

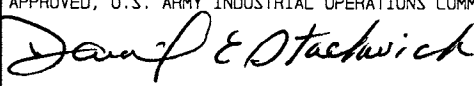
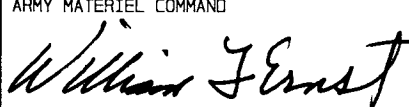


# LOADING AND BRACING ON FLATBED TRAILERS • OF GAU-8/A 30MM AMMUNITION PACKAGED IN AUTOMATIC LOADING SYSTEM (ALS) CNU-309/E AND/OR CNU-332/E CONTAINERS ⊕

## INDEX

<u>ITEM</u>	<u>PAGE(S)</u>
GENERAL NOTES, AND MATERIAL SPECIFICATIONS - - - - -	2
TWIN-PACK UNIT DETAILS - - - - -	3
16 TWIN-PACK UNIT LOAD ON A 40'-0" LONG FLAT BED TRAILER - - - - -	4,5
17 TWIN-PACK UNIT LOAD ON A 45'-0" LONG FLAT BED TRAILER - - - - -	6,7
18 TWIN-PACK UNIT LOAD ON A 48'-0" LONG FLAT BED TRAILER - - - - -	8,9
18 TWIN-PACK UNIT LOAD ON A 48'-0" LONG FLAT BED TRAILER (CHAIN TIE DOWN METHOD) - - - - -	10,11
DETAILS - - - - -	12,14

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

⊕ THESE TRAILER LOADING PROCEDURES ARE ALSO APPLICABLE FOR SHIPMENTS OF THE CNU-309A/E AND CNU-332A/E CONTAINERS.

U.S. ARMY MATERIEL COMMAND DRAWING			
APPROVED, U.S. ARMY INDUSTRIAL OPERATIONS COMMAND 	DRAFTSMAN	TECHNICIAN	ENGINEER
		R. HAYNES	
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND 	VALIDATION ENGINEERING DIVISION 	TRANSPORTATION ENGINEERING DIVISION 	LOGISTICS ENGINEERING OFFICE
OCTOBER 1996			
	CLASS	DIVISION	DRAWING
	19	48	8570
			FILE
			SP11M12

DO NOT SCALE

GENERAL NOTES

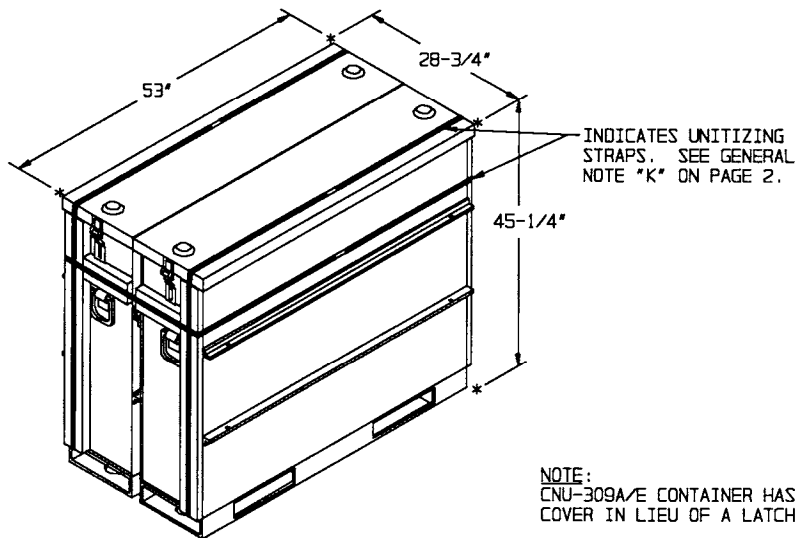
(GENERAL NOTES CONTINUED)

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1, AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE OUTLOADING PROCEDURES SPECIFIED IN THIS DRAWING ARE APPLICABLE TO GAU-8/A 30MM AMMUNITION IN AUTOMATIC LOADING SYSTEM (ALS) CNU-309/E AND/OR CNU-322/E CONTAINERS. THE SHIPPING AND STORAGE CONFIGURATION FOR THE CONTAINERS CONSISTS OF TWO CONTAINERS UNITIZED INTO ONE TWIN-PACK UNIT. SUBSEQUENT REFERENCE TO TWIN-PACK UNIT HEREIN MEANS TWO CNU-309/E OR CNU-322/E CONTAINERS WITH 30MM AMMUNITION UNITIZED TOGETHER. SEE THE PICTORIAL VIEW ON PAGE 3 FOR SIZE AND WEIGHT.
- C. THE LOADS AS SHOWN HEREIN ARE BASED ON 48'-0" LONG BY 8'-6" WIDE, AND 45'-0" LONG BY 8'-0" WIDE, FLATBED TRAILERS. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED. TRAILERS MUST HAVE WOOD OR WOOD AND METAL FLOORS. TRAILERS HAVING ALL-METAL FLOORS CANNOT BE USED. CAUTION: IF THE TRAILER FLOOR IS EQUIPPED WITH EXPOSED METAL DECKING ABOVE THE BOGIE ASSEMBLY, OR ELSEWHERE, FIELD MEASUREMENTS SHOULD BE MADE TO ENSURE THAT THE METAL DECKING DOES NOT INTERFERE WITH THE PROPER POSITIONING AND NAILING OF THE DUNNAGE AS SPECIFIED BY THE PROCEDURES SHOWN HEREIN.
- D. SELECTION OF A VEHICLE USED TO TRANSPORT THE DESIGNATED ITEM MUST COMPLY WITH AR 55-355, CHAPTER 29, FOR EXPLOSIVES AND OTHER DANGEROUS ARTICLES, IN FULL.
- E. GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT FOR A LOAD WILL BE THE RESPONSIBILITY OF THE CARRIER. THE CARRIER WILL ADVISE THE SHIPPER OF APPLICABLE LOADING REQUIREMENTS, AND THE SHIPPER WILL LOAD ACCORDINGLY.
- F. NOTICE: A SHIPMENT WILL BE POSITIONED ON A TRAILER CONSISTENT WITH STATE WEIGHT LAWS.
- G. OTHER TYPES OF LADING ITEMS MAY BE LOADED ON A TRAILER WHICH IS PARTIALLY LOADED WITH THE DESIGNATED ITEM, PROVIDING THE TOTAL LOAD IS COMPATIBLE, EXISTING DIRECTIVES ARE NOT VIOLATED, AND THE OTHER LADING ITEMS ARE BLOCKED AND BRACED TO EQUAL THE BLOCKING AND BRACING CRITERIA SPECIFIED HEREIN.
- H. CAUTION: REGARDLESS OF THE TYPE OF TRAILER INVOLVED, ONLY THOSE TRAILERS HAVING TIEDOWN ANCHORING FACILITIES WHICH PROVIDE HOLDING STRENGTH EQUAL TO OR GREATER THAN THE STRENGTH OF THE HOLD-DOWN STRAPS OR CHAINS AND WHICH ALIGN NEAR THE INDICATED LOCATIONS FOR THE HOLD-DOWN STRAPS OR CHAINS SHOULD BE USED. IF THE TRAILER ANCHOR DEVICES ARE NOT PROPERLY POSITIONED TO RECEIVE STRAPPING OR CHAINS, AS SHOWN, OR IF THE ANCHOR DEVICES ARE NOT EQUAL TO OR GREATER THAN THE STRENGTH OF THE TIEDOWN STRAPS OR CHAINS, STEEL STRAPS MAY BE APPLIED TO FORM A COMPLETE LOOP WHICH ENCOMPASSES BOTH THE LADING AND THE TRAILER FRAME AND/OR BED. CAUTION: AVOID TRAILER WHEELS, FIFTH WHEEL PLATE CONTROLS AND OTHER APPURTENANCES. USE EDGE PROTECTORS OR PADS ON ALL SHARP EDGES. NEITHER CHAINS NOR WEB STRAPS WILL BE APPLIED TO FORM A COMPLETE LOOP WHICH ENCOMPASSES BOTH THE LADING AND THE TRAILER FRAME AND/OR BED.
- J. 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.
- 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 14 FOR GUIDANCE.
- L. THE TRANSPORTING VEHICLE OPERATOR SHOULD BE INSTRUCTED TO PERIODICALLY INSPECT THE TIEDOWN CHAINS AND LOAD BINDERS OR WEB STRAPS DURING TRANSIT AND TIGHTEN IF NECESSARY.
- M. THE NUMBER OF LADING UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE TRAILER TO BE LOADED OR THE QUANTITY TO BE SHIPPED. THE APPROVED METHODS SHOWN HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING AND STAYING OF THE DESIGNATED ITEM.
- N. DUNNAGE LUMBER SPECIFIED IS OF NOMINAL SIZE. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.
- O. 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.
- P. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "SPECIAL NOTES" SECTION WHICH IS IMMEDIATELY ADJACENT TO A DEPICTED OUTLOADING METHOD.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

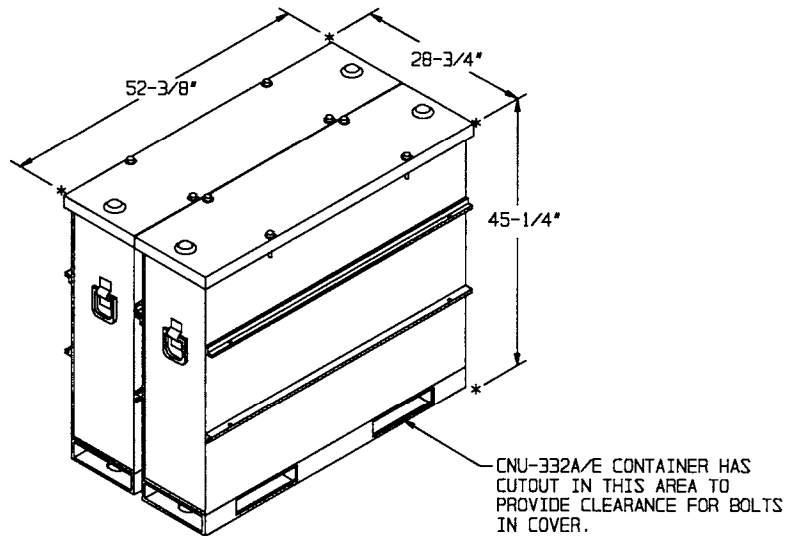
- LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.
- NAILS - - - - - : FED SPEC FF-N-105; COMMON.
- STRAPPING, STEEL - - : ASTM D3953; FLAT STRAPPING, TYPE 1, HEAVY DUTY, FINISH A, B (GRADE 2), OR C.
- SEAL, STRAP - - - - : ASTM D3953; CLASS H, FINISH A, B (GRADE 2), OR C, DOUBLE NOTCH TYPE, STYLE I, II, OR IV.
- STAPLE, STRAP - - - : COMMERCIAL GRADE.
- STAKE POCKET PROTECTOR - - : COMMERCIAL GRADE.
- CHAIN - - - - - : NATIONAL ASSOCIATION OF CHAIN MANUFACTURER'S WELDED CHAIN SPECIFICATION ADOPTED NOVEMBER 1975.
- LOAD BINDER - - - - : FED SPEC GGG-B-325.



