STORAGE IN APPROVED MAGAZINES OF ANTI-PERSONNEL OBSTACLE BREACHING SYSTEM (APOBS) PACKED 1 PER SHIPPING AND STORAGE CONTAINER, UNITIZED 4 CONTAINERS PER 42" X 53" WOODEN PALLET

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U.S. ARMY MATERIEL COMMAND DRAWING					
APPROVED, U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND	DRAFTSMAN INGEBORG DEPPE				
David a. Piskouk	ENGINEE	٦	M. DAEUMER		
SMCAR-ESK	SUPPLY ENGINEERING DIVISION Juich				
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND	LOGISTICS ENGINEERING WILL		air Flust		
William F Ernst	OCTOBER 1992				
U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL	CLASS	NOISIVID	DRAWING	FILE	
	19	48	4074/ 129A	1-3-14-22 PM1000	

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. THE STORAGE PROCEDURES SPECIFIED HEREIN ARE APPLICABLE TO ANTI-PERSONNEL OBSTACLE BREACHING SYSTEM (APOBS) PACKED ONE PER SHIPPING AND STORAGE CONTAINER, UNITIZED 4 CONTAINERS PER 42" X 53" WOODEN PALLET.
- C. FOR DETAIL OF THE PALLET UNIT, SEE PAGE 3. FOR UNITI-ZATION PROCEDURES SEE U.S. ARMY AMC DRAWING 19-48-4116/129A-20PA1002

PALLET UNIT:

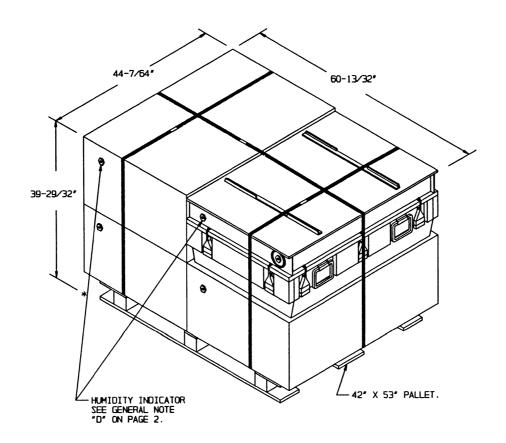
DIMENSIONS - - - - - - 44-7/64" LONG BY 60-13/32" WIDE BY 39-29/32" HIGH GROSS WEIGHT - - - - - 1,014 POUNDS (APPROX) CUBE - - - - - - 61.5 CUBIC FEET (APPROX)

- D. THE STORAGE PROCEDURES DEPICTED HEREIN ARE DESIGNED TO PROVIDE FOR INSPECTION OF HUMIDITY INDICATORS OF ALL CONTAINERS IN THE UNITS BEING STORED. NOTICE: THE HUMIDITY INDICATORS OF ALL CONTAINERS IN EACH UNIT MUST FACE THE SAME SIDE OF THE PALLET AS SPECIFIED IN THE UNITIZATION DRAWING IDENTIFIED IN NOTE "C". ANY PALLET UNIT RECEIVED FOR STORAGE THAT DOES NOT COMPLY WITH THE ABOVE REQUIREMENTS MUST BE REUNITIZED PRIOR TO STORING TO PERMIT NECESSARY INSPECTION OF ALL HUMIDITY INDICATORS.
- E. STORED PALLET UNITS MUST NOT CONTACT THE WALLS OR COLUMNS OF A MAGAZINE. TO PROVIDE FOR THIS MANDATORY CLEARANCE REQUIREMENT, UNITS MAY BE ELIMINATED FROM THE DEPICTED STORAGE PATTERNS AS NECESSARY.
- F. CAUTION: THE ALLOWABLE 'EXPLOSIVE LIMIT' ESTABLISHED FOR A MAGAZINE IS NOT TO BE EXCEEDED. THIS LIMITATION MAY REQUIRE A QUANTITY REDUCTION FROM THE STORAGE AS SHOWN
- G. IF AVAILABLE MHE PERMITS, ADDITIONAL PALLET UNITS MAY BE STORED WITHIN THE MHE AREA AND/OR OTHER AVAILABLE AREA OF THE MAGAZINE.
- H. 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 PALLET UNITS IN OTHER TYPES OF APPROVED MAGAZINES. MINOR ADJUSTMENTS MAY BE MADE TO FACTLITATE STORAGE IN OTHER TYPES OF MAGAZINES, HOWEVER, THE BASIC PRINCIPLES AS DEPICTED HEREIN WILL BE FOLLOWED.
- J. INSPECTION AISLE DIMENSIONS AS SHOWN MAY BE ADJUSTED. HOWEVER, THEY WILL BE A MINIMUM OF 18" WIDE TO FACI-LITATE INSPECTION OF ALL PALLET UNITS.
- K. THE MAXIMUM FLOOR LOAD FOR A MAGAZINE AS PRESCRIBED BY LOCAL STANDARDS WILL NOT BE EXCEEDED.
- L. IF THE QUANTITY OF PALLET UNITS FOR A MAGAZINE IS TO BE REDUCED FROM WHAT IS SHOWN HEREIN 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.
- M. THE HEIGHT OF THE PACKAGE GUARD ON SOME FORKLIFT TRUCKS MAY NOT PERMIT PLACEMENT OF SOME TOP LAYER UNITS IN THE STACKS SHOWN IN THE STORAGE VIEWS HEREIN, UNLESS TWO UPPER PALLET UNITS ARE HANDLED AS ONE LIFT OR THE PACKAGE GUARD IS REMOVED (TINE CARRIAGE WILL IN MOST INSTANCES PROVIDE ADEQUATE PACKAGE GUARD PROTECTION). ONLY A FORKLIFT TRUCK OF ADEQUATE CAPACITY WILL BE USED WHEN LIFTING TWO PALLET UNITS AS ONE LIFT.
- N. PORTIONS OF THE MAGAZINES, SUCH AS SIDEWALLS, END WALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE STORAGE VIEWS FOR CLARITY PURPOSES.

