# STORAGE IN APPROVED MAGAZINES OF COMPLETE ROUNDS\* PACKED IN CYLINDRICAL METAL CONTAINERS ON 4-WAY ENTRY PALLETS

# M159 SERIES CONTAINER

INDEX

STRADLEY AND OVAL ARCH TYPE MAGAZINES - - - - - - - - - - - - - - - - - -

#### UNIT NO. 1 UNIT NO. 2 ITEM PAGE(S) PAGE(S) 2 - - -GENERAL NOTES - - - -2 DETAILS 3 STORAGE PROCEDURES (EARTH COVERED MAGAZINES): 81'-0", 60'-8" AND 40'-4" L X 26'-6" W X 12'-9" H IGLOO MAGAZINES - - 81'-2" L X 26'-6" W X 12'-1-3/4" H ARCH TYPE MAGAZINE - - - - - - -4.5 - - - 24.256,7 - - 26,2780'-0" AND 40'-0" L X 25'-0" W X 12'-1-3/4" H ARCH TYPE MAGAZINES - -8,9 - - - 28,2980'-0" AND 40'-0" L X 25'-0" W X 11'-0" H ARCH TYPE MAGAZINES - - - 10,11 - - 30,31 80'-0" AND 40'-0" L X 25'-0" W X 10'-0" H ARCH TYPE MAGAZINES - - - 12,13 - - 32,33 80'-0" L X 25'-0" W X 14'-0" H STRADLEY MAGAZINE - - - - - - - - -14,15 - - - 34,35 89'-0" L X 24'-10" W X 14'-4" H OVAL ARCH MAGAZINE ------16,17 - - - 36,37 52'-0" AND 44'-7" DIA CORBETTA MAGAZINES --------18,19 - - - 38.39 100'-8" L X 50'-0" W RECTANGULAR MAGAZINE - - - - - -20,21 - - - 40,41STORAGE PROCEDURES (STANDARD ABOVE GROUND MAGAZINE): 217'-4" L X 50'-3" W X 14'-1-1/4" H STANDARD MAGAZINE - - - - -22,23 - - - 42,43TYPICAL MULTIPLE-LOT STORAGE PROCEDURES:

THIS DRAWING SUPERSEDES PART OF DRAWING 19-48-4145-1-2-3-4-14-22PM1003, DATED APRIL 1981, AS PERTAINS TO M159 SERIES CONTAINERS.

RECTANGULAR MAGAZINE - - - -

IGLOO AND ARCH TYPE MAGAZINES - - - -

U.S. ARMY MATERIEL COMMAND DRAWING				
APPROVED, U.S. ARMY INDUSTRIAL OPERATIONS	DRAFTSMAN		D. WHITMORE	
David G. Pishoul	ENGINEER	M. DAEUMER		
AMSTA-AR-ESK	SUPPLY ENGINEERING DIVISION			
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND	LOGISTICS ENGINEERING Thoms I Mulch			
Janya. Colin	AUGUST 1991 / '			
U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL	CLASS	NOISIVIO	DRAWING	FILE
REVISION NO. 1 OCTOBER 1995	19	48	4145/3	1-2-3-4-
SEE REVISION LISTING ON PAGE 2	15	TU	ב יכדיוד	14-22PM 1003

DO NOT SCALE

44,45 - - - 44,45

46,47 - - - 46,47

48,49 - - - 48,49 50 - - - 50

#### 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 COMPLETE ROUNDS PACKED IN MISS SERIES CONTAINERS ON 35" BY 45-1/2" AND ON 40" BY 48" WOODEN PALLETS. FOR DETAIL OF THE PALLET UNITS, SEE PAGE 3.
- C. 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 FACILITATE STORAGE IN OTHER TYPES OF MAGAZINES, HOWEVER, THE BASIC PRINCIPLES AS DEPICTED HEREIN WILL BE FOLLOWED.
- D. CAUTION: THE ALLOWABLE "EXPLOSIVE LIMIT" ESTABLISHED FOR A MAGAZINE IS NOT TO BE EXCEEDED. THIS LIMITATION MAY REDUIRE A QUANTITY REDUCTION FROM THE STORAGE AS SHOWN
- E. 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.
- F. 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.
- G. THE MAXIMUM FLOOR LOAD FOR A MAGAZINE AS PRESCRIBED BY LOCAL STANDARDS WILL NOT BE EXCEEDED.
- H. IF AVAILABLE MHE PERMITS, ADDITIONAL PALLETIZED UNITS
  MAY BE STORED WITHIN THE MHE AREA AND/OR OTHER AVAILABLE
  AREA OF THE MAGAZINE.
- J. 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.
- K. 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.
- L. STORAGE OF MULTIPLE LOTS IN A MAGAZINE WILL REDUIRE 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 44 THRU 50.
- M. 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 43 CAN ALSO BE ADAPTED FOR THE STORING OF MORE THAN ONE LOT, HOWEVER, THE USE OF A STAGGERED LAYER STORAGE PATTERN AS SHOWN IS PROHIBITED. MULTIPLE LOTS OF PALLET UNITS WHEN STORED IN ACCORDANCE WITH THE BASIC STORAGE PATTERN MAY BE STORED WITH ONE OR MORE STACKS USED FOR EACH LOT. LOTS WILL NOT BE MIXED, EXCEPT TO THE EXTENT THAT UNITS OF ONE LOT WILL NOT BE STACKED ON TOP OF PALLET UNITS FROM ANOTHER LOT. MULTIPLE LOTS OF PALLET UNITS MAY BE STORED WITH ONE OR MORE ROWS USED FOR EACH LOT. (A ROW RUNS FROM THE REAR OF THE MAGAZINE TO THE FRONT). EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR REMOVAL AND INSPECTION/INVENTORY IN ACCORDANCE WITH OTHER CRITERIA SPECIFIED IN THESE GENERAL NOTES AND IN THE SPECIAL NOTES ON PAGES 44 THRU SO.
- N. ANY "LIGHT" PALLET UNIT THAT DOES NOT CONTAIN A FULL QUANTITY OF ROUNDS WILL NOT BE BURIED IN STORAGE. IT MUST BE POSITIONED ADJACENT TO AN AISLE, PREFERABLY IN FRONT OF THE LOT.

(CONTINUED AT RIGHT)

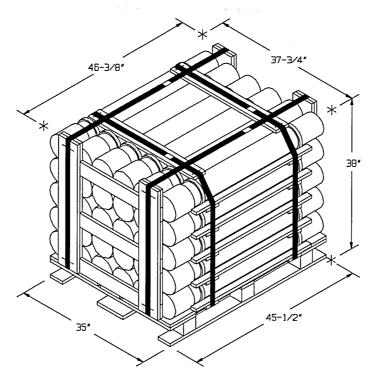
#### (GENERAL NOTES CONTINUED)

- O. A PRODUCTION OR STORAGE FACILITY IS AUTHORIZED TO HAVE ONE INCOMPLETE, UN-BANDED PARTIAL UNIT PER LOT IN A STORAGE STRUCTURE. PRIOR TO SHIPMENT OF A PARTIAL UNIT, A LAYER MUST BE COMPLETED, IF APPLICABLE, BY THE POSITIONING OF ONE OR MORE FILLERS AS DELINEATED BY DRAWING 19-48-4079/3-20PM1002. THE UNIT MUST THEN BE RE-BANDED WITH THE SAME SIZE AND QUANTITY OF STRAPS AS THE ORIGINAL UNIT.
- P. PORTIONS OF THE MAGAZINES, SUCH AS SIDEWALLS, END WALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE STORAGE VIEWS FOR CLARITY PURPOSES.
- Q. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES, AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENT MAY BE COMPUTED ON THE BASIS OF ONE INCH EQUALS 25.4 MM, AND ONE POUND EQUALS 0.454 KG.

#### REVISIONS

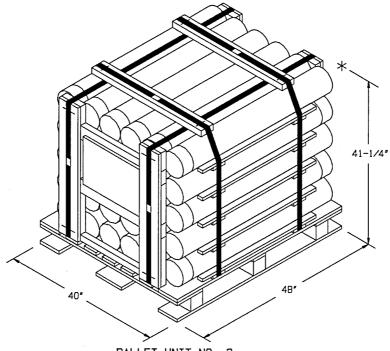
REVISION NO. 1, DATED OCTOBER 1995 CONSISTS OF:

CONVERTING TO CAD.



# PALLET UNIT NO. 1

GROSS WEIGHT - - - - 2,176 LBS (APPROX) CUBE - - - - 38.5 CUBIC FEET (APPROX) FOR UNITIZATION PROCEDURES SEE U. S. ARMY AMC (DARCOM) DRAWING 19-48-4079/3-20PM1002.

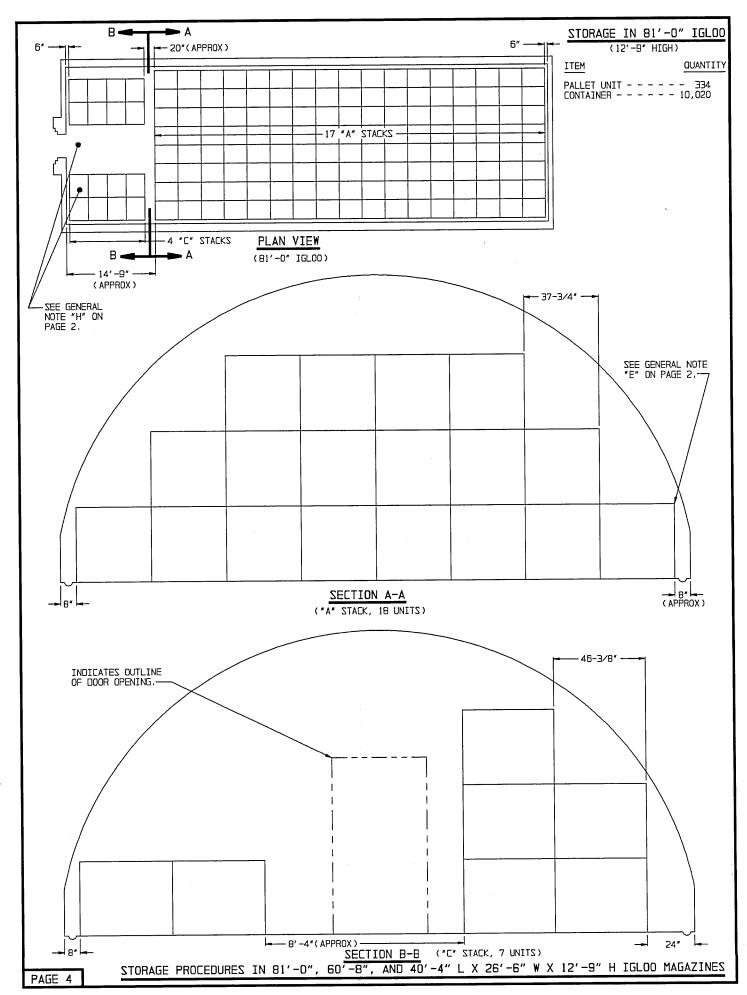


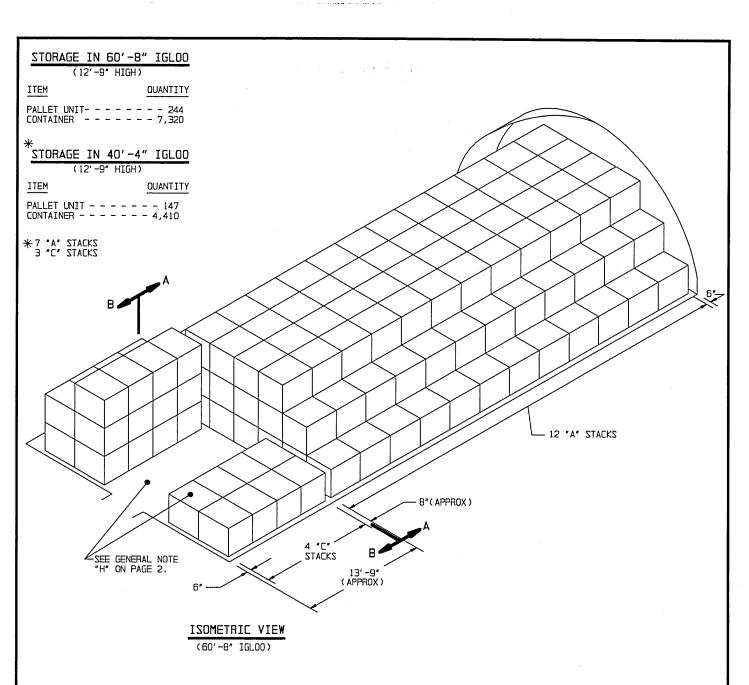
# PALLET UNIT NO. 2

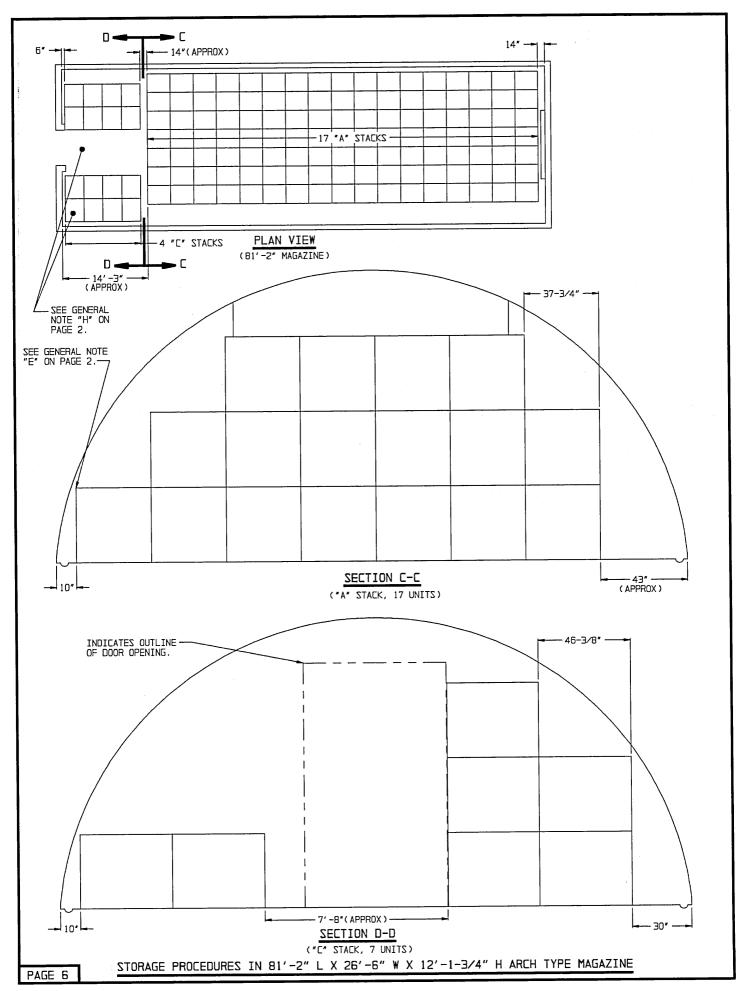
GROSS WEIGHT - - - - 2,200 LBS (APPROX)
CUBE - - - - 45.83 CUBIC FEET (APPROX)
FOR UNITIZATION PROCEDURES SEE U. S

