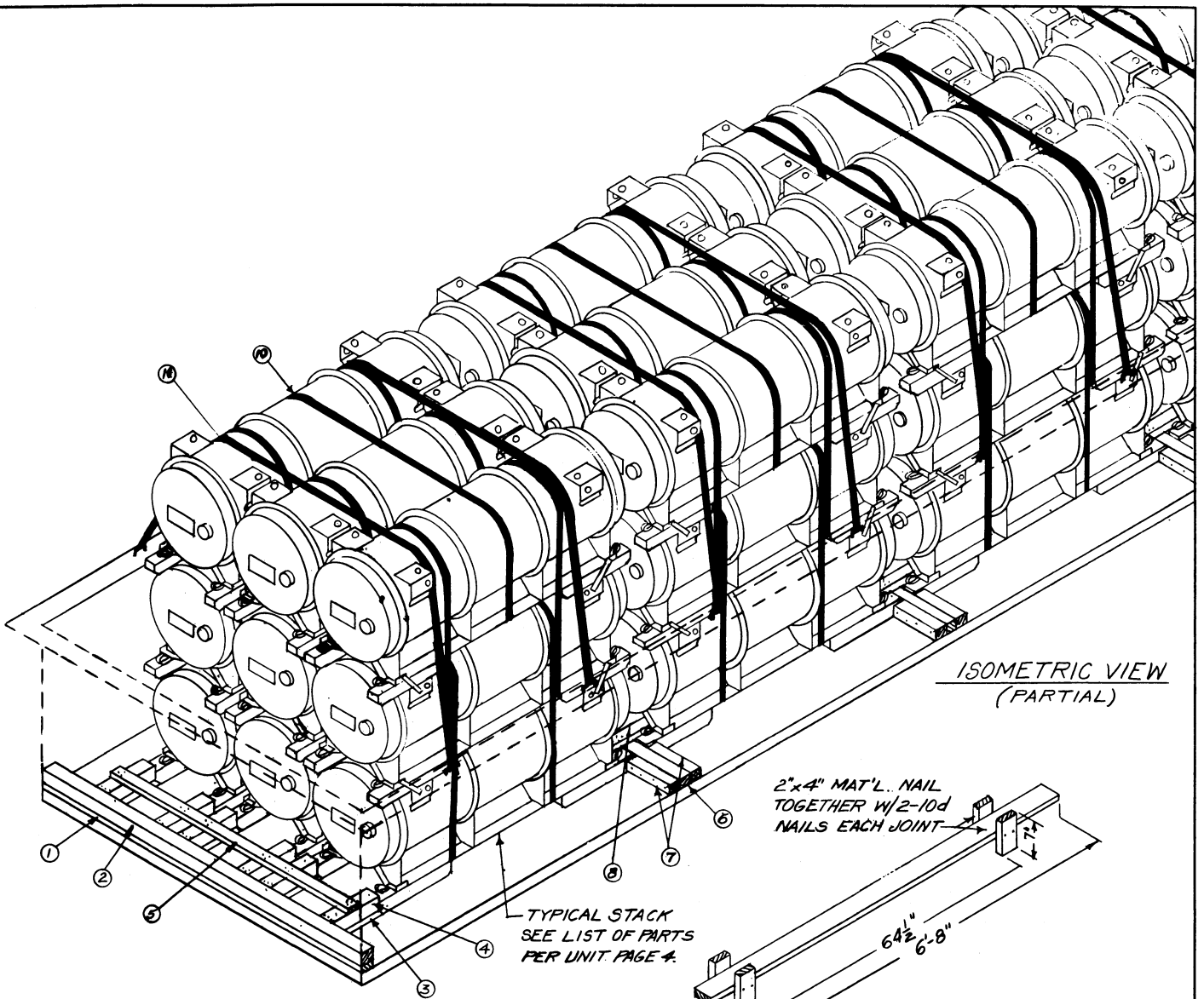


APPROVED
BUREAU
OF
EXPLOSIVES
St. J. Brasonuck
DATE *5/17/58* INSPECTOR



**LOADING & BRACING IN GONDOLA CAR
(CL & LCL) OF THE FORE SECTION FOR THE
HAWK ANTI-AIRCRAFT GUIDED MISSILE**

LOADING & BRACING IN GONDOLA CAR (CL & LCL) OF THE FORE SECTION FOR THE HAWK ANTI-AIRCRAFT GUIDED MISSILE			
DRAFTSMAN <i>AAS</i>	TRACER	ENGINEER <i>CRJ</i>	SUBMITTER <i>W3711/ate</i>
CHECKER <i>CRJ</i>	CHECKER <i>[Signature]</i>	ENGINEER	COL., ORDN. CORPS U.S.A.
REVISIONS			EXAMINED <i>Donald C. Koshin</i>
			ORDN. CORPS U.S.A.
			APPROVED BY ORDER OF THE CHIEF OF ORDNANCE <i>Robert F. Weidman</i>
			ORDN. CORPS U.S.A.
			ORDNANCE CORPS U.S.A.
			27 MARCH 1958
			CLASS DIVISION DRAWING FILE
			19 48 5362 GM5A60