NOTE:  
CNU-309A/E CONTAINER HAS A BOLTED COVER IN LIEU OF A LATCH ASSEMBLY.

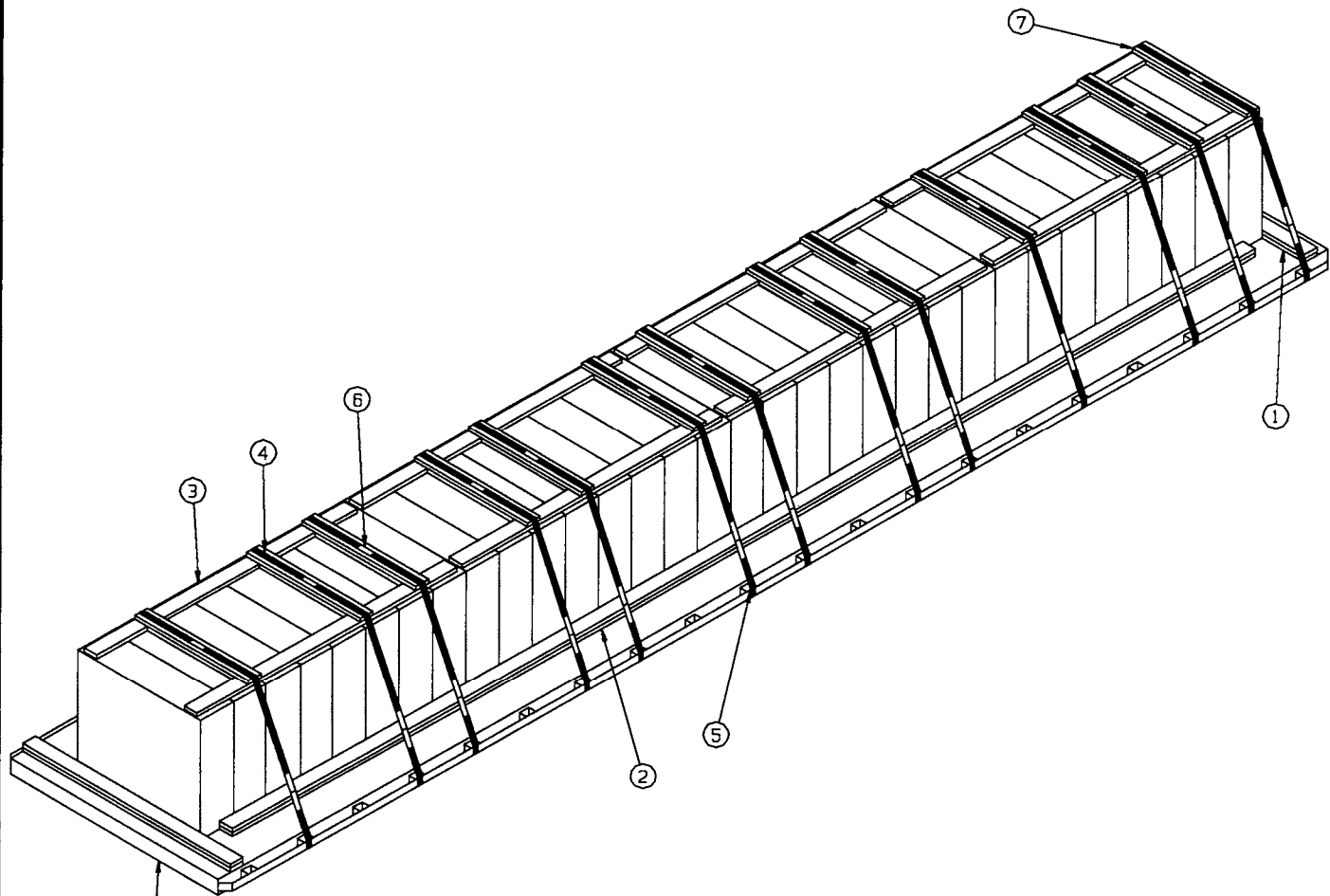
**TWIN-PACK UNIT (CNU-309/E CONTAINER)**

TWIN-PACK UNIT DATA:  
 NUMBER OF CONTAINERS - - - - - TWO (2)  
 GROSS WEIGHT - - - - - 2,350 LBS (APPROX)  
 CUBE - - - - - 39.9 CUBIC FEET



**TWIN-PACK UNIT (CNU-332/E CONTAINER)**

TWIN-PACK UNIT DATA:  
 NUMBER OF CONTAINERS - - - - - TWO (2)  
 GROSS WEIGHT - - - - - 2,350 LBS (APPROX)  
 CUBE - - - - - 39.4 CUBIC FEET



REAR OF TRAILER.

ISOMETRIC VIEW

KEY NUMBERS

- ① HEADER, 2" X 6" BY TRAILER WIDTH (DOUBLED) (2 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/8-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/8-20d NAILS. SEE GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING, 2" X 6" BY LENGTH TO SUIT (DOUBLED) (2 REQD). RANDOM LENGTH PIECES MAY BE USED. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/1-10d NAIL EVERY 8". NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ③ HOLD-DOWN ASSEMBLY A (4 REQD). SEE THE "HOLD-DOWN ASSEMBLY A" DETAIL ON PAGE 12.
- ④ HOLD-DOWN STRAP, 2" X .050" OR .044" X 24'-0" LONG STEEL STRAPPING (13 REQD). INSTALL EACH STRAP FROM TWO 12'-0" LONG PIECES. STAPLE TO HOLD-DOWN ASSEMBLY, PIECE MARKED ③, AND STRAPPING BOARD ASSEMBLY, PIECE MARKED ⑦, W/2 STAPLES. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑤ PAD, 2" X .050" OR .044" X 18" LONG STEEL STRAPPING (26 REQD). POSITION UNDER ANCHORING FACILITY AND SEAL TO HOLD-DOWN STRAP, PIECE MARKED ④. ALT: STAKE POCKET PROTECTOR (52 REQD). USE TWO UNDER EACH ANCHORING FACILITY WITH A HOLD-DOWN STRAP. SEE THE "HOLD-DOWN STRAP ANCHORING DETAIL" ON PAGE 14.
- ⑥ SEAL FOR 2" STRAPPING (65 REQD, 5 PER STRAP). DOUBLE NOTCH EACH SEAL, EXCEPT THOSE USED TO SECURE THE PADS, PIECES MARKED ⑤. SEE THE "HOLD-DOWN STRAP ANCHORING DETAILS" AND "END-OVER-END LAP JOINT DETAILS" ON PAGE 14.
- ⑦ STRAPPING BOARD ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 12. NAIL TO THE HOLD-DOWN ASSEMBLY A W/3-10d NAILS AT EACH END. POSITION IN ALIGNMENT WITH THE TRAILER STAKE POCKET.

