LOADING AND BRACING (TL AND LTL) IN VAN TRAILERS ⊕ OF PALLETIZED PROPELLING CHARGES PACKED IN CYLINDRICAL METAL CONTAINERS

PA68 SERIES CONTAINERS

INDEX

⊕ **CAUTION: THE LOADING 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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REVISION NO. 1	MAY 1998

SEE THE REVISION LISTING ON PAGE 3

CLASS	DIVISION	DRAWING	FILE
19	48	4042C/10	11PM1000

PROJECT FSA 43C/10-63

GENERAL NOTES

A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1 AND AUGMENTS TM 743-200-1 (CHAPTER 5).

B. THE OUTLOADING PROCEDURES SPECIFIED IN THIS DRAWING ARE APPLICABLE FOR THE PA68 SERIES PROPELLING CHARGE CONTAINER ASSEMBLED ON THE 35" X 45-1/2" OR 40" X 48" 4-WAY ENTRY PALLET. SEE THE PICTORAL VIEWS ON PAGES 4 AND 5 FOR SIZES AND WEIGHTS. SEE U.S. ARMY MATERIEL COMMAND DRAWING 19-48-4042A/11-20PM1001 FOR UNITIZATION PROCEDURES FOR THE PA68 SERIES CONTAINERS.

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. 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. 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 43,000 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 INTO TRAILERS WHICH ARE PARTIALLY LOADED WITH PALLET UNITS OF PROPELLING CHARGES, PROVIDING THE TOTAL LOAD IS COMPATIBLE, EXISTING DIRECTIVES ARE NOT VIOLATED, AND THE OTHER LADING ITEMS ARE BLOCKED AND BRACED TO EQUAL THE BLOCKING AND BRACING CRITERIA SPECIFIED HEREIN.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

LUMBER - - - - - - - -:	SEE TM 743-200-1 (DUNNAGE LUMBER) AND VOLUNTARY PRODUCT STANDARD PS 20.
NAILS - - - - - - - -:	ASTM F1667; COMMON STEEL NAIL (NLCMS OR NLCMMS).
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.
WIRE, CARBON STEEL -:	ASTM A853; ANNEALED AT FINISH, BLACK OXIDE FINISH, .0800" DIA, GRADE 1006 OR BETTER.
STAPLE, STRAP - - -:	COMMERCIAL GRADE.

(GENERAL NOTES CONTINUED)

J. ALL 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, PIECE MARKED (1), 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.

L. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.

M. NOTICE: 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.

N. 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 ASTM F1667 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.

O. PORTIONS OF THE TRAILERS, SUCH AS SIDEWALLS, ENDWALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.

P. THE UNBLOCKED SPACE ACROSS THE WIDTH OF A LOAD BAY IS NOT TO EXCEED 6". THE THICKNESS AND QUANTITY OF THE LUMBER USED IN ANTI-SWAY BRACE ASSEMBLIES MAY BE ADJUSTED AS REQUIRED TO FACILITATE VARIANCE IN THE SIZE OF THE PALLET UNIT.

Q. 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.

R. PALLET UNITS WHICH DO NOT CONTAIN A FULL QUANTITY OF ITEMS CAN BE TRANSPORTED. SEE THE "SHIPMENT OF A PARTIAL PALLET UNIT" DETAIL ON PAGE 31. FOR "SHIPMENT OF LEFT-OVER CONTAINERS" SEE THE DETAILS ON PAGE 32.

S. THESE PROCEDURES CAN ALSO BE UTILIZED FOR THE SHIPMENT OF PALLET UNITS OF PA68 SERIES CONTAINERS WHEN THEY ARE LOADED WITH AN ITEM OTHER THAN THE SPECIFIED PROPELLING CHARGES, OR WHEN THEY ARE EMPTY.

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.

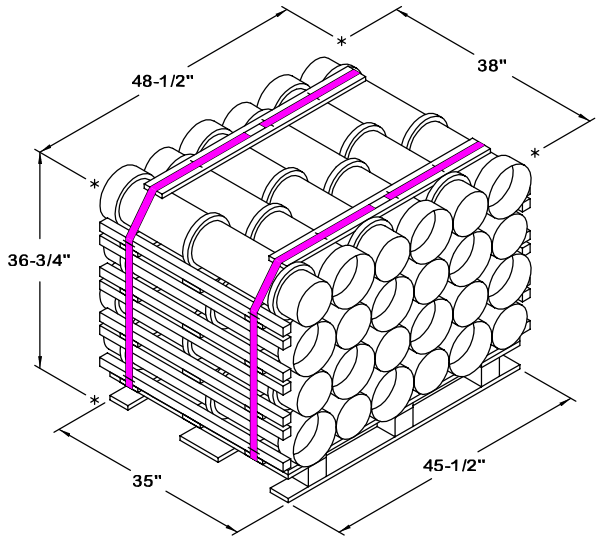
U. ANY OF THE PALLET UNITS DEPICTED ON PAGES 4 AND 5 MAY BE LOADED AS A MIXED LOAD IN THE SAME TRAILER, INCLUDING THE BASIC HEIGHT UNITS WITH THE INCREASED AND/OR DECREASED HEIGHT UNITS. FOR MIXED-HEIGHT LOADS, POSITION ALL PALLET UNITS OF ONE HEIGHT IN ONE LAYER, WITH THE TALLER UNITS IN THE BOTTOM LAYER. IF FULL LAYERS OF ONE HEIGHT UNIT ARE NOT POSSIBLE FOR THE QUANTITY OF EACH SIZE TO BE SHIPPED, THE TALLER UNITS WILL BE LOADED IN THE FORWARD PORTION OF THE BOTTOM LAYER, AND THE SHORTER UNITS IN THE REAR PORTION.

ITEMIZED INDEX

REVISION

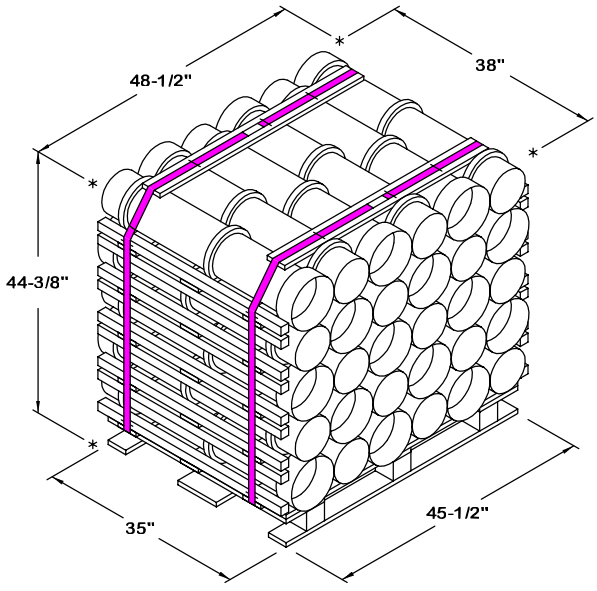
REVISION NO. 1, DATED MAY 1998, CONSISTS OF:

1. CHANGING WIDTH OF ALTERNATED CONTAINERS UNIT FROM 47-3/4" TO 48-1/2".
2. INCLUDING LOAD DRAWINGS OF LONGER AND WIDER TRAILERS.
3. INCLUDING LOAD DRAWING OF CROSSWISE POSITIONED ALTERNATED CONTAINERS UNITS.
4. INCLUDING CHIMNEY PATTERN LOADS FOR FLAT AND ROUTED DUNNAGE METHOD UNITS.
5. INCORPORATING NAILED-HEADER METHOD INTO LOAD DRAWINGS.
6. REMOVING LOADS IN TRAILERS EQUIPPED WITH MECHANICAL BRACING DEVICES.
7. REMOVING MOST TOP-OF-LOAD ANTI-SWAY BRACES FROM LOAD DRAWINGS.
8. REMOVING TYGARD METHOD OF LOAD RESTRAINT.
9. UPDATING GENERAL NOTES AND DRAWING FORMAT.



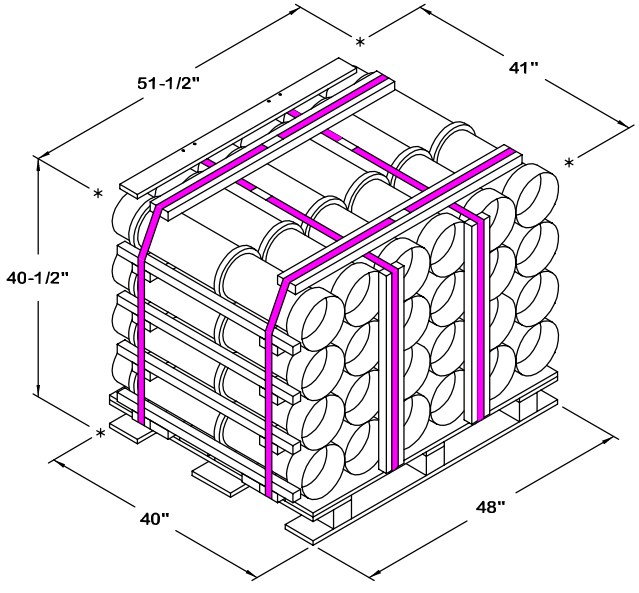
ALTERNATED CONTAINERS UNIT (BASIC HEIGHT)

CONTAINER - - - - - - - - - - - 24 EACH @ 50 LBS (APPROX)
CUBE - - - - - - - - - - - - - - 39.2 CUBIC FEET (APPROX)
GROSS WEIGHT - - - - - - - - - 1,333 LBS (APPROX)



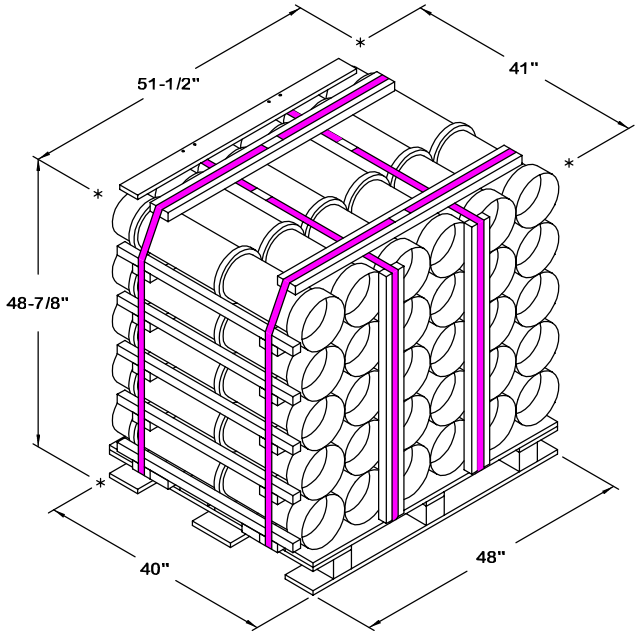
ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT)

CONTAINER - - - - - - - - - - - 30 EACH @ 50 LBS (APPROX)
CUBE - - - - - - - - - - - - - - 47.3 CUBIC FEET (APPROX)
GROSS WEIGHT - - - - - - - - - 1,651 LBS (APPROX)



FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT)

CONTAINER - - - - - - - - - - - 24 EACH @ 50 LBS (APPROX)
CUBE - - - - - - - - - - - - - - 49.5 CUBIC FEET (APPROX)
GROSS WEIGHT - - - - - - - - - 1,385 LBS (APPROX)

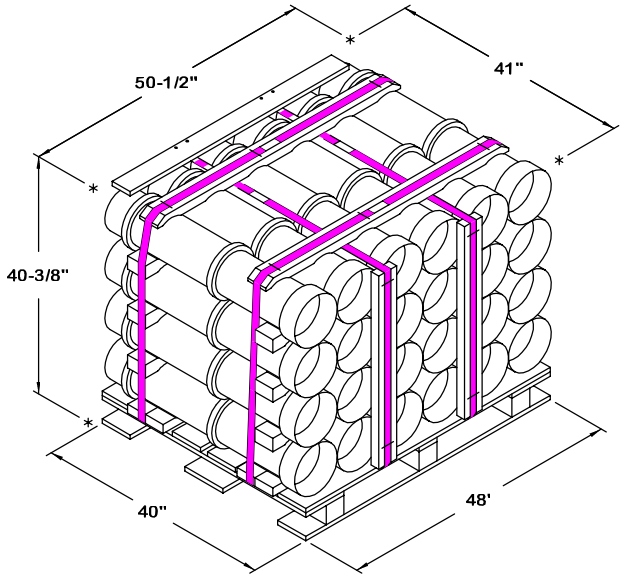


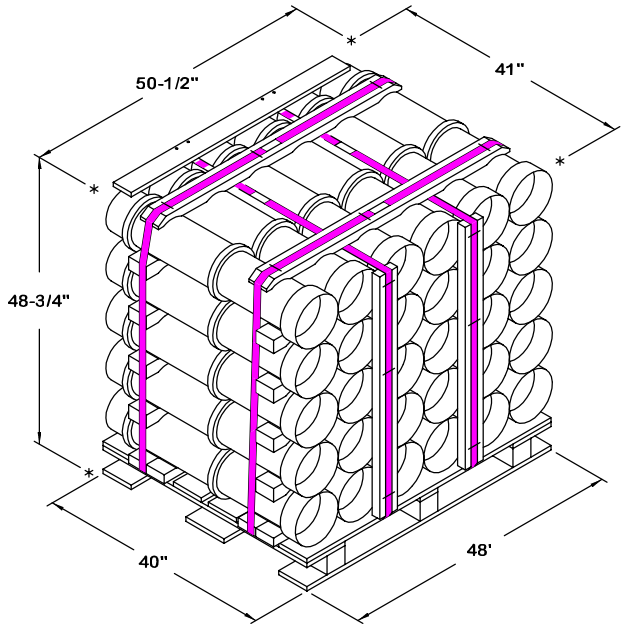
FLAT DUNNAGE METHOD UNIT (INCREASED HEIGHT)

CONTAINER - - - - - - - - - - - 30 EACH @ 50 LBS (APPROX)
CUBE - - - - - - - - - - - - - - 59.7 CUBIC FEET (APPROX)
GROSS WEIGHT - - - - - - - - - 1,709 LBS (APPROX)

PALLET UNIT DETAILS

PROJECT FSA 43C/10-63



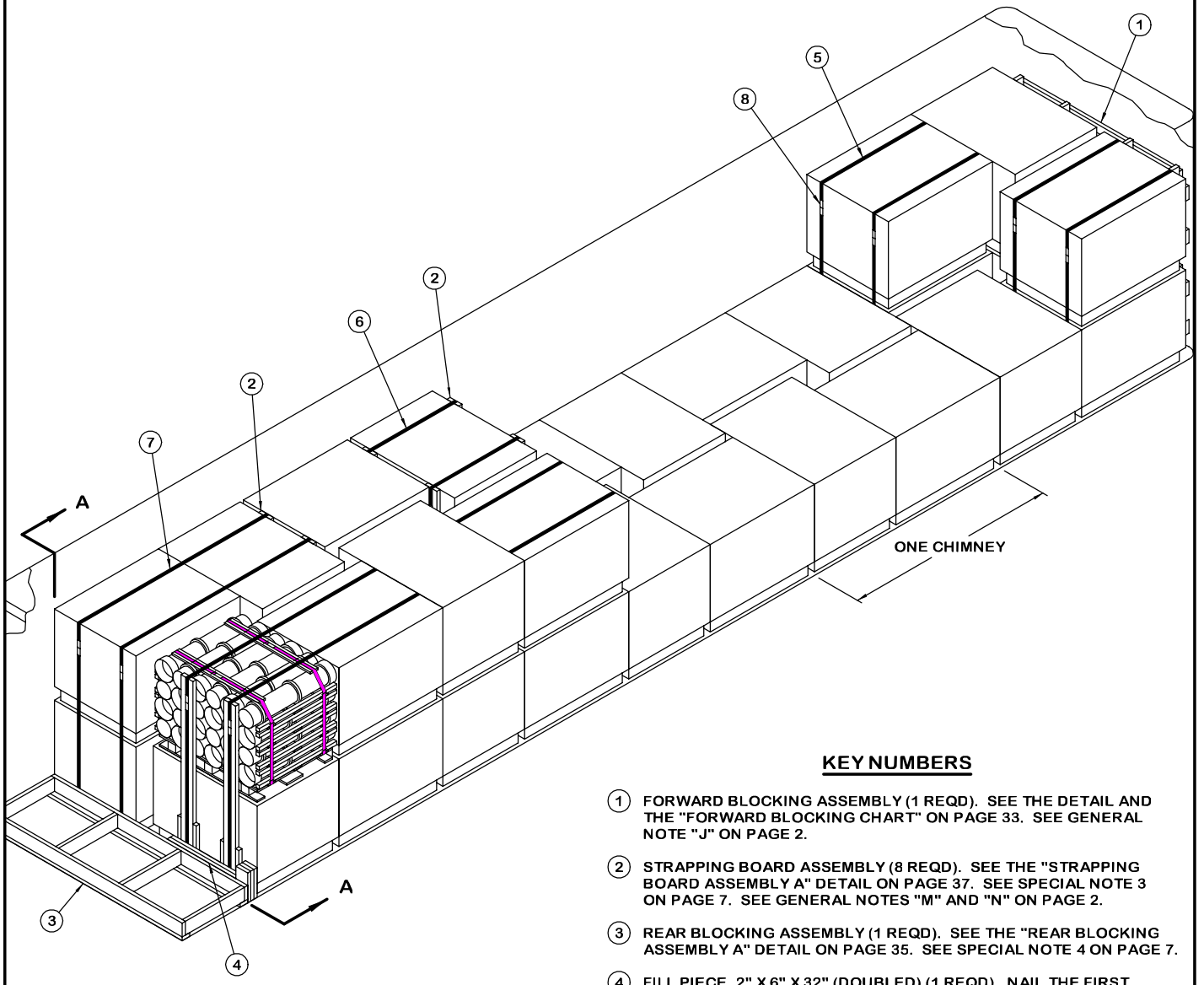


ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT)

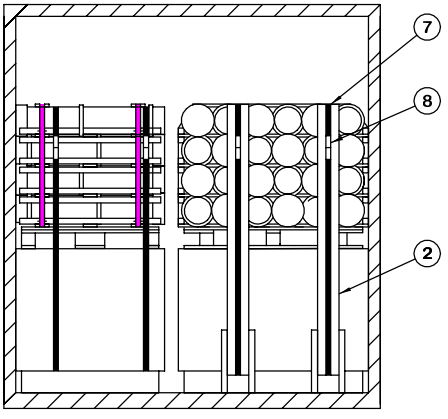
CONTAINER - - - - - - - - - - - 24 EACH @ 50 LBS (APPROX)
CUBE - - - - - - - - - - - - - 48.4 CUBIC FEET (APPROX)
GROSS WEIGHT - - - - - - - - - 1,385 LBS (APPROX)

ROUTED DUNNAGE METHOD UNIT (INCREASED HEIGHT)

CONTAINER - - - - - - - - - - - 30 EACH @ 50 LBS (APPROX)
CUBE - - - - - - - - - - - - - 58.4 CUBIC FEET (APPROX)
GROSS WEIGHT - - - - - - - - - 1,711 LBS (APPROX)



ISOMETRIC VIEW



SECTION A-A

KEY NUMBERS

(1) FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 33. SEE GENERAL NOTE "J" ON PAGE 2.

(2) STRAPPING BOARD ASSEMBLY (8 REQD). SEE THE "STRAPPING BOARD ASSEMBLY A" DETAIL ON PAGE 37. SEE SPECIAL NOTE 3 ON PAGE 7. SEE GENERAL NOTES "M" AND "N" ON PAGE 2.

(3) REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 35. SEE SPECIAL NOTE 4 ON PAGE 7.

(4) FILL PIECE, 2" X 6" X 32" (DOUBLED) (1 REQD). NAIL THE FIRST PIECE TO THE REAR BLOCKING ASSEMBLY W/3-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 5 ON PAGE 7.

(5) STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 21'-0" LONG STEEL STRAPPING (6 REQD). INSTALL SO AS TO ENCIRCLE A PALLET UNIT STACK AS SHOWN. SEE SPECIAL NOTE 5 ON PAGE 7.

(6) STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 20'-0" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE A PALLET UNIT STACK AND TWO STRAPPING BOARD ASSEMBLIES. STAPLE TO A STRAPPING BOARD ASSEMBLY, PIECE MARKED (2), W/2 STAPLES.

(7) BUNDLING STRAP, 1-1/4" X .035" OR .031" X 28'-0" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNIT STACKS AND A STRAPPING BOARD ASSEMBLY. SEE SPECIAL NOTE 7 ON PAGE 7. STAPLE TO A STRAPPING BOARD, PIECE MARKED (2), W/2 STAPLES.

(8) SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

ALTERNATED CONTAINERS UNIT - CHIMNEY PATTERN (BASIC HEIGHT)
31-UNIT LOAD IN A 40'-0" LONG BY 7'-6" WIDE CONVENTIONAL VAN TRAILER

PROJECT FSA 43C/10-63

SPECIAL NOTES:

1. A 31-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TYPE TRAILER. THE CHIMNEY PATTERN LOAD IS APPLICABLE FOR TRAILERS WHICH ARE 7'-5" TO 7'-8-1/4" IN WIDTH. FOR WIDER TRAILERS, REFER TO THE LOADING PATTERNS ON PAGES 8 AND 10.

2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 6 IS THE ALTERNATED CONTAINERS UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 38" LONG BY 48-1/2" WIDE BY 36-3/4" HIGH AND WEIGHING APPROXIMATELY 1,333 POUNDS.

3. FOR EASE OF INSTALLATION, A STRAPPING BOARD ASSEMBLY "B" MAY BE USED IN LIEU OF EACH PAIR OF STRAPPING BOARD ASSEMBLIES, PIECE MARKED ②, WHICH ARE USED UNDER THE UNITIZING STRAPS, PIECE MARKED ⑥. A STRAPPING BOARD ASSEMBLY "C" MAY BE USED IN LIEU OF EACH PAIR OF STRAPPING BOARD ASSEMBLIES WHICH ARE USED UNDER THE BUNDLING STRAPS, PIECE MARKED ⑦. SEE THE DETAILS ON PAGE 37.

4. IF THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9", SOLID FILL REAR BLOCKING WILL BE USED IN LIEU OF THE DEPICTED REAR BLOCKING ASSEMBLY. SEE THE REAR BLOCKING ASSEMBLY "C" DETAIL ON PAGE 36. IF THE SPACE IS LESS THAN 1-1/2" REAR BLOCKING IS NOT REQUIRED. SEE SPECIAL NOTE 12.

5. IF A ONE-LAYER CHIMNEY PATTERN LOAD IS TO BE SHIPPED, THE STRAPPING BOARD ASSEMBLIES, THE FILL PIECE, THE STACK UNITIZING STRAPS, THE BUNDLING STRAPS, AND THE SEALS, PIECES MARKED ② AND PIECES MARKED ④ THROUGH ⑧ WILL NOT BE REQUIRED.

