

ATACMS

LOADING AND BRACING IN END/ SIDE OPENING ISO CONTAINERS[⊕] OF MISSILE/LAUNCH POD ASSEMBLY (M/LPA) FOR ARMY TACTICAL MISSILE SYSTEMS

INDEX

<u>ITEM</u>	<u>PAGE(S)</u>
GENERAL NOTES AND MATERIAL SPECIFICATIONS - - - - -	2
M/LPA DETAIL AND HANDLING GUIDANCE - - - - -	3
FOUR M/LPA LOAD - - - - -	4-7
THREE M/LPA LOAD - - - - -	8-9
TWO M/LPA LOAD - - - - -	10-12
ONE M/LPA LOAD - - - - -	13-15
DETAILS - - - - -	16

DISTRIBUTION STATEMENT A:

APPROVED FOR PUBLIC RELEASE
DISTRIBUTION IS UNLIMITED.

⊕ THE PROCEDURES SHOWN HEREIN ARE APPLICABLE TO LOADS THAT ARE TO BE SHIPPED BY CONTAINER-ON-FLATCAR (COFC) RAIL, MOTOR, OR WATER CARRIERS.

U.S. ARMY MATERIEL COMMAND DRAWING

<p style="text-align: center;">APPROVED, U.S. ARMY AVIATION AND MISSILE COMMAND</p> <p>O'CONNOR.DOUG LAS.LEO.11405822 51</p> <p><small>Digitally signed by O'CONNOR.DOUGLAS.LEO.114 0582251 Date: 2024.03.18 07:54:28 -05'00'</small></p>	<p>CAUTION: VERIFY PRIOR TO USE AT https://www.dau.edu/cop/ammo/Pages/Default.aspx THAT THIS IS THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 16.</p>		<h2 style="margin: 0;">MARCH 2024</h2>														
	<p>DO NOT SCALE</p>																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">DESIGN ENGINEER</td> <td style="width: 10%;">BASIC</td> <td colspan="4" style="text-align: center;">RICHARD GARSIDE</td> </tr> <tr> <td></td> <td style="text-align: center;">REV.</td> <td colspan="4"></td> </tr> </table>	DESIGN ENGINEER	BASIC	RICHARD GARSIDE					REV.								
DESIGN ENGINEER	BASIC	RICHARD GARSIDE															
	REV.																
<p style="text-align: center;">APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND</p> <p>BRAILSFORD.KEIT H.ANTHONY.10286 55661</p> <p><small>Digitally signed by BRAILSFORD.KEITH.ANTHONY. 1028655661 Date: 2024.03.19 16:46:07 -05'00'</small></p> <p style="text-align: center;">DEFENSE AMMUNITION CENTER</p>	<p>ENGINEERING DIVISON</p> <p>FIEFFER.LAUR A.A.1230375727</p> <p><small>Digitally signed by FIEFFER.LAURA.A.1230375727 Date: 2024.03.05 07:48:46 -05'00'</small></p>	<p>TEST ENGINEER</p> <p>FELICIANO.AD IN.1259200373</p> <p><small>Digitally signed by FELICIANO.ADIN.1259200373 Date: 2024.03.12 14:35:55 -05'00'</small></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">CLASS</td> <td style="width: 15%;">DIVISION</td> <td style="width: 15%;">DRAWING</td> <td style="width: 15%;">FILE</td> <td colspan="2"></td> </tr> <tr> <td style="text-align: center;">19</td> <td style="text-align: center;">48</td> <td style="text-align: center;">8901</td> <td style="text-align: center;">GM15AT9</td> <td colspan="2"></td> </tr> </table>	CLASS	DIVISION	DRAWING	FILE			19	48	8901	GM15AT9				
CLASS	DIVISION	DRAWING	FILE														
19	48	8901	GM15AT9														
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">TEST REPORT</td> <td style="width: 10%;">NA</td> <td colspan="4"></td> </tr> </table>	TEST REPORT	NA					<p>EXPLOSIVES SAFETY DIRECTORATE</p> <p>MACE.KENT. 1056975302</p> <p><small>Digitally signed by MACE.KENT.1056975302 Date: 2024.03.13 09:06:16 -05'00'</small></p>									
TEST REPORT	NA																

GENERAL NOTES

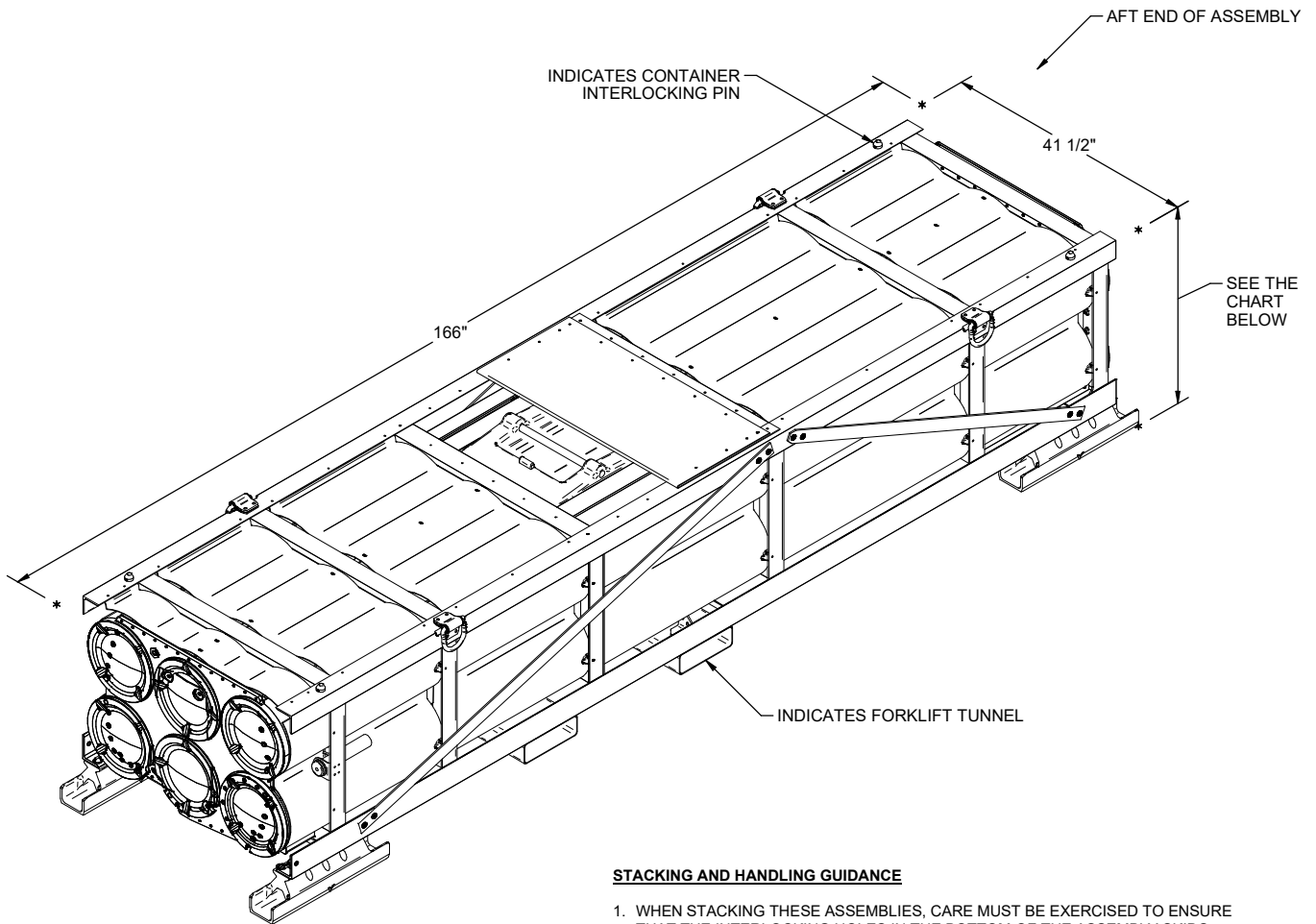
(GENERAL NOTES CONTINUED)