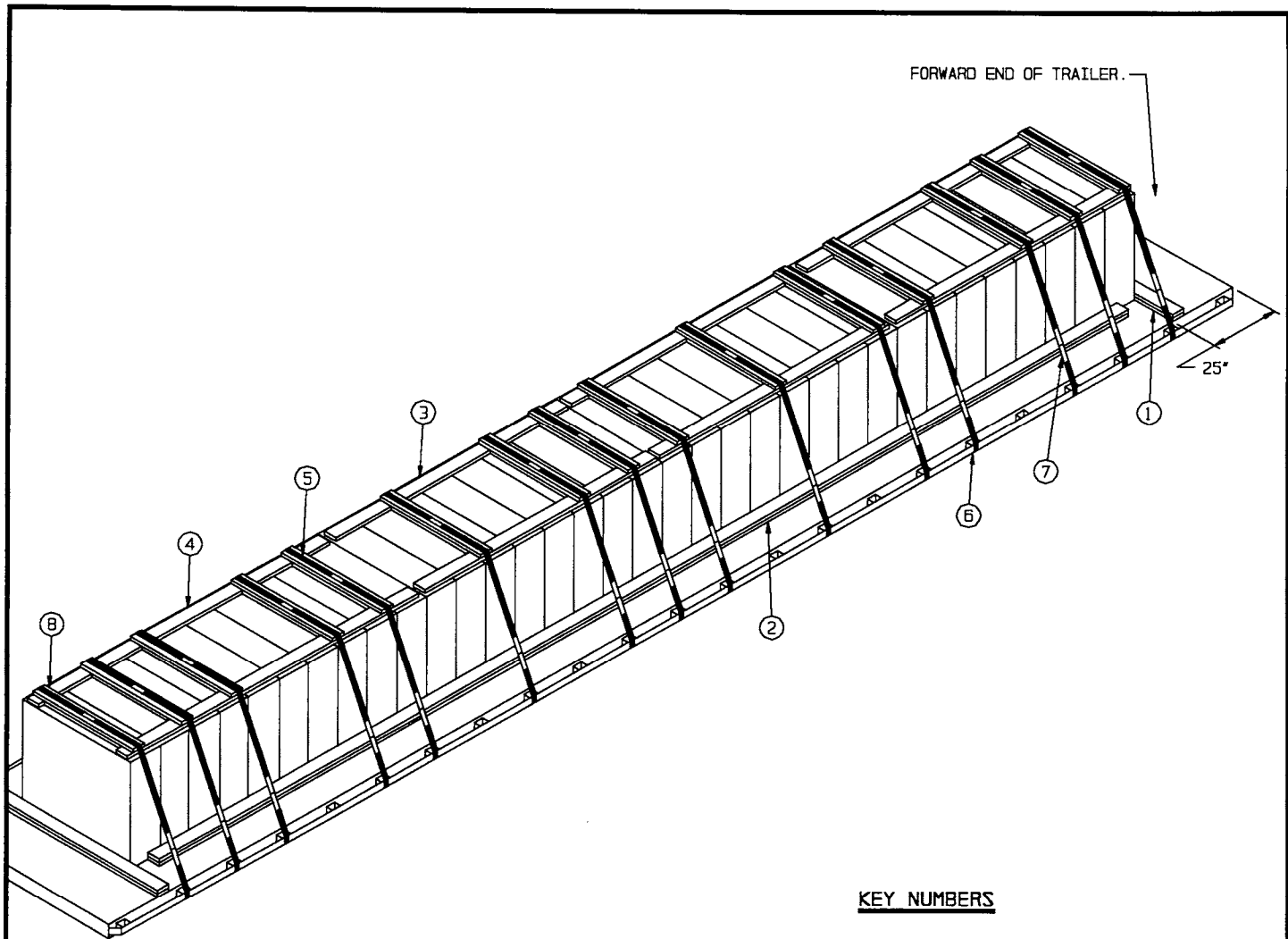
SPECIAL NOTES:

1. A 16 TWIN-PACK UNIT LOAD IS SHOWN ON A 40'-0" LONG BY 8'-0" WIDE FLAT BED TRAILER. TRAILERS OF OTHER DIMENSIONS MAY BE USED.
2. THE CNU-332/E CONTAINERS ARE SHOWN IN THE LOAD VIEW ON PAGE 4. THE PROCEDURES ARE ALSO APPLICABLE FOR SHIPMENTS OF CNU-309/E CONTAINERS. SEE SPECIAL NOTES 4 AND 5 BELOW.
3. THE DEPICTED LOAD MAY BE DECREASED, AS NECESSARY TO SUIT A QUANTITY TO BE SHIPPED OR TO MEET WEIGHT LIMIT REQUIREMENTS, BY OMITTING ONE OR MORE LOAD UNITS OF TWIN-PACKS, AND ADJUSTING THE LOCATION OF THE REMAINING UNITS AS NECESSARY TO PROVIDE FOR PROPER WEIGHT DISTRIBUTION.
4. THE LADING WEIGHT IN THE "LOAD AS SHOWN" IS BASED ON THE TWIN-PACK UNIT AT THE MAXIMUM WEIGHT OF 2,350 POUNDS EACH.
5. BOTH THE CNU-332/E CONTAINERS AND THE CNU-309/E CONTAINERS MAY BE SHIPPED ON THE SAME TRAILER.
6. ALL CONTAINERS SHOWN IN THE LOAD VIEW ON PAGE 4 ARE TWIN-PACK UNITS. IF IT IS DESIRED TO SHIP A SINGLE CONTAINER FROM A TWIN-PACK UNIT, THE SINGLE CONTAINER MUST BE LOCATED WITHIN THE FORWARD PORTION OF THE LOAD. A SINGLE CONTAINER MUST NOT BE LOCATED AT THE END OF THE LOAD.
7. CHAINS AND LOAD BINDERS MAY BE USED IN LIEU OF THE 2" HOLD-DOWN STRAP, PADS, AND SEALS, PIECES MARKED ④ THRU ⑥. THE HOLD-DOWN ASSEMBLY, PIECE MARKED ③, THE STRAPPING BOARD ASSEMBLY, PIECE MARKED ⑦, AND THE REST OF THE DUNNAGE WILL BE APPLIED AT THE SAME LOCATIONS AS SHOWN FOR THE STEEL STRAPPING. SEE THE "SPECIAL PROVISIONS FOR CHAIN TIE DOWN" ON PAGE 11 FOR GUIDANCE.
8. WEB STRAP ASSEMBLIES MAY BE USED IN LIEU OF THE 2" HOLD-DOWN STRAP, PADS, AND SEALS, PIECES MARKED ④ THRU ⑥. THE HOLD-DOWN ASSEMBLY, PIECE MARKED ③, THE STRAPPING BOARD ASSEMBLY, PIECE MARKED ⑦, AND THE REST OF THE DUNNAGE WILL BE APPLIED AT THE SAME LOCATIONS AS SHOWN FOR THE STEEL STRAPPING. SEE THE "SPECIAL PROVISIONS FOR WEB STRAP TIE DOWN" ON PAGE 7 FOR GUIDANCE.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 6"	352	352
NAILS	NO. REQD	POUNDS
10d (3")	374	5-3/4
20d (4)	16	1/2
STEEL STRAPPING, 2" - - -	351' REQD - - -	117 LBS
SEAL FOR 2" STRAPPING - - - - -	65 REQD - - - - -	13 LBS
STAPLE, 2-1/8" X 3/4" - - - - -	26 REQD - - - - -	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
TWIN-PACK UNIT - - - - -	16 - - - - -	37,600 LBS
DUNNAGE - - - - -	- - - - -	841 LBS
TOTAL WEIGHT - - - - -		38,441 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① HEADER, 2" X 6" BY TRAILER WIDTH (DOUBLED) (2 REQD). POSITION THE HEADER AT THE FORWARD END OF THE TRAILER 25" BACK FROM THE FORWARD END OF THE TRAILER AS SHOWN. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/8-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/8-20d NAILS. SEE GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING, 2" X 6" BY LENGTH TO SUIT (DOUBLED) (2 REQD). RANDOM LENGTH PIECES MAY BE USED. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/1-10d NAIL EVERY 8". NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ③ HOLD-DOWN ASSEMBLY A (3 REQD). SEE THE "HOLD-DOWN ASSEMBLY A" ON PAGE 12.
- ④ HOLD-DOWN ASSEMBLY B (1 REQD). SEE THE "HOLD-DOWN ASSEMBLY B" DETAIL ON PAGE 13.
- ⑤ HOLD-DOWN STRAP, 2" X .050" OR .044" X 24'-0" LONG STEEL STRAPPING (15 REQD). INSTALL EACH STRAP FROM TWO 12'-0" LONG PIECES. STAPLE TO HOLD-DOWN ASSEMBLY OR STRAPPING BOARD ASSEMBLY, PIECES MARKED ③, ④, AND ⑧ W/2 STAPLES. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑥ PAD, 2" X .050" OR .044" X 18" LONG STEEL STRAPPING (30 REQD). POSITION UNDER ANCHORING FACILITY AND SEAL TO HOLD-DOWN STRAP, PIECE MARKED ⑤. ALT: STAKE POCKET PROTECTOR (60 REQD). USE TWO UNDER EACH ANCHORING FACILITY WITH A HOLD-DOWN STRAP. SEE THE "HOLD-DOWN STRAP ANCHORING DETAIL" ON PAGE 14.
- ⑦ SEAL FOR 2" STRAPPING (75 REQD, 5 PER STRAP). DOUBLE NOTCH EACH SEAL, EXCEPT THOSE USED TO SECURE THE PADS, PIECES MARKED ⑥. SEE THE "HOLD-DOWN STRAP ANCHORING DETAIL" AND "END-OVER-END LAP JOINT DETAILS" ON PAGE 14.
- ⑧ STRAPPING BOARD ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 12. NAIL TO HOLD-DOWN ASSEMBLY A W/3-10d NAILS AT EACH END. POSITION IN ALIGNMENT WITH TRAILER STAKE POCKET.