6. AN UNSUPPORTED PALLET UNIT IN THE SECOND LAYER, EXCEPT AT THE VERY REAR OF THE LOAD, MUST BE UNITIZED TO A CORRESPONDING PALLET UNIT IN THE FIRST LAYER. A 2-HIGH PALLET STACK REQUIRING UNITIZATION AND THAT HAS THE CONTAINERS OF THE UNIT POSITIONED LENGTHWISE IN THE VAN TRAILER, WILL REQUIRE STRAPPING BOARD ASSEMBLIES. THE STRAPPING BOARD ASSEMBLIES, PIECE MARKED ②, AND THE UNITIZING STRAPS, PIECES MARKED ⑥, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.

7. IF A STACK AT THE REAR OF THE TRAILER IS MORE THAN ONE UNIT HIGH, AS IN THE DEPICTED LOAD, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑦, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.

8. IF ONLY ONE PALLET UNIT IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON TOP OF THE REARMOST PALLET UNIT IN THE FIRST LAYER.

9. REFER TO PAGE 31 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

10. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FIVE MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 32 FOR GUIDANCE.

11. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 28 THROUGH 30.

12. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 8 AND 9. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

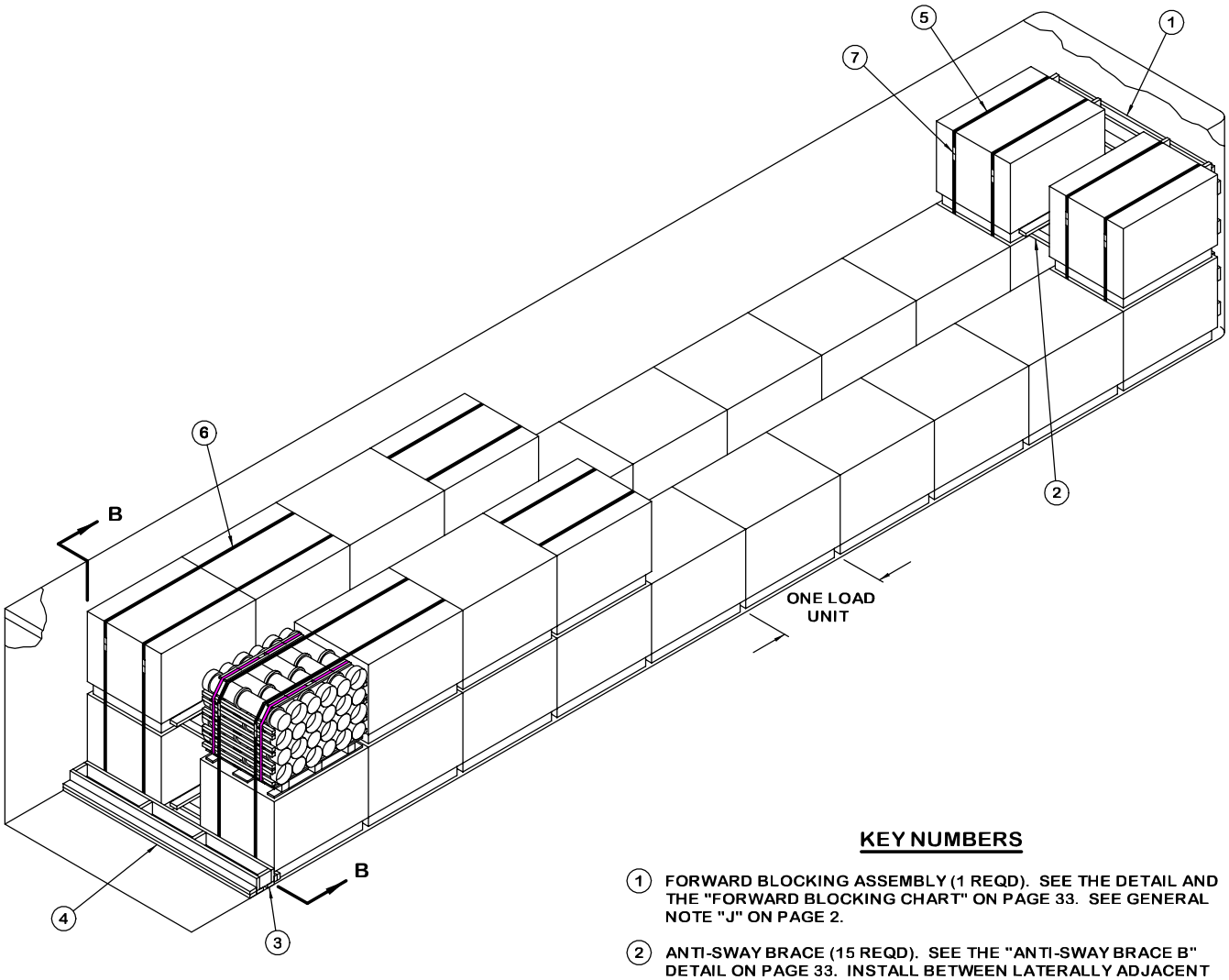
BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 2" 2" X 3" 2" X 4" 2" X 6"	22 1 40 135	8 1 27 135
NAILS	NO. REQD	POUNDS
10d (3")	173	2-3/4
1-1/4" STEEL STRAPPING - - 278' REQD - - - 39-3/4 LBS SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS STAPLE - - - - - - - - - - - - 16 REQD - - - - - - NIL		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	31 - - - - - -	41,323 LBS
DUNNAGE - - - - - - - - - - - - - - -		386 LBS
	TOTAL WEIGHT - - - - - -	41,709 LBS (APPROX)

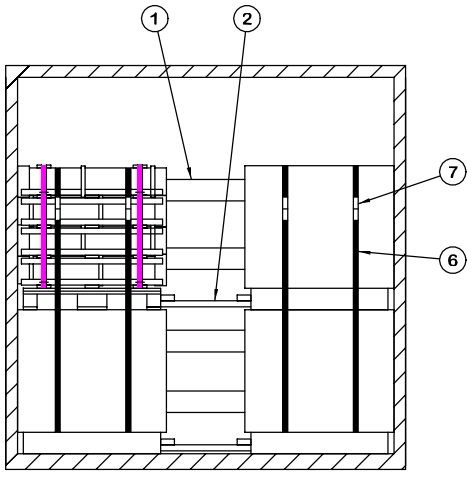
ALTERNATED CONTAINERS UNIT - CHIMNEY PATTERN (BASIC HEIGHT)
31-UNIT LOAD IN A 40'-0" LONG BY 7'-6" WIDE CONVENTIONAL VAN TRAILER



ISOMETRIC VIEW

KEY NUMBERS

1. FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 33. SEE GENERAL NOTE "J" ON PAGE 2.
2. ANTI-SWAY BRACE (15 REQD). SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 33. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE GENERAL NOTES "M" AND "N" ON PAGE 2.
3. REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 35. SEE SPECIAL NOTE 3 ON PAGE 9.
4. REAR HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (DOUBLED) (1 REQD). POSITION AGAINST THE REAR BLOCKING ASSEMBLY, PIECE MARKED (3). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/17-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER AND TOENAIL TO THE REAR BLOCKING ASSEMBLY W/4-10d NAILS. FOR OTHER LOAD WEIGHTS, SEE THE NAILING CHART ON PAGE 9.
5. STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 21'-0" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE A PALLET UNIT STACK AS SHOWN. SEE SPECIAL NOTE 4 ON PAGE 9.
6. BUNDLING STRAP, 1-1/4" X .035" OR .031" X 28'-0" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNIT STACKS IN THE SECOND LAYER AND TWO UNITS DIRECTLY BELOW AS SHOWN. SEE SPECIAL NOTE 5 ON PAGE 9.
7. SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



SECTION B-B

ALTERNATED CONTAINERS UNIT (BASIC HEIGHT)
30-UNIT LOAD IN A 45'-0" LONG BY 8'-0" WIDE CONVENTIONAL VAN TRAILER

PROJECT FSA 43C/10-63

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.

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. 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 30-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 8'-0"" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TYPE TRAILER. WIDER OR NARROWER TRAILER MAY BE USED OF SHIPMENT OF THE DEPICTED LOAD. FOR TRAILERS 8'-2" OR WIDER, REFER TO THE LOAD ON PAGE 10 FOR DETAILS.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 8 IS THE ALTERNATED CONTAINERS UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 38" LONG BY 48-1/2" WIDE BY 36-3/4" HIGH AND WEIGHING APPROXIMATELY 1,333 POUNDS.
3. IF THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9", A SOLID FILL REAR BLOCKING WILL BE USED IN LIEU OF THE DEPICTED REAR BLOCKING ASSEMBLY. SEE THE "REAR BLOCKING ASSEMBLY C" DETAIL ON PAGE 36. IF THE SPACE IS LESS THAN 1-1/2" REAR BLOCKING IS NOT REQUIRED. SEE SPECIAL NOTE 11.
4. THE STACK UNITIZING STRAPS, PIECES MARKED ⑤ IN THE LOAD ON PAGE 8, WILL BE INSTALLED TO SECURE AN UNSUPPORTED PALLET UNIT IN THE SECOND LAYER TO A CORRESPONDING UNIT IN THE FIRST LAYER, EXCEPT AT THE VERY REAR OF THE LOAD.
5. IF A STACK AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS IN THE DEPICTED LOAD, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑥, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
6. IF A PALLET UNIT IS EITHER ADDED TO OR OMITTED FROM THE DEPICTED LOAD, THE PALLET UNIT IN THE SECOND LAYER THAT DOES NOT HAVE A PALLET UNIT DIRECTLY OPPOSITE MUST BE SECURED BY A BUNDLING STRAP AROUND THAT STACK AND THE STACK IMMEDIATELY ADJACENT.
7. IF ONLY ONE PALLET UNIT IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON TOP OF THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, PIECE MARKED ⑤. PROVIDE LATERAL BRACING BY INSTALLING A "TOP-OF-LOAD ANTI-SWAY BRACE" AS DETAILED ON PAGE 34 AND SHOWN IN THE LOAD ON PAGE 14. WIRE TIE AS SHOWN BY THE "TIE WIRE APPLICATION" DETAIL ON PAGE 34.
8. REFER TO PAGE 31 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
9. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FIVE MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 32 FOR GUIDANCE.
10. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 28 THROUGH 30.
11. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 8 AND 9. FOR THE DEPICTED LOAD IN A 40'-0" LONG TRAILER WHEN USING THE NAILED HEADER METHOD, IT WILL BE NECESSARY TO FORM EIGHT LOAD UNITS INSTEAD OF NINE, AS SHOWN. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

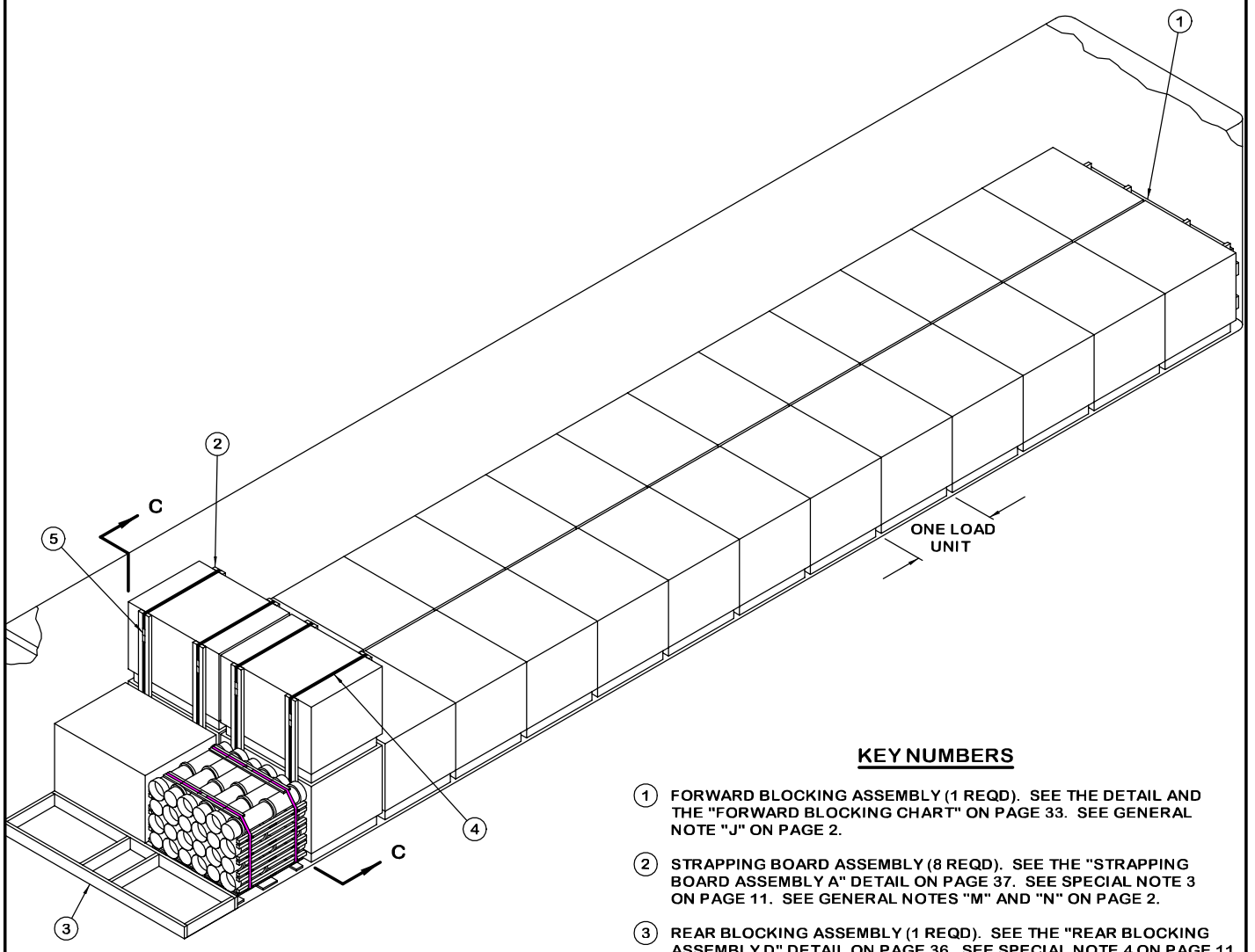
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 3" 2" X 4" 2" X 6"	3 234 77	2 156 77
NAILS	NO. REQD	POUNDS
10d (3")	336	5-1/4
1-1/4" STEEL STRAPPING - - 280' REQD - - - - - 40 LBS SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	30	39,990 LBS
DUNNAGE		517 LBS
TOTAL WEIGHT		40,507 LBS (APPROX)

ALTERNATED CONTAINERS UNIT (BASIC HEIGHT)
30-UNIT LOAD IN A 45'-0" LONG BY 8'-0" WIDE CONVENTIONAL VAN TRAILER

PROJECT FSA 43C/10-63



ISOMETRIC VIEW

KEY NUMBERS

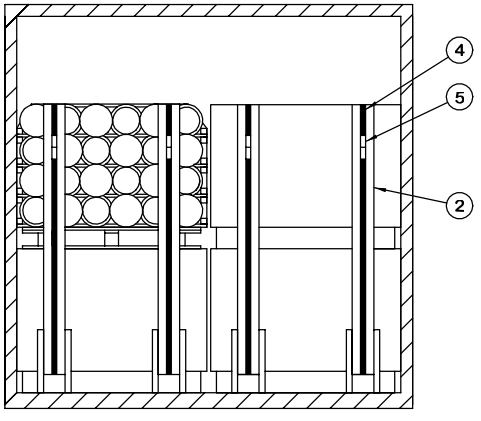
(1) FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 33. SEE GENERAL NOTE "J" ON PAGE 2.

(2) STRAPPING BOARD ASSEMBLY (8 REQD). SEE THE "STRAPPING BOARD ASSEMBLY A" DETAIL ON PAGE 37. SEE SPECIAL NOTE 3 ON PAGE 11. SEE GENERAL NOTES "M" AND "N" ON PAGE 2.

(3) REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY D" DETAIL ON PAGE 36. SEE SPECIAL NOTE 4 ON PAGE 11.

(4) STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 20'-0" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE A PALLET UNIT STACK AND TWO STRAPPING BOARD ASSEMBLIES. STAPLE TO A STRAPPING BOARD ASSEMBLY, PIECE MARKED (2), W/2 STAPLES.

(5) SEAL FOR 1-1/4" STRAPPING (8 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



SECTION C-C

ALTERNATED CONTAINERS UNIT (BASIC HEIGHT)
30-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER

PROJECT FSA 43C/10-63

SPECIAL NOTES:

1. A 30-UNIT LOAD IS SHOWN IN A 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TYPE TRAILER. NARROWER TRAILERS CANNOT BE USED FOR THIS PARTICULAR LOADING PATTERN.

2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 10 IS THE ALTERNATED CONTAINERS UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 38" LONG BY 48-1/2" WIDE BY 36-3/4" HIGH AND WEIGHING APPROXIMATELY 1,333 POUNDS.

3. FOR EASE OF INSTALLATION, A STRAPPING BOARD ASSEMBLY "B" MAY BE USED IN LIEU OF EACH PAIR OF STRAPPING BOARD ASSEMBLIES, PIECE MARKED ②, WHICH ARE USED UNDER THE UNITIZING STRAPS, PIECE MARKED ④. SEE THE DETAILS ON PAGE 37.

4. IF THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9", SOLID FILL REAR BLOCKING WILL BE USED IN LIEU OF THE DEPICTED REAR BLOCKING ASSEMBLY. SEE THE REAR BLOCKING ASSEMBLY "C" DETAIL ON PAGE 36. IF THE SPACE IS LESS THAN 1-1/2" REAR BLOCKING IS NOT REQUIRED. SEE SPECIAL NOTE 11.

5. AN UNSUPPORTED PALLET UNIT IN THE SECOND LAYER, EXCEPT AT THE VERY REAR OF THE LOAD, MUST BE UNITIZED TO A CORRESPONDING PALLET UNIT IN THE FIRST LAYER. A 2-HIGH PALLET STACK REQUIRING UNITIZATION AND THAT HAS THE CONTAINERS OF THE UNIT POSITIONED LENGTHWISE IN THE VAN TRAILER, WILL REQUIRE STRAPPING BOARD ASSEMBLIES. THE STRAPPING BOARD ASSEMBLIES, PIECE MARKED ②, AND THE UNITIZING STRAPS, PIECES MARKED ⑥, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.

6. IF A STACK AT THE REAR OF THE TRAILER IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑦ ON PAGE 6, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.

7. IF ONLY ONE PALLET UNIT IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON TOP OF THE REARMOST PALLET UNIT IN THE FIRST LAYER.

8. REFER TO PAGE 31 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

9. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FIVE MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 32 FOR GUIDANCE.

10. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 28 THROUGH 30.

11. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 8 AND 9. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

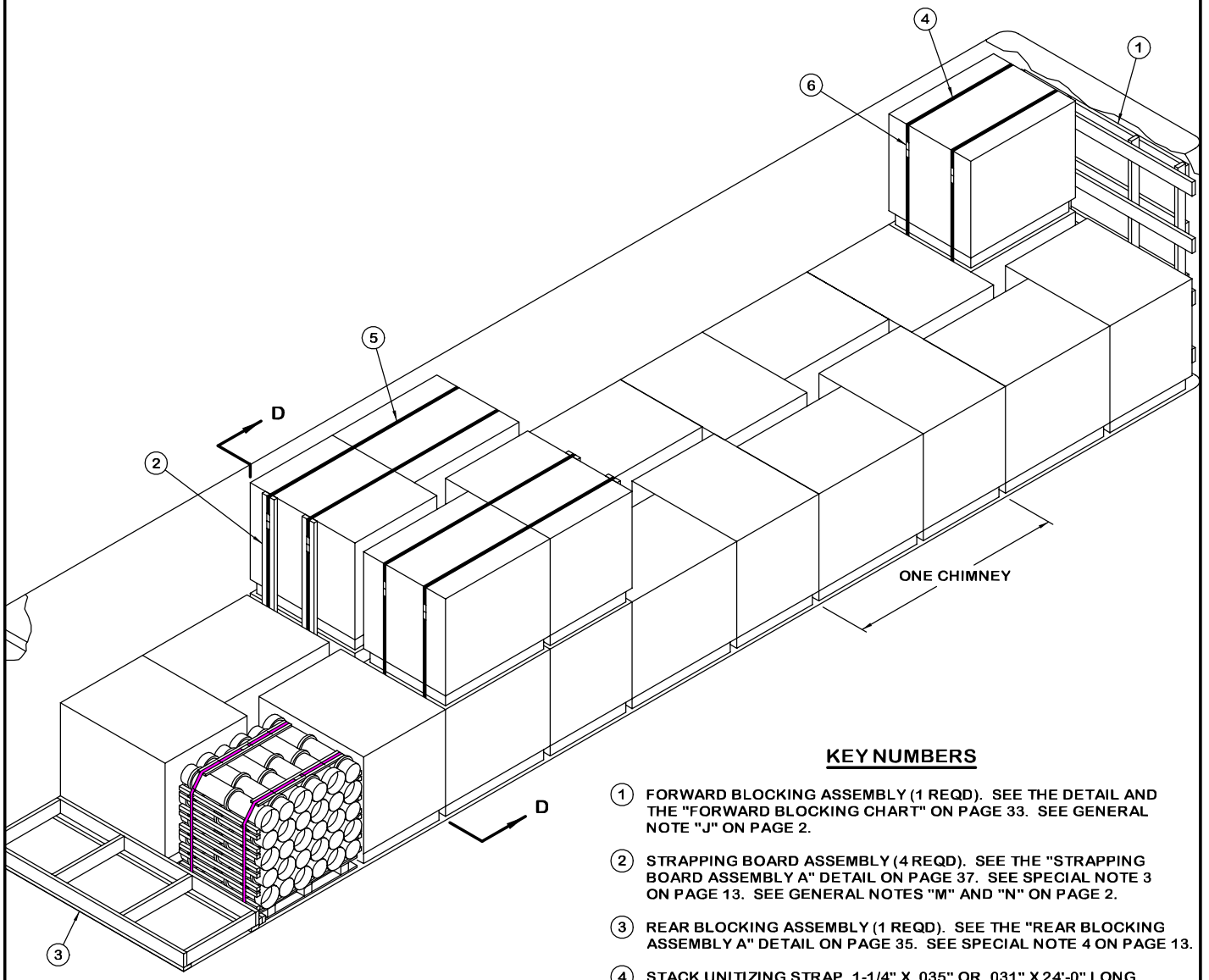
BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 2" 2" X 3" 2" X 4" 2" X 6"	22 2 14 103	8 1 10 103
NAILS	NO. REQD	POUNDS
10d (3")	116	2
1-1/4" STEEL STRAPPING - - 80' REQD - - - 11-1/2 LBS SEAL FOR 1-1/4" STRAPPING - 8 REQD - - - - 1/2 LBS STAPLE - - - - - - - - - - - - 16 REQD - - - - - - NIL		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	30 - - - - - -	39,990 LBS
DUNNAGE - - - - - - - - - - - - - - -		258 LBS
	TOTAL WEIGHT - - - - - -	40,248 LBS (APPROX)

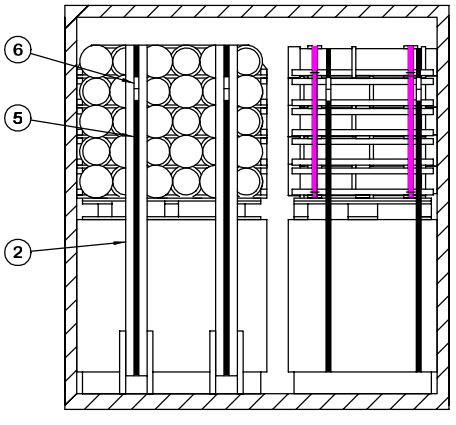
ALTERNATED CONTAINERS UNIT (BASIC HEIGHT)
30-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER



ISOMETRIC VIEW

KEY NUMBERS

1. FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 33. SEE GENERAL NOTE "J" ON PAGE 2.
2. STRAPPING BOARD ASSEMBLY (4 REQD). SEE THE "STRAPPING BOARD ASSEMBLY A" DETAIL ON PAGE 37. SEE SPECIAL NOTE 3 ON PAGE 13. SEE GENERAL NOTES "M" AND "N" ON PAGE 2.
3. REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 35. SEE SPECIAL NOTE 4 ON PAGE 13.
4. STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 24'-0" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE A PALLET UNIT STACK AS SHOWN. SEE SPECIAL NOTE 6 ON PAGE 13.
5. BUNDLING STRAP, 1-1/4" X .035" OR .031" X 30'-0" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNIT STACKS AND A STRAPPING BOARD ASSEMBLY. SEE SPECIAL NOTE 7 ON PAGE 13. STAPLE TO A STRAPPING BOARD, PIECE MARKED (2), W/2 STAPLES.
6. SEAL FOR 1-1/4" STRAPPING (12 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



SECTION D-D

ALTERNATED CONTAINERS UNIT - CHIMNEY PATTERN (INCREASED HEIGHT)
25-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER

PROJECT FSA 43C/10-63

SPECIAL NOTES:

1. A 25-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TYPE TRAILER. THE CHIMNEY PATTERN LOAD IS APPLICABLE FOR TRAILERS WHICH ARE 7'-5" TO 7'-8-1/4" IN WIDTH. FOR WIDER TRAILERS, REFER TO THE LOADING PATTERNS ON PAGES 14 AND 16.

