

LOADING AND BRACING (TL & LTL) IN VAN TRAILERS[⊕] OF AIR INFLATABLE RETARDER, BSU-49/B PACKED IN THE CNU-335 A/E OR CNU-335/E CONTAINER OR BSU-50/B PACKED IN THE CNU-336 A/E OR CNU 336/E CONTAINER

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CAUTION: PROCEDURES SHOWN HEREIN, ARE ONLY APPLICABLE FOR
HIGHWAY MOVEMENTS, NOT FOR TRAILER-ON-FLAT CAR (TOFC) MOVEMENTS.

U.S. ARMY MATERIEL COMMAND DRAWING

APPROVED, U.S. ARMY INDUSTRIAL OPERATIONS COMMAND 	ENGINEER	BASIC		DO NOT SCALE			
		REV.		WEBSITE: HTTP://WWW.DAC.ARMY.MIL			
	TECHNICIAN	BASIC	RICHARD HAYNES	NOVEMBER 1986			
	REV.	RICHARD HAYNES	REVISION NO. 2 SEPTEMBER 1997				
	DRAFTSMAN	BASIC	BARB LEONARD	SEE THE REVISION LISTING ON PAGE 3			
		REV.	SONJA WILSON	CLASS	DIVISION	DRAWING	FILE
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND 	TRANSPORTATION ENGINEERING DIVISION		<i>W. R. Finck</i>	19	48	7071	SP11J2
	VALIDATION ENGINEERING DIVISION		<i>W. R. Finck</i> TESTED				
	LOGISTICS ENGINEERING OFFICE		<i>W. R. Finck</i>				
U.S. ARMY DEFENSE AMMUNITION CENTER							

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 THE AIR INFLATABLE RETARDER, BSU-49/B PACKED IN THE CNU-335A/E CONTAINER OR BSU-50/B PACKED IN THE CNU-336A/E CONTAINER OR PACKED IN THEIR SHIPPING STORAGE CONTAINERS. SEE THE PICTORIAL VIEWS ON PAGE 3 FOR SIZE AND WEIGHT. REFER TO T.O. 11A6-13-7 FOR FURTHER INFORMATION.
- 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 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 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 "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 43,000 POUNDS, IF IT IS DESIRED TO INCREASE THE LADING WEIGHT.

(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 - - - - - : COMMERCIAL ITEM DESCRIPTION A-A-55057, TYPE A, 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 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.
- ANTI-CHAFING MATERIAL - - - - - : MIL-B-121 (OR EQUAL); NEUTRAL BARRIER MATERIAL.
- FIBERBOARD - - - - - : FED SPEC PPP-F-320; TYPE SF (SOLID FIBERBOARD), CLASS DOMESTIC, ALL GRADES.

- 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 PALLET UNITS DIRECTLY AGAINST THE FORWARD PORTION OF THE TRAILER.
- 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 17 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 SENCOR 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 3".
- Q. IF THE SPACE AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS 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" USE THE "REAR BLOCKING ASSEMBLY" AS DEPICTED ON PAGE 14.
- 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 0.454 KG.

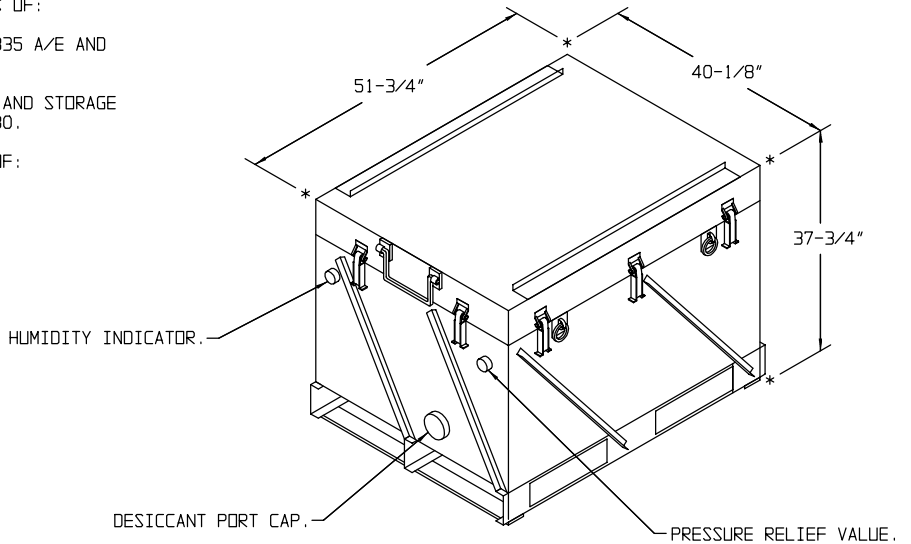
REVISIONS

REVISION NO. 1, DATED OCTOBER 1988, CONSISTS OF:

1. REMOVING DUNNAGE REQUIREMENTS FROM CNU-335 A/E AND CNU-336 A/E CONTAINERS.
2. ADDING SHIPPING PROCEDURES FOR SHIPPING AND STORAGE CONTAINERS PN 796060-10 AND PN 796060-30.

REVISION NO. 2 DATED AUGUST 1997, CONSISTS OF:

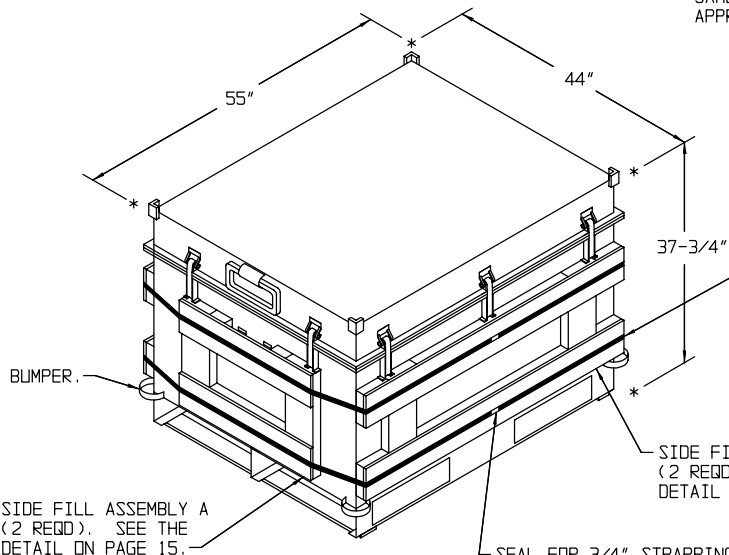
1. UPDATING DRAWING FORMAT.



CNU-335 A/E CONTAINER

* AIR INFLATABLE RETARDER, BSU-49/B (CNU-335A/E CONTAINER) - - 1,038 LBS (APPROX)

* THE UNIT SHOWN ABOVE IS APPLICABLE TO BOTH THE AIR INFLATABLE RETARDER, BSU-49/B PACKED IN THE CNU-335A/E OR BSU-50/B PACKED IN THE CNU-336A/E CONTAINER. ALTHOUGH BOTH CONTAINERS ARE THE SAME SIZE, THE BSU-50/B PACKED IN THE CNU-336A/E CONTAINER WEIGHS APPROXIMATELY 559 POUNDS.



CNU-336/E CONTAINER

AIR INFLATABLE RETARDER, BSU-49/B (CNU-335/E CONTAINER) - - - - - 1,038 LBS (APPROX)
 DUNNAGE - - - - - 82 LBS
 TOTAL WEIGHT - - - - - 1,120 LBS (APPROX)

THE UNIT SHOWN ABOVE IS APPLICABLE TO BOTH THE AIR INFLATABLE RETARDER, BSU-49/B PACKED IN THE CNU-335/E CONTAINER OR BSU-50/B PACKED IN THE CNU-336/E CONTAINER. ALTHOUGH BOTH CONTAINERS ARE THE SAME SIZE, THE BSU-50/B PACKED IN THE CNU 336/E CONTAINER WEIGHS APPROXIMATELY 641 POUNDS.

