

JAGM

LOADING AND BRACING (TL & LTL) IN VAN TRAILERS[⊕] OF JOINT AIR- TO-GROUND MISSILE (JAGM) PACKED ONE PER METAL CON- TAINER, UNITIZED 6 CONTAINERS PER 4-WAY ENTRY PALLET

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

U.S. ARMY MATERIEL COMMAND DRAWING

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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 SPECIFIED OUTLOADING PROCEDURES ARE APPLICABLE TO LOADS OF JOINT AIR-TO-GROUND MISSILE (JAGM), PACKED ONE PER METAL CONTAINER, SIX CONTAINERS PER 4-WAY WOODEN PALLET. SUBSEQUENT REFERENCE TO PALLET UNIT HEREIN MEANS THE PALLET UNIT WITH AMMUNITION ITEMS. SEE PAGE 3 AND AMC DRAWING 19-48-5284-GM20JG1 FOR DETAILS OF THE PALLET UNIT. **CAUTION:** REGARDLESS OF THE QUANTITY OF PALLET UNITS TO BE SHIPPED, THE "MAXIMUM GROSS WEIGHT" OF THE VAN TRAILER MUST NOT BE EXCEEDED.
- C. THE OUTLOADING PROCEDURES DEPICTED WITHIN THIS DOCUMENT ARE APPLICABLE FOR SHIPMENTS IN CONVENTIONAL TYPE VAN TRAILERS AND APPLY TO TRAILERS HAVING WOOD, OR WOOD AND METAL, OR ALL METAL FLOORS. REGARDLESS OF THE DIMENSIONS OF THE VAN TRAILERS SHOWN, THE PROCEDURES ARE ALSO APPLICABLE FOR TRAILERS WHICH ARE 89" THRU 99" IN WIDTH AND FOR TRAILERS OF OTHER LENGTHS FROM THE SHORTEST TO THE LONGEST AVAILABLE (REF: 24' TO 53'), AND FOR STRAIGHT TRUCK VANS. THE SPECIFIED BRACING IS ADEQUATE FOR LOADS WEIGHING UP TO AND INCLUDING THE MAXIMUM WEIGHTS PERMITTED BY LAW.
- D. SELECTION OF A VEHICLE FOR THE TRANSPORT OF THE DESIGNATED ITEM IS THE RESPONSIBILITY OF THE ORIGINATING CARRIER AND THE SHIPPER. ONLY VEHICLES IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE REGULATORY DOCUMENTS WILL BE SELECTED FOR USE.
- E. 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. THE TOTAL WEIGHT OF THE LADING, OF THE DUNNAGE, OF THE TRACTOR, AND OF THE SEMITRAILER CARRYING THE LADING MUST NOT EXCEED THE MAXIMUM GROSS WEIGHT ALLOWED FOR THE STATE OR STATES THRU WHICH THE LOAD IS TO BE TRANSPORTED BY MOTOR CARRIER. LIKEWISE, THE GROSS WEIGHT ON A SINGLE OR TANDEM AXLE MUST NOT EXCEED THE MAXIMUM ALLOWABLE WEIGHT. IF THERE IS ANY DOUBT AS TO WHETHER THE TOTAL GROSS WEIGHT OR AXLE WEIGHT EXCEEDS THE MAXIMUM ALLOWED, WEIGHT SHOULD BE VERIFIED BY ACTUALLY WEIGHING THE LOADED VEHICLE.
- F. **NOTICE:** A SHIPMENT WILL BE POSITIONED IN THE TRAILER CONSISTENT WITH STATE WEIGHT LAWS. THE NUMBER OF LADING UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE TRAILER TO BE LOADED OR THE QUANTITY TO BE SHIPPED. COMBINATIONS OF THE OUTLOADING PROCEDURES SPECIFIED MAY BE USED, HOWEVER, THE APPROVED METHODS SHOWN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE DESIGNATED ITEMS.
- G. THE "LOAD AS SHOWN" FOR MOST OF THE FULL LOADS DEPICTED HEREIN IS BASED ON AN APPROXIMATE LADING WEIGHT OF 25,000 POUNDS. THE SPECIFIED BLOCKING AND BRACING FOR THE FULL LOADS IS ADEQUATE FOR THE RETENTION OF LOADS, UP TO 45,000 POUNDS, IF IT IS DESIRED TO INCREASE THE LADING WEIGHT.
- H. OTHER TYPES OF LADING ITEMS MAY BE LOADED 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.
- J. SOME LOADS ARE SHOWN IN TRAILERS HAVING ROUNDED CORNERS AT THE FORWARD END. IF THE CONVENTIONAL VAN TRAILER BEING USED IS EQUIPPED WITH A SQUARE FRONT OR WITH AN INSTALLED BULKHEAD, OMIT THE FORWARD BLOCKING ASSEMBLY, AND POSITION THE PALLET UNITS DIRECTLY AGAINST THE FORWARD PORTION OF THE TRAILER.
- 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 "END-OVER-END LAP JOINT DETAILS" ON PAGE 3 FOR GUIDANCE.

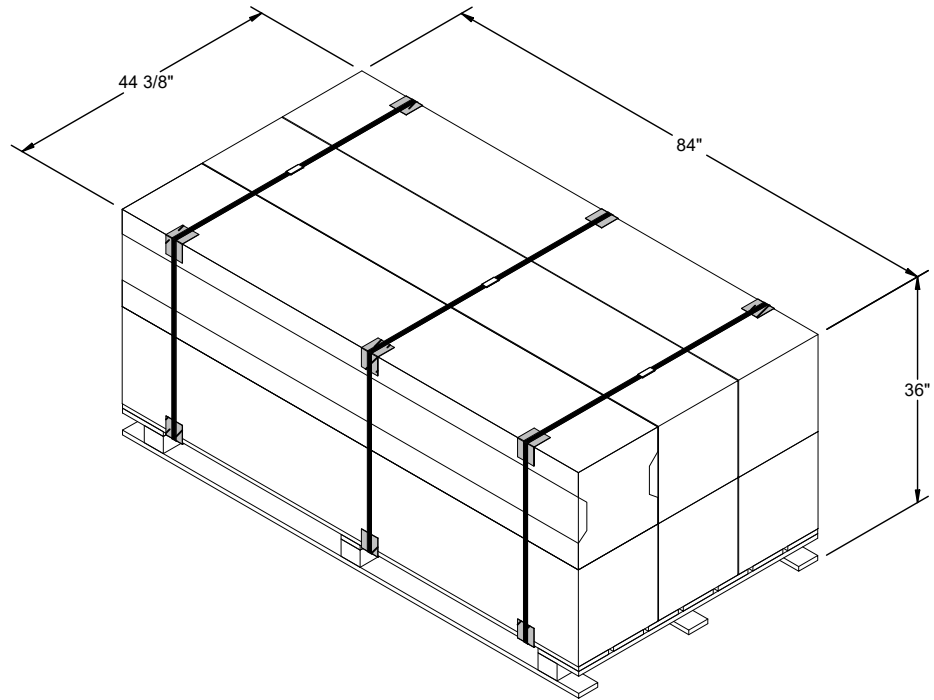
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MATERIAL SPECIFICATIONS

- LUMBER** - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND VOLUNTARY PRODUCT STANDARD PS 20.
- NAILS** - - - - - : ASTM F1667; COMMON STEEL NAIL (NLCMS OR NLCMS).
- STRAPPING, STEEL** - - : ASTM D3953; FLAT STRAPPING, TYPE 1, HEAVY DUTY, FINISH A, B (GRADE 2), OR C.
- SEAL, STRAP** - - - - : ASTM D3953; CLASS H, FINISH A, B (GRADE 2), OR C, DOUBLE NOTCH TYPE, STYLE I, II, OR IV.

(GENERAL NOTES CONTINUED)

- L. 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.
- M. POWER DRIVEN STAPLES MAY BE USED AS ALTERNATIVE FASTENERS FOR NAILS WHEN CONSTRUCTING DUNNAGE ASSEMBLIES THAT ARE TO BE USED IN THE DELINEATED TRAILER LOADS SHOWN THROUGHOUT THIS DRAWING. THE STAPLES TO BE USED MUST BE EQUAL IN LENGTH TO THE SPECIFIED NAIL SIZE AND MUST BE SUBSTITUTED ON A ONE STAPLE FOR ONE NAIL BASIS. STAPLES WHICH ARE 2-1/2" OR LESS IN LENGTH SHOULD BE IN ACCORDANCE WITH ASTM F1667 AS NEARLY AS PRACTICABLE. STAPLES THAT 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.
- N. **CAUTION:** WHEN POWER OR PNEUMATIC NAILERS ARE BEING USED IN THE APPLICATION OF NAILED FLOORLINE BLOCKING OR BRACING, PALLET UNITS BEING LOADED INTO THE CONVEYANCE MUST BE POSITIONED TO ALLOW A CLEAR PATH OF EXIT FOR THE OPERATOR AT ALL TIMES, SHOULD AN EMERGENCY EXIT BECOME NECESSARY.
- O. IF THE SPACE AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR MEASURES 1-1/2" OR LESS REAR BLOCKING IS NOT REQUIRED. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THE 9", USE THE "REAR BLOCKING ASSEMBLY A" AS DEPICTED ON PAGE 17. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY B", AS SHOWN ON PAGE 17. **NOTE:** REAR BLOCKING ASSEMBLIES MAY BE REPLACED WITH NAILED HEADERS AT THE REAR OF THE LOAD, PROVIDED THE TRAILER IS CONFIGURED SUCH AS TO ALLOW NAILING IN THE AREA IN QUESTION. REFER TO THE LOAD ON PAGE 6 AND THE HEADER NAILING CHARTS ON PAGE 7 FOR GUIDANCE. **CAUTION:** THE NAILED HEADER METHOD IS REQUIRED WHEN LOADING VAN TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS.
- P. PORTIONS OF THE TRAILERS, SUCH AS SIDEWALLS, ENDWALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- Q. THE PALLET UNITS THAT DO NOT CONTAIN A FULL QUANTITY OF ITEMS CAN BE TRANSPORTED. SEE THE "SHIPMENT OF A PARTIAL PALLET UNIT" DETAILS ON PAGE 19. FOR "SHIPMENT OF LEFTOVER CONTAINERS" SEE THE DETAILS ON PAGE 18.
- R. THESE PROCEDURES CAN ALSO BE UTILIZED FOR THE SHIPMENT OF PALLET UNITS OF METAL CONTAINERS WHEN THEY ARE LOADED WITH AN ITEM OTHER THAN THE SPECIFIED MUNITION, OR WHEN THEY ARE EMPTY.
- S. 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.
- T. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES, AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENTS MAY BE COMPUTED ON THE BASIS OF ONE INCH EQUALS 25.4MM, AND ONE POUND EQUALS 0.454 KG.



PALLET UNIT

GROSS WEIGHT - - - - - 1,357 LBS
 CUBE - - - - - 77.7 CU FT



ONE SEAL WITH
 TWO PAIR OF
 NOTCHES.

