

# LOADING AND BRACING (TL AND LTL) IN VAN TRAILERS<sup>⊕</sup> OF PALLETIZED PROPELLING CHARGES PACKED IN CYLINDRICAL METAL CONTAINERS

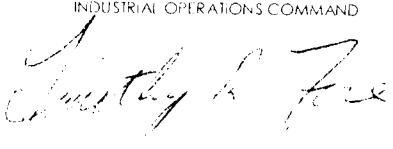
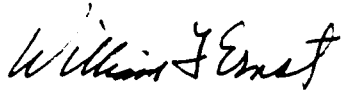

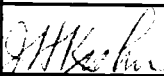

## M14 SERIES CONTAINERS

### INDEX

| ITEM   | PAGE(S) |
|--|---------|
| GENERAL NOTES AND MATERIAL SPECIFICATIONS - - - - -  | 2-3     |
| ITEMIZED INDEX - - - - -   | 3       |
| PALLET UNIT DETAILS - - - - -  | 4, 5    |
| TYPICAL FULL DETAILS - - - - -   | 6-31    |
| TYPICAL LTL DETAILS - - - - -  | 32-34   |
| PROCEDURES FOR SHIPMENT OF A PARTIAL PALLET UNIT - - - - -                                     | 35      |
| PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS - - - - -                                       | 36      |
| DETAILS - - - - -  | 37-42   |
| PROCEDURES FOR CONVENTIONAL VAN TRAILERS EQUIPPED<br>WITH LARGE-ANGLED FRONT CORNERS - - - - - | 43      |

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

### U.S. ARMY MATERIEL COMMAND DRAWING

|  |   |  |  |              |  |  |                                    |                                  |  |  |       |          |         |      |
|--|---|--|--|--------------|--|--|------------------------------------|----------------------------------|--|--|-------|----------|---------|------|
| APPROVED, U.S. ARMY<br>INDUSTRIAL OPERATIONS COMMAND<br><br>  | ENGINEER                                  | BASIC  |  | DO NOT SCALE |  |  |                                    |                                  |  |  |       |          |         |      |
|  |   | REV.   | MICHAEL SARDONE  |              |  |  |                                    | WEBSITE: HTTP://WWW.DAC.ARMY.MIL |  |  |       |          |         |      |
|  | TECHNICIAN                                | BASIC  | RALPH ARNOLD   | JULY 1986    |  |  |                                    |                                  |  |  |       |          |         |      |
|  | REV.                                      |  | REVISION NO. 1      OCTOBER 1997   |              |  |  |                                    |                                  |  |  |       |          |         |      |
| DRAFTSMAN  | BASIC                                     | BARBARA LEONARD  |  |              |  |  | SEE THE REVISION LISTING ON PAGE 3 |                                  |  |  |       |          |         |      |
|  | REV.                                      |  | <table border="1"> <tr> <td>CLASS</td> <td>DIVISION</td> <td>DRAWING</td> <td>FILE</td> </tr> <tr> <td>19</td> <td>48</td> <td>4042C/3</td> <td>11PM1000</td> </tr> </table> |              |  |  |                                    |                                  |  |  | CLASS | DIVISION | DRAWING | FILE |
| CLASS  | DIVISION                                  | DRAWING  |  |              |  |  | FILE                               |                                  |  |  |       |          |         |      |
| 19   | 48  | 4042C/3  | 11PM1000   |              |  |  |                                    |                                  |  |  |       |          |         |      |
| APPROVED BY ORDER OF COMMANDING GENERAL,<br>U.S. ARMY MATERIEL COMMAND<br><br><br>U.S. ARMY DEFENSE AMMUNITION CENTER | TRANSPORTATION<br>ENGINEERING<br>DIVISION |  |  |              |  |  |                                    |                                  |  |  |       |          |         |      |
|  | VALIDATION<br>ENGINEERING<br>DIVISION     |   |  | TESTED       |  |  |                                    |                                  |  |  |       |          |         |      |
|  | LOGISTICS<br>ENGINEERING<br>OFFICE        |  |  |              |  |  |                                    |                                  |  |  |       |          |         |      |

**GENERAL NOTES**

**(GENERAL NOTES CONTINUED)**

- 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 M14 SERIES PROPELLING CHARGE CONTAINER ASSEMBLED ON THE 35" X 45-1/2" 4-WAY ENTRY PALLET AND THE 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/3-20PM1001 FOR UNITIZATION PROCEDURES FOR THE M14 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 TO BE USED TO TRANSPORT THE DESIGNATED ITEM MUST COMPLY WITH AR 55-355, CHAPTER 29, FOR EXPLOSIVES AND OTHER DANGEROUS ARTICLES, IN FULL.
- 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 SEMI TRAILER 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) 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.
- WIRE, CARBON STEEL - : ASTM A853; ANNEALED AT FINISH, BLACK OXIDE FINISH, .0800" DIA, GRADE 1006 OR BETTER.

- J. MOST 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 WHENEVER POSSIBLE WHEN NAILS ARE DRIVEN INTO JOINTS OF DUNNAGE ASSEMBLIES. ALSO, A STAGGERED NAILING PATTERN WILL BE USED WHEN DUNNAGE IS NAILED TO THE FLOOR OF THE TRANSPORTING VEHICLE, OR WHEN LAMINATING DUNNAGE. 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 FEDERAL SPECIFICATION FF-N-105 AS NEARLY AS PRACTICABLE. STAPLES WHICH ARE LONGER THAN 2-1/2" WILL BE A COMMERCIAL GRADE, OF A QUALITY EQUIVALENT TO THOSE MANUFACTURED BY SENCO PRODUCTS INCORPORATED. NOTE: STAPLES WILL NOT BE SUBSTITUTED FOR NAILS IN ANY LOAD RESTRAINING FLOOR DUNNAGE APPLICATION.
- 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". EXCESSIVE SLACK CAN BE ELIMINATED FROM A LOAD BY LAMINATING ADDITIONAL PIECES OF APPROPRIATE THICKNESS TO THE CRIB FILL. NAIL EACH ADDITIONAL PIECE TO THE BUFFER PIECE W/1 APPROPRIATELY SIZED NAIL EVERY 12". ADDITIONALLY, THE THICKNESS AND QUANTITY OF THE LUMBER USED IN CRIB FILL AND 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" DETAILS ON PAGE 35. FOR "SHIPMENT OF LEFT-OVER CONTAINERS" SEE THE DETAILS ON PAGE 36.
- S. THESE PROCEDURES CAN ALSO BE UTILIZED FOR THE SHIPMENT OF PALLET UNITS OF M14 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.

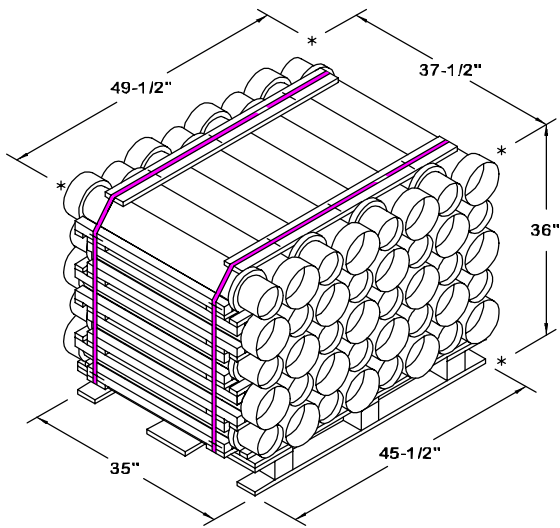
INDEX

| <u>ITEM</u>  | <u>PAGE(S)</u> |
|--|----------------|
| GENERAL NOTES AND MATERIAL SPECIFICATIONS - - - - -  | 2-3            |
| PALLET UNIT DETAILS - - - - -  | 4-5            |
| ALTERNATED CONTAINERS UNIT (BASIC HEIGHT)  |                |
| 40'-0" LONG BY 7'-8" WIDE VAN TRAILER - - - - -  | 6-7            |
| 45'-0" LONG BY 8'-0" WIDE VAN TRAILER - - - - -  | 8-9            |
| ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT)  |                |
| 40'-0" LONG BY 7'-8" WIDE VAN TRAILER - - - - -  | 10-11          |
| 48'-0" LONG BY 8'-2" WIDE VAN TRAILER (CHIMNEY PATTERN) - - - - -                              | 12-13          |
| FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT)  |                |
| 40'-0" LONG BY 7'-8" WIDE VAN TRAILER - - - - -  | 14-15          |
| 45'-0" LONG BY 8'-0" WIDE VAN TRAILER - - - - -  | 16-17          |
| FLAT DUNNAGE METHOD UNIT (DECREASED HEIGHT)  |                |
| 40'-0" LONG BY 7'-8" WIDE VAN TRAILER - - - - -  | 18-19          |
| 48'-0" LONG BY 8'-2" WIDE VAN TRAILER - - - - -  | 20-21          |
| ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT)  |                |
| 40'-0" LONG BY 7'-8" WIDE VAN TRAILER - - - - -  | 22-23          |
| 48'-0" LONG BY 8'-2" WIDE VAN TRAILER - - - - -  | 24-25          |
| ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT)  |                |
| 40'-0" LONG BY 7'-8" WIDE VAN TRAILER - - - - -  | 26-27          |
| 45'-0" LONG BY 8'-2" WIDE VAN TRAILER - - - - -  | 28-29          |
| ALTERNATIVE LOADING PROCEDURE FOR ALL UNITS - - - - -  | 30-31          |
| TYPICAL LTL (5-UNIT LOAD) IN A CONVENTIONAL VAN TRAILER - - - - -                              | 32             |
| TYPICAL LTL (1-UNIT LOAD) IN A CONVENTIONAL VAN TRAILER<br>(LTL BRACE) - - - - -               | 33             |
| TYPICAL LTL (1-UNIT LOAD) IN A CONVENTIONAL VAN TRAILER<br>(NAILED HEADER) - - - - -           | 34             |
| PROCEDURES FOR SHIPMENT OF A PARTIAL PALLET UNIT - - - - -                                     | 35             |
| PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS - - - - -                                       | 36             |
| PROCEDURES FOR CONVENTIONAL VAN TRAILERS EQUIPPED WITH<br>LARGE-ANGLED FRONT CORNERS - - - - - | 43             |
| DETAILS:   |                |
| ANTI-SWAY BRACE A - - - - -  | 37             |
| ANTI-SWAY BRACE B - - - - -  | 37             |
| BULKHEAD GATE - - - - -  | 42             |
| FORWARD BLOCKING ASSEMBLY - - - - -  | 37             |
| LTL BRACE - - - - -  | 33             |
| REAR BLOCKING ASSEMBLY A - - - - -   | 39             |
| REAR BLOCKING ASSEMBLY B - - - - -   | 39             |
| REAR BLOCKING ASSEMBLY C - - - - -   | 40             |
| REAR BLOCKING ASSEMBLY D - - - - -   | 40             |
| REAR BLOCKING ASSEMBLY E - - - - -   | 41             |
| SEPARATOR GATE - - - - -   | 39             |
| SPACER ASSEMBLY A - - - - -  | 42             |
| SPACER ASSEMBLY B - - - - -  | 43             |
| SPACER ASSEMBLY C - - - - -  | 43             |
| STRAPPING BOARD ASSEMBLY A - - - - -   | 38             |
| STRAPPING BOARD ASSEMBLY B - - - - -   | 38             |

REVISION

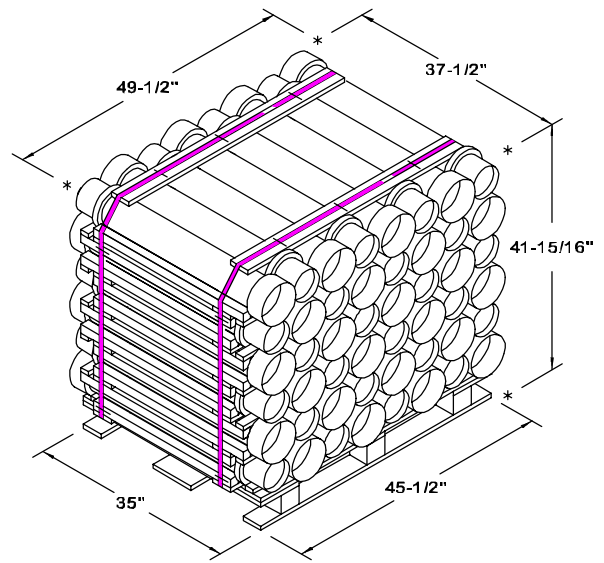
REVISION NO. 1, DATED OCTOBER 1997, CONSISTS OF:

1. INCLUDING LOAD DRAWINGS OF LONGER AND WIDER TRAILERS.
2. INCLUDING CROSSWISE LOADING PATTERN FOR ROUTED DUNNAGE METHOD UNIT.
3. INCORPORATING NAILED-HEADER METHOD INTO LOAD DRAWINGS.
4. REMOVING LOADS IN TRAILERS EQUIPPED WITH MECHANICAL BRACING DEVICES.
5. REMOVING TOP-OF-LOAD ANTI-SWAY BRACES FROM LOAD DRAWINGS.
6. REMOVING TYGARD METHOD OF LOAD RESTRAINT.
7. UPDATING GENERAL NOTES AND DRAWING FORMAT.



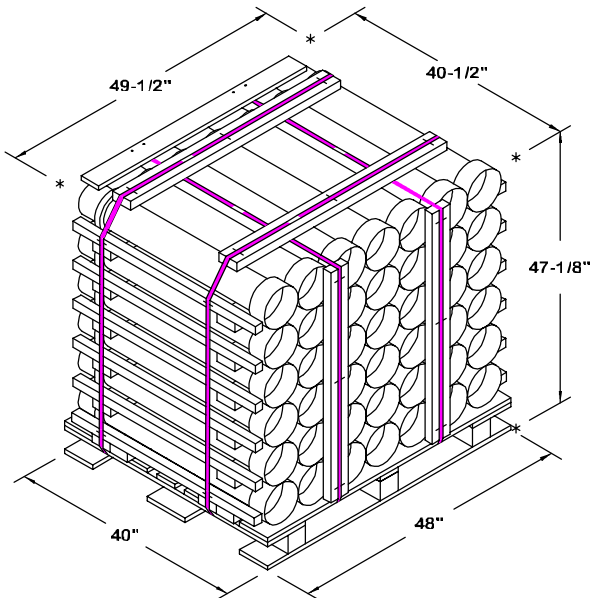
**ALTERNATED CONTAINERS UNIT (BASIC HEIGHT)**

CONTAINER - - - - - 40 EACH @ 29 LBS (APPROX)  
 CUBE - - - - - 38.7 CUBIC FEET (APPROX)  
 GROSS WEIGHT - - - - - 1,306 LBS (APPROX)



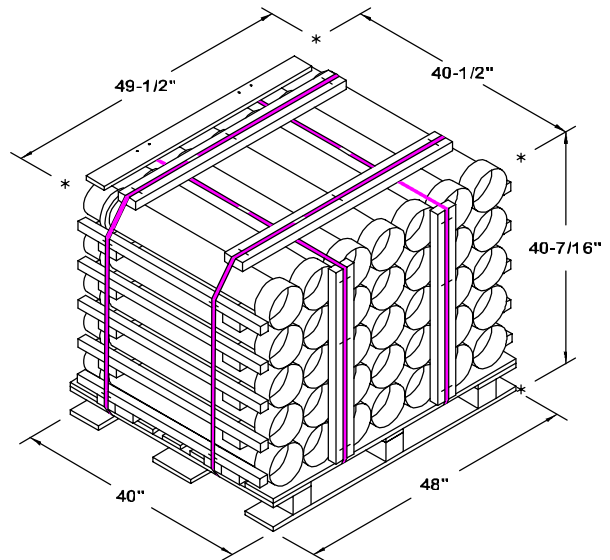
**ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT)**

CONTAINER - - - - - 48 EACH @ 29 LBS (APPROX)  
 CUBE - - - - - 45.1 CUBIC FEET (APPROX)  
 GROSS WEIGHT - - - - - 1,553 LBS (APPROX)



**FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT)**

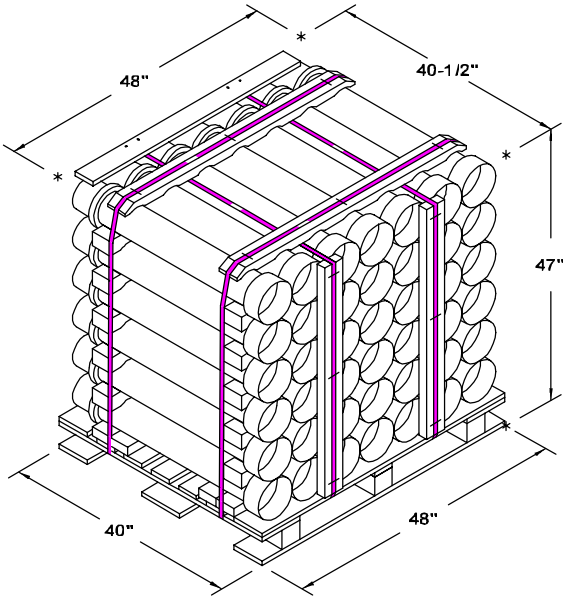
CONTAINER - - - - - 42 EACH @ 29 LBS (APPROX)  
 CUBE - - - - - 54.7 CUBIC FEET (APPROX)  
 GROSS WEIGHT - - - - - 1,439 LBS (APPROX)



**FLAT DUNNAGE METHOD UNIT (DECREASED HEIGHT)**

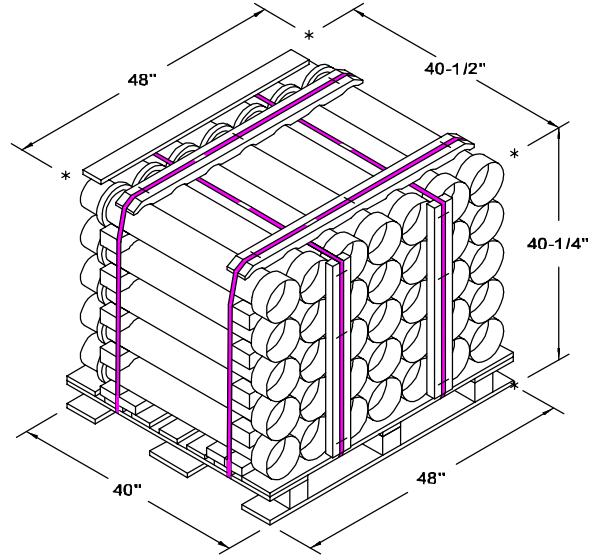
CONTAINER - - - - - 35 EACH @ 29 LBS (APPROX)  
 CUBE - - - - - 46.9 CUBIC FEET (APPROX)  
 GROSS WEIGHT - - - - - 1,217 LBS (APPROX)





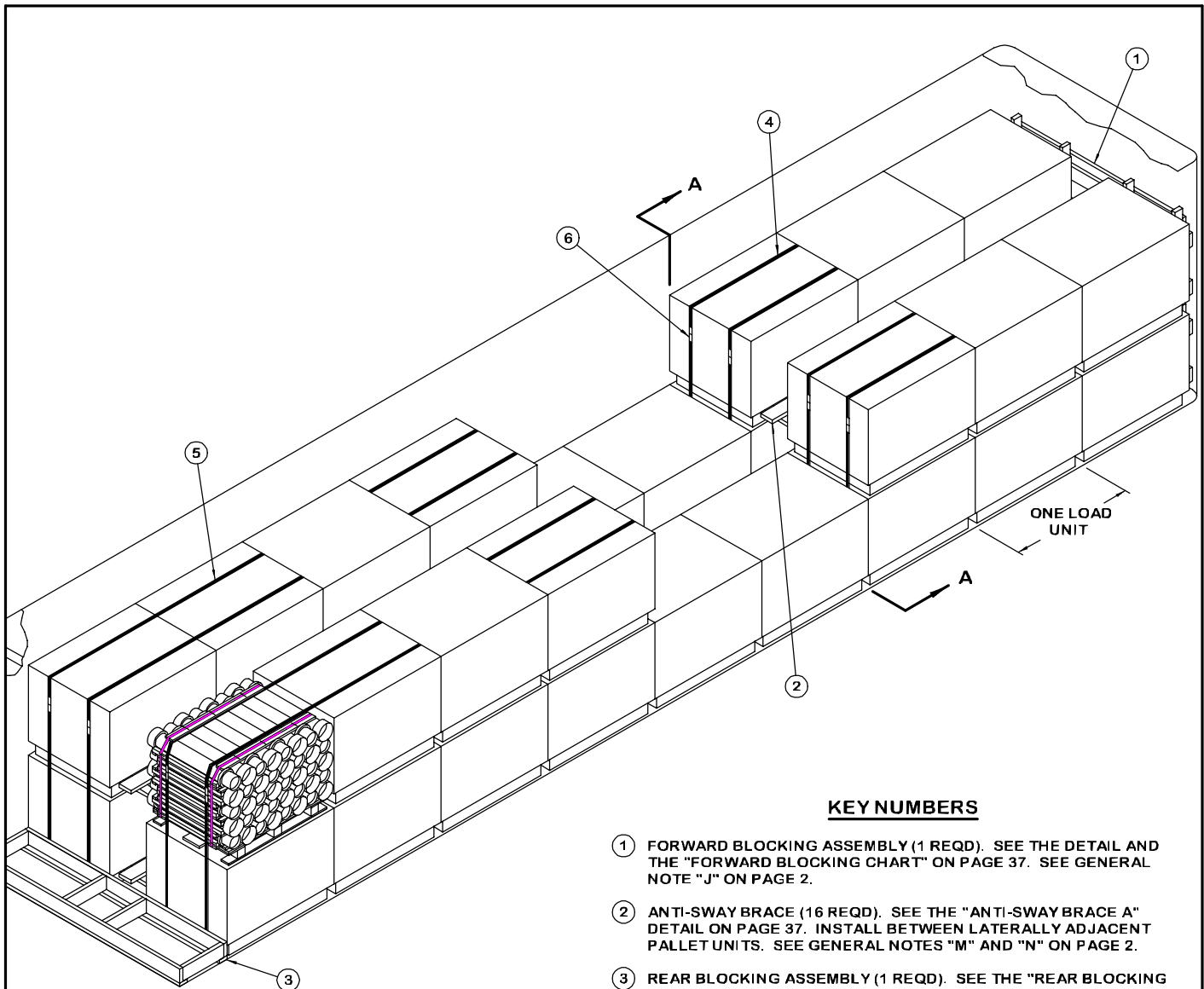
**ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT)**

CONTAINER - - - - - 42 EACH @ 29 LBS (APPROX)  
 CUBE - - - - - 52.9 CUBIC FEET (APPROX)  
 GROSS WEIGHT - - - - - 1,439 LBS (APPROX)

