



UNITIZATION PROCEDURES* FOR 5 INCH X 25 INCH SINGLE ROUND CONTAINERS (SRC) ON 4-WAY EN- TRY PALLETS

* CAUTION: THE PROCEDURES DEPICTED HEREIN ARE FOR INTRA-INSTALLATION MOVEMENT ONLY.

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U.S. ARMY MATERIEL COMMAND DRAWING

		<u>CAUTION</u> : VERIFY PRIOR TO USE AT WWW.DAC.ARMY.MIL THAT THIS IS THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 6.		
 WM. TROOPER STUDDERT CMA, NATIONAL MAINTENANCE POINT		DO NOT SCALE		JANUARY 2006
		ENGINEER OR TECHNICIAN	BASIC REV.	
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND  U.S. ARMY DEFENSE AMMUNITION CENTER		TRANSPORTATION ENGINEERING DIVISION		
		VALIDATION ENGINEERING DIVISION		TESTED
		ENGINEERING DIRECTORATE		
				DRAWING
				DA-117/1

GENERAL NOTES

A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1 (CHAPTER 5) AND CONFORMS TO MIL-STD-1660.

B. FOR DETAILS OF THE 5 INCH X 25 INCH SINGLE ROUND CONTAINER, SEE DET DRAWING ACV00640.

CONTAINER DIMENSIONS
BASE OUTSIDE DIAMETER - - - 8.50"
OVERALL LENGTH - - - - - 28.13"
GROSS WEIGHT - - - - - 59 LBS (MAX)

C. DIMENSIONAL LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF A NOMINAL SIZE, UNLESS OTHERWISE SPECIFIED. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE AND 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE.

D. UNLESS OTHERWISE SPECIFIED, A PLUS OR MINUS 1/4" IS ALLOWED ON OVERALL LENGTH AND WIDTH DIMENSIONS OF ANY DUNNAGE ASSEMBLY. HOWEVER, SIMILAR PIECES IN AN ASSEMBLY MUST BE WITHIN 1/8" OF THE SAME DIMENSION. FOR THICKNESS DIMENSIONS, A PLUS ZERO, MINUS 1/8" IS ALLOWED.

E. WHEN ASSEMBLING A PALLET UNIT, CARE SHALL BE TAKEN TO ENSURE THAT THE ASSEMBLIES ARE EVENLY ALIGNED HORIZONTALLY AND VERTICALLY SO THAT THE SIDES AND ENDS OF THE PALLET UNIT DO NOT EXCEED A 1/2" TOLERANCE.

F. DIMENSIONS GIVEN FOR DUNNAGE ASSEMBLIES WILL BE FIELD CHECKED PRIOR TO THEIR ASSEMBLY. CONTAINERS MUST FIT SNUGLY IN THE DUNNAGE ASSEMBLIES. THIS GUIDANCE MUST BE APPLIED PRIOR TO BEGINNING A PALLETIZING OPERATION.

G. THE FOLLOWING AMC DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS DRAWING.

ON-INSTALLATION MOVEMENT- - - 19-48-4306-5-11Q1000
STORAGE - - - - - 19-48-4515-CB1-14-22P4

H. WHEN ASSEMBLING THE PALLET UNIT WITH CONTAINERS, CARE SHOULD BE EXERCISED TO PRECLUDE INTERFERENCE WITH THE VARIOUS DIVIDERS. FILL EACH 4-WIDE ROW COMPLETELY AND PLACE LATERAL DIVIDERS INTO THEIR PROPER LOCATION PRIOR TO STARTING AN ADDITIONAL ROW.

J. THE STYLE 1 PALLET DELINEATED IN THE DETAIL ON PAGE 3 NEED NOT HAVE CHAMFERS OR STRAP SLOTS AS SPECIFIED WITHIN MILITARY SPECIFICATION MIL-P-15011 WHEN USED FOR THE UNITIZATION OF ITEMS COVERED BY THIS DRAWING.

K. LESS-THAN-FULL PALLET UNITS SHOULD HAVE THE CONTAINERS CENTERED ON THE PALLET TO BALANCE THE LOAD.

L. 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.

M. IF LEAKING OR SUSPECT ITEMS COVERED HEREIN ARE UNITIZED PRIOR TO ISSUANCE OF THIS REVISION TO THIS APPENDIX, THE CONTAINERS NEED NOT BE REUNITIZED SOLELY TO CONFORM TO THIS REVISION.

N. CAUTION: DO NOT STACK PALLET UNITS ONE ON TOP OF ANOTHER IN STORAGE OR IN TRANSIT.

MATERIAL SPECIFICATIONS

LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND VOLUNTARY PRODUCT STANDARD PS 20.

