

APPROVED BY
 HAZARDOUS MATERIALS SYSTEMS
 (BOE) ASSOCIATION OF AMERICAN
 RAILROADS
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LOADING AND BRACING^① WITH WOODEN DUNNAGE IN SIDE OPENING COMMERCIAL CONTAINERS OF MAVERICK (AGM-65) MISSILES IN CNU-445/E AND CNU- 447/E SHIPPING AND STORAGE CONTAINERS

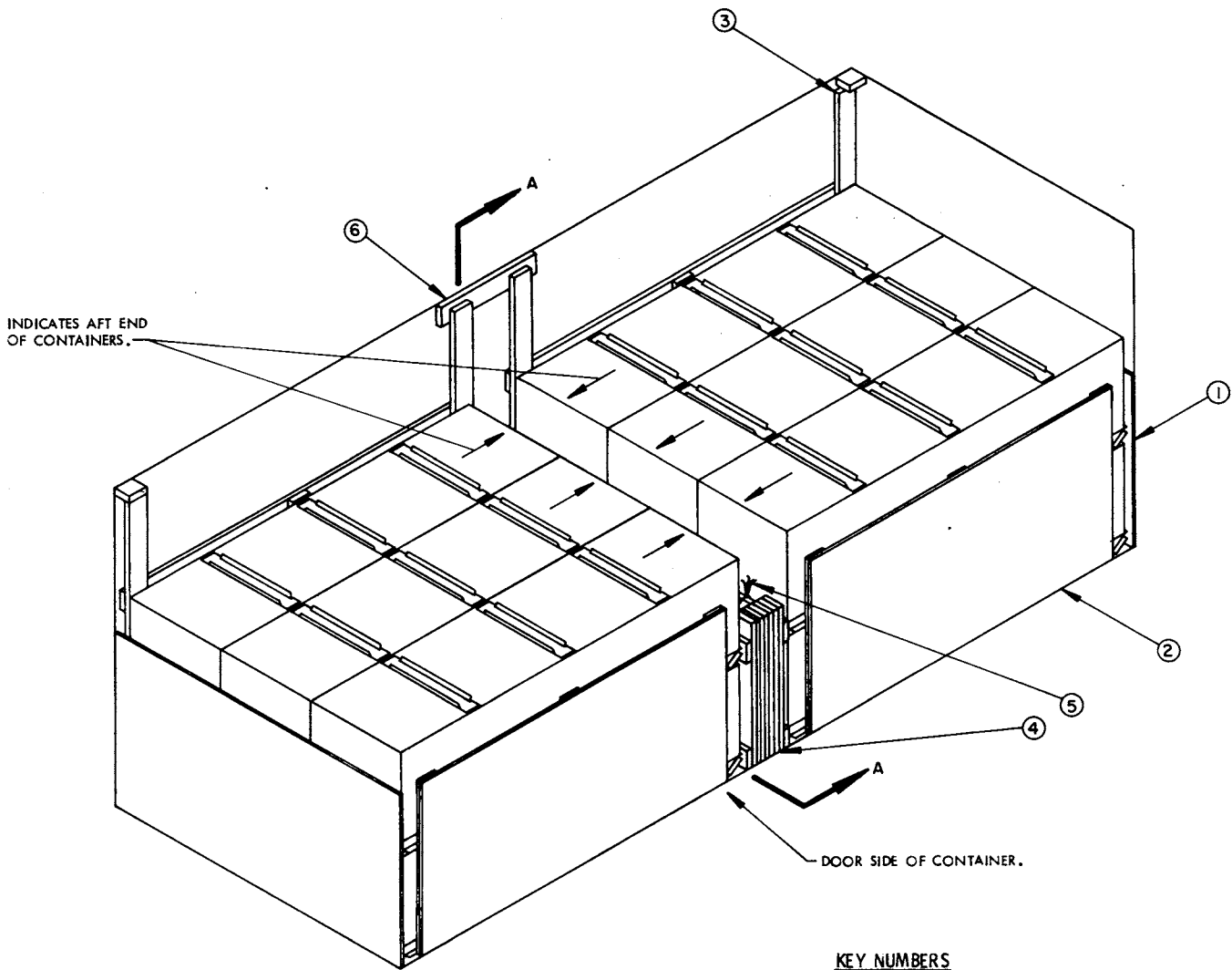
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① LOADING AND BRACING SPECIFICATIONS SET FORTH WITHIN THIS DRAWING ARE APPLICABLE TO LOADS THAT ARE TO BE SHIPPED BY TRAILER/CONTAINER-ON-FLAT-CAR (T/COFC) RAIL CARRIER SERVICE. THESE SPECIFICATIONS MAY ALSO BE USED FOR LOADS THAT ARE TO BE MOVED BY MOTOR OR WATER CARRIERS. SEE GENERAL NOTE "J" ON PAGE 3.