STRAP JOINT A

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

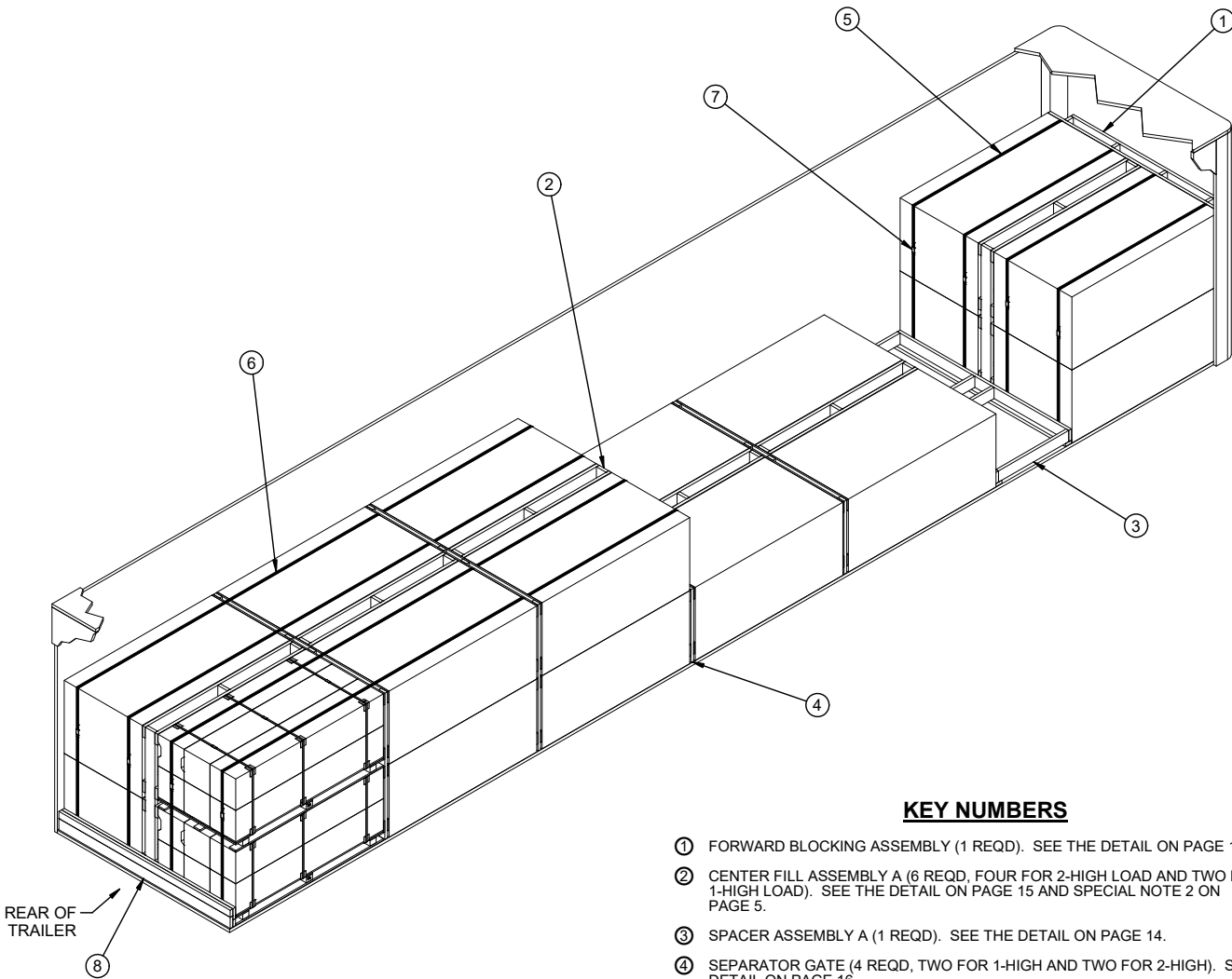


TWO SEALS, BUTTED
 TOGETHER, WITH
 TWO PAIR OF CRIMPS
 EACH SEAL.

STRAP JOINT B

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

END-OVER-END LAP JOINT DETAILS



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 14.
- ② CENTER FILL ASSEMBLY A (6 REQD, FOUR FOR 2-HIGH LOAD AND TWO FOR 1-HIGH LOAD). SEE THE DETAIL ON PAGE 15 AND SPECIAL NOTE 2 ON PAGE 5.
- ③ SPACER ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 14.
- ④ SEPARATOR GATE (4 REQD, TWO FOR 1-HIGH AND TWO FOR 2-HIGH). SEE THE DETAIL ON PAGE 16.
- ⑤ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 26'-6" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNITS AS SHOWN. SEE SPECIAL NOTE 4 ON PAGE 5.
- ⑥ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 41'-0" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNITS IN THE SECOND LAYER AND TWO UNITS DIRECTLY BELOW AS SHOWN. SEE SPECIAL NOTE 5 ON PAGE 5.
- ⑦ SEAL FOR 1-1/4" STRAPPING (12 REQD, 1 PER STRAP). DOUBLE NOTCH EACH SEAL WITH TWO PAIR OF NOTCHES. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 3.
- ⑧ REAR BLOCKING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 17 AND SPECIAL NOTE 3 ON PAGE 5.

BILL OF MATERIAL

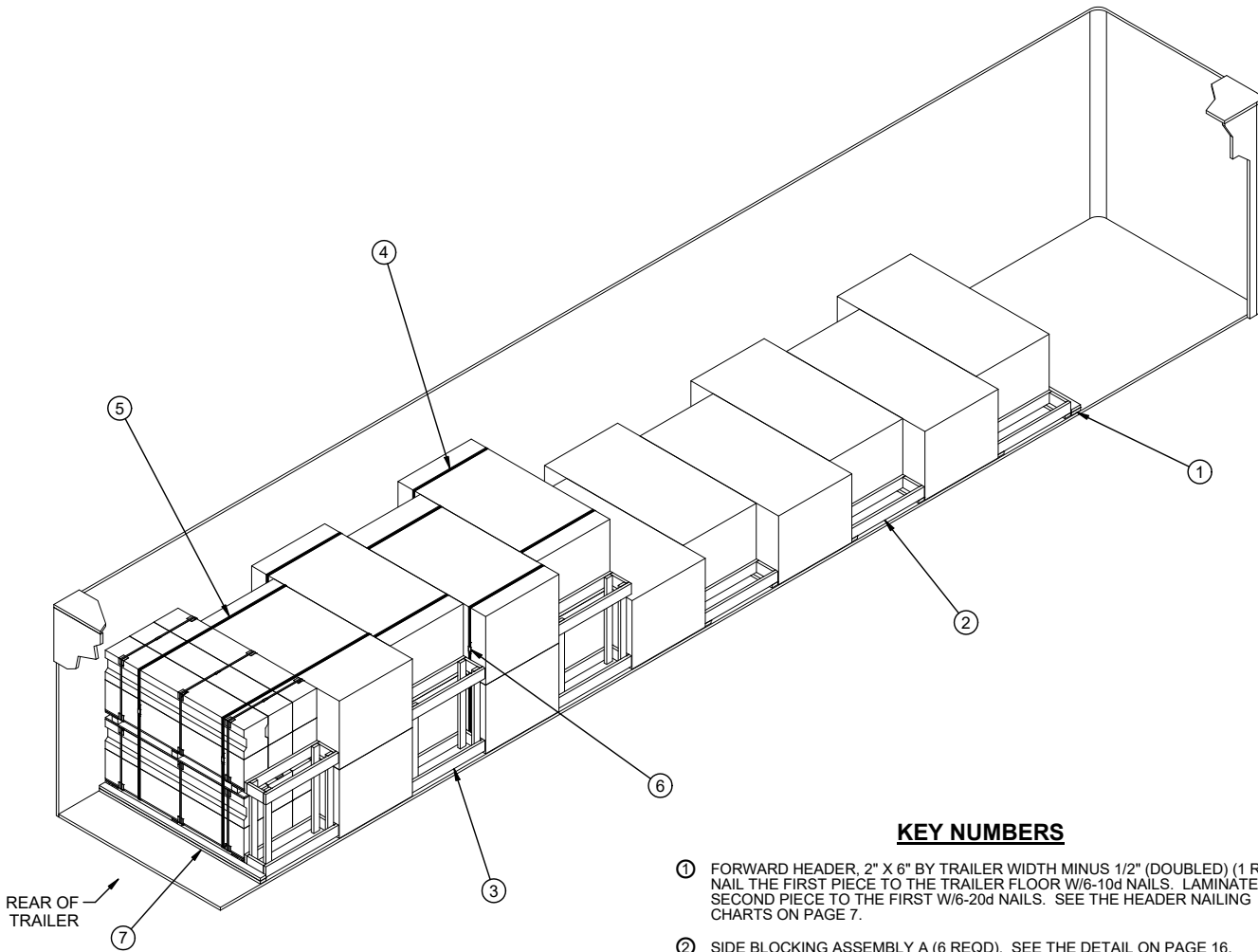
LUMBER	LINEAR FEET	BOARD FEET
1" x 6"	195	98
2" x 4"	129	86
2" x 6"	476	476
NAILS	NO. REQD	POUNDS
6d (2")	288	1-3/4
10d (3")	516	8
STEEL STRAPPING, 1-1/4" - - 376' REQD - - 54 LBS		
SEAL FOR 1-1/4" STRAPPING - - 12 REQD - - 1/2 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	20 - - - - -	27,140 LBS
DUNNAGE - - - - -	- - - - -	1,384 LBS
TOTAL WEIGHT - - - - -		28,524 LBS (APPROX)

SPECIAL NOTES:

1. A 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER WITH ROUNDED FRONT CORNERS IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED. IF A TRAILER WITH SQUARE FRONT CORNERS IS TO BE LOADED, THE FORWARD BLOCKING ASSEMBLY MAY BE OMITTED.
2. CENTER FILL ASSEMBLIES MAY BE OMITTED WHEN THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS 3" OR LESS, AS MEASURED FROM PALLET UNIT.
3. IF THE SPACE AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR IS GREATER THAN 1-1/2" BUT LESS THAN 9", USE THE "REAR BLOCKING ASSEMBLY A" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY B" AS DEPICTED ON PAGE 17. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED. **NOTE:** REAR BLOCKING ASSEMBLIES MAY BE REPLACED WITH NAILED HEADERS AT THE REAR OF THE LOAD, PROVIDED THE TRAILER IS CONFIGURED SUCH AS TO ALLOW NAILING IN THE AREA IN QUESTION. REFER TO THE REAR HEADER ON PAGE 6 AND THE HEADER NAILING CHARTS ON PAGE 7 FOR GUIDANCE.
4. IF THE CENTER PORTION OF THE LENGTH OF THE TOP TIER IS NOT COMPLETE, THE UNITIZING STRAPS WILL BE APPLIED AROUND THE REARMOST COMPLETE STACK AND AROUND THE MOST FORWARD COMPLETE STACK IN EACH ROW WHERE THE NUMBER OF TIERS (LAYERS IN THE LOAD) CHANGES BY ONE.
5. IF A STACK AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH AS IN THE DEPICTED LOAD, THE BUNDLING STRAPS MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
6. THE DEPICTED LOAD CAN BE ADJUSTED TO SUIT THE QUANTITY TO BE SHIPPED, OR TO SUIT THE WEIGHT OF THE UNIT BEING LOADED.
7. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED TWO CONTAINERS MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 18 FOR GUIDANCE.
8. REFER TO PAGE 19 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (1 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-10d NAILS. LAMINATE THE SECOND PIECE TO THE FIRST W/6-20d NAILS. SEE THE HEADER NAILING CHARTS ON PAGE 7.
- ② SIDE BLOCKING ASSEMBLY A (6 REQD). SEE THE DETAIL ON PAGE 16.
- ③ SIDE BLOCKING ASSEMBLY B (5 REQD). SEE THE DETAIL ON PAGE 16.
- ④ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 19'-10" LONG STEEL STRAPPING (6 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNITS AS SHOWN. SEE SPECIAL NOTE 3 ON PAGE 7.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 27'-2" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNITS IN THE SECOND LAYER AND TWO UNITS DIRECTLY BELOW AS SHOWN. SEE SPECIAL NOTE 4 ON PAGE 7.
- ⑥ SEAL FOR 1-1/4" STRAPPING (8 REQD, 1 PER STRAP). DOUBLE NOTCH EACH SEAL WITH TWO PAIR OF NOTCHES. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 3.
- ⑦ REAR HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (1 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/9-10d NAILS. LAMINATE THE SECOND PIECE TO THE FIRST W/9-20d NAILS. SEE SPECIAL NOTE 2 AND THE HEADER NAILING CHARTS ON PAGE 7.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" x 2"	40	13
2" x 4"	104	70
2" x 6"	160	160
NAILS	NO. REQD	POUNDS
10d (3")	441	7
20d (4")	14	1/2
STEEL STRAPPING, 1-1/4" - - 174' REQD - - 25 LBS		
SEAL FOR 1-1/4" STRAPPING - - 8 REQD - - 1/2 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	16	21,712 LBS
DUNNAGE		519 LBS
TOTAL WEIGHT		22,231 LBS (APPROX)

