# STORAGE IN 60' & 80' IGLOO, 80' STRADLEY, AND 89' OVAL-ARCH MAGAZINES OF PROJECTILE, CHEMICAL, 105 MM, PACKED 24 PER PALLET

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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), TM 9-1300-206 (CHAPTER 4), AND TM 3-250.
- B. PALLET UNIT DETAILS:

24 PROJECTILE PALLET UNIT:

DIMENSIONS --- 20-1/2" LONG X 35-1/2" WIDE X 20" HIGH (APPROX), GROSS WEIGHT - 799 POUNDS (APPROX),

- C. NOTE: THE PROCEDURES DEPICTED IN THIS DRAWING ARE FOR 24-PROJECTILE PALLET UNITS. HOWEVER, THESE PROCEDURES CAN ALSO BE USED FOR STORING 15-PROJECTILE PALLET UNITS. WHEN 15-PROJECTILE UNITS ARE POSITIONED VERTICALLY, THE DIMENSIONS OF THE STABILIZER ASSEMBLIES WILL BE ADJUSTED ACCORDINGLY AND THE LENGTH OF THE 2" X 4" RISER PIECES REDUCED TO 30". IN THE HORIZONTAL POSITION, 15-PROJECTILE UNITS MAY BE STACKED UP TO 6 LAYERS HIGH. ALSO THE QUANTITY OF PALLET UNITS FER STACK WILL BE INCREASED.
- AISLE DIMENSIONS SHOWN IN THIS DRAWING MAY BE ADJUSTED TO SUIT LOCAL CONDITIONS AND/OR AVAILABLE MATERIALS HANDLING EQUIPMENT; HOWEVER, THIRTY-INCH (30") MINIMUM ACCESS AISLES WILL BE PROVIDED, AS SHOWN, TO FACILITATE INSPECTION.
- E. STORED PALLET UNITS MUST NOT CONTACT THE WALL OF A MAGAZINE.
  PROVIDE FOR THIS MANDATORY CLEARANCE REQUIREMENT, UNITS MAY BE
  ELIMINATED FROM THE DEPICTED STORAGE PATTERN AS NECESSARY.
- THE MAXIMUM FLOOR LOAD FOR A MAGAZINE, AS PRESCRIBED BY LOCAL STANDARDS,
- THE STORAGE PROCEDURES DEPICTED HEREIN FOR 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 COMPUTED OF MAGAZINES. WILL BE COMPLIED WITH.
- H. THE MAGAZINE MUST COMPLY WITH ALL REQUIREMENTS AND BE APPROVED FOR THE STORAGE OF CHEMICAL ITEMS.
- OTHER COMPATIBLE ITEMS MAY BE STORED IN A MAGAZINE WHICH IS PARTIALLY FILLED WITH THE DESIGNATED ITEM.
- COMBINATION OF MATERIAL HANDLING EQUIPMENT (MHE), SUCH AS FORKLIFT A COMBINATION OF MATERIAL HANDLING EQUIPMENT (MHE), SUCH AS FURKLIFT TRUCKS, PALLET JACKS, AND OTHER APPROVED EQUIPMENT, MAY BE USED TO PLACE AND/OR REMOVE UNITS WITHIN A STACK. IF SUITABLE MHE IS NOT AVAILABLE TO PERMIT PLACING AND/OR REMOVAL OPERATIONS WITHIN THE DESIGNATED MHE OPERATING AISLE, IT MAY BE NECESSARY TO OMIT ONE ROW OF UNITS ADJACENT TO THE MHE OPERATING AISLE TO GAIN ADDITIONAL OPERATING SPACE.
- L. REFER TO PAGE 14 FOR GUIDANCE RELATIVE TO LOT SEPARATION REQUIREMENTS WHEN STORING MULTIPLE LOTS WITHIN A MAGAZINE.
- M. THE STORAGE PROCEDURES DEPICTED FOR IGLOO MAGAZINES ARE ALSO APPLICABLE FOR STEEL ARCH MAGAZINES WHICH HAVE A SIMILAR CROSS SECTIONAL AREA.
- N. PROVIDED SUITABLE NARROW AISLE STACKER MHE IS AVAILABLE, IT IS PERMITTED TO PLACE ADDITIONAL PALLET UNITS ON TOP OF THE ONE-LAYER HIGH ROWS ADJACENT TO THE MHE OPERATING AISLE, AS SHOWN, TO GAIN INCREASED STORAGE DENSITY.
- O. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE AND 2" X 4" MATERIAL IS 1-1/2" THICK BY 3-1/2" WIDE.
- WEDGES ARE REQUIRED TO PERMIT LEVEL STACKING OF UNITS IN IGLOO AND STRADLEY MAGAZINES, WHICH HAVE FLOORS THAT SLOPE TOWARD THE SIDEWALL OF THE MAGAZINE. WEDGES ARE NOT REQUIRED IN OVAL-ARCH MAGAZINES, WHERE THE FLOOR DOES NOT SLOPE TOWARD THE SIDEWALL OF THE MAGAZINE. WEDGES WILL BE USED IN AN OVAL-ARCH MAGAZINE IF THE FLOOR IS SLOPED TO THE SIDE WALLS.