NAILS - - - - - : ASTM F1667; COMMON STEEL NAIL (NLCMS OR NLCMSM) AND PALLET NAIL (NLPL-03). ALT (FOR COMMON NAILS ONLY): UNDERLAYMENT NAIL (NLUL), PALLET NAIL (NLPL), OR COOLER NAIL (NLCL) OF SAME SIZE.

PALLET - - - - - : MIL SPEC MIL-P-15011; 4-WAY ENTRY, STYLE 1, TYPE I, CLASS 1, PRESERVATIVE TREATED.

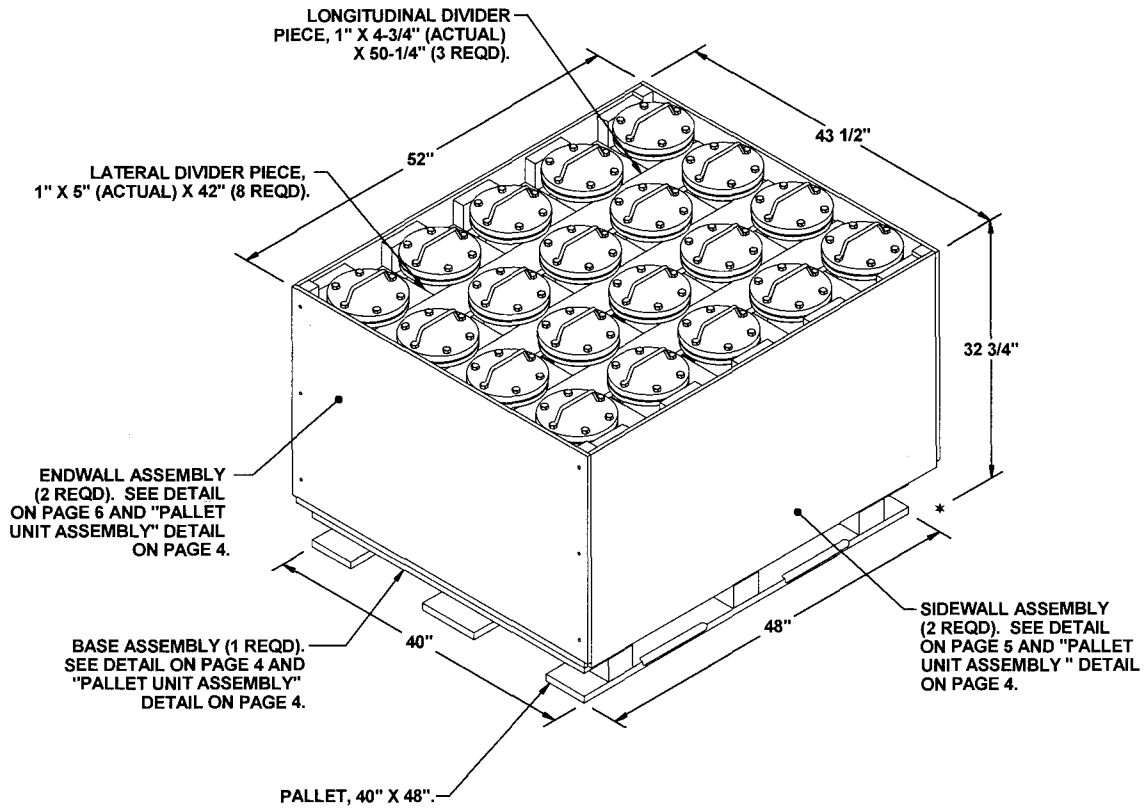
PLYWOOD - - - - - : COMMERCIAL ITEM DESCRIPTION A-A-55057, INDUSTRIAL PLYWOOD, INTERIOR WITH EXTERIOR GLUE, GRADE C-D. IF SPECIFIED GRADE IS NOT AVAILABLE, A BETTER INTERIOR OR AN EXTERIOR GRADE MAY BE SUBSTITUTED.

STAPLE - - - - - : ASTM F1667; STFCs-189 OR STFCs-207, 3/8" CROWN WIDTH X 3/4" LEG.

WIRE, CARBON STEEL - - : ASTM A853; ANNEALED AT FINISH, BLACK OXIDE FINISH, 0.0800" DIA, GRADE 1006 OR BETTER.

WOOD SCREW, LAG - - : COMMERCIAL GRADE; HEX HEAD WOOD SCREW, ZINC PLATE FINISH, LAG SCREW.