ISOMETRIC VIEW
(PARTIAL)

2"x4" MAT'L. NAIL
TOGETHER W/2-10d
NAILS EACH JOINT

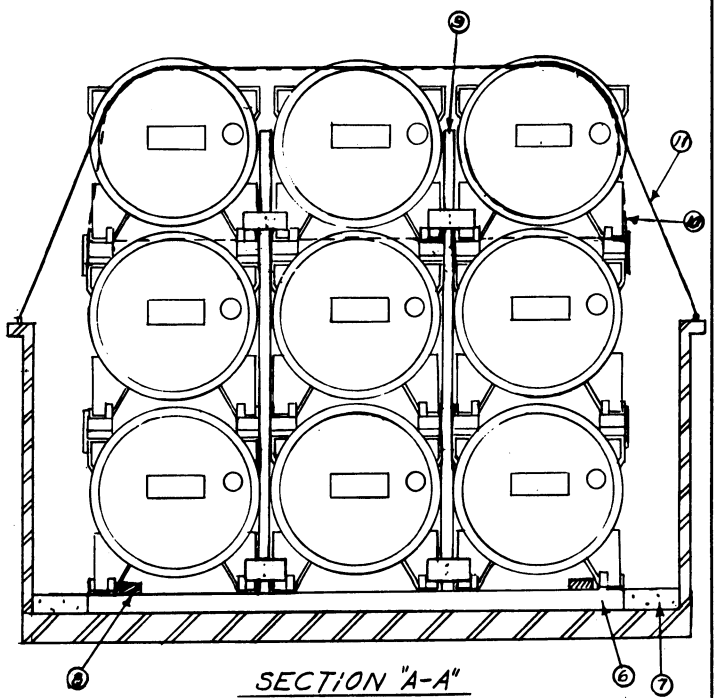
TYPICAL STACK
SEE LIST OF PARTS
PER UNIT PAGE 4.

64 1/2" x 8"

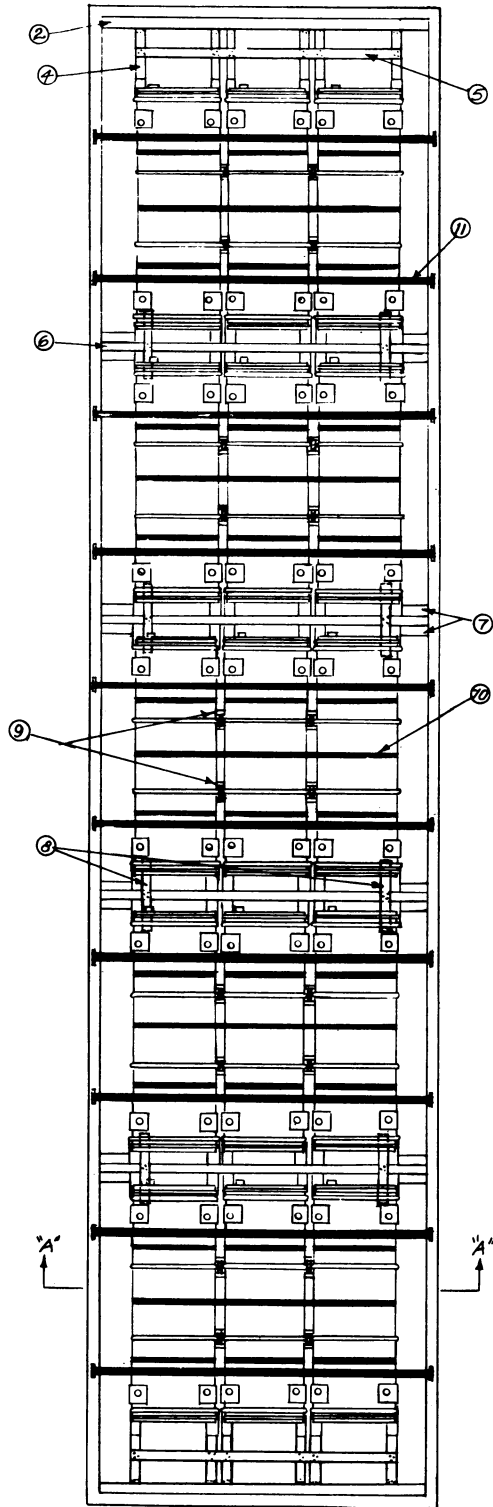
9 ANTI-CHAFING BOARD
(20 REQ'D)

