

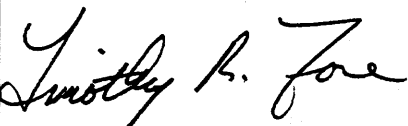

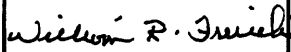
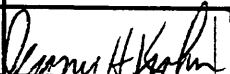
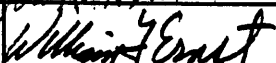
LOADING AND BRACING (TL & LTL) ON FLATBED TRAILERS OF CBU ITEMS PACKED IN CNU-123/E SHIPPING AND STORAGE CONTAINERS

INDEX

ITEM	PAGE(S)
GENERAL NOTES AND MATERIAL SPECIFICATIONS	2
CONTAINER DETAIL	3
30-UNIT LOAD ON A 40'-0" LONG BY 8'-0" WIDE FLATBED TRAILER (STEEL STRAP TIEDOWN METHOD)	4, 5
30-UNIT LOAD ON A 40'-0" LONG BY 8'-0" WIDE FLATBED TRAILER (CHAIN TIEDOWN METHOD)	6, 7
30-UNIT LOAD ON A 40'-0" LONG BY 8'-0" WIDE FLATBED TRAILER (WEB STRAP TIEDOWN METHOD)	8, 9
26-UNIT LOAD ON A 40'-0" LONG BY 8'-0" WIDE FLATBED TRAILER (STEEL STRAP TIEDOWN METHOD)	10, 11
26-UNIT LOAD ON A 40'-0" LONG BY 8'-0" WIDE FLATBED TRAILER (CHAIN TIEDOWN METHOD)	12, 13
26-UNIT LOAD ON A 40'-0" LONG BY 8'-0" WIDE FLATBED TRAILER (WEB STRAP TIEDOWN METHOD)	14, 15
TYPICAL LTL (2-UNIT LOAD) DETAILS	16
PROVISIONS FOR THE USE OF FIREHOSE	17
	18

● **CAUTION:** THE OUTLOADING PROCEDURES SHOWN HEREIN ARE ONLY APPLICABLE TO HIGHWAY MOVEMENTS, NOT TRAILER-ON-FLATCAR (TOFC) MOVEMENTS.

U.S. ARMY MATERIEL COMMAND DRAWING

APPROVED, U.S. ARMY INDUSTRIAL OPERATIONS COMMAND 	ENGINEER	BASIC	MELVIN DAEUMER	DO NOT SCALE			
		REV.	MICHAEL SARDONE	WEBSITE: HTTP://WWW.DAC.ARMY.MIL			
	TECHNICIAN	BASIC		JANUARY 1972			
		REV.					
DRAFTSMAN	BASIC		REVISION NO. 1	JANUARY 1997			
	REV.		SEE THE REVISION LISTING ON PAGE 2				
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND  DEFENSE AMMUNITION CENTER	TRANSPORTATION ENGINEERING DIVISION			CLASS	DIVISION	DRAWING	FILE
	VALIDATION ENGINEERING DIVISION			19	48	4096	11PM1004
	LOGISTICS ENGINEERING OFFICE						

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 CBU ITEMS PACKED IN CNU-123/E CONTAINERS. SUBSEQUENT REFERENCE TO CONTAINER HEREIN MEANS THE CONTAINER WITH CONTENTS. SEE PAGE 3 FOR DETAIL OF THE CONTAINER.
- C. THE LOADS AS SHOWN HEREIN ARE BASED ON 40'-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.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

<u>LUMBER</u> -----:	SEE TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.
<u>NAILS</u> -----:	FED SPEC FF-N-105; COMMON.
<u>STRAP, WEB</u> -----:	WEB SLING AND TIEDOWN ASSOCIATION RECOMMENDED STANDARD SPECIFICATION FOR SYNTHETIC WEB TIEDOWNS, FIRST PUBLISHED IN JANUARY 1991.
<u>STRAPPING, STEEL</u> -:	ASTM D3953; FLAT STRAPPING, TYPE 1 OR 2, HEAVY DUTY, FINISH A, B (GRADE 2), OR C.
<u>SEAL, STRAP</u> -----:	ASTM D3953; CLASS H, FINISH A, B (GRADE 2), OR C, DOUBLE NOTCH TYPE, STYLE I, II, OR IV.
<u>STAPLE, STRAP</u> -----:	COMMERCIAL GRADE.
<u>STAKE POCKET PROTECTOR</u> -----:	COMMERCIAL GRADE.
<u>ANTI-CHAFING MATERIAL</u> -----:	MIL-B-121 (OR EQUAL); NEUTRAL BARRIER MATERIAL.
<u>CHAIN</u> -----:	NATIONAL ASSOCIATION OF CHAIN MANUFACTURER'S WELDED CHAIN SPECIFICATION ADOPTED NOVEMBER 1975.
<u>LOAD BINDER</u> -----:	FED SPEC GGG-B-325.

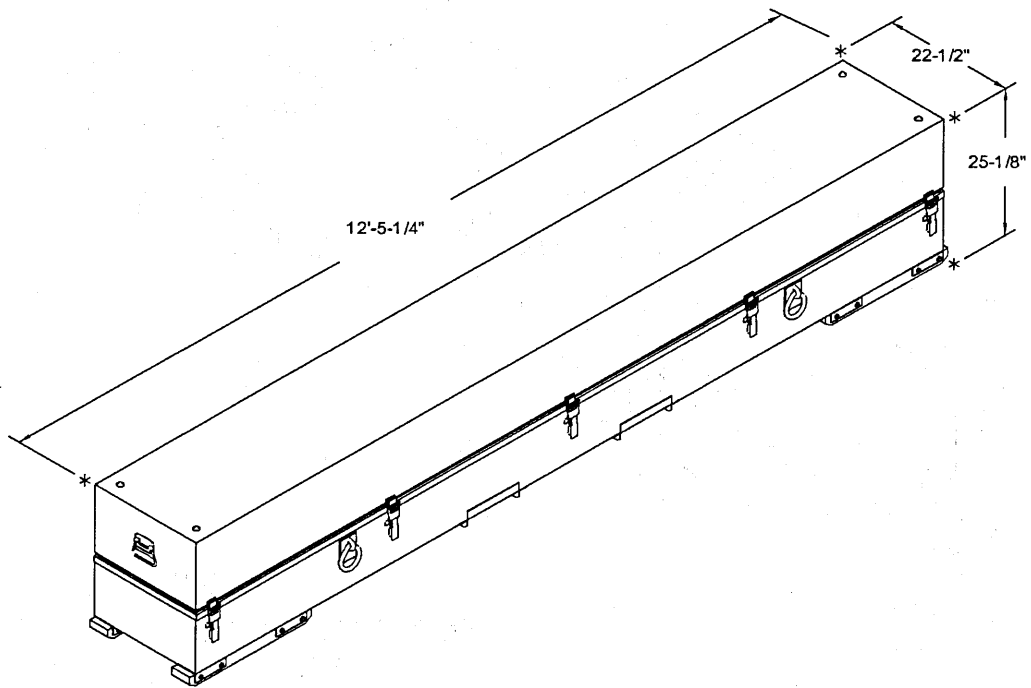
(GENERAL NOTES CONTINUED)

- 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 TIE-DOWN 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 17 FOR GUIDANCE.
- L. THE TRANSPORTING VEHICLE OPERATOR SHOULD BE INSTRUCTED TO PERIODICALLY INSPECT THE TIEDOWN CHAINS AND LOAD BINDERS 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.

REVISION

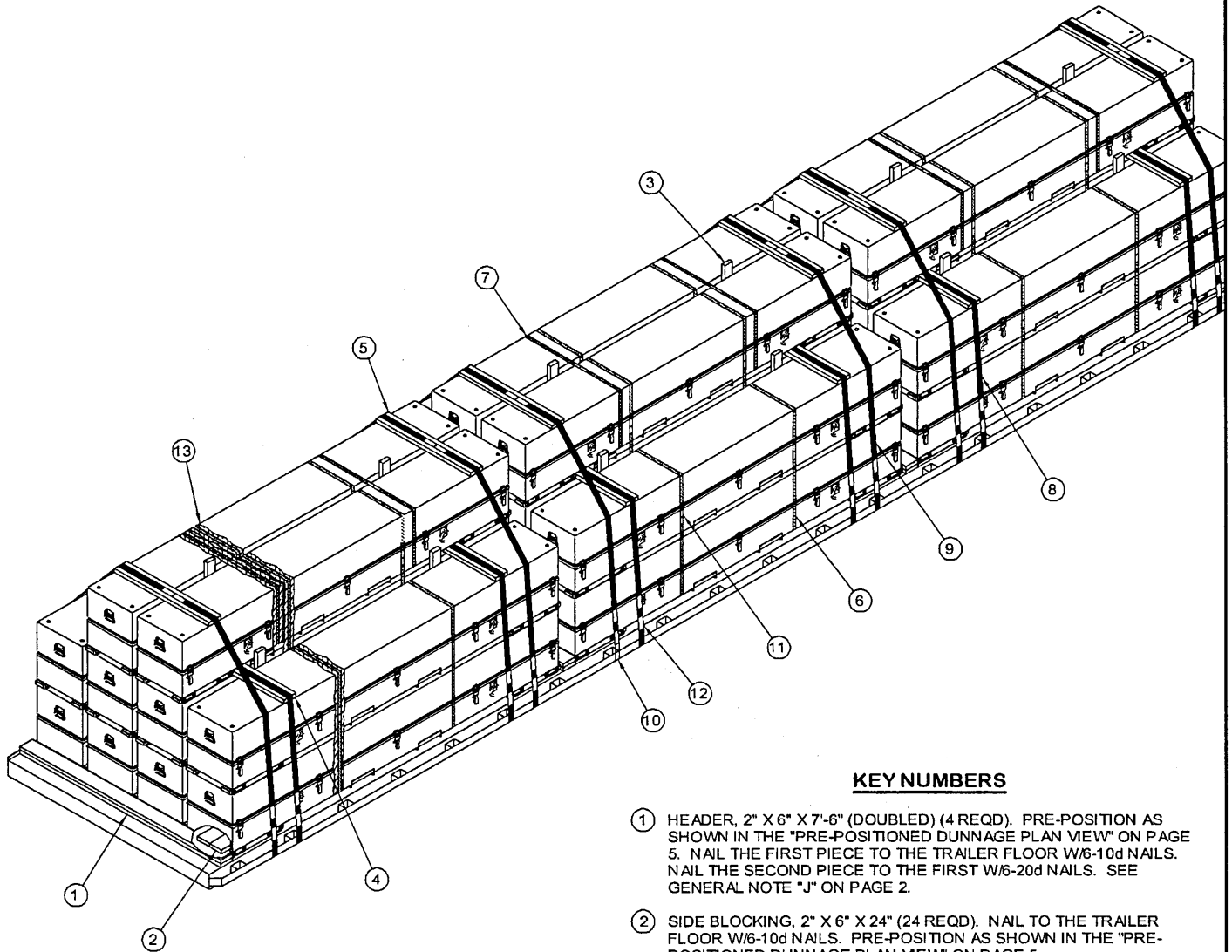
REVISION NO. 1 DATED JANUARY 1997, CONSISTS OF:

1. ADDING CHAIN TIEDOWN METHOD.
2. ADDING WEB STRAP TIEDOWN METHOD.
3. MODIFYING SIDE BLOCKING AND HEADERS.
4. MODIFYING THE ANTI-CHAFING ASSEMBLY.
5. REMOVING BACK-UP CLEATS.
6. REMOVING DRAWINGS FOR 30'-0" LONG TRAILERS.
7. UPDATING GENERAL NOTES AND DRAWING FORMAT.
8. INCLUDING PROVISIONS FOR THE USE OF FIREHOSE IN LIEU OF CHAIN BOARDS OR STRAPPING BOARDS.