WASHER - - - - - : COMMERCIAL GRADE; WASHER, PLAIN, FLAT, ZINC PLATE FINISH.

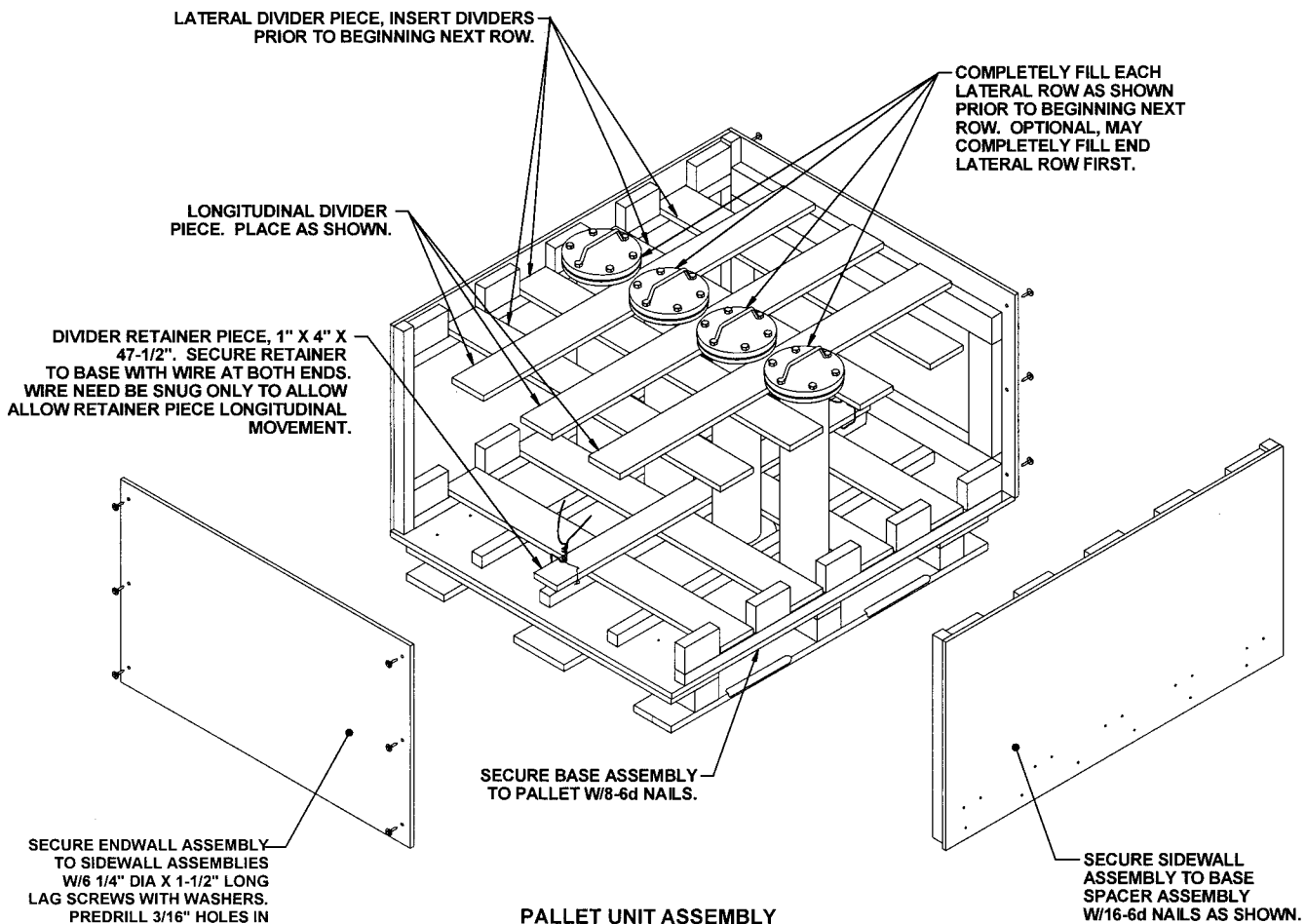


PALLET UNIT

20 5 INCH X 25 INCH SRCs @ 59 LBS	-----	1,180 LBS
DUNNAGE	-----	192 LBS
PALLET	-----	80 LBS

TOTAL WEIGHT ----- 1,452 LBS (APPROX)
 CUBE ----- 42.9 CU FT (APPROX)

