ALL SYSTEMS

LOADING AND BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF TYPE I (HALF SIZE) AND TYPE 2 (STANDARD) CARGO TRANSPORTERS (CONEX CONTAINERS) WHEN LOADED WITH MISSILE/ROCKET ASSOCIATED COMMODITIES*

INDEX

TEM PAGE	<u>.(5)</u>
GENERAL NOTES, AND MATERIAL SPECIFICATIONS	- 2
TYPE I CARGO TRANSPORTERS:	
9-UNIT LOAD IN A 40'-0" LONG BY 7'-6" WIDE TRAILER	
TYPICAL LTL (I-UNIT LOAD)	-4
TYPICAL LTL (4-UNIT LOAD)	- 5
TYPE 2 CARGO TRANSPORTERS.	
4-UNIT LOAD IN A 36'-O" LONG BY 7'-6" WIDE TRAILER	- 6
TYPICAL LTL (I-UNIT LOAD)	7
DETAILS	- 8

WAH.

- THIS DRAWING SUPERSEDES USAMO DRAWING 19-48-5740-GM 11/16-2.
- * THE OUTLOADING PROCEDURES DELINEATED HEREIN ARE APPLICABLE TO THE MOVEMENT OF CONEX CONTAINERS WHICH ARE LOADED WITH ANY RELATIVELY SMALL COMMODITY, WHETHER AMMUNITION OR GROUND SUPPORT EQUIPMENT ORIENTED. HOWEVER, OTHER REGULATIONS / DIRECTIVES APPLY TO SUCH MATTERS AS SELECTION OF ITEM FOR CONEX MOVEMENT, ITEM PACKAGING SPECIFICATIONS AND SO FORTH.

DO NOT SCALE

	SWC AMMO	A 4 A	OUTCOTT'S		ł .			
601/	RIC	CIM	SECOND/	WEL			COMMANDER, SA	
	REVIS		NS		APPROVE		Bein	
1 28 JUN	60 X 11 May	(ì	When	I P	l		, AR	MY MISSILE COMMIND
						_	HERMANICA, ARMY	
					4		1000	
					L		T BAPPLY & MARK	TEMMEE COMMAND
					N	MATERIEL	COMMAND	U.S.A.
						ID FEB	RUARY	967
					CLASS	DIVISION	DRAWING	PILE
					19	48	5740	GM
					13	70	5/40	IIH2

PROJECT GM 5508-64

GENERAL NOTES

- THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AMCR 740-13, AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- THE OUTLOADING PROCEDURES SPECIFIED HEREIN ARE APPLICABLE TO THE TYPE I AND THE OUTLOADING PROCEDURES SPECIFIED HEREIN ARE APPLICABLE TO THE TYPE I AND TYPE 2 CARGO TRANSPORTERS. BOTH TYPE I AND 2 TRANSPORTERS MAY BE SHIPPED WITHIN THE SAME LOAD BY USING A COMBINATION OF THE PROCEDURES SHOWN HEREIN. SUBSEQUENT REFERENCE TO TYPE I OR 2 TRANSPORTER HEREIN MEANS THE CARGO TRANSPORTER WITH CONTENTS. CAUTION: THE CONTENTS OF A TYPE I OR TYPE 2 TRANSPORTER ARE LIMITED TO NOT MORE THAN 7,800 POUNDS OF LADING EVENLY DISTRIBUTED OVER THE TRANSPORTER FLOOR
- THE LOAD AS SHOWN ON PAGE 3 IS BASED ON THE TYPE I TRANSPORTER IN A CLOSED OR OPEN TOP VAN TRAILER 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) WITH A WOOD, A WOOD AND METAL, OR A METAL FLOOR. THE DELINEATED OUT-LOADING PROCEDURES ARE ALSO APPLICABLE TO TRAILERS WHICH ARE 90' THROUGH
- D. THE LOAD AS SHOWN ON PAGE 4 IS BASED ON THE TYPE 2 TRANSPORTER IN A CLOSED OR OPEN TOP VAN TRAILER 36'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) WITH A WOOD, A WOOD AND METAL, OR A METAL FLOOR. THE DELINEATED OUT-LOADING PROCEDURES ARE ALSO APPLICABLE TO TRAILERS WHICH ARE 90" THROUGH 93" WIDE.
- FOR DETAILS OF THE CARGO TRANSPORTER, TYPE I (1 ½ SIZE), SEE MILITARY SPECIFICATION MIL-8-11886. (SEE GENERAL NOTE "5").