2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 12 IS THE ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 38" LONG BY 48-1/2" WIDE BY 44-3/8" HIGH AND WEIGHING APPROXIMATELY 1,651 POUNDS.

3. FOR EASE OF INSTALLATION, A STRAPPING BOARD ASSEMBLY "C" MAY BE USED IN LIEU OF EACH PAIR OF STRAPPING BOARD ASSEMBLIES WHICH ARE USED UNDER THE BUNDLING STRAPS, PIECE MARKED ⑤. SEE THE DETAILS ON PAGE 37.

4. IF THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9", SOLID FILL REAR BLOCKING WILL BE USED IN LIEU OF THE DEPICTED REAR BLOCKING ASSEMBLY. SEE THE REAR BLOCKING ASSEMBLY "C" DETAIL ON PAGE 36. IF THE SPACE IS LESS THAN 1-1/2" REAR BLOCKING IS NOT REQUIRED. SEE SPECIAL NOTE 12.

5. IF A ONE-LAYER CHIMNEY PATTERN LOAD IS TO BE SHIPPED, THE STRAPPING BOARD ASSEMBLIES, THE STACK UNITIZING STRAPS, THE BUNDLING STRAPS, AND THE SEALS, PIECES MARKED ② AND PIECES MARKED ④ THROUGH ⑥ WILL NOT BE REQUIRED.

6. AN UNSUPPORTED PALLET UNIT IN THE SECOND LAYER, EXCEPT AT THE VERY REAR OF THE LOAD, MUST BE UNITIZED TO A CORRESPONDING PALLET UNIT IN THE FIRST LAYER. A 2-HIGH PALLET STACK REQUIRING UNITIZATION AND THAT HAS THE CONTAINERS OF THE UNIT POSITIONED LENGTHWISE IN THE VAN TRAILER, WILL REQUIRE STRAPPING BOARD ASSEMBLIES. THE STRAPPING BOARD ASSEMBLIES, PIECE MARKED ②, AND THE UNITIZING STRAPS, PIECES MARKED ④, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.

7. IF A STACK AT THE REAR OF THE TRAILER IS MORE THAN ONE UNIT HIGH, AS IN THE DEPICTED LOAD, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑤, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.

8. IF ONLY ONE PALLET UNIT IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON TOP OF THE REARMOST PALLET UNIT IN THE FIRST LAYER.

9. REFER TO PAGE 31 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

10. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FIVE MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 32 FOR GUIDANCE.

11. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 28 THROUGH 30.

12. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 8 AND 9. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

BILL OF MATERIAL

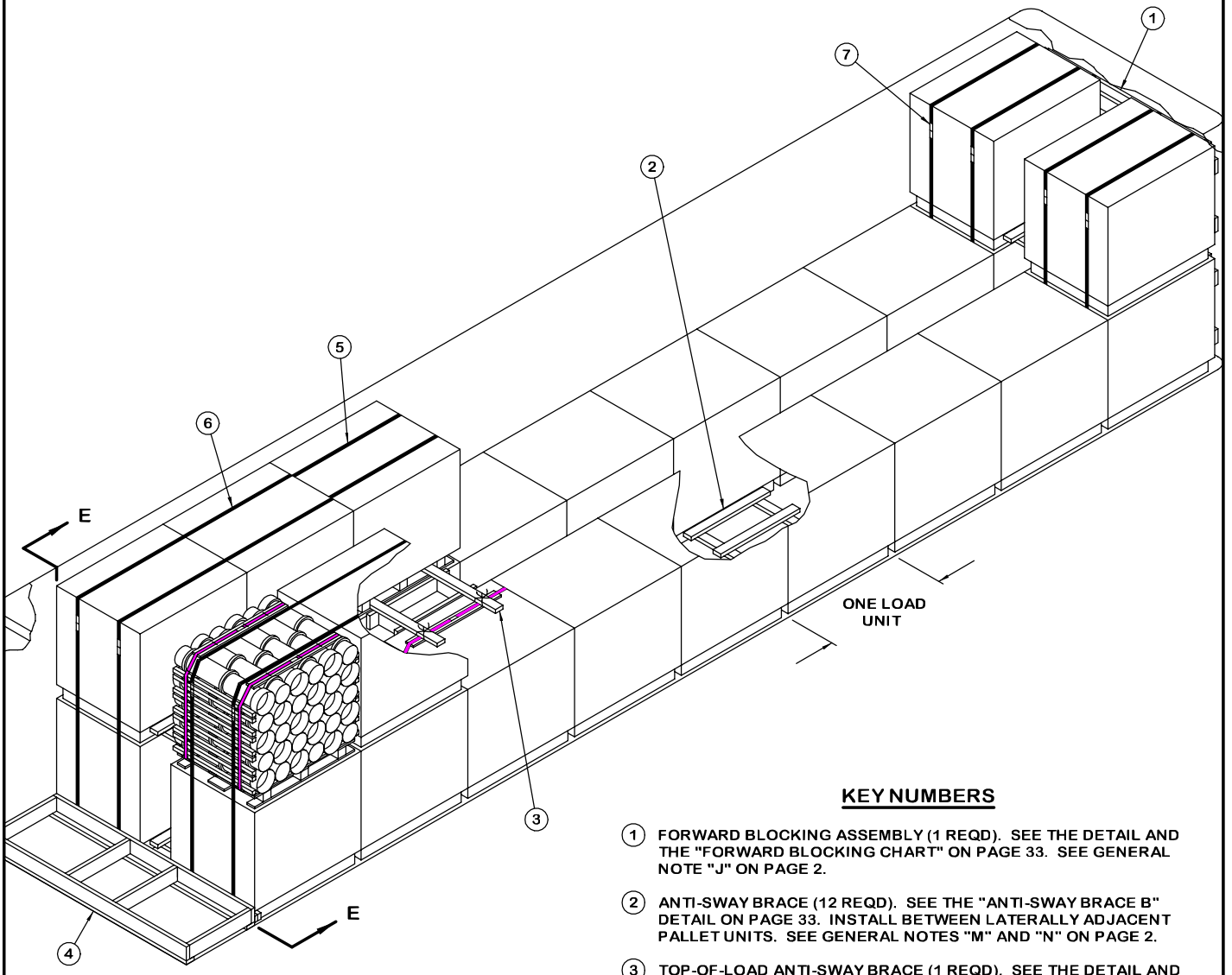
LUMBER	LINEAR FEET	BOARD FEET
2" X 2" 2" X 3" 2" X 4" 2" X 6"	11 3 45 113	4 2 30 113
NAILS	NO. REQD	POUNDS
10d (3")	140	2-1/4

1-1/4" STEEL STRAPPING - - 168' REQD - - - - - 14 LBS
SEAL FOR 1-1/4" STRAPPING - 12 REQD - - - - 3/4 LB
STAPLE - - - - - - - - - - - - 8 REQD - - - - - - NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	25 - - - - - -	41,275 LBS
DUNNAGE - - - - - - - - - - - - - - -		315 LBS
	TOTAL WEIGHT - - - - - -	41,590 LBS (APPROX)

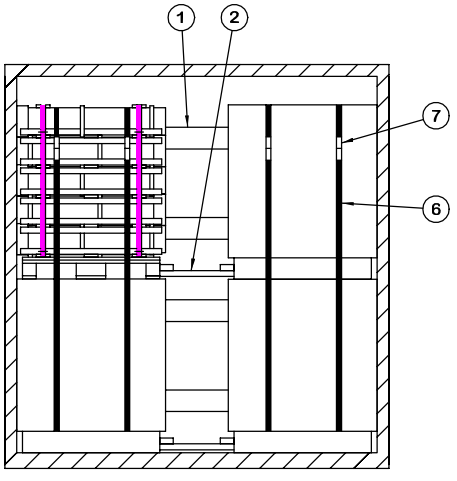
ALTERNATED CONTAINERS UNIT - CHIMNEY PATTERN (INCREASED HEIGHT)
25-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER



KEY NUMBERS

1. FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 33. SEE GENERAL NOTE "J" ON PAGE 2.
2. ANTI-SWAY BRACE (12 REQD). SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 33. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE GENERAL NOTES "M" AND "N" ON PAGE 2.
3. TOP-OF-LOAD ANTI-SWAY BRACE (1 REQD). SEE THE DETAIL AND THE "TIE WIRE APPLICATION" DETAIL ON PAGE 34. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE SPECIAL NOTE 3 ON PAGE 15.
4. REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 35. SEE SPECIAL NOTE 4 ON PAGE 15.
5. STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 24'-0" LONG STEEL STRAPPING (6 REQD). INSTALL SO AS TO ENCIRCLE A PALLET UNIT STACK AS SHOWN. SEE SPECIAL NOTE 5 ON PAGE 15.
6. BUNDLING STRAP, 1-1/4" X .035" OR .031" X 32'-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 6 ON PAGE 15.
7. SEAL FOR 1-1/4" STRAPPING (20 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

ISOMETRIC VIEW



SECTION E-E

PIECE MARKED ③ OMITTED FOR CLARITY PURPOSES.

ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT)
25-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER

PROJECT FSA 43C/10-63

SPECIAL NOTES:

1. A 25-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TYPE TRAILER. WIDER OR NARROWER TRAILERS MAY BE USED FOR SHIPMENT OF THE DEPICTED LOAD. IF A TRAILER WHICH IS 8'-2" OR WIDER IS FURNISHED FOR LOADING, SEE THE LOADING PATTERN ON PAGE 16.

2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 14 IS THE ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 38" LONG BY 48-1/2" WIDE BY 44-3/8" HIGH AND WEIGHING APPROXIMATELY 1,651 POUNDS.

3. THE TOP-OF-LOAD ANTI-SWAY BRACE, SHOWN IN THE LOAD AS PIECE MARKED ③, IS ONLY REQUIRED FOR THE BRACING OF AN ODD UNIT IN THE SECOND LAYER. IF ANOTHER PALLET UNIT IS POSITIONED OPPOSITE THE ODD UNIT, THE ANTI-SWAY BRACE "B" WILL BE INSTALLED IN LIEU OF PIECE MARKED ③.

4. IF THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9", SOLID FILL REAR BLOCKING WILL BE USED IN LIEU OF THE DEPICTED REAR BLOCKING ASSEMBLY. SEE THE REAR BLOCKING ASSEMBLY "B" DETAIL ON PAGE 35. IF THE SPACE IS LESS THAN 1-1/2" REAR BLOCKING IS NOT REQUIRED. SEE SPECIAL NOTE 13.

5. THE STACK UNITIZING STRAPS, PIECES MARKED ⑤ IN THE LOAD ON PAGE 14, WILL BE INSTALLED TO SECURE AN UNSUPPORTED PALLET UNIT IN THE SECOND LAYER TO A CORRESPONDING UNIT IN THE FIRST LAYER, EXCEPT AT THE VERY REAR OF THE LOAD.

6. IF A STACK AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS IN THE DEPICTED LOAD, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑥, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.

7. IF ONLY ONE PALLET UNIT IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON TOP OF THE REARMOST PALLET UNIT IN THE FIRST LAYER.

8. SEE PAGE 12 FOR AN ALTERNATIVE LOADING PATTERN.

9. REFER TO PAGE 31 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

10. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FIVE MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 32 FOR GUIDANCE.

11. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 28 THROUGH 30.

12. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 7'-6" IT WILL BE NECESSARY TO LIMIT THE REARMOST LOAD UNIT TO ONE PALLET UNIT IN HEIGHT. IF THE SECOND LAYER AT THE REAR OF THE LOAD IS MOVED FORWARD, THE BUNDLING STRAPS, PIECE MARKED ⑥, WILL NOT BE REQUIRED; SIX ADDITIONAL STACK UNITIZING STRAPS, PIECE MARKED ⑤, WILL BE REQUIRED.

13. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 8 AND 9. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

BILL OF MATERIAL

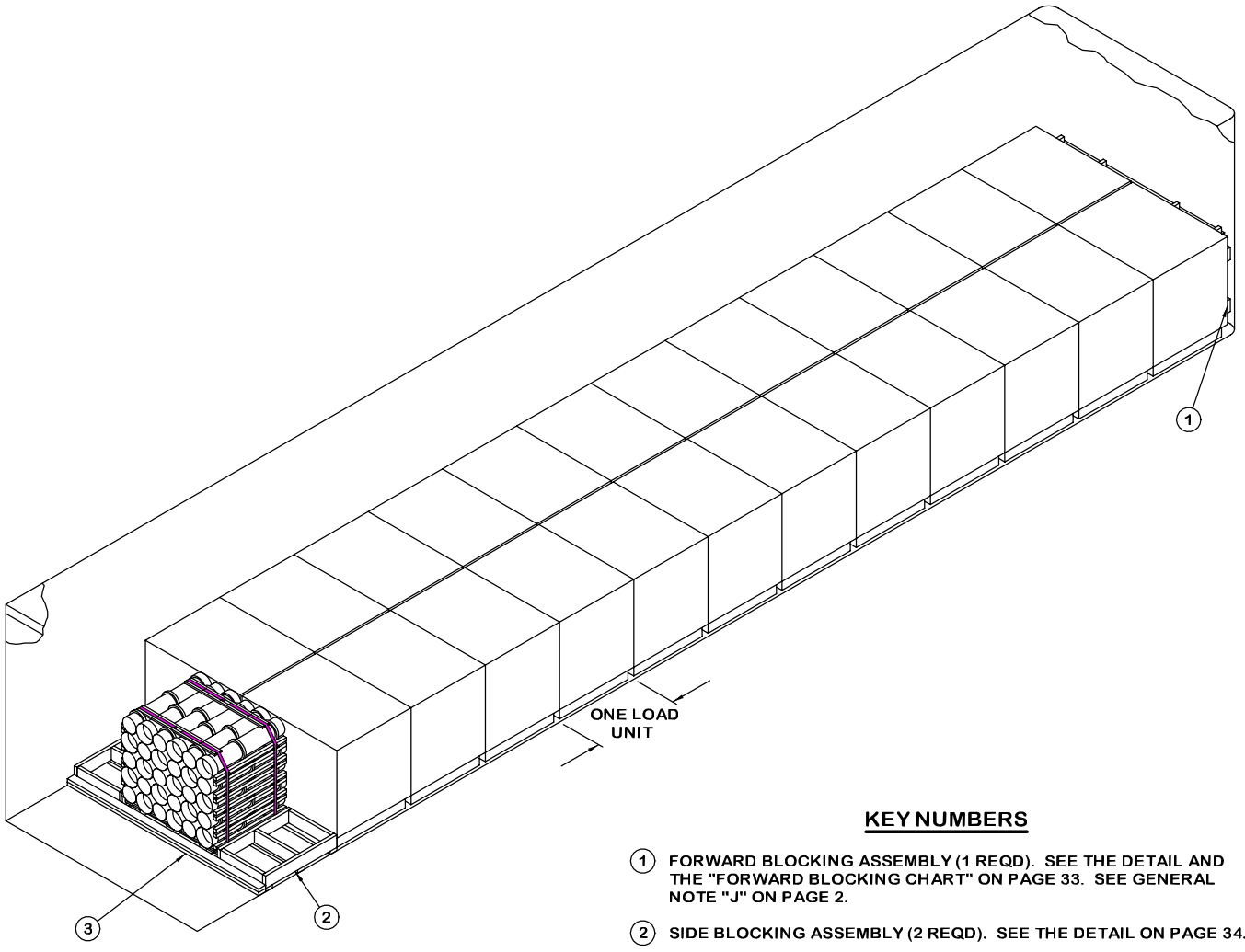
LUMBER	LINEAR FEET	BOARD FEET
2" X 3" 2" X 4" 2" X 6"	3 184 92	2 123 92
NAILS	NO. REQD	POUNDS
10d (3")	286	4-1/2

1-1/4" STEEL STRAPPING - - 272' REQD - - - - - 39 LBS
SEAL FOR 1-1/4" STRAPPING - 20 REQD - - - - - 1 LB
.0800" DIA. WIRE - - - - - 5' REQD - - - - - - NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	25	41,275 LBS
DUNNAGE		479 LBS
TOTAL WEIGHT		41,754 LBS (APPROX)

ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT)
25-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER



ISOMETRIC VIEW

KEY NUMBERS

1. FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 33. SEE GENERAL NOTE "J" ON PAGE 2.
2. SIDE BLOCKING ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 34.
3. REAR HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (DOUBLED) (1 REQD). POSITION AGAINST THE SIDE BLOCKING ASSEMBLIES AND THE PALLET POSTS OF THE REARMOST PALLET. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/17-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER AND TOENAIL TO THE SIDE BLOCKING ASSEMBLIES W/2-10d NAILS EACH. FOR OTHER LOAD WEIGHTS, SEE THE NAILING CHART ON PAGE 9.

ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT)
25-UNIT LOAD IN A 45'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER

SPECIAL NOTES:

1. A 25-UNIT LOAD IS SHOWN IN A 45'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TYPE TRAILER. NARROWER TRAILERS CANNOT BE USED FOR THIS PARTICULAR LOADING PATTERN.

2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 16 IS THE ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 38" LONG BY 48-1/2" WIDE BY 44-3/8" HIGH AND WEIGHING APPROXIMATELY 1,651 POUNDS.

3. IF THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9", SOLID FILL REAR BLOCKING WILL BE USED IN LIEU OF THE DEPICTED REAR BLOCKING ASSEMBLY. SEE THE REAR BLOCKING ASSEMBLY "C" DETAIL ON PAGE 36. IF THE SPACE IS LESS THAN 1-1/2" REAR BLOCKING IS NOT REQUIRED. SEE SPECIAL NOTE 10.

4. AN UNSUPPORTED PALLET UNIT IN THE SECOND LAYER, EXCEPT AT THE VERY REAR OF THE LOAD, MUST BE UNITIZED TO A CORRESPONDING PALLET UNIT IN THE FIRST LAYER. A 2-HIGH PALLET STACK REQUIRING UNITIZATION AND THAT HAS THE CONTAINERS OF THE UNIT POSITIONED LENGTHWISE IN THE VAN TRAILER, WILL REQUIRE FOUR STRAPPING BOARD ASSEMBLIES, AS DETAILED ON PAGE 37, AND TWO UNITIZING STRAPS, SIMILAR TO PIECES MARKED ⑥ AND 22'-0" IN LENGTH, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.

5. IF A STACK AT THE REAR OF THE TRAILER IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑥ ON PAGE 14 AND 28'-0" IN LENGTH, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.

6. IF ONLY ONE PALLET UNIT IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON TOP OF THE REARMOST PALLET UNIT IN THE FIRST LAYER.

7. REFER TO PAGE 31 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

8. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FIVE MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 32 FOR GUIDANCE.

9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 28 THROUGH 30.

