LOADING AND BRACING (TL & LTL) IN VAN TRAILERS® OF BSU-84, BSU-88 OR BSG-92 AIRFOIL GROUP PACKED IN CNU-373/E SHIPPING AND STORAGE CONTAINERS

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U.S. ARMY MATERIEL COMMAND DRAWING APPROVED, U.S. ARMY CAUTION: VERIFY PRIOR TO USE AT WWW.DAC.ARMY.MIL/DET THAT THIS JOINT MUNITIONS COMMAND IS THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 26. DO NOT SCALE **JUNE 2003 MELVIN SIX** BASIC ENGINEER OR TECHNICIAN MELVIN SIX REV. **REVISION NO. 1 NOVEMBER 2006** TRANSPORTATION APPROVED BY ORDER OF COMMANDING GENERAL U.S. ARMY MATERIEL COMMAND **ENGINEERING** SEE THE REVISION LISTING ON PAGE 2 DIVISION CLASS DIVISION DRAWING VALIDATION ENGINEERING DIVISION SP11J103 19 48 8686 **ENGINEERING** DIRECTORATE U.S. ARMY DEFENSE AMMUNITION CENTER

PROJECT

SP 385-00

<u>CAUTION</u>: THE PROCEDURES SHOWN HEREIN ARE <u>ONLY</u> APPLICABLE FOR HIGHWAY MOVEMENTS, <u>NOT</u> FOR TRAILER-ON-FLATCAR (TOFC) MOVEMENTS.

GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1 AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE OUTLOADING PROCEDURES SPECIFIED IN THIS DRAWING ARE APPLICABLE TO LOADS OF BSU-84, BSU-88 OR BSG-92 AIRFOIL GROUP PACKED IN THE CNU-373/E CONTAINER. SUBSEQUENT REFERENCE TO CONTAINER HEREIN MEANS THE CONTAINER WITH MISSILE INSTALLED. SEE AIR FORCE DRAWING 817218-30 AND PAGE 3 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. 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 FOR THE TRANSPORT OF THE DESIGNATED ITEM IS THE RESPONSIBILITY OF THE ORIGINATING CARRIER AND THE SHIPPER. ONLY VEHICLES IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE REGULATORY DOCUMENTS WILL BE SELECTED FOR USE.
- 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 39,000 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-373/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.
- 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 POSITION OF THE TRAILER.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

- LUMBER - - -: SEE TM 743-200-1 (DUNNAGE LUMBER) AND VOLUNTARY PRODUCT STANDARD PS 20.
- NAILS -----: ASTM F1667; COMMON STEEL NAIL (NLCMS OR NLCMMS).
- STRAPPING, STEEL -: ASTM D3953; FLAT STRAPPING, TYPE 1 OR 2, 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.

PAGE 2

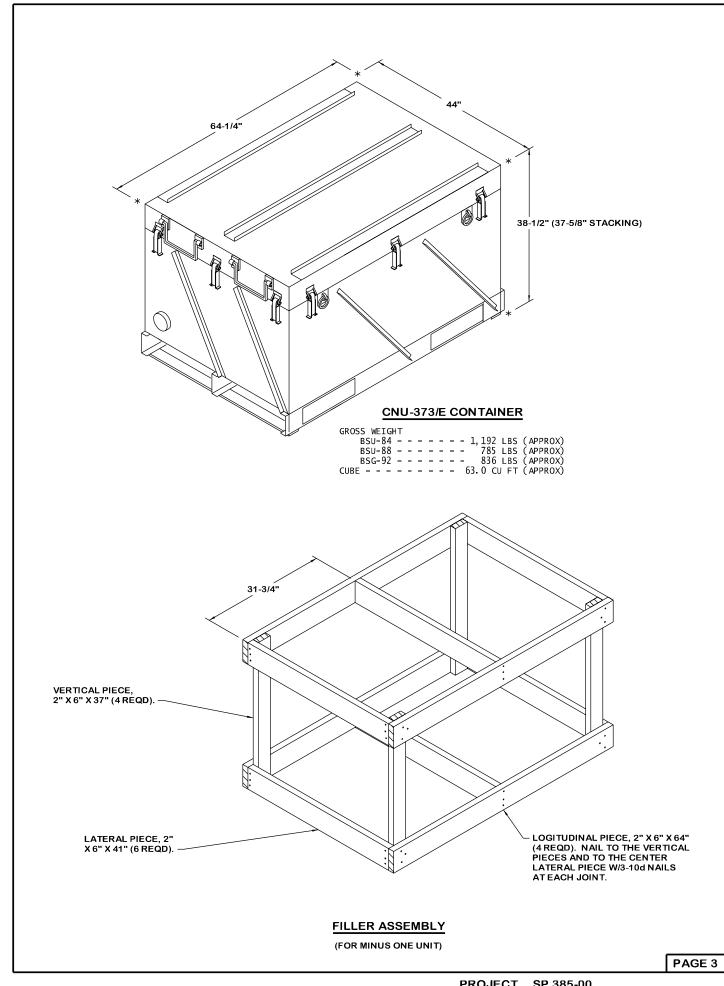
(GENERAL NOTES CONTINUED)

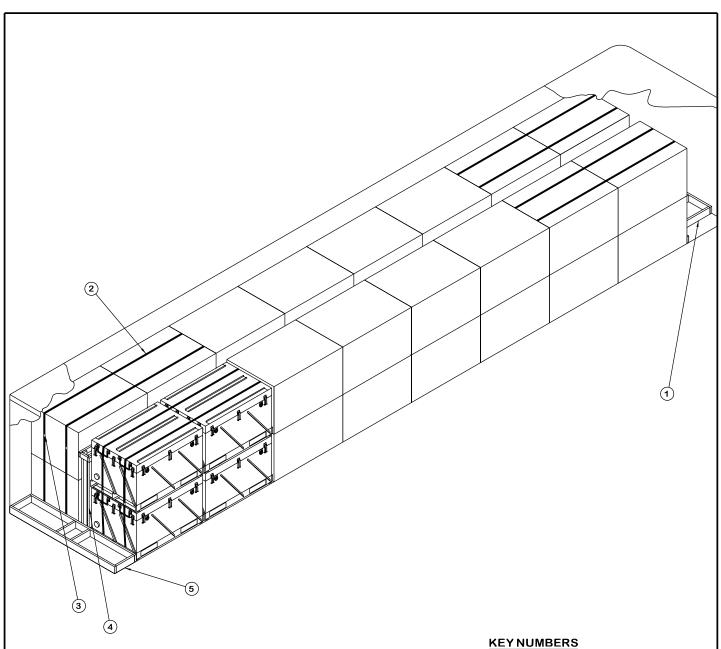
- K. WHEN STEEL STRAPPING IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF ONE SEAL WITH TWO PAIR OF NOTCHES WILL BE USED TO SEAL THE JOINT WHEN A NOTCH-TYPE SEALER IS BEING USED. A MINIMUM OF TWO SEALS, BUTTED TOGETHER WITH TWO PAIR OF CRIMPS PER SEAL WILL BE USED TO SEAL THE JOINT WHEN A CRIMP-TYPE SEALER IS BEING USED. REFER TO THE "STRAP JOINT A" AND "STRAP JOINT B" DETAILS ON PAGE 25 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 WHER-EVER 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 ASTM F1667 AS NEARLY AS PRACTICABLE. STAPLES WHICH ARE LONGER THAN 2-1/2", WILL BE A COMMERCIAL GRADE AND 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". EXCESSIVE SLACK CAN BE ELIMINATED FROM A LOAD BY INSTALLING 1" OR 2" X 4" SIDE BLOCKING BETWEEN THE CONTAINER AND VAN TRAILER SIDEWALL OR BETWEEN THE CONTAINER ROWS. AS REQUIRED.
- Q. IF THE SPACE AT THE REAR OF THE LOAD, BETWEEN THE CONTAINERS AND THE REAR DOOR MEASURES 1-1/2" OR LESS, REAR BLOCK-ING 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 SHOWN ON PAGE 21. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" OR "C" AS DEPICTED ON PAGES 21 AND 22. NOTE: REAR BLOCKING ASSEMBLIES MAY BE REPLACED WITH NAILED HEADERS AT THE REAR OF THE LOAD, PROVIDED THE TRAILER FLOOR IS CONFIGURED SUCH AS TO ALLOW NAILING IN THIS AREA. CAUTION: THE NAILED HEADER METHOD IS REQUIRED WHEN LOADING VAN TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS.
- 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 CNU-373/E CONTAINERS WHEN THEY ARE LOADED WITH AN ITEM OTHER THAN THE SPECIFIED AIRFOIL, 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 25.4MM AND ONE POUND EQUALS 0.454 KG.