REVISIONS				DRAFTSMAN	pt	PROJ ENG
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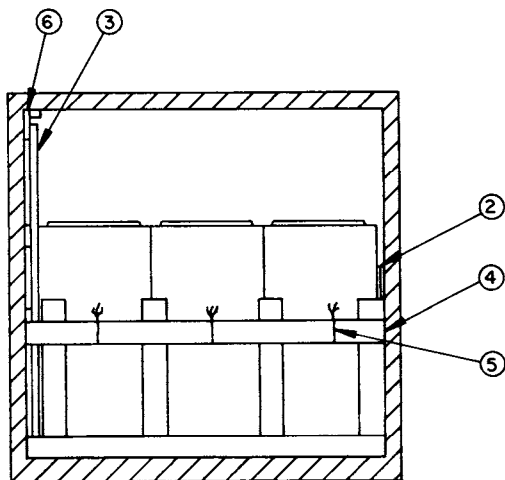
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ISOMETRIC VIEW

KEY NUMBERS

- ① END GATE (2 REQD). SEE THE "END GATE" DETAIL ON PAGE 6.
- ② SIDE FILL GATE (2 REQD). SEE THE "SIDE FILL GATE" DETAIL ON PAGE 5 AND GENERAL NOTES "D" AND "F" ON PAGE 3. INSTALL SUCH THAT THE HOLD-DOWN PIECES FIT WITHIN THE OPENINGS IN THE CONTAINER SKIDS.
- ③ SIDE FILL ASSEMBLY (2 REQD). SEE THE "SIDE FILL ASSEMBLY" DETAIL ON PAGE 5 AND GENERAL NOTE "D" ON PAGE 3.
- ④ CENTER FILL ASSEMBLY (1 REQD). SEE THE "CENTER FILL ASSEMBLY" DETAIL ON PAGE 6 AND GENERAL NOTE "F" ON PAGE 2. WIRE TIE TO THE CONTAINERS WITH PIECE MARKED ⑤.
- ⑤ TIE WIRE, NO. 14 GAGE 36" LONG (3 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND THE BEARING PIECE OF THE CENTER FILL ASSEMBLY AND A LIFTING HANDLE ON A CONTAINER. BRING ENDS TOGETHER AND TWIST TAUT.
- ⑥ SIDE FILL ASSEMBLY SPLICE PIECE, 2" X 6" X 30" (1 REQD). LOCATE AS SHOWN, BEHIND SIDE FILL ASSEMBLY BEARING PIECES, NEAR CONTAINER CEILING. NAIL THROUGH SIDE FILL ASSEMBLY BEARING PIECES INTO SPLICE PIECE W/3-10d NAILS AT EACH END.



