STACK HANDLING.

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

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

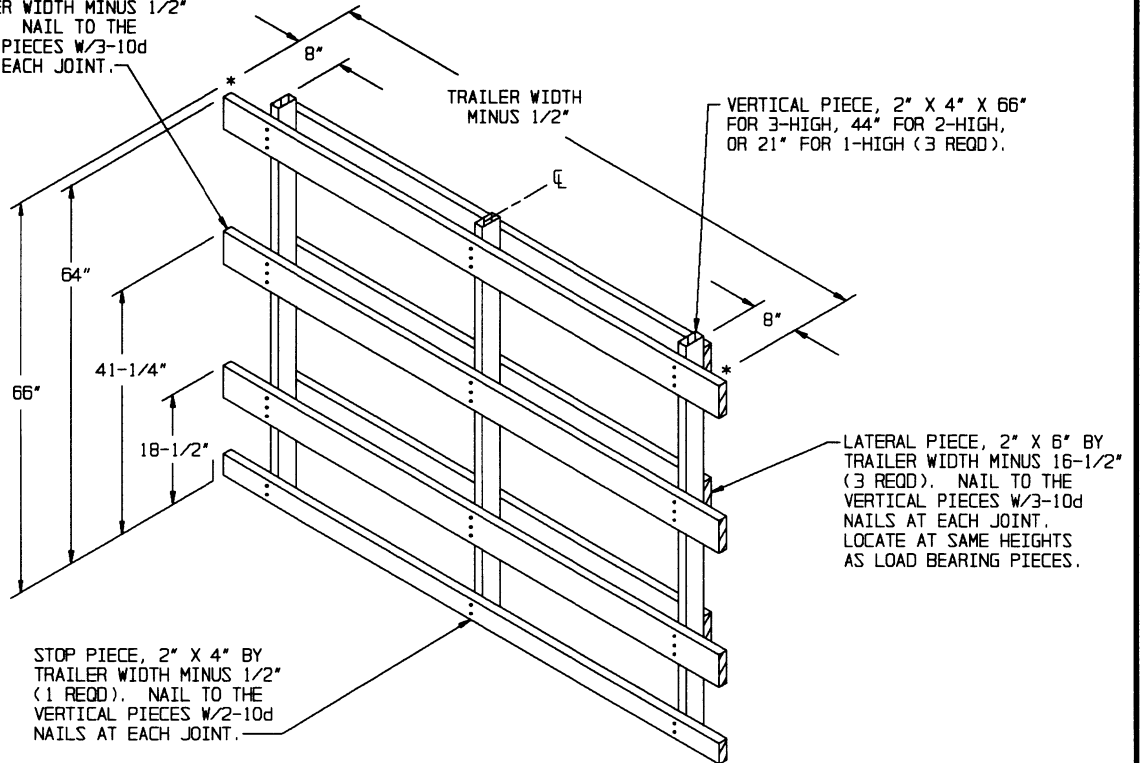
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CNU-152/E CONTAINER STACK DETAIL

DIMENSIONS - - - - - 94-3/8" L X 34-1/4" W X 17-3/8" H
 CUBE - - - - - 32.5 CU FT (APPROX)
 CNU-152/E WEIGHT - - - 693 LBS (APPROX)

LOAD BEARING PIECE, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (3 REQD). NAIL TO THE VERTICAL PIECES W/3-10d NAILS AT EACH JOINT.

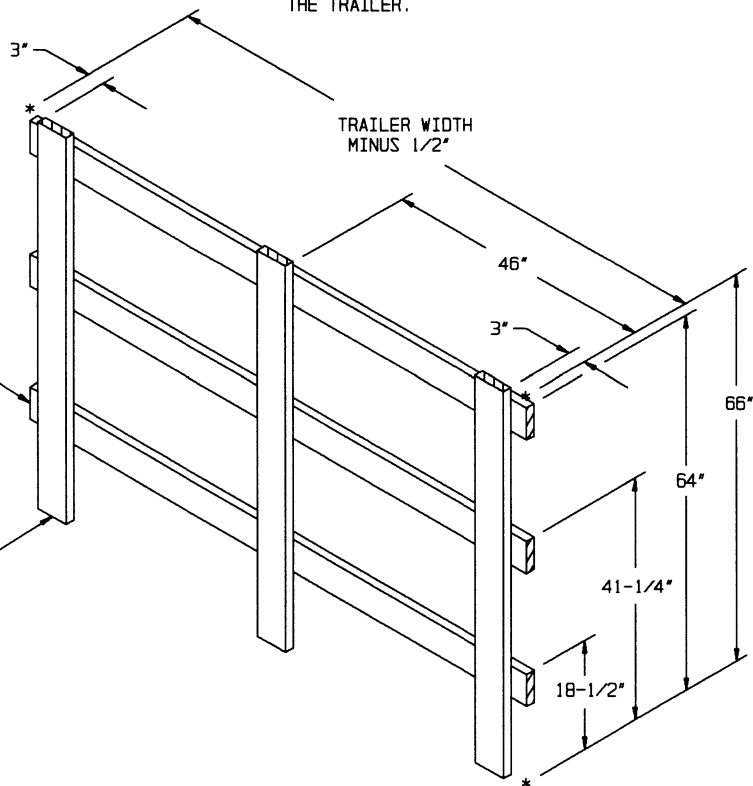


FORWARD BLOCKING ASSEMBLY A

THIS ASSEMBLY IS DESIGNED FOR USE AT THE FORWARD END OF A LOAD OF CROSSWISE-CONTAINER STACKS OF CNU-80/E AND/OR CNU-203/E CONTAINERS IN A TRAILER HAVING ROUNDED CORNERS, OR TO AID IN PROPER WEIGHT DISTRIBUTION OF THE LOAD IN THE TRAILER.

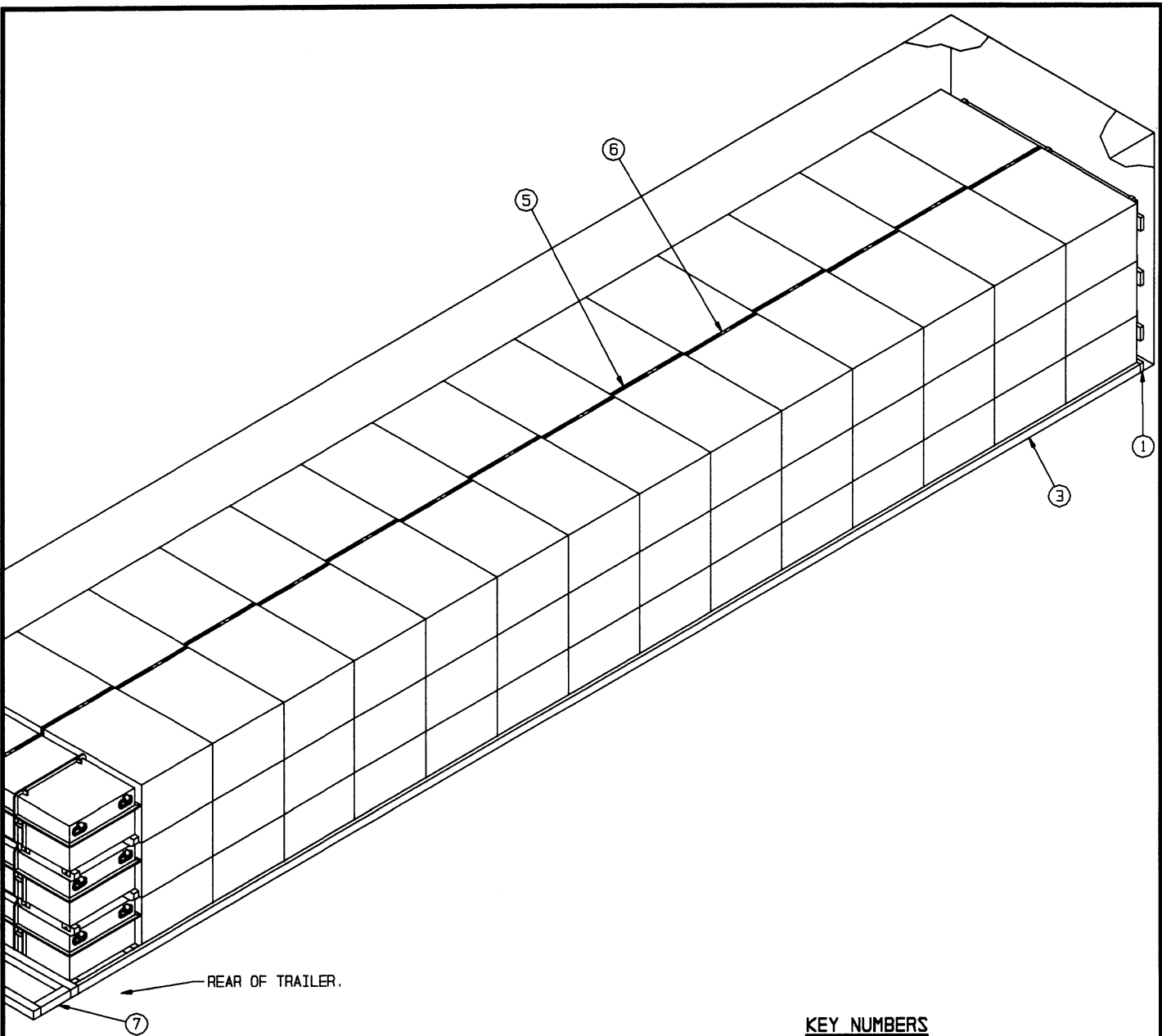
HORIZONTAL PIECE, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (3 REQD). NAIL TO THE VERTICAL PIECES W/3-10d NAILS AT EACH JOINT.

VERTICAL PIECE, 2" X 6" X 66" FOR 3-HIGH, 44" FOR 2-HIGH, OR 21" FOR 1-HIGH (3 REQD).



FORWARD BLOCKING ASSEMBLY B

THIS ASSEMBLY IS DESIGNED FOR USE AT THE FORWARD END OF A LOAD OF CROSSWISE-CONTAINER STACKS OF CNU-80/E AND/OR CNU-203/E CONTAINERS.