REVISION

REVISION NO. 1, DATED NOVEMBER 2006, CONSISTS OF:

ADDING REFERENCE TO BSU-88 AND BSG-92 TO THE DRAWING.





- \bigodot FORWARD BLOCKING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 19 AND SPECIAL NOTES 2 THRU 4 ON PAGE 5.
- 2 BUNDLING STRAP, 1-1/4" X .031" OR .035" X 34'-0" LONG STEEL STRAPPING (8 REQD, 2 PER STACK OF 2 UNITS HIGH BY 2 UNITS LONG). STRAP EIGHT UNITS AT THE FRONT AND REAR OF THE TRAILER. INSTALL AS FAR APART AS FORKLIFT OPENINGS AL-LOW. SEE SPECIAL NOTES 5 AND 6 ON PAGE 5.
- (3) SEAL FOR 1-1/4" STRAPPING (8 REQD, 1 PER STRAP). DOUBLE NOTCH EACH SEAL.
- (4) CRIB FILL ASSEMBLY A (8 REQD). SEE THE DETAIL ON PAGE 24 AND SPECIAL NOTE 7 ON PAGE 5.
- $\begin{picture}(60,0)\put(0,0){\line(0,0){10}}\put(0,0){\line(0,0){10}$

PAGE 4

32-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER

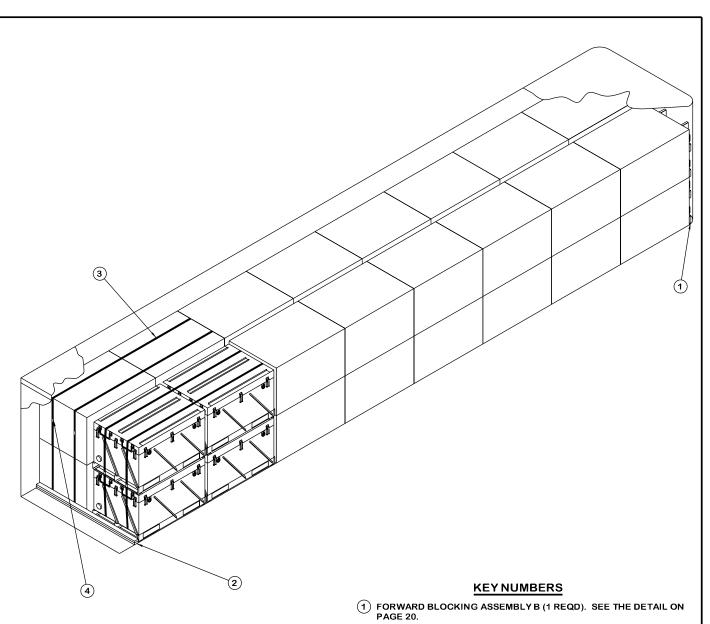
- A 32-UNIT LOAD OF CNU-373/E CONTAINERS IS SHOWN IN A 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSIONS) CONVENTIONAL VAN TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED. SEE GENERAL NOTE "E" ON PAGE 2.
- 2. A TRAILER WITH ROUNDED FRONT CORNERS IS SHOWN. IF A TRAILER WITH SQUARE FRONT CORNERS IS TO BE LOADED, THE FORWARD BLOCKING ASSEMBLY "A", PIECE MARKED ① ON PAGE 4, WILL NEED TO BE MODIFIED. SEE THE DETAIL ON PAGE 19.
- 3. THE LENGTH OF THE STRUTS IN THE FORWARD BLOCKING ASSEMBLY "A", PIECE MARKED ① ON PAGE 4, CAN BE ADJUSTED TO PROVIDE FOR PROPER WEIGHT DISTRIBUTION IN THE TRAILER. THE STRUTS SHOWN ARE TYPICAL ONLY.
- 4. IF THE TRAILER HAS SUFFICIENT NAILING AREA AT THE FRONT OF THE LOAD, A NAILED HEADER MAY BE USED IN PLACE OF THE FORWARD BLOCKING ASSEMBLY. SEE THE LOAD ON PAGE 8 FOR GUIDANCE ON INSTALLING A NAILED HEADER.
- 5. IF A STACK AT THE FRONT OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS IN THE DEPICTED LOAD, AND FORWARD BLOCKING ASSEMBLY "A" OR A NAILED HEADER IS BEING USED, BUNDLING STRAPS, SHOWN AS PIECE MARKED ②, MUST BE MUST BE INSTALLED AS TO ENCIRCLE THE FORWARD MOST TWO STACKS IN EACH APPLICABLE ROW.
- 6. IF A STACK AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS IN THE DEPICTED LOAD, BUNDLING STRAPS, SHOWN AS PIECE MARKED ②, MUST BE INSTALLED TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
- CRIB FILL ASSEMBLIES ARE REQUIRED WHEN THE SPACE BETWEEN THE LATERALLY ADJACENT UNITS EXCEEDS 6", AS MEASURED FROM UNIT TO UNIT.
- 8. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE CONTAINERS AND THE REAR DOOR IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9" USE THE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 21. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED. NOTE: REAR BLOCKING ASSEMBLIES MAY BE REPLACED WITH NAILED HEADERS AT THE REAR OF THE LOAD, PROVIDED THE TRAILER IS CONFIGURED SUCH AS TO ALLOW NAILING IN THE AREA IN QUESTION. REFER TO PIECE MARKED ② ON PAGE 6 AND THE HEADER NAILING CHARTS ON PAGE 7 FOR GUIDANCE.
- THE DEPICTED LOAD CAN BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED OR TO SUIT THE WEIGHT OF THE UNIT BEING LOADED. A LOAD CAN BE REDUCED BY OMITTING ONE OR MORE FULL LOAD UNITS FROM THE LOAD.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" x 4" 2" x 6"	358 48	239 48
NAILS	NO. REQD	POUNDS
10d (3")	272	4-1/4

STEEL STRAPPING, 1-1/4" - 272.00'REQD - - - - 39 LBS SEAL FOR 1-1/4" STRAPPING - - 8 REQD - - - 1/2 LBS

LOAD AS SHOWN

32-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER



- (2) REAR HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (1 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/16-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/16-10d NAILS. SEE THE HEADER NAILING CHARTS ON PAGE 7.
- 3 BUNDLING STRAP, 1-1/4" X .031" OR .035" X 34'-0" LONG STEEL STRAPPING (4 REQD, 2 PER STACK OF 2 UNITS HIGH BY 2 UNITS LONG). INSTALL AROUND EIGHT UNITS AT THE REAR OF THE TRAILER. INSTALL AS FAR APART AS FORKLIFT OPENINGS ALLOW. SEE SPECIAL NOTE 4 ON PAGE 7.
- 4 SEAL FOR 1-1/4" STRAPPING (4 REQD, 1 PER STRAP). DOUBLE CRIMP EACH SEAL.

- A 32-UNIT LOAD OF CNU-373/E CONTAINERS IS SHOWN IN A 45'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSIONS) CONVENTIONAL VAN TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED. SEE GEN-ERAL NOTE "E" ON PAGE 2.
- 2. A TRAILER WITH ROUNDED FRONT CORNERS IS SHOWN. IF A TRAILER WITH SQUARE FRONT CORNERS IS TO BE LOADED, THE FORWARD BLOCKING ASSEMBLY "B", PIECE MARKED ① ON PAGE 6, WILL NEED TO BE MODIFIED. SEE THE DETAIL ON PAGE 20.
- IF THE TRAILER HAS SUFFICIENT NAILING AREA AT THE FRONT OF THE LOAD, A NAILED HEADER MAY BE USED IN PLACE OF THE FORWARD BLOCKING ASSEMBLY. SEE THE LOAD ON PAGE 8 FOR GUIDANCE ON INSTALLING A NAILED HEADER.
- 4. IF THE SPACE AT THE REAR OF THE LOAD IS 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 THAN 9" USE THE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 21. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE CONTAINERS AND THE REAR DOOR IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" AS DETAILED ON PAGE 21 OR THE NAILED HEADER AS SHOWN. IF THE TRAILER IS EQUIPPED WITH A METAL THRESHOLD PLATE AND IT INTERFERES WITH THE NAILING OF PIECE MARKED ② ON PAGE 6, ONE OF THE REAR BLOCKING ASSEMBLIES DESCRIBED ABOVE MUST BE INSTALLED.
- IF A STACK AT THE REAR OF THE LOAD IS STACKED TWO TIERS HIGH, AS IN THE DEPICTED LOAD, BUNDLING STRAPS, SHOWN AS PIECE MARKED (3) MUST BE INSTALLED TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.