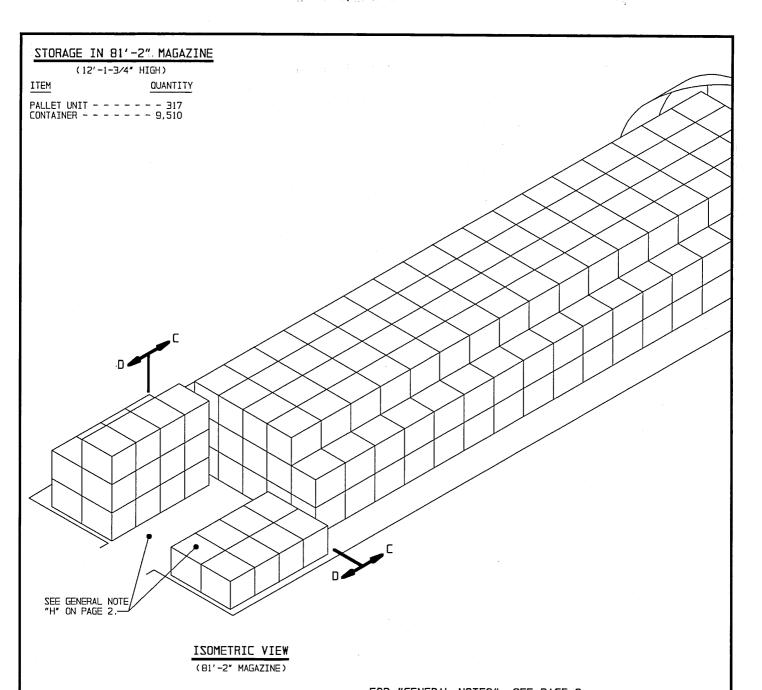
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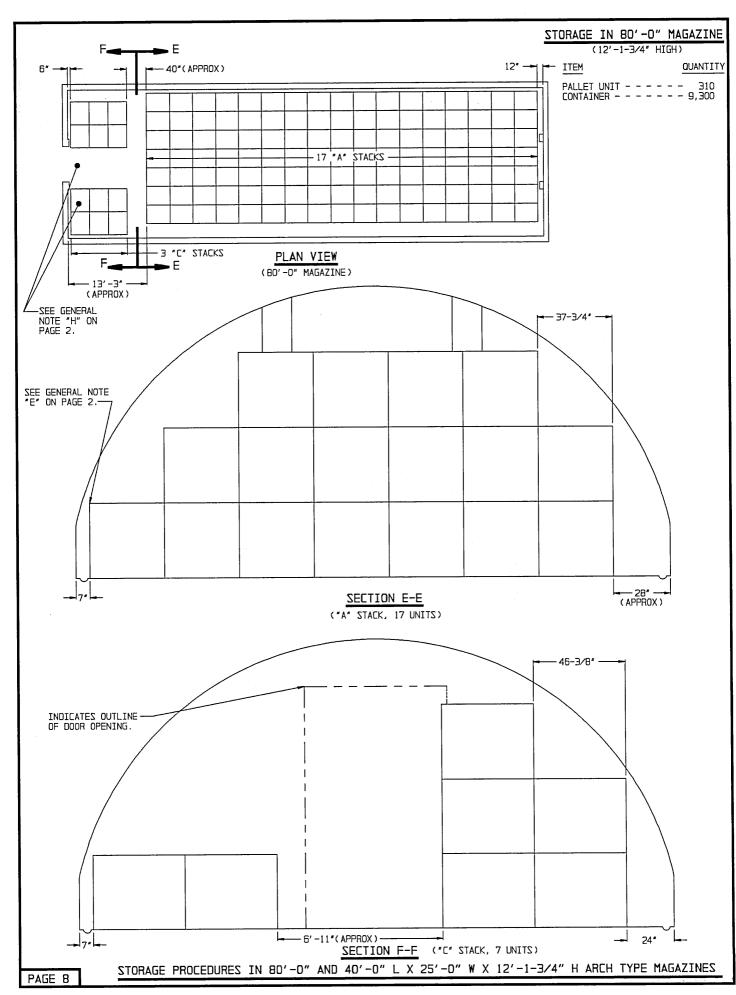
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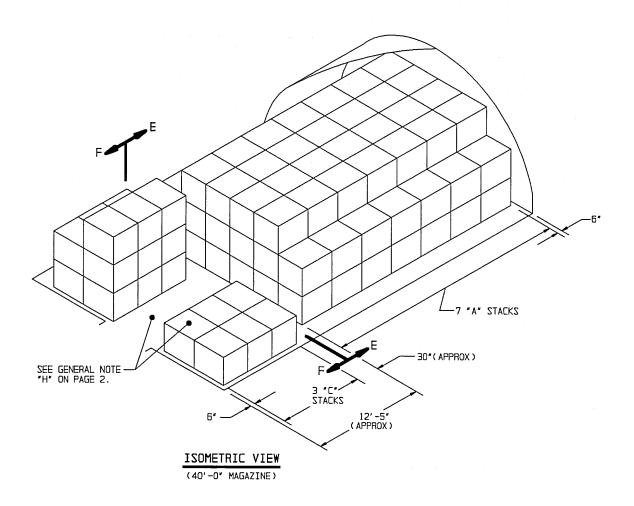


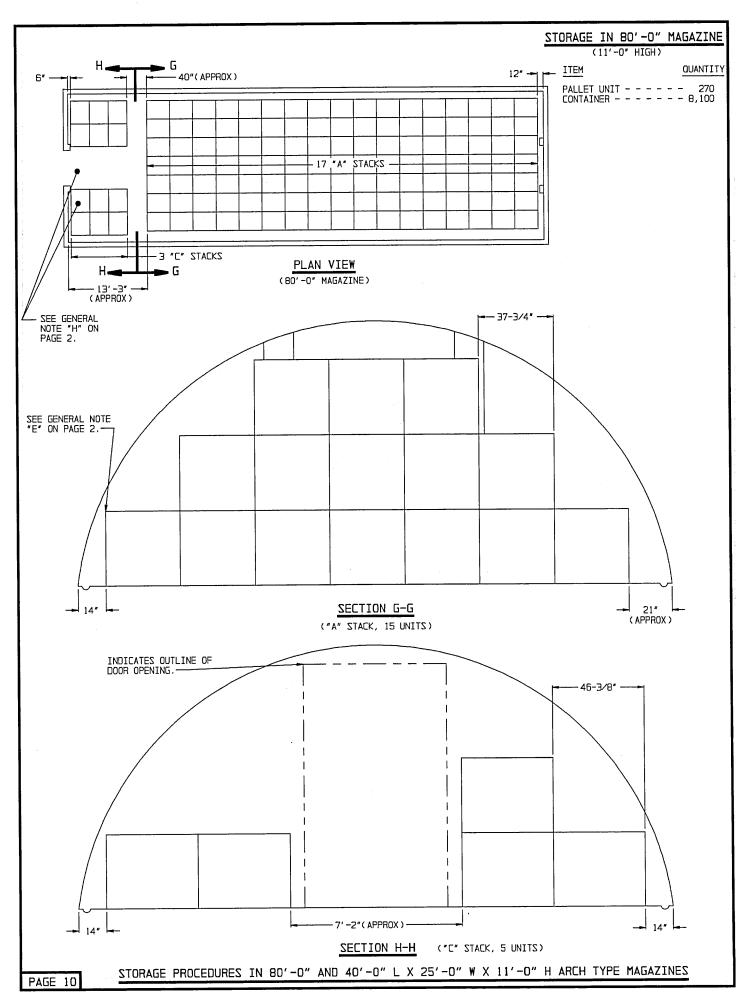
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ITEM

QUANTITY

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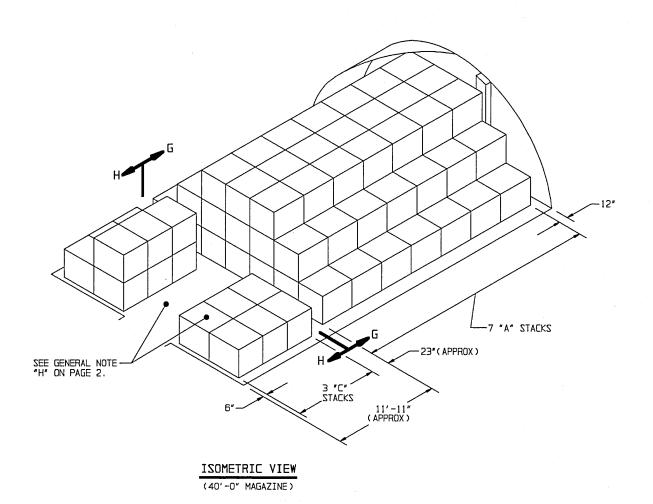




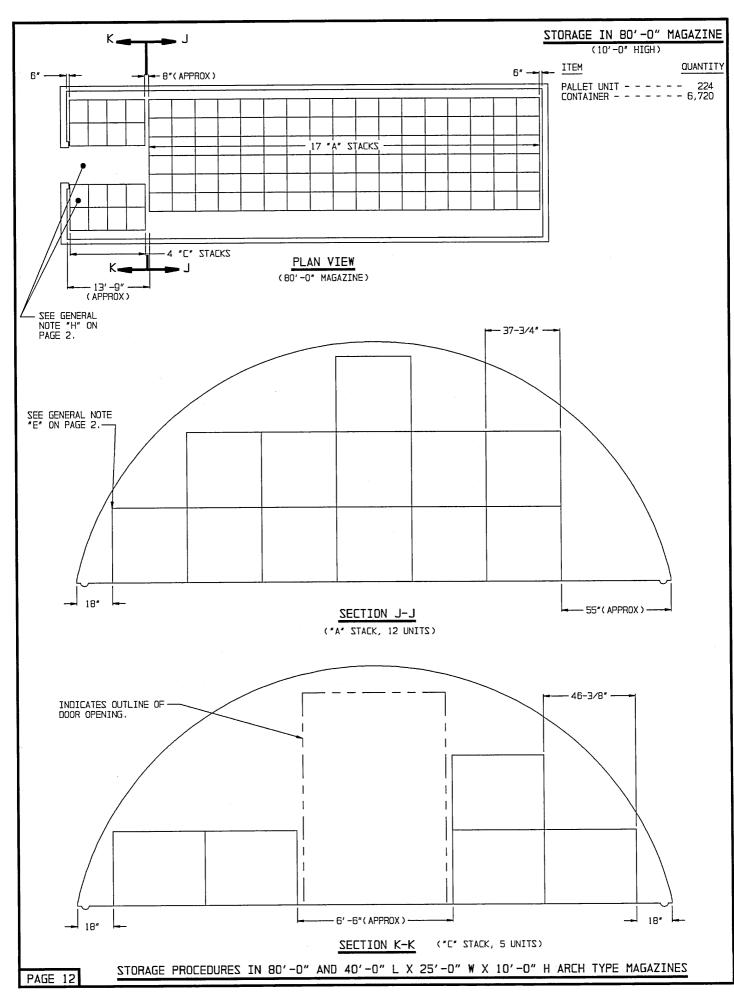
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PALLET UNIT - - - - 120
CONTAINER - - - - - 3,600



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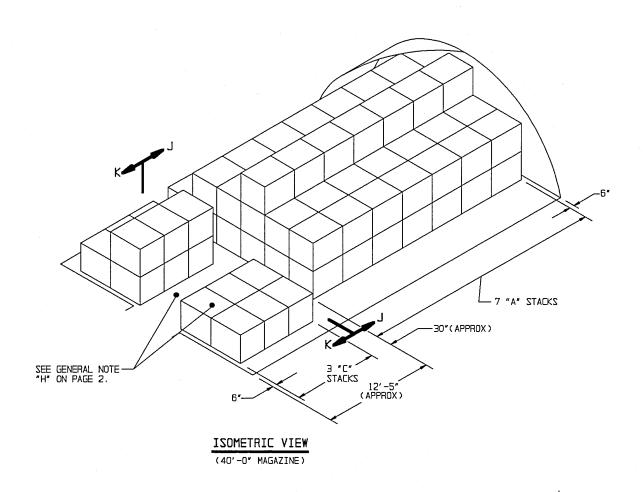