KEY NUMBERS & NOTES (CL)

1. 2" X 4" X CAR WIDTH (2 REQ'D) NAIL TO PIECE 2 W/ 16D NAIL EVERY 8" POSITION AT EACH END OF CAR.
2. 4" X 4" X CAR WIDTH (2 REQ'D) 1 EACH END OF CAR.
3. 2" X 4" CUT TO FIT (12 REQ'D) 45° BEVEL ON ONE END. NAIL TO PIECE 4 W/ 4 16D NAILS. POSITION ASSY AGAINST SKIDS AS SHOWN.
4. 4" X 4" CUT TO FIT (12 REQ'D) TO NAIL TO PIECE 4 W/ 3 16D NAILS EACH.
5. 2" X 4" X 7' 6" (2 REQ'D) NAIL TO PIECE 4 W/ 3 16D NAILS EACH JOINT.
6. 4" X 4" X CAR WIDTH (4 REQ'D)
7. 4" X 4" X APPROX 9' 5 7/8" (16 REQ'D) NAIL TO PIECE 6 W/ 3 50D NAILS EACH.
8. 2" X 4" X 24" (8 REQ'D) POSITION AS SHOWN (SEE PLAN) NAIL TO PIECE 6 W/ 3 16D NAILS EACH.
9. ANTI-CHAFING BOARD (SEE DETAIL) ASSEMBLE AND PRE-POSITION AS LOADING PROGRESSES.
10. 1" 1 7/8" X .035" X APPROX 21' 0" STEEL STRAPPING (15 REQ'D).
11. 2" X .050" X APPROX 16' 0" STEEL STRAPPING (10 REQ'D).



SECTION "A-A"



PLAN VIEW

BILL OF MATERIAL (CL)		
LUMBER	LINEAL FEET	BOARD FEET
2" X 4"	240	160
4" X 4"	194	259
NAILS	NO. REQ'D	LBS
10d	160	2½
16d	120	2½
20d	36	1½
50d	48	4
STEEL STRAPPING 1½" X .035" APPROX 105 FT REQ'D 15 LBS		
2" X .050" APPROX 90 FT REQ'D 30 LBS		