SECTION A-A

(GENERAL NOTES CONTINUED)

GENERAL NOTES

- 2. INSTALL ONE END GATE AND ONE SIDE FILL ASSEMBLY.
- 3. LOAD SIX CNU-445/E OR CNU-447/E CONTAINERS.
- 4. REPEAT STEP 2.
- 5. REPEAT STEP 3.
- 6. FABRICATE THE CENTER FILL ASSEMBLY.
- 7. INSTALL THE CENTER FILL ASSEMBLY.
- 8. WIRE TIE CENTER FILL ASSEMBLY TO CONTAINERS.
- 9. INSTALL THE SIDE FILL ASSEMBLY SPLICE PIECE. SEE NOTE BELOW.
- 10. INSTALL TWO SIDE FILL GATES.

* IF DESIRED, PIECES MARKED ①, ③, AND ⑥ MAY BE INSTALLED PRIOR TO LOADING A CONTAINER.

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH FAR 740-1 AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE SPECIFIED OUTLOADING PROCEDURES ARE APPLICABLE TO THE MAVERICK (AGM-65) MISSILE IN A CNU-445/E OR CNU-447/E CONTAINER. SUBSEQUENT REFERENCE TO CONTAINER HEREIN MEANS THE CNU-445/E OR CNU-447/E CONTAINER WITH MISSILES INSTALLED. SEE PAGE 4 FOR DETAILS OF THE CONTAINERS. CAUTION: REGARDLESS OF THE QUANTITY OF CONTAINERS TO BE SHIPPED, THE "MAXIMUM GROSS WEIGHT" MUST NOT BE EXCEEDED.
- C. THE LOAD AS SHOWN IS BASED ON A 6,050 POUND 20' LONG BY 8' WIDE BY 8'-6" HIGH SIDE OPENING INTERMODAL COMMERCIAL CONTAINER WITH INSIDE DIMENSIONS OF 19'-4" LONG BY 89" WIDE BY 88" HIGH. 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.
- D. WHEN LOADING CNU-445/E OR CNU-447/E CONTAINERS, THEY ARE TO BE POSITIONED SO AS TO ACHIEVE A TIGHT LOAD (TIGHT AGAINST THE END AND SIDE DUNNAGE ASSEMBLIES). ALTHOUGH A TOTAL OF ONE AND ONE-HALF INCHES (1-1/2") OF UNBLOCKED SPACE ACROSS THE WIDTH OF A LOAD BAY IS PERMITTED, LATERAL VOIDS WITHIN THE LOAD ARE TO BE HELD TO A MINIMUM. EXCESSIVE SLACK CAN BE ELIMINATED FROM A LOAD BY LAMINATING ADDITIONAL PIECES OF APPROPRIATE THICKNESS TO THE BEARING PIECES ON THE SIDE FILL ASSEMBLIES ON ONE OR BOTH SIDES OF THE CONTAINER. NAIL EACH ADDITIONAL PIECE TO THE BEARING PIECE W/1 APPROPRIATELY SIZED NAIL EVERY 12". ADDITIONALLY, THE THICKNESS OF THE BEARING PIECES ON ONE OR BOTH SIDES OF THE CONTAINER MAY BE ADJUSTED AS REQUIRED TO FACILITATE VARIANCE IN THE CNU-445/E OR CNU-447/E CONTAINER SIZE.
- E. 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.
- 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. CAUTION: DO NOT NAIL DUNNAGE MATERIAL TO THE CONTAINER WALLS OR FLOOR. ALL NAILING WILL BE WITHIN THE DUNNAGE.
- H. PORTIONS OF THE CONTAINER DEPICTED WITHIN THIS DRAWING, SUCH AS THE SIDE DOORS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- J. REQUIREMENTS CITED WITHIN THE BUREAU OF EXPLOSIVES PAMPHLET 6C 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 BOGIE ASSEMBLIES WHEN BEING MOVED IN TOPC 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.
- K. 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.
- 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 0.454KG.
- M. RECOMMENDED SEQUENTIAL LOADING PROCEDURES:
 - 1. PREFABRICATE TWO END GATES (ONE RIGHT HAND AND ONE LEFT HAND), TWO SIDE FILL ASSEMBLIES, AND TWO SIDE FILL GATES.