( CONTINUED AT RIGHT )

## MATERIAL SPECIFICATIONS

LUMBER -----: SEE TM 743-200-1, DUNNAGE LUMBER: FED SPEC MM-L-751. -----: COMMON, CEMENT COATED OR CHEMICALLY ETCHED.
FED SPEC FF-N-105. NAILS ---ALT: ANNULAR-RING NAIL OF THE SAME SIZE. STRAPPING, STEEL ----: CLASS I, TYPE I OR IV, HEAVY DUTY, FINISH A OR B ( GRADE 2 ), FED SPEC QQ-S-781. SEAL, STRAP -----: TYPE D, STYLE I, II OR IV, CLASS H.

FED SPEC QQ-S-781.

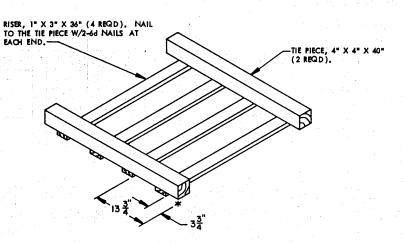
### ( GENERAL NOTES CONTINUED )

- Q, WHEN STORING UNITS IN THE VERTICAL POSITION, IT MAY BE NECESSARY TO OMIT ONE UNIT FROM THE TOP LAYER OF EACH STACK AT THE OPERATING AISLE IF THE AVAILABLE MHE CANNOT PLACE THE UNIT WITHOUT STRIKING THE
- WHEN ANY STRAP IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF ONE (1) SEAL, WITH TWO (2) PAIR OF CRIMPS PER SEAL MUST BE USED TO SEAL THE JOINT.

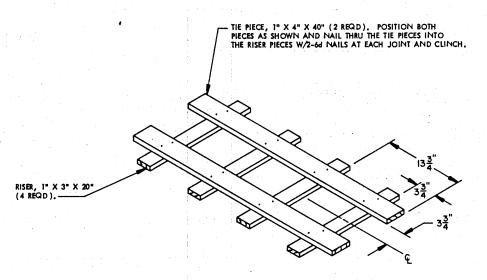
### **REVISIONS**

REVISION NO. 1, DATED MARCH 1977, CONSISTS OF:

- DELETING PROCEDURES FOR 68-PROJECTILE PALLET UNITS.
  REPLACING 4" X 4" RISERS WITH STABILIZER ASSEMBLES,
  ADDING PROCEDURES FOR HORIZONTAL STORAGE OF PALLET UNITS.
  UPDATING GENERAL NOTES AND ADDING NOTE PERTAINING TO
- PROCEDURES FOR 15-PROJECTILE PALLET UNITS.