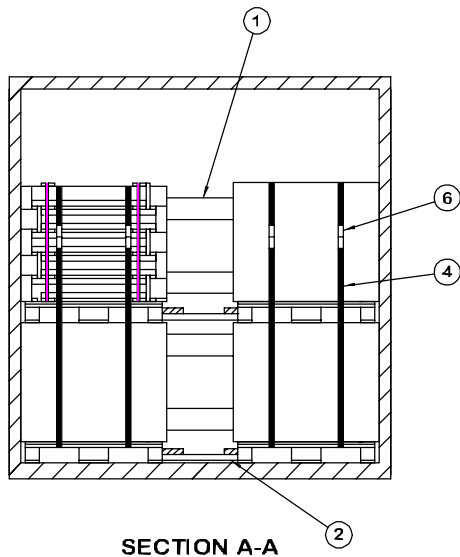


**ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT)**

CONTAINER - - - - - 35 EACH @ 29 LBS (APPROX)  
 CUBE - - - - - 45.3 CUBIC FEET (APPROX)  
 GROSS WEIGHT - - - - - 1,216 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 37. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (16 REQD). SEE THE "ANTI-SWAY BRACE A" DETAIL ON PAGE 37. 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" ON PAGE 39. SEE SPECIAL NOTE 3 ON PAGE 7.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 21'-0" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 4 ON PAGE 7.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 30'-0" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 5 ON PAGE 7.
- ⑥ SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

**SPECIAL NOTES:**

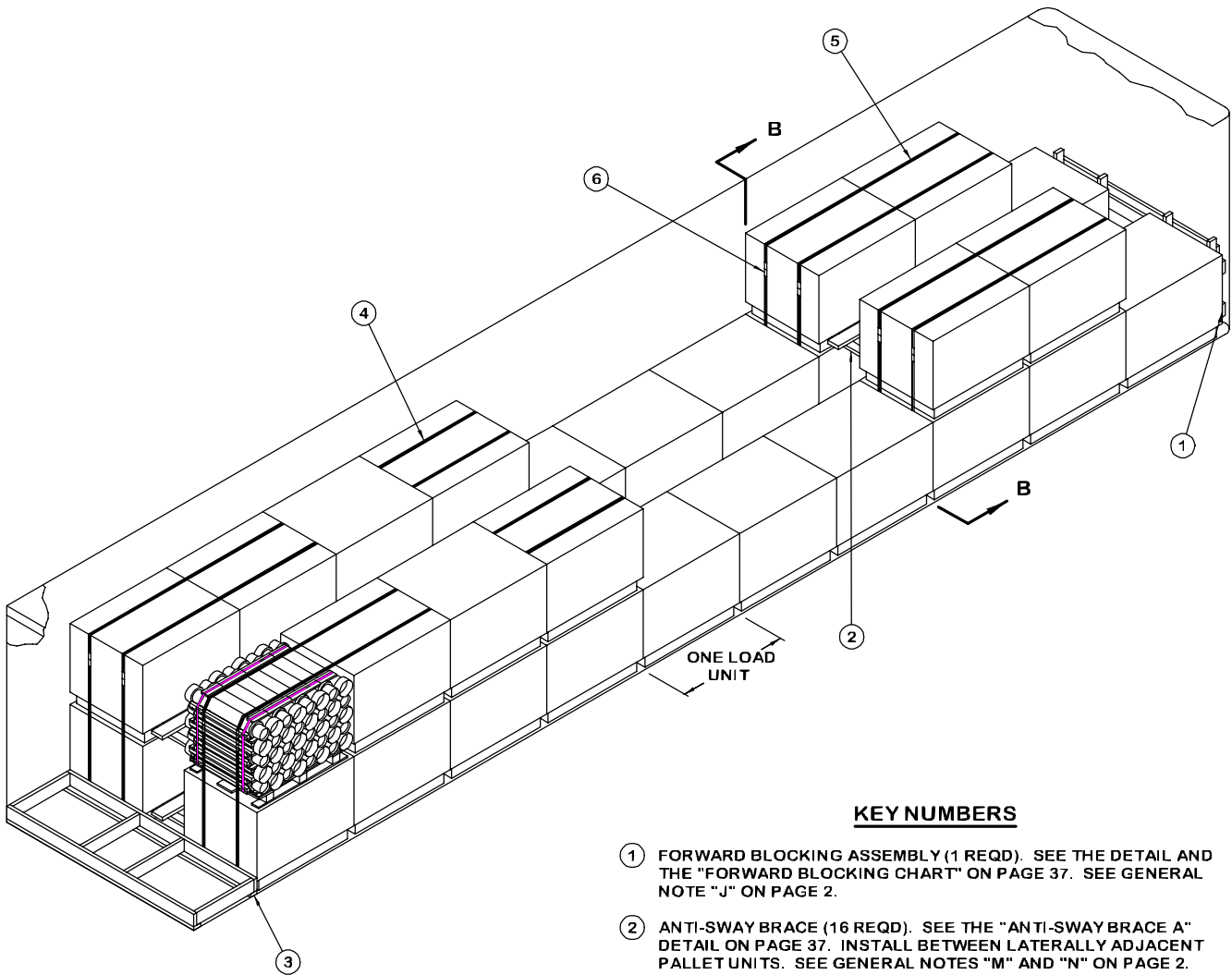
1. A 32-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED FRONT CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 6 IS THE ALTERNATED CONTAINERS UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 37-1/2" LONG BY 49-1/2" SIDE BY 36" HIGH AND WEIGHING APPROXIMATELY 1,306 POUNDS.
3. 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 A" AS DETAILED ON PAGE 39. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY B", PIECE MARKED ③ ON PAGE 6. SEE SPECIAL NOTE 11.
4. A PALLET UNIT AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER, UNLESS THE STACKED UNITS ARE AGAINST THE FRONT WALL OF A SQUARE-FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE LOAD. THE UNITIZING STRAPS, PIECE MARKED ④, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS SHOWN, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑤, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
6. IF A PALLET UNITS IS TO BE ADDED TO OR OMITTED FROM THE DEPICTED LOAD, THE STACK CONTAINING THE ODD UNIT IN THE SECOND LAYER AND AN ADJACENT STACK MUST BE SECURED BY INSTALLING BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑤ ON PAGE 6, SO AS TO ENCIRCLE THE TWO STACKS. OMIT TWO STACK UNITIZING STRAPS, PIECE MARKED ④.
7. IF ONLY ONE PALLET IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW IT MUST NOT BE POSITIONED ON THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING TWO STACK UNITIZING STRAPS, PIECE MARKED ④.
8. REFER TO PAGE 34 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
9. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED SEVEN MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 36 FOR GUIDANCE.
10. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 32 THROUGH 34.
11. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD OF REAR BLOCKING AS DEPICTED ON PAGES 16 AND 17 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

| BILL OF MATERIAL                                      |             |            |
|---|-------------|------------|
| LUMBER  | LINEAR FEET | BOARD FEET |
| 2" X 3"   | 2           | 1          |
| 2" X 4"   | 177         | 118        |
| 2" X 6"   | 131         | 131        |
| NAILS   | NO. REQD    | POUNDS     |
| 10d (3")  | 308         | 4-3/4      |
| 1-1/4" STEEL STRAPPING - - 288' REQD - - - 41-1/4 LBS |             |            |
| SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS   |             |            |

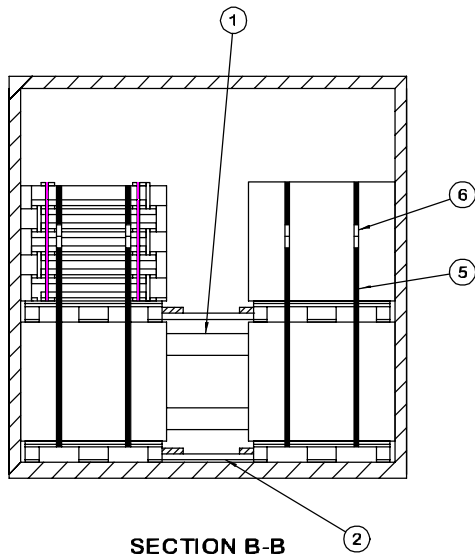
**LOAD AS SHOWN**

| ITEM                   | QUANTITY     | WEIGHT (APPROX)     |
|------------------------|--------------|---------------------|
| PALLET UNIT - - - - -  | 32 - - - - - | 41,792 LBS          |
| DUNNAGE - - - - -      | - - - - -    | 548 LBS             |
| TOTAL WEIGHT - - - - - |              | 42,340 LBS (APPROX) |

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



**ISOMETRIC VIEW**



**SECTION B-B**

**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 37. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (16 REQD). SEE THE "ANTI-SWAY BRACE A" DETAIL ON PAGE 37. 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" ON PAGE 39. SEE SPECIAL NOTE 3 ON PAGE 9.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 21'-0" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 4 ON PAGE 9.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 30'-0" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 5 ON PAGE 9.
- ⑥ SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

**SPECIAL NOTES:**

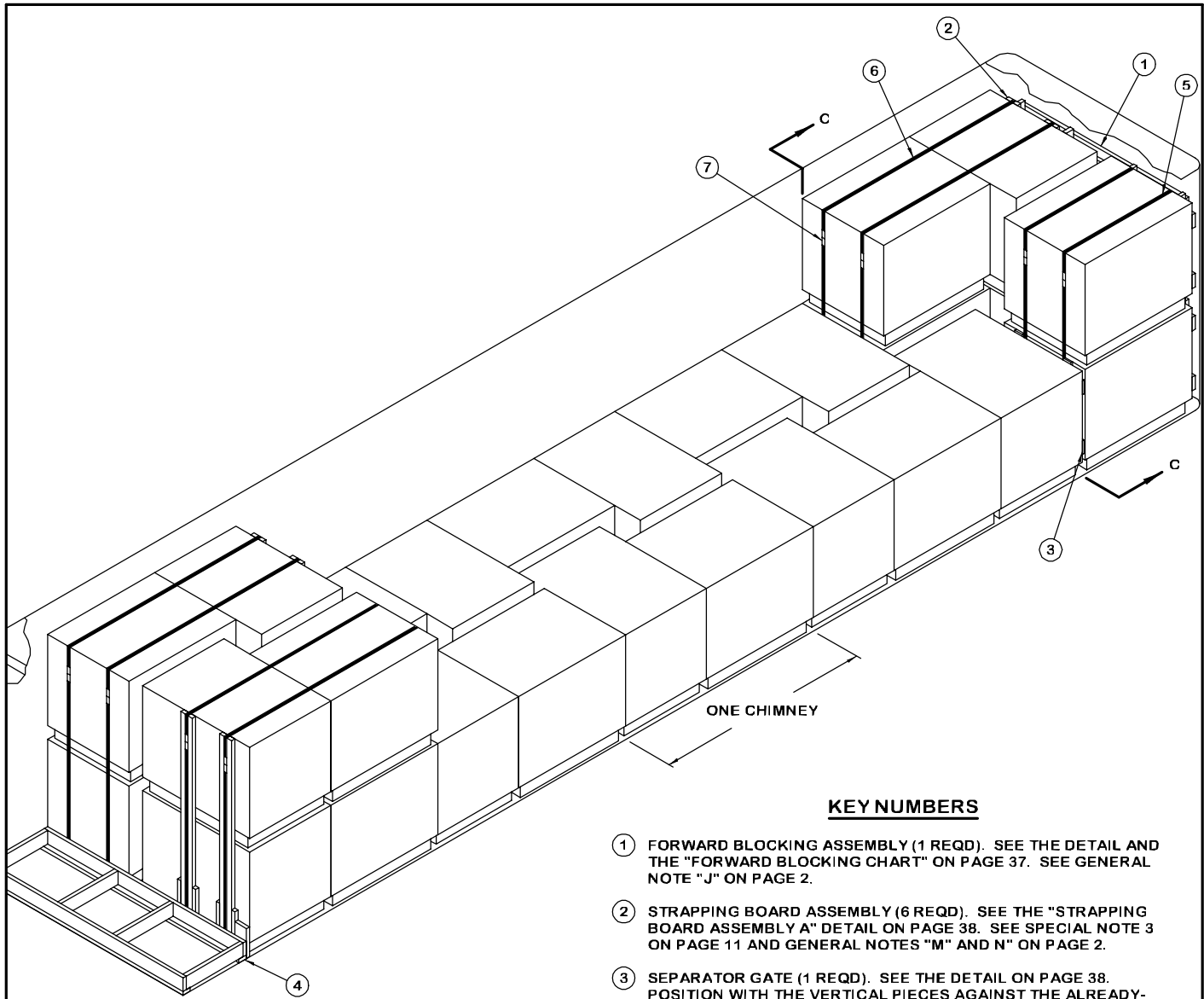
1. A 32-UNIT LOAD IS SHOWN IN A 45'-0" LONG BY 8'-0" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED FRONT CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 8 IS THE ALTERNATED CONTAINERS UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 37-1/2" LONG BY 49-1/2" SIDE BY 36" HIGH AND WEIGHING APPROXIMATELY 1,306 POUNDS.
3. 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 A" AS DETAILED ON PAGE 39. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY B", PIECE MARKED ③ ON PAGE 8. SEE SPECIAL NOTE 11.
4. A PALLET UNIT AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER, UNLESS THE STACKED UNITS ARE AGAINST THE FRONT WALL OF A SQUARE-FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE LOAD. THE UNITIZING STRAPS, PIECE MARKED ④, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS SHOWN, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑤, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
6. IF A PALLET UNITS IS TO BE ADDED TO OR OMITTED FROM THE DEPICTED LOAD, THE STACK CONTAINING THE ODD UNIT IN THE SECOND LAYER AND AN ADJACENT STACK MUST BE SECURED BY INSTALLING BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑤ ON PAGE 6, SO AS TO ENCIRCLE THE TWO STACKS. OMIT TWO STACK UNITIZING STRAPS, PIECE MARKED ④.
7. IF ONLY ONE PALLET IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW IT MUST NOT BE POSITIONED ON THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING TWO STACK UNITIZING STRAPS, PIECE MARKED ④.
8. REFER TO PAGE 35 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
9. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED SEVEN MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 36 FOR GUIDANCE.
10. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 32 THROUGH 34.
11. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD OF REAR BLOCKING AS DEPICTED ON PAGES 16 AND 17 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

| BILL OF MATERIAL                                      |             |            |
|---|-------------|------------|
| LUMBER  | LINEAR FEET | BOARD FEET |
| 2" X 3"   | 2           | 1          |
| 2" X 4"   | 177         | 118        |
| 2" X 6"   | 107         | 107        |
| NAILS   | NO. REQD    | POUNDS     |
| 10d (3")  | 276         | 4-1/4      |
| 1-1/4" STEEL STRAPPING - - 324' REQD - - - 46-1/2 LBS |             |            |
| SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS   |             |            |

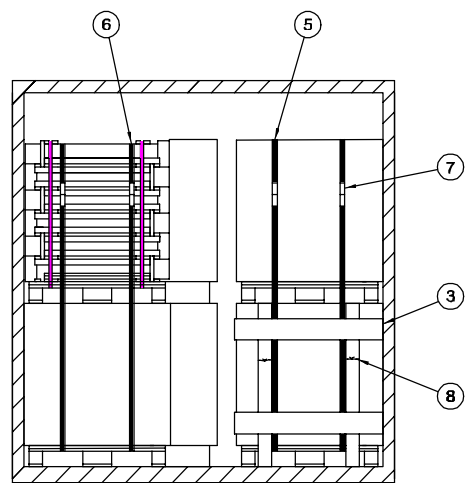
LOAD AS SHOWN

| ITEM                   | QUANTITY     | WEIGHT (APPROX)     |
|------------------------|--------------|---------------------|
| PALLET UNIT - - - - -  | 32 - - - - - | 41,792 LBS          |
| DUNNAGE - - - - -      | - - - - -    | 504 LBS             |
| TOTAL WEIGHT - - - - - |              | 42,296 LBS (APPROX) |

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



**ISOMETRIC VIEW**



**SECTION C-C**

**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 37. SEE GENERAL NOTE "J" ON PAGE 2.
- ② STRAPPING BOARD ASSEMBLY (6 REQD). SEE THE "STRAPPING BOARD ASSEMBLY A" DETAIL ON PAGE 38. SEE SPECIAL NOTE 3 ON PAGE 11 AND GENERAL NOTES "M" AND "N" ON PAGE 2.
- ③ SEPARATOR GATE (1 REQD). SEE THE DETAIL ON PAGE 38. POSITION WITH THE VERTICAL PIECES AGAINST THE ALREADY-LOADED UNIT. SEE SPECIAL NOTE 4 ON PAGE 11. SEE KEY NUMBER ⑧.
- ④ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY C" DETAIL ON PAGE 40. SEE SPECIAL NOTE 5 ON PAGE 11.
- ⑤ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 23'-0" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 6 ON PAGE 11. AS APPLICABLE, STAPLE TO A STRAPPING BOARD ASSEMBLY, PIECE MARKED ②, W/1 STAPLE.
- ⑥ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 32'-0" LONG STEEL STRAPPING (6 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 7 ON PAGE 11. AS APPLICABLE, STAPLE TO A STRAPPING BOARD ASSEMBLY, PIECE MARKED ②, W/1 STAPLE.
- ⑦ SEAL FOR 1-1/4" STRAPPING (16 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑧ TIE WIRE, .0800" DIA., 24" LONG (2 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND THE CROSS PIECE OF AN INTERMEDIATE DUNNAGE ASSEMBLY ON THE PALLET UNIT AND A VERTICAL PIECE OF THE SEPARATOR GATE, PIECE MARKED ③, AND TWIST TAUT.

(SPECIAL NOTES CONTINUED)

13. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE "NAILED-HEADER METHOD" AS SHOWN ON PAGE 16. NOTE THAT THE NAILED-HEADER METHOD MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
14. WHEN THE SECOND LAYER AT THE FRONT OF THE TRAILER CONSISTS OF ONLY THREE PALLET UNITS INSTEAD OF A FULL CHIMNEY OF FOUR PALLET UNITS, BUNDLING STRAPS, PIECE MARKED (6), WILL BE USED IN LIEU OF STACK UNITIZING STRAPS, PIECE MARKED (5), FOR THE SECUREMENT OF THE ODD PALLET UNIT AT THE REAR OF THE SECOND LAYER PORTION AT THE FRONT OF THE TRAILER.

SPECIAL NOTES:

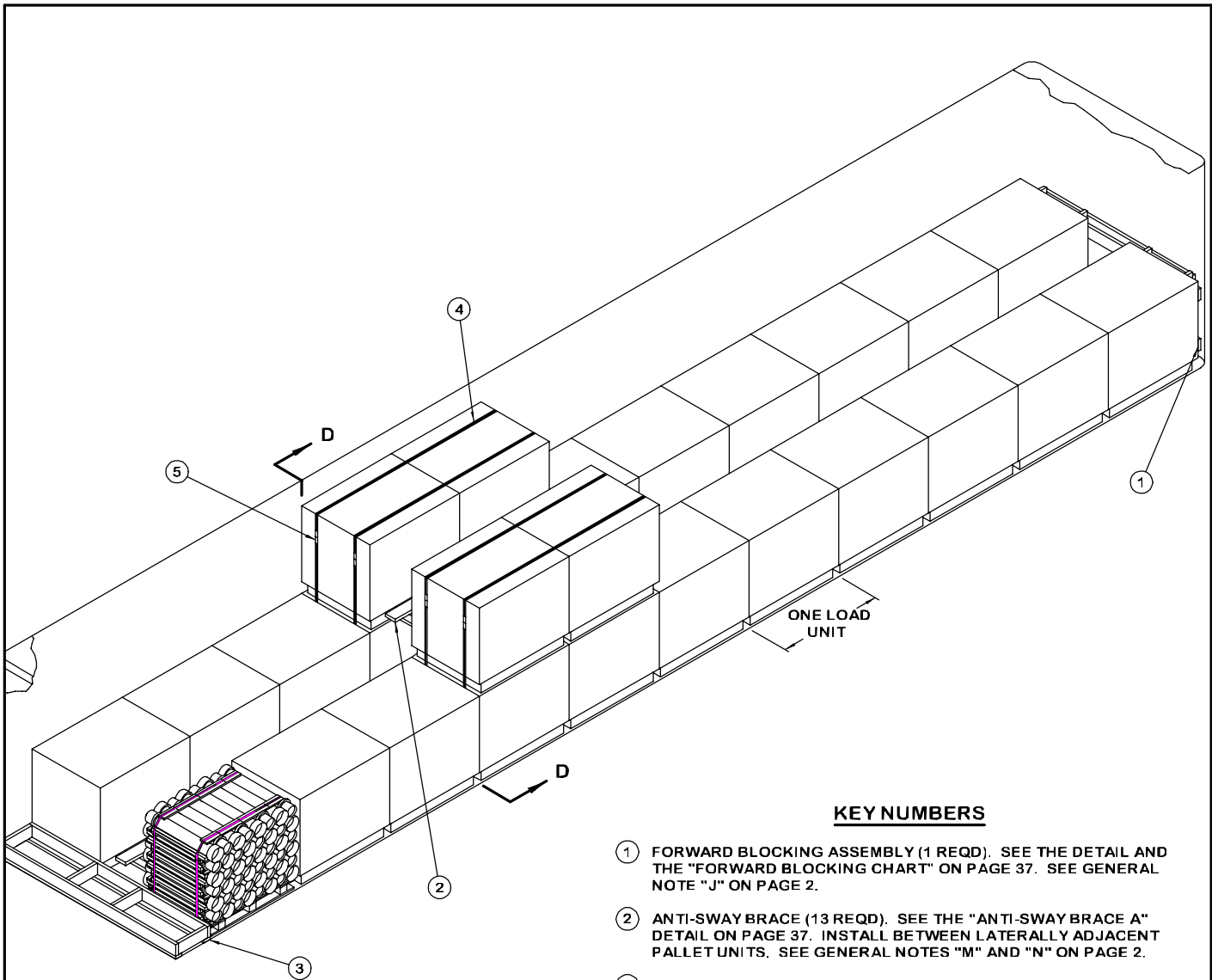
1. A 27-UNIT CHIMNEY PATTERN LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 10 IS THE ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 37-1/2" LONG BY 49-1/2" WIDE BY 41-15/16" HIGH AND WEIGHING APPROXIMATELY 1,553 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). SEE THE "STRAPPING BOARD ASSEMBLY B" DETAIL ON PAGE 38.
4. THE SEPARATOR GATE, PIECE MARKED (3), IS ONLY REQUIRED WHEN A PALLET UNIT IS OMITTED FROM THE CHIMNEY PATTERN AT THE FRONT OF THE SECOND LAYER. IF A FOURTH PALLET UNIT IS ADDED, STRAPPING BOARD ASSEMBLIES WILL BE REQUIRED, AND WILL NEGATE THE NEED FOR PIECE MARKED (3).
5. IF THE VOID AT THE REAR OF THE LOAD BETWEEN THE PALLET UNITS AND THE REAR DOORS MEASURES 1-1/2" OF 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 A" AS DETAILED ON PAGE 39. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY C", PIECE MARKED (4) ON PAGE 10. SEE SPECIAL NOTE 13.
6. A PALLET UNIT AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER, UNLESS THE STACKED UNITS ARE AGAINST THE FRONT WALL OF A SQUARE-FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE LOAD. THE UNITIZING STRAPS, PIECE MARKED (5), AND THE STRAPPING BOARD ASSEMBLIES, PIECE MARKED (2), MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK. SEE SPECIAL NOTE 14.
7. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS SHOWN, BUNDLING STRAPS, SHOWN AS PIECE MARKED (6), MUST BE INSTALLED TO ENCIRCLE THE REARMOST TWO STACKS AND TWO STRAPPING BOARD ASSEMBLIES, PIECE MARKED (2), 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 THE REARMOST PALLET UNIT IN THE FIRST LAYER. IT MUST BE POSITIONED ON A FIRST LAYER PALLET WHICH HAS THE 45-1/2" DIMENSION OF THE PALLET CROSSWISE IN THE TRAILER. PROVIDE LONGITUDINAL BRACING BY INSTALLING TWO UNITIZING STRAPS, PIECE MARKED (5), EXTENDING AROUND STRAPPING BOARD ASSEMBLIES, PIECE MARKED (2), AT EACH SIDE OF THE STACK. POSITION AND WIRE TIE A SEPARATOR GATE, PIECE MARKED (3), AT EACH END OF THE PALLET UNIT DIRECTLY OPPOSITE TO COMPENSATE FOR THE THICKNESS OF THE STRAPPING BOARD ASSEMBLIES.
9. REFER TO PAGE 35 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
10. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED SEVEN MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 36 FOR GUIDANCE.
11. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 32 THROUGH 34.
12. REFER TO PAGE 6 FOR GUIDANCE IN SHIPPING THIS ITEM BY AN ALTERNATIVE METHOD.

