

LOADING AND BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF VARIOUS SIZE BOMB BODIES

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CAUTION: THE PROCEDURES SHOWN HEREIN ARE ONLY APPLICABLE FOR HIGHWAY MOVEMENTS; NOT FOR TRAILER-ON-FLAT-CAR MOVEMENTS.

DO NOT SCALE

REVISIONS			DRAFTSMAN	PROJ. ENG.
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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 WITHIN THIS DOCUMENT ARE APPLICABLE TO VARIOUS SIZE BOMB BODIES IN VAN TRAILERS.
- C. FOR DETAILS OF THE SPECIFIC BOMB BODIES SHOWN WITHIN THIS DRAWING, SEE THE DETAILS ON PAGE 3.
- D. THE LOADS AS SHOWN HEREIN ARE BASED ON 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) CLOSED OR OPEN TOP VAN TRAILERS AND THEY ARE LIMITED TO HIGHWAY MOVEMENTS ONLY.
- E. THE GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT FOR A LOAD WILL BE THE RESPONSIBILITY OF THE CARRIER. THE CARRIER WILL ADVISE THE SHIPPER OF THE APPLICABLE LOADING REQUIREMENTS, AND THE SHIPPER WILL LOAD ACCORDINGLY.
- F. **NOTE:** A SHIPMENT WILL BE POSITIONED IN A TRAILER CONSISTENT WITH STATE WEIGHT LAWS. THE NUMBER OF UNITS MAY BE ADJUSTED TO FIT THE QUANTITY TO BE SHIPPED; HOWEVER, THE APPROVED METHODS CONTAINED HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING AND STAYING OF THE DESIGNATED ITEM.
- G. FLOOR RISERS AND INTERMEDIATE DUNNAGE AS SHOWN THROUGHOUT THIS DRAWING MAY BE CONSTRUCTED FROM RANDOM LENGTH MATERIAL FOR EASE IN LOADING OPERATIONS.
- H. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE AND 4" X 4" MATERIAL IS ACTUALLY 3-1/2" THICK BY 3-1/2" WIDE.
- J. A STAGGERED NAILING PATTERN WILL BE USED WHENEVER 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. 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 ONTO OR RIGHT BESIDE A NAIL IN A LOWER PIECE.
- K. POWER DRIVEN STAPLES MAY BE USED AS ALTERNATIVE FASTENERS FOR NAILS WHEN CONSTRUCTING DUNNAGE ASSEMBLIES WHICH ARE TO BE USED IN THE DELINEATED TRAILER LOADS SHOWN THROUGHOUT THIS DRAWING. THE STAPLES TO BE USED MUST BE EQUAL IN LENGTH TO THE SPECIFIED NAIL SIZE AND MUST BE SUBSTITUTED ON A ONE STAPLE FOR ONE NAIL BASIS. STAPLES WHICH ARE 2-1/2" OR LESS IN LENGTH SHOULD BE IN ACCORDANCE WITH FEDERAL SPECIFICATION FF-N-105 AS NEARLY AS PRACTICABLE. STAPLES WHICH ARE LONGER THAN 2-1/2" WILL BE A COMMERCIAL GRADE, OF A QUALITY EQUIVALENT TO THOSE MANUFACTURED BY SENCO PRODUCTS INCORPORATED. **NOTE:** STAPLES WILL NOT BE SUBSTITUTED FOR NAILS IN ANY LOAD RESTRAINING FLOOR DUNNAGE APPLICATION.
- L. PORTIONS OF THE TRAILER BODIES DEPICTED WITHIN THIS PROCEDURAL DRAWING, SUCH AS ONE OF THE VAN TRAILER SIDE WALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- M. THROUGHOUT THIS PROCEDURAL DRAWING, CORRUGATED RUBBER MATTING FASTENED TO THE FLOOR DUNNAGE OR INTERMEDIATE DUNNAGE IS SPECIFIED TO PROTECT THE PAINTED SURFACE OF THE BOMB BODIES. CORRUGATED RUBBER MATTING OF THE TYPE SHOWN IS AVAILABLE FROM McMASTER-CARR SUPPLY COMPANY, CHICAGO, IL, AND IS LISTED AS CATALOG NUMBER 6974T3. THIS RUBBER MATTING WILL HAVE TO BE CUT TO A WIDTH OF 5-1/2" AND FASTENED TO THE DUNNAGE EITHER WITH THE USE OF AN APPROPRIATE ADHESIVE OR BY SMALL NAILS OR STAPLES PLACED SO AS NOT TO CONTACT THE BOMB BODIES.
- N. **NOTE:** IT IS IMPORTANT THAT THE PAINTED SURFACE OF THE BOMB BODIES BE THOROUGHLY DRY PRIOR TO LOADING IN THE TRANSPORTING VEHICLE.
- O. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "SPECIAL NOTES" SECTIONS WHICH ARE IMMEDIATELY ADJACENT TO THE DEPICTED OUTLOADING METHODS.

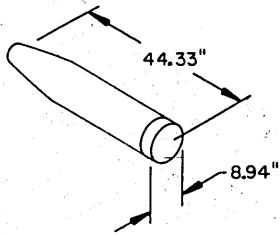
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(GENERAL NOTES CONTINUED)

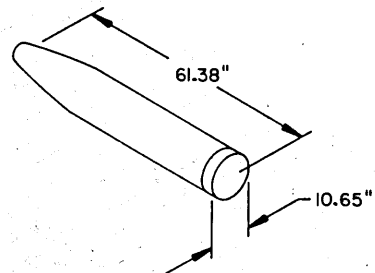
- P. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES, AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENTS MAY BE COMPUTED ON THE BASIS OF ONE INCH EQUALS 25.4MM AND ONE POUND EQUALS 0.454KG.
- Q. WHEN STEEL STRAPPING IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF ONE (1) SEAL WITH TWO (2) PAIR OF NOTCHES WILL BE USED TO SEAL THE JOINT WHEN A NOTCH-TYPE SEALER IS BEING USED. A MINIMUM OF TWO (2) SEALS, BUTTED TOGETHER, WITH TWO (2) 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 22 FOR GUIDANCE.

MATERIAL SPECIFICATIONS

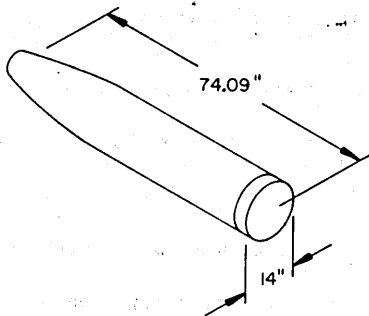
- LUMBER** ----- :SEE TM 743-200-1, DUNNAGE LUMBER; FED SPEC MM-L-751.
- NAILS** ----- :COMMON, FED SPEC FF-N-105.
- STRAPPING, STEEL** ----- :CLASS 1, TYPE I OR IV, HEAVY DUTY, FINISH A, B, (GRADE 2), OR C; FED SPEC QQ-S-781.
- SEAL, STRAP** ----- :TYPE D, STYLE I, II OR IV, CLASS H, FINISH A, B (GRADE 2), OR C; FED SPEC QQ-S-781.
- MAT, RUBBER** ----- :MAT, FLOOR, STANDING, MIL-M-910E (OR EQUAL).
- ANTI-CHIPPING MATERIAL** ----- :NEUTRAL BARRIER MATERIAL, MIL-B-121 (OR EQUAL).



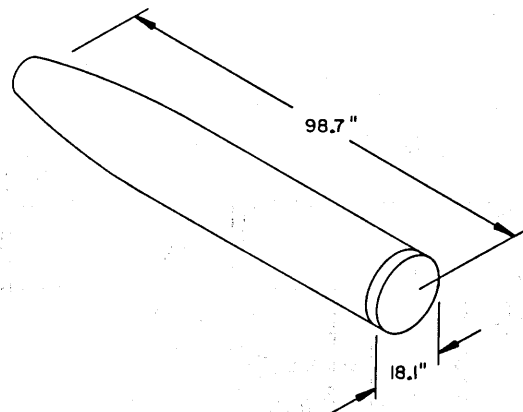
250 POUND MK81 MOD 1
 GROSS WEIGHT ----- 135 LBS
 NAVARSYSCOM DWG NO. 923AS114 (REV A)



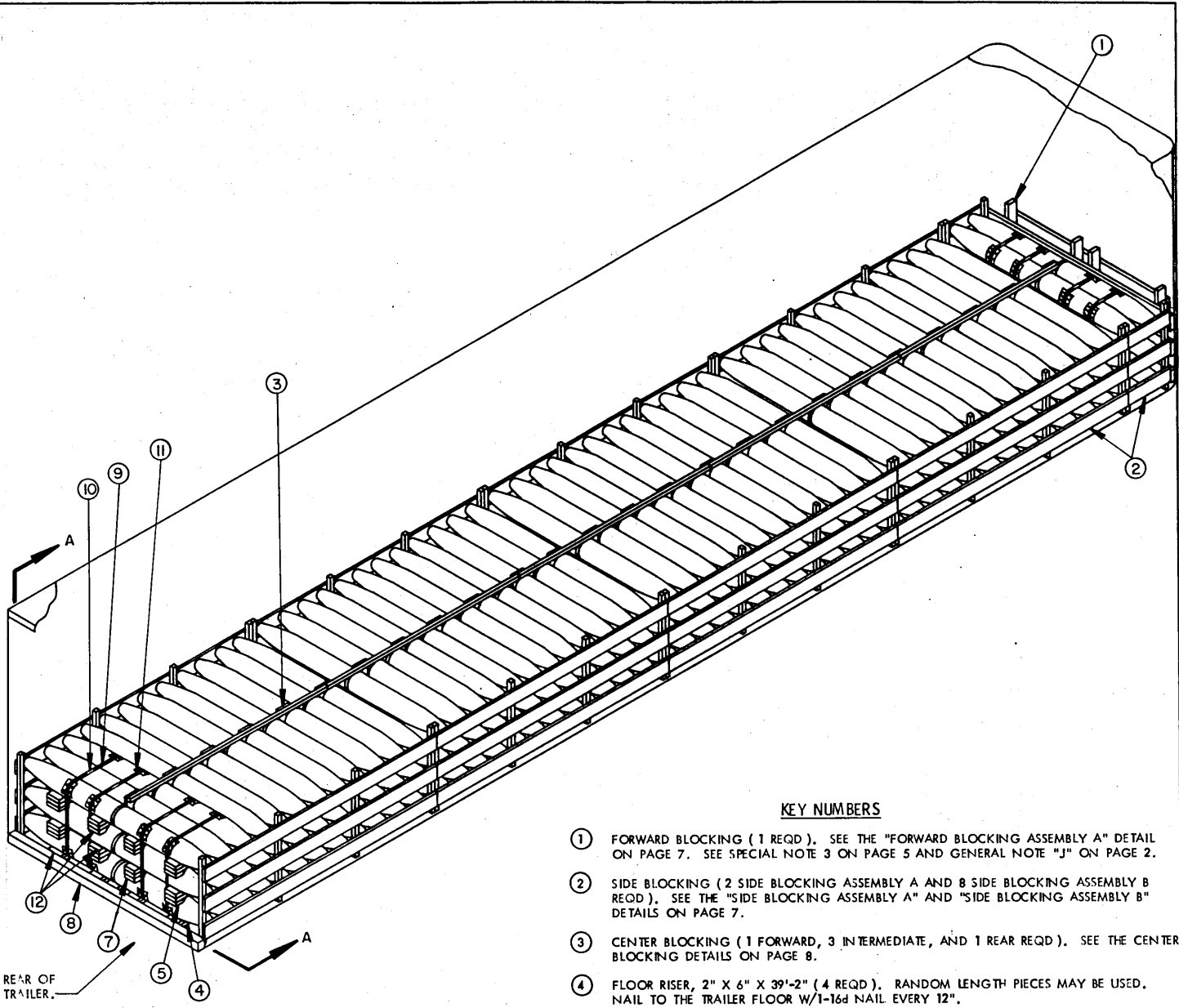
300 POUND MK82 MOD 1
 GROSS WEIGHT ----- 301 LBS
 NAVARSYSCOM DWG NO. 1380545 (REV AA)



