The Changing Role of the Military Civil Engineer in the Shadow of the Evolution of the 21st Century Terrorist Threat

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Critical Infrastructure Risks

- America’s Critical Infrastructure
- Natural Disasters
- Space Weather/EMP
- Physical Attack
- Cyber Warfare
Critical Infrastructure/Critical Systems

National Security Infrastructure

Electrical Grid

Communications Infrastructure
Critical Infrastructure/Critical Systems

- National Security Infrastructure
- Transportation
- Water
- Wastewater
- Electrical Grid
- Communications Infrastructure
Critical Infrastructure/Critical Systems

Critical Systems
- Government
- Military
- Intel Gathering
- Financial/Banking
- Tax Records
- Real Estate Rcrds
- Personnel Rcrds
- Health Records
- Pension/SS Rcrds

National Security Infrastructure
- Transportation
- Water
- Wastewater
- Electrical Grid
- Communications Infrastructure
The Changing Battle Space

Traditional Warfare

- The Front Lines
# The Changing Battle Space

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# Traditional Roles of the Military Engineer

## Military Activities
- **Combat Engineering**
  - Bridge building, laying minefields, field defenses
- **Strategic Support**
  - Construct airfields, ports, roads, railways, comm
- **Ancillary Support**
  - Disposal of unexploded warheads

## Civil Works Projects
- **Flood Control**
- **River Navigation Projects**
- **Dams**
- **Bridges**
- **Search, Rescue, Recovery**
- **Post Disaster Clean-Up and Fire Fighting Activities**
### Evolving Role of the Military Engineer

#### Identify
- Conduct Risk Assessments
- Collaborate with Community/Local Authorities
- Feedback Loop to Coordinating Organizations (DHS/NIST)

#### Harden
- Identify Points of Failure
- Reduce Exposure Points
- Re-engineer “At Risk” Systems
- Assess/Press For New/Resilient Solutions

#### Respond
- Triage Event Impact
- Limit Scope of Damage
- Provide Short Term “Work Arouunds”
- Establish Islands of Refuge for the Displaced

#### Recover
- Repair Damaged Subsystems
- Restoration of Impacted Systems
- Provide Recovery Assistance to Local Community
- Institutionalize “Lessons Learned”
Questions?

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