- 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 HEREIN ARE APPLICABLE TO THE ARMY TACTICAL MISSILE SYSTEM (ATACMS) COMPLETE ROUND, WHEN PACKED IN THE MISSILE/LAUNCH POD ASSEMBLY (M/LPA). SUBSEQUENT REFERENCE TO ASSEMBLY HEREIN MEANS THE M/LPA WITH MISSILE COMPONENTS.
- C. FOR DETAILS OF THE MISSILE/LAUNCH POD ASSEMBLY, SEE AMCOM DRAWING 13330138 AND THE VIEW AND CHART ON PAGE 3.
- D. THE LOADS AS SHOWN ARE BASED ON A 6,613 POUND 20' LONG BY 8' WIDE BY 8'-6" HIGH END/SIDE OPENING ISO CONTAINER WITH INSIDE DIMENSIONS OF 19'-4" LONG BY 91" WIDE BY 90" HIGH, WITH A MAXIMUM GROSS WEIGHT OF 52,910 POUNDS. OLDER/OTHER CONTAINERS MAY HAVE DIFFERENT INSIDE MEASUREMENTS. VERIFY INSIDE CONTAINER DIMENSIONS PRIOR TO FABRICATING DUNNAGE. THE LOAD IS DESIGNED FOR TRAILER/CONTAINER-ON-FLATCAR (T/COFC) SHIPMENT, HOWEVER, THE LOAD AS DESIGNED CAN ALSO BE MOVED BY OTHER SURFACE MODES OF TRANSPORT. **NOTICE:** OTHER CONTAINERS OF THE SAME DESIGN CONFIGURATION CAN BE USED.
- E. WHEN LOADING THE ASSEMBLIES, THEY ARE TO BE POSITIONED SO AS TO ACHIEVE A TIGHT LOAD (TIGHT AGAINST THE DUNNAGE ASSEMBLIES). THE UNBLOCKED SPACE ACROSS THE WIDTH OF A LOAD BAY IS NOT TO EXCEED 1-1/2". EXCESSIVE SLACK CAN BE ELIMINATED FROM A LOAD BY LAMINATING ADDITIONAL PIECES OF APPROPRIATE THICKNESS TO THE VERTICAL PIECES ON THE SIDE FILL ASSEMBLIES ON ONE OR BOTH SIDES OF THE CONTAINER. NAIL EACH ADDITIONAL PIECE W/1 APPROPRIATELY SIZED NAIL EVERY 12". ADDITIONALLY, THE NUMBER AND THICKNESS OF THE ADDITIONAL PIECES MAY BE ADJUSTED AS REQUIRED TO FACILITATE VARIANCE IN THE WIDTH OF THE ISO CONTAINER. THE LOADS MUST BE AS TIGHT AS POSSIBLE LONGITUDINALLY, BUT THE VOID MUST NOT EXCEED 3/4" OVERALL. EXCESSIVE SLACK CAN BE ELIMINATED BY INCREASING THE LENGTH OF THE STRUTS. **CAUTION:** THE SEQUENTIAL LOADING PROCEDURES DETAILED IN GENERAL NOTE "T" MUST BE FOLLOWED IN THE ORDER PROVIDED. THE LOADING SEQUENCE WILL BE APPLIED TO ALL LOADS, WITH ALLOWANCES FOR VARYING DUNNAGE ASSEMBLIES AND M/LPA QUANTITIES. THE REAR OF THE LOAD MUST BE BLOCKED AND BRACED LAST TO ACHIEVE A TIGHT LOAD.
- F. A STAGGERED NAILING PATTERN WILL BE USED WHENEVER POSSIBLE WHEN NAILS ARE DRIVEN INTO JOINTS OF DUNNAGE ASSEMBLIES OR WHEN LAMINATING DUNNAGE. ADDITIONALLY, THE NAILING PATTERN FOR AN UPPER PIECE OF LAMINATED DUNNAGE WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL FOR THAT PIECE WILL NOT BE DRIVEN THROUGH, ONTO OR RIGHT BESIDE A NAIL IN A LOWER PIECE.
- G. IN SOME CONTAINERS THERE IS A SLOT AT THE CORNERS OF THE FORWARD WALL. PIECES OF DUNNAGE MATERIAL MUST BE LAMINATED TO THE BUFFER PIECE ON THE FORWARD STRUT ASSEMBLY TO PROVIDE A FLAT SURFACE FOR THE BUFFER PIECE. A PIECE OF 2" X 4", 2" X 3" OR A SPECIAL WIDTH PIECE CUT-TO-FIT CAN BE USED. THIS FILL PIECE WILL BE NAILED WITH ONE APPROPRIATELY SIZED NAIL EVERY 12". NOTE THAT SOME CONTAINERS ARE EQUIPPED WITH "TIE-BARS" IN THE CORNER SLOT, WHICH PRECLUDE THE USE OF A FULL HEIGHT FILL PIECE. WHEN "TIE-BARS" ARE PRESENT, THE FILL PIECE MUST BE INSTALLED IN SEGMENTS DESIGNED TO FIT BETWEEN THE "TIE-BARS" VERTICALLY. THE FILL PIECE(S) IS NOT REQUIRED WHEN THE CORNER PORTIONS OF THE CONTAINER FORWARD WALL ARE SMOOTH AND FLAT. DO NOT ALLOW ANY DUNNAGE ASSEMBLY TO CONTACT THE CONTAINER FORWARD WALL. ONLY THE CORNER POSTS OF THE CONTAINER SHOULD BE USED FOR FORWARD LONGITUDINAL BLOCKING.
- H. **CAUTION:** DO NOT NAIL DUNNAGE MATERIAL TO THE CONTAINER WALLS OR FLOOR. ALL NAILING WILL BE WITHIN THE DUNNAGE.
- J. PORTIONS OF THE CONTAINER DEPICTED WITHIN THIS DRAWING, SUCH AS THE SIDEWALL, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- K. **MAXIMUM LOAD WEIGHT CRITERIA:**
THE MAXIMUM LOAD WEIGHTS ARE CONTROLLED BY EQUIPMENT CAPABILITY FACTORS. ALTHOUGH THE HEAVIEST MAXIMUM LOADS ARE DELINEATED IN THE LOAD VIEWS, PROVISIONS ARE INCLUDED WITHIN THIS DRAWING SO THAT THE BASIC LOADS CAN BE ADJUSTED TO SATISFY A LESSER QUANTITY OF LADING UNITS. DEPENDING ON TRANSPORTATION ROUTING, IT MAY BE NECESSARY TO REDUCE THE LOAD WEIGHT TO SATISFY "WEIGHT LAWS" OF CERTAIN STATES. ALSO, IT MAY BE NECESSARY TO REDUCE THE LOAD WEIGHT TO SATISFY OTHER WEIGHT RESTRICTIONS IMPOSED ON THE INTER-MODAL CONTAINER SYSTEM.
- L. REQUIREMENTS CITED WITHIN THE ASSOCIATION OF AMERICAN RAILROADS (AAR) INTERMODAL LOADING GUIDE APPLY WHEN THE SHIPMENT MOVES BY TRAILER/CONTAINER-ON-FLATCAR (T/COFC). SPECIAL T/COFC NOTES FOLLOW:
1. A LOADED CONTAINER MUST BE ON A CHASSIS EQUIPPED WITH TWO BO-GIE ASSEMBLIES WHEN BEING MOVED IN TOFC SERVICE.
2. THE LOAD LIMIT OF A T/COFC RAILCAR MUST NOT BE EXCEEDED, NOR WILL A CAR BE LOADED SO THAT THE TRUCK UNDER ONE END OF THE CAR CARRIES MORE THAN ONE-HALF OF THE LOAD LIMIT FOR THAT CAR.
- M. DURING INTRASTATE AND/OR INTERSTATE MOVES BY MOTOR CARRIER, A PROPER CHASSIS OR MODIFIED FLATBED TRAILER MUST BE USED TO PRECLUDE VIOLATION OF ONE OR MORE "WEIGHT LAWS" APPLICABLE TO THE STATE OR STATES INVOLVED.
- N. WHETHER A CONTAINER IS FULL OR IS LOADED WITH A REDUCED QUANTITY OF LADING UNITS, THE LENGTHWISE CENTER OF GRAVITY OF THE LOAD MUST BE WITHIN 12", IN EITHER DIRECTION, OF THE MID-POINT OF THE CONTAINER.
- O. SIX UNIVERSAL LOAD RETAINERS ARE DEPICTED IN THE LOAD ON PAGE 4. SIX UNIVERSAL LOAD RETAINERS ARE REQUIRED WHEN LOADING FOUR OR THREE MISSILE/LAUNCH POD ASSEMBLIES; TWO UNIVERSAL LOAD RETAINERS ARE REQUIRED WHEN LOADING TWO OR ONE MISSILE/LAUNCH POD ASSEMBLIES. REFER TO DEPARTMENT OF THE ARMY DAC DRAWING ACV00682 FOR DETAILS OF THE UNIVERSAL LOAD RETAINER CONSTRUCTION, AND TO DEPARTMENT OF THE ARMY DRAWING DA-116 FOR DETAILS FOR INSTALLATION TO THE DOOR POST VERTICAL, PLACEMENT INTO THE CONTAINER, AND FOR OTHER METHODS OF REAR OF LOAD RESTRAINT.
- P. NEW STYLE MISSILE/LAUNCH POD ASSEMBLIES HAVE END COVERS ON THE AFT END OF THE ASSEMBLY WHICH EXTEND SLIGHTLY BEYOND THE TOP AND BOTTOM RAILS. EXTREME CARE MUST BE EXERCISED DURING HANDLING OPERATIONS TO ENSURE THAT NO CONTACT OCCURS BETWEEN THE FORKLIFT TRUCK AND END COVER.
- Q. THE DUNNAGE ASSEMBLIES SHOWN WITHIN THIS DRAWING ARE BASED ON THE DIMENSIONS FOR THE TALLER M/LPAs. WHEN SHIPPING OTHER M/LPAs, SOME DIMENSIONS WILL CHANGE SLIGHTLY. THESE CHANGES ARE NOTED IN THE DETAILED VIEWS OF THE DUNNAGE ASSEMBLIES.
- R. DUNNAGE LUMBER SPECIFIED IS OF NOMINAL SIZE. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.
- S. 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.
- T. RECOMMENDED SEQUENTIAL LOADING PROCEDURES FOR THE LOAD ON PAGE 4:
1. PREFABRICATE TWO FORWARD STRUT ASSEMBLIES, FORWARD BLOCKING ASSEMBLY, REAR BLOCKING ASSEMBLY, TWO SIDE FILL ASSEMBLIES, CENTER FILL ASSEMBLY AND TWO DOOR POST VERTICAL ASSEMBLIES.
2. INSTALL THE TWO FORWARD STRUT ASSEMBLIES AND THE FORWARD BLOCKING ASSEMBLY.
3. INSTALL ONE SIDE FILL ASSEMBLY AGAINST SIDE WALL AND TWO M/LPA CONTAINERS.
4. INSTALL CENTER FILL ASSEMBLY AND LAST TWO M/LPA CONTAINERS.
5. INSTALL LAST SIDE FILL ASSEMBLY AND REAR BLOCKING ASSEMBLY.
6. CLOSE SIDE DOORS AND INSTALL TWO DOOR POST VERTICAL ASSEMBLIES, EIGHT STRUTS AND FOUR DOOR SPANNERS.

MATERIAL SPECIFICATIONS

- LUMBER** - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND VOL-UNTARY PRODUCT STANDARD PS 20.
- NAILS** - - - - - : ASTM F1667; COMMON STEEL NAIL NLCMS OR NLCMMS).
- PLYWOOD** - - - - - : COMMERCIAL ITEM DESCRIPTION A-A-55057, INDUSTRIAL PLYWOOD, INTERIOR WITH EXTERIOR GLUE, GRADE C-D. IF SPECIFIED GRADE IS NOT AVAILABLE, A BETTER INTERIOR OR AN EXTERIOR GRADE MAY BE SUBSTITUTED.
- WIRE, CARBON STEEL** - : ASTM A853; ANNEALED AT FINISH, BLACK OXIDE FINISH, 0.0800" DIA, GRADE 1006 OR BETTER.

(CONTINUED AT RIGHT)



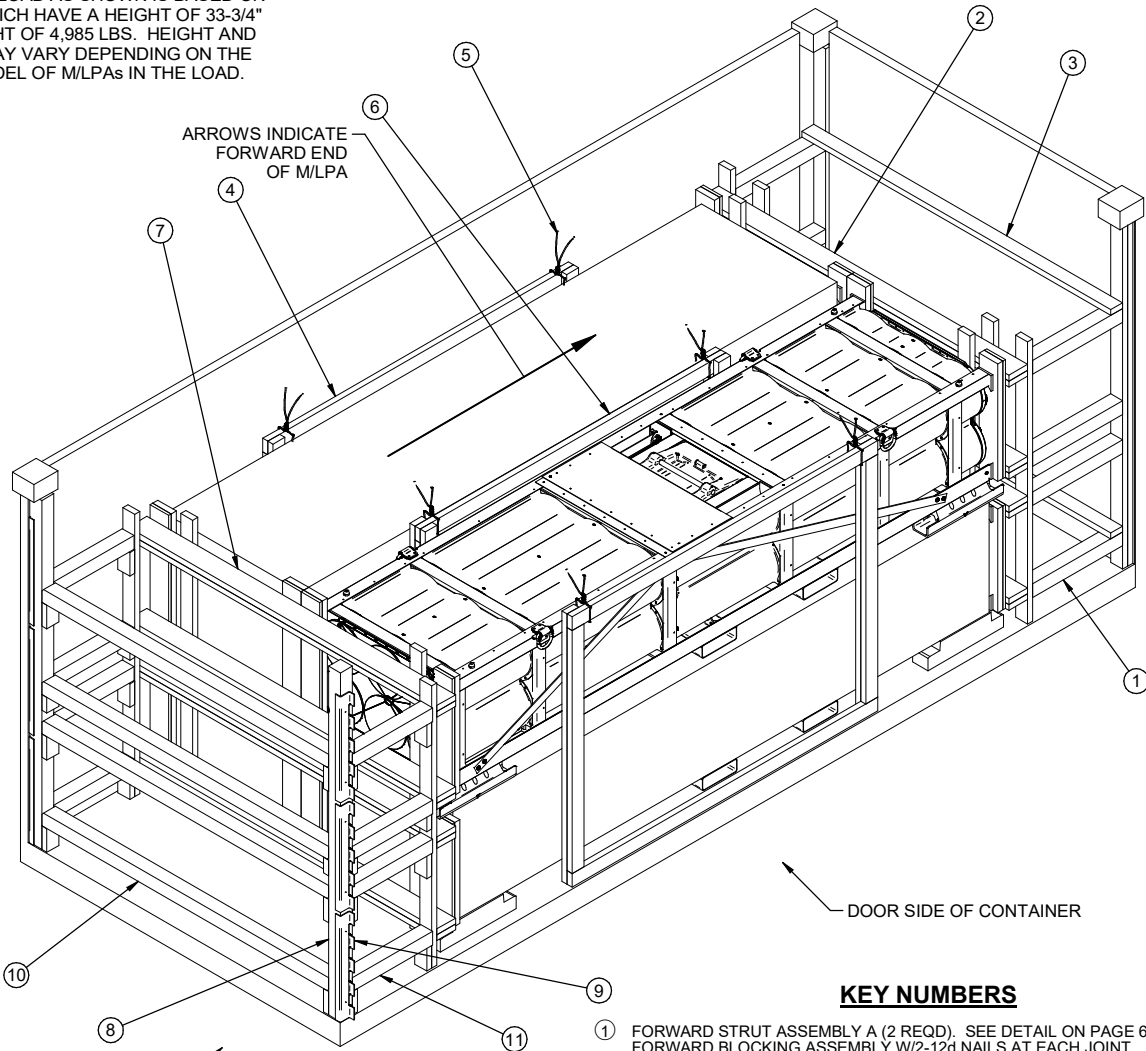
MISSILE/LAUNCH POD ASSEMBLY

STACKING AND HANDLING GUIDANCE

1. WHEN STACKING THESE ASSEMBLIES, CARE MUST BE EXERCISED TO ENSURE THAT THE INTERLOCKING HOLES IN THE BOTTOM OF THE ASSEMBLY SKIDS ALIGN CORRECTLY WITH THE INTERLOCKING PINS ON THE TOP OF THE FRAME OF THE LOWER ASSEMBLY AND ENSURE PROPER FUNCTIONING OF THE ASSEMBLY INTERLOCKS.
2. ONLY APPROVED AND APPROPRIATELY SIZED MATERIAL HANDLING EQUIPMENT WILL BE USED FOR HANDLING THE DEPICTED ASSEMBLIES. APPROVED MATERIAL HANDLING EQUIPMENT (FORKLIFT TRUCKS, CRANES, HAND TRUCKS, DOLLIES, ROLLER ASSEMBLIES, SLINGS, SPREADER BARS, ETC.) IS SPECIFIED ELSEWHERE.
3. PRECAUTIONARY HANDLING TECHNIQUES NORMALLY EMPLOYED OR AS SPECIFIED FOR THE TYPE OF COMMODITY INVOLVED WILL BE OBSERVED.
4. IF HANDLING IS ACCOMPLISHED WITH A FORKLIFT TRUCK, THE ASSEMBLIES SHOULD BE HANDLED FROM A SIDE POSITION AS MUCH AS POSSIBLE. CARE MUST BE EXERCISED WHEN INSERTING FORKS UNDER AN ASSEMBLY, TO PREVENT DAMAGE TO THE ASSEMBLY BY THE FORK TINES OR THE FORKLIFT PACKAGE GUARD. A 1" X 4" MATERIAL BUFFER BOARD MUST BE PLACED ACROSS THE FORKLIFT TRUCK TINES SUCH THAT THE TINES DO NOT CONTACT THE BOTTOM SURFACE OF THE FRAME MEMBERS. IF ONE ASSEMBLY IS HANDLED BY SLINGING, THE SLING MAY BE ATTACHED TO THE LIFTING POINTS ON THE ASSEMBLY. DO NOT HANDLE STACKED ASSEMBLIES WITH A SLING.