400 POUND MK83 MOD 4
 GROSS WEIGHT ----- 475 LBS
 NAVARSYSCOM DWG NO. 2841464 (REV M)



700 POUND MK84 MOD 4
 GROSS WEIGHT ----- 950 LBS
 NAVARSYSCOM DWG NO. 923AS105 (REV A)

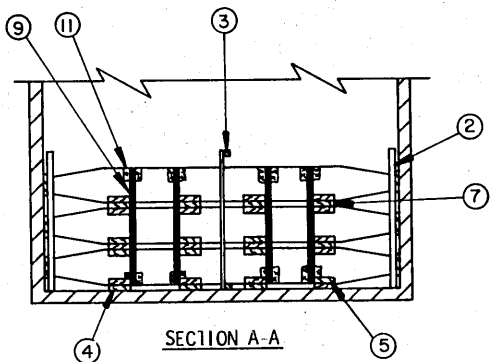


ISOMETRIC VIEW

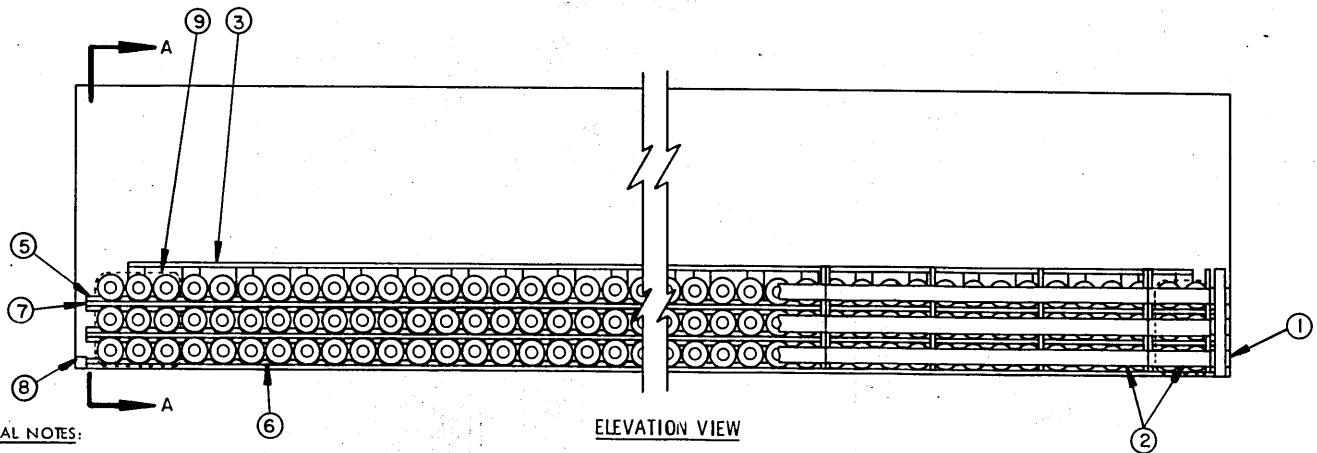
REAR OF TRAILER

KEY NUMBERS

- ① FORWARD BLOCKING (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY A" DETAIL ON PAGE 7. SEE SPECIAL NOTE 3 ON PAGE 5 AND GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING (2 SIDE BLOCKING ASSEMBLY A AND 8 SIDE BLOCKING ASSEMBLY B REQD). SEE THE "SIDE BLOCKING ASSEMBLY A" AND "SIDE BLOCKING ASSEMBLY B" DETAILS ON PAGE 7.
- ③ CENTER BLOCKING (1 FORWARD, 3 INTERMEDIATE, AND 1 REAR REQD). SEE THE CENTER BLOCKING DETAILS ON PAGE 8.
- ④ FLOOR RISER, 2" X 6" X 39'-2" (4 REQD). RANDOM LENGTH PIECES MAY BE USED. NAIL TO THE TRAILER FLOOR W/1-16d NAIL EVERY 12".
- ⑤ BLOCK (40 REQD). SEE THE "BLOCK A" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ④ AND ⑦ W/3-10d NAILS.
- ⑥ BLOCK (980 REQD). SEE THE "BLOCK B" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ④ AND ⑦ W/3-10d NAILS.
- ⑦ INTERMEDIATE PIECE, 2" X 6" X 39'-2" (8 REQD). RANDOM LENGTH PIECES MAY BE USED.
- ⑧ REAR BLOCKING, 4" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (1 REQD).
- ⑨ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 10'-0" LONG (4 REQD), AND 1-1/4" X .035" OR .031" X 8'-0" LONG STEEL STRAPPING (4 REQD). INSTALL THE FOUR 8'-0" LONG STRAPS SO AS TO ENCIRCLE THE FIRST TWO STACKS OF BOMBS AT THE FORWARD END OF THE TRAILER AS SHOWN. INSTALL THE FOUR 10'-0" LONG STRAPS SO AS TO ENCIRCLE THE LAST THREE STACKS OF BOMBS AT THE REAR OF THE LOAD AS SHOWN.
- ⑩ SEAL FOR 1-1/4" STRAPPING, (8 REQD, 1 PER STRAP). DOUBLE NOTCH EACH SEAL. SEE GENERAL NOTE "O" ON PAGE 2.
- ⑪ ANTI-CHAFING MATERIAL (AS REQD). PLACE UNDER STRAPPING AT ALL POINTS OF CONTACT WITH THE BOMB BODIES.
- ⑫ RUBBER MATTING (20 REQD) 5-1/2" WIDE X 52'-0" LONG. SEE SPECIAL NOTE 5 ON PAGE 5, "INSTALLATION OF RUBBER MATTING" ON PAGE 9, AND GENERAL NOTE "M" ON PAGE 2.



SECTION A-A



SPECIAL NOTES:

1. A 300-UNIT LOAD OF 250-POUND MK81 BOMB BODIES IS SHOWN IN A 40'-0" LONG VAN TRAILER WITH INSIDE DIMENSIONS OF 39'-6" LONG BY 7'-6" WIDE. WIDER TRAILERS MAY BE USED.
2. IF A WIDER TRAILER IS TO BE USED FOR SHIPMENT OF THE BOMBS, THE VERTICAL PIECES OF THE CENTER AND/OR HORIZONTAL PIECES OF THE SIDE BLOCKING ASSEMBLIES MAY BE INCREASED IN THICKNESS.
3. A TRAILER WITH ROUNDED CORNERS AT THE FORWARD END IS SHOWN IN THE LOAD VIEW. IF THE TRAILER BEING USED HAS SQUARE CORNERS, OMIT THE FORWARD BLOCKING, PIECE MARKED ①. REDUCE THE LENGTH OF THE FLOOR RISER AND INTERMEDIATE PIECE TO 38'-8" LONG AND PLACE THE FIRST STACK OF BOMBS DIRECTLY AGAINST THE FRONT WALL OF THE TRAILER.
4. THE QUANTITY OF BOMB BODIES SHIPPED MAY BE REDUCED AS NECESSARY BY OMITTING STACKS OR LAYERS OF BOMBS AND ADJUSTING THE DUNNAGE REQUIREMENTS.
5. RUBBER MATTING, DESCRIBED WITHIN GENERAL NOTE "M" ON PAGE 2 AND SHOWN ON PAGE 9, IS TO BE USED TO PROTECT THE SPECIAL PAINTED FINISH AND PREVENT DAMAGE TO THE BOMB BODIES. IN ADDITION, CARE MUST BE EXERCISED DURING LOADING OPERATIONS TO ENSURE THAT THE MATTING IS NOT TORN WHEN THE BOMBS ARE PLACED UPON IT. ALSO, NOTE THAT THE MATTING IS TO BE PLACED BETWEEN THE BOMBS AND DUNNAGE BOTH ON TOP OF AND UNDERNEATH EACH BOMB, AS APPLICABLE.

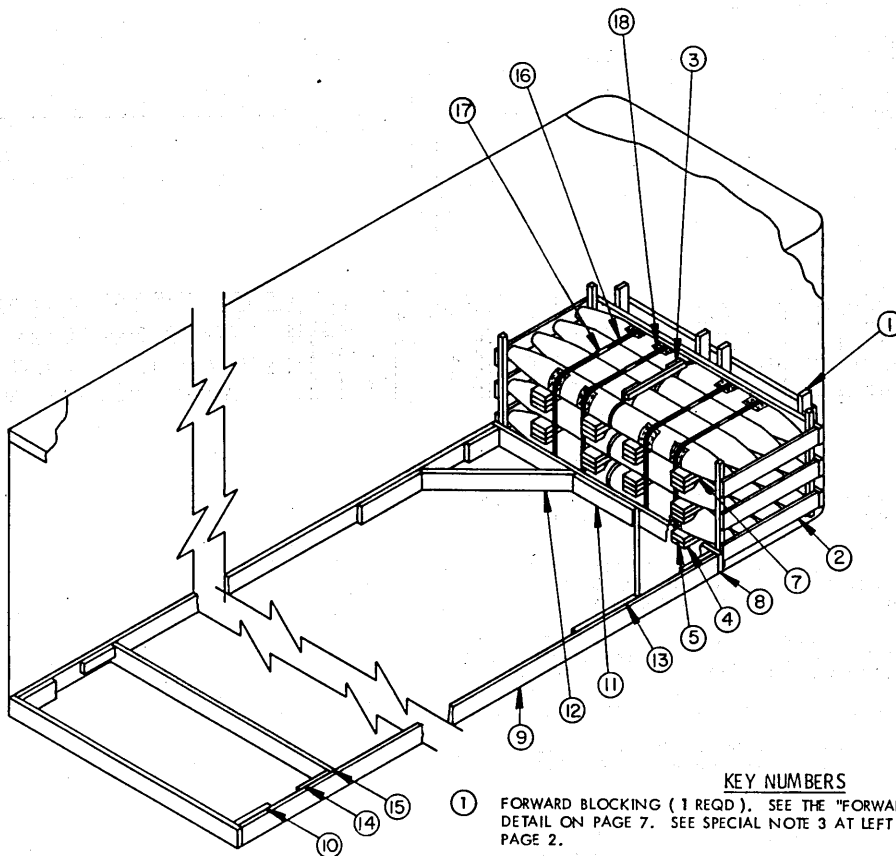
BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	306	153
2" X 2"	184	62
2" X 4"	12	8
2" X 6"	980	980
4" X 4"	8	10
NAILS	NO. REQD	POUNDS
6d (2")	424	2-1/2
10d (3")	3,072	47-1/4
16d (3-1/2")	156	3-1/2
STEEL STRAPPING, 1-1/4" X .035"	72' REQD	10-1/4 LBS
SEAL FOR 1-1/4" STRAPPING	8 REQD	1/2 LB
RUBBER MAT, 1/4" X 5-1/2"	1,040' REQD	200 LBS
ANTI-CHAFING	AS REQD	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
250 LB BOMB	300	40,500 LBS
DUNNAGE		2,650 LBS

TOTAL WEIGHT ----- 43,150 LBS (APPROX)



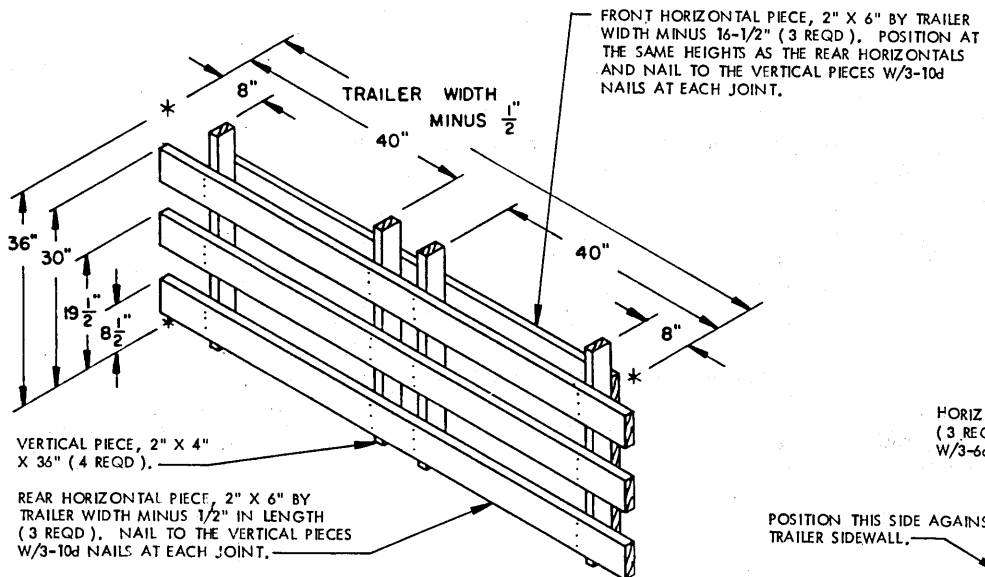
ISOMETRIC VIEW

SPECIAL NOTES:

1. A 24-UNIT LOAD OF 250 POUND BOMB BODIES IS SHOWN. THESE UNLOADING PROCEDURES DEPICT THE USE OF "K-BRACE" TYPE BLOCKING IN A 7'-6" WIDE (INSIDE DIMENSION) VAN TRAILER.
2. THE DEPICTED "K-BRACE" BLOCKING WILL RETAIN A MAXIMUM OF 20,000 POUNDS.
3. A TRAILER WITH ROUNDED CORNERS AT THE FORWARD END IS SHOWN IN THE LOAD VIEW. IF THE TRAILER BEING USED HAS SQUARE CORNERS, OMIT THE FORWARD BLOCKING, PIECE MARKED ①, REDUCE THE LENGTH OF THE FLOOR RISER AND INTERMEDIATE PIECES BY 3-1/2" AND POSITION SO THAT THE BOMB BODIES CONTACT THE FRONT WALL OF THE TRAILER.
4. RUBBER MATTING, DESCRIBED WITHIN GENERAL NOTE "M" ON PAGE 2 AND SHOWN ON PAGE 9, IS TO BE USED TO PROTECT THE SPECIAL PAINTED FINISH AND PREVENT DAMAGE TO THE BOMB BODIES. IN ADDITION, CARE MUST BE EXERCISED DURING LOADING AND UNLOADING OPERATIONS. SEE SPECIAL NOTE 5 ON PAGE 5.
5. DEPENDING ON THE NUMBER OF STACKS OF BOMB BODIES BEING LOADED, EACH OF THE SIDE STRUTS, PIECES MARKED ⑨, MAY NEED TO BE FORMED FROM MORE THAN ONE PIECE OF MATERIAL. IF SUCH IS THE CASE, THE SIDE STRUTS MUST BE SPLICED. SPLICING CAN BE ACCOMPLISHED BY CENTERING A 2" X 6" X 24" PIECE ON THE JOINT OF THE SIDE STRUTS AND NAILING IT TO THE SIDE STRUTS W/4-10d NAILS AT EACH END.
6. ALL LTL LOADS REGARDLESS OF THEIR SIZE, REQUIRE ONE STRUT BRACE POSITIONED NEAR THE REAR OF THE TRAILER AND NAILED TO THE SIDE STRUTS. IF THE SIDE STRUTS, PIECES MARKED ⑨, ARE LONGER THAN 7'-0", AN ADDITIONAL STRUT BRACE, PIECES MARKED ⑭ AND ⑮, MUST BE APPLIED FOR EVERY 7'-0" OF SIDE STRUT LENGTH.
7. SEE THE "NAILED-HEADER" METHOD ON PAGE 22 FOR ALTERNATIVE REAR BLOCKING PROCEDURES.

KEY NUMBERS

- ① FORWARD BLOCKING (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY A" DETAIL ON PAGE 7. SEE SPECIAL NOTE 3 AT LEFT AND GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING (2@36-1/2" LONG REQD). SEE THE "SIDE BLOCKING ASSEMBLY A" DETAIL ON PAGE 7.
- ③ CENTER BLOCKING (1 REQD). SEE THE "CENTER BLOCKING" DETAILS ON PAGE 8.
- ④ FLOOR RISER, 2" X 6" X 35" (4 REQD). NAIL TO THE TRAILER FLOOR W/1-16d NAIL EVERY 12".
- ⑤ BLOCK (40 REQD). SEE THE "BLOCK A" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ④ AND ⑦ W/3-10d NAILS.
- ⑥ BLOCK (60 REQD). SEE THE "BLOCK B" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ④ AND ⑦ W/3-10d NAILS.
- ⑦ INTERMEDIATE PIECE, 2" X 6" X 35" (8 REQD).
- ⑧ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD).
- ⑨ SIDE STRUT, 2" X 6" BY CUT-TO-FIT BETWEEN FORWARD AND REAR HEADERS, PIECES MARKED ⑧ (2 REQD). SEE SPECIAL NOTE 5 AT LEFT.
- ⑩ POCKET CLEAT, 2" X 6" X 12" (4 REQD). NAIL TO SIDE STRUT, PIECE MARKED ⑨ W/3-10d NAILS. TOENAIL TO THE ADJACENT HEADER, PIECE MARKED ⑧ W/3-12d NAILS.
- ⑪ CENTER CLEAT, 2" X 6" X 30" (1 REQD). NAIL TO A HEADER, PIECE MARKED ⑧, W/6-10d NAILS.
- ⑫ DIAGONAL BRACE, 2" X 6" BY CUT-TO-FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO THE ADJACENT HEADER AND SIDE STRUT, PIECES MARKED ⑧ AND ⑨, W/2-16d NAILS AT EACH END.
- ⑬ BACK-UP CLEAT, 2" X 6" X 30" (2 REQD). NAIL TO A SIDE STRUT, PIECE MARKED ⑨, W/8-10d NAILS.
- ⑭ STRUT BRACE RETAINING CLEAT, 2" X 4" X 12" (AS REQD). NAIL TO A SIDE STRUT, PIECE MARKED ⑨, W/3-10d NAILS.
- ⑮ STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 3" IN LENGTH, (MINIMUM OF ONE REQUIRED). NAIL TO THE STRUT BRACE RETAINING CLEATS, PIECE MARKED ⑭, W/2-12d NAILS AT EACH END. SEE SPECIAL NOTE 6 AT LEFT.
- ⑯ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 10'-0" LONG STEEL STRAPPING (4 REQD). INSTALL TO ENCIRCLE 12 BOMBS AS SHOWN ABOVE.
- ⑰ SEAL FOR 1-1/4" STRAPPING, (4 REQD, 1 PER STRAP). DOUBLE NOTCH EACH SEAL. SEE GENERAL NOTE "O" ON PAGE 2.
- ⑱ ANTI-CHAFING MATERIAL, (AS REQD). PLACE UNDER STRAPPING AT ALL POINTS OF CONTACT WITH BOMB BODIES.
- ⑲ RUBBER MATTING, (20 REQD), 5-1/2" WIDE X 48" LONG. SEE SPECIAL NOTE 4 AT LEFT, "INSTALLATION OF RUBBER MATTING" ON PAGE 9, AND GENERAL NOTE "M" ON PAGE 2.