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

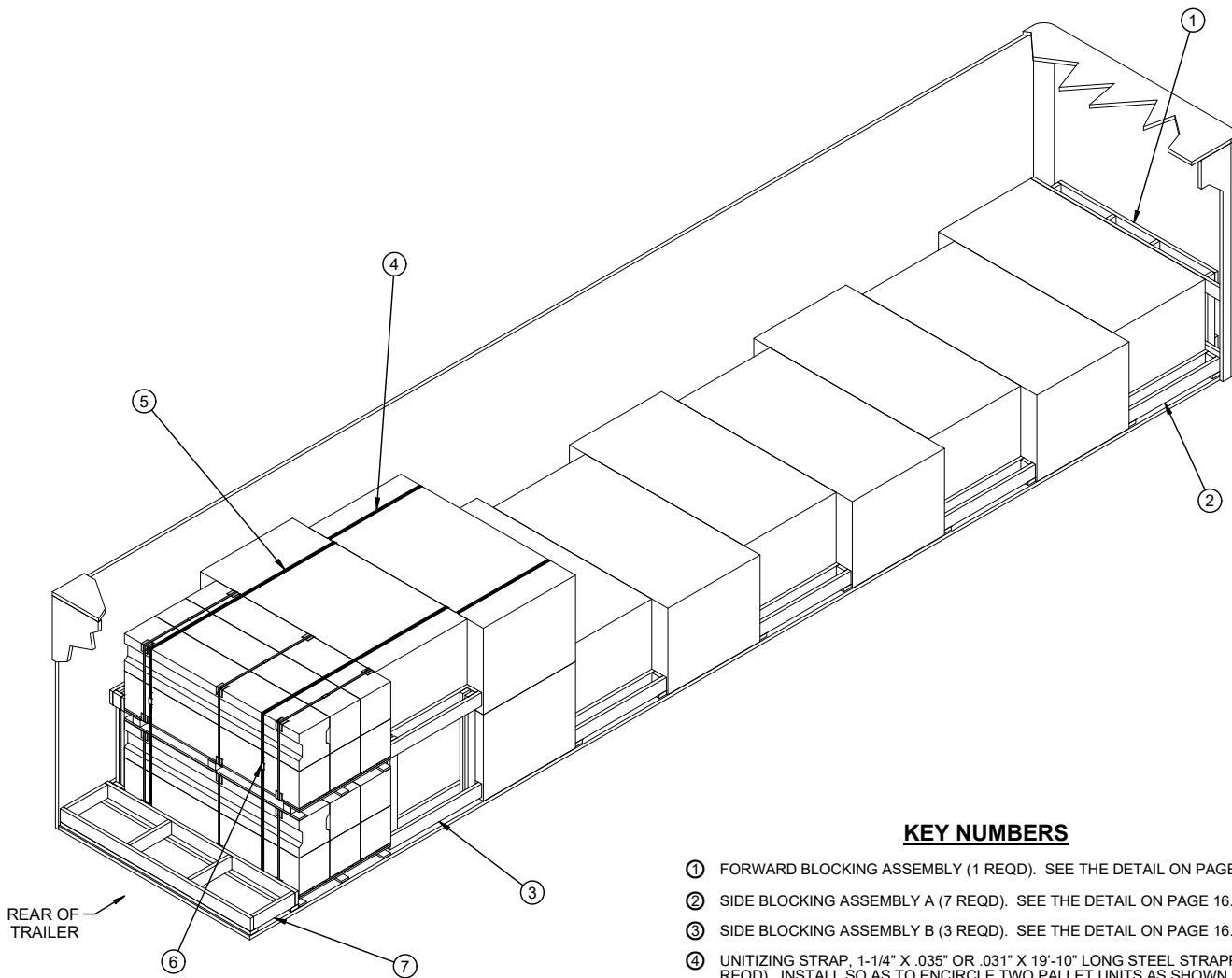
® HEADERS AT THE FRONT END OF A LOAD OR AT THE FRONT END OF A DIVIDED LOAD WILL BE DOUBLED 2" X 6" MATERIAL. THE NUMBER OF NAILS INDICATED ABOVE REFERS TO THE NUMBER OF NAILS USED IN EACH LAMINATION OF A HEADER, FOR EXAMPLE 8 NAILS MEANS THE FIRST BOARD IS NAILED TO THE TRAILER FLOOR W/8-10d NAILS, AND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

REAR HEADER NAILING CHART*	
#NAILS	MAX. LOAD WEIGHT (LBS)
6	15,000
7	17,500
8	20,000
9	22,500
10	25,000
11	27,500
12	30,000
13	32,500
14	35,000
15	37,500
16	40,000
17	42,500
18	45,000

* HEADERS AT THE REAR OF A FULL LOAD OR AT THE REAR END OF A DIVIDED LOAD WILL BE DOUBLED 2" X 4" MATERIAL. THE NUMBER OF NAILS INDICATED ABOVE REFERS TO THE NUMBER OF NAILS USED IN EACH LAMINATION OF A HEADER, FOR EXAMPLE 8 NAILS MEANS THE FIRST BOARD IS NAILED TO THE TRAILER FLOOR W/8-10d NAILS, AND THE SECOND BOARD IS LAMINATED TO THE FIRST W/8-10d NAILS, FOR A TOTAL OF 16-10d NAILS. A MINIMUM OF 6 PAIRS OF NAILS WILL BE USED FOR TRAILER WIDTH HEADERS. **NOTE:** REAR HEADERS MAY BE HANDLED IN THE SAME MANNER AS FORWARD HEADERS, USING 2" X 6" MATERIAL WITH 10d AND 20d NAILS, IF DESIRED.

SPECIAL NOTES:

1. A 53'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER WITH A NAILABLE FLOOR IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. IF THE SPACE AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED. IF THE TRAILER IS EQUIPPED WITH A METAL THRESHOLD PLATE AND IT INTERFERES WITH THE NAILING THE HEADER, ONE OF THE REAR BLOCKING ASSEMBLIES DESCRIBED BELOW MUST BE INSTALLED. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9", USE THE "REAR BLOCKING ASSEMBLY A" AS DEPICTED ON PAGE 17. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY B" AS DEPICTED ON PAGE 17.
3. IF THE CENTER PORTION OF THE LENGTH OF THE TOP TIER IS NOT COMPLETE, THE UNITIZING STRAPS WILL BE APPLIED AROUND THE REARMOST COMPLETE STACK AND AROUND THE MOST FORWARD COMPLETE STACK IN EACH ROW WHERE THE NUMBER OF TIERS (LAYERS IN THE LOAD) CHANGES BY ONE.
4. IF A STACK AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH AS IN THE DEPICTED LOAD, THE BUNDLING STRAPS MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
5. THE DEPICTED LOAD CAN BE ADJUSTED TO SUIT THE QUANTITY TO BE SHIPPED, OR TO SUIT THE WEIGHT OF THE UNIT BEING LOADED.
6. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED TWO CONTAINERS MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 18 FOR GUIDANCE.
7. REFER TO PAGE 19 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.



REAR OF TRAILER

ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 14.
- ② SIDE BLOCKING ASSEMBLY A (7 REQD). SEE THE DETAIL ON PAGE 16.
- ③ SIDE BLOCKING ASSEMBLY B (3 REQD). SEE THE DETAIL ON PAGE 16.
- ④ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 19'-10" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNITS AS SHOWN. SEE SPECIAL NOTE 3 ON PAGE 7.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 27'-2" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNITS IN THE SECOND LAYER AND TWO UNITS DIRECTLY BELOW AS SHOWN. SEE SPECIAL NOTE 4 ON PAGE 7.
- ⑥ SEAL FOR 1-1/4" STRAPPING (4 REQD, 1 PER STRAP). DOUBLE NOTCH EACH SEAL WITH TWO PAIR OF NOTCHES. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 3.
- ⑦ REAR BLOCKING ASSEMBLY B (1 REQD). SEE THE DETAIL ON PAGE 17 AND SPECIAL NOTE 2 ON PAGE 9.

BILL OF MATERIAL

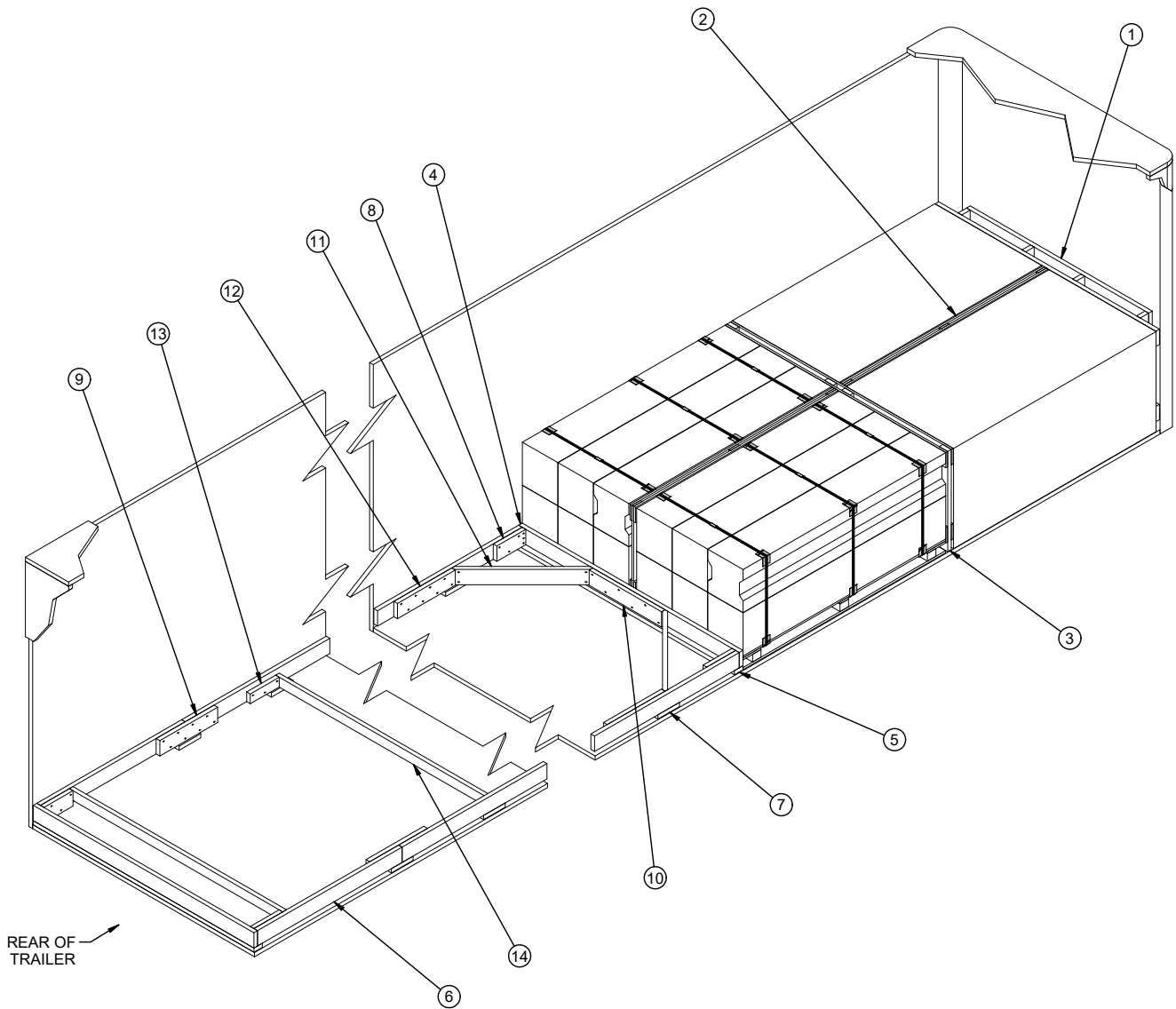
LUMBER	LINEAR FEET	BOARD FEET
2" x 2"	37	12
2" x 4"	81	54
2" x 6"	154	154
NAILS	NO. REQD	POUNDS
10d (3")	436	6-3/4
STEEL STRAPPING, 1-1/4" - - 94' REQD - - 14 LBS		
SEAL FOR 1-1/4" STRAPPING - - 8 REQD - - 1/4 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	13 - - - - -	17,641 LBS
DUNNAGE - - - - -	- - - - -	461 LBS
TOTAL WEIGHT - - - - -		18,102 LBS (APPROX)