CNU-123/E CONTAINER

GROSS WEIGHT ----- 1,336 LBS (APPROX)
CUBE ----- 34.9 CU. FT (APPROX)



ISOMETRIC VIEW

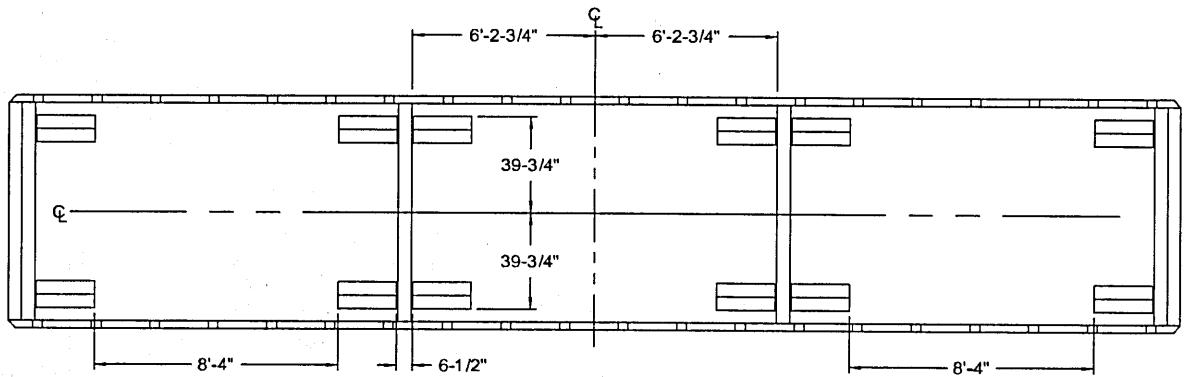
KEY NUMBERS

(KEY NUMBERS CONTINUED)

- ⑩ PAD, 2" X .050" OR .044" X 18" LONG STEEL STRAPPING (24 REQD). POSITION UNDER STAKE POCKET OR RUB RAIL AND SEAL TO HOLD-DOWN STRAPS, PIECES MARKED ⑧ AND ⑨. SEE "DETAIL A" ON PAGE 17. ALT: STAKE POCKET PROTECTOR (48 REQD). USE TWO UNDER EACH STAKE POCKET OR RUB RAIL WITH A HOLD-DOWN STRAP. SEE THE "HOLD-DOWN STRAP ANCHORING DETAILS" ON PAGE 17.
- ⑪ SEAL FOR 1-1/4" STEEL STRAPPING (84 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑫ SEAL FOR 2" STEEL STRAPPING (60 REQD, 4 PER PIECE MARKED ⑧, 6 PER PIECE MARKED ⑨). DOUBLE CRIMP EACH SEAL EXCEPT THOSE USED TO SECURE THE PADS, PIECES MARKED ⑩.
- ⑬ ANTI-CHAFING NEUTRAL BARRIER MATERIAL (AS REQD). PLACE UNDER ALL STRAPPING AT ALL POINTS OF CONTACT WITH THE CONTAINERS.

- ① HEADER, 2" X 6" X 7'-6" (DOUBLED) (4 REQD). PRE-POSITION AS SHOWN IN THE "PRE-POSITIONED DUNNAGE PLAN VIEW" ON PAGE 5. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/6-20d NAILS. SEE GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING, 2" X 6" X 24" (24 REQD). NAIL TO THE TRAILER FLOOR W/6-10d NAILS. PRE-POSITION AS SHOWN IN THE "PRE-POSITIONED DUNNAGE PLAN VIEW" ON PAGE 5.
- ③ ANTI-CHAFING ASSEMBLY A (9 REQD; 3 REQD FOR 3-HIGH LOAD, 6 REQD FOR 2-HIGH LOAD). SEE THE DETAIL ON PAGE 13. LOCATE BETWEEN THE LATCH AND THE TIEDOWN RING FOR PROPER SECUREMENT.
- ④ SECOND-LAYER STRAPPING BOARD, 2" X 6" BY LOAD WIDTH (6 REQD). POSITION UNDER HOLD-DOWN STRAP, PIECE MARKED ⑧.
- ⑤ THIRD LAYER STRAPPING BOARD, 2" X 6" X 42" (6 REQD). POSITION UNDER HOLD-DOWN STRAP, PIECE MARKED ⑧.
- ⑥ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (36 REQD; 2 REQD FOR EACH 2-HIGH STACK, 4 REQD FOR EACH 3-HIGH STACK). ENCIRCLE THE TWO CONTAINERS IN EACH 2-HIGH STACK. ENCIRCLE THE FIRST AND SECOND, AND SECOND AND THIRD CONTAINERS IN EACH 3-HIGH STACK. SEE GENERAL NOTE "K" ON PAGE 2 AND SPECIAL NOTE 2 ON PAGE 5.
- ⑦ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (6 REQD, 2 PER LOAD UNIT). ENCIRCLE THE TOP TWO CONTAINERS IN THE 3-HIGH STACKS OF EACH LOAD UNIT.
- ⑧ HOLD-DOWN STRAP, 2" X .050" OR .044" X 23'-0" LONG STEEL STRAPPING (6 REQD, 2 PER LOAD UNIT). INSTALL FROM ONE PIECE OF STRAPPING AND STAPLE TO THE STRAPPING BOARD, PIECE MARKED ④, W/4 STAPLES.
- ⑨ HOLD-DOWN STRAP, 2" X .050" OR .044" X 27'-0" LONG STEEL STRAPPING (6 REQD, 2 PER LOAD UNIT). INSTALL FROM TWO 13'-6" LONG PIECES. STAPLE TO THE STRAPPING BOARD, PIECE MARKED ④, W/4 STAPLES.

(KEY NUMBERS CONTINUED AT LEFT)



PRE-POSITIONED DUNNAGE PLAN VIEW

SPECIAL NOTES:

1. A 30-UNIT LOAD IS SHOWN ON A 40'-0" LONG BY 8'-0" WIDE FLATBED TRAILER. THE AVAILABLE LOADING SURFACE OF THE TRAILER MUST MEASURE AT LEAST 39'-3" LONG FOR THE DEPICTED LOADING PROCEDURES TO BE APPLICABLE. A SHORTER OR NARROWER TRAILER CANNOT BE USED FOR THE SHIPMENT OF THREE LOAD UNITS WHICH ARE FOUR CONTAINERS WIDE.
2. IF THE CAPACITY OF THE MATERIALS HANDLING EQUIPMENT PERMITS, IT IS RECOMMENDED THAT THE UNITIZING STRAPS BE APPLIED PRIOR TO FINAL PLACEMENT OF THE CONTAINERS ON THE TRAILER.
3. TO SATISFY A LESS-THAN-FULL LOAD QUANTITY, OMIT THE THIRD-LAYER CONTAINERS FROM ONE OR MORE UNITS AS REQUIRED. FOR EACH LOAD UNIT WITH AN OMITTED THIRD-LAYER, REDUCE THE HEIGHT OF THE TOP LONGITUDINAL PIECE OF THE ANTI-CHAFING ASSEMBLY A TO 54", AND OMIT TWO STRAPPING BOARDS MARKED (5). TWO UNITIZING STRAPS MARKED (6). TWO BUNDLING STRAPS MARKED (7), AND TWO HOLD-DOWN STRAPS MARKED (9). TWO BUNDLING STRAPS OF 1-1/4" X .035" OR .031" X 21'-0" LONG STEEL STRAPPING MUST BE INSTALLED TO ENCIRCLE THE FOUR SECOND-LAYER CONTAINERS IN THAT LOAD UNIT.
4. THREE CONTAINERS MAY BE OMITTED FROM A LOAD UNIT BY APPLYING THE PROCEDURES SPECIFIED IN SPECIAL NOTE 3 ABOVE AND SUBSTITUTING A "FILLER ASSEMBLY" IN THE PLACE OF ONE OF THE CENTER CONTAINERS IN THE SECOND-LAYER OF THAT LOAD UNIT. SEE THE "FILLER ASSEMBLY" DETAIL ON PAGE 11 AND THE TYPICAL APPLICATION AS DEPICTED IN THE LOAD VIEW ON PAGE 10.
5. A COMBINATION OF THE VARIOUS LOAD UNIT CONFIGURATIONS AND PROCEDURES DEPICTED THROUGHOUT THIS DRAWING MAY BE USED TO SATISFY THE QUANTITY OF CONTAINERS TO BE SHIPPED OR THE SIZE OF THE TRAILER BEING LOADED. SEE GENERAL NOTES "F" AND "G" ON PAGE 2.
6. IF CHAINS AND LOAD BINDERS ARE TO BE USED FOR LOAD SECUREMENT, REFER TO THE PROCEDURES ON PAGES 6 AND 7. IF WEB STRAP TIEDOWNS ARE TO BE USED FOR LOAD SECUREMENT, REFER TO PAGES 8 AND 9 FOR GUIDANCE.