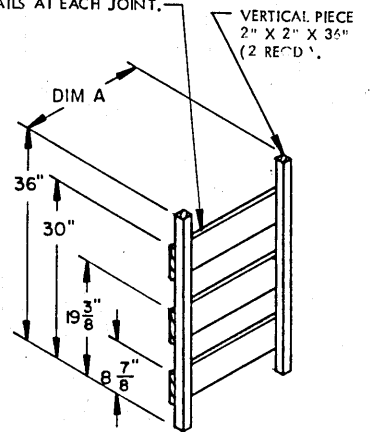
FORWARD BLOCKING ASSEMBLY A

THIS FORWARD BLOCKING ASSEMBLY IS APPLICABLE FOR A 3-LAYER LOAD OF 250 POUND BOMB BODIES. IF LESS THAN 3-LAYERS ARE TO BE SHIPPED, THE ASSEMBLY MAY BE REDUCED IN HEIGHT ACCORDINGLY.

CHART A	
NO. BOMBS	DIM A
1	8-3/4"
2	18"
3	26-1/2"
4	36-1/2"

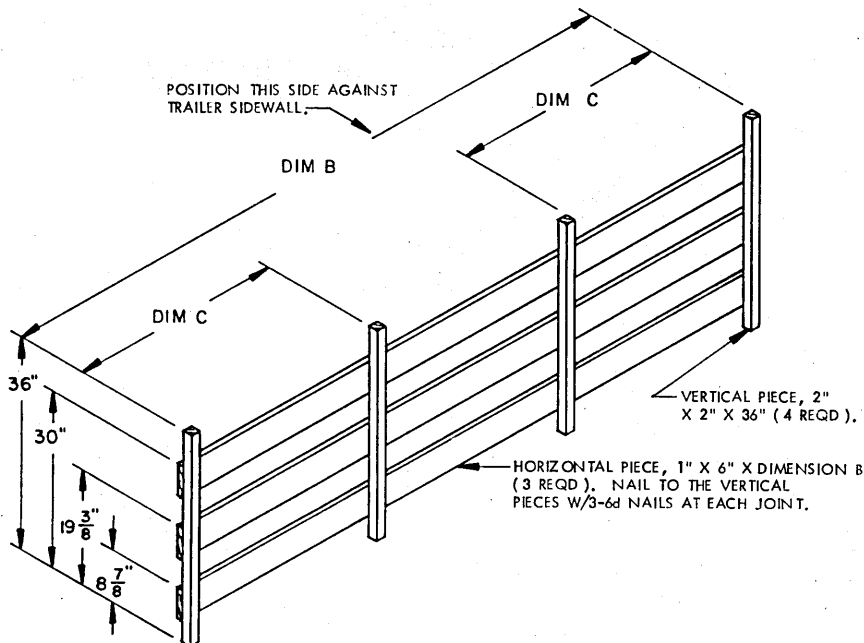
HORIZONTAL PIECE, 1" X 6" BY DIMENSION A (3 REQD). NAIL TO THE VERTICAL PIECES W/3-6d NAILS AT EACH JOINT.

POSITION THIS SIDE AGAINST TRAILER SIDEWALL.



SIDE BLOCKING ASSEMBLY A

THIS ASSEMBLY SHALL BE USED IN THE SHIPMENT OF 1 THRU 4 STACKS OF BOMBS 3 LAYERS IN HEIGHT. THE HEIGHT MAY BE ADJUSTED AS REQUIRED DEPENDING ON THE NUMBER OF LAYERS OF BOMBS. SEE CHART A AT LEFT.



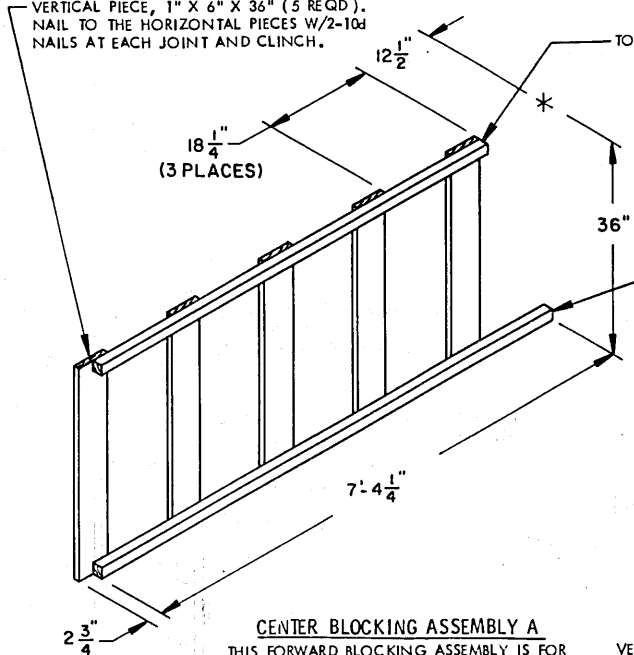
SIDE BLOCKING ASSEMBLY B

THIS ASSEMBLY SHALL BE USED IN THE SHIPMENT OF 5 THRU 12 STACKS OF BOMBS 3 LAYERS IN HEIGHT. THE HEIGHT MAY BE ADJUSTED AS REQUIRED DEPENDING ON THE NUMBER OF LAYERS OF BOMBS. SEE CHART B AT RIGHT.

CHART B		
NO. BOMBS	DIM B	DIM C
5	45-1/2"	17-5/8"
6	54-3/4"	17-5/8"
7	64"	17-5/8"
8	6'-1-1/4"	27"
9	6'-10-1/4"	27"
10	7'-7-1/2"	27"
11	8'-4-3/4"	36"
12	9'-2"	36"

VERTICAL PIECE, 1" X 6" X 36" (5 REQD).
NAIL TO THE HORIZONTAL PIECES W/2-10d
NAILS AT EACH JOINT AND CLINCH.

TOP HORIZONTAL PIECE, 2" X 2" X 6'-3-3/4" (1 REQD).



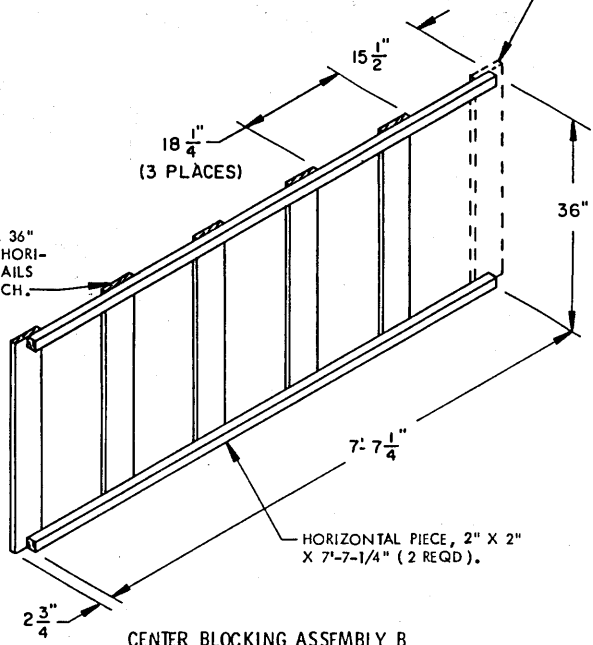
BOTTOM HORIZONTAL PIECE, 2" X 2" X 7'-4-1/4" (1 REQD).

LOCATION OF 1" X 6" VERTICAL THAT WILL
BE NAILED TO 2 INTERMEDIATE ASSEMBLIES
AND/OR A FORWARD OR REAR ASSEMBLY.

CENTER BLOCKING ASSEMBLY A

THIS FORWARD BLOCKING ASSEMBLY IS FOR
USE BETWEEN NINE STACKS OF BOMB BODIES
AT THE FORWARD END OF A LOAD. FOR
LESS THAN NINE STACKS, ADJUST THE
LENGTHS OF THE HORIZONTAL PIECES AND
THE NUMBER OF VERTICAL PIECES AS
NECESSARY.

VERTICAL PIECE, 1" X 6" X 36"
(5 REQD). NAIL TO THE HORI-
ZONTAL PIECES W/2-10d NAILS
AT EACH JOINT AND CLINCH.



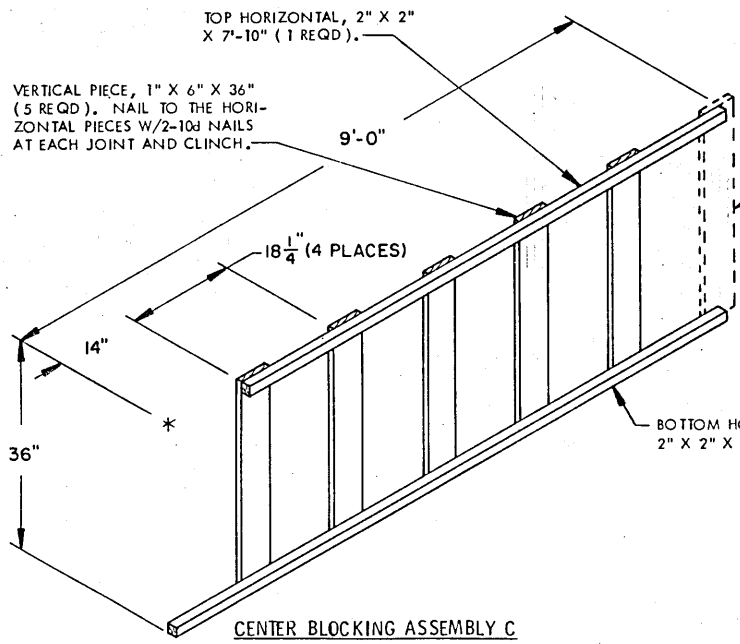
CENTER BLOCKING ASSEMBLY B

THIS INTERMEDIATE BLOCKING ASSEMBLY IS FOR USE
BETWEEN NINE STACKS OF BOMB BODIES.

HORIZONTAL PIECE, 2" X 2"
X 7'-7-1/4" (2 REQD).

TOP HORIZONTAL, 2" X 2"
X 7'-10" (1 REQD).

VERTICAL PIECE, 1" X 6" X 36"
(5 REQD). NAIL TO THE HORI-
ZONTAL PIECES W/2-10d NAILS
AT EACH JOINT AND CLINCH.

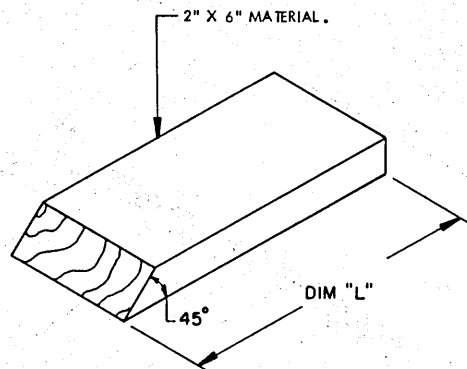


LOCATION OF 1" X 6" VERTICAL
THAT WILL BE NAILED TO AN
INTERMEDIATE ASSEMBLY AND A
REAR ASSEMBLY.

BOTTOM HORIZONTAL PIECE,
2" X 2" X 9'-0" (1 REQD).

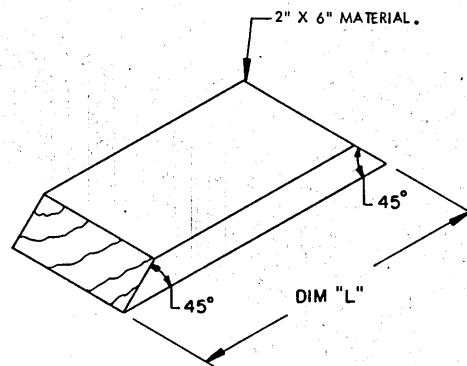
CENTER BLOCKING ASSEMBLY C

THIS REAR BLOCKING ASSEMBLY IS FOR USE BETWEEN
ELEVEN STACKS OF BOMB BODIES AT THE REAR END
OF A LOAD.



BLOCK A
SEE CHART AT RIGHT FOR DIM "L".

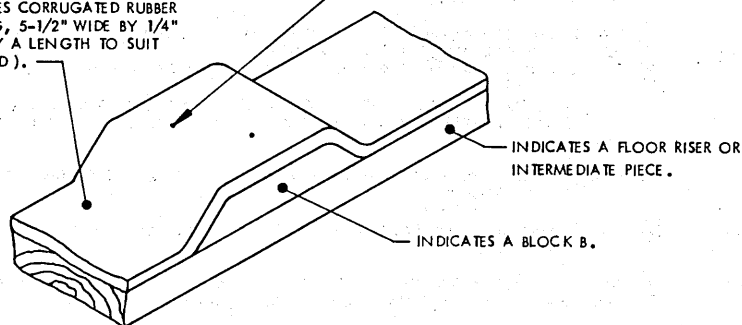
CHART C		
BOMB	BLOCK STYLE	"L" LENGTH
250 LB	A	6"
	B	5-3/8"
500 LB	A	6"
	B	7"
1,000 LB	A	4-1/8"
	B	10-1/8"
2,000 LB	A	10"
	B	13-1/4"



BLOCK B
SEE CHART ABOVE FOR DIM "L".

NAIL OR STAPLE RUBBER MATTING TO FLOOR RISER, INTERMEDIATE PIECE, BLOCK A, AND BLOCK B AS NECESSARY TO SECURE. SEE GENERAL NOTE "M" ON PAGE 2.

INDICATES CORRUGATED RUBBER MATTING, 5-1/2" WIDE BY 1/4" THICK BY A LENGTH TO SUIT (AS REQD).

