STORAGE IN APPROVED MAGAZINES OF 8" SEPARATE LOADING PROJECTILES, UNITIZED 6 ROUNDS PER 19-1/2" L X 28-1/2" W X 38-1/2" H PALLET UNIT

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 HEIGHT OF UNIT MAY VARY SLIGHTLY, HOWEVER, PROCEDURES SPECIFIED HEREIN WILL APPLY.

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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. THE STORAGE PROCEDURES DEPICTED WITHIN THIS DOCUMENT ARE APPLICABLE FOR STORAGE IN VARIOUS TYPES AND SIZES OF MAGAZINES. THE STORAGE PROCEDURES DEPICTED FOR THE SPECIFIC TYPES OF MAGAZINES MAY ALSO BE UTILIZED TO STORE PROJECTILE PALLET UNITS IN OTHER TYPES OF APPROVED MAGAZINES. MINOR ADJUSTMENTS MAY BE MADE TO FACILITATE STORAGE IN OTHER TYPES OF MAGAZINES, HOWEVER, THE BASIC PRINCIPLES AS DEPICTED HEREIN WILL BE FOLLOWED.
- C. CAUTION: THE ALLOWABLE "EXPLOSIVE LIMIT" ESTABLISHED FOR A MAGAZINE IS NOT TO BE EXCEEDED. STORAGE OF SOME SPECIFIC TYPES OF SEPARATE LOADING PROJECTILES MUST ALSO COMPLY WITH CURRENT DIRECTIVES AND REGULATORY REQUIREMENTS OTHER THAN AS SPECIFIED IN THIS DRAWING.
- D. TMO (2) PALLET UNITS CAN BE HANDLED BY A FORKLIFT TRUCK AS ONE LOAD, IF THE LENGTH OF THE FORK TIMES IS ADEQUATE TO PROVIDE FILL-LENGTH OR NEARLY FULL-LENGTH REARING UNDER THE LOAD BEING HANDLED. OTHER APPLICABLE SAFETY CONTROLS (DIRECTIVES, REGULATIONS, ETC.) MUST BE ORSERVED. SEE NOTE "G" BELOW FOR ADDITIONAL REQUIREMENTS.
- E. STACK-STABILIZING DIMMAGE PIECES CONSISTING OF 2" X 4" MATERIAL WILL BE USED BETWEEN LAYERS OF PALLET INJITS TO PROVIDE CLEARANCE FOR THE FORK TIMES OF THE FORKLIFT TRUCK FOR SAFE PLACEMENT OR REMOVAL OF UPPER LAYER PALLET UNITS. USUALLY, MOST 2" X 4" DIMMAGE PIECES WILL RE 36" LONG.
- F. IN CONJUNCTION WITH THE SPECIFIED STACK-LEVELING WEDGES AND/OR STACK-STABILIZING DUNNAGE, ADDITIONAL STACK-STABILIZING DUNNAGE IN THE FORM OF "SHIMS" PROBABLY WILL BE REQUIRED TO ACHIEVE SOUND AND ACCEPTABLE STABLE STACKS. SHIM MATERIAL OF VARYING THICKNESSES WILL BE USED BETWEEN STACKED UNITS AS REQUIRED TO GAIN LEVEL OR NEARLY LEVEL STACKS AND SOLID BEARING WITHIN A STACK FROM THE FLOOR OF A MAGAZINE TO THE TOP OF THE STACK. ALSO, "SHIMS" WILL BE USED IN LIEU OF SPECIFIED WEDGES IN OVALARCH TYPE MAGAZINES BECAUSE THE FLOOR SLOPES FROM THE REAR WALL TOWARD THE FRONT WALL. ADDITIONALLY, "SHIMS" CAN BE USED WITHIN AN IGLOO TYPE MAGAZINE INSTEAD OF THE SPECIFIED WEDGES, PROVIDING THE MAGAZINE FLOOR DOES NOT SLOPE MORE THAN 1-1/4" FROM THE CENTER TO A SIDEWALL.
- G. TO FACILITATE STABLE AND SAFE HANDLING, BY A FORKLIFT TRUCK, IN STACKING THESE PALLET UNITS, TWO (2) PALLET INJITS WILL BE BUNDLED TOGETHER WITH TWO (2) STRAPS AS SHOWN IN THE "BUNDLING DETAIL" ON PAGE 3. BUNDLING STRAPS ARE NOT REQUIRED FOR PALLET UNITS STORED ONE-LAYER HIGH.
- H. STORED PALLET UNITS MUST NOT CONTACT THE WALLS OF A MAGAZINE. TO PROVIDE FOR THIS MANDATORY CLEARANCE REQUIREMENT, UNITS MAY BE ELIMINATED FROM THE DEPICTED STORAGE PATTERN AS NECESSARY.
- J. AISLE DIMENSIONS SHOWN FOR STORAGE PROCEDURES IN MAGAZINES MAY BE ADJUSTED TO SUIT LOCAL CONDITIONS, VARIATIONS IN PALLET UNIT DIMENSIONS, AND/OR AVAILABLE MATERIALS HANDLING EQUIPMENT. AISLE SPACING FOR PROJECTILE STORAGE IN STANDARD ABOVE-GROUND MAGAZINES MUST COMPLY WITH NOSE TO NOSE AND BASE TO BASE DISTANCE REQUIRMENTS SPECIFIED ON PAGE 27.
- K. STORAGE PROCEDURES FOR PROJECTILE PALLET UNITS IN STANDARD ABOVE-GROUND MAGAZINES, AS DEPICTED ON PAGES 27 THRU 29, REQUIRE THE USE OF A SPECIAL "TURNING ATTACHMENT" ON THE FORKLIFT TRUCK FOR HANDLING AND STACKING THE UNITS. FOR DETAILS OF THE "TURNING ATTACHMENT", AUXILIARY PARTS, AND PROCEDURES FOR ITS OPERATION AND USE, SEE DRAWINGS NO. D-ORD, 1361 AND 1362, C-ORD, 1069, AND 19-48-1221-599.
- L. THE MAXIMUM FLOOR LOAD FOR A MAGAZINE AS PRESCRIBED BY LOCAL STANDARDS WILL NOT BE EXCEEDED.
- M. IF THE AVAILABLE MHE PERMITS, ADDITIONAL PALLETIZED UNITS MAY BE STORED
 WITHIN THE FRONTAL AREA AND/OR OTHER AVAILABLE AREA OF THE MAGAZINE.
- N. PORTIONS OF THE MAGAZINES, SUCH AS SIDEWALLS, END WALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE STORAGE VIEWS FOR CLARITY PURPOSES.
- P. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE.
- Q. STORAGE OF MULTIPLE LOTS IN A MAGAZINE WILL REQUIRE CAREFUL PREPLANNING SO AS TO INSURE MHE ACCESSIBILITY TO ANY LOT IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN THE APPLICABLE "SPECIAL NOTES" SECTIONS OF THE MULTIPLE-LOT STORAGE PROCEDURES TYPICALLY SHOWN ON PAGES 20 THRU 26. FOR MULTIPLE LOT STORAGE IN STANDARD ABOVE-GROUND MAGAZINES, SEE SPECIAL NOTE 7 ON PAGE 27.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

LUMBER -----: SEE TM 743-200-1, DUNNA GE LUMBER, FED SPEC MM-L-751.

STRAPPING, STEEL ---: ASTM 0 3953; FLAT STRAPPING, TYPE 1 OR 2, HEAVY DUTY, ZINC-COATED (GRADE 2).

SEAL, STRAP ----:: ASTM D 3953; CLASS H, FINISH B (GRADE 2), TYPE D, STYLE I, II, OR IV.

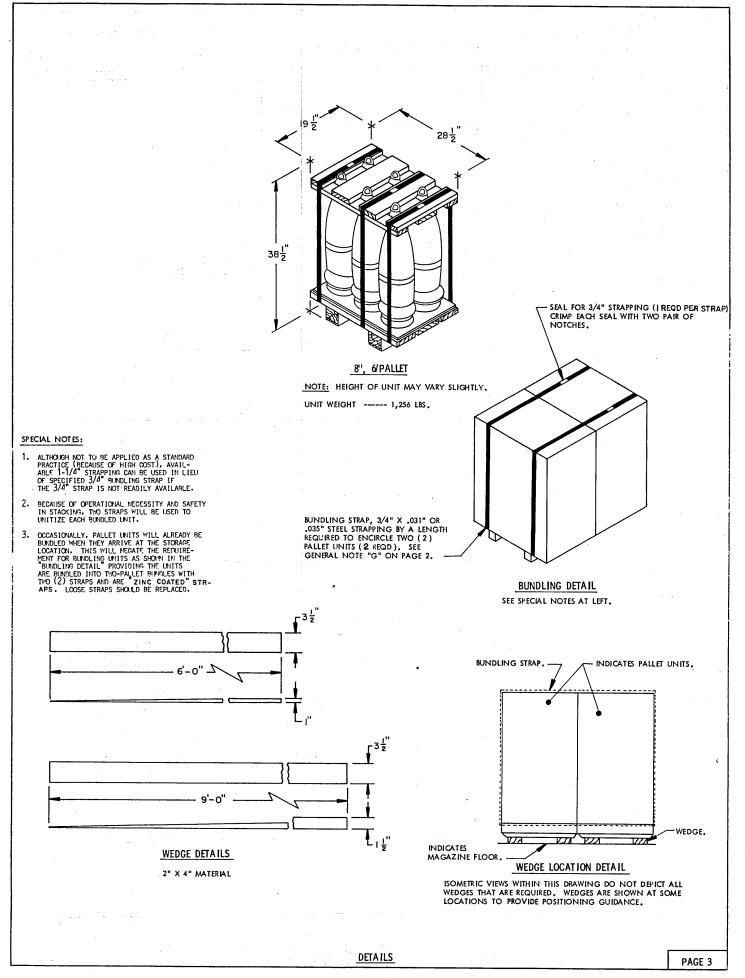
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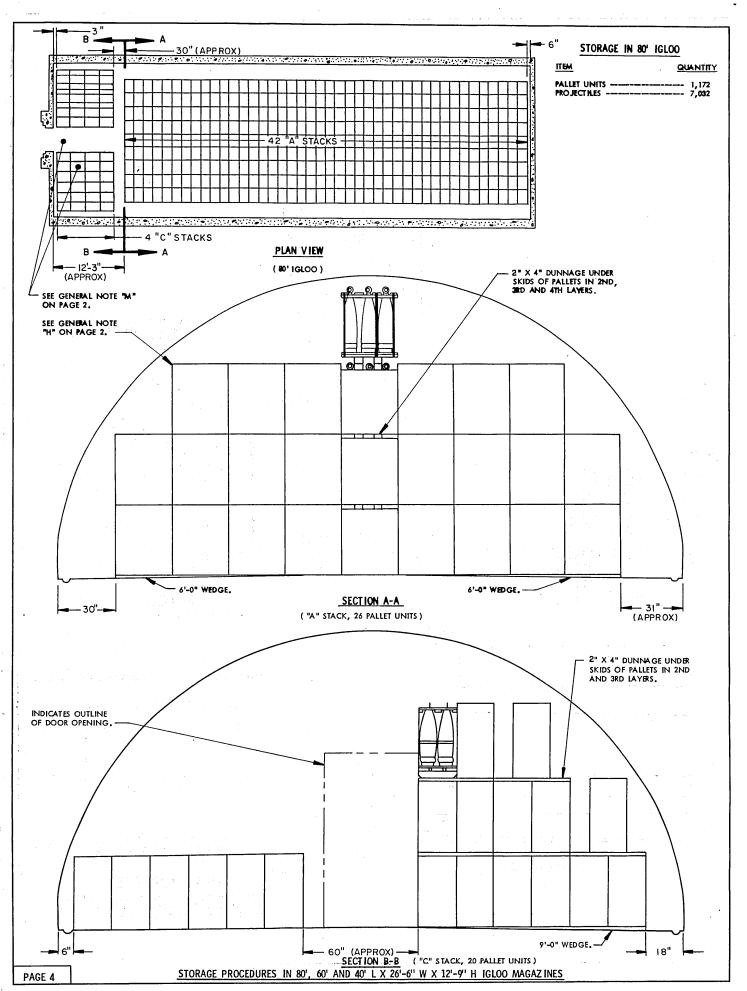
- R. ANY "LIGHT" PALLETIZED UNIT THAT DOES NOT CONTAIN A FULL QUANTITY OF SEPARATE LOADING PROJECTILES WILL NOT BE BURIED IN STORAGE. IT MUST BE POSITIONED ADJACENT TO AN AISLE, PREFERABLY IN FRONT OF THE LOT.
- S. SEPARATE LOADING PROJECTILES PRESENTLY STORED IN ACCORDANCE WITH A PRIOR APPROVED 19-48 SERIES DRAWING NEED NOT BE RE-STORED SOLELY TO CONFORM TO THE PROCEDURES SPECIFIED IN THIS DOCUMENT.