FORWARD HEADER NAILING CHART ●	
#NAILS	MAX. LOAD WEIGHT (LBS)
3	15,000
4	20,000
5	25,000
6	30,000
7	35,000
8	40,000
9	45,000

HEADERS AT THE FRONT END OF A LOAD OR AT THE FRONT END OF A DIVIDED LOAD WILL BE DOUBLED 2" X 6" MATERIAL. THE NUMBER OF NAILS INDICATED ABOVE REFERS TO THE NUMBER OF NAILS USED IN EACH LAMINATION OF A HEADER, FOR EXAMPLE 8 NAILS MEANS THE FIRST BOARD IS NAILED TO THE TRAILER FLOOR W8-10d NAILS, AND THE SECOND BOARD IS LAMINATED TO THE FIRST W/8-20d NAILS, FOR A TOTAL OF 8-10d AND 8-20d NAILS PER HEADER.

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

* HEADERS AT THE REAR OF A FULL LOAD OR AT THE REAR END OF A DIVIDED LOAD WILL BE DOUBLED 2" X 4" MATERIAL. THE NUMBER OF NAILS INDICATED ABOVE REFERS TO THE NUMBER OF 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 16-10d NAILS. NOTE: REAR HEADERS MAY BE HANDLED IN THE SAME MANNER AS FORWARD HEADERS, USING 2" X 6" MATERIAL WITH 10d AND 20d NAILS, IF DESIRED.

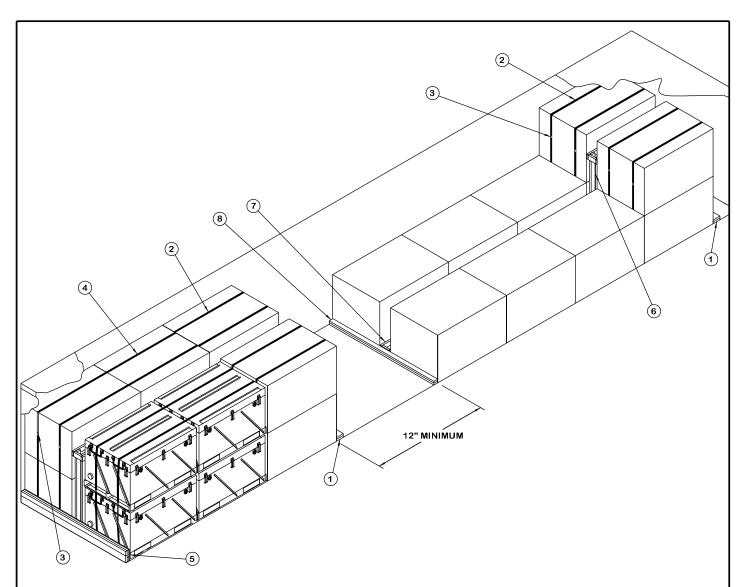
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" x 4" 2" x 6"	16 81	11 81
NAILS	NO. REQD	POUNDS
10d (3")	96	1-1/2
STEEL STRAPPING, 1-1/4" - 136.0'REQD 20 LB: SEAL FOR 1-1/4" STRAPPING 4 REQD 1/4 LB:		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
	32	

TOTAL WEIGHT - - - - - - 38,347 LBS (APPROX)

32-UNIT LOAD IN A 45'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER



KEY NUMBERS

- 1 HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (2 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-10d NAILS EVENLY SPACED. LAMINATE THE SECOND W/6-20d NAILS. SEE THE HEADER NAILING CHARTS ON PAGE 7.
- ② STACK UNITIZING STRAP, 1-1/4" X .031" OR .035" X 23'-7" LONG STEEL STRAPPING (8 REQD, 2 PER STACK). INSTALL AS FAR APART AS FORKLIFT OPENINGS ALLOW.
- (3) SEAL FOR 1-1/4" STRAPPING (12 REQD, 1 PER STRAP). DOUBLE NOTCH EACH SEAL.
- 4 BUNDLING STRAP, 1-1/4" X .031" OR .035" X 34'-0" LONG STEEL STRAPPING (4 REQD, 2 PER STACK OF TWO UNITS HIGH BY TWO UNITS LONG). INSTALL AROUND EIGHT UNITS AT THE REAR OF THE TRAILER. INSTALL AS FAR APART AS FORKLIFT OPENINGS ALLOW. SEE SPECIAL NOTE 3 ON PAGE 9.
- (5) REAR BLOCKING ASSEMBLY B (1 REQD). SEE THE DETAIL ON PAGE 21 AND SPECIAL NOTE 7 ON PAGE 9.
- (6) CRIB FILL ASSEMBLY A (4 REQD). SEE THE DETAIL ON PAGE 24 AND SPECIAL NOTES 4 AND 5 ON PAGE 9.
- (7) CRIB FILL ASSEMBLY B (3 REQD). SEE THE DETAIL ON PAGE 24 AND SPECIAL NOTES 4 AND 6 ON PAGE 9.
- (8) REAR HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (1 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-10d NAILS. LAMINATE THE SECOND PIECE TO THE FIRST W/6-10d NAILS. SEE THE HEADER NAILING CHARTS ON PAGE 7.

PAGE 8

22-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER

- A 22-UNIT LOAD OF CNU-373/E CONTAINERS IS SHOWN IN A 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSIONS) CONVENTIONAL VAN TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED. SEE GENERAL NOTE "E" ON PAGE 2.
- 2. IF THE TRAILER HAS SUFFICIENT AREA AT THE FRONT OF THE LOAD, A FORWARD BLOCKING ASSEMBLY MAY BE USED IN PLACE OF THE HEADER. SEE THE LOAD ON PAGE 4 FOR GUIDANCE ON INSTALLING A FORWARD BLOCKING ASSEMBLY.
- 3. IF A STACK AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS IN THE DEPICTED LOAD, BUNDLING STRAPS, SHOWN AS PIECE MARKED & MUST BE INSTALLED AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
- 4. CRIB FILL ASSEMBLIES ARE REQUIRED WHEN THE SPACE BETWEEN THE LATERALLY ADJACENT UNITS EXCEEDS 6", AS MEASURED FROM UNIT TO UNIT.
- 5. CRIB FILL ASSEMBLY "A" IS DESIGNED FOR LATERALLY ADJACENT TWO-TIER STACKED UNITS.
- CRIB FILL ASSEMBLY "B" IS DESIGNED FOR LATERALLY ADJACENT ONE-TIER UNITS.
- 7. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE CONTAINERS AND THE REAR DOOR IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" AS DETAILED ON PAGE 21. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9" USE THE REAR BLOCKING ASSEMBLY "B" AS SHOWN ON PAGE 8. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, A REAR BLOCKING ASSEMBLY IS NOT REQUIRED. NOTE: REAR BLOCKING ASSEMBLIES MAY BE REPLACED WITH NAILED HEADERS AT THE REAR OF THE LOAD, PROVIDED THE TRAILER IS CONFIGURED SUCH AS TO ALLOW NAILING IN THE AREA IN QUESTION. REFER TO PIECE MARKED 2 ON PAGE 6 AND THE HEADER NAILING CHARTS ON PAGE 7 FOR GUIDANCE.
- 8. THE DEPICTED LOAD CAN BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED OR TO SUIT THE WEIGHT OF THE UNIT BEING LOADED. A LOAD CAN BE REDUCED BY OMITTING ONE OR MORE FULL LOAD UNITS FROM THE LOAD.
- 9. STACK UNITIZING STRAPS, PIECE MARKED ②, MUST BE APPLIED AROUND THE TWO-HIGH STACKS WHICH ARE IMMEDIATELY ADJACENT TO THE ONE-HIGH UNITS. THE UNITIZING STRAPS MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 1" X 6" 2" X 4" 2" X 6"	9 9 248 49	3 4 166 49
NAILS	NO. REQD	POUNDS
6d (2") 10d (3") 20d (4")	16 236 12	1/4 3-3/4 1/2