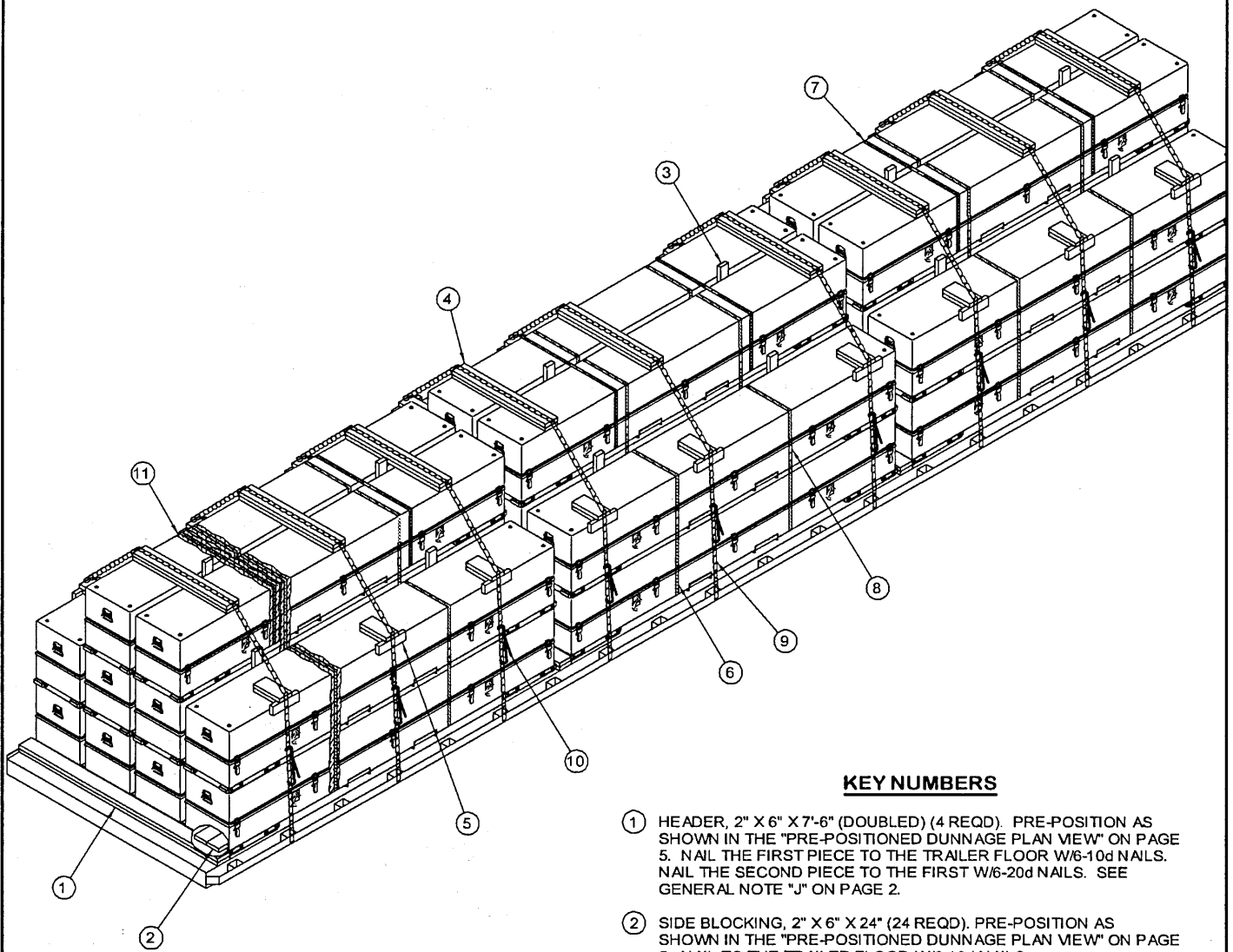
BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	177	59
2" X 4"	93	62
2" X 6"	173	173
NAILS	NO. REQD	POUNDS
6d (2")	174	1-1/4
10d (3")	168	2-3/4
20d (4")	24	1
STEEL STRAPPING, 1-1/4" -----	546' REQD -----	78 LBS
STEEL STRAPPING, 2" -----	336' REQD -----	112 LBS
SEAL FOR 1-1/4" STRAPPING -----	84 REQD -----	4 LBS
SEAL FOR 2" STRAPPING -----	60 REQD -----	12 LBS
STAPLE FOR 2" STRAPPING -----	48 REQD -----	2 LBS
ANTI-CHAFING MATERIAL -----	AS REQD -----	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER -----	30 -----	40,080 LBS
DUNNAGE -----	-----	801 LBS

TOTAL WEIGHT ----- 40,881 LBS (APPROX)



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

- ⑩ LOAD BINDER, 5/16", OVER-CENTER TYPE (9 REQD, 1 PER CHAIN). WIRE TIE HANDLE TO PREVENT OPENING DURING TRANSPORT. FASTEN THE TENSIONED CHAIN, PIECE MARKED ⑨, TO THE CHAIN BOARD, PIECE MARKED ④, W/1-20d NAIL AT EACH END BY DRIVING EACH NAIL INTO THE CHAIN BOARD THRU AN OPENING IN A CHAIN LINK AND BENDING IT OVER THE LINK. ALSO FASTEN W/1-20d NAIL TO EACH PIECE MARKED ⑤.
- ⑪ ANTI-CHAFING NEUTRAL BARRIER MATERIAL (AS REQD). PLACE UNDER ALL STRAPPING AT ALL POINTS OF CONTACT WITH THE CONTAINERS.

KEY NUMBERS

- ① HEADER, 2" X 6" X 7'-6" (DOUBLED) (4 REQD). PRE-POSITION AS SHOWN IN THE "PRE-POSITIONED DUNNAGE PLAN VIEW" ON PAGE 5. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/6-20d NAILS. SEE GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING, 2" X 6" X 24" (24 REQD). PRE-POSITION AS SHOWN IN THE "PRE-POSITIONED DUNNAGE PLAN VIEW" ON PAGE 5. NAIL TO THE TRAILER FLOOR W/6-10d NAILS.
- ③ ANTI-CHAFING ASSEMBLY A (9 REQD; 3 REQD FOR 3-HIGH LOAD, 6 REQD FOR 2-HIGH LOAD). SEE THE DETAIL ON PAGE 13. LOCATE BETWEEN THE LATCH AND THE TIEDOWN RING FOR PROPER SECUREMENT.
- ④ CHAIN BOARD, 2" X 6" BY LOAD WIDTH (DOUBLED) (9 REQD). LAMINATE W/6-10d NAILS.
- ⑤ ANTI-CHAFING ASSEMBLY B (18 REQD). SEE THE DETAIL ON PAGE 7.
- ⑥ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (36 REQD; 2 REQD FOR EACH 2-HIGH STACK, 4 REQD FOR EACH 3-HIGH STACK). ENCIRCLE THE TWO CONTAINERS IN EACH 2-HIGH STACK. ENCIRCLE THE FIRST AND SECOND, AND SECOND AND THIRD CONTAINERS IN EACH 3-HIGH STACK. SEE GENERAL NOTE "K" ON PAGE 2 AND SPECIAL NOTE 2 ON PAGE 7.
- ⑦ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (6 REQD, 2 PER LOAD UNIT). ENCIRCLE THE TOP TWO CONTAINERS IN THE 3-HIGH STACKS OF EACH LOAD UNIT.
- ⑧ SEAL FOR 1-1/4" STEEL STRAPPING (84 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑨ CHAIN, BINDING, 5/16" GRADE 70 BY A LENGTH TO SUIT (9 REQD). POSITION AS SHOWN. ATTACH TO A TRAILER STAKE POCKET. DO NOT ATTACH TO A RUB RAIL. SEE THE "SPECIAL PROVISIONS FOR CHAIN TIEDOWN" ON PAGE 7.

(KEY NUMBERS CONTINUED AT LEFT)

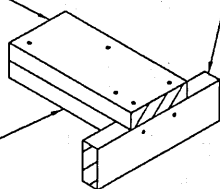
SPECIAL NOTES:

1. A 30-UNIT LOAD IS SHOWN ON A 40'-0" LONG BY 8'-0" WIDE FLATBED TRAILER. THE AVAILABLE LOADING SURFACE OF THE TRAILER MUST MEASURE AT LEAST 39'-3" LONG FOR THE DEPICTED LOADING PROCEDURES TO BE APPLICABLE. A SHORTER OR NARROWER TRAILER CANNOT BE USED FOR THE SHIPMENT OF THREE LOAD UNITS WHICH ARE FOUR CONTAINERS WIDE.
2. IF THE CAPACITY OF THE MATERIALS HANDLING EQUIPMENT PERMITS, IT IS RECOMMENDED THAT THE UNITIZING STRAPS BE APPLIED PRIOR TO FINAL PLACEMENT OF THE CONTAINERS ON THE TRAILER.
3. TO SATISFY A LESS-THAN-FULL-LOAD QUANTITY, OMIT THE THIRD-LAYER CONTAINERS FROM ONE OR MORE UNITS AS REQUIRED. FOR EACH LOAD UNIT WITH AN OMITTED THIRD-LAYER, REDUCE THE HEIGHT OF THE TOP LONGITUDINAL PIECE OF THE ANTI-CHAFING ANTI-CHAFING ASSEMBLY A TO 54", AND OMIT THREE CHAIN BOARDS MARKED (4) TWO UNITIZING STRAPS MARKED (6) TWO BUNDLING STRAPS MARKED (7), AND THREE ANTI-CHAFING ASSEMBLIES B MARKED (8). TWO BUNDLING STRAPS OF 1-1/4" X .035" OR .031" X 21'-0" LONG STEEL STRAPPING MUST BE INSTALLED TO ENCIRCLE THE FOUR SECOND-LAYER CONTAINERS IN THAT LOAD UNIT. ADJUST THE CHAIN LENGTH AS NECESSARY.
4. THREE CONTAINERS MAY BE OMITTED FROM A LOAD UNIT BY APPLYING THE PROCEDURES SPECIFIED IN SPECIAL NOTE 3 ABOVE AND SUBSTITUTING A "FILLER ASSEMBLY" IN THE PLACE OF ONE OF THE CENTER CONTAINERS IN THE SECOND-LAYER OF THAT LOAD UNIT. SEE THE "FILLER ASSEMBLY" DETAIL ON PAGE 11 AND THE TYPICAL APPLICATION AS DEPICTED IN THE LOAD VIEW ON PAGE 12.
5. A COMBINATION OF THE VARIOUS LOAD UNIT CONFIGURATIONS AND PROCEDURES DEPICTED THROUGHOUT THIS DRAWING MAY BE USED TO SATISFY THE QUANTITY OF CONTAINERS TO BE SHIPPED OR THE SIZE OF THE TRAILER BEING LOADED. SEE GENERAL NOTES "F" AND "G" ON PAGE 2.
6. IF STEEL STRAPPING IS TO BE USED FOR LOAD SECUREMENT, REFER TO THE PROCEDURES ON PAGES 4 AND 5. IF WEB STRAP TIEDOWNS ARE TO BE USED FOR LOAD SECUREMENT, REFER TO PAGES 8 AND 9 FOR GUIDANCE.

BEARING PIECE, 2" X 6" X 12" (1 REQD). NAIL TO THE STOP PIECE W/2-10d NAILS AND TO THE FILL PIECE W/3-10d NAILS.

STOP PIECE, 2" X 4" X 12" (1 REQD). NAIL TO THE FILL PIECE W/2-10d NAILS.

FILL PIECE, 2" X 6" X 10-1/2" (1 REQD).