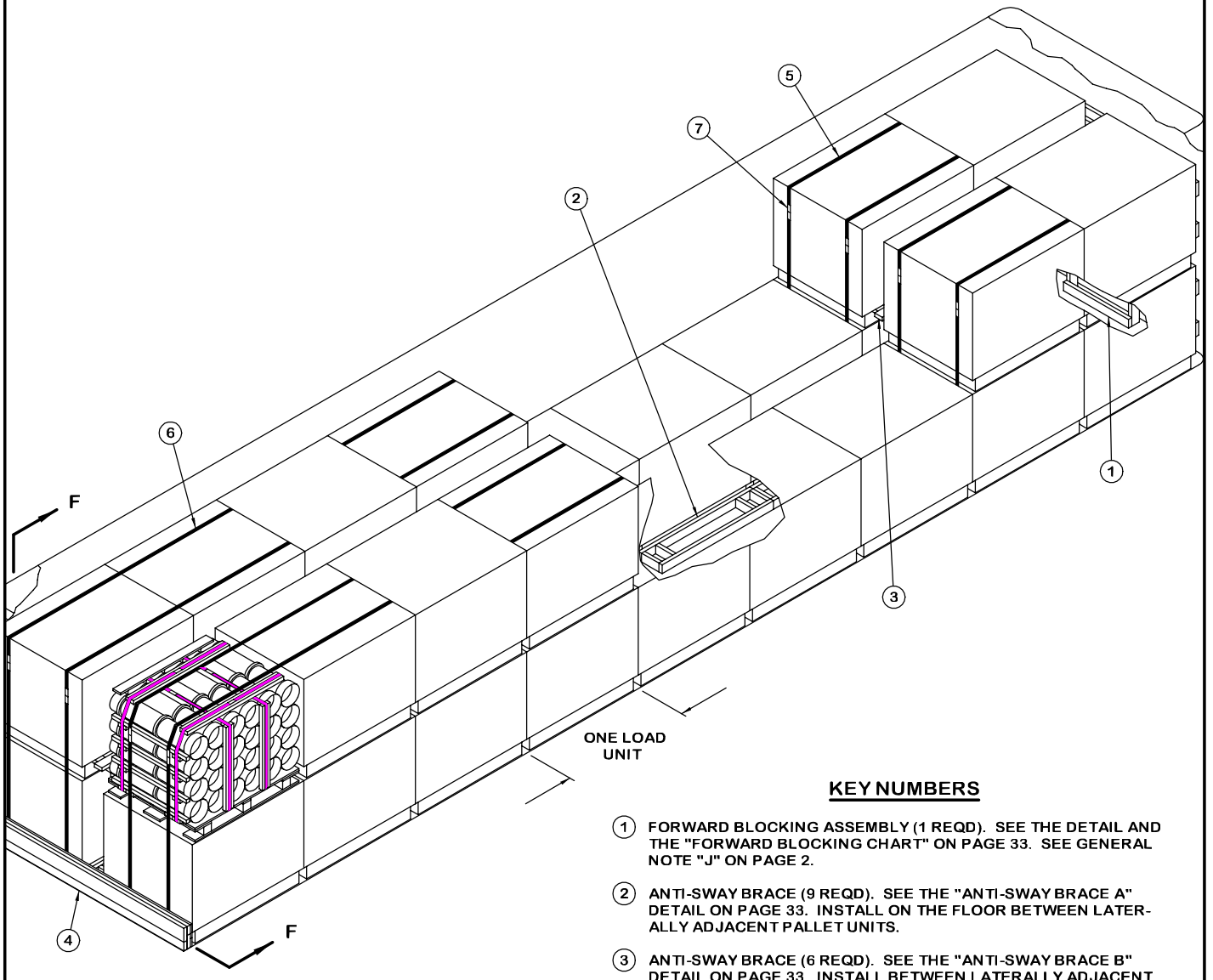
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 8, 9, AND 16. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4" 2" X 6"	44 55	30 55
NAILS	NO. REQD	POUNDS
10d (3")	124	2

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	25	41,275 LBS
DUNNAGE		172 LBS
TOTAL WEIGHT		41,447 LBS (APPROX)

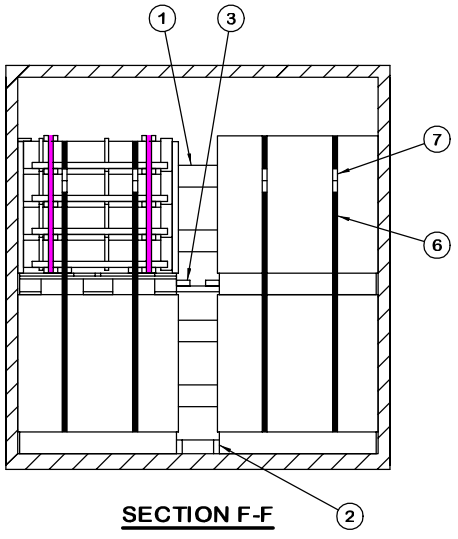
ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT)
25-UNIT LOAD IN A 45'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER



KEY NUMBERS

1. FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 33. SEE GENERAL NOTE "J" ON PAGE 2.
2. ANTI-SWAY BRACE (9 REQD). SEE THE "ANTI-SWAY BRACE A" DETAIL ON PAGE 33. INSTALL ON THE FLOOR BETWEEN LATERALLY ADJACENT PALLET UNITS.
3. ANTI-SWAY BRACE (6 REQD). SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 33. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE SPECIAL NOTE 3 ON PAGE 19.
4. REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY C" DETAIL ON PAGE 36. SEE SPECIAL NOTE 4 ON PAGE 19.
5. STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 23'-0" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE A PALLET UNIT STACK AS SHOWN. SEE SPECIAL NOTE 5 ON PAGE 19.
6. BUNDLING STRAP, 1-1/4" X .035" OR .031" X 31'-6" 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 6 ON PAGE 19.
7. SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

ISOMETRIC VIEW



SECTION F-F

FLAT DUNNAGE/ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT)
30-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER

PROJECT FSA 43C/10-63

SPECIAL NOTES:

1. A 30-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER. WIDER OR NARROWER TRAILERS MAY BE USED.

2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 18 IS THE FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 41" LONG BY 51-1/2" WIDE BY 40-1/2" HIGH AND WEIGHING APPROXIMATELY 1,400 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 41" LONG BY 50-1/2" WIDE BY 40-3/8" HIGH AND WEIGHING APPROXIMATELY 1,385 POUNDS.

3. IF DESIRED, ANTI-SWAY BRACE "B" WHICH IS SHOWN AS PIECE MARKED ③ AND USED BETWEEN LATERALLY ADJACENT PALLET UNITS IN THE SECOND LAYER MAY ALSO BE USED BETWEEN THE PALLET UNITS IN THE FIRST LAYER IN LIEU OF ANTI-SWAY BRACE "A". THE STOP PIECE ON THE FORWARD BLOCKING ASSEMBLY MAY THEN BE OMITTED.

4. IF THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS MORE THAN 9", A STRUT TYPE OF REAR BLOCKING MUST BE USED. SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 35. IF THE SPACE IS LESS THAN 1-1/2" REAR BLOCKING IS NOT REQUIRED. SEE SPECIAL NOTE 12.

5. THE STACK UNITIZING STRAPS, PIECES MARKED ⑤ IN THE LOAD ON PAGE 18, WILL BE INSTALLED TO SECURE AN UNSUPPORTED PALLET UNIT IN THE SECOND LAYER TO A CORRESPONDING UNIT IN THE FIRST LAYER, EXCEPT AT THE VERY REAR OF THE LOAD.

6. IF A STACK AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS IN THE DEPICTED LOAD, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑥, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.

7. IF A PALLET UNIT IS EITHER ADDED TO OR OMITTED FROM THE DEPICTED LOAD, THE PALLET UNIT IN THE SECOND LAYER THAT DOES NOT HAVE A PALLET UNIT DIRECTLY OPPOSITE MUST BE SECURED BY A BUNDLING STRAP AROUND THAT STACK AND THE STACK IMMEDIATELY ADJACENT.

8. IF ONLY ONE PALLET UNIT IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON TOP OF THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, PIECE MARKED ⑤. PROVIDE LATERAL BRACING BY INSTALLING A "TOP-OF-LOAD ANTI-SWAY BRACE" AS DETAILED ON PAGE 34 AND SHOWN IN THE LOAD ON PAGE 14. WIRE TIE AS SHOWN BY THE "TIE WIRE APPLICATION" DETAIL ON PAGE 34.

9. REFER TO PAGE 31 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

10. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FIVE MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 32 FOR GUIDANCE.

11. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 28 THROUGH 30.

12. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 8 AND 9. FOR THE DEPICTED LOAD IN A 40'-0" LONG TRAILER WHEN USING THE NAILED HEADER METHOD, IT WILL BE NECESSARY TO FORM EIGHT LOAD UNITS INSTEAD OF NINE, AS SHOWN. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

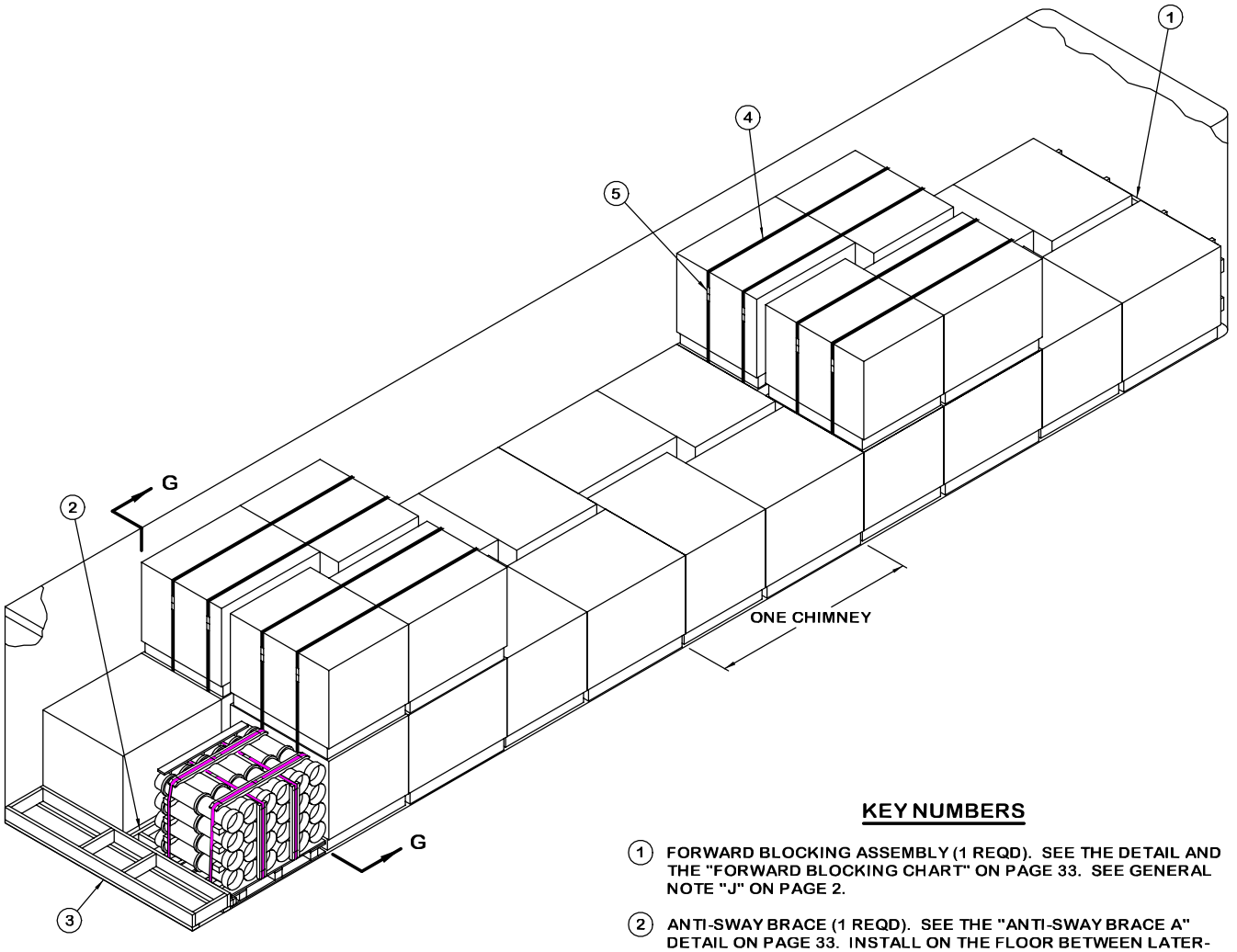
BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 1" X 6" 2" X 4" 2" X 6"	8 8 208 73	3 4 139 73
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	16 388	1/4 6
1-1/4" STEEL STRAPPING - - 310' REQD - - - 44-1/2 LBS SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	30	41,550 LBS *
DUNNAGE		490 LBS
TOTAL WEIGHT		42,040 LBS (APPROX)

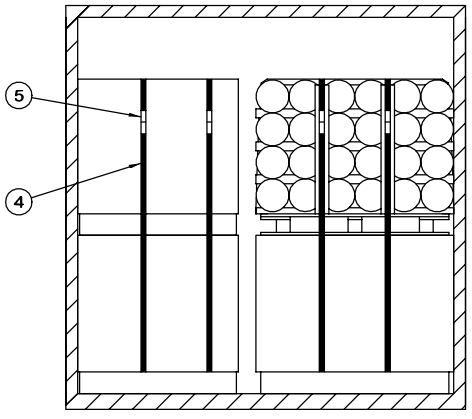
* FLAT DUNNAGE METHOD UNIT WEIGHT SHOWN; 41,550 POUNDS FOR ROUTED DUNNAGE METHOD UNIT. DUNNAGE WEIGHT FOR THE ROUTED DUNNAGE METHOD UNIT IS 487 POUNDS.



ISOMETRIC VIEW

KEY NUMBERS

1. FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 33. SEE GENERAL NOTE "J" ON PAGE 2.
2. ANTI-SWAY BRACE (1 REQD). SEE THE "ANTI-SWAY BRACE A" DETAIL ON PAGE 33. INSTALL ON THE FLOOR BETWEEN LATERALLY ADJACENT PALLET UNITS.
3. REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 35. SEE SPECIAL NOTE 3 ON PAGE 21.
4. BUNDLING STRAP, 1-1/4" X .035" OR .031" X 29'-6" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNIT STACKS. SEE SPECIAL NOTE 6 ON PAGE 21.
5. SEAL FOR 1-1/4" STRAPPING (16 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



SECTION G-G

FLAT DUNNAGE/ROUTED DUNNAGE METHOD UNIT - CHIMNEY PATTERN (BASIC HEIGHT)
30-UNIT LOAD IN A 45'-0" LONG BY 8'-0" WIDE CONVENTIONAL VAN TRAILER

PROJECT FSA 43C/10-63

SPECIAL NOTES:

1. A 30-UNIT LOAD IS SHOWN IN A 45'-0" LONG BY 8'-0" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TYPE TRAILER. THE CHIMNEY PATTERN LOAD IS APPLICABLE FOR TRAILERS WHICH ARE 7'-8" TO 8'-2" IN WIDTH.

2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 20 IS THE ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 41" LONG BY 50-1/2" WIDE BY 40-5/8" HIGH AND WEIGHING APPROXIMATELY 1,385 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 41" LONG BY 51-1/2" WIDE BY 40-1/2" HIGH AND WEIGHING APPROXIMATELY 1,400 POUNDS.

3. IF THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9", SOLID FILL REAR BLOCKING WILL BE USED IN LIEU OF THE DEPICTED REAR BLOCKING ASSEMBLY. SEE THE REAR BLOCKING ASSEMBLY "C" DETAIL ON PAGE 36. IF THE SPACE IS LESS THAN 1-1/2" REAR BLOCKING IS NOT REQUIRED. SEE SPECIAL NOTE 11.

4. IF A ONE-LAYER CHIMNEY PATTERN LOAD IS TO BE SHIPPED, THE BUNDLING STRAPS AND THE SEALS, PIECES MARKED ④ AND ⑤ WILL NOT BE REQUIRED.

5. AN UNSUPPORTED PALLET UNIT IN THE SECOND LAYER, EXCEPT AT THE VERY REAR OF THE LOAD, MUST BE UNITIZED TO A CORRESPONDING PALLET UNIT IN THE FIRST LAYER. A 2-HIGH PALLET STACK REQUIRING UNITIZATION WILL REQUIRE TWO UNITIZING STRAPS, PIECE MARKED ⑤ ON PAGE 18. THE UNITIZING STRAPS MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.

6. IF A STACK AT THE REAR OF THE TRAILER IS MORE THAN ONE UNIT HIGH, AS IN THE DEPICTED LOAD, BUNDLING STRAPS, SHOWN AS PIECE MARKED ④, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.

7. IF ONLY ONE PALLET UNIT IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON TOP OF THE REARMOST PALLET UNIT IN THE FIRST LAYER.

8. REFER TO PAGE 31 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

9. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FIVE MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 32 FOR GUIDANCE.

10. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 28 THROUGH 30.

11. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 8 AND 9. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

BILL OF MATERIAL

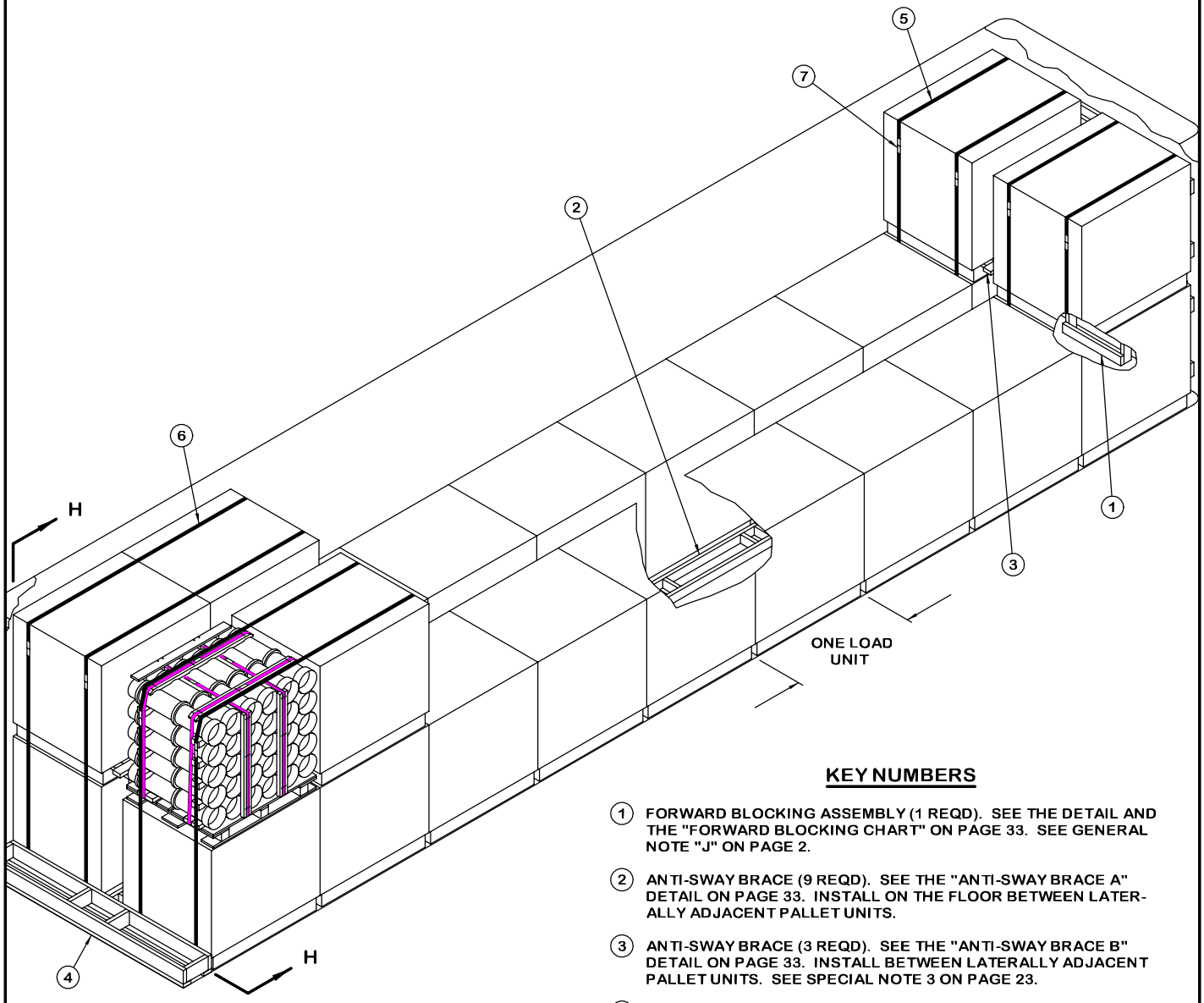
LUMBER	LINEAR FEET	BOARD FEET
2" X 3" 2" X 4" 2" X 6"	2 44 52	1 30 52
NAILS	NO. REQD	POUNDS
10d (3")	102	1-3/4
1-1/4" STEEL STRAPPING - - 236' REQD - - - 33-3/4 LBS SEAL FOR 1-1/4" STRAPPING - 16 REQD - - - - 3/4 LB		

LOAD AS SHOWN

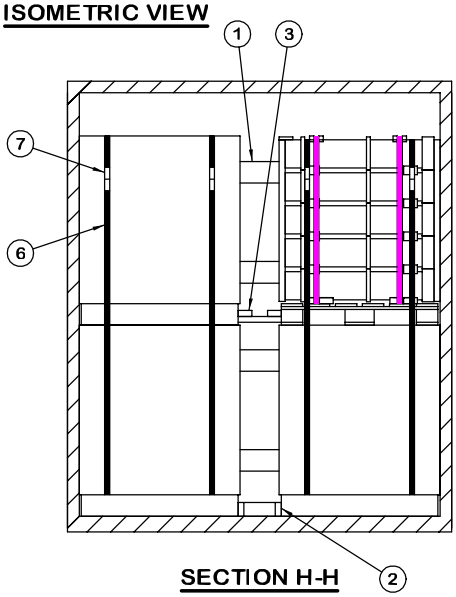
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	30	41,550 LBS *
DUNNAGE		203 LBS
TOTAL WEIGHT		41,753 LBS (APPROX)

* ROUTED DUNNAGE METHOD UNIT WEIGHT SHOWN; 41,550 POUNDS FOR FLAT DUNNAGE METHOD UNIT. DUNNAGE WEIGHT FOR THE FLAT DUNNAGE METHOD UNIT IS 199 POUNDS.

FLAT DUNNAGE/ROUTED DUNNAGE METHOD UNIT - CHIMNEY PATTERN (BASIC HEIGHT)
30-UNIT LOAD IN A 45'-0" LONG BY 8'-0" WIDE CONVENTIONAL VAN TRAILER



ISOMETRIC VIEW



SECTION H-H

KEY NUMBERS

1. FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 33. SEE GENERAL NOTE "J" ON PAGE 2.
2. ANTI-SWAY BRACE (9 REQD). SEE THE "ANTI-SWAY BRACE A" DETAIL ON PAGE 33. INSTALL ON THE FLOOR BETWEEN LATERALLY ADJACENT PALLET UNITS.
3. ANTI-SWAY BRACE (3 REQD). SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 33. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE SPECIAL NOTE 3 ON PAGE 23.
4. REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 35. SEE SPECIAL NOTE 4 ON PAGE 23.
5. STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 26'-0" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE A PALLET UNIT STACK AS SHOWN. SEE SPECIAL NOTE 5 ON PAGE 23.
6. BUNDLING STRAP, 1-1/4" X .035" OR .031" X 34'-6" 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 6 ON PAGE 23.
7. SEAL FOR 1-1/4" STRAPPING (16 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

FLAT DUNNAGE/ROUTED DUNNAGE METHOD UNIT (INCREASED HEIGHT)
24-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE HIGH-VOLUME VAN TRAILER

PROJECT FSA 43C/10-63

(SPECIAL NOTES CONTINUED)

13. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 8 AND 9. FOR THE DEPICTED LOAD IN A 40'-0" LONG TRAILER WHEN USING THE NAILED HEADER METHOD, IT WILL BE NECESSARY TO FORM EIGHT LOAD UNITS INSTEAD OF NINE, AS SHOWN. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

SPECIAL NOTES:

1. A 24-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) HIGH-VOLUME VAN TYPE TRAILER. WIDER OR NARROWER TRAILERS MAY BE USED.

2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 22 IS THE ROUTED DUNNAGE METHOD UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 41" LONG BY 50-1/2" WIDE BY 48-3/4" HIGH AND WEIGHING APPROXIMATELY 1,711 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE FLAT DUNNAGE METHOD UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 41" LONG BY 51-1/2" WIDE BY 48-7/8" HIGH AND WEIGHING APPROXIMATELY 1,709 POUNDS.