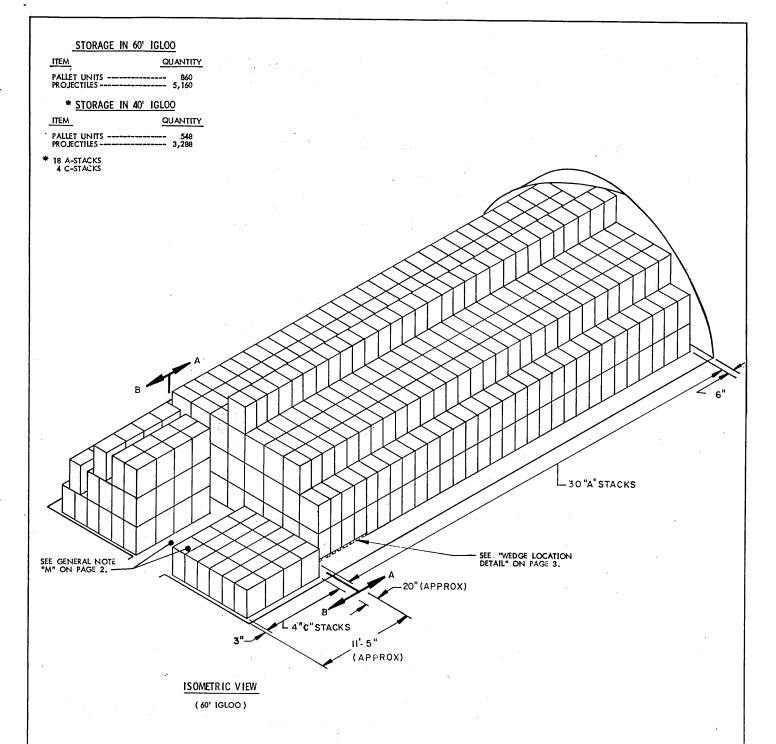
REVISIONS

REVISION NO.1, DATED NOVEMBER 1991, CONSIST OF:

- 1. REVISING GENERAL NOTES "D", "E"; AND "G".
- ADDING MANDATORY REQUIREMENTS FOR BUNDLING UNITS WITH TWO (2) STRAPS.
- 3. CHANGING STACK-STABILIZING DIAMAGE BETWEEN LAYERS FROM 1" x 4" MATERIAL TO 2" x 4" MATERIAL.
- 4. UPDATING MATERIAL SPECIFICATIONS FOR STEEL STRAPPING AND SEALS.
- 5. UPDATING DRAWING FORMAT.





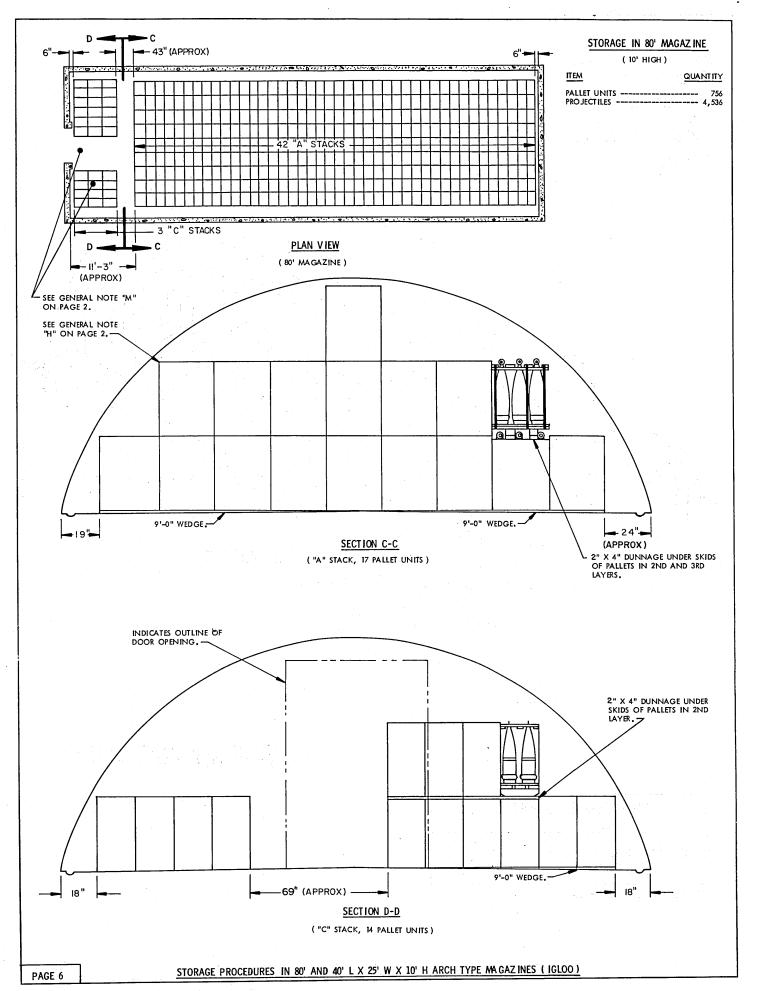


FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2. FOR "WEDGE DETAILS", SEE PAGE 3.

BILL OF MATERIAL (PER STACK)				
TYPE WEDGE		GES	2" X 4" DUN	VAGE LUMBER **
STACK	6'-0"	9'-0"	LINEAR FEET	BOARD FEET
Α	4 REQD	i	51.00	34.00
С	. , .:	2 REQD	30.00	20.00

* * SEE GENERAL NOTES "E" AND "F" ON PAGE 2.

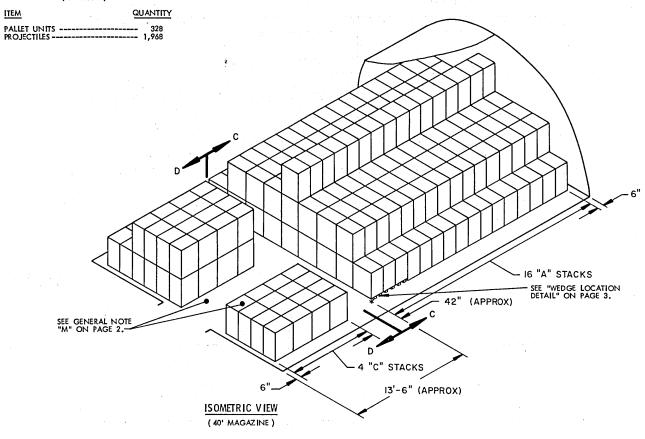
STORAGE PROCEDURES IN 80', 60' AND 40' L X 26'-6" W X 12'-9" H IGLOO MAGAZINES



STORAGE IN 40' MAGAZINE

(10' HIGH)

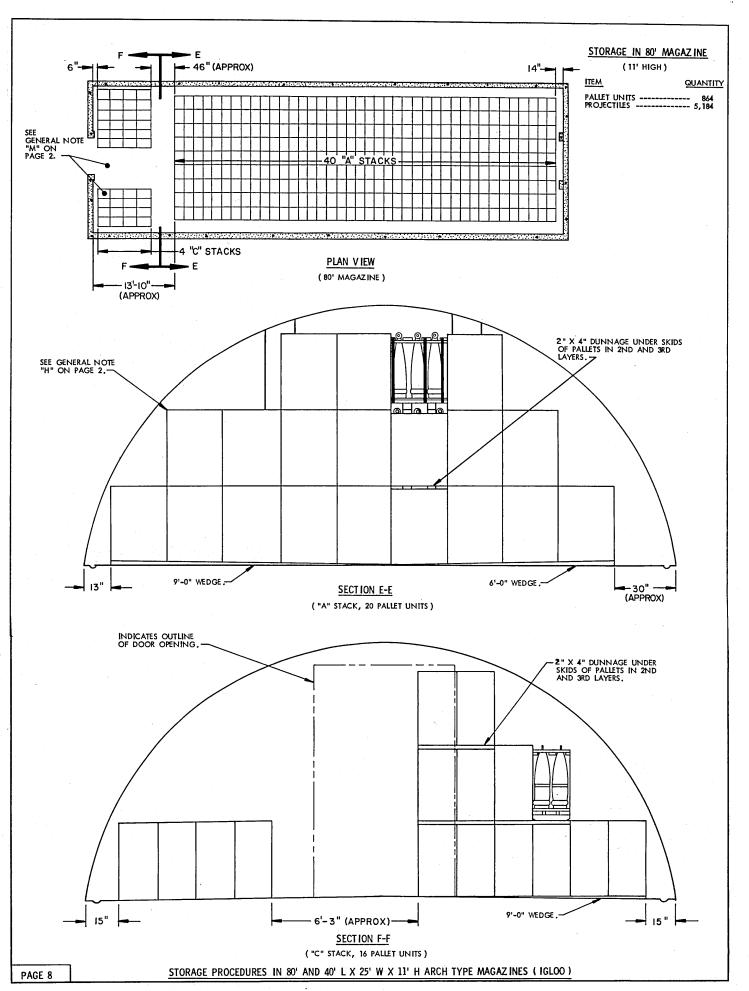
ITEM



FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2. FOR "WEDGE DETAILS", SEE PAGE 3.