ANTI-CHAFING ASSEMBLY B

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	177	59
2" X 4"	111	74
2" X 6"	205	205
NAILS	NO. REQD	POUNDS
6d (2")	174	1-1/4
10d (3")	312	5
20d (4")	60	2-1/4
STEEL STRAPPING, 1-1/4" -----	546' REQD -----	78 LBS
SEAL FOR 1-1/4" STRAPPING -----	84 REQD -----	4 LBS
CHAIN, BINDING, 5/16" -----	243' REQD -----	292 LBS
LOAD BINDER -----	9 REQD -----	54 LBS
ANTI-CHAFING MATERIAL -----	AS REQD -----	NIL

SPECIAL PROVISIONS FOR CHAIN TIEDOWN

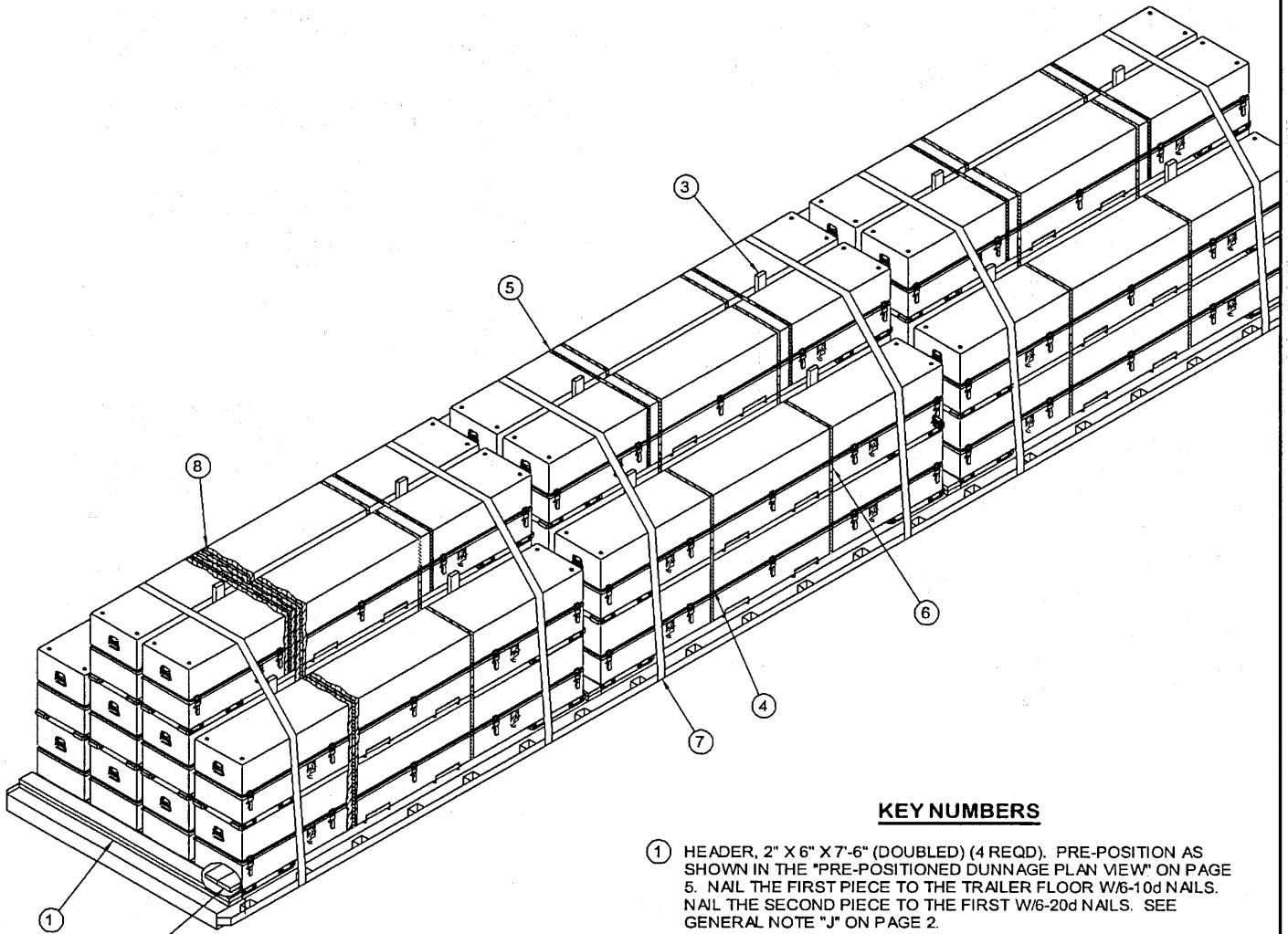
LADING MAY BE SECURED TO THE FLATBED TRAILER BY CARRIER-OWNED CHAINS AND LOAD BINDERS IN LIEU OF SPECIFIED STRAPPING, PROVIDED THE FOLLOWING CONDITIONS ARE MET AND THE PROCEDURES CONTAINED ON PAGES 6 AND 7 ARE FOLLOWED.

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.

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER -----	30 -----	40,080 LBS
DUNNAGE -----	-----	1,113 LBS

TOTAL WEIGHT ----- 41,193 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① HEADER, 2" X 6" X 7'-6" (DOUBLED) (4 REQD). PRE-POSITION AS SHOWN IN THE "PRE-POSITIONED DUNNAGE PLAN VIEW" ON PAGE 5. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/6-20d NAILS. SEE GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING, 2" X 6" X 24" (24 REQD). PRE-POSITION AS SHOWN IN THE "PRE-POSITIONED DUNNAGE PLAN VIEW" ON PAGE 5. NAIL TO THE TRAILER FLOOR W/6-10d NAILS.
- ③ ANTI-CHAFING ASSEMBLY A (9 REQD; 3 REQD FOR 3-HIGH LOAD, 6 REQD FOR 2-HIGH LOAD). SEE THE DETAIL ON PAGE 13. LOCATE BETWEEN THE LATCH AND THE TIEDOWN RING FOR PROPER SECUREMENT.
- ④ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (36 REQD; 2 REQD FOR EACH 2-HIGH STACK, 4 REQD FOR EACH 3-HIGH STACK). ENCIRCLE THE TWO CONTAINERS IN EACH 2-HIGH STACK. ENCIRCLE THE FIRST AND SECOND, AND SECOND AND THIRD CONTAINERS IN EACH 3-HIGH STACK. SEE GENERAL NOTE "K" ON PAGE 2 AND SPECIAL NOTE 2 ON PAGE 9.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (6 REQD, 2 PER LOAD UNIT). ENCIRCLE THE TOP TWO CONTAINERS IN THE 3-HIGH STACKS OF EACH LOAD UNIT.
- ⑥ SEAL FOR 1-1/4" STEEL STRAPPING (84 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑦ WEB STRAP ASSEMBLY (6 REQD, 2 PER LOAD UNIT). POSITION TO EXTEND FROM A WINCH ON ONE SIDE OF THE TRAILER, OVER THE CONTAINERS, TO AN ATTACHMENT POINT ON THE OPPOSITE SIDE. SEE THE "SPECIAL PROVISIONS FOR WEB STRAP TIEDOWN" ON PAGE 9.
- ⑧ ANTI-CHAFING NEUTRAL BARRIER MATERIAL (AS REQD). PLACE UNDER ALL STEEL STRAPPING AT ALL POINTS OF CONTACT WITH THE CONTAINERS.

SPECIAL PROVISIONS FOR WEB STRAP TIEDOWN

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.
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. MUST BE FASTENED TO THE TRAILER WITH A MINIMUM OF TWO BOLTS.

(SPECIAL PROVISIONS CONTINUED AT RIGHT)

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	177	59
2" X 4"	93	62
2" X 6"	108	108
NAILS	NO. REQD	POUNDS
6d (2")	174	1-1/4
10d (3")	168	2-3/4
20d (4")	24	1
STEEL STRAPPING, 1-1/4" ---- 546' REQD ----- 78 LBS		
SEAL FOR 1-1/4" STRAPPING -- 84 REQD ----- 4 LBS		
WEB STRAP ASSEMBLIES ----- 6 REQD ----- 6 LBS		
ANTI-CHAFING MATERIAL ---- AS REQD ----- NIL		

SPECIAL NOTES:

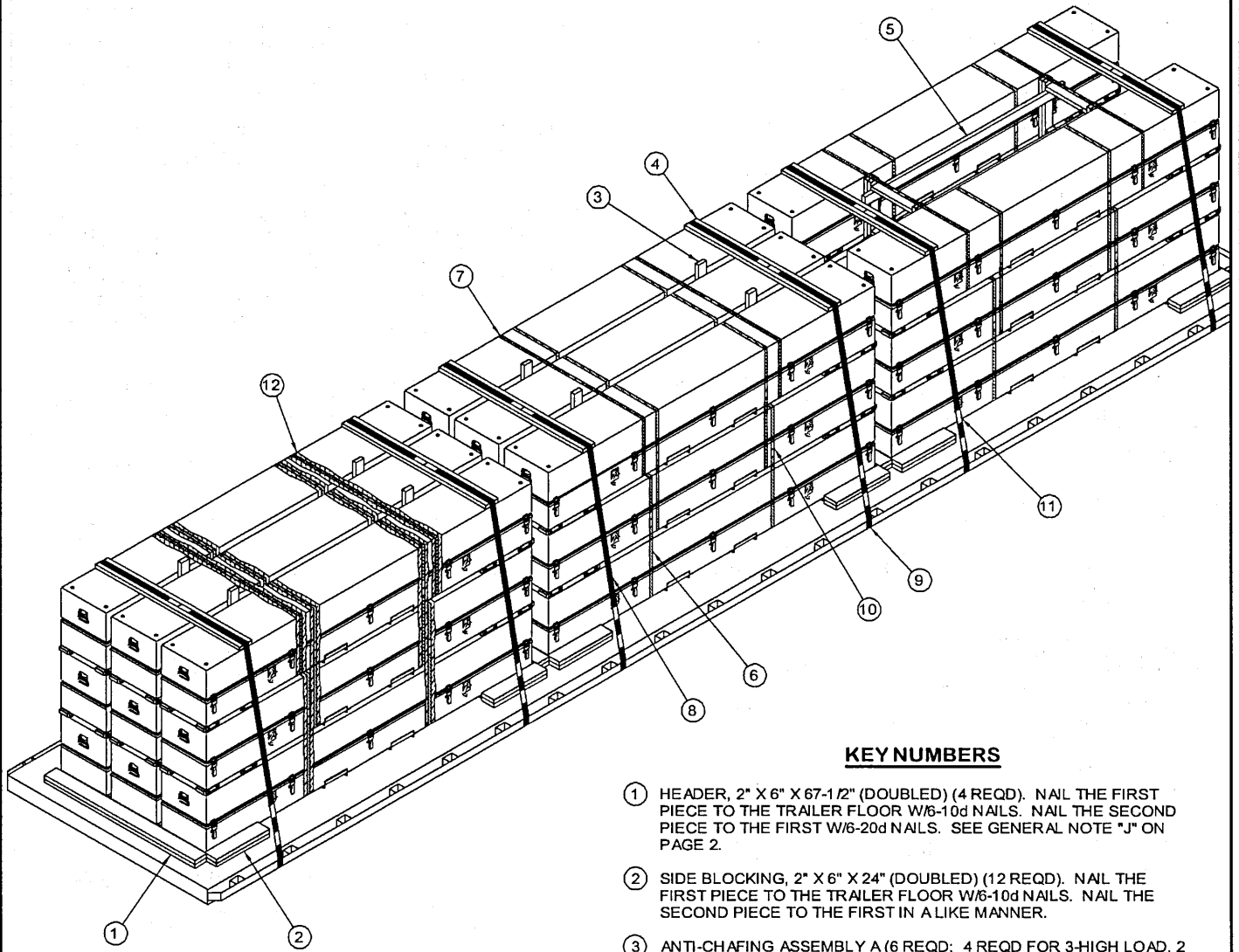
1. A 30-UNIT LOAD IS SHOWN ON A 40'-0" LONG BY 8'-0" WIDE FLATBED TRAILER. THE AVAILABLE LOADING SURFACE OF THE TRAILER MUST MEASURE AT LEAST 39'-3" LONG FOR THE DEPICTED LOADING PROCEDURES TO BE APPLICABLE. A SHORTER OR NARROWER TRAILER CANNOT BE USED FOR THE SHIPMENT OF THREE LOAD UNITS WHICH ARE FOUR CONTAINERS WIDE.
2. IF THE CAPACITY OF THE MATERIALS HANDLING EQUIPMENT PERMITS, IT IS RECOMMENDED THAT THE UNITIZING STRAPS BE APPLIED PRIOR TO FINAL PLACEMENT OF THE CONTAINERS ON THE TRAILER.
3. TO SATISFY A LESS-THAN-FULL-LOAD QUANTITY, OMIT THE THIRD-LAYER CONTAINERS FROM ONE OR MORE UNITS AS REQUIRED. FOR EACH LOAD UNIT WITH AN OMITTED THIRD-LAYER, REDUCE THE HEIGHT OF THE TOP LONGITUDINAL PIECE OF THE ANTI-CHAFING ASSEMBLY TO 54", AND OMIT TWO UNITIZING STRAPS MARKED (4) AND TWO BUNDLING STRAPS MARKED (5). TWO BUNDLING STRAPS OF 1-1/4" X .035" OR .031" X 21'-0" LONG STEEL STRAPPING MUST BE INSTALLED TO ENCIRCLE THE FOUR SECOND-LAYER CONTAINERS IN THAT LOAD UNIT.
4. THREE CONTAINERS MAY BE OMITTED FROM A LOAD UNIT BY APPLYING THE PROCEDURES SPECIFIED IN SPECIAL NOTE 3 ABOVE AND SUBSTITUTING A "FILLER ASSEMBLY" IN THE PLACE OF ONE OF THE CENTER CONTAINERS IN THE SECOND-LAYER OF THAT LOAD UNIT. SEE THE "FILLER ASSEMBLY" DETAIL ON PAGE 11 AND THE TYPICAL APPLICATION AS DEPICTED IN THE LOAD VIEW ON PAGE 14.
5. A COMBINATION OF THE VARIOUS LOAD UNIT CONFIGURATIONS AND PROCEDURES DEPICTED THROUGHOUT THIS DRAWING MAY BE USED TO SATISFY THE QUANTITY OF CONTAINERS TO BE SHIPPED OR THE SIZE OF THE TRAILER BEING LOADED. SEE GENERAL NOTES "F" AND "G" ON PAGE 2.
6. IF CHAINS AND LOAD BINDERS ARE TO BE USED FOR LOAD SECUREMENT, REFER TO THE PROCEDURES ON PAGES 6 AND 7. IF STEEL STRAPPING IS TO BE USED FOR LOAD SECUREMENT, REFER TO THE PROCEDURES ON PAGES 4 AND 5 FOR GUIDANCE.