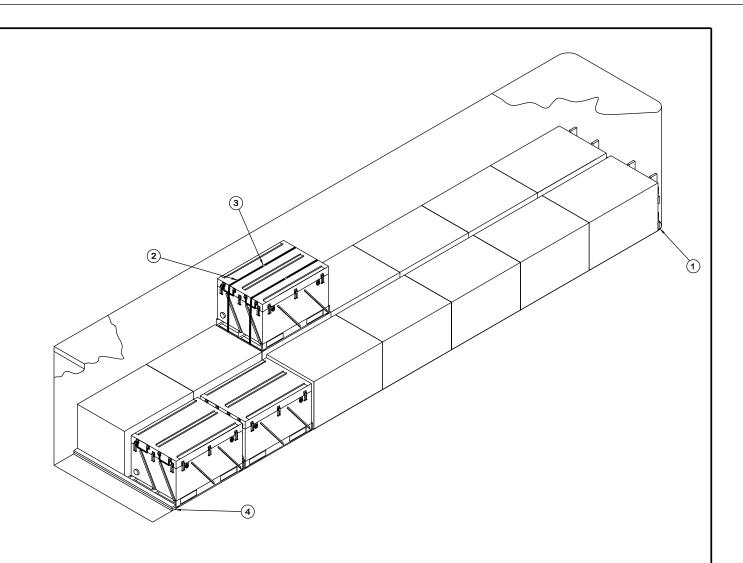
STEEL STRAPPING, 1-1/4" - 324.67'REQD - - - 47 LBS SEAL FOR 1-1/4" STRAPPING - - 12 REQD - - - 3/4 LB

LOAD AS SHOWN

ONTAINER - - - - - 22 - - - - 26, 224 LBS
DUNNAGE - - - - - - - - - - - - 26,717 LBS (APPROX)

TOTAL WEIGHT - - - - - - 26,717 LBS (APPROX)

22-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER



KEY NUMBERS

- (1) FORWARD BLOCKING ASSEMBLY B (1 REQD). SEE DETAIL ON PAGE 20 AND SPECIAL NOTES 2 AND 3 ON PAGE 11.
- ② STACK UNITIZING STRAP, 1-1/4" X .031" OR .035" X 23'-7" LONG (2 REQD). INSTALL AS FAR APART AS FORKLIFT OPENINGS ALLOW. SEE SPECIAL NOTE 5 ON PAGE 11.
- (3) SEAL FOR 1-1/4 STRAPPING (2 REQD). DOUBLE NOTCH EACH SEAL.
- (4) REAR HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (1 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/8-10d NAILS. LAMINATE THE SECOND PIECE TO THE FIRST W/8-10d NAILS. SEE THE HEADER NAILING CHARTS ON PAGE 7 AND SPECIAL NOTE 4 ON PAGE 11.

- A 15-UNIT LOAD OF CNU-373/E CONTAINERS IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSIONS) CONVENTIONAL VAN TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED. SEE GENERAL NOTE "E" ON PAGE 2.
- 2. A TRAILER WITH ROUNDED FRONT CORNERS IS SHOWN. IF A TRAILER WITH SQUARE FRONT CORNERS IS TO BE LOADED, THE FORWARD BLOCKING ASSEMBLY "B", PIECE MARKED ① ON PAGE 10, WILL NEED TO BE MODIFIED OR IT MAY BE OMITTED. SEE THE DETAILS ON PAGE 20.
- 3. IF THE TRAILER HAS SUFFICIENT NAILING AREA AT THE FRONT OF THE LOAD, A NAILED HEADER MAY BE USED IN PLACE OF THE FORWARD BLOCKING ASSEMBLY. SEE THE LOAD ON PAGE 8 FOR GUIDANCE ON INSTALLING A NAILED HEADER.
- 4. IF THE SPACE AT THE REAR OF THE LOAD IS 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 THAN 9" USE THE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 21. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE CONTAINERS AND THE REAR DOOR IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" AS DETAILED ON PAGE 21 OR THE NAILED HEADER AS SHOWN. IF THE TRAILER IS EQUIPPED WITH A METAL THRESHOLD PLATE AND IT INTERFERES WITH THE NAILING OF PIECE MARKED (2) ON PAGE 10, ONE OF THE REAR BLOCKING ASSEMBLIES DESCRIBED ABOVE MUST BE INSTALLED.
- 5. STACK UNITIZING STRAP, PIECES MARKED ②, MUST BE APPLIED AROUND THE TWO-HIGH STACKS WHICH ARE IMMEDIATELY ADJACENT EITHER LATERALLY OR LONGITUDINALLY TO THE ONE-HIGH UNITS. UNITIZING STRAPS MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
- THE DEPICTED LOAD CAN BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED OR TO SUIT THE WEIGHT OF THE UNIT BEING LOADED. A LOAD CAN BE REDUCED BY OMITTING ONE OR MORE FULL LOAD UNITS FROM THE LOAD.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" x 4" 2" x 6"	16 41	11 41
NAILS	NO. REQD	POUNDS
10d (3")	48	3/4
CTEEL CTRANSTING 1 1 /4" 47 2 DEOD 7 LDC		

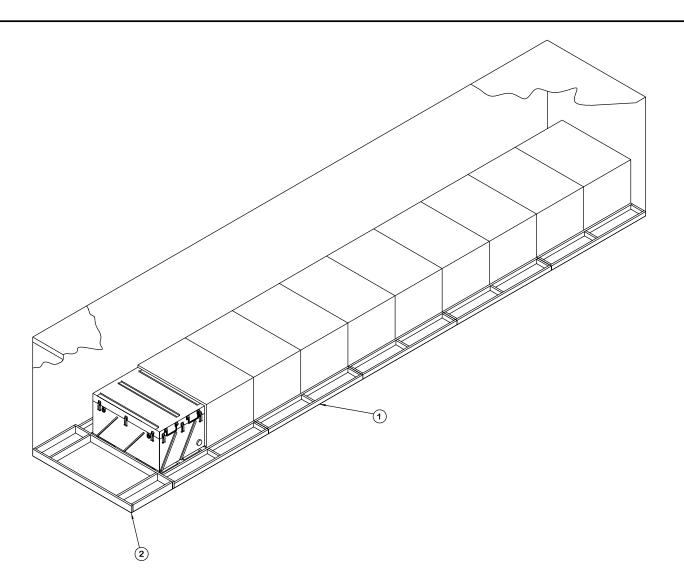
STEEL STRAPPING, 1-1/4" - - 47.2'REQD - - - - 7 LBS SEAL FOR 1-1/4" STRAPPING - - 2 REQD - - - NIL

LOAD AS SHOWN

ONTAINER - - - - - 15 - - - - - 17, 880 LBS

DUNNAGE - - - - - - - - - - - - - 17, 989 LBS (APPROX)

15-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER



KEY NUMBERS

1 SIDE SPACER ASSEMBLY (10 REQD). SEE DETAIL ON PAGE 22.

ISOMETRIC VIEW

 \bigodot REAR BLOCKING ASSEMBLY C (1 REQD). SEE THE DETAIL ON PAGE 22 AND SPECIAL NOTE 3 ON PAGE 13.

10-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER

- A 10-UNIT LOAD OF CNU-373/E CONTAINERS IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSIONS) CONVENTIONAL VAN TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED. SEE GENERAL NOTE "E" ON PAGE 2.
- 2. A TRAILER WITH SQUARE FRONT CORNERS IS SHOWN. IF A TRAILER WITH ROUNDED FRONT CORNERS IS TO BE LOADED, A HEADER OR FORWARD BLOCKING ASSEMBLY "B" WILL NEED TO BE ADDED. SEE THE DETAIL ON PAGE 20.
- 3. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE CONTAINERS AND THE REAR DOOR IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY "A" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9" USE THE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 21. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED. NOTE: REAR BLOCKING ASSEMBLIES MAY BE REPLACED WITH NAILED HEADERS AT THE REAR OF THE LOAD, PROVIDED THE TRAILER IS CONFIGURED SUCH AS TO ALLOW NAILING IN THE AREA IN QUESTION. REFER TO PIECE MARKED ② ON PAGE 6 AND THE HEADER NAILING CHARTS ON PAGE 7 FOR GUIDANCE.
- 4. THE DEPICTED LOAD CAN BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED OR TO SUIT THE WEIGHT OF THE UNIT BEING LOADED. A LOAD CAN BE REDUCED BY OMITTING ONE OR MORE FULL LOAD UNITS FROM THE LOAD.