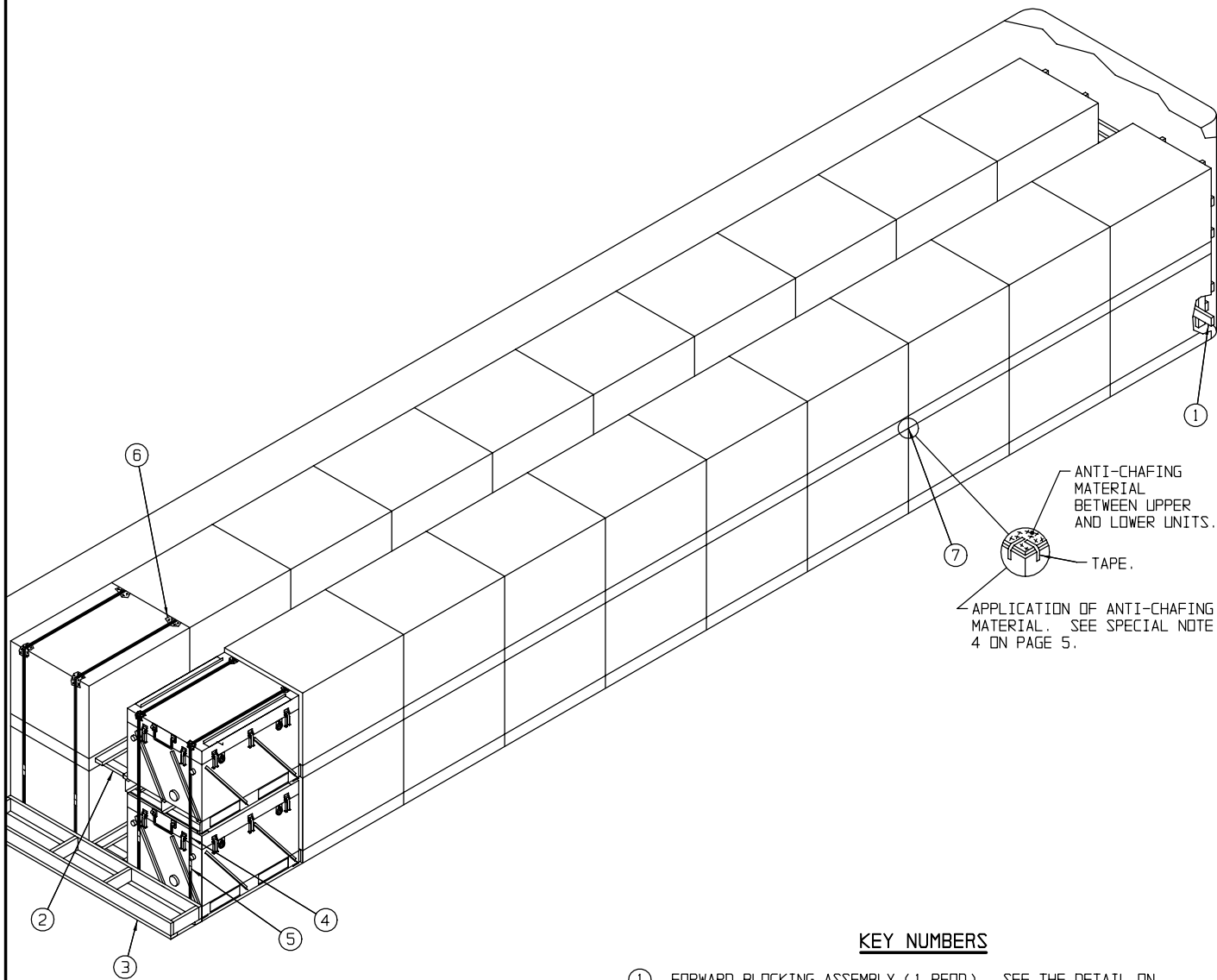
HORIZONTAL STRAP, 3/4" X .035" OR .031" X 17'-0" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE THE CONTAINER AND DUNNAGE AS SHOWN.

SIDE FILL ASSEMBLY B (2 REQD). SEE THE DETAIL ON PAGE 15.

SEAL FOR 3/4" STRAPPING (2 REQD, 1 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF NOTCHES.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 6"	31	31
NAILS	NO. REQD	POUNDS
6d (2")	88	1/2
STEEL STRAPPING, 3/4"	34' REQD	2-1/2 LBS
SEAL FOR 3/4" STRAPPING	2 REQD	NIL
PLYWOOD, 1/2"	9.60 SQ FT REQD	10 LBS



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 14. SEE SPECIAL NOTE 3 ON PAGE 5. SEE GENERAL NOTE "M" ON PAGE 2.
- ② ANTI-SWAY BRACE (20 REQD). SEE THE DETAIL ON PAGE 16. INSTALL BETWEEN LATERALLY ADJACENT CONTAINERS.
- ③ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 14. SEE SPECIAL NOTE 2 ON PAGE 5.
- ④ UNITIZING STRAP, 1-1/4" X .035" DR .031" X 23'-0" LONG STEEL STRAPPING (4 REQD). PRE-POSITION PRIOR TO LOADING THE STACKS INTO THE TRAILER.
- ⑤ SEAL FOR 1-1/4" STEEL STRAPPING (8 REQD, 2 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF CRIMPS. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 17. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑥ ANTI-CHAFING, NEUTRAL BARRIER MATERIAL (AS REQD). PLACE UNDER STRAPPING AT ALL POINTS OF CONTACT WITH THE CONTAINER.
- ⑦ ANTI-CHAFING MATERIAL (AS REQD). PLACE SO AS TO BE BETWEEN THE SKIDS OF AN UPPER CONTAINER AND THE COVER ASSEMBLY OF A LOWER CONTAINER. SEE SPECIAL NOTE 4 ON PAGE 5.

SPECIAL NOTES:

1. A 40-UNIT LOAD OF BSU-49/B RETARDERS PACKED IN THE CNU-335A/E CONTAINERS IS SHOWN IN A 45'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY USED.
2. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE CONTAINER AND THE REAR DOOR MEASURES 1-1/2" OR LESS, NO REAR BLOCKING IS REQUIRED. IF THE VOID AT THE REAR OF THE LOAD IS MORE THAN 1-1/2" BUT LESS THAN 9", USE THE SOLID FILL TYPE REAR BLOCKING AS SHOWN IN THE LOAD VIEW ON PAGE 8.
3. A TRAILER WITH ROUNDED CORNERS AT THE FORWARD END IS SHOWN IN THE LOAD VIEW. IF THE TRAILER BEING USED HAS SQUARE CORNERS, OMIT THE FORWARD BLOCKING, PIECE MARKED ①, AND POSITION THE CONTAINERS DIRECTLY AGAINST THE FRONT WALL OF THE TRAILER.
4. ANTI-CHAFING MATERIAL SUCH AS CORRUGATED OR THIN SOLID FIBERBOARD SHOULD BE PLACED BETWEEN THE AREAS OF CONTACT BETWEEN THE SKIDS (RUNNERS) OF AN UPPER CONTAINER AND THE COVER ASSEMBLY OF A LOWER CONTAINER. TEN FOLDS OF 50-POUND BASIS WEIGHT OR HEAVIER KRAFT PAPER COULD BE SUBSTITUTED FOR THE FIBERBOARD MATERIAL. REGARDLESS OF THE TYPE OF ANTI-CHAFING MATERIAL USED, IT SHOULD BE FASTENED TO THE COVER ASSEMBLY OF A LOWER CONTAINER BY TAPING THE ENDS OF THE MATERIAL TO SIDEWALLS OF THE LOWER CONTAINER WITH SHORT PIECES OF SUITABLE TAPE.