BILL OF MATERIAL

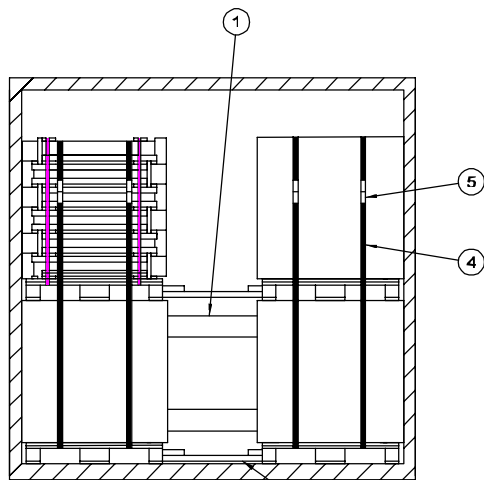
| LUMBER  | LINEAR FEET | BOARD FEET |
|---|-------------|------------|
| 1" X 4"   | 7           | 3          |
| 1" X 6"   | 7           | 4          |
| 2" X 2"   | 16          | 6          |
| 2" X 3"   | 1           | 1          |
| 2" X 4"   | 44          | 30         |
| 2" X 6"   | 123         | 123        |
| NAILS   | NO. REQD    | POUNDS     |
| 6d (2")   | 12          | 1/4        |
| 10d (3")  | 150         | 2-1/2      |
| 1-1/4" STEEL STRAPPING - - 238' REQD - - - - - 34 LBS |             |            |
| SEAL FOR 1-1/4" STRAPPING - 16 REQD - - - - - 3/4 LB  |             |            |
| WIRE, .0800" DIA - - - - - 4' REQD - - - - - NIL      |             |            |
| STAPLE - - - - - 6 REQD - - - - - NIL                 |             |            |

LOAD AS SHOWN

| ITEM         | QUANTITY | WEIGHT (APPROX)     |
|--------------|----------|---------------------|
| PALLET UNIT  | 27       | 41,931 LBS          |
| DUNNAGE      |          | 372 LBS             |
| TOTAL WEIGHT |          | 42,303 LBS (APPROX) |



**ISOMETRIC VIEW**



**SECTION D-D**

**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 37. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (13 REQD). SEE THE "ANTI-SWAY BRACE A" DETAIL ON PAGE 37. 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" ON PAGE 39. SEE SPECIAL NOTE 3 ON PAGE 13.
- ④ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 32'-0" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 5 ON PAGE 13.
- ⑤ SEAL FOR 1-1/4" STRAPPING (8 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



**SPECIAL NOTES:**

1. A 26-UNIT LOAD IS SHOWN IN A 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED FRONT CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 12 IS THE ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 37-1/2" LONG BY 49-1/2" SIDE BY 41-15/16" HIGH AND WEIGHING APPROXIMATELY 1,553 POUNDS.
3. 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 A" AS DETAILED ON PAGE 39. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY B", PIECE MARKED ③ ON PAGE 12. SEE SPECIAL NOTE 11.
4. A PALLET UNIT AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER. UNLESS THE STACKED UNITS ARE AGAINST THE FRONT WALL OF A SQUARE-FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE LOAD. THE UNITIZING STRAPS, PIECE MARKED ④, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS SHOWN, BUNDLING STRAPS, SHOWN AS PIECE MARKED ④, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
6. IF A PALLET UNITS IS TO BE ADDED TO OR OMITTED FROM THE DEPICTED LOAD, THE STACK CONTAINING THE ODD UNIT IN THE SECOND LAYER AND AN ADJACENT STACK MUST BE SECURED BY INSTALLING BUNDLING STRAPS, SHOWN AS PIECE MARKED ④ ON PAGE 12, SO AS TO ENCIRCLE THE TWO STACKS. IN THE CASE OF OMITTING A PALLET UNIT, ELIMINATE TWO BUNDLING STRAPS, PIECE MARKED ④, AND INSTALL TWO 23'-0" LONG STACK UNITIZING STRAPS, SHOWN AS PIECE MARKED ⑤ ON PAGE 10.
7. IF ONLY ONE PALLET IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW IT MUST NOT BE POSITIONED ON THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING TWO STACK UNITIZING STRAPS, SHOWN AS PIECE MARKED ⑤ ON PAGE 10.
8. REFER TO PAGE 35 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
9. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED SEVEN MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 36 FOR GUIDANCE.
10. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 32 THROUGH 34.
11. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD OF REAR BLOCKING AS DEPICTED ON PAGES 16 AND 17 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

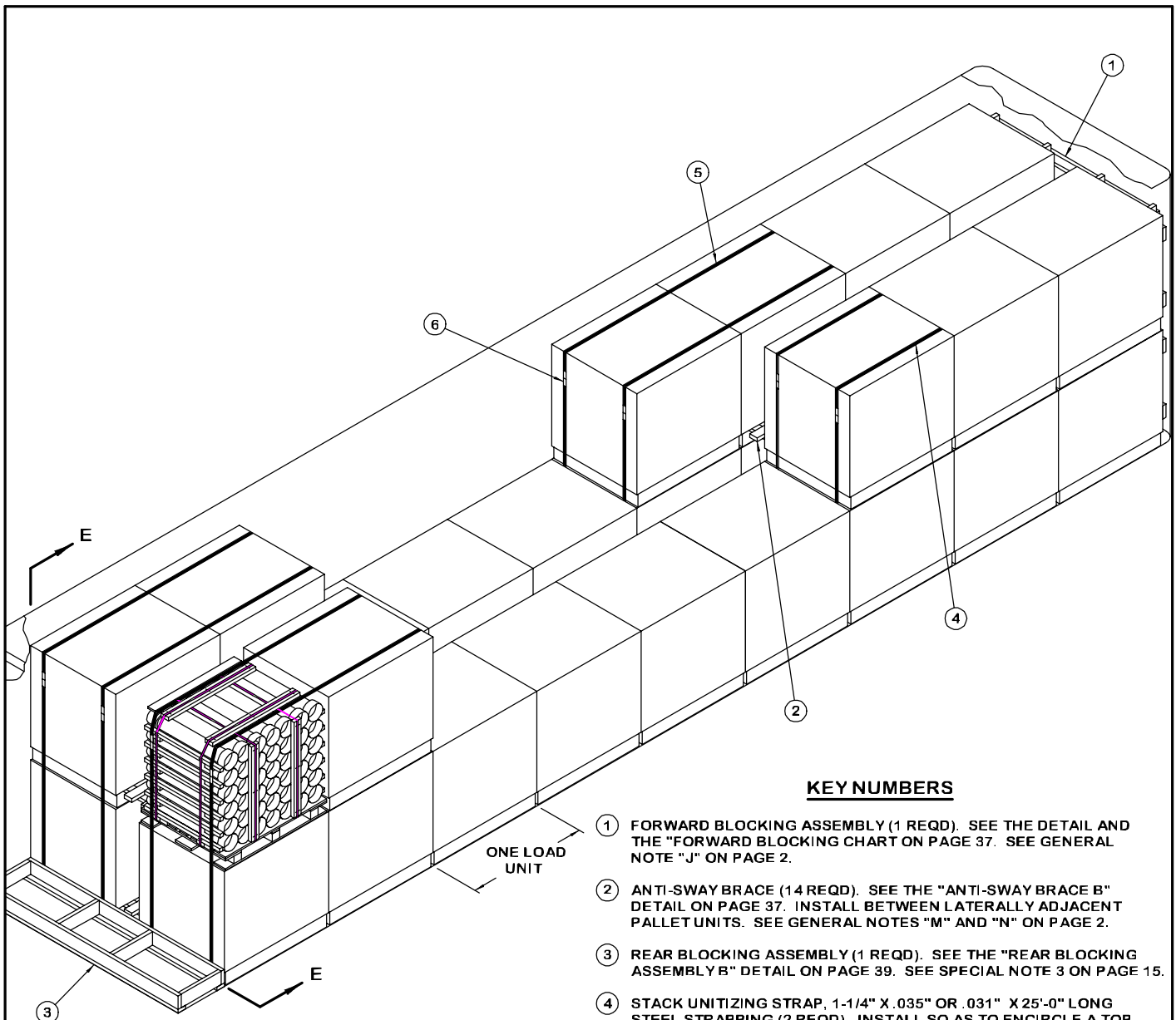
**BILL OF MATERIAL**

| LUMBER  | LINEAR FEET | BOARD FEET |
|---|-------------|------------|
| 2" X 3"   | 2           | 1          |
| 2" X 4"   | 157         | 105        |
| 2" X 6"   | 96          | 96         |
| NAILS   | NO. REQD    | POUNDS     |
| 10d (3")  | 240         | 3-3/4      |
| 1-1/4" STEEL STRAPPING - - 128' REQD - - - 18-1/2 LBS |             |            |
| SEAL FOR 1-1/4" STRAPPING - 8 REQD - - - 1/2 LB       |             |            |

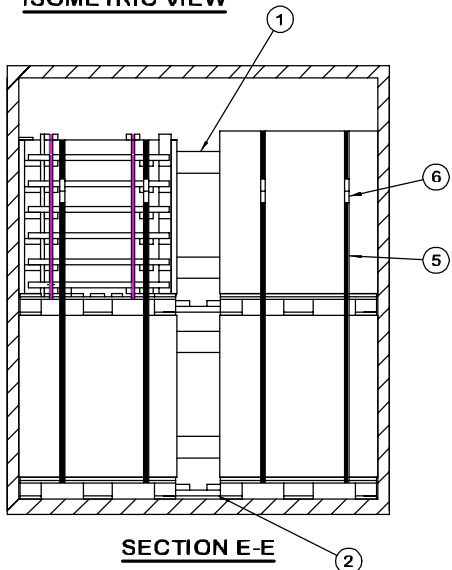
**LOAD AS SHOWN**

| ITEM                   | QUANTITY     | WEIGHT (APPROX)     |
|------------------------|--------------|---------------------|
| PALLET UNIT - - - - -  | 26 - - - - - | 40,378 LBS          |
| DUNNAGE - - - - -      | - - - - -    | 427 LBS             |
| <hr/>                  |              |                     |
| TOTAL WEIGHT - - - - - |              | 40,805 LBS (APPROX) |

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



**ISOMETRIC VIEW**



**SECTION E-E**

**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART ON PAGE 37. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (14 REQD). SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 37. 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 39. SEE SPECIAL NOTE 3 ON PAGE 15.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 25'-0" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 4 ON PAGE 15.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 33'-0" LONG STEEL STRAPPING (6 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 5 ON PAGE 15.
- ⑥ SEAL FOR 1-1/4" STRAPPING (16 REQD). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

**FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT)  
29-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE HI-VOLUME VAN TRAILER**

**SPECIAL NOTES:**

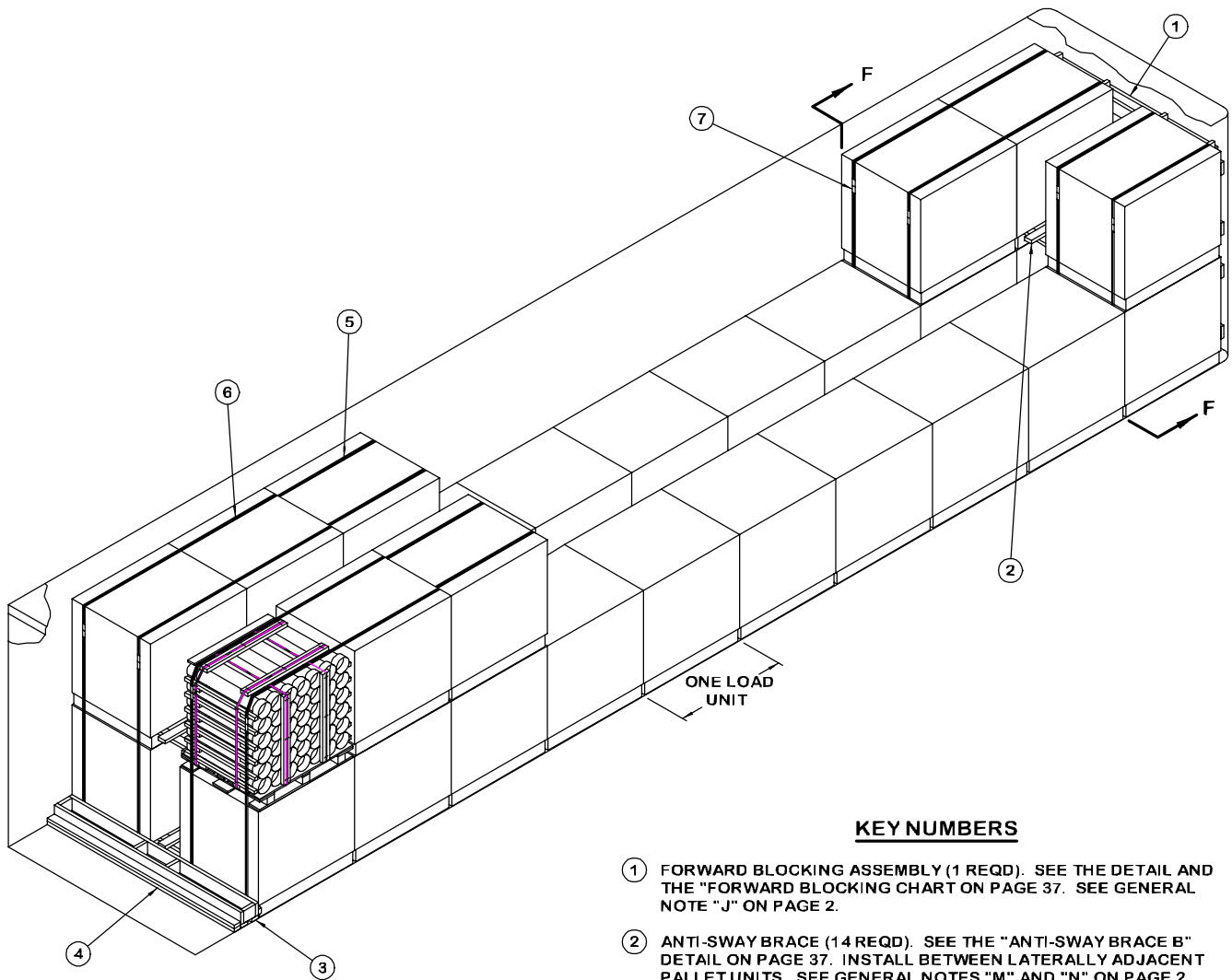
1. A 29-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) HI-VOLUME VAN TRAILER. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 14 IS THE FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 40-1/2" LONG BY 49-1/2" WIDE BY 47-1/8" HIGH AND WEIGHING APPROXIMATELY 1,439 POUNDS.
3. 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 A" AS DETAILED ON PAGE 39. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY B", PIECE MARKED ③ ON PAGE 14. SEE SPECIAL NOTE 11.
4. A PALLET UNIT AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER, UNLESS THE STACKED UNITS ARE AGAINST THE FRONT WALL OF A SQUARE-FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE LOAD. THE UNITIZING STRAPS, PIECE MARKED ④, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS IN THE DEPICTED LOAD, BUNDLING STRAPS, PIECE MARKED ⑤, MUST BE INSTALLED SO AS TO ENCIRCLE THE REAR-MOST TWO STACKS IN EACH APPLICABLE ROW.
6. IF ONLY ONE PALLET UNIT IS TO BE LOADED ON THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, PIECE MARKED ④.
7. REFER TO PAGE 35 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED SIX, MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 36 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO PAGES 32 THROUGH 34 FOR GUIDANCE.
10. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 8'-4", IT WILL BE NECESSARY TO LIMIT THE REARMOST LOAD UNIT TO ONE PALLET IN HEIGHT. IF THE SECOND LAYER AT THE REAR OF THE LOAD UNIT IS MOVED FORWARD, FOUR BUNDLING STRAPS, PIECE MARKED ⑤, MAY BE USED FOR SECUREMENT OF THE FOUR PALLET UNITS, OR EIGHT UNITIZING STRAPS SHOWN AS PIECE MARKED ④ MAY BE USED INSTEAD.
11. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE "NAILED-HEADER METHOD" AS SHOWN ON PAGE 16. NOTE THAT THE NAILED-HEADER METHOD MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

| BILL OF MATERIAL                                      |             |            |
|---|-------------|------------|
| LUMBER  | LINEAR FEET | BOARD FEET |
| 2" X 3"   | 2           | 1          |
| 2" X 4"   | 200         | 134        |
| 2" X 6"   | 80          | 80         |
| NAILS   | NO. REQD    | POUNDS     |
| 10d (3")  | 284         | 4-1/2      |
| 1-1/4" STEEL STRAPPING - - 248' REQD - - - 35-1/2 LBS |             |            |
| SEAL FOR 1-1/4" STRAPPING - 16 REQD - - - 3/4 LB      |             |            |

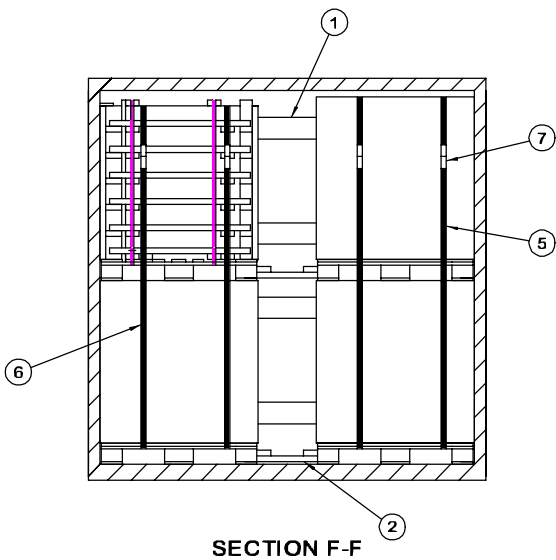
**LOAD AS SHOWN**

| ITEM                   | QUANTITY     | WEIGHT (APPROX)     |
|------------------------|--------------|---------------------|
| PALLET UNIT - - - - -  | 29 - - - - - | 41,731 LBS          |
| DUNNAGE - - - - -      | - - - - -    | 471 LBS             |
| TOTAL WEIGHT - - - - - |              | 42,202 LBS (APPROX) |

**FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT)  
29-UNIT LOAD IN A 40'-0' LONG BY 7'-8" WIDE HI-VOLUME VAN TRAILER**



**ISOMETRIC VIEW**



**SECTION F-F**

**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART ON PAGE 37. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (14 REQD). SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 37. 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 39. SEE SPECIAL NOTE 3 ON PAGE 17.
- 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 17.
- ⑤ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 25'-0" LONG STEEL STRAPPING (6 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 4 ON PAGE 17.
- ⑥ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 33'-0" LONG STEEL STRAPPING (6 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 5 ON PAGE 17.
- ⑦ SEAL FOR 1-1/4" STRAPPING (24 REQD). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

| FORWARD HEADER<br>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<br>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:**

