



Optional Design Features
 This Standard General Purpose Warehouse supports two separate category codes, 44110 and 44220 and may have substantially differing design and operational requirements in order to meet the Army's needs on a worldwide basis. Facilities which will serve the largest depot level to the smaller base installations, may range in size from several hundred thousand square feet to as few as forty thousand square feet. The material handling systems will also vary from very basic to the highly automated. To be a viable prototype for the unlimited range of facilities that are possible, it has been necessary to retain the highest degree of flexibility.

While the basic 120,000 square foot prototype, shown and described herein, may serve many installations with little or no modifications, it is necessary that certain options be left open to the user and the design agency. These options must be fully identified with justification in the DD Form 1391 and approved by the Installation MACOM prior to implementing the planning, design and construction processes for this facility.

- Optional features that are deemed appropriate are:
- **INCREASE/DECREASE SIZE:**
 Many combinations exist with the 64' x 33' grid to adjust configuration and size. Examples of some possibilities are indicated herein.
 - **INCREASE HEIGHT:**
 Depending upon products to be handled, stored and the selection of specific materials handling equipment, selection of a 34' or 60' clear height may be warranted. A multiple height building may prove to be the most cost effective.
 - **GRID ADJUSTMENT:**
 The column grid of 64' x 33' was determined to be a universal grid that would meet the widest variation in material handling layouts. Where specific selection of the materials handling equipment is determined during early-on programming, and the related analysis of the system(s) indicates a different grid layout would be more efficient and cost effective, the grid pattern may be altered.
 - **GRADE LEVEL MAIN FLOOR:**
 Some installations, generally depot level, may determine that having the main floor at grade in lieu of dock level will be more effective operationally; this is an acceptable option.
 - **RAIL SPUR DOCK:**
 It has been generally acknowledged that rail service to Army warehousing has declined substantially and that most are serviced by truck. There will be instances where the rail spur is accessible and required, and the optional rail dock added as an acceptable option.
 - **NUMBER OF DOCKING DOORS:**
 The docking doors indicated on the prototype will satisfy most conditions. However, the number of doors may be increased (or decreased) where the user has sufficiently justified the quantity of doors required.
 - **LOGISTICS/ADMINISTRATIVE CORE:**
 This operations support core represents a workable size and arrangement for a 120,000 square foot General Purpose Warehouse. Factors at specific locations may require a greater number of personnel and space, while there will be applications where no Logistics/Administrative Core would be required. This option allows the user to adjust this core area to his specific requirements in those instances where the function and the staffing of the warehouse is well documented, and where there is no foreseeable future change of the warehouse mission.
 - **MATERIALS AND TYPES OF CONSTRUCTION:**
 The type of construction together with the materials shown represents a widely recognized and accepted method for warehouse facilities. The application to worldwide use mandates that certain geographic locations will have varying construction techniques, materials, customs, codes and regulations which must be complied with.
 - **SPECIAL PURPOSE MODULES:**
 Some installations may require special storage capability such as secured storage, humidity control, refrigeration, etc. These optional items may be added to the basic design, or brought in modular form at some future date.
 - **POV PARKING:**
 The POV parking may be increased, decreased or eliminated as site specific staffing criteria warrants. The user should determine from the function and operation of the warehouse what the staffing requirements are, and whether on-site parking will be a requirement.
 - **FIREWALLS:**
 The firewalls may be eliminated up to 120,000 square feet if approved by the fire protection authority of the MACOM, and the following conditions are met and addressed in the DD Form 1391, paragraphs D1 or D5:
 - The increased size of the fire area is required for efficient operation.
 - Possible additional loss due to fire is recognized and acceptable.
 - Automatic sprinkler and alarm systems are included as described in the Army Standard Design.
 For fire areas greater than 120,000 square feet, a waiver is required from HQUSACE.

Revisions			
Symbol	Descriptions	Date	Approved

THE ORB ORGANIZATION	U. S. ARMY ENGINEER DISTRICT, SEATTLE CORPS OF ENGINEERS SEATTLE, WASHINGTON		
	DEPARTMENT OF THE ARMY FACILITIES STANDARDIZATION PROGRAM DEFINITIVE DESIGN		
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Drawn by: KNY			
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