**SPECIAL NOTES:**

1. A 17 TWIN-PACK UNIT LOAD IS SHOWN ON A 45'-0" LONG BY 8'-0" WIDE FLAT BED TRAILER. LONGER TRAILERS, EITHER NARROWER OR WIDER MAY BE USED FOR THE DEPICTED LOAD.
2. THE CNU-332/E CONTAINERS ARE SHOWN IN THE LOAD VIEW ON PAGE 6. THE PROCEDURES ARE ALSO APPLICABLE FOR SHIPMENTS OF CNU-309/E CONTAINERS. SEE SPECIAL NOTES 4 AND 5 BELOW.
3. THE DEPICTED LOAD MAY BE DECREASED, AS NECESSARY TO SUIT A QUANTITY TO BE SHIPPED OR TO MEET WEIGHT LIMIT REQUIREMENTS, BY OMITTING ONE OR MORE LOAD UNITS OF TWIN-PACKS, AND ADJUSTING THE LOCATION OF THE REMAINING UNITS AS NECESSARY TO PROVIDE FOR PROPER WEIGHT DISTRIBUTION.
4. THE LADING WEIGHT IN THE "LOAD AS SHOWN" IS BASED ON THE TWIN-PACK UNIT AT THE MAXIMUM WEIGHT OF 2,350 POUNDS EACH.
5. BOTH THE CNU-332/E CONTAINERS AND THE CNU-309/E CONTAINERS MAY BE SHIPPED ON THE SAME TRAILER.
6. ALL CONTAINERS SHOWN IN THE LOAD VIEW ON PAGE 6 ARE TWIN-PACK UNITS. IF IT IS DESIRED TO SHIP A SINGLE CONTAINER FROM A TWIN-PACK UNIT, THE SINGLE CONTAINER MUST BE LOCATED WITHIN THE FORWARD PORTION OF THE LOAD. A SINGLE CONTAINER MUST NOT BE LOCATED AT THE END OF THE LOAD.
7. CHAINS AND LOAD BINDERS MAY BE USED IN LIEU OF THE 2" HOLD-DOWN STRAP, PADS, AND SEALS, PIECES MARKED ⑤ THRU ⑦. THE HOLD-DOWN ASSEMBLIES, PIECES MARKED ③, AND ④, THE STRAPPING BOARD ASSEMBLIES, PIECES MARKED ⑥, AND THE REST OF THE DUNNAGE WILL BE APPLIED AT THE SAME LOCATIONS AS SHOWN FOR THE STEEL STRAPPING. SEE THE "SPECIAL PROVISIONS FOR CHAIN TIE DOWN" ON PAGE 11 FOR GUIDANCE.
8. WEB STRAP ASSEMBLIES MAY BE USED IN LIEU OF THE 2" HOLD-DOWN STRAP, PADS, AND SEALS, PIECES MARKED ⑤ THRU ⑦. THE HOLD-DOWN ASSEMBLIES, PIECES MARKED ③, AND ④, THE STRAPPING BOARD ASSEMBLIES, PIECES MARKED ⑥, AND THE REST OF THE DUNNAGE WILL BE APPLIED AT THE SAME LOCATIONS AS SHOWN FOR THE STEEL STRAPPING. SEE THE "SPECIAL PROVISIONS FOR WEB STRAP TIE DOWN" AT RIGHT FOR GUIDANCE.
9. DUE TO THE CONFIGURATION OF THE TWIN-PACK CONTAINERS AND THE METHOD OF VERTICAL RESTRAINT DEPICTED IN THE LOAD ON PAGE 6, A MINIMUM OF 3 WEB STRAPS ARE TO BE USED WITH A HOLD-DOWN ASSEMBLY A AND A MINIMUM OF 4 WEB STRAPS WILL BE USED WITH HOLD-DOWN ASSEMBLY B.

**SPECIAL PROVISIONS FOR WEB STRAP TIE DOWN:**

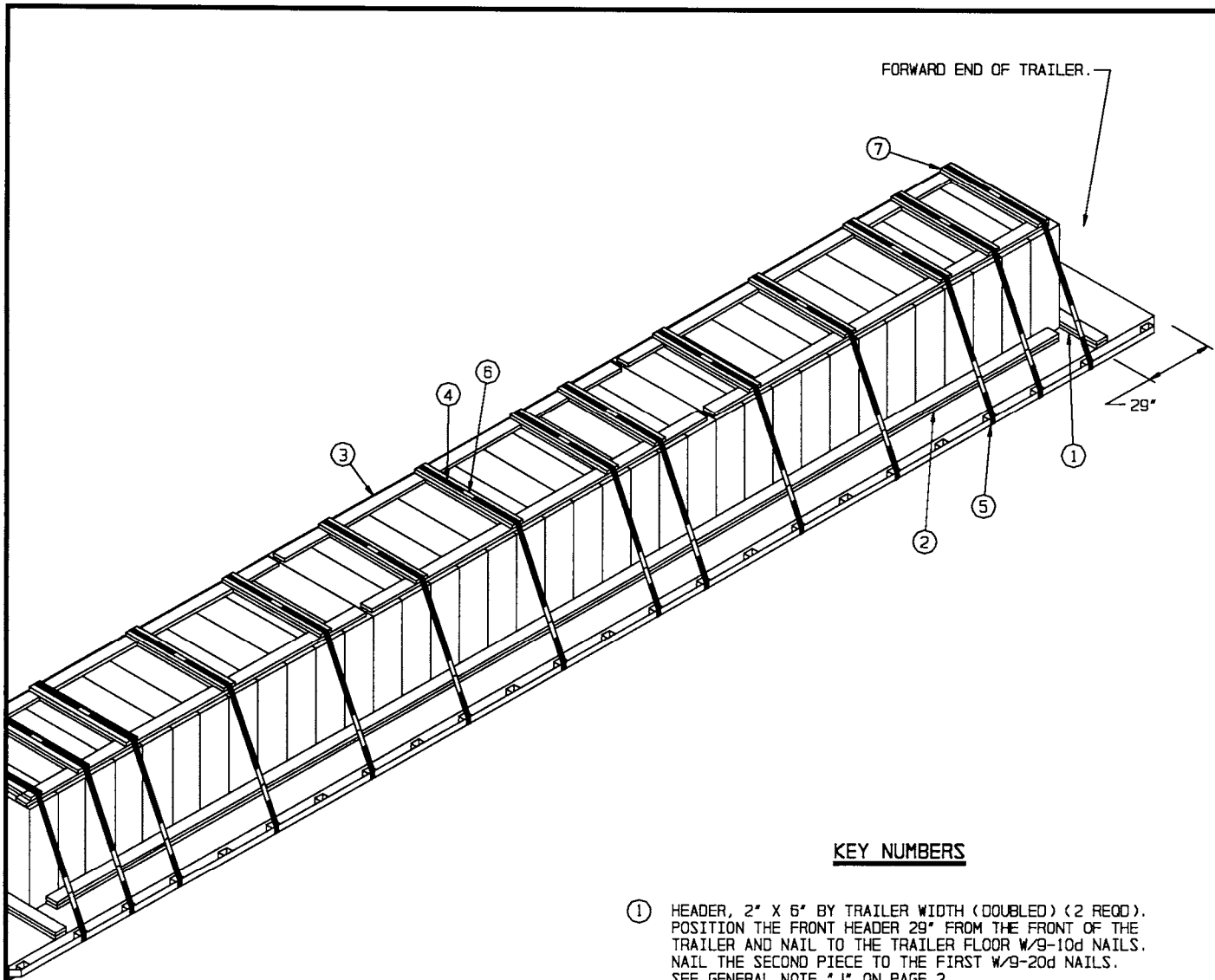
LADING MAY BE SECURED TO A FLATBED TRAILER BY WEB STRAP ASSEMBLIES IN LIEU OF STEEL STRAPPING OR CHAINS AND LOAD BINDERS, PROVIDED THE FOLLOWING CONDITIONS ARE MET.

1. ONLY WEB STRAPS OF GOOD QUALITY WILL BE USED. ALL WEB STRAPS AND ASSOCIATED HARDWARE SHALL CONFORM TO THE WEB SLING & TIEDOWN ASSOCIATION RECOMMENDED STANDARD SPECIFICATION FOR SYNTHETIC WEB TIEDOWNS, FIRST PUBLISHED IN 1991.
2. ALL WEB STRAP TIEDOWN ASSEMBLIES SHALL BE PERMANENTLY LABELED WITHIN 18" OF ONE END TO SHOW:
  - A. NAME OR TRADEMARK OF MANUFACTURER
  - B. WORKING LOAD LIMIT (WLL)
  - C. DATE OF MANUFACTURE (MONTH AND YEAR)
3. WEB STRAP ASSEMBLY MINIMUM BREAKING STRENGTH WILL BE AT LEAST THREE TIMES THE WLL MARKED ON THE STRAP.
4. THE TOTAL MINIMUM BREAKING STRENGTH (MBS) OF THE STRAPS USED TO RESTRAIN AMMUNITION ITEMS WILL BE AT LEAST 1-1/2 TIMES THE TOTAL WEIGHT OF THE ITEMS, WITH A MINIMUM OF TWO STRAPS POSITIONED OVER EACH LOAD UNIT ON A TRAILER. WRITTEN PROOF OF THE MBS OF THE STRAPS SHALL BE PROVIDED BY THE CARRIER TO THE SHIPPING ACTIVITY IF REQUESTED. SEE SPECIAL NOTE 9 AT LEFT.
5. CARRIERS MUST COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS APPLICABLE TO CARGO RESTRAINT USING WEB STRAPS.
6. WHEN USING STRAPS AND WINCHES FOR CARGO RESTRAINT, THE STRAPS WILL BE TENSIONED UNTIL TIGHT WITHOUT CAUSING DAMAGE TO THE CARGO. ONLY WINCH BARS WILL BE USED FOR OPERATING THE STRAP WINCHES.
7. BEFORE AND DURING INSTALLATION, THE WEB STRAP ASSEMBLIES SHALL BE INSPECTED FOR DEFECTS. STRAPS HAVING ANY OF THE FOLLOWING DEFECTS WILL NOT BE USED FOR THE RESTRAINT OF ANY AMMUNITION LOAD, WITH THE EXCEPTION OF ONE WITH FRAYED ENDS. A STRAP HAVING FRAYED ENDS CAN BE USED IF THE FRAYED END IS TRIMMED AND MELTED WITH HEAT OR FLAME UNTIL ALL STRANDS ARE SEIZED.
  - A. STRAP ASSEMBLY HARDWARE: SHALL BE INSPECTED FOR BENT HOOKS, GOUGES, CORROSION, SIGNS OF REPAIR, BENT RATCHETS OR WINCHES, WEAR, OR ANY OTHER NOTICEABLE DEFECTS.
  - B. STRAP WEBBING: SHALL BE INSPECTED FOR KNOTS, EXCESSIVE ABRASIVE WEAR, TEARS, PUNCTURES, CUTS, ACID OR CAUSTIC BURNS, BROKEN STITCHES, FRAYED ENDS, OIL OR GREASE SPOTS EXCEEDING 6 SQUARE INCHES, BLEACHING OF COLOR, INCREASED STIFFNESS, SPLICES, VISIBLE WEAR INDICATOR THREADS, OR ANY OTHER NOTICEABLE DEFECTS.
8. RATCHET HANDLES MUST BE IN THE LOCKED POSITION AND/OR WINCH LOCKING DEVICES MUST BE FULLY SEATED IN THE TEETH OF THE WINCH.
9. IF THE WINCHES BEING USED ARE THE REMOVABLE TYPE HAVING BOLTS FOR ATTACHMENT TO THE TRAILER, CARE MUST BE EXERCISED WHEN ATTACHING THE WINCHES TO THE TRAILER. IF EXCESSIVE FORCE IS EXERTED ON THE BOLT DURING TENSIONING, DEFORMATION OF THE WINCH BRACKET MAY OCCUR, AND SUBSEQUENTLY CAUSE FAILURE OF THE WINCH BRACKET DURING TRANSPORT. WINCHES MUST BE FASTENED TO THE TRAILER WITH A MINIMUM OF TWO BOLTS.
10. DRIVERS MUST BE INSTRUCTED TO PERIODICALLY CHECK THE TIGHTNESS OF THE WEB STRAP ASSEMBLIES AND RE-TIGHTEN, IF NECESSARY.
11. IF PROVIDED ON OR WITH THE WEB STRAP ASSEMBLIES, SCUFF SLEEVES/WEB PROTECTORS WILL BE USED WHEREVER THE STRAP PASSES OVER A SHARP CORNER OR IRREGULAR SURFACE. IF NOT PROVIDED, ANTI-CHAFING MATERIAL OF A SUITABLE THICKNESS WILL BE USED TO INSURE THAT THE STRAP WEBBING IS NOT DAMAGED DURING TRANSPORT OF THE LOAD.
12. THE HARDWARE FITTING OF THE TIEDOWN ASSEMBLIES MUST BE ATTACHED TO THE TRAILER IN SUCH A MANNER THAT THEY WILL REMAIN IN PLACE IF SLACK DEVELOPS IN THE STRAP DURING TRANSPORT.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
TWIN-PACK UNIT	17	39,950 LBS
DUNNAGE		925 LBS
<b>TOTAL WEIGHT</b>		<b>40,875 LBS (APPROX)</b>