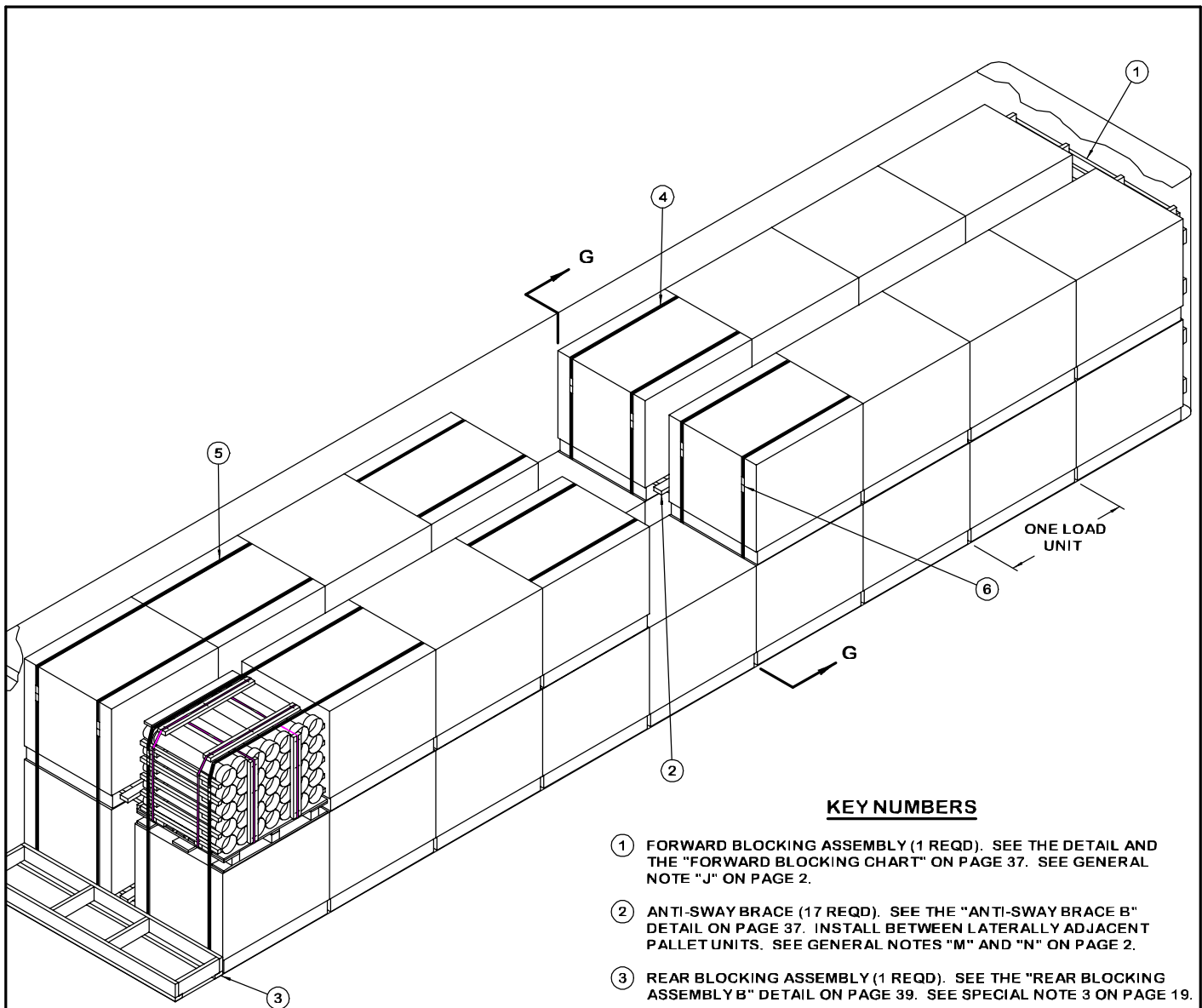
1. A 29-UNIT LOAD IS SHOWN IN A 45'-0" LONG BY 8'-0" WIDE (INSIDE DIMENSION) HI-VOLUME VAN TRAILER WITH ROUNDED CORNERS AND NAILABLE FLOORS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 16 IS THE FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 40-1/2" LONG BY 49-1/2" WIDE BY 47-1/8" HIGH AND WEIGHING APPROXIMATELY 1,439 POUNDS.
3. 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 A" AS DETAILED ON PAGE 39. WHEN USING THE NAILED-HEADER METHOD AS SHOWN ON PAGE 16, THE STRUT LENGTHS OF PIECE MARKED ③ WILL BE THE MINIMUM 6". IF POSSIBLE, PIECE MARKED ③ MAY BE ELIMINATED IF THERE IS ENOUGH ROOM TO NAIL WITH HEADERS PLACED DIRECTLY AGAINST THE PALLET UNIT. SEE THE NAILING CHARTS AT LEFT.
4. A PALLET UNIT AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER, UNLESS THE STACKED UNITS ARE AGAINST THE FRONT WALL OF A SQUARE-FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE LOAD. THE UNITIZING STRAPS, PIECE MARKED ⑤, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS IN THE DEPICTED LOAD, BUNDLING STRAPS, PIECE MARKED ⑥, MUST BE INSTALLED SO AS TO ENCIRCLE THE REAR-MOST TWO STACKS IN EACH APPLICABLE ROW.
6. IF ONLY ONE PALLET UNIT IS TO BE LOADED ON THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, PIECE MARKED ⑤.
7. REFER TO PAGE 35 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED SIX, MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 36 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO PAGES 32 THROUGH 34 FOR GUIDANCE.
10. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 8'-4", IT WILL BE NECESSARY TO LIMIT THE REARMOST LOAD UNIT TO ONE PALLET IN HEIGHT. IF THE SECOND LAYER AT THE REAR OF THE LOAD UNIT IS MOVED FORWARD, FOUR BUNDLING STRAPS, PIECE MARKED ⑥, MAY BE USED FOR SECUREMENT OF THE FOUR PALLET UNITS, OR EIGHT UNITIZING STRAPS SHOWN AS PIECE MARKED ⑤ MAY BE USED INSTEAD.
11. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, THE "NAILED-HEADER METHOD" AS SHOWN MUST BE USED.

| BILL OF MATERIAL  |             |            |
|---|-------------|------------|
| LUMBER  | LINEAR FEET | BOARD FEET |
| 2" X 3"   | 2           | 1          |
| 2" X 4"   | 226         | 151        |
| 2" X 6"   | 76          | 76         |
| NAILS   | NO. REQD    | POUNDS     |
| 10d (3")  | 318         | 5          |
| 1-1/4" STEEL STRAPPING - - 348 <sup>1</sup> REQD - - - 49-3/4 LBS |             |            |
| SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS               |             |            |

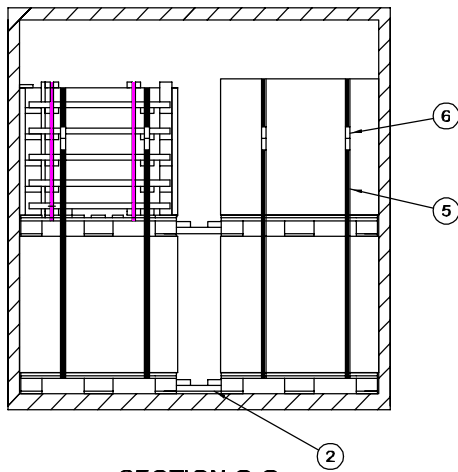
**LOAD AS SHOWN**

| ITEM                   | QUANTITY     | WEIGHT (APPROX)     |
|------------------------|--------------|---------------------|
| PALLET UNIT - - - - -  | 29 - - - - - | 41,731 LBS          |
| DUNNAGE - - - - -      | - - - - -    | 512 LBS             |
| TOTAL WEIGHT - - - - - |              | 42,243 LBS (APPROX) |

**FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT)  
29- UNIT LOAD IN A 45'-0" LONG BY 8'-0" WIDE HI-VOLUME VAN TRAILER**



**ISOMETRIC VIEW**



**SECTION G-G**

**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 37. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (17 REQD). SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 37. 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 39. SEE SPECIAL NOTE 3 ON PAGE 19.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 22'-6" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 4 ON PAGE 19.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 31'-0" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 5 ON PAGE 19.
- ⑥ SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

**SPECIAL NOTES:**

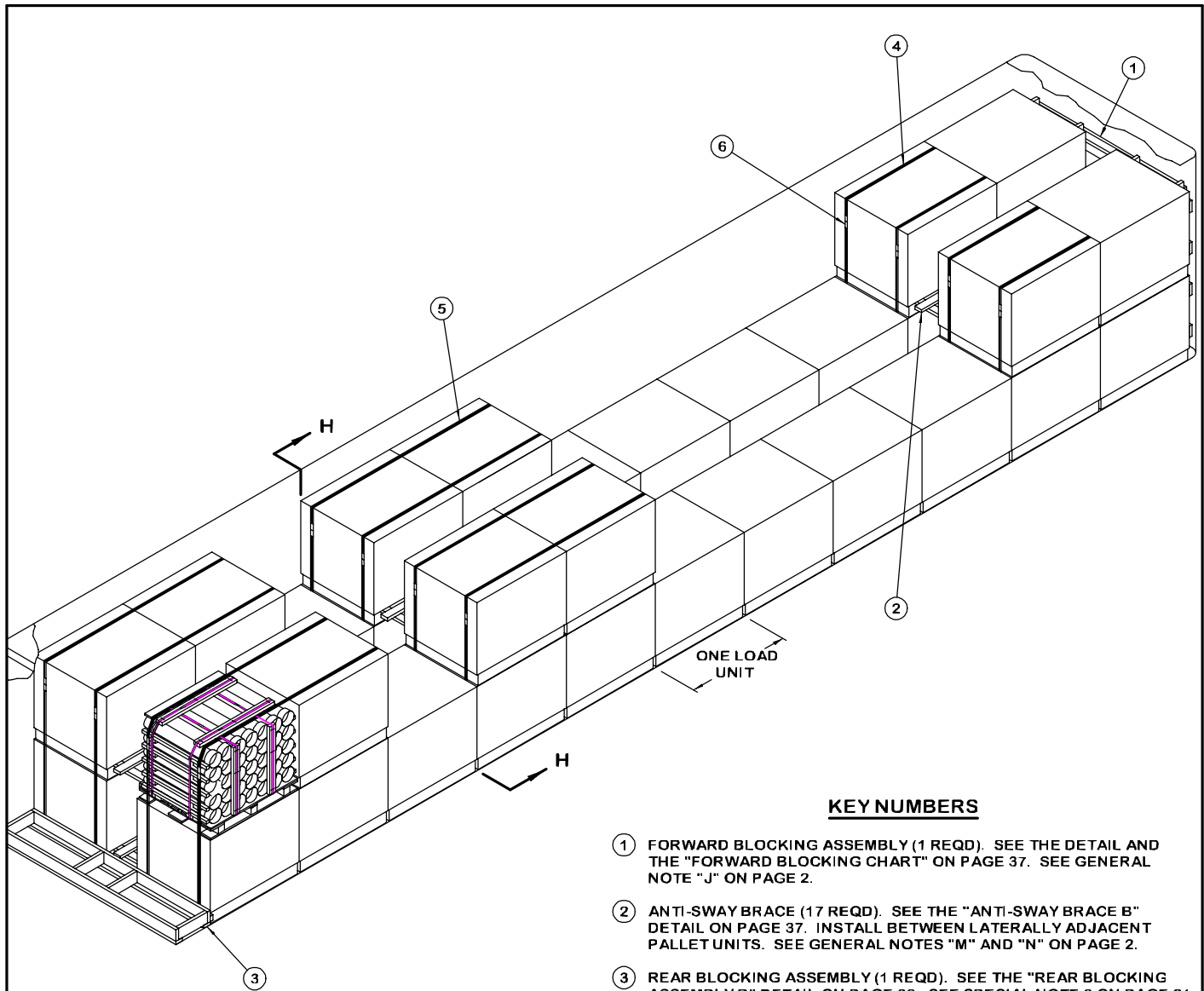
1. A 34-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 18 IS THE FLAT DUNNAGE METHOD UNIT (DECREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 40-1/2" LONG BY 49-1/2" WIDE BY 40-7/16" HIGH AND WEIGHING APPROXIMATELY 1,217 POUNDS.
3. 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 A" AS DETAILED ON PAGE 39. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY B", PIECE MARKED ③ ON PAGE 18. SEE SPECIAL NOTE 11.
4. A PALLET UNIT AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER, UNLESS THE STACKED UNITS ARE AGAINST THE FRONT WALL OF A SQUARE-FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE LOAD. THE UNITIZING STRAPS, PIECE MARKED ④, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS SHOWN, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑤, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
6. IF A PALLET UNIT IS TO BE ADDED TO OR OMITTED FROM THE DEPICTED LOAD, THE STACK CONTAINING THE ODD UNIT WILL BE UNITIZED WITH TWO STACK UNITIZING STRAPS, PIECE MARKED ④.
7. IF ONLY ONE PALLET IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW IT MUST NOT BE POSITIONED ON THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING TWO STACK UNITIZING STRAPS, PIECE MARKED ④.
8. REFER TO PAGE 35 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
9. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED SIX MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 36 FOR GUIDANCE.
10. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 32 THROUGH 34.
11. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD OF REAR BLOCKING AS DEPICTED ON PAGES 16 AND 17 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

| BILL OF MATERIAL                                      |             |            |
|---|-------------|------------|
| LUMBER  | LINEAR FEET | BOARD FEET |
| 2" X 3"   | 2           | 1          |
| 2" X 4"   | 229         | 153        |
| 2" X 6"   | 80          | 80         |
| NAILS   | NO. REQD    | POUNDS     |
| 10d (3")  | 320         | 5          |
| 1-1/4" STEEL STRAPPING - - 304' REQD - - - 43-1/2 LBS |             |            |
| SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS   |             |            |

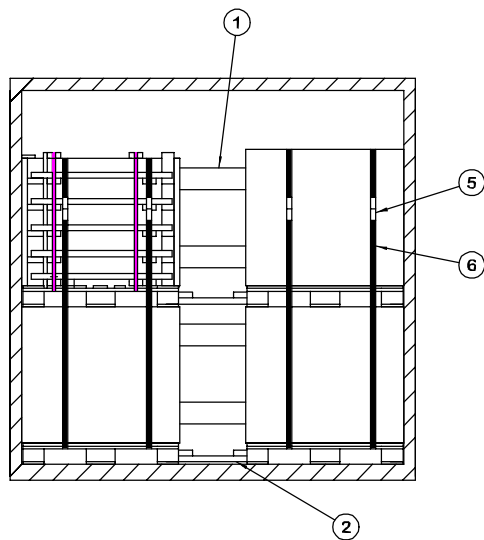
**LOAD AS SHOWN**

| ITEM                   | QUANTITY     | WEIGHT (APPROX)     |
|------------------------|--------------|---------------------|
| PALLET UNIT - - - - -  | 34 - - - - - | 41,378 LBS          |
| DUNNAGE - - - - -      | - - - - -    | 518 LBS             |
| TOTAL WEIGHT - - - - - |              | 41,896 LBS (APPROX) |

**FLAT DUNNAGE METHOD UNIT (DECREASED HEIGHT)  
34-UNIT LOAD IN A 40'-0" LONG BY 7'-8" 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 37. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (17 REQD). SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 37. 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 39. SEE SPECIAL NOTE 3 ON PAGE 21.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 22'-6" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 4 ON PAGE 21.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 31'-0" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 5 ON PAGE 21.
- ⑥ SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



**SPECIAL NOTES:**

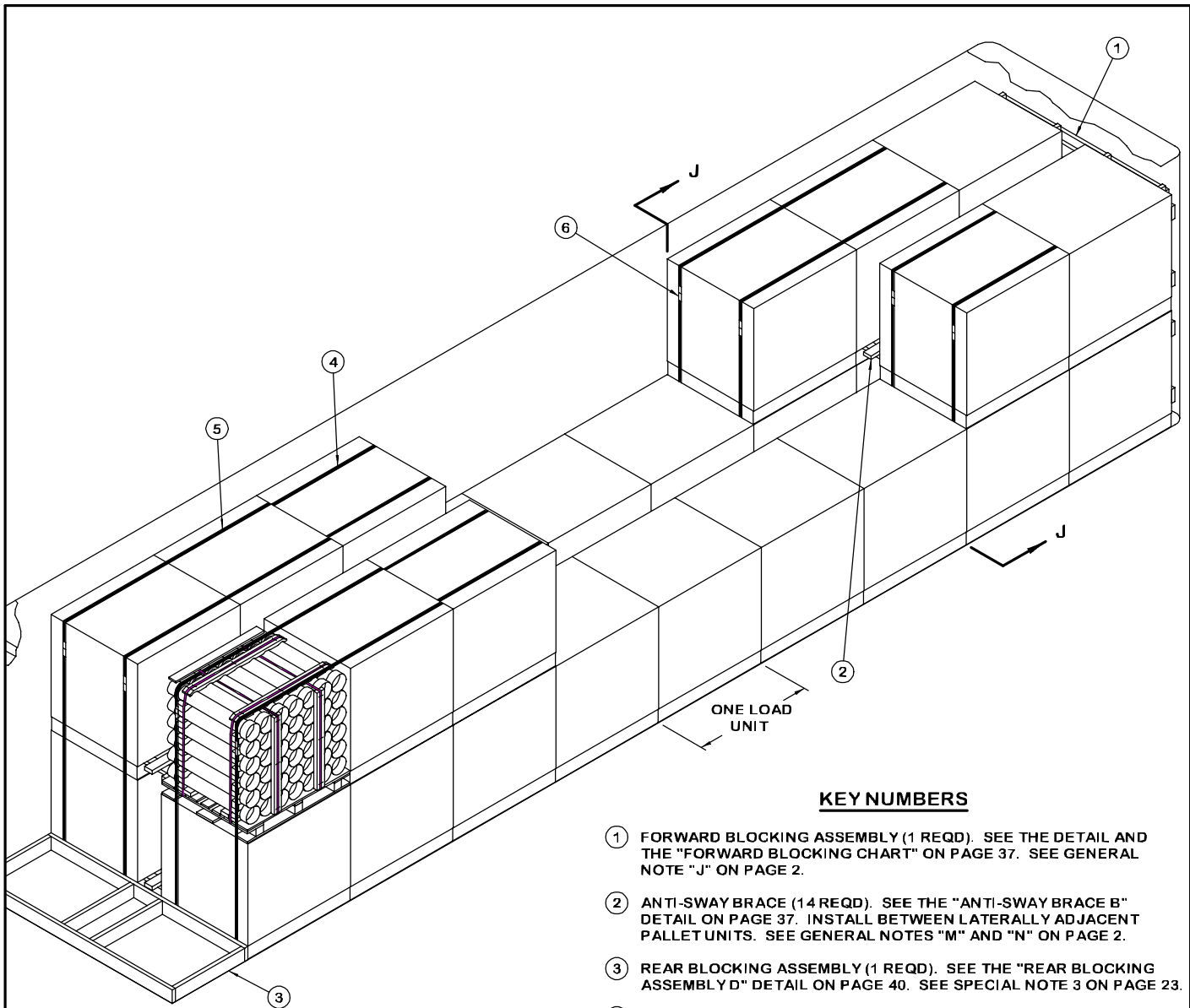
1. A 34-UNIT LOAD IS SHOWN IN A 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 20 IS THE FLAT DUNNAGE METHOD UNIT (DECREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 40-1/2" LONG BY 49-1/2" WIDE BY 40-7/16" HIGH AND WEIGHING APPROXIMATELY 1,217 POUNDS.
3. 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 A" AS DETAILED ON PAGE 39. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY B", PIECE MARKED ③ ON PAGE 20. SEE SPECIAL NOTE 11.
4. A PALLET UNIT AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER, UNLESS THE STACKED UNITS ARE AGAINST THE FRONT WALL OF A SQUARE-FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE LOAD. THE UNITIZING STRAPS, PIECE MARKED ④, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS SHOWN, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑤, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
6. IF A PALLET UNIT IS TO BE ADDED TO OR OMITTED FROM THE DEPICTED LOAD, THE STACK CONTAINING THE ODD UNIT WILL BE UNITIZED WITH TWO STACK UNITIZING STRAPS, PIECE MARKED ④.
7. IF ONLY ONE PALLET IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW IT MUST NOT BE POSITIONED ON THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING TWO STACK UNITIZING STRAPS, PIECE MARKED ④.
8. REFER TO PAGE 35 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
9. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED SIX MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 36 FOR GUIDANCE.
10. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 32 THROUGH 34.
11. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD OF REAR BLOCKING AS DEPICTED ON PAGES 16 AND 17 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

| BILL OF MATERIAL                                      |             |            |
|---|-------------|------------|
| LUMBER  | LINEAR FEET | BOARD FEET |
| 2" X 3"   | 2           | 1          |
| 2" X 4"   | 247         | 165        |
| 2" X 6"   | 84          | 84         |
| NAILS   | NO. REQD    | POUNDS     |
| 10d (3")  | 320         | 5          |
| 1-1/4" STEEL STRAPPING - - 338' REQD - - - 48-1/2 LBS |             |            |
| SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS   |             |            |

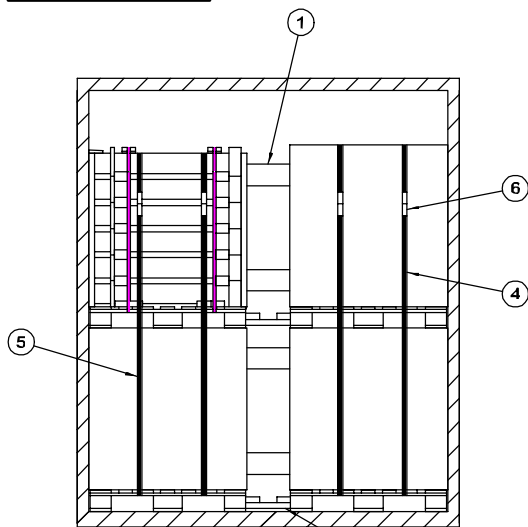
**LOAD AS SHOWN**

| ITEM                   | QUANTITY     | WEIGHT (APPROX)     |
|------------------------|--------------|---------------------|
| PALLET UNIT - - - - -  | 34 - - - - - | 41,378 LBS          |
| DUNNAGE - - - - -      | - - - - -    | 555 LBS             |
| TOTAL WEIGHT - - - - - |              | 41,933 LBS (APPROX) |

**FLAT DUNNAGE METHOD UNIT (DECREASED HEIGHT)  
34-UNIT LOAD IN A 48'-0" LONG BY 8'-2" 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 37. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (14 REQD). SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 37. 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 D" DETAIL ON PAGE 40. SEE SPECIAL NOTE 3 ON PAGE 23.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 25'-0" LONG STEEL STRAPPING (6 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 4 ON PAGE 23.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 33'-0" LONG STEEL STRAPPING (6 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 5 ON PAGE 23.
- ⑥ SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

**SPECIAL NOTES:**

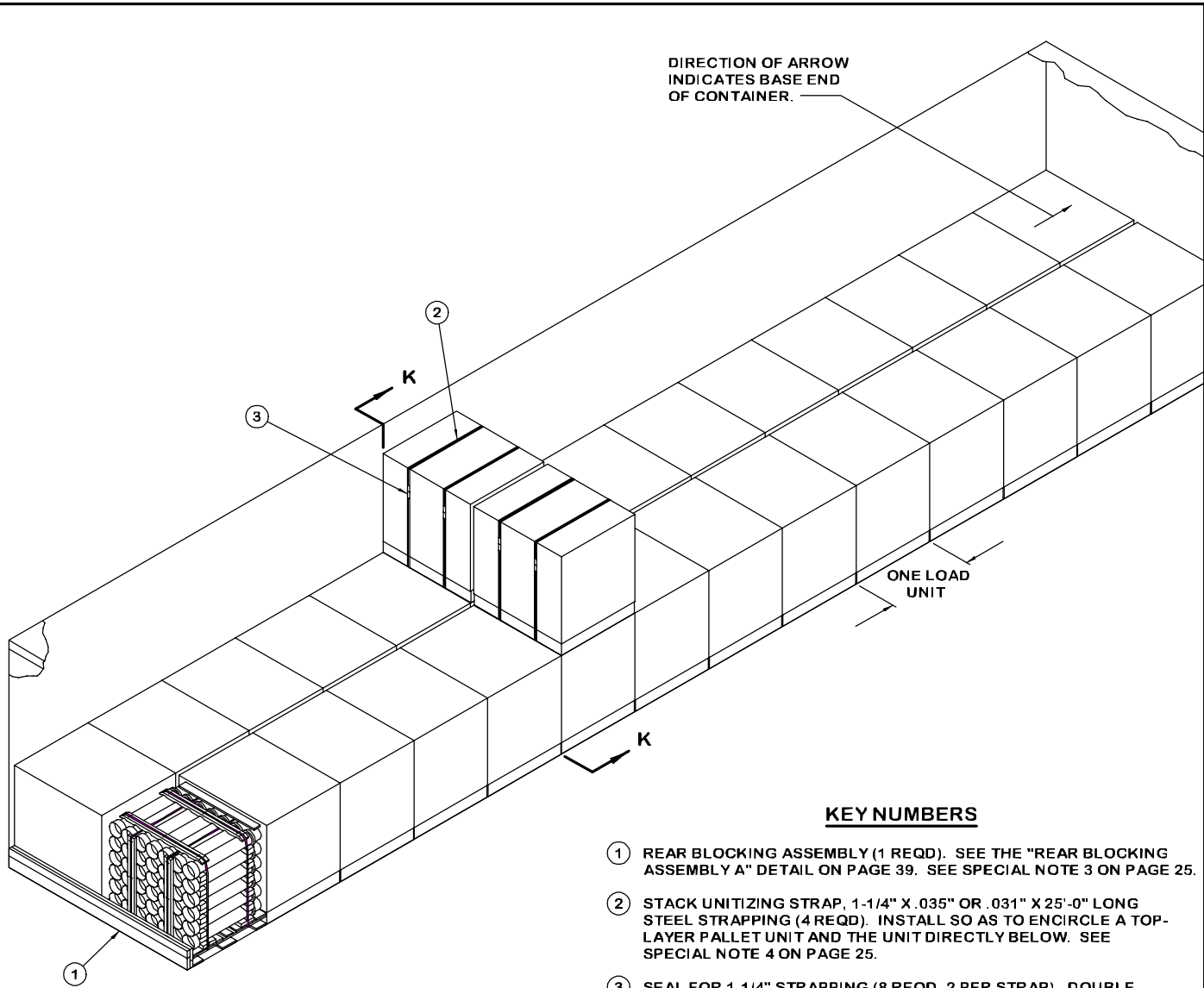
1. A 29-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) HI-VOLUME VAN TRAILER. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 22 IS THE ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 40-1/2" LONG BY 48" WIDE 47" HIGH AND WEIGHING APPROXIMATELY 1,439 POUNDS.
3. 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 A" ON PAGE 39. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY D", PIECE MARKED ③ ON PAGE 22. SEE SPECIAL NOTE 12.
4. A PALLET UNIT AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER, UNLESS THE STACKED UNITS ARE AGAINST THE FRONT WALL OF A SQUARE-FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE LOAD. THE UNITIZING STRAPS, PIECE MARKED ④, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS SHOWN, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑤, 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 ON THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, PIECE MARKED ④.
7. REFER TO PAGE 35 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED SIX, MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 36 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO PAGES 32 THROUGH 34 FOR GUIDANCE.
10. FOR TRAILERS 8'-2" WIDE OR GREATER, SEE THE LOAD ON PAGE 24 FOR GUIDANCE.
11. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 7'-11", 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, FOUR BUNDLING STRAPS, PIECE MARKED ⑤, WILL NOT BE REQUIRED. STACK UNITIZING STRAPS, PIECE MARKED ④, WILL THEN BE INSTALLED TO SECURE EACH PALLET STACK AT EACH END OF THAT PORTION OF THE LOAD.
12. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD OF REAR BLOCKING AS DEPICTED ON PAGES 16 AND 17 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

| BILL OF MATERIAL                                      |             |            |
|---|-------------|------------|
| LUMBER  | LINEAR FEET | BOARD FEET |
| 2" X 3"   | 2           | 1          |
| 2" X 4"   | 182         | 122        |
| 2" X 6"   | 84          | 84         |
| NAILS   | NO. REQD    | POUNDS     |
| 10d (3")  | 262         | 4          |
| 1-1/4" STEEL STRAPPING - - 348' REQD - - - 49-3/4 LBS |             |            |
| SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS   |             |            |

