

LOADING AND BRACING ON FLATRACK ISO CONTAINERS OF AIR INFLATABLE RETARDER, BSU-49/B PACKED IN THE CNU-335/E OR CNU-335A/E CONTAINER, AND BSU-50/B PACKED IN THE CNU-336/E OR CNU-336A/E CONTAINER

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- LOADING AND BRACING SPECIFICATIONS SET FORTH WITHIN THIS DRAWING ARE APPLICABLE TO LOADS THAT ARE TO BE SHIPPED BY TRAILER/CONTAINER-ON-FLATCAR (T/COFC) RAIL CARRIER SERVICE. THESE SPECIFICATIONS MAY ALSO BE USED FOR LOADS THAT ARE TO BE MOVED BY MOTOR OR WATER CARRIERS.

U.S. ARMY MATERIEL COMMAND DRAWING			
APPROVED, U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND <i>Timothy R. Fox</i>	DRAFTSMAN	TECHNICIAN	ENGINEER L. FIEFFER
	VALIDATION ENGINEERING DIVISION	TRANSPORTATION ENGINEERING DIVISION	LOGISTICS ENGINEERING OFFICE
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND <i>William F Ernst</i>	NOVEMBER 1993		
U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL	CLASS	DIVISION	DRAWING
	19	48	8540
			FILE SP15J38

DO NOT SCALE

GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1 AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. ALL LOADS SHIPPED BY THE PROCEDURES DEPICTED IN THIS DRAWING MUST BE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN TITLE 49, THE UNITED STATES CODE OF FEDERAL REGULATIONS; AR 55-355/AFM 75-2; DOD 4500.32-R; DOD 5100.76-M; DOD 6055.9-STD; AS WELL AS ANY AND ALL OTHER APPLICABLE SERVICE REGULATIONS.
- C. THE SPECIFIED OUTLOADING PROCEDURES ARE APPLICABLE TO LOADS OF AIR INFLATABLE RETARDER, BSU-49/B PACKED IN THE CNU-335/E OR CNU-335A/E CONTAINER OR BSU-50/B PACKED IN THE CNU-336/E CONTAINER OR CNU-336A/E CONTAINER. SUBSEQUENT REFERENCE TO CONTAINER HEREIN MEANS THE CONTAINER WITH AIR INFLATABLE RETARDER. SEE PAGE 3 FOR DETAILS OF THE CONTAINERS. CAUTION: REGARDLESS OF THE QUANTITY OF CONTAINERS TO BE SHIPPED, THE "MAXIMUM GROSS WEIGHT" OF THE FLATRACK ISO CONTAINER MUST NOT BE EXCEEDED.
- D. THE LOAD AS SHOWN IS BASED ON A 20'-0" LONG BY 8'-0" WIDE FLATRACK ISO CONTAINER WITH FULL HEIGHT ENDWALLS, AND INSIDE DIMENSIONS OF 19'-4" LONG BY 7'-2" WIDE. THE LOAD AS SHOWN CAN BE SHIPPED BY ANY FORM OF SURFACE TRANSPORTATION. NOTICE: OTHER CONTAINERS OF THE SAME DESIGN CONFIGURATION CAN ALSO BE USED.
- E. WHEN LOADING CONTAINERS, THEY ARE TO BE POSITIONED SO AS TO ACHIEVE A TIGHT LOAD BETWEEN THE END BLOCKING ASSEMBLY AND THE LADING. ALTHOUGH A TOTAL OF ONE INCH OF UNBLOCKED SPACE ACROSS THE WIDTH OF A LOAD IS PERMITTED, LONGITUDINAL VOIDS WITHIN THE LOAD ARE TO BE HELD TO A MINIMUM, NOT EXCEEDING ONE-HALF INCH (1/2"). EXCESSIVE SLACK CAN BE ELIMINATED FROM A LOAD BY LAMINATING ADDITIONAL PIECES OF APPROPRIATE THICKNESS TO THE HORIZONTAL PIECES ON THE CENTER GATE. NAIL EACH ADDITIONAL PIECE TO THE HORIZONTAL PIECE W/1 APPROPRIATELY SIZED NAIL EVERY 12". ADDITIONALLY, THE THICKNESS AND QUANTITY OF THE VERTICAL PIECES IN THE CENTER GATE MAY BE ADJUSTED AS REQUIRED TO FACILITATE VARIANCE IN THE LENGTH OF THE CONTAINER.
- F. 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.
- G. 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.

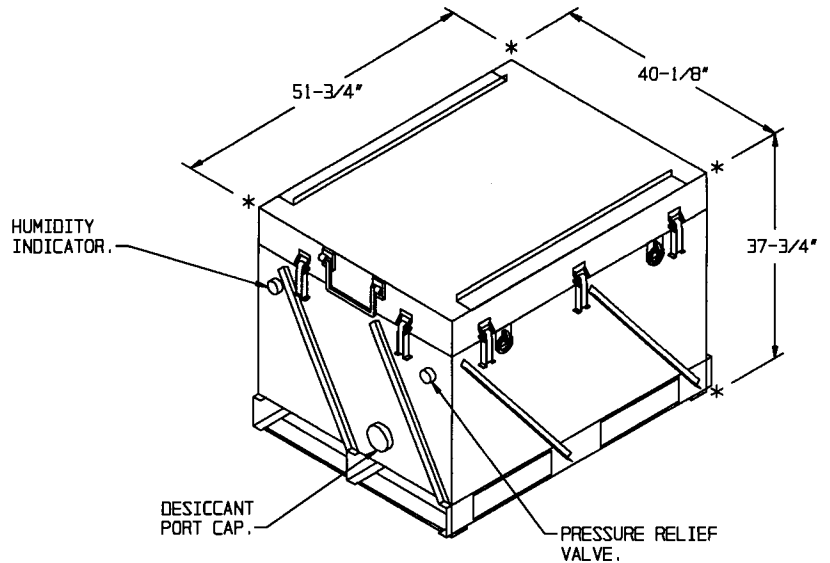
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MATERIAL SPECIFICATIONS

LUMBER	---	SEE TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.
NAILS	---	FED SPEC FF-N-105; COMMON.
PLYWOOD	---	COMMERCIAL ITEM DESCRIPTION A-A-55057, TYPE A, CONSTRUCTION AND INDUSTRIAL PLYWOOD, INTERIOR WITH EXTERIOR GLUE, GRADE C-O. IF SPECIFIED GRADE IS NOT AVAILABLE, A BETTER INTERIOR OR AN EXTERIOR GRADE MAY BE SUBSTITUTED.
STRAPPING, STEEL	--	ASTM D3953; FLAT STRAPPING, TYPE 1, HEAVY DUTY, FINISH A, B (GRADE 2), OR C.
SEAL, STRAP	---	ASTM D3953; CLASS H, FINISH A, B (GRADE 2), OR C, DOUBLE NOTCH TYPE, STYLE I, II, OR IV.
WIRE, CARBON STEEL	--	ASTM A853; ANNEALED AT FINISH, BLACK OXIDE FINISH, .0800" DIA, GRADE 1006 OR BETTER.
STAPLE, STRAP	---	COMMERCIAL GRADE.
ANTI-CHAFING MATERIAL	---	MIL-B-121 (OR EQUAL); NEUTRAL BARRIER MATERIAL.