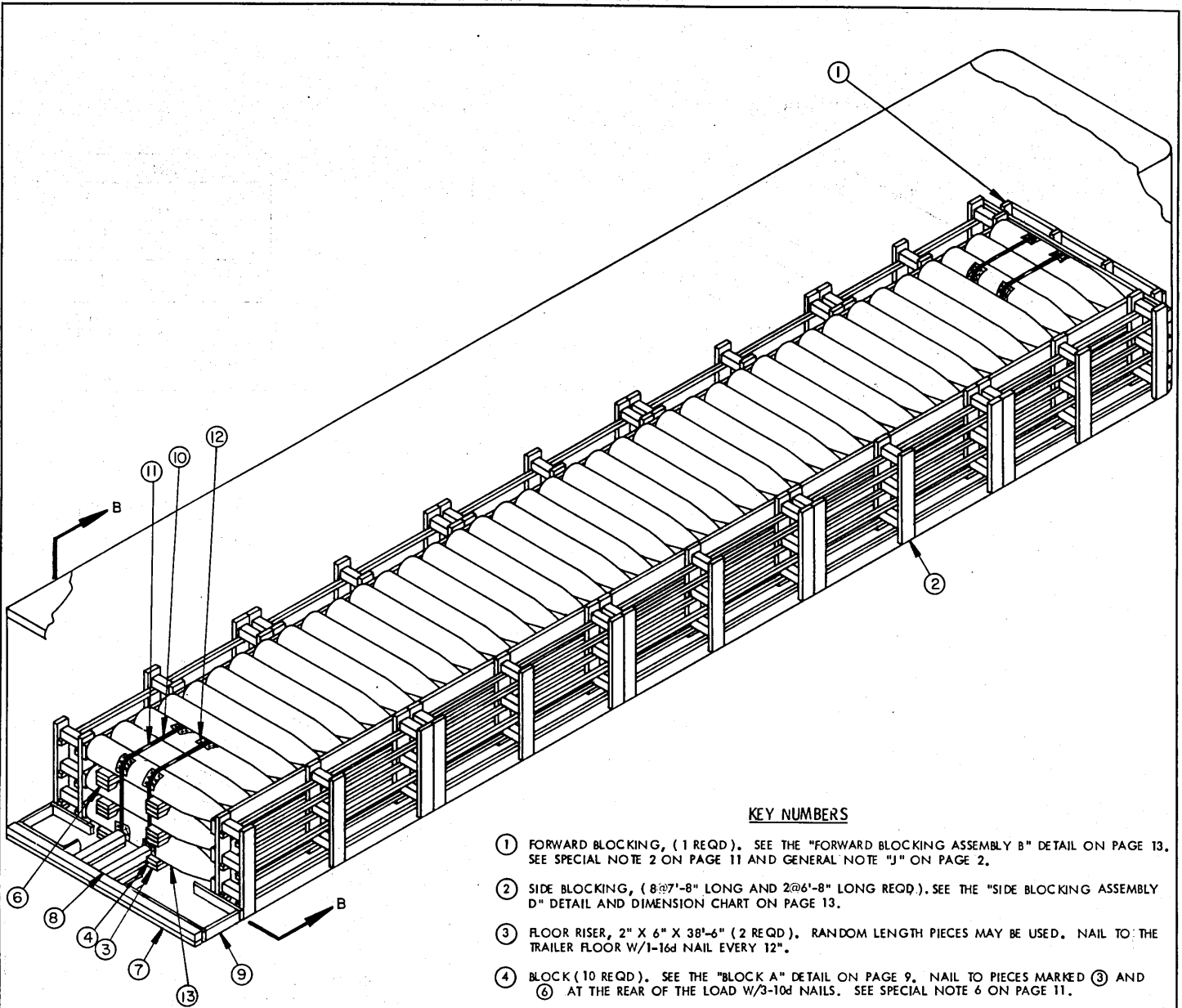


INDICATES A FLOOR RISER OR INTERMEDIATE PIECE.

INDICATES A BLOCK B.

INSTALLATION OF RUBBER MATTING

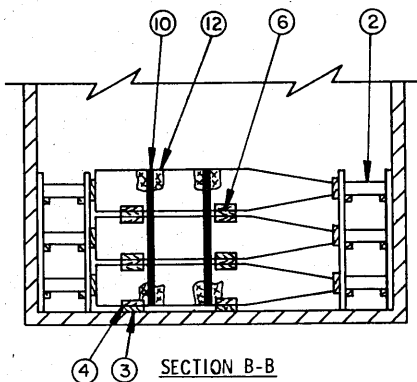
CORRUGATED RUBBER MATTING AS SPECIFIED WITHIN THE MATERIAL SPECIFICATIONS ON PAGE 2 MUST BE ATTACHED TO THE FLOOR RISERS, INTERMEDIATE PIECES, BLOCKS A AND B WHEREVER THEY CONTACT THE BOMB BODIES. THE MATTING SHALL BE SECURED IN SUCH A MANNER SO AS TO PREVENT IT FROM BECOMING DISLODGED DURING SHIPMENT.



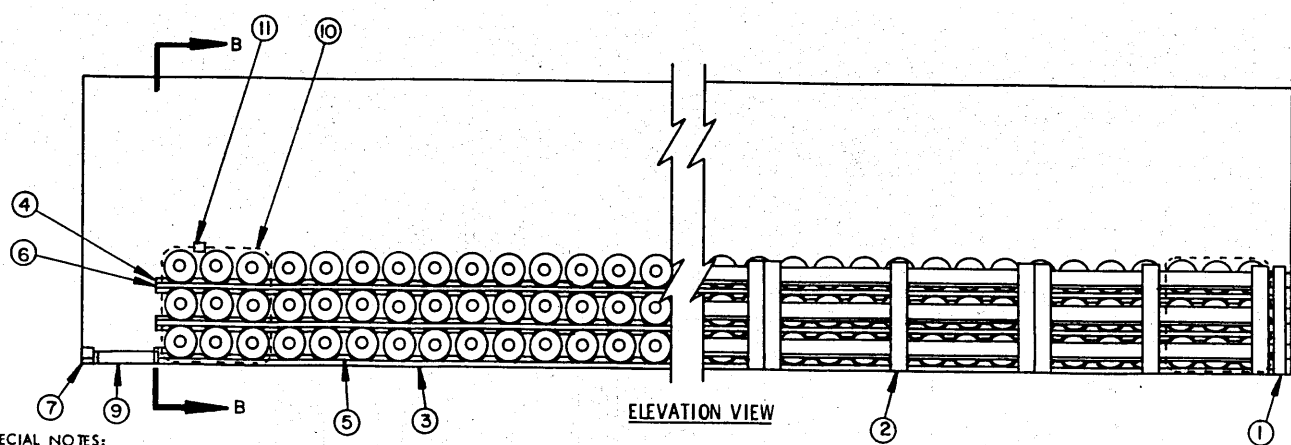
ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING, (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY B" DETAIL ON PAGE 13. SEE SPECIAL NOTE 2 ON PAGE 11 AND GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING, (8@7'-8" LONG AND 2@6'-8" LONG REQD). SEE THE "SIDE BLOCKING ASSEMBLY D" DETAIL AND DIMENSION CHART ON PAGE 13.
- ③ FLOOR RISER, 2" X 6" X 38'-6" (2 REQD). RANDOM LENGTH PIECES MAY BE USED. NAIL TO THE TRAILER FLOOR W/1-16d NAIL EVERY 12".
- ④ BLOCK (10 REQD). SEE THE "BLOCK A" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ③ AND ⑥ AT THE REAR OF THE LOAD W/3-10d NAILS. SEE SPECIAL NOTE 6 ON PAGE 11.
- ⑤ BLOCK (380 REQD). SEE THE "BLOCK B" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ③ AND ⑥ W/3-10d NAILS.
- ⑥ INTERMEDIATE PIECE, 2" X 6" X 38'-6" (4 REQD). RANDOM LENGTH PIECES MAY BE USED.
- ⑦ REAR BLOCKING, 2" X 4" AND 4" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (1 REQD). LAMINATE W/1-10d NAIL EVERY 6".
- ⑧ REAR SPACER, 2" X 4" AND 4" X 4" BY CUT-TO-FIT (2 REQD). LAMINATE W/1-10d NAIL EVERY 6". TOENAIL TO PIECE MARKED ⑦ W/2-12d NAILS.
- ⑨ SIDE BLOCKING RETAINER (2 REQD). SEE THE "SIDE BLOCKING RETAINER" DETAIL ON PAGE 11.
- ⑩ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 12'-0" LONG STEEL STRAPPING (4 REQD). INSTALL TO ENCIRCLE THE FIRST THREE STACKS OF BOMBS IN THE FRONT AND REAR OF THE TRAILER AS SHOWN.
- ⑪ SEAL FOR 1-1/4" STRAPPING (4 REQD, 1 PER STRAP). DOUBLE NOTCH EACH SEAL. SEE GENERAL NOTE "Q" ON PAGE 2.
- ⑫ ANTI-CHAFING MATERIAL (AS REQD). PLACE UNDER STRAPPING AT ALL POINTS OF CONTACT WITH THE BOMB BODIES.
- ⑬ RUBBER MATTING, (10 REQD). 5-1/2" WIDE X 45'-0" LONG. SEE SPECIAL NOTE 4 ON PAGE 11, "INSTALLATION OF RUBBER MATTING" ON PAGE 9, AND GENERAL NOTE "M" ON PAGE 2.



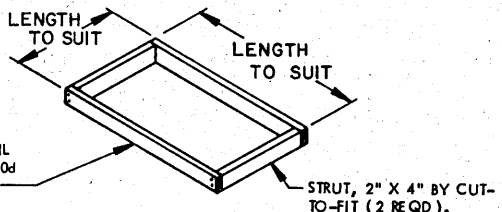
SECTION B-B



SPECIAL NOTES:

1. A 117-UNIT LOAD OF 500-POUND MK82 BOMB BODIES IS SHOWN IN A 40'-0" LONG VAN TRAILER WITH INSIDE DIMENSIONS OF 39'-6" LONG BY 7'-6" WIDE. WIDER OR NARROWER TRAILERS MAY BE USED.
2. A TRAILER WITH ROUNDED CORNERS AT THE FORWARD END IS SHOWN IN THE LOAD ON PAGE 10. IF TRAILER BEING USED HAS SQUARE CORNERS, OMIT THE FORWARD BLOCKING, PIECE MARKED ①, REDUCE THE LENGTH OF THE FLOOR RISER AND INTERMEDIATE PIECE TO 38'-0" LONG AND PLACE THE FIRST STACK OF BOMBS DIRECTLY AGAINST THE FRONT WALL OF THE TRAILER.
3. THE QUANTITY OF BOMB BODIES SHIPPED MAY BE REDUCED AS NECESSARY BY OMITTING STACKS OR LAYERS OF BOMBS AND ADJUSTING THE DUNNAGE REQUIREMENTS.
4. RUBBER MATTING, DESCRIBED WITHIN GENERAL NOTE "M" ON PAGE 2 AND SHOWN ON PAGE 9, IS TO BE USED TO PROTECT THE SPECIAL PAINTED FINISH AND PREVENT DAMAGE TO THE BOMB BODIES. IN ADDITION, CARE MUST BE EXERCISED DURING LOADING AND UNLOADING OPERATIONS. SEE SPECIAL NOTE 5 ON PAGE 5.
5. SEE THE "NAILED-HEADER" METHOD ON PAGE 22 FOR ALTERNATIVE REAR BLOCKING PROCEDURES.
6. TWO "BLOCK A'S" ADJACENT TO THE "SIDE BLOCKING RETAINERS", PIECES MARKED ⑨ MUST BE REDUCED FROM 6" LONG TO 3" LONG AND NAILED W/2-10d NAILS.

ELEVATION VIEW



BEARING PIECE, 2" X 4" BY A LENGTH TO SUIT (2 REQD). NAIL TO THE STRUTS W/2-10d NAILS AT EACH END.

STRUT, 2" X 4" BY CUT-TO-FIT (2 REQD).

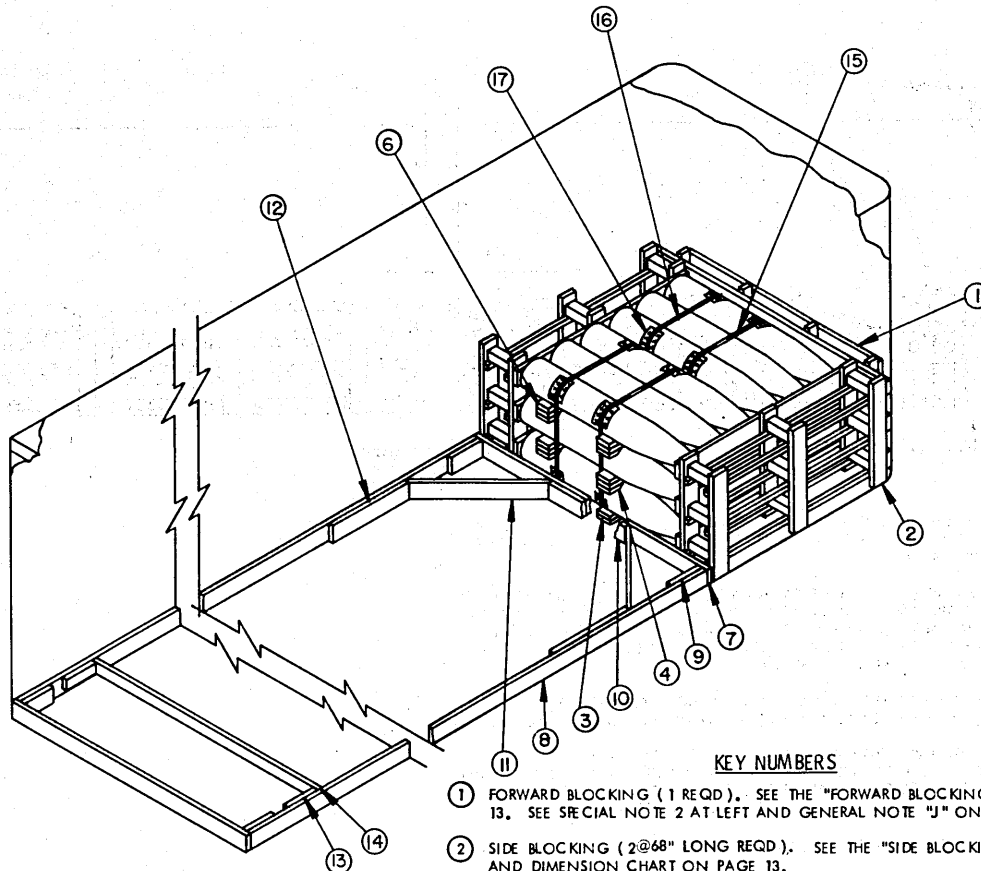
SIDE BLOCKING RETAINER

THE ABOVE ASSEMBLY MUST BE FABRICATED SO AS TO PROVIDE A TIGHT FIT BETWEEN THE SIDE BLOCKING ASSEMBLY AND THE REAR BLOCKING. THE LENGTH OF THE ABOVE ASSEMBLY SHALL BE SO THAT THE ASSEMBLY FITS BETWEEN THE TRAILER SIDEWALL AND THE FLOOR RISER, PIECE MARKED ③.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	448	149
2" X 4"	42	28
2" X 6"	902	902
4" X 4"	90	120
NAILS	NO. REQD	POUNDS
10d (3")	1,931	29-3/4
12d (3-1/4")	360	6
16d (3-1/2")	76	1-1/2
STEEL STRAPPING, 1-1/4" X .035"	48' REQD	7 LBS
SEAL FOR 1-1/4" STRAPPING	4 REQD	1/2 LB
RUBBER MAT, 1/4" X 5-1/2"	450' REQD	86 LBS
ANTI-CHAFING	AS REQD	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
500 LB BOMB	117	35,217 LBS
DUNNAGE		2,529 LBS
TOTAL WEIGHT		37,746 LBS