(10'-0" HIGH)

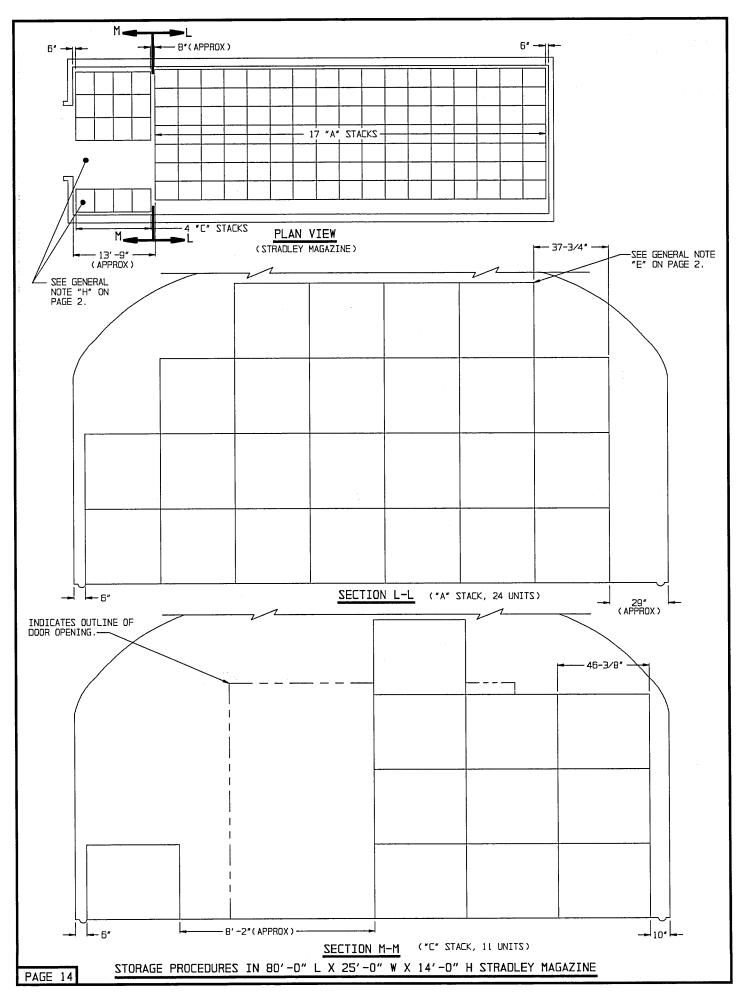
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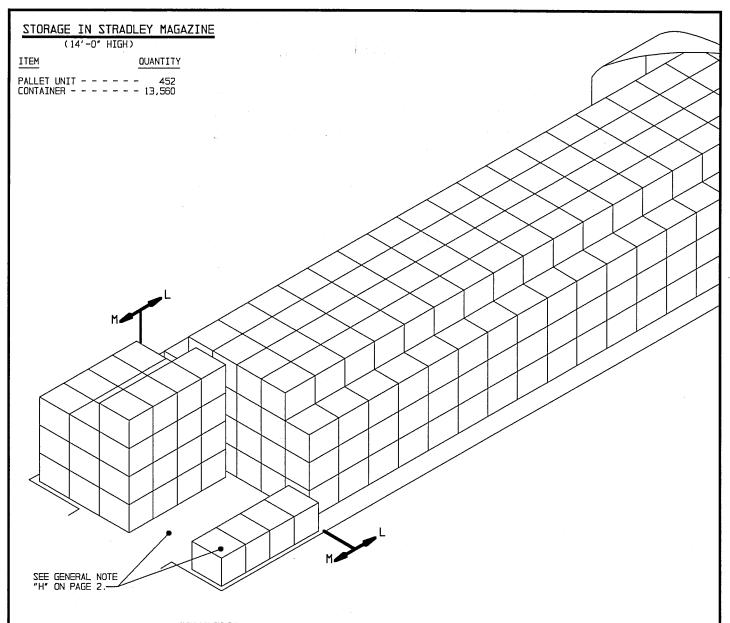
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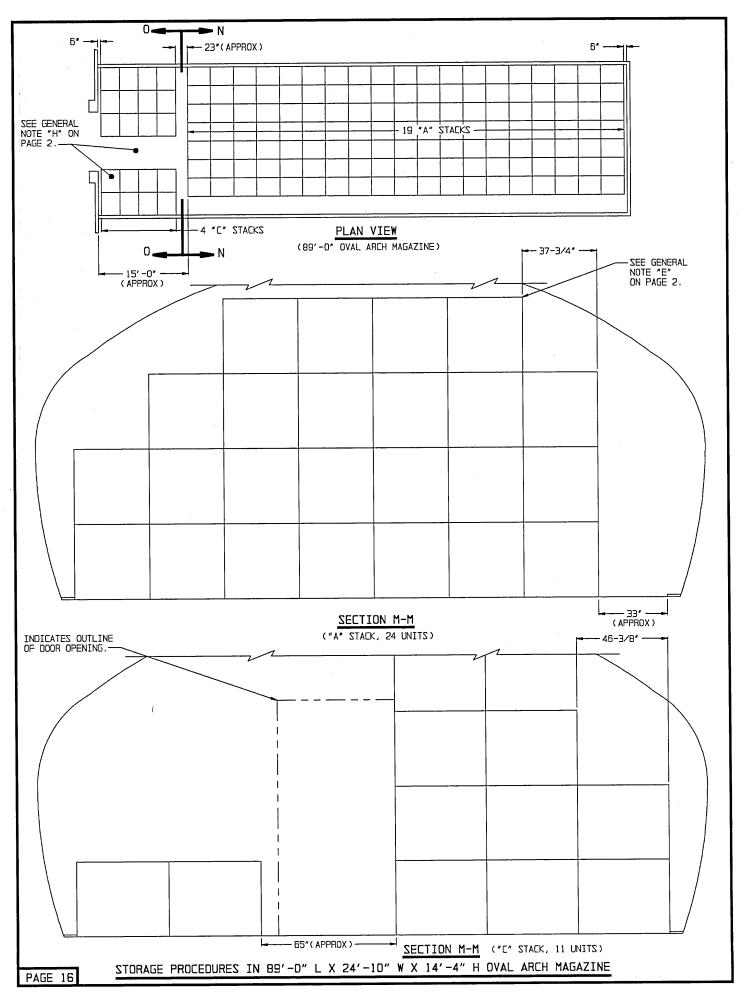
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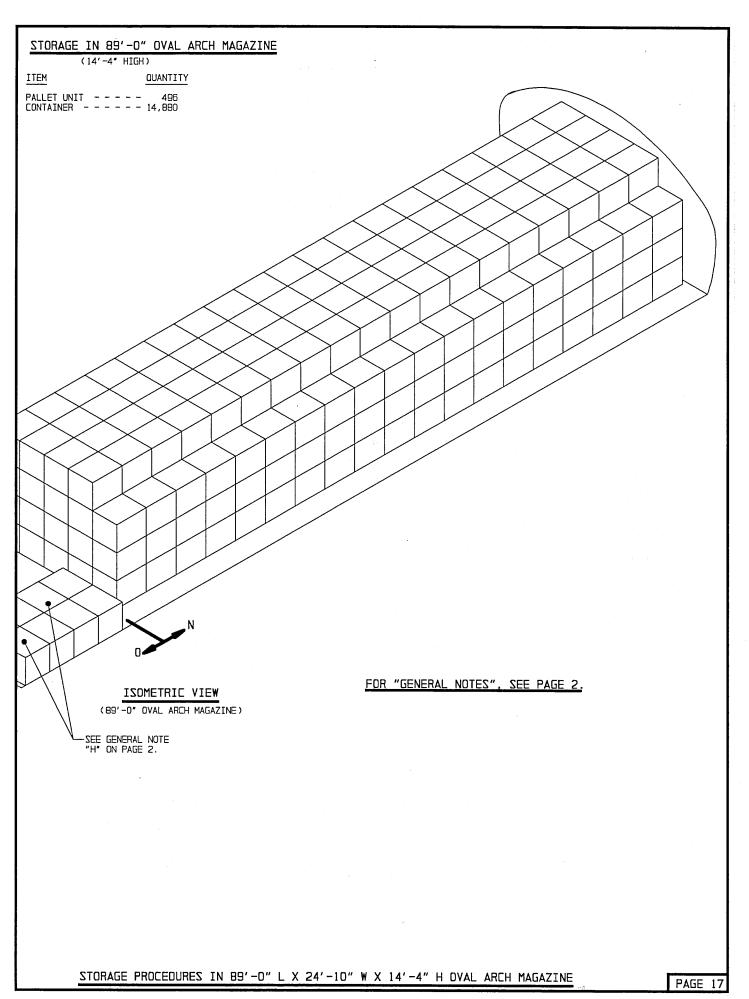