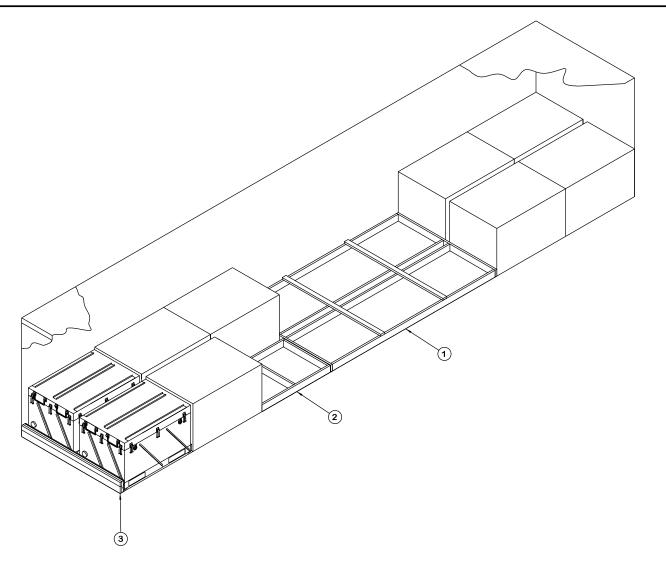
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 6" 2" X 4" 2" X 6"	3 174 29	2 116 29
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	8 144	NIL 2-1/4

LOAD AS SHOWN

ITEM	QUANTITY	$\underline{\text{WEIGHT}}$ (APPROX)
	10	

TOTAL WEIGHT - - - - - - 12,214 LBS (APPROX)

10-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER



KEY NUMBERS

- (1) CENTER SPACER ASSEMBLY (1 REQD). SEE DETAIL ON PAGE 23 AND SPECIAL NOTE 4 ON PAGE 15.
- 2 SPACER ASSEMBLY (1 REQD). SEE DETAIL ON PAGE 23 AND SPECIAL NOTE 6 ON PAGE 15.
- $\begin{tabular}{ll} \hline (3) & REAR BLOCKING ASSEMBLY B (1 REQD). SEE THE DETAIL ON PAGE 21 AND SPECIAL NOTE 3 ON PAGE 15. \\ \hline \end{tabular}$

- A 9-UNIT LOAD OF CNU-373/E CONTAINERS IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSIONS) VAN TRAILER WITH A STEEL FLOOR. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED. SEE GENERAL NOTE "E" ON PAGE 2.
- A TRAILER WITH SQUARE FRONT CORNERS IS SHOWN. IF A
 TRAILER WITH ROUNDED FRONT CORNERS IS TO BE LOADED, A
 HEADER OR FORWARD BLOCKING ASSEMBLY WILL NEED TO BE
 ADDED. SEE THE DETAILS ON PAGES 19 AND 20.
- 3. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE CONTAINERS AND THE REAR DOOR IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" AS DETAILED ON PAGE 21. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9" USE THE REAR BLOCKING ASSEMBLY "B" AS SHOWN ON PAGE 14. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED.
- 4. CENTER SPACER ASSEMBLY, SHOWN AS PIECE MARKED (1) IN THE LOAD ON PAGE 14, 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 LOCATION OF THE ASSEMBLY, AND/OR THE STRUT LENGTHS, MAY BE DIFFERENT FROM WHAT IS SHOWN. IF A SHORTER TRAILER IS USED FOR THE DEPICTED LOAD, THIS ASSEMBLY MAY NOT BE REQUIRED. NOTE: THE CENTER SPACER ASSEMBLY MUST NOT BE POSITIONED NEXT TO A FORWARD BLOCKING ASSEMBLY, IF REQUIRED.
- 5. SPACER ASSEMBLY, SHOWN AS PIECE MARKED ② IN THE LOAD ON PAGE 14, IS ONLY SHOWN TO DEPICT A TYPICAL INSTALLATION. IF A CONTAINER IS LOADED IN PLACE OF THE SPACER ASSEMBLY, THE SPACER ASSEMBLY WILL NOT BE REQUIRED. NOTE: THE SPACER ASSEMBLY MUST NOT BE POSITIONED NEXT TO A FORWARD BLOCKING ASSEMBLY, IF REQUIRED.
- THE DEPICTED LOAD CAN BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED OR TO SUIT THE WEIGHT OF THE UNIT BEING LOADED. A LOAD CAN BE REDUCED BY OMITTING ONE OR MORE FULL LOAD UNITS FROM THE LOAD.

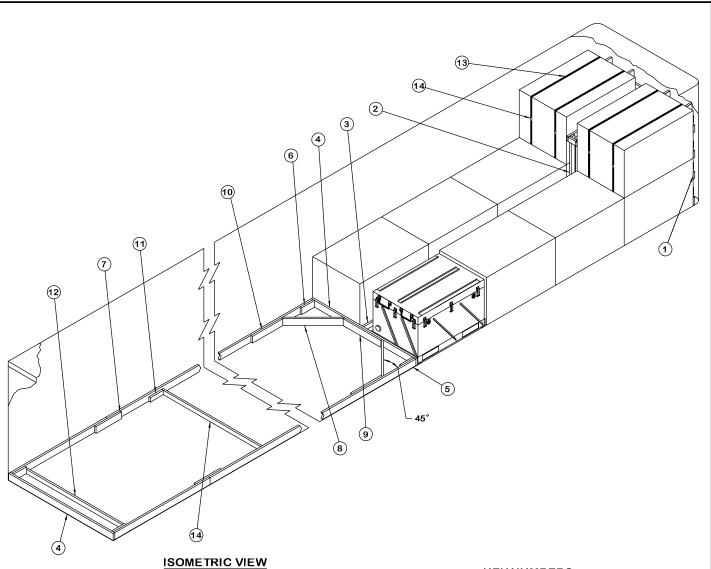
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 1" X 6" 2" X 4" 2" X 6"	9 9 32 83	3 4 21 83
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	16 56	1/4 1

LOAD AS SHOWN

<u>ITEM</u>	QUANTITY	$\underline{\text{WEIGHT}}$ (APPROX)
	9	

TOTAL WEIGHT - - - - - - - 10,949 LBS (APPROX)

9-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER



(KEY NUMBERS CONTINUED)

- (9) CENTER CLEAT, 2" X 6" BY CUT-TO-FIT BETWEEN THE DIAGONAL BRACES, PIECES MARKED (8) (1 REQD). NAIL TO THE HEADER, PIECE MARKED (4), W/6-10d NAILS.
- (10) BACK-UP CLEAT, 2" X 6" X 24" (2 REQD). NAIL TO A SIDE STRUT, PIECE MARKED (5), W/8-10d NAILS.
- (1) STRUT BRACE RETAINING CLEAT, 2" X 4" X 12" (AS REQD). NAIL TO A SIDE STRUT, PIECE MARKED (5), W/3-10d NAILS. SEE SPECIAL NOTE 5 ON PAGE 17.
- (2) STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 3" IN LENGTH (MINIMUM OF ONE REQD). NAIL TO THE POCKET CLEATS, PIECES MARKED (6), AND/OR TO THE STRUT BRACE RETAINING CLEATS, PIECES MARKED (1), W/2-12d NAILS AT EACH END. SEE SPECIAL NOTES 5 AND 6 ON PAGE 17.
- (3) STACK UNITIZING STRAP, 1-1/4" X .031" OR .035" X 23'-7" LONG STEEL STRAPPING (4 REQD, 2 PER STACK). INSTALL AS FAR APART AS FORKLIFT OPENINGS ALLOW. SEE SPECIAL NOTE 11 ON PAGE 17.
- (4) SEAL FOR 1-1/4" STRAPPING (4 REQD, 1 PER STRAP). DOUBLE NOTCH EACH SEAL.