(CONTINUED AT RIGHT)

(GENERAL NOTES CONTINUED)

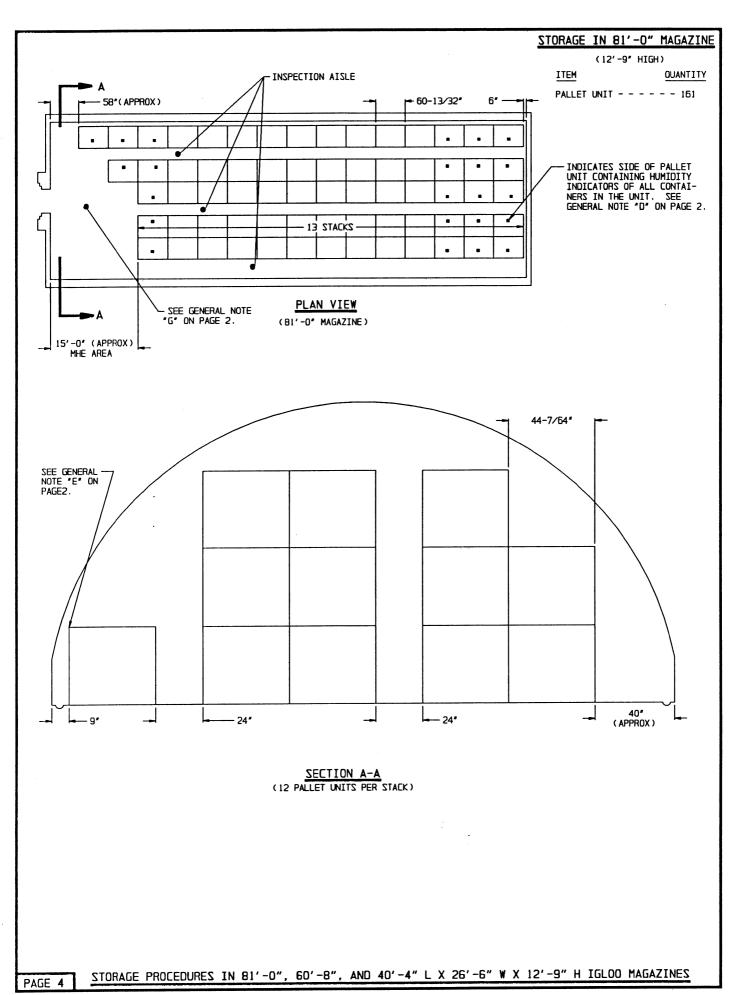
- O. THE PROCEDURES WITHIN THIS DRAWING DEPICT THE STORAGE OF ONLY ONE LOT PER MAGAZINE. HOWEVER, MORE THAN ONE LOT OF AN ITEM MAY BE STORED, AS TYPICALLY SHOWN ON PAGES 20 THRU 22, OR OTHER COMPATIBLE ITEMS MAY BE STORED IN THE SAME MAGAZINE.
- P. STORAGE OF MULTIPLE LOTS IN A MAGAZINE WILL REQUIRE CAREFUL PRE-PLANNING 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 22.
- Q. ALTHOUGH SPECIFIC PROCEDURES ARE INCLUDED IN THIS DRAWING FOR STORING MULTIPLE LOTS WITHIN ONE STRUCTURE, THE BASIC STORAGE PATTERN AS SHOWN ON PAGES 4 THRU 19 CAN ALSO BE ADAPTED FOR THE STORING OF MORE THAN ONE LOT. LOTS WHEN STORED IN ACCORDANCE WITH THE BASIC STORAGE PATTERN MAY BE STORED WITH ONE OR MORE ROWS USED FOR EACH LOT. A SPACE OF APPROXIMATELY 1" WILL HAVE TO BE LEFT BETWEEN ADJACENT ROWS CONTAINING DIFFERENT LOTS. THE REQUIREMENTS OF THE SPECIAL NOTES ON PAGES 20 THRU 22 WILL ALSO BE APPLIED WHEN ADAPTING BASIC STORAGE PATTERNS FOR MULTIPLE LOT STORAGE.

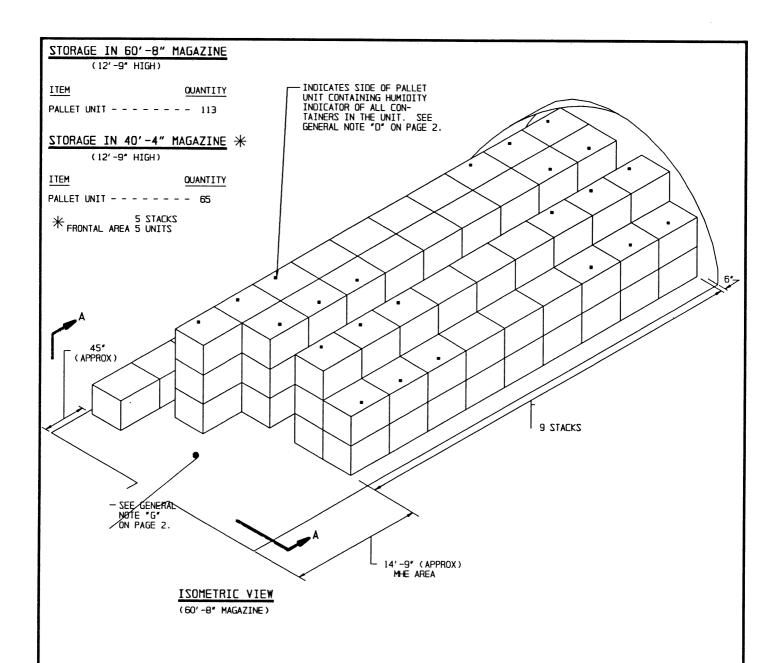


PALLET UNIT

GROSS WEIGHT - - - - - 1,014 LBS (APPROX)
CUBE - - - - - - 61.5 CU FT (APPROX)

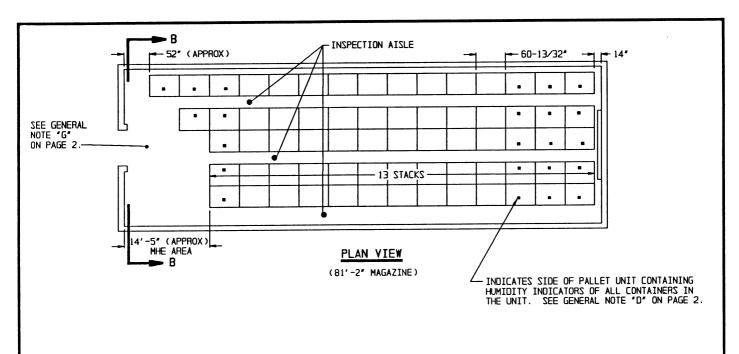
DETAIL

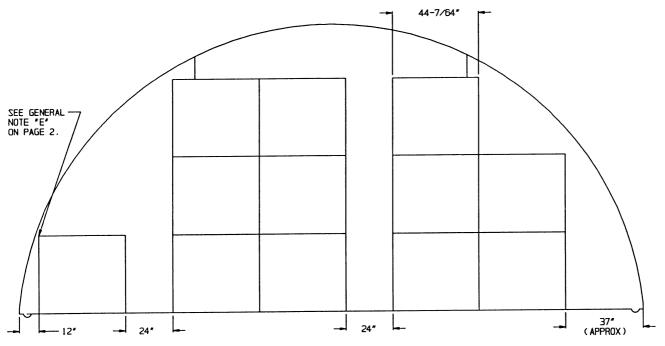




FOR "GENERAL NOTES" SEE PAGE 2.