 OUTSIDE DIMENSIONS ---- 51" LONG X 75" WIDE X 82-1/2" HIGH. TARE WEIGHT -------- 1,050 POUNDS (APPROX). MAXIMUM CONTENT WEIGHT ---- 7 800 POUNDS

FOR DETAILS OF THE CARGO TRANSPORTER, TYPE 2 (STANDARD), SEE MILITARY SPECIFICATION MIL-B-11886. OUTSIDE DIMENSIONS ---- 102" LONG X 75" WIDE X 82-1/2" HIGH.

TARE WEIGHT ----- 1,430 POUNDS (APPROX).
MAXIMUM CONTENT WEIGHT ---- 7,800 POUNDS.

- F. SELECTION OF A VEHICLE TO BE USED TO TRANSPORT GUIDED MISSILE AMMUNITION AND/OR COMPONENTS THEREOF MUST COMPLY WITH AR 55-355, CHAPTER 213, FOR EXPLOSIVES OR OTHER DANGEROUS ARTICLES. IN FULL.
- 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.
- A SHIPMENT WILL BE POSITIONED IN THE TRAILER CONSISTENT WITH STATE WEIGHT LAWS. THE NUMBER OF UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE TRAILER TO BE LOADED OR THE QUANTITY TO BE SHIPPED; HOWEVER, THE APPROVED METHODS SHOWN HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE DESIGNATED ITEM.
- THE SPECIFIED OUTLOADING PROCEDURES ARE APPLICABLE FOR THE SHIPMENT OF CARGO TRANSPORTERS LOADED WITH EXPLOSIVE OR NON-EXPLOSIVE ITEMS AND/OR EMPTY CARGO TRANSPORTERS.
- K. LOADING, BLOCKING AND BRACING METHODS SHOWN HEREIN ARE APPROVED FOR HIGH DENSITY, LOW VOLUME MATERIAL INCLUDING DOT CLASS "A" EXPLOSIVES WHICH ARE INTERNALLY BLOCKED AND BRACED INSIDE THE TRANSPORTER IN ACCORDANCE WITH U. S. ARMY MATERIEL COMMAND APPROVED "FILLING" DRAWINGS OF THE 19-48 SERIES, OR APPLICABLE PARAGRAPHS OF DOT REGULATIONS (TARIFF NO. 19 AND SUBSEQUENT ISSUES THEREOF).
- OTHER TYPES OF LADING ITEMS MAY BE LOADED IN THE TRAILERS WHICH ARE PARTIALLY LOADED WITH CARGO TRANSPORTERS, 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
- WHEN ANY STRAP IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF TWO (2) SEALS, BUTTED TOGETHER, WITH TWO (2) CRIMPS PER SEAL MUST BE USED TO SEAL THE JOINT.
- N. FOR TRAILERS NOT EQUIPPED WITH REAR CORNER POSTS, THE REAR BLOCKING MUST CONTACT THE REAR DOORS WHEN THEY ARE CLOSED.

(GENERAL NOTES CONTINUED AT RIGHT)

(GENERAL NOTES CONTINUED)