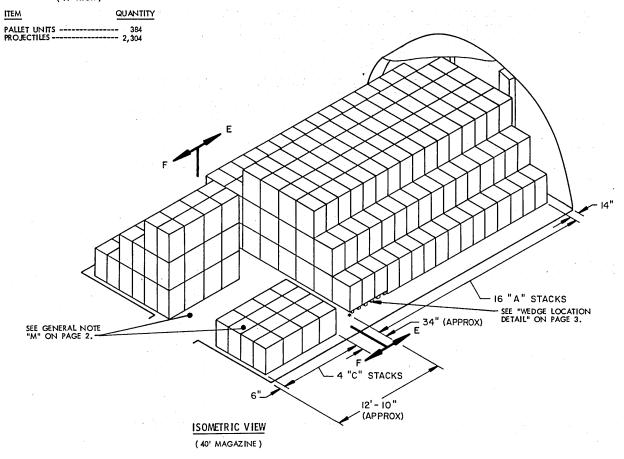
	BILL OF MATERIAL (PER STACK)				
TYPE STACK	WEDGES	2 " X 4" DUNNA	GE LUMBER *		
	9'-0"	LINEAR FEET	BOARD FEET		
Α	4 REQD	24.00	16.00		
С	2 REQD	12.00	8.00		

* SEE GENERAL NOTES "E" AND "F" ON PAGE 2.



STORAGE IN 40' MAGAZINE

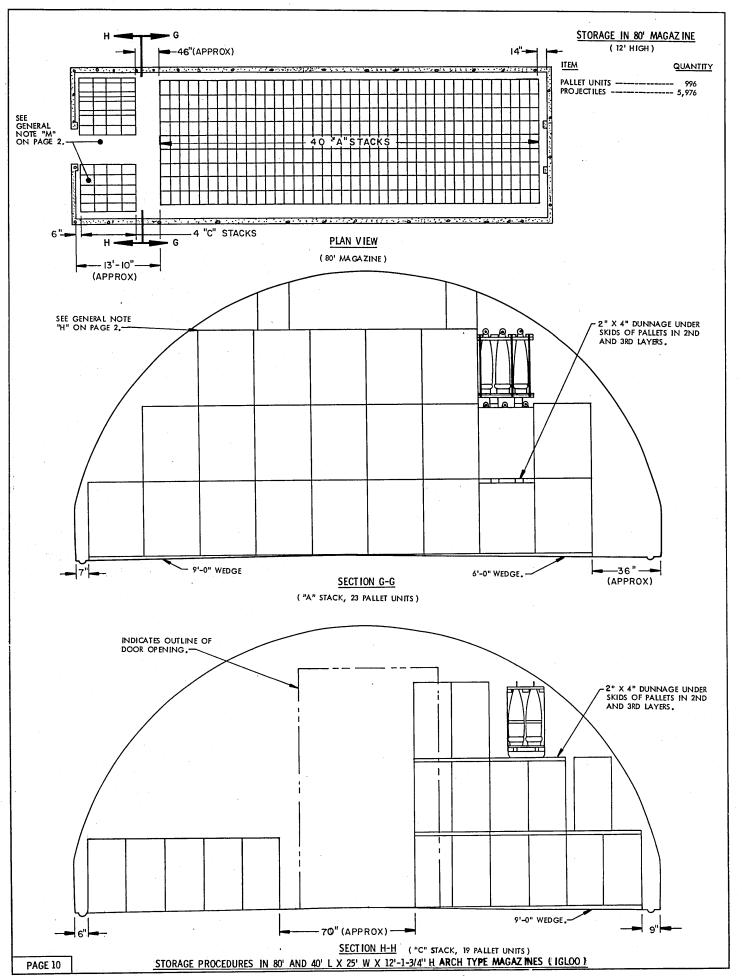
(11' HIGH)

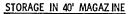


FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2. FOR "WEDGE DETAILS", SEE PAGE 3.

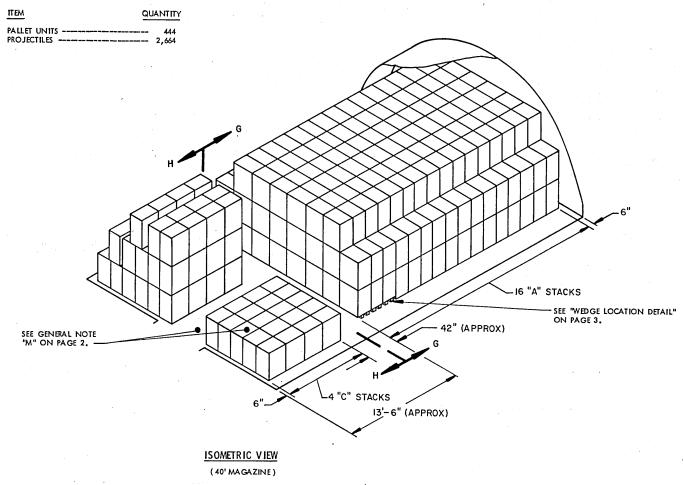
BILL OF MATERIAL (PER STACK)				
TYPE	WEDGE	S	2" X 4" DUNI	NAGE LUMBER *
SIAGR	6'-0"	9'-0"	LINEAR FEET	BOARD FEET
A	2 REQD	2 REQD	33.00	22.00
С		2 REQD	18.00	12.00

* SEE GENERAL NOTES "E" AND "F" ON PAGE 2.





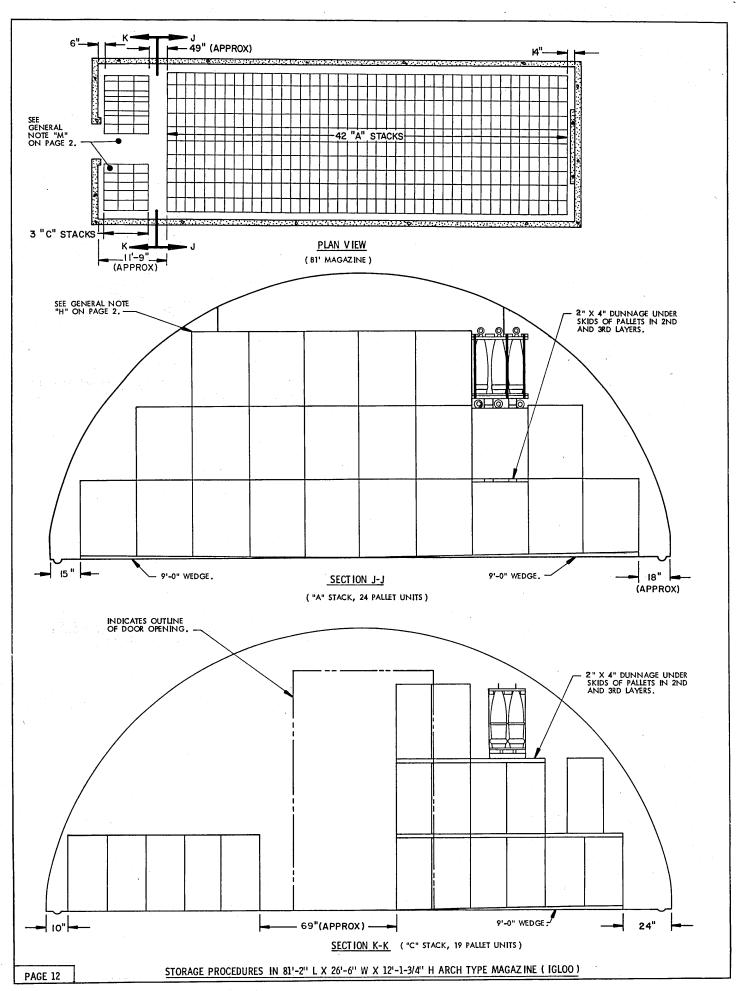
(12' HIGH)

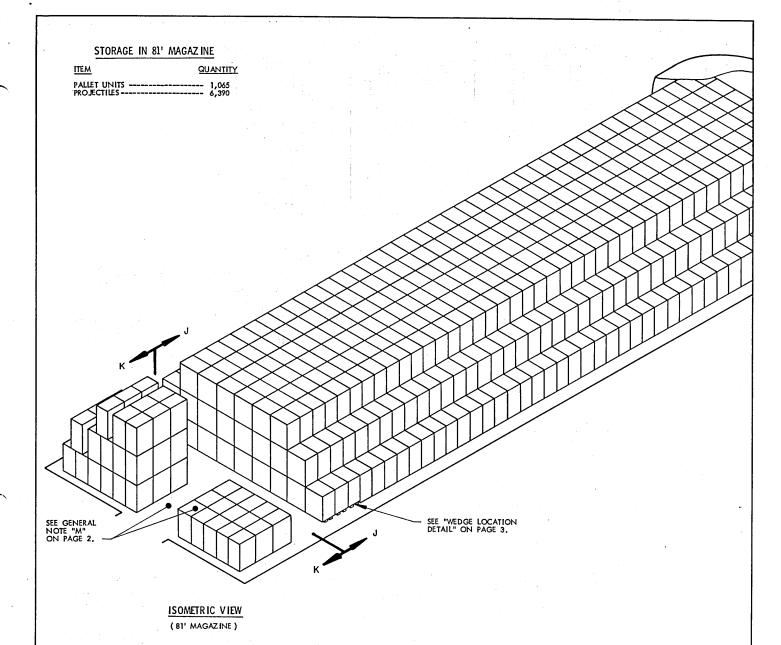


FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2. FOR "WEDGE DETAILS", SEE PAGE 3.

BILL OF MATERIAL (PER STACK)						
TYPE STACK	WEDGES		2" X 4" DUNNAGE LUMBER			
SIACK	6'-0"	9'-0"	LINEAR FEET	BOARD FEET		
A	2 REQD	2 REQD	42.00	28.00		
С		2 REQD	30,00	20.00		

^{*} SEE GENERAL NOTES "E" AND "F" ON PAGE 2.