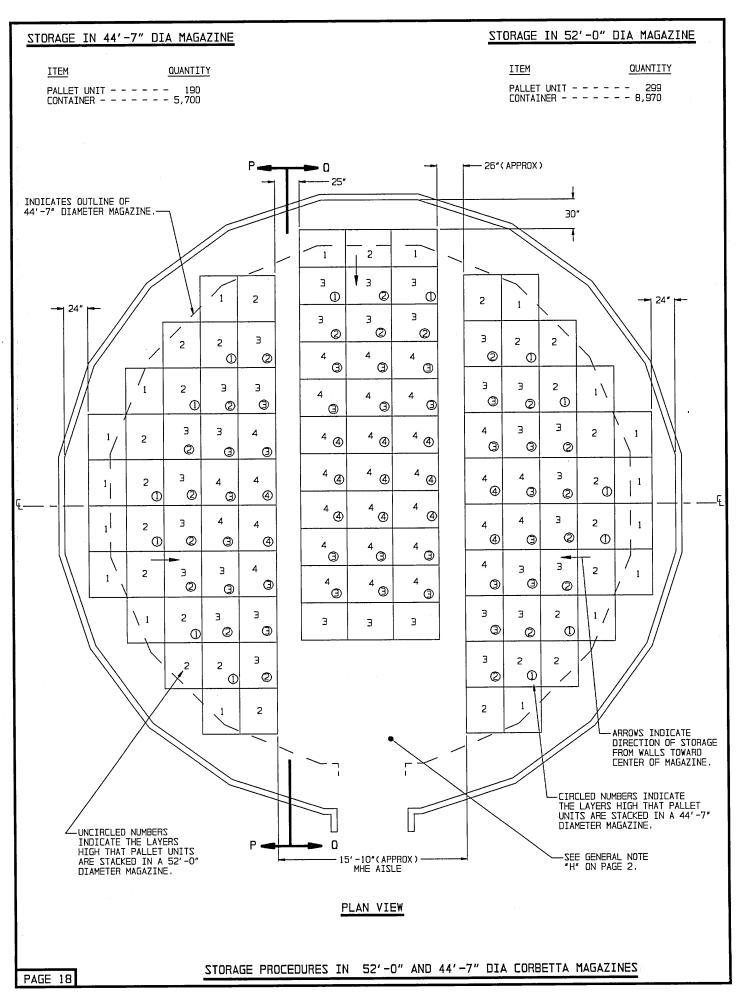


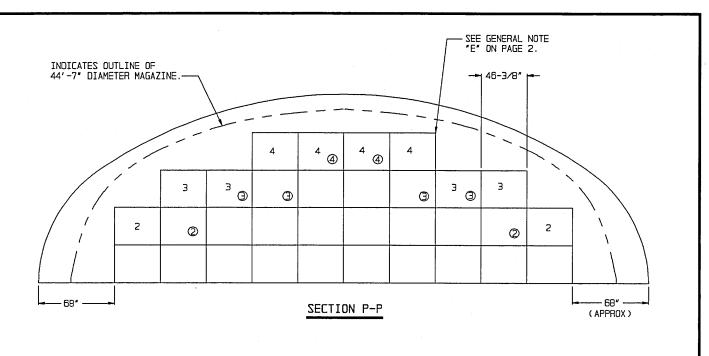
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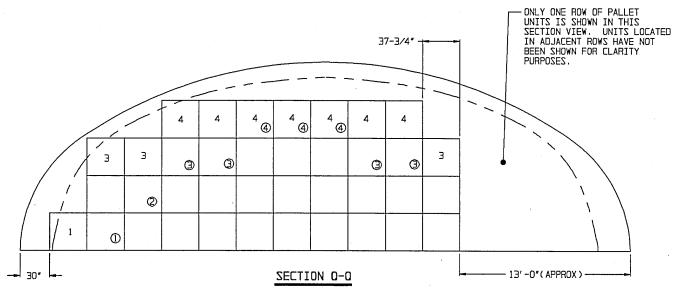
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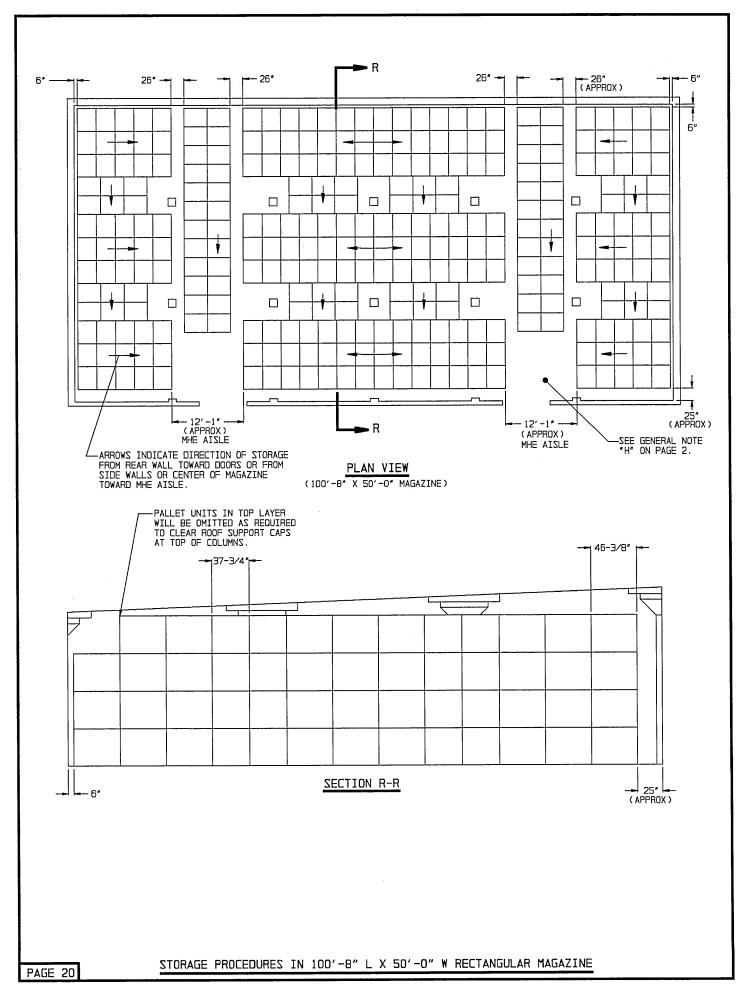


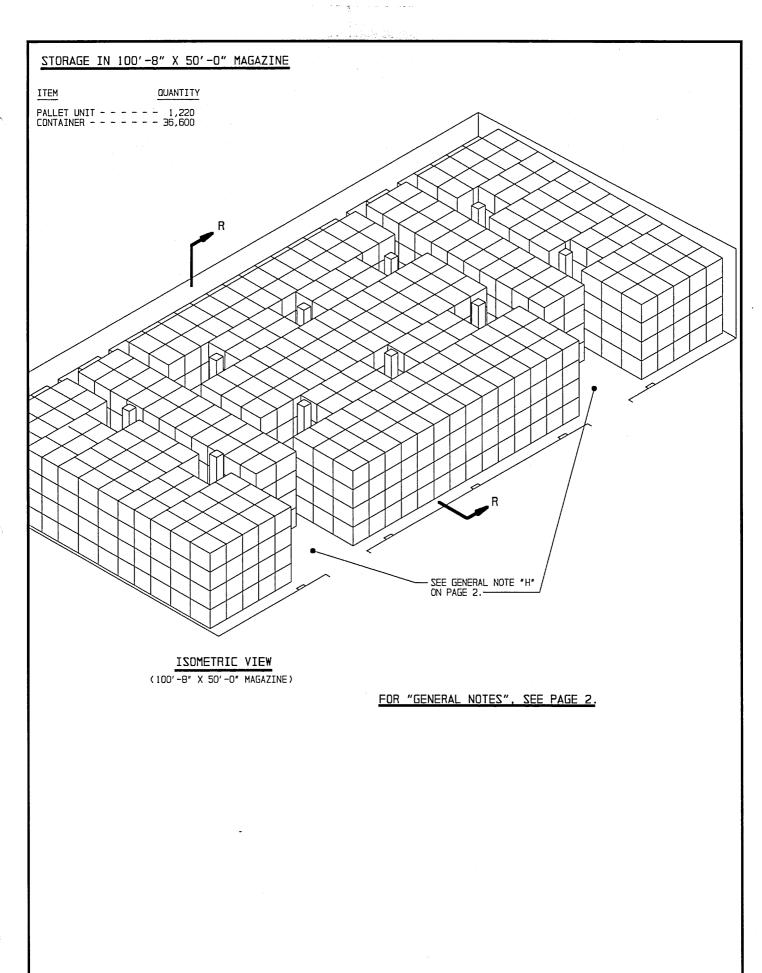






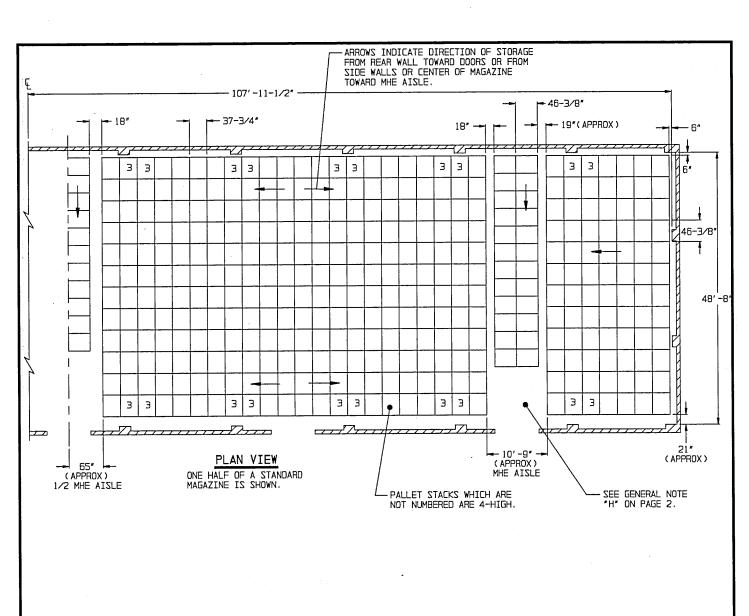
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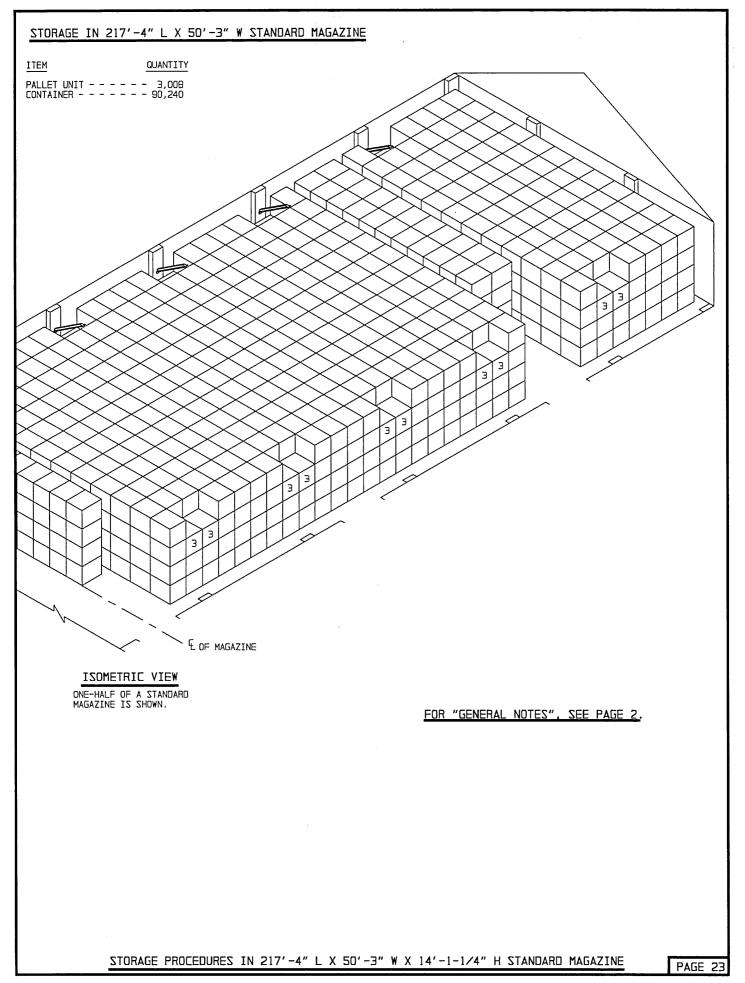




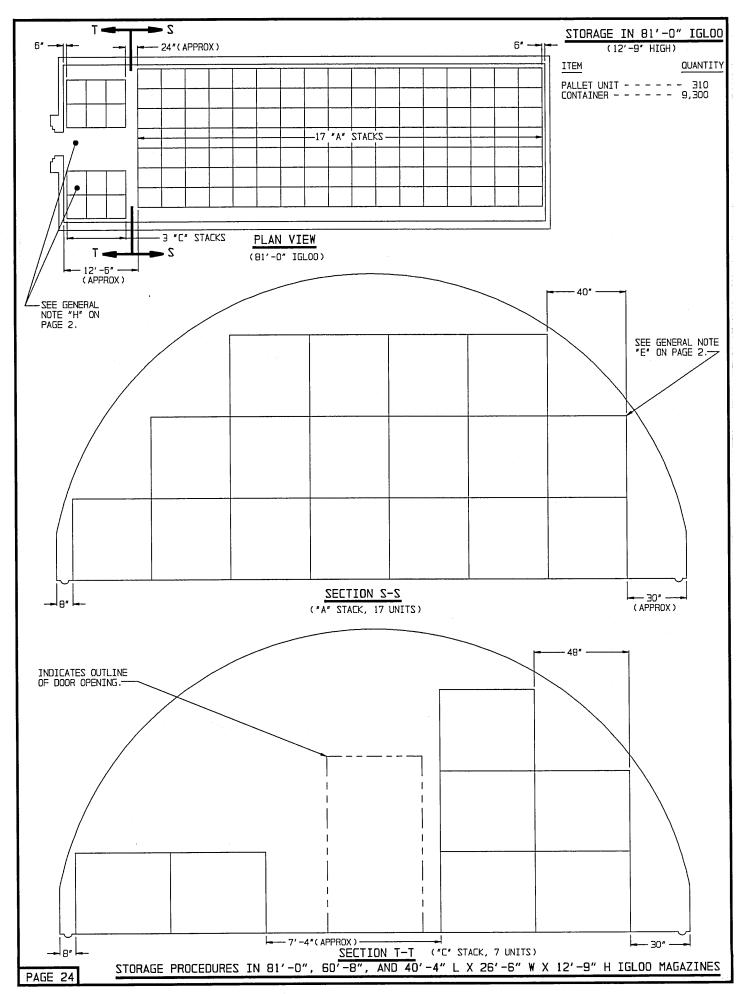
STORAGE PROCEDURES IN 100'-B" L X 50'-0" W RECTANGULAR MAGAZINE