NSN	DODIC	MODEL	HEIGHT	WEIGHT (LBS)	CUBE (CU FT)
1427-01-481-1620	N/A	TACMS 2K	33-3/4"	4,985	134.6
1427-01-398-6538	PL38	M39A1	33-3/4"	4,640	134.6
1427-01-463-0001	PL38	M39A1	33-3/4"	4,640	134.6
1427-01-439-8639	PL47	M39A3	33-3/4"	4,985	134.6
1427-01-480-8516	PL65	M48	33-3/4"	4,682	134.6
1427-00-000-0195	PL81	M39	32-5/8"	5,105	129.7
1427-01-274-3904	PL81	M39	32-5/8"	4,814	129.7
1427-01-386-3113	PL81	M39	32-5/8"	5,111	129.7
1427-01-511-2143	PM75	M57	33-3/4"	4,676	134.6
1427-01-649-5369	PMC8	M57A1	33-3/4"	4,755	134.6

NOTE: THE LOAD AS SHOWN IS BASED ON M/LPAs WHICH HAVE A HEIGHT OF 33-3/4" AND WEIGHT OF 4,985 LBS. HEIGHT AND WEIGHT MAY VARY DEPENDING ON THE DODIC/MODEL OF M/LPAs IN THE LOAD.



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD STRUT ASSEMBLY A (2 REQD). SEE DETAIL ON PAGE 6. NAIL TO FORWARD BLOCKING ASSEMBLY W/2-12d NAILS AT EACH JOINT.
- ② FORWARD BLOCKING ASSEMBLY A (1 REQD). SEE DETAIL ON PAGE 5.
- ③ SPREADER PIECE, 2' X 4" X 7'-7" (2 REQD). NAIL TO FORWARD STRUT ASSEMBLY W/2-10d NAILS AT EACH END.
- ④ SIDE FILL ASSEMBLY A (2 REQD). PLACE BETWEEN LIFTING RINGS OF CONTAINERS. SEE DETAIL ON PAGE 7.
- ⑤ TIE WIRE, .0800" DIA WIRE 24" LONG (6 REQD). INSTALL TO LOOP AROUND THE FILL ASSEMBLY AND THE CONTAINER FRAME.
- ⑥ CENTER FILL ASSEMBLY A (1 REQD). PLACE BETWEEN LIFTING RINGS OF CONTAINERS. SEE DETAIL ON PAGE 7.
- ⑦ REAR BLOCKING ASSEMBLY A (1 REQD). SEE DETAIL ON PAGE 6.
- ⑧ DOOR POST VERTICAL A (2 REQD). SEE DETAIL ON PAGE 12.
- ⑨ UNIVERSAL LOAD RETAINER (6 REQD, 3 PER SIDE). NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/2-10d NAILS. SEE DEPARTMENT OF THE ARMY DRAWING DA-116, GENERAL NOTE "O" ON PAGE 2, AND "DETAIL A" ON PAGE 16.
- ⑩ DOOR SPANNER, 4" X 4" BY CUT-TO-FIT FOR A DRIVE FIT (REF: 7'-1/2") (4 REQD). TOENAIL TO THE DOOR POST VERTICAL W/2-12d NAILS AT EACH END. SEE THE "BEVEL CUT" DETAIL ON PAGE 16. AFTER INSTALLING THE BOTTOM AND TOP SPANNERS, THE STRUTS ARE TO BE INSTALLED.
- ⑪ STRUT, 4" X 4" BY CUT-TO-FIT (REF: 23-5/8") (8 REQD). TOENAIL TO THE REAR BLOCKING ASSEMBLY AND THE DOOR POST VERTICAL W/2-12d NAILS AT EACH END. SEE THE "BEVEL CUT" DETAIL ON PAGE 16.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	38	19
2" X 4"	213	142
2" X 6"	159	159
4" X 4"	76	102
NAILS	NO. REQD	POUNDS
10d (3")	336	5.2
12d (3-1/4")	64	1.1
16d (3-1/2")	96	2.1
PLYWOOD, 1/2" - -	1.68 SQ FT REQD - - -	2.3 LBS
UNIVERSAL LOAD RETAINER - -	6 REQD - - -	39 LBS
TIE WIRE, 0.0800" DIA - -	12 LN FT - - -	0.2 LBS

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
ATACMS M/LPA - - - - -	4 - - - - -	19,940 LBS*
DUNNAGE - - - - -	- - - - -	893 LBS
CONTAINER - - - - -	- - - - -	6,613 LBS

TOTAL WEIGHT - - - - - 27,446 LBS (APPROX)

*SEE NOTE ABOVE

SPACER (AS REQUIRED). SEE THE DETAIL BELOW. POSITION SO AS TO CONTACT THE TOP AND BOTTOM RAILS ON THE AFT END OF THE M/LPA AND NAIL TO THE LOAD BEARING PIECE W/2-6d NAILS. **NOTE:** SPACERS ARE ONLY REQUIRED WHEN LOADING M/LPAs WITH END COVERS THAT EXTEND BEYOND THE TOP AND BOTTOM RAILS. SPACERS ARE NOT REQUIRED IF THE END COVERS ARE FLUSH WITH OR INSET TO THE RAILS.

UPPER LOAD BEARING PIECE, 2" X 6" X 30" (4 REQD). NAIL THROUGH UPPER FILL PIECE INTO BEAM ASSEMBLIES W/3-16d NAILS AT EACH END.

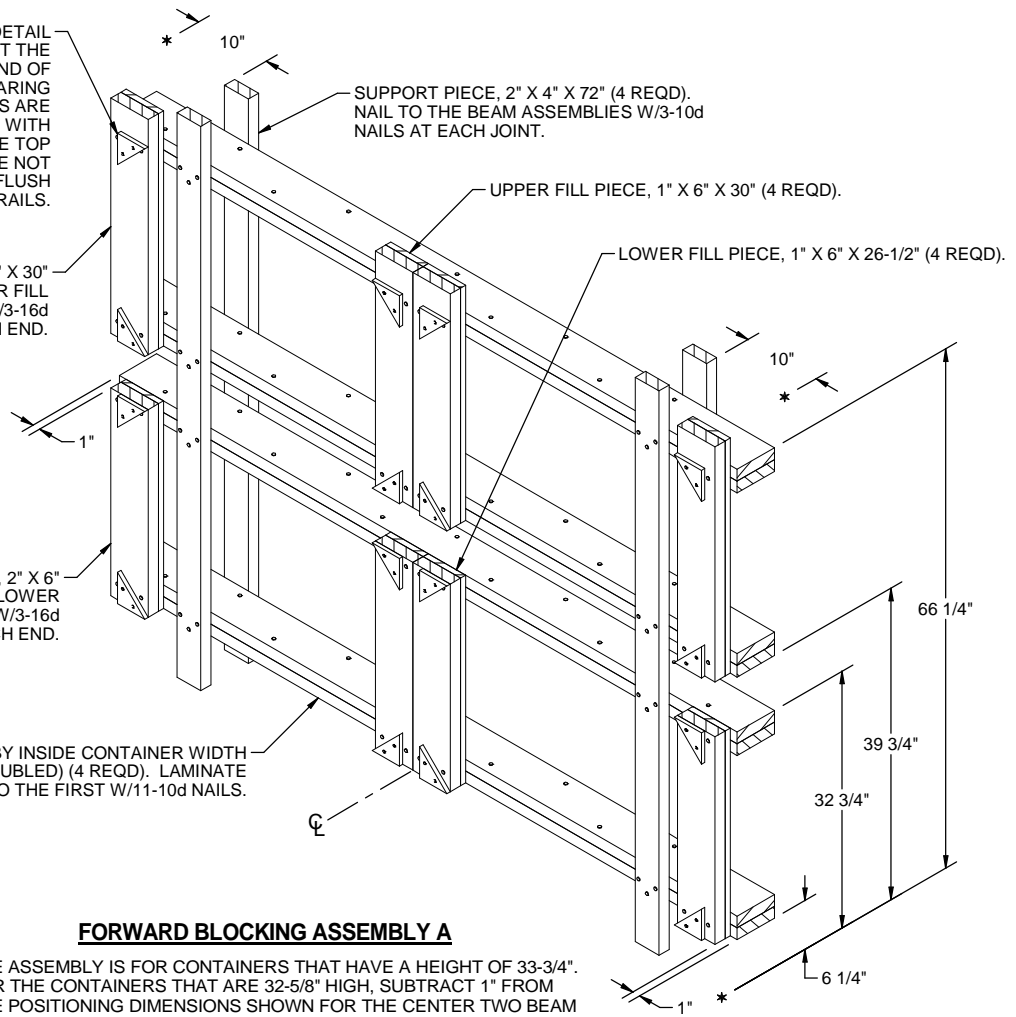
LOWER LOAD BEARING PIECE, 2" X 6" X 26-1/2" (4 REQD). NAIL THROUGH LOWER FILL PIECE INTO BEAM ASSEMBLIES W/3-16d NAILS AT EACH END.

BEAM ASSEMBLY, 2" X 6" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (DOUBLED) (4 REQD). LAMINATE THE SECOND PIECE TO THE FIRST W/11-10d NAILS.

SUPPORT PIECE, 2" X 4" X 72" (4 REQD). NAIL TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT.

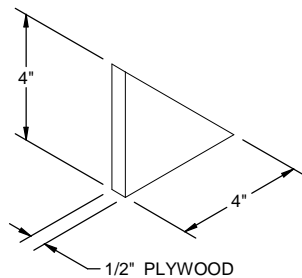
UPPER FILL PIECE, 1" X 6" X 30" (4 REQD).

LOWER FILL PIECE, 1" X 6" X 26-1/2" (4 REQD).



FORWARD BLOCKING ASSEMBLY A

THE ASSEMBLY IS FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4". FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, SUBTRACT 1" FROM THE POSITIONING DIMENSIONS SHOWN FOR THE CENTER TWO BEAM ASSEMBLIES AND 2" FROM THE POSITIONING DIMENSION SHOWN FOR THE TOP BEAM ASSEMBLY.



SPACER

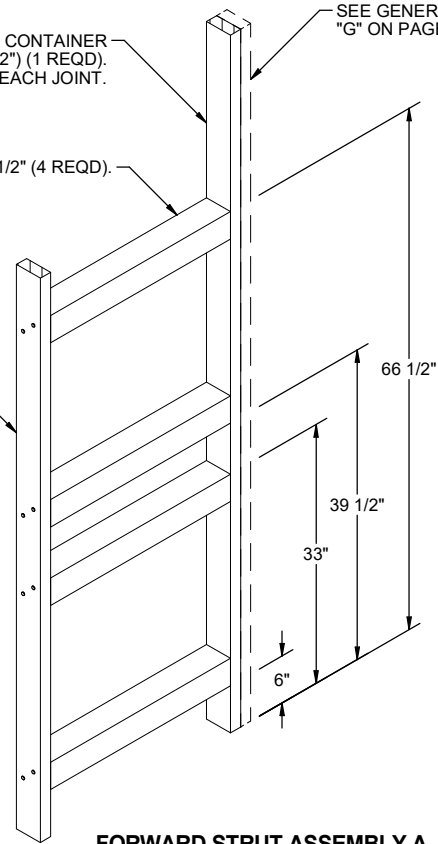
TO PROVIDE ADDITIONAL SPACE BETWEEN THE NEW STYLE AFT END COVER AND THE REAR BLOCKING ASSEMBLY, SPACER PIECES, AS DEPICTED ABOVE MUST BE USED. THE SPACER PIECES SHALL BE LOCATED SO THAT THEY CONTACT EITHER THE BOTTOM OR TOP RAIL OF THE M/LPA. **NOTE:** SPACERS ARE ONLY REQUIRED AT THE FORWARD END OF THE ASSEMBLIES.

BUFFER PIECE, 2" X 4" BY INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-5 1/2") (1 REQD). NAIL TO THE STRUTS W/2-10d NAILS AT EACH JOINT.

SEE GENERAL NOTE "G" ON PAGE 2.

STRUT, 4" X 4" X 26-1/2" (4 REQD).

VERTICAL PIECE, 2" X 4" X 72" (1 REQD). NAIL TO THE STRUTS W/2-10d NAILS AT EACH JOINT.