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 6"	383	383
NAILS	NO. REQD	POUNDS
10d (3")	406	6-1/4
20d (4")	15	1/2
STEEL STRAPPING, 2" ---	411' REQD ---	137 LBS
SEAL FOR 2" STRAPPING ---	75 REQD ---	15 LBS
STAPLE, 2-1/8" X 3/4" ---	30 REQD ---	NIL



ISOMETRIC VIEW

KEY NUMBERS

- ① HEADER, 2" X 6" BY TRAILER WIDTH (DOUBLED) (2 REQD). POSITION THE FRONT HEADER 29" FROM THE FRONT OF THE TRAILER AND NAIL TO THE TRAILER FLOOR W/9-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/9-20d NAILS. SEE GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING, 2" X 6" BY LENGTH TO SUIT (DOUBLED) (2 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/1-10d NAIL EVERY 8". NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ③ HOLD-DOWN ASSEMBLY B (3 REQD). SEE THE "HOLD-DOWN ASSEMBLY B" DETAIL ON PAGE 13.
- ④ HOLD-DOWN STRAP, 2" X .050" OR .044" X 24'-0" LONG STEEL STRAPPING (14 REQD). INSTALL EACH STRAP FROM TWO 12'-0" LONG PIECES. STAPLE TO HOLD-DOWN ASSEMBLY, OR STRAPPING BOARD ASSEMBLY, PIECES MARKED ③, AND ⑦, W/2 STAPLES. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑤ PAD, 2" X .050" OR .044" X 18" LONG STEEL STRAPPING (28 REQD). POSITION UNDER ANCHORING FACILITY AND SEAL TO HOLD-DOWN STRAP, PIECE MARKED ④. ALT: STAKE POCKET PROTECTOR (56 REQD). USE TWO UNDER EACH ANCHORING FACILITY WITH A HOLD-DOWN STRAP. SEE THE "HOLD-DOWN STRAP ANCHORING DETAIL" ON PAGE 14.
- ⑥ SEAL FOR 2" STRAPPING (70 REQD, 5 PER STRAP). DOUBLE NOTCH EACH SEAL, EXCEPT THOSE USED TO SECURE THE PADS, PIECES MARKED ⑤. SEE THE "HOLD-DOWN STRAP ANCHORING DETAILS" AND "END-OVER-END LAP JOINT DETAILS" ON PAGE 14.
- ⑦ STRAPPING BOARD ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 12. POSITION IN ALIGNMENT WITH TRAILER STAKE POCKET AND NAIL TO HOLD-DOWN ASSEMBLY B W/3-10d NAILS AT EACH END.



**PROVISIONS FOR THE USE OF FIRE HOSE IN LIEU OF CHAIN OR STRAPPING BOARDS**

FIRE HOSE THAT IS NO LONGER SUITABLE FOR USE IN FIRE FIGHTING APPLICATIONS CAN BE SUBSTITUTED FOR THE DOUBLED 2" BY 6" WOODEN CHAIN BOARDS OR SINGLE 2" BY 6" STRAPPING BOARDS, AS SPECIFIED WITHIN APPROVED AMC 19-48 SERIES FLATBED TRAILER OUTLOADING DRAWINGS, PROVIDED THE FOLLOWING CONDITIONS ARE MET.

**1. SUBSTITUTION AND APPLICATION GUIDANCE**

A. FIRE HOSE MAY BE USED WHEREVER A CHAIN OR STRAPPING BOARD CONTACTS A RIGID SURFACE OF THE LOAD PROVIDED GOUGING, SCRATCHING, CRACKING, BENDING, CRUSHING, OR OTHER VISIBLE DAMAGE DOES NOT OCCUR TO THE LOAD.

B. ONE OR MORE SEGMENTS OF FIRE HOSE MAY BE USED TO REPLACE EACH CHAIN OR STRAPPING BOARD PROVIDING LOAD PROTECTION DURING TENSIONING OF TIEDOWNS AND LOAD SHIPMENT; I.E., A CHAIN BOARD NEED NOT BE REPLACED BY A SINGLE SEGMENT OF HOSE, MULTIPLE SEGMENTS MAY BE USED INSTEAD, AS LONG AS THEY ARE SECURELY FASTENED TO THE TIEDOWN. REGARDLESS OF THE NUMBER OF SEGMENTS USED, THE HOSE LENGTH WILL BE SUCH THAT IT EXTENDS AT LEAST 6" BEYOND THE EDGE OF THE LOAD.

C. FIRE HOSE CANNOT BE USED IN PLACE OF A PURCHASE BOARD ON A LOAD CONSISTING OF MORE THAN TWO PALLETS OR CONTAINERS ACROSS THE WIDTH OF THE TRAILER. THE FIRE HOSE CAN BE APPLIED TO THE OUTER STACKS, HOWEVER, A PURCHASE BOARD ASSEMBLY WILL STILL BE REQUIRED TO PROVIDE VERTICAL HOLD-DOWN ON THE CENTER STACK(S).

**2. ACCEPTABLE FIRE HOSE**

A. FIRE HOSE TO BE USED WILL BE A RUBBER LINED SINGLE OR DOUBLE JACKETED TYPE; I.E., IT MUST HAVE A RUBBER LINING INSIDE A SINGLE OR DOUBLED FABRIC (COTTON, LINEN, ETC.) JACKET.

B. THE COLLAPSED WIDTH OF THE HOSE MUST BE A MINIMUM OF 2-1/2".

C. THE HOSE SEGMENTS USED MUST NOT CONTAIN DEFECTS THAT WILL ALLOW DIRECT CONTACT OF THE CHAIN OR LOAD BINDER WITH THE LOAD. THE HOSE THICKNESS MUST ALSO BE OF SUCH A THICKNESS THAT DENTING OR DAMAGE TO THE LOAD DOES NOT OCCUR DURING CHAIN OR STRAP TENSIONING.

**4. SECUREMENT TO CHAINS OR STRAPS**

A. THE SEGMENTS OF HOSE USED UNDER EACH CHAIN OR STRAP WILL BE SECURED TO THE CHAIN OR STRAP WITH ONE FASTENER EVERY 12", WITH A MINIMUM OF TWO FASTENERS REQUIRED PER HOSE SEGMENT.

B. FASTENERS CAN CONSIST OF PLASTIC ELECTRICAL TIES, NO. 14 GAGE WIRE, OR TAPE. REGARDLESS OF THE TYPE OF FASTENING USED, IT MUST PROVIDE A POSITIVE MEANS OF SECUREMENT OF THE HOSE TO THE CHAIN OR STRAP AND MUST NOT DAMAGE THE SURFACE OF THE CONTAINER, PALLET, OR ITEM IT CONTACTS.