MATERIAL SPECIFICATIONS

LUMBER: SEE PAR. 8400, ORDN'G 3-4 VOL 3, DATED 1 JULY 1955

NAILS: COMMON CEMENT COATED, FED SPEC. FF-N-105

ALTERNATE: ANNULAR RING TYPE NAIL OF SAME SIZE

STRAPPING: STEEL, 1½" X .035" AND 2" X .050", TYPE 1,

CLASS "A" OR "C", FED SPEC. QQ-S 701

GENERAL NOTES

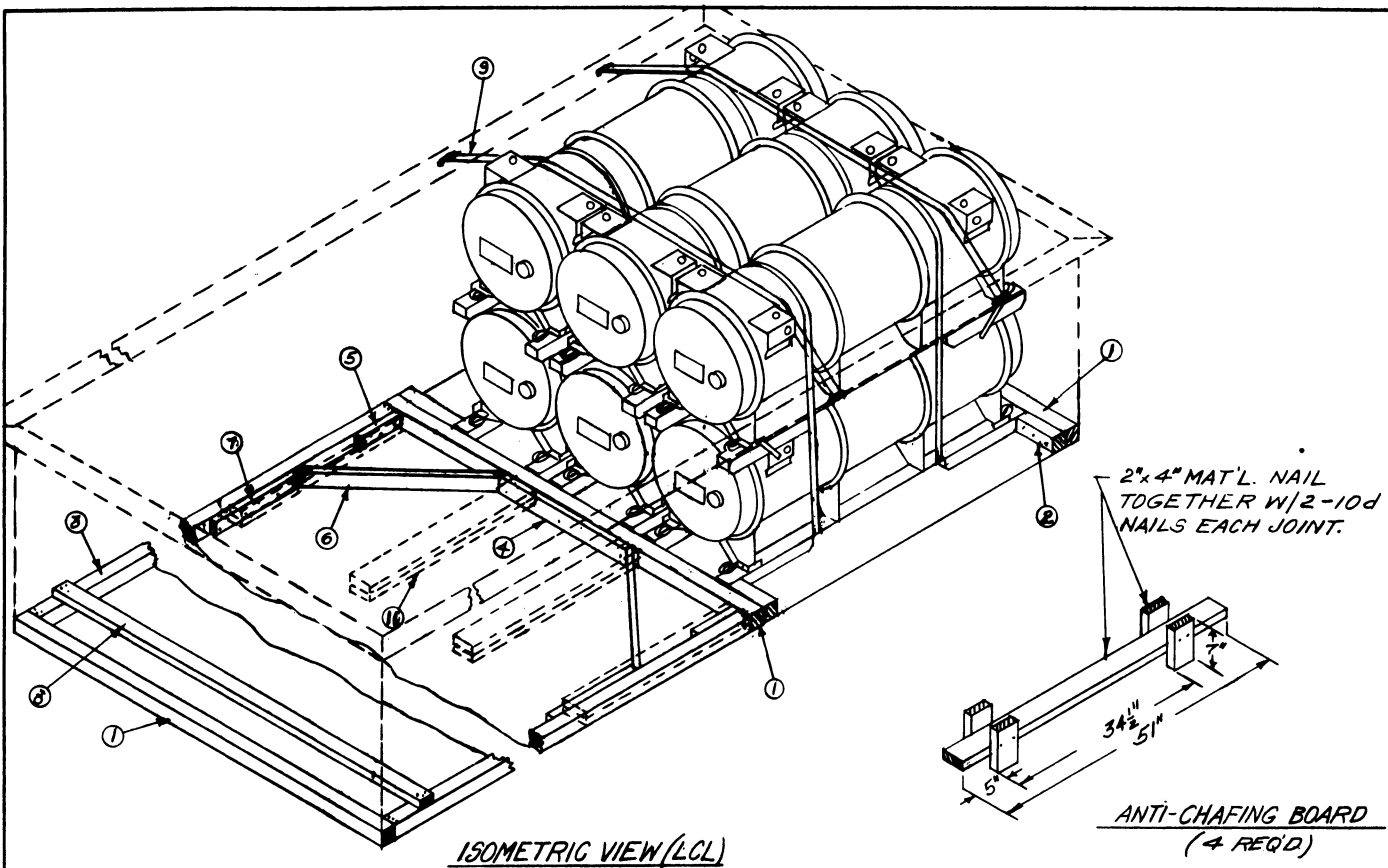
- A. LOAD AS SHOWN IS BASED ON GONDOLA CAR DRIVING DIMENSIONS OF 40' 6" L X 9' 0" WIDE X 40" HIGH TOTAL.
- B. WHITSE SHIPMENTS WILL BE POSITIONED IN THE GONDOLA IN COMPLIANCE WITH THE WEIGHT DISTRIBUTION REQUIREMENTS OF THE RAILCAR. THE NUMBER OF UNITS MAY BE ADJUSTED TO FIT THE RAILCAR CONCERNED OR THE QUANTITY TO BE SHIPPED; HOWEVER, THE APPROVED METHODS CONTAINED HEREIN FOR FULL OR PARTIAL CAR LOAD MUST BE FOLLOWED FOR BLOCKING, BRACING AND STAYING OF THIS ITEM.
- C. SELECTION OF RAILCARS FOR TRANSPORT OF THIS ITEM WILL BE IN ACCORDANCE WITH PAR. 8,300.6 OF ORDN 3-4, VOL 3.
- D. FOR THE CARLOADING OF THIS ITEM, INSTALLATIONS SHOULD REQUEST GONDOLA CARS WITH ANCHOR STRAP TIE DOWN FACILITIES. IN THE EVENT GONDOLA CARS SO EQUIPPED ARE NOT READILY AVAILABLE, ANCHOR STRAP TIE DOWNS MAY BE LOCALLY FABRICATED.
- E. FOR DETAILS OF CONTAINER SEE Dwg NO. _____ CONTAINER SIZE ____ 06½" L X 28½" W X 33½" H. GROSS WT. ____ 700 LBS.

<u>LOAD AS SHOWN</u>	<u>CONTAINERS</u>	<u>WEIGHT (INCL. DUNNAGE)</u>
	45	32,604

45

32,604

DO NOT SCALE

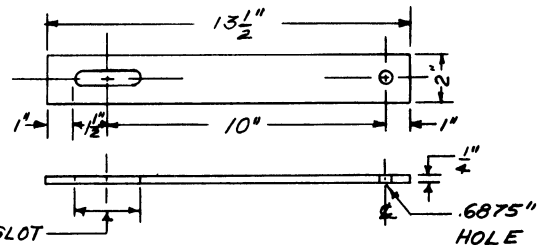


ISOMETRIC VIEW (LCL)