FORWARD STRUT ASSEMBLY A

THE ASSEMBLY IS FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4". FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, SUBTRACT 1" FROM THE POSITIONING DIMENSIONS SHOWN FOR THE CENTER TWO STRUTS AND 2" FROM THE POSITIONING DIMENSIONS SHOWN FOR THE TOP STRUT.

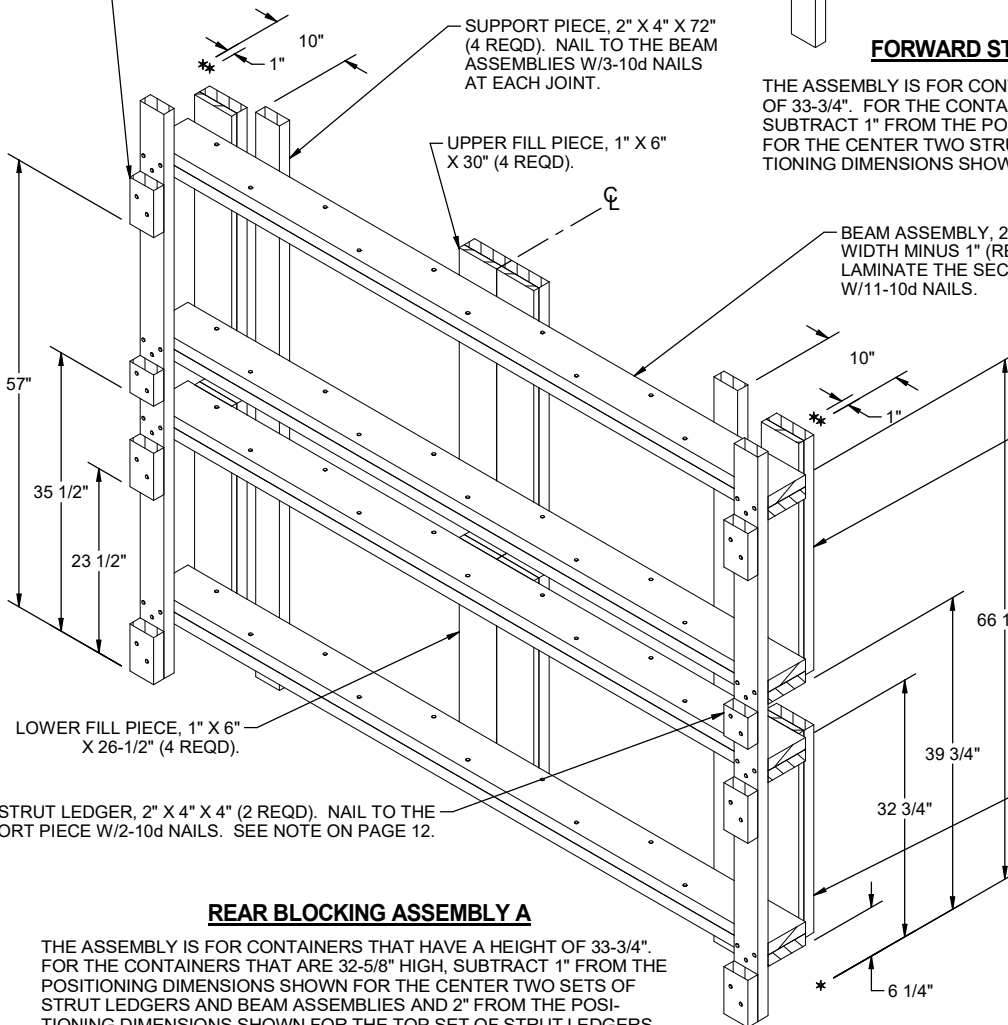
STRUT LEDGER, 2" X 4" X 6" (6 REQD). NAIL TO THE SUPPORT PIECE W/2-10d NAILS. SEE NOTE ON PAGE 12.

SUPPORT PIECE, 2" X 4" X 72" (4 REQD). NAIL TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT.

UPPER FILL PIECE, 1" X 6" X 30" (4 REQD).

BEAM ASSEMBLY, 2" X 6" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (DOUBLED) (4 REQD). LAMINATE THE SECOND PIECE TO THE FIRST W/11-10d NAILS.

UPPER LOAD BEARING PIECE, 2" X 6" X 30" (4 REQD). NAIL THROUGH UPPER FILL PIECE INTO BEAM ASSEMBLIES W/3-16d NAILS AT EACH END.



REAR BLOCKING ASSEMBLY A

THE ASSEMBLY IS FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4". FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, SUBTRACT 1" FROM THE POSITIONING DIMENSIONS SHOWN FOR THE CENTER TWO SETS OF STRUT LEDGERS AND BEAM ASSEMBLIES AND 2" FROM THE POSITIONING DIMENSIONS SHOWN FOR THE TOP SET OF STRUT LEDGERS AND BEAM ASSEMBLY.

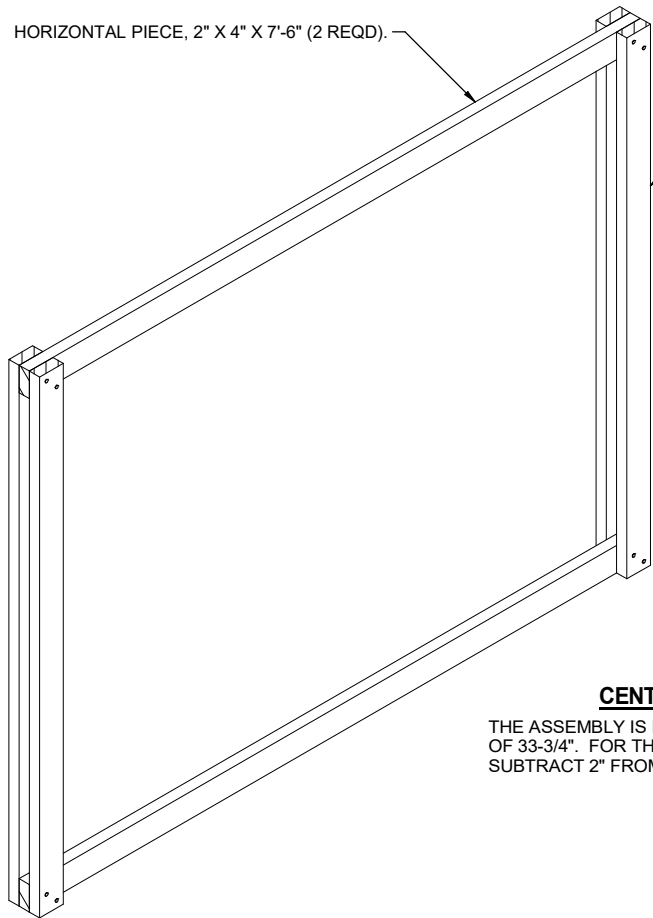
STRUT LEDGER, 2" X 4" X 4" (2 REQD). NAIL TO THE SUPPORT PIECE W/2-10d NAILS. SEE NOTE ON PAGE 12.

LOWER FILL PIECE, 1" X 6" X 26-1/2" (4 REQD).

LOWER LOAD BEARING PIECE, 2" X 6" X 26-1/2" (4 REQD). NAIL THROUGH LOWER FILL PIECE INTO BEAM ASSEMBLIES W/3-16d NAILS AT EACH END.

HORIZONTAL PIECE, 2" X 4" X 7'-6" (2 REQD).

VERTICAL PIECE, 2" X 4" X 69" (4 REQD).
NAIL TO THE HORIZONTAL PIECES
W/2-10d NAILS AT EACH END.



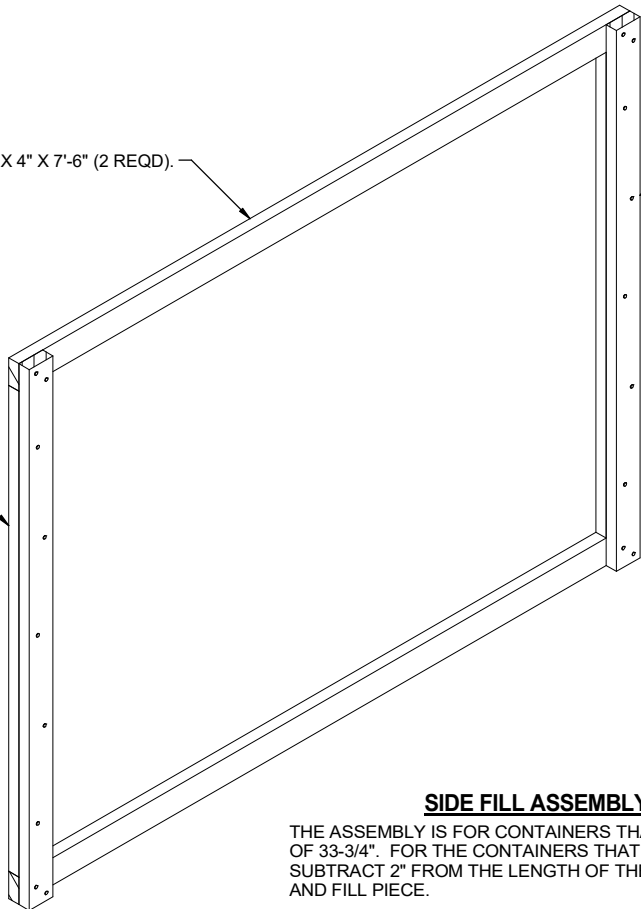
CENTER FILL ASSEMBLY A

THE ASSEMBLY IS FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4". FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, SUBTRACT 2" FROM THE LENGTH OF THE VERTICAL PIECE.

HORIZONTAL PIECE, 2" X 4" X 7'-6" (2 REQD).

VERTICAL PIECE, 2" X 4" X 69" (2 REQD).
NAIL TO THE HORIZONTAL PIECES
W/2-10d NAILS AT EACH END AND TO
THE FILL PIECE W/5-10d NAILS.

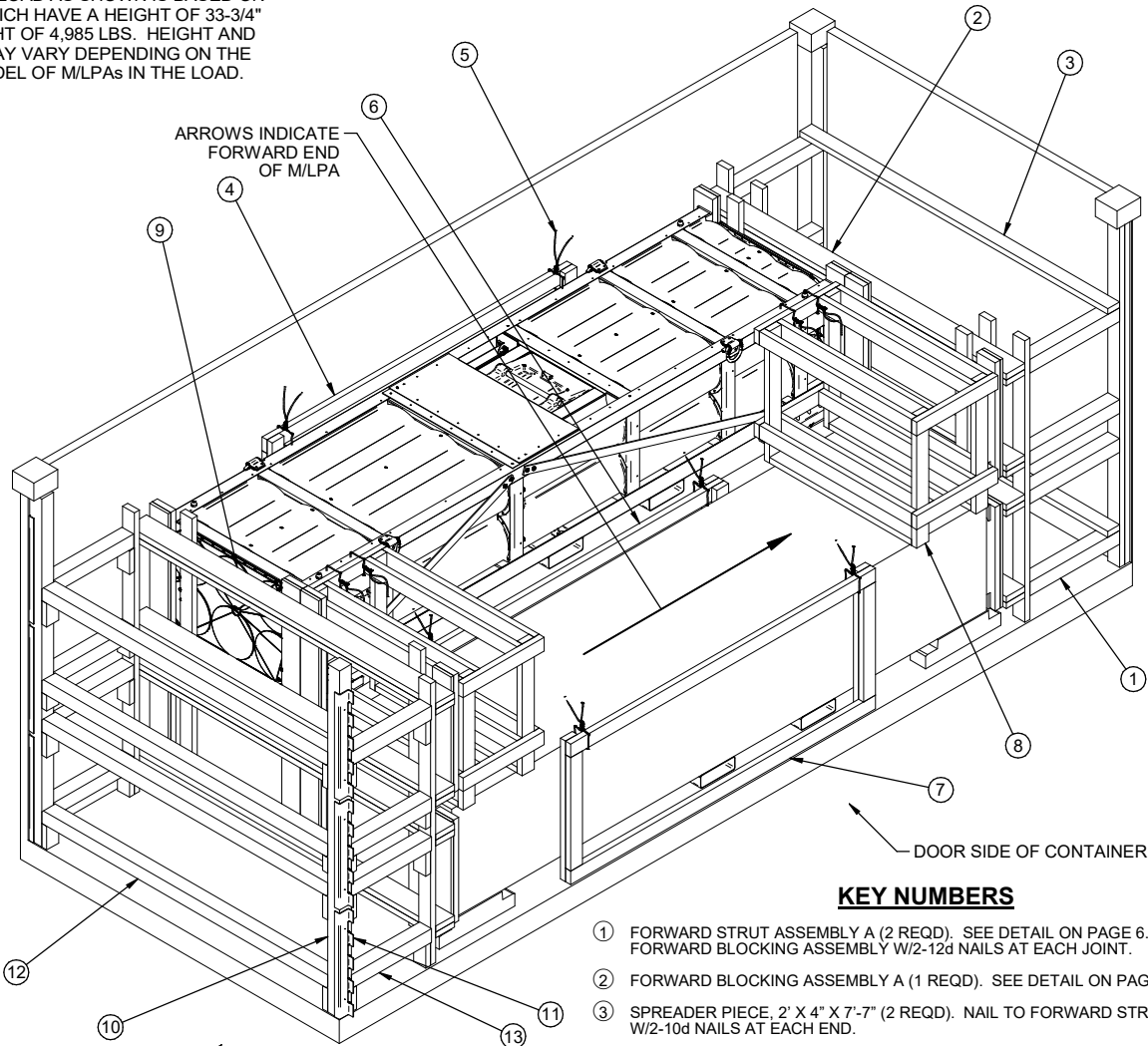
FILL PIECE, 2" X 4" X 62" (2 REQD).



