

ENGINEER DOCTRINE UPDATE

U.S. Army Maneuver Support Center Training and Doctrine Development Department Doctrine Division, Engineer Branch

Publications Currently Under Revision

Publication Number	Title	Date	Description (and Current Status)
FM 3-34	<i>Engineer Operations</i>	Jan 04	This is the engineer keystone manual. It encompasses all engineer doctrine; integrates the three engineer functions of combat, general, and geospatial engineering; and addresses engineer operations across the entire spectrum of operations. Status: The estimated date for posting to Army Knowledge Online (AKO) is Winter 2008/2009.
FM 3-34.22 (FM 3-34.221) (FM 5-71-2) (FM 5-71-3) (FM 5-7-30)	<i>Engineer Operations – Brigade Combat Team and Below</i>	Pending (Jan 05) (Jun 96) (Oct 95) (Dec 94)	This new manual will encompass engineer operations in support of brigade combat teams (BCTs) (heavy, infantry, and Stryker—the armored cavalry regiment) and their primary subordinate units (infantry battalion, Stryker battalion, combined arms battalion, and the reconnaissance squadron). This manual will supersede FM 3-34.221, FM 5-7-30, FM 5-71-2, and FM 5-71-3. Status: The estimated date for posting to AKO is Spring 2009.
FM 3-34.23 (FM 5-116) (FM 5-100-15) (FM 5-71-100)	<i>Engineer Operations – Echelons Above Brigade Combat Team</i>	Pending (Feb 99) (Jun 95) (Apr 93)	This is a new manual that will encompass engineer operations in support of all engineer operations above the BCTs (division, corps, and theater). The intent is to consolidate and revise three engineer FMs that provide doctrinal guidance for the entire spectrum of engineer operations supporting echelons above the BCT level. This manual will supersede FM 5-71-100, FM 5-100-15 and FM 5-116. Status: Preparing the final draft for staffing.
Combat Engineering			
FM 3-90.11 (FM 3-34.2)	<i>Combined Arms Mobility Operations</i>	Aug 00	This is a full revision, to include renaming and renumbering of FM 3-34.2, <i>Combined Arms Breaching Operations</i> . Changes in the force structure have required adjustment of the tactics, techniques, and procedures (TTP) associated with breaching and clearance operations. Status: On hold for release of FM 3-90, <i>Tactics</i> .
FM 3-90.13 (FM 5-102) (FM 90-7)	<i>Combined Arms Obstacle Integration</i>	Sept 94 Mar 85	This revised manual will contain the basic fundamentals associated with countermobility operations and will incorporate aspects of the contemporary operating environment (COE). Status: On hold for release of FM 3-90, <i>Tactics</i> .
FM 3-34.300 (FM 5-103)	<i>Survivability</i>	Jun 85	This manual provides survivability information needed by commanders and staff at the tactical level. It includes guidance on integrating survivability into planning and order production and creation of the engineer running estimate. It provides examples of a survivability capabilities card, matrix, and timeline to assist with the planning, revision, and conduct of specific survivability tasks. Status: On hold for release of FM 3-10, <i>Protection</i> .

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Combat Engineering (continued)			
FM 3-34.281 (FM 20-11)	<i>Military Diving</i>	Jan 99	This manual, formerly an adaptation of the Navy diving manual, will support one of the modular units of the MEF. Within the Army, it is used by special operations forces, as well as engineer divers. The entire Navy diving manual will not be adopted; instead, the targeted sections applying to Army diving use will be adopted with other Army-specific considerations being added. Status: Final draft; expect publication in Spring 2009.
General Engineering			
FM 3-34.400 (FM 5-104)	<i>General Engineering</i>	Nov 86	This manual describes the operational environment (OE) and how to apply and integrate general engineering principals in support of full spectrum operations. It focuses on the establishment and maintenance of lines of communications and engineer support to sustainment operations throughout the area of operation. Although not designated as a multi-Service publication, it is intended to inform all Service components of the types of general engineering tasks, planning considerations, the variety of units available to perform them, and the capabilities of Army engineers to accomplish them. Status: The estimated posting to AKO is Spring 2009.
FM 3-34.410 Volumes I & II (FM 5-430-00-1 & 5-430-00-2)	<i>Design of Theater of Operations Roads, Airfields, and Helipads</i>	Aug 94; Sep 94	This manual will serve as a reference for engineer planners in support of joint and theater operations in the design of roads, airfields, and helipads. This manual is currently dual-designated with the Air Force. The Navy plans to adopt it as well. Status: Adjudicating comments on the final draft.
FM 3-34.451 (FM 5-472)	<i>Materials Testing</i>	Dec 92	This manual will provide technical information for obtaining samples and performing engineering tests and calculations on soils, bituminous paving mixtures, and concrete. For use in military construction. The test procedures and terminology will conform to the latest methods and specifications of the American Society for Testing and Materials (ASTM), the American Concrete Institute (ACI), and the Portland Cement Association (PCA), with alternate field testing methods and sampling techniques when complete lab facilities are unavailable or impractical to use. Status: Adjudicating comments on the final draft.
FM 3-34.465 (FM 3-34.465 & FM 3-34.468)	<i>Quarry Operations</i>	Mar 05; Dec 03 (Apr 94)	This manual outlines the methods and procedures used in the exploration for and operation of pits and quarries. It provides information on equipment required for operating pits and quarries and for supplying crushed mineral products, but does not cover the operation of the stated types of equipment. This is a collaborative effort with the Navy and includes the newest technologies and current practices. Status: Preparing the final draft for staffing to the force.
FM 3-34.469 (FM 5-484)	<i>Multi-Service Well Drilling Operations</i>	Mar 94	This manual is a guide for planning, designing, and drilling wells. It focuses on techniques and procedures for installing wells and includes expedient methods for digging shallow water wells, such as hand-dug wells. This is a collaborative effort with the Navy and includes the newest technologies, current practices, and revised formulas. Status: The estimated date for posting to AKO is Spring 2009.