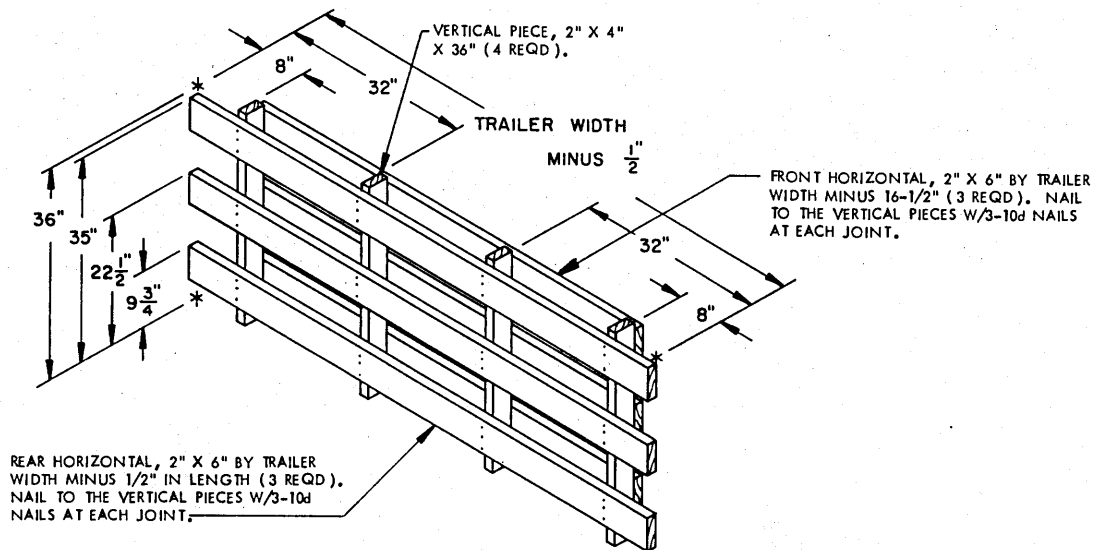
ISOMETRIC VIEW

SPECIAL NOTES:

1. AN 18-UNIT LOAD IS SHOWN. THESE OUTLOADING PROCEDURES DEPICT THE USE OF "K-BRACE" TYPE BLOCKING IN A 7'-6" WIDE (INSIDE DIMENSION) VAN TRAILER.
2. IF THE TRAILER BEING LOADED HAS SQUARE CORNERS AT THE FORWARD END, OMIT THE FORWARD BLOCKING, PIECE MARKED ①, REDUCE THE LENGTH OF THE FLOOR RISER, AND INTERMEDIATE PIECES, PIECES MARKED ③ AND ⑥ BY THREE INCHES (3") AND POSITION SO THAT THE BOMB BODIES CONTACT THE FRONT WALL OF THE TRAILER.
3. THE DEPICTED "K-BRACE" BLOCKING WILL RETAIN A MAXIMUM OF 20,000 POUNDS.
4. RUBBER MATTING, DESCRIBED WITHIN GENERAL NOTE "M" ON PAGE 2 AND SHOWN ON PAGE 9, IS TO BE USED TO PROTECT THE SPECIAL PAINTED FINISH AND PREVENT DAMAGE TO THE BOMB BODIES. IN ADDITION, CARE MUST BE EXERCISED DURING LOADING AND UNLOADING OPERATIONS. SEE SPECIAL NOTE 5 ON PAGE 5.
5. DEPENDING ON THE NUMBER OF STACKS OF BOMB BODIES BEING LOADED, EACH OF THE SIDE STRUTS, PIECES MARKED ⑧, MAY NEED TO BE FORMED FROM MORE THAN ONE PIECE OF MATERIAL. IF SUCH IS THE CASE, THE SIDE STRUTS MUST BE SPLICED. SPLICING CAN BE ACCOMPLISHED BY CENTERING A 2" X 6" X 24" PIECE ON THE JOINT OF THE SIDE STRUTS AND NAILING IT TO THE SIDE STRUTS W/4-10d NAILS AT EACH END.
6. SEE THE "NAILED-HEADER" METHOD ON PAGE 22 FOR ALTERNATIVE REAR BLOCKING PROCEDURES.
7. ALL LTL LOADS, REGARDLESS OF THEIR SIZE, REQUIRE ONE STRUT BRACE POSITIONED NEAR THE REAR OF THE TRAILER AND NAILED TO THE SIDE STRUTS. IF THE SIDE STRUTS, PIECES MARKED ⑧, ARE LONGER THAN 7'-0", AN ADDITIONAL STRUT BRACE MUST BE APPLIED FOR EVERY 7'-0" OF SIDE STRUT LENGTH.

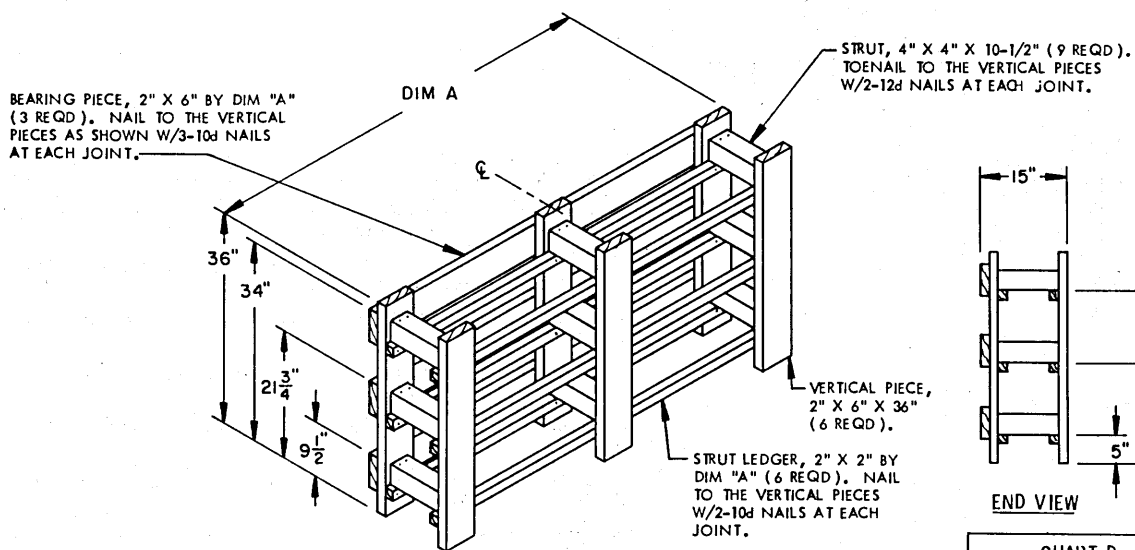
KEY NUMBERS

- ① FORWARD BLOCKING (1 REQD). SEE THE "FORWARD BLOCKING B" DETAIL ON PAGE 13. SEE SPECIAL NOTE 2 AT LEFT AND GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING (2@68" LONG REQD). SEE THE "SIDE BLOCKING ASSEMBLY D" DETAIL AND DIMENSION CHART ON PAGE 13.
- ③ FLOOR RISER, 2" X 6" X 72-1/4" (2 REQD). NAIL TO THE TRAILER FLOOR W/1-16d NAIL EVERY 12".
- ④ BLOCK (10 REQD). SEE THE "BLOCK A" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ③ AND ⑥ W/3-10d NAILS. NOTE: TWO "BLOCK A'S" ADJACENT TO THE HEADER, PIECE MARKED ⑦, MUST BE REDUCED FROM 6" LONG TO 3" LONG.
- ⑤ BLOCK (50 REQD). SEE THE "BLOCK B" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ③ AND ⑥ W/3-10d NAILS.
- ⑥ INTERMEDIATE PIECE, 2" X 6" X 75-1/4" (4 REQD).
- ⑦ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD).
- ⑧ SIDE STRUT, 2" X 6" BY CUT-TO-FIT BETWEEN FORWARD AND REAR HEADERS, PIECES MARKED ⑦, (2 REQD).
- ⑨ POCKET CLEAT, 2" X 6" X 12" (4 REQD). NAIL TO SIDE STRUT, PIECE MARKED ⑧, W/3-10d NAILS. TOENAIL TO THE ADJACENT HEADER, PIECE MARKED ⑦, W/3-12d NAILS.
- ⑩ CENTER CLEAT, 2" X 6" X 30" (1 REQD). NAIL TO A HEADER, PIECE MARKED ⑦, W/6-10d NAILS.
- ⑪ DIAGONAL BRACE, 2" X 6" BY CUT-TO-FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS, INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO THE ADJACENT HEADER AND SIDE STRUT, PIECES MARKED ⑦ AND ⑧, W/2-16d NAILS AT EACH END.
- ⑫ BACK-UP CLEAT, 2" X 6" X 30" (2 REQD). NAIL TO A SIDE STRUT, PIECE MARKED ⑧, W/8-10d NAILS.
- ⑬ STRUT BRACE RETAINING CLEAT, 2" X 4" X 12" (AS REQD). NAIL TO A SIDE STRUT, PIECE MARKED ⑧, W/3-10d NAILS.
- ⑭ STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 3" IN LENGTH (MINIMUM OF ONE REQUIRED). NAIL TO THE STRUT BRACE RETAINING CLEATS, PIECES MARKED ⑬, W/2-12d NAILS AT EACH END. SEE SPECIAL NOTE 7 AT LEFT.
- ⑮ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 12'-0" LONG STEEL STRAPPING (4 REQD) INSTALL TO ENCIRCLE 9 BOMBS AS SHOWN.
- ⑯ SEAL FOR 1-1/4" STRAPPING, (4 REQD, 1 PER STRAP). DOUBLE NOTCH EACH SEAL. SEE GENERAL NOTE "Q" ON PAGE 2.
- ⑰ ANTI-CHAFING MATERIAL (AS REQD). PLACE UNDER STRAPPING AT ALL POINTS OF CONTACT WITH THE BOMB BODIES.
- ⑱ RUBBER MATTING (10 REQD). 5-1/2" WIDE X 7'-1" LONG. SEE SPECIAL NOTE 4 AT LEFT, "INSTALLATION OF RUBBER MATTING" ON PAGE 9, AND GENERAL NOTE "M" ON PAGE 2.



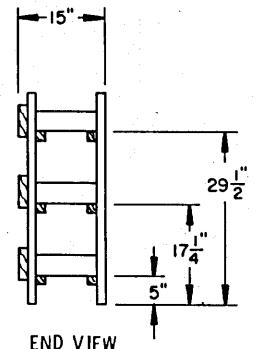
FORWARD BLOCKING ASSEMBLY B

THIS FORWARD BLOCKING ASSEMBLY IS APPLICABLE FOR A 3-LAYER LOAD OF 500-POUND BOMB BODIES. IF LESS THAN 3-LAYERS ARE TO BE SHIPPED, THE ASSEMBLY MAY BE REDUCED IN HEIGHT ACCORDINGLY.



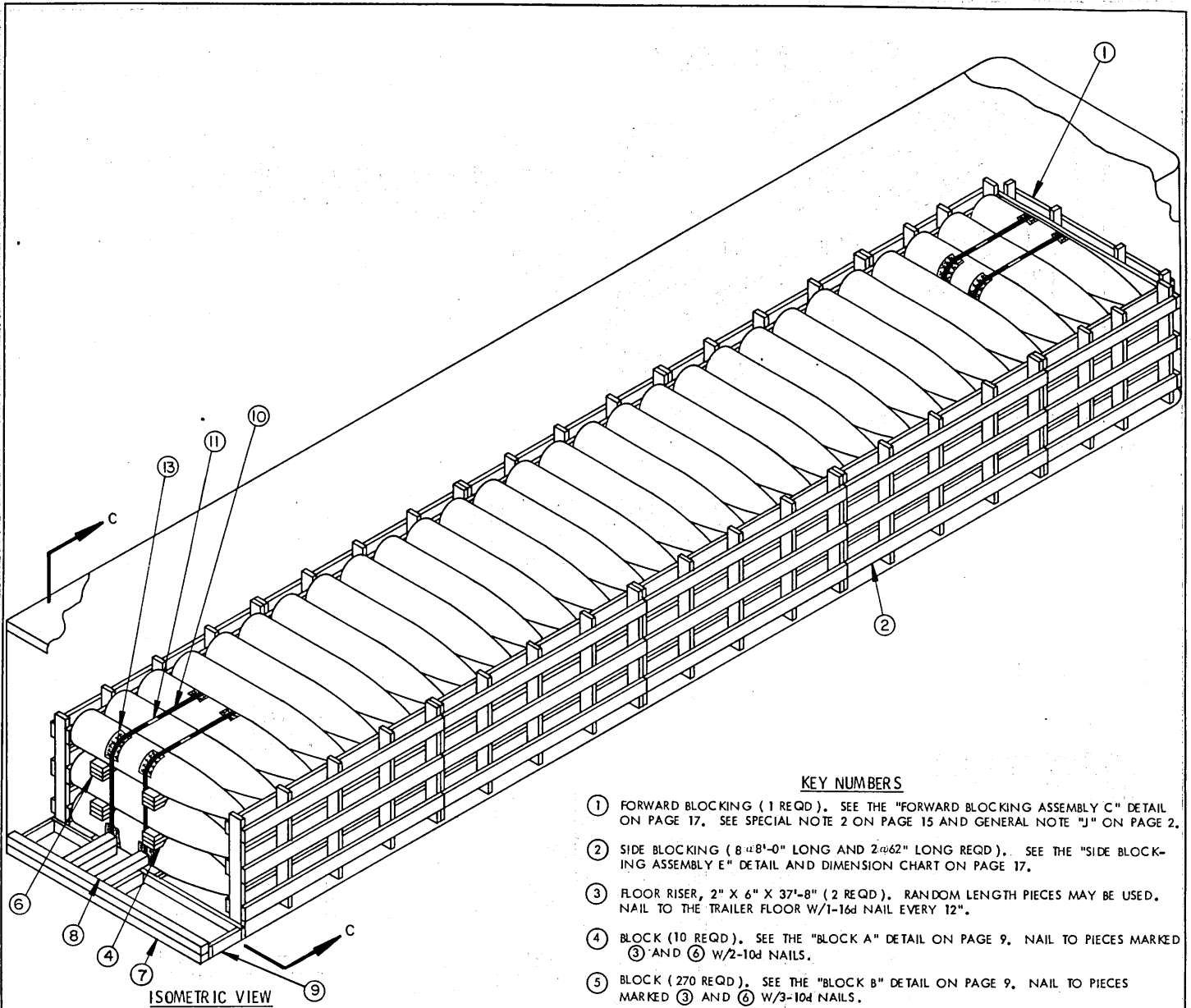
SIDE BLOCKING ASSEMBLY D

THIS SIDE BLOCKING ASSEMBLY IS APPLICABLE FOR A 3-LAYER LOAD OF 500-POUND BOMB BODIES IN A 7'-6" WIDE (INSIDE DIMENSION) TRAILER. IF A WIDER OR NARROWER TRAILER IS USED, INCREASE OR DECREASE THE LENGTH OF THE STRUTS AS APPLICABLE. IF DESIRED, THE VERTICAL PIECES MAY BE NAILED TO THE STRUTS W/2-10d NAILS IN LEIU OF TOENAILING THE STRUTS TO THE VERTICAL PIECES W/2-12d NAILS AS SHOWN.