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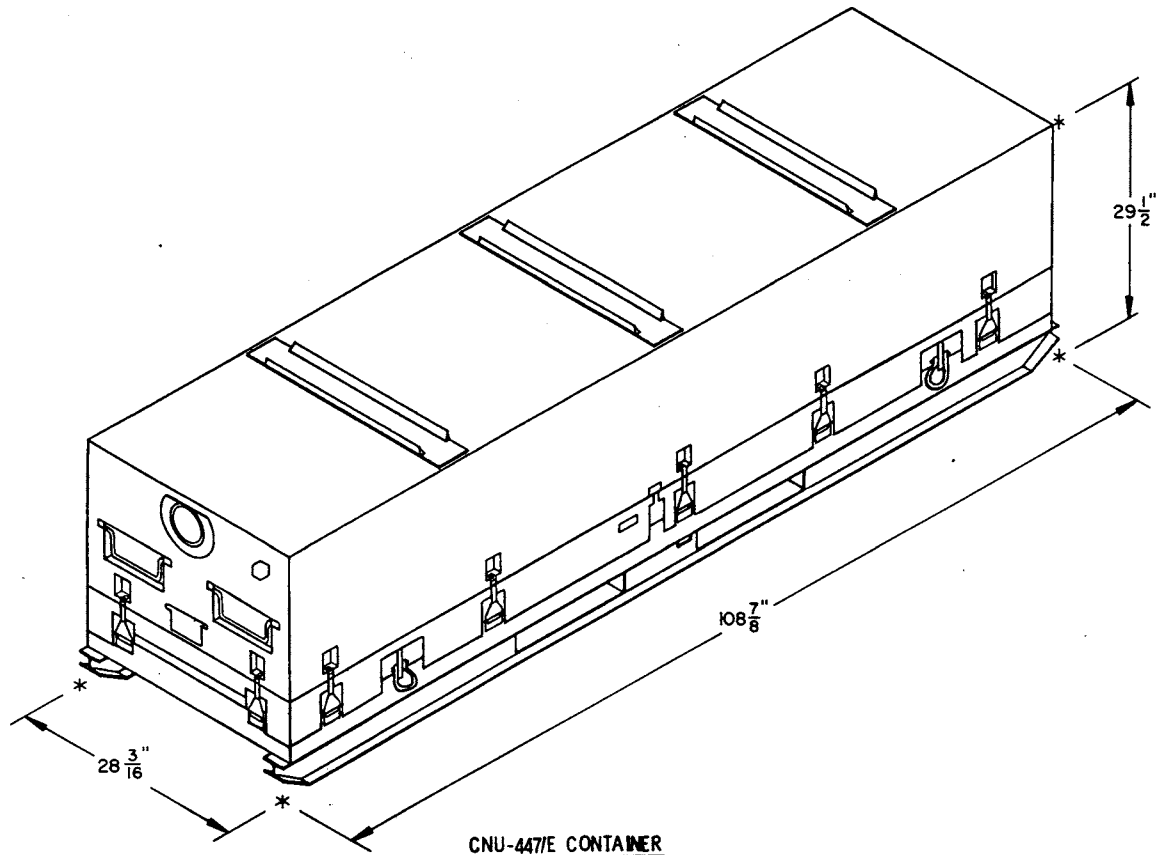
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	38	19
2" X 3"	24	12
2" X 6"	205	205
NAILS	NO. REQD	POUNDS
6d (2")	58	1/2
10d (3")	268	4-1/4
PLYWOOD, 3/4"	123 SQ FT REQD	254 LBS
WIRE, NO. 14 GAGE	9' REQD	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-445/E OR-447/E	12	13,440 LBS
DUNNAGE		731 LBS
CONTAINER		6,050 LBS
TOTAL WEIGHT		20,221 LBS (APPROX)