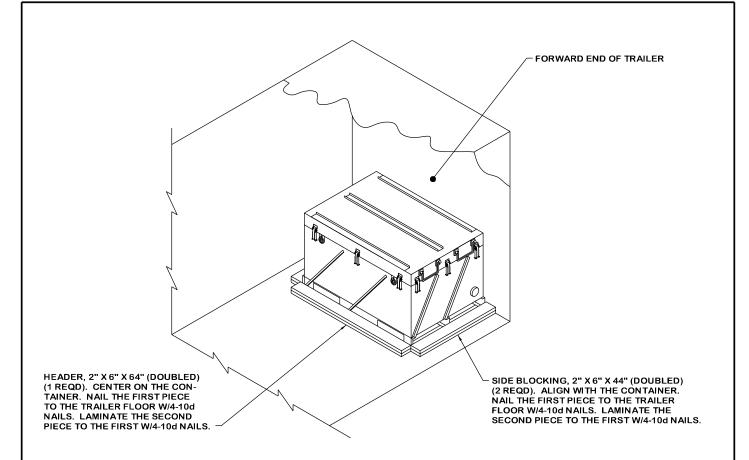
KEY NUMBERS

- (1) FORWARD BLOCKING ASSEMBLY B (1 REQD). SEE THE DETAIL ON PAGE 20 AND SPECIAL NOTES 2 AND 3 ON PAGE 17.
- (2) CRIB FILL ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 24. SEE SPECIAL NOTES 8 AND 10 ON PAGE 17.
- (3) CRIB FILL ASSEMBLY B (3 REQD). SEE THE DETAIL ON PAGE 24. SEE SPECIAL NOTES 8 AND 10 ON PAGE 17.
- (4) HEADER, 2" X 6" X TRAILER WIDTH (2 REQD).
- (5) SIDE STRUT, 2" X 6" BY CUT-TO-FIT BETWEEN THE HEADERS, PIECES MARKED (4) (2 REQD). SEE SPECIAL NOTE 4 ON PAGE 17.
- (6) POCKET CLEAT, 2" X 6" X 12" (4 REQD). NAIL TO A SIDE STRUT, PIECE MARKED 5, W/3-10d NAILS. TOENAIL TO THE ADJACENT HEADER, PIECE MARKED (4), W/3-12d NAILS.
- (7) SPLICE PIECE, 2" X 6" X 24" (AS REQD). CENTER ON JOINT OF SIDE STRUTS, PIECES MARKED (5), AND NAIL W/4-10d NAILS TO EACH END OF SIDE STRUTS. SEE SPECIAL NOTE 4 ON PAGE 17.
- (8) DIAGONAL BRACE, 2" X 6" X 42" (2 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AS SHOWN AND TOENAIL TO THE ADJACENT HEADER AND SIDE STRUT, PIECES MARKED (3) AND (5), W/2-16d NAILS AT EACH END. SEE THE "DIAGONAL BRACE BEVEL DETAIL" ON PAGE 25.

(CONTINUED AT LEFT)

PAGE 16 TYPICAL LTL (10-UNIT) LOAD IN A CONVENTIONAL VAN TRAILER

- A 10-UNIT LOAD OF CNU-373/E CONTAINERS IS SHOWN IN AN 8'-2" WIDE (INSIDE DIMENSION) VAN TRAILER. TRAILERS OF OTHER WIDTHS MAY BE USED. SEE GENERAL NOTE "E" ON PAGE 2.
- 2. A TRAILER WITH ROUNDED FRONT CORNERS IS SHOWN. IF A TRAILER WITH SQUARE FRONT CORNERS IS TO BE LOADED, FORWARD BLOCKING ASSEMBLY "B", PIECE MARKED ① ON PAGE 16, WILL NEED TO BE MODIFIED OR IT MAY BE OMITTED. SEE THE DETAILS ON PAGE 20.
- IF THE TRAILER HAS SUFFICIENT NAILING AREA AT THE FRONT OF THE LOAD, A NAILED HEADER MAY BE USED IN PLACE OF THE FOR-WARD BLOCKING ASSEMBLY. SEE THE LOAD ON PAGE 8 FOR GUID-ANCE ON INSTALLING A NAILED HEADER.
- 4. DEPENDING ON THE NUMBER OF CONTAINERS BEING LOADED, EACH OF THE SIDE STRUTS, PIECES MARKED ⑤ ON PAGE 16, 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 W/4-10d NAILS AT EACH END OF THE SIDE STRUTS. NOTE: IF DESIRED, THE STRUT BRACES, PIECES MARKED (12) ON PAGE 16, MAY BE NAILED TO THE SPLICE PIECES IN LIEU OF USING ADDITIONAL STRUT BRACE RETAINING CLEATS, PIECES MARKED (11).
- 5. ALL LOADS THAT UTILIZE THE BLOCKING PROCEDURES DEPICTED ON PAGE 16, REGARDLESS OF THE NUMBER OF CONTAINERS, REQUIRE ONE STRUT BRACE POSITIONED AT THE REAR OF THE TRAILER AND NAILED TO THE POCKET CLEATS, PIECES MARKED (6). AN ADDITIONAL STRUT BRACE, PIECE MARKED (7), AND TWO STRUT BRACE RETAINING CLEATS, PIECES MARKED (11), MUST BE APPLIED FOR EVERY 7'-0" OF SIDE STRUT LENGTH, WHEN THE SIDE STRUTS, PIECES MARKED (5), ARE LONGER THAN 7'-0".
- 6. THE "K-BRACE" BLOCKING, SHOWN AS PIECES MARKED (4) THRU (12), IS ADEQUATE FOR RETAINING A MAXIMUM LOAD OF 20,000 POUNDS.
- THE DEPICTED LOAD CAN BE INCREASED TO SUIT THE QUANTITY TO BE SHIPPED. SEE THE PROCEDURES ON PAGES 4 THRU 15 FOR GUID-ANCE. THE DEPICTED LOAD CAN ALSO BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED.
- 8. CRIB FILL MAY BE OMITTED IF SPACE BETWEEN LATERALLY ADJACENT UNITS IS 6" OR LESS.
- 9. CRIB FILL ASSEMBLY "A" IS DESIGNED FOR LATERALLY ADJACENT TWO-TIER STACKED UNITS.
- 10. CRIB FILL ASSEMBLY "B" IS DESIGNED FOR LATERALLY ADJACENT ONE-TIER UNITS.
- 11. STACK UNITIZING STRAPS, PIECES MARKED (3), MUST BE APPLIED AROUND THE TWO-HIGH STACKS WHICH ARE IMMEDIATELY ADJACENT EITHER LATERALLY OR LONGITUDINALLY TO ONE-HIGH UNITS. UNITIZING STRAPS MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.

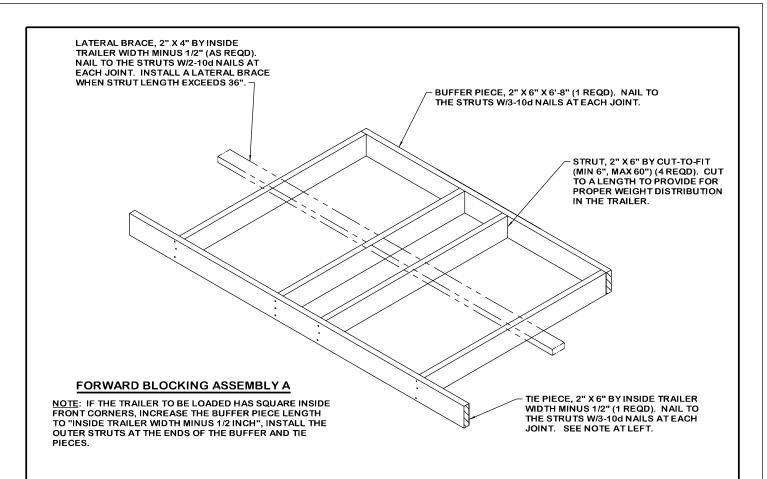


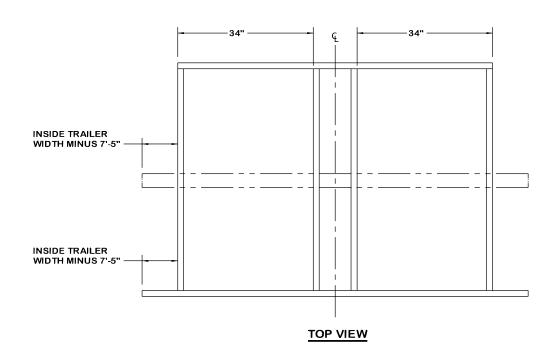
SPECIAL NOTES:

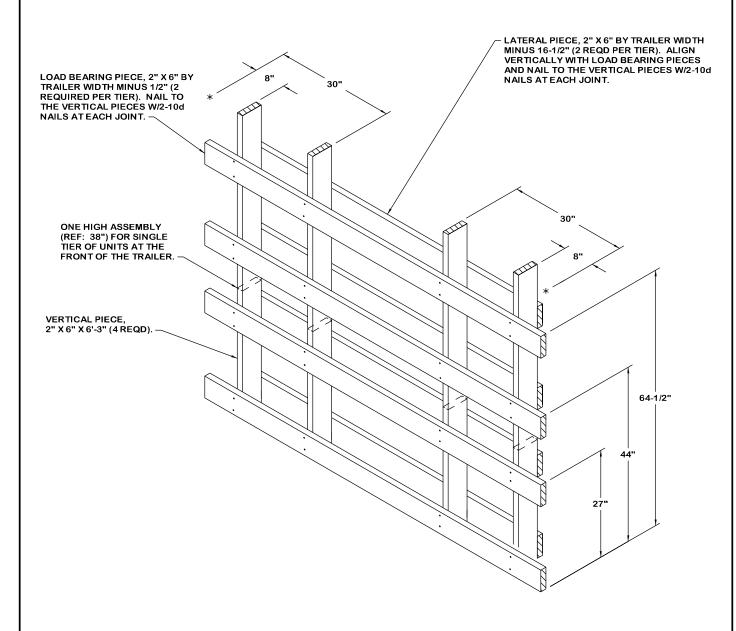
- A 7"-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER WHICH HAS A NAILABLE FLOOR IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
- 2. POSITIONING OF A UNIT IS OPTIONAL. UNITS MAY ALSO BE LO-CATED IN THE CORNER OF THE TRAILER. IF THE TRAILER DOES NOT HAVE A SQUARE FRONT, A FORWARD BLOCKING ASSEMBLY MUST BE INSTALLED WHEN POSITIONING A UNIT IN THE CORNER OF THE TRAILER. SEE DETAIL ON PAGES 19 AND 20.
- 3. MORE THAN ONE CONTAINER CAN BE SHIPPED, PROVIDING THE CAPACITY OF THE HEADER IS NOT EXCEEDED. THE LOAD SHOULD BE FORMED IN ROWS, WITH UNITS POSITIONED AGAINST OPPOSITE SIDE WALLS. THE PROPER CRIB FILL, IF REQUIRED, WILL BE INSTALLED BETWEEN LATERALLY ADJACENT UNITS. SEE THE DETAIL ON PAGE 24.
- 4. THE HEADER AS APPLIED ABOVE FOR LONGITUDINAL BRACING WILL SUPPORT 10,000 POUNDS OF LADING; A TRAILER WIDTH HEADER WILL SUPPORT UP TO A FULL LOAD OF CONTAINERS. SEE THE HEADER NAILING CHARTS ON PAGE 7.