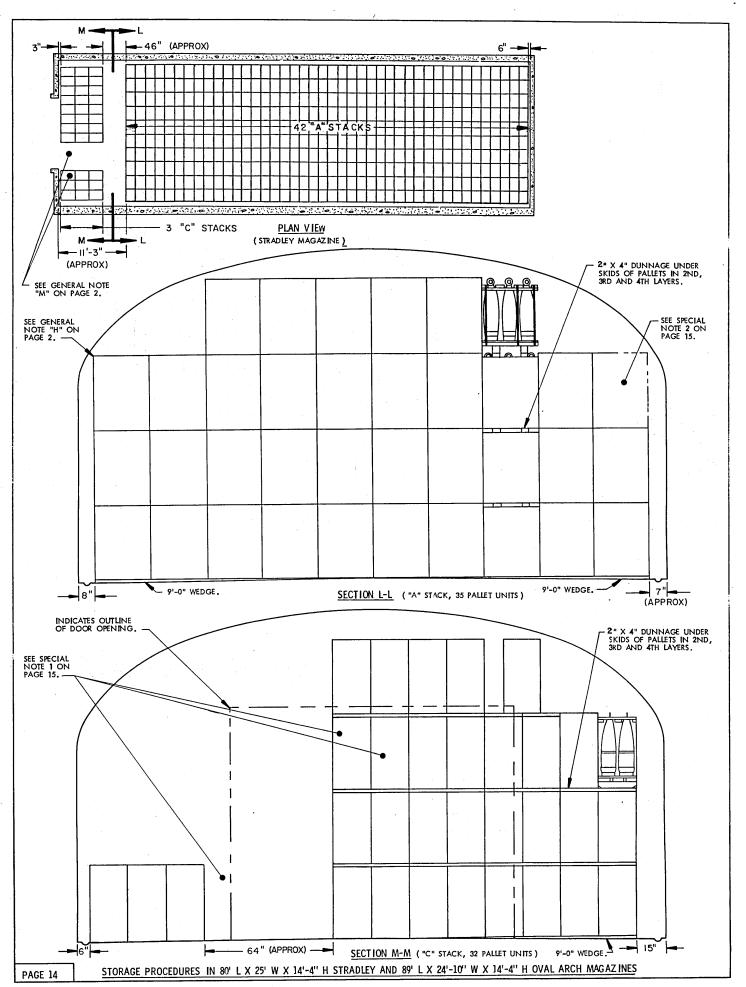


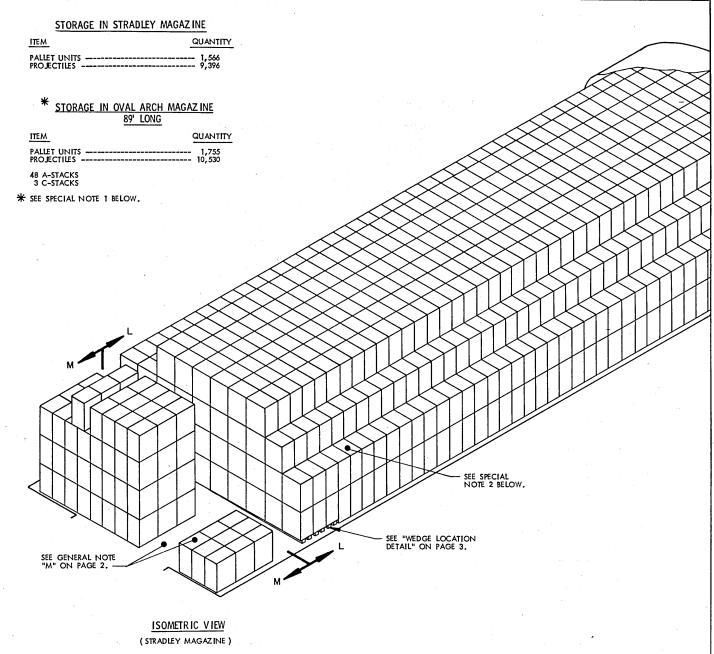


FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2. FOR "WEDGE DETAILS", SEE PAGE 3.

	BILL OF MATERIAL (PER STACK)					
TYPE	GE LUMBER *					
STACK	9'-0"	LINEAR FEET	BOARD FEET			
Α	4 REQD	42.00	28.00			
С	2 REQD	30.00	20.00			

* SEE GENERAL NOTES "E" AND "F" ON PAGE 2.





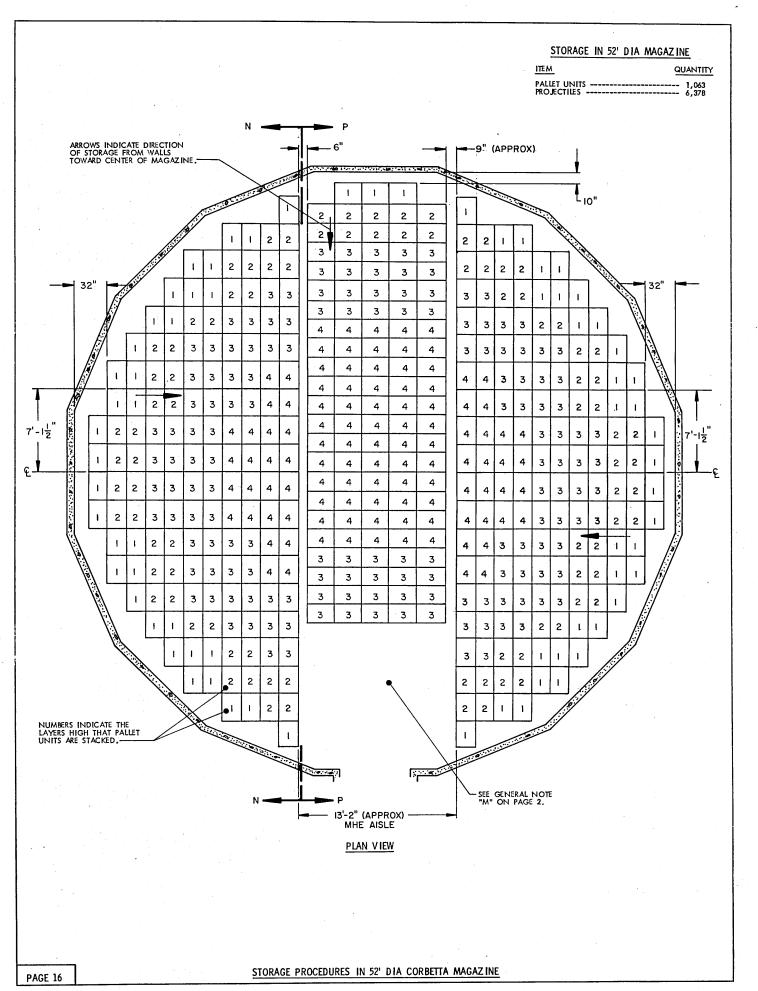
FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2. FOR "WEDGE DETAILS", SEE PAGE 3.

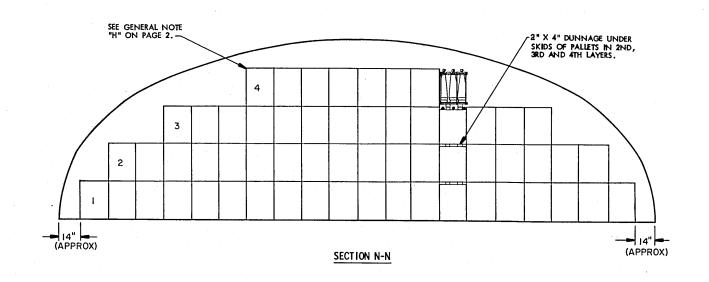
SPECIAL NOTES:

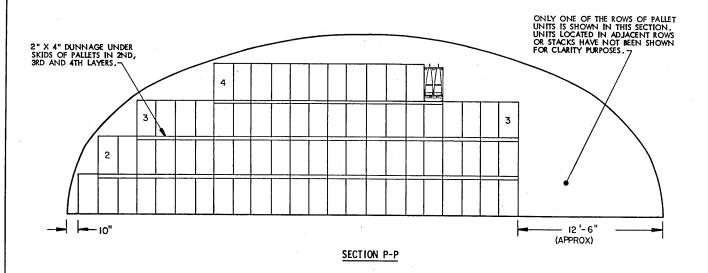
- 1. FOR STORAGE IN OVAL ARCH MAGAZINES, THE TWO (2) ROWS OF PALLET UNITS ADJACENT TO THE OPERATING AISLE AS SHOWN IN "SECTION M-M" MUST BE OMITTED AND ONE (1) PALLET UNIT CAN BE ADDED ON THE OPPOSITE SIDE OF THE OPERATING AISLE BECAUSE OF THE RELATIVELY NARROW DOOR OPENING. THIS WILL REDUCE THE "C" STACKS TO 25 UNITS EACH.
- 2. THE PALLET UNIT SHOWN BY PHANTOM LINES WITHIN THE SECTION VIEW ON PAGE 14 IS INTENTIONALLY OMITTED FROM THE SPECIFIED STORAGE ARRANGEMENT TO PROVIDE ACCESS TO ALL STACKS FOR INSPECTION/INVENTORY PURPOSES. HOWEVER, IF DESIRED AND IF INSPECTION/INVENTORY REQUIREMENTS CAN BE SATISFIED, AN ADDITIONAL PALLET UNIT MAY BE ADDED TO ONE OR MORE "A" STACKS AT THE LOCATION INDICATED BY THE PHANTOM LINES.

BILL OF MATERIAL (PER STACK)				
TYPE WEDGES 2" X 4" DUNNAGE LUMBER ;				
31/401	9'-0"	LINEAR FEET BOARD FEET		
Α	4 REQD	75.00	50.00	
С	2 REQD	66.00	44.00	

** SEE GENERAL NOTES "E" AND "F" ON PAGE 2.





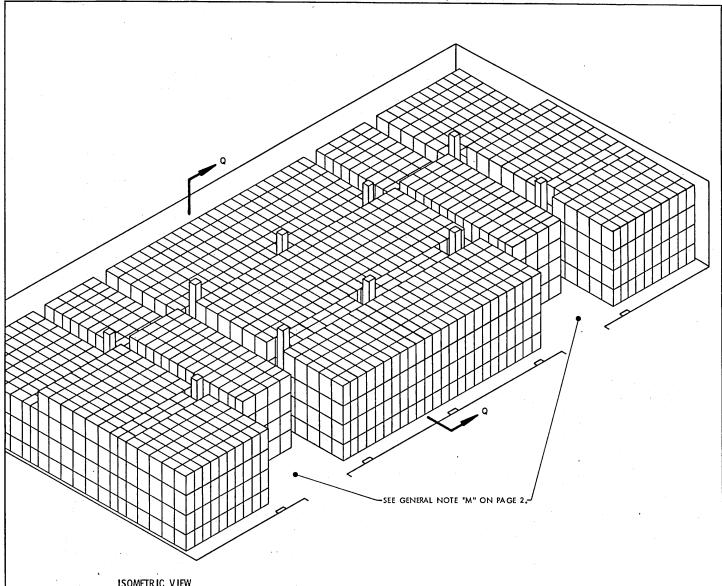


FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2.