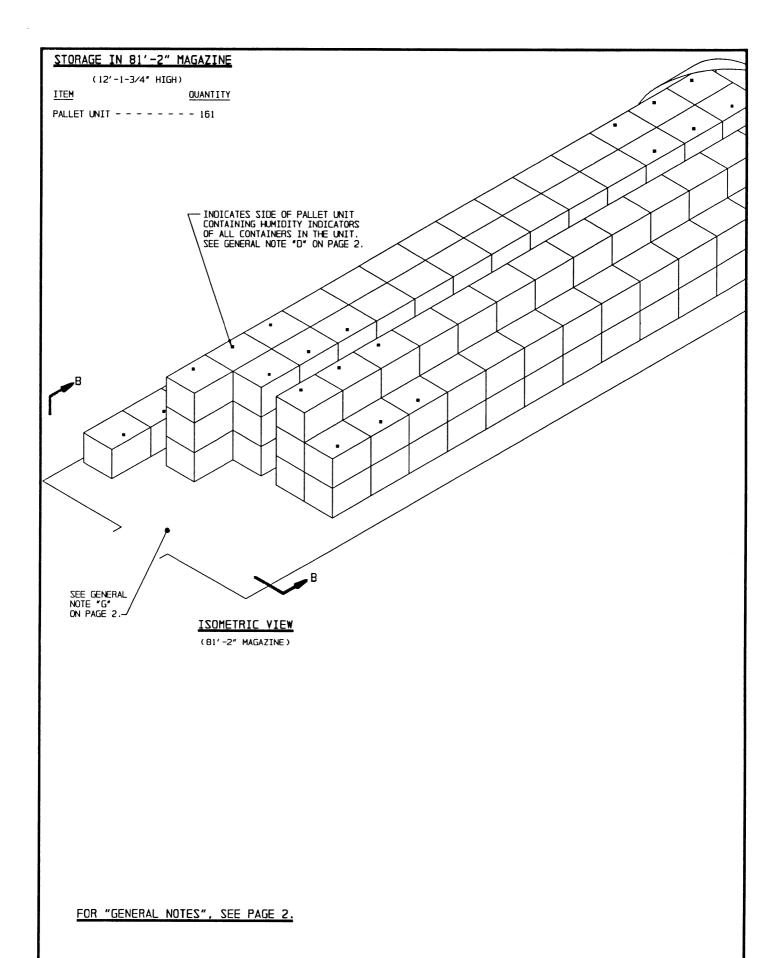
STORAGE PROCEDURES IN 81'-0", 60'-8" AND 40'-4" L X 26'-6" W X 12'-9" H IGLOO MAGAZINES



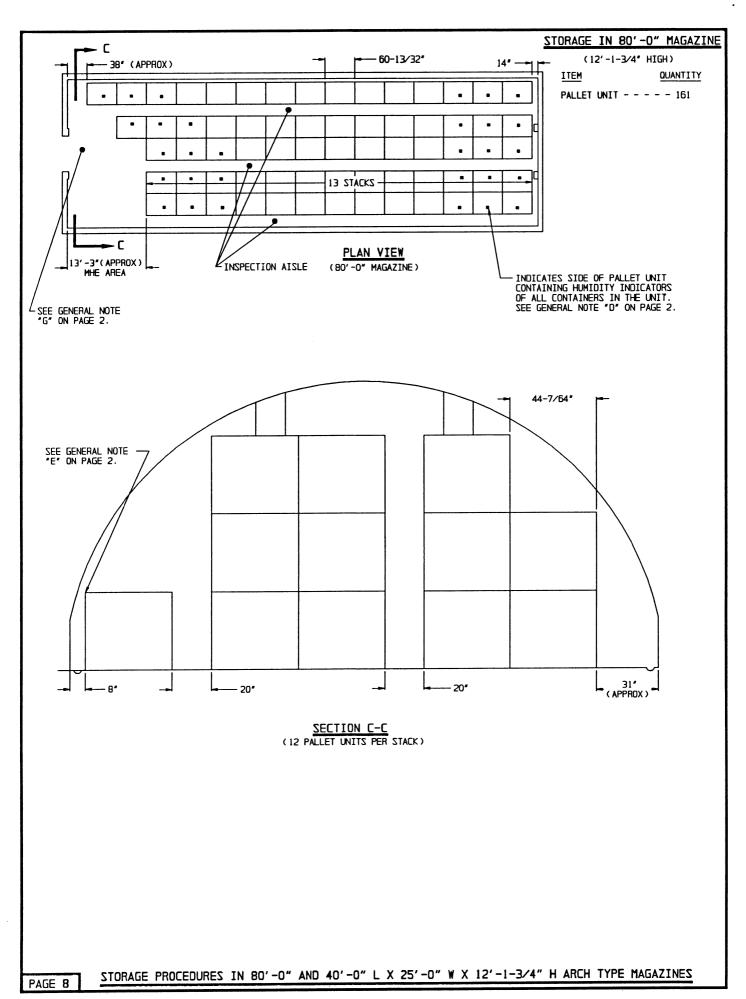


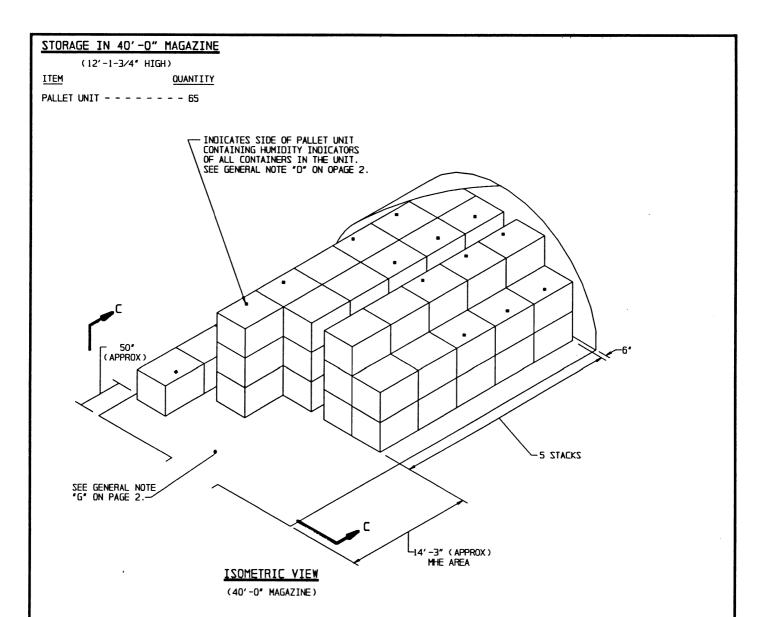
SECTION B-B
(12 PALLET UNITS PER STACK)