(GENERAL NOTES CONTINUED)

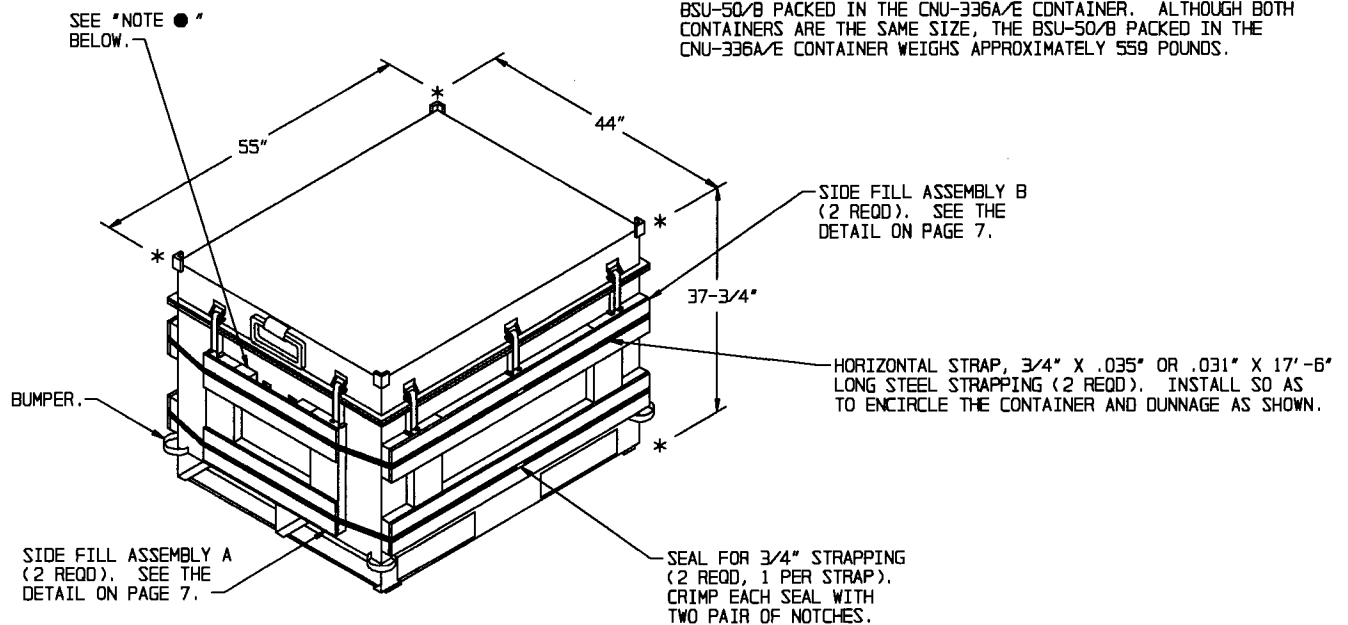
- H. PORTIONS OF ONE OF THE FLATRACK ENDWALLS DEPICTED WITHIN THIS DRAWING HAVE NOT BEEN SHOWN IN THE LOAD VIEW FOR CLARITY PURPOSES.
- J. WHEN INSTALLING END BLOCKING ASSEMBLIES, THE ASSEMBLIES MUST BE POSITIONED SO AS TO BE SUPPORTED AND IN LINE WITH THE STRONG POINTS OF THE FLATRACK ENDWALLS. NOTE: SOME FLATRACK ENDWALLS WILL REQUIRE FILL PIECES TO BE INSTALLED ON THE END BLOCKING ASSEMBLY TO PROVIDE A UNIFORM LOAD BEARING SURFACE. NAIL THESE FILL PIECES TO THE END BLOCKING ASSEMBLY W/1 APPROPRIATELY SIZED NAIL EVERY SIX INCHES.
- K. WHEN STEEL STRAPPING IS SEALED IN 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. REFER TO THE "STRAP JOINT A" AND "STRAP JOINT B" DETAILS ON PAGE 8 FOR GUIDANCE.
- L. 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 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 FLAT BED TRAILER MUST BE USED TO PRECLUDE VIOLATION OF ONE OR MORE "WEIGHT LAWS" APPLICABLE TO THE STATE OR STATES INVOLVED.
- N. THE 2" STRAPPING USED FOR LOAD SECUREMENT, I.E., HOLD-DOWN STRAPS, WILL ONLY BE FASTENED TO THE FLATRACK CONTAINER BY UTILIZING TIEDOWN PROVISIONS LOCATED ON THE TOP OR ALONG THE SIDE OF THE FLATRACK BOTTOM SIDE RAILS. CAUTION: THE LOAD SECUREMENT STRAPS WILL NOT BE POSITIONED AROUND THE UNDERSIDE OR THROUGH THE FORKLIFT POCKETS OF THE FLATRACK CONTAINER. ADDITIONALLY, THE FLATRACK TIEDOWN PROVISIONS MUST BE AT LEAST AS STRONG AS THE 2" LOAD SECUREMENT STRAPPING BEING USED; AND BE OF A SUFFICIENT WIDTH TO RECEIVE THE 2" STRAPPING AND BE OF A DESIGN WHICH WILL PROVIDE A BEARING SURFACE ACROSS THE FULL WIDTH OF THE 2" STRAPPING SO THAT THE STRAPPING WILL NOT BE DEFORMED, ESPECIALLY AT ITS EDGES, WHEN PROPERLY TENSIONED.
- O. THE OUTLOADING PROCEDURES SPECIFIED HEREIN CAN ALSO BE UTILIZED FOR THE SHIPMENT OF THE DEPICTED CONTAINERS WHEN THEY ARE LOADED WITH AN ITEM WHICH IS IDENTIFIED DIFFERENTLY BY NOMENCLATURE THAN THE ITEM DESIGNATED IN THE DRAWING TITLE.
- P. REFER TO ASSOCIATION OF AMERICAN RAILROADS MANUAL "GENERAL RULES GOVERNING THE LOADING OF COMMODITIES ON OPEN TOP CARS" FOR APPLICABLE LOADING RULES AS FOLLOWS: PREFACE, 1A, 2, 5, 10, AND 15. NOTE THAT ALL STRAPPING USED FOR LOAD SECUREMENT, I.E., HOLD-DOWN STRAPS, MUST BE MARKED AS SPECIFIED IN LOADING RULE 15.
- Q. ANTI-CHAFING MATERIAL MAY BE INSTALLED AT POINTS OF CONTACT BETWEEN CONTAINERS AND BETWEEN CONTAINERS AND STEEL STRAPPING, IF DESIRED, TO PREVENT CHAFING DAMAGE TO CONTAINER PAINT AND MARKINGS.
- R. 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.
- S. THE LOADS AS SHOWN ON PAGE 4 AND PAGE 6 MAY BE REDUCED BY ONE LAYER FOR A SHIPMENT OF EIGHT CONTAINERS, IF DESIRED.