END VIEW

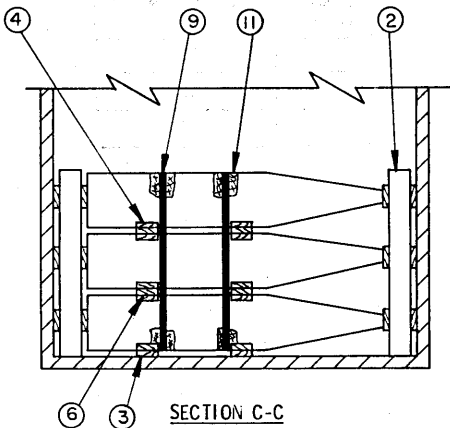
CHART D	
NO. OF BOMBS LONG	DIMENSION "A"
6	68"
7	6'-8"
8	7'-8"



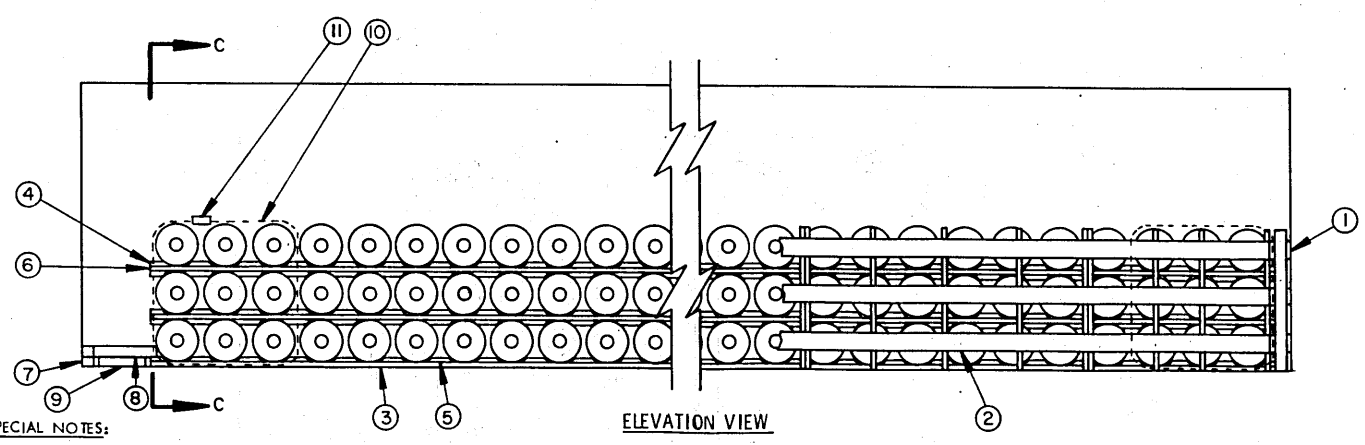
ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY C" DETAIL ON PAGE 17. SEE SPECIAL NOTE 2 ON PAGE 15 AND GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING (8 @ 8'-0" LONG AND 2 @ 62" LONG REQD). SEE THE "SIDE BLOCKING ASSEMBLY E" DETAIL AND DIMENSION CHART ON PAGE 17.
- ③ FLOOR RISER, 2" X 6" X 37'-8" (2 REQD). RANDOM LENGTH PIECES MAY BE USED. NAIL TO THE TRAILER FLOOR W/1-16d NAIL EVERY 12".
- ④ BLOCK (10 REQD). SEE THE "BLOCK A" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ③ AND ⑥ W/2-10d NAILS.
- ⑤ BLOCK (270 REQD). SEE THE "BLOCK B" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ③ AND ⑥ W/3-10d NAILS.
- ⑥ INTERMEDIATE PIECE, 2" X 6" X 37'-8" (4 REQD). RANDOM LENGTH PIECES MAY BE USED.
- ⑦ REAR BLOCKING, 4" X 4" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (1 REQD). LAMINATE W/1-40d NAIL EVERY 6".
- ⑧ REAR SPACER, 4" X 4" BY CUT-TO-FIT (DOUBLED) (2 REQD). LAMINATE W/1-40d NAIL EVERY 6".
- ⑨ SIDE BLOCKING RETAINER (2 REQD). SEE THE "SIDE BLOCKING RETAINER" DETAIL ON PAGE 11.
- ⑩ BUNDLING STRAP, 1-1/4" X .035" OR .031" BY 16'-0" LONG STEEL STRAPPING (4 REQD). INSTALL TO ENCIRCLE THE FIRST THREE STACKS OF BOMBS IN THE FRONT AND REAR OF THE TRAILER AS SHOWN.
- ⑪ SEAL FOR 1-1/4" STRAPPING (4 REQD, 1 PER STRAP). DOUBLE NOTCH EACH SEAL. SEE GENERAL NOTE "Q" ON PAGE 2.
- ⑫ ANTI-CHAFING MATERIAL (AS REQD). PLACE UNDER STRAPPING AT ALL POINTS OF CONTACT WITH THE BOMB BODIES.
- ⑬ RUBBER MATTING (10 REQD) 5-1/2" WIDE X 59'-9" LONG. SEE SPECIAL NOTE 4 ON PAGE 15, "INSTALLATION OF RUBBER MATTING" ON PAGE 9, AND GENERAL NOTE "M" ON PAGE 2.



SECTION C-C



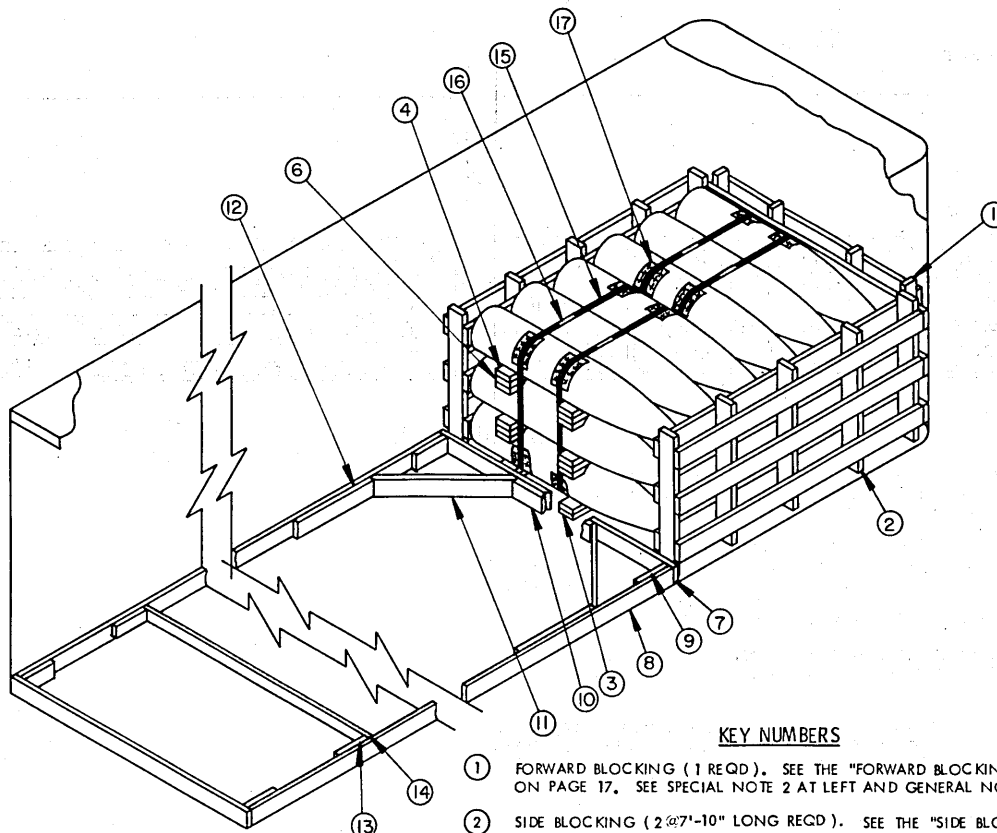
SPECIAL NOTES:

1. AN 84-UNIT LOAD OF 1,000-POUND MK83 BOMB BODIES IS SHOWN IN A 40'-0" LONG VAN TRAILER WITH INSIDE DIMENSIONS OF 39'-6" LONG BY 7'-6" WIDE. TRAILERS OF OTHER SIZES MAY BE USED.
2. A TRAILER WITH ROUNDED CORNERS AT THE FORWARD END IS SHOWN IN THE LOAD ON PAGE 14. IF THE TRAILER BEING USED HAS SQUARE CORNERS, OMIT THE FORWARD BLOCKING, PIECE MARKED ①, REDUCE THE LENGTH OF THE FLOOR RISER AND INTERMEDIATE PIECE TO 37'-6" LONG AND PLACE THE FIRST STACK OF BOMBS DIRECTLY AGAINST THE FRONT WALL OF THE TRAILER.
3. THE QUANTITY OF BOMB BODIES SHIPPED MAY BE REDUCED AS NECESSARY BY OMITTING STACKS OR LAYERS OF BOMBS AND ADJUSTING THE DUNNAGE REQUIREMENTS.
4. RUBBER MATTING, DESCRIBED WITHIN GENERAL NOTE "M" ON PAGE 2 AND SHOWN ON PAGE 9, IS TO BE USED TO PROTECT THE SPECIAL PAINTED FINISH AND PREVENT DAMAGE TO THE BOMB BODIES. IN ADDITION, CARE MUST BE EXERCISED DURING LOADING AND UNLOADING OPERATIONS. SEE SPECIAL NOTE 5 ON PAGE 5.
5. SEE THE "NAILED-HEADER" METHOD ON PAGE 22 FOR ALTERNATIVE REAR BLOCKING PROCEDURES.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	34	23
2" X 6"	1,141	1,141
4" X 4"	22	30
NAILS	NO. REQD	POUNDS
10d (3")	1,534	23-1/2
16d (3-1/2")	76	1-1/2
40d (5")	36	1-3/4
STEEL STRAPPING, 1-1/4" X .035"	64' REQD	9 LBS
SEAL FOR 1-1/4" STRAPPING	4 REQD	1/2 LB
RUBBER MAT, 1/4" X 5-1/2"	598' REQD	114 LBS
ANTI-CHAFING MATERIAL	AS REQD	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
1,000 LB BOMB	84	39,900 LBS
DUNNAGE		2,538 LBS
TOTAL WEIGHT		42,438 LBS



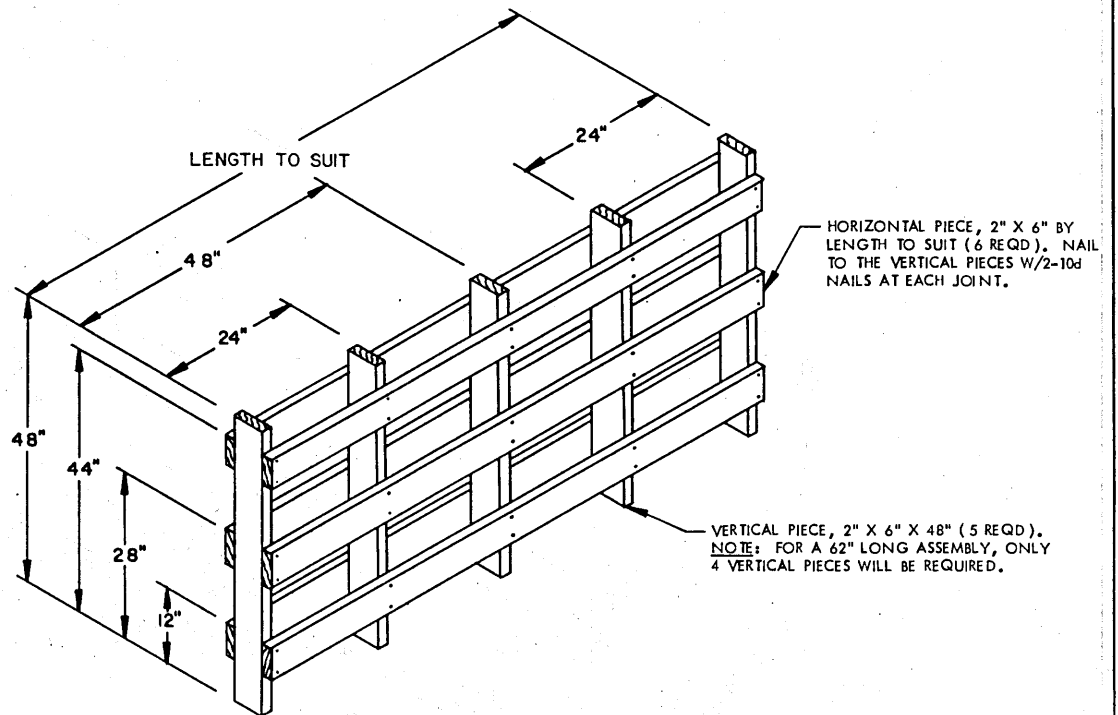
ISOMETRIC VIEW

SPECIAL NOTES:

1. AN 18-UNIT LOAD IS SHOWN. THESE OUTLOADING PROCEDURES DEPICT THE USE OF "K-BRACE" TYPE BLOCKING IN A 7'-6" WIDE (INSIDE DIMENSION) VAN TRAILER.
2. THE TRAILER SHOWN IN THE ABOVE VIEW HAS ROUNDED CORNERS, HOWEVER, IF THE TRAILER BEING LOADED HAS SQUARE CORNERS AT THE FORWARD END, OMIT THE FORWARD BLOCKING, PIECE MARKED ①, AND POSITION THE BOMB BODIES SO THAT THEY CONTACT THE FRONT WALL OF THE TRAILER.
3. THE DEPICTED "K-BRACE" BLOCKING WILL RETAIN A MAXIMUM OF 20,000 LBS.
4. RUBBER MATTING, DESCRIBED WITHIN GENERAL NOTE "M" ON PAGE 2 AND SHOWN ON PAGE 9, IS TO BE USED TO PROTECT THE SPECIAL PAINTED FINISH AND PREVENT DAMAGE TO THE BOMB BODIES. IN ADDITION, CARE MUST BE EXERCISED DURING LOADING AND UNLOADING OPERATIONS. SEE SPECIAL NOTE 5 ON PAGE 5.
5. DEPENDING ON THE NUMBER OF STACKS OF BOMB BODIES BEING LOADED, EACH OF THE SIDE STRUTS, PIECES MARKED ⑧, MAY NEED TO BE FORMED FROM MORE THAN ONE PIECE OF MATERIAL. IF SUCH IS THE CASE, THE SIDE STRUTS MUST BE SPLICED. SPLICING CAN BE ACCOMPLISHED BY CENTERING A 2" X 6" X 24" PIECE ON THE JOINT OF THE SIDE STRUTS AND NAILING IT TO THE SIDE STRUTS W/4-10d NAILS AT EACH END.
6. SEE THE "NAILED-HEADER" METHOD ON PAGE 22 FOR ALTERNATIVE REAR BLOCKING PROCEDURES.
7. ALL LTL LOADS, REGARDLESS OF THEIR SIZE, REQUIRE ONE STRUT BRACE POSITIONED NEAR THE REAR OF THE TRAILER AND NAILED TO THE SIDE STRUTS. IF THE SIDE STRUTS, PIECES MARKED ⑧, ARE LONGER THAN 7'-0", AN ADDITIONAL STRUT BRACE MUST BE APPLIED FOR EVERY 7'-0" OF SIDE STRUT LENGTH.