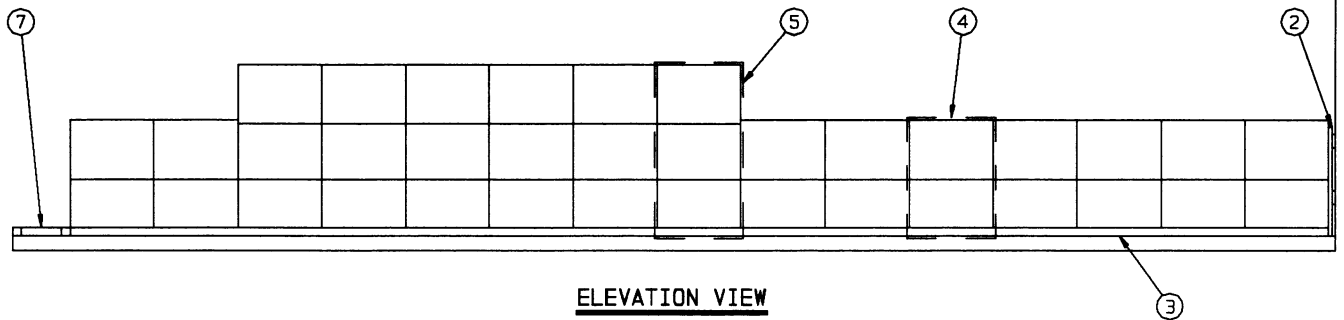
ISOMETRIC VIEW

CNU-80/E CONTAINERS AT 934 POUNDS
OR CNU-203/E CONTAINERS.

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY A (1 REQD AT 3-HIGH FOR PAGE 6). SEE THE DETAIL ON PAGE 5. SEE GENERAL NOTES "L" AND "M" ON PAGE 2. SEE SPECIAL NOTE 2 ON PAGE 7.
- ② FORWARD BLOCKING ASSEMBLY B (1 REQD AT FRONT OF 2-HIGH STACKS FOR LOAD ON PAGE 7).
- ③ SIDE BLOCKING, 2" X 4" X BY LOAD LENGTH (REF: 42'-9") (2 REQD). POSITION ON EDGE AT EACH SIDE OF THE LOAD. RANDOM LENGTHS MAY BE USED. SEE SPECIAL NOTE 5 ON PAGE 7.
- ④ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 14'-0" (9 REQD FOR LOAD ON PAGE 7). INSTALL TO ENCIRCLE A STACK OF TWO CONTAINERS. SEE THE "UNITIZATION AND HANDLING GUIDANCE" ON PAGE 4. SEE SPECIAL NOTE 6 ON PAGE 7.
- ⑤ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 18'-0" (15 REQD FOR ABOVE LOAD, 6 REQD FOR PAGE 7 LOAD). INSTALL TO ENCIRCLE A STACK OF THREE CONTAINERS.
- ⑥ SEAL FOR 1-1/4" STEEL STRAPPING (30 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "J" ON PAGE 2.
- ⑦ REAR BLOCKING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 16. SEE SPECIAL NOTE 7 ON PAGE 7.

**45-UNIT LOAD OF CNU-80/E OR CNU-203/E
CONTAINERS IN A 45'-0" LONG BY 8'-2" WIDE VAN TRAILER**



ELEVATION VIEW
CNU-80/E CONTAINERS AT 1,174 POUNDS.

(SPECIAL NOTES CONTINUED)

7. IF THE EXCESS SPACE AT THE REAR OF THE LOAD IS LESS THAN 1-1/2", REAR BLOCKING IS NOT REQUIRED. IF THE SPACE IS FROM 1-1/2" TO 12", SOLID FILL SHOULD BE USED. SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 17. IF THE EXCESS SPACE IS GREATER THAN 12", THE DEPICTED REAR BLOCKING ASSEMBLY WILL BE USED.
8. FORTY-FIVE CNU-203/E CONTAINERS CAN ALSO BE SHIPPED USING THE PROCEDURES DEPICTED ON PAGE 6. THE LADING WEIGHT FOR THE CNU-203/E CONTAINERS WILL BE 38,250 POUNDS.
9. THE "LOAD AS SHOWN" FOR PAGE 7 IS BASED ON THE CNU-80/E CONTAINERS AT THEIR MAXIMUM WEIGHT OF 1,174 POUNDS. ONE OR TWO CONTAINERS CAN BE ADDED TO THE REAR TWO STACKS, IF DESIRED. THIS POSITIONING IS ADEQUATE FOR A "WESTERN" TYPE OR OTHER THAN A "WESTERN" TYPE. ADDITIONAL CONTAINERS MAY BE ADDED TO THE THIRD LAYER IF SHIPPING LIGHTER UNITS.
10. IF A 48'-0" LONG TRAILER IS FURNISHED FOR LOADING, A MAXIMUM OF 48 CONTAINERS CAN BE LOADED (BY SIZE AND BY WEIGHT AT 950 POUNDS), AND WILL PROBABLY BE LIMITED TO NOT MORE THAN 46 CONTAINERS AT 934 POUNDS OR 36 AT 1,174 POUNDS.

SPECIAL NOTES:

1. A 45-UNIT LOAD IS SHOWN IN THE "ISOMETRIC VIEW" ON PAGE 6. THIS LOAD IS APPLICABLE FOR A LOAD OF CNU-80/E CONTAINERS AT THE MINIMUM WEIGHT OF 934 POUNDS, OR FOR A LOAD OF CNU-203/E CONTAINERS. A 36-UNIT LOAD OF CNU-80/E CONTAINERS AT THE MAXIMUM WEIGHT OF 1,174 POUNDS IS SHOWN IN THE "ELEVATION VIEW" ABOVE. A 45'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) VAN TRAILERS ARE SHOWN. TRAILERS OF OTHER LENGTHS AND TRAILERS OF OTHER WIDTHS (8'-0" MINIMUM) MAY BE USED. SEE SPECIAL NOTE 3 BELOW.
2. THE FORWARD BLOCKING ASSEMBLY A, PIECE MARKED ①, MUST BE USED IN ROUNDED CORNER TRAILERS. IT IS ALSO REQUIRED FOR THE DEPICTED LOAD ON PAGE 6 IN ORDER TO MOVE THE LOAD REARWARD IN A "WESTERN" TYPE TRAILER TO PREVENT POSSIBLE OVERLOADING OF THE TRACTOR DRIVE AXLES. FOR THE LOAD ON PAGE 6 IN A TRAILER OTHER THAN A "WESTERN" TYPE, THE FORWARD BLOCKING ASSEMBLY B WILL BE USED. ALL SQUARE FRONT TRAILERS REQUIRE THE USE OF FORWARD BLOCKING ASSEMBLY B. SEE THE DETAIL ON PAGE 5.
3. FOR CNU-80/E CONTAINERS WEIGHING BETWEEN THE MINIMUM AND MAXIMUM WEIGHT, CONTAINERS MUST BE OMITTED FROM THE THIRD LAYER OF THE LOAD ON PAGE 6. CONTAINERS SHOULD BE OMITTED FROM THE FORWARD END IN A "WESTERN" TYPE TRAILER OR FROM THE REAR END IN A TRAILER OTHER THAN A "WESTERN" TYPE.
4. THE PLACEMENT OF THE CNU-80/E CONTAINERS IN THE THIRD LAYER OF THE LOAD IN THE "ELEVATION VIEW" ABOVE IS BASED ON A TRAILER OTHER THAN A "WESTERN" TYPE. IF A "WESTERN" TYPE TRAILER IS TO BE LOADED, THE SIX CONTAINERS IN THE THIRD LAYER SHOULD BE PLACED ON THE TOP OF THE SIX REAR STACKS FOR THE BEST WEIGHT DISTRIBUTION.
5. IF THE LATERAL SPACE AT THE SIDES OF THE CONTAINERS IS NOT ENOUGH TO INSTALL 2" X 4" MATERIAL, 1" X 4" MATERIAL MAY BE USED ON ONE OR BOTH SIDES BETWEEN THE CONTAINERS AND THE TRAILER SIDEWALL.
6. IT IS RECOMMENDED THAT THE CONTAINER STACKS BE UNITIZED PRIOR TO PLACEMENT IN THE TRAILER, IF THE CAPACITY OF THE MATERIAL HANDLING EQUIPMENT PERMITS.

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BILL OF MATERIAL (PAGE 6)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	110	74
2" X 6"	42	42
4" X 4"	19	26
NAILS	NO. REQD	POUNDS
10d (3")	72	1-1/4
16d (3-1/2")	16	1/2
STEEL STRAPPING, 1-1/4" -- 270' REQD ---- 39 LBS		
SEAL FOR 1-1/4" STRAPPING -- 30 REQD -- 1-1/2 LBS		

BILL OF MATERIAL (PAGE 7)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	86	58
2" X 6"	34	34
4" X 4"	19	26
NAILS	NO. REQD	POUNDS
10d (3")	27	1/2
16d (3-1/2")	16	1/2
STEEL STRAPPING, 1-1/4" -- 234' REQD ---- 35 LBS		
SEAL FOR 1-1/4" STRAPPING -- 30 REQD -- 1-1/2 LBS		