BILL OF MATERIAL

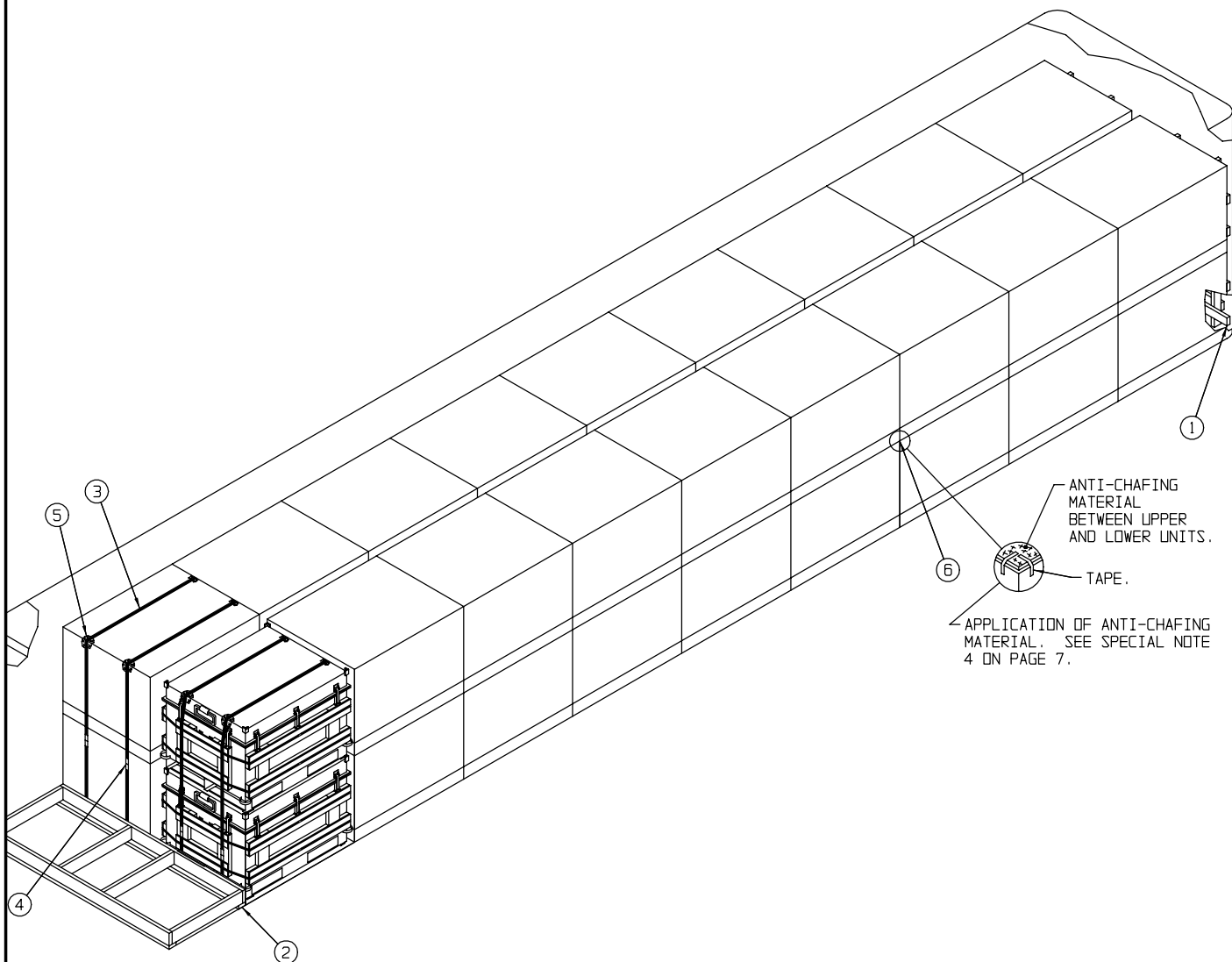
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	345	230
2" X 6"	19	19
NAILS	NO. REQD	POUNDS
10d (3")	352	5-1/2
STEEL STRAPPING, 1-1/4" - -	92' REQD - - - -	13 LBS
SEAL FOR 1-1/4" STRAPPING - -	8 REQD - - - -	NIL
ANTI-CHAFING MATERIAL - - -	AS REQD - - - -	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-335 A/E	40	41,520 LBS *
DUNNAGE		516 LBS
TOTAL WEIGHT		42,036 LBS (APPROX)

* CNU-336 A/E CONTAINERS WILL WEIGH 22,360 LBS.

40-UNIT LOAD (CNU-335 A/E) IN A 45'-0" LONG BY 8'-2" WIDE VAN TRAILER



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 14. SEE SPECIAL NOTE 3 ON PAGE 5. SEE GENERAL NOTE "M" ON PAGE 2.
- ② REAR BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 14. SEE SPECIAL NOTE 2 ON PAGE 7.
- ③ UNITIZING STRAP, 1-1/4" X .035" DR .031" X 23'-0" LONG STEEL STRAPPING (4 REQD). PRE-POSITION PRIOR TO LOADING THE STACKS INTO THE TRAILER.
- ④ SEAL FOR 1-1/4" STEEL STRAPPING (8 REQD, 2 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF CRIMPS. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 17. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑤ ANTI-CHAFING, NEUTRAL BARRIER MATERIAL (AS REQD). PLACE UNDER STRAPPING AT ALL POINTS OF CONTACT WITH THE CONTAINER.
- ⑥ ANTI-CHAFING MATERIAL (AS REQD). PLACE SO AS TO BE BETWEEN THE SKIDS OF AN UPPER CONTAINER AND THE COVER ASSEMBLY OF A LOWER CONTAINER. SEE SPECIAL NOTE 4 ON PAGE 7.

SPECIAL NOTES:

1. A 36-UNIT LOAD OF BSU-49/B RETARDERS PACKED SHIPPING AND STORAGE CONTAINER, PN 796060-10, IS SHOWN IN A 45'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY USED.
2. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE CONTAINER AND THE REAR DOOR MEASURES 1-1/2" OR LESS, NO REAR BLOCKING IS REQUIRED. IF THE VOID AT THE REAR OF THE LOAD IS MORE THAN 1-1/2" BUT LESS THAN 9", USE THE SOLID FILL TYPE REAR BLOCKING AS SHOWN IN THE LOAD VIEW ON PAGE 8.
3. A TRAILER WITH ROUNDED CORNERS AT THE FORWARD END IS SHOWN IN THE LOAD VIEW. IF THE TRAILER BEING USED HAS SQUARE CORNERS, OMIT THE FORWARD BLOCKING, PIECE MARKED ①, AND POSITION THE CONTAINERS DIRECTLY AGAINST THE FRONT WALL OF THE TRAILER.
4. ANTI-CHAFING MATERIAL SUCH AS CORRUGATED OR THIN SOLID FIBERBOARD SHOULD BE PLACED BETWEEN THE AREAS OF CONTACT BETWEEN THE SKIDS (RUNNERS) OF AN UPPER CONTAINER AND THE COVER ASSEMBLY OF A LOWER CONTAINER. TEN FOLDS OF 50-POUND BASIS WEIGHT OF HEAVIER KRAFT PAPER COULD BE SUBSTITUTED FOR THE FIBERBOARD MATERIAL. REGARDLESS OF THE TYPE OF ANTI-CHAFING MATERIAL USED, IT SHOULD BE FASTENED TO THE COVER ASSEMBLY OF A LOWER CONTAINER BY TAPING THE ENDS OF THE MATERIAL TO SIDEWALLS OF THE LOWER CONTAINER WITH SHORT PIECES OF SUITABLE TAPE.