(SPECIAL PROVISIONS FOR WEB STRAP TIEDOWN CONTINUED)

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)
CONTAINER -----	30 -----	40,080 LBS
DUNNAGE -----		545 LBS
TOTAL WEIGHT -----		40,625 LBS (APPROX)



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

- ⑩ SEAL FOR 1-1/4" STEEL STRAPPING (80 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑪ SEAL FOR 2" STEEL STRAPPING (36 REQD, 6 PER STRAP). DOUBLE CRIMP EACH SEAL EXCEPT THOSE USED TO SECURE THE PADS, PIECES MARKED ⑨.
- ⑫ ANTI-CHAFING NEUTRAL BARRIER MATERIAL (AS REQD). PLACE UNDER ALL STRAPPING AT ALL POINTS OF CONTACT WITH THE CONTAINERS.

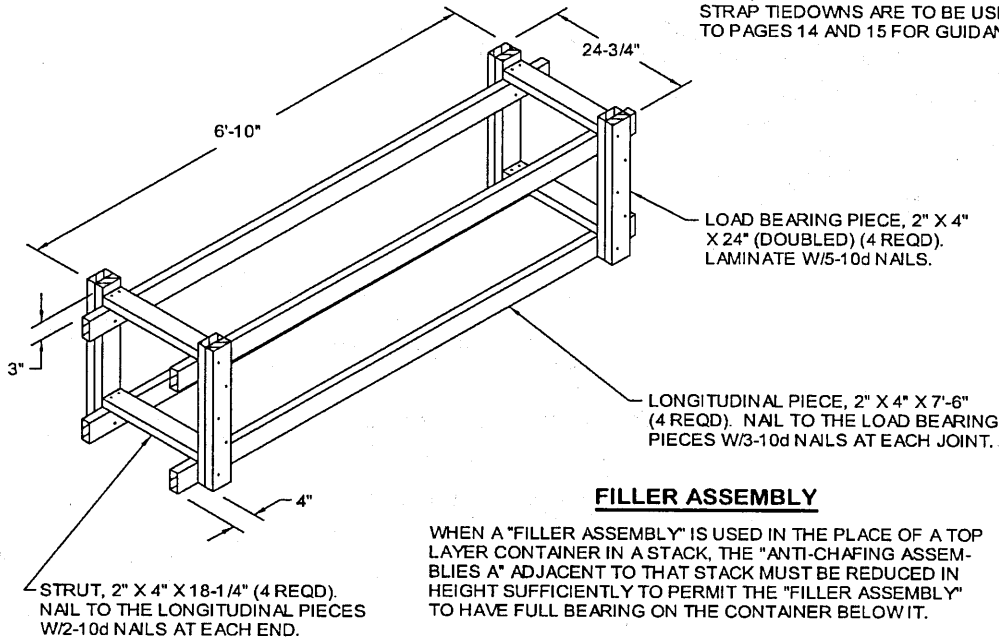
KEY NUMBERS

- ① HEADER, 2" X 6" X 67-1/2" (DOUBLED) (4 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/6-20d NAILS. SEE GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING, 2" X 6" X 24" (DOUBLED) (12 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ③ ANTI-CHAFING ASSEMBLY A (6 REQD; 4 REQD FOR 3-HIGH LOAD, 2 REQD FOR 2-HIGH LOAD). SEE THE DETAIL ON PAGE 13. LOCATE BETWEEN THE LATCH AND THE TIEDOWN RING FOR PROPER SECUREMENT. NOTE: THE ASSEMBLIES FOR THE 2-HIGH PORTION OF THE LOAD MUST BE REDUCED TO 50" HIGH TO PERMIT PROPER PLACEMENT OF THE "FILLER ASSEMBLY", PIECE MARKED ⑤.
- ④ STRAPPING BOARD, 2" X 6" BY LOAD WIDTH (6 REQD). POSITION UNDER THE HOLD-DOWN STRAP, PIECE MARKED ⑧.
- ⑤ FILLER ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 11 AND SPECIAL NOTE 3 ON PAGE 11.
- ⑥ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (34 REQD; 2 REQD FOR THE 2-HIGH STACK, 4 REQD FOR EACH 3-HIGH STACK). ENCIRCLE THE TWO CONTAINERS IN THE 2-HIGH STACK. ENCIRCLE THE FIRST AND SECOND, AND SECOND AND THIRD CONTAINERS IN EACH 3-HIGH STACK. SEE GENERAL NOTE "K" AND SPECIAL NOTE 2 ON PAGE 11.
- ⑦ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 17'-0" LONG STEEL STRAPPING (6 REQD, 2 PER LOAD UNIT). ENCIRCLE THE TOP LAYER OF CONTAINERS IN EACH LOAD UNIT.
- ⑧ HOLD-DOWN STRAP, 2" X .050" OR .044" X 27'-0" LONG STEEL STRAPPING (6 REQD, 2 PER LOAD UNIT). INSTALL EACH STRAP FROM TWO 13'-6" LONG PIECES. STAPLE TO THE STRAPPING BOARD, PIECE MARKED ④, W/4 STAPLES.
- ⑨ PAD, 2" X .050" OR .044" X 18" LONG STEEL STRAPPING (12 REQD). POSITION UNDER STAKE POCKET OF RUB RAIL AND SEAL TO THE HOLD-DOWN STRAPS, PIECES MARKED ⑧. SEE "DETAIL A" ON PAGE 17. ALT: STAKE POCKET PROTECTOR (48 REQD). USE TWO UNDER EACH STAKE POCKET OR RUB RAIL WITH A HOLD-DOWN STRAP. SEE "HOLD-DOWN STRAP ANCHORING DETAILS" ON PAGE 17.

(KEY NUMBERS CONTINUED AT LEFT)

SPECIAL NOTES:

1. A 26-UNIT LOAD IS SHOWN ON A 40'-0" LONG BY 8'-0" WIDE FLATBED TRAILER. NARROWER TRAILERS MAY BE USED. THE AVAILABLE LOADING SURFACE OF THE TRAILER MUST MEASURE AT LEAST 39'-3" FOR THE DEPICTED LOADING TO BE APPLICABLE. A SHORTER TRAILER CANNOT BE USED FOR THE SHIPMENT OF A THREE LOAD UNIT LONG LOAD.
2. IF THE CAPACITY OF THE MATERIALS HANDLING EQUIPMENT PERMITS, IT IS RECOMMENDED THAT VERTICAL UNITIZING STRAPS BE APPLIED PRIOR TO FINAL PLACEMENT OF THE CONTAINERS ON THE TRAILER.
3. THE USE OF THE "FILLER ASSEMBLY" IS SPECIFIED FOR THE DEPICTED LOAD ONLY TO SHOW A TYPICAL APPLICATION. TO SATISFY A LESS-THAN-FULL-LOAD QUANTITY, A FILLER ASSEMBLY MAY BE USED IN PLACE OF A TOP-LAYER CONTAINER OF A CENTER STACK IN ONE OR MORE LOAD UNITS.
4. FOR THE SHIPMENT OF A 24-UNIT LOAD, OMIT THE TOP-LAYER CONTAINERS OF THE FORWARD LOAD UNIT, AND INSTALL THE BUNDLING STRAPS MARKED ⑦ TO ENCIRCLE THE SECOND-LAYER CONTAINERS OF THAT LOAD UNIT.
5. A COMBINATION OF THE VARIOUS LOAD UNIT CONFIGURATIONS AND PROCEDURES DEPICTED THROUGHOUT THIS DRAWING MAY BE USED TO SATISFY THE QUANTITY OF CONTAINERS TO BE SHIPPED OR THE SIZE OF THE TRAILER BEING LOADED. SEE GENERAL NOTES "F" AND "G" ON PAGE 2.
6. IF CHAINS AND LOAD BINDERS ARE TO BE USED FOR LOAD SECUREMENT, REFER TO THE PROCEDURES ON PAGES 12 AND 13. IF WEB STRAP TIEDOWNS ARE TO BE USED FOR LOAD SECUREMENT, REFER TO PAGES 14 AND 15 FOR GUIDANCE.