- FOR TRAILERS HAVING ROUNDED CORNERS AT THE FORWARD END, THE TRAILER WIDTH 2" X 4" AND/OR 4" X 4" PIECES AT THE FRONT OF THE LOAD SHOULD BE CUT TO A LENGTH WHICH WILL PROVIDE FOR FULL BEARING OF THE PIECES AGAINST THE "SQUARE" PORTION OF THE TRAILER FRONT WALL. FOR TRAILERS HAVING A ROUND FRONT, REFER TO THE "FORWARD BLOCKING" DETAIL ON PAGE 8 FOR THE APPLICABLE BLOCKING SPECIFICATIONS.
- PORTIONS OF THE TRAILER BODIES DEPICTED WITHIN THIS PROCEDURAL DRAWING, SUCH AS ONE OF THE SIDE WALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-5/8" THICK BY 3-5/8" WIDE AND 4" X 4" MATERIAL IS ACTUALLY 3-5/8" THICK BY 3-5/8"
- NOTICE: A STAGGERED NAILING PATTERN WILL BE USED WHEN DUNNAGE IS NAILED TO THE FLOOR OF THE TRANSPORTING VEHICLE, OR WHEN LAMINATING DUNNAGE. ALSO, 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 ONTO OR RIGHT BESIDE A NAIL IN A LOWER PIECE.
- CARGO TRANSPORTERS MANUFACTURED IN COMPLIANCE WITH MILITARY SPECIFICATION MIL-B-21560 MAY BE USED FOR THE TRANSPORTATION OF MILITARY EXPLOSIVES AND HAZARD MUNITIONS AND GROUND SUPPORT EQUIPMENT ITEMS; HOWEVER, THE LIMITATIONS SPECIFIED WITHIN GENERAL NOTE "B" WILL

REVISIONS

REVISION NO. 1, DATED 28 JUNE 1968, CONSISTS OF:

- 1 CHANGE IN DRAWING TITLE
- 2. FILE NUMBER CHANGE.
- 3. ADDITION OF WEIGHT LIMITATION FOR TRANSPORTER CONTENTS.
- 4. CHANGE IN MATERIAL SPECIFICATIONS.

MATERIAL SPECIFICATIONS

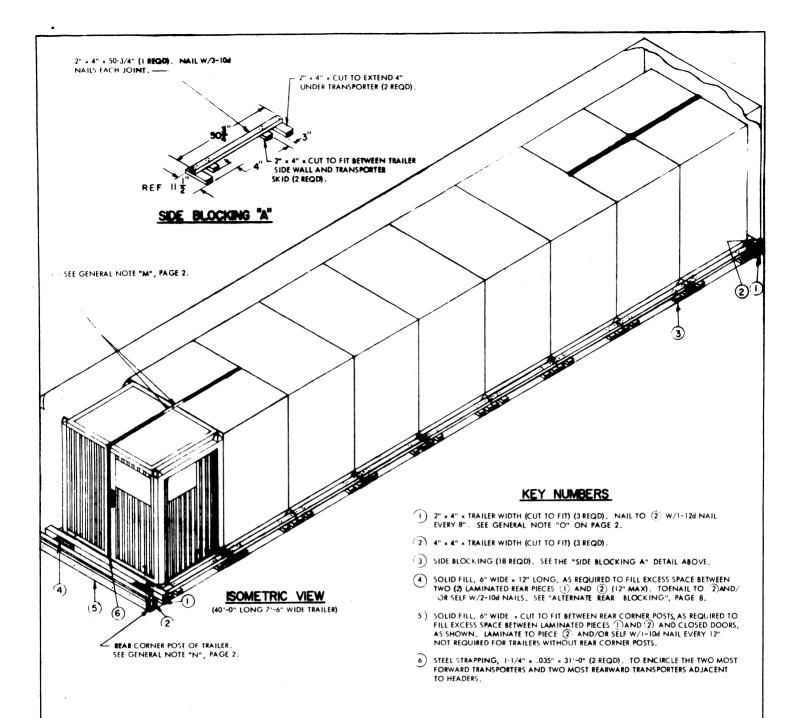
LUMBER ----: SEE TM 743-200-1, DUNNAGE LUMBER; FED SPEC MM-L-751.

NAILS ----- : COMMON, CEMENT COATED OR CHEMICALLY ETCHED,

FED SPEC FF-N-105. ALT: ANNULAR-RING TYPE NAIL OF SAME SIZE,

STEEL STRAPPING: TYPE I OR IV, CLASS A OR B OR C, FED SPEC QQ-S-781.
FOR FSN SEE SB-38-100.

STRAP SEAL --- : COMMERCIAL GRADE.



BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" × 6"	2	1
2" × 4"	156	103
2" × 6"	18	18
4" × 4"	23	31
NAILS	NO. REQD	POUNDS
10d (3")	246	4
12d (3-1/4")	24	1/2

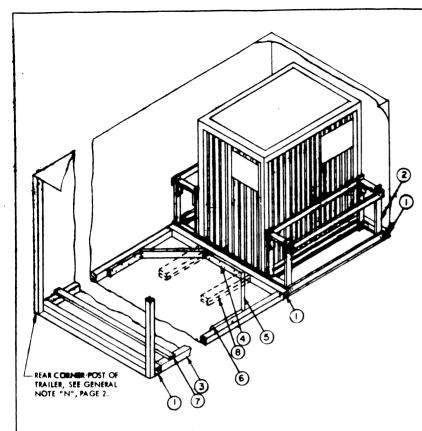
(*) WEIGHT OF TRUCKLOAD SHOWN WAS COMPUTED BY USING 4, 388 POUNDS OF GROSS WEIGHT PER TRANSPORTER. THE NUMBER OF TRANSPORTERS THAT MAY BE SHIPPED PER VEHICLE AND THE GROSS WEIGHT OF THE LOAD WILL DEPEND UPON THE WEIGHT OF THE COMMODITIES BEING SHIPPED. SEE GENERAL NOTE "G", PAGE 2.

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT	(APF	ROX)
TYPE I CARGO TRA	NSPORTER 9	- 39,492	LBS	SEE NOTE
DUNNAGE		- 397	LBS	
	TOTAL WEIGHT	- 39, 889	LBS	(APPROX)

9-UNIT LOAD IN A 40'-0" LONG BY 7'-6" WIDE TRAILER (TYPE I CARGO TRANSPORTER)

PAGE 3



ISOMETRIC VIEW

KEY NUMBERS

- 1 4" x 4" x TRAILER WIDTH (CUT TO FIT) (3 REQD). SEE GENERAL NOTE "O"
- ON PAGE 2.

 3 SIDE BLOCKING (2 REQD). SEE "SIDE BLOCKING C"-AND NOTE " ...
- BELOW.

 3 4" x 4" x CUT TO FIT (2 REQD).
- 4) 2" x 4" x 30" (1 REQD). NAIL TO 1) W/6-12d NAILS.
- (4) 2" x 4" x 24" (2 REQD). NAIL TO (3) W/6-12d NAILS.
- (8) 2" × 4" AS REQD (DOUBLED) FOR WOOD OR WOOD AND METAL FLOOR TRAILERS. DELETE REAR PIECE (1) AND PIECES (3) THRU (7) . NAIL FIRST PIECE TO FLOOR WITH 12d NAILS AND SECOND PIECE TO FIRST IN LIKE MANNER. SEE CHART "A" BELOW. SEE GENERAL NOTE "R" ON PAGE 2.

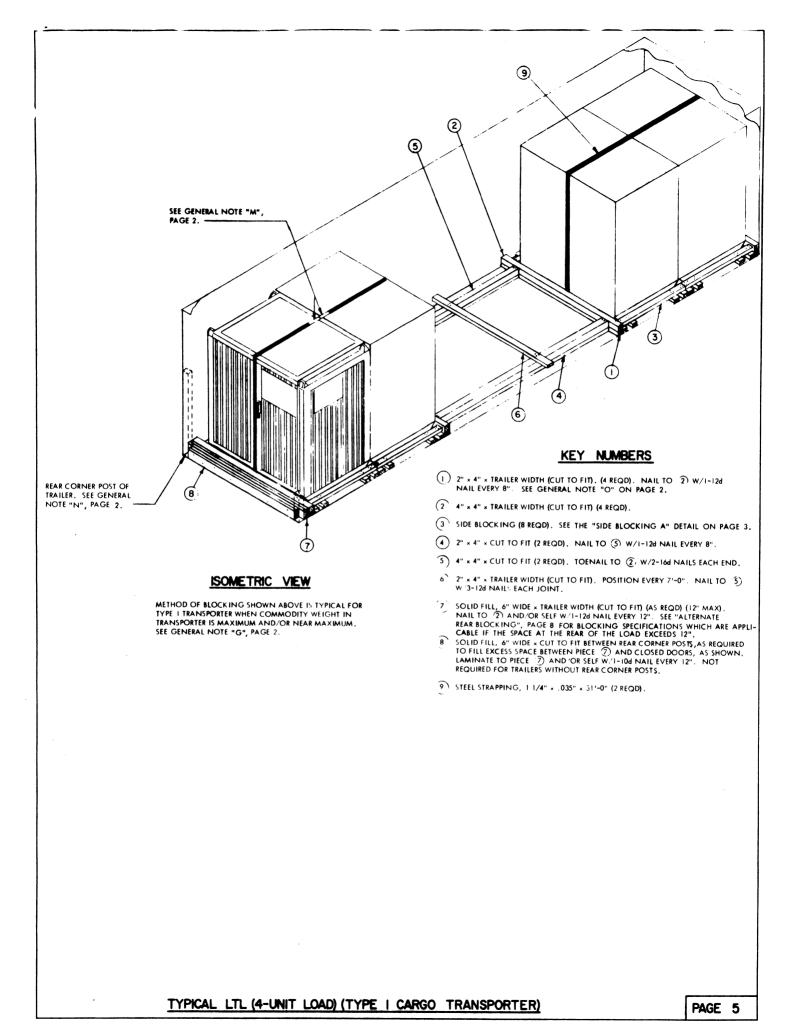
WHEN MORE THAN ONE TYPE I CARGO TRANSPORTER IS SHIPPED, USE THE METOD SHOWN ON PAGE 3 AND USE CHART A. SEE THE "ALTERNATE REAR BLOCKING" DETAIL ON PAGE 8 FOR BLOCKING SPECIFICATIONS WHICH MUST BE USED IF THE LOAD WEIGHT EXCEEDS 26,000 POUNDS.