**LOAD AS SHOWN**

| ITEM                   | QUANTITY     | WEIGHT (APPROX)     |
|------------------------|--------------|---------------------|
| PALLET UNIT - - - - -  | 29 - - - - - | 41,731 LBS          |
| DUNNAGE - - - - -      | - - - - -    | 469 LBS             |
| TOTAL WEIGHT - - - - - |              | 42,200 LBS (APPROX) |

**ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT)  
29-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE HI-VOLUME VAN TRAILER**

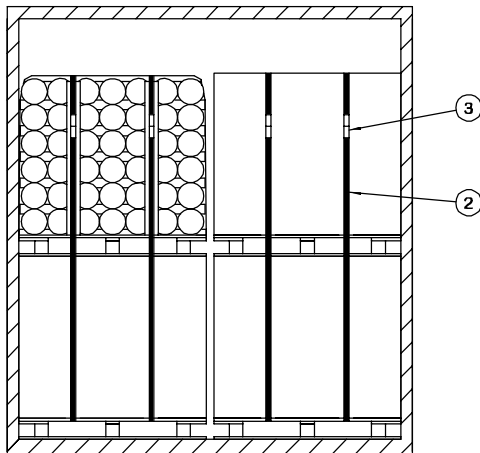


DIRECTION OF ARROW  
INDICATES BASE END  
OF CONTAINER.

**KEY NUMBERS**

- ① REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 39. SEE SPECIAL NOTE 3 ON PAGE 25.
- ② STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 25'-0" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 4 ON PAGE 25.
- ③ SEAL FOR 1-1/4" STRAPPING (8 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

**ISOMETRIC VIEW**



**SECTION K-K**

**ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT)  
30-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE HI-VOLUME VAN TRAILER**

**SPECIAL NOTES:**

1. A 29-UNIT LOAD IS SHOWN IN A 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) HI-VOLUME VAN TRAILER. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 24 IS THE ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 40'-1/2" LONG BY 48" WIDE 47" HIGH AND WEIGHING APPROXIMATELY 1,439 POUNDS.
3. 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 A", PIECE MARKED ① ON PAGE 24. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY D", ON PAGE 40. SEE SPECIAL NOTE 12.
4. A PALLET UNIT AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER, UNLESS THE STACKED UNITS ARE AGAINST THE FRONT WALL OF A SQUARE-FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE LOAD. THE UNITIZING STRAPS, PIECE MARKED ②, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑤ 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 ON THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, PIECE MARKED ②.
7. REFER TO PAGE 35 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED SIX, MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 36 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO PAGES 32 THROUGH 34 FOR GUIDANCE.
10. FOR TRAILERS LESS THAN 8'-2" WIDE, SEE THE LOAD ON PAGE 22 FOR GUIDANCE.
11. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 7'-11", IT WILL BE NECESSARY TO LIMIT THE REARMOST LOAD UNIT TO ONE PALLET UNIT IN HEIGHT.
12. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD OF REAR BLOCKING AS DEPICTED ON PAGES 16 AND 17 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

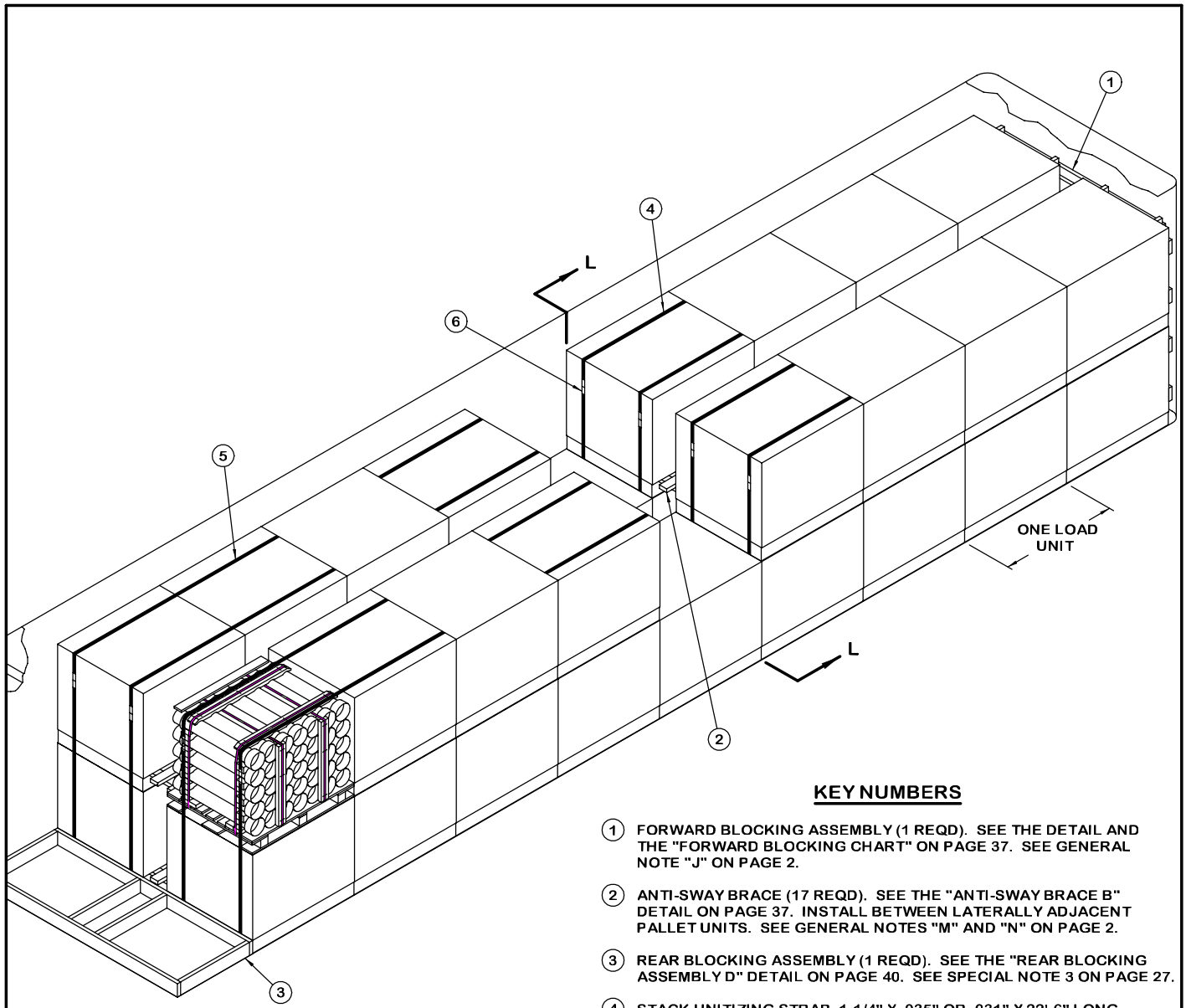
**BILL OF MATERIAL**

| LUMBER  | LINEAR FEET | BOARD FEET |
|---|-------------|------------|
| 2" x 4"   | 17          | 12         |
| 2" x 6"   | 17          | 17         |
| NAILS   | NO. REQD    | POUNDS     |
| 10d (3")  | 18          | 1/2        |
| 1-1/4" STEEL STRAPPING - - 47' REQD - - - 6-3/4 LBS |             |            |
| SEAL FOR 1-1/4" STRAPPING - 8 REQD - - - 1/2 LB     |             |            |

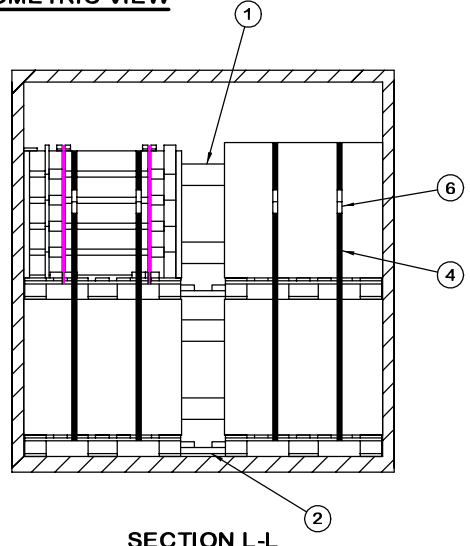
**LOAD AS SHOWN**

| ITEM                   | QUANTITY     | WEIGHT (APPROX)     |
|------------------------|--------------|---------------------|
| PALLET UNIT - - - - -  | 30 - - - - - | 43,170 LBS          |
| DUNNAGE - - - - -      | - - - - -    | 66 LBS              |
| TOTAL WEIGHT - - - - - |              | 43,236 LBS (APPROX) |

**ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT)  
30-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE HI-VOLUME VAN TRAILER**



**ISOMETRIC VIEW**



**SECTION L-L**

**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 37. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (17 REQD). SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 37. 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 D" DETAIL ON PAGE 40. SEE SPECIAL NOTE 3 ON PAGE 27.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 22'-6" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 4 ON PAGE 27.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 30'-6" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 5 ON PAGE 27.
- ⑥ SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

**SPECIAL NOTES:**

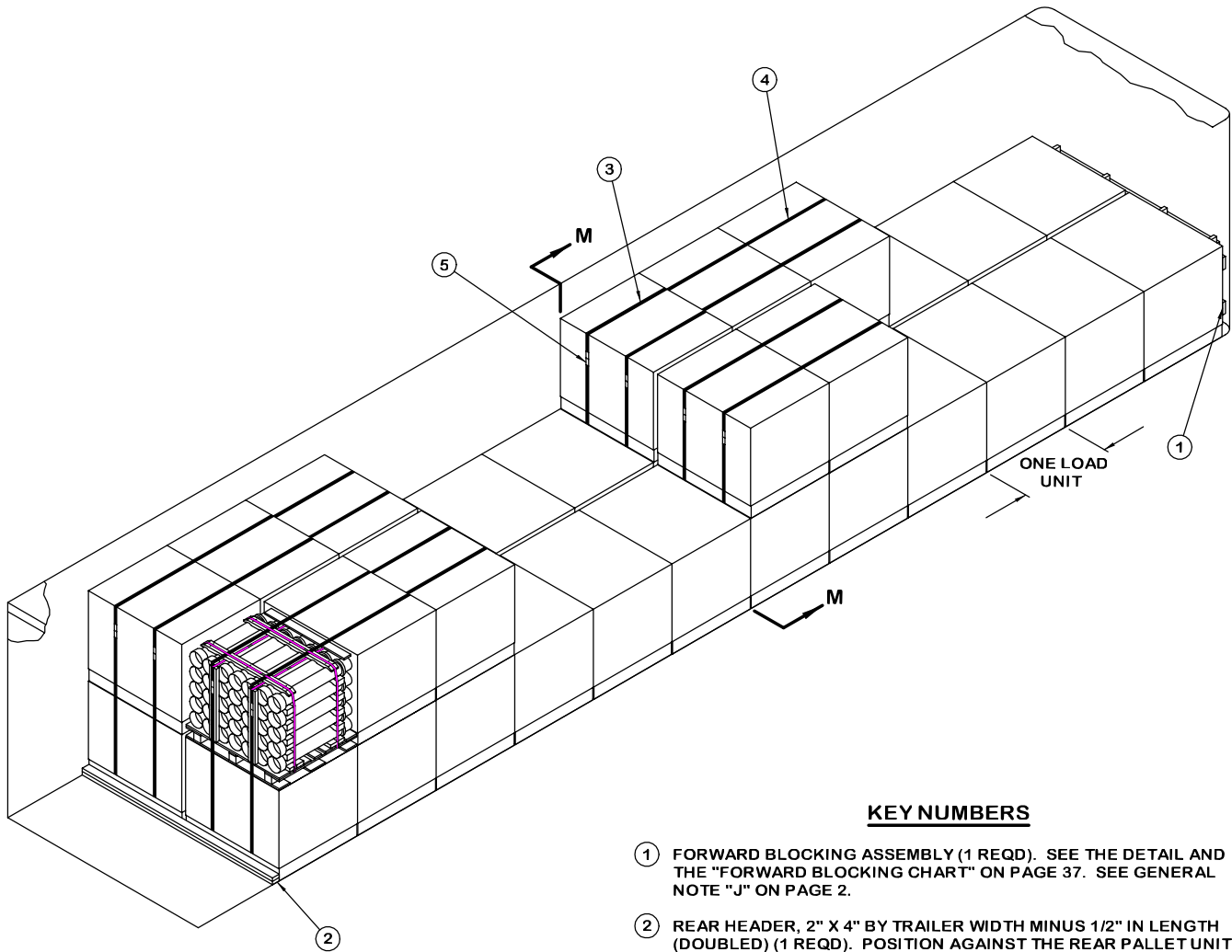
1. A 34-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED FRONT CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 26 IS THE ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 40-1/2" LONG BY 48" SIDE BY 40-1/4" HIGH AND WEIGHING APPROXIMATELY 1,216 POUNDS.
3. 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 A" AS DETAILED ON PAGE 39. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY D", PIECE MARKED ③ ON PAGE 26. SEE SPECIAL NOTE 11.
4. A PALLET UNIT AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER, UNLESS THE STACKED UNITS ARE AGAINST THE FRONT WALL OF A SQUARE-FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE LOAD. THE UNITIZING STRAPS, PIECE MARKED ④, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS SHOWN, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑤, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
6. IF A PALLET UNIT IS TO BE ADDED TO OR OMITTED FROM THE DEPICTED LOAD, THE STACK CONTAINING THE ODD UNIT WILL BE SECURED WITH TWO STACK UNITIZING STRAPS, PIECE MARKED ④.
7. IF ONLY ONE PALLET IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW IT MUST NOT BE POSITIONED ON THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING TWO STACK UNITIZING STRAPS, PIECE MARKED ④.
8. REFER TO PAGE 35 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
9. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED SIX MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 36 FOR GUIDANCE.
10. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 32 THROUGH 34.
11. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD OF REAR BLOCKING AS DEPICTED ON PAGES 16 AND 17 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

| BILL OF MATERIAL                                      |             |            |
|---|-------------|------------|
| LUMBER  | LINEAR FEET | BOARD FEET |
| 2" X 3"   | 2           | 1          |
| 2" X 4"   | 210         | 140        |
| 2" X 6"   | 84          | 84         |
| NAILS   | NO. REQD    | POUNDS     |
| 10d (3")  | 298         | 4-3/4      |
| 1-1/4" STEEL STRAPPING - - 302' REQD - - - 43-1/4 LBS |             |            |
| SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/2 LBS   |             |            |

**LOAD AS SHOWN**

| ITEM                   | QUANTITY     | WEIGHT (APPROX)     |
|------------------------|--------------|---------------------|
| PALLET UNIT - - - - -  | 34 - - - - - | 41,344 LBS          |
| DUNNAGE - - - - -      | - - - - -    | 500 LBS             |
| TOTAL WEIGHT - - - - - |              | 41,844 LBS (APPROX) |

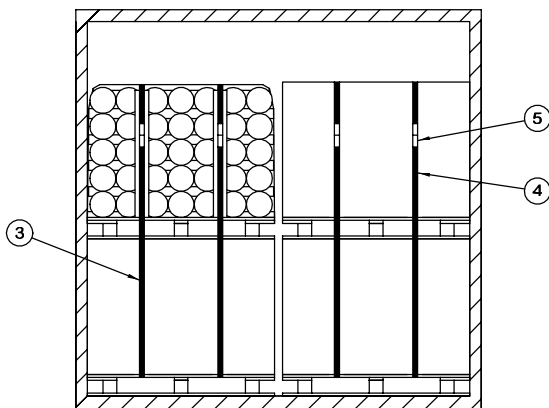
**ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT)  
34-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER**



**ISOMETRIC VIEW**

**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 37. SEE GENERAL NOTE "J" ON PAGE 2.
- ② REAR HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (DOUBLED) (1 REQD). POSITION AGAINST THE REAR PALLET UNITS. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/18-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. FOR OTHER LOAD WEIGHTS, SEE THE NAILING CHART ON PAGE 17.
- ③ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 22'-6" LONG STEEL STRAPPING (6 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 3 ON PAGE 29.
- ④ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 30'-6" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 5 ON PAGE 29.
- ⑤ SEAL FOR 1-1/4" STRAPPING (28 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



**SECTION M-M**

**ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT)  
35-UNIT LOAD IN A 45'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER**



**SPECIAL NOTES:**

1. A 35-UNIT LOAD IS SHOWN IN A 45'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED FRONT CORNERS AND NAILABLE FLOORS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 28 IS THE ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 40-1/2" LONG BY 48" SIDE BY 40-1/4" HIGH AND WEIGHING APPROXIMATELY 1,216 POUNDS.
3. 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 A" AS DETAILED ON PAGE 39. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY D", PIECE MARKED (3) ON PAGE 26, IN TRAILERS WITH NON-NAILABLE FLOORS OR IF DESIRED. SEE SPECIAL NOTE 11.
4. A PALLET UNIT AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER, UNLESS THE STACKED UNITS ARE AGAINST THE FRONT WALL OF A SQUARE-FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE LOAD. THE UNITIZING STRAPS, PIECE MARKED (3), MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS SHOWN, BUNDLING STRAPS, SHOWN AS PIECE MARKED (4), MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
6. IF A PALLET UNIT IS TO BE ADDED TO OR OMITTED FROM THE DEPICTED LOAD, THE STACK CONTAINING THE ODD UNIT WILL BE SECURED WITH TWO STACK UNITIZING STRAPS, PIECE MARKED (3), OR WITH BUNDLING STRAPS, PIECE MARKED (4), AS SHOWN.
7. IF ONLY ONE PALLET IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW IT MUST NOT BE POSITIONED ON THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING TWO STACK UNITIZING STRAPS, PIECE MARKED (3).
8. REFER TO PAGE 35 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
9. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED SIX MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 36 FOR GUIDANCE.
10. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 32 THROUGH 34.
11. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, THE NAILED-HEADER METHOD OF REAR BLOCKING AS SHOWN MUST BE USED. SEE THE NAILING CHARTS ON PAGE 17 FOR GUIDANCE. A REAR BLOCKING ASSEMBLY, AS SHOWN ON PAGE 16, WILL NOT BE NECESSARY.