SINGLE-STACK STABILIZER ASSEMBLY

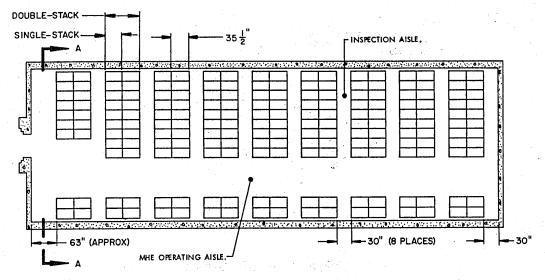


DOUBLE-STACK STABILIZER ASSEMBLY

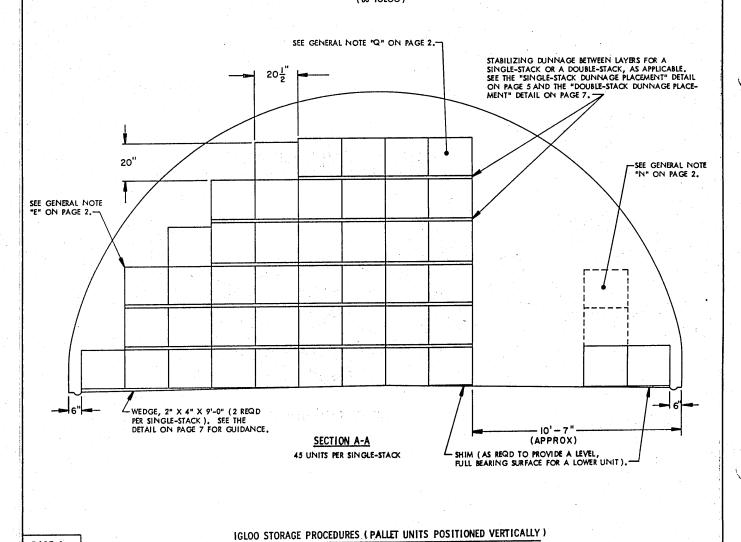
# STORAGE AS SHOWN

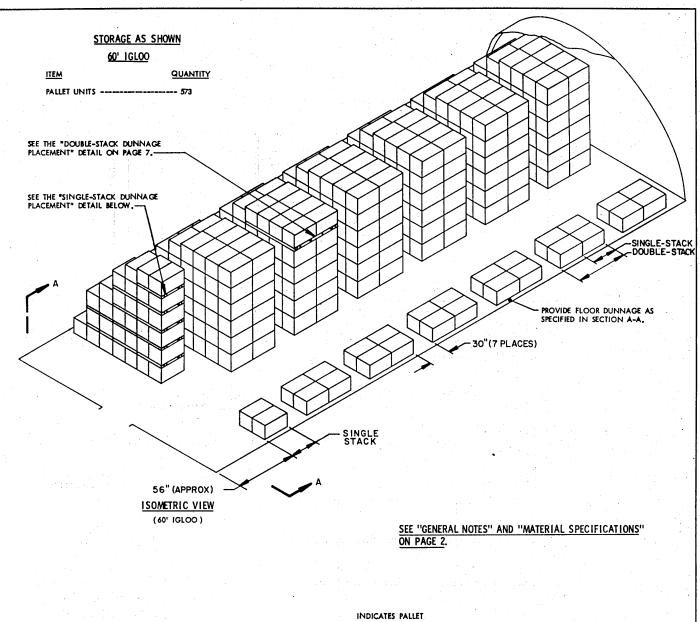
80' IGLOO

PALLET UNITS ----- 786

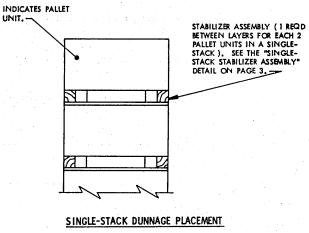


(80' IGLOO)