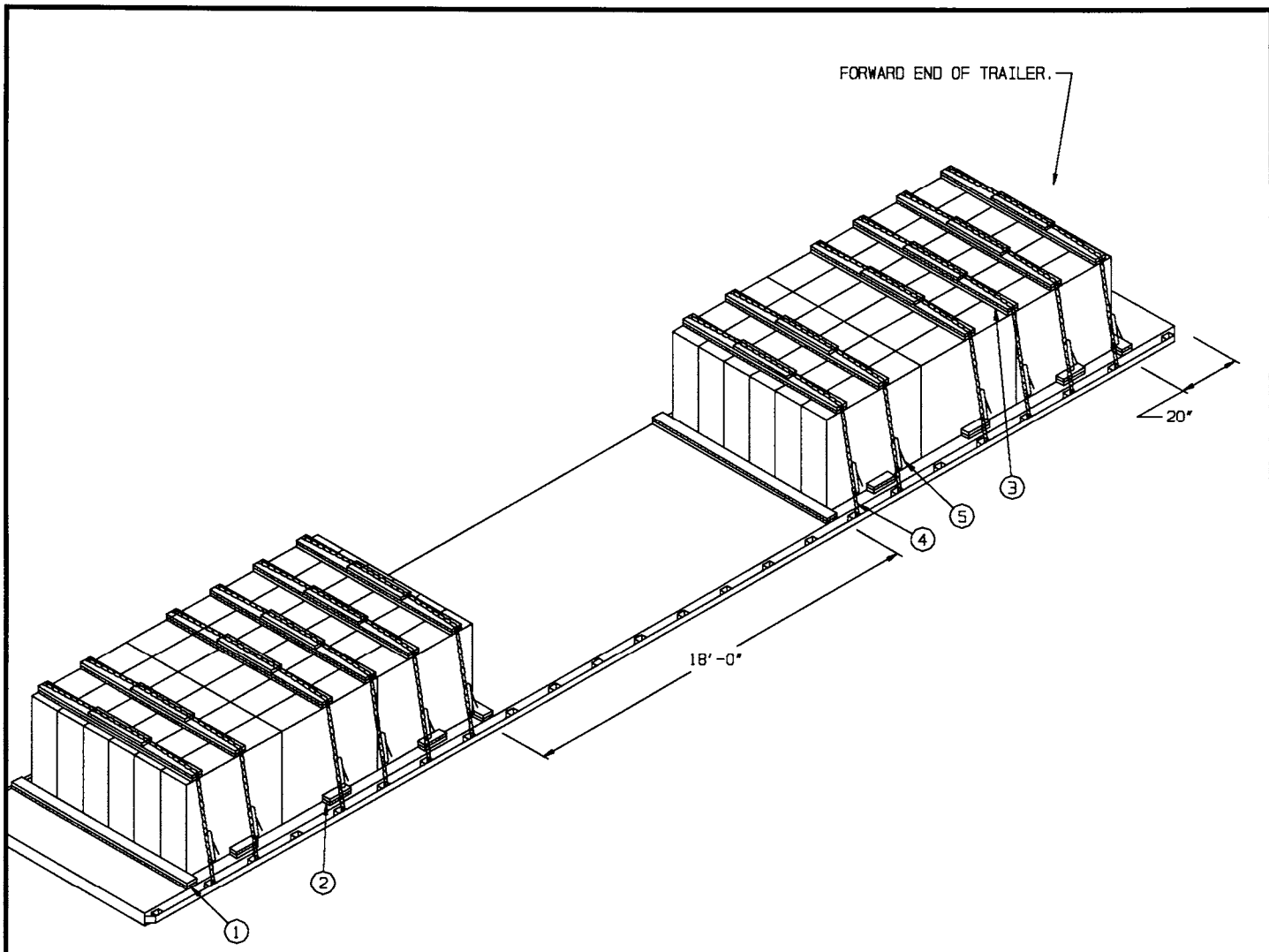
**SPECIAL NOTES:**

1. AN 18 TWIN-PACK UNIT LOAD IS SHOWN ON A 48'-0" LONG BY 8'-0" WIDE FLAT BED TRAILER. LONGER TRAILERS, EITHER NARROWER OR WIDER MAY BE USED FOR THE DEPICTED LOAD.
2. THE CNU-332/E CONTAINERS ARE SHOWN IN THE LOAD VIEW ON PAGE 8. THE PROCEDURES ARE ALSO APPLICABLE FOR SHIPMENTS OF CNU-309/E CONTAINERS. SEE SPECIAL NOTES 4 AND 5 BELOW.
3. THE DEPICTED LOAD MAY BE DECREASED, AS NECESSARY TO SUIT A QUANTITY TO BE SHIPPED OR TO MEET WEIGHT LIMIT REQUIREMENTS, BY OMITTING ONE OR MORE LOAD UNITS OF TWIN-PACKS, AND ADJUSTING THE LOCATION OF THE REMAINING UNITS AS NECESSARY TO PROVIDE FOR PROPER WEIGHT DISTRIBUTION.
4. THE LADING WEIGHT IN THE "LOAD AS SHOWN" IS BASED ON THE TWIN-PACK UNIT AT THE MAXIMUM WEIGHT OF 2,350 POUNDS EACH.
5. BOTH THE CNU-332/E CONTAINERS AND THE CNU-309/E CONTAINERS MAY BE SHIPPED ON THE SAME TRAILER.
6. ALL CONTAINERS SHOWN IN THE LOAD VIEW ON PAGE 8 ARE TWIN-PACK UNITS. IF IT IS DESIRED TO SHIP A SINGLE CONTAINER FROM A TWIN-PACK UNIT, THE SINGLE CONTAINER MUST BE LOCATED WITHIN THE FORWARD PORTION OF THE LOAD. A SINGLE CONTAINER MUST NOT BE LOCATED AT THE END OF THE LOAD.
7. CHAINS AND LOAD BINDERS MAY BE USED IN LIEU OF THE 2" HOLD-DOWN STRAP, PADS, AND SEALS, PIECES MARKED ④ THRU ⑥. THE HOLD-DOWN ASSEMBLY, PIECE MARKED ③, STRAPPING BOARD ASSEMBLY, PIECE MARKED ⑦, AND THE REST OF THE DUNNAGE WILL BE APPLIED AT THE SAME LOCATIONS AS SHOWN FOR THE STEEL STRAPPING. SEE THE "SPECIAL PROVISIONS FOR CHAIN TIE DOWN" ON PAGES 10 AND 11 FOR GUIDANCE. NOTE THAT A MINIMUM OF 4 CHAINS AND LOAD BINDERS WILL BE USED WITH EACH HOLD-DOWN ASSEMBLY B.
8. WEB STRAP ASSEMBLIES MAY BE USED IN LIEU OF THE 2" HOLD-DOWN STRAP, PADS, AND SEALS, PIECES MARKED ④ THRU ⑥. THE HOLD-DOWN ASSEMBLY, PIECE MARKED ③, THE STRAPPING BOARD ASSEMBLY, PIECE MARKED ⑦, AND THE REST OF THE DUNNAGE WILL BE APPLIED AT THE SAME LOCATIONS AS SHOWN FOR THE STEEL STRAPPING. SEE THE "SPECIAL PROVISIONS FOR WEB STRAP TIE DOWN" ON PAGE 7 FOR GUIDANCE.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 6"	379	379
NAILS	NO. REQD	POUNDS
10d (3")	410	6-1/2
20d (4")	18	1/2
STEEL STRAPPING, 2" - - - -	378' REQD - - - -	126 LBS
SEAL FOR 2" STRAPPING - - - -	70 REQD - - - -	14 LBS
STAPLE, 2-1/8" X 3/4" - - - -	28 REQD - - - -	NIL

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
TWIN-PACK UNIT - - - - -	18 - - - - -	42,300 LBS
DUNNAGE - - - - -	- - - - -	905 LBS
TOTAL WEIGHT - - - - -		43,205 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (4 REQD). PRE-POSITION THE FIRST PIECE 20" FROM THE FRONT OF THE TRAILER AS SHOWN AND NAIL TO THE TRAILER FLOOR W/8-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/8-20d NAILS. SEE GENERAL NOTE "J" ON PAGE 2. FROM THE THIRD LOAD UNIT AS DIMENSIONED. SEE GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING, 2" X 6" X 12" (DOUBLED) (12 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/4-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ③ CHAIN BOARD ASSEMBLY (12 REQD, 2 PER LOAD UNIT). SEE THE DETAIL ON PAGE
- ④ CHAIN, BINDING, 5/16", GRADE 70, BY A LENGTH TO SUIT (12 REQD). POSITION AS SHOWN. ATTACH TO A TRAILER STAKE POCKET. DO NOT ATTACH TO A RUB RAIL. SEE THE "SPECIAL PROVISIONS FOR CHAIN TIE-DOWN" ON PAGE 11. SEE GENERAL NOTE "L" ON PAGE 2.
- ⑤ LOAD BINDER, 5/16", OVER-CENTER TYPE (12 REQD, 1 PER CHAIN). WIRE TIE HANDLE TO PREVENT OPENING DURING TRANSPORT. FASTEN THE TENSIONED CHAIN, PIECE MARKED ④, TO A CHAIN BOARD ASSEMBLY, MARKED ③, W/1-20d NAIL AT EACH END BY DRIVING EACH NAIL INTO THE CHAIN BOARD ASSEMBLY THRU AN OPENING IN A CHAIN LINK AND BENDING IT OVER THE LINK.

**SPECIAL PROVISIONS FOR CHAIN TIE DOWN:**

LADING MAY BE SECURED TO THE FLATBED TRAILER BY CARRIER-OWNED CHAINS AND LOAD BINDERS IN LIEU OF SPECIFIED STRAPPING, PROVIDED THE FOLLOWING CONDITIONS ARE MET AND THE PROCEDURES CONTAINED ON PAGES 10 AND 11 ARE FOLLOWED.