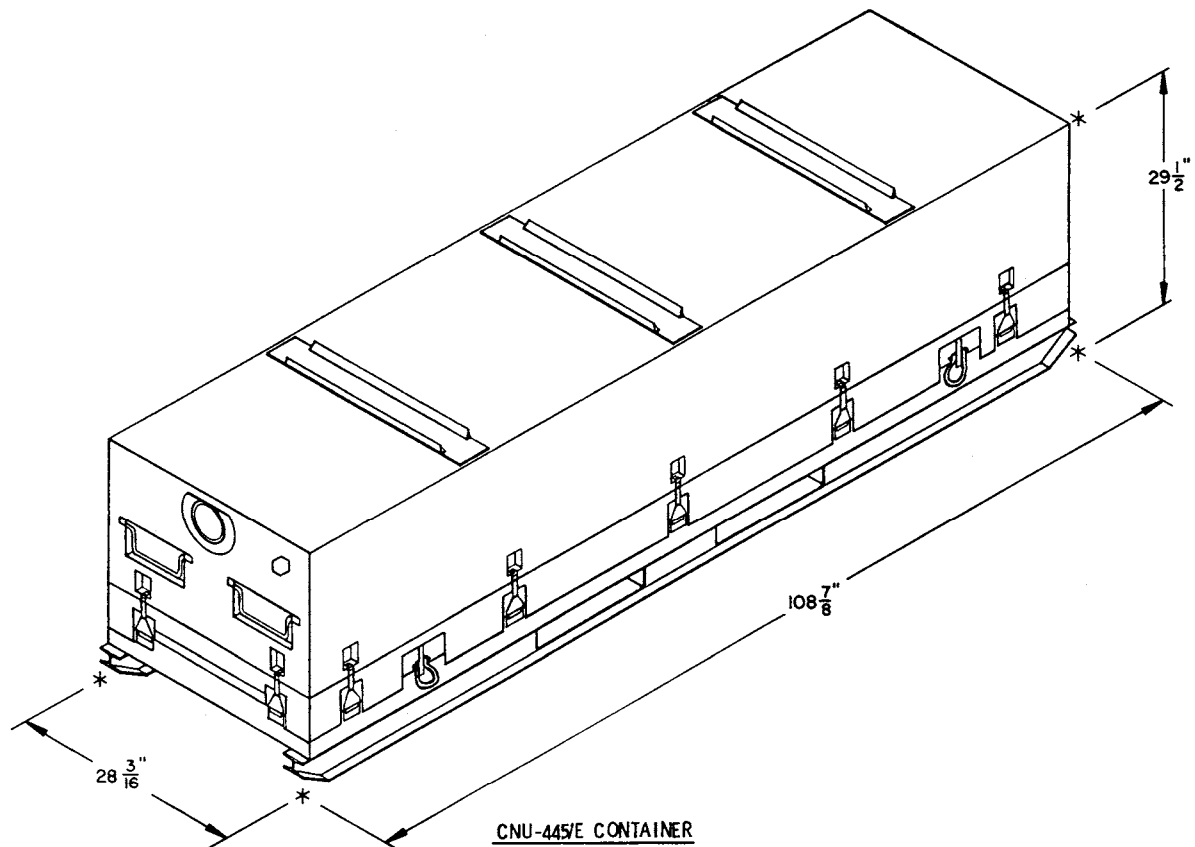
MATERIAL SPECIFICATIONS

- LUMBER : TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.
- NAILS : FED SPEC FF-N-105; COMMON.
- WIRE : ANNEALED, BLACK; FED SPEC QQ-W-461.
- PLYWOOD : GROUP B, CONSTRUCTION AND 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; FED SPEC NN-P-530.