STORAGE PROCEDURES IN 81'-2" L X 26'-6" W X 12'-1-3/4" H ARCH TYPE MAGAZINE

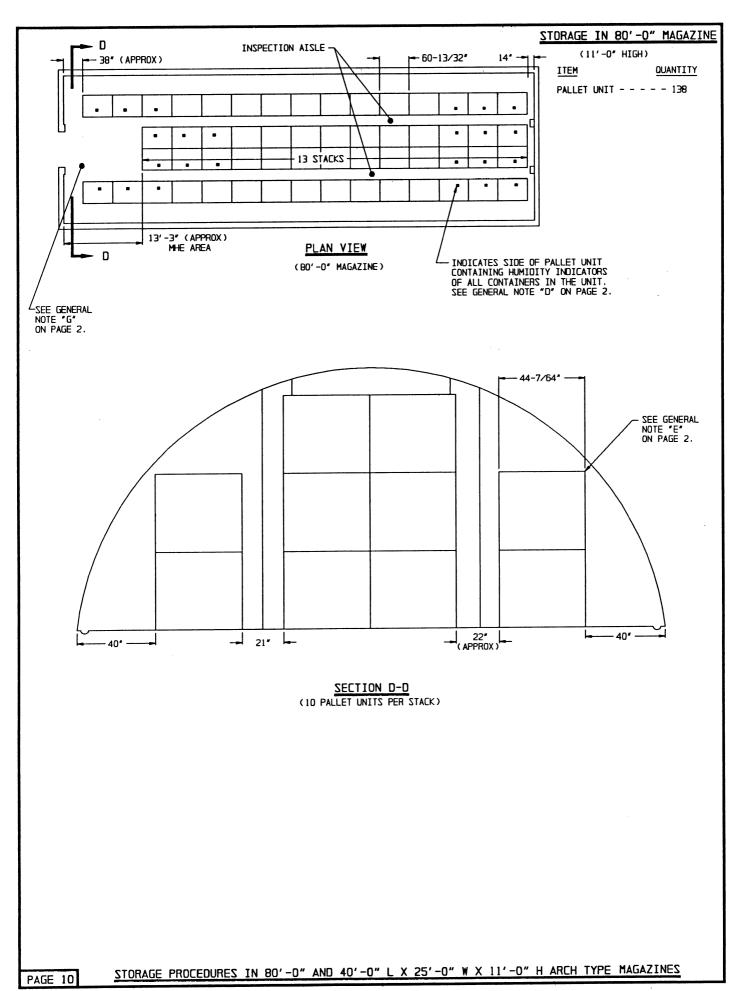


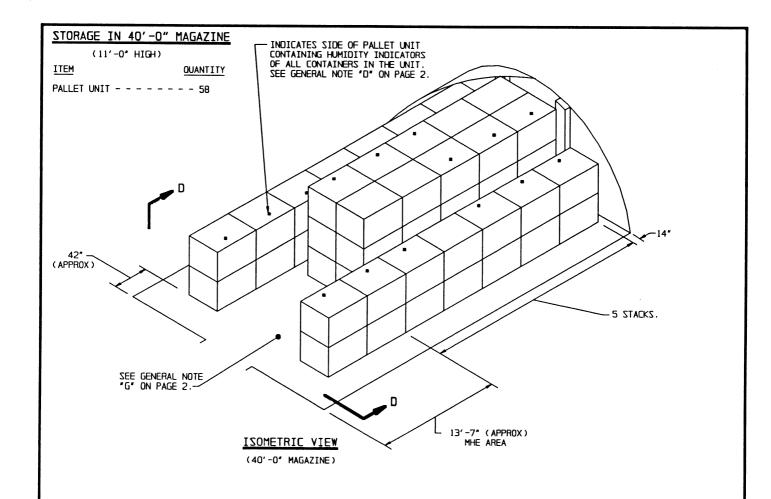
STORAGE PROCEDURES IN 81'-2" L X 26'-6" W X 12'-1-3/4" H ARCH TYPE MAGAZINE



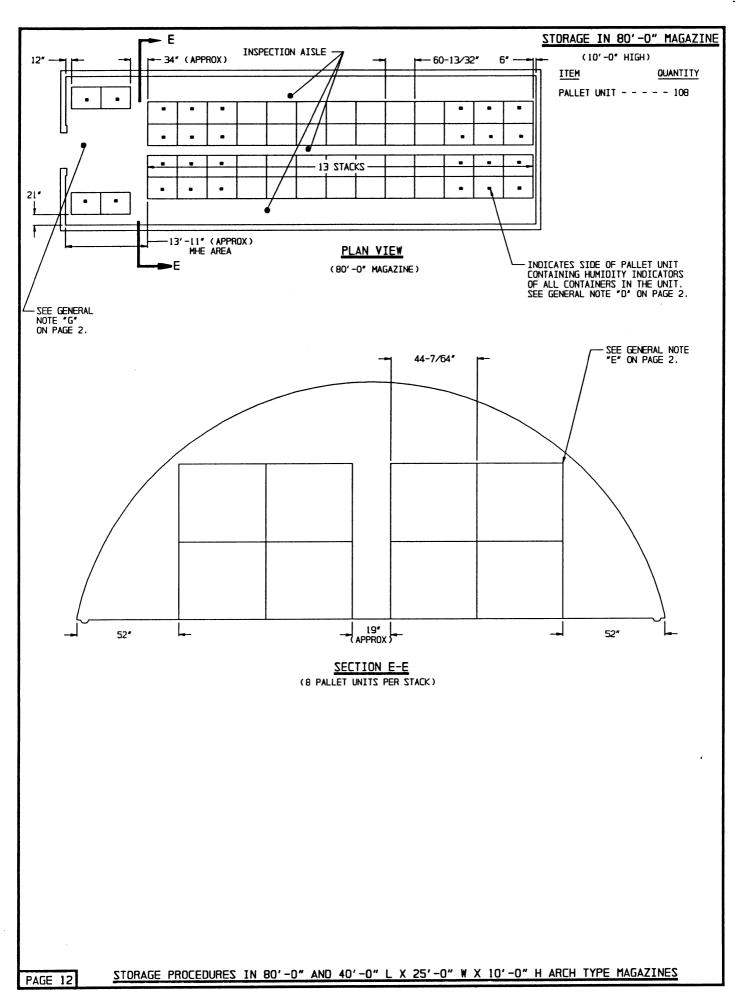


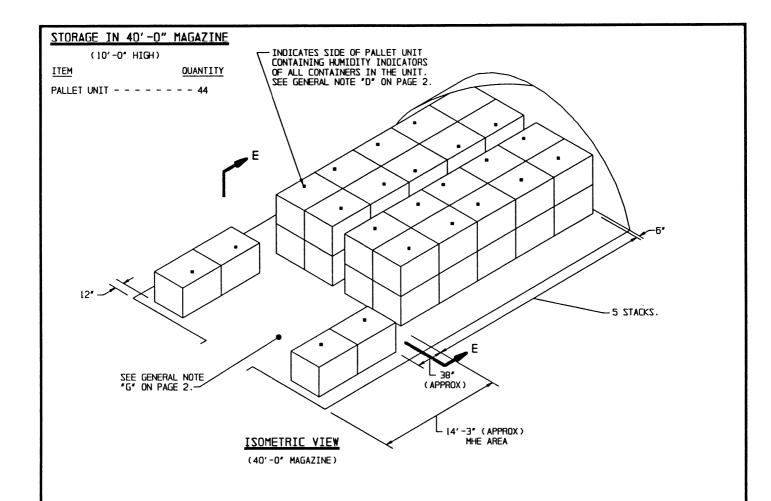
FOR "GENERAL NOTES", SEE PAGE 2.