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General Engineering (continued)			
FM 3-34.485 (FM 5-415)	<i>Firefighting Operations</i>	Feb 99	This manual gives directions on deploying and using engineer firefighting teams. These teams provide fire prevention/protection, aircraft crash/rescue, natural cover, and hazardous material (HAZMAT) (incident) responses within a theater of operation (TO). This is a parallel effort with the revision of the firefighting Army regulation (AR) to bring both policy and doctrine current with required certifications, newest technologies, and current practices. Status: Initiating the program directive and developing the initial draft.
FM 3-34.500 (FM 3-100.4)	<i>Environmental Considerations in Military Operations</i>	Jun 00	This manual provides environmental protection procedures during all types of operations. It states the purposes of military environmental protection, a description of legal requirements, and a summary of current military programs. It also describes how to apply risk management methods to identify actions that may harm the environment and appropriate steps to prevent or mitigate damage. Status: The estimated date for posting to AKO is Spring 2009
Geospatial Engineering			
FM 3-34.600 (FM 3-34-230)	<i>Geospatial Operations</i>	3 Aug 00	This full revision of FM 3-34.230, <i>Geospatial Operations</i> , will incorporate changes as a result of FM 3-34, Engineer Operations, and FM 3-0, <i>Operations</i> . Geospatial engineering consists of those engineer capabilities and activities that contribute to a clear understanding of the physical environment by providing geospatial information and service to commanders and staffs. Status: Preparing the initial draft.

NOTE: Current engineer publications can be accessed and downloaded in electronic format from the Reimer Digital Library at <<http://www.adtdl.army.mil>> or the MSKN website at <<https://www.us.army.mil/suite/page/500629>>. The manuals discussed in this article are currently under development. Drafts may be obtained during the staffing process or by contacting the engineer doctrine branch at: Commercial 573-563-0003, DSN 676-0003, or <douglas.merrill@us.army.mil>. The development status of these manuals was current as of 5 November 2008.

Engineer Doctrine Contact Update

The Engineer Doctrine team would like to introduce to the Regiment its newest member, Mr. Doug Merrill, who is taking over from Mr. Jeff Beacham as the Engineer Senior Doctrine Analyst. Doug's Army Knowledge Online (AKO) contact information is <douglas.merrill@us.army.mil>. If you haven't already, you will soon begin to see the staffing of draft doctrine coming to you from Doug.

A new Maneuver Support Knowledge Network (MSKN) website has been established for Engineer Doctrine. There you can download the current manuals in the Engineer Doctrinal Hierarchy, as well as drafts of the various manuals under revision, and can stay updated on the status of those revisions and view the final comment matrices on each draft. The page may be reached through the MSKN homepage or via this link, which goes

directly to the Engineer page vice the MSKN homepage after AKO login: <<https://www.us.army.mil/suite/page/500629>>.

The Engineer Doctrine element is the lead for the Regiment's doctrine. The Engineer School's Doctrine Division is consolidated at the MANSCEN level within the MANSCEN Directorate of Training (MDoT) Doctrine Division. The telephone numbers for Engineer Doctrine are—Doctrine Chief, (573) 563-7537; Senior Doctrine Analyst, (573) 563-0003 (DSN prefix, 676-).

The mailing address for written correspondence is: Commandant, United States Army Engineer School, ATTN: ATZT-TDD-E, 320 MANSCEN Loop, Suite 220, Fort Leonard Wood, Missouri 65473-8929.

For electronic correspondence, the generic NIPR e-mail address has changed to <leon.mdottddengdoc@conus.army.mil>.