1. ONLY CHAINS AND LOAD BINDERS OF GOOD QUALITY WILL BE USED. ALL CHAINS AND LOAD BINDERS SHALL CONFORM TO THE NATIONAL ASSOCIATION OF CHAIN MANUFACTURER'S WELDED CHAIN SPECIFICATION ADOPTED NOVEMBER 1975.
2. ALL CHAINS SHALL BE MARKED AS PRESCRIBED BY THE NATIONAL ASSOCIATION OF CHAIN MANUFACTURER'S WELDED CHAIN SPECIFICATION ADOPTED NOVEMBER 1975. AT LEAST ONE LINK IN EVERY 36 LINKS SHALL CARRY THE MANUFACTURER'S PERMANENT AND DISTINCTIVE MARK IDENTIFYING THE GRADE OF CHAIN. CHAINS NOT MARKED IN THIS MANNER SHALL NOT BE USED. IN ADDITION TO THE GRADE MARKING, THE CHAIN MAY ALSO CARRY LETTER MARKINGS OR SYMBOLS IDENTIFYING THE CHAIN MANUFACTURER. THE PRESENCE OF THE MANUFACTURER'S IDENTIFICATION MARKING IS NOT MANDATORY.
3. BEFORE AND DURING INSTALLATION, THE CHAINS AND LOAD BINDERS SHALL BE INSPECTED FOR BENT HOOKS, STRETCH, GOUGES, BENT LINKS, WEAR, OR ANY OTHER NOTICEABLE DEFECTS. ANY DEFICIENCY SHALL BE CAUSE FOR REJECTION OF A CHAIN OR LOAD BINDER. CHAINS MUST NOT BE TWISTED DURING INSTALLATION. CAUTION: EXTREME CARE MUST BE EXERCISED WHEN TENSIONING CHAINS TO PREVENT DAMAGE OR PERMANENT DEFORMATION TO THE LADING.
4. CHAIN SIZES AND GRADES APPROVED FOR USE WITH FLATBED TRAILER LOADS ARE AS FOLLOWS:
  - A. 3/8", GRADE 43 HIGH TEST CHAIN
  - B. 5/16", GRADE 70 BINDING CHAIN
  - C. 3/8", GRADE 70 BINDING CHAIN
  - D. 5/16", GRADE 80 ALLOY STEEL CHAIN
  - E. 3/8", GRADE 80 ALLOY STEEL CHAIN
5. THE GRABHOOKS ON THE ENDS OF THE CHAIN MAY BE OF THE FOLLOWING TYPES WITH GRADE MARKINGS AS INDICATED.
  - A. CLEVIS GRABHOOKS, 3/8" SIZE, DO NOT REQUIRE GRADE MARKING. ALLOY GRABHOOKS, 5/16" SIZE, SHALL CARRY THE MANUFACTURER'S GRADE MARK OF 7, 70, OR 700. THE HOOKS SHALL BE USED ON THE APPROPRIATE SIZE CHAIN.
  - B. CLOSED EYE GRABHOOKS, 3/8" AND 5/16" SIZE, MAY BE USED ON THE APPROPRIATE SIZE CHAIN IF THEY ARE A PART OF A CHAIN ASSEMBLY WHICH WAS PROVIDED BY A CHAIN MANUFACTURER, AND THE CHAIN ASSEMBLY CARRIES THE CORRECT GRADE IDENTIFICATION MARKING AS PREVIOUSLY STATED. CLOSED EYE GRABHOOKS THAT FORM A PART OF THE CHAIN ASSEMBLY ARE EXEMPT FROM GRADE MARKINGS.
6. CONNECTING LINKS USED FOR CHAIN REPAIR MUST BE CORRECTLY MARKED AND BE EQUAL TO OR GREATER IN STRENGTH THAN THE CHAIN THEY ARE REPAIRING. CHAINS WITH UNMARKED CONNECTING LINKS SHALL NOT BE USED.
7. CHAIN AND FITTING OF A HIGHER GRADE MAY BE SUBSTITUTED FOR THE GRADES SPECIFIED IN NOTE 4 ABOVE.
8. LOAD BINDERS SHALL BE 5/16" TO 3/8" SIZE AND HAVE A MINIMUM BREAKING STRENGTH OF 16,200 POUNDS (WORKING LOAD LIMIT OF 5,400 POUNDS). OVERCENTER TYPE LOAD BINDERS SHALL BE SAFETY WIRED TO PREVENT ACCIDENTAL OPENING DURING TRANSPORT. LOAD BINDER SIZE SHALL BE COMPATIBLE WITH THE SIZE OF THE CHAIN BEING USED.

**SPECIAL NOTES:**

1. AN 18 TWIN-PACK UNIT LOAD IS SHOWN ON A 48'-0" LONG BY 8'-6" WIDE FLAT BED TRAILER. LONGER TRAILERS, EITHER NARROWER OR WIDER MAY BE USED FOR THE DEPICTED LOAD.
2. THE CNU-332/E CONTAINERS ARE SHOWN IN THE LOAD VIEW ON PAGE 10. THE PROCEDURES ARE ALSO APPLICABLE FOR SHIPMENTS OF CNU-309/E CONTAINERS. SEE SPECIAL NOTES 4 AND 5 BELOW.
3. THE DEPICTED LOAD MAY BE DECREASED, AS NECESSARY TO SUIT A QUANTITY TO BE SHIPPED OR TO MEET WEIGHT LIMIT REQUIREMENTS, BY OMITTING ONE OR MORE LOAD UNITS OF TWIN-PACKS, AND ADJUSTING THE LOCATION OF THE REMAINING UNITS AS NECESSARY TO PROVIDE FOR PROPER WEIGHT DISTRIBUTION.
4. THE LADING WEIGHT IN THE "LOAD AS SHOWN" IS BASED ON THE TWIN-PACK UNIT AT THE MAXIMUM WEIGHT OF 2,350 POUNDS EACH.
5. BOTH THE CNU-332/E CONTAINERS AND THE CNU-309/E CONTAINERS MAY BE SHIPPED ON THE SAME TRAILER.
6. ALL CONTAINERS SHOWN IN THE LOAD VIEW ON PAGE 10 ARE TWIN-PACK UNITS. IF IT IS DESIRED TO SHIP A SINGLE CONTAINER FROM A TWIN-PACK UNIT, THE SINGLE CONTAINER MUST BE LOCATED LONGITUDINALLY IN THE CENTER OF THE LOAD. A SINGLE CONTAINER MUST NOT BE LOCATED IN THE OUTER ROW OF THE LOAD.
7. THE TRANSPORTING VEHICLE OPERATOR SHOULD BE INSTRUCTED TO PERIODICALLY INSPECT THE TIEDOWN CHAINS AND LOAD BINDERS DURING TRANSIT AND TIGHTEN IF NECESSARY.
8. IF AN 8'-0" WIDE TRAILER IS BEING USED FOR SHIPMENT, ADJUST THE LOAD TO BE FIVE CONTAINERS WIDE BY 7 LOAD UNITS LONG. PRE-POSITION THE FIRST HEADER 20" FROM THE FRONT OF THE TRAILER, LOAD 3 LOAD UNITS AND BEGIN THE SECOND SET OF LOAD UNITS 60" FROM THE END OF THE FIRST SET, THEN LOAD THE REMAINING 4 LOAD UNITS, FOR A TOTAL OF 35 CONTAINERS.

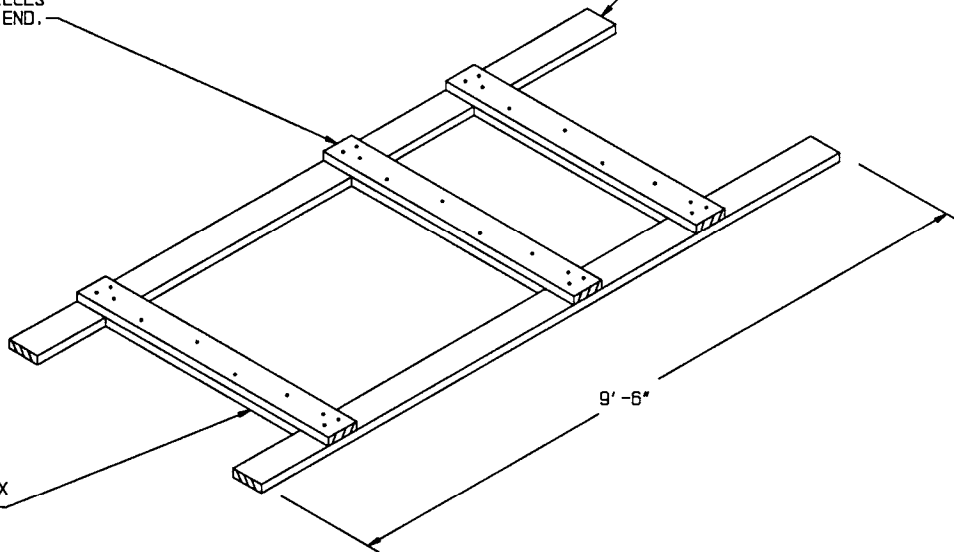
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	24	16
2" X 6"	267	267
NAILS	NO. REQD	POUNDS
10d (3")	272	4
20d (4)	56	1-1/4
BINDING CHAIN, 5/16"	196' REQD	235 LBS
LOAD BINDER	14 REQD	84 LBS

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
TWIN-PACK UNIT	18	42,300 LBS
DUNNAGE		890 LBS
TOTAL WEIGHT		43,190 LBS (APPROX)

STRAPPING BOARD, 2" X 6" X 48"  
 (3 REQD). POSITION SO AS TO BE  
 IN ALIGNMENT WITH A TRAILER  
 STAKE POCKET. NAIL TO THE  
 FILL PIECES W/4-10d NAILS AND  
 TO THE LOAD BEARING PIECES  
 W/3-10d NAILS AT EACH END.

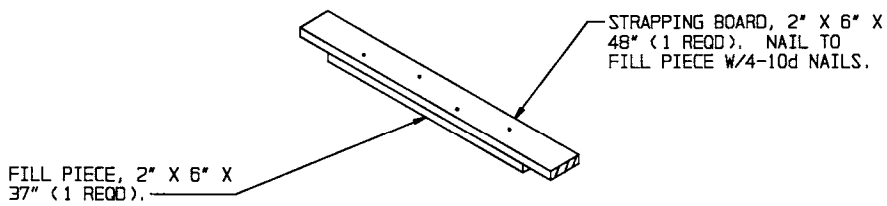
LOAD BEARING PIECE, 2"  
 X 6" X 9'-6" (2 REQD).



FILL PIECE, 2" X 6" X  
 37" (3 REQD).