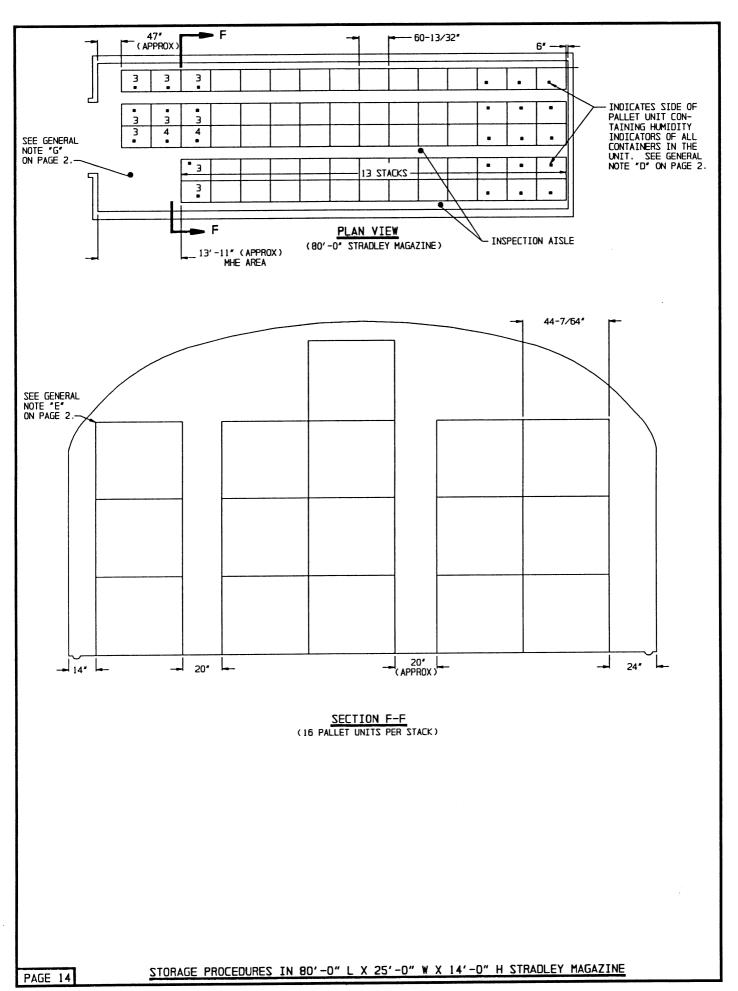
FOR "GENERAL NOTES", SEE PAGE 2.