ISOMETRIC VIEW

⊕ AIR INFLATABLE RETARDER, BSU-49/B
(CNU-335A/E CNTR) - - 1,038 LBS (APPROX)

⊕ THE UNIT SHOWN ABOVE IS APPLICABLE TO BOTH THE AIR INFLATABLE RETARDER, BSU-49/B PACKED IN THE CNU-335A/E CONTAINER OR BSU-50/B PACKED IN THE CNU-336A/E CONTAINER. ALTHOUGH BOTH CONTAINERS ARE THE SAME SIZE, THE BSU-50/B PACKED IN THE CNU-336A/E CONTAINER WEIGHS APPROXIMATELY 559 POUNDS.



ISOMETRIC VIEW

⊕ AIR INFLATABLE RETARDER, BSU-49/B
(CNU-335/E CNTR) - - 1,038 LBS (APPROX)
DUNNAGE - - - - - 82 LBS

TOTAL WEIGHT - - - - 1,120 LBS (APPROX)

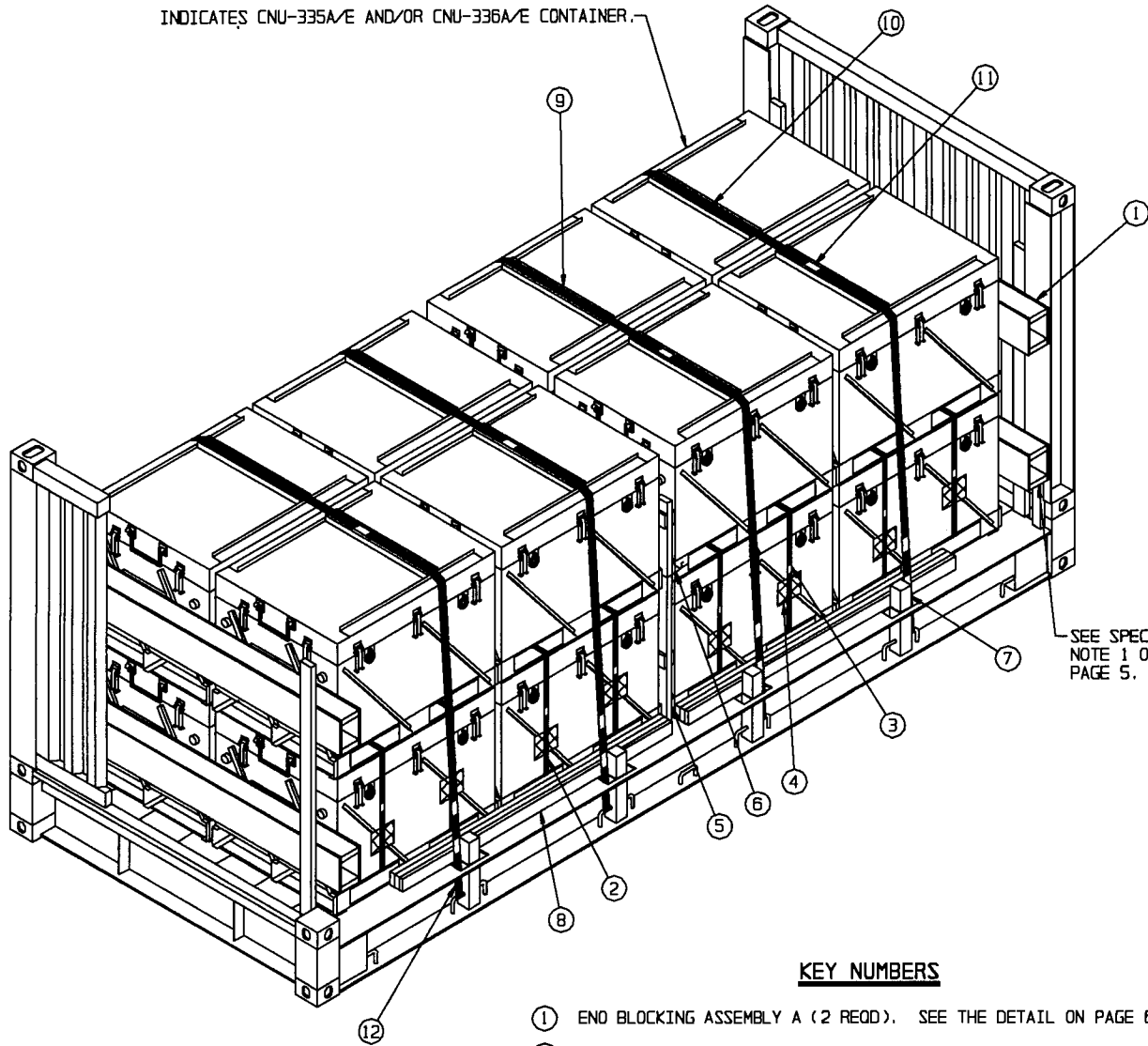
⊕ THE UNIT SHOWN ABOVE IS APPLICABLE TO BOTH THE AIR INFLATABLE RETARDER, BSU-49/B PACKED IN THE CNU-335/E CONTAINER OR BSU-50/B PACKED IN THE CNU-336/E CONTAINER. ALTHOUGH BOTH CONTAINERS ARE THE SAME SIZE, THE BSU-50/B PACKED IN THE CNU-336/E CONTAINER WEIGHS APPROXIMATELY 641 POUNDS.

● NOTE: THE INTERMEDIATE FILLER PIECE OF THE "SIDE FILL ASSEMBLY A" MAY BE NOTCHED OR PARTIALLY OMITTED AS NECESSARY TO PROVIDE ACCESS TO THE HUMIDITY INDICATOR AND PRESSURE RELIEF VALVE. SEE "DETAIL A" ON PAGE 7.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 6"	31	31
NAILS	NO. REQD	POUNDS
6d (2")	88	3/4
STEEL STRAPPING, 3/4" - - 35.00'	REQD - -	2-1/2 LBS
SEAL FOR 3/4" STRAPPING - - - 2	REQD - - - -	NIL
PLYWOOD, 1/2" - - - 11.77 SQ FT	REQD - -	16.19 LBS

INDICATES CNU-335A/E AND/OR CNU-336A/E CONTAINER.



SEE SPECIAL
NOTE 1 ON
PAGE 5.

ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

- ⑩ HOLD-DOWN STRAP, 2" X .044" X .050" BY A LENGTH TO SUIT (REF: 23'-0") (4 REQD). INSTALL EACH STRAP FROM TWO 12'-6" LONG PIECES. STAPLE TO THE STRAPPING BOARD W/2 STAPLES EACH.
- ⑪ SEAL FOR 2" STRAPPING (20 REQD). FASTEN PIECE MARKED ⑩ WITH ONE SEAL CRIMPED WITH TWO PAIR OF NOTCHES. FASTEN PIECE MARKED ⑫ WITH ONE SEAL CRIMPED WITH ONE PAIR OF NOTCHES. SEE THE "TIEDOWN DETAIL" ON PAGE 12.
- ⑫ PAD, STRAPPING, 2" X .044" OR .050" X 18" (8 REQD). PRE-POSITION THE PAD BETWEEN THE HOLD-DOWN STRAP, PIECE MARKED ⑩, AND THE FLATRACK TIEDOWN PROVISIONS. FASTEN WITH ONE SEAL CRIMPED WITH ONE PAIR OF NOTCHES. SEE THE "TIEDOWN DETAIL" ON PAGE 12.