BILL OF MATERIAL

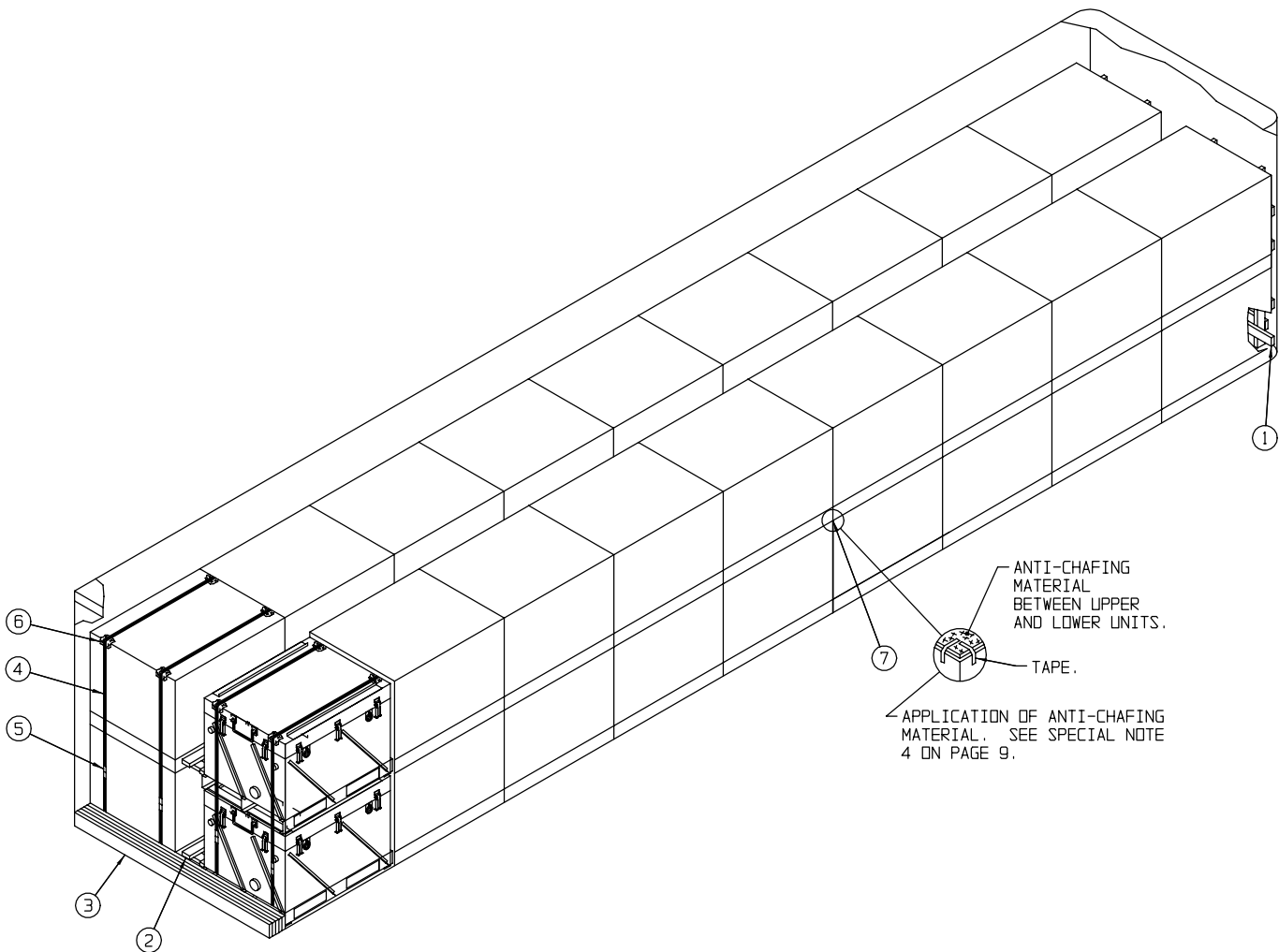
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	95	63
2" X 6"	25	25
NAILS	NO. REQD	POUNDS
10d (3")	112	1-3/4
STEEL STRAPPING, 1-1/4" - - -	92' REQD - - - -	13 LBS
SEAL FOR 1-1/4" STRAPPING - - -	8 REQD - - - -	NIL
ANTI-CHAFING MATERIAL - - - -	AS REQD - - - -	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-335/E - - - - -	36 - - - - -	40,320 LBS *
DUNNAGE - - - - -	- - - - -	191 LBS
TOTAL WEIGHT - - - - -		40,511 LBS (APPROX)

* BSU-50/B RETARDER IN CNU 336/E CONTAINER WILL WEIGH 23,076 LBS.

36-UNIT LOAD (CNU-335/E) IN A 45'-0" LONG BY 7'-8" WIDE VAN TRAILER



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 14. SEE SPECIAL NOTE 3 ON PAGE 9. SEE GENERAL NOTE "M" ON PAGE 2.
- ② ANTI-SWAY BRACE (18 REQD). SEE THE DETAIL ON PAGE 16. INSTALL BETWEEN LATERALLY ADJACENT CONTAINERS.
- ③ REAR BLOCKING SOLID FILL, 6" WIDE MATERIAL BY TRAILER WIDTH MINUS 1/2" LENGTH (AS REQD TO FILL VOID AT THE REAR OF THE LOAD). LAMINATE W/1-10d NAIL EVERY 12". IF MORE THAN 1 THICKNESS REQUIRED, SEE SPECIAL NOTE 2 ON PAGE 9.
- ④ UNITIZING STRAP, 1-1/4" X .035" DR .031" X 23'-0" LONG STEEL STRAPPING (4 REQD). PRE-POSITION PRIOR TO LOADING THE STACKS INTO THE TRAILER.
- ⑤ SEAL FOR 1-1/4" STEEL STRAPPING (8 REQD, 2 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF CRIMPS. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 17. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑥ ANTI-CHAFING, NEUTRAL BARRIER MATERIAL (AS REQD). PLACE UNDER STRAPPING AT ALL POINTS OF CONTACT WITH THE CONTAINER.
- ⑦ ANTI-CHAFING MATERIAL (AS REQD). PLACE SO AS TO BE BETWEEN THE SKIDS OF AN UPPER CONTAINER AND THE COVER ASSEMBLY OF A LOWER CONTAINER. SEE SPECIAL NOTE 4 ON PAGE 9.

SPECIAL NOTES:

1. A 36-UNIT LOAD OF BSU-49/B RETARDERS PACKED IN THE CNU-335A/E CONTAINERS IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY USED.
2. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE CONTAINER AND THE REAR DOOR MEASURES 1-1/2" OR LESS, NO REAR BLOCKING IS REQUIRED. IF THE VOID AT THE REAR OF THE LOAD IS MORE THAN 9", USE THE "REAR BLOCKING ASSEMBLY" AS SHOWN IN THE LOAD VIEW ON PAGE 4.
3. A TRAILER WITH ROUNDED CORNERS AT THE FORWARD END IS SHOWN IN THE LOAD VIEW. IF THE TRAILER BEING USED HAS SQUARE CORNERS, OMIT THE FORWARD BLOCKING, PIECE MARKED ①, AND POSITION THE CONTAINERS DIRECTLY AGAINST THE FRONT WALL OF THE TRAILER.
4. ANTI-CHAFING MATERIAL SUCH AS CORRUGATED OR THIN SOLID FIBERBOARD SHOULD BE PLACED BETWEEN THE AREAS OF CONTACT BETWEEN THE SKIDS (RUNNERS) OF AN UPPER CONTAINER AND THE COVER ASSEMBLY OF A LOWER CONTAINER. TEN FOLDS OF 50-POUND BASIS WEIGHT OF HEAVIER KRAFT PAPER COULD BE SUBSTITUTED FOR THE FIBERBOARD MATERIAL. REGARDLESS OF THE TYPE OF ANTI-CHAFING MATERIAL USED, IT SHOULD BE FASTENED TO THE COVER ASSEMBLY OF A LOWER CONTAINER BY TAPING THE ENDS OF THE MATERIAL TO SIDEWALLS OF THE LOWER CONTAINER WITH SHORT PIECES OF SUITABLE TAPE.