SIDE FILL ASSEMBLY A

THE ASSEMBLY IS FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4". FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, SUBTRACT 2" FROM THE LENGTH OF THE VERTICAL PIECE AND FILL PIECE.

NOTE: THE LOAD AS SHOWN IS BASED ON M/LPAs WHICH HAVE A HEIGHT OF 33-3/4" AND WEIGHT OF 4,985 LBS. HEIGHT AND WEIGHT MAY VARY DEPENDING ON THE DODIC/MODEL OF M/LPAs IN THE LOAD.



ARROWS INDICATE FORWARD END OF M/LPA

DOOR SIDE OF CONTAINER

KEY NUMBERS

- ① FORWARD STRUT ASSEMBLY A (2 REQD). SEE DETAIL ON PAGE 6. NAIL TO FORWARD BLOCKING ASSEMBLY W/2-12d NAILS AT EACH JOINT.
- ② FORWARD BLOCKING ASSEMBLY A (1 REQD). SEE DETAIL ON PAGE 5.
- ③ SPREADER PIECE, 2' X 4' X 7'-7" (2 REQD). NAIL TO FORWARD STRUT ASSEMBLY W/2-10d NAILS AT EACH END.
- ④ SIDE FILL ASSEMBLY A (1 REQD). PLACE BETWEEN LIFTING RINGS OF CONTAINERS. SEE DETAIL ON PAGE 7.
- ⑤ TIE WIRE, .0800" DIA WIRE 24" LONG (10 REQD). INSTALL TO LOOP AROUND THE FILL ASSEMBLY OR FILLER ASSEMBLY AND THE CONTAINER FRAME.
- ⑥ CENTER FILL ASSEMBLY B (1 REQD). PLACE BETWEEN LIFTING RINGS OF CONTAINERS. SEE DETAIL ON PAGE 9.
- ⑦ SIDE FILL ASSEMBLY B (1 REQD). PLACE BETWEEN LIFTING RINGS OF CONTAINERS. SEE DETAIL ON PAGE 9.
- ⑧ FILLER ASSEMBLY A (2 REQD). SEE DETAIL ON PAGE 9.
- ⑨ REAR BLOCKING ASSEMBLY A (1 REQD). SEE DETAIL ON PAGE 6.
- ⑩ DOOR POST VERTICAL A (2 REQD). SEE DETAIL ON PAGE 12.
- ⑪ UNIVERSAL LOAD RETAINER (6 REQD, 3 PER SIDE). NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/2-10d NAILS. SEE DEPARTMENT OF THE ARMY DRAWING DA-116, GENERAL NOTE "O" ON PAGE 2, AND "DETAIL A" ON PAGE 16.
- ⑫ DOOR SPANNER, 4" X 4" BY CUT-TO-FIT FOR A DRIVE FIT (REF: 7'-1/2") (4 REQD). TOENAIL TO THE DOOR POST VERTICAL W/2-12d NAILS AT EACH END. SEE THE "BEVEL CUT" DETAIL ON PAGE 16. AFTER INSTALLING THE BOTTOM AND TOP SPANNERS, THE STRUTS ARE TO BE INSTALLED.
- ⑬ STRUT, 4" X 4" BY CUT-TO-FIT (REF: 23-5/8") (8 REQD). TOENAIL TO THE REAR BLOCKING ASSEMBLY AND THE DOOR POST VERTICAL W/2-12d NAILS AT EACH END. SEE THE "BEVEL CUT" DETAIL ON PAGE 16.

DOOR END OF CONTAINER

ISOMETRIC VIEW

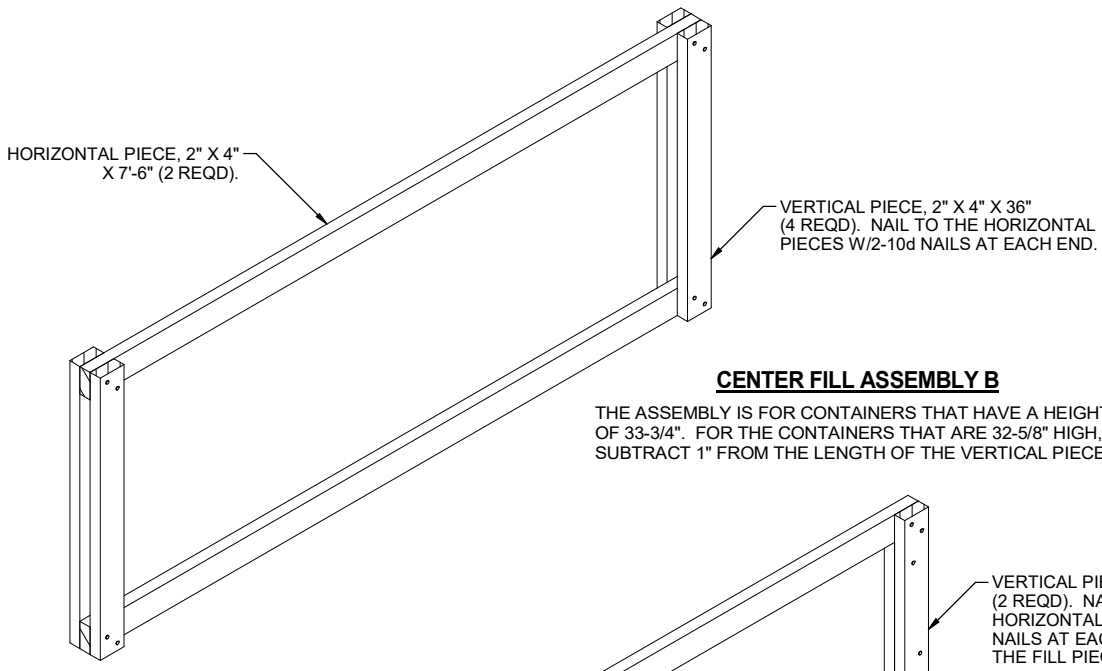
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" x 6"	38	19
2" x 4"	303	202
2" x 6"	159	159
4" x 4"	76	102
NAILS	NO. REQD	POUNDS
10d (3")	444	6.8
12d (3-1/4")	64	1.1
16d (3-1/2")	96	2.1
PLYWOOD, 1/2" - -	1.68 SQ FT REQD	- - - 2.3 LBS
UNIVERSAL LOAD RETAINER - -	6 REQD	- - - 39 LBS
TIE WIRE, 0.0800" DIA - -	20 LN FT	- - - 0.3 LBS

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
ATACMS M/LPA	3	14,955 LBS*
DUNNAGE		1,015 LBS
CONTAINER		6,613 LBS

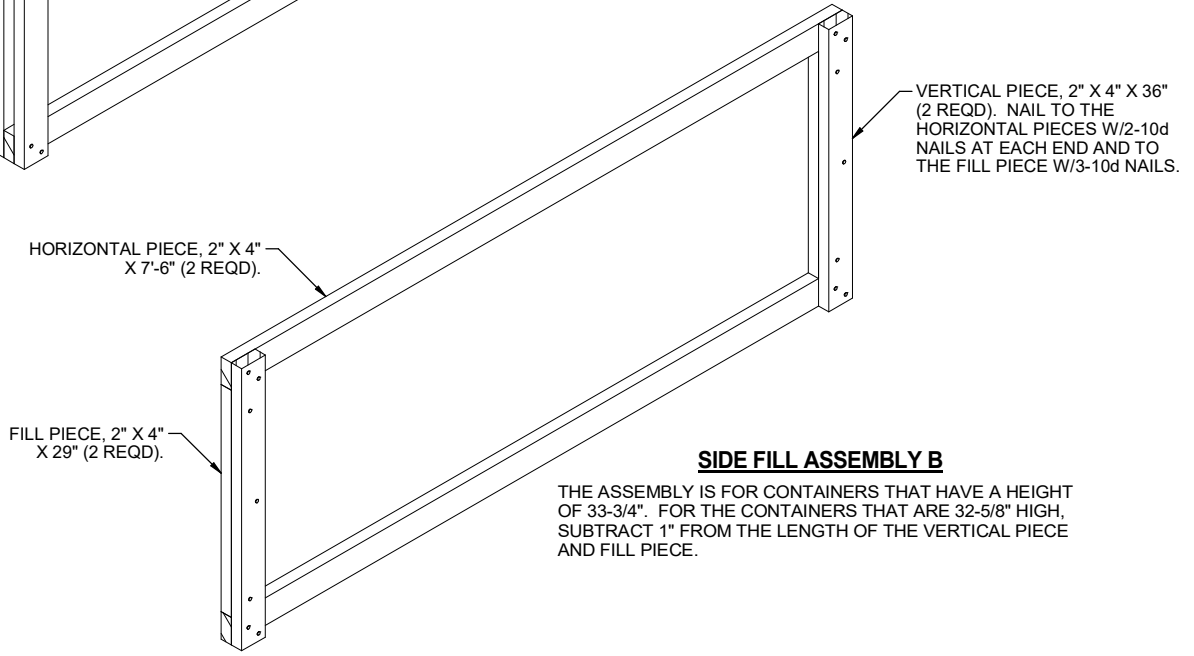
TOTAL WEIGHT - - - - - 22,583 LBS (APPROX)

*SEE NOTE ABOVE



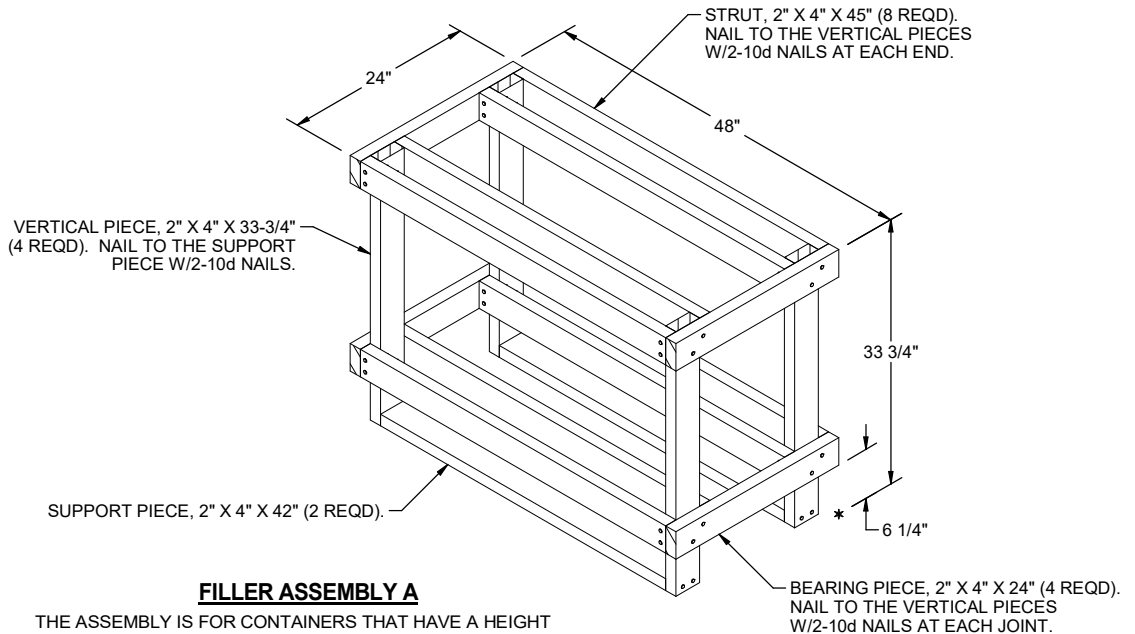
CENTER FILL ASSEMBLY B

THE ASSEMBLY IS FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4". FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, SUBTRACT 1" FROM THE LENGTH OF THE VERTICAL PIECE.