3. IF DESIRED, ANTI-SWAY BRACE "B" WHICH IS SHOWN AS PIECE MARKED ③ AND USED BETWEEN LATERALLY ADJACENT PALLET UNITS IN THE SECOND LAYER MAY ALSO BE USED BETWEEN THE PALLET UNITS IN THE FIRST LAYER IN LIEU OF ANTI-SWAY BRACE "A". THE STOP PIECE ON THE FORWARD BLOCKING ASSEMBLY MAY THEN BE OMITTED.

4. IF THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9", SOLID FILL BLOCKING WILL BE USED IN LIEU OF THE DEPICTED REAR BLOCKING ASSEMBLY. SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 35. IF THE SPACE IS LESS THAN 1-1/2" REAR BLOCKING IS NOT REQUIRED. SEE SPECIAL NOTE 13.

5. THE STACK UNITIZING STRAPS, PIECE MARKED ⑤ IN THE LOAD ON PAGE 22, WILL BE INSTALLED TO SECURE AN UNSUPPORTED PALLET UNIT IN THE SECOND LAYER TO A CORRESPONDING UNIT IN THE FIRST LAYER, EXCEPT AT THE VERY REAR OF THE LOAD.

6. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE TRAILER IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑥, MUST BE INSTALLED SO AS TO ENCIRCLE THE REAR-MOST TWO STACKS IN EACH APPLICABLE ROW.

7. IF ONLY ONE PALLET UNIT IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON TOP OF THE REAR-MOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, PIECE MARKED ⑤. PROVIDE LATERAL BRACING BY INSTALLING A "TOP-OF-LOAD ANTI-SWAY BRACE" AS DETAILED ON PAGE 34 AND SHOWN IN THE LOAD VIEW ON PAGE 14 AS PIECE MARKED ③. WIRE TIE AS SHOWN BY THE "TIE WIRE APPLICATION" DETAIL ON PAGE 34.

8. IF A PALLET UNIT IS EITHER ADDED TO OR OMITTED FROM THE DEPICTED LOAD, THE PALLET UNIT IN THE SECOND LAYER THAT DOES NOT HAVE A PALLET UNIT DIRECTLY OPPOSITE MUST BE SECURED BY INSTALLING BUNDLING STRAPS AROUND THAT STACK AND THE STACK IMMEDIATELY ADJACENT, AND ALSO INSTALLING A "TOP-OF-LOAD ANTI-SWAY BRACE" AS SHOWN IN THE LOAD ON PAGE 14.

9. REFER TO PAGE 31 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

10. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FIVE MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 32 FOR GUIDANCE.

11. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE PROCEDURES ON PAGES 28 THROUGH 30.

12. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 8'-2-1/2" IT WILL BE NECESSARY TO LIMIT THE REARMOST LOAD UNIT TO ONE PALLET UNIT IN HEIGHT. IF THE SECOND LAYER AT THE REAR OF THE LOAD IS MOVED FORWARD, THE BUNDLING STRAPS, PIECE MARKED ⑥, MAY BE USED, OR EACH PALLET STACK MAY BE UNITIZED, AS DESIRED.

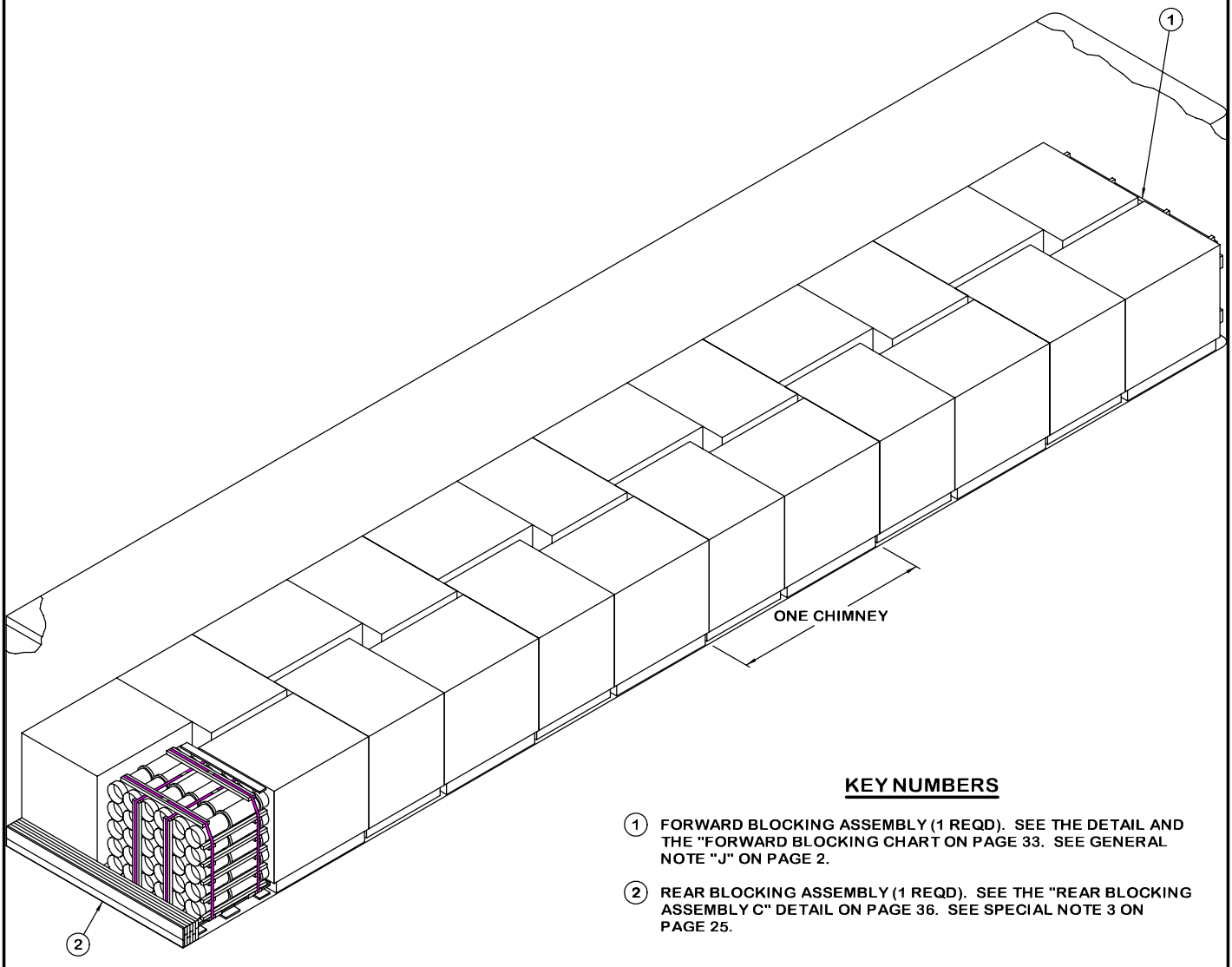
(CONTINUED AT LEFT)

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 3" 2" X 4" 2" X 6"	2 185 77	1 124 77
NAILS	NO. REQD	POUNDS
10d (3")	300	4-3/4
1-1/4" STEEL STRAPPING - - 242' REQD - - - 34-3/4 LBS SEAL FOR 1-1/4" STRAPPING - 16 REQD - - - - 3/4 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	24	41,064 LBS *
DUNNAGE		445 LBS
TOTAL WEIGHT		41,509 LBS (APPROX)

* ROUTED DUNNAGE METHOD UNIT WEIGHT SHOWN; 41,016 POUNDS FOR FLAT DUNNAGE METHOD UNIT. DUNNAGE WEIGHT FOR THE FLAT DUNNAGE METHOD UNIT IS 444 POUNDS.



KEY NUMBERS

(1) FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART ON PAGE 33. SEE GENERAL NOTE "J" ON PAGE 2.

(2) REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY C" DETAIL ON PAGE 36. SEE SPECIAL NOTE 3 ON PAGE 25.

ISOMETRIC VIEW

FLAT DUNNAGE/ROUTED DUNNAGE METHOD UNIT - CHIMNEY PATTERN (INCREASED HEIGHT)
24-UNIT LOAD IN A 48'-0" LONG BY 8'-0" WIDE CONVENTIONAL VAN TRAILER

PROJECT FSA 43C/10-63

SPECIAL NOTES:

1. A 24-UNIT LOAD IS SHOWN IN A 48'-0" LONG BY 8'-0" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TYPE TRAILER. THE CHIMNEY PATTERN LOAD IS APPLICABLE FOR TRAILERS WHICH ARE 7'-8" TO 8'-2" IN WIDTH.

2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 24 IS THE FLAT DUNNAGE METHOD UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 41" LONG BY 51-1/2" WIDE BY 48-7/8" HIGH AND WEIGHING APPROXIMATELY 1,709 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE ROUTED DUNNAGE METHOD UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 41" LONG BY 50-1/2" WIDE BY 48-3/4" HIGH AND WEIGHING APPROXIMATELY 1,711 POUNDS.

3. IF THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS MORE THAN 9", A STRUT TYPE OF REAR BLOCKING MUST BE USED. SEE THE REAR BLOCKING ASSEMBLY "B" DETAIL ON PAGE 35. IF THE SPACE IS LESS THAN 1-1/2" REAR BLOCKING IS NOT REQUIRED. SEE SPECIAL NOTE 10.

4. AN UNSUPPORTED PALLET UNIT IN THE SECOND LAYER, EXCEPT AT THE VERY REAR OF THE LOAD, MUST BE UNITIZED TO A CORRESPONDING PALLET UNIT IN THE FIRST LAYER. A 2-HIGH PALLET STACK REQUIRING UNITIZATION WILL REQUIRE TWO UNITIZING STRAPS, PIECE MARKED ⑤ ON PAGE 22. THE UNITIZING STRAPS MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.

5. IF A STACK AT THE REAR OF THE TRAILER IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑥ ON PAGE 22, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.

6. IF ONLY ONE PALLET UNIT IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON TOP OF THE REARMOST PALLET UNIT IN THE FIRST LAYER.

7. REFER TO PAGE 31 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

8. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FIVE MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 32 FOR GUIDANCE.

9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 28 THROUGH 30.

10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 8 AND 9. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

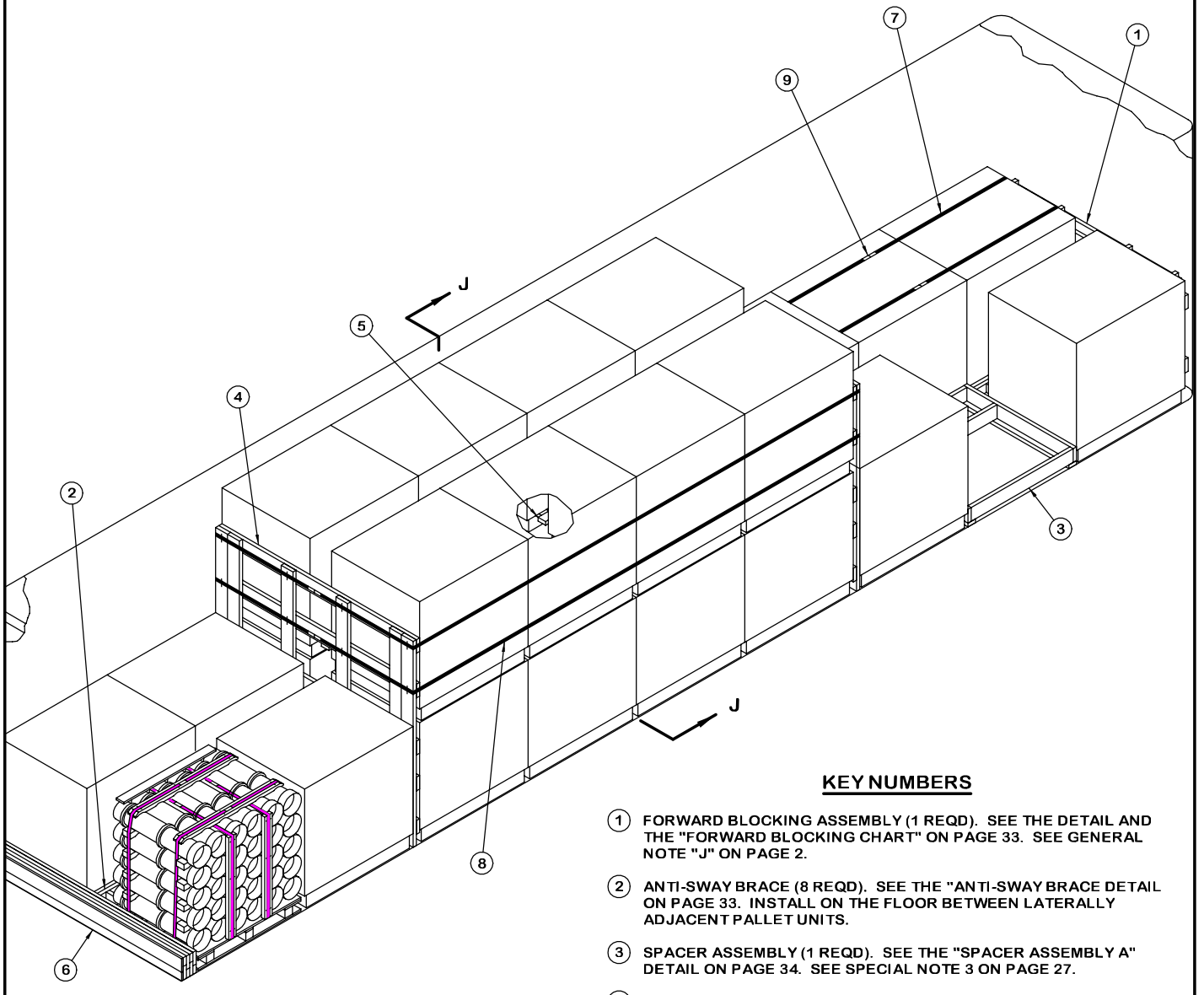
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 1" X 6" 2" X 4" 2" X 6"	8 8 56 70	3 4 38 70
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	18 86	1/4 1-1/2

LOAD AS SHOWN

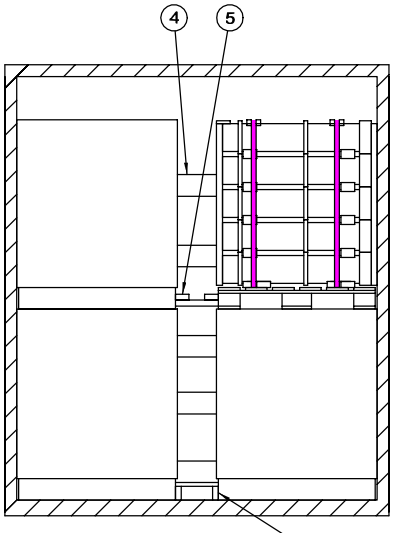
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	24	41,016 LBS *
DUNNAGE		232 LBS
TOTAL WEIGHT		41,248 LBS (APPROX)

* FLAT DUNNAGE METHOD UNIT WEIGHT SHOWN; 41,064 POUNDS FOR ROUTED DUNNAGE METHOD UNIT. DUNNAGE WEIGHT FOR THE ROUTED DUNNAGE METHOD UNIT IS 212 POUNDS.

FLAT DUNNAGE/ROUTED DUNNAGE METHOD UNIT - CHIMNEY PATTERN (INCREASED HEIGHT)
24-UNIT LOAD IN A 48'-0" LONG BY 8'-0" WIDE CONVENTIONAL VAN TRAILER



ISOMETRIC VIEW



SECTION J-J

KEY NUMBERS

1. FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 33. SEE GENERAL NOTE "J" ON PAGE 2.
2. ANTI-SWAY BRACE (8 REQD). SEE THE "ANTI-SWAY BRACE DETAIL ON PAGE 33. INSTALL ON THE FLOOR BETWEEN LATERALLY ADJACENT PALLET UNITS.
3. SPACER ASSEMBLY (1 REQD). SEE THE "SPACER ASSEMBLY A" DETAIL ON PAGE 34. SEE SPECIAL NOTE 3 ON PAGE 27.
4. BULKHEAD GATE (2 REQD). SEE THE DETAIL AND THE "BULKHEAD GATE CHART" ON PAGE 38.
5. ANTI-SWAY BRACE (4 REQD). SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 33. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS IN THE SECOND LAYER. SEE SPECIAL NOTE 4 ON PAGE 27.
6. REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY C" DETAIL ON PAGE 36. SEE SPECIAL NOTES 5 AND 6 ON PAGE 27.
7. BUNDLING STRAP, 1-1/4" X .035" OR .031" X 26'-0" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNITS AS SHOWN. SEE SPECIAL NOTE 7 ON PAGE 27.
8. BUNDLING STRAP, 1-1/4" X .035" OR .031" X 53'-0" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE EIGHT UPPER-LAYER PALLET UNITS AS SHOWN. STAPLE TO THE BULKHEAD GATE, PIECE MARKED (4), W/4 STAPLES.
9. SEAL FOR 1-1/4" STRAPPING (8 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

ALTERNATIVE LOADING PROCEDURE FOR ALL UNITS
25-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE HI-VOLUME VAN TRAILER

PROJECT FSA 43C/10-63

SPECIAL NOTES:

1. A 25-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TYPE TRAILER. WIDER OR NARROWER TRAILERS MAY BE USED. HIGH-VOLUME TRAILERS MAY BE REQUIRED.

2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 26 IS THE ROUTED DUNNAGE METHOD UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 41" LONG BY 50-1/2" WIDE BY 48-3/4" HIGH AND WEIGHING APPROXIMATELY 1,711 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER UNITS DEPICTED ON PAGES 4 AND 5.

3. THE SPACER ASSEMBLY, SHOWN IN THE LOAD VIEW AS PIECE MARKED ③, IS ONLY SHOWN TO DEPICT A TYPICAL INSTALLATION. IF A PALLET UNIT IS LOADED IN PLACE OF THE SPACER ASSEMBLY, THE BUNDLING STRAPS, PIECE MARKED ⑦, WILL NOT BE REQUIRED. NOTE THAT A SPACER ASSEMBLY MUST BE POSITIONED WHERE THERE WILL BE A PALLET UNIT AT EACH END; A SPACER ASSEMBLY MUST NOT BE POSITIONED ADJACENT TO THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①, OR ADJACENT TO A BULKHEAD GATE, PIECE MARKED ④.

4. IF DESIRED, WHEN LOADING THE FLAT DUNNAGE OR ROUTED DUNNAGE METHOD UNITS, THE ANTI-SWAY BRACE "B" WHICH IS SHOWN AS PIECE MARKED ⑤, AND USED BETWEEN THE LATERALLY ADJACENT PALLET UNITS IN THE SECOND LAYER, MAY BE USED BETWEEN THE PALLET UNITS IN THE FIRST LAYER. THE STOP PIECE ON THE FORWARD BLOCKING ASSEMBLY AND ON THE BULKHEAD GATE MAY THEN BE OMITTED.

5. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOORS MEASURES 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED. IF THE VOID AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9", USE REAR BLOCKING ASSEMBLY "C" AS SHOWN. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, A STRUT TYPE OF REAR BLOCKING MUST BE USED. SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 35. SEE SPECIAL NOTE 6.

6. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 8 AND 9. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

7. A PALLET UNIT THAT DOES NOT HAVE A PALLET UNIT DIRECTLY OPPOSITE MUST BE SECURED BY INSTALLING BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑦ IN THE LOAD ON PAGE 26, AROUND THAT PALLET AND THE PALLET UNIT IMMEDIATELY ADJACENT. NOTE THAT ONLY ONE BUNDLING STRAP IS REQUIRED WHEN A PALLET UNIT IS OMITTED FROM A LOAD OF BASIC HEIGHT UNITS. A PALLET UNIT WILL NOT BE OMITTED FROM THE SECOND LAYER PORTION OF THE LOAD.

8. THE SECOND LAYER PORTION OF THE LOAD IS LIMITED TO NOT MORE THAN FOURTEEN BASIC HEIGHT UNITS OR TEN INCREASED HEIGHT UNITS. THE LOWER BUNDLING STRAP, PIECE MARKED ⑧, MAY BE OMITTED IF THE SECOND LAYER CONTAINS SIX OR LESS OF ANY OF THE PALLET UNITS.

9. REFER TO PAGE 31 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

10. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 32 FOR GUIDANCE.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 1" X 6" 2" X 4" 2" X 6"	8 8 210 241	3 4 140 241
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	16 560	1/4 8-3/4
1-1/4" STEEL STRAPPING - - 158' REQD - - - 22-3/4 LBS SEAL FOR 1-1/4" STRAPPING - 8 REQD - - - - 1/2 LB STAPLE - - - - - - - - - - - - 16 REQD - - - - - - NIL		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	25 - - - - - -	42,775 LBS
DUNNAGE - - - - - - - - - - - - - - -		809 LBS
	TOTAL WEIGHT - - - - - -	43,584 LBS (APPROX)

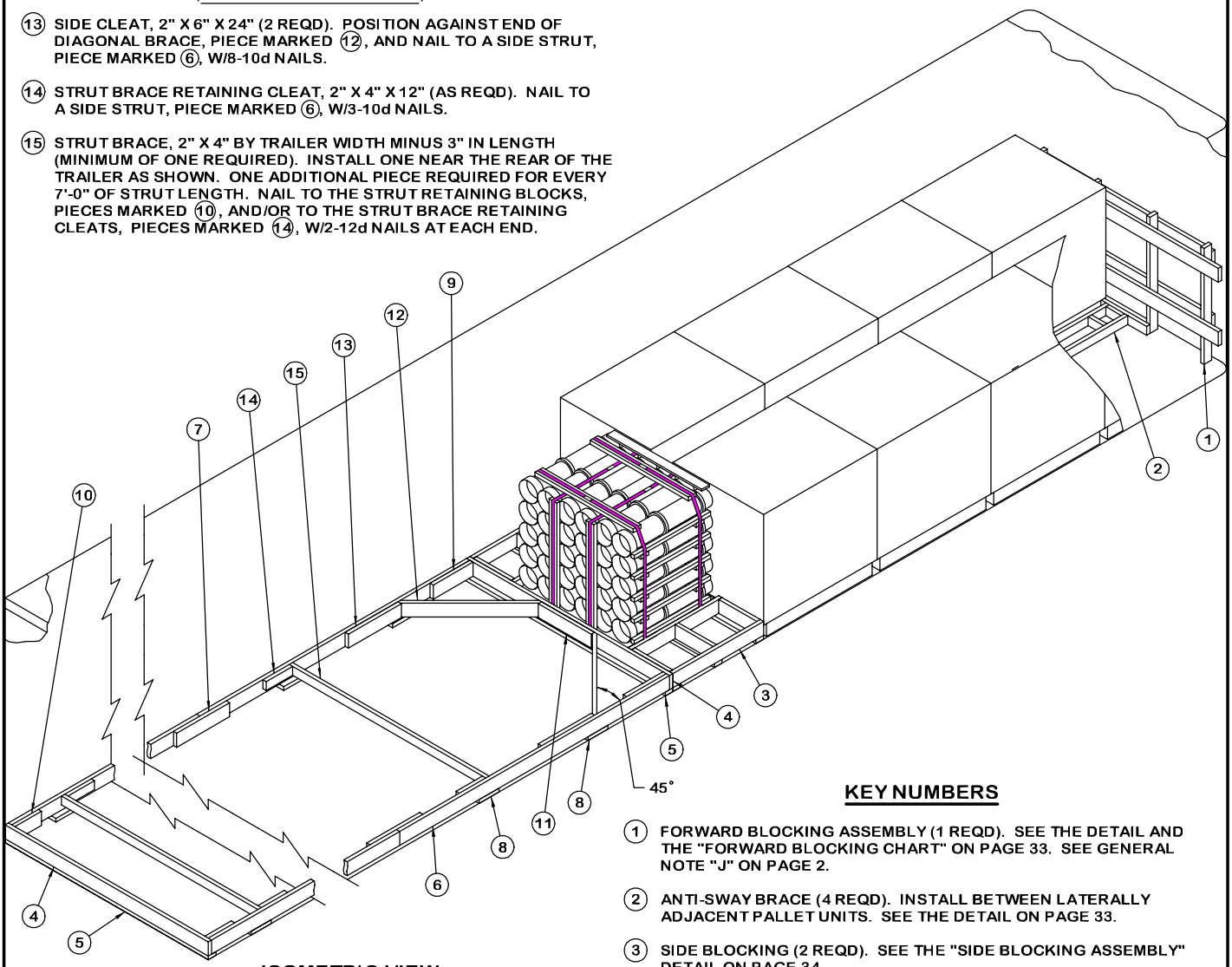
ALTERNATIVE LOADING PROCEDURE FOR ALL UNITS
25-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE HI-VOLUME VAN TRAILER

(KEY NUMBERS CONTINUED)

(13) SIDE CLEAT, 2" X 6" X 24" (2 REQD). POSITION AGAINST END OF DIAGONAL BRACE, PIECE MARKED (12), AND NAIL TO A SIDE STRUT, PIECE MARKED (6), W/8-10d NAILS.