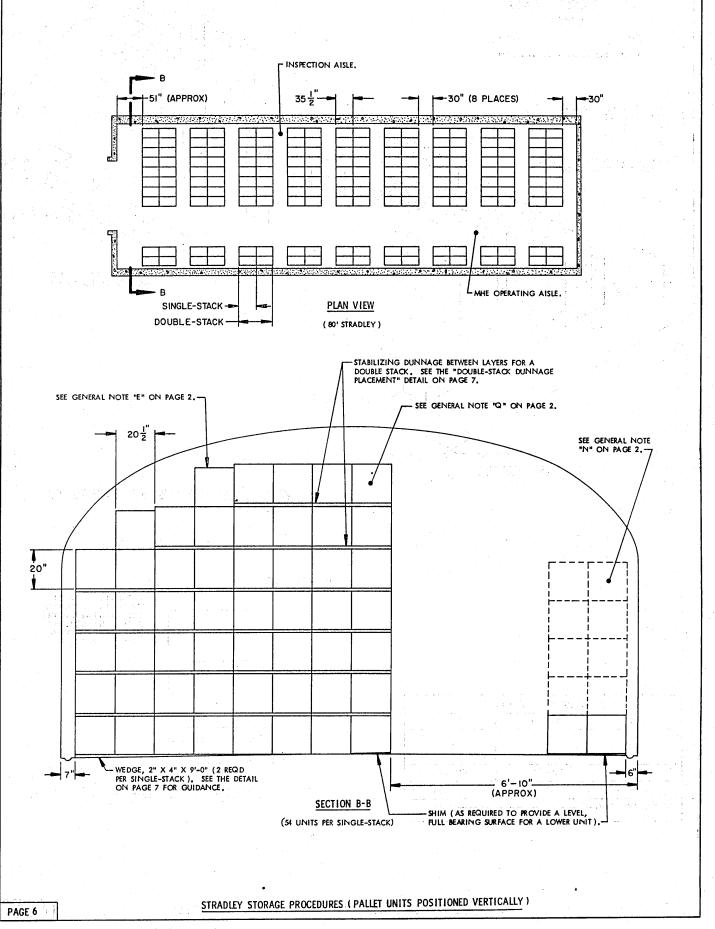


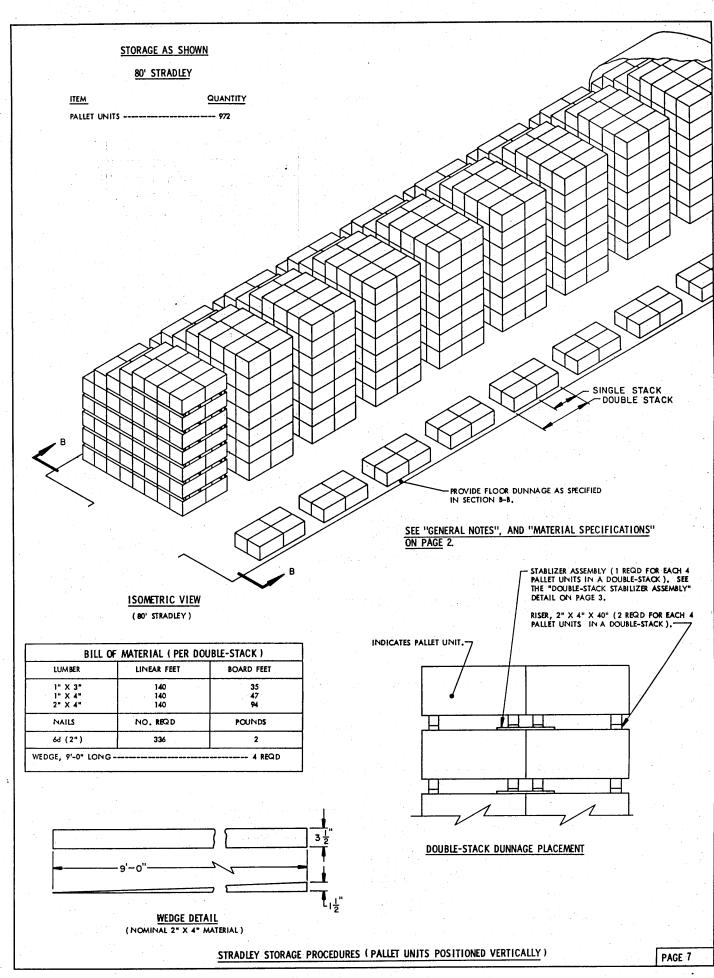


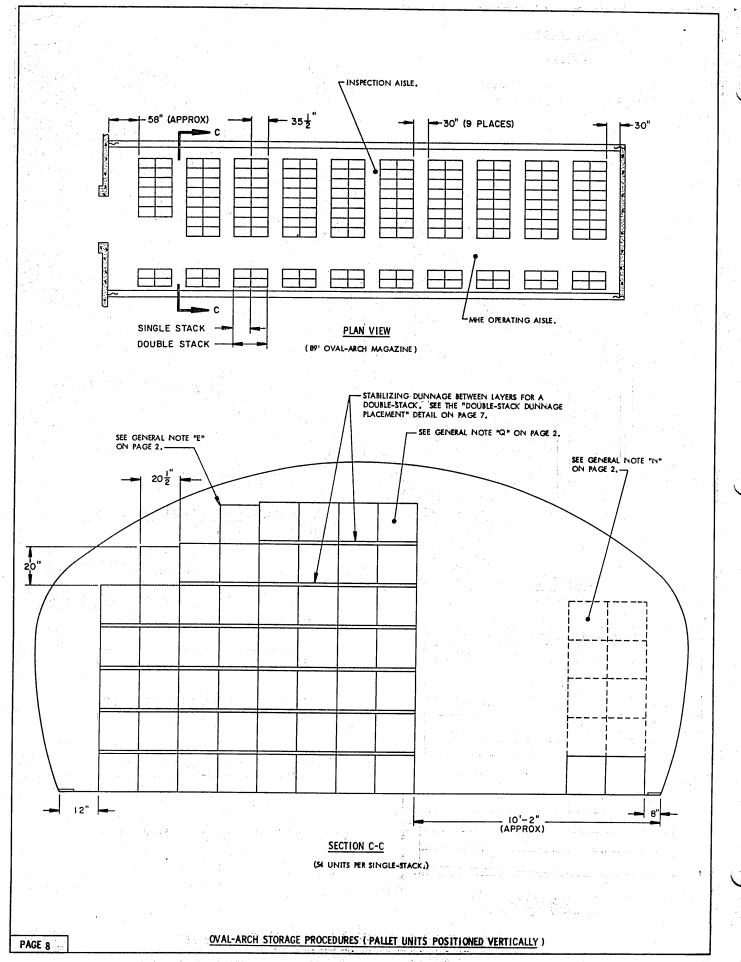
LUMBER	LINEAR FEET	BOARD FEET
1" X 3"	108	27
1" X 4"	108	36
2" X 4"	108	72
NAILS	NO. REQD	POUNDS
6d (2")	256	1-1/2