BILL OF MATERIAL

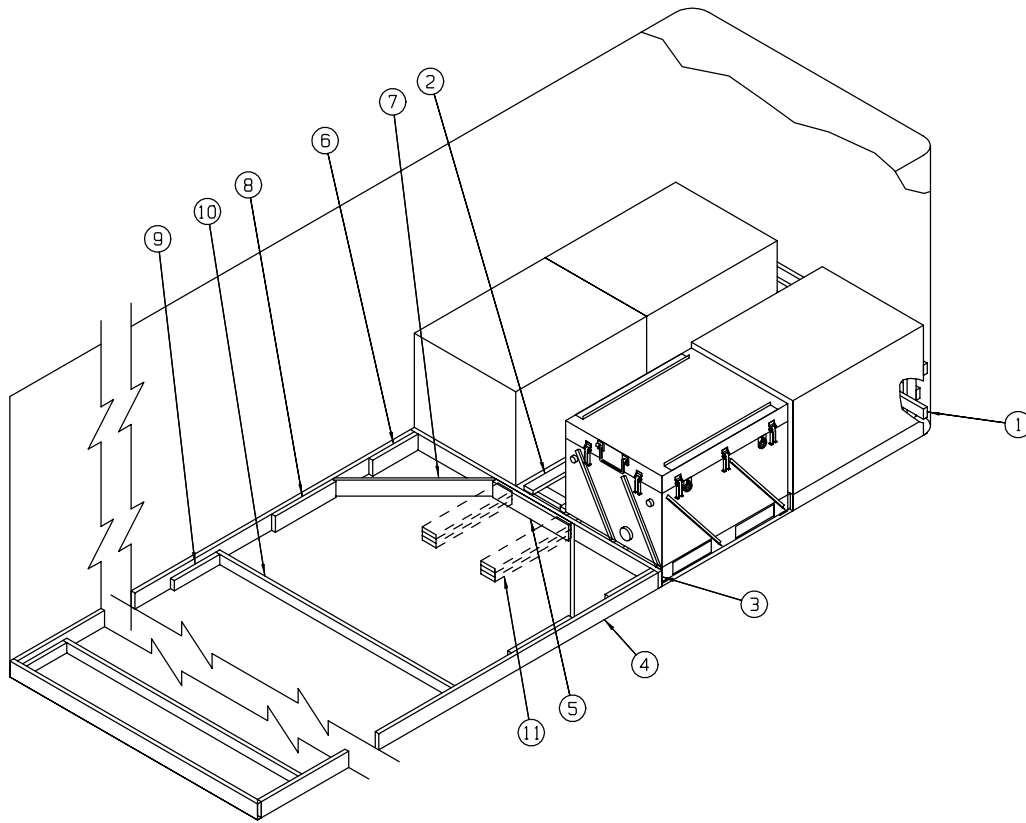
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	284	189
2" X 6"	39	39
NAILS	NO. REQD	POUNDS
10d (3")	308	4-3/4
STEEL STRAPPING, 1-1/4" - -	92' REQD - - - -	13 LBS
SEAL FOR 1-1/4" STRAPPING - -	8 REQD - - - -	NIL
ANTI-CHAFING MATERIAL - - -	AS REQD - - - -	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-335 A/E	36	37,368 LBS *
DUNNAGE		474 LBS
TOTAL WEIGHT		37,842 LBS (APPROX)

* CNU-336 A/E CONTAINER WILL WEIGH 1,242 LBS.

36-UNIT LOAD (CNU-335 A/E) IN A 40'-0" LONG BY 7'-8" WIDE VAN TRAILER



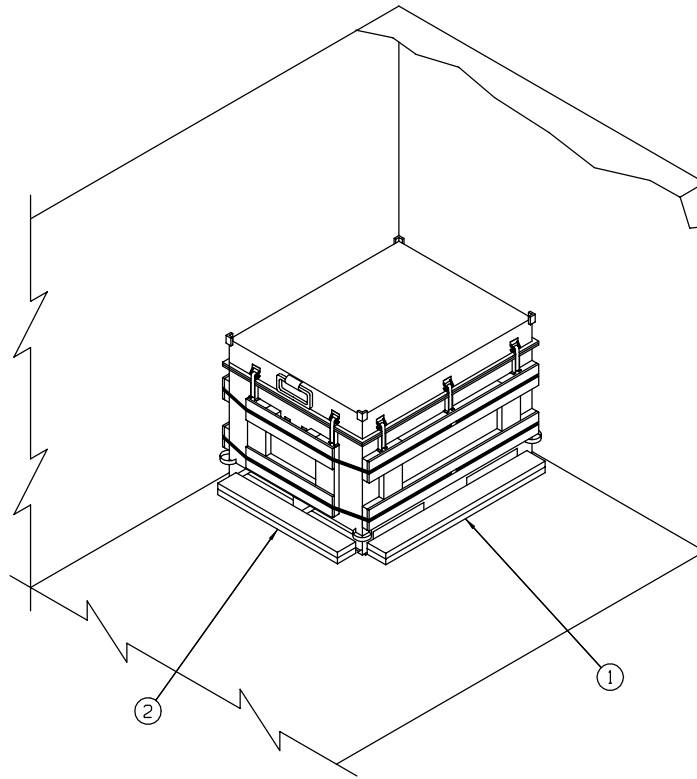
ISOMETRIC VIEW

SPECIAL NOTES:

1. THESE UNLOADING PROCEDURES DEPICT THE USE OF "K-BRACE" BLOCKING IN A 7'-6" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH IS EQUIPPED WITH OR WITHOUT NAILABLE FLOORS.
2. PIECES MARKED ① ARE FOR USE IN TRAILERS WHICH HAVE A NAILABLE FLOOR AND SHOULD BE USED, IF POSSIBLE, IN LIEU OF PIECES MARKED ④ THROUGH ⑩ WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS. TWO BACK-UP CLEATS, SHOWN AS PIECES MARKED ①, ARE ADEQUATE FOR RETAINING NOT MORE THAN 16,000 POUNDS.
3. THE TYPICAL K-BRACE BLOCKING DEPICTED ABOVE WILL RETAIN A MAXIMUM OF 20,000 POUNDS.
4. IF THE SIDE STRUTS SHOWN AS PIECE MARKED ④ 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.
5. ALL LTL LOADS, REGARDLESS OF THEIR SIZE, REQUIRE ONE STRUT BRACE POSITIONED AT THE REAR OF THE TRAILER AND NAILED TO PIECES MARKED ⑨. IF THE SIDE STRUTS, PIECES MARKED ④, ARE LONGER THAN 7'-0" AN ADDITIONAL STRUT BRACE, PIECE MARKED ⑩, AND TWO STRUT BRACE RETAINING CLEATS, PIECES MARKED ⑨, MUST BE APPLIED FOR EVERY 7'-0" OF SIDE STRUT LENGTH.
6. THE TYPICAL LTL SHOWN ABOVE IS APPLICABLE TO ALL CONTAINERS AS DEPICTED WITHIN THIS DRAWING.

KEY NUMBERS

- ① FORWARD BLOCKING FOR 1-HIGH (1 REQD). SEE THE "FORWARD BLOCKING" DETAIL ON PAGE 14. SEE GENERAL NOTE "L" ON PAGE 2.
- ② ANTI-SWAY BRACE (2 REQD). SEE THE DETAIL ON PAGE 16.
- ③ HEADER, 2" X 6" BY TRAILER WIDTH (CUT TO FIT) (2 REQD).
- ④ SIDE STRUT, 2" X 6" BY CUT TO FIT BETWEEN HEADERS MARKED ③ (2 REQD). SEE SPECIAL NOTE 4 AT LEFT.
- ⑤ CENTER CLEAT, 2" X 6" X 30" (1 REQD). NAIL TO HEADER, PIECE MARKED ③ W/6-10d NAILS.
- ⑥ POCKET CLEAT, 2" X 6" X 18" (2 REQD). NAIL TO STRUT, PIECE MARKED ④, W/5-10d NAILS. TOENAIL TO THE ADJACENT HEADER PIECE MARKED ③, W/3-12d NAILS.
- ⑦ 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 ③, AND STRUT, PIECE MARKED ④, W/2-16d NAILS AT EACH END.
- ⑧ BACK-UP CLEAT, 2" X 6" X 24" (2 REQD). NAIL TO A STRUT, PIECE MARKED ④, W/8-10d NAILS.
- ⑨ STRUT BRACE RETAINING CLEAT, 2" X 4" X 12" (AS REQD). NAIL TO A SIDE STRUT, PIECE MARKED ④, W/3-10d NAILS. SEE SPECIAL NOTE 5 ON THIS PAGE.
- ⑩ STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 3" (CUT TO FIT) (MINIMUM OF ONE REQD). NAIL TO PIECES MARKED ⑨ W/2-12d NAILS AT EACH END. SEE SPECIAL NOTE 5 AT LEFT.
- ⑪ BACK-UP CLEAT, 2" X 6" X 30" (TRIPLED) (2 REQD). POSITION AS SHOWN AND NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/8-12d NAILS. NAIL EACH ADDITIONAL PIECE IN A LIKE MANNER. TOENAIL THE TOP PIECE TO A HEADER, PIECE MARKED ③, W/2-12d NAILS. SEE SPECIAL NOTE 2 AT LEFT.