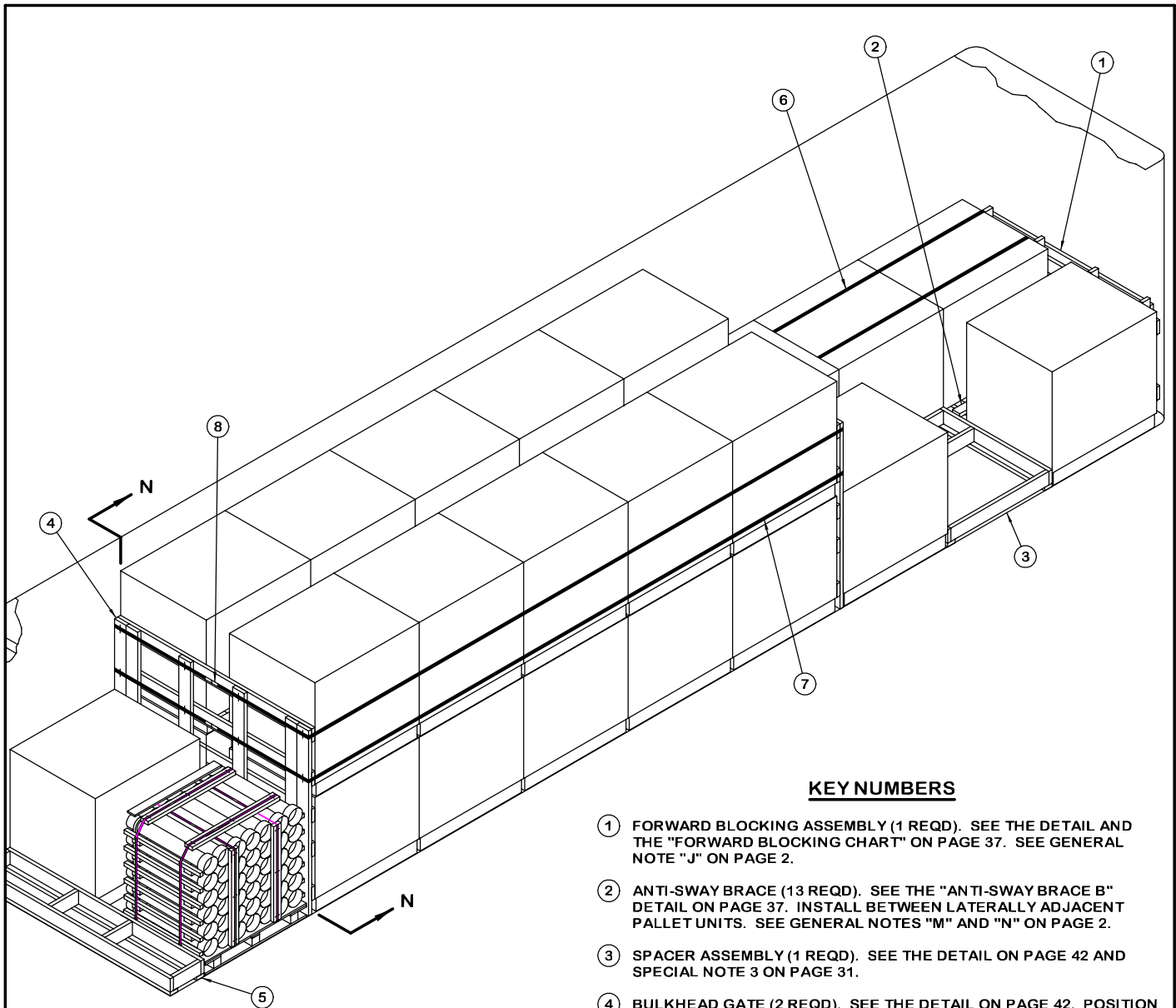
**BILL OF MATERIAL**

| LUMBER  | LINEAR FEET | BOARD FEET |
|---|-------------|------------|
| 2" X 4"   | 30          | 20         |
| 2" X 6"   | 31          | 31         |
| NAILS   | NO. REQD    | POUNDS     |
| 10d (3")  | 68          | 1-1/4      |
| 1-1/4" STEEL STRAPPING - - 379' REQD - - - 54-1/4 LBS |             |            |
| SEAL FOR 1-1/4" STRAPPING - 28 REQD - - - 1-1/2 LBS   |             |            |

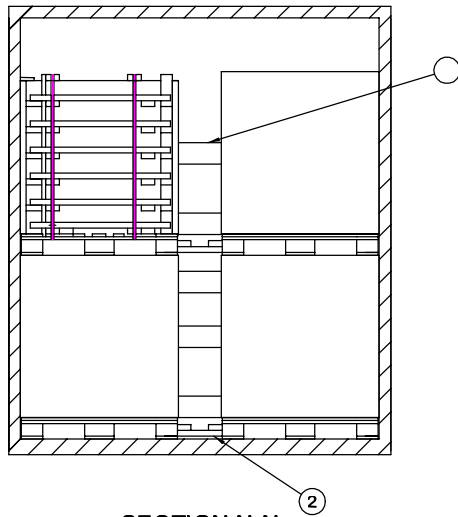
**LOAD AS SHOWN**

| ITEM                   | QUANTITY     | WEIGHT (APPROX)     |
|------------------------|--------------|---------------------|
| PALLET UNIT - - - - -  | 35 - - - - - | 42,560 LBS          |
| DUNNAGE - - - - -      | - - - - -    | 159 LBS             |
| <hr/>                  |              |                     |
| TOTAL WEIGHT - - - - - |              | 42,719 LBS (APPROX) |

**ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT)  
35-UNIT LOAD IN A 45'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER**



**ISOMETRIC VIEW**



**SECTION N-N**

**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 37. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (13 REQD). SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 37. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE GENERAL NOTES "M" AND "N" ON PAGE 2.
- ③ SPACER ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 42 AND SPECIAL NOTE 3 ON PAGE 31.
- ④ BULKHEAD GATE (2 REQD). SEE THE DETAIL ON PAGE 42. POSITION WITH THE HORIZONTAL PIECES AGAINST THE 2-HIGH PORTION OF THE LOAD.
- ⑤ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 38 AND SPECIAL NOTE 4 ON PAGE 31.
- ⑥ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 25'-6" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNITS AS SHOWN. SEE SPECIAL NOTE 5 ON PAGE 31.
- ⑦ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 60'-0" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE TEN PALLET UNIT STACKS AND THE BULKHEAD GATES, PIECE MARKED ④, AS SHOWN. STAPLE TO THE BULKHEAD GATE ASSEMBLY W/4 STAPLES. SEE SPECIAL NOTE 6 ON PAGE 31.
- ⑧ SEAL FOR 1-1/4" STRAPPING (8 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

**SPECIAL NOTES:**

1. A 27-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER. TRAILERS OF OTHER DIMENSIONS MAY BE USED. SEE SPECIAL NOTE 10.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 30 IS THE FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 40-1/2" LONG BY 49-1/2" WIDE BY 47-1/8" HIGH AND WEIGHING APPROXIMATELY 1,439 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER UNITS DEPICTED ON PAGES 4 AND 5.
3. THE SPACER ASSEMBLY, PIECE MARKED ③, IS SHOWN ONLY TO DEPICT A TYPICAL INSTALLATION. IF DESIRED, A PALLET UNIT MAY BE LOADED IN THE PLACE OF A SPACER. NOTE THAT A SPACER ASSEMBLY SHOULD NOT BE LOCATED NEXT TO EITHER THE FORWARD BLOCKING ASSEMBLY OR A BULKHEAD GATE, PIECES MARKED ① AND ⑤, RESPECTIVELY.
4. 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 A" AS DETAILED ON PAGE 39. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY B", PIECE MARKED ⑤ ON PAGE 30, IF THE ALTERNATED CONTAINERS UNITS OR THE FLAT DUNNAGE METHOD UNITS ARE BEING LOADED. IF THE ROUTED DUNNAGE METHOD UNITS ARE BEING LOADED, USE THE "REAR BLOCKING ASSEMBLY D" AS DETAILED ON PAGE 40. SEE SPECIAL NOTE 9.
5. A PALLET THAT DOES NOT HAVE A PALLET UNIT DIRECTLY OPPOSITE MUST BE SECURED BY INSTALLING BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑥ IN THE LOAD ON PAGE 30, AROUND THAT PALLET UNIT AND THE PALLET UNIT IMMEDIATELY ADJACENT. NOTE THAT ONLY ONE BUNDLING STRAP IS REQUIRED WHEN LOADING THE DECREASED HEIGHT FLAT DUNNAGE OR ROUTED DUNNAGE METHOD UNITS OR WHEN LOADING THE ALTERNATED CONTAINERS UNITS. NOTE THAT A PALLET UNIT WILL NOT BE OMITTED FROM THE SECOND LAYER PORTION OF THE LOAD.
6. THE SECOND LAYER PORTION OF THE LOAD IS LIMITED TO NOT MORE THAN 14 BASIC HEIGHT ALTERNATED CONTAINERS UNITS OR 12 BASIC HEIGHT FLAT AND/OR ROUTED DUNNAGE METHOD UNITS. 12 INCREASED HEIGHT ALTERNATED CONTAINERS UNITS OR 16 DECREASED HEIGHT FLAT AND/OR ROUTED DUNNAGE METHOD UNITS MAY BE LOADED IN THE SECOND LAYER WHEN USING TWO BUNDLING STRAPS, PIECE MARKED ⑦. ONLY ONE BUNDLING STRAP, PIECE MARKED ⑦, WILL BE REQUIRED IF THE SECOND LAYER CONSISTS OF NOT MORE THAN SIX BASIC HEIGHT OR INCREASED HEIGHT ALTERNATED CONTAINERS UNITS OR SIX BASIC HEIGHT FLAT AND/OR ROUTED DUNNAGE METHOD UNITS. EIGHT DECREASED HEIGHT FLAT AND/OR ROUTED DUNNAGE METHOD UNITS CAN BE LOADED WHEN USING ONLY ONE BUNDLING STRAP.
7. REFER TO PAGE 35 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED SEVEN CONTAINERS FOR THE ALTERNATED CONTAINERS UNIT METHOD OR NOT TO EXCEED SIX CONTAINERS FOR THE FLAT AND/OR ROUTED DUNNAGE METHOD UNITS MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 36 FOR GUIDANCE.
9. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD OF REAR BLOCKING AS DEPICTED ON PAGES 16 AND 17 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
10. HI-VOLUME TRAILERS WILL BE REQUIRED WHEN SHIPPING A TWO-LAYER LOAD OF THE BASIC HEIGHT FLAT AND/OR ROUTED DUNNAGE METHOD UNITS.

**BILL OF MATERIAL**

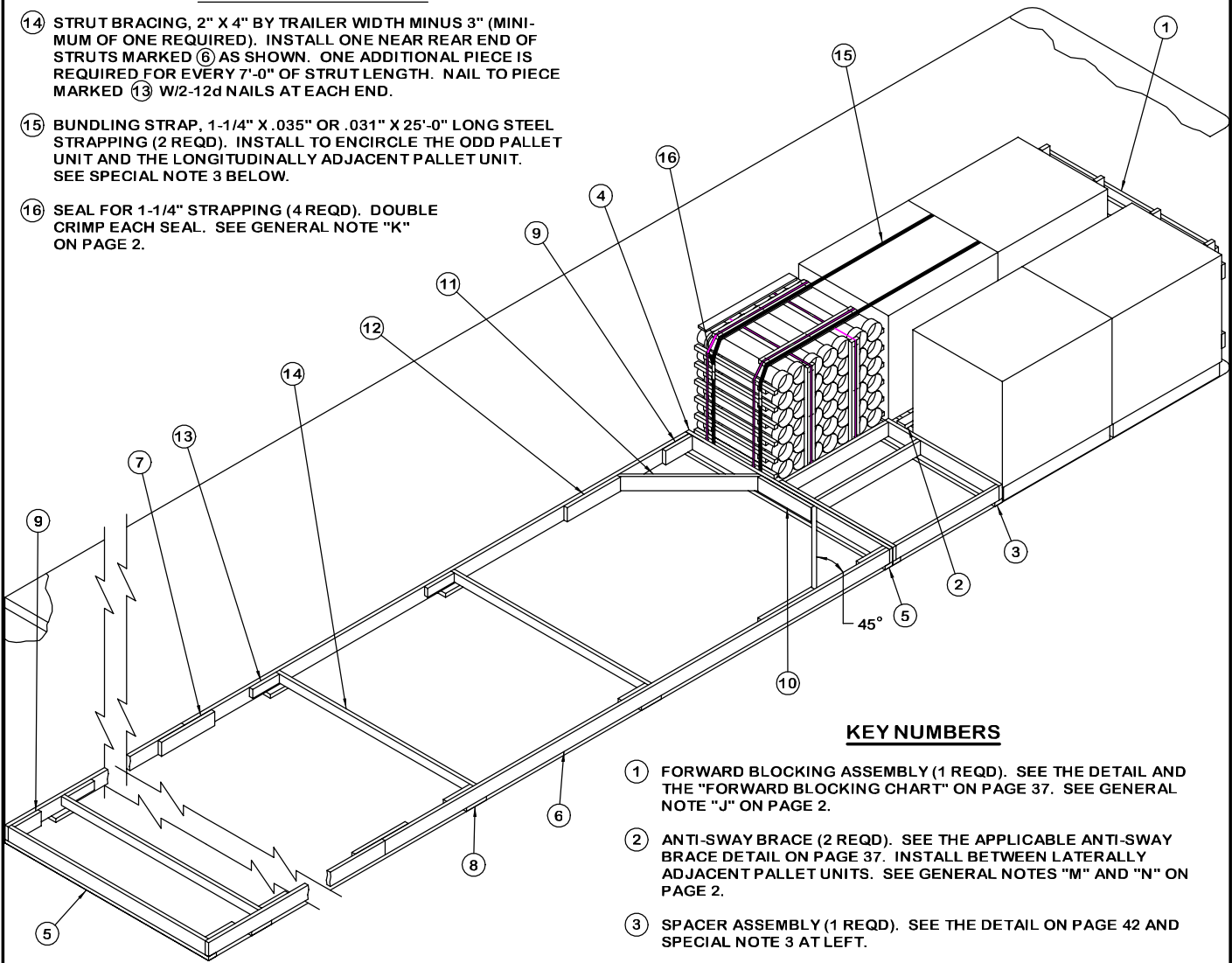
| LUMBER  | LINEAR FEET | BOARD FEET |
|---|-------------|------------|
| 2" X 3"   | 2           | 1          |
| 2" X 4"   | 183         | 122        |
| 2" X 6"   | 224         | 224        |
| NAILS   | NO. REQD    | POUNDS     |
| 10d (3")  | 458         | 7          |
| 1-1/4" STEEL STRAPPING - - 171' REQD - - - 24-1/2 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 - - - - -  | 27 - - - - - | 38,853 LBS          |
| DUNNAGE - - - - -      | - - - - -    | 726 LBS             |
| TOTAL WEIGHT - - - - - |              | 39,579 LBS (APPROX) |

(SPECIAL NOTES CONTINUED)

- ⑭ STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 3" (MINIMUM OF ONE REQUIRED). INSTALL ONE NEAR REAR END OF STRUTS MARKED ⑥ AS SHOWN. ONE ADDITIONAL PIECE IS REQUIRED FOR EVERY 7'-0" OF STRUT LENGTH. NAIL TO PIECE MARKED ⑬ W/2-12d NAILS AT EACH END.
- ⑮ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 25'-0" LONG STEEL STRAPPING (2 REQD). INSTALL TO ENCIRCLE THE ODD PALLET UNIT AND THE LONGITUDINALLY ADJACENT PALLET UNIT. SEE SPECIAL NOTE 3 BELOW.
- ⑯ SEAL FOR 1-1/4" STRAPPING (4 REQD). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



**ISOMETRIC VIEW**

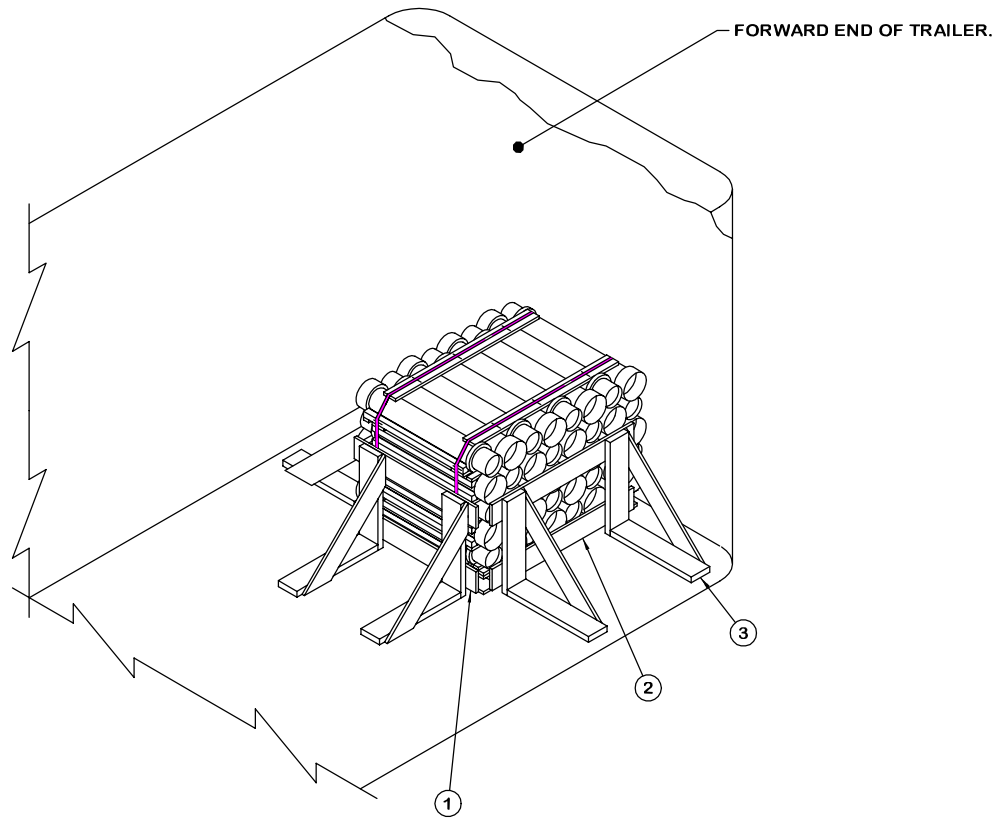
**SPECIAL NOTES:**

1. A 5-UNIT LOAD IS SHOWN. THESE OUTLOADING PROCEDURES DEPICT THE USE OF "K-BRACE" TYPE BLOCKING AND COVER "NAILED-FLOORLINE" BLOCKING IN A 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH IS EQUIPPED WITH OR WITHOUT A NAILABLE FLOOR. WIDER OR NARROWER TRAILERS CAN BE USED. SEE SPECIAL NOTE 5.
2. THE PALLET UNIT SHOWN IS THE FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT). THE PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER UNITS DEPICTED ON PAGES 4 AND 5. NOTE THAT WHEN LOADING THE ROUTED DUNNAGE METHOD UNITS, THE RISER PIECES, PIECE MARKED ⑧, MAY BE OMITTED.
3. THE SPACER ASSEMBLY, PIECE MARKED ③, IS ONLY REQUIRED WHEN SHIPPING AN UNEVEN NUMBER OF PALLET UNITS. THE BUNDLING STRAPS, PIECE MARKED ⑮, ARE ONLY REQUIRED WHEN THE ODD PALLET IS EITHER A FLAT DUNNAGE OR ROUTED DUNNAGE METHOD BASIC HEIGHT UNIT.
4. WHEN LOADING THE ROUTED DUNNAGE METHOD UNITS, THE HEADER AND SIDE STRUT SUPPORT PIECES AND RISER PIECES, PIECES MARKED ⑤ AND ⑧, RESPECTIVELY, WILL NOT BE REQUIRED.
5. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD OF REAR BLOCKING AS DEPICTED ON PAGES 16 AND 17 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS, AND MAY BE USED IN LIEU OF PIECES MARKED ④ THROUGH ⑭ WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS.

**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 37. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (2 REQD). SEE THE APPLICABLE ANTI-SWAY BRACE DETAIL ON PAGE 37. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE GENERAL NOTES "M" AND "N" ON PAGE 2.
- ③ SPACER ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 42 AND SPECIAL NOTE 3 AT LEFT.
- ④ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD). POSITION ON EDGE.
- ⑤ HEADER AND SIDE STRUT SUPPORT PIECE, 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 12". SEE SPECIAL NOTE 4 AT LEFT.
- ⑥ SIDE STRUT, 2" X 6" BY CUT-TO-FIT BETWEEN THE HEADERS, PIECE MARKED ④ (2 REQD).
- ⑦ SPLICE PIECE, 2" X 6" X 24" (AS REQD). CENTER OF A JOINT OF PIECES MARKED ⑥ AND NAIL W/4-10d NAILS AT EACH END.
- ⑧ RISER PIECE, 2" X 4" X 9" (AS REQD). NAIL TO THE BOTTOM EDGE OF PIECE MARKED ⑥ W/2-10d NAILS.
- ⑨ POCKET CLEAT, 2" X 6" X 12" (4 REQD). NAIL TO PIECE MARKED ⑥ W/3-10d NAILS. TOENAIL TO THE ADJACENT PIECE MARKED ④ W/3-12d NAILS.
- ⑩ CENTER CLEAT, 2" X 6" X 24" (1 REQD). NAIL TO THE HEADER, PIECE MARKED ④, 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 MARKED ④ AND STRUT MARKED ⑥ W/2-16d NAILS AT EACH END.
- ⑫ SIDE CLEAT, 2" X 6" X 24" (2 REQD). NAIL TO PIECE MARKED ⑥ W/8-10d NAILS.
- ⑬ STRUT BRACING SUPPORT PIECE, 2" X 4" X 12" (AS REQD). NAIL TO SIDE STRUT, PIECE MARKED ⑥, W/3-10d NAILS.

(CONTINUED ABOVE LEFT)



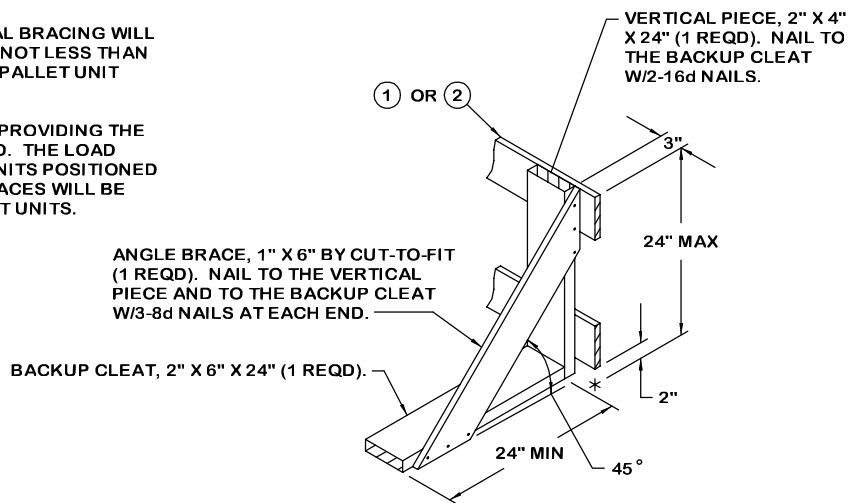
**ISOMETRIC VIEW**

**SPECIAL NOTES:**

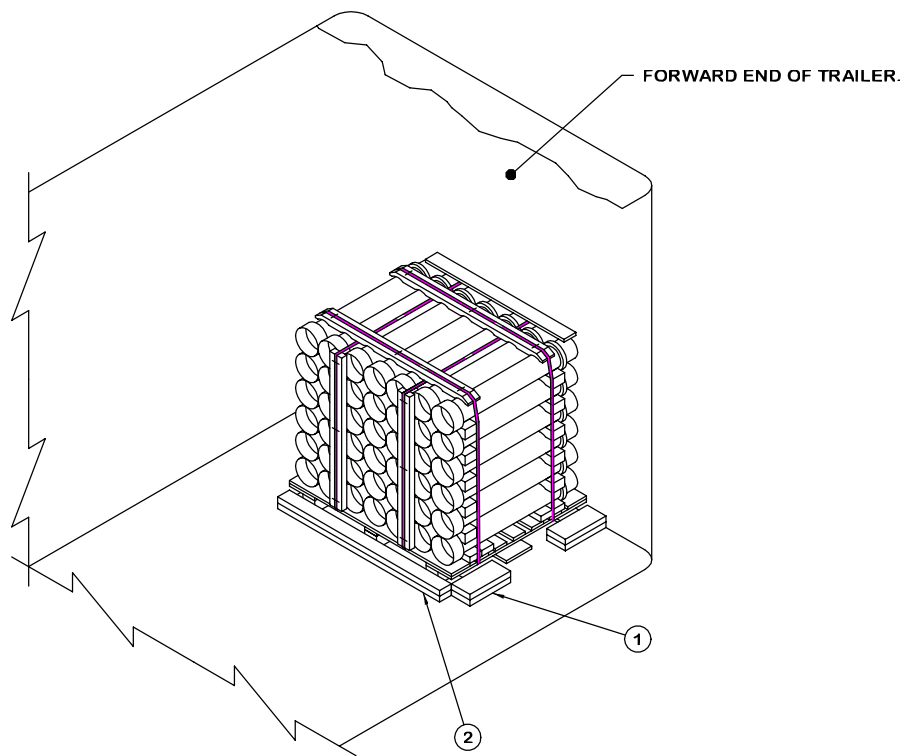
1. A 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER WHICH HAS A NAILABLE FLOOR IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
2. THE PALLET UNIT SHOWN IS THE ALTERNATED CONTAINERS UNIT (BASIC HEIGHT). HAVING OVERALL DIMENSIONS OF 37-1/2" LONG BY 49-1/2" WIDE BY 36" HIGH AND WEIGHING APPROXIMATELY 1,306 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER UNITS ON PAGES 4 AND 5.
3. THE POSITIONING OF A UNIT IS OPTIONAL. IF THE TRAILER BEING USED HAS A SQUARE FRONT, THE PALLET UNIT MAY BE LOCATED IN THE CORNER OF THE TRAILER AND TWO LESS LTL BRACES WILL BE USED.
4. EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS OF LADING; HOWEVER, NOT LESS THAN TWO LTL 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 BRACES 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.