SPECIAL NOTES:

1. A 45'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER WITH ROUNDED FRONT CORNERS IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED. IF A TRAILER WITH SQUARE FRONT CORNERS IS TO BE LOADED, THE FORWARD BLOCKING ASSEMBLY MAY BE OMITTED.
2. IF THE SPACE AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY B" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9", USE THE "REAR BLOCKING ASSEMBLY A" AS DEPICTED ON PAGE 17. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED. **NOTE:** REAR BLOCKING ASSEMBLIES MAY BE REPLACED WITH NAILED HEADERS AT THE REAR OF THE LOAD, PROVIDED THE TRAILER IS CONFIGURED SUCH AS TO ALLOW NAILING IN THE AREA IN QUESTION. REFER TO THE REAR HEADER ON PAGE 6 AND THE HEADER NAILING CHARTS ON PAGE 7 FOR GUIDANCE.
3. IF THE CENTER PORTION OF THE LENGTH OF THE TOP TIER IS NOT COMPLETE, THE UNITIZING STRAPS WILL BE APPLIED AROUND THE REARMOST COMPLETE STACK AND AROUND THE MOST FORWARD COMPLETE STACK IN EACH ROW WHERE THE NUMBER OF TIERS (LAYERS IN THE LOAD) CHANGES BY ONE.
4. IF A STACK AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH AS IN THE DEPICTED LOAD, THE BUNDLING STRAPS MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
5. THE DEPICTED LOAD CAN BE ADJUSTED TO SUIT THE QUANTITY TO BE SHIPPED, OR TO SUIT THE WEIGHT OF THE UNIT BEING LOADED.
6. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED TWO CONTAINERS MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 18 FOR GUIDANCE.
7. REFER TO PAGE 19 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

- ⑨ SPLICE PIECE, 2" X 6" X 24" (AS REQD). CENTER ON JOINT OF PIECE AND NAIL TO SIDE STRUT W/4-10d NAILS AT EACH END. SEE SPECIAL NOTE 4 ON PAGE 11.
- ⑩ CENTER CLEAT, 2" X 6" X 30" (1 REQD). NAIL TO A HEADER 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 W/2-16d NAILS AT EACH END.
- ⑫ BACK-UP CLEAT, 2" X 6" X 24" (2 REQD). NAIL TO A SIDE STRUT W/8-10d NAILS.
- ⑬ STRUT BRACE RETAINING CLEAT, 2" X 4" X 12" (AS REQD). NAIL TO A SIDE STRUT W/3-10d NAILS. SEE SPECIAL NOTE 5 ON PAGE 11.
- ⑭ STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 3" IN LENGTH (MINIMUM OF ONE REQUIRED). NAIL TO THE POCKET CLEATS AND/OR TO THE STRUT BRACE RETAINING CLEATS, W/2-12d NAILS AT EACH END. SEE SPECIAL NOTE 5 ON PAGE 11.

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 14.
- ② CENTER FILL ASSEMBLY B (2 REQD). SEE DETAIL ON PAGE 15.
- ③ SEPARATOR GATE (1 REQD). SEE THE DETAIL ON PAGE 16.
- ④ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD). SEE SPECIAL NOTE 7 ON PAGE 11.
- ⑤ HEADER AND SIDE STRUT SUPPORT, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD). NAIL TO THE BOTTOM EDGE OF A HEADER W/1-10d NAIL EVERY 8".
- ⑥ SIDE STRUT, 2" X 6" BY CUT TO FIT BETWEEN THE FORWARD AND REAR HEADERS (2 REQD). SEE SPECIAL NOTE 4 ON PAGE 11.
- ⑦ RISER PIECE, 2" X 4" X 9" (AS REQD). CENTER UNDER THE JOINTS OF THE DIAGONAL BRACE AND BACK-UP CLEAT, AND UNDER THE JOINTS OF THE STRUT BRACE RETAINING CLEAT AND STRUT BRACE, AND UNDER THE SPLICE OF SIDE STRUT IF APPLICABLE. NAIL TO SIDE STRUT W/2-10d NAILS.
- ⑧ POCKET CLEAT, 2" X 6" X 12" (4 REQD). NAIL TO A SIDE STRUT W/3-10d NAILS. TOENAIL TO THE ADJACENT HEADER W/3-12d NAILS.

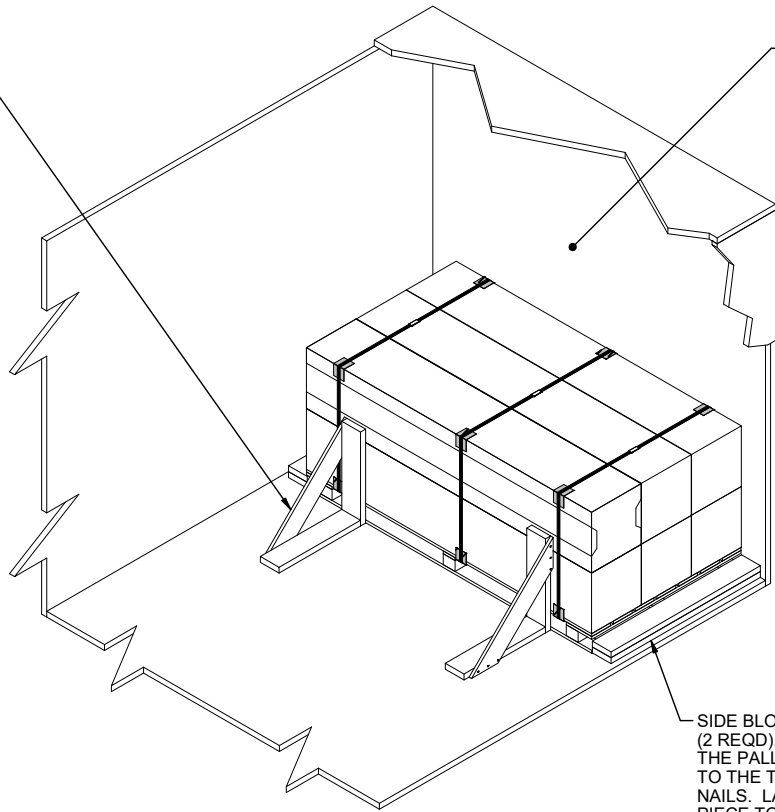
(CONTINUED AT LEFT)

SPECIAL NOTES:

1. A 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER WITH ROUNDED FRONT CORNERS IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED. IF A TRAILER WITH SQUARE FRONT CORNERS IS TO BE LOADED, THE FORWARD BLOCKING ASSEMBLY MAY BE OMITTED.
2. CENTER FILL ASSEMBLY MAY BE OMITTED WHEN THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS 3" OR LESS, AS MEASURED FROM PALLET UNIT TO PALLET UNIT.
3. THE "SIDE BLOCKING ASSEMBLY A" AS DEPICTED ON PAGE 16 MAY REQUIRE IF LOADING OF AN ODD NUMBER OF PALLET UNITS.
4. DEPENDING ON THE NUMBER OF UNITS BEING LOADED, EACH OF THE SIDE STRUTS 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. **CAUTION:** A RISER PIECE MUST BE POSITIONED UNDER EACH SPLICE JOINT. IF DESIRED, THE STRUT BRACE PIECE(S) MAY BE NAILED TO THE SPLICE PIECES IN LIEU OF USING ADDITIONAL STRUT BRACE RETAINING CLEATS.
5. ALL LTL LOADS, REGARDLESS OF THEIR SIZE, REQUIRE ONE STRUT BRACE POSITIONED AT THE REAR OF THE TRAILER AND NAILED TO THE POCKET CLEAT. IF THE SIDE STRUTS ARE LONGER THAN 7'-0", AN ADDITIONAL STRUT BRACE AND TWO STRUT BRACE RETAINING CLEATS, AND TWO RISER PIECES MUST BE APPLIED FOR EVERY 7'-0" OF SIDE STRUT LENGTH.
6. THE "K-BRACE" BLOCKING IS ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD OF 20,000 POUNDS.
7. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, THE NAILED-HEADER METHOD OF REAR BLOCKING MUST BE INSTALLED IN LIEU OF THE "K-BRACE" TYPE BLOCKING. REFER TO THE LOAD ON PAGE 6 AND THE HEADER NAILING CHARTS ON PAGE 7 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD OF REAR BLOCKING MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS AND NAILABLE FLOORS, AND MAY BE USED IN LIEU OF THE "K-BRACE" PIECES WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS.
8. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED TWO CONTAINERS MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 18 FOR GUIDANCE.
9. REFER TO PAGE 19 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

LTL BRACE (2 REQD). SEE THE DETAIL BELOW. NAIL TO THE TRAILER FLOOR W/5-10d NAILS.