BILL OF MATERIAL (PER PALLET STACK)			
STACK 2" X 4" DUNNAGE LUMBER *			
HEIGHT	LINEAR FEET	BOARD FEET	
2 3 4	3.00 6.00 9.00	2.00 4.00 6.00	

*SEE GENERAL NOTES "E" AND "F" ON PAGE 2.

STORAGE PROCEDURES IN 52' DIA CORBETTA MAGAZINE



ISOMETRIC VIEW

(100' L X 50' W MA GAZINE)

FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2.

BILL OF MATERIAL (PER PALLET STACK) 2" X 4" DUNNAGE LUMBER* STACK HEIGHT LINEAR FEET BOARD FEET 3 6.00 4.00 9.00 6.00

STORAGE IN 100' X 50' MAGAZINE

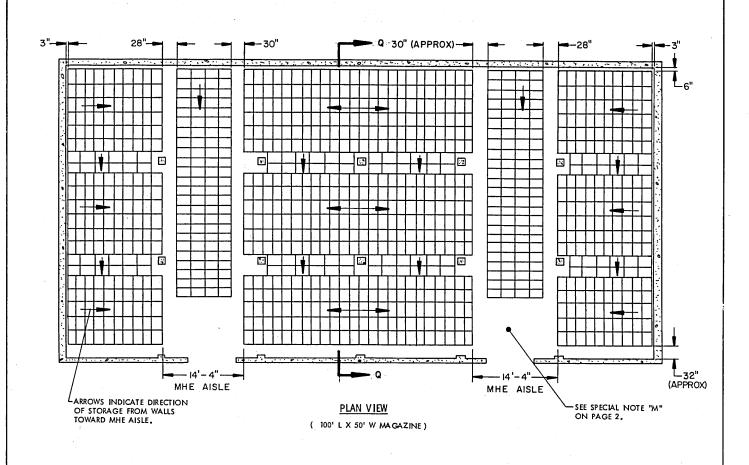
<u>ITEM</u>	QU	ANTITY
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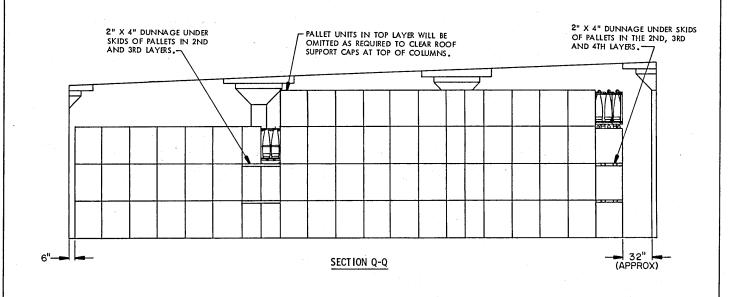
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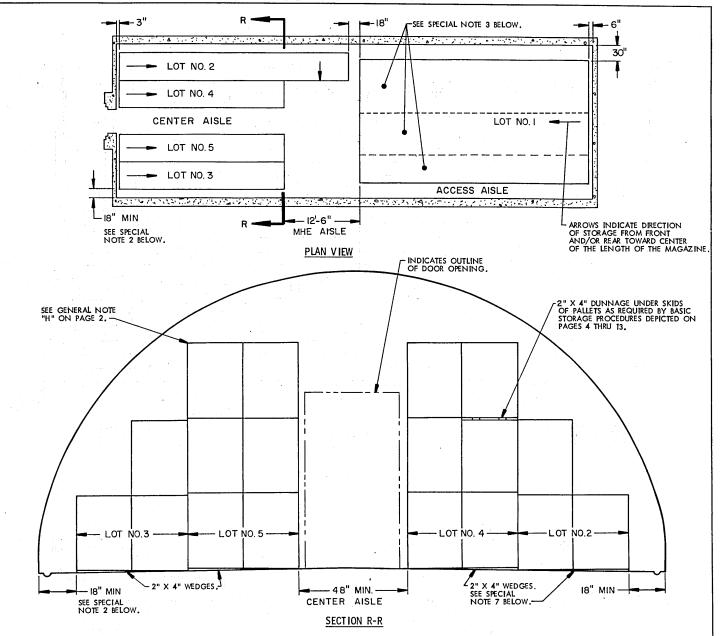
IF THE QUANTITY FOR A MAGAZINE IS TO BE REDUCED FROM WHAT IS SHOWN - DUE TO THE PERMITTED "EXPLOSIVE LIMIT" OR FOR ANY OTHER REASON, SUCH AS A LIMITED QUANTITY TO BE STORED - THE DELINEATED PROCEDURES ARE TO BE ADJUSTED BY OMITTING STACKS RATHER THAN BY OMITTING LAYERS.

STORAGE PROCEDURES IN 100' L X 50' W RECTANGULAR MAGAZINE

^{*} SEE GENERAL NOTES "E" AND "F" ON PAGE 2.







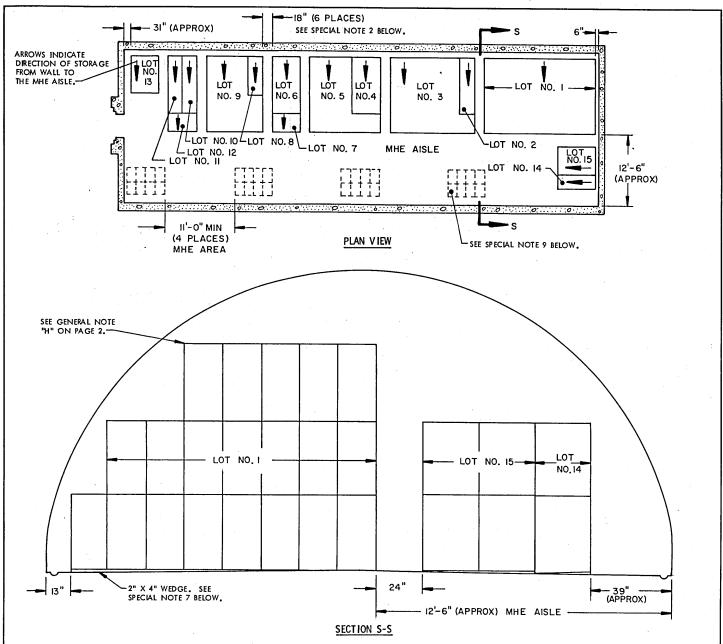
- I. THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO RELATIVELY LARGE LOTS. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
- 2. AN INSPECTION/INVENTORY AISLE MUST BE PROVIDED AT ONE SIDE OR END OF EACH LOT.
- 3. GENERALLY, THE LARGEST LOT SHOULD BE STORED IN THE REAR OF THE MAGAZINE. HOWEVER, THE REAR AREA MAY BE USED TO STORE MORE THAN ONE LOT BY ERECTING ROWS SIMILAR TO THOSE SHOWN IN THE FRONTAL AREA. A CENTER AISLE WILL NOT BE REQUIRED IN THE REAR AREA AS LONG AS EACH LOT IS ACCESSIBLE FOR REMOVAL AND INSPECTION/INVENTORY IN ACCORDANCE WITH OTHER CRITERIA SPECIFIED IN THESE SPECIAL NOTES AND IN THE GENERAL NOTES ON PAGE 2
- 4. EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE. A SINGLE-LOT OF PALLET UNITS IS CONSIDERED "ACCESSIBLE" IF NO MORE THAN TWELVE (12) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THAT LOT. THE TERM "LIFT" MEANS HANDLING AND MOVING NOT MORE THAN TWO (2) PALLET UNITS OF PROJECTILES AT ONE TIME.
- FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE SIDEWALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.
- EACH LOT MUST BE STORED TWO (2) UNITS (MINIMUM) WIDE TO ACCOMMODATE WIDTH OF MHE DURING OPERATIONS, EXCEPT FOR A ROW ADJACENT TO A CENTER AISLE.

(CONTINUED AT RIGHT)

(SPECIAL NOTES CONTINUED)

- 7. LENGTH OF 2" X 4" WEDGES WILL BE DETERMINED BY THE WIDTH OF THE LOT IN ROWS. WEDGES WILL NOT EXTEND INTO AISLE OR UNDER ADJACENT LOTS.
- 8. WHEN TWO LOTS ARE STORED ADJACENT TO EACH OTHER, THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.

TYPICAL MULTIPLE-LOT STORAGE IN IGLOO AND ARCH TYPE MAGAZINES



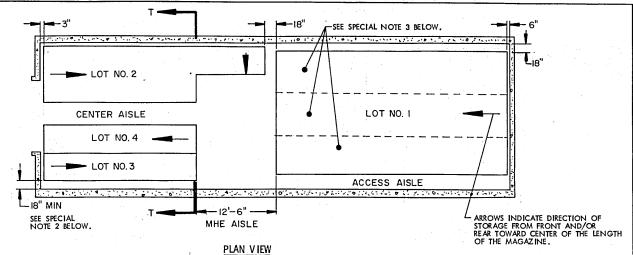
- THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO STORAGE OF NUMEROUS SMALL LOTS. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
- AN INSPECTION/INVENTORY AISLE NOT LESS THAN 18" WIDE MUST BE PROVIDED AT ONE SIDE OF EACH "BURIED" LOT.
- 3. GENERALLY, THE LARGEST LOT SHOULD BE STORED IN THE REAR OF THE MAGAZINE, HOWEVER, THE REAR AREA MAY BE USED TO STORE MORE THAN ONE LOT BY ERECTING STACKS SIMILAR TO THOSE SHOWN IN THE FRONTAL AREA. AN MHE AISLE WILL BE REQUIRED ON ONE SIDE OF THE MAGAZINE, AND EACH LOT MUST BE ACCESSIBLE FOR REMOVAL AND INSPECTION/INVENTORY IN ACCORDANCE WITH OTHER CRITERIA SPECIFIED IN THESE SPECIAL NOTES AND IN THE GENERAL NOTES ON PAGE 2.
- 4. EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE, A SINGLE-LOT OF PALLET UNITS IS CONSIDERED "ACCESSIBLE" IF NO MORE THAN TWELVE (12) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THAT LOT. THE TERM "LIFT" MEANS HANDLING AND MOVING NOT MORE THAN TWO (2) PALLET UNITS OF PROJECTILES AT ONE TIME.
- FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE SIDEWALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.
- 6. EACH LOT MUST BE STORED TWO (2) UNITS (MINIMUM) WIDE TO ACCOMMODATE WIDTH OF MHE DURING OPERATIONS, EXCEPT FOR A ROW ADJACENT TO AN INSPECTION/INVENTORY AISLE.