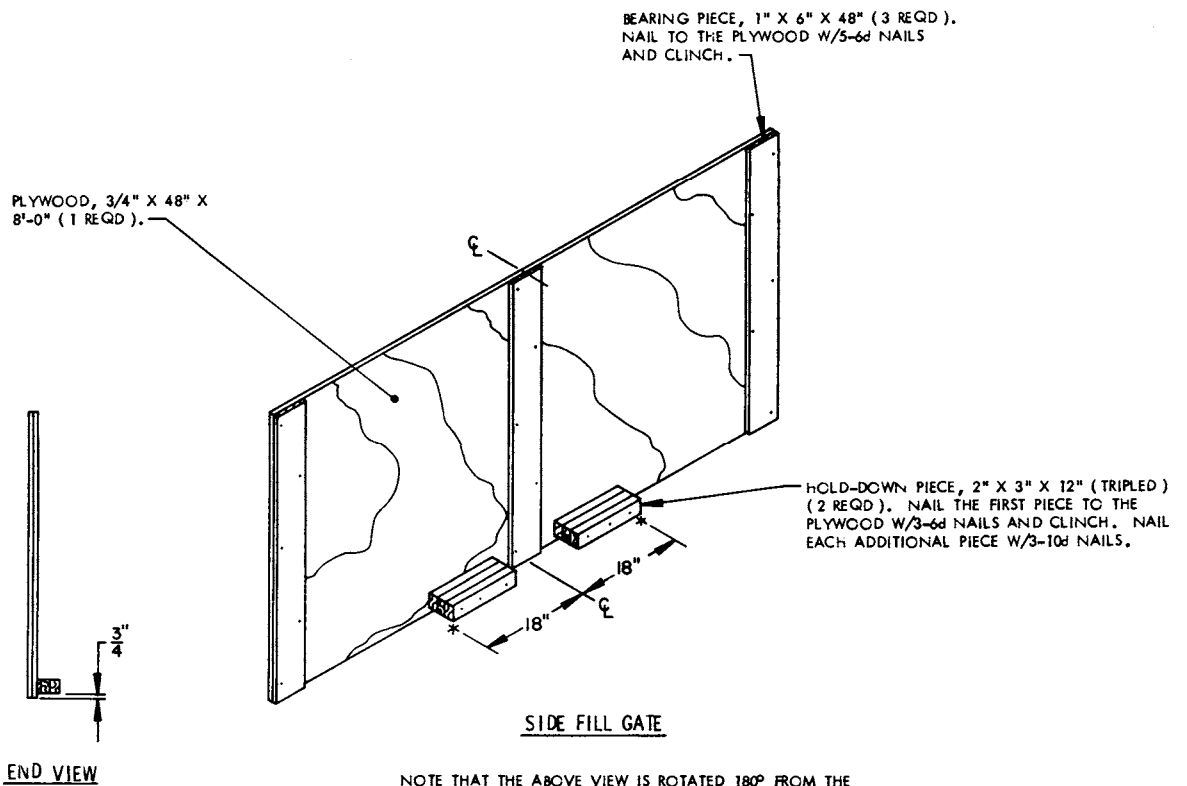
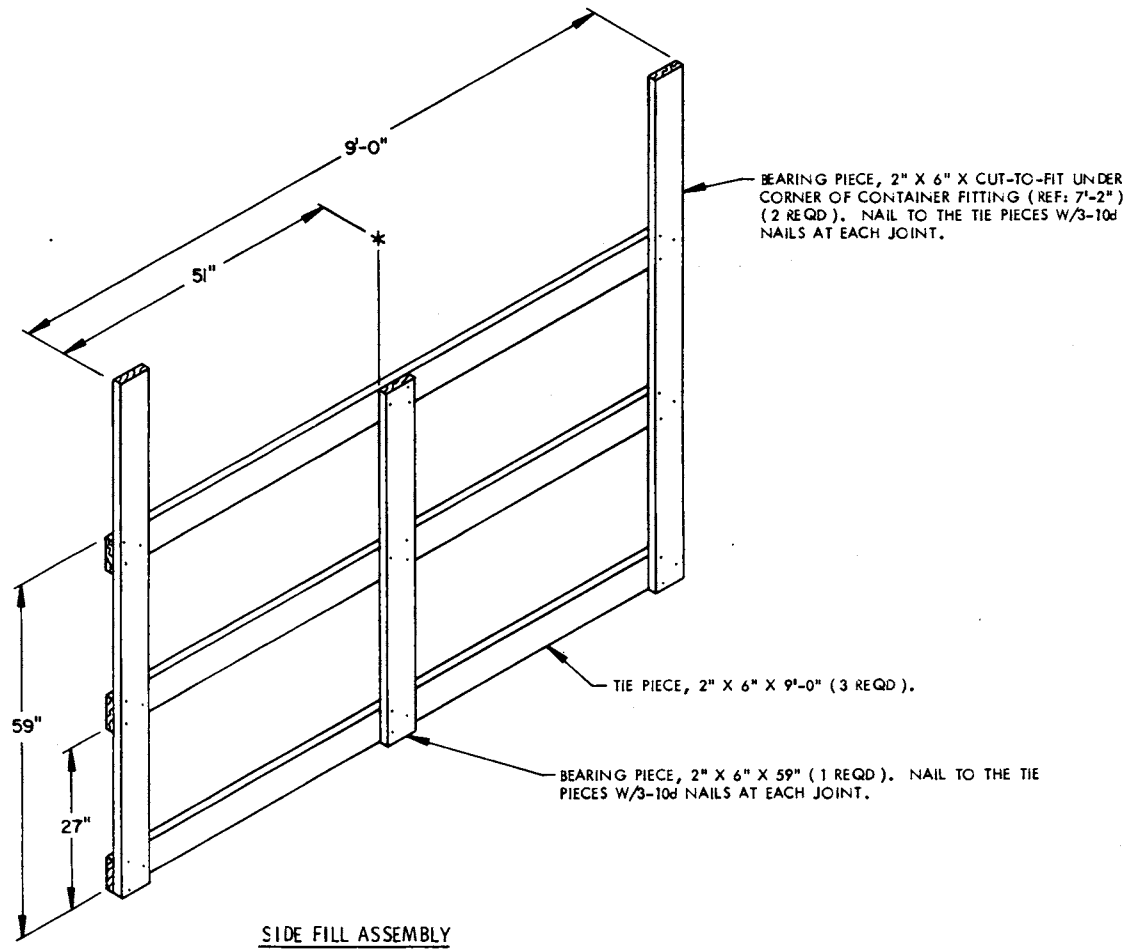
CNU-447/E CONTAINER