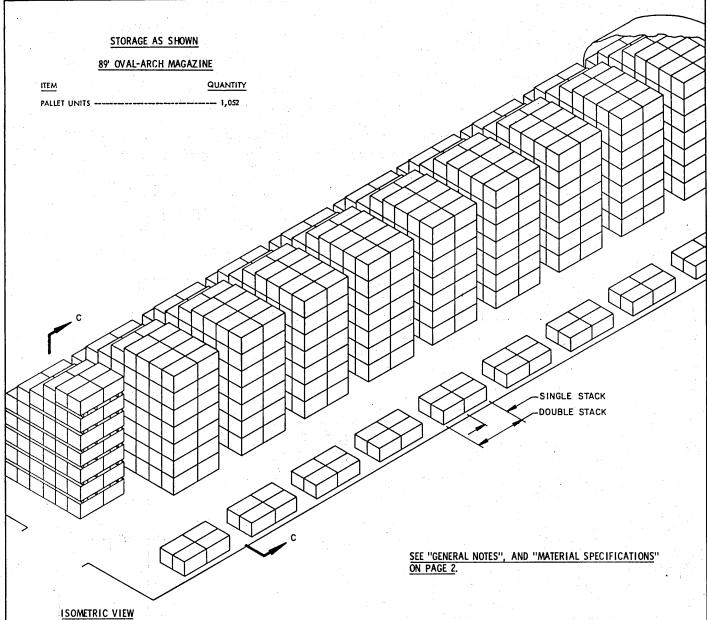


IGLOO STORAGE PROCEDURES ( PALLET UNITS POSITIONED VERTICALLY )









(89' OVAL-ARCH MAGAZINE)

BILL	OF MATERIAL (PER	DOUBLE-STACK )
LUMBER	LINEAR FEET	BOARD FEET
1" X 3" 1" X 4" 2" X 4"	140 140 140	35 47 94
NAILS	NO. REQD	POUNDS
6d (2")	336	2

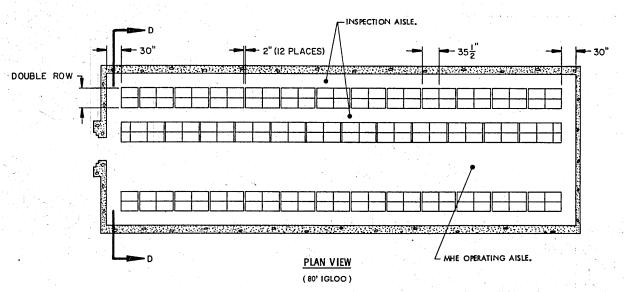
OVAL-ARCH STORAGE PROCEDURES ( PALLET UNITS POSITIONED VERTICALLY )