(14) STRUT BRACE RETAINING CLEAT, 2" X 4" X 12" (AS REQD). NAIL TO A SIDE STRUT, PIECE MARKED (6), W/3-10d NAILS.

(15) STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 3" IN LENGTH (MINIMUM OF ONE REQUIRED). INSTALL ONE NEAR THE REAR OF THE TRAILER AS SHOWN. ONE ADDITIONAL PIECE REQUIRED FOR EVERY 7'-0" OF STRUT LENGTH. NAIL TO THE STRUT RETAINING BLOCKS, PIECES MARKED (10), AND/OR TO THE STRUT BRACE RETAINING CLEATS, PIECES MARKED (14), W/2-12d NAILS AT EACH END.



ISOMETRIC VIEW

SPECIAL NOTES:

1. THESE OUTLOADING PROCEDURES COVER THE USE OF BOTH "K-BRACE" AND NAILED FLOORLINE BLOCKING IN A 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH IS EQUIPPED WITH OR WITHOUT NAILABLE FLOORS AND REAR CORNER POSTS. WIDER OR NARROWER TRAILERS MAY BE USED. SEE SPECIAL NOTES 4 AND 5.

2. THE PALLET UNIT SHOWN IS THE FLAT DUNNAGE METHOD UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 41" LONG BY 51-1/2" WIDE BY 48-7/8" HIGH AND WEIGHING APPROXIMATELY 1,709 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER UNITS DEPICTED ON PAGES 4 AND 5.

3. THE K-BRACE BLOCKING SHOWN AS PIECES MARKED (4) THRU (15) IS ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD OF 20,000 POUNDS.

4. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED IN LIEU OF THE "K-BRACE" TYPE BLOCKING. THE NAILED HEADER METHOD IS SHOWN ON PAGE 8. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN LIEU OF PIECES MARKED (4) THRU (15) WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS. SEE SPECIAL NOTE 5.

5. WHEN THE NAILED-HEADER METHOD OF BRACING IS APPLIED FOR THE BRACING OF THE DEPICTED 9-UNIT LOAD OR ANY ODD NUMBERED QUANTITY, ONLY THE DOUBLED 2" X 4" PIECES ARE REQUIRED AS SHOWN IN THE LOAD ON PAGE 16. 2" X 6" MATERIAL MAY BE SUBSTITUTED FOR THE 2" X 4" HEADER MATERIAL TO FACILITATE NAILING. WHEN SHIPPING AN EVEN NUMBERED QUANTITY, USE A REAR BLOCKING ASSEMBLY AS SHOWN IN THE LOAD ON PAGE 8.

KEY NUMBERS

(1) FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 33. SEE GENERAL NOTE "J" ON PAGE 2.

(2) ANTI-SWAY BRACE (4 REQD). INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE THE DETAIL ON PAGE 33.

(3) SIDE BLOCKING (2 REQD). SEE THE "SIDE BLOCKING ASSEMBLY" DETAIL ON PAGE 34.

(4) HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD).

(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, PIECE MARKED (4), W/1-10d NAIL EVERY 8".

(6) SIDE STRUT, 2" X 6" BY CUT-TO-FIT BETWEEN THE FORWARD AND REAR HEADERS, PIECES MARKED (4) (2 REQD).

(7) SPLICE PIECE, 2" X 6" X 24" (AS REQD). CENTER ON JOINT OF PIECES MARKED (6) AND NAIL W/4-10d NAILS AT EACH END.

(8) RISER PIECE, 2" X 4" X 9" (AS REQD). CENTER UNDER THE JOINTS OF PIECES MARKED (12) AND (13), (14) AND (15), AND UNDER THE SPLICE OF PIECES MARKED (6), IF APPLICABLE. NAIL TO SIDE STRUT MARKED (6) W/2-10d NAILS.

(9) POCKET CLEAT, 2" X 6" X 18" (2 REQD). NAIL TO A SIDE STRUT, PIECE MARKED (6), W/5-10d NAILS. TOENAIL TO THE ADJACENT HEADER, PIECE MARKED (4), W/3-12d NAILS.

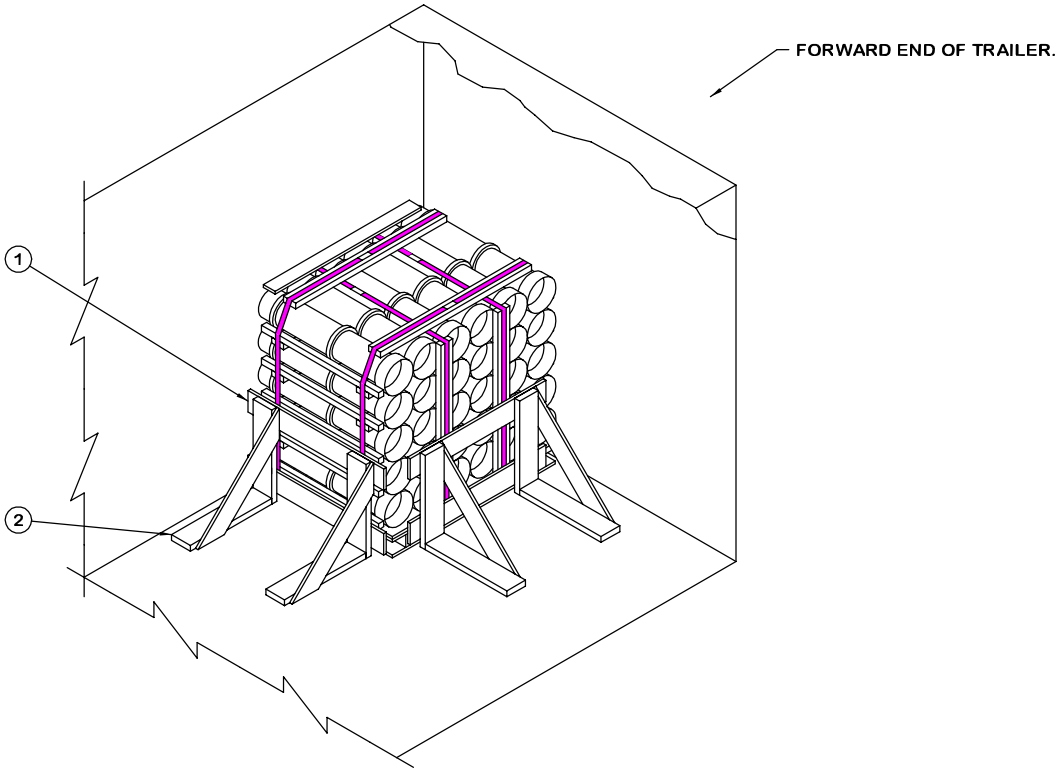
(10) STRUT RETAINING BLOCK, 2" X 6" X 12" (2 REQD). NAIL TO A SIDE STRUT, PIECE MARKED (6), W/3-10d NAILS. TOENAIL TO THE ADJACENT HEADER, PIECE MARKED (4), W/3-12d NAILS.

(11) CENTER CLEAT, 2" X 6" X 24" (1 REQD). NAIL TO A HEADER, PIECE MARKED (4), 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 (4) AND (6), W/2-12d NAILS AT EACH END.

(CONTINUED ABOVE LEFT)

TYPICAL LTL-9 PALLET UNITS IN A CONVENTIONAL TYPE VAN TRAILER



ISOMETRIC VIEW

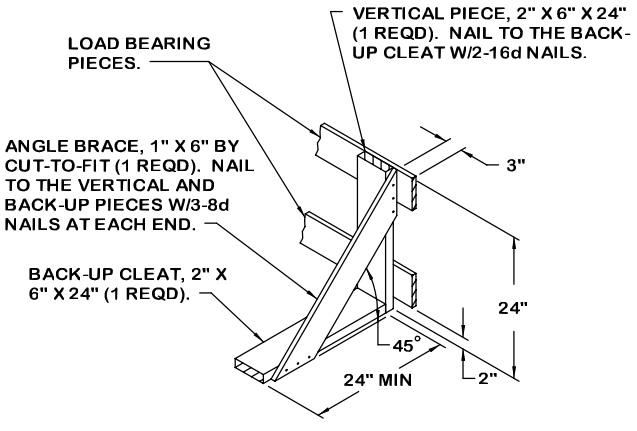
SPECIAL NOTES:

1. THESE OUTLOADING PROCEDURES DEPICT THE USE OF LTL BRACE BLOCKING IN A CONVENTIONAL TYPE VAN TRAILER EQUIPPED WITH A NAILABLE FLOOR.
2. THE PALLET UNIT SHOWN IS THE FLAT DUNNAGE METHOD UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 41" LONG BY 51-1/2" WIDE BY 48-7/8" HIGH AND WEIGHING APPROXIMATELY 1,709 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER UNITS DEPICTED ON PAGES 4 AND 5.
3. IF THE TRAILER BEING LOADED HAS ROUNDED FRONT CORNERS, TWO ADDITIONAL LTL BRACES MAY BE POSITIONED AT THE FORWARD END OF THE LADING, OR A FORWARD BLOCKING ASSEMBLY, SHOWN AS KEY NUMBER (1) ON PAGE 18, MAY BE USED.
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.
5. MORE THAN ONE PALLET UNIT CAN BE SHIPPED PROVIDING THE CAPACITY OF THE LTL BRACE IS NOT EXCEEDED. THE LOAD SHOULD BE FORMED IN TWO ROWS, WITH THE UNITS POSITIONED AGAINST OPPOSITE SIDEWALLS. ANTI-SWAY BRACES WILL BE INSTALLED BETWEEN THE LATERALLY ADJACENT UNITS, IF APPLICABLE.

KEY NUMBERS

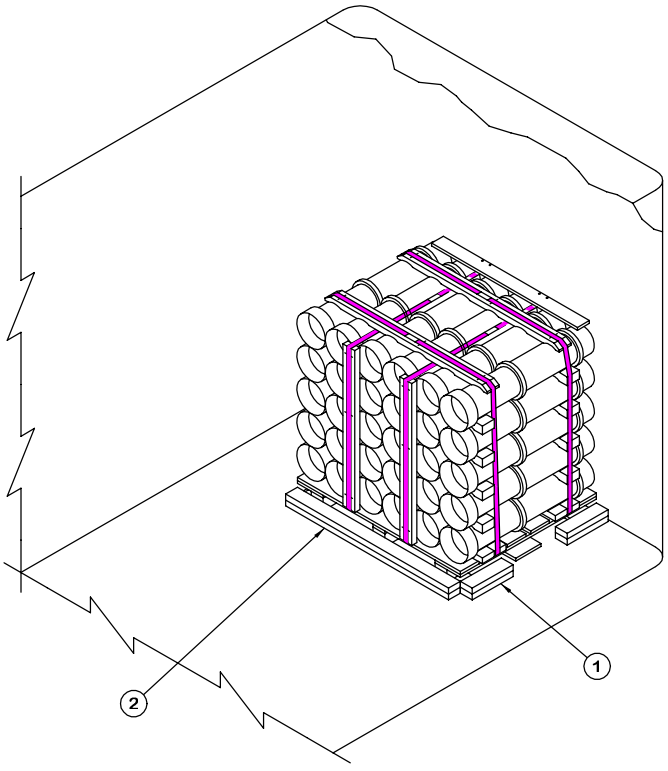
(1) LOAD BEARING PIECE, 1" X 6" X 40" (4 REQD). LOCATE AT HEIGHTS SPECIFIED IN THE DETAILS BELOW. NAIL TO PIECES MARKED (2) W/4-6d NAILS AT EACH JOINT.

(2) LTL BRACE (4 REQD). SEE THE DETAIL BELOW. NAIL EACH LTL BRACE TO TRAILER FLOOR W/7-10d NAILS. SEE SPECIAL NOTE 4 AT LEFT.



LTL BRACE

TYPICAL LTL-1 PALLET UNIT IN A CONVENTIONAL TYPE VAN TRAILER (LTL BRACE METHOD)



ISOMETRIC VIEW

SPECIAL NOTES:

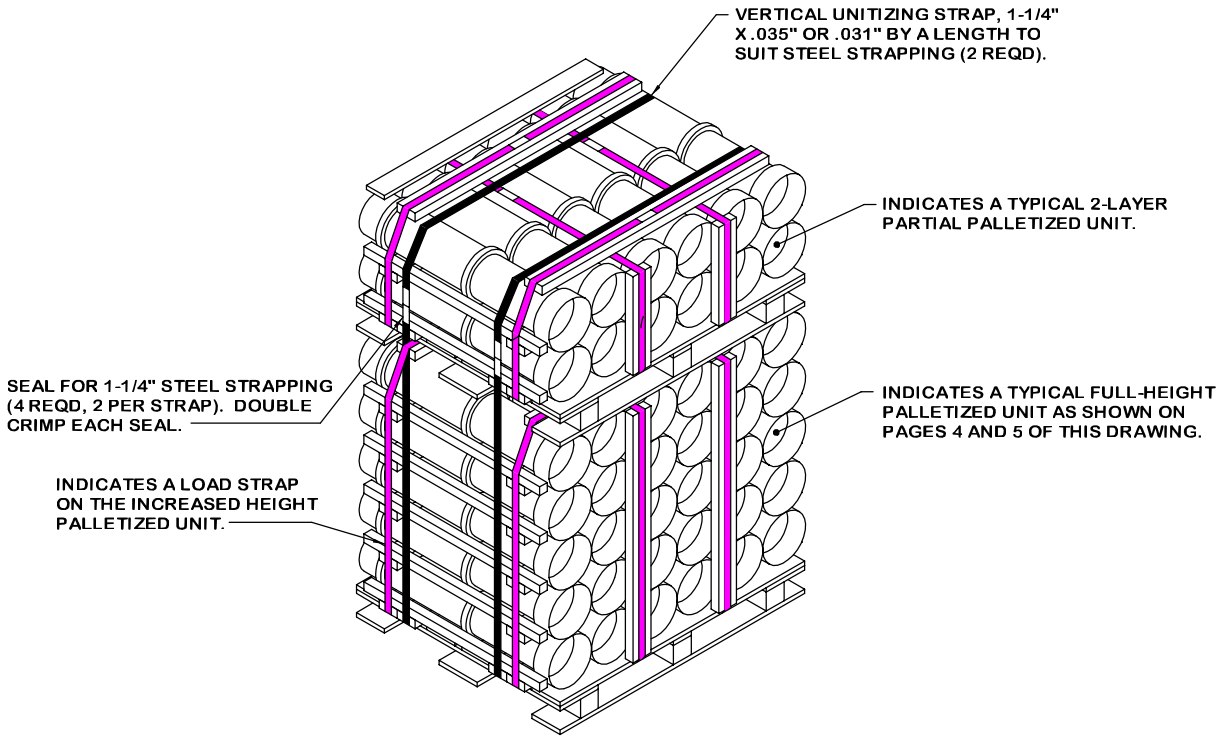
1. A 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER WHICH HAS A NAILABLE FLOOR IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
2. THE PALLET UNIT SHOWN IS THE ROUTED DUNNAGE METHOD UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 41" LONG BY 50-1/2" WIDE BY 48-3/4" HIGH AND WEIGHING APPROXIMATELY 1,711 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER UNITS ON PAGES 4 AND 5.
3. THE POSITIONING OF THE UNIT IS OPTIONAL. IF THE TRAILER BEING LOADED HAS A SQUARE FRONT, THE PALLET UNIT MAY BE LOCATED IN THE CORNER OF THE TRAILER AND TWO LESS SIDE BLOCKING PIECES WILL BE USED.
4. FOR EASE OF INSTALLATION AND NAILING, 2" X 6" MATERIAL MAY BE USED IN LIEU OF 2" X 4" MATERIAL.
5. FOR OTHER QUANTITY LTL LOADS USING THE NAILED HEADER METHOD, REFER TO THE NAILING CHARTS ON PAGE 9 FOR GUIDANCE.

KEY NUMBERS

(1) SIDE BLOCKING, 2" X 4" X 12" (DOUBLED) (4 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/4-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.

(2) REAR HEADER, 2" X 4" X 48" (DOUBLED) (1 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/6-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.

TYPICAL LTL-1 PALLET UNIT IN A CONVENTIONAL TYPE VAN TRAILER (NAILED HEADER METHOD)



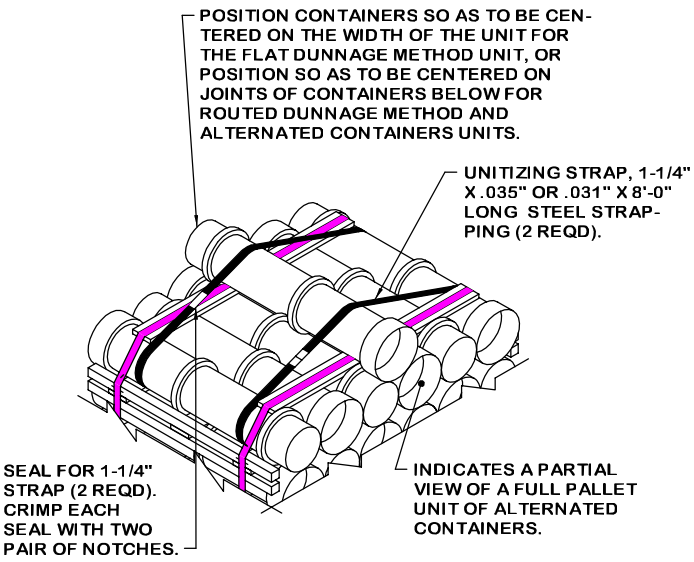
SECUREMENT OF A PARTIAL PALLET UNIT POSITIONED ON A FULL HEIGHT PALLET UNIT

SPECIAL NOTES:

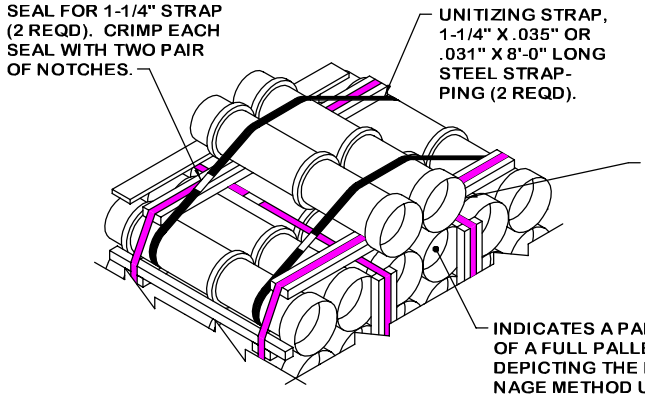
1. THE VIEW SHOWN ABOVE DEPICTS A PARTIAL 2-LAYER PALLET UNIT POSITIONED ON TOP OF A FULL-HEIGHT PALLET UNIT AND UNITIZED WITH TWO VERTICAL UNITIZING STRAPS. PLACEMENT WITHIN THE LOAD IS OPTIONAL, EXCEPT THAT IT WILL NOT BE POSITIONED WITHIN A GROUP WHICH IS BUNDLED TOGETHER OR WITHIN A STACK WHICH IS UNITIZED. THE PREFERRED LOCATION WOULD BE WITHIN A ONE-HIGH PORTION OF A LOAD (NOT IN THE REAR LOAD UNIT) IF AVAILABLE, OR WITHIN THE TOP LAYER OF A LOAD IF THE TRAILER HEIGHT PERMITS.

2. SHIPMENTS OF PALLET UNITS 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.

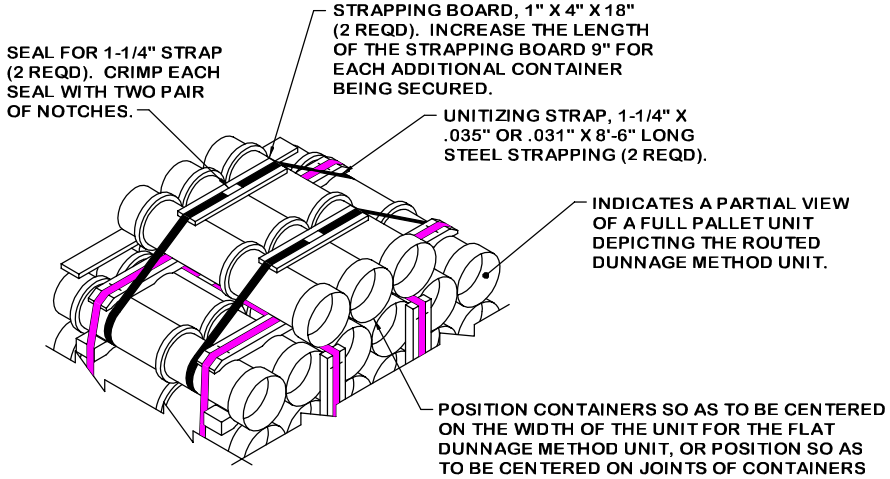
3. FOR SHIPMENT OF ONE THROUGH FIVE "LEFTOVER" CONTAINERS, SEE THE PROCEDURES ON PAGE 32 OF THIS DRAWING.