LOAD AS SHOWN (PAGE-6) *

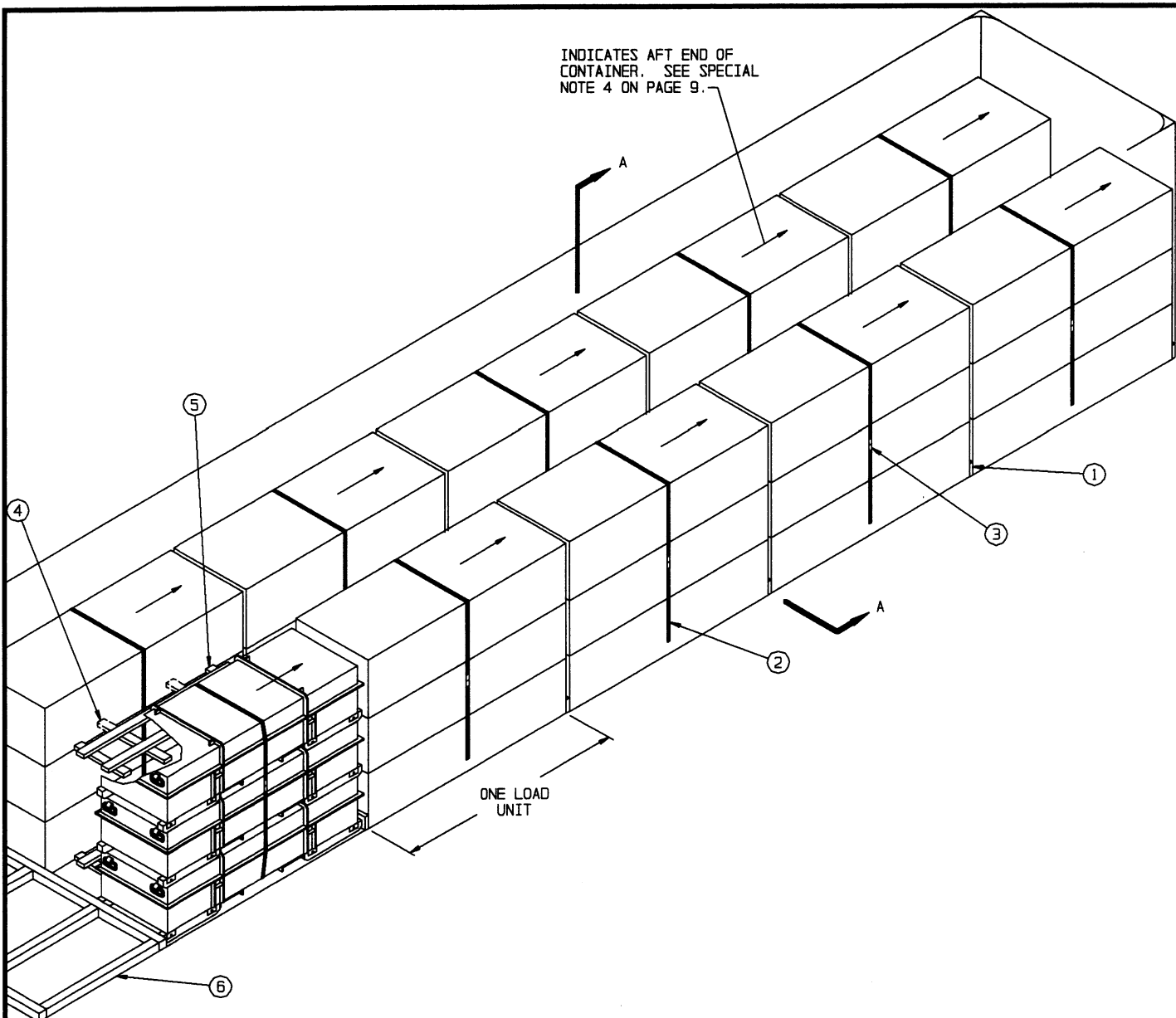
ITEM	QUANTITY	WEIGHT (APPROX)
CNU-80/E OR CNU-203/E CONTAINER	45	42,030 LBS
DUNNAGE		327 LBS
TOTAL WEIGHT		42,357 LBS (APPROX)

* SEE SPECIAL NOTES 3 AND 8 ABOVE.

LOAD AS SHOWN (PAGE-7) ●

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-80/E CONTAINER	36	42,264 LBS
DUNNAGE		274 LBS
TOTAL WEIGHT		42,538 LBS (APPROX)

● SEE SPECIAL NOTE 9 ABOVE.

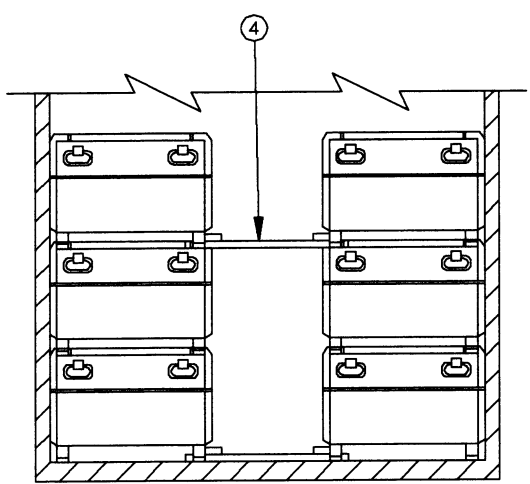


INDICATES AFT END OF CONTAINER. SEE SPECIAL NOTE 4 ON PAGE 9.

ISOMETRIC VIEW

KEY NUMBERS

- ① HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (5 REQD). POSITION ON EDGE AT THE FRONT OF THE TRAILER AND BETWEEN LONGITUDINALLY ADJACENT LOAD UNITS. SEE SPECIAL NOTE 2 ON PAGE 9.
- ② UNITIZING STRAP, 1-1/4" X .035" OR .031" X 18'-0" (10 REQD). INSTALL TO ENCIRCLE A STACK OF THREE CONTAINERS. SEE THE "UNITIZATION AND HANDLING GUIDANCE" ON PAGE 3. SEE SPECIAL NOTE 3 ON PAGE 9.
- ③ SEAL FOR 1-1/4" STEEL STRAPPING (20 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "J" ON PAGE 2.
- ④ ANTI-SWAY BRACE ASSEMBLY SUPPORT PIECE, 2" X 4" BY CUT TO EXTEND 4" UNDER EACH OF THE TWO LATERALLY ADJACENT CONTAINERS (20 REQD). POSITION AS SHOWN BY THE "ANTI-SWAY BRACE" DETAIL ON PAGE 12. SEE SPECIAL NOTE 5 ON PAGE 9 FOR INSTALLATION GUIDANCE. SEE SPECIAL NOTE 6 FOR ALTERNATIVE SIDE BLOCKING.
- ⑤ ANTI-SWAY BRACE ASSEMBLY (10 REQD). SEE THE DETAIL ON PAGE 17. NAIL TO THE ANTI-SWAY BRACE SUPPORT PIECES, PIECE MARKED ④, W/3-10d NAILS AT EACH JOINT. SEE GENERAL NOTES "L" AND "M" ON PAGE 2.
- ⑥ REAR BLOCKING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 16. SEE SPECIAL NOTE 7 ON PAGE 9.



SECTION A-A

30-UNIT LOAD OF CNU-80/E OR CNU-203/E
CONTAINERS IN A 45'-0" LONG BY 7'-8" WIDE VAN TRAILER

(SPECIAL NOTES CONTINUED)

10. THE DEPICTED LOAD MAY BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED. ONE CONTAINER CAN BE OMITTED FROM THE TOP LAYER OF A LOAD UNIT. THE ANTI-SWAY BRACE SUPPORT PIECES AND THE ANTI-SWAY BRACE ASSEMBLY, PIECES MARKED ④ AND ⑤, WILL THEN BE INSTALLED BETWEEN THE CONTAINERS IN THE NEXT LOWER LAYER. A LOAD MAY BE REDUCED BY TWO UNITS BE OMITTING LATERALLY ADJACENT CONTAINERS FROM THE TOP LAYER OF A LOAD UNIT.

SPECIAL NOTES:

1. A 30-UNIT LOAD OF CNU-80/E CONTAINERS IS SHOWN IN A 45'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER. TRAILERS OF OTHER DIMENSIONS MAY BE USED.
2. THE TRAILER SHOWN IS EQUIPPED WITH A SQUARE FRONT WALL. IF THE TRAILER TO BE LOADED HAS ROUNDED FRONT CORNERS, A FORWARD BLOCKING ASSEMBLY "C" MUST BE INSTALLED. SEE THE DETAIL ON PAGE 16.
3. IF THE CAPACITY OF THE MATERIALS HANDLING EQUIPMENT PERMITS, IT IS RECOMMENDED THAT CONTAINER STACKS BE UNITIZED PRIOR TO LOADING INTO THE TRAILER.
4. CONTAINER STACKS WILL BE LOADED INTO TRAILER WITH THE "AFT" END OF THE CONTAINERS FACING THE FORWARD END OF THE TRAILER. THIS WILL REDUCE THE CHANCE OF DAMAGING THE HUMIDITY INDICATORS OR THE AIR VENTS DURING HANDLING OPERATIONS.
5. INSTALLATION OF THE ANTI-SWAY BRACES BETWEEN CONTAINERS IN THE BOTTOM LAYER CAN EASILY BE ACCOMPLISHED. FOR THE ANTI-SWAY BRACES BETWEEN THE TOP LAYER CONTAINERS, THE FOLLOWING GUIDANCE IS PROVIDED. PLACE AN ANTI-SWAY BRACE SUPPORT PIECE, PIECE MARKED ④, ON TOP OF THE SECOND LAYER CONTAINERS AND IN CONTACT WITH THE BACK SIDE OF THE UNITIZING STRAP, WITH THE ENDS EXTENDING 15" BEYOND THE SUPPORT PIECE, AND NAIL THRU THE TIE PIECES INTO THE SUPPORT PIECE W/3-10d NAILS AT EACH JOINT. SLIDE THE ASSEMBLED PIECES FORWARD UNTIL THE SUPPORT PIECE CONTACTS THE FARTHEST SKIDS OF THE CONTAINERS. PLACE ANOTHER ANTI-SWAY BRACE SUPPORT PIECE AS BEFORE BUT IN CONTACT WITH THE NEAREST CONTAINER SKID AND NAIL THE TIE PIECES TO IT.
6. IF DESIRED IN TRAILERS HAVING A NAILABLE FLOOR, NAILED SIDE BLOCKING MAY BE USED IN LIEU OF THE ANTI-SWAY BRACE SUPPORT PIECES AND ANTI-SWAY BRACE ASSEMBLIES, PIECES MARKED ④ AND ⑤ AT THE FLOOR LEVEL. SIDE BLOCKING WILL BE DOUBLED 2" X 6" X 12" LONG PIECES. POSITION AGAINST A CONTAINER SKID AND NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/4-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
7. IF DESIRED IN A TRAILER HAVING A NAILABLE FLOOR, A NAILED HEADER MAY BE INSTALLED IN LIEU OF THE REAR BLOCKING ASSEMBLY, PIECE MARKED ⑥. SEE PIECE MARKED ⑦ ON PAGE 12 FOR GUIDANCE. REFER TO SPECIAL NOTE 6 ON PAGE 14 FOR THE QUANTITY OF NAILS WHICH WILL BE USED FOR NAILING OF THE HEADER IF LESS THAN A FULL LOAD IS TO BE SHIPPED.
8. THE "LOAD AS SHOWN" FOR THE CNU-80/E CONTAINER IS BASED ON THE MAXIMUM WEIGHT OF 1,174 POUNDS FOR THAT ITEM. THE TOTAL LOAD WEIGHT BASED ON THE MINIMUM WEIGHT 934 POUNDS FOR THE ITEM WILL BE APPROXIMATELY 28,524 POUNDS. THE LOAD WEIGHT FOR OTHER ITEMS WILL BE SOMEWHERE IN BETWEEN.
9. THIRTY CNU-203/E CONTAINERS CAN BE LOADED IN A 45'-0" LONG TRAILER FOR A LADING WEIGHT OF 25,500 POUNDS AND A TOTAL WEIGHT OF 26,004 POUNDS. THIRTY CNU-152/E CONTAINERS CAN BE LOADED FOR A LADING WEIGHT OF 20,790 POUNDS AND A TOTAL WEIGHT OF 21,294 POUNDS.