CONTAINER WEIGHT-----1,120 LBS (APPROX)
 CUBE-----52.4 CUBIC FEET (APPROX)

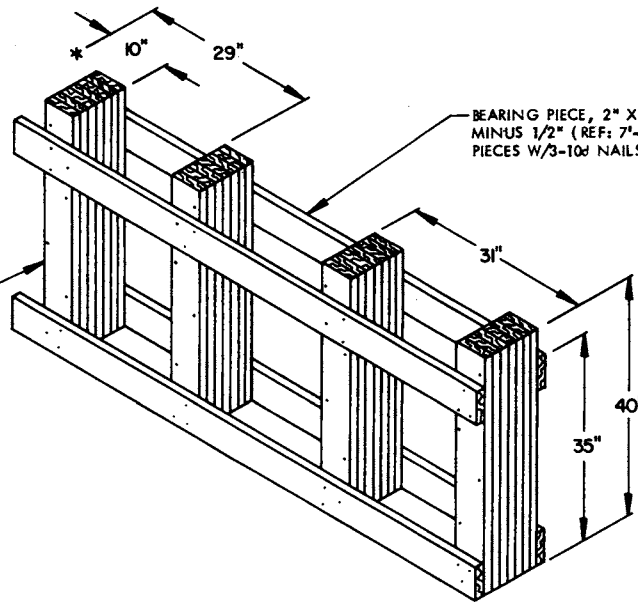


CNU-445/E CONTAINER

CONTAINER WEIGHT (MAX)-----1,120 LBS (APPROX)
 CUBE-----52.4 CUBIC FEET (APPROX)