SECUREMENT OF ONE CONTAINER



SECUREMENT OF TWO CONTAINERS



SECUREMENT OF THREE CONTAINERS

SPECIAL NOTES:

1. SHIPMENTS OF PROPELLING CHARGES 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 LEFTOVER CONTAINERS. LEFTOVER CONTAINERS ARE DESCRIBED AS A QUANTITY OF CONTAINERS WHICH IS INSUFFICIENT TO FORM A FULL-LAYERED PARTIAL UNIT FOR SECUREMENT ON TOP OF A FULL PALLET UNIT AS SHOWN ON PAGE 31.

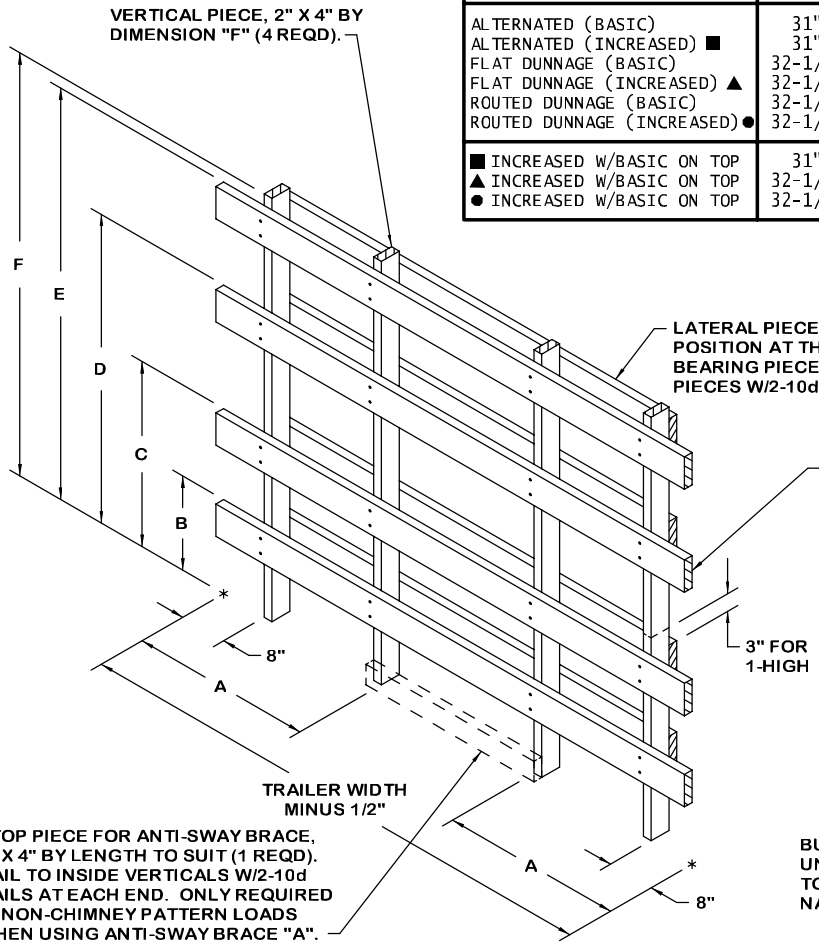
2. SHIPMENT OF LEFTOVER CONTAINERS IS APPLICABLE FOR CONUS AND OCONUS MOTOR CARRIER SHIPMENTS FROM DEPOT TO DEPOT OR FROM DEPOTS TO POSTS, CAMPS AND STATIONS, OR UPON APPROVAL FROM HIGHER HEADQUARTERS, FOR SHIPMENTS FROM LOAD, ASSEMBLE, AND PACK PLANTS TO DEPOTS. CAUTION: A LOAD CONTAINING LEFTOVER CONTAINERS 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 REQUIRED AS GUIDANCE IN THE SECUREMENT OF LEFTOVER CONTAINERS FOR SHIPMENT. THE VIEW AT TOP LEFT DEPICTS ONE LEFTOVER CONTAINER SECURED TO A FULL-HEIGHT ALTERNATED CONTAINERS METHOD PALLET UNIT. THE VIEW BELOW DEPICTS TWO LEFTOVER CONTAINERS SECURED TO A FULL-HEIGHT FLAT DUNNAGE METHOD PALLET UNIT. FOR THE ALTERNATED CONTAINERS UNIT AND FOR THE FLAT DUNNAGE METHOD UNIT THE UNITIZING STRAP MUST NOT GO AROUND THE INTERMEDIATE DUNNAGE ASSEMBLY; THE STRAP MUST BE THREADED BEHIND THE 2" X 2" PIECES OF THE ASSEMBLY. THE BOTTOM VIEW DEPICTS THREE LEFTOVER CONTAINERS SECURED TO A FULL-HEIGHT ROUTED DUNNAGE METHOD PALLET UNIT. WHEN THREE TO FIVE LEFTOVER CONTAINERS ARE BEING SHIPPED, A STRAPPING BOARD WILL BE NEEDED. LEFTOVER CONTAINERS MUST BE SECURED WITH A MINIMUM OF TWO PIECES OF STEEL STRAPPING.

4. THE PREFERRED LOCATION FOR THE POSITIONING OF A PALLET UNIT HAVING ONE OR MORE CONTAINERS STRAPPED TO THE TOP WOULD BE WITHIN THE ONE-HIGH PORTION OF THE LOAD; IT MUST NOT HAVE A PALLET UNIT STACKED ON TOP.

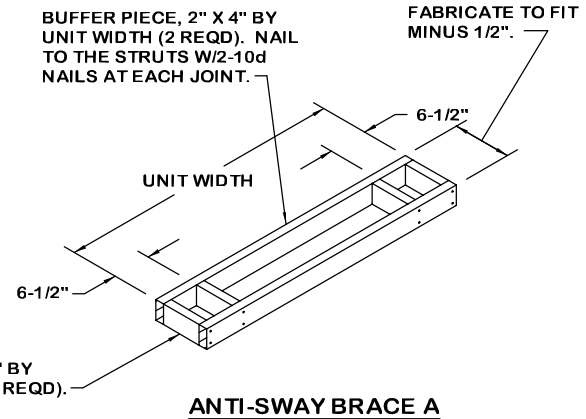
5. THE PROCEDURES ON THIS PAGE ARE APPLICABLE FOR THE SHIPMENT OF LEFTOVER CONTAINERS IN ANY OF THE LOADS DEPICTED HEREIN.

FORWARD BLOCKING CHART						
PALLET UNIT TYPE	DIMENSION					
	A	B	C	D	E	F
ALTERNATED (BASIC)	31"	16"	31-1/2"	52-1/2"	70"	72"
ALTERNATED (INCREASED) ■	31"	16"	39"	60"	6'-11"	7'-0"
FLAT DUNNAGE (BASIC)	32-1/2"	17-1/2"	34"	57"	6'-1-1/2"	6'-3"
FLAT DUNNAGE (INCREASED) ▲	32-1/2"	17-1/2"	42-1/2"	65"	7'-6-1/2"	7'-8"
ROUTED DUNNAGE (BASIC)	32-1/2"	17"	34"	56-1/2"	6'-1-1/2"	6'-4"
ROUTED DUNNAGE (INCREASED) ●	32-1/2"	17"	42-1/2"	65"	7'-6-1/2"	7'-8"
■ INCREASED W/BASIC ON TOP	31"	16"	39"	60"	6'-3-1/2"	6'-6"
▲ INCREASED W/BASIC ON TOP	32-1/2"	17-1/2"	42-1/2"	66"	6'-10-1/2"	7'-0"
● INCREASED W/BASIC ON TOP	32-1/2"	17"	42-1/2"	65-1/2"	6'-101/2"	7'-0"



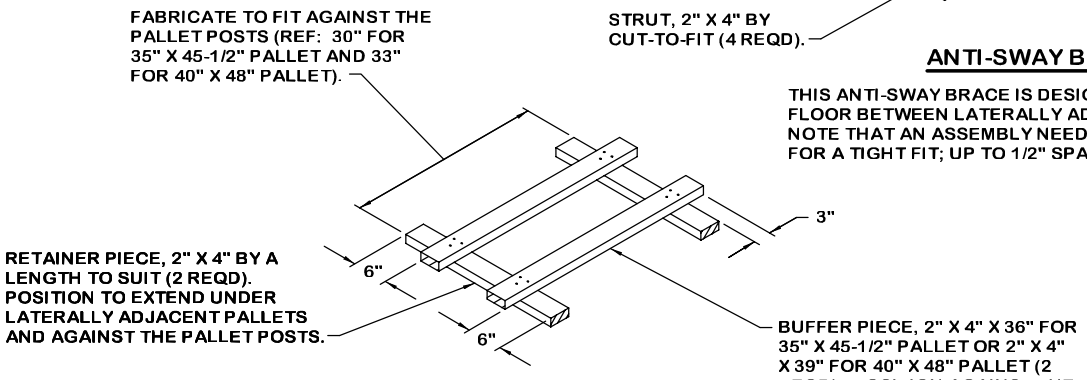
FORWARD BLOCKING ASSEMBLY

THIS ASSEMBLY IS DESIGNED FOR USE AT THE FRONT END OF A TRAILER HAVING ROUNDED FRONT 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.



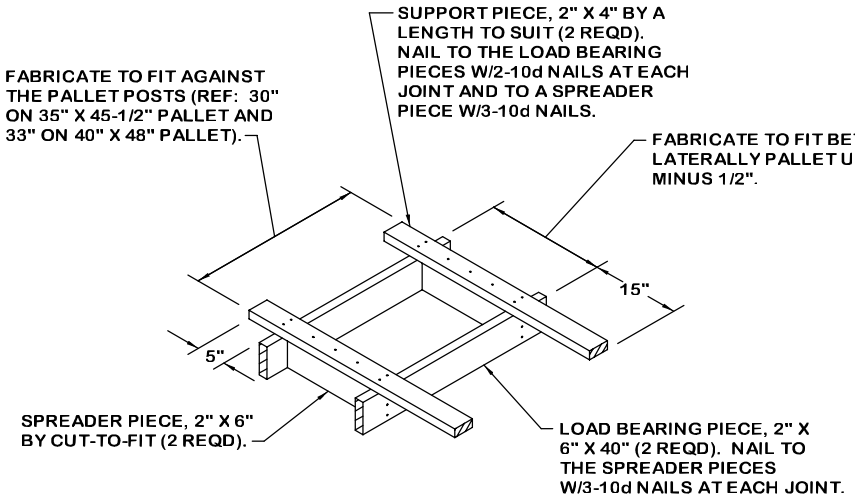
ANTI-SWAY BRACE A

THIS ANTI-SWAY BRACE IS DESIGNED FOR USE ON THE FLOOR BETWEEN LATERALLY ADJACENT PALLET UNITS. NOTE THAT AN ASSEMBLY NEED NOT BE CONSTRUCTED FOR A TIGHT FIT; UP TO 1/2" SPACE IS PERMITTED.



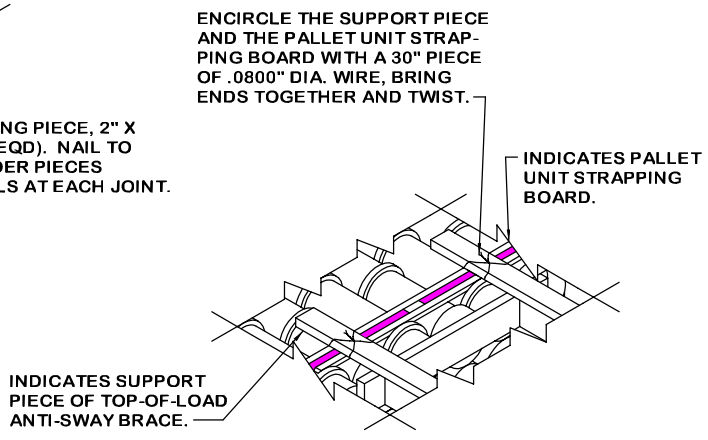
ANTI-SWAY BRACE B

THIS ANTI-SWAY BRACE MUST BE FABRICATED IN PLACE BETWEEN PALLETS.



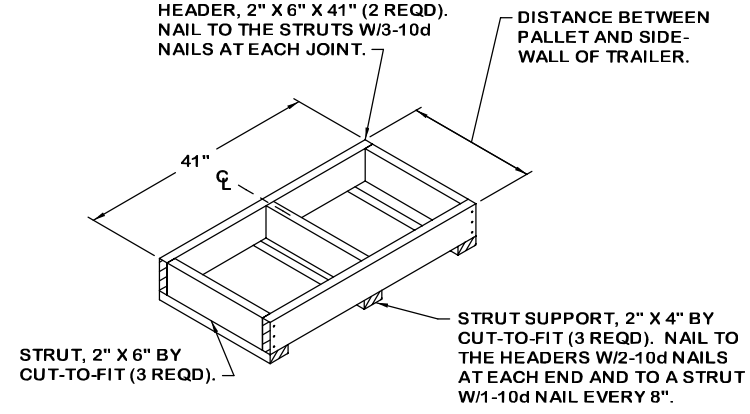
TOP-OF-LOAD ANTI-SWAY BRACE

THIS ASSEMBLY IS DESIGNED FOR THE LATERAL BRACING OF A PALLET UNIT IN THE SECOND LAYER WHEN THERE IS NOT A PALLET UNIT DIRECTLY OPPOSITE IT AND TOP-OF-LOAD ANTI-SWAY BRACING IS REQUIRED.



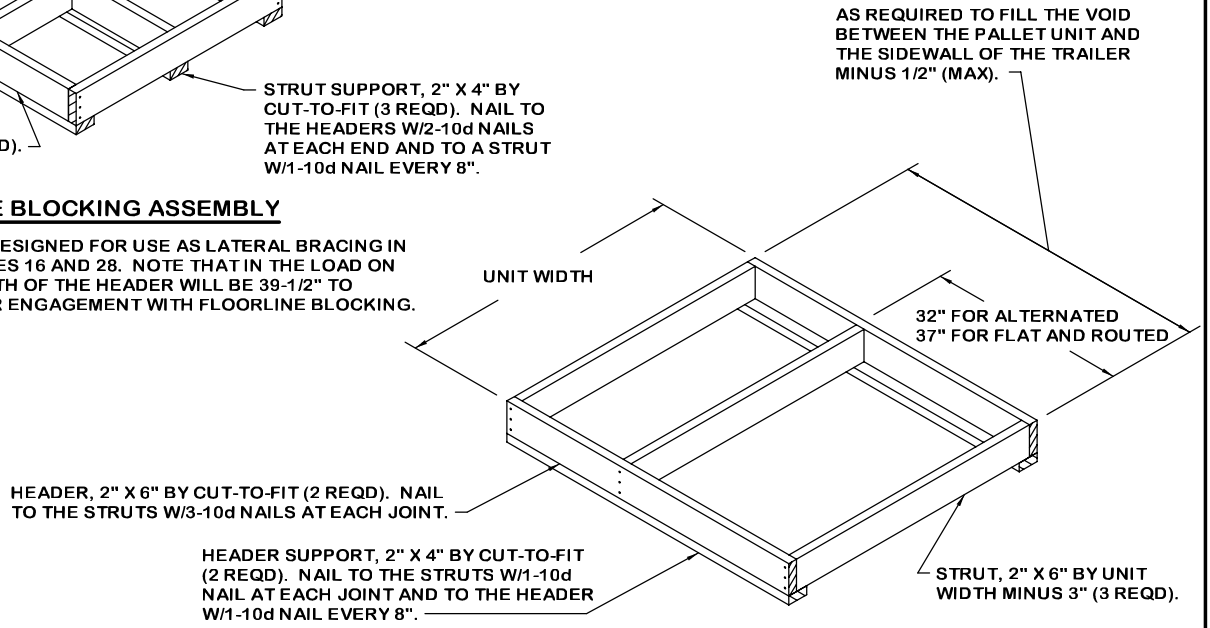
TIE WIRE APPLICATION

THIS VIEW DEPICTS THE SECUREMENT OF A TOP-OF-LOAD ANTI-SWAY BRACE TO THE TOP OF A PALLET UNIT BY WIRE TYING TO THE STRAPPING BOARD WITH .0800" DIA. WIRE.



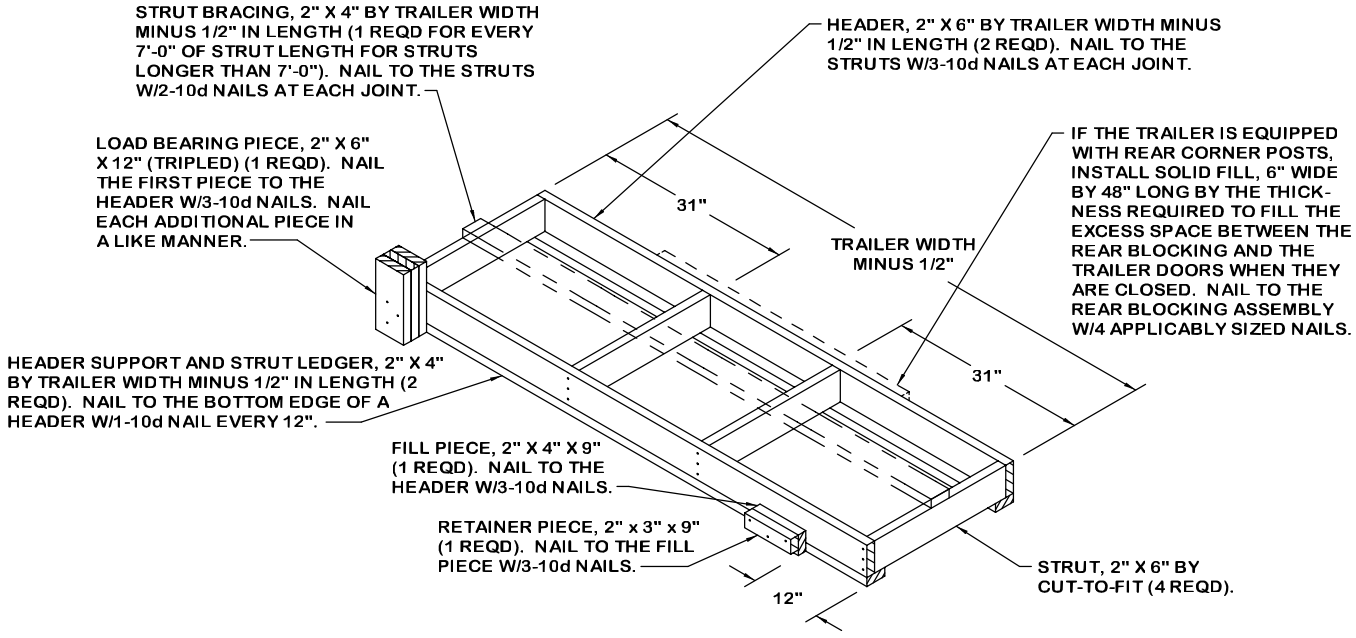
SIDE BLOCKING ASSEMBLY

THIS ASSEMBLY IS DESIGNED FOR USE AS LATERAL BRACING IN THE LOADS ON PAGES 16 AND 28. NOTE THAT IN THE LOAD ON PAGE 16, THE LENGTH OF THE HEADER WILL BE 39-1/2" TO ALLOW FOR PROPER ENGAGEMENT WITH FLOORLINE BLOCKING.



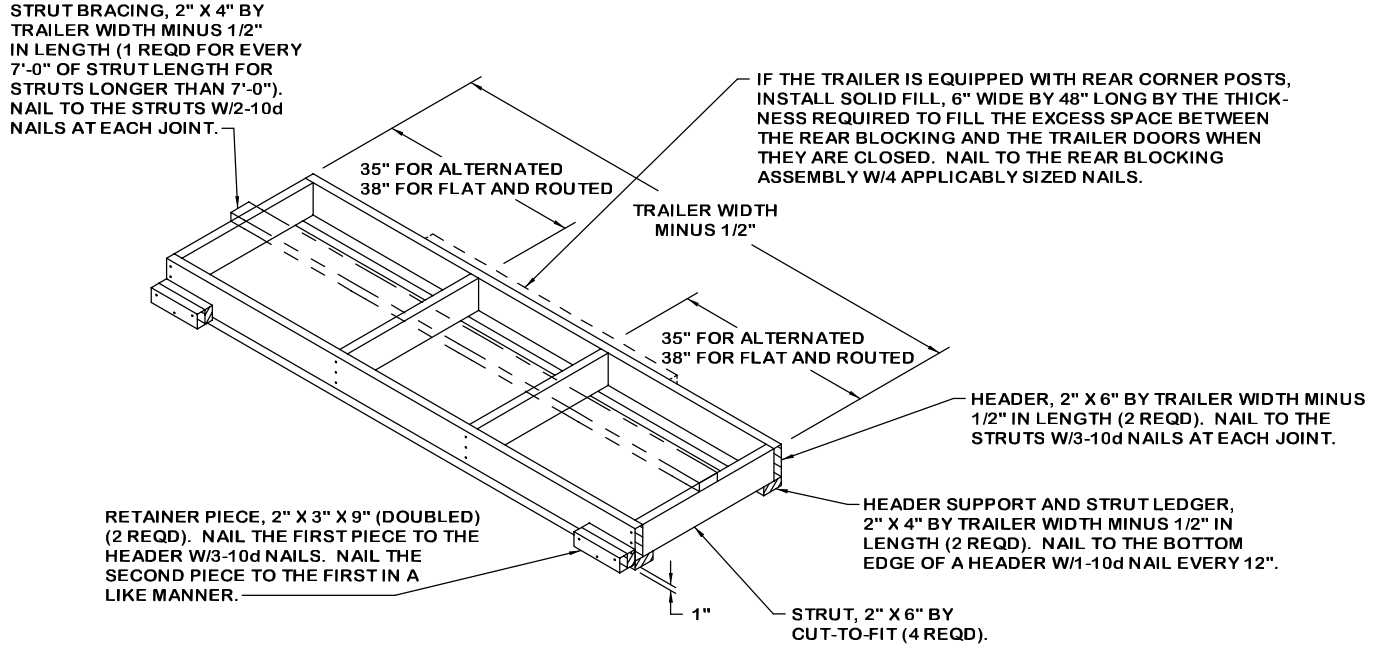
SPACER ASSEMBLY A

THIS ASSEMBLY IS DESIGNED FOR USE IN THE PLACE OF AN OMITTED PALLET UNIT, AS USED IN THE LOAD ON PAGE 26.