(CONTINUED AT LEFT)

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-80/E CONTAINER	30	35,220 LBS (MAX) *
DUNNAGE		504 LBS
TOTAL WEIGHT		35,724 LBS (APPROX)

* SEE SPECIAL NOTE 7 ABOVE.

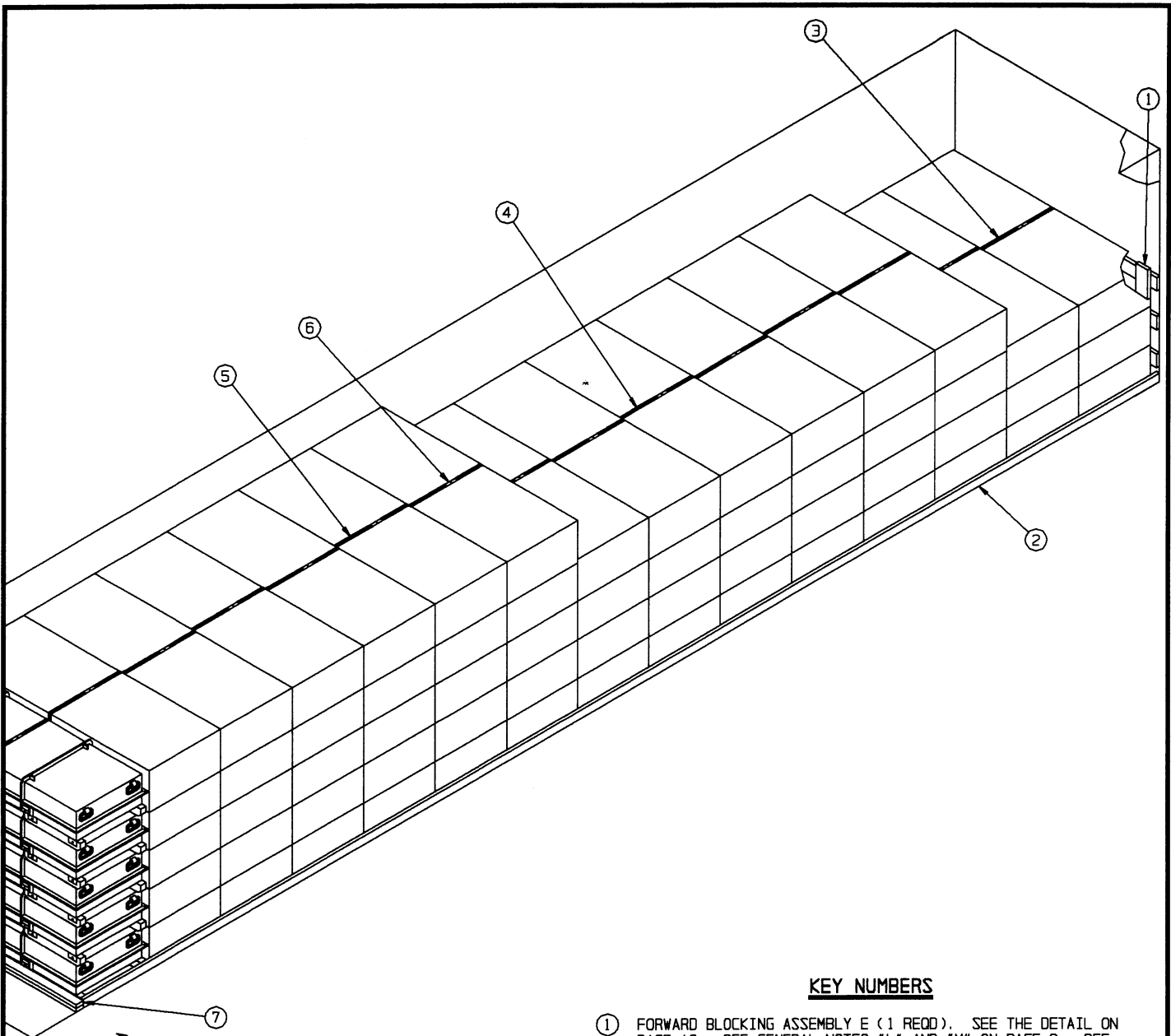
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-203/E CONTAINER	30	25,500 LBS ●
DUNNAGE		504 LBS
TOTAL WEIGHT		26,004 LBS (APPROX)

● SEE SPECIAL NOTE 9 ABOVE.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	226	151
2" X 6"	39	39
4" X 4"	34	46
NAILS	NO. REQD	POUNDS
10d (3")	240	3-3/4
16d (3-1/2")	16	1/2
STEEL STRAPPING, 1-1/4"	180' REQD	26 LBS
SEAL FOR 1-1/4" STRAPPING	20 REQD	1 LB

30-UNIT LOAD OF CNU-80/E OR CNU-203/E CONTAINERS IN A 45'-0" LONG BY 7'-8" WIDE VAN TRAILER



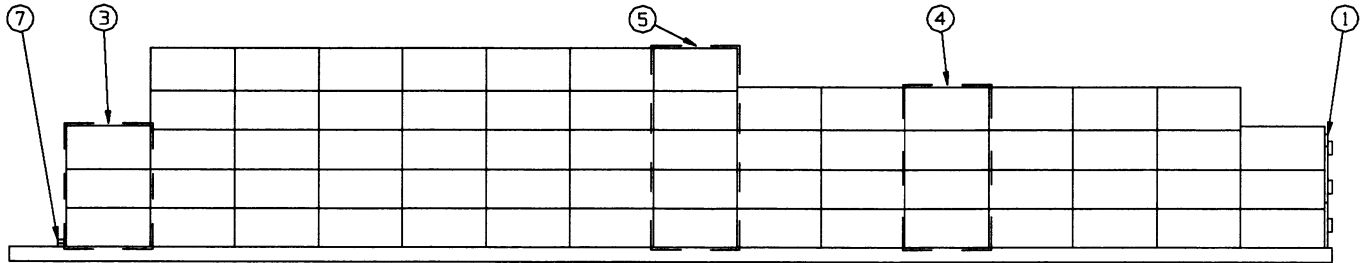
ISOMETRIC VIEW

"WESTERN" TYPE TRAILER

REAR OF TRAILER.

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY E (1 REOD). SEE THE DETAIL ON PAGE 18. SEE GENERAL NOTES "L" AND "M" ON PAGE 2. SEE SPECIAL NOTE 2 ON PAGE 11.
- ② SIDE BLOCKING, 2" X 4" X BY LOAD LENGTH (REF: 42'-8") (2 REOD). POSITION ON EDGE AT EACH SIDE OF THE LOAD. RANDOM LENGTHS MAY BE USED. SEE SPECIAL NOTE 4 ON PAGE 11.
- ③ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 15'-0" LONG STEEL STRAPPING (2 REOD). INSTALL TO ENCIRCLE A STACK OF THREE CONTAINERS. SEE THE "UNITIZATION AND HANDLING GUIDANCE" ON PAGE 3 AND THE "CNU-152/E CONTAINER STACK DETAIL" ON PAGE 4. SEE SPECIAL NOTE 6 ON PAGE 7.
- ④ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 18'-0" LONG STEEL STRAPPING (6 REOD). INSTALL TO ENCIRCLE A STACK OF FOUR CONTAINERS.
- ⑤ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 20'-6" LONG STEEL STRAPPING (7 REOD). INSTALL TO ENCIRCLE A STACK OF FIVE CONTAINERS.
- ⑥ SEAL FOR 1-1/4" STEEL STRAPPING (30 REOD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "J" ON PAGE 2.
- ⑦ REAR HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (1 REOD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/14-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 6 ON PAGE 11.



ELEVATION VIEW

OTHER THAN "WESTERN" TYPE TRAILER.