FILLER ASSEMBLY

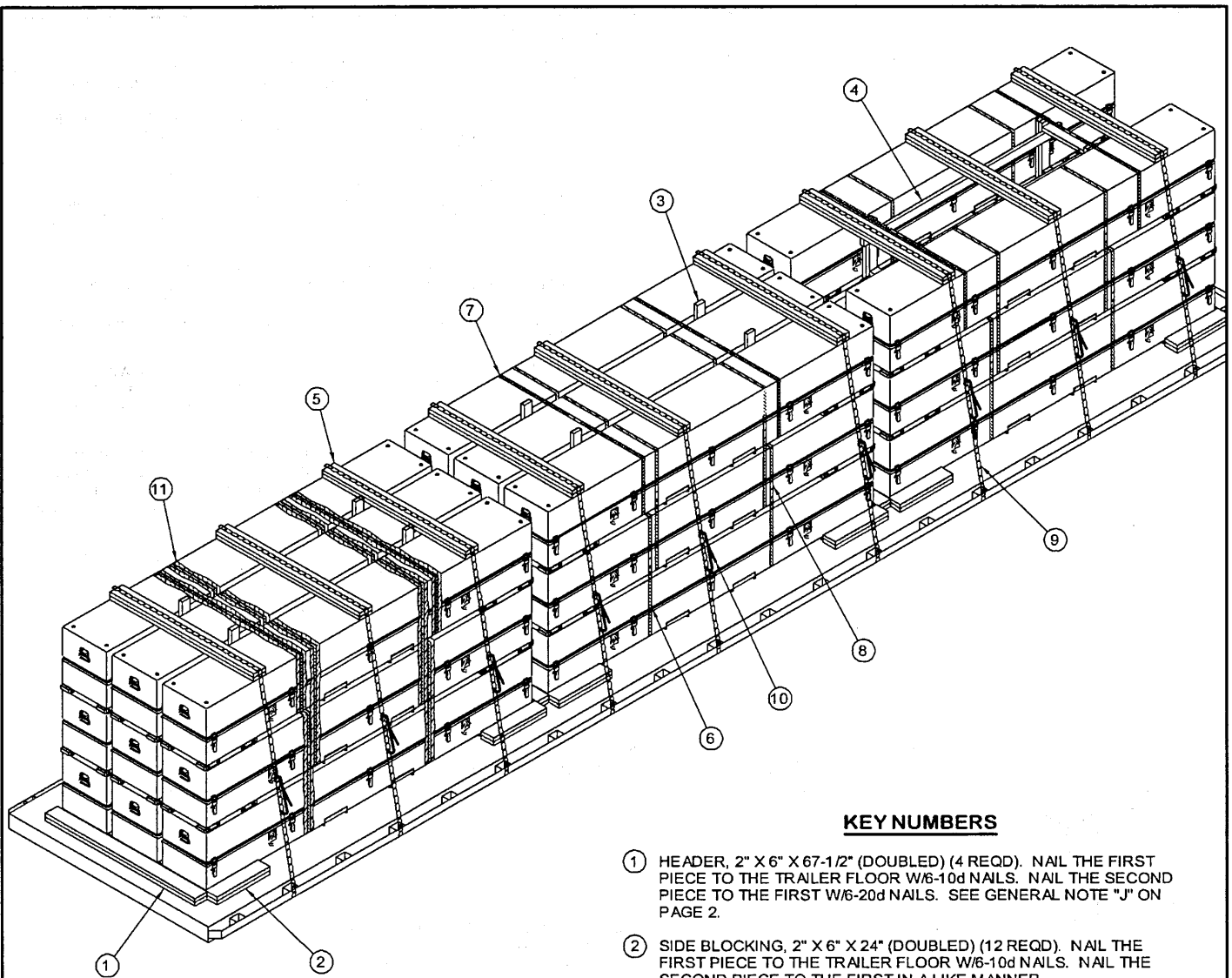
WHEN A "FILLER ASSEMBLY" IS USED IN THE PLACE OF A TOP LAYER CONTAINER IN A STACK, THE "ANTI-CHAFING ASSEMBLIES A" ADJACENT TO THAT STACK MUST BE REDUCED IN HEIGHT SUFFICIENTLY TO PERMIT THE "FILLER ASSEMBLY" TO HAVE FULL BEARING ON THE CONTAINER BELOW IT.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	126	42
2" X 4"	123	82
2" X 6"	125	125
NAILS	NO. REQD	POUNDS
6d (2")	124	3/4
10d (3")	228	3-1/2
20d (4")	24	1
STEEL STRAPPING, 1-1/4" -----	544' REQD -----	78 LBS
STEEL STRAPPING, 2" -----	180' REQD -----	60 LBS
SEAL FOR 1-1/4" STRAPPING -----	80 REQD -----	4 LBS
SEAL FOR 2" STRAPPING -----	30 REQD -----	7-1/4 LBS
STAPLE FOR 2" STRAPPING -----	24 REQD -----	NIL
ANTI-CHAFING MATERIAL -----	AS REQD -----	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER -----	26 -----	34,736 LBS
DUNNAGE -----	-----	653 LBS
TOTAL WEIGHT -----		35,389 LBS (APPROX)



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

KEY NUMBERS

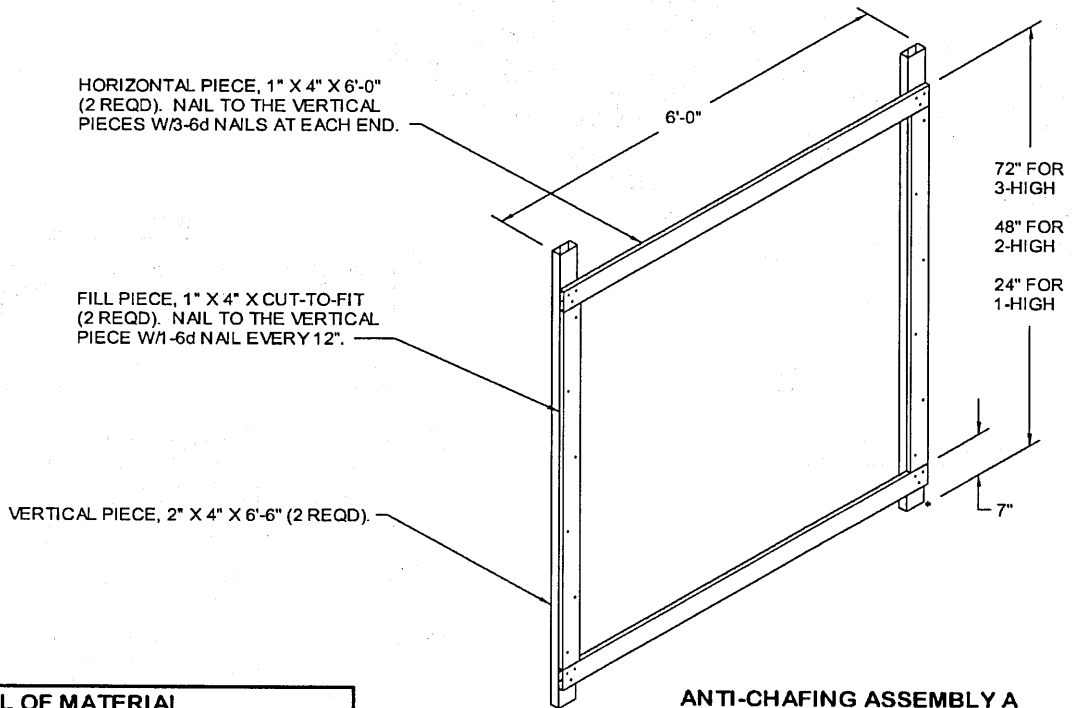
- ① HEADER, 2" X 6" X 67-1/2" (DOUBLED) (4 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/6-20d NAILS. SEE GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING, 2" X 6" X 24" (DOUBLED) (12 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ③ ANTI-CHAFING ASSEMBLY A (6 REQD; 4 REQD FOR 3-HIGH LOAD, 2 REQD FOR 2-HIGH LOAD). SEE THE DETAIL ON PAGE 13. LOCATE BETWEEN THE LATCH AND THE TIEDOWN RING FOR PROPER SECUREMENT. NOTE: THE ASSEMBLIES FOR THE 2-HIGH PORTION OF THE LOAD MUST BE REDUCED TO 50" HIGH TO PERMIT PROPER PLACEMENT OF THE "FILLER ASSEMBLY", PIECE MARKED ④
- ④ FILLER ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 11 AND SPECIAL NOTE 3 ON PAGE 13.
- ⑤ CHAIN BOARD, 2" X 6" X 64" (DOUBLED) (9 REQD). LAMINATE W/8-10d NAILS.
- ⑥ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (34 REQD; 2 REQD FOR THE 2-HIGH STACK, 4 REQD FOR EACH 3-HIGH STACK). ENCIRCLE THE TWO CONTAINERS IN THE 2-HIGH STACK. ENCIRCLE THE FIRST AND SECOND, AND SECOND AND THIRD CONTAINERS IN EACH 3-HIGH STACK. SEE GENERAL NOTE "K" AND SPECIAL NOTE 2 ON PAGE 13.
- ⑦ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 17'-0" LONG STEEL STRAPPING (6 REQD, 2 PER LOAD UNIT). ENCIRCLE THE TOP LAYER OF CONTAINERS IN EACH LOAD UNIT.
- ⑧ SEAL FOR 1-1/4" STEEL STRAPPING (80 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑨ CHAIN, BINDING, 5/16" GRADE 70 BY A LENGTH TO SUIT (9 REQD). POSITION AS SHOWN. ATTACH TO A TRAILER STAKE POCKET. DO NOT ATTACH TO A RUB RAIL. SEE THE "SPECIAL PROVISIONS FOR CHAIN TIEDOWN" ON PAGE 7.

(KEY NUMBERS CONTINUED AT LEFT)

- ⑩ LOAD BINDER, 5/16", OVER-CENTER TYPE (9 REQD, 1 PER CHAIN). WIRE TIE HANDLE TO PREVENT OPENING DURING TRANSPORT. FASTEN THE TENSIONED CHAIN, PIECE MARKED ⑨, TO THE CHAIN BOARD, PIECE MARKED ⑤, W/1-20d NAIL AT EACH END BY DRIVING EACH NAIL INTO THE CHAIN BOARD THRU AN OPENING IN A CHAIN LINK AND BENDING IT OVER THE LINK.
- ⑪ ANTI-CHAFING NEUTRAL BARRIER MATERIAL (AS REQD). PLACE UNDER ALL STRAPPING AT ALL POINTS OF CONTACT WITH THE CONTAINERS.