KEY NUMBERS

- ① END BLOCKING ASSEMBLY A (2 REQD). SEE THE DETAIL ON PAGE 6.
- ② BUNDLING STRAP, 1-1/4" X .035" OR .031" BY A LENGTH TO SUIT (REF: 21'-0") (8 REQD). INSTALL TO ENCIRCLE ALL FOUR CONTAINERS IN ONE STACK.
- ③ SEAL FOR 1-1/4" STRAPPING (8 REQD, 1 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF NOTCHES.
- ④ ANTI-CHAFING MATERIAL (AS REQD). INSTALL AT POINTS OF CONTACT BETWEEN CONTAINERS AND STEEL STRAPPING TO PREVENT DAMAGE TO THE STRAPS.
- ⑤ CENTER GATE A (1 REQD). SEE THE DETAIL ON PAGE 6.
- ⑥ TIE WIRE, NO. 14 GAGE WIRE 24" LONG (2 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND THE CENTER FILL ASSEMBLY AND AN ADJACENT CONTAINER. BRING ENDS TOGETHER AND TWIST TAUT.
- ⑦ STAKE, 4" X 4" X 18" (8 REQD). INSTALL THE STAKE INTO THE FLATRACK STAKE POCKETS WITH A TIGHT (SNUG) FIT. NOTE: REFERENCE DIMENSIONS FOR A TIGHT FITTING STAKE ARE 3-1/4" (ACTUAL) X 3-1/4" (ACTUAL). NAIL 1-20d NAIL THRU THE HOLE PROVIDED IN THE FACE OF THE FLATRACK STAKE POCKET AND INTO THE STAKE. BEND THE PROTRUDING HEAD OF THE NAIL OVER AGAINST THE STAKE POCKET.
- ⑧ SIDE BLOCKING, 2" X 4" X 7'-0" AND/OR 1" X 4" X 7'-0" (AS REQD). CENTER EACH PIECE BETWEEN A PAIR OF STAKES, AS SHOWN ABOVE. LAMINATE EACH ADDITIONAL PIECE TO THE PREVIOUS W/7-10d NAILS. TOENAIL TO THE STAKES W/2-12d NAILS EACH.
- ⑨ STRAPPING BOARD, 2" X 4" X 32" (8 REQD). INSTALL BETWEEN THE LIPS ON TOP OF THE CONTAINERS, AND IN LINE WITH A FLATRACK TIEDOWN PROVISION.

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SPECIAL NOTES:

1. THE LOCATION OF THE BOTTOM BOX BEAM ASSEMBLY MAY BE RAISED IF NECESSARY TO AVOID INTERFERENCE WITH THE HINGE ON THE FLATRACK ENDWALL.
2. THE LOAD AS SHOWN ON PAGE 4 MAY BE REDUCED BY ONE LAYER FOR A SHIPMENT OF EIGHT CONTAINERS.
3. POSITION THE STRAPPING BOARDS AND THE HOLD-DOWN STRAPS SO AS TO BE VERTICALLY IN LINE WITH THE FLATRACK TIEDOWN POINTS.

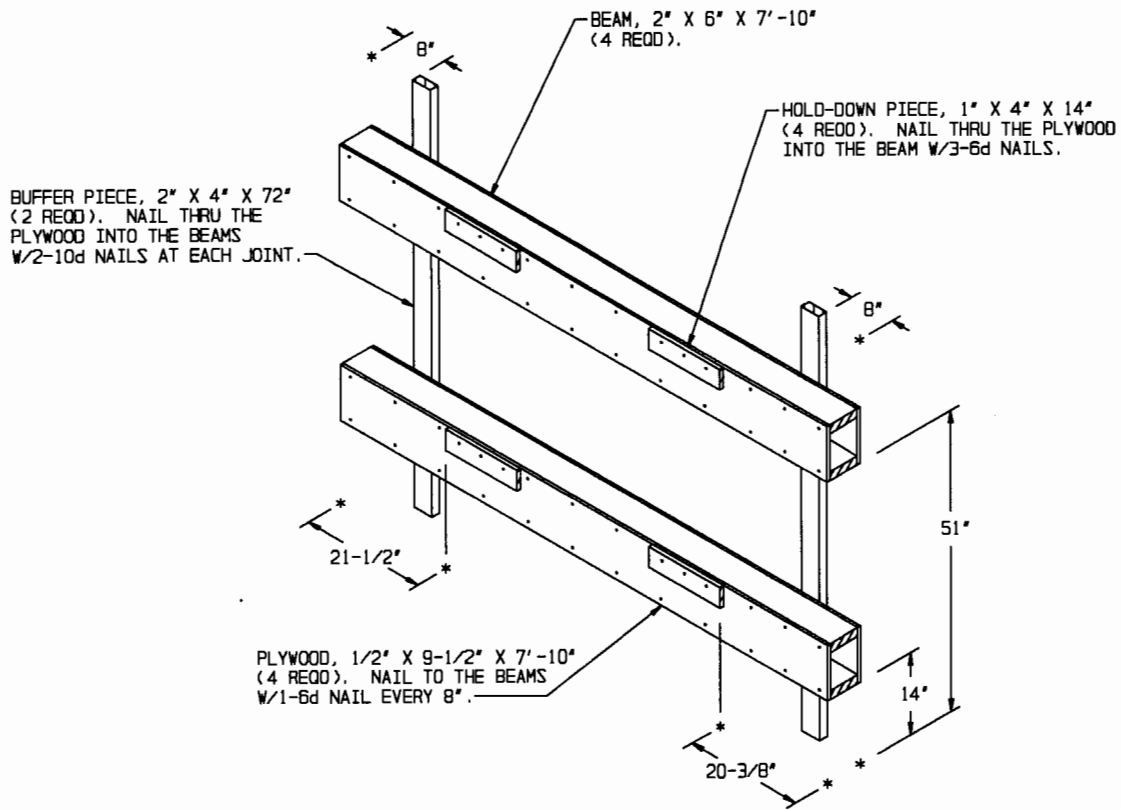
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	64	22
2" X 4"	140	94
2" X 6"	68	68
4" X 4"	12	16
NAILS	NO. REQD	POUNDS
6d (2")	258	1-3/4
10d (3")	88	1-1/2
12d (3-1/4")	16	1/2
20d (4")	8	1/2
PLYWOOD, 1/2" - - - 49.61 SQ FT REQD - - - 69 LBS STEEL STRAPPING, 1-1/4" - 168' REQD - - - 24 LBS SEAL FOR 1-1/4" STRAPPING - - 8 REQD - - - 1/2 LBS STEEL STRAPPING, 2" - - - 104' REQD - - - 35 LBS SEAL FOR 2" STRAPPING - - - 20 REQD - - - 4 LBS STAPLE - - - - - 16 REQD - - - - - NIL WIRE, 14 GAGE - - - - - 4' REQD - - - - - NIL ANTI-CHAFING MATERIAL - - - AS REQD - - - - - NIL		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-335A/E	16	16,608 LBS
DUNNAGE		537 LBS
FLATRACK		5,700 LBS
TOTAL WEIGHT		22,845 LBS (APPROX)