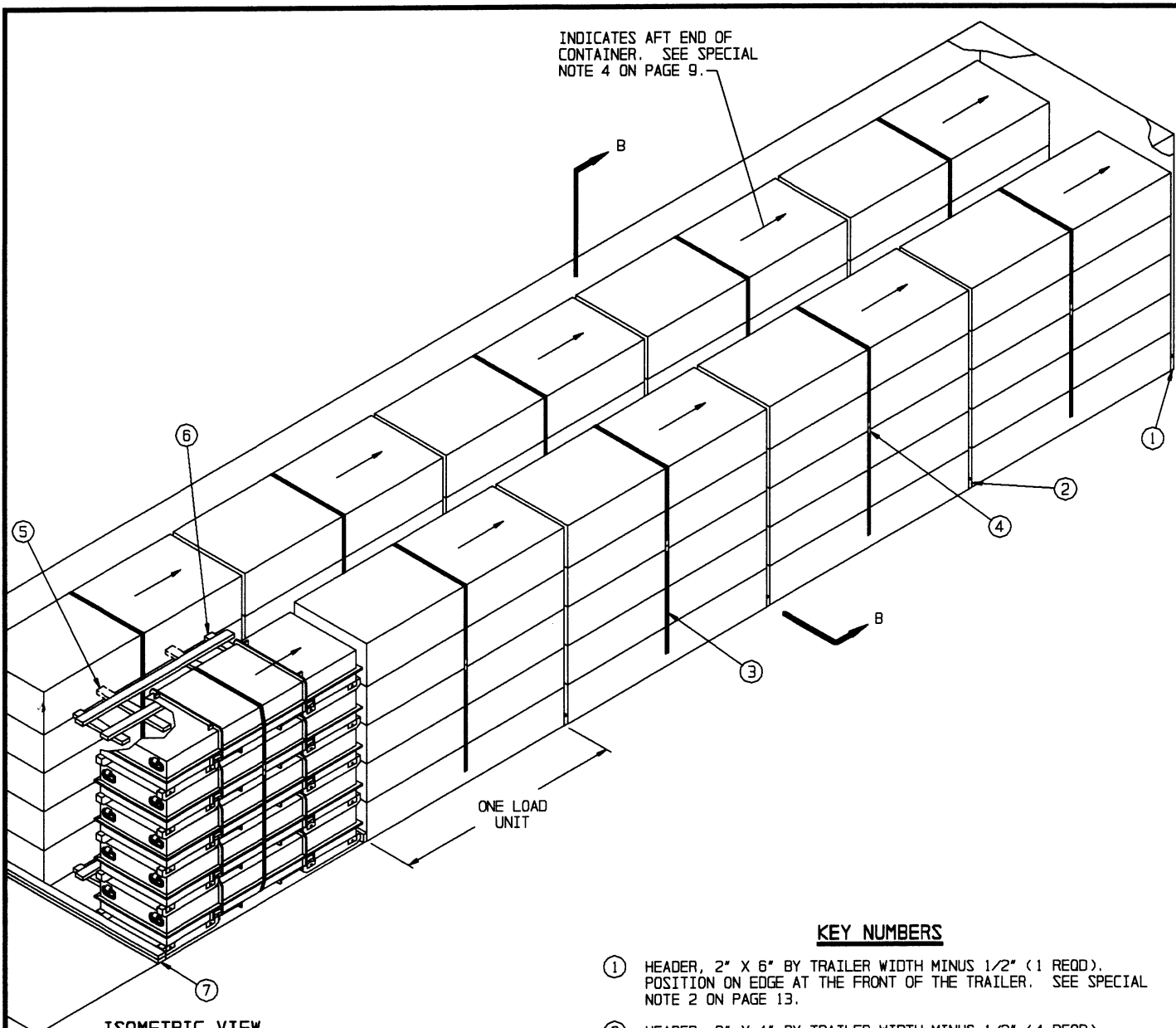
SPECIAL NOTES:

1. 65-UNIT LOAD IS SHOWN IN THE "ISOMETRIC VIEW" ON PAGE 10 AND IN THE "ELEVATION VIEW" ABOVE. 45' LONG BY 8'-2" WIDE (INSIDE DIMENSION) VAN TRAILERS ARE SHOWN. TRAILERS OF OTHER LENGTHS AND TRAILERS OF OTHER WIDTHS (8'-0" MINIMUM) MAY BE USED. SEE SPECIAL NOTE 3 BELOW.
2. THE FORWARD BLOCKING ASSEMBLY E, PIECE MARKED ①, MUST BE USED IN SQUARE FRONT TRAILERS. IF THE TRAILER TO BE LOADED IS EQUIPPED WITH ROUNDED FRONT CORNERS, THE "FORWARD BLOCKING ASSEMBLY D" MUST BE USED INSTEAD. SEE THE DETAIL ON PAGE 18.
3. A "WESTERN TYPE TRAILER IS SHOWN IN THE "ISOMETRIC VIEW" ON PAGE 10. IF A TRAILER OTHER THAN THE "WESTERN" TYPE IS FURNISHED FOR LOADING, THE LOADING PATTERN SHOWN IN THE "ELEVATION VIEW" ABOVE MAY BE APPLIED. THESE LOADING PATTERNS ARE FURNISHED AS GUIDANCE. THE PATTERNS MAY BE ADJUSTED AS NECESSARY TO OBTAIN THE BEST WEIGHT DISTRIBUTION.
4. IF THE LATERAL SPACE AT THE SIDES OF THE CONTAINERS IS NOT ENOUGH TO INSTALL 2" X 4" MATERIAL, 1" X 4" MATERIAL MAY BE USED ON ONE OR BOTH SIDES BETWEEN THE CONTAINER SKIDS AND TRAILER SIDEWALL.
5. IF THE CAPACITY OF THE MATERIALS HANDLING EQUIPMENT PERMITS, IT IS RECOMMENDED THAT THE CONTAINER STACKS BE UNITIZED PRIOR TO PLACEMENT IN THE TRAILER.
6. IF THE TRAILER FURNISHED DOES NOT HAVE A NAILABLE FLOOR AT THE REAR OF THE LOAD, OR IF DESIRED, A REAR BLOCKING ASSEMBLY MAY BE USED IN LIEU OF THE NAILED HEADER, PIECE MARKED ⑦. SEE SPECIAL NOTE 7.
7. IF THE EXCESS SPACE AT THE REAR OF THE LOAD IS LESS THAN 1-1/2", REAR BLOCKING IS NOT REQUIRED. IF THE SPACE IS FROM 1-1/2" TO 12", SOLID FILL SHOULD BE USED. SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 17. IF THE EXCESS SPACE IS GREATER THAN 12", THE "REAR BLOCKING ASSEMBLY A" WILL BE USED. SEE THE DETAIL ON PAGE 16.
8. IF A 48'-0" LONG TRAILER IS FURNISHED FOR LOADING, AN ADDITIONAL STACK CAN BE LOADED. HOWEVER, THE LOAD WILL PROBABLY BE LIMITED TO NOT MORE THAN 62 CONTAINERS. A POSSIBLE LOADING PATTERN WOULD BE FOUR STACKS OF THREE HIGH AT THE FRONT OF THE TRAILER, TWELVE LONG FROM THERE TO THE REAR, WITH TWO UNITS ON TOP OF TWO OF THE THREE STACKS AT THE REAR. THIS LOAD SHOULD BE WEIGHED TO ENSURE THAT EITHER THE DRIVE AXLES OF THE TRACTOR OR THE TRAILER AXLES ARE NOT OVERLOADED.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	107	72
2" X 6"	36	36
NAILS	NO. REQD	POUNDS
10d (3")	27	1/2
STEEL STRAPPING, 1-1/4" -- 261' REQD ----- 38 LBS		
SEAL FOR 1-1/4" STRAPPING -- 32 REQD -- 1-1/2 LBS		

LOAD AS SHOWN

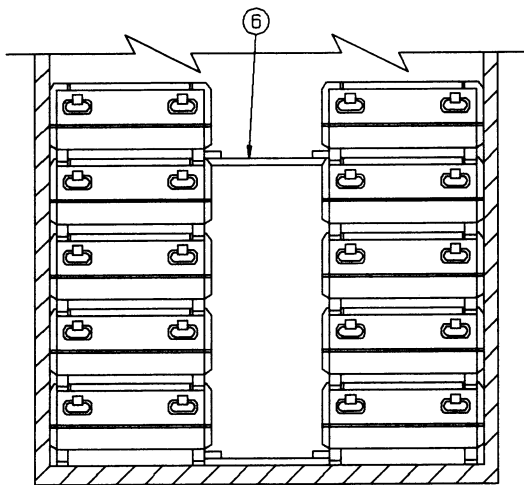
ITEM	QUANTITY	WEIGHT (APPROX)
CNU-152/E CONTAINER	65	45,045 LBS
DUNNAGE		256 LBS
<hr/>		
TOTAL WEIGHT		45,301 LBS (APPROX)



INDICATES AFT END OF CONTAINER. SEE SPECIAL NOTE 4 ON PAGE 9.

ISOMETRIC VIEW

REAR OF TRAILER.



SECTION B-B

KEY NUMBERS

- ① HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (1 REQD). POSITION ON EDGE AT THE FRONT OF THE TRAILER. SEE SPECIAL NOTE 2 ON PAGE 13.
- ② HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (4 REQD). POSITION ON EDGE BETWEEN LONGITUDINALLY ADJACENT LOAD UNITS.
- ③ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 20'-6" (10 REQD). INSTALL TO ENCIRCLE A STACK OF THREE CONTAINERS. SEE THE "UNITIZATION AND HANDLING GUIDANCE" ON PAGE 3 AND THE "CNU-152/E CONTAINER STACK DETAIL" ON PAGE 4. SEE SPECIAL NOTE 3 ON PAGE 13.
- ④ SEAL FOR 1-1/4" STEEL STRAPPING (20 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "J" ON PAGE 2.
- ⑤ ANTI-SWAY BRACE ASSEMBLY SUPPORT PIECE, 2" X 4" BY CUT TO EXTEND 4" UNDER EACH OF THE TWO LATERALLY ADJACENT CONTAINERS (20 REQD). POSITION AS SHOWN BY THE "ANTI-SWAY BRACE" DETAIL ON PAGE 17. SEE SPECIAL NOTE 5 ON PAGE 13 FOR INSTALLATION GUIDANCE. SEE SPECIAL NOTE 6 FOR ALTERNATIVE SIDE BLOCKING.
- ⑥ ANTI-SWAY BRACE ASSEMBLY (10 REQD). SEE THE DETAIL ON PAGE 17. NAIL TO THE ANTI-SWAY BRACE SUPPORT PIECES, PIECE MARKED ⑤, W/3-10d NAILS AT EACH JOINT. SEE GENERAL NOTES "L" AND "M" ON PAGE 2.
- ⑦ REAR HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (1 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/14-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 7 ON PAGE 13.