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	12.29	4.10
1" X 4-3/4" (ACT)	28.00	11.67
1" X 5" (ACT)	12.60	5.00
2" X 2"	40.33	13.44
2" X 4"	17.83	20.67
NAILS	NO. REQD	POUNDS
6d (2")	150	1
10d (3")	72	1
LAG SCREWS	NO. REQD	POUNDS
1/4" X 1-1/2"	12	1/4
WASHERS	NO. REQD	POUNDS
1/4" FLAT	12	NIL
PALLET, 40" X 48"	1 REQD	80 LBS
PLYWOOD, 1/2"	35.31 FT REQD	48.55 LBS
PLYWOOD, 3/4"	15.35 FT REQD	31.64 LBS
WIRE, .080" DIA	3.00 FT REQD	NIL
STAPLE, 3/8" X 3/4"	2 REQD	NIL

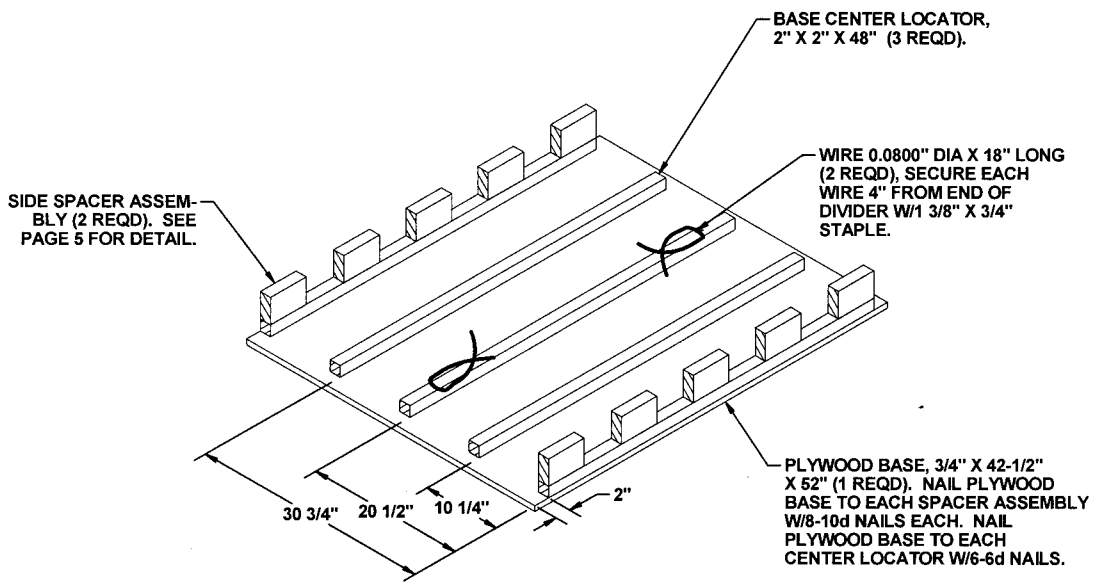


PALLET UNIT ASSEMBLY

REMOVE ONE ENDWALL OF PALLET ASSEMBLY TO ADD OR REMOVE CONTAINERS. REMOVE DIVIDER RETAINER, LONGITUDINAL DIVIDERS AND LATERAL DIVIDERS. FILL PALLET UNIT FROM END (OR CENTER TO MAINTAIN PROPER BALANCE). NOTE: FILL EACH FOUR WIDE LATERAL ROW COMPLETELY BEFORE STARTING NEXT ROW. ADD LATERAL DIVIDERS AS EACH FOUR WIDE LATERAL ROW IS COMPLETED. REASSEMBLE IN REVERSE ORDER.

SECURE ENDWALL ASSEMBLY TO SIDEWALL ASSEMBLIES W/6 1/4" DIA X 1-1/2" LONG LAG SCREWS WITH WASHERS. PREDRILL 3/16" HOLES IN SIDEWALL ASSEMBLY TO REDUCE SPLITTING. NOTE: REMOVE ONLY ONE ENDWALL WHEN LOADING CONTAINERS ONTO PALLET.

SECURE SIDEWALL ASSEMBLY TO BASE SPACER ASSEMBLY W/16-6d NAILS AS SHOWN.