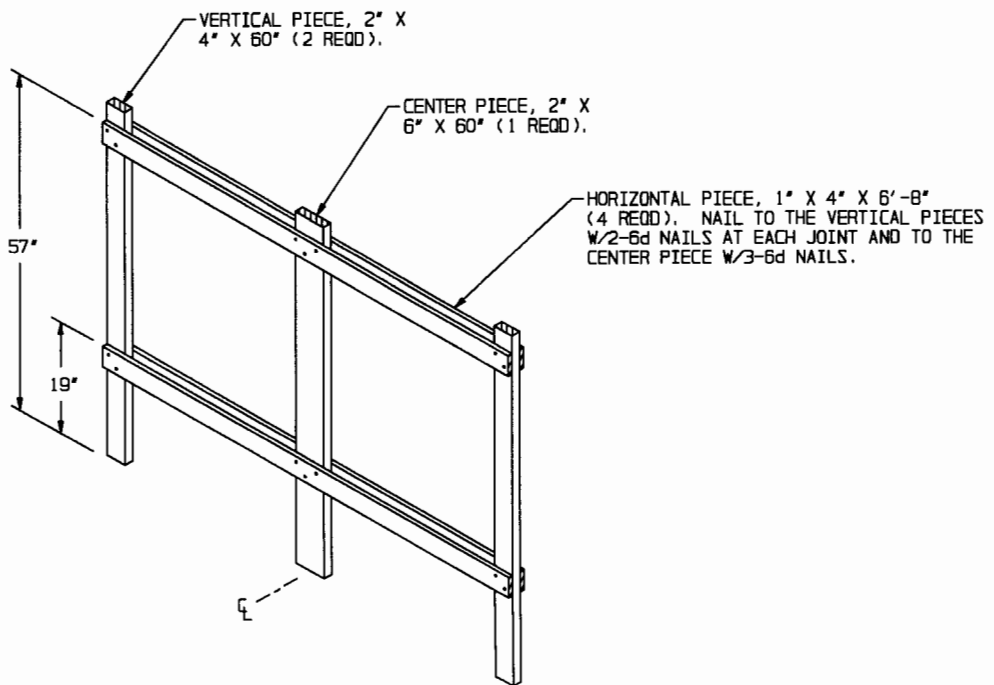
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-336A/E	16	8,944 LBS
DUNNAGE		537 LBS
FLATRACK		5,700 LBS
TOTAL WEIGHT		15,181 LBS (APPROX)



END BLOCKING ASSEMBLY A

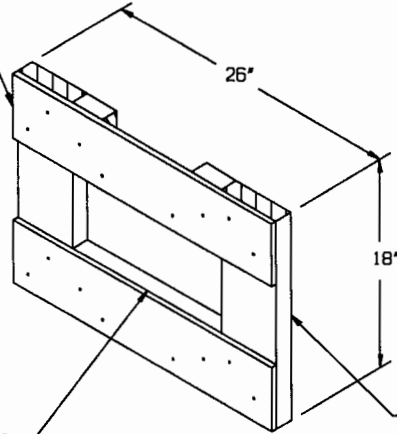
NOTE: FOR A ONE HIGH LOAD, ELIMINATE THE TOP BOX BEAM ASSEMBLY.



CENTER GATE A

NOTE: FOR A ONE HIGH LOAD, ELIMINATE THE TOP TWO HORIZONTAL PIECES AND SHORTEN THE VERTICAL AND CENTER PIECES TO 16".

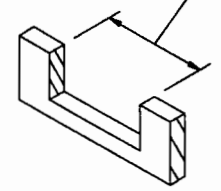
LATERAL PIECE, 5-1/2" X 26" X 1/2" THICK PLYWOOD (2 REQD). NAIL TO THE VERTICAL PIECES W/2-6d NAILS AT EACH END AND TO INTERMEDIATE FILLER PIECE W/4-6d NAILS.



INTERMEDIATE FILLER PIECE, 2" X 6" X 15" (2 REQD). NOTCH TOP PIECE SO AS TO ALLOW VIEWING OF HUMIDITY INDICATOR AND PRESSURE RELIEF VALVE SEE "DETAIL A".

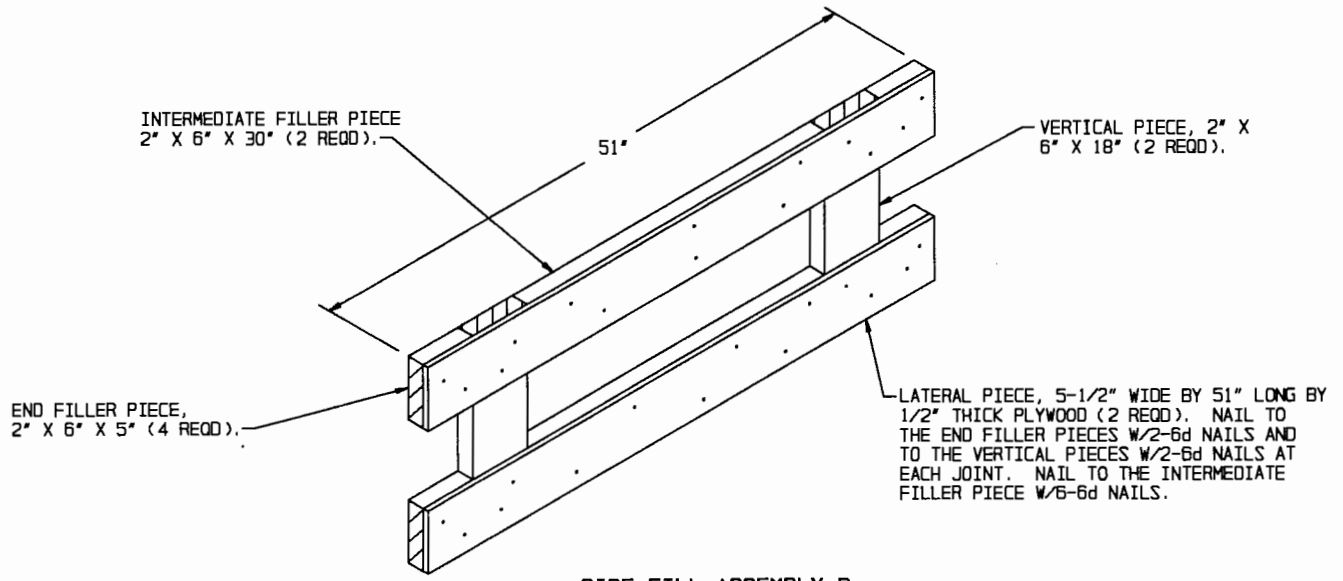
VERTICAL PIECE, 2" X 6" X 18" (2 REQD).

NOTCH AS REQD TO PROVIDE VISUAL ACCESS TO THE HUMIDITY INDICATOR AND PRESSURE RELIEF VALVE ON THE SIDE OF THE SHIPPING AND STORAGE CONTAINER.



DETAIL A

SIDE FILL ASSEMBLY A



INTERMEDIATE FILLER PIECE 2" X 6" X 30" (2 REQD).