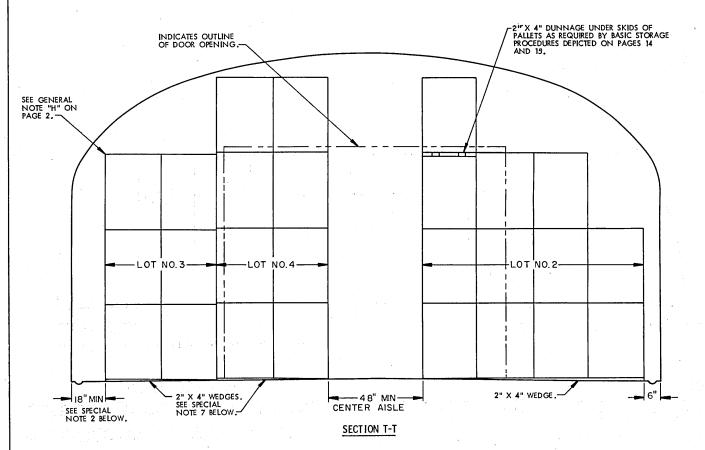
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(SPECIAL NOTES CONTINUED)

- LENGTH OF 2" X 4" WEDGES WILL BE DETERMINED BY THE WIDTH OF THE LOT IN ROWS. WEDGES WILL NOT EXTEND INTO AISLE OR UNDER ADJACENT LOTS.
- 8. WHEN TWO LOTS ARE STORED ADJACENT TO EACH OTHER, THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.
- 9. AREAS INCLOSED BY DOTTED LINES INDICATE LOCATIONS WHERE ADDITIONAL LOTS MAY BE STORED OR WHERE ADDITIONAL ITEMS MAY BE STORED THAT ARE FROM THE LOT OR LOTS WHICH ARE DIRECTLY OR ALMOST DRECTLY ACROSS THE CENTER ASSLE ON THE OTHER SIDE OF THE MAGAZINE, COMPLIANCE WITH ALL OF THE MULTIPLE-LOT CRITERIA AS SET FORTH ON THIS PAGE MUST BE OBSERVED. THE SIZE OF THE LOTS BEING STORED AND THE CRITERIA OF SPECIAL NOTE 4, RELATIVE TO "12 LIFTS", WILL BE MAJOR FACTORS IMPACTING ON THE NUMBER OF UNIT LOADS THAT CAN BE STORED IN AN "ADDITIONAL STORAGE LOCATION". MORE OR FEWER STACKS THAN SHOWN MAY BE STORED AT ANY ONE OF THE ADDITIONAL STORAGE LOCATIONS. AN 11-FOOT MHE OPBRATING AREA HAS BEEN SPECIFIED FOR ACCESS TO EACH "ADDITIONAL LOCATION" BY FORKLIFT TRUCK. THIS OPERATING AREA IS BASED ON REQUIREMENTS OF FORKLIFT TRUCKS. COMMONLY USED IN STORAGE MAGAZINES. THE MHE OPBRATING AREA CAN BE ENLARGED AS REQUIRED TO SUIT AVAILABLE FORKLIFT TRUCKS, AND SHOULD BE MADE SMALLER IF AVAILABLE MHE PERMITS. A "CENTER AISLE" (SPACE BETWEEN STORAGE ON ONE SIDE OF A MAGAZINE AND AN "ADDITIONAL STORAGE LOCATION") IS TO BE AT LEAST 48 INCHES WIDE. AN AISLE SLIGHTLY WIDER THAN 48 INCHES WILL ENHANCE FORKLIFT TRUCK MOVEMENT WITHIN A MAGAZINE; HOWEVER, THIS AISLE SHOULD NOT BE MADE WIDER IF A LOSS IN STORAGE RESULTS.

TYPICAL MULTIPLE-LOT STORAGE IN IGLOO AND ARCH TYPE MAGAZINES





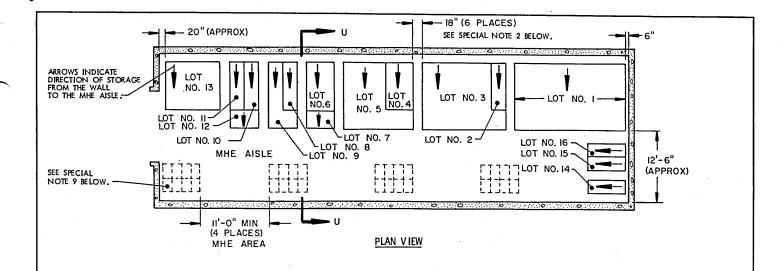
- THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO RELATIVELY LARGE LOTS. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
- 2. AN INSPECTION/INVENTORY AISLE MUST BE PROVIDED AT ONE SIDE OR END OF EACH LOT.
- GENERALLY, THE LARGEST LOT SHOULD BE STORED IN THE REAR OF THE MAGAZINE. HOWEVER, THE REAR AREA MAY BE USED TO STORE MORE THAN ONE LOT BY ERECTING ROWS SIMILAR TO THOSE SHOWN IN THE FRONTAL AREA. A CENTER AISLE WILL NOT BE REQUIRED IN THE REAR AREA AS LONG AS EACH LOT IS ACCESSIBLE FOR REMOVAL AND INSPECTION/INVENTORY IN ACCORDANCE WITH OTHER CRITERIA SPECIFIED IN THESE SPECIAL NOTES AND IN THE GENERAL NOTES ON PAGE 2.
- EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE. A SINGLE-LOT OF PALLET UNITS IS CONSIDERED "ACCESSIBLE" IF NO MORE THAN TWELVE (12) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THAT LOT. THE TERM "LIFT" MEANS HANDLING AND MOVING NOT MORE THAN TWO (2) PALLET UNITS OF PROJECTILES AT ONE TIME.
- FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE SIDEWALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.

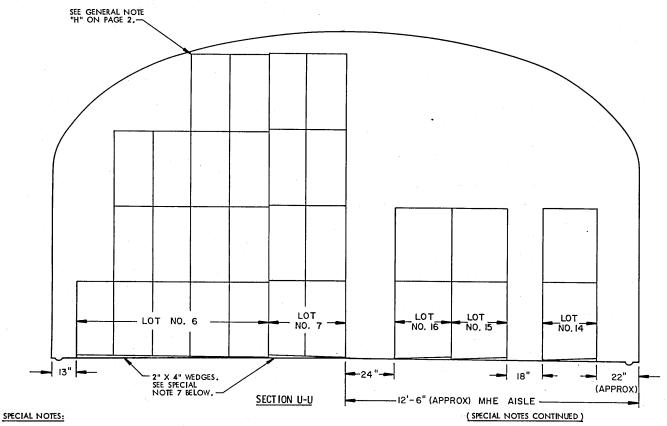
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(SPECIAL NOTES CONTINUED)

- EACH LOT MUST BE STORED TWO (2) UNITS (MINIMUM) WIDE TO ACCOMMODATE WIDTH OF MHE DURING OPERATIONS, EXCEPT FOR A ROW ADJACENT TO A CENTER AISLE.
- 7. LENGTH OF 2" X 4" WEDGES WILL BE DETERMINED BY THE WIDTH OF THE LOT IN ROWS. WEDGES WILL NOT EXTEND INTO AISLES OR UNDER ADJACENT LOTS.
- WHEN TWO LOTS ARE STORED ADJACENT TO EACH OTHER, THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.

TYPICAL MULTIPLE-LOT STORAGE IN STRADLEY AND OVAL ARCH TYPE MAGAZINES





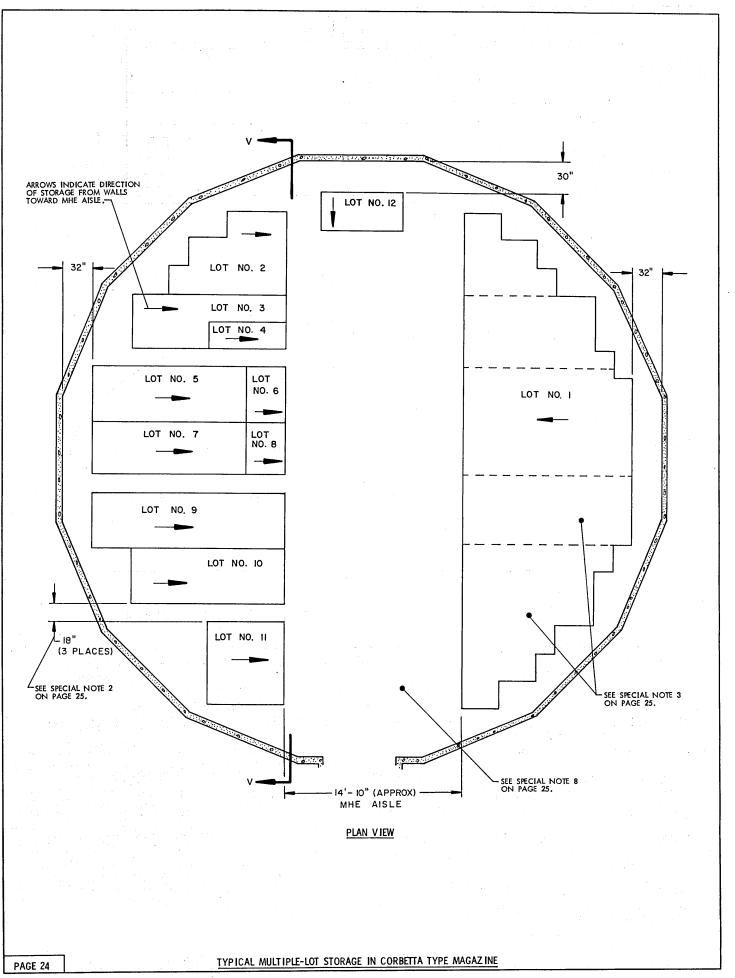
- THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO STORAGE OF NUMEROUS SMALL LOTS. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
- 2. AN INSPECTION/INVENTORY AISLE NOT LESS THAN 18" WIDE MUST BE PROVIDED AT ONE SIDE OF EACH "BURIED" LOT.
- 3. GENERALLY, THE LARGEST LOT SHOULD BE STORED IN THE REAR OF THE MAGAZINE. HOWEVER, THE REAR AREA MAY BE USED TO STORE MORE THAN ONE LOT BY ERECTING STACKS SIMILAR TO THOSE SHOWN IN THE FRONTAL AREA. AN MHE AISLE WILL BE REQUIRED ON ONE SIDE OF THE MAGAZINE, AND EACH LOT MUST BE ACCESSIBLE FOR REMOVAL AND INSPECTION/INVENTORY IN ACCORDANCE WITH OTHER CRITERIA SPECIFED IN THESE SPECIAL NOTES AND IN THE GENERAL NOTES ON PAGE 2.
- 4. EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE. A SINGLE-LOT OF PALLET UNITS IS CONSIDERED "ACCESSIBLE" IF NO MORE THAN TWELVE (12) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THAT LOT. THE TERM "LIFT" MEANS HANDLING AND MOVING NOT MORE THAN TWO (2) PALLET UNITS OF PROJECTILES AT ONE TIME.
- 5. FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE SIDEWALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.
- 6. EACH LOT MUST BE STORED TWO (2) UNITS (MINIMUM) WIDE TO ACCOMMODATE WIDTH OF MHE DURING OPERATIONS, EXCEPT FOR A ROW ADJACENT TO AN INSPECTION/INVENTORY AISLE.