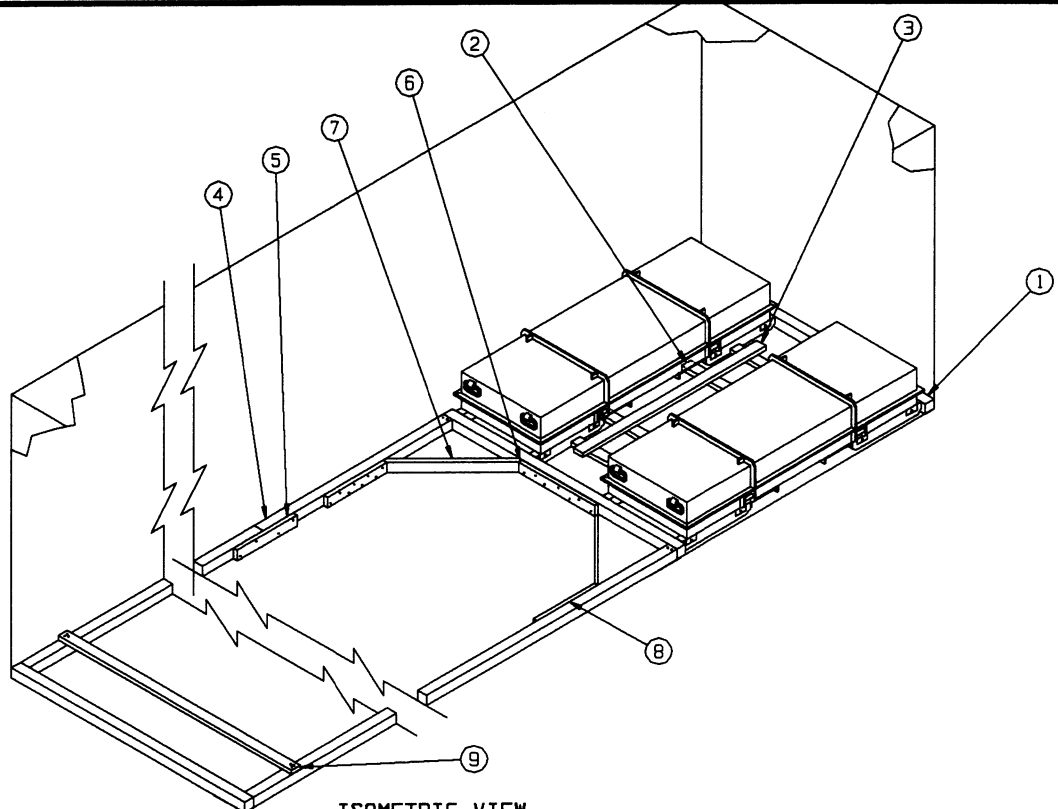
SPECIAL NOTES:

1. A 50-UNIT LOAD OF CNU-152/E CONTAINERS IS SHOWN IN A 45'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER. TRAILERS OF OTHER DIMENSIONS MAY BE USED.
2. THE TRAILER SHOWN IS EQUIPPED WITH A SQUARE FRONT WALL. IF THE TRAILER TO BE LOADED HAS ROUNDED FRONT CORNERS, A FORWARD BLOCKING ASSEMBLY "C" MUST BE INSTALLED. SEE THE DETAIL ON PAGE 16.
3. IF THE CAPACITY OF THE MATERIALS HANDLING EQUIPMENT PERMITS, IT IS RECOMMENDED THAT CONTAINER STACKS BE UNITIZED PRIOR TO LOADING INTO THE TRAILER.
4. CONTAINER STACKS WILL BE LOADED INTO TRAILER WITH THE "AFT" END OF THE CONTAINERS FACING THE FORWARD END OF THE TRAILER. THIS WILL REDUCE THE CHANCE OF DAMAGING THE HUMIDITY INDICATORS OR THE AIR VENTS DURING HANDLING OPERATIONS.
5. INSTALLATION OF THE ANTI-SWAY BRACES BETWEEN CONTAINERS IN THE BOTTOM LAYER CAN EASILY BE ACCOMPLISHED. FOR THE ANTI-SWAY BRACES BETWEEN THE TOP LAYER CONTAINERS, THE FOLLOWING GUIDANCE IS PROVIDED. PLACE AN ANTI-SWAY BRACE SUPPORT PIECE, PIECE MARKED ④, ON TOP OF THE SECOND LAYER CONTAINERS AND IN CONTACT WITH THE BACK SIDE OF THE UNITIZING STRAP, WITH THE ENDS EXTENDING 4" UNDER EACH TOP CONTAINER. PLACE THE ANTI-SWAY BRACE ASSEMBLY, PIECE MARKED ⑤, ON THE SUPPORT PIECE, WITH THE CROSS BRACE PIECE OF THE ANTI-SWAY BRACE EXTENDING 15" BEYOND THE SUPPORT PIECE, AND NAIL THRU THE TIE PIECES INTO THE SUPPORT PIECE W/3-10d NAILS AT EACH JOINT. SLIDE THE ASSEMBLED PIECES FORWARD UNTIL THE SUPPORT PIECE CONTACTS THE FARTHEST SKIDS OF THE CONTAINERS. PLACE ANOTHER ANTI-SWAY BRACE SUPPORT PIECE AS BEFORE BUT IN CONTACT WITH THE NEAREST CONTAINER SKID AND NAIL THE TIE PIECES TO IT.
6. IF DESIRED IN TRAILERS HAVING A NAILABLE FLOOR, NAILED SIDE BLOCKING MAY BE USED IN LIEU OF THE ANTI-SWAY BRACE SUPPORT PIECES AND ANTI-SWAY BRACE ASSEMBLIES, PIECES MARKED ④ AND ⑤ AT THE FLOOR LEVEL. SIDE BLOCKING WILL BE DOUBLED 2" X 6" X 12" LONG PIECES. POSITION AGAINST A CONTAINER SKID AND NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/4-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
7. IF DESIRED, A REAR BLOCKING ASSEMBLY MAY BE USED IN LIEU OF THE NAILED HEADER, PIECE MARKED ⑦. SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 16. SEE PIECE MARKED ⑥ ON PAGE 8 FOR A TYPICAL INSTALLATION.
8. THE DEPICTED LOAD MAY BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED. ONE CONTAINER CAN BE OMITTED FROM THE TOP LAYER OF A LOAD UNIT. THE ANTI-SWAY BRACE SUPPORT PIECES AND THE ANTI-SWAY BRACE ASSEMBLY, PIECES MARKED ⑤ AND ⑥, WILL THEN BE INSTALLED BETWEEN THE CONTAINERS IN THE NEXT LOWER LAYER. A LOAD MAY BE REDUCED BY TWO UNITS BY OMITTING LATERALLY ADJACENT CONTAINERS FROM THE TOP LAYER OF A LOAD UNIT.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	271	181
2" X 6"	8	8
NAILS	NO. REQD	POUNDS
10d (3")	268	4-1/4
STEEL STRAPPING, 1-1/4" -- 205' REQD ----- 30 LBS		
SEAL FOR 1-1/4" STRAPPING -- 20 REQD ----- 1 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-152/E CONTAINER	50	34,650 LBS
DUNNAGE		414 LBS
TOTAL WEIGHT		35,064 LBS (APPROX)



ISOMETRIC VIEW

SPECIAL NOTES:

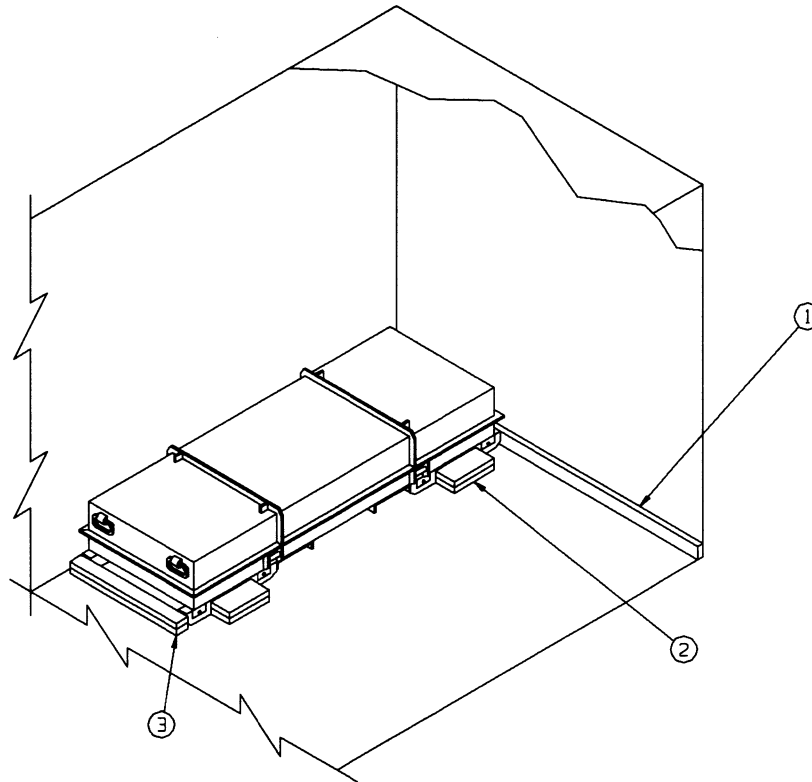
1. A 2-UNIT LOAD IS SHOWN IN 7'-8" WIDE VAN TRAILER. OTHER WIDTH TRAILERS MAY BE USED.
2. A TRAILER EQUIPPED WITH A SQUARE FRONT WALL IS SHOWN. IF THE TRAILER TO BE LOADED HAS ROUNDED FRONT CORNERS, A "FORWARD BLOCKING ASSEMBLY C" MUST BE USED IN LIEU OF THE DEPICTED FORWARD HEADER, PIECE MARKED ①. SEE THE DETAIL ON PAGE 16.
3. IF DESIRED, NAILED SIDE BLOCKING MAY BE USED IN LIEU OF PIECES MARKED ② AND ③. SEE PIECE MARKED ② ON PAGE 15 FOR GUIDANCE.
4. ALL LTL LOADS, REGARDLESS OF THEIR SIZE, REQUIRE ONE STRUT BRACE POSITIONED AT THE REAR OF THE TRAILER AND NAILED TO PIECES MARKED ④. IF THE SIDE STRUTS, PIECES MARKED ④, ARE LONGER THAN 7'-0", AN ADDITIONAL STRUT BRACE, PIECE MARKED ⑨ MUST BE APPLIED FOR EVERY 7'-0" OF SIDE STRUT LENGTH.
5. THE K-BRACE BLOCKING, SHOWN AS THE INTERMEDIATE HEADER, PIECE MARKED ①, AND PIECES MARKED ④ THRU ⑨, IS ADEQUATE FOR RETAINING A MAXIMUM LOAD OF 20,000 POUNDS. THIS WILL BE NOT MORE THAN SEVENTEEN CNU-80/E CONTAINERS AT MAXIMUM WEIGHT OR 21 AT MINIMUM WEIGHT, 23 CNU-203 CONTAINERS, OR 28 CNU-152/E CONTAINERS.
6. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, A NAILED-HEADER TYPE METHOD OF REAR BLOCKING MUST BE INSTALLED IN LIEU OF THE "K-BRACE" TYPE BLOCKING, PIECES MARKED ④ THRU ⑨. SEE PIECE MARKED ⑦ ON PAGE 12 FOR A TYPICAL INSTALLATION. THE HEADER WILL BE TRAILER WIDTH MINUS 1/2" AND WILL BE NAILED WITH NOT LESS THAN 6-10d NAILS IN EACH LAYER. THE NUMBER OF CONTAINERS WHICH CAN BE RETAINED BASED ON THE QUANTITY OF NAILS IN EACH LAYER OF THE HEADER IS AS FOLLOWS:

NO. OF NAILS	CNU-80/E 1,174 LBS	CNU-80/E 934 LBS	CNU-203/E	CNU-152/E
6	12	16	17	21
7	14	18	20	25
8	17	21	23	28
9	19	24	26	32
10	21	26	29	36
11	23	29	32	39
12	25	32	35	43
13	27	34	38	46
14	29	37	41	50
15	31	40	44	54
16	34	42	47	57
17	36	45	50	61
18	38	48	52	64

KEY NUMBERS

- ① HEADER, 4" X 4" BY TRAILER WIDTH MINUS 1/2" (3 REQD). SEE SPECIAL NOTE 2 AT LEFT.
- ② ANTI-SWAY BRACE SUPPORT PIECE, 2" X 4" BY CUT TO EXTEND 4" UNDER EACH OF THE TWO LATERALLY ADJACENT CONTAINERS (2 REQD). POSITION AS SHOWN BY THE "ANTI-SWAY BRACE" DETAIL ON PAGE 17.
- ③ ANTI-SWAY BRACE ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 16. SEE GENERAL NOTES "L" AND "M" ON PAGE 2.
- ④ SIDE STRUT, 4" X 4" BY CUT TO FIT BETWEEN THE FORWARD HEADER AND THE REAR HEADER, PIECE MARKED ① (2 REQD). TOENAIL TO PIECES MARKED ① W/2-16d NAILS AT EACH END.
- ⑤ SPLICE PIECE, 2" X 4" X 24" (AS REQD). CENTER ON A JOINT OF A SIDE STRUT, PIECE MARKED ④, AND NAIL W/4-10d NAILS AT EACH END.
- ⑥ CENTER CLEAT, 2" X 4" X 30" (1 REQD). NAIL TO A FORWARD HEADER, PIECE MARKED ①, W/7-10d NAILS.
- ⑦ DIAGONAL BRACE, 2" X 4" BY CUT TO FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO A FORWARD HEADER AND TO A SIDE STRUT, PIECES MARKED ① AND ④, W/2-16d NAILS AT EACH END.
- ⑧ BACK-UP CLEAT, 2" X 4" X 24" (2 REQD). NAIL TO A SIDE STRUT PIECE MARKED ④, W/8-10d NAILS.
- ⑨ STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (MINIMUM OF ONE REQUIRED). POSITION NEAR THE REAR OF THE TRAILER AND NAIL TO THE SIDE STRUTS, PIECES MARKED ④, W/3-10d NAILS AT EACH END. SEE SPECIAL NOTE 4 AT LEFT.

TYPICAL LTL (2-UNIT LOAD)



ISOMETRIC VIEW

SPECIAL NOTES:

1. A 1-UNIT LOAD IS SHOWN IN A 7'-8" WIDE VAN TRAILER. TRAILERS OF OTHER WIDTHS MAY BE USED.
2. THE DEPICTED PROCEDURES ARE APPLICABLE FOR LENGTHWISE SHIPMENT OF ANY OF THE CONTAINERS INCLUDED IN THIS DRAWING. SEE SPECIAL NOTE 5 BELOW.
3. IN LIEU OF THE 2" X 4" ON-EDGE HEADER AT THE FRONT OF THE TRAILER, A PIECE MARKED ③ MAY BE INSTALLED AT THE FRONT OF THE CONTAINER.
4. IF THE TRAILER TO BE LOADED IS EQUIPPED WITH ROUNDED CORNERS. THE CONTAINER SHOULD BE LOADED IN THE CENTER OF A THE TRAILER WIDTH. THE HEADER, PIECE MARKED ①, IF USED, SHOULD THEN BE AS LONG AS THE FLAT SURFACE OF A THE TRAILER FRONT WALL.
5. IF A CONTAINER IS TO BE SHIPPED CROSSWISE IN THE TRAILER, THE CONTAINER MAY BE LOADED DIRECTLY AGAINST THE TRAILER FRONT WALL. SIDE BLOCKING WILL BE 2" X 4" X 32" AND/OR 1" X 4" X 32" POSITIONED ON EDGE AT THE ENDS OF THE CONTAINER. THE HEADER WILL BE 2" X 4" BY TRAILER WIDTH MINUS 1/2" DOUBLED PIECES. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. TO FACILITATE NAILING, THE HEADER MAY BE 2" X 6" MATERIAL, IF DESIRED. SEE SPECIAL NOTE 6 ON PAGE 14 FOR GUIDANCE AS TO THE REQUIRED NUMBER OF NAILS, BASED ON THE NUMBER OF CONTAINERS BEING LOADED.

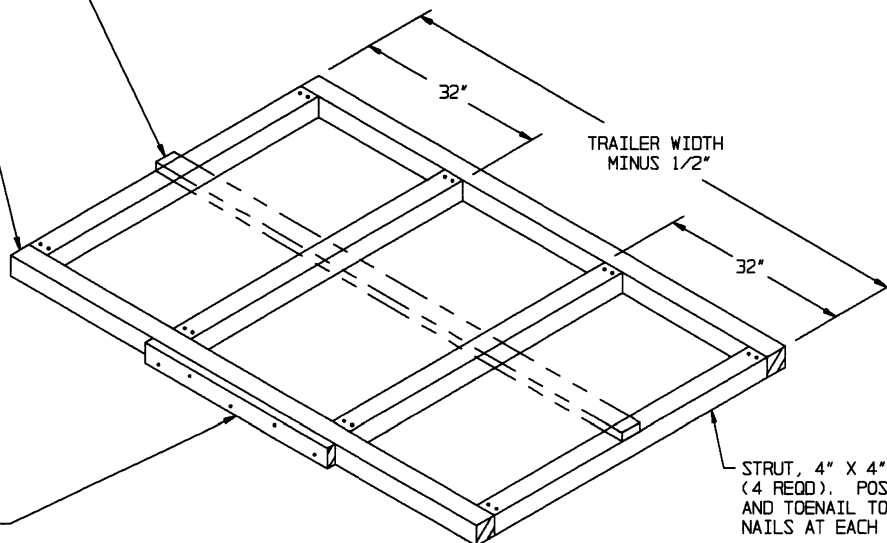
KEY NUMBERS

- ① HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (1 REQD). POSITION ON EDGE AT THE FRONT OF THE TRAILER. SEE SPECIAL NOTES 2 AND 3 AT LEFT.
- ② SIDE BLOCKING, 2" X 6" X 12" (DOUBLED) (2 REQD). POSITION AGAINST CONTAINER SKID. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/4-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE GENERAL NOTE "L" ON PAGE 2.
- ③ REAR HEADER, 2" X 4" X 32" (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.

STRUT BRACING, 2" X 4" BY TRAILER WIDTH (CUT-TO-FIT).
 NAIL TO STRUTS W/3-12d NAILS AT EACH JOINT. NOTE:
 THIS PIECE IS ONLY REQUIRED IF STRUTS ARE 7'-0" OR
 GREATER IN LENGTH.

HEADER, 4" X 4" BY TRAILER
 WIDTH MINUS 1/2" (2 REQD).

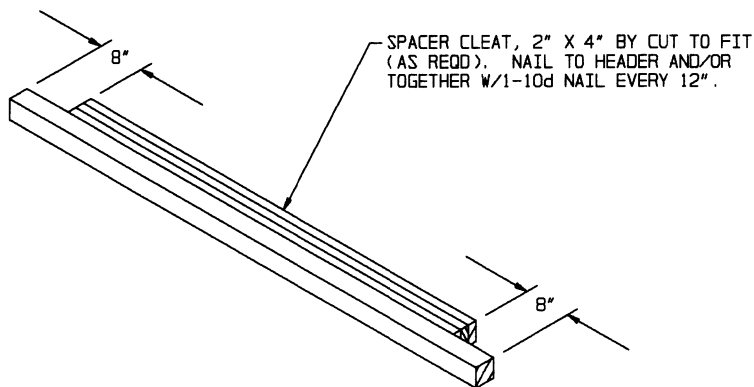
SOLID FILL 4" WIDE BY 36"
 LONG BY THE THICKNESS
 REQUIRED TO CONTACT THE
 REAR DOORS OF A TRAILER
 WHEN THEY ARE CLOSED.
 LAMINATE TO THE HEADER
 AND/OR TOGETHER W/5-12d
 NAILS. THIS PIECE IS NOT
 REQUIRED WHEN SHIPPING IN
 TRAILERS WHICH DO NOT HAVE
 REAR CORNER POSTS.



STRUT, 4" X 4" BY CUT TO FIT
 (4 REQD). POSITION AS SHOWN
 AND TOENAIL TO HEADERS W/2-16d
 NAILS AT EACH END.