SPECIAL NOTES:

1. A 26-UNIT LOAD IS SHOWN ON A 40'-0" LONG BY 8'-0" WIDE FLATBED TRAILER. TRAILERS OF OTHER WIDTHS MAY BE USED, HOWEVER, THE AVAILABLE LOADING SURFACE MUST MEASURE AT LEAST 39'-3" LONG FOR THE DEPICTED LOADING PROCEDURES TO BE APPLICABLE. A SHORTER TRAILER CANNOT BE USED FOR SHIPMENT OF A THREE LOAD UNIT LONG LOAD.
2. IF THE CAPACITY OF THE MATERIALS HANDLING EQUIPMENT PERMITS, IT IS RECOMMENDED THAT THE UNITIZING STRAPS BE APPLIED PRIOR TO FINAL PLACEMENT OF THE CONTAINERS ON THE TRAILER.
3. THE USE OF THE "FILLER ASSEMBLY" IS SPECIFIED FOR THE DEPICTED LOAD ONLY TO SHOW A TYPICAL APPLICATION. TO SATISFY A LESS-THAN-FULL-LOAD QUANTITY, A "FILLER ASSEMBLY" MAY BE USED IN THE PLACE OF A TOP LAYER CONTAINER OF A CENTER STACK IN ONE OR MORE LOAD UNITS.
4. FOR THE SHIPMENT OF A 24-UNIT LOAD, OMIT THE TOP LAYER CONTAINERS OF THE FORWARD LOAD UNIT, AND INSTALL THE BUNDLING STRAPS, PIECES MARKED (7), TO ENCIRCLE THE SECOND-LAYER CONTAINERS OF THAT LOAD UNIT.
5. A COMBINATION OF THE VARIOUS LOAD UNIT CONFIGURATIONS AND PROCEDURES DEPICTED THROUGHOUT THIS DRAWING MAY BE USED TO SATISFY THE QUANTITY OF CONTAINERS TO BE SHIPPED OR THE SIZE OF THE TRAILER BEING LOADED. SEE GENERAL NOTES "F" AND "G" ON PAGE 2.
6. IF STEEL STRAPPING IS TO BE USED FOR LOAD SECUREMENT, REFER TO THE PROCEDURES ON PAGES 10 AND 11. IF WEB STRAP TIEDOWNS ARE TO BE USED FOR LOAD SECUREMENT, REFER TO PAGES 14 AND 15 FOR GUIDANCE.

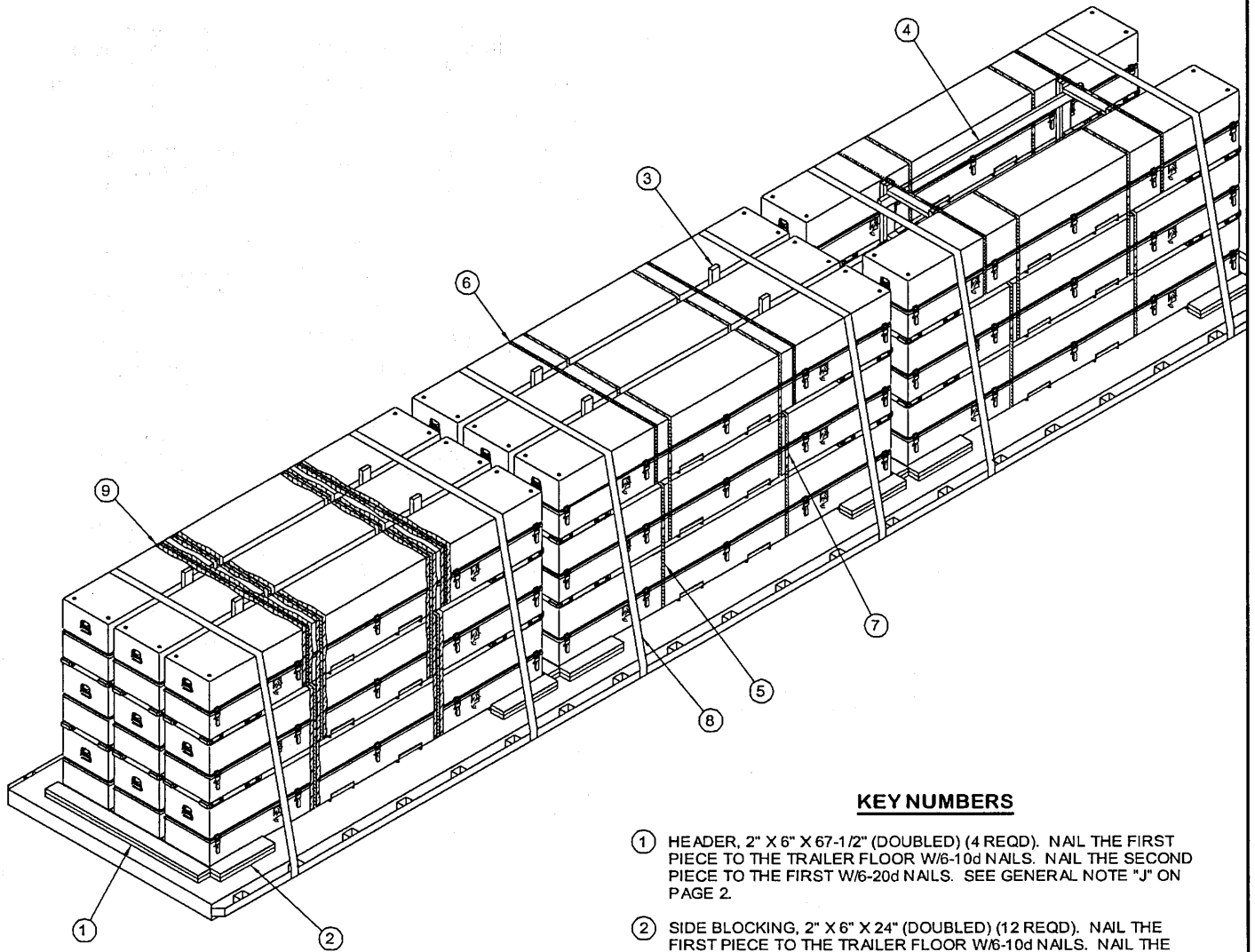


ANTI-CHAFING ASSEMBLY A
 FOR A 2-HIGH LOAD, REDUCE THE VERTICAL PIECES TO 54".
 FOR A 1-HIGH LOAD, REDUCE THE VERTICAL PIECES TO 30".

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	126	42
2" X 4"	123	82
2" X 6"	189	189
NAILS	NO. REQD	POUNDS
6d (2")	124	3/4
10d (3")	300	4-3/4
20d (4")	42	1-1/2
STEEL STRAPPING, 1-1/4"	544' REQD	78 LBS
SEAL FOR 1-1/4" STRAPPING	80 REQD	4 LBS
CHAIN, BINDING, 5/16"	243' REQD	292 LBS
LOAD BINDER	9 REQD	54 LBS
ANTI-CHAFING MATERIAL	AS REQD	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER	26	34,736 LBS
DUNNAGE		1,054 LBS
TOTAL WEIGHT		35,790 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① HEADER, 2" X 6" X 67-1/2" (DOUBLED) (4 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/6-20d NAILS. SEE GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING, 2" X 6" X 24" (DOUBLED) (12 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ③ ANTI-CHAFING ASSEMBLY A (6 REQD; 4 REQD FOR 3-HIGH LOAD, 2 REQD FOR 2-HIGH LOAD). SEE THE DETAIL ON PAGE 13. LOCATE BETWEEN THE LATCH AND THE TIEDOWN RING FOR PROPER SECUREMENT. NOTE: THE ASSEMBLIES FOR THE 2-HIGH PORTION OF THE LOAD MUST BE REDUCED TO 50" HIGH TO PERMIT PROPER PLACEMENT OF THE "FILLER ASSEMBLY", PIECE MARKED ④.
- ④ FILLER ASSEMBLY, (1 REQD). SEE THE DETAIL ON PAGE 11 AND SPECIAL NOTE 3 ON PAGE 15.
- ⑤ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (34 REQD; 2 REQD FOR THE 2-HIGH STACK, 4 REQD FOR EACH 3-HIGH STACK). ENCIRCLE THE TWO CONTAINERS IN THE 2-HIGH STACK. ENCIRCLE THE FIRST AND SECOND, AND SECOND AND THIRD CONTAINERS IN EACH 3-HIGH STACK. SEE GENERAL NOTE "K" AND SPECIAL NOTE 2 ON PAGE 15.
- ⑥ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 17'-0" LONG STEEL STRAPPING (6 REQD, 2 PER LOAD UNIT). ENCIRCLE THE TOP LAYER OF CONTAINERS IN EACH LOAD UNIT.
- ⑦ SEAL FOR 1-1/4" STEEL STRAPPING (80 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑧ WEB STRAP ASSEMBLY (6 REQD, 2 PER LOAD UNIT). POSITION TO EXTEND FROM A WINCH ON ONE SIDE OF THE TRAILER, OVER THE CONTAINERS, TO AN ATTACHMENT POINT ON THE OPPOSITE SIDE. SEE THE "SPECIAL PROVISIONS FOR WEB STRAP TIEDOWN" ON PAGE 9.
- ⑨ ANTI-CHAFING NEUTRAL BARRIER MATERIAL (AS REQD). PLACE UNDER ALL STEEL STRAPPING AT ALL POINTS OF CONTACT WITH THE CONTAINERS.

SPECIAL NOTES:

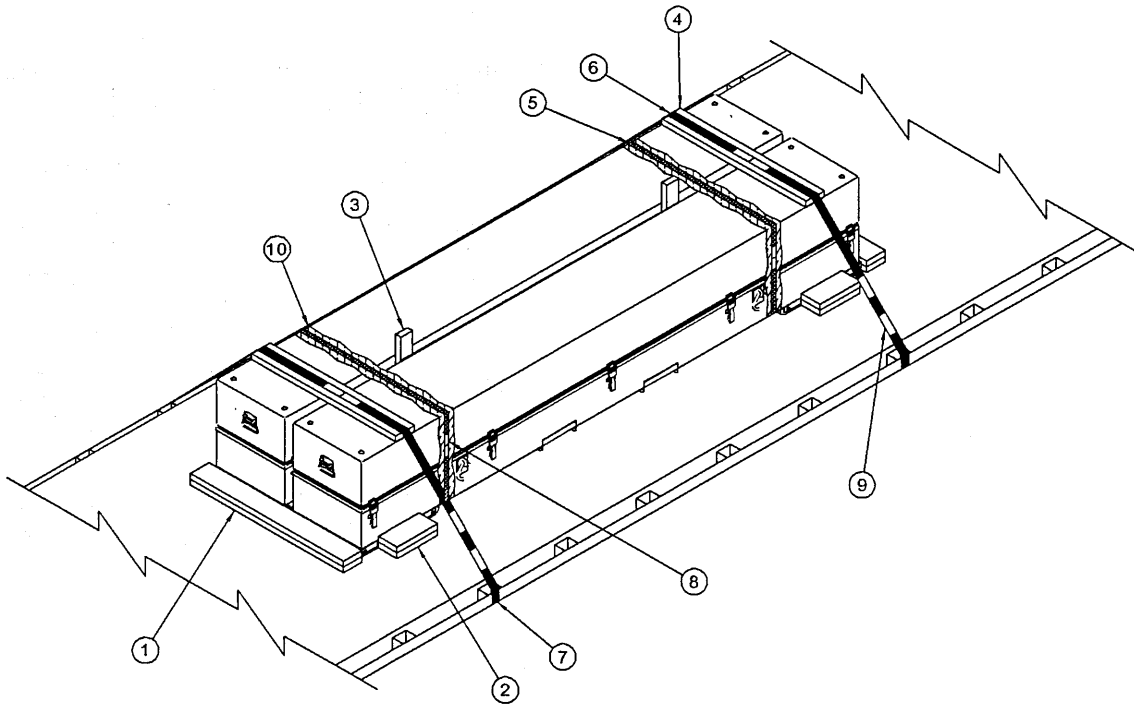
1. A 26-UNIT LOAD IS SHOWN ON A 40'-0" LONG BY 8'-0" WIDE FLATBED TRAILER. TRAILERS OF OTHER WIDTHS MAY BE USED, HOWEVER, THE AVAILABLE LOADING SURFACE MUST MEASURE AT LEAST 39'-3" LONG FOR THE DEPICTED LOADING PROCEDURES TO BE APPLICABLE. A SHORTER TRAILER CANNOT BE USED FOR SHIPMENT OF A THREE LOAD UNIT LONG LOAD.
2. IF THE CAPACITY OF THE MATERIALS HANDLING EQUIPMENT PERMITS, IT IS RECOMMENDED THAT THE UNITIZING STRAPS BE APPLIED PRIOR TO FINAL PLACEMENT OF THE CONTAINERS ON THE TRAILER.
3. THE USE OF THE "FILLER ASSEMBLY" IS SPECIFIED FOR THE DEPICTED LOAD ONLY TO SHOW A TYPICAL APPLICATION. TO SATISFY A LESS-THAN-FULL-LOAD QUANTITY, A "FILLER ASSEMBLY" MAY BE USED IN THE PLACE OF A TOP LAYER CONTAINER OF A CENTER STACK IN ONE OR MORE LOAD UNITS.
4. FOR THE SHIPMENT OF A 24-UNIT LOAD, OMIT THE TOP LAYER CONTAINERS OF THE FORWARD LOAD UNIT, AND INSTALL THE BUNDLING STRAPS, PIECES MARKED (6), TO ENCIRCLE THE SECOND-LAYER CONTAINERS OF THAT LOAD UNIT.
5. A COMBINATION OF THE VARIOUS LOAD UNIT CONFIGURATIONS AND PROCEDURES DEPICTED THROUGHOUT THIS DRAWING MAY BE USED TO SATISFY THE QUANTITY OF CONTAINERS TO BE SHIPPED OR THE SIZE OF THE TRAILER BEING LOADED. SEE GENERAL NOTES "F" AND "G" ON PAGE 2.
6. IF STEEL STRAPPING IS TO BE USED FOR LOAD SECUREMENT, REFER TO THE PROCEDURES ON PAGES 10 AND 11. IF CHAINS AND LOAD BINDERS ARE TO BE USED FOR LOAD SECUREMENT, REFER TO THE PROCEDURES ON PAGES 12 AND 13.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	126	42
2" X 4"	123	82
2" X 6"	93	93
NAILS	NO. REQD	POUNDS
6d (2")	124	3/4
10d (3")	228	5-1/2
20d (4")	24	1
STEEL STRAPPING, 1-1/4" -----	544' REQD -----	78 LBS
SEAL FOR 1-1/4" STRAPPING -----	80 REQD -----	4 LBS
WEB STRAP ASSEMBLIES -----	6 REQD -----	NIL
ANTI-CHAFING MATERIAL -----	AS REQD -----	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER -----	26 -----	34,736 LBS
DUNNAGE -----	-----	524 LBS
TOTAL WEIGHT -----		35,260 LBS (APPROX)



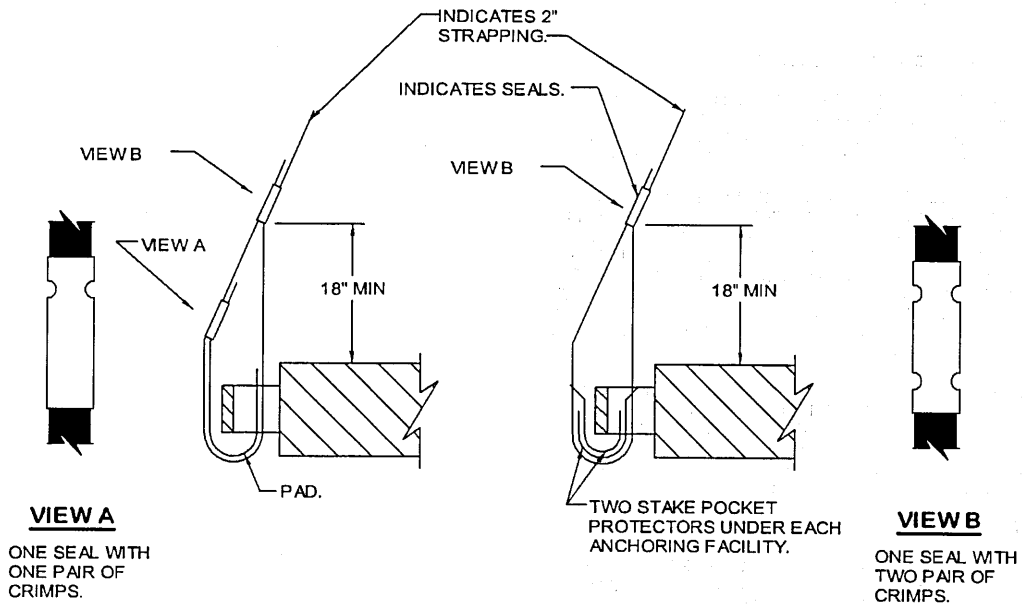
ISOMETRIC VIEW

SPECIAL NOTES:

1. A 2-CONTAINER LOAD IS SHOWN. HOWEVER, THE DEPICTED PROCEDURES CAN ALSO BE USED FOR THE SHIPMENT OF A 1-CONTAINER LOAD BY MODIFYING THE LOAD AS FOLLOWS:
 - A. OMIT PIECES MARKED ③, ⑤, ⑧, AND ⑩.
 - B. USE PIECES MARKED ②, ⑦, AND ⑨ AS SPECIFIED.
 - C. REDUCE THE LENGTH OF THE HEADERS, PIECES MARKED ①, TO 22'-1/2".
 - D. REDUCE THE LENGTH OF THE STRAPPING BOARDS ACCORDINGLY.
 - E. REDUCE THE LENGTH OF THE HOLD-DOWN STRAPS, PIECES MARKED ⑥, TO 19'-0".
2. REFER TO THE "SPECIAL PROVISIONS FOR CHAIN TIEDOWN" ON PAGE 7 FOR THE USE OF CHAINS IN LIEU OF HOLD-DOWN STRAPPING. REFER TO THE "SPECIAL PROVISIONS FOR THE USE OF WEB STRAP TIEDOWN" ON PAGE 9 FOR THE USE OF WEB STRAPS IN LIEU OF HOLD-DOWN STRAPPING.

KEY NUMBERS

- ① HEADER, 2" X 4" X 48" (DOUBLED) (2 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/4-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/4-20d NAILS. SEE GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING, 2" X 6" X 12" (4 REQD). LOCATE AS SHOWN AND NAIL THE FIRST PIECE TO TRAILER FLOOR W/4-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ③ ANTI-CHAFING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 13. LOCATE BETWEEN THE LATCH AND TIEDOWN RING FOR PROPER SECUREMENT.
- ④ STRAPPING BOARD, 2" X 6" BY A LENGTH TO SUIT (2 REQD).
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (2 REQD). SEE GENERAL NOTE "K" ON PAGE 2.
- ⑥ HOLD-DOWN STRAP, 2" X .050" OR .044" X 20'-0" LONG STEEL STRAPPING (2 REQD). INSTALL EACH STRAP FROM TWO 10'-0" LONG PIECES. STAPLE TO THE STRAPPING BOARD, PIECE MARKED ④, W/2 STAPLES.
- ⑦ PAD, 2" X .050" OR .044" X 18" LONG STEEL STRAPPING (4 REQD). POSITION UNDER STAKE POCKET OR RUB RAIL AND SEAL TO THE HOLD-DOWN STRAP, PIECE MARKED ⑥. ALT: STAKE POCKET PROTECTOR (8 REQD). USE TWO UNDER EACH STAKE POCKET OR RUB RAIL WITH A HOLD-DOWN STRAP. SEE THE "HOLD-DOWN STRAP ANCHORING DETAILS" ON PAGE 17.
- ⑧ SEAL FOR 1-1/4" STEEL STRAPPING (4 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑨ SEAL FOR 2" STEEL STRAPPING (10 REQD, 5 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF CRIMPS, EXCEPT THOSE USED TO SECURE THE PADS, PIECES MARKED ⑦. SEE THE "HOLD-DOWN STRAP ANCHORING DETAILS" AND THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 17.
- ⑩ ANTI-CHAFING NEUTRAL BARRIER MATERIAL (AS REQD). PLACE UNDER ALL STRAPPING AT ALL POINTS OF CONTACT WITH THE CONTAINERS.



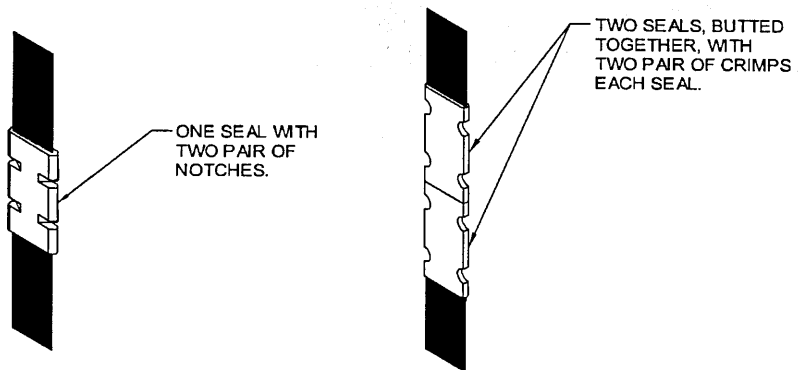
VIEW A
ONE SEAL WITH ONE PAIR OF CRIMPS.

DETAIL A
METHOD OF INSTALLING 2" STRAPPING AND PAD AT ANCHORING FACILITY.

DETAIL B
METHOD OF INSTALLING 2" STRAPPING AND STAKE POCKET PROTECTORS (ALT PAD).

VIEW B
ONE SEAL WITH TWO PAIR OF CRIMPS.

HOLD-DOWN STRAP ANCHORING DETAILS



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

**PROVISIONS FOR THE USE OF FIREHOSE IN LIEU
OF CHAIN BOARDS 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 HEREIN, 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.

3. 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.