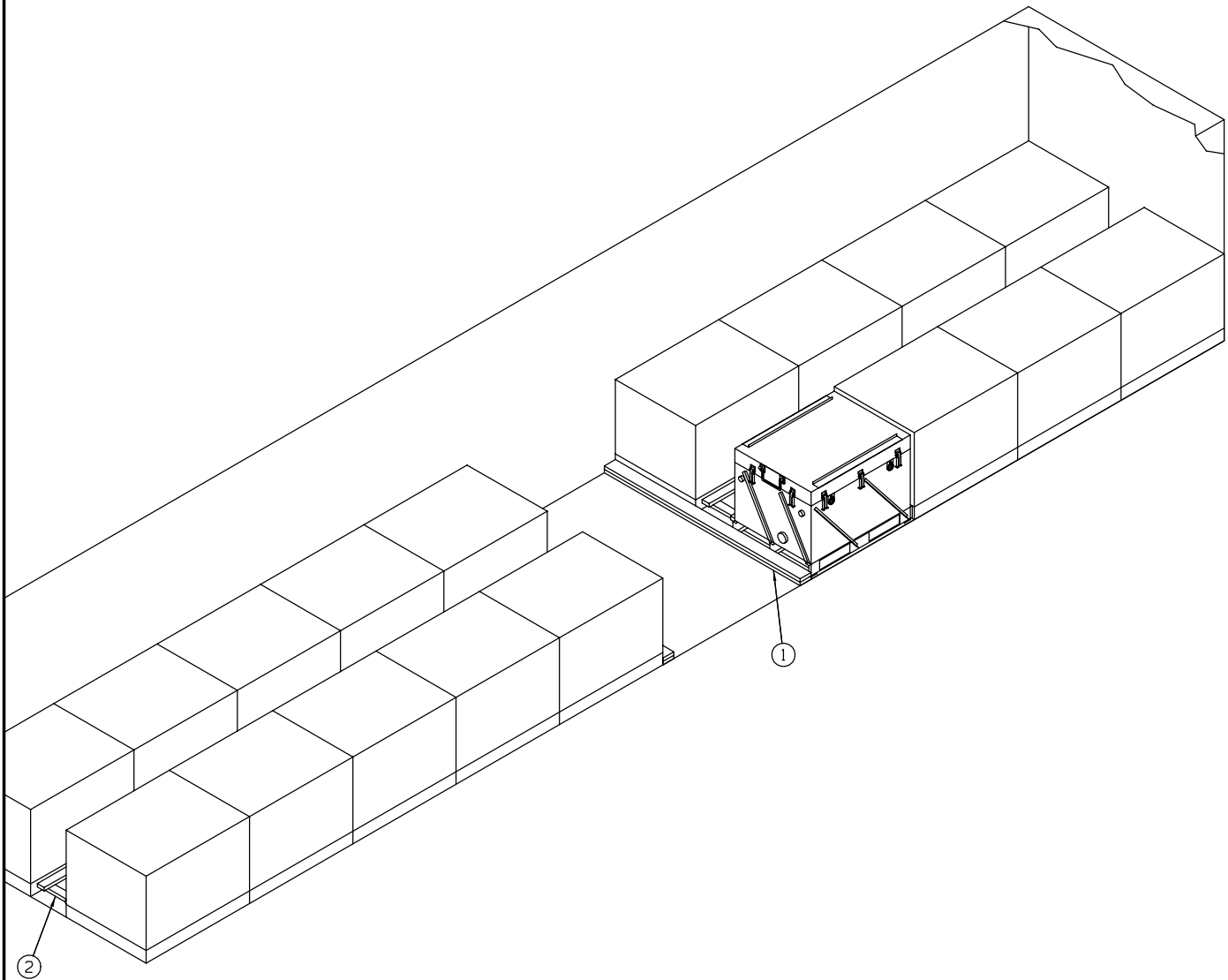
ISOMETRIC VIEW

SPECIAL NOTES:

1. A 1-UNIT LOAD IS SHOWN IN A 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH HAS A NAILABLE FLOOR. OTHER WIDTH TRAILERS CAN BE USED.
2. IF THE TRAILER BEING LOADED IS EQUIPPED WITH ROUNDED FRONT CORNERS, THE CONTAINER SHOULD BE POSITIONED IN THE CENTER OF THE TRAILER WIDTH AND SIDE BLOCKING INSTALLED ON BOTH SIDES OF THE CONTAINER.
3. THE HEADER, SHOWN AS PIECE MARKED ②, WILL NOT BE RELIED UPON TO RETAIN MORE THAN TWO CONTAINERS.
4. IF MORE THAN TWO CONTAINERS ARE TO BE TRANSPORTED, THE LOAD SHOULD BE FORMED IN ROWS, WITH THE CONTAINERS POSITIONED AGAINST OPPOSITE SIDEWALLS, AS SHOWN IN THE TYPICAL LTL VIEW ON PAGE 10.

KEY NUMBERS

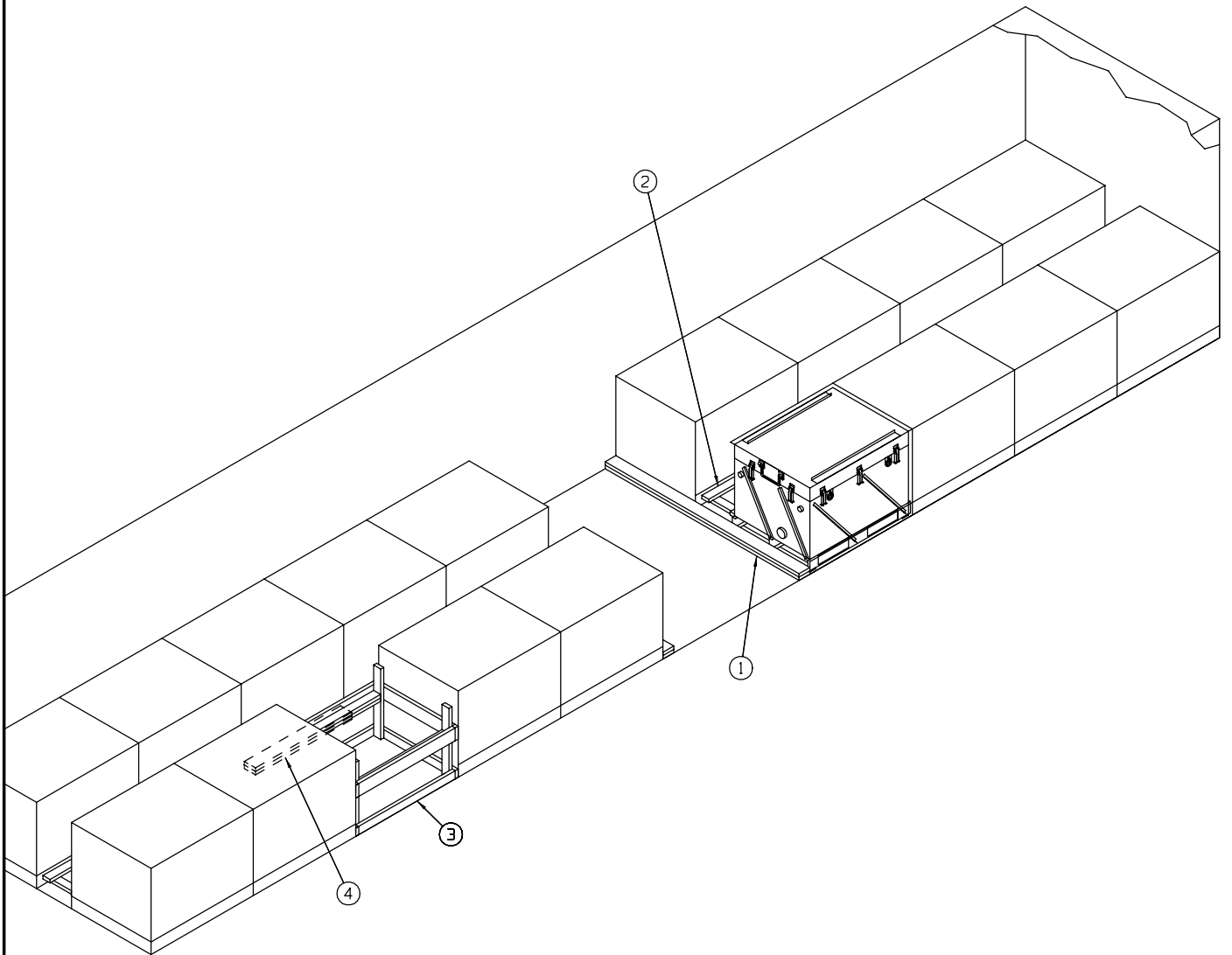
- ① SIDE BLOCKING, 2" X 6" X 48" (DOUBLED) (1 REQD). POSITION AS SHOWN. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/4-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE GENERAL NOTE "M" ON PAGE 2. SEE SPECIAL NOTE 2 AT LEFT.
- ② HEADER, 2" X 6" X 36" (DOUBLED) (1 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/3-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTES 3 AND 4 AT LEFT.