**KEY NUMBERS**

- ① LOAD BEARING PIECE, 1" X 6" X 36" (2 REQD). LOCATE AT THE HEIGHTS AS SPECIFIED IN THE "LTL BRACE" DETAIL BELOW. NAIL TO THE LTL BRACES W/4-6d NAILS AT EACH JOINT. SEE GENERAL NOTE "M" ON PAGE 2.
- ② LOAD BEARING PIECE, 1" X 6" X 42" (4 REQD). LOCATE AT THE HEIGHTS AS SPECIFIED IN THE "LTL BRACE" DETAIL BELOW. NAIL TO THE LTL BRACES W/4-6d NAILS AT EACH JOINT.
- ③ LTL BRACE (6 REQD). SEE THE "LTL BRACE" DETAIL BELOW. NAIL TO THE TRAILER FLOOR W/7-10d NAILS. SEE SPECIAL NOTE 4 AT LEFT.



**LTL BRACE**



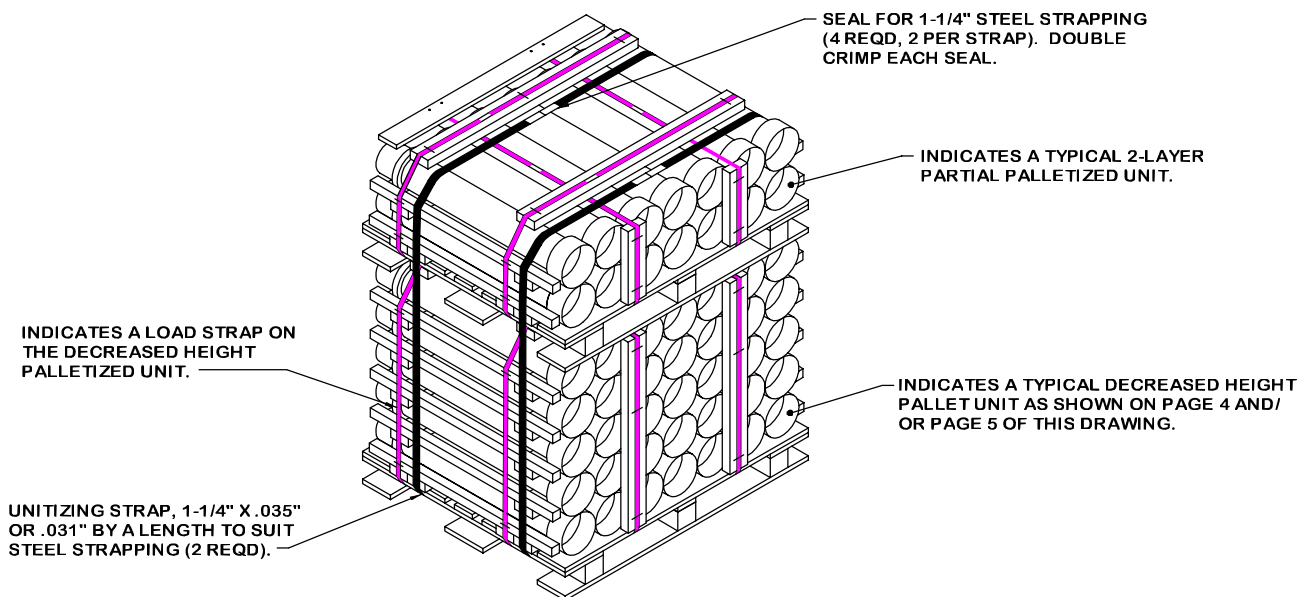
**ISOMETRIC VIEW**

**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 (BASIC HEIGHT), HAVING OVERALL DIMENSIONS OF 40-1/2" LONG BY 48" WIDE BY 47" HIGH AND WEIGHING APPROXIMATELY 1,439 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 OTHER QUANTITY LTL LOADS USING THE NAILED HEADER METHOD, REFER TO THE NAILING CHARTS ON PAGE 17 FOR GUIDANCE.

**KEY NUMBERS**

- ① SIDE BLOCKING, 2" X 6" 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/3-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST W/3-20d NAILS.



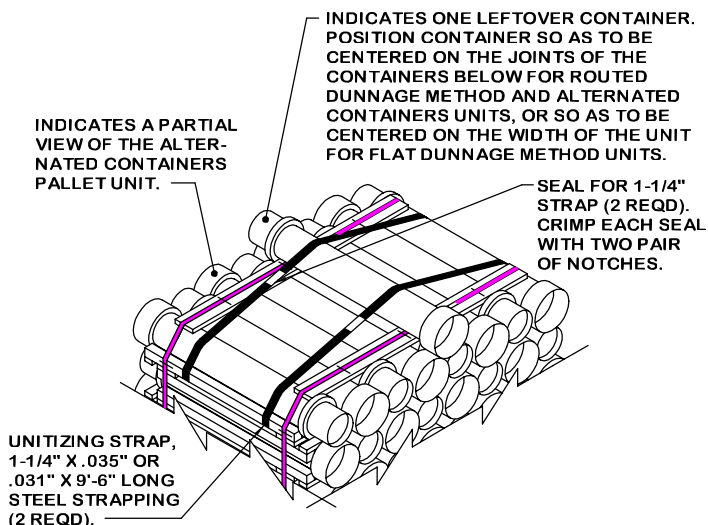
**SECUREMENT OF A PARTIAL PALLET UNIT ON TOP OF A FULL PALLET UNIT**

**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 SHOULD 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. THE PROCEDURES ON THIS PAGE AND ON PAGE 36 ARE PRESENTED AS GUIDANCE IN THE SHIPMENT OF THESE PARTIAL UNITS.
3. THE "PROCEDURES FOR SHIPMENT OF A PARTIAL PALLET UNIT" ON THIS PAGE ARE APPLICABLE FOR LOADS IN CONVENTIONAL VAN TRAILERS.
4. FOR SHIPMENT OF ONE THROUGH SIX "LEFTOVER" CONTAINERS (SEVEN FOR THE ALTERNATED CONTAINERS UNIT), SEE THE PROCEDURES ON PAGE 36 OF THIS DRAWING.

**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 THESE ITEMS NEEDED TO FILL A REQUISITION, MAY NECESSITATE THE SHIPMENT OF ONE OR MORE LEFTOVER CONTAINERS WHICH IS INSUFFICIENT TO FORM A FULL-LAYERED PARTIAL UNIT FOR SECUREMENT ON TOP OF A FULL PALLET UNIT AS SHOWN ON PAGE 35.
2. SHIPMENT OF LEFTOVER CONTAINERS IS APPLICABLE FOR CONUS AND OCONUS MOTOR CARRIER SHIPMENTS FROM DEPOT TO DEPOT OR FROM DEPOTS TO POST, 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 PALLET UNIT, MUST NOT BE DESTINED FOR SHIPMENT OVERSEAS BY WATER CARRIER.
3. THE PALLET UNITS SHOWN ARE THE ALTERNATED DUNNAGE METHOD UNIT WITH ONE LEFTOVER CONTAINER, THE FLAT DUNNAGE METHOD WITH TWO LEFTOVER CONTAINERS, AND THE ROUTED DUNNAGE METHOD UNIT WITH THREE LEFTOVER CONTAINERS. 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" PIECE OF THE ASSEMBLY. WHEN THREE TO SEVEN LEFTOVER CONTAINERS ARE BEING SHIPPED, A STRAPPING BOARD WILL BE REQUIRED. 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.

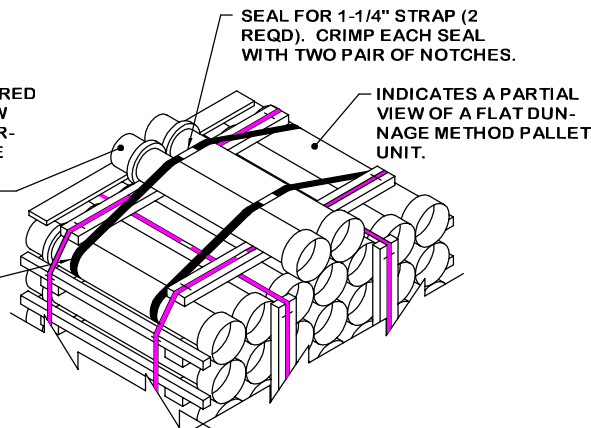


**SECUREMENT OF ONE CONTAINER**

THE ALTERNATED CONTAINERS UNIT IS SHOWN. UP TO SEVEN LEFTOVER CONTAINERS MAY BE SECURED TO THE TOP OF A PALLET UNIT WHEN SHIPPING THE ALTERNATED CONTAINERS UNITS.

INDICATES TWO LEFTOVER CONTAINERS. POSITION CONTAINERS SO AS TO BE CENTERED ON THE JOINTS OF THE CONTAINERS BELOW FOR ROUTED DUNNAGE METHOD AND ALTERNATED CONTAINERS UNITS, OR SO AS TO BE CENTERED ON THE WIDTH OF THE UNIT FOR FLAT DUNNAGE METHOD UNITS.

UNITIZING STRAP, 1-1/4" X .035" OR .031" X 10'-0" LONG STEEL STRAPPING (2 REQD).



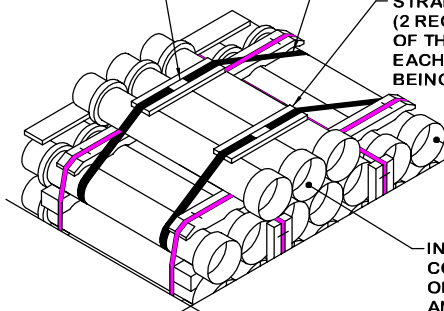
**SECUREMENT OF TWO CONTAINERS**

THE FLAT DUNNAGE METHOD UNIT IS SHOWN. UP TO SIX LEFTOVER CONTAINERS MAY BE SECURED TO THE TOP OF A PALLET UNIT WHEN SHIPPING THE FLAT DUNNAGE METHOD UNITS.

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

UNITIZING STRAP, 1-1/4" X .035" OR .031" X 10'-6" LONG STEEL STRAPPING (2 REQD). STAPLE TO THE STRAPPING BOARD W/2 STAPLES.

STRAPPING BOARD, 1" X 4" X 15" (2 REQD). INCREASE THE LENGTH OF THE STRAPPING BOARD 7" FOR EACH ADDITIONAL CONTAINER BEING SECURED.



INDICATES THREE LEFTOVER CONTAINERS. POSITION CONTAINERS SO AS TO BE CENTERED ON THE JOINTS OF THE CONTAINERS BELOW FOR ROUTED DUNNAGE AND ALTERNATED CONTAINERS UNITS, OR SO AS TO BE CENTERED ON THE WIDTH OF THE UNIT FOR FLAT DUNNAGE METHOD UNITS.

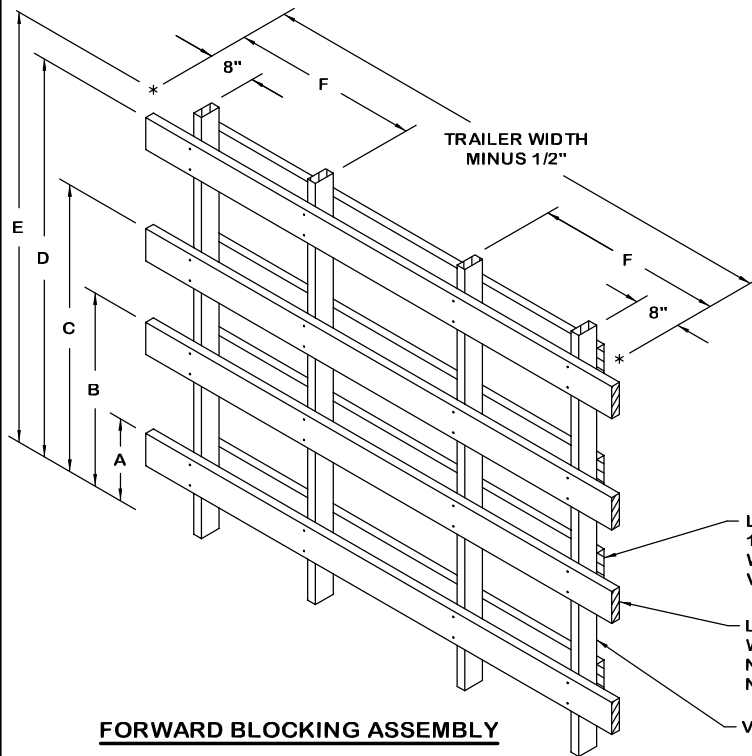
**SECUREMENT OF THREE CONTAINERS**

THE ROUTED DUNNAGE METHOD UNIT IS SHOWN. UP TO SIX LEFTOVER CONTAINERS MAY BE SECURED TO THE TOP OF A PALLET UNIT WHEN SHIPPING THE ROUTED DUNNAGE METHOD UNITS.



## FORWARD BLOCKING CHART

| PALLET UNIT TYPE           | DIMENSIONS |     |     |        |       |     |
|----------------------------|------------|-----|-----|--------|-------|-----|
|                            | A          | B   | C   | D      | E     | F   |
| ALTERNATED (BASIC)         | 14"        | 33" | 49" | 68"    | 72"   | 32" |
| ALTERNATED (INCREASED) ■   | 14"        | 38" | 55" | 6'-7"  | 6'-9" | 32" |
| FLAT (BASIC) ▲             | 16"        | 43" | 62" | 7'-5"  | 7'-8" | 34" |
| FLAT (DECREASED)           | 16"        | 36" | 56" | 6'-4"  | 6'-7" | 34" |
| ROUTED (BASIC) ●           | 15"        | 42" | 62" | 7'-5"  | 7'-7" | 35" |
| ROUTED (DECREASED)         | 15"        | 35" | 55" | 6'-3"  | 6'-6" | 35" |
| ■ INCREASED W/BASIC ON TOP | 14"        | 38" | 55" | 6'-2"  | 6'-4" | 32" |
| ▲ BASIC W/DECREASED ON TOP | 16"        | 43" | 62" | 6'-10" | 7'-0" | 34" |
| ● BASIC W/DECREASED ON TOP | 15"        | 42" | 62" | 6'-10" | 7'-0" | 35" |



### FORWARD BLOCKING ASSEMBLY

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 8-1/2", 2" X 6" VERTICAL PIECES WILL BE USED IN LIEU OF THE 2" X 4" PIECES. **NOTE:** SEE FORWARD BLOCKING CHART AT RIGHT. IF THE TRAILER HAS LARGE-ANGLED FRONT CORNERS, REFER TO PAGE 43 FOR GUIDANCE.

LATERAL PIECE, 2" X 6" BY TRAILER WIDTH MINUS 16-1/2" IN LENGTH (4 REQD). ALIGN VERTICALLY WITH LOAD BEARING PIECES AND NAIL TO THE VERTICAL PIECES W/2-10d NAILS AT EACH JOINT.

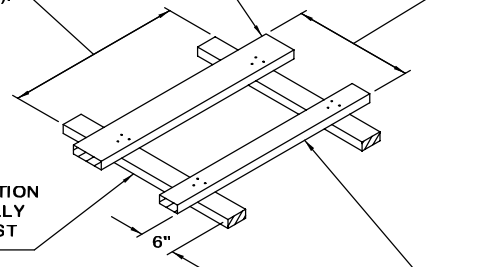
LOAD BEARING PIECE, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (4 REQD). NAIL TO THE VERTICAL PIECES W/2-10d NAILS AT EACH JOINT.

VERTICAL PIECE, 2" X 4" BY DIMENSION "E" (4 REQD).

BUFFER PIECE, 2" X 6" X 38" (1 REQD). POSITION AGAINST THE PALLET POSTS AND NAIL TO THE RETAINER PIECES W/3-10d NAILS AT EACH JOINT.

FABRICATE TO FIT BETWEEN THE POSTS OF LATERALLY ADJACENT PALLETS.

FABRICATE TO FIT AGAINST THE PALLET POSTS (REF: 30").

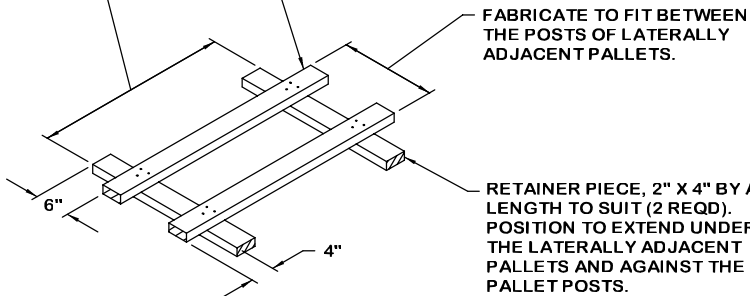


RETAINER PIECE, 2" X 4" BY A LENGTH TO SUIT (2 REQD). POSITION TO EXTEND UNDER THE LATERALLY ADJACENT PALLETS AND AGAINST THE PALLET POSTS.

BUFFER PIECE, 2" X 4" X 38" (1 REQD). POSITION AGAINST THE PALLET POSTS AND NAIL TO THE RETAINER PIECES W/3-10d NAILS AT EACH JOINT.

BUFFER PIECE, 2" X 4" X 41" (2 REQD). POSITION AGAINST THE PALLET POSTS AND NAIL TO THE RETAINER PIECES W/3-10d NAILS AT EACH JOINT.

FABRICATE TO FIT AGAINST THE PALLET POSTS (REF: 33").



FABRICATE TO FIT BETWEEN THE POSTS OF LATERALLY ADJACENT PALLETS.

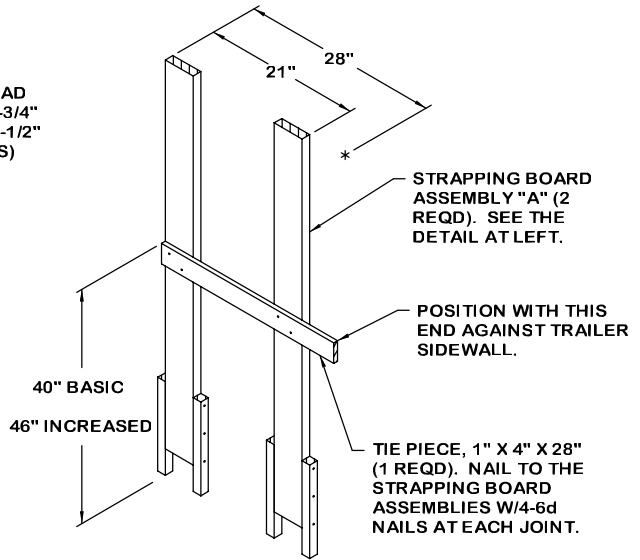
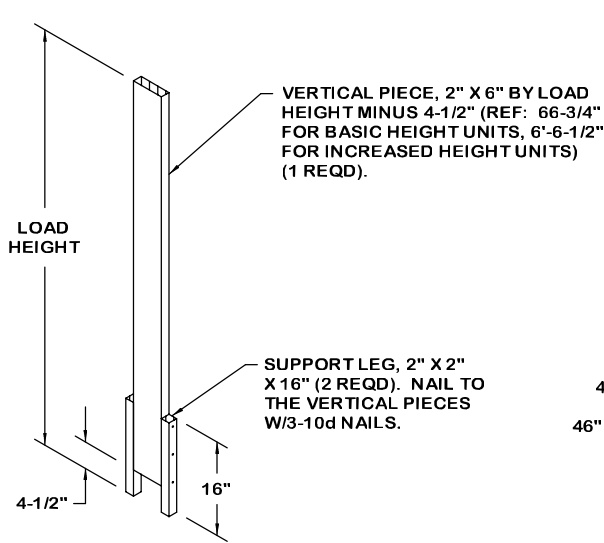
RETAINER PIECE, 2" X 4" BY A LENGTH TO SUIT (2 REQD). POSITION TO EXTEND UNDER THE LATERALLY ADJACENT PALLETS AND AGAINST THE PALLET POSTS.

### ANTI-SWAY BRACE A

THIS ASSEMBLY IS DESIGNED FOR USE IN THE ALTERNATED CONTAINERS UNIT LOADS ON PAGES 6 THROUGH 13. THE ASSEMBLY HAS A 2" X 6" BUFFER PIECE (APPLY LAST) ON ONE SIDE TO FACILITATE NAILING. BOTH BUFFER PIECES MAY BE 2" X 4" MATERIAL IF NAILING CAN BE ACCOMPLISHED.

### ANTI-SWAY BRACE B

THIS ASSEMBLY IS DESIGNED FOR USE IN THE LOADS OF FLAT DUNNAGE AND ROUTED DUNNAGE METHOD UNITS ON PAGES 14 THROUGH 31.

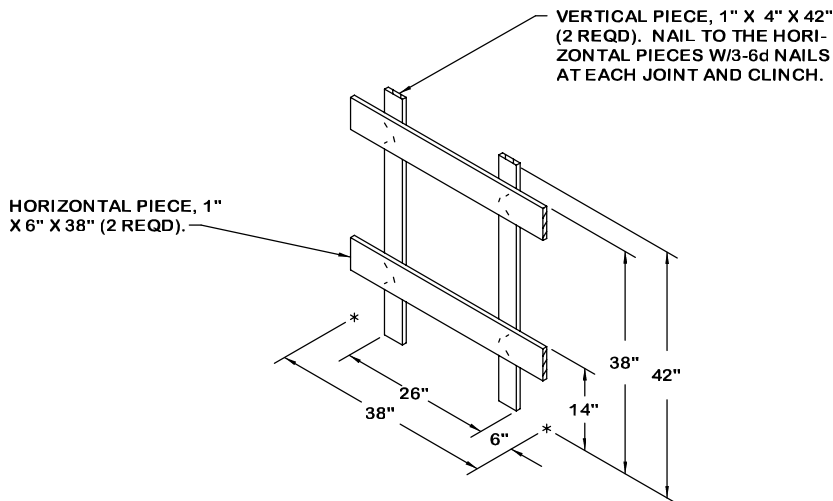


### STRAPPING BOARD ASSEMBLY A

THIS ASSEMBLY IS ONLY FOR USE WITHIN CHIMNEY PATTERN LOADS OF LOADS AS TYPICALLY SHOWN ON PAGES 10 AND 11.