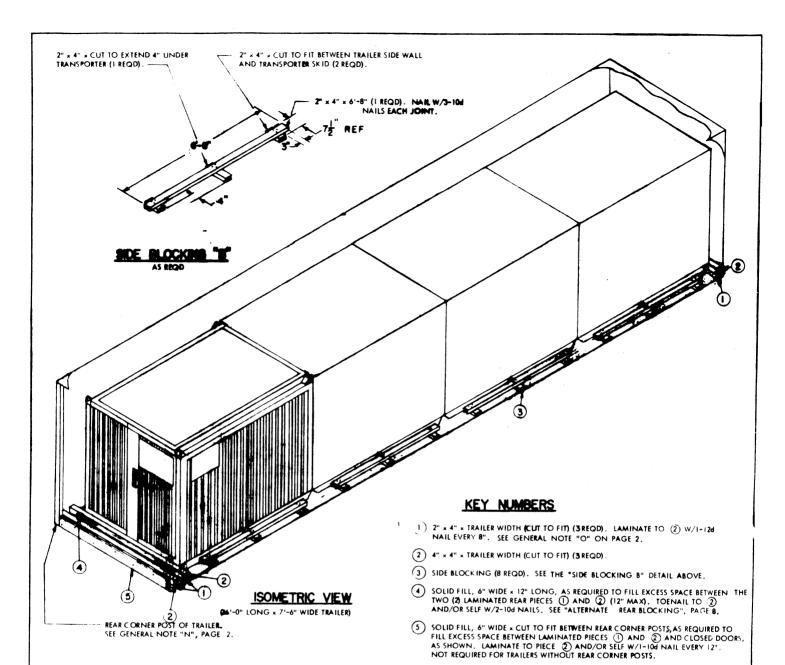
	2" x 4" x 6" (4 REQD). NAIL W/3-10d NAILS.
2" x 4" x 36" (4 REQD)	53"
6'-3"	
5"	9½"
36" 72	
	2" x 2" x 6'-3" (2 REQD). NAIL W/2-10d NAILS FACH END.
2" × 4" × CUT TO FIT	— 2" x 4" 6'-3" (4 REQD). NAIL W/3-10d NAILS EACH END.
(4 REQD). TOENAIL W/2-10d NAILS EACH END.	SIDE BLOCKING "C"

CHART "A"				
MAX GROSS WT	BACKUPS	NAILS		
0 TO 10,000 10,000 TO 13,000 13,000 TO 15,000 15,000 TO 20,000	2 - 30" 2 - 36" 2 - 42"OR 3 - 30" 4 - 30"	7 9 11 OR 7 7		

PAGE 4

TYPICAL LTL (I-UNIT LOAD) (TYPE I CARGO TRANSPORTER)