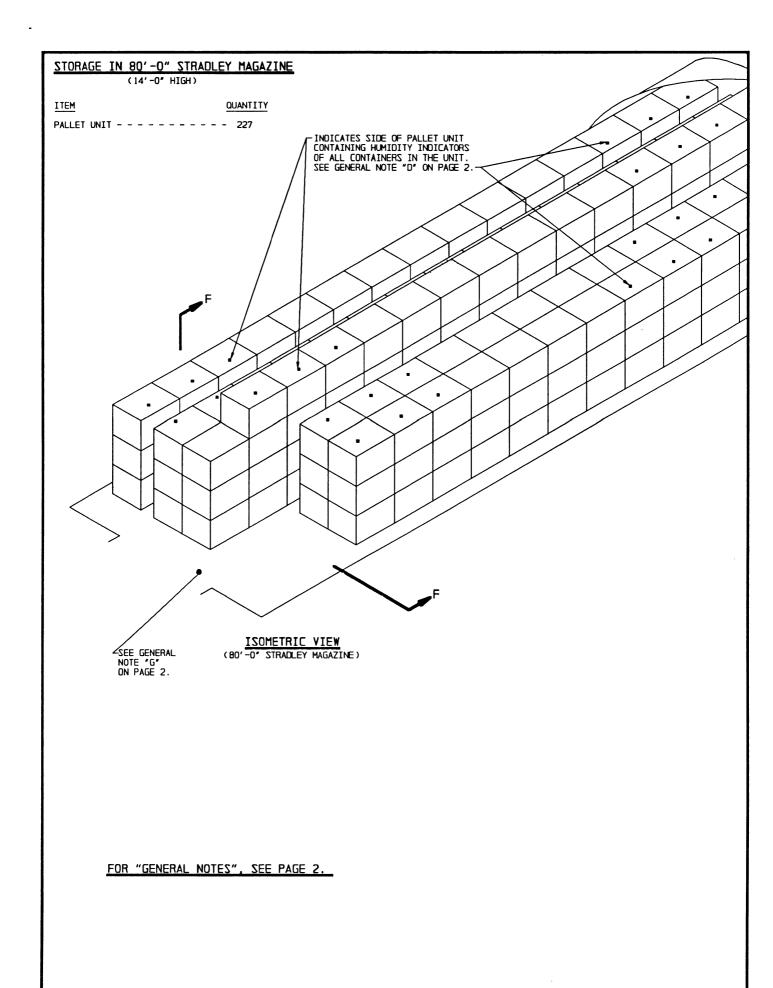




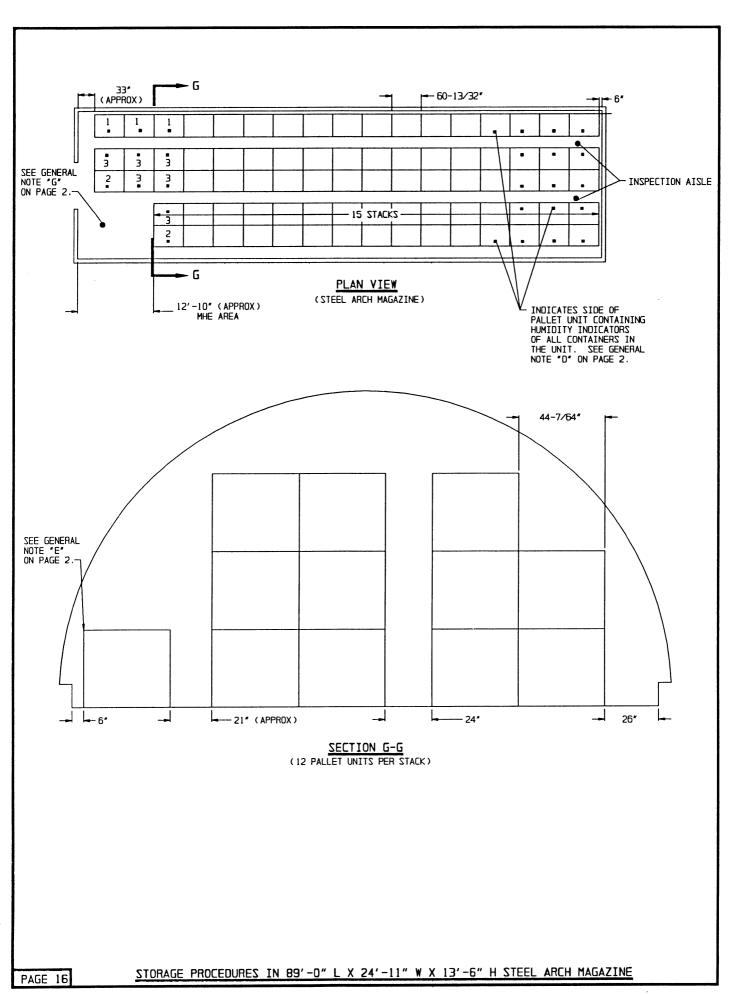
FOR "GENERAL NOTES", SEE PAGE 2.

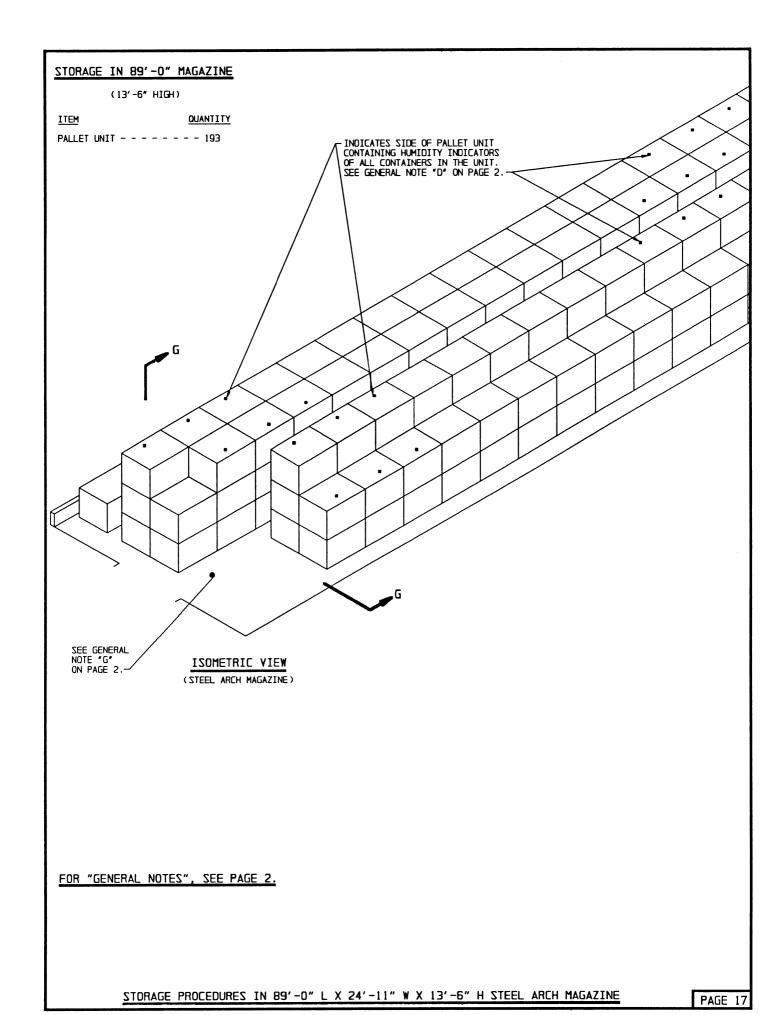
STORAGE PROCEDURES IN 80'-0" AND 40'-0" L X 25'-0" W X 10'-0" H ARCH TYPE MAGAZINES