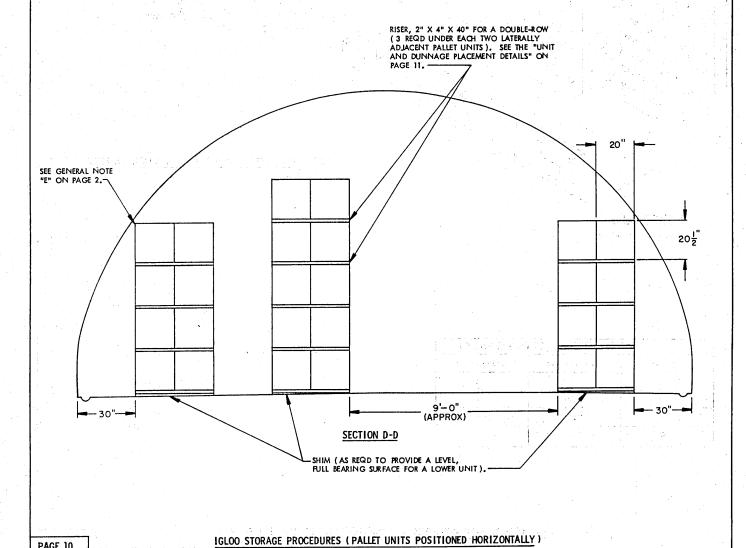
# STORAGE AS SHOWN

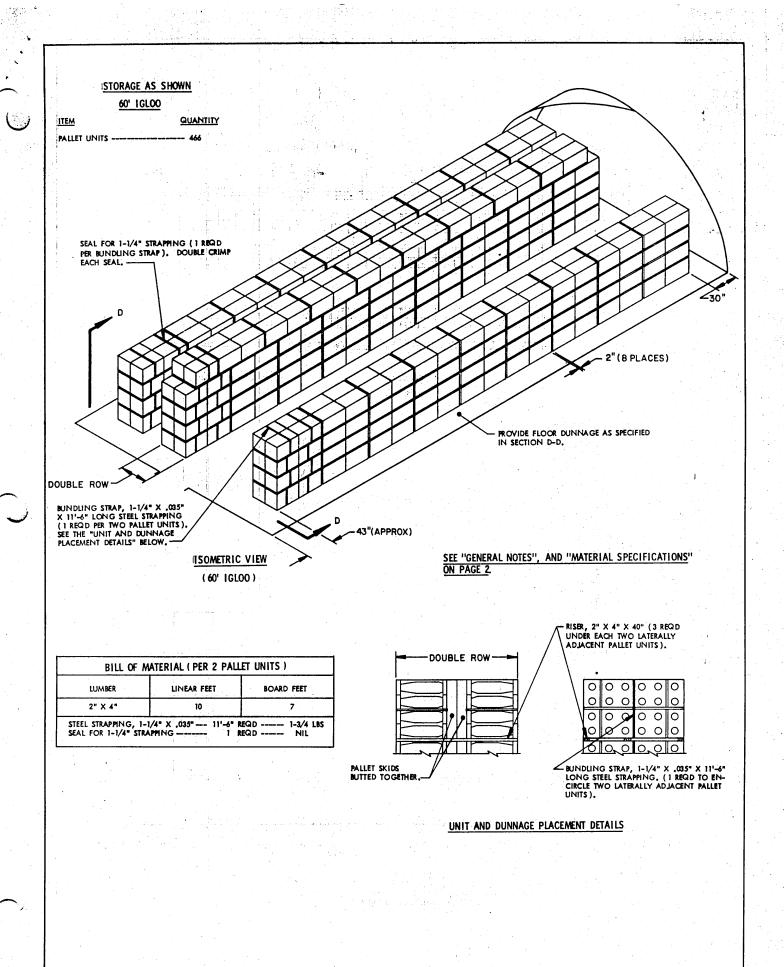
80' IGLOO

ITEM QUANTITY

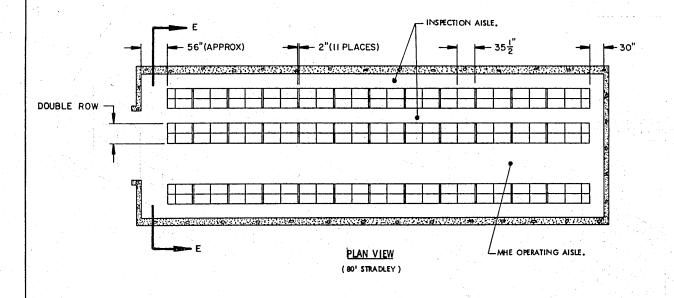