51"

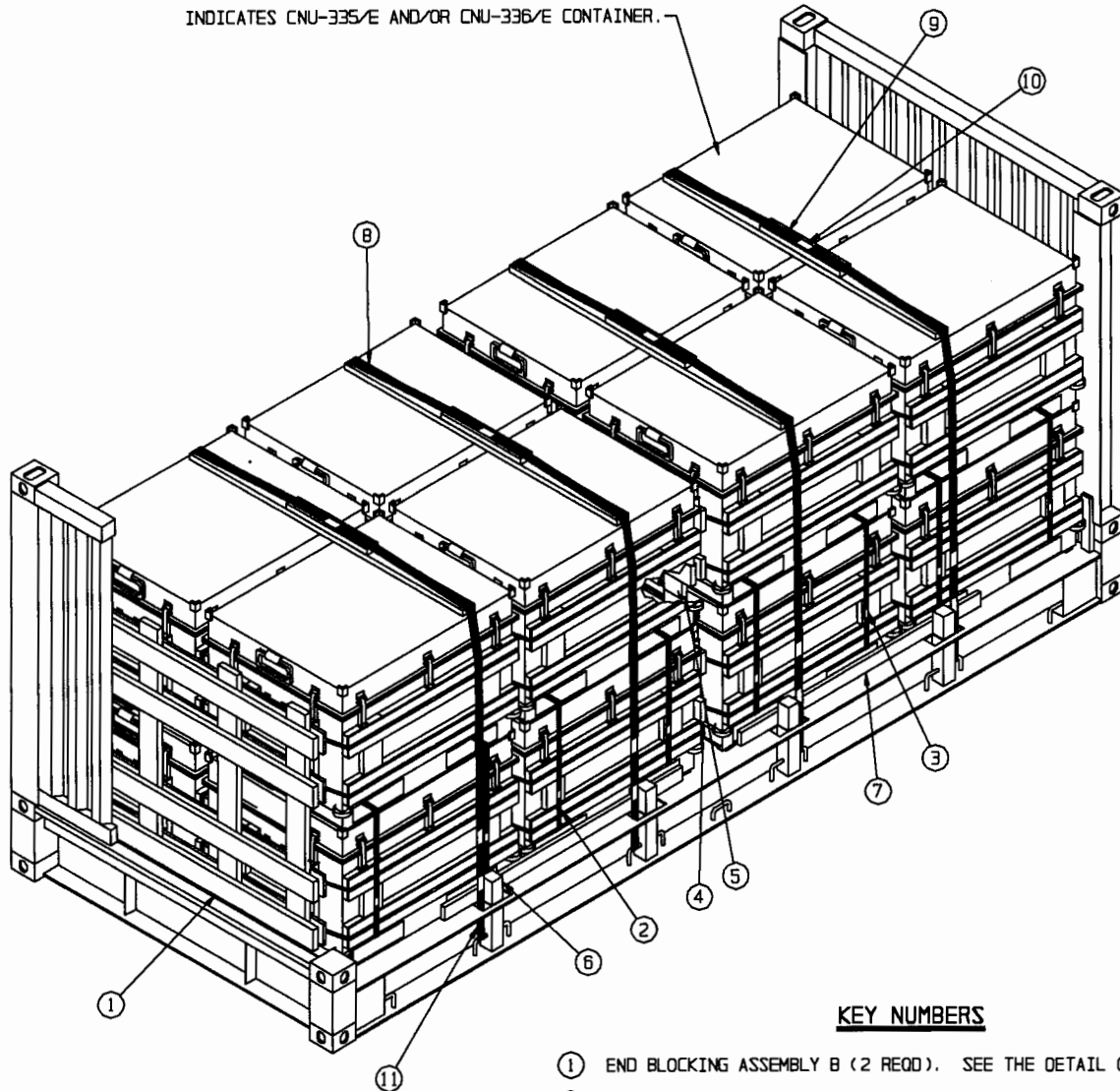
VERTICAL PIECE, 2" X 6" X 18" (2 REQD).

END FILLER PIECE, 2" X 6" X 5" (4 REQD).

LATERAL PIECE, 5-1/2" WIDE BY 51" LONG BY 1/2" THICK PLYWOOD (2 REQD). NAIL TO THE END FILLER PIECES W/2-6d NAILS AND TO THE VERTICAL PIECES W/2-6d NAILS AT EACH JOINT. NAIL TO THE INTERMEDIATE FILLER PIECE W/6-6d NAILS.

SIDE FILL ASSEMBLY B

INDICATES CNU-335/E AND/OR CNU-336/E CONTAINER.



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

- ⑩ SEAL FOR 2" STRAPPING (20 REQD). FASTEN PIECE MARKED ⑨ WITH ONE SEAL CRIMPED WITH TWO PAIR OF NOTCHES. FASTEN PIECE MARKED ⑪ WITH ONE SEAL CRIMPED WITH ONE PAIR OF NOTCHES. SEE THE "TIEDOWN DETAIL" ON PAGE 12.
- ⑪ PAD, STRAPPING, 2" X .044" OR .050" X 18" (8 REQD). PRE-POSITION THE PAD BETWEEN THE HOLD-DOWN STRAP, PIECE MARKED ⑨, AND THE FLATRACK TIEDOWN PROVISIONS. FASTEN WITH ONE SEAL CRIMPED WITH ONE PAIR OF NOTCHES. SEE THE "TIEDOWN DETAIL" ON PAGE 12.

KEY NUMBERS

- ① END BLOCKING ASSEMBLY B (2 REQD). SEE THE DETAIL ON PAGE 10.
- ② BUNDLING STRAP, 1-1/4" X .035" OR .031" BY A LENGTH TO SUIT (REF: 22'-0") (8 REQD). INSTALL TO ENCIRCLE ALL FOUR CONTAINERS IN ONE STACK.
- ③ SEAL FOR 1-1/4" STRAPPING (8 REQD, 1 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF NOTCHES.
- ④ CENTER GATE B (1 REQD). SEE THE DETAIL ON PAGE 11.
- ⑤ TIE WIRE, NO. 14 GAGE WIRE 24" LONG (2 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND THE CENTER FILL ASSEMBLY AND AN ADJACENT CONTAINER HANDLE. BRING ENDS TOGETHER AND TWIST TAUT.
- ⑥ STAKE, 4" X 4" X 18" (8 REQD). INSTALL THE STAKE INTO THE FLATRACK STAKE POCKETS WITH A TIGHT (SNUG) FIT. NOTE: REFERENCE DIMENSIONS FOR A TIGHT FITTING STAKE ARE 3-1/4" (ACTUAL) X 3-1/4" (ACTUAL). NAIL 1-20d NAIL THRU THE HOLE PROVIDED IN THE FACE OF THE FLATRACK STAKE POCKET AND INTO THE STAKE. BEND THE PROTRUDING HEAD OF THE NAIL OVER AGAINST THE STAKE POCKET.
- ⑦ SIDE BLOCKING, 2" X 4" X 7'-0" ON ONE SIDE, 1" X 4" X 7'-0" ON THE OPPOSITE SIDE (4 REQD, 2 EACH). CENTER EACH PIECE BETWEEN A PAIR OF STAKES, AS SHOWN ABOVE. TOENAIL TO THE STAKES W/2-12d NAILS EACH.
- ⑧ STRAPPING BOARD ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 10.
- ⑨ HOLD-DOWN STRAP, 2" X .044" X .050" BY A LENGTH TO SUIT (REF: 23'-0") (4 REQD). INSTALL EACH STRAP FROM TWO 12'-6" LONG PIECES. STAPLE TO THE STRAPPING BOARD ASSEMBLY W/2 STAPLES.