SIDE FILL ASSEMBLY B

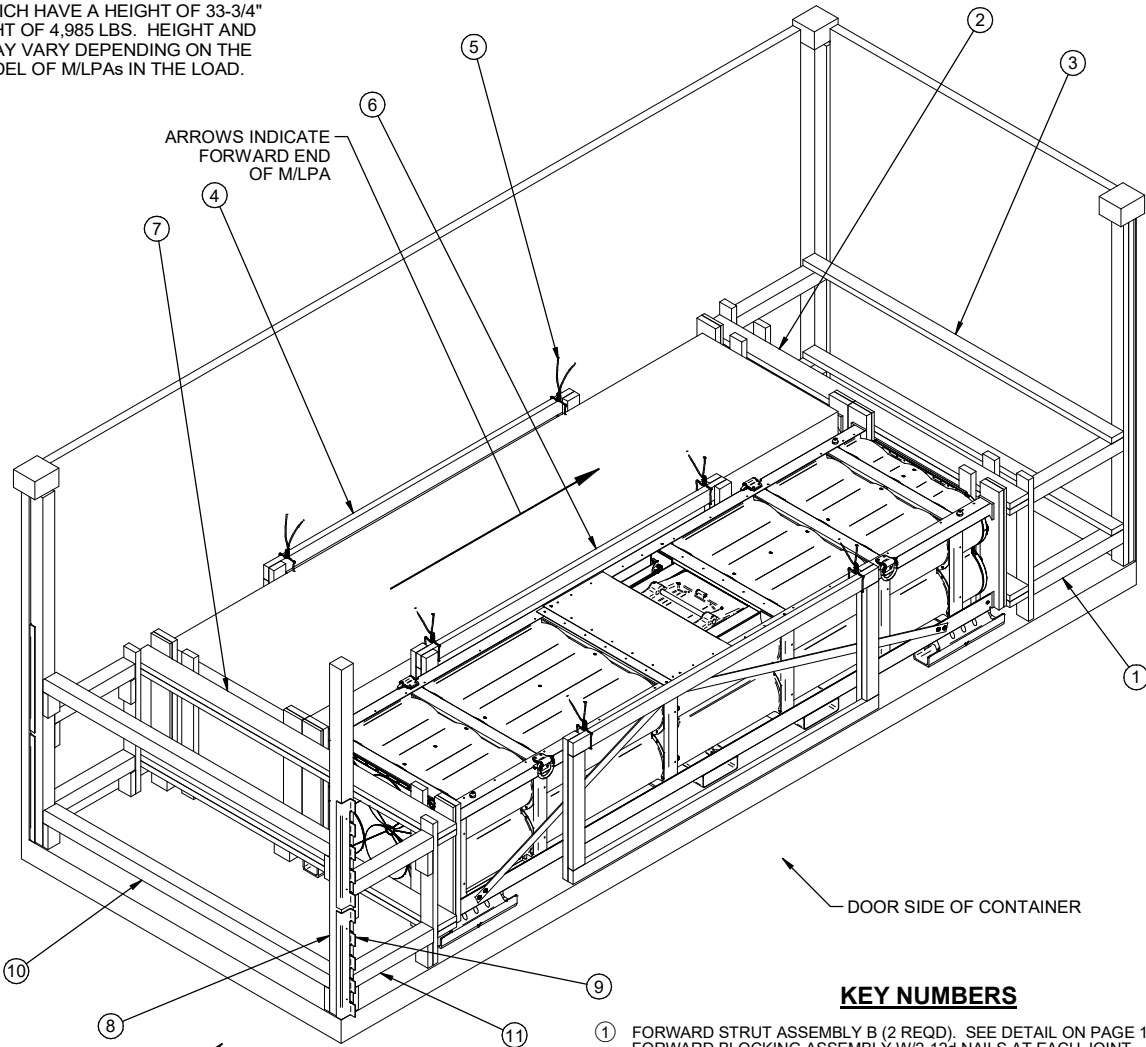
THE ASSEMBLY IS FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4". FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, SUBTRACT 1" FROM THE LENGTH OF THE VERTICAL PIECE AND FILL PIECE.



FILLER ASSEMBLY A

THE ASSEMBLY IS FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4". FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, REDUCE THE LENGTH OF THE VERTICAL PIECE BY 1".

NOTE: THE LOAD AS SHOWN IS BASED ON M/LPAs WHICH HAVE A HEIGHT OF 33-3/4" AND WEIGHT OF 4,985 LBS. HEIGHT AND WEIGHT MAY VARY DEPENDING ON THE DODIC/MODEL OF M/LPAs IN THE LOAD.



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD STRUT ASSEMBLY B (2 REQD). SEE DETAIL ON PAGE 12. NAIL TO FORWARD BLOCKING ASSEMBLY W/2-12d NAILS AT EACH JOINT.
- ② FORWARD BLOCKING ASSEMBLY B (1 REQD). SEE DETAIL ON PAGE 11.
- ③ SPREADER PIECE, 2' X 4" X 7'-7" (2 REQD). NAIL TO FORWARD STRUT ASSEMBLY W/2-10d NAILS AT EACH END.
- ④ SIDE FILL ASSEMBLY B (2 REQD). PLACE BETWEEN LIFTING RINGS OF CONTAINERS. SEE DETAIL ON PAGE 9.
- ⑤ TIE WIRE, .0800" DIA WIRE 24" LONG (6 REQD). INSTALL TO LOOP AROUND THE FILL ASSEMBLY AND THE CONTAINER FRAME.
- ⑥ CENTER FILL ASSEMBLY B (1 REQD). PLACE BETWEEN LIFTING RINGS OF CONTAINERS. SEE DETAIL ON PAGE 9.
- ⑦ REAR BLOCKING ASSEMBLY B (1 REQD). SEE DETAIL ON PAGE 11.
- ⑧ DOOR POST VERTICAL B (2 REQD). SEE DETAIL ON PAGE 12.
- ⑨ UNIVERSAL LOAD RETAINER (4 REQD, 2 PER SIDE). NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/2-10d NAILS. SEE DEPARTMENT OF THE ARMY DRAWING DA-116, GENERAL NOTE "O" ON PAGE 2, AND "DETAIL A" ON PAGE 16.
- ⑩ DOOR SPANNER, 4" X 4" BY CUT-TO-FIT FOR A DRIVE FIT (REF: 7'-1/2") (2 REQD). TOENAIL TO THE DOOR POST VERTICAL W/2-12d NAILS AT EACH END. SEE THE "BEVEL CUT" DETAIL ON PAGE 16.
- ⑪ STRUT, 4" X 4" BY CUT-TO-FIT (REF: 23-5/8") (4 REQD). TOENAIL TO THE REAR BLOCKING ASSEMBLY AND THE DOOR POST VERTICAL W/2-12d NAILS AT EACH END. SEE THE "BEVEL CUT" DETAIL ON PAGE 16.

BILL OF MATERIAL

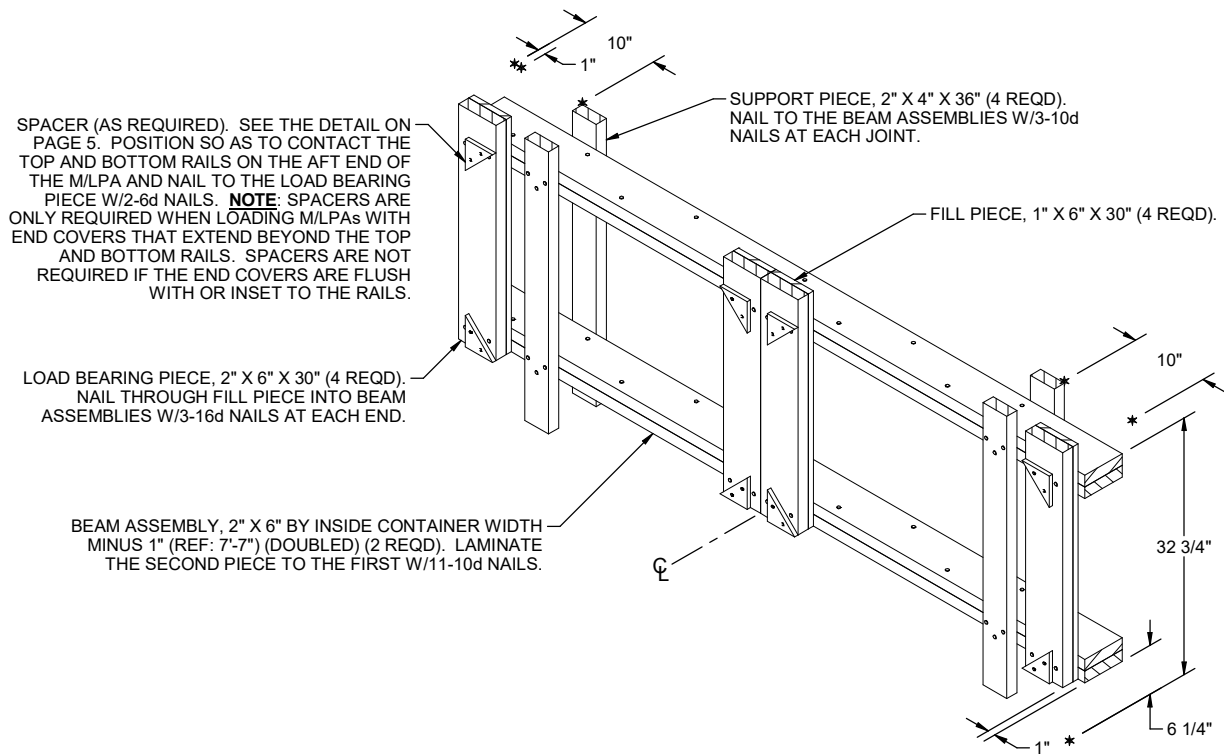
LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	20	10
2" X 4"	145	97
2" X 6"	81	81
4" X 4"	46	61
NAILS	NO. REQD	POUNDS
10d (3")	192	3
12d (3-1/4")	32	0.5
16d (3-1/2")	48	1
PLYWOOD, 1/2" - -	0.84 SQ FT REQD	- - - 1.2 LBS
UNIVERSAL LOAD RETAINER - -	4 REQD	- - - 26 LBS
TIE WIRE, 0.0800" DIA - -	12 LN FT	- - - 0.2 LBS

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
ATACMS M/LPA	2	9,970 LBS*
DUNNAGE		528 LBS
CONTAINER		6,613 LBS

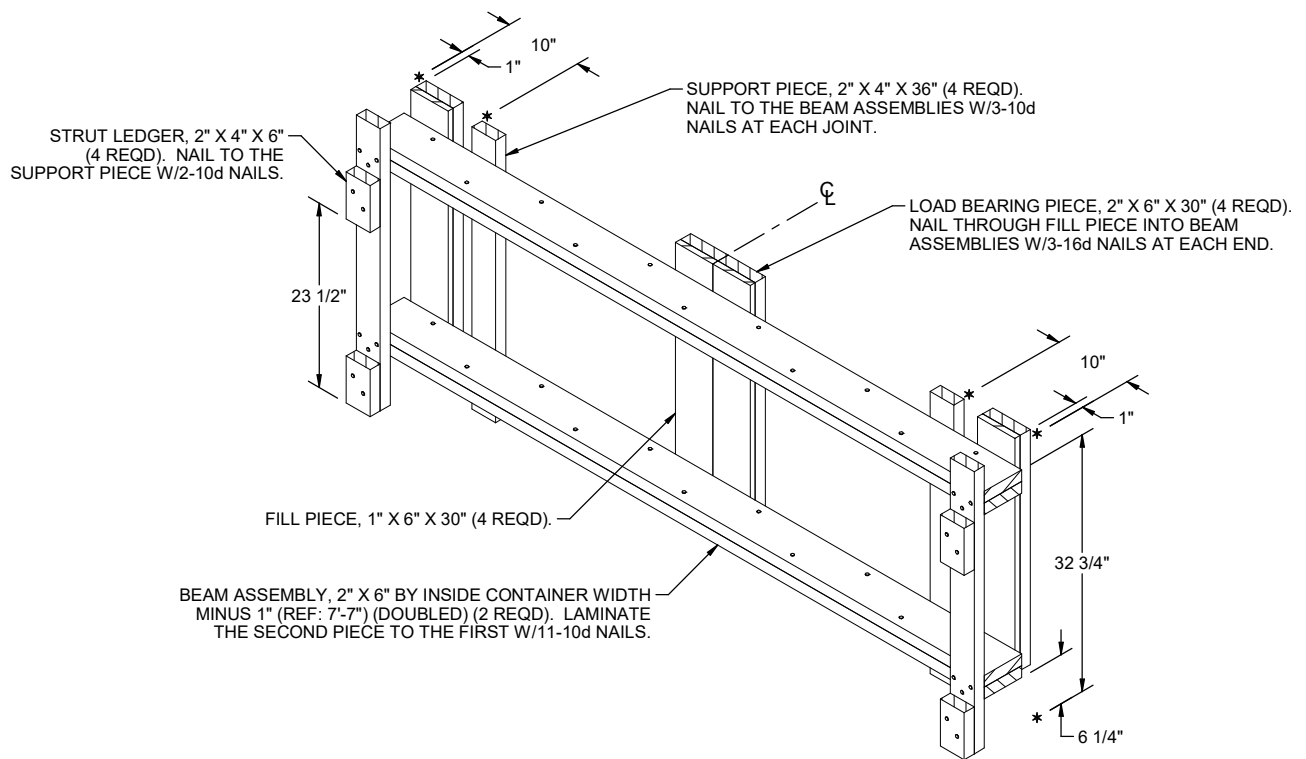
TOTAL WEIGHT - - - - - 17,111 LBS (APPROX)