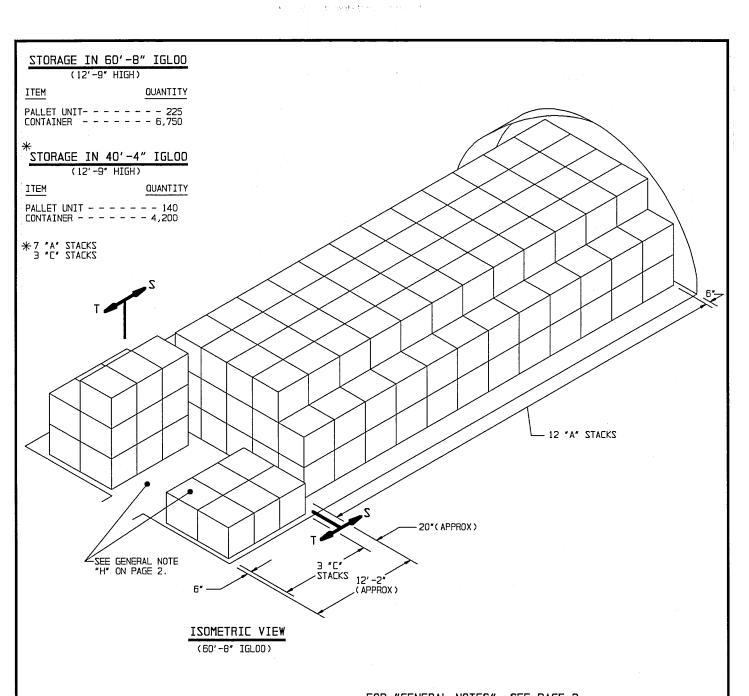
PAGE 21



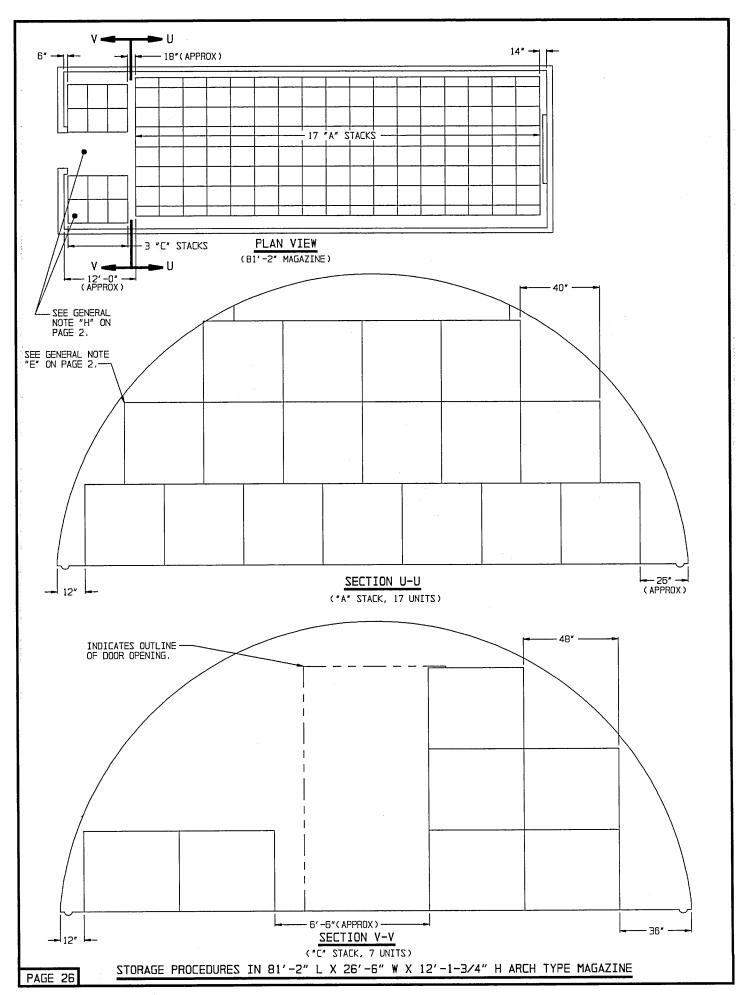


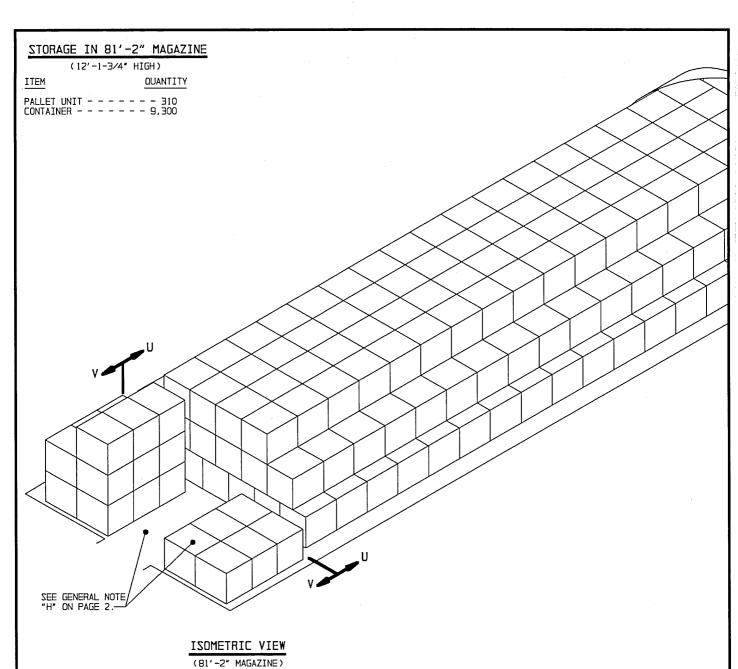
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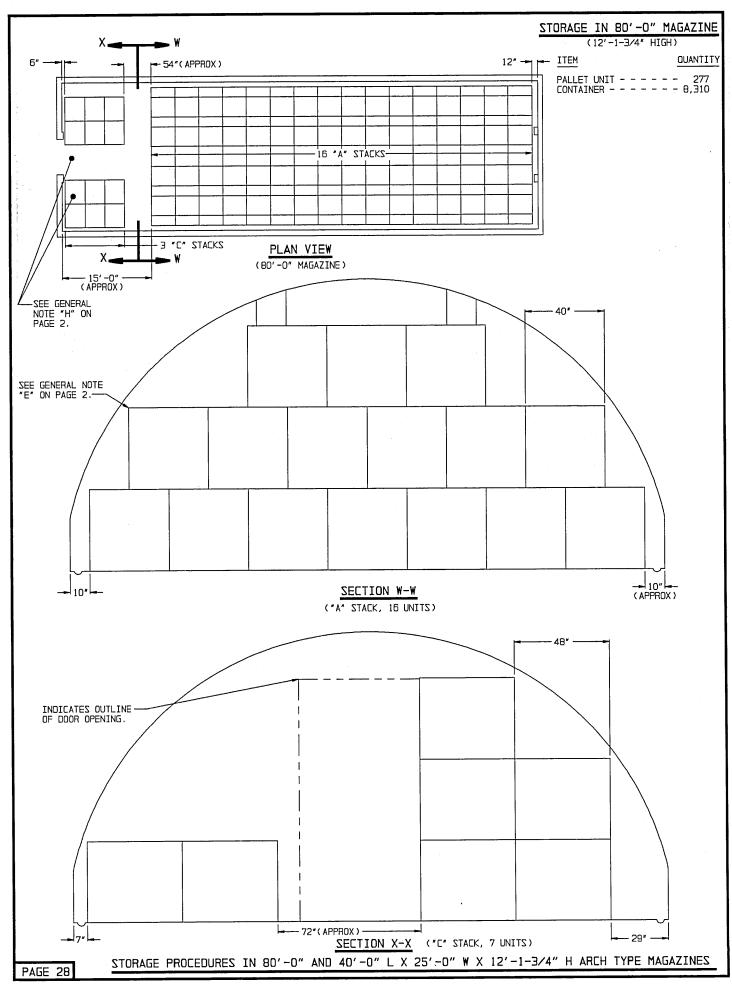




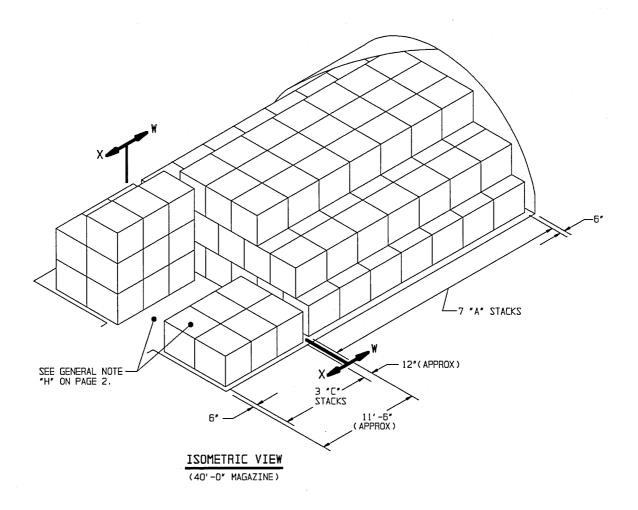
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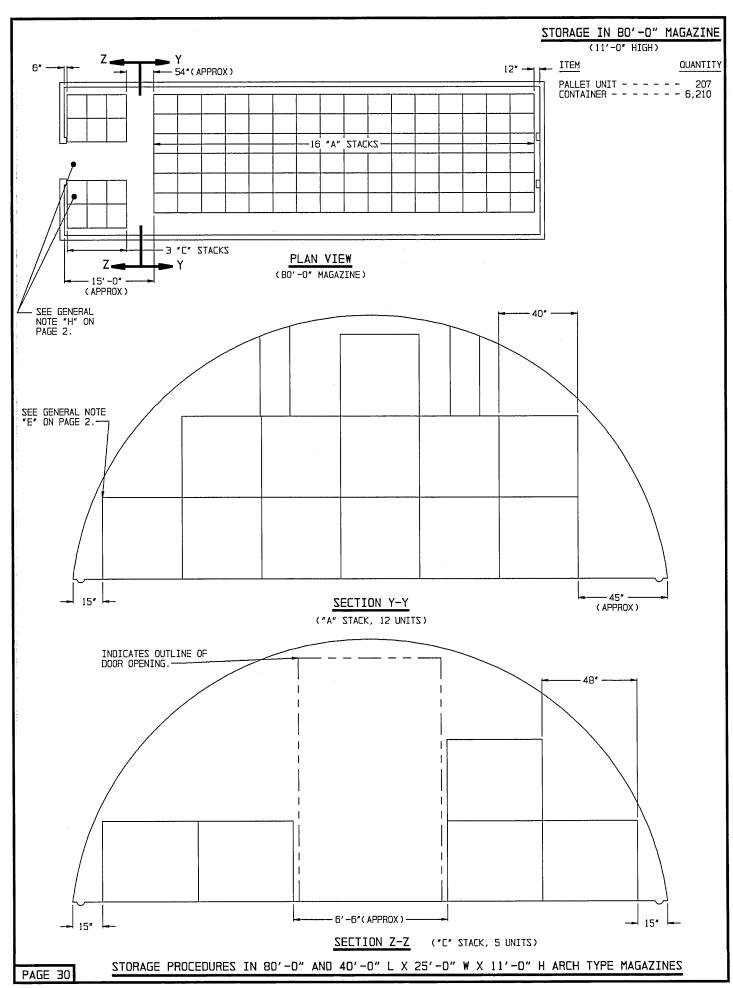






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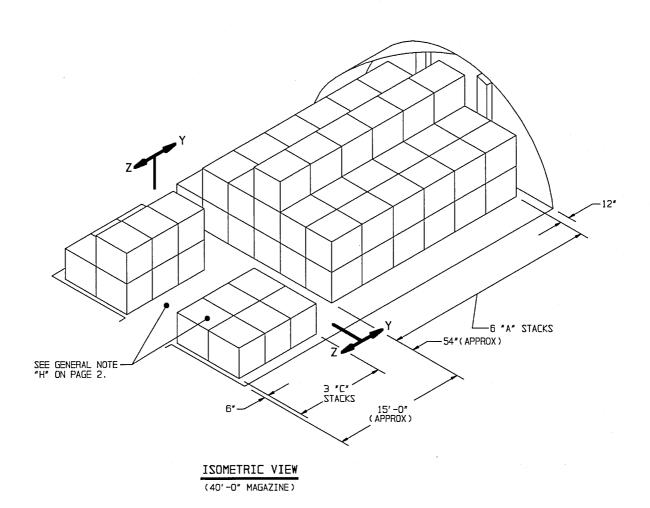


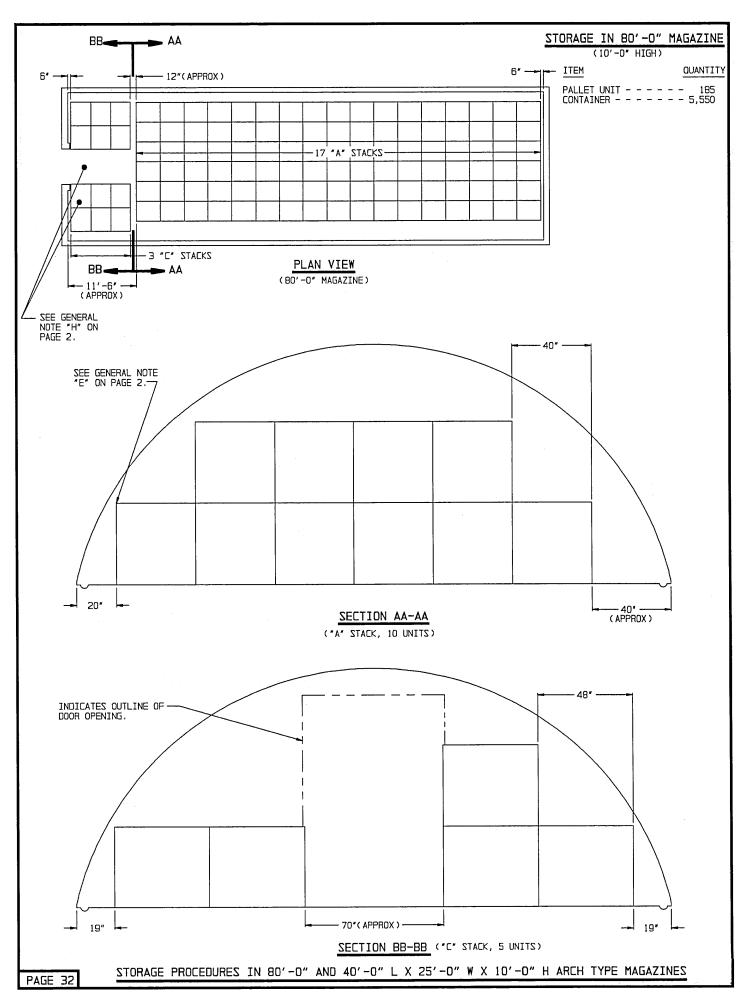
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ITEM

QUANTITY

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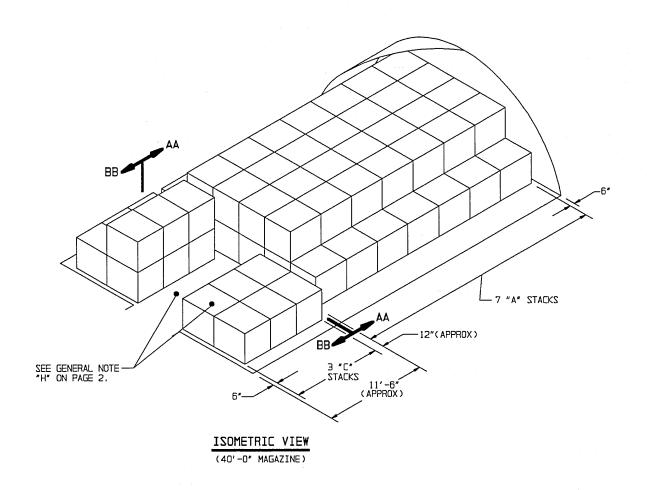