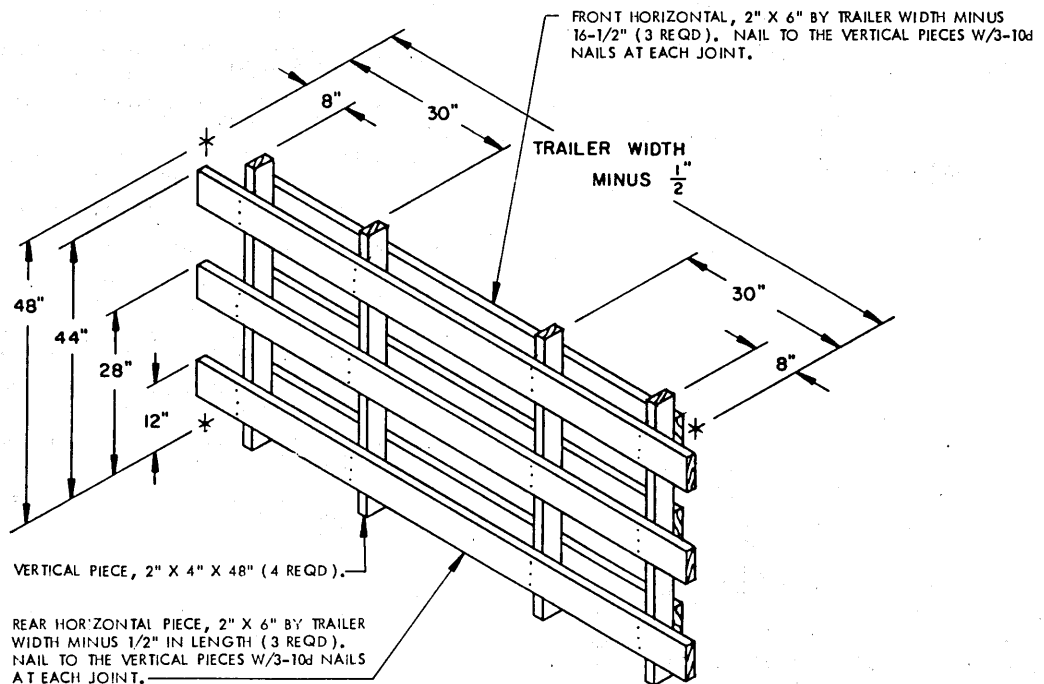
KEY NUMBERS

- ① FORWARD BLOCKING (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY C" DETAIL ON PAGE 17. SEE SPECIAL NOTE 2 AT LEFT AND GENERAL NOTE "J" ON PAGE 2.
- ② SIDE BLOCKING (2 @ 7'-10" LONG REQD). SEE THE "SIDE BLOCKING ASSEMBLY E" DETAIL AND DIMENSION CHART ON PAGE 17.
- ③ FLOOR RISER, 2" X 6" X 7'-10" (2 REQD). NAIL TO THE TRAILER FLOOR W/1-16d NAIL EVERY 12".
- ④ BLOCK (10 REQD). SEE THE "BLOCK A" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ③ AND ⑥ W/2-10d NAILS.
- ⑤ BLOCK (50 REQD). SEE THE "BLOCK B" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ③ AND ⑥ W/5-10d NAILS.
- ⑥ INTERMEDIATE PIECE, 2" X 6" X 7'-10" (4 REQD).
- ⑦ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD).
- ⑧ SIDE STRUT, 2" X 6" BY CUT-TO-FIT BETWEEN FORWARD AND REAR HEADERS, PIECES MARKED ⑦ (2 REQD).
- ⑨ POCKET CLEAT, 2" X 6" X 12" (4 REQD). NAIL TO SIDE STRUT, PIECE MARKED ⑧ W/3-10d NAILS. TOENAIL TO THE ADJACENT HEADER, PIECE MARKED ⑦ W/3-12d NAILS.
- ⑩ CENTER CLEAT, 2" X 6" X 30" (1 REQD). NAIL TO A HEADER, PIECE MARKED ⑦, W/6-10d NAILS.
- ⑪ DIAGONAL BRACE, 2" X 6" BY CUT-TO-FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS, INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO THE ADJACENT HEADER AND SIDE STRUT, PIECES MARKED ⑦ AND ⑧ W/2-16d NAILS AT EACH END.
- ⑫ BACK-UP CLEAT, 2" X 6" X 30" (2 REQD). NAIL TO A SIDE STRUT, PIECE MARKED ⑧, W/8-10d NAILS.
- ⑬ STRUT BRACE RETAINING CLEAT, 2" X 4" X 12" (AS REQD). NAIL TO A SIDE STRUT PIECE MARKED ⑧, W/3-10d NAILS.
- ⑭ STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 3" IN LENGTH (MINIMUM OF ONE REQUIRED). NAIL TO THE STRUT BRACE RETAINING CLEATS, PIECES MARKED ⑬, W/2-12d NAILS AT EACH END. SEE SPECIAL NOTE 7 AT LEFT.
- ⑮ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 16'-0" LONG STEEL STRAPPING (4 REQD). INSTALL TO ENCIRCLE 9 BOMBS AS SHOWN.
- ⑯ SEAL FOR 1-1/4" STRAPPING (4 REQD, 1 PER STRAP). DOUBLE NOTCH EACH SEAL. SEE GENERAL NOTE "Q" ON PAGE 2.
- ⑰ ANTI-CHAFING MATERIAL (AS REQD). PLACE UNDER STRAPPING AT ALL POINTS OF CONTACT WITH THE BOMB BODIES.
- ⑱ RUBBER MATTING (10 REQD) 5-1/2" WIDE X 8'-3" LONG. SEE SPECIAL NOTE 4 AT LEFT, "INSTALLATION OF RUBBER MATTING" ON PAGE 9, AND GENERAL NOTE "M" ON PAGE 2.



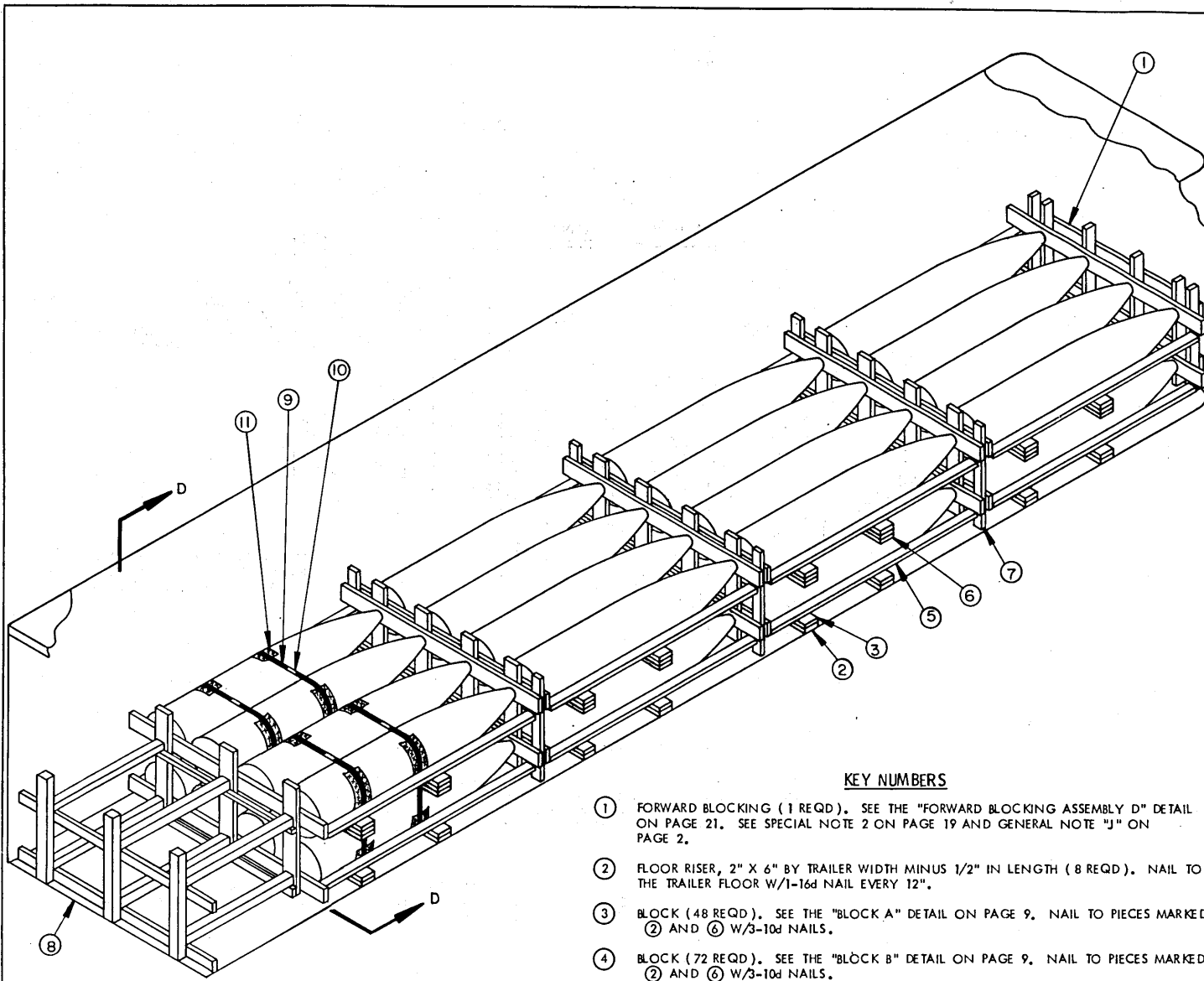
SIDE BLOCKING ASSEMBLY E

THIS SIDE BLOCKING ASSEMBLY IS APPLICABLE FOR A 3-LAYER LOAD OF 1,000 POUND BOMB BODIES IN A 7'-6" WIDE (INSIDE DIMENSION) TRAILER. IF A WIDER OR NARROWER TRAILER IS USED, INCREASE OR DECREASE THE WIDTH OF THE VERTICAL PIECES AS APPLICABLE.



FORWARD BLOCKING ASSEMBLY C

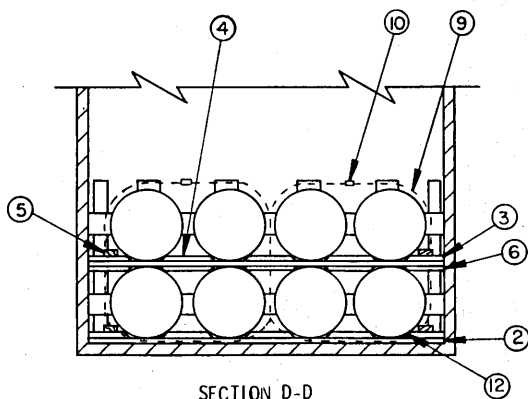
THIS FORWARD BLOCKING ASSEMBLY IS APPLICABLE FOR A 3-LAYER LOAD OF 1,000 POUND BOMB BODIES. IF LESS THAN 3 LAYERS ARE TO BE SHIPPED, THE ASSEMBLY MAY BE REDUCED IN HEIGHT ACCORDINGLY.



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY D" DETAIL ON PAGE 21. SEE SPECIAL NOTE 2 ON PAGE 19 AND GENERAL NOTE "J" ON PAGE 2.
- ② FLOOR RISER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (8 REQD). NAIL TO THE TRAILER FLOOR W/1-16d NAIL EVERY 12".
- ③ BLOCK (48 REQD). SEE THE "BLOCK A" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ② AND ⑥ W/3-10d NAILS.
- ④ BLOCK (72 REQD). SEE THE "BLOCK B" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ② AND ⑥ W/3-10d NAILS.
- ⑤ RETAINER, 2" X 4" X 8'-2" (16 REQD). NAIL TO BLOCK A, PIECE MARKED ③, W/2-10d NAILS AT EACH JOINT.
- ⑥ INTERMEDIATE RISER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (8 REQD).
- ⑦ SEPARATOR GATE (3 REQD). SEE THE "SEPARATOR GATE" DETAIL ON PAGE 21.
- ⑧ REAR BLOCKING (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 21.
- ⑨ BUNDLING STRAP, 1-1/4" X .035" OR .031" BY 13'-0" LONG STEEL STRAPPING (4 REQD). INSTALL TO ENCIRCLE FOUR BOMBS AS SHOWN.
- ⑩ SEAL FOR 1-1/4" STRAPPING; (4 REQD, 1 PER STRAP). DOUBLE NOTCH EACH SEAL. SEE GENERAL NOTE "Q" ON PAGE 2.
- ⑪ ANTI-CHAFING MATERIAL (AS REQD). PLACE UNDER STRAPPING AT ALL POINTS OF CONTACT WITH THE BOMB BODIES.
- ⑫ RUBBER MATTING (24 REQD) 5-1/2" WIDE X 7'-6" LONG. SEE SPECIAL NOTE 4 ON PAGE 19, "INSTALLATION OF RUBBER MATTING" ON PAGE 9, AND GENERAL NOTE "M" ON PAGE 2.