ANTI-CHAFING BOARD
(4 REQ'D)

KEY NUMBERS & NOTES (LCL)

1. 4" X 4" X CAR WIDTH (3 REQ'D) POSITION AS SHOWN. TO BE NAILED TO WOOD OR HAILABLE STEEL FLOOR W/ 1 40d NAIL EVERY 8".
2. 4" X 4" X APPROX 9 5/8" (4 REQ'D). NAIL TO PIECE 1 W/ 3 50d NAILS EACH.
3. 4" X 4" CUT TO FIT POSITION AS SHOWN. TO NAIL TO PIECE 1 W/ 3 16d NAILS EACH END (2 REQ'D).
4. 2" X 4" X 36" CENTER AND NAIL TO PIECE 1 W/ 1 16d NAIL EVERY 6". (1 REQ'D)
5. 2" X 4" X 12" (2 REQ'D) NAIL TO PIECE 3 W/ 4 16d NAILS.
6. 2" X 4" X 51 1/2" (2 REQ'D) DOUBLE BEVEL EACH END. NAIL TO 1 & 3 WITH 2 16d NAILS EACH END.
7. 2" X 4" X 24" (2 REQ'D) NAIL TO PIECE 3 W/ 1 16d NAIL EVERY 4".
8. 2" X 4" X CAR WIDTH (NO. AS REQ'D) LOCATE 7" 0" (MAX) CENTER TO CENTER. NAIL TO PIECE 3 W/ 3 16d NAILS EACH END.
9. 2" X .050 STEEL STRAPPING APPROX 13' 6" (2 REQ'D).
10. ANTI CHAFING BOARD (SEE DETAIL) ASSEMBLE AND PRE POSITION AS LOADING PROGRESSES.
11. 2" X 6" X 40" (DOUBLED) (4 REQ'D) NAIL BOTTOM PIECE TO FLOOR W/ 1-16d NAIL EVERY 8". NAIL TOP PIECE TO BOTTOM IN LIKE MANNER. USE FOR CARS WITH WOOD OR HAILABLE STEEL FLOORS. ELIMINATE PIECES 3, 4, 5, 6, 7, & 8.



DETAIL-CONNECTING BAR

- NOTE:
- EACH GROUP OF THREE (3) CONTAINERS REQUIRES:
1. EIGHT (8) CONNECTING BARS SECURED IN PLACE BY: SIXTEEN (16) BOLTS 5/8" DIA. (SEE LIST OF PARTS.) SIXTEEN (16) NUTS (SEE LIST OF PARTS.)
 2. 1.25" STEEL STRAPPING AS SHOWN IN TYPICAL STACK.

- NOTE:
- HOLES MAY BE "BURRED" THRU CONNECTING BAR THEN ENLARGED TO .6875" WITH A "BRIDGE" TYPE.
- N. B. LOCK WASHERS WILL NOT BE USED.

BILL OF MATERIAL (LCL)		
QUANTITY	LINEAL FT	BOARD FT
2" X 4"	90	54
4" X 4"	90	131
NAILS 10d APPROX 32 REQ'D	1/2 LB	
16d APPROX 74 REQ'D	1 3/4 LBS	
50d APPROX 12 REQ'D	1 LB	
STEEL STRAPPING 2" X .050" APPROX 27 FT REQ'D	9 LBS	

MATERIAL SPECIFICATIONS

SEE MATERIAL SPECIFICATIONS, PAGE 3

LIST OF PARTS PER UNIT (STACK)

LINE NO	NAME OF PARTS	PC. WK ORD PART NO.	MATERIAL				SPEC. NO	REMARKS
			SIZE OR FORM	KIND	GRADE	(DOW NO)		
1	SCREW, CAP	16 225910	5/8"-18 UNF-2A	STEEL ALLOY			PLAIN FINISH	
2	NUT, CASTLE	16 210469	5/8"-18 UNF-2B	STEEL ALLOY			PLAIN FINISH	
3	WASHER	16 221440	5/8"	STEEL, COR ROSION, RESISTANT	LIGHT SERIES		PLAIN	
4	PIN, COTTER	16 590492	1/8"X2"	STEEL, COR ROSION, RESISTANT			SPLIT	
5	BAR CONNECTING	8	2" X 1/2" X 13 1/2"	STEEL, HOT ROLLED		001010 ST 136		
6	STRAPPING	4	1.25" X .035"	STEEL	TYPE 1 CLASS A	00 5 781 A	189 6"	

* ALTERNATE: DOUBLE "LOCK NUTS" MAY BE SUBSTITUTED FOR CASTLE NUTS AND COTTER PINS