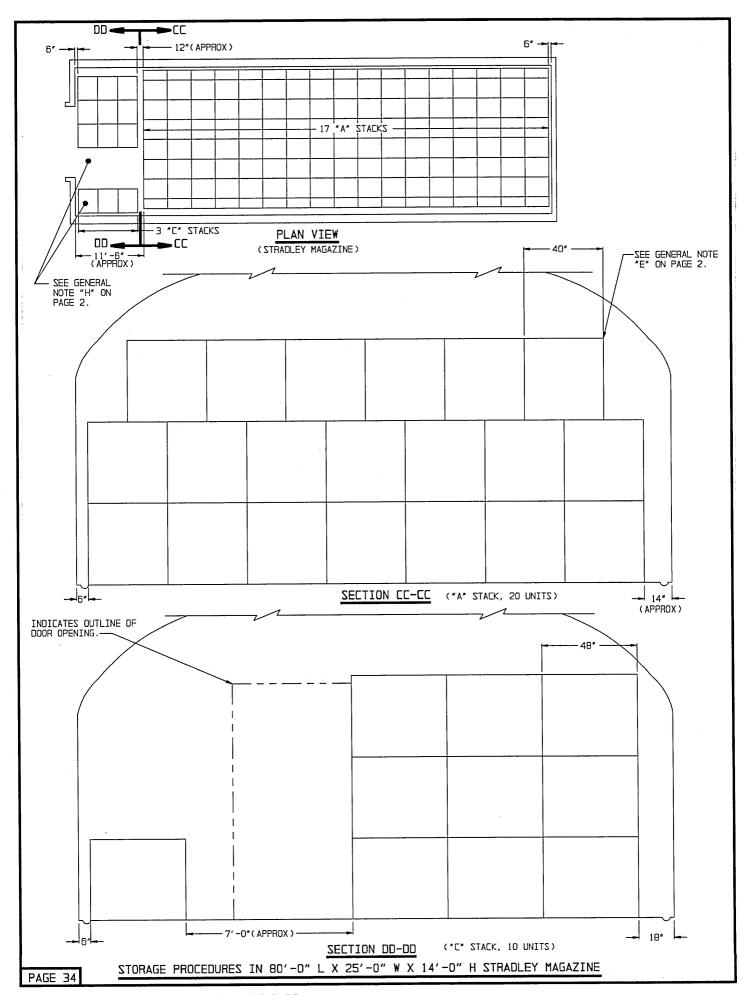
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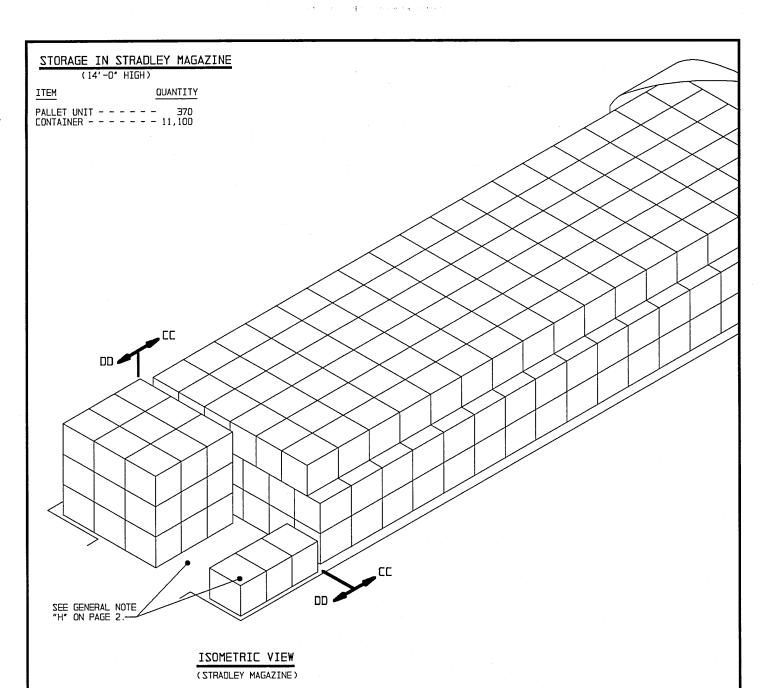
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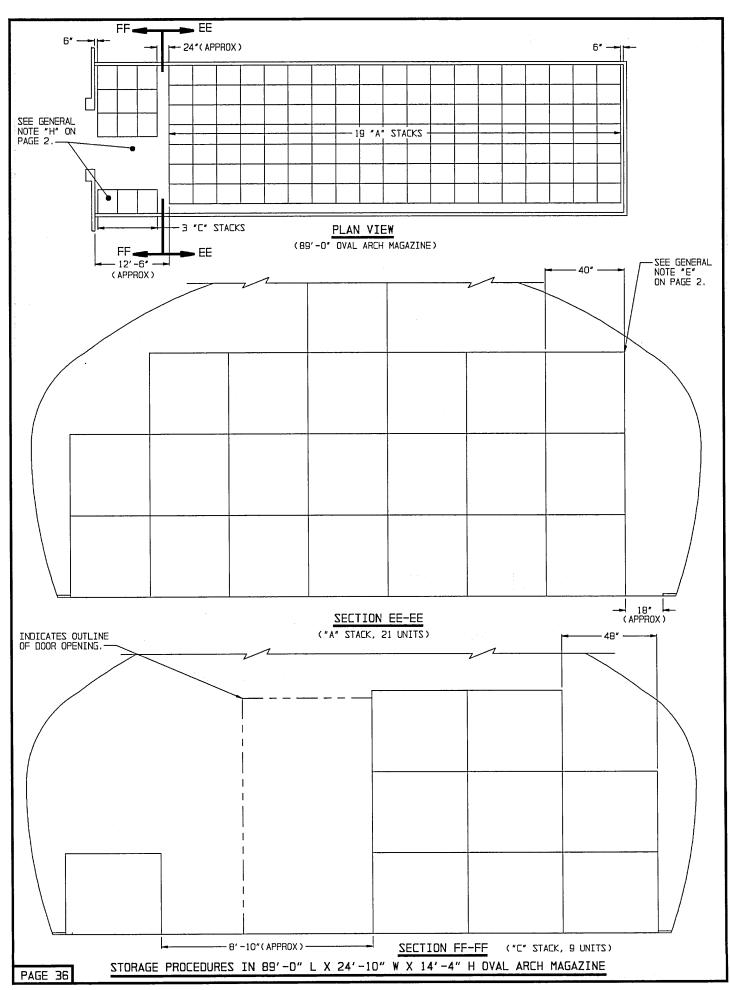


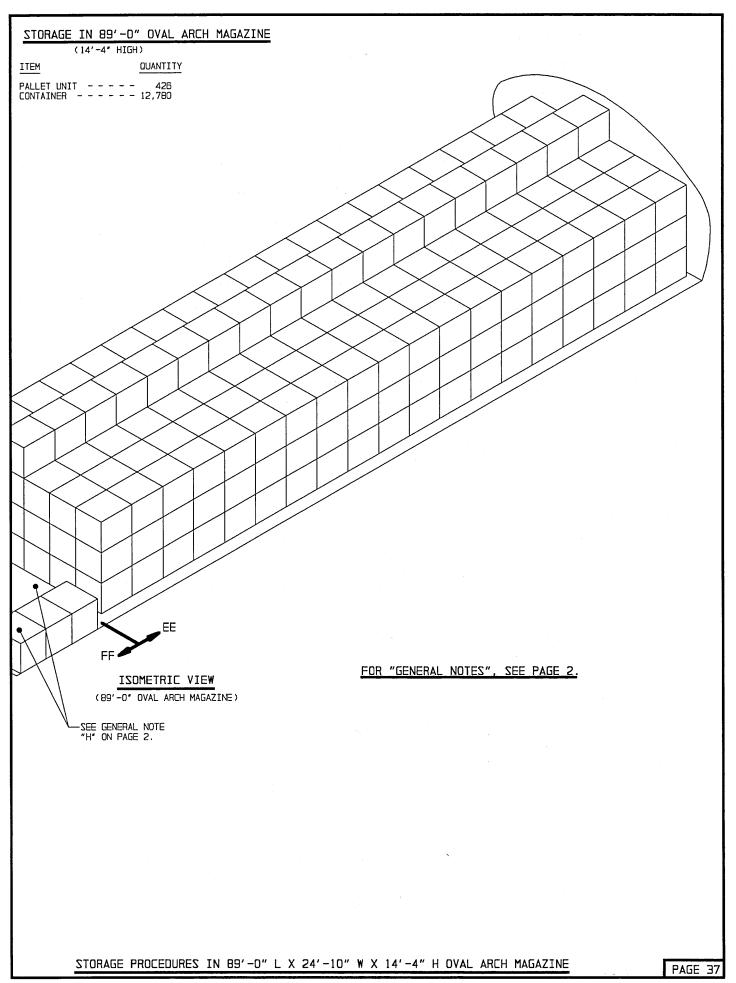
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STORAGE PROCEDURES IN 80'-0" L X 25'-0" W X 14'-0" H STRADLEY MAGAZINE