(CONTINUED AT LEFT)

SPECIAL NOTES:

1. THE LOAD AS SHOWN ON PAGE 8 MAY BE REDUCED BY ONE LAYER FOR A SHIPMENT OF EIGHT CONTAINERS.
2. POSITION THE STRAPPING BOARD ASSEMBLIES AND THE HOLD-DOWN STRAPS SO AS TO BE VERTICALLY IN LINE WITH THE FLATRACK TIEDOWN POINTS.

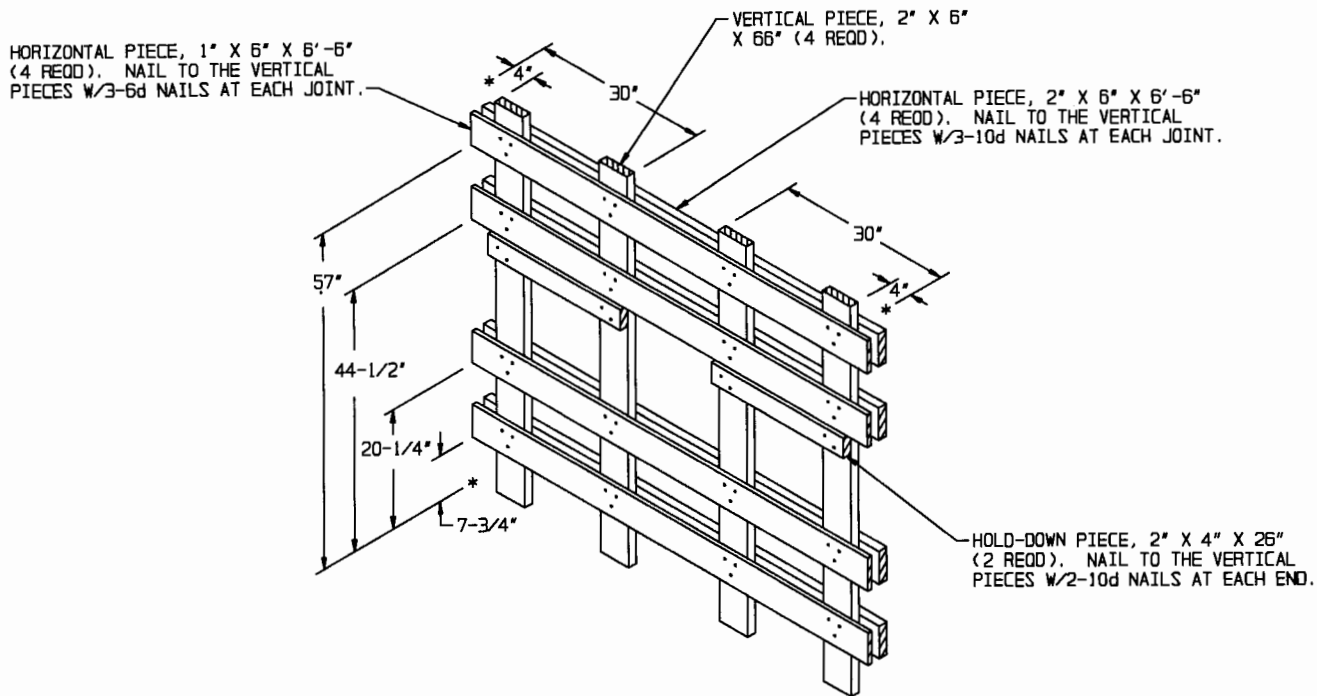
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	14	5
1" X 6"	52	26
2" X 4"	58	39
2" X 6"	170	170
4" X 4"	12	16
NAILS	NO. REQD	POUNDS
6d (2")	96	3/4
10d (3")	224	3-1/2
12d (3-1/4")	16	1/2
20d (4")	8	1/2
STEEL STRAPPING, 1-1/4" - 176' REQD		26 LBS
SEAL FOR 1-1/4" STRAPPING - 8 REQD		1/2 LBS
STEEL STRAPPING, 2" - 104' REQD		35 LBS
SEAL FOR 2" STRAPPING - 20 REQD		4 LBS
WIRE, 14 GAGE - 4' REQD		NIL
STAPLE - 8 REQD		NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-335/E	16	17,920 LBS
DUNNAGE		583 LBS
FLATRACK		5,700 LBS
TOTAL WEIGHT		24,203 LBS (APPROX)

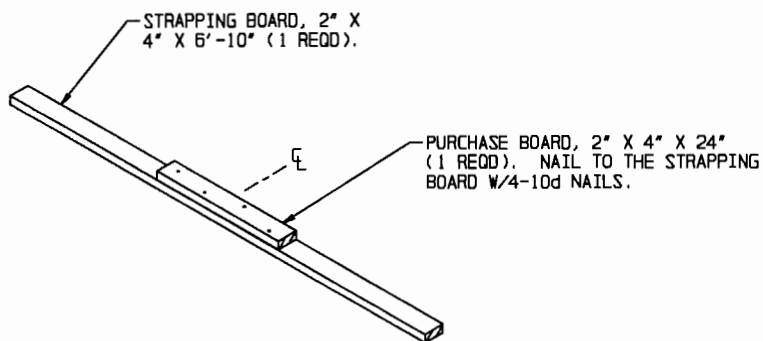
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU-336/E	16	10,256 LBS
DUNNAGE		583 LBS
FLATRACK		5,700 LBS
TOTAL WEIGHT		16,539 LBS (APPROX)

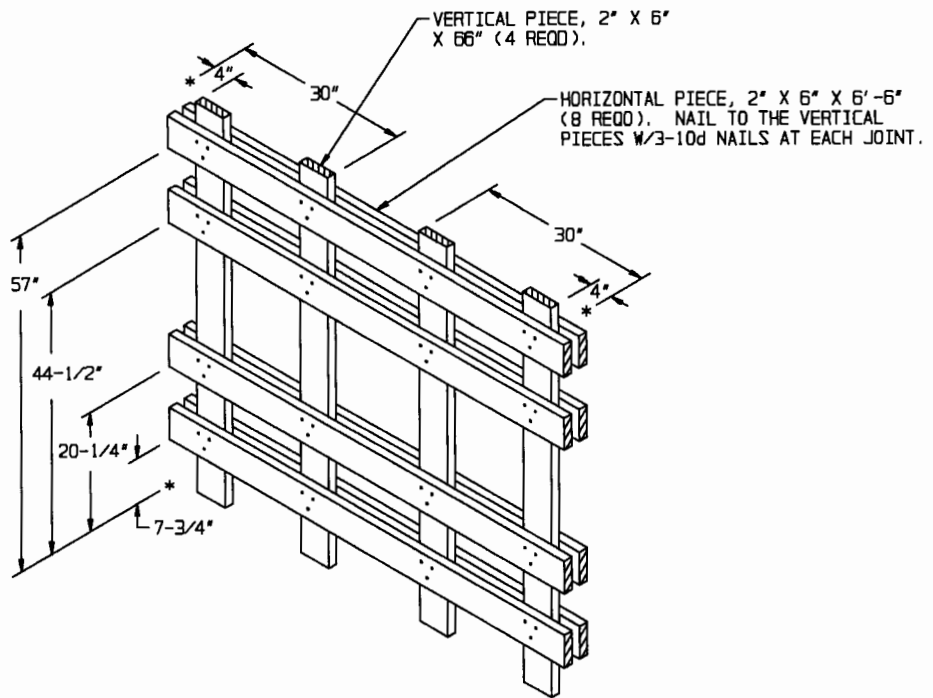


END BLOCKING ASSEMBLY B

NOTE: FOR A ONE HIGH LOAD, ELIMINATE THE TOP FOUR HORIZONTAL PIECES, MOVE THE HOLD-DOWN PIECES TO THE 20-1/4" HORIZONTAL PIECE, AND SHORTEN THE VERTICAL PIECES TO 24".