SECTION D-D

SPECIAL NOTES:

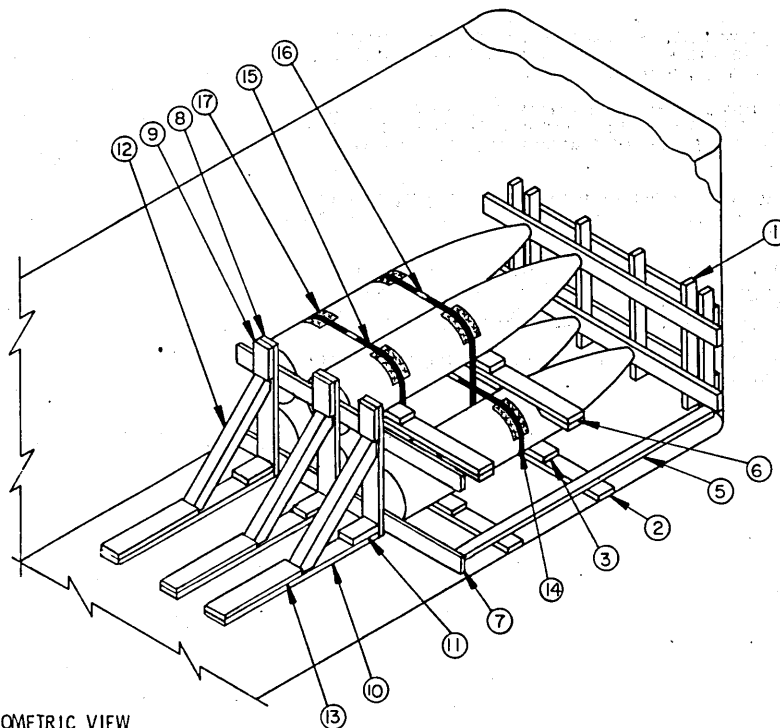
1. A 32-UNIT LOAD OF 2,000 POUND MK84 BOMB BODIES IS SHOWN IN A 40'-0" LONG VAN TRAILER WITH INSIDE DIMENSIONS OF 39'-6" LONG BY 7'-6" WIDE. TRAILERS OF OTHER SIZES MAY BE USED.
2. A TRAILER WITH ROUNDED CORNERS AT THE FORWARD END IS SHOWN IN THE LOAD ON PAGE 18. IF THE TRAILER BEING USED HAS SQUARE CORNERS, REPLACE THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①, WITH A SEPARATOR GATE, PIECE MARKED ②.
3. THE QUANTITY OF BOMB BODIES SHIPPED MAY BE REDUCED AS NECESSARY BY OMITTING STACKS OR THE SECOND LAYER OF BOMBS AND ADJUSTING THE DUNNAGE REQUIREMENTS.
4. RUBBER MATTING, DESCRIBED WITHIN GENERAL NOTE "M" ON PAGE 2 AND SHOWN ON PAGE 9, IS TO BE USED TO PROTECT THE SPECIAL PAINTED FINISH AND PREVENT DAMAGE TO THE BOMB BODIES. IN ADDITION, CARE MUST BE EXERCISED DURING LOADING AND UNLOADING OPERATIONS. SEE SPECIAL NOTE 5 ON PAGE 5.
5. SEE THE "NAILED-HEADER" METHOD ON PAGE 22 FOR ALTERNATIVE REAR BLOCK-IN BLOCKING PROCEDURES.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	6	2
2" X 4"	194	130
2" X 6"	363	363
4" X 4"	10	14
NAILS	NO. REQD	POUNDS
10d (3")	742	11-1/4
12d (3-1/4")	24	1/2
16d (3-1/2")	56	1
STEEL STRAPPING, 1-1/4" X .035" -----	52' REQD	7-1/2 LBS
SEAL FOR 1-1/4" STRAPPING -----	4 REQD	1/2 LB
RUBBER MAT, 1/4" X 5-1/2" -----	180' REQD	35 LBS
ANTI-CHAFING MATERIAL -----	AS REQD	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
2,000 LB BOMB -----	32	30,400 LBS
DUNNAGE -----		1,074 LBS
TOTAL WEIGHT -----		31,474 LBS



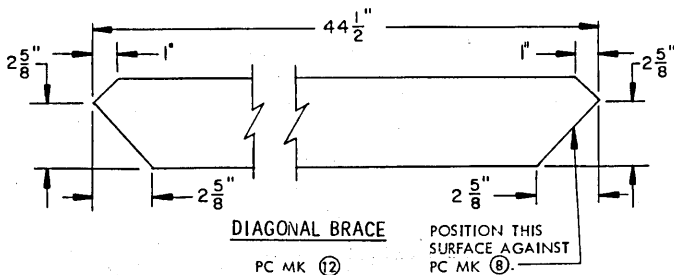
ISOMETRIC VIEW

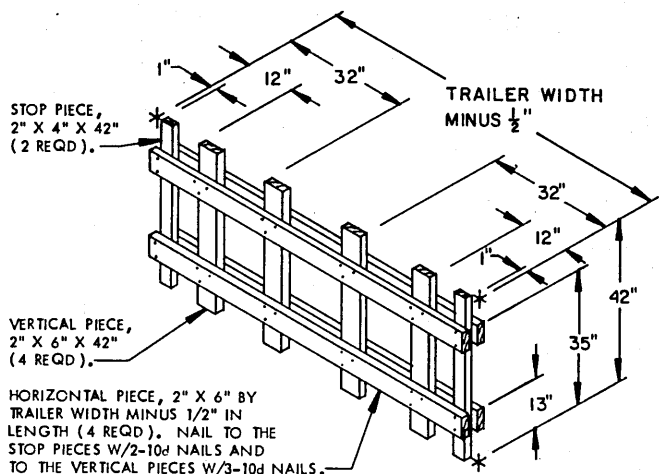
KEY NUMBERS

- ① FORWARD BLOCKING (1 REQD). SEE THE "FORWARD BLOCKING D" DETAIL ON PAGE 21. SEE SPECIAL NOTE 3 AT LEFT AND GENERAL NOTE "J" ON PAGE 2.
- ② FLOOR RISER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD). NAIL TO THE TRAILER FLOOR W/1-16d NAIL EVERY 12".
- ③ BLOCK (12 REQD). SEE THE "BLOCK A" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ② AND ⑥ W/3-10d NAILS.
- ④ BLOCK (10 REQD). SEE THE "BLOCK B" DETAIL ON PAGE 9. NAIL TO PIECES MARKED ② AND ⑥ W/3-10d NAILS.
- ⑤ RETAINER, 2" X 4" X 8'-2" (3 REQD). NAIL TO PIECE MARKED ③ AND/OR ② W/2-10d NAILS AT EACH JOINT.
- ⑥ INTERMEDIATE RISER, 2" X 6" X 68" (2 REQD).
- ⑦ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD). NAIL TO THE VERTICAL PIECES W/3-10d NAILS AT EACH JOINT.
- ⑧ VERTICAL PIECE, 2" X 6" BY LADING HEIGHT PLUS 3" (3 REQD).
- ⑨ HOLD-DOWN CLEAT, 2" X 6" X 9" (3 REQD). NAIL TO THE VERTICAL PIECES W/3-10d NAILS.
- ⑩ FLOOR CLEAT, 2" X 6" X 61-1/2" (3 REQD). NAIL TO THE TRAILER FLOOR W/8-10d NAILS.
- ⑪ SUPPORT CLEAT, 2" X 6" X 18" (3 REQD). NAIL TO THE FLOOR CLEAT W/4-10d NAILS AND TOENAIL TO THE VERTICAL PIECE W/2-12d NAILS.
- ⑫ DIAGONAL BRACE, 4" X 4" X 44-1/2" (3 REQD). TOENAIL TO THE VERTICAL PIECE AND THE FLOOR CLEAT W/2-12d NAILS AT EACH END. SEE THE "DIAGONAL BRACE" BELOW.
- ⑬ BACK-UP CLEAT, 2" X 6" X 30" (3 REQD). NAIL TO THE FLOOR CLEAT W/7-10d NAILS.
- ⑭ LATERAL BUNDLING STRAP, 1-1/4" X .035" OR .031" X 10'-0" LONG STEEL STRAPPING (2 REQD). ENCIRCLE 2 BOMBS IN THE FIRST LAYER AS SHOWN ABOVE.
- ⑮ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (2 REQD). ENCIRCLE 4 BOMBS AS SHOWN IN THE VIEW ABOVE.
- ⑯ SEAL FOR 1-1/4" STRAPPING (4 REQD, 1 PER STRAP) DOUBLE NOTCH EACH SEAL. SEE GENERAL NOTE "O" ON PAGE 2.
- ⑰ ANTI-CHAFING MATERIAL (AS REQD). PLACE UNDER STRAPPING AT ALL POINTS OF CONTACT WITH BOMB BODIES.
- ⑱ RUBBER MATTING (4 REQD) 5-1/2" WIDE X 7'-0" LONG. SEE SPECIAL NOTE 4 AT LEFT, "INSTALLATION OF RUBBER MATTING" ON PAGE 9, AND GENERAL NOTE "M" ON PAGE 2.

SPECIAL NOTES:

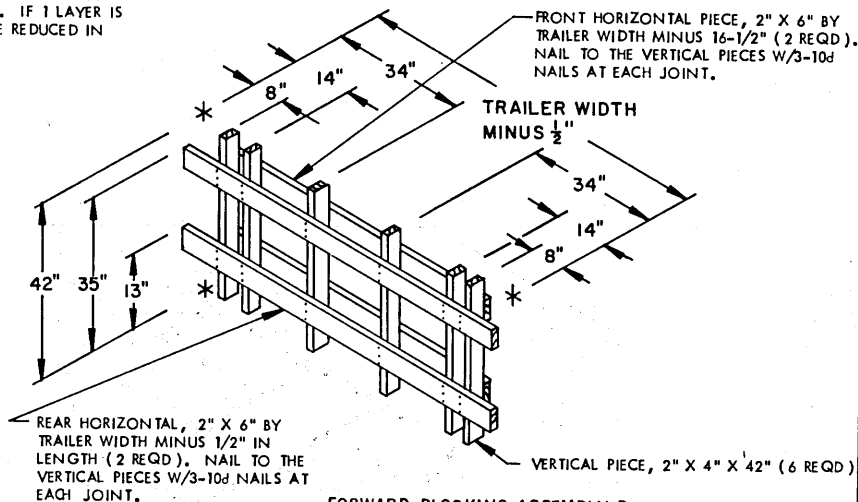
1. A 5-UNIT LOAD OF 2,000 POUND BOMB BODIES IS SHOWN. THESE UNLOADING PROCEDURES DEPICT THE USE OF "K-BRACE" TYPE BLOCKING IN A 7'-6" WIDE (INSIDE DIMENSION) VAN TRAILER.
2. THE DEPICTED "KNEE BRACE" BLOCKING WILL RETAIN A MAXIMUM OF 18,000 POUNDS.
3. A TRAILER WITH ROUNDED CORNERS AT THE FORWARD END IS SHOWN IN THE LOAD VIEW. IF THE TRAILER BEING USED HAS SQUARE CORNERS, REPLACE THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①, WITH A SEPARATOR GATE AS DETAILED ON PAGE 21.
4. RUBBER MATTING, DESCRIBED WITHIN GENERAL NOTE "M" ON PAGE 2 AND SHOWN ON PAGE 9, IS TO BE USED TO PROTECT THE SPECIAL PAINTED FINISH AND PREVENT DAMAGE TO THE BOMB BODIES. IN ADDITION, CARE MUST BE EXERCISED DURING LOADING AND UNLOADING OPERATIONS.





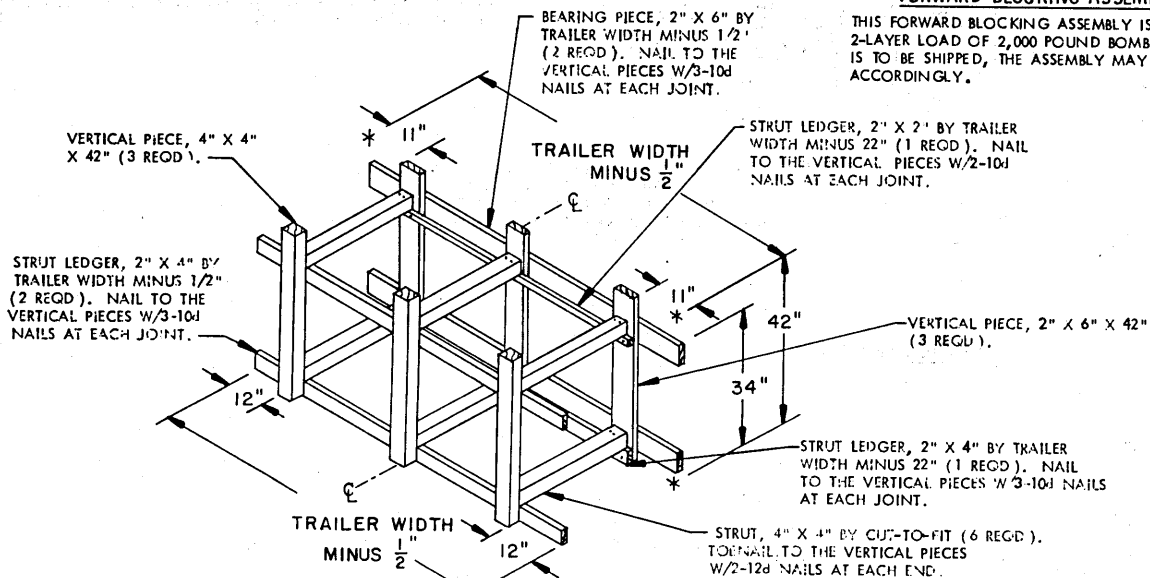
SEPARATOR GATE

THIS SEPARATOR GATE IS APPLICABLE FOR A 2-LAYER LOAD OF 2,000 POUND BOMB BODIES. IF 1 LAYER IS TO BE SHIPPED, THE ASSEMBLY MAY BE REDUCED IN HEIGHT ACCORDINGLY.



FORWARD BLOCKING ASSEMBLY D

THIS FORWARD BLOCKING ASSEMBLY IS APPLICABLE FOR A 2-LAYER LOAD OF 2,000 POUND BOMB BODIES. IF 1 LAYER IS TO BE SHIPPED, THE ASSEMBLY MAY BE REDUCED IN HEIGHT ACCORDINGLY.



REAR BLOCKING ASSEMBLY A



ONE SEAL WITH TWO PAIR OF NOTCHES.

STRAP JOINT A

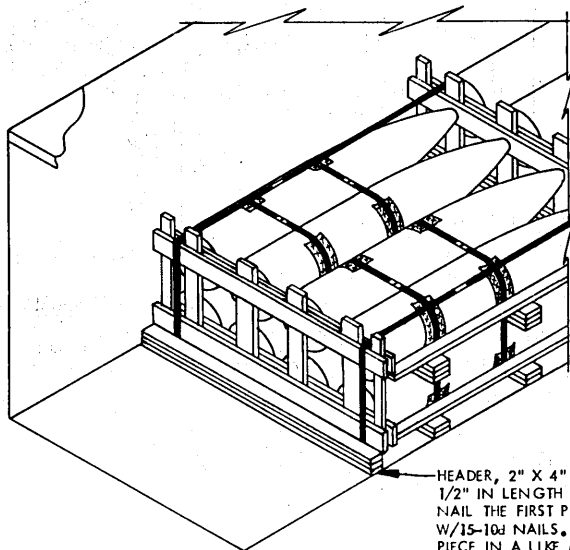
METHOD OF SECURING A STRAP JOINT WHEN USING A NOTCH-TYPE SEALER.



TWO SEALS, BUTTED TOGETHER, WITH TWO PAIR OF CRIMPS EACH SEAL.

STRAP JOINT B

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



HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (TRIPLED); (1 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/15-10# NAILS. NAIL EACH ADDITIONAL PIECE IN A LIKE MANNER.

NAILED-HEADER METHOD

SPECIAL NOTES:

1. THE TYPICAL NAILED-HEADER METHOD OF REAR BLOCKING DEPICTED AT THE LEFT CAN ONLY BE USED IN TRAILERS HAVING A NAILABLE FLOOR AREA BETWEEN THE LADING AND THE METAL THRESHOLD, OR A THRESHOLD PLATE IF THE TRAILER IS SO EQUIPPED, OF AT LEAST THREE (3) INCHES.
2. THE LOAD SHOWN IS TYPICAL, THE NAILED-HEADER METHOD SHOWN MAY BE USED FOR ANY OF THE LOADS AS SHOWN WITHIN THIS PROCEDURAL DRAWING.
3. THE NAILED-HEADER METHOD OF REAR BLOCKING IS ADEQUATE FOR THE RETENTION OF THE MAXIMUM WEIGHT LOAD.
4. THE NAILED-HEADER METHOD, ALTHOUGH DESIGNED ESPECIALLY FOR TRAILERS HAVING ROLL-UP TYPE DOORS, MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.