PALLET UNITS ---- 648

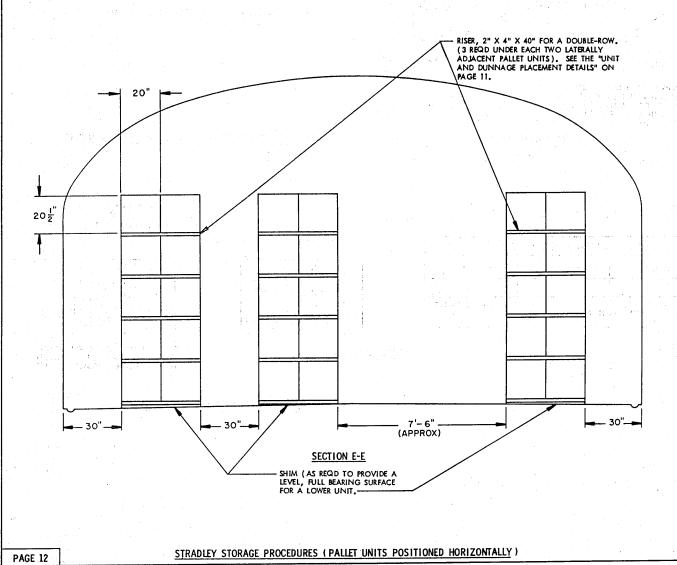


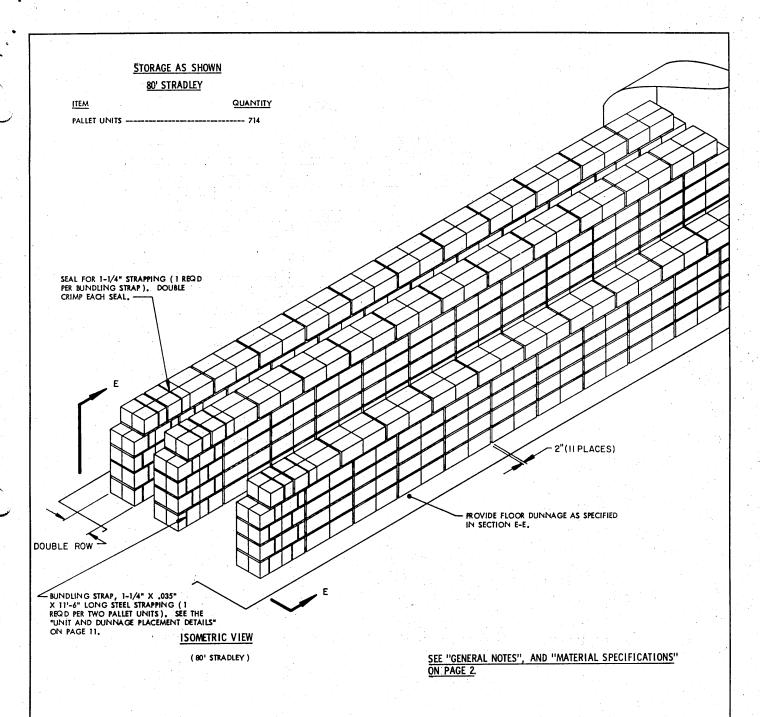




IGLOO STORAGE PROCEDURES (PALLET UNITS POSITIONED HORIZONTALLY)