REAR BLOCKING ASSEMBLY A

THIS REAR BLOCKING IS FOR USE AT THE REAR OF A LOAD, EITHER CROSSWISE-LOADED
 OR LENGTHWISE-LOADED CONTAINERS WHEN THE SPACE AT THE REAR OF THE LADING MEASURES
 12" OR MORE. WHEN THE EXCESS SPACE MEASURES 60" OR MORE, THE "K-BRACE" TYPE
 OR REAR BLOCKING AS SHOWN IN THE LOAD VIEW ON PAGE 14 MAY BE USED IN LIEU OF
 THE ABOVE TYPE OF BLOCKING.



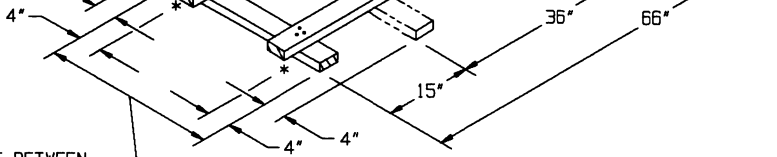
FORWARD BLOCKING ASSEMBLY C

THIS FLOOR LINE BLOCKING IS DESIGNED FOR USE AT THE FORWARD END OF A LOAD
 OF CONTAINERS LENGTHWISE WHICH IS TO BE SHIPPED IN A TRAILER HAVING ROUNDED
 CORNERS. ADDITIONAL LAMINATIONS MAY BE ADDED TO THE BACK SIDE OF THE SPACER
 CLEATS TO COMPENSATE FOR LARGER RADIUS CORNERS.

PIECE MARKED ④ ON PAGES 8 AND 12.

CROSS BRACE, 2" X 4" BY CUT TO FIT BETWEEN SKIDS OF LATERALLY ADJACENT CONTAINERS MINUS 1/2" (2 REQD).

LONGITUDINAL BRACE, 2" X 4" X 72" (2 REQD). NAIL TO CROSS BRACE PIECES W/3-10d NAILS AT EACH JOINT. NOTE: NAIL TO ANTI-SWAY BRACE SUPPORT PIECES AFTER THE CROSS BRACE AND LONGITUDINAL BRACE PIECES HAVE BEEN ASSEMBLED AND POSITIONED IN THE LOAD. SEE SPECIAL NOTE 4 ON PAGE 9 OR 12 FOR FURTHER GUIDANCE.

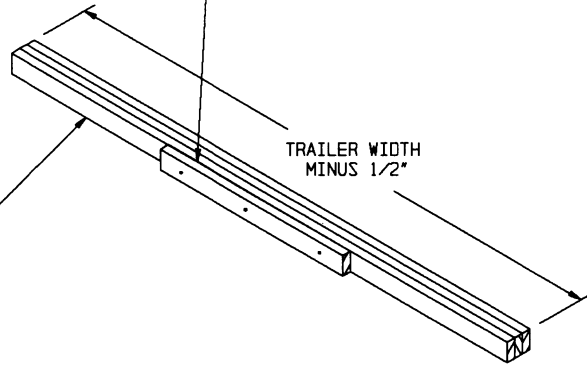


CUT TO FIT BETWEEN SKIDS OF ADJACENT CONTAINERS MINUS 1/2".

ANTI-SWAY BRACE ASSEMBLY

IF THE TRAILER IS EQUIPPED WITH REAR CORNER POSTS, INSTALL SOLID FILL, 4" WIDE BY 36" LONG BY THE THICKNESS REQUIRED TO FILL THE EXCESS SPACE BETWEEN THE REAR BLOCKING AND THE DOORS ON THE TRAILERS WHEN THEY ARE CLOSED. NAIL TO THE SOLID FILL W/3 APPLICABLY SIZED NAILS.

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



REAR BLOCKING ASSEMBLY B

THIS REAR BLOCKING IS FOR USE AT THE REAR OF A LOAD, EITHER CROSSWISE-LOADED OR LENGTHWISE-LOADED CONTAINERS, WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 12".



ONE SEAL WITH TWO PAIR OF NOTCHES.

STRAP JOINT A

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

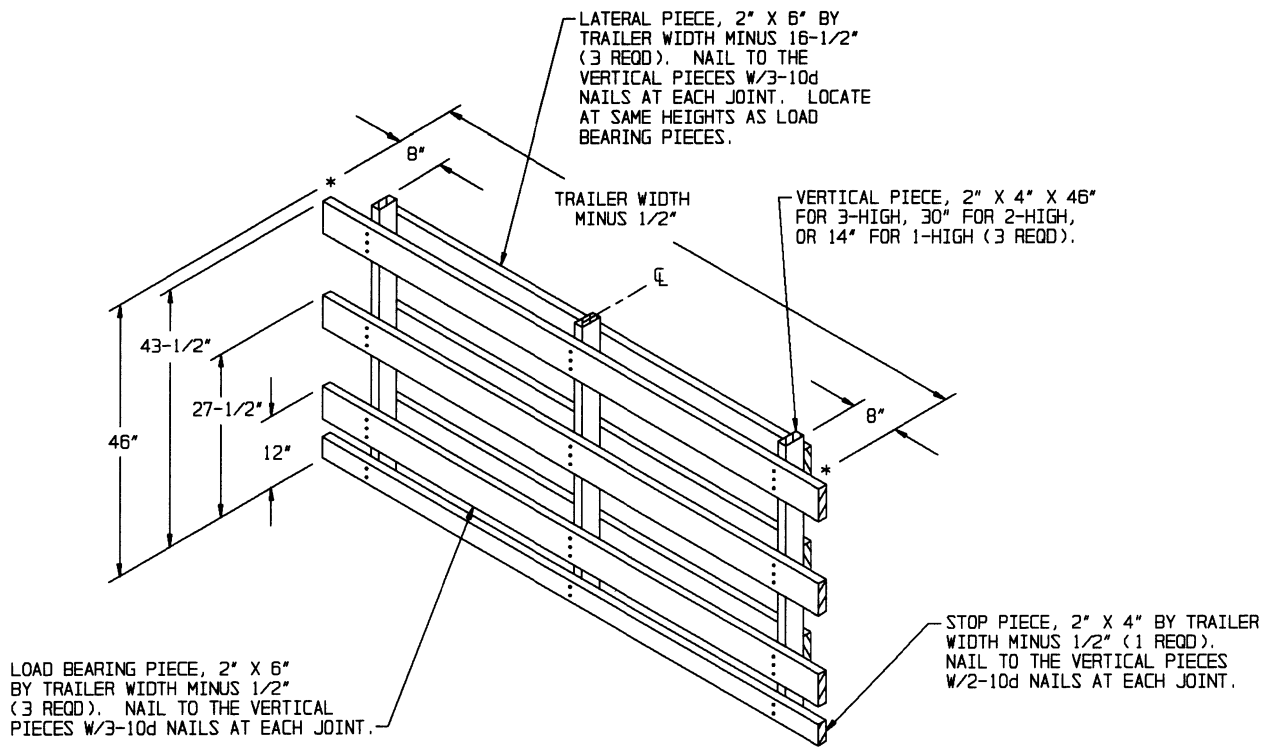


TWO SEALS, BUTTED TOGETHER, WITH TWO PAIR OF CRIMPS EACH SEAL.

STRAP JOINT B

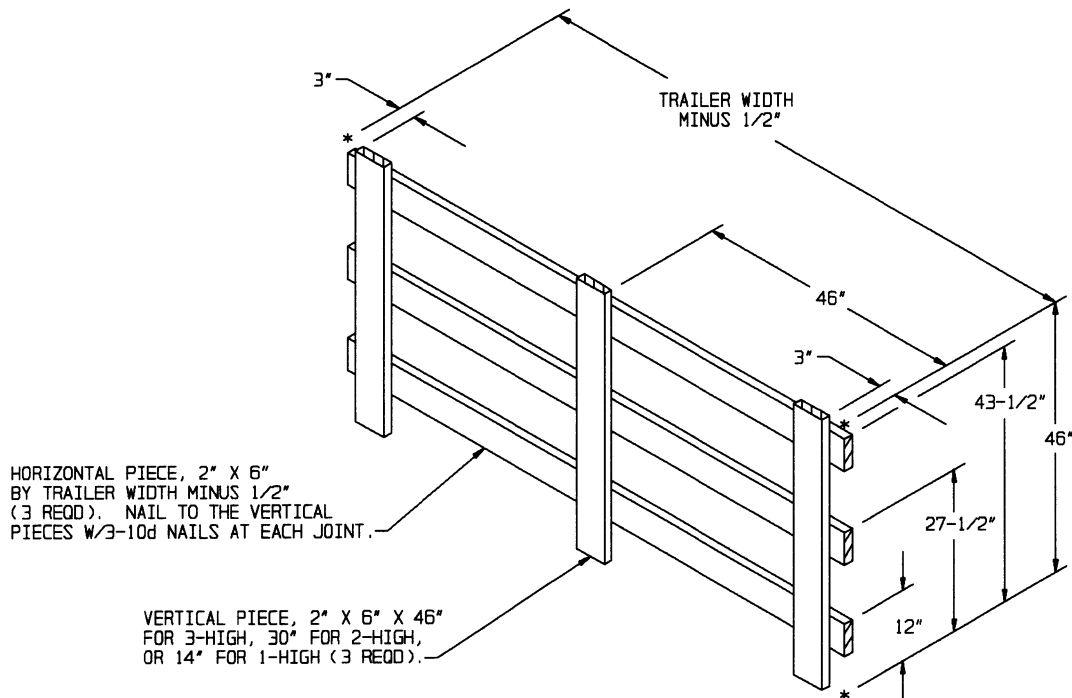
METHOD OF SECURING A STRAP JOINT WHEN USING A CRIMP-TYPE SEALER.

END-OVER-END LAP JOINT DETAILS



FORWARD BLOCKING ASSEMBLY D

THIS ASSEMBLY IS DESIGNED FOR USE AT THE FORWARD END OF A LOAD OF CROSSWISE-CONTAINER STACKS OF CNU-152/E CONTAINERS IN A TRAILER HAVING ROUNDED CORNERS.



FORWARD BLOCKING ASSEMBLY E

THIS ASSEMBLY IS DESIGNED FOR USE AT THE FORWARD END OF A LOAD OF CROSS-WISE CONTAINER STACKS OF CNU-152/E CONTAINERS IN A SQUARE FRONT TRAILER.