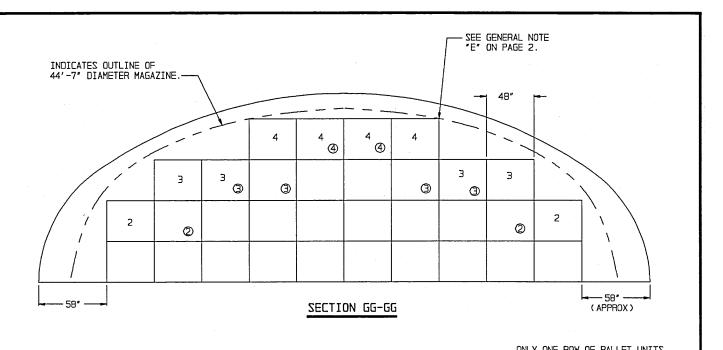
PAGE 35

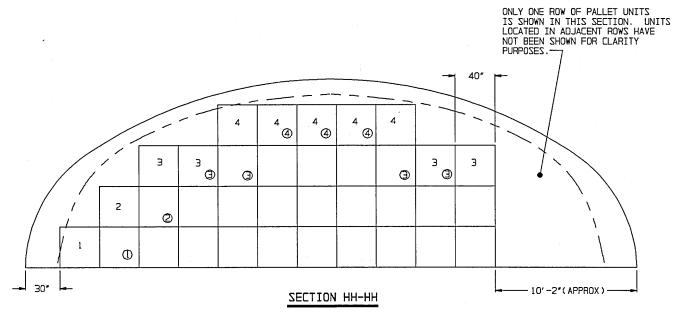




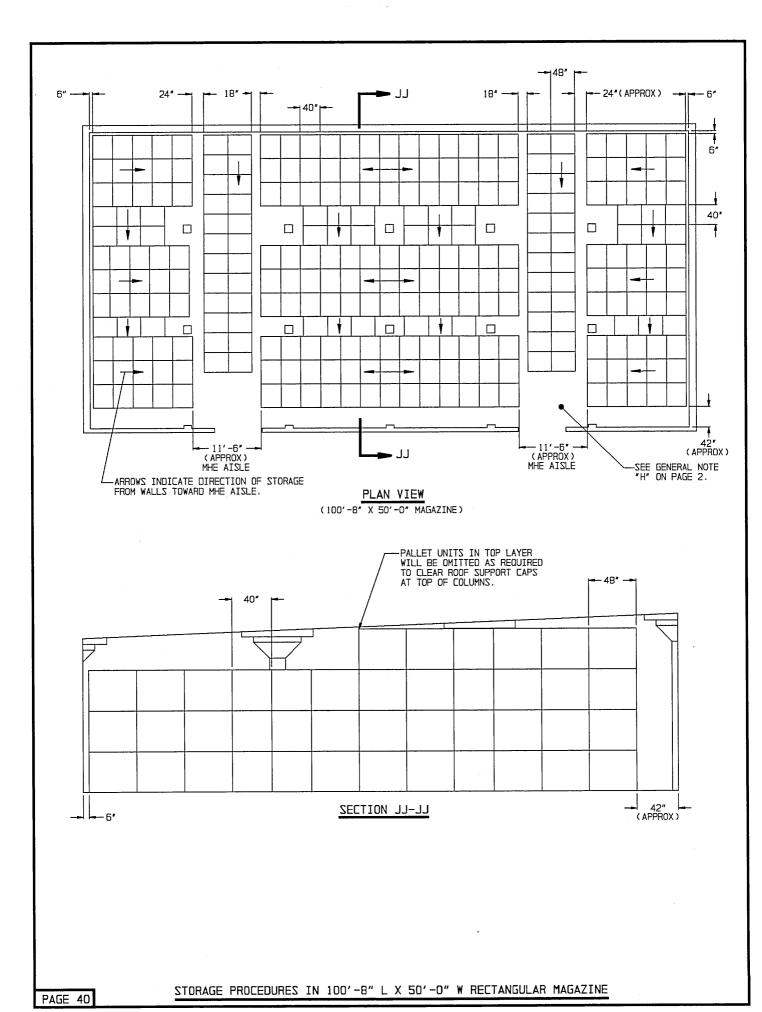
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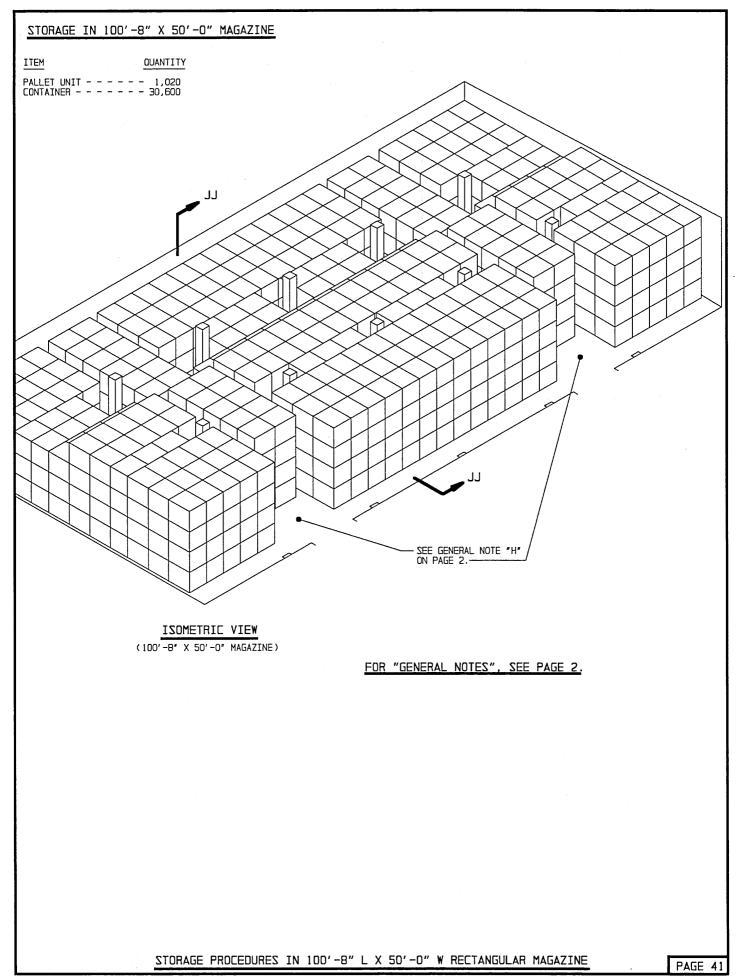
#### STORAGE IN 44'-7" DIA MAGAZINE STORAGE IN 52'-0" DIA MAGAZINE QUANTITY ITEM <u>ITEM</u> QUANTITY PALLET UNIT - - - - - 287 CONTAINER - - - - - 8,610 PALLET UNIT - - - - - 190 CONTAINER - - - - - 5,700 GG 🚤 - 20" ( APPROX ) INDICATES OUTLINE OF 44'-7" DIAMETER MAGAZINE.-22" (2) (2) Э 1 \ (2) (3) (3) **(4)** | 1 (2) (4) (2) 1 / \ 1 (2) (1) (2) ARROWS INDICATE DIRECTION OF STORAGE FROM WALLS TOWARD CENTER OF MAGAZINE. -CIRCLED NUMBERS INDICATE THE LAYERS HIGH THAT PALLET UNITS ARE STACKED IN A 44'-7" DIAMETER MAGAZINE. -UNCIRCLED NUMBERS INDICATE THE LAYERS HIGH THAT PALLET UNITS ARE STACKED IN A 52'-0" GG 🚤 -SEE GENERAL NOTE "H" ON PAGE 2. DIAMETER MAGAZINE. 14'-4"( APPROX ) -MHE AISLE PLAN VIEW STORAGE PROCEDURES IN 52'-0" AND 44'-7" DIA CORBETTA MAGAZINES PAGE 38

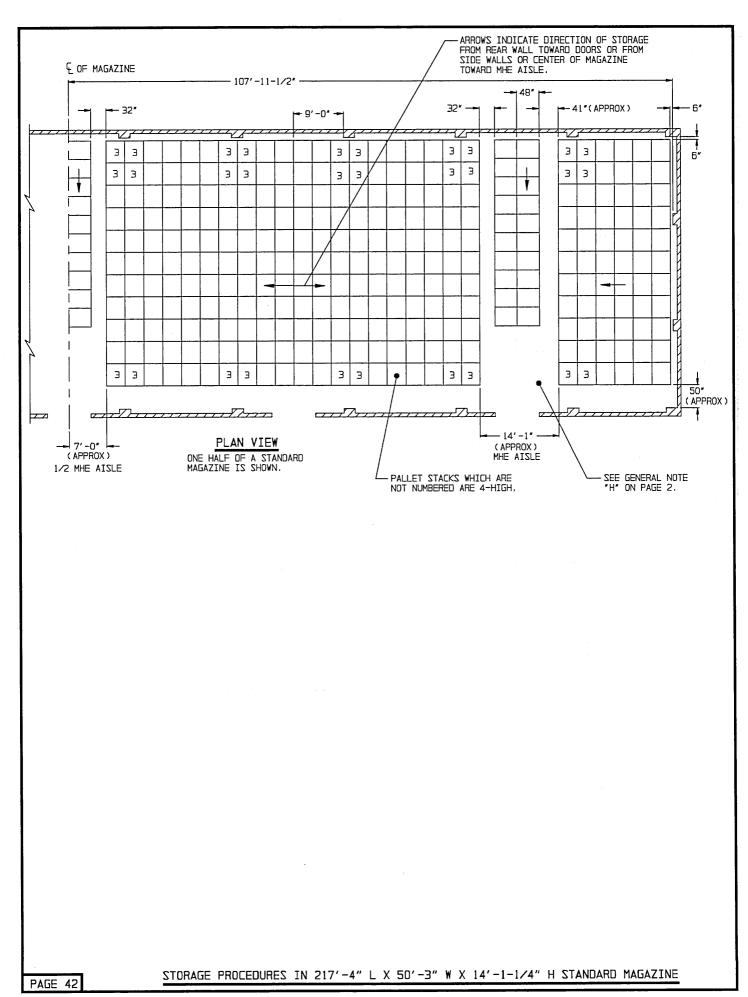


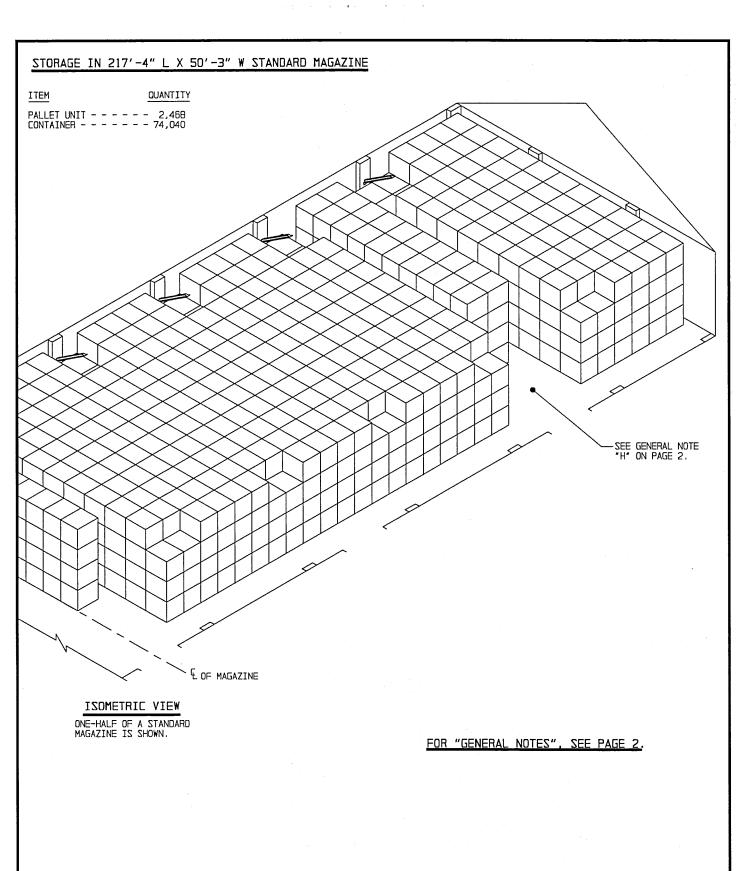


FOR "GENERAL NOTES", SEE PAGE 2.

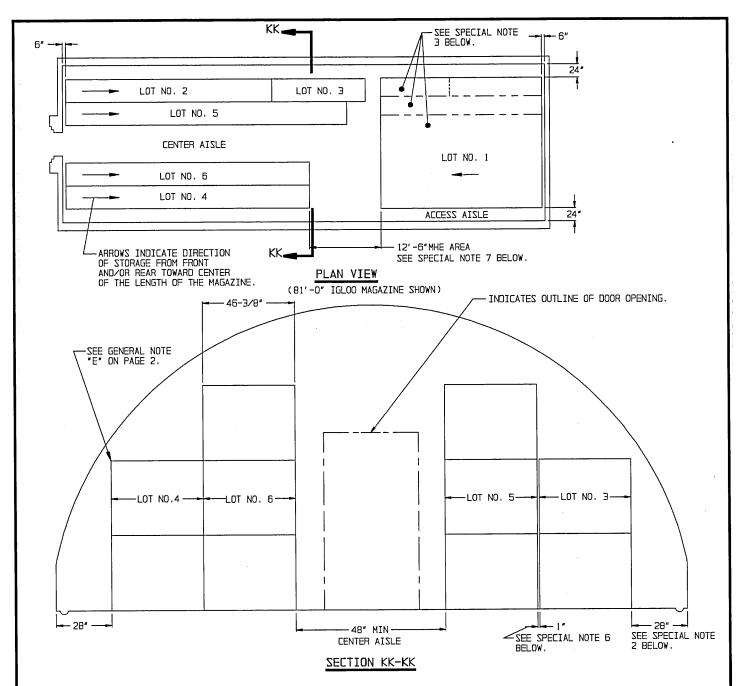








STORAGE PROCEDURES IN 217'-4" L X 50'-3" W X 14'-1-1/4" H STANDARD MAGAZINE



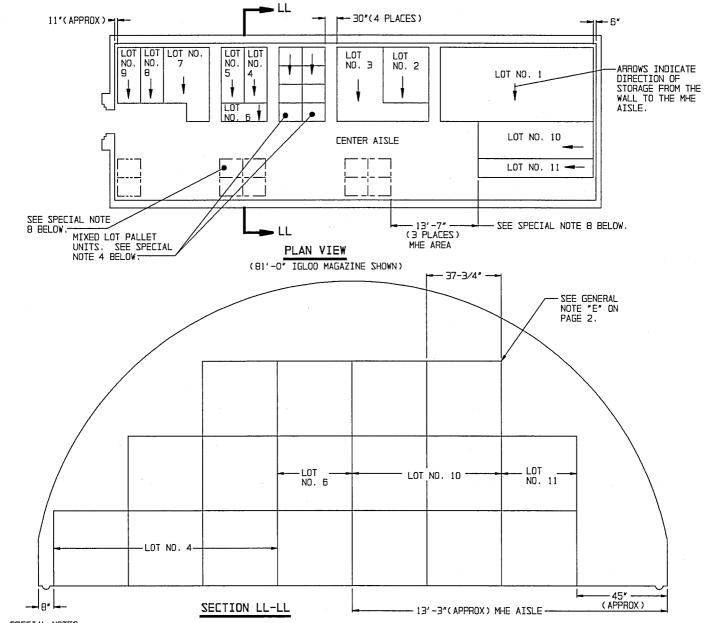
- THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO RELATIVELY LARGE LOTS. ADAPTATION: MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
- 2. AN INSPECTION/INVENTORY AISLE MUST BE PROVIDED AT ONE SIDE OR END OF EACH LOT.
- 3. GENERALLY, THE 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. 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. A "LIFT" MAY CONSIST OF ONE (1) OR MORE PALLET UNITS, PROVIDING THE CAPACITY OF 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 12'-6" 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 48" WIDE. AN AISLE SLIGHTLY WIDER THAN 48 INCHES WILL ENHANCE FORKLIFT TRUCK MOVEMENT WITHIN A MAGAZINE; HOWEVER, THIS AISLE SHOULD BE MADE WIDER IF A LOSS OF 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 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 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 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
- A MIXED-LOT PALLET UNIT MAY HAVE FROM TWO LOTS PER PALLET UNIT UPWARDS TO AS MANY DIFFERENT LOTS AS COMPLETE ROUNDS WITHIN THAT UNIT. HOWEVER, LOTS WITHIN THE PALLET UNIT MUST HAVE THE SAME NATIONAL STOCK NUMBER AND CONDITION CODE.
- EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY EALH LUI WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE. PALLET UNITS OF A SINGLE-LOT OR MIXED-LOT PALLET UNITS ARE CONSIDERED "ACCESSIBLE" IF NO MORE THAN TWELVE (12) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THE SINGLE-LOT OR MIXED-LOT UNITS. A "LIFT" MAY CONSIST OF ONE (1) OR MORE PALLET UNITS, PROVIDING THE CAPACITY OF MHE PERMITS, AND SAFE HANDLING IS NOT JEOPARDIZED.