FORWARD END OF TRAILER

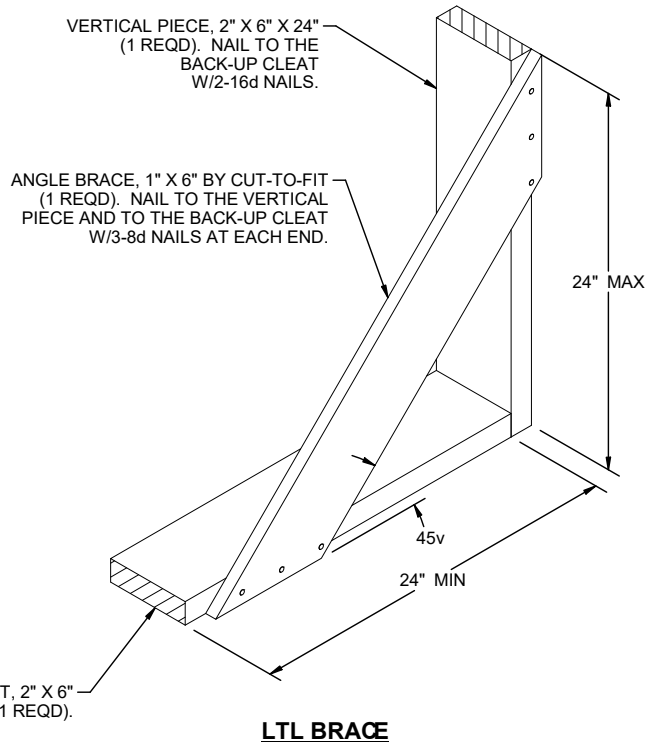


SIDE BLOCKING, 2" X 6" X 44" (DOUBLED) (2 REQD). POSITION TIGHT AGAINST THE PALLET. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/4-10d NAILS. LAMINATE THE SECOND PIECE TO THE FIRST W/4-10d NAILS.

ISOMETRIC VIEW

SPECIAL NOTES:

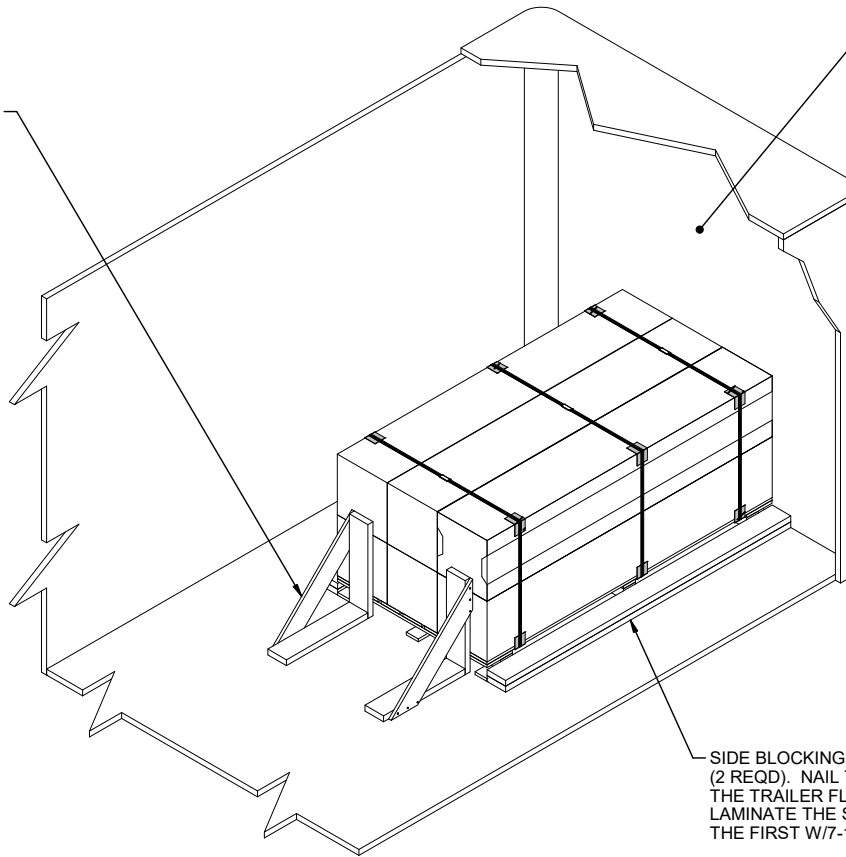
1. A 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER WHICH HAS A NAILABLE FLOOR IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
2. THE POSITIONING OF A UNIT IS OPTIONAL. UNITS MAY ALSO BE LOCATED IN THE CORNER OF THE TRAILER, IF DESIRED. IF THE TRAILER DOES NOT HAVE A SQUARE FRONT, A FORWARD BLOCKING ASSEMBLY MUST BE INSTALLED WHEN POSITIONING A UNIT IN THE CORNER OF THE TRAILER. SEE THE DETAIL ON PAGE 14.
3. MORE THAN ONE PALLET UNIT CAN BE SHIPPED, PROVIDING THE CAPACITY OF THE LTL BRACES IS NOT EXCEEDED. THE LOAD SHOULD BE FORMED IN ROWS, WITH THE UNITS POSITIONED AGAINST OPPOSITE SIDEWALLS. THE PROPER CENTER FILL ASSEMBLIES, IF REQUIRED, WILL BE INSTALLED BETWEEN THE LATERALLY ADJACENT UNITS. SEE THE DETAILS ON PAGE 15.
4. EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS OF LADING; HOWEVER, NOT LESS THAN TWO BRACES WILL BE USED AGAINST EACH PALLET UNIT ACROSS THE WIDTH OF THE TRAILER.



LTL BRACE

LTL BRACE (2 REQD). SEE THE DETAIL ON PAGE 12. NAIL TO THE TRAILER FLOOR W/5-10d NAILS.

FORWARD END OF TRAILER



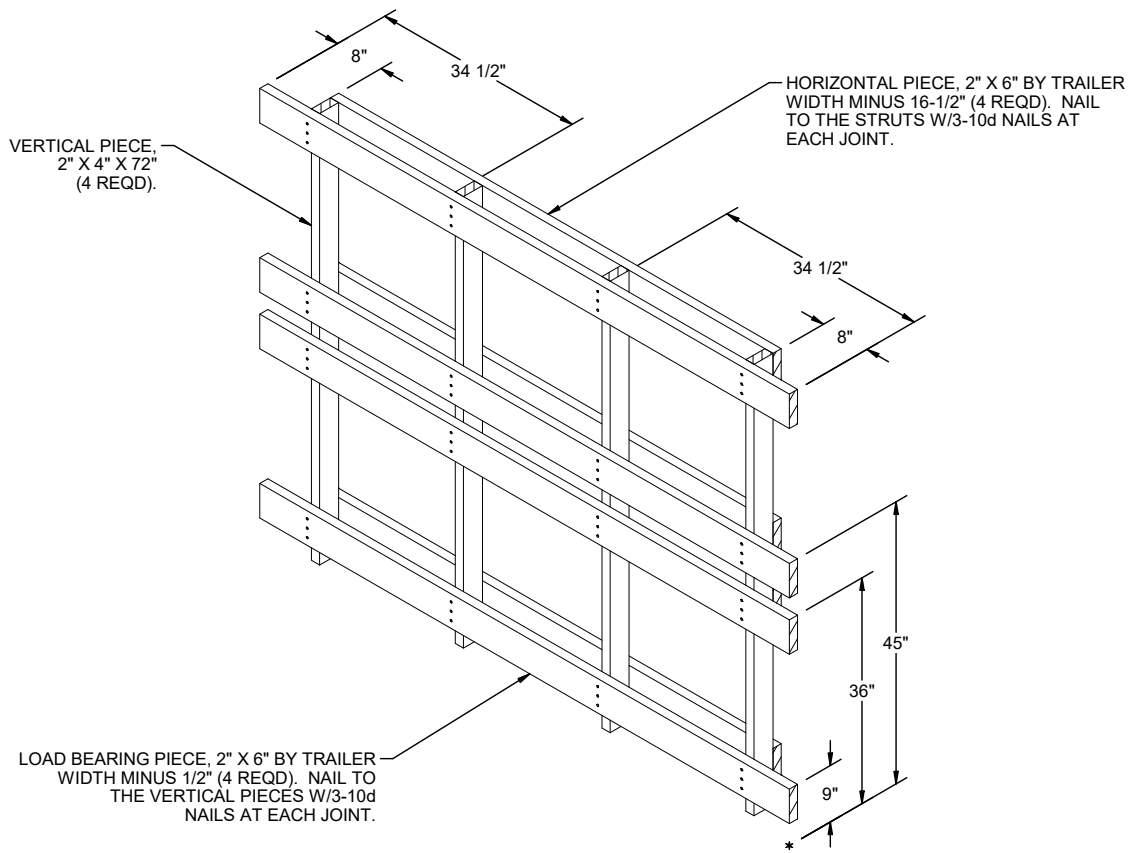
SIDE BLOCKING, 2" X 6" X 7'-0" (DOUBLED) (2 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/7-10d NAILS. LAMINATE THE SECOND PIECE TO THE FIRST W/7-10d NAILS.

ISOMETRIC VIEW

SPECIAL NOTES:

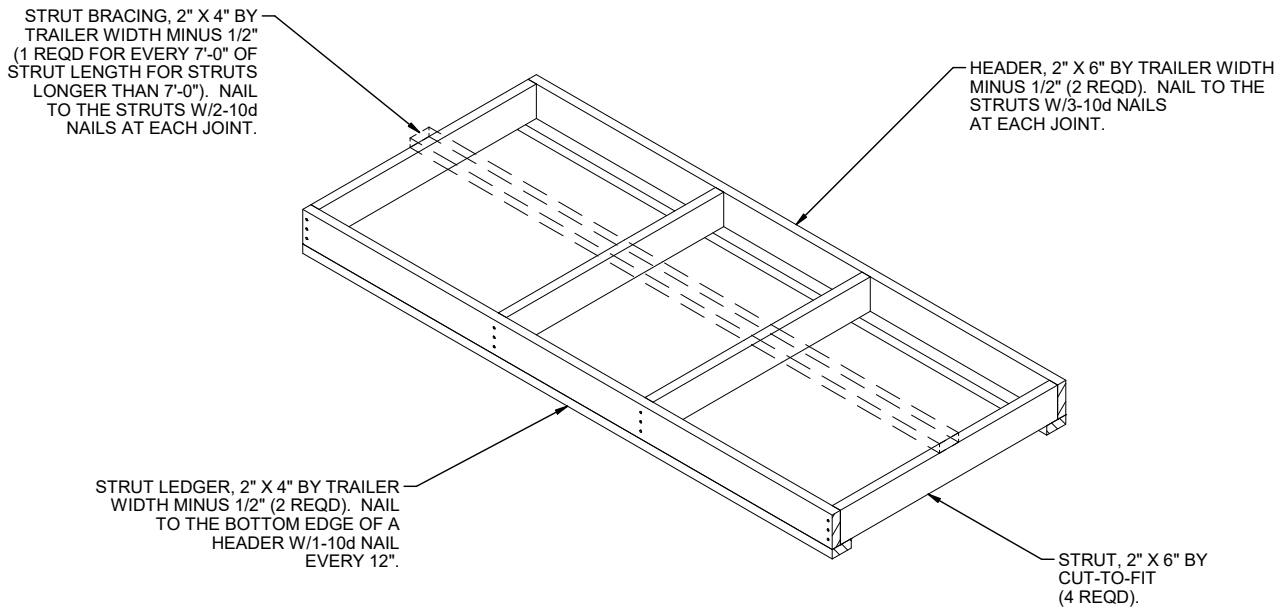
1. AN 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER WHICH HAS A NAILABLE FLOOR IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
2. THE POSITIONING OF A UNIT IS OPTIONAL. UNITS MAY BE LOCATED IN THE CORNER OF THE TRAILER, IF DESIRED. IF THE TRAILER DOES NOT HAVE A SQUARE FRONT, A FORWARD BLOCKING ASSEMBLY MUST BE INSTALLED WHEN POSITIONING A UNIT IN THE CORNER OF THE TRAILER. SEE THE DETAIL ON PAGE 14.
3. MORE THAN ONE PALLET UNIT CAN BE SHIPPED. THE LOAD SHOULD BE FORMED IN ROWS, WITH THE UNITS POSITIONED AGAINST OPPOSITE SIDE-WALLS. THE PROPER CENTER FILL ASSEMBLIES, IF REQUIRED, WILL BE INSTALLED BETWEEN THE LATERALLY ADJACENT UNITS. SEE THE DETAILS ON PAGE 15.
4. EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS OF LADING; HOWEVER, NOT LESS THAN TWO BRACES WILL BE USED AGAINST EACH PALLET UNIT ACROSS THE WIDTH OF THE TRAILER.