*SEE NOTE ABOVE



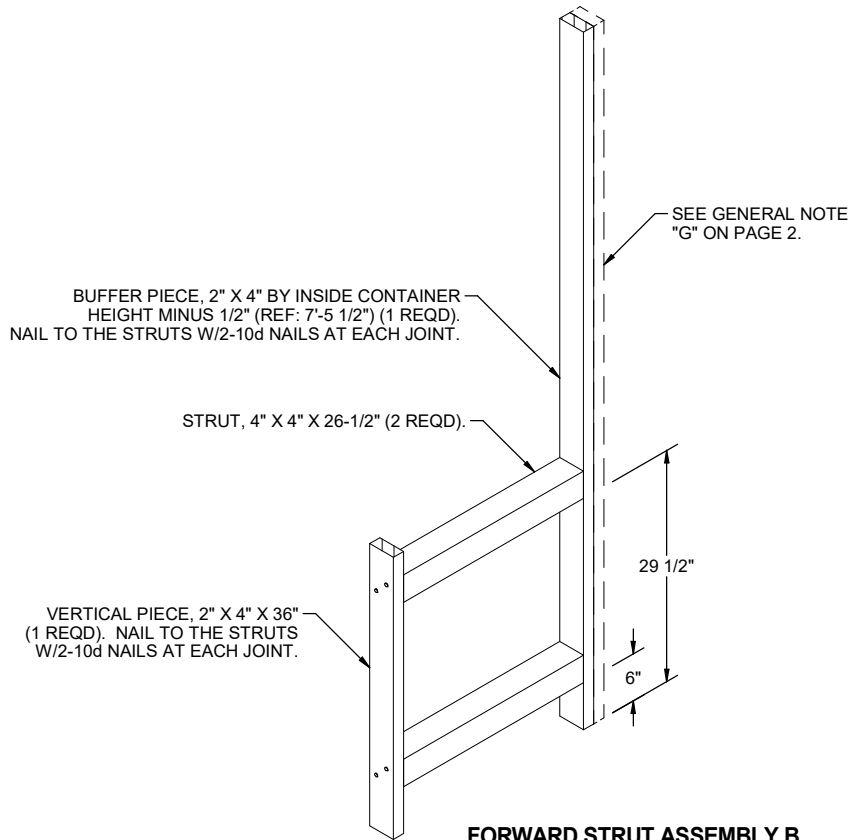
FORWARD BLOCKING ASSEMBLY B

THE ASSEMBLY IS FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4". FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, SUBTRACT 1" FROM THE POSITIONING DIMENSION SHOWN FOR THE TOP BEAM ASSEMBLY.



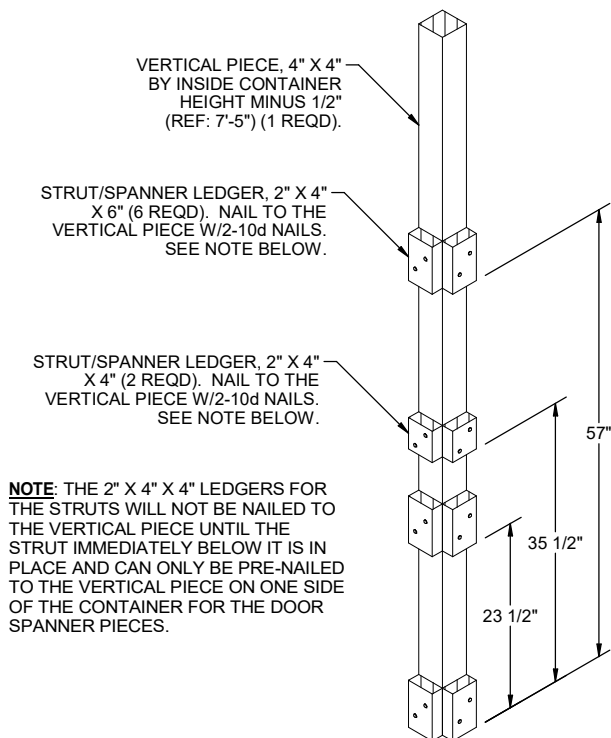
REAR BLOCKING ASSEMBLY B

THE ASSEMBLY IS FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4". FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, SUBTRACT 1" FROM THE POSITIONING DIMENSIONS SHOWN FOR THE TOP SET OF STRUT LEDGERS AND BEAM ASSEMBLY.



FORWARD STRUT ASSEMBLY B

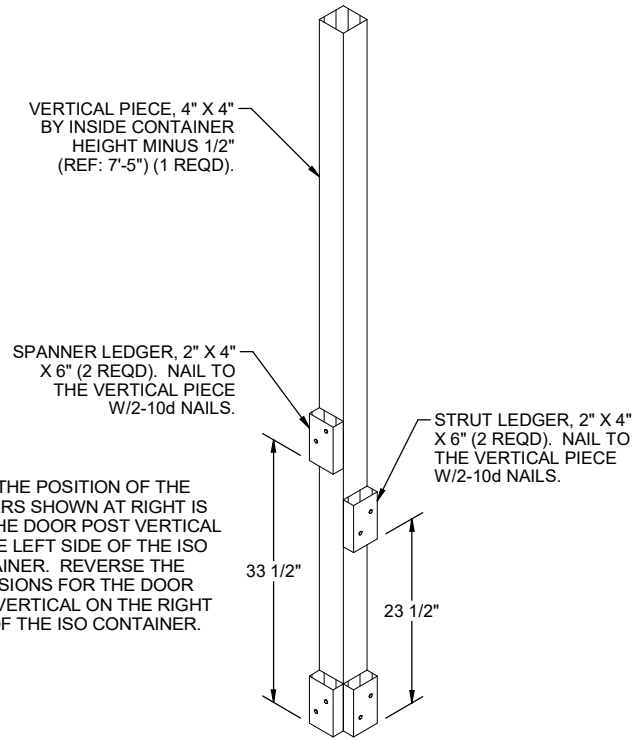
THE ASSEMBLY IS FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4". FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, SUBTRACT 1" FROM THE POSITIONING DIMENSION OF THE TOP STRUT.



NOTE: THE 2" X 4" X 4" LEDGERS FOR THE STRUTS WILL NOT BE NAILED TO THE VERTICAL PIECE UNTIL THE STRUT IMMEDIATELY BELOW IT IS IN PLACE AND CAN ONLY BE PRE-NAILED TO THE VERTICAL PIECE ON ONE SIDE OF THE CONTAINER FOR THE DOOR SPANNER PIECES.

DOOR POST VERTICAL A

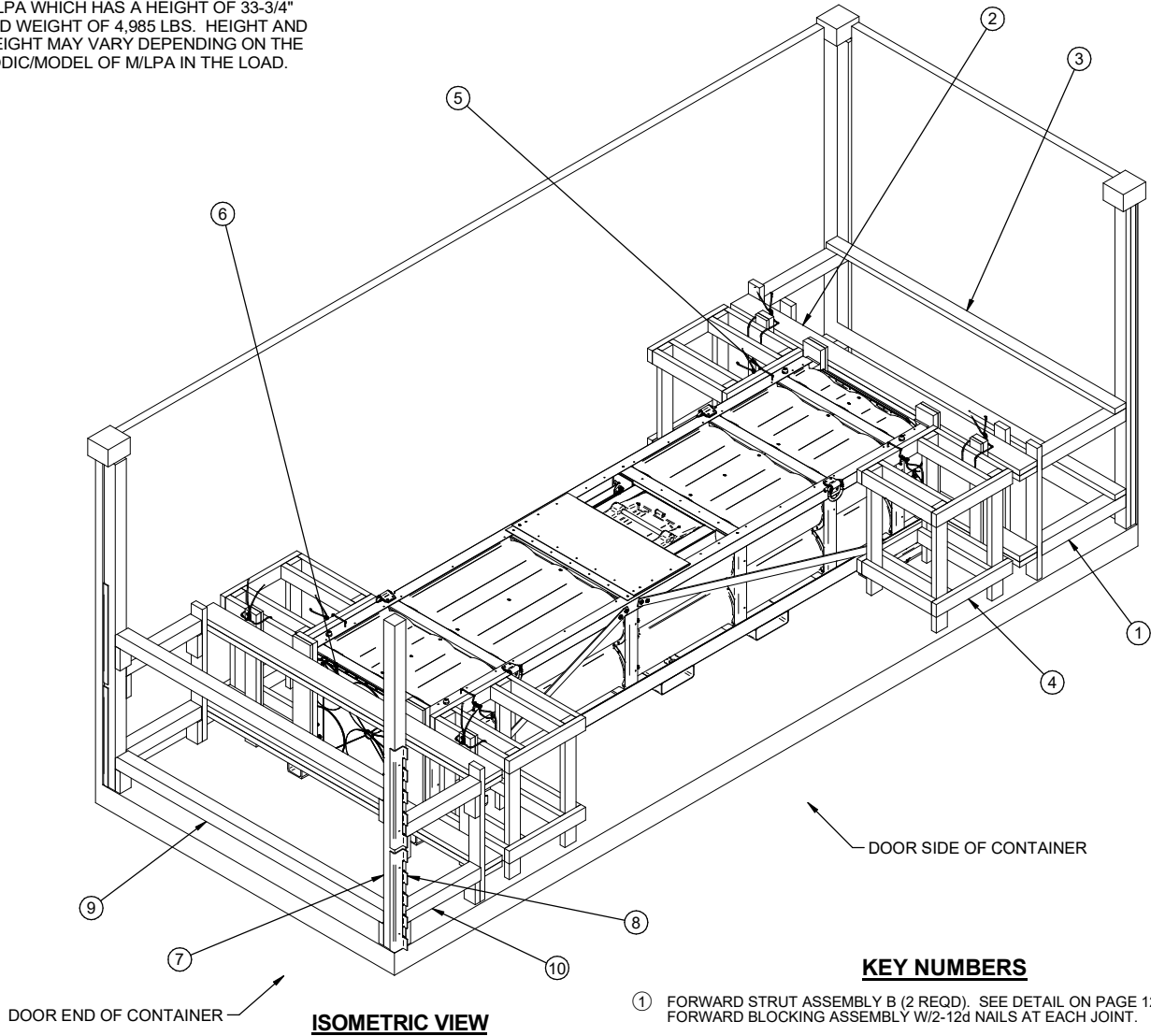
THE DIMENSIONS SHOWN ARE FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4". FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, SUBTRACT 1" FROM THE POSITIONING DIMENSION SHOWN FOR THE CENTER FOUR LEDGERS AND 2" FROM THE POSITIONING DIMENSIONS SHOWN FOR THE UPPER TWO LEDGERS.



DOOR POST VERTICAL B

THE DIMENSIONS SHOWN ARE FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4". FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, SUBTRACT 1" FROM THE POSITIONING DIMENSION SHOWN FOR THE UPPER STRUT LEDGER.

NOTE: THE LOAD AS SHOWN IS BASED ON M/LPA WHICH HAS A HEIGHT OF 33-3/4" AND WEIGHT OF 4,985 LBS. HEIGHT AND WEIGHT MAY VARY DEPENDING ON THE DODIC/MODEL OF M/LPA IN THE LOAD.



KEY NUMBERS

- ① FORWARD STRUT ASSEMBLY B (2 REQD). SEE DETAIL ON PAGE 12. NAIL TO FORWARD BLOCKING ASSEMBLY W/2-12d NAILS AT EACH JOINT.
- ② FORWARD BLOCKING ASSEMBLY C (1 REQD). SEE DETAIL ON PAGE 14.
- ③ SPREADER PIECE, 2" X 4" X 7'-7" (2 REQD). NAIL TO FORWARD STRUT ASSEMBLY W/2-10d NAILS AT EACH END.
- ④ FILLER ASSEMBLY B (4 REQD). WIRE TIE TO CONTAINER AND FORWARD OR REAR BLOCKING ASSEMBLY. SEE DETAIL ON PAGE 15.
- ⑤ TIE WIRE, .0800" DIA WIRE 24" LONG (8 REQD). INSTALL TO LOOP AROUND THE FILLER ASSEMBLY AND EITHER THE CONTAINER FRAME OR BLOCKING ASSEMBLY AS SHOWN.
- ⑥ REAR BLOCKING ASSEMBLY C (1 REQD). SEE DETAIL ON PAGE 14.
- ⑦ DOOR POST VERTICAL B (2 REQD). SEE DETAIL ON PAGE 12.
- ⑧ UNIVERSAL LOAD RETAINER (4 REQD, 2 PER SIDE). NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/2-10d NAILS. SEE DEPARTMENT OF THE ARMY DRAWING DA-116, GENERAL NOTE "O" ON PAGE 2, AND "DETAIL A" ON PAGE 16.
- ⑨ DOOR SPANNER, 4" X 4" BY CUT-TO-FIT FOR A DRIVE FIT (REF: 7'-1/2") (2 REQD). TOENAIL TO THE DOOR POST VERTICAL W/2-12d NAILS AT EACH END. SEE THE "BEVEL CUT" DETAIL ON PAGE 16.
- ⑩ STRUT, 4" X 4" BY CUT-TO-FIT (REF: 23-5/8") (4 REQD). TOENAIL TO THE REAR BLOCKING ASSEMBLY AND THE DOOR POST VERTICAL W/2-12d NAILS AT EACH END. SEE THE "BEVEL CUT" DETAIL ON PAGE 16.