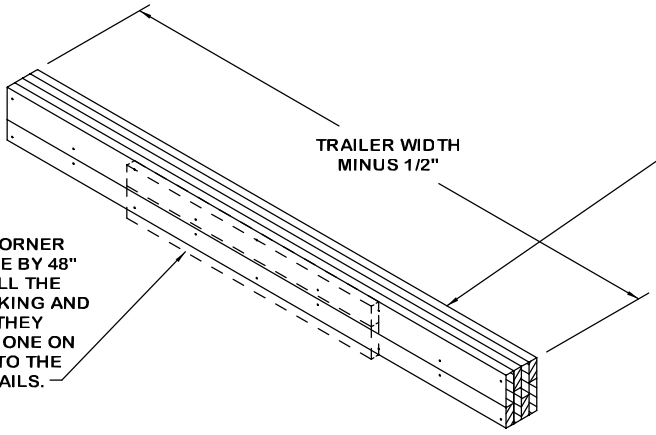
REAR BLOCKING ASSEMBLY A

THIS REAR BLOCKING ASSEMBLY IS DESIGNED FOR USE WITH THE CHIMNEY TYPE LOADING PATTERN AS DEPICTED ON PAGE 6. NOTE: THIS DETAIL HAS BEEN ROTATED 180° TO ILLUSTRATE MORE CLEARLY THE PLACEMENT OF THE LOAD BEARING AND RETAINER PIECES ON THE ASSEMBLY. WHEN A LOAD BEARING PIECE IS NOT REQUIRED AS IN THE LOAD ON PAGE 12, THE LOAD BEARING PIECE WILL BE OMITTED AND IN ITS PLACE WILL BE INSTALLED A DOUBLED 2" X 3" X 9" RETAINER PIECE POSITIONED AS SHOWN IN THE REAR BLOCKING ASSEMBLY "B" BELOW.



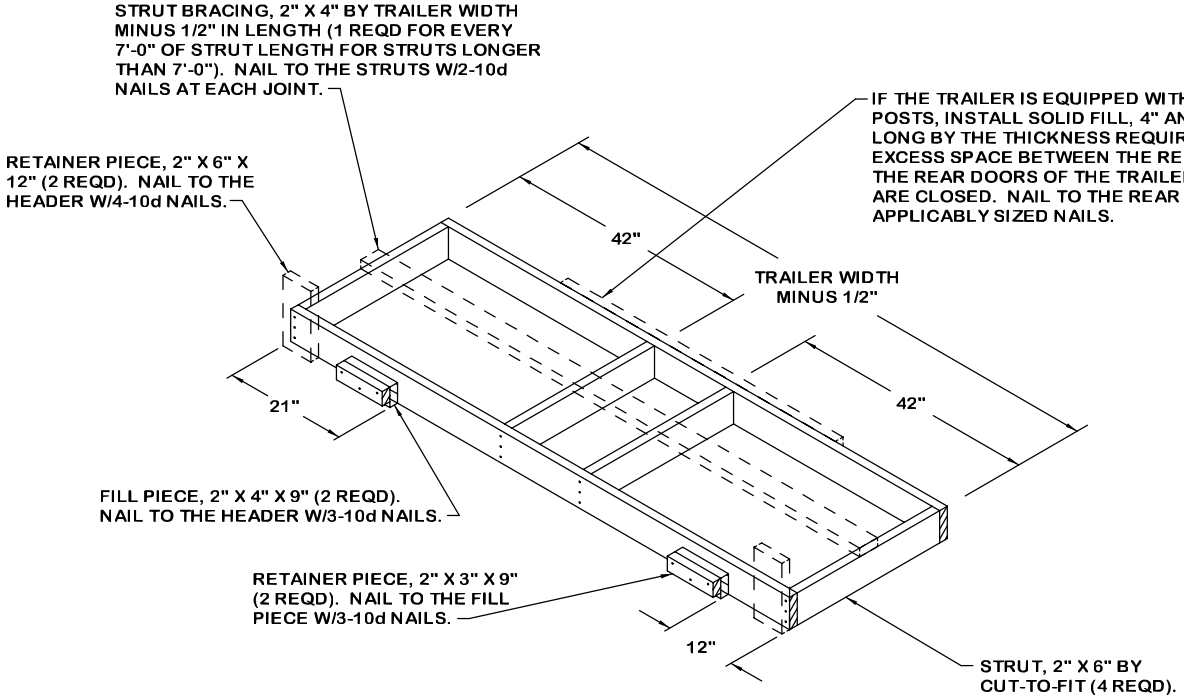
REAR BLOCKING ASSEMBLY B

THIS REAR BLOCKING ASSEMBLY IS DESIGNED FOR USE AT THE REAR END OF A LOAD AS DEPICTED ON PAGES 8, 14, 20, AND 22, AND AS AN ALTERNATIVE FOR THE LOADS ON PAGES 18 AND 26 WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS 9" OR GREATER.



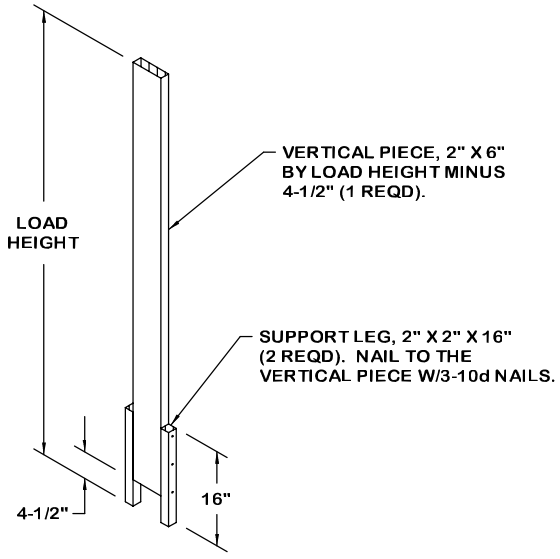
REAR BLOCKING ASSEMBLY C

THIS REAR BLOCKING ASSEMBLY IS DESIGNED FOR USE AT THE REAR END OF A LOAD WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9".



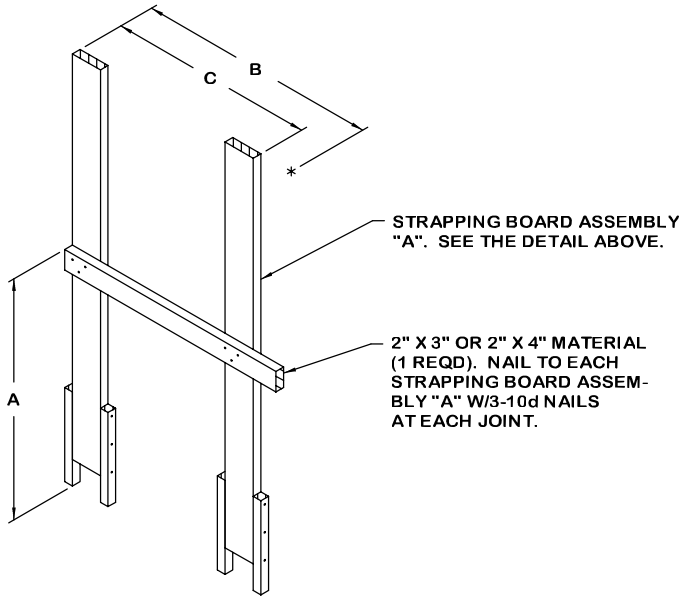
REAR BLOCKING ASSEMBLY D

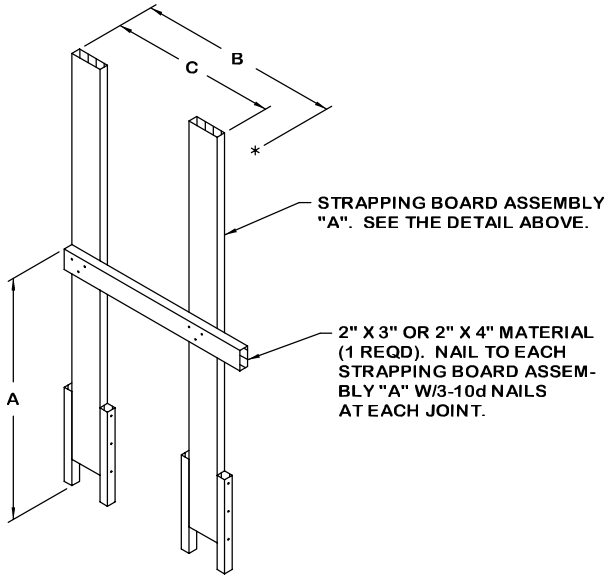
THIS ASSEMBLY IS ONLY FOR USE AT THE REAR OF ALTERNATED CONTAINERS UNITS AS SHOWN IN THE LOAD ON PAGE 10 WHEN THE EXCESS SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS MORE THAN 9". IF THE REARMOST LOAD UNIT IN THE TRAILER IS ONE LAYER IN HEIGHT, THE 2" X 4" X 9" FILL PIECES AND THE 2" X 3" X 9" RETAINER PIECES WILL BE APPLIED AS SHOWN. IF THE REARMOST LOAD UNIT IS STACKED, THE PHANTOMED 2" X 6" X 12" RETAINER PIECES WILL BE USED IN LIEU OF THE 2" X 3" X 9" AND 2" X 4" X 9" PIECES. NOTE THAT THE ABOVE VIEW IS ROTATED 180° FROM THE POSITION IN WHICH IT WILL BE INSTALLED.



STRAPPING BOARD ASSEMBLY A

THIS ASSEMBLY IS DESIGNED FOR USE IN CHIMNEY PATTERN LOADS OF ALTERNATED CONTAINERS UNITS ON PAGES 6 AND 12 , AND ALSO FOR THE CROSSWISE POSITIONED LOAD ON PAGE 10.





STRAPPING BOARD ASSEMBLY B

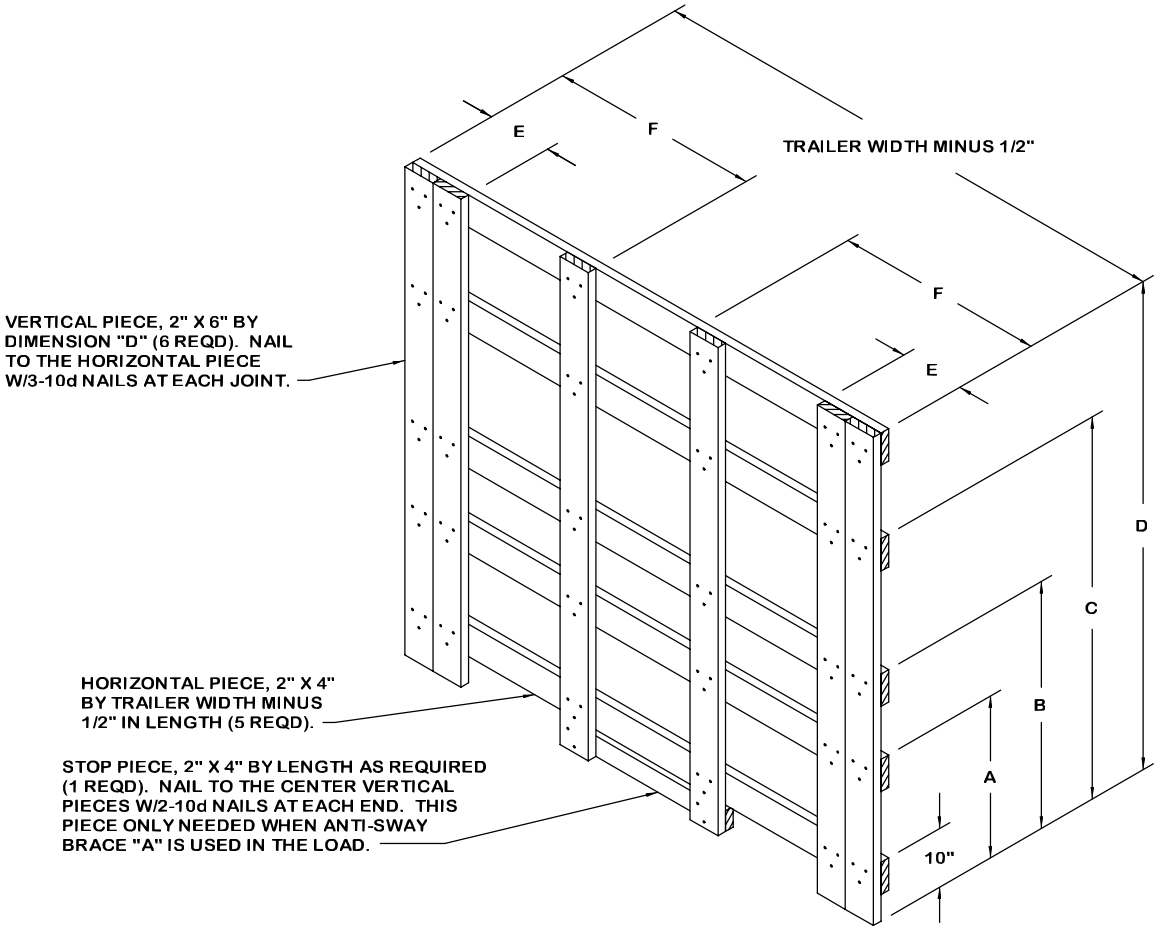
2 REQD, 1 AS SHOWN AND 1 OPPOSITE HAND, FOR USE UNDER PIECES MARKED ⑥ ON PAGE 6. THIS ASSEMBLY IS AN ALTERNATIVE FOR A PAIR OF STRAPPING BOARD ASSEMBLIES "A".

STRAPPING BOARD ASSEMBLY B CHART			
	DIMENSIONS		
PALLET UNIT TYPE	A	B	C
ALTERNATED (BASIC) ALTERNATED (INCREASED)	41" 48-1/2"	41-1/2" 41-1/2"	35-1/2" 35-1/2"

STRAPPING BOARD ASSEMBLY C

1 REQD FOR USE UNDER PIECES MARKED ⑦ ON PAGE 6, PIECES MARKED ④ ON PAGE 10, AND PIECES MARKED ⑤ ON PAGE 12. THIS ASSEMBLY IS AN ALTERNATIVE FOR A PAIR OF STRAPPING BOARD ASSEMBLIES "A".

STRAPPING BOARD ASSEMBLY C CHART			
	DIMENSIONS		
PALLET UNIT TYPE	A	B	C
ALTERNATED (BASIC) ALTERNATED (INCREASED)	41" 48-1/2"	34-1/2" 34-1/2"	28-1/2" 28-1/2"

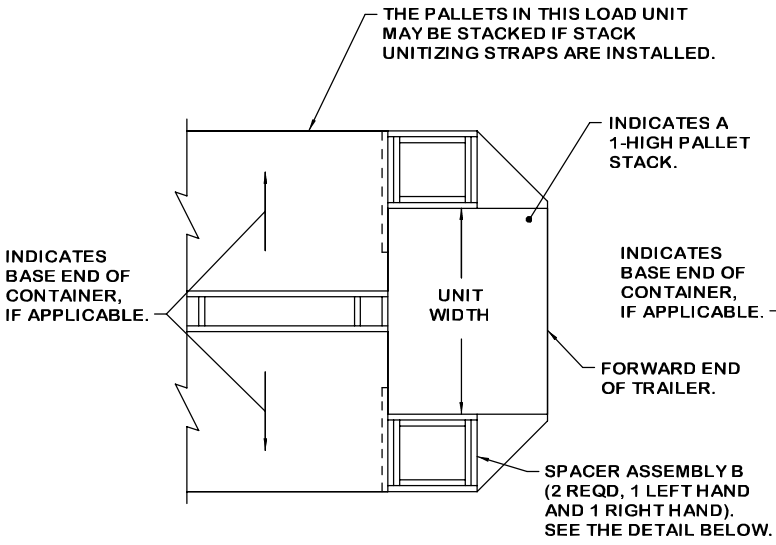


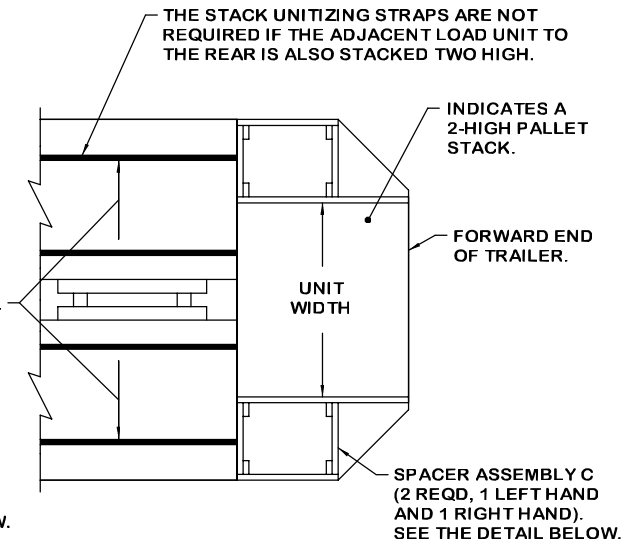
BULKHEAD GATE

THIS GATE IS FOR USE IN THE ALTERNATIVE LOADING PROCEDURE ON PAGE 26.

BULKHEAD GATE CHART

PALLET UNIT TYPE	DIMENSION					
	A	B	C	D	E	F
ALTERNATED (BASIC)	24"	31-1/2"	46"	60"	22"	35"
ALTERNATED (INCREASED) ■	24"	39"	60"	6'-11"	22"	35"
FLAT DUNNAGE (BASIC)	27-1/2"	35"	50"	68"	11"	36"
FLAT DUNNAGE (INCREASED) ▲	27-1/2"	42-1/2"	67"	7'-0"	11"	36"
ROUTED DUNNAGE (BASIC)	27-1/2"	35"	50"	68"	11"	36"
ROUTED DUNNAGE (INCREASED) ●	27-1/2"	42"	65"	6'-11"	11"	36"
■ INCREASED W/BASIC ON TOP	24"	39"	54"	68"	22"	35"
▲ INCREASED W/BASIC ON TOP	27-1/2"	42-1/2"	58"	6'-2"	11"	36"
● INCREASED W/BASIC ON TOP	27-1/2"	42"	58"	6'-2"	11"	36"



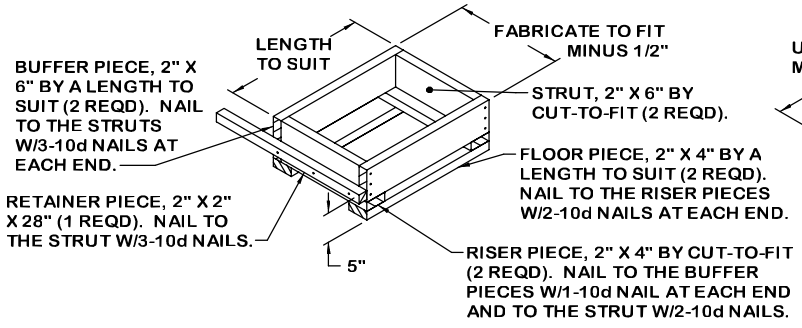


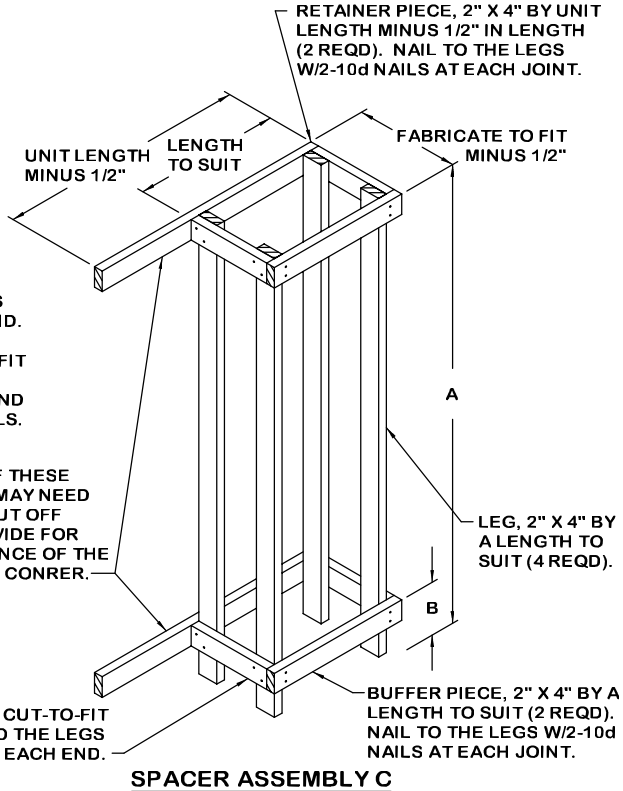
ALTERNATIVE FORWARD LOADING PATTERN A

THIS PROCEDURE IS APPLICABLE TO THE LOADING OF ONE PALLET UNIT 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. THE ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT) IS SHOWN. THE PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER UNITS DEPICTED ON PAGES 4 AND 5.

ALTERNATIVE FORWARD LOADING PATTERN B

THIS PROCEDURE IS APPLICABLE TO THE LOADING OF A STACK OF TWO PALLET UNITS 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. NOTE THAT IF THE LOAD UNIT BEHIND THE STACKED PALLETS IN THE FRONT OF THE TRAILER IS ONLY ONE HIGH, TWO STACK UNITIZING STRAPS MUST BE INSTALLED AROUND THOSE PALLET UNITS IN THE FRONT STACK. THE ROUTED DUNNAGE METHOD (BASIC HEIGHT) IS SHOWN. THE PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER UNITS DEPICTED ON PAGES 4 AND 5.





SPACER ASSEMBLY B

THIS ASSEMBLY IS DESIGNED FOR LATERAL BRACING OF A SINGLE PALLET UNIT WHICH IS TURNED 90° FROM THE NORMAL LOADING ORIENTATION AND POSITIONED IN THE FRONT OF AN ANGLED-CORNER CONVENTIONAL VAN TRAILER AS SHOWN IN THE "ALTERNATIVE FORWARD LOADING PATTERN A" VIEW ABOVE. RIGHT HAND AND LEFT HAND SPACER ASSEMBLIES ARE REQUIRED.

SPACER ASSEMBLY C CHART

PALLET UNIT TYPE	DIM A	DIM B
ALTERNATED (BASIC)	45"	8-1/2"
ALTERNATED (INCREASED) ■	53"	8-1/2"
FLAT (BASIC) ▲	49"	9"
FLAT (INCREASED)	6'-10"	9"
ROUTED (BASIC) ●	56"	16"
ROUTED (INCREASED)	6'-10"	16"
■ INCREASED W/BASIC ON TOP	53"	8-1/2"
▲ INCREASED W/BASIC ON TOP	57"	9"
● INCREASED W/BASIC ON TOP	64-1/2"	16"

SPACER ASSEMBLY C

THIS ASSEMBLY IS DESIGNED FOR LATERAL BRACING OF A TWO-HIGH PALLET STACK WHICH IS TURNED 90° FROM THE NORMAL LOADING ORIENTATION AND POSITIONED IN THE FRONT OF AN ANGLED-CORNER CONVENTIONAL VAN TRAILER AS SHOWN IN THE "ALTERNATIVE FORWARD LOADING PATTERN B" VIEW ABOVE. NOTE THAT THIS VIEW DEPICTS THE ASSEMBLY POSITIONED 180° FROM THE POSITION IN WHICH IT WILL BE INSTALLED IN A LOAD. RIGHT HAND AND LEFT HAND SPACER ASSEMBLIES ARE REQUIRED.