PAGE 18

TYPICAL LTL (1-UNIT) LOAD IN A CONVENTIONAL VAN TRAILER

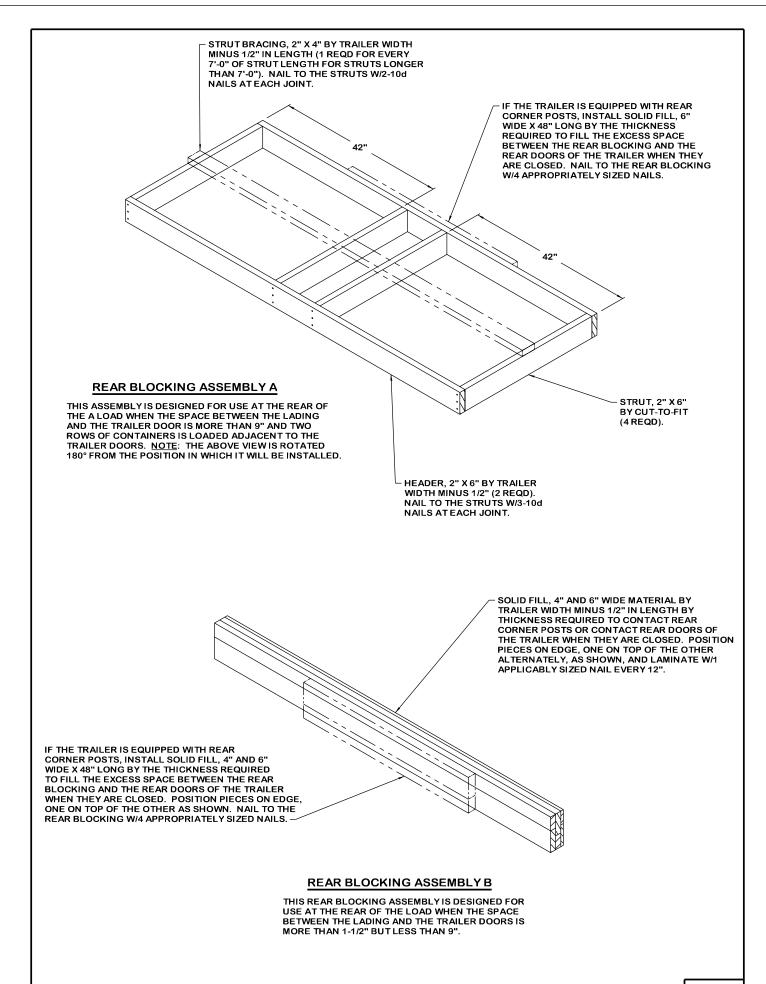


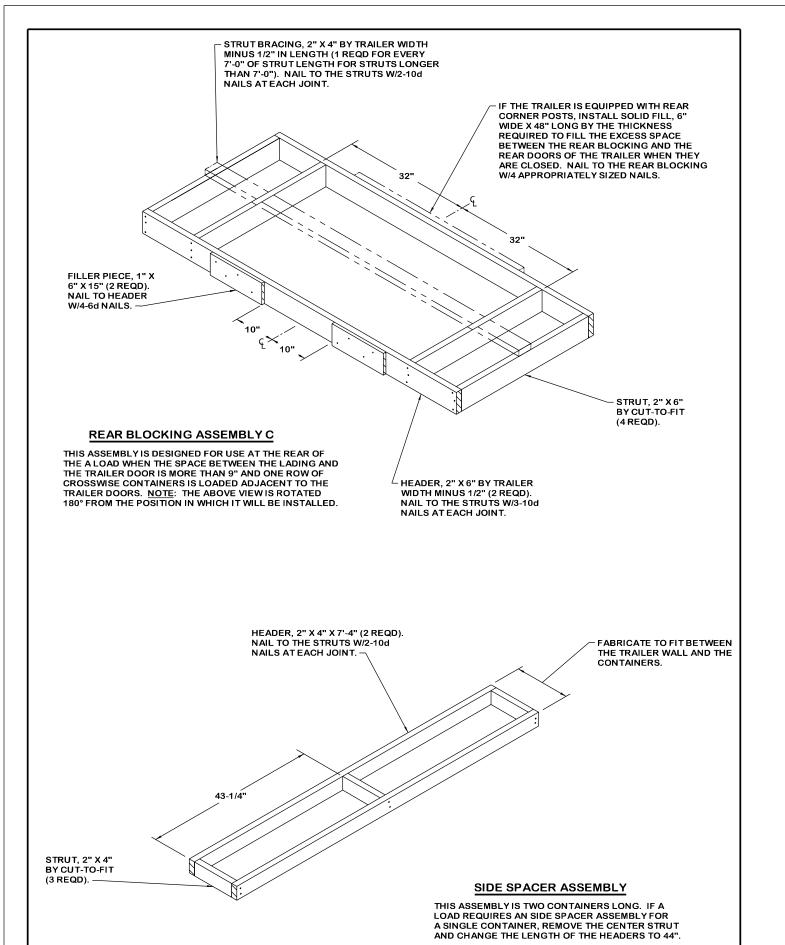


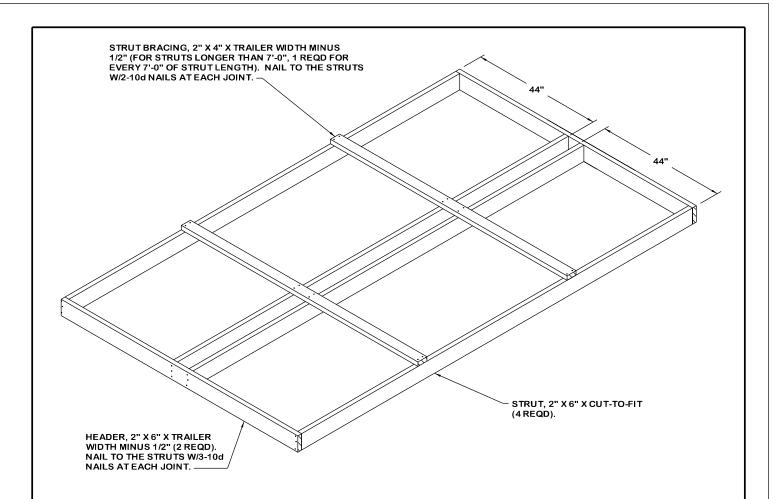


FORWARD BLOCKING ASSEMBLY B

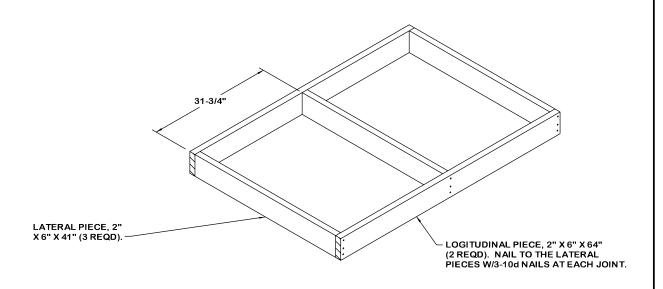
THE ASSEMBLY DEPICTED ABOVE IS APPLICABLE FOR A TWO-TIER LOAD. FOR A ONE-TIER LOAD, ELIMINATE THE TOP TWO LATERAL PIECES AND THE TOP TWO LOAD BEARING PIECES AND SHORTEN THE VERTICAL PIECES TO 38", AS DEPICTED ABOVE. THIS ASSEMBLY IS DESIGNED FOR USE AT THE FRONT END OF A TRAILER HAVING ROUNDED CORNERS, AND IS APPLICABLE FOR A CORNER RADIUS 6-1/2" TO 8". IF THE RADIUS IS LESS THAN 6-1/2" VERTICAL PIECES WILL BE 2" X 4" IN LIEU OF THE 2" X 6" PIECES. IF THE TRAILER TO BE LOADED HAS LARGE ANGLED CORNERS AT THE FORWARD END REFER TO PAGE 26 FOR GUIDANCE.



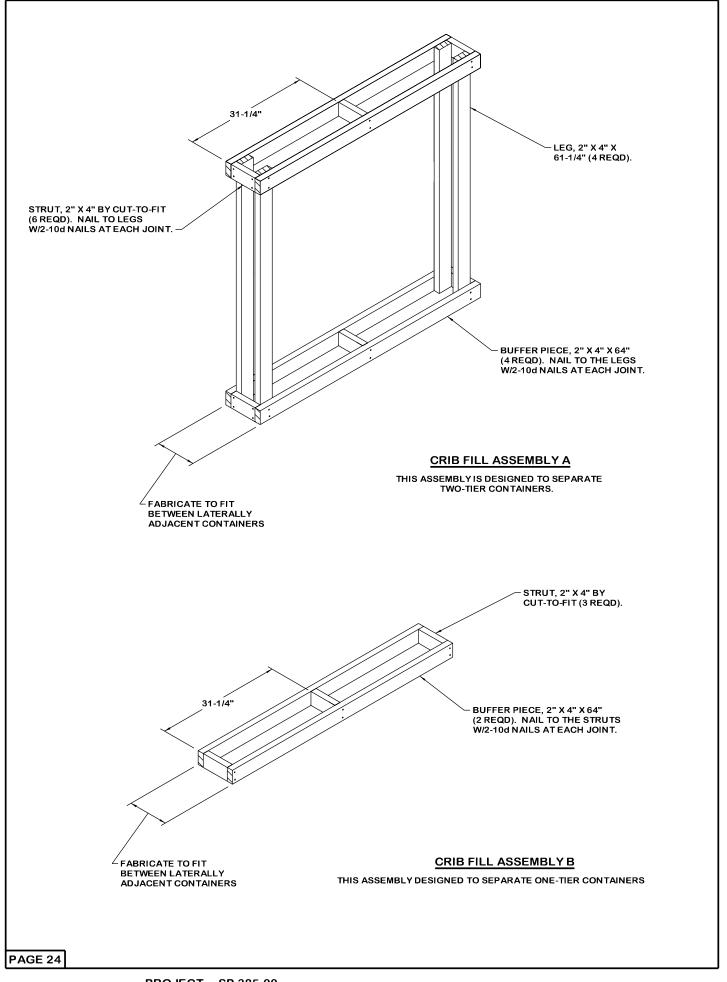


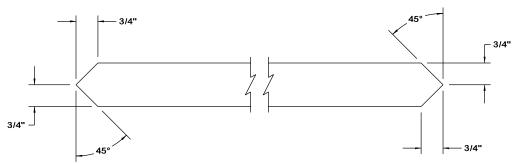


CENTER SPACER ASSEMBLY



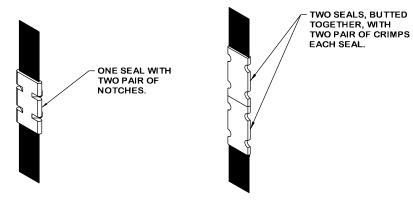
SPACER ASSEMBLY





DIAGONAL BRACE BEVEL DETAIL

DEPICTED ABOVE IS THE TOP VIEW OF 2" X 6" MATERIAL. SEE THE LOAD ON PAGE 10.



STRAP JOINT A

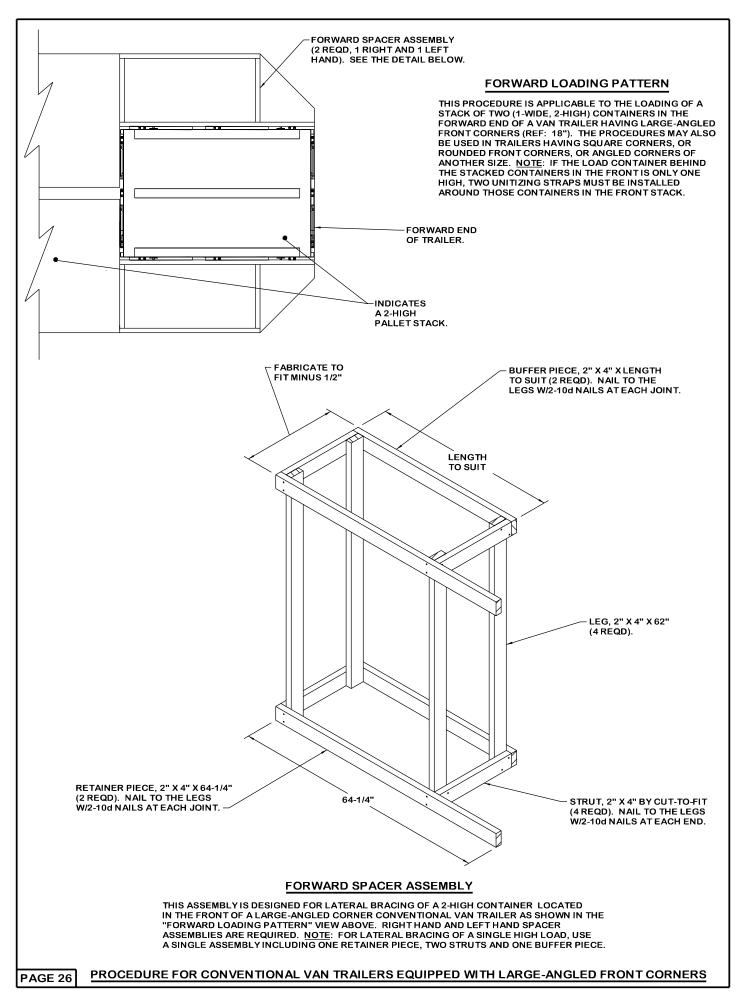
METHOD OF SECURING A STRAP JOINT WHEN USING A NOTCH-TYPE SEALER.

STRAP JOINT B

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

END-OVER-END LAP JOINT DETAILS

SEE GENERAL NOTE "K" ON PAGE 2.



PROJECT SP 385-00