### STRAPPING BOARD ASSEMBLY B

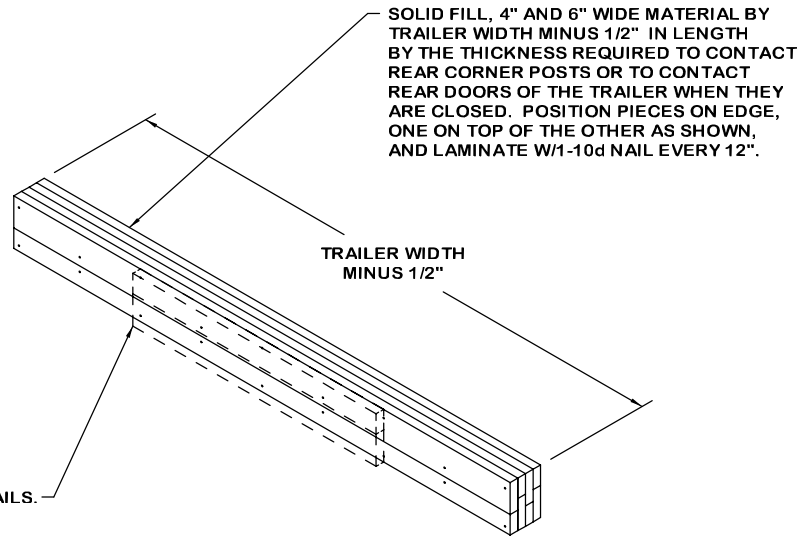
THIS ASSEMBLY IS AN ALTERNATIVE FOR THE STRAPPING BOARD ASSEMBLY "A" FOR USE IN THE LOAD ON PAGES 10 AND 11.



### SEPARATOR GATE

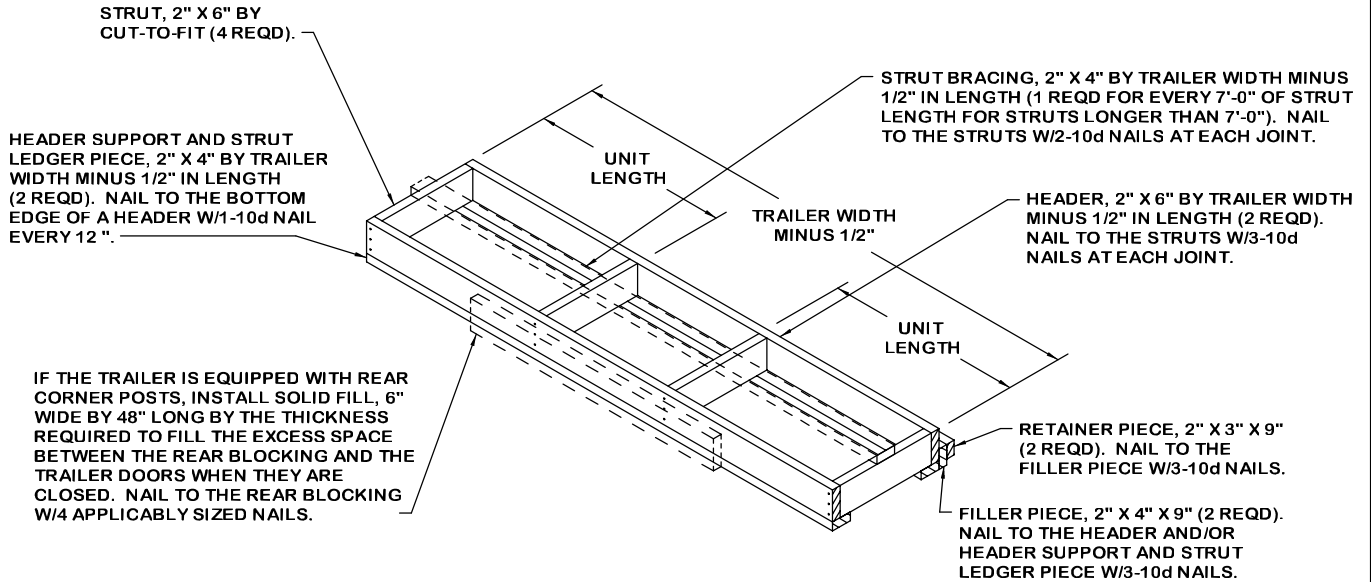
THIS ASSEMBLY IS FOR USE IN THE "CHIMNEY PATTERN" LOAD SHOWN ON PAGE 10 WHEN A "CHIMNEY" CONTAINS LESS THAN FOUR PALLET UNITS. INSTALL WITH THE VERTICAL PIECES TOWARD THE FRONT OF THE TRAILER.

IF THE TRAILER IS EQUIPPED WITH REAR CORNER POSTS, INSTALL SOLID FILL 4" AND 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 EDGE, ONE ON TOP OF THE OTHER AS SHOWN, AND NAIL TO THE REAR BLOCKING W/4 APPLICABLY SIZED NAILS.



**REAR BLOCKING ASSEMBLY A**

THIS REAR BLOCKING IS DESIGNED FOR USE AT THE REAR END OF ANY OF THE DEPICTED LOADS IN CONVENTIONAL VAN TRAILERS WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9" BUT AT LEAST 1-1/2".



**REAR BLOCKING ASSEMBLY B**

THIS ASSEMBLY IS FOR USE AT THE REAR OF THE ALTERNATED CONTAINERS UNIT LOADS AND THE FLAT DUNNAGE METHOD UNIT LOADS WHEN THE EXCESS SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS 9" OR GREATER.

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 TRAILER DOORS WHEN THEY ARE CLOSED. NAIL TO THE REAR BLOCKING W/4 APPLICABLY SIZED NAILS.

STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (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.

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

FILLER PIECE, 2" X 4" X 9" (1 REQD). NAIL TO THE HEADER AND/OR HEADER SUPPORT PIECE W/3-10d NAILS.

RETAINER PIECE, 2" X 3" X 9" (1 REQD). NAIL TO THE HEADER W/3-10d NAILS.

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

HEADER SUPPORT AND STRUT LEDGER PIECE, 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 12".

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

THIS SIDE IS TO BE PLACED AGAINST THE LADING.

### REAR BLOCKING ASSEMBLY C

THIS ASSEMBLY IS DESIGNED FOR USE AT THE REAR OF THE ALTERNATED CONTAINERS UNIT CHIMNEY PATTERN LOAD SHOWN ON PAGE 10 WHEN THE EXCESS SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS 9" OR GREATER. NOTE THAT THIS VIEW IS ROTATED 90° FROM THE POSITION IN WHICH THE ASSEMBLY WILL BE INSTALLED.

STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (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.

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 TRAILER DOORS WHEN THEY ARE CLOSED. NAIL TO THE REAR BLOCKING W/4 APPLICABLY SIZED NAILS.

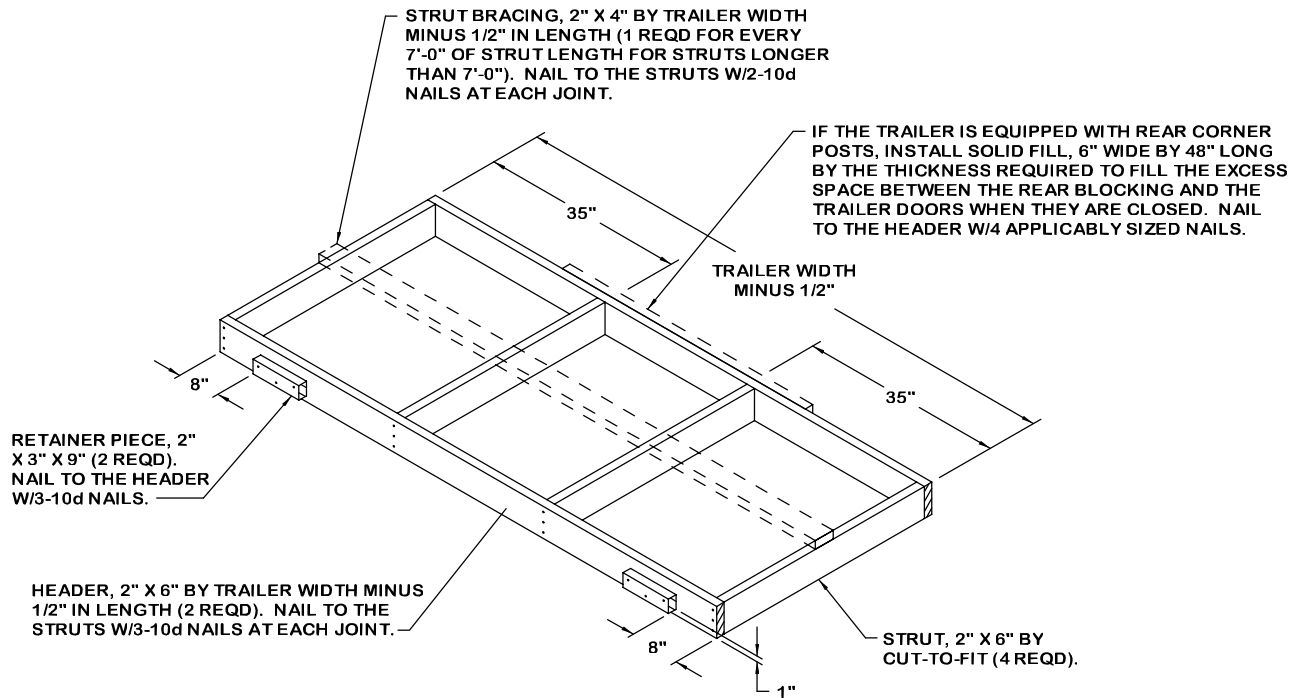
HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD). NAIL TO THE STRUTS W/3-10d NAILS AT EACH JOINT.

RETAINER PIECE, 2" X 3" X 9" (2 REQD). NAIL TO THE HEADER W/3-10d NAILS. POSITION 3-1/2" ABOVE BOTTOM EDGE OF HEADER.

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

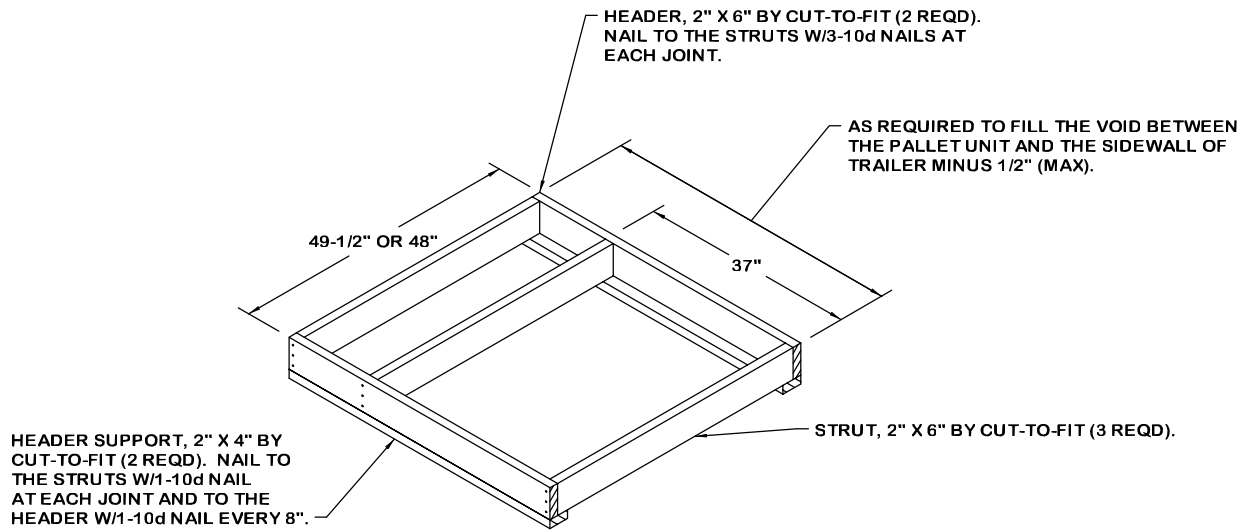
### REAR BLOCKING ASSEMBLY D

THIS ASSEMBLY IS DESIGNED FOR USE AT THE REAR OF THE ROUTED DUNNAGE METHOD UNIT LOADS ON PAGES 22 AND 26 WHEN THE EXCESS SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS 9" OR GREATER.



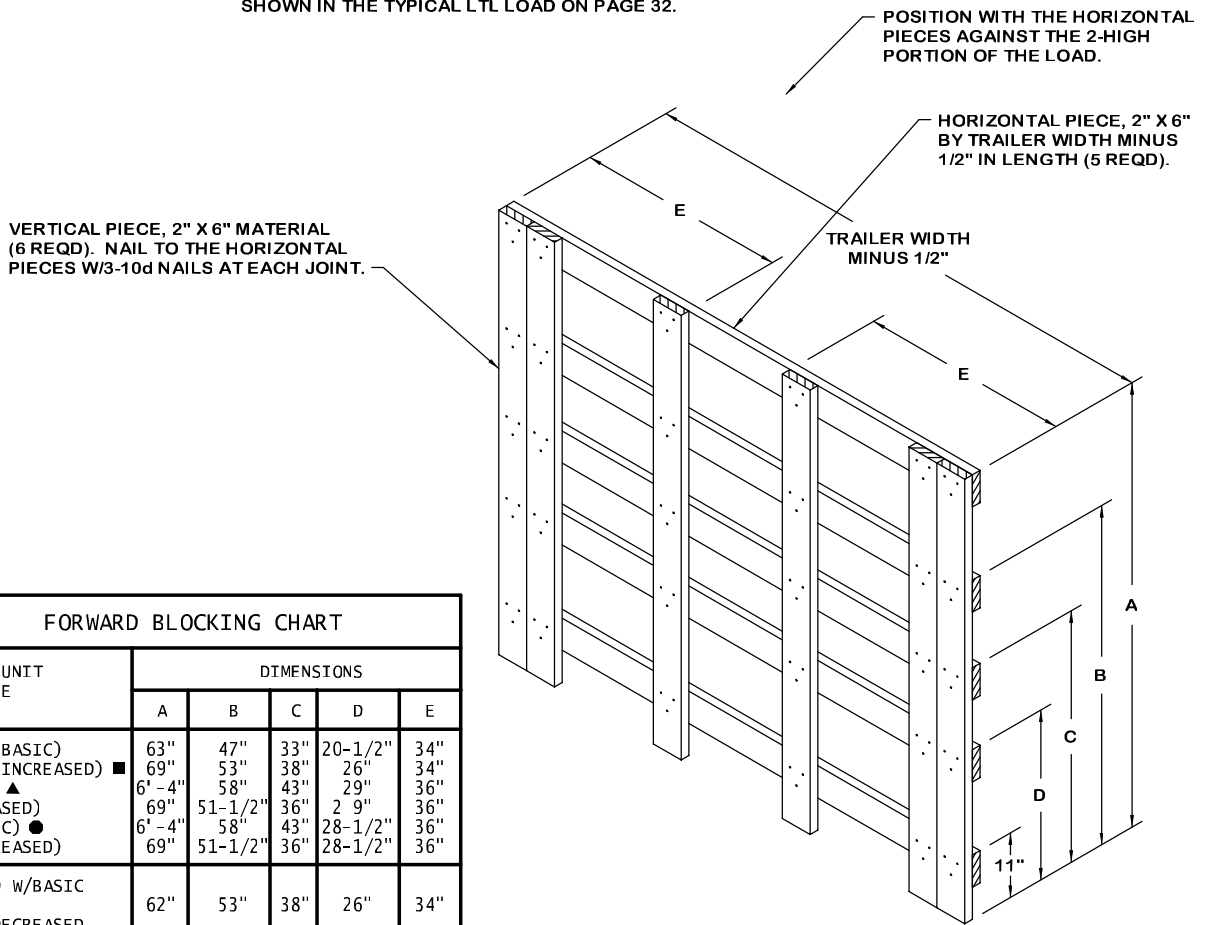
### REAR BLOCKING ASSEMBLY E

THIS ASSEMBLY IS ONLY FOR USE AT THE REAR OF A LOAD OF ROUTED DUNNAGE METHOD UNITS WHEN THEY ARE LOADED CROSSWISE AS SHOWN ON PAGES 24 AND 28 WHEN THE EXCESS SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS 9" OR GREATER. NOTE THAT THE ABOVE VIEW DEPICTS THE ASSEMBLY ROTATED 180° FROM THE POSITION IN WHICH IT WILL BE INSTALLED.



**SPACER ASSEMBLY A**

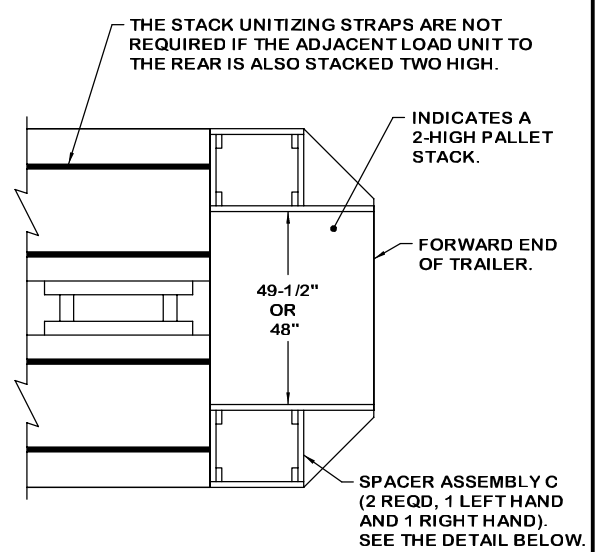
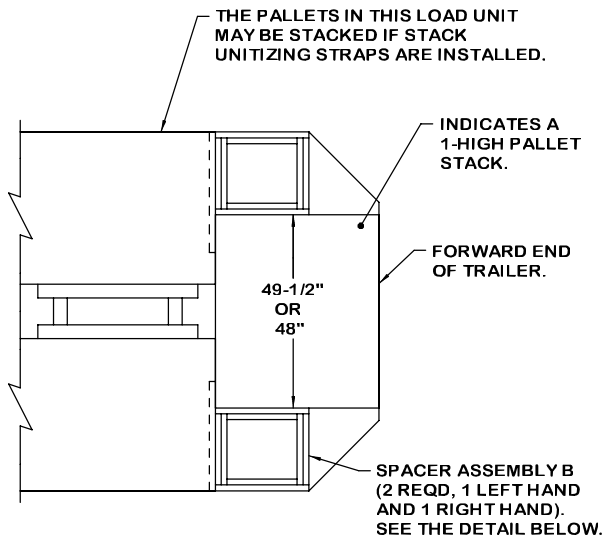
THIS ASSEMBLY IS DESIGNED FOR USE AS LATERAL BRACING IN A CONVENTIONAL VAN TRAILER AS SHOWN IN THE TYPICAL LTL LOAD ON PAGE 32.



**BULKHEAD GATE**

THIS GATE IS DESIGNED FOR USE IN THE ALTERNATIVE LOADING PROCEDURE LOAD ON PAGE 30.

| FORWARD BLOCKING CHART     |            |         |     |         |     |
|----------------------------|------------|---------|-----|---------|-----|
| PALLET UNIT TYPE           | DIMENSIONS |         |     |         |     |
|                            | A          | B       | C   | D       | E   |
| ALTERNATED (BASIC)         | 63"        | 47"     | 33" | 20-1/2" | 34" |
| ALTERNATED (INCREASED) ■   | 69"        | 53"     | 38" | 26"     | 34" |
| FLAT (BASIC) ▲             | 6'-4"      | 58"     | 43" | 29"     | 36" |
| FLAT (DECREASED)           | 69"        | 51-1/2" | 36" | 2' 9"   | 36" |
| ROUTED (BASIC) ●           | 6'-4"      | 58"     | 43" | 28-1/2" | 36" |
| ROUTED (DECREASED)         | 69"        | 51-1/2" | 36" | 28-1/2" | 36" |
| ■ INCREASED W/BASIC ON TOP | 62"        | 53"     | 38" | 26"     | 34" |
| ▲ BASIC W/DECREASED ON TOP | 68"        | 57"     | 43" | 29"     | 36" |
| ● BASIC W/DECREASED ON TOP | 68"        | 56"     | 43" | 28-1/2" | 36" |

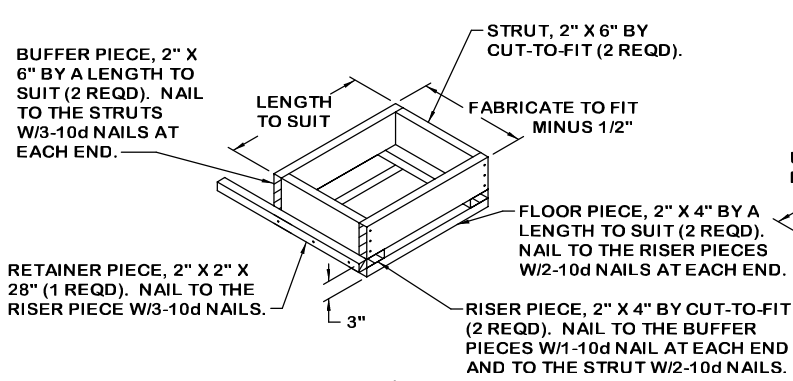


**ALTERNATIVE FORWARD LOADING PATTERN A**

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.

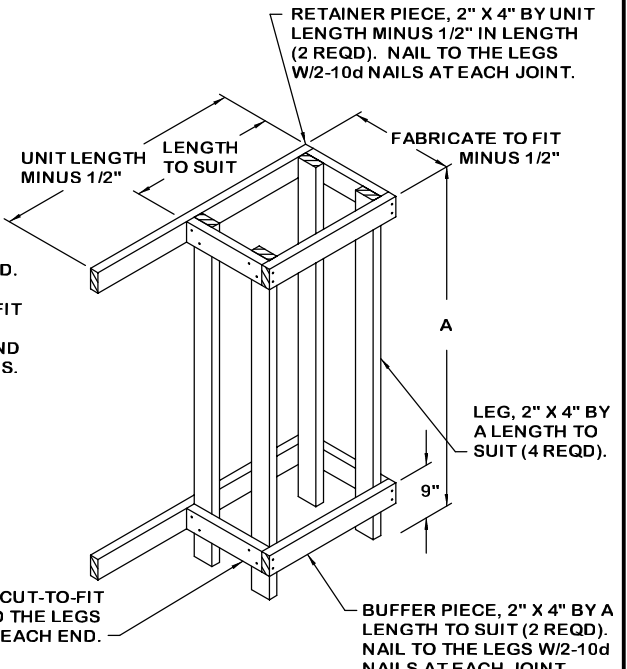
**ALTERNATIVE FORWARD LOADING PATTERN B**

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 PALLET 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**

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.

| SPACER ASSEMBLY C CHART    |       |
|----------------------------|-------|
| PALLET UNIT TYPE           | DIM A |
| ALTERNATED (BASIC)         | 44"   |
| ALTERNATED (INCREASED) ■   | 50"   |
| FLAT (BASIC) ▲             | 6'-3" |
| FLAT (DECREASED)           | 49"   |
| ROUTED (BASIC) ●           | 6'-3" |
| ROUTED (DECREASED)         | 55"   |
| ■ INCREASED W/BASIC ON TOP | 50"   |
| ▲ BASIC W/DECREASED ON TOP | 54"   |
| ● BASIC W/DECREASED ON TOP | 61"   |