TYPICAL LTL (1-UNITLOAD)



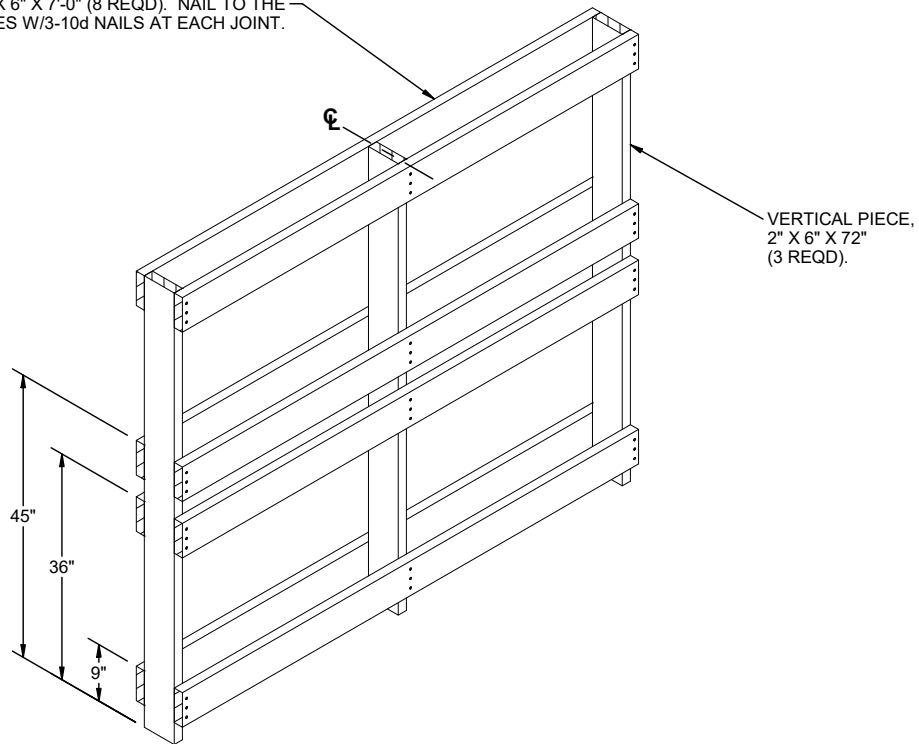
FORWARD BLOCKING ASSEMBLY

THE ASSEMBLY AS DEPICTED ABOVE IS APPLICABLE FOR TWO-HIGH LOAD. FOR ONE-HIGH LOAD, ELIMINATE THE TOP TWO HORIZONTAL AND LOAD BEARING PIECES AND SHORTEN THE VERTICAL PIECES FROM 72" TO 36". **NOTE:** THIS ASSEMBLY IS DESIGNED FOR USE AT THE FRONT END OF A TRAILER HAVING ROUNDED CORNERS, AND IS APPLICABLE FOR A CORNER RADIUS OF NOT MORE THAN 6-1/2". IF THE RADIUS IS FROM 6-1/2" TO 8", 2" X 6" VERTICAL PIECES WILL BE USED IN LIEU OF THE 2" X 4" PIECES. IF THE TRAILER TO BE LOADED HAS LARGE-ANGLED CORNERS AT THE FORWARD END, REFER TO PAGE 20 FOR GUIDANCE.



SPACER ASSEMBLY A

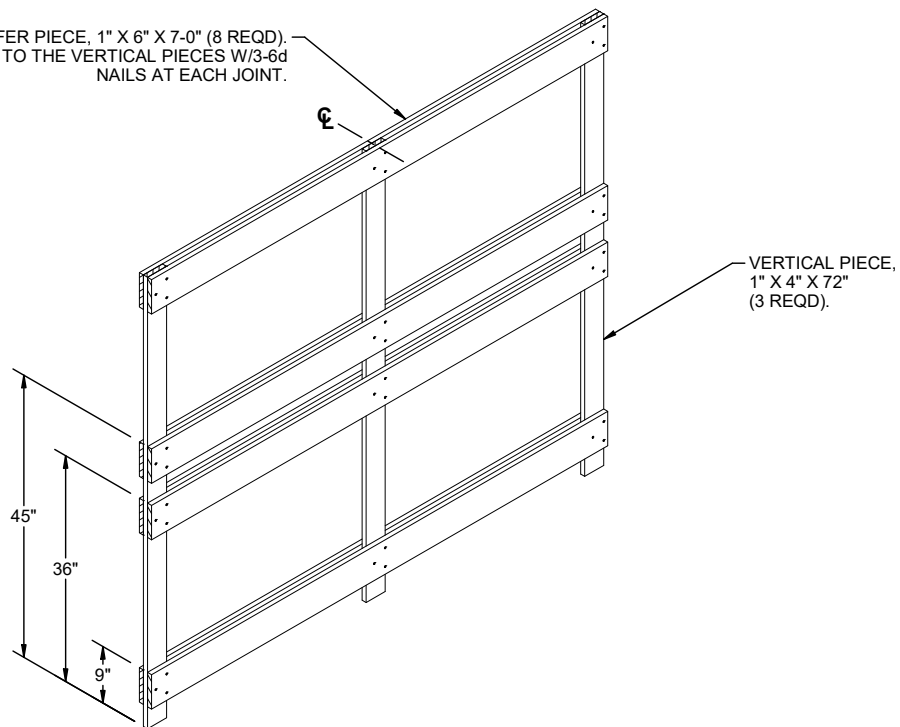
BUFFER PIECE, 2" X 6" X 7'-0" (8 REQD). NAIL TO THE VERTICAL PIECES W/3-10d NAILS AT EACH JOINT.



CENTER FILL ASSEMBLY A

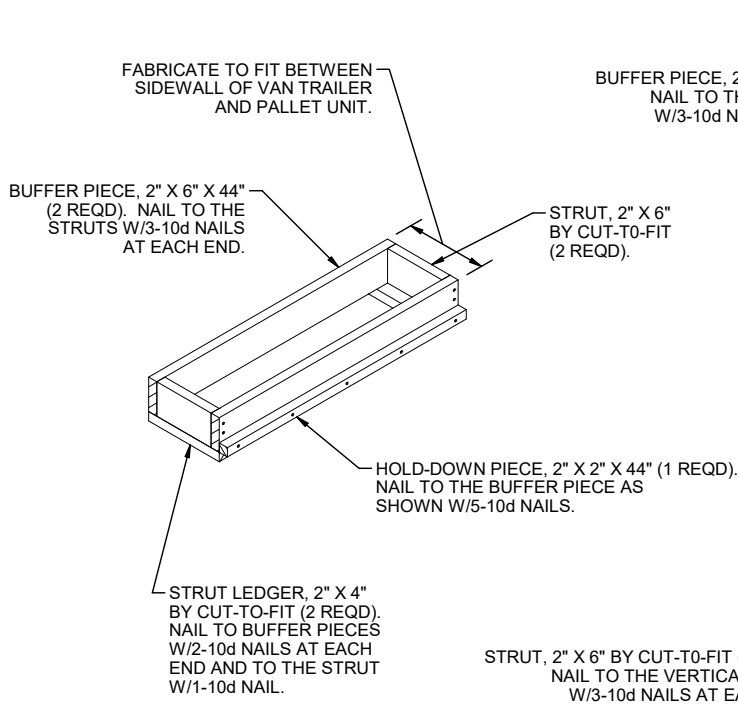
THE ASSEMBLY AS DEPICTED ABOVE IS APPLICABLE FOR TWO-HIGH LOAD. FOR ONE-HIGH LOAD, ELIMINATE THE TOP FOUR BUFFER PIECES AND SHORTEN THE VERTICAL PIECES FROM 72" TO 36".

BUFFER PIECE, 1" X 6" X 7'-0" (8 REQD). NAIL TO THE VERTICAL PIECES W/3-6d NAILS AT EACH JOINT.

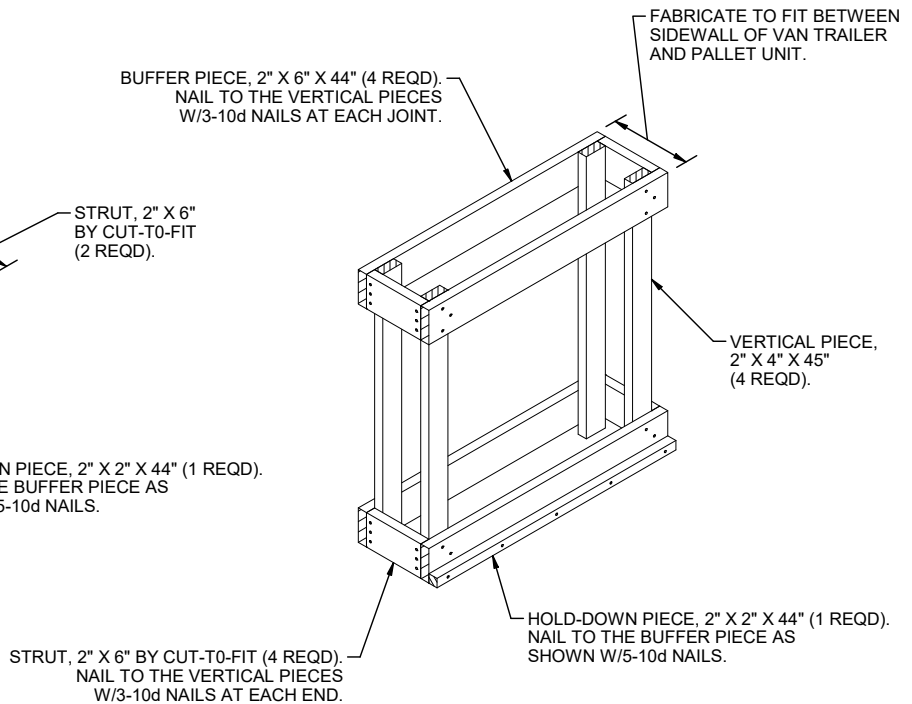


CENTER FILL ASSEMBLY B

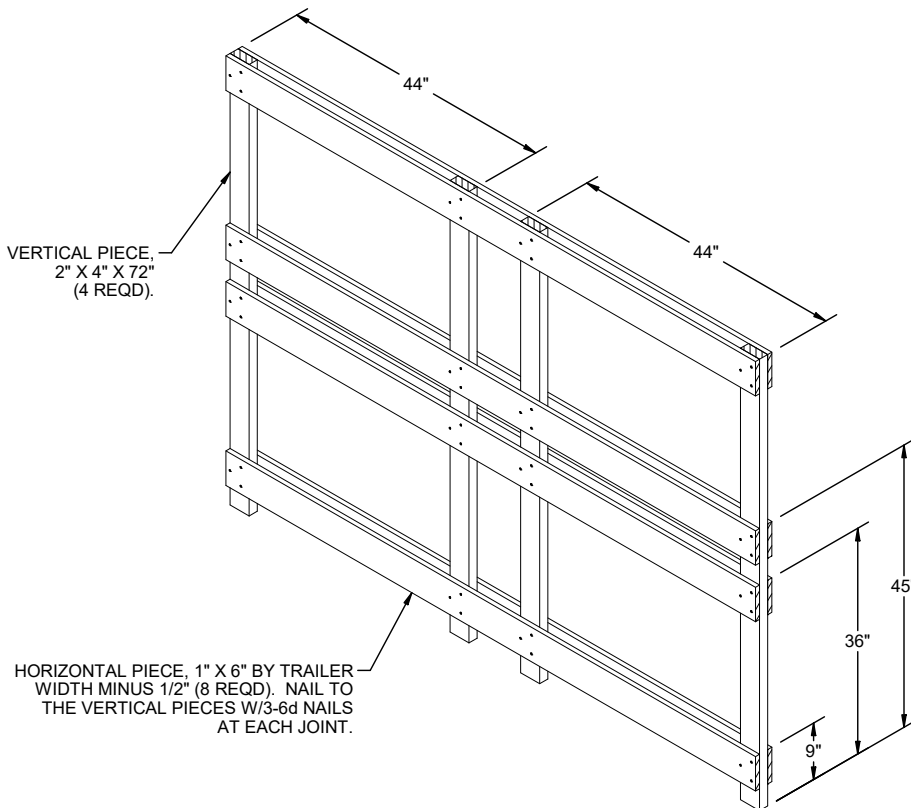
THE ASSEMBLY AS DEPICTED ABOVE IS APPLICABLE FOR TWO-HIGH LOAD. FOR ONE-HIGH LOAD, ELIMINATE THE TOP FOUR BUFFER PIECES AND SHORTEN THE VERTICAL PIECES FROM 72" TO 36".