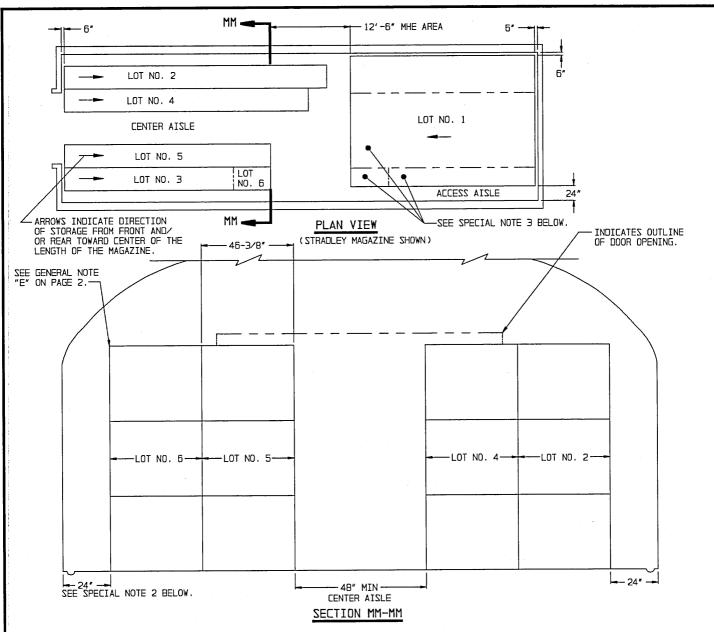
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# (SPECIAL NOTES CONTINUED)

- FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE SIDEWALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.
- 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.
  - 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 DIRECTLY OF THE MADSAINE. 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 5, 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. A 13'-7" 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 THE MAGAZINE AND AN "ADDITIONAL STORAGE LOCATION") IS TO BE AT LEAST 4B INCHES WIDE. AN AISLE SLIGHTLY WIDER THAN 4B 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



PAGE 46

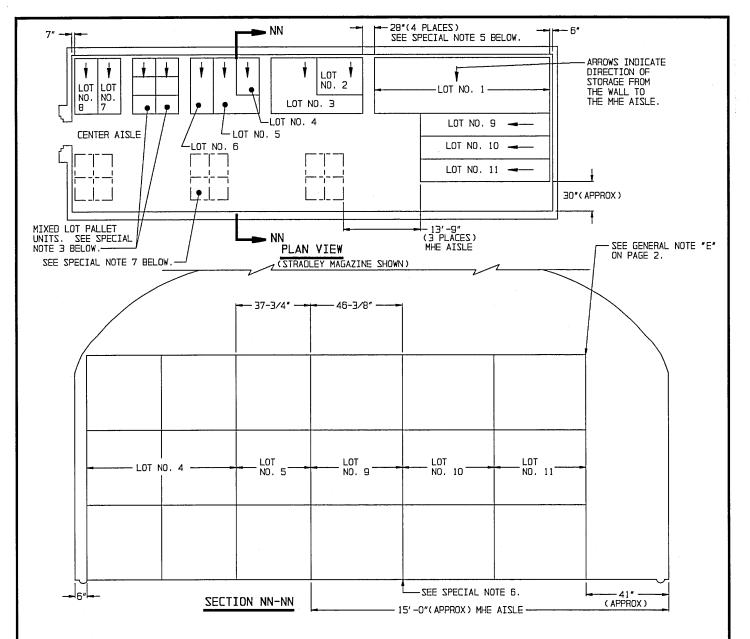
- THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO RELATIVELY LARGE LOTS. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
- AN INSPECTION/INVENTORY AISLE MUST BE PROVIDED AT ONE SIDE OR END OF EACH LOT.
- 3. GENERALLY, THE LARGEST LOT SHOULD BE STORED IN THE REAR OF THE 7. MAGAZINE. HOWEVER, THE 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 RECUIRED 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. A "LIFT" MAY CONSIST OF ONE (1) OR MORE PALLET UNITS, PROVIDING THE CAPACITY OF MHE PERMITS, AND SAFE HANDLING IS NOT JEOPARDIZED.

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# (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 12'-6" 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 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 OF STORAGE RESULTS.

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



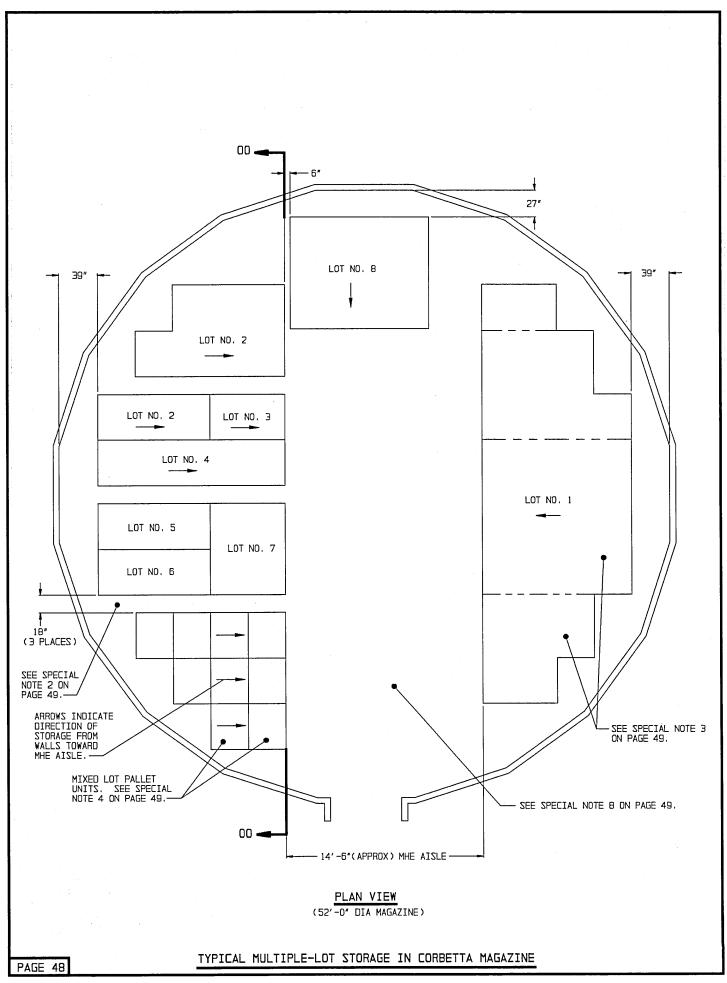
- THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO STORAGE OF NUMEROUS SMALL LOTS. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
- 2. GENERALLY, THE LARGEST LOT SHOULD BE STORED IN THE REAR OF THE MAGAZINE. HOWEVER, THE REAR 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.
- 3. A MIXED-LOT PALLET UNIT MAY HAVE FROM TWO LOTS PER PALLET UNIT UPWARDS TO AS MANY DIFFERENT LOTS AS COMPLETE ROUNDS WITHIN THAT UNIT. HOWEVER, LOTS WITHIN THE PALLET UNIT MUST HAVE THE SAME NATIONAL STOCK NUMBER AND CONDITION CODE.
- 4. EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE. PALLET UNITS OF A SINGLE-LOT OR MIXED-LOT PALLET UNITS ARE CONSIDERED "ACCESSIBLE" IF NO MORE THAN TWELVE (12) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THE SINGLE-LOT OR MIXED-LOT UNITS. A "LIFT" MAY CONSIST OF ONE (1) OR MORE PALLET UNITS, PROVIDING THE CAPACITY OF MHE PERMITS, AND SAFE HANDLING IS NOT JEOPARDIZED.

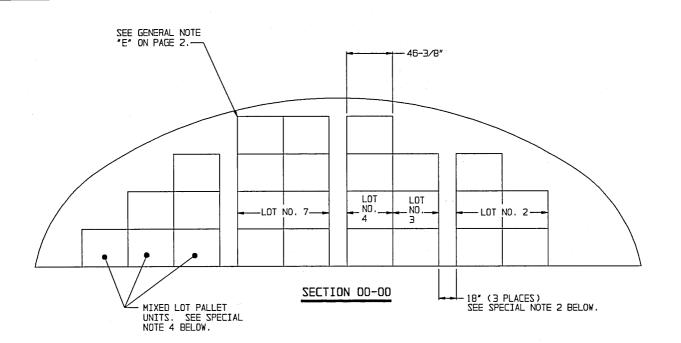
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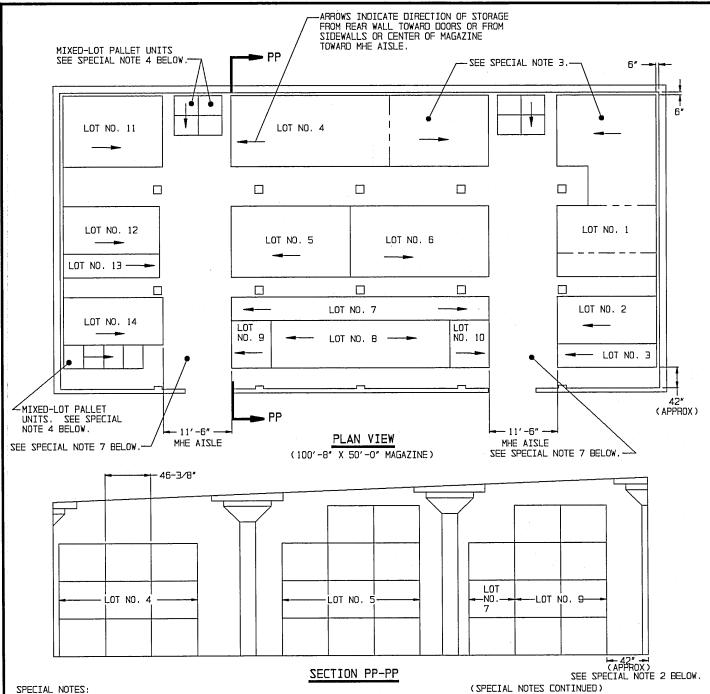
- 5. AN INSPECTION/INVENTORY AISLE NOT LESS THAN 18" WIDE MUST BE PROVIDED AT ONE SIDE OR END OF EACH LOT.
- 6. WHEN TWO LOTS ARE STORED ADJACENT TO EACH OTHER, THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.
  - AREAS INCLOSED BY DOTTED LINES INDICATE LOCATIONS 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 UNITS 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 13'-9" 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 HHE PERMITS. A "CENTER AISLE" (SPACE BETWEEN STORAGE ON ONE SIDE OF THE MAGAZINE AND AN "ADDITIONAL STORAGE LOCATION") IS TO BE AT LEAST 4B INCHES WIDE. AN AISLE SLIGHTLY WIDER THAN 4B 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 STRADLEY AND OVAL ARCH TYPE MAGAZINES





- THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE AND ON PAGE 48 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 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. A MIXED-LOT PALLET UNIT MAY HAVE FROM TWO LOTS PER PALLET UNIT UPWARDS TO AS MANY DIFFERENT LOTS AS COMPLETE ROUNDS WITHIN THAT UNIT. HOWEVER, ALL LOTS WITHIN THE PALLET UNIT MUST HAVE THE SAME NATIONAL STOCK NUMBER AND CONDITION CODE.
- 5. EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE. PALLET UNITS OF A SINGLE-LOT OR MIXED-LOT PALLET UNITS ARE CONSIDERED "ACCESSIBLE" IF NO MORE THAN TWELVE (12) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THE SINGLE-LOT OR MIXED-LOT UNITS. A "LIFT" MAY CONSIST OF ONE (1) OR TWO (2) PALLET UNITS, PROVIDING THE CAPACITY OF MHE PERMITS, AND SAFE HANDLING IS NOT JEOPARDIZED.
- 6. FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE WALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.
- 7. 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. AREAS INCLOSED BY DOTTED LINES INDICATE LOCATIONS WHERE ADDITIONAL LOTS MAY BE STORED, THAT ARE FROM THE LOT OR LOTS ADJACENT TO THE MHE AISLE. 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 5, RELATIVE TO "12 LIFTS", WILL BE MAJOR FACTORS IMPACTING ON THE NUMBER OF PALLET UNITS THAT CAN BE STORED IN AN "ADDITIONAL STORAGE LOCATION". THIS ADDITIONAL STORAGE IS TO BE ARRANGED IN A MANNER SIMILAR TO ARRANGEMENTS DEPICTED ON PAGES 45 AND 47 FOR THE "ADDITIONAL STORAGE LOCATIONS" (SHOWN BY DOTTED LINES). ADEQUATE SPACE FOR MHE OPERATION, AS DESCRIBED ON PAGES 45 AND 47, MUST BE MADE AVAILABLE FOR THE ADDITIONAL STORAGE. LOCATIONS" (SHOWN BY DOTTED LINES). ATTACKED ON PAGES 45 AND 47, MUST BE MADE AVAILABLE FOR THE MULTIPLE LOT CRITERIA AS SET FORTH ON THIS PAGE MUST BE OBSERVED.



THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE 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 LOT.

- 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, OR AS TYPICALLY SHOWN 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.
- A MIXED-LOT PALLET UNIT MAY HAVE FROM TWO LOTS PER PALLET UNIT UPWARDS TO AS MANY DIFFERENT LOTS AS COMPLETE ROUNDS WITHIN THAT UNIT. HOWEVER, ALL LOTS WITHIN THE PALLET UNIT MUST HAVE THE SAME NATIONAL STOCK NUMBER AND CONDITION
  - (CONTINUED AT RIGHT)

- 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
- 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 TWO (2) PALLET UNITS, PROVIDING THE CAPACITY OF MHE PERMITS, AND SAFE HANDLING IS NOT JEOPARDIZED.
- THE MHE AISLE MAY BE USED TO STORE ONE OR MORE STACKS OF 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 45 AND 47 FOR THE "ADDITIONAL STORAGE LOCATIONS" (SHOWN BY DOTTED LINES). ADEQUATE SPACE FOR MHE OPERATION, AS DESCRIBED ON PAGES 45 AND 47, 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 RESERVED. OBSERVED.

TYPICAL MULTIPLE-LOT STORAGE IN RECTANGULAR MAGAZINE