



US Army Corps
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ENGINEERING AND CONSTRUCTION BULLETIN

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Subject: Department of Defense Explosives Safety Board (DDESB) approval of Earth Covered-Magazine (ECM), U.S. Army Corps of Engineers Standard Drawing Series 421-80-09

Applicability: Guidance

1. Purpose: This bulletin announces the availability of the new 7-bar structural designation ECM approved by the DDESB for new construction. The 421-80-09 ECM supersedes the 33-15-74 ECM. The 421-80-09 ECM is a cast-in-place reinforced concrete oval-arch type structure and qualifies to be sited as an Earth Covered-Magazine (ECM) per the guidance in DoD 6055.09-M, DoD Ammunition and Explosives Safety Standards. The approval documentation will be included in DDESB Technical Paper 15, Approved Protective Construction. The magazine drawings will be posted for download on the Whole Building Design Guide (WBDG) website for Ammunition and Explosives Storage Magazines, http://www.wbdg.org/design/ammo_magazines.php. In the interim, requests for the drawings should be sent to Mr. Jeff Coulston at jeff.coulston@usace.army.mil.
2. Background: The oval-arch type ECM is frequently chosen for new construction for tenants with missions that involve the storage of ammunition and explosives. The new series incorporates recent code updates and clarity to enhance constructability. The development of the new 421-80-09 ECM was coordinated with the DDESB and the Army, Navy and Air Force Safety Centers.
3. Use: This ECM provides another DDESB approved protective structure alternative for the storage of ammunition and explosives. This ECM is approved for new construction of Ammunition Supply Points and other Munitions Supply Areas. Although a transition period is recognized, it is recommended, as possible, that the new 421-80-09 ECM be utilized for projects that currently include the construction of the 33-15-74 ECM.
4. Distribution: The 421-80-09 ECM drawings are approved for public release and distribution is unlimited.
5. The points of contact for this ECB are Richard Ludwitzke, CECW-CE, 202-761-1580 and Jeff Coulston, CEHNC-EDC-S, 256-895-1651.

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