BILL OF MATERIAL

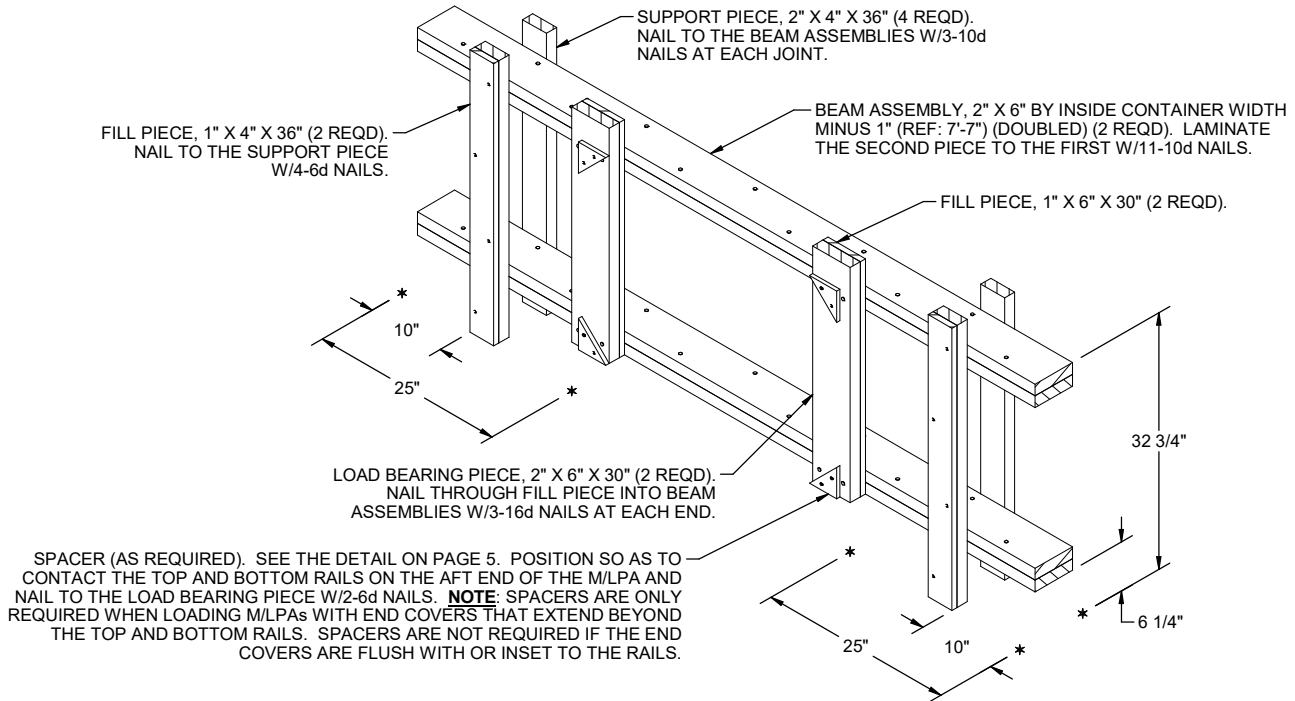
LUMBER	LINEAR FEET	BOARD FEET
1" x 4"	12	4
1" x 6"	10	5
2" x 4"	202	135
2" x 6"	71	71
4" x 4"	46	61
NAILS	NO. REQD	POUNDS
6d (2")	16	0.1
10d (3")	300	4.6
12d (3-1/4")	32	0.5
16d (3-1/2")	24	0.5
PLYWOOD, 1/2" - -	0.42 SQ FT REQD - -	0.58 LBS
UNIVERSAL LOAD RETAINER - -	4 REQD - -	26 LBS
TIE WIRE, 0.0800" DIA - -	16 LN FT - -	0.27 LBS

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
ATACMS M/LPA - - - -	1 - - - - -	4,985 LBS*
DUNNAGE - - - - -	- - - - -	583 LBS
CONTAINER - - - - -	- - - - -	6,613 LBS

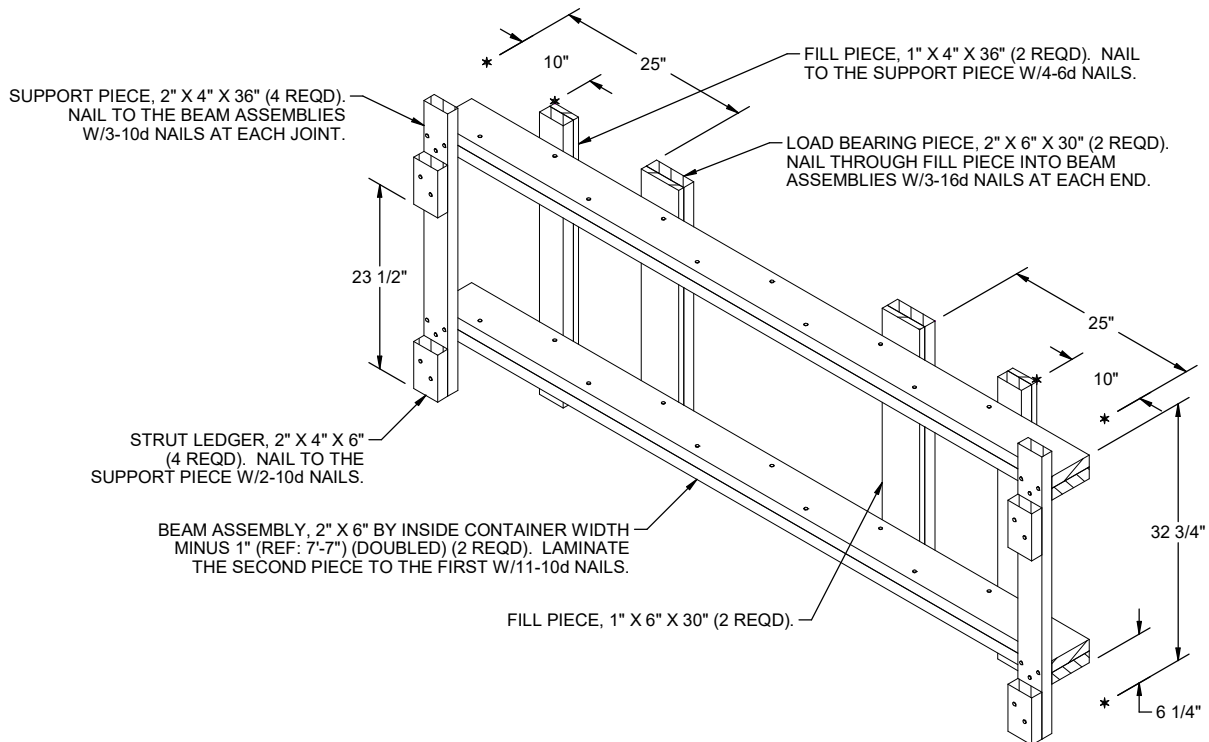
TOTAL WEIGHT - - - - - 12,181 LBS (APPROX)

*SEE NOTE ABOVE



FORWARD BLOCKING ASSEMBLY C

THE ASSEMBLY IS FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4".
FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, SUBTRACT 1" FROM THE POSITIONING DIMENSION SHOWN FOR THE TOP BEAM ASSEMBLY.



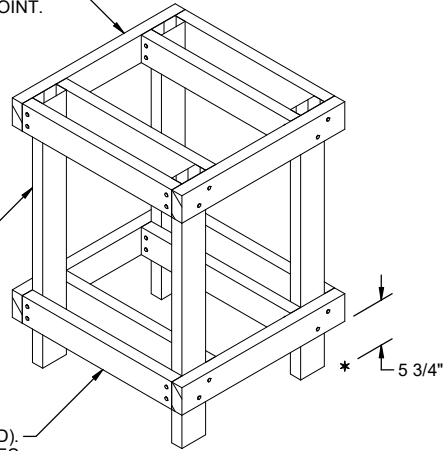
REAR BLOCKING ASSEMBLY C

THE ASSEMBLY IS FOR CONTAINERS THAT HAVE A HEIGHT OF 33-3/4".
FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, SUBTRACT 1" FROM THE POSITIONING DIMENSIONS SHOWN FOR THE TOP SET OF STRUT LEDGERS AND BEAM ASSEMBLY.

BEARING PIECE, 2" X 4" X 24" (4 REQD).
NAIL TO THE VERTICAL PIECES W/2-10d
NAILS AT EACH JOINT.

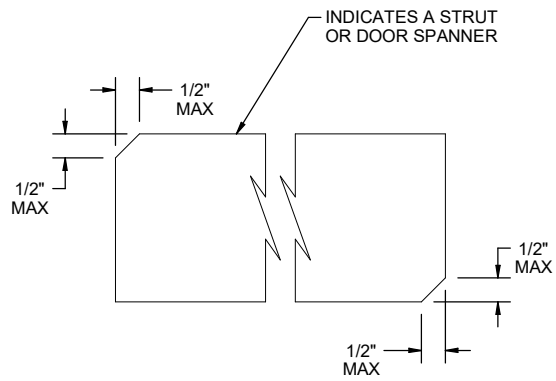
VERTICAL PIECE, 2" X 4"
X 33-3/4" (4 REQD).

STRUT, 2" X 4" X 22" (8 REQD).
NAIL TO THE VERTICAL PIECES
W/2-10d NAILS AT EACH END.



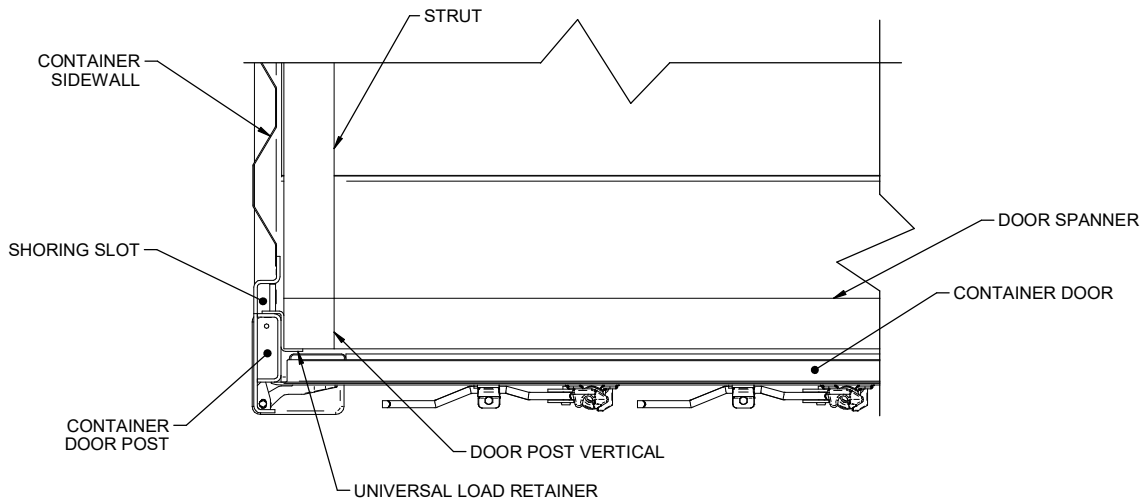
FILLER ASSEMBLY B

THE ASSEMBLY IS FOR CONTAINERS THAT HAVE A HEIGHT OF
33-3/4". FOR THE CONTAINERS THAT ARE 32-5/8" HIGH, REDUCE
THE LENGTH OF THE VERTICAL PIECE BY 1".



BEVEL CUT

IF DESIRED, EACH END OF A STRUT OR DOOR SPANNER MAY BE BEVEL-CUT AS SHOWN ABOVE TO FACILITATE INSTALLING THE STRUTS WITH A "DRIVE" FIT.



DETAIL A

A PARTIAL PLAN VIEW OF THE LEFT REAR PORTION OF THE CONTAINER IS SHOWN DEPICTING THE PROPER POSITION OF THE DOOR POST VERTICAL RETAINER AND ADJACENT DUNNAGE PIECES.