**HOLD-DOWN ASSEMBLY A**

THE LENGTH OF THE LOAD BEARING PIECES MAY BE ADJUSTED  
 AS NECESSARY FOR USE ON OTHER THAN FOUR TWIN-PACK UNITS.



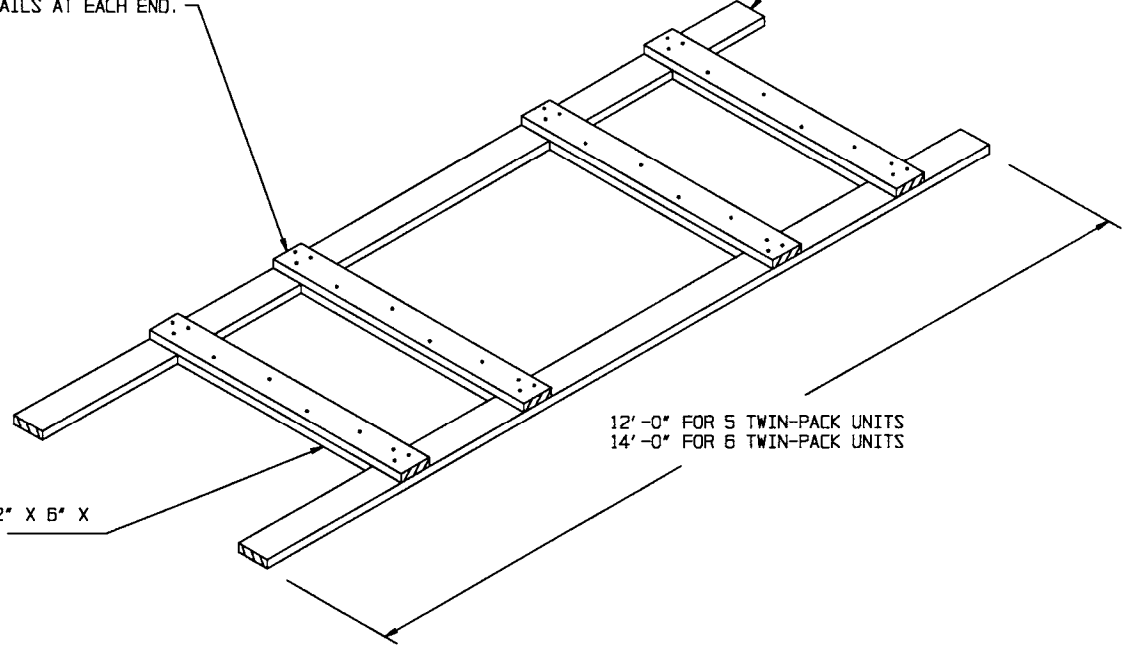
STRAPPING BOARD, 2" X 6" X  
 48" (1 REQD). NAIL TO  
 FILL PIECE W/4-10d NAILS.

FILL PIECE, 2" X 6" X  
 37" (1 REQD).

**STRAPPING BOARD ASSEMBLY**

STRAPPING BOARD, 2" X 6" X 48"  
 (4 REQD). POSITION SO AS TO BE  
 IN ALIGNMENT WITH A TRAILER  
 STAKE POCKET. NAIL TO THE  
 FILL PIECES W/4-10d NAILS AND  
 TO THE LOAD BEARING PIECES  
 W/3-10d NAILS AT EACH END.

LOAD BEARING PIECE, 2" X 6"  
 BY LENGTH TO SUIT (2 REQD).

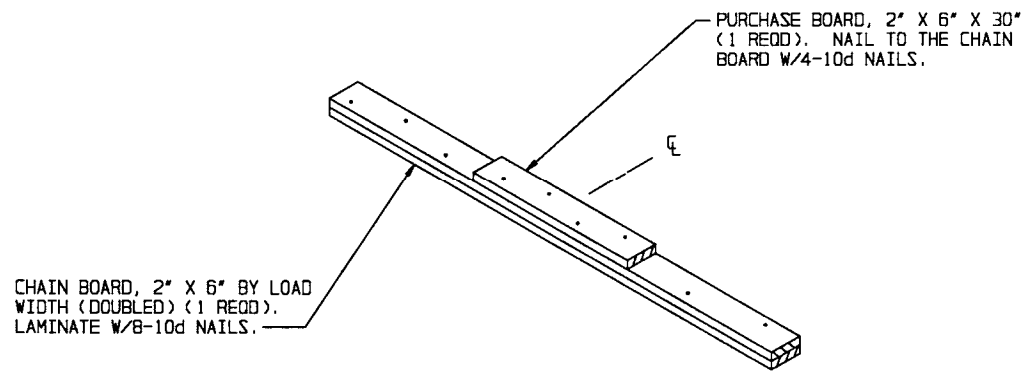


FILL PIECE, 2" X 6" X  
 37" (4 REQD).

12'-0" FOR 5 TWIN-PACK UNITS  
 14'-0" FOR 6 TWIN-PACK UNITS

**HOLD-DOWN ASSEMBLY B**

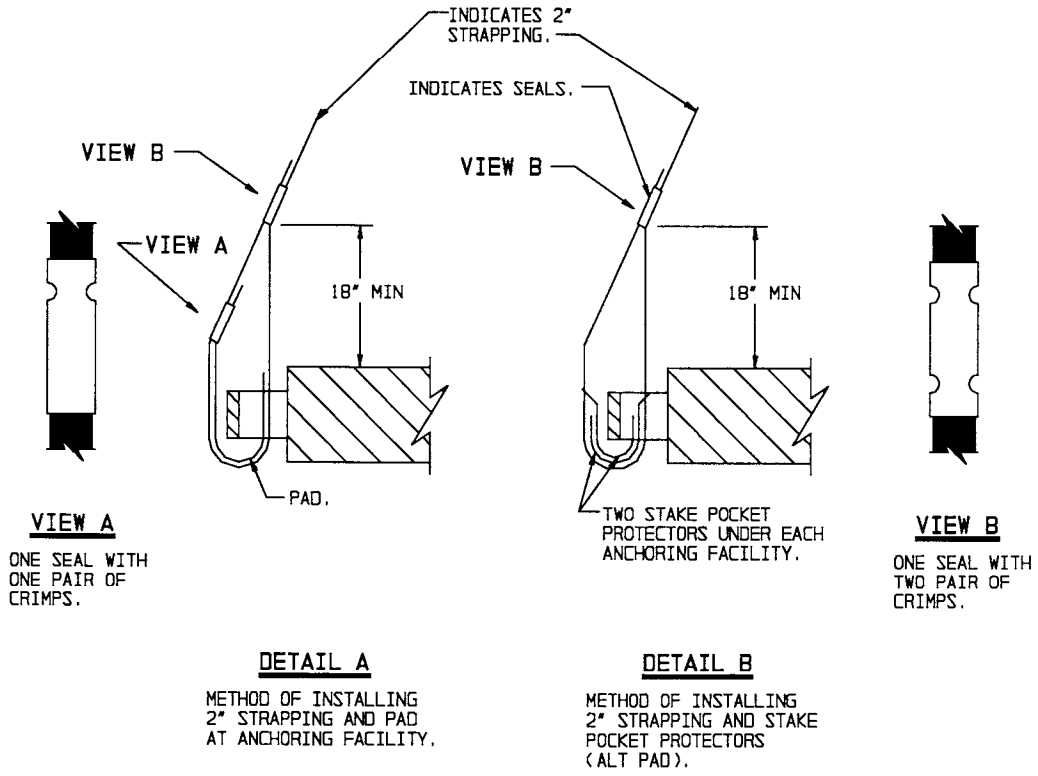
THE LENGTH OF THE LOAD BEARING PIECES MAY BE ADJUSTED  
 AS NECESSARY FOR USE ON OTHER THAN FIVE OR SIX  
 TWIN-PACK UNITS.



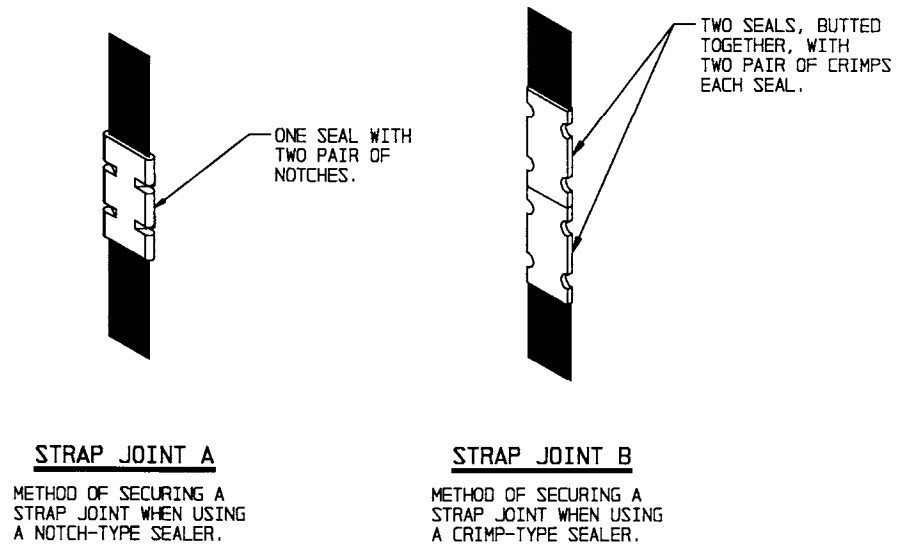
PURCHASE BOARD, 2" X 6" X 30"  
 (1 REQD). NAIL TO THE CHAIN  
 BOARD W/4-10d NAILS.

CHAIN BOARD, 2" X 6" BY LOAD  
 WIDTH (DOUBLED) (1 REQD).  
 LAMINATE W/8-10d NAILS.

**STRAPPING BOARD ASSEMBLY**



**HOLD-DOWN STRAP ANCHORING DETAILS**



**END-OVER-END LAP JOINT DETAILS**