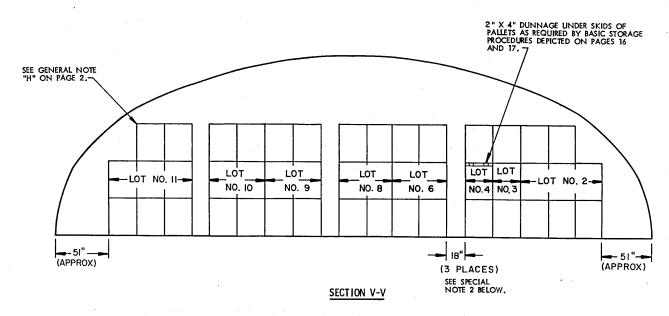
- LENGTH OF 2" X 4" WEDGES WILL BE DETERMINED BY THE WIDTH OF THE LOT IN ROWS. WEDGES WILL NOT EXTEND INTO AISLE OR UNDER ADJACENT LOTS.
- 8. WHEN TWO LOTS ARE STORED ADJACENT TO EACH OTHER, THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.
- SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.

 AREAS INCLOSED BY DOTTED LINES INDICATE LOCATIONS WHERE ADDITIONAL LOTS MAY BE STORED OR WHERE ADDITIONAL ITEMS MAY BE STORED, THAT ARE FROM THE LOT OR LOTS WHICH ARE DIRECTLY OR ALMOST DIRECTLY ACROSS THE CENTER AISLE ON THE OTHER SIDE OF THE MAGAZINE. COMPLIANCE WITH ALL OF THE MULTIPLE-LOT CRITERIA AS SET FORTH ON THIS PAGE MUST BE OBSERVED. THE SIZE OF THE LOTS BEING STORED AND THE CRITERIA OF SPECIAL NOTE 4, RELATIVE TO "12 LIFTS" WILL BE MAJOR FACTORS IMPACTING ON THE NUMBER OF CHAITVE TO "12 LIFTS" WILL BE MAJOR FACTORS IMPACTING ON THE NUMBER OF UNIT LOADS THAT CAN BE STORED IN AN "ADDITIONAL STOREDE LOCATION". MORE OR FEWER STACKS THAN SHOWN MAY BE STORED AT ANY ONE OF THE ADDITIONAL STOREDE LOCATIONS. AN 11-FOOT MHE OPERATING AREA HAS BEEN SPECIFIED FOR ACCESS TO EACH "ADDITIONAL LOCATION" BY FORKLIFT TRUCK, THIS OPERATING AREA IS BASED ON REQUIREMENTS OF FORKLIFT TRUCKS COMMONLY USED IN STORAGE MAGAZINES, THE MHE OPERATING AREA CAN BE ENLARGED AS REQUIRED TO SUIT AVAILABLE FORKLIFT TRUCKS, AND SHOULD BE MADE SMALLER IF AVAILABLE MHE PERMITS. A "CENTER AISLE" (SPACE BETWEEN STORAGE ON ONE SIDE OF A MAGAZINE AND AN "ADDITIONAL STORAGE LOCATION") IS TO BE AT LEAST 48 INCHES WIDE. AN AN SILE SILGHTLY WIDER THAN 48 INCHES WILL ENHANCE FORKLIFT TRUCK MOVEMENT WITHIN A MAGAZINE; HOWEVER, THIS AISLE SHOULD NOT BE MADE WIDER IF A LOSS IN STORAGE RESULTS.

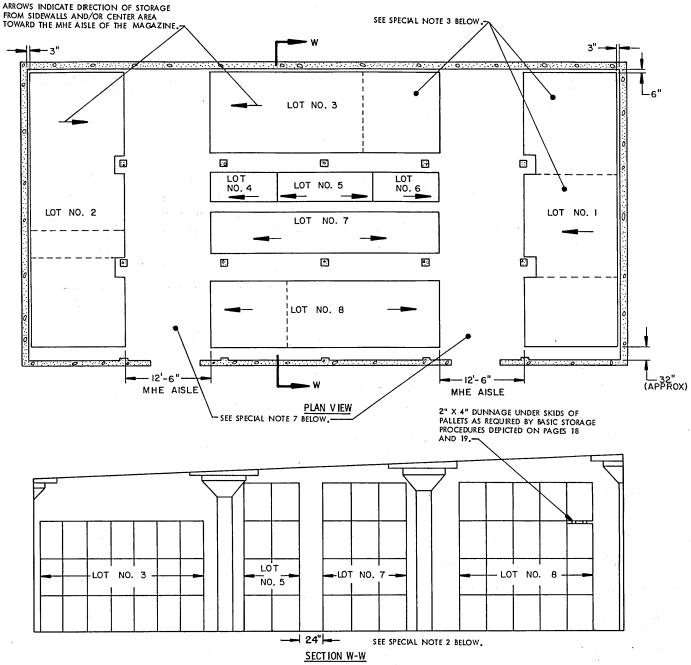
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TYPICAL MULTIPLE-LOT STORAGE IN STRADLEY AND OVAL ARCH TYPE MAGAZINES





- THE STORAGE PLANS SHOWN ARE TYPICAL ONLY. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
- 2. AN INSPECTION/INVENTORY AISLE NOT LESS THAN 18" WIDE MUST BE PROVIDED AT ONE SIDE OF EACH "BURIED" LOT.
- 3. GENERALLY, THE LARGEST LOT SHOULD BE STORED ON ONE SIDE OF THE MAGAZINE. HOWEVER, BOTH SIDES MAY BE USED TO STORE MORE THAN ONE LOT BY ERECTING ROWS SIMILAR TO THOSE SHOWN ON THE LEFT SIDE. EACH ADDITIONAL LOT MUST BE ACCESSIBLE FOR REMOVAL AND INSPECTION/INVENTORY IN ACCORDANCE WITH OTHER CRITERIA SPECIFIED IN THESE SPECIAL NOTES AND IN THE GENERAL NOTES ON PAGE 2.
- 4. EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE. A SINGLE-LOT OF PALLET UNITS IS CONSIDERED "ACCESSIBLE" IF NO MORE THAN TWELVE (12) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THAT LOT. THE TERM "LIFT" MEANS HANDLING AND MOVING NOT MORE THAN TWO (2) PALLET UNITS OF PROJECTILES AT ONE TIME.
- 5. FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE WALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.
- EACH LOT MUST BE STORED TWO (2) UNITS (MINIMUM) WIDE TO ACCOMMODATE WIDTH OF MHE DURING OPERATIONS, EXCEPT FOR A ROW ADJACENT TO AN INSPECTION/INVENTORY AISLE.
- WHEN TWO LOTS ARE STORED ADJACENT TO EACH OTHER, THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.
- 8. THE MHE AISLE MAY BE USED TO STORE ONE OR MORE STACKS OF ADDITIONAL LOTS OR ADDITIONAL ITEMS THAT ARE FROM A LOT ADJACENT TO THE MHE AISLE. THIS ADDITIONAL STORAGE IS TO BE ARRANGED IN A MANNER SIMILAR TO ARRANGEMENTS DEPICTED ON PAGES 21 AND 23 FOR THE "ADDITIONAL STORAGE LOCATIONS" (SHOWN BY DOTTED LINES). ADEQUATE SPACE FOR MHE OPERATION, AS DESCRIBED ON PAGES 21 AND 23, MUST BE MADE AVAILABLE FOR THE ADDITIONAL STORAGE. ALSO, COMPLIANCE WITH ALL OF THE MULTIPLE-LOT CRITERIA AS SET FORTH ON THIS PAGE MUST BE OBSERVED.



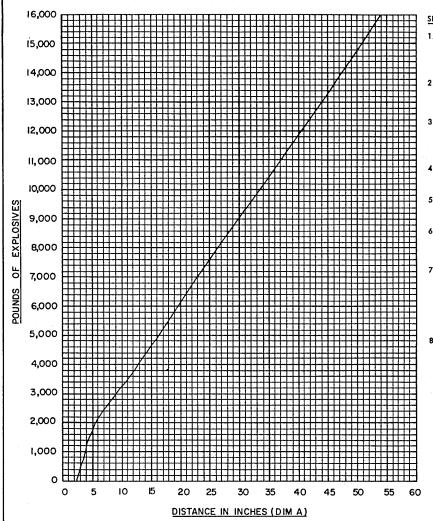
- THE STORAGE PLANS SHOWN ARE TYPICAL ONLY. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
- AN INSPECTION/INVENTORY AISLE NOT LESS THAN 18" WIDE MUST BE PROVIDED AT ONE SIDE OF EACH "BURIED" LOT.
- 3. GENERALLY, THE LARGEST LOT SHOULD BE STORED IN THE REAR OR ON ONE SIDE OF THE MAGAZINE. HOWEVER, THESE AREAS MAY BE USED TO STORE MORE THAN ONE LOT BY ERECTING ROWS SIMILAR TO THOSE SHOWN IN THE CENTER AREA OR AS TYPICALLY INDICATED BY DOTTED LINES. EACH ADDITIONAL LOT MUST BE ACCESSIBLE FOR REMOVAL AND INSPECTION/INVENTORY IN ACCORDANCE WITH OTHER CRITERIA SPECIFIED IN THESE SPECIAL NOTES AND IN THE GENERAL NOTES ON PAGE 2.
- 4. EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE. A SINGLE-LOT OF PALLET UNITS IS CONSIDERED "ACCESSIBLE" IF NO MORE THAN TWENTY-FOUR (24) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THAT LOT. THE TERM "LIFT" MEANS HANDLING AND MOVING NOT MORE THAN TWO (2) PALLET UNITS OF PROJECTILES AT ONE TIME.
- 5. WHEN TWO LOTS ARE STORED AD ACENT TO EACH OTHER THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.