SIDE BLOCKING ASSEMBLY A

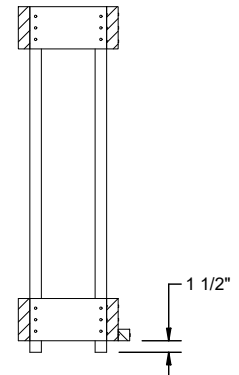


SIDE BLOCKING ASSEMBLY B



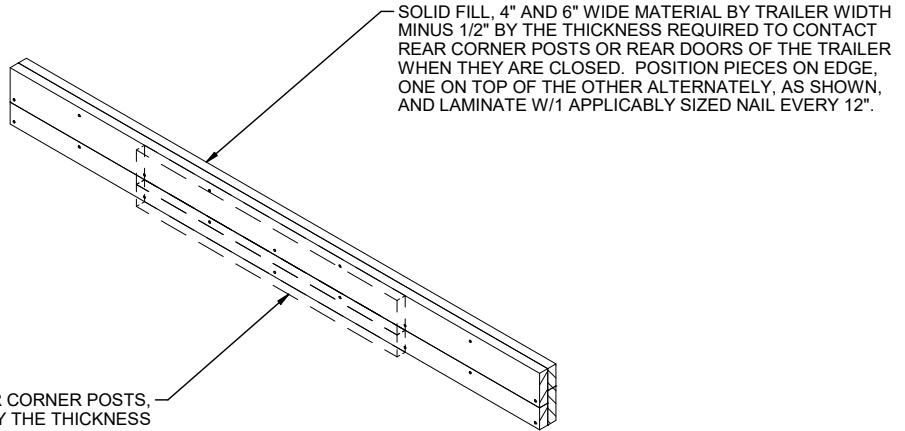
SEPARATOR GATE

THE ASSEMBLY AS DEPICTED ABOVE IS APPLICABLE FOR TWO-HIGH LOAD. FOR ONE-HIGH LOAD, ELIMINATE THE TOP FOUR HORIZONTAL PIECES AND SHORTEN THE VERTICAL PIECES FROM 72" TO 36".



SIDE BLOCKING ASSEMBLY B

(FRONT VIEW)



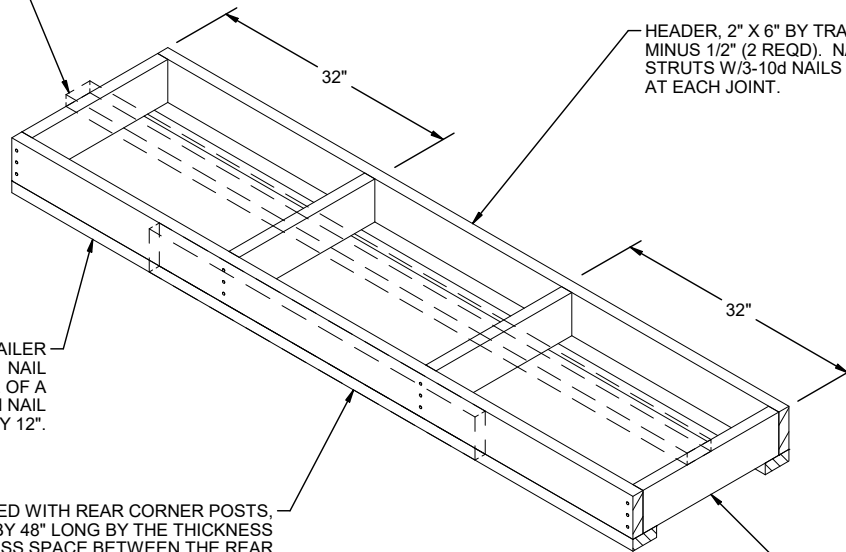
SOLID FILL, 4" AND 6" WIDE MATERIAL BY TRAILER WIDTH MINUS 1/2" BY THE THICKNESS REQUIRED TO CONTACT REAR CORNER POSTS OR REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED. POSITION PIECES ON EDGE, ONE ON TOP OF THE OTHER ALTERNATELY, AS SHOWN, AND LAMINATE W/1 APPLICABLY SIZED NAIL EVERY 12".

IF THE TRAILER IS EQUIPPED WITH REAR CORNER POSTS, INSTALL SOLID FILL, 6" WIDE BY 48" LONG BY THE THICKNESS REQUIRED TO FILL THE EXCESS SPACE BETWEEN THE REAR BLOCKING AND THE REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED. POSITION PIECES ON THE EDGE, ONE ON TOP OF THE OTHER AS SHOWN. NAIL TO THE REAR BLOCKING W/4 APPLICABLY SIZED NAILS.

REAR BLOCKING ASSEMBLY A

THIS REAR BLOCKING ASSEMBLY IS DESIGNED FOR USE AT THE REAR OF THE LOAD WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS GREATER THAN 1-1/2" BUT LESS THAN 9".

STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (1 REQD FOR EVERY 7'-0" OF STRUT LENGTH FOR STRUTS LONGER THAN 7'-0"). NAIL TO THE STRUTS W/2-10d NAILS AT EACH JOINT.



HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (2 REQD). NAIL TO THE STRUTS W/3-10d NAILS AT EACH JOINT.

STRUT LEDGER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (2 REQD). NAIL TO THE BOTTOM EDGE OF A HEADER W/1-10d NAIL EVERY 12".

IF THE TRAILER IS EQUIPPED WITH REAR CORNER POSTS, INSTALL SOLID FILL, 6" WIDE BY 48" LONG BY THE THICKNESS REQUIRED TO FILL THE EXCESS SPACE BETWEEN THE REAR BLOCKING AND THE REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED. NAIL TO THE REAR BLOCKING W/4 APPLICABLY SIZED NAILS.

STRUT, 2" X 6" BY CUT-TO-FIT (4 REQD).

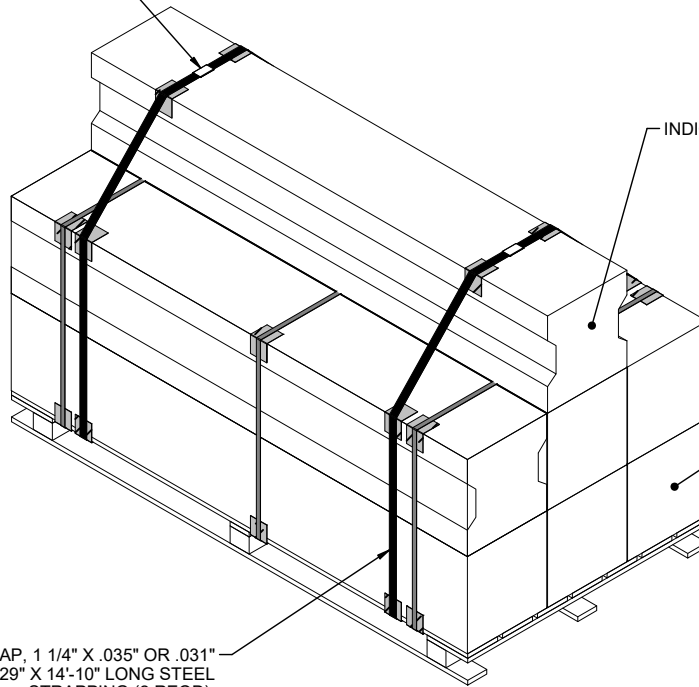
REAR BLOCKING ASSEMBLY B

THIS REAR BLOCKING ASSEMBLY IS DESIGNED FOR USE AT THE REAR OF THE LOAD WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS 9" OR GREATER.

SPECIAL NOTES:

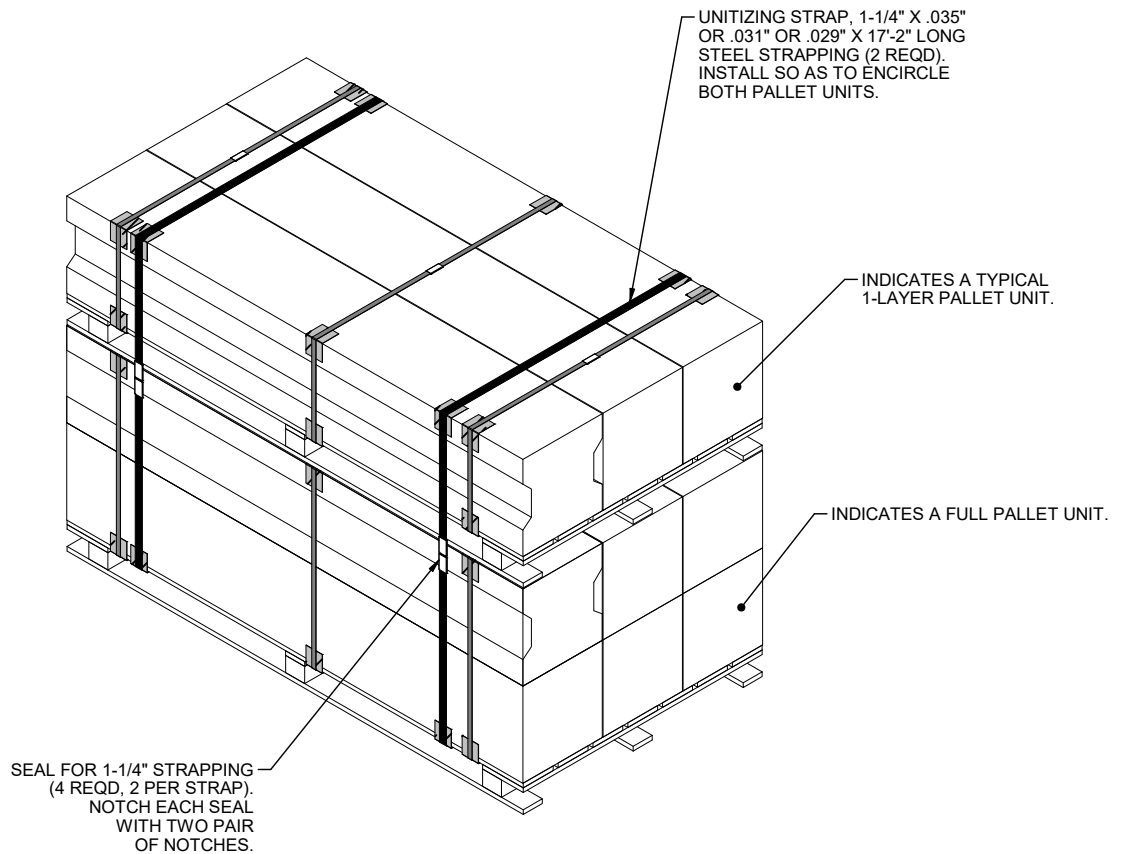
1. SHIPMENTS OF PALLET UNITS OF JAGM MISSILES SHOULD CONSIST OF FULL-HEIGHT UNITS TO THE MAXIMUM EXTENT POSSIBLE. HOWEVER, THE END OF A LOT OR THE QUANTITY OF ITEMS NEEDED TO FILL A REQUISITION MAY NECESSITATE THE SHIPMENT OF ONE OR MORE LEFTOVER CONTAINERS. LEFTOVER CONTAINERS ARE DESCRIBED AS ANY QUANTITY OF CONTAINERS WHICH ARE INSUFFICIENT TO FORM A FULL LAYER OF A PARTIAL PALLET UNIT FOR SHIPMENT ON TOP OF A LOAD AS SHOWN ON PAGE 19. THEY ARE USUALLY CONTAINERS OF THE SAME AMMUNITION ITEM AS THE BALANCE OF THE LOAD ALTHOUGH THEY MAY BE ANY OTHER COMPATIBLE ITEM.
2. SHIPMENT OF LEFTOVER CONTAINERS IS APPLICABLE FOR CONUS AND OCONUS MOTOR CARRIER SHIPMENTS FROM DEPOT TO DEPOT OR FROM DEPOTS TO POSTS, CAMPS, AND STATIONS, OR, UPON APPROVAL FROM HIGHER HEADQUARTERS, FOR SHIPMENTS FROM LOAD, ASSEMBLE, AND PACK PLANTS TO DEPOTS. **CAUTION:** A LOAD CONTAINING LEFTOVER CONTAINERS IN AN AMOUNT WHICH IS LESS THAN A FULL LAYER, AND SECURED TO THE TOP OF A FULL OR PARTIAL UNIT, MUST NOT BE DESTINED FOR SHIPMENT OVERSEAS BY WATER CARRIER.
3. THE PROCEDURES ON THIS PAGE ARE PRESENTED AS GUIDANCE IN THE SECUREMENT OF LEFTOVER CONTAINERS FOR SHIPMENT. THE PROCEDURES ARE ALSO APPLICABLE FOR SECUREMENT OF LEFTOVER CONTAINERS TO PARTIAL PALLET UNITS FOR SHIPMENT ON TOP OF A LOAD. SEE SPECIAL NOTE 5 ON PAGE 19 FOR LIMITATIONS. IN ADDITION, THE PROCEDURES ARE APPLICABLE FOR SECURING LEFTOVER CONTAINERS TO A PARTIAL UNIT FOR SHIPMENT WITHIN A TIER.
4. THE QUANTITY OF LEFTOVER CONTAINERS WHICH CAN BE SECURED TO FULL OR PARTIAL UNITS IS LIMITED TO TWO CONTAINERS. LEFTOVER CONTAINERS MUST NOT BE STACKED.
5. THE PROCEDURES DEPICTED ON THIS PAGE ARE APPLICABLE FOR THE SHIPMENT OF LEFTOVER CONTAINER IN ANY OF THE LOADS DEPICTED HEREIN, OR ON TOP OF A PARTIAL PALLET UNIT.

SEAL FOR 1 1/4" STRAPPING
(2 REQD). CRIMP EACH
SEAL WITH TWO PAIR
OF NOTCHES.



UNITIZING STRAP, 1 1/4" X .035" OR .031"
OR .029" X 14'-10" LONG STEEL
STRAPPING (2 REQD).

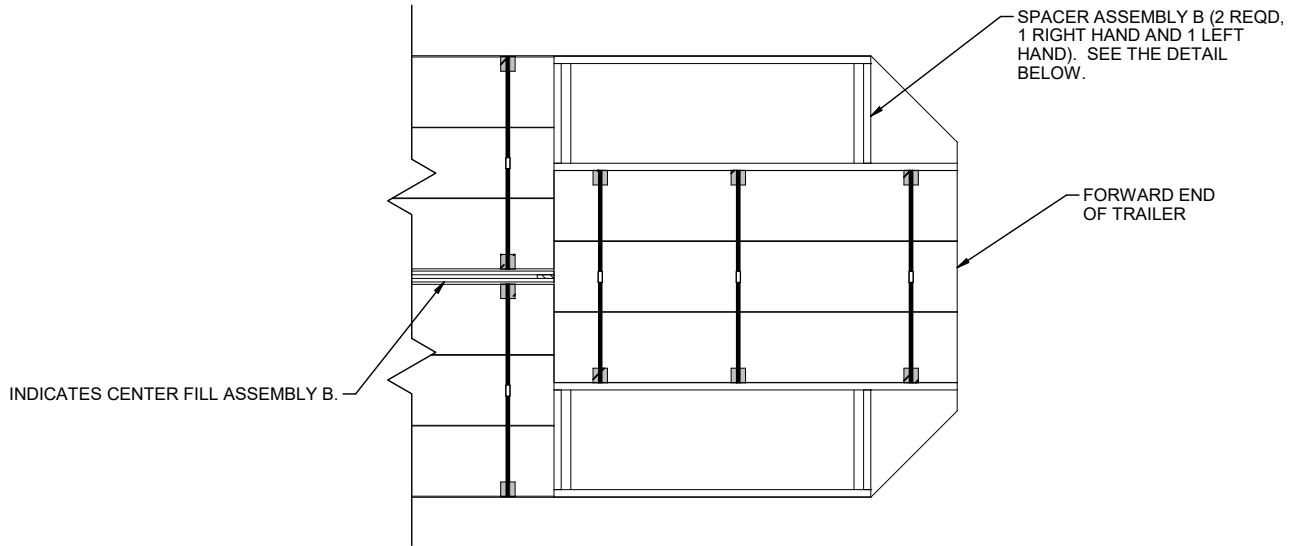
SECUREMENT OF ONE ADDITIONAL CONTAINER



**SECUREMENT OF A PARTIAL PALLET UNIT
ON TOP OF A FULL PALLET UNIT**

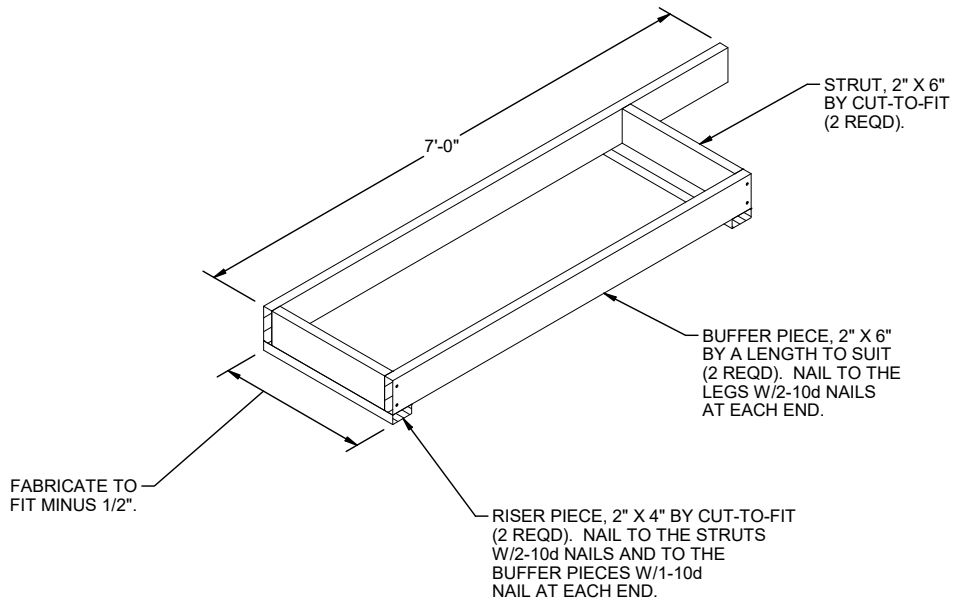
SPECIAL NOTES:

1. SHIPMENTS OF PALLET UNITS OF JAGM MISSILES SHOULD CONSIST OF FULL-HEIGHT AND FULL-LAYER UNITS TO THE MAXIMUM EXTENT POSSIBLE. HOWEVER, THE END OF A LOT OR THE QUANTITY OF ITEMS NEEDED TO FILL A REQUISITION MAY NECESSITATE THE SHIPMENT OF ONE OR MORE LESS-THAN-FULL PALLET UNITS WITHIN A LOAD. THE PROCEDURES ON THIS PAGE ARE PRESENTED AS GUIDANCE IN THE SHIPMENT OF THESE PARTIAL UNITS.
2. A LESS-THAN-FULL HEIGHT PALLET UNIT CAN BE SHIPPED BY POSITIONING IT EITHER ON THE TOP TIER OF A LOAD OR ON THE TOP OF A LOWER PORTION OF A LOAD WHEN THE LOAD CONTAINS A PARTIAL TIER IN THE END OF THE TRAILER. THE PARTIAL UNIT WILL BE STRAPPED TO THE PALLET UNIT DIRECTLY BELOW WITH TWO VERTICAL UNITIZING STRAPS. SEE THE "SECUREMENT OF A PARTIAL UNIT ON TOP OF A FULL PALLET UNIT" VIEW ABOVE FOR GUIDANCE.
3. THIS PROCEDURE IS APPLICABLE ONLY FOR USE IN A WIDTHWISE LOAD, AS DEPICTED ON PAGES 6, AND 8.
4. A PARTIAL PALLET UNIT MUST NOT BE POSITIONED ON THE REARMOST PALLET UNIT IN THE LOAD.
5. LEFTOVER CONTAINERS, IN AN AMOUNT WHICH IS LESS THAN THE QUANTITY IN ONE LAYER OF A UNIT, CAN BE SECURED TO THE TOP OF A PARTIAL UNIT FOR SECUREMENT ON TOP OF A LOAD. THE LEFTOVER CONTAINERS MUST BE SECURED TO THE PARTIAL UNIT WITH THEIR OWN STRAPPING, SEPARATE FROM THE STRAPS FOR THE PARTIAL UNIT. SEE THE DETAILS ON PAGE 18 FOR GUIDANCE IN STRAP APPLICATION.



ALTERNATIVE FORWARD LOADING PATTERN

THIS PROCEDURE IS APPLICABLE TO THE LOADING OF ONE PALLET UNIT (1-HIGH) IN THE FORWARD END OF A CONVENTIONAL VAN TRAILER HAVING LARGE-ANGLED FRONT CORNERS (REF: 18"). THE PROCEDURES MAY ALSO BE USED IN TRAILERS HAVING SQUARE CORNERS, OR ROUNDED FRONT CORNERS, OR ANGLED CORNERS OF ANOTHER SIZE. A 7'-8" WIDE TRAILER IS SHOWN, WIDER TRAILERS CAN BE USED.



SPACER ASSEMBLY B