ISOMETRIC VIEW

KEY NUMBERS

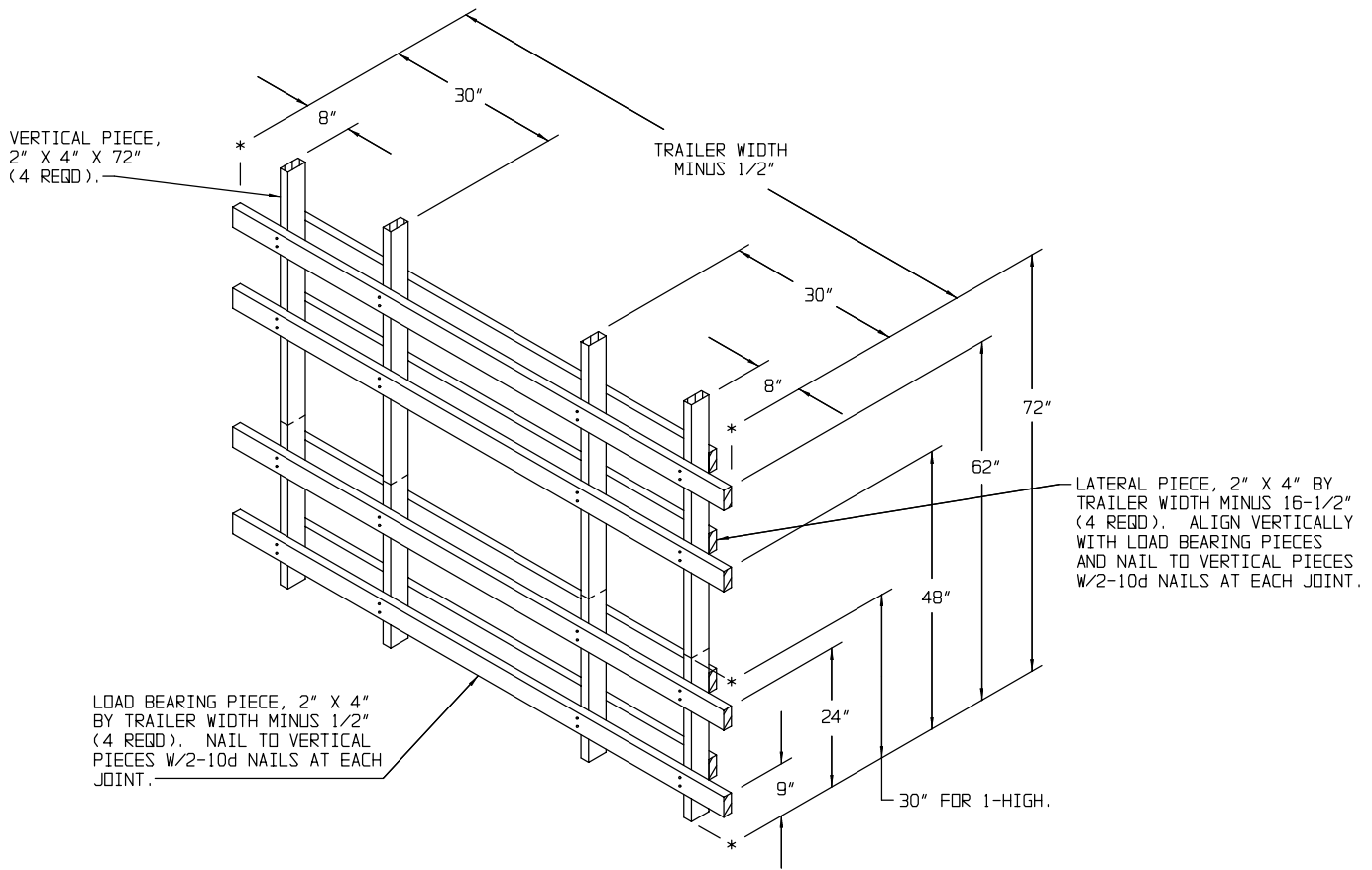
- ① HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (2 REQD). POSITION AS SHOWN. NAIL THE FIRST TO THE TRAILER FLOOR W/8-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ② ANTI-SWAY BRACE (18 REQD). SEE THE DETAIL ON PAGE 16. INSTALL BETWEEN LATERALLY ADJACENT CONTAINERS.



ISOMETRIC VIEW

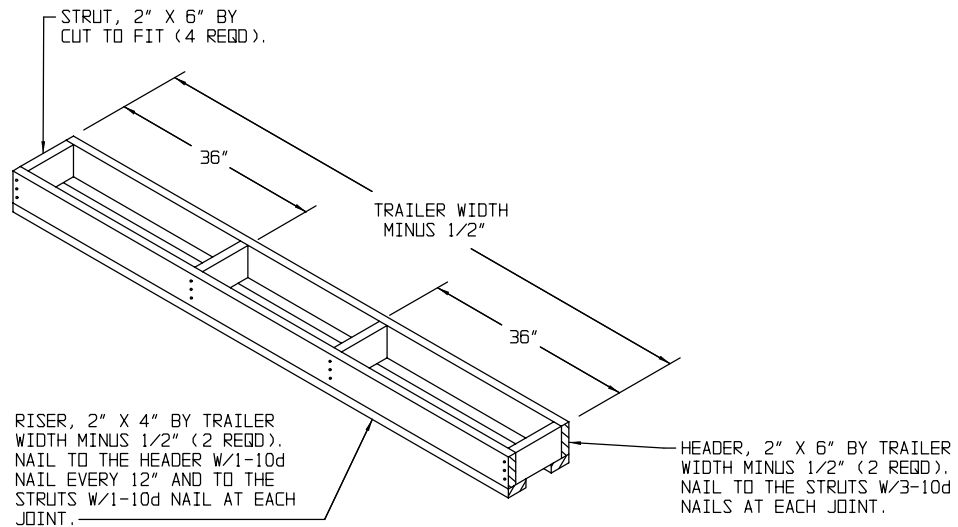
KEY NUMBERS

- ① HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (2 REQD). POSITION AS SHOWN. NAIL THE FIRST TO THE TRAILER FLOOR W/8-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ② ANTI-SWAY BRACE (8 REQD). SEE THE DETAIL ON PAGE 16. INSTALL BETWEEN LATERALLY ADJACENT CONTAINERS.
- ③ OMITTED CONTAINER ASSEMBLY A (1 REQD). POSITION AS SHOWN. SEE THE DETAIL ON PAGE 16. WIRE TIE TO A LONGITUDINALLY ADJACENT CONTAINER.
- ④ SIDE BLOCKING, 2" X 6" X 48" (DOUBLED) (1 REQD). 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

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", 2" X 6" VERTICAL PIECES WILL BE USED IN LIEU OF THE 2" X 4" PIECES.



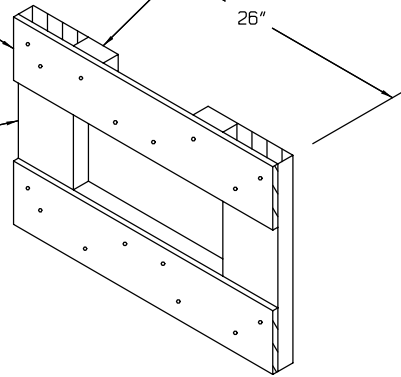
REAR BLOCKING ASSEMBLY

DETAILS

LATERAL PIECE, 5-1/2" X 26" X 1/2"
THICK PLYWOOD (2 REQD). NAIL TO
THE VERTICAL PIECES W/2-6d NAILS
AND TO THE INTERMEDIATE FILLER
PIECES W/4-6d NAILS.

