

CEMP-ET

Technical Letter  
No. 1110-3-462

14 January 1994

Engineering and Design  
EARTH-COVERED MAGAZINE STANDARD DESIGNS

1. Purpose. This letter provides guidance on incorporating standard designs of earth-covered magazines into military construction projects.

2. Applicability. This letter applies to all HQUSACE/OCE elements, major subordinate commands, districts, and field operating activities (FOA) having military design and construction responsibility.

3. References.

a. DoD 6055.9-STD, DOD Ammunition and Explosives Safety Standards.

b. DD Form 1391, FY \_\_ Military Construction Project Data.

c. AR 385-60, Coordination with Department of Defense Explosives Safety Board.

d. EP 1110-345-2, Index of Design Drawings for Military Construction.

4. Discussion.

a. Ammunition and explosives handling facilities (which include magazines) are unique in that DoD Explosives Safety Board (DDESB) must approve site plans and sometimes design drawings before construction can commence. Because of this, magazine standard designs were developed in coordination with DDESB so that the designs would be considered pre-approved when called for in construction plans. The details of this approval process are described in AR 385-60 (reference 3.c.).

b. The following is a list of DDESB approved earth-covered magazine standard designs that can be used for new construction. These drawings can be obtained from Huntsville Division in accordance with EP 1110-345-2 (reference 3.d.). The width dimension indicates the usable width of the floor slab suitable for programming computations. With the exception of drawings 33-15-65 and 422-15-01, variable length magazines are normally constructed to lengths of 18.3 m (60 ft.) or 24.4 m (80 ft.).

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(1) 33-15-65. This depicts four small steel-arch magazines of variable length to 8.2 m (27 ft.) maximum: widths 2.3 m (7-3/4 ft.), 2.7 m (9 ft.), 3.3 m (10-3/4 ft.), and 3.9 m (12-3/4 ft.).

(2) 33-15-74. This depicts a variable-length, 27.4 m (90 ft.) maximum, concrete oval-arch magazine: width 7.6 m (25 ft.).

(3) 421-80-01. This depicts a variable-length, 27.1 m (89 ft.) maximum, steel semicircular-arch magazine: width 7.6 m (25 ft.).

(4) 421-80-02. This depicts a variable-length, 27.4 m (90 ft.) maximum, steel and concrete box magazine using the blast and fragment resistant (BFR) wall system: width 7.3 m (24 ft.).

(5) 421-80-03. This depicts a variable-length, 27.1 m (89 ft.) maximum, steel oval-arch magazine: width 7.6 m (25 ft.).


(6) 422-15-01. This depicts a concrete cubicle magazine, 3.0 m (10 ft.) by 3.0 m (10 ft.).

c. DoD 6055.9-STD (reference 3.a.) is a publication sponsored by DDESB wherein approved magazines are listed in Chapter 5. Paragraph B.1.d. states that drawing 33-15-73 is no longer approved for new construction. Drawing 421-80-03 which supersedes 33-15-73 has been approved as a standard magazine by the DDESB and can be used for new construction.

5. Action to be Taken. DD Forms 1391 (reference 3.b.) for ammunition and explosives storage projects normally describe a magazine only to the extent of stating "earth-covered magazine." The design agency must assure that an appropriate standard design is incorporated into the project. Selection of a standard design will be made from the drawings listed in paragraph 4.b. above.

6. Implementation. This letter will have special application as defined in paragraph 6.c., ER 1110-345-100.

FOR THE DIRECTOR OF MILITARY PROGRAMS:

  
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