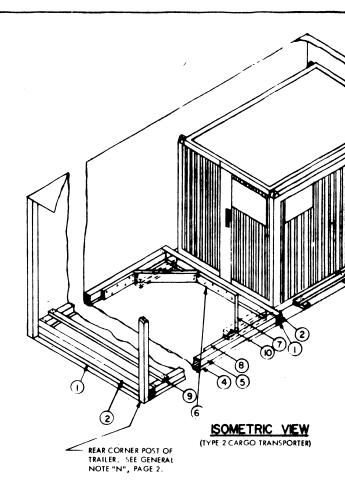
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
!" × 6"	6	3
2" × 4" 2" × 6"	94	32 20
4" × 4"	23	31
NAILS	NO, REQD	POUNDS
10d (3")	110	1-3/4
12d (3-1/4")	24	1/2

** WEIGHT OF TRUCKLOAD SHOWN WAS COMPUTED BY USING 9,000 POUNDS OF GROSS WEIGHT PER TRANSPORTER. SEE GENERAL NOTE "G", PAGE 2.

LOAD AS SHOWN

4-UNIT LOAD IN A 36'-O" LONG BY 7'-6" WIDE TRAILER (TYPE 2 CARGO TRANSPORTER)

PAGE 6



NET NOMBERS

- 2" x 4" x TRAILER WIDTH (3 REQD). LAMINATE TO 2 W/1-12d NAIL EVERY 8". SEE GENERAL NOTE "O" ON PAGE 2.
- GENERAL NOTE "O" ON PAGE 2.

 (2) 4" × 4" × TRAILER WIDTH (CUT TO FIT) (3 REQD).
- (3) SIDE BLOCKING (2 REQD). SEE THE "SIDE BLOCKING B" DETAIL ON PAGE 6.

KEY NI MARERO

- (4) $2'' \times 4'' \times CUT$ TO FIT (2 REQD). LAMINATE TO (5) W/1-12d NAIL EVERY 8".
- (5) 4" × 4" × CUT TO FIT (2 REQD). TOENAIL TO (2) W/2-16d NAILS EACH END.
- $\widehat{6}$) 2" × 6" × 30" (I REQD). NAIL TO $\widehat{1}$) AND/OR $\widehat{2}$, W 6-12d NAILS.
- $\overbrace{)}^{2"\times 6"\times CUT} \text{ TO FIT (2 REQD)}, \text{ DOUBLE BEVEL EACH END 45}^o. \text{ TOENAIL TO} \text{ } 1) \\ \text{AND/OR } \overbrace{?}^{2} \text{ AND } \underbrace{\$}^{2} \text{ AND/OR } \underbrace{\$}^{2} \text{ W/2-16d NAILS EACH END}.$
- 8) 2" x 6" x 24" (2 REQD). NAIL TO (4) AND/OR (5) W/o-12d NAILS.
- 9) 2" x 4" x TRAILER WIDTH (CUT 10 FIT) (MIN 1 REQD). POSITION EVERY 7'-0". NAIL TO (§) W 3-12d NAILS EACH END.
- 10) 2" × 4" × LENGTH TO SUIT (TRIPLED) (AS REQD). FOR WOOD OR WOOD AND METAL FLOOR TRAILERS DELETE REAR PIECES ① AND ② AND PIECES ④ THRU ③, NAIL FIRST PIECE TO TRAILER FLOOR W12d NAILS. NAIL EACH ADDITIONAL PIECE TO FIRST IN LIKE MANNER. TOENAIL TO ② W/2-12d NAILS. SEE CHART "B" BELOW. SEE GENERAL NOTE "R" ON PAGE 2.

MAX GROSS WT	BACKUPS	NAILS
0 TO 8,000	2 - 30*	7
8,000 TO 10,000	2 - 36"	9
10,000 TO 13,600	2 - 42"	11
13,000 TO 16,000	4 - 30"	7
14,000 TO 20,000	4 - 36"	9
20,000 TO 26,000	4 - 42"	11
LOADS TO 26,000	K-BRACE AS S	HOWN MAY BE US

THIS BLOCKING IS APPLICABLE FOR A TRAILER HAVING A ROUND FRONT, REFER TO GENERAL NOTE "O" ON PAGE 2 FOR PROVISIONS APPLICABLE TO A ROUNDED-CORNER TRAILER.