INTERMEDIATE FILLER PIECE,
2" X 6" X 15" (2 REQD).
NOTCH TOP PIECE SO AS TO
ALLOW VIEWING OF HUMIDITY
INDICATOR AND PRESSURE
RELIEF VALUE. SEE
"DETAIL A" BELOW.

VERTICAL PIECE,
2" X 6" X 18"
(2 REQD).



SIDE FILL ASSEMBLY A

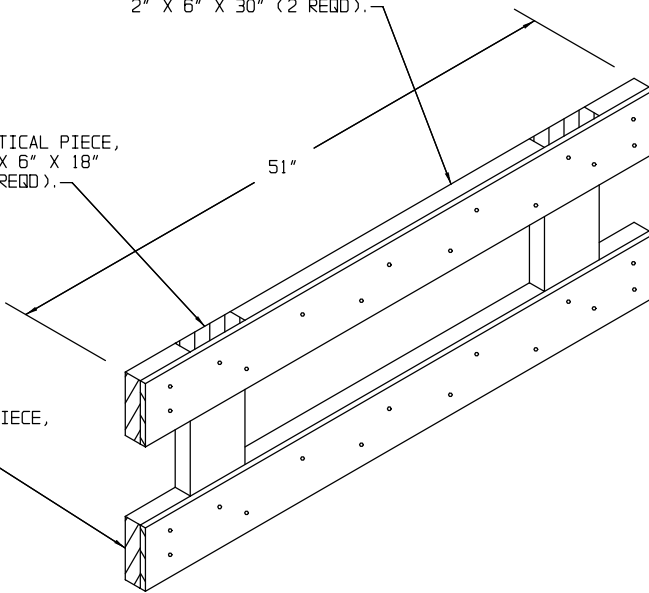
INTERMEDIATE FILLER PIECE,
2" X 6" X 30" (2 REQD).

VERTICAL PIECE,
2" X 6" X 18"
(2 REQD).

51"

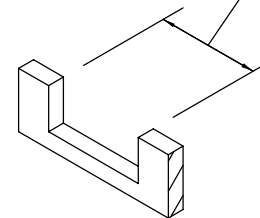
LATERAL PIECE, 5-1/2" WIDE BY 51" LONG BY
1/2" THICK PLYWOOD (2 REQD). NAIL TO THE
END FILLER PIECES W/2-6d NAILS. NAIL
TO THE VERTICAL PIECES W/2-6d NAILS. NAIL
TO THE INTERMEDIATE FILLER PIECES W/6-6d
NAILS.

END FILLER PIECE,
2" X 6" X 5"
(4 REQD).



SIDE FILL ASSEMBLY B

NOTCH AS REQD TO PROVIDE
VISUAL ACCESS TO THE
HUMIDITY INDICATOR AND
PRESSURE RELIEF VALUE ON
THE SIDE OF THE SHIPPING
AND STORAGE CONTAINER.

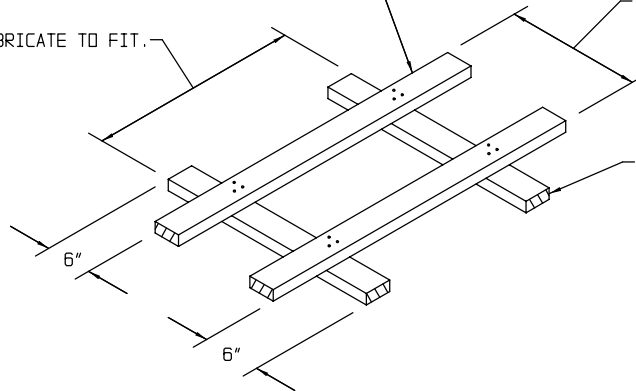


DETAIL A

BLOCKING PIECE, 2" X 4" X 44"
(2 REQD). NAIL TO THE SUPPORT
PIECES W/3-10d NAILS AT EACH JOINT.

FABRICATE TO FIT.

DISTANCE BETWEEN
CONTAINERS.



SUPPORT PIECE, 2" X 4" BY
LATERAL VOID PLUS 12" (2 REQD).
PLACE IN THE FORKLIFT OPENING
OF THE CONTAINERS.

ANTI-SWAY BRACE

ANTI-SWAY BRACE SHOULD BE ASSEMBLED IN
PLACE TO ENSURE A SNUG FIT BETWEEN THE
LOADING AND THE BLOCKING PIECE OF THE BRACE.

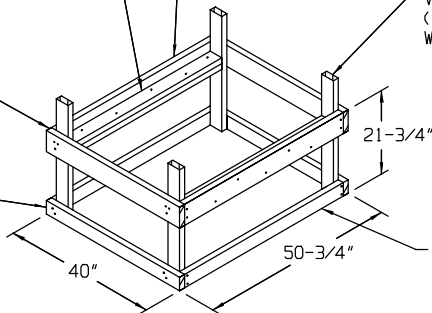
STRUT, 2" X 4" X 44-3/4"
(DOUBLED) (2 REQD). NAIL
THE FIRST PIECE TO THE
SECOND W/5-10d NAILS.

BUFFER PIECE, 2" X 6" X 47-3/4"
(2 REQD). NAIL TO THE VERTICAL
PIECES W/2-10d NAILS AT EACH END
AND TO THE STRUTS W/5-10d NAILS.

TOP HORIZONTAL PIECE,
2" X 6" X 40" (2 REQD).
NAIL TO THE VERTICAL
PIECES W/3-10d NAILS
AT EACH JOINT.

VERTICAL PIECE, 2" X 4" X 30"
(4 REQD). NAIL TO THE STRUT
W/3-10d NAILS.

BOTTOM HORIZONTAL PIECE,
2" X 4" X 40" (2 REQD).
NAIL TO THE VERTICAL
PIECES W/2-10d NAILS AT
EACH JOINT.



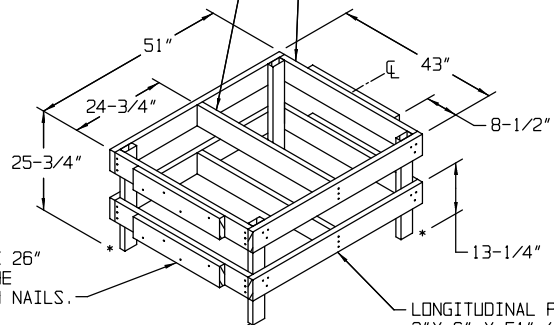
BUFFER PIECE, 2" X 4" X 47-3/4"
(2 REQD). NAIL TO THE VERTICAL
PIECES W/2-10d NAILS AT EACH END.

OMITTED CONTAINER ASSEMBLY A

THIS ASSEMBLY IS TO BE USED WHEN OMITTING
THE CNU-335 A/E OR CNU-336 A/E CONTAINER.

CENTER SUPPORT PIECE,
2" X 6" X 40" (2 REQD).

LATERAL PIECE, 2" X 6" X 40"
(4 REQD). NAIL TO THE VERTICAL
PIECES W/3-10d NAILS AT EACH END.



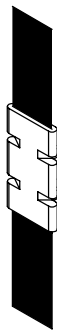
FILL PIECE, 2" X 6" X 26"
(4 REQD). NAIL TO THE
LATERAL PIECE W/4-10d NAILS.

VERTICAL PIECE,
2" X 4" X 25-3/4"
(4 REQD).

LONGITUDINAL PIECE,
2" X 6" X 51" (4 REQD).
NAIL TO THE VERTICAL
PIECES AND CENTER
SUPPORT PIECES W/3-10d
NAILS AT EACH JOINT.

OMITTED CONTAINER ASSEMBLY B

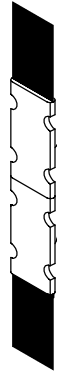
THIS ASSEMBLY IS TO BE USED WHEN OMITTING
THE CNU-335/E OR CNU-336/E CONTAINER.



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