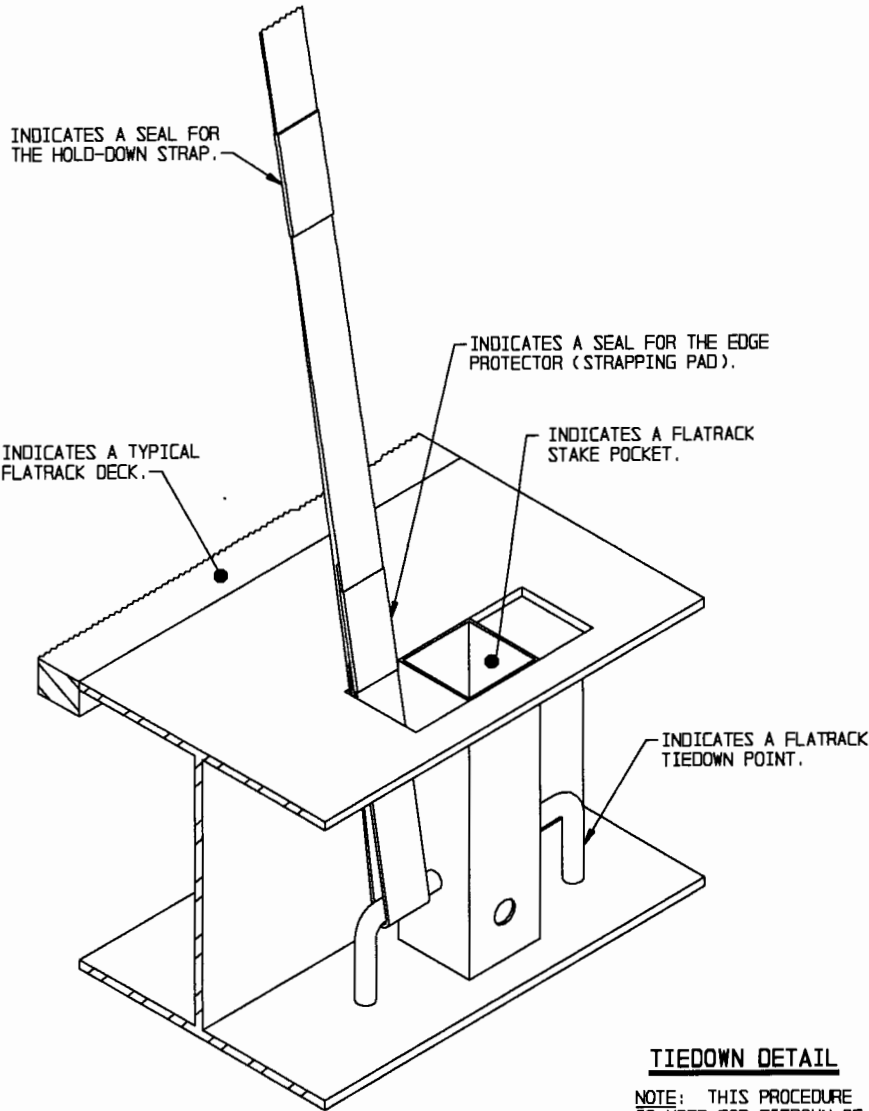


STRAPPING BOARD ASSEMBLY

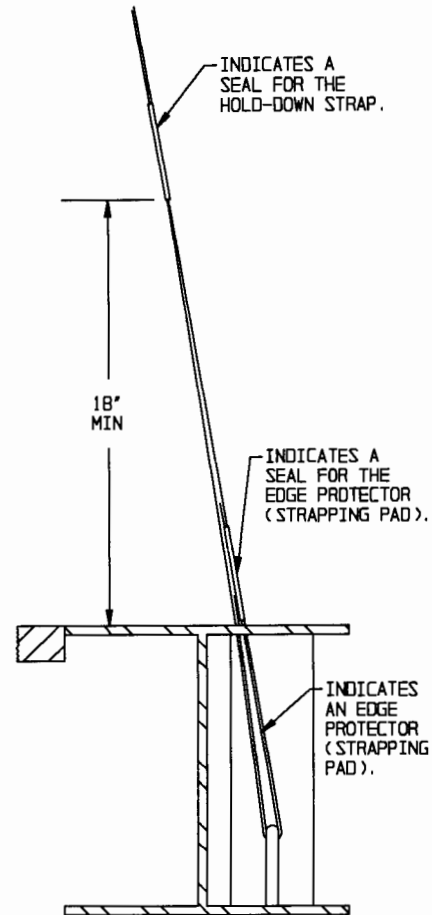


CENTER GATE B

NOTE: FOR A ONE HIGH LOAD, ELIMINATE THE TOP FOUR HORIZONTAL PIECES, AND SHORTEN THE VERTICAL PIECES TO 24".



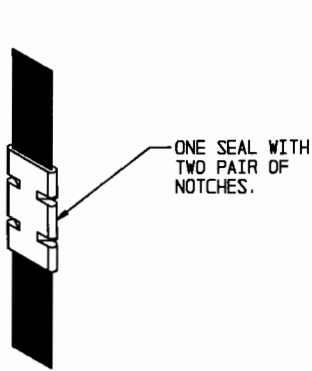
PARTIAL ISOMETRIC SECTION VIEW



PARTIAL SIDE VIEW

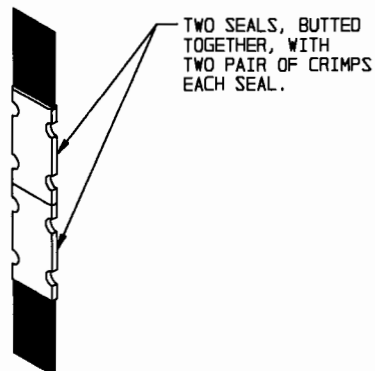
TIEDOWN DETAIL

NOTE: THIS PROCEDURE IS USED FOR TIEDOWN OF THE LOAD USING FLATRACK SIDE RAIL TIEDOWN POINTS. SEE GENERAL NOTE "N" ON PAGE 2.



STRAP JOINT A

METHOD OF SECURING A STRAP JOINT WHEN USING A NOTCH-TYPE SEALER.



STRAP JOINT B

METHOD OF SECURING A STRAP JOINT WHEN USING A CRIMP-TYPE SEALER.

STRAP/SEAL DETAIL

DETAILS