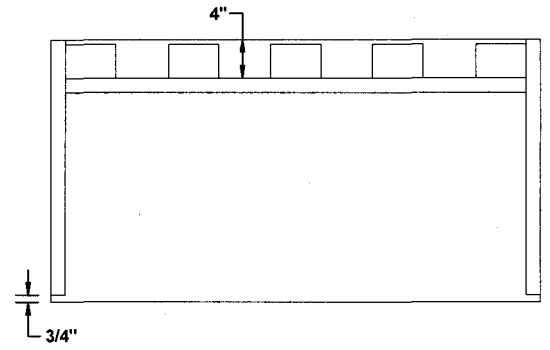
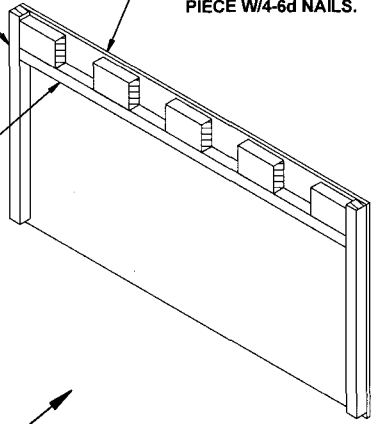
BASE ASSEMBLY

VERTICAL PIECE, 2" X 2" X 26-1/2" (2 REQD).

SIDEWALL PLYWOOD, 1/2" X 27-1/4" X 51" (1 REQD).
 NAIL TO SIDE SPACER ASSEMBLY W/16-6d NAILS.
 NAIL TO EACH VERTICAL PIECE W/4-6d NAILS.

SIDE SPACER ASSEMBLY, (1 REQD). SEE BELOW FOR DETAIL.

VIEW A



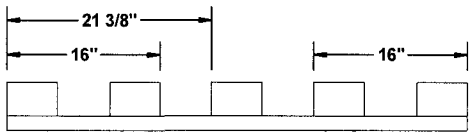
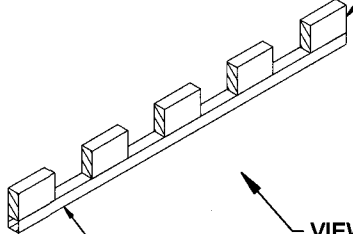
VIEW A

SIDEWALL ASSEMBLY

SPACER 2" X 4" X 5-1/4" (5 REQD).

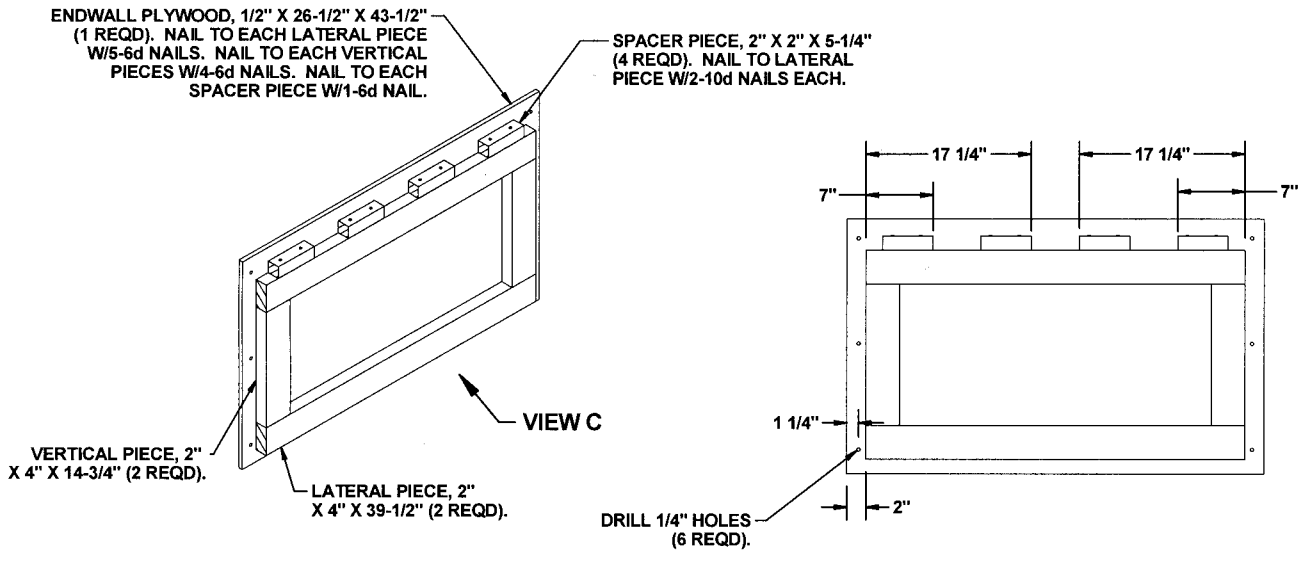
LONGITUDINAL PIECE 2" X 2" X 48" (1 REQD).
 NAIL TO EACH SPACER W/2-10d NAILS.

VIEW B



VIEW B

SIDE SPACER ASSEMBLY



ENDWALL ASSEMBLY

VIEW C