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(SPECIAL NOTES CONTINUED)

- 6. EACH LOT MUST BE STORED TWO (2) UNITS (MINIMUM) WIDE TO ACCOMMODATE WIDTH OF MHE DURING OPERATIONS, EXCEPT FOR A ROW ADJACENT TO AN INSPECTION/INVENTORY AISLE.
- 7. THE MHE AISLE MAY BE USED TO STORE ONE OR MORE STACKS OF ADDITIONAL LOTS OR ADDITIONAL ITEMS THAT ARE FROM A LOT ADJACENT TO THE MHE AISLE. THIS ADDITIONAL STORAGE IS TO BE ARRANGED IN A MANNER SIMILAR TO ARRANGEMENTS DEPICTED ON PAGES 21 AND 23 FOR THE "ADDITIONAL STORAGE LOCATIONS" (SHOWN BY DOTTED LINES). ADEQUATE SPACE FOR MHE OPERATION, AS DESCRIBED ON PAGES 21 AND 23, MUST BE MADE AVAILABLE FOR THE ADDITIONAL STORAGE. ALSO, COMPLIANCE WITH ALL OF THE MULTIPLE-LOT CRITERIA AS SET FORTH ON THIS PAGE MUST BE OBSERVED.

TYPICAL MULTIPLE-LOT STORAGE IN RECTANGULAR MAGAZINE



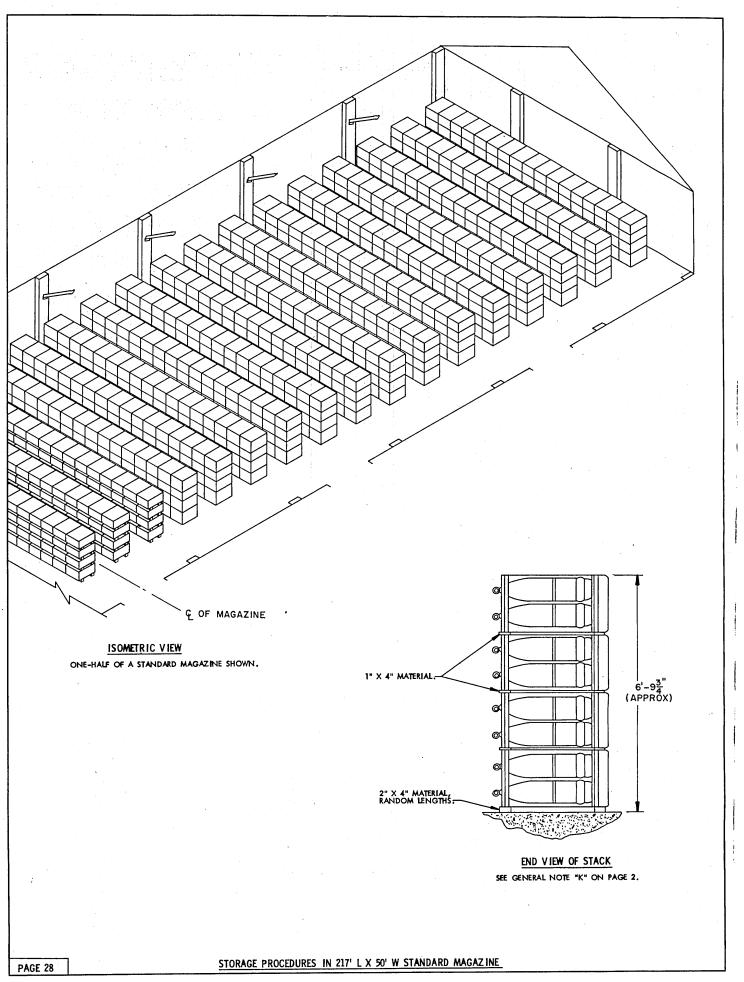
- 1. THE DEPICTED "DISTANCE CURVE" AND THE "METHOD OF MEASURING NOSE TO NOSE AND BASE TO BASE DISTANCE" ARE REQUIRED TO BE USED FOR THE STORAGE OF PROJECTILE PALLET UNITS IN STANDARD ABOVE-GROUND MAGAZINES AS FURTHER DELINEATED ON PAGES 28 AND 29.
- ALL SEPARATE LOADING PROJECTILES WILL BE STORED NOSE TO NOSE AND BASE TO BASE THROUGHOUT THE MAGAZINE. FOR SPECIAL HANDLING EQUIPMENT REQUIRED, SEE GENERAL NOTE "K" ON PAGE 2.
- 3. THE DISTANCE CURVE DESIGNATES THE AISLE SPACING (DIM A BELOW) TO BE PROVIDED BETWEEN STACKS OF PROJECTILES. SIZE OF AISLE IS DETERMINED BY THE POUNDS OF EXPLOSIVE CONTAINED WITHIN A STACK, NOSE TO NOSE AND BASE TO BASE DIMENSIONS MUST NOT BE DECREASED UNDER ANY CONDITIONS.
- CATEGORY (18) CLASS 1.2 AMMUNITION STORED IN ABOVE-GROUND MAGAZINES WILL BE PLACED IN STACKS OF NOT MORE THAN 15,000 POUNDS OF EXPLOSIVE EACH.
- NOTE: STORAGE OF SOME SPECIFIC TYPES OF SEPARATE LOADING PROJECTILES MUST ALSO COMPLY WITH DIRECTIVES AND REGULATORY REQUIREMENTS OTHER THAN AS SPECIFIED HEREIN.
- 6. NOSE TO NOSE AND BASE TO BASE QUANTITY DISTANCE CURVE SHOWN IS BASED ON ABERDEEN TESTS, AND IS DESIGNED TO LIMIT EXPLOSIONS TO ONE STACK IF PROJECTILES ARE STACKED ALLOWING AISLE SPACING AS SHOWN ON CURVE.
- 7. MULTIPLE LOTS OF ITEMS MAY BE STORED IN A MAGAZINE. ALSO, MORE THAN ONE LOT OF ITEMS MAY BE STORED WITHIN A STACK; HOWEVER, ITEMS OF ONE LOT WILL NOT BE STACKED ON TOP OF ITEMS FROM ANOTHER LOT. ADDITIONALLY, AN MHE OPERATING AISLE MUST BE PROVIDED, AS REQUIRED, TO PERMIT ACCESS TO ANY LOT. LOTS SHOULD BE SEPARATED BY A 3" MINIMUM SPACE, DUNNAGE MATERIAL USED FOR ONE LOT WILL NOT EXTEND UNDER ITEMS OF AN ADJACENT LOT.
- PALLET UNITS WILL NOT BE STACKED MORE THAN FOUR (4) UNITS HIGH WHEN PROJECTILES ARE IN THE HORIZONTAL POSITION.

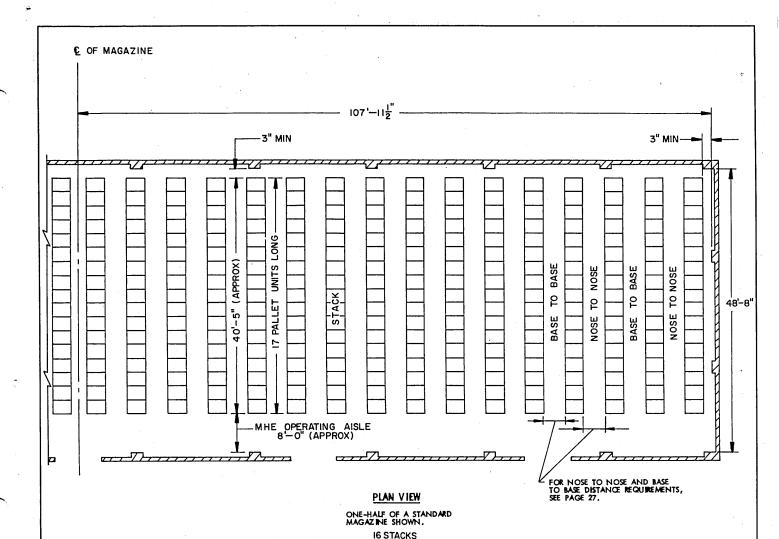
DISTANCE CURVE

DIM A DIM A MIN

METHOD OF MEASURING NOSE TO NOSE & BASE TO BASE DISTANCE

DIM A WILL BE THE DISTANCE IN INCHES AS DETERMINED FROM THE DISTANCE CURVE SHOWN ABOVE. SEE SPECIAL NOTE 3 ABOVE. DIM B EQUALS DIM A MINUS 10", BASED ON PALLET UNITS HAVING 3-5/8" HIGH SKIDS AND 1-3/8" THICK STRINGERS.





FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2.

STORAGE AS SHOWN

ONE-HALF OF A STANDARD MAGAZINE.

PALLET UNIT (68/STACK) ----- 1,086

PALLET UNIT (68/STACK) ------ 1,088
PROJECTILES (6/PALLET) ----- 6,528

BILL OF MATERIAL (PER STACK)			
LUMBER	* LINEAR FEET	BOARD FEET	
1" X 4" 2" X 4"	242,52 80,84	80.84 53.33	

* RANDOM LENGTHS MAY BE USED. SEE SPECIAL NOTES ON THIS PAGE FOR ADDITIONAL GUIDANCE.

SPECIAL NOTES:

- 1. RANDOM LENGTHS MAY BE USED FOR FLOOR AND INTERMEDIATE DUNNAGE, HOWEVER, FOR THE INTERMEDIATE DUNNAGE, 54" LONG PECES WILL ENHANCE STORAGE OPERATIONS. CAUTION: BASED ON HANDING TWO PALLETS PER LIFT, NOT MORE THAN TWO PECES CAN ECUSED TO MAKE A 54" LONG PECE, AND THESE PIECES CANNOT BE OF EQUAL LENGTH (27"). THE SHORTEST OF THE TWO PECES CAN RANGE IN LENGTH PROM 16-1/2" TO 24". IF TWO RANDOM LENGTH PECES ARE USED TO FORM BOTH 54" LONG PECES OF INTERMEDIATE DUNNAGE UNDER ONE "SET" OF TWO PALLETS, THE JOINTS WITHIN THESE PIECES ARE TO BE STAGGERED.
- 2. THE STORAGE AS SHOWN IS BASED ON HANDLING TWO PALLET UNITS PER LIFT. STORAGE CAN BE ACCOMPLISHED BY HANDLING ONE PALLET UNIT PER LIFT, HOWEVER, DUE TO STACK STABILITY REQUIREMENTS, RANDOM LENGTH INTERMEDIATE DUNNAGE IS NOT PERMITTED AND THE MINIMUM LENGTH FOR INTERMEDIATE DUNNAGE PECES IS 27" (EQUAL TO DIMENSION OF ONE PALLET UNIT).

STORAGE PROCEDURES IN 217' L X 50' W STANDARD MAGAZINE