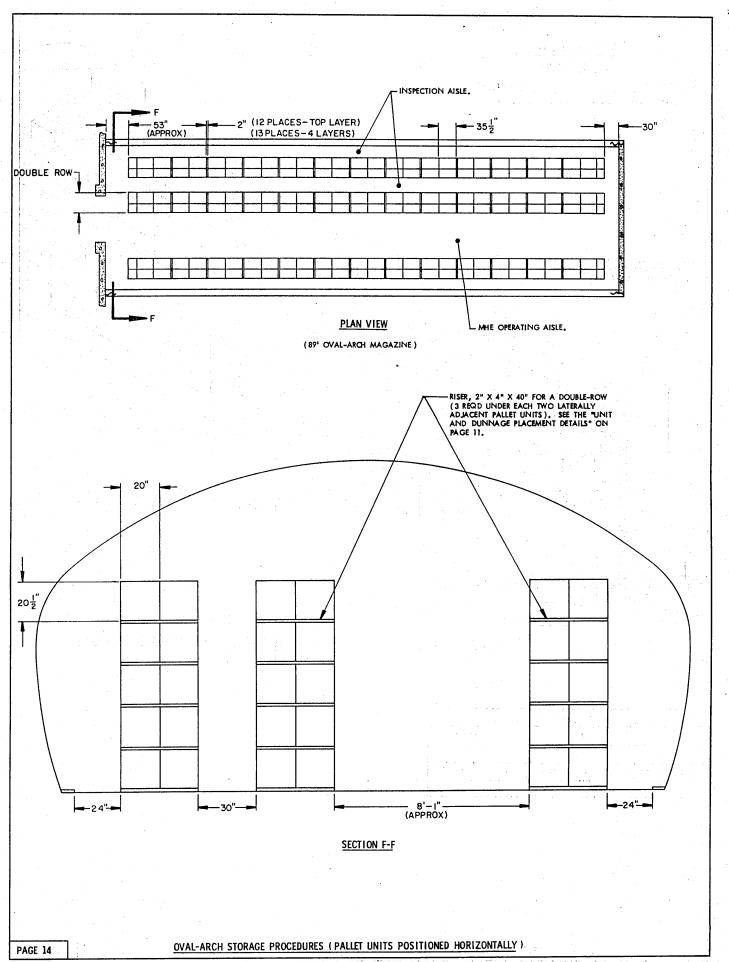


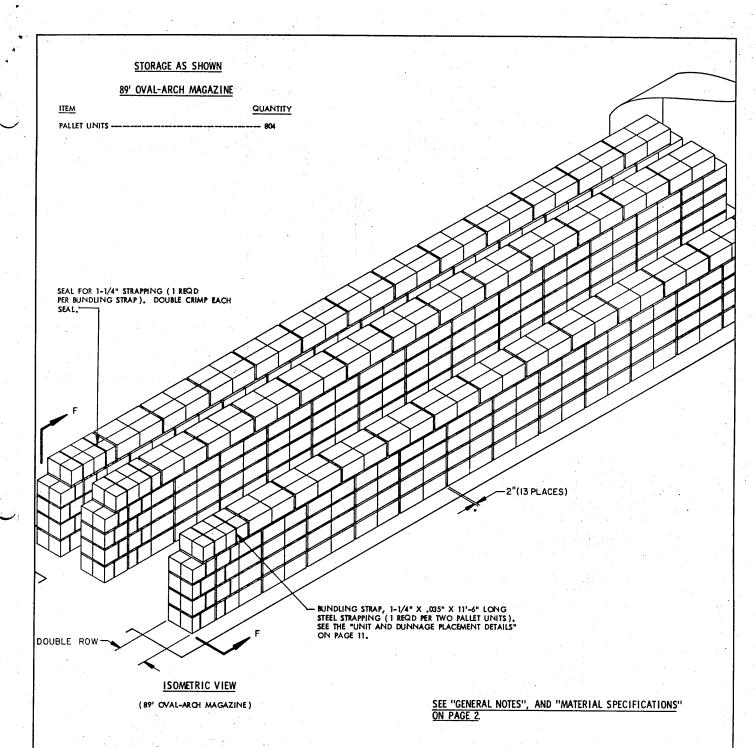




LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	10	7

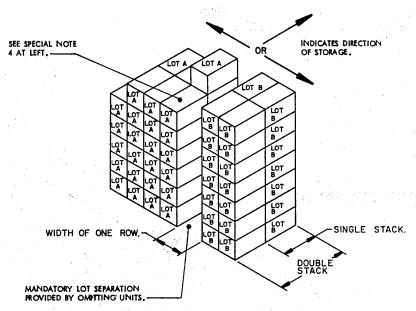
STRADLEY STORAGE PROCEDURES ( PALLET UNITS POSITIONED HORIZONTALLY )





LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	10	7

OVAL-ARCH STORAGE PROCEDURES (PALLET UNITS POSITIONED HORIZONTALLY)

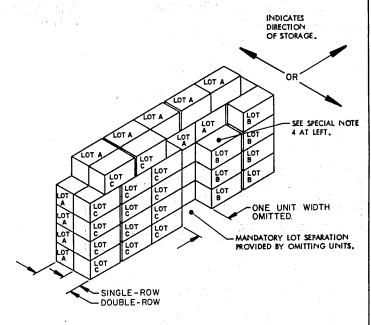


# TYPICAL LOT SEPARATION DETAIL I

(VERTICAL STORAGE DEPICTED)

### SPECIAL NOTES:

- LOT SEPARATION WILL BE MAINTAINED WITHIN A STORAGE MAGAZINE. THE TYPICAL DETAILS ON THIS PAGE ILLUSTRATE POSSIBLE CONFIGURATIONS WHICH COMPLY WITH THE MANDATORY LOT SEPARATION REQUIREMENTS. OTHER CONFIGURATIONS MAY ALSO BE USED, PROVIDED THE OTHER CONFIGURATIONS COMPLY WITH THE BASIC REQUIREMENTS STATED HEREIN.
- WHEN STORING MULTIPLE LOTS WITH UNITS POSITIONED VERTICALLY WITHIN A MAGAZINE, DIFFERENT LOTS WILL BE SEPARATED WITHIN A DOUBLE STACK BY OMITTING UNITS IN THE MANNER SHOWN IN THE "TYPICAL LOT SEPARATION DETAIL!".
- LOT SEPARATION FOR UNITS STORED HORIZONTALLY WILL BE AS SHOWN IN "TYPICAL LOT SEPARATION DETAIL 2".
- 4. ONE LOT WILL NOT BE STACKED ON TOP OF ANOTHER LOT.



TYPICAL LOT SEPARATION DETAIL 2 (HORIZONTAL STORAGE DEPICTED)

MULTIPLE LOT STORAGE REQUIREMENTS