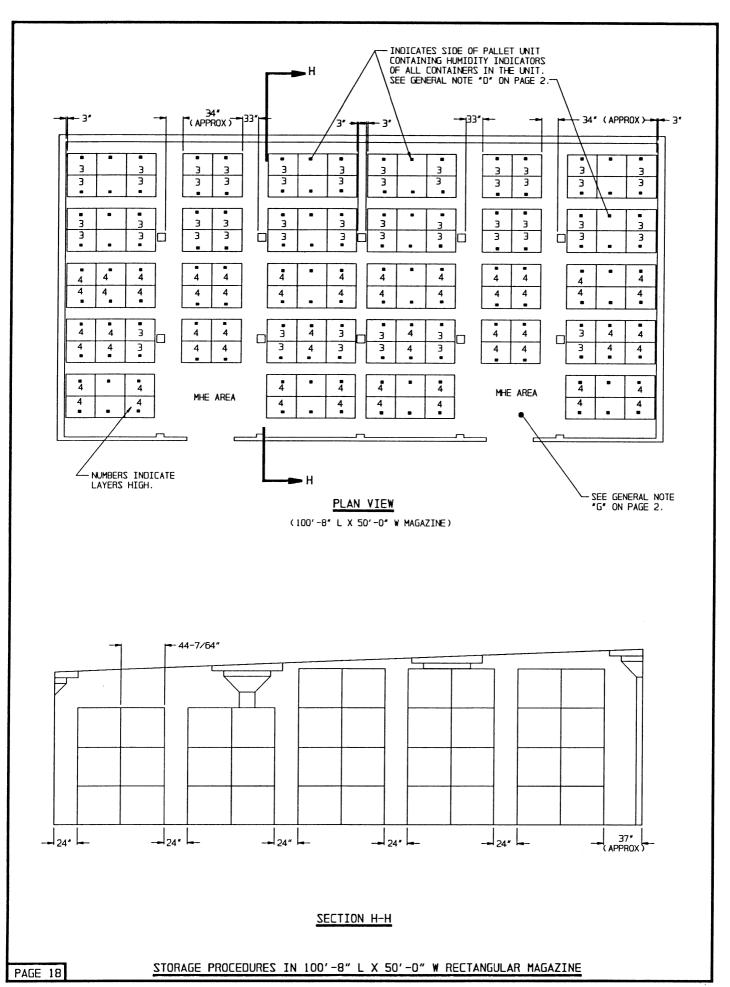


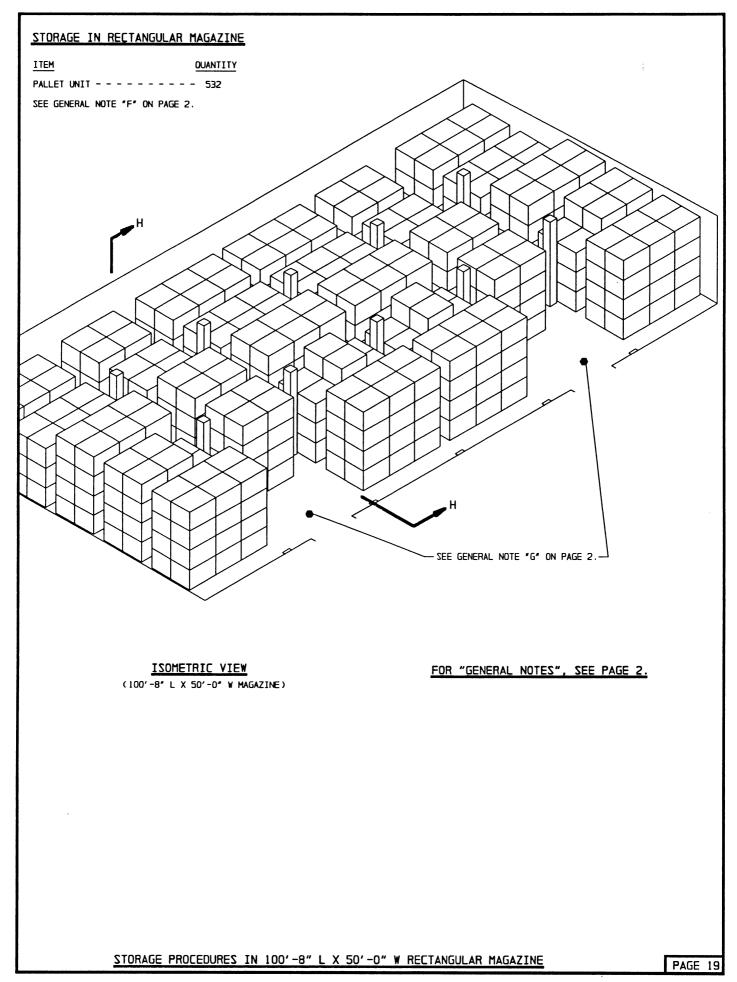


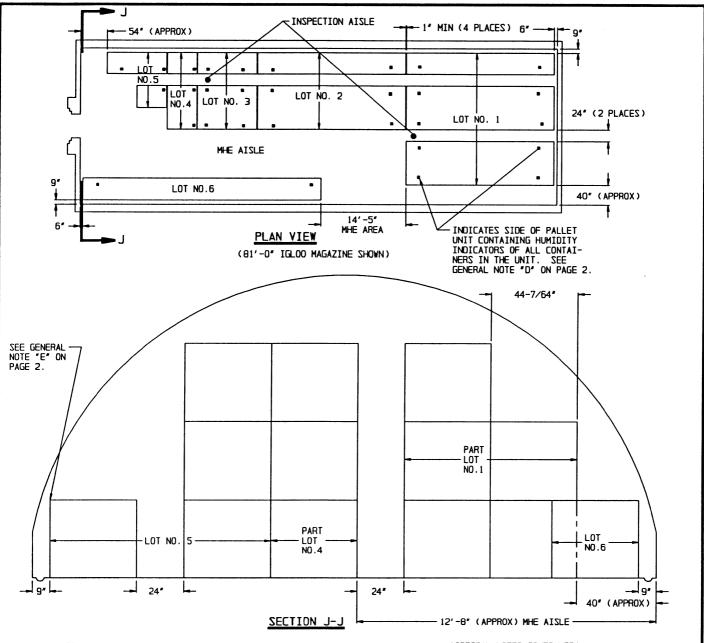
STORAGE PROCEDURES IN 80'-0" L X 25'-0" W X 14'-0" H STRADLEY MAGAZINE











SPECIAL NOTES:

PAGE 20

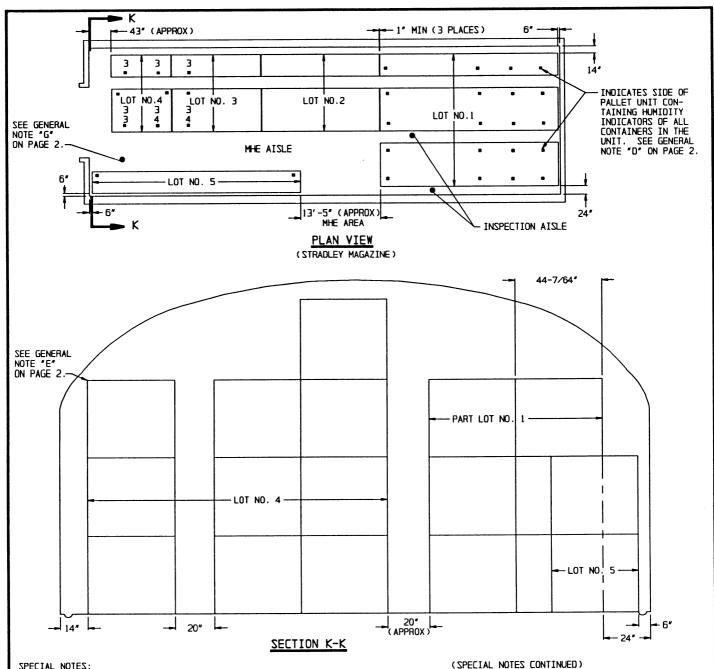
- 1. THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO SEVERAL LOTS. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED REQUIRE.
- 2. AN 18" MIN WIDE AISLE MUST BE PROVIDED FOR INSPECTION OF HUMIDITY INDICATORS OF ALL UNITS WITHIN THE LOT, AND WILL ALSO FACILITATE INVENTORY. SEE GENERAL NOTE "D" ON PAGE 2.
- 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. AN MHE AISLE WILL BE REQUIRED ON ONE SIDE OF THE MAGAZINE, AND EACH LOT MUST BE ACCESSIBLE FOR REMOVAL AND INSPECTION 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. A "LIFT" MAY CONSIST OF ONE (1) OR MORE PALLET UNITS, PROVIDING THE CAPACITY OF THE MHE PERMITS AND SAFE HANDLING IS NOT JEOPARDIZED.

(CONTINUED AT RIGHT).