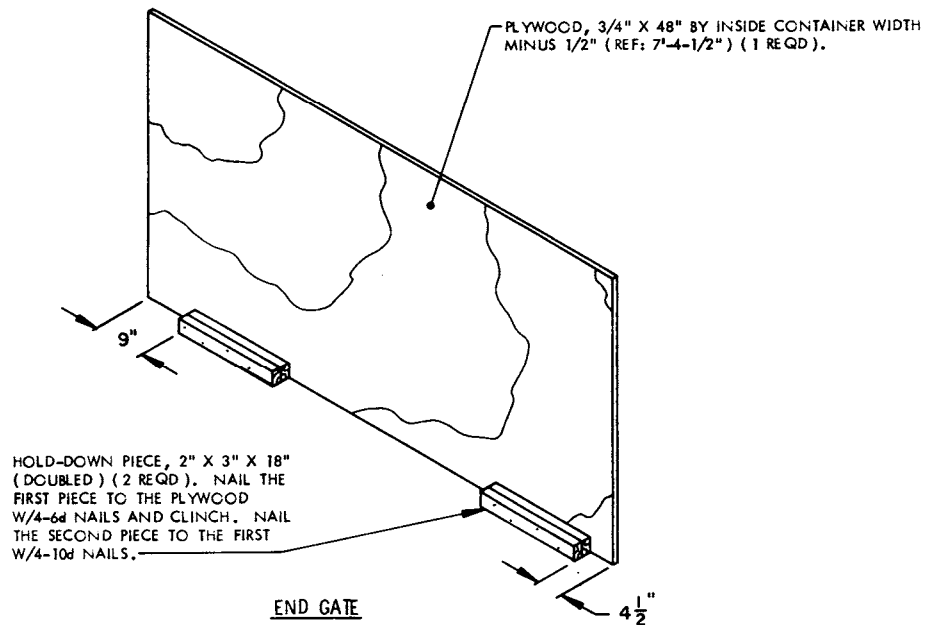
FILL PIECE, 6" WIDE BY 40" LONG BY THICKNESS REQUIRED TO PROVIDE A TIGHT FIT BETWEEN CONTAINERS (REQD AT 4 PLACES). NAIL THE SECOND PIECE TO THE FIRST W/5-10d NAILS. NAIL EACH ADDITIONAL PIECE IN A LIKE MANNER.



BEARING PIECE, 2" X 6" BY INSIDE CONTAINER WIDTH MINUS 1/2" (REF: 7'-4-1/2") (4 REQD). NAIL TO FILL PIECES W/3-10d NAILS PER JOINT.

CENTER FILL ASSEMBLY

THE ASSEMBLY WILL BE LOCATED SUCH THAT THE END WITH THE OFFSET FILL PIECES WILL BE AGAINST THE SIDE WALL.



PLYWOOD, 3/4" X 48" BY INSIDE CONTAINER WIDTH MINUS 1/2" (REF: 7'-4-1/2") (1 REQD).

HOLD-DOWN PIECE, 2" X 3" X 18" (DOUBLED) (2 REQD). NAIL THE FIRST PIECE TO THE PLYWOOD W/4-6d NAILS AND CLINCH. NAIL THE SECOND PIECE TO THE FIRST W/4-10d NAILS.

END GATE

NOTE: THE HOLD-DOWN PIECE THAT IS LOCATED 9" FROM THE END OF THE GATE WILL BE LOCATED UNDER THE CONTAINERS AND NEAREST THE SIDE WALL. THE HOLD-DOWN PIECE LOCATED 4-1/2" FROM THE END OF THE GATE WILL BE LOCATED ON THE DOOR SIDE OF THE CONTAINER. ONE RIGHT HAND ASSEMBLY AND ONE LEFT HAND ASSEMBLY ARE REQUIRED.