(SPECIAL NOTES CONTINUED)

- 5. FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE SIDEWALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE
- 6. 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.
- 7. A 14'-5" MHE OPERATING AREA HAS BEEN SHOWN. 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 EACH SIDE OF MAGAZINE) IS TO BE AT LEAST 4B INCHES OR 66 INCHES WIDE DEPENDING ON UNITS BEING ENDHANDLED OR SIDE HANDLED.
- 8. IF MIXED-LOT PALLET UNITS ARE TO BE STORED THEY SHOULD BE PLACED IN THE FRONTAL AREA OF THE MAGAZINE. A MIXED-LOT PALLET UNIT MAY HAVE FROM TWO LOTS PER PALLET UNIT UPWARD TO AS MANY DIFFERENT LOTS AS CONTAINERS WITHIN THAT UNIT. HOWEVER, ALL LOTS WITHIN THE PALLET UNIT MUST HAVE THE SAME NATIONAL STOCK NUMBER AND CONDITION CODE.

TYPICAL MULTIPLE-LOT STORAGE IN IGLOO AND ARCH TYPE MAGAZINES



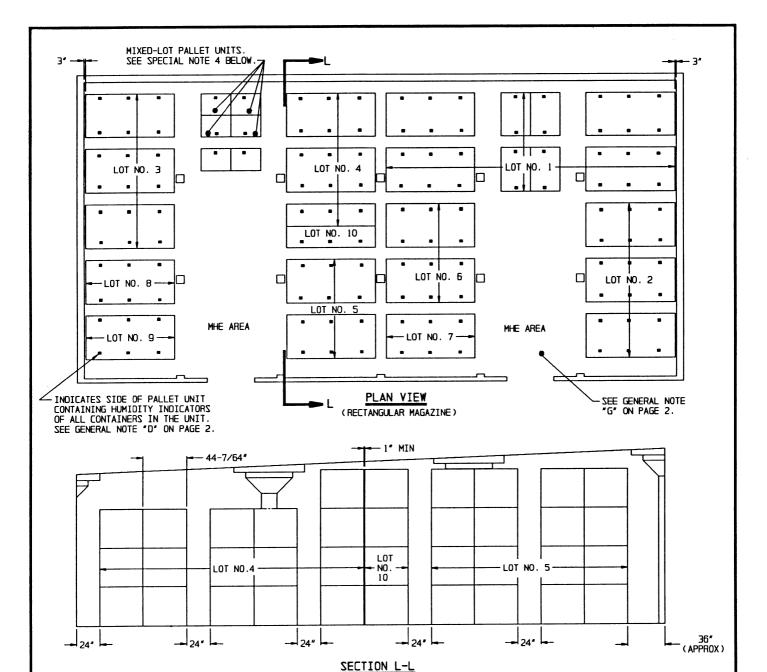
SPECIAL NOTES:

- THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO SEVERAL LOTS. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE
- 2. AN 18" MIN WIDE AISLE MUST BE PROVIDED FOR INSPECTION OF HUMIDITY INDICATORS OF ALL UNITS WITHIN THE LOT, AND WILL ALSO FACILITATE INVENTORY. SEE GENERAL NOTE "D" ON PAGE 2.
- 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 THAN ONE LUT BY EMELTING HOWS 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 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 "ACCCESSIBLE" IF NO MORE THAN TWELVE (12) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THAT LOT. A "LIFT" MAY CONSIST OF ONE (1) OR MORE PALLET UNITS, PROVIDING THE CAPACITY OF THE MHE PERMITS AND SAFE HANDLING IS NOT JEOPARDIZED.

- 5. FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE SIDEWALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.
- 6. 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.
- 7. A 13'-5' MHE OPERATING AREA HAS BEEN SHOWN. 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 EACH SIDE OF MAGAZINE). IS TO BE AT LEAST 4B INCHES OR 66 INCHES WIDE DEPENDING ON UNITS BEING ENDHANDIED OR SIDE-HANDIED. HANDLED OR SIDE-HANDLED.
- 8. IF MIXED-LOT PALLET UNITS ARE TO BE STORED THEY SHOULD BE PLACED IN THE FRONTAL AREA OF THE MAGAZINE. A MIXED-LOT PALLET UNIT MAY HAVE FROM TWO LOTS PER PALLET UNIT UPWARD TO AS MANY DIFFERENT LOTS AS CONTAINERS WITHIN THAT UNIT. HOWEVER, ALL LOTS WITHIN THE PALLET UNIT MUST A MIXED-LOT HAVE THE SAME NATIONAL STOCK NUMBER AND CONDITION CODE.

(CONTINUED AT RIGHT)

TYPICAL MULTIPLE-LOT STORAGE IN STRADLEY MAGAZINE



SPECIAL NOTES:

- THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO NUMEROUS LOTS. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN A MAGAZINE REOUTRE.
- 2. AN 18" MIN WIDE AISLE MUST BE PROVIDED FOR INSPECTION OF HUMIDITY INDICATORS OF ALL UNITS WITHIN THE LOT AND WILL ALSO FACILITATE INVENTORY. SEE GENERAL NOTE "D" ON PAGE 2.
- 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 SMALLER SIZED LOTS, EACH ADDITIONAL LOT MUST BE ACCESSIBLE FOR REMOVAL AND INSPECTION IN ACCORDANCE WITH OTHER CRITERIA SPECIFIED IN THESE SPECIAL NOTES AND IN THE GENERAL NOTES ON PAGE 2.
- 4. A MIXED-LOT PALLET UNIT MAY HAVE FROM TWO LOTS PER PALLET UNIT UPWARDS TO AS MANY DIFFERENT LOTS AS CONTAINERS WITHIN THAT UNIT, HOWEVER, ALL LOTS WITHIN THE PALLET UNIT MUST HAVE THE SAME NATIONAL STOCK NUMBER AND CONDITION CODE.

(SPECIAL NOTES CONTINUED)

- WHEN TWO LOTS ARE ADJACENT TO EACH OTHER, THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.
- 6. EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE. PALLET UNITS OF A SINGLE-LOT ARE CONSIDERED "ACCESSIBLE" IF NO MORE THAN TWENTY-FOUR (24) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THE SINGLE-LOT. A "LIFT" MAY CONSIST OF ONE (1) OR MORE PALLET UNITS, PROVIDING THE CAPACITY OF THE MHE PERMITS AND SAFE HANDLING IS NOT JEOPARDIZED.
- 7. THE MHE AREA MAY BE USED TO STORE ONE OR MORE UNIT-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 TO PROVIDE ADEQUATE SPACE FOR MHE OPERATION, TO COMPLY WITH ALL OF THE MULTIPLE-LOT CRITERIA AS SET FORTH ON THIS PAGE.
- 8. PALLET UNITS IN TOP LAYER WILL BE OMITTED AS REQUIRED TO CLEAR ROOF SUPPORT CAPS AT TOP OF COLUMNS.

(CONTINUED AT RIGHT).

TYPICAL MULTIPLE-LOT STORAGE IN RECTANGULAR MAGAZINE