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Master Planning,
Housing, and
Barracks

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The top two images show the proposed mixed-use mission support facility at U.S. Army Garrison Miami, Florida, that combines logistics and administrative uses into one connected building supporting footprint reduction, resiliency, energy efficiency, low impact development, and mission effectiveness goals. The proposed barracks (bottom image) follow the apartment model first developed at Fort Leonard Wood with one building sized for no more than 10 residents. This makes the building exempt from anti-terrorism/force protection requirements and much more efficient in terms of total cost and area required. See article on [Page 15](#) (Images courtesy of The Urban Collaborative, LLC).





Defining resiliency: A planning approach to mission readiness

by Jerry Zekert and Mark Gillem

Resiliency in planning is not a new subject. William Penn's 17th century plan for Philadelphia focused in part on resiliency. He insisted on a site for Philadelphia that was "navigable, high, dry, and healthy." He wanted uniform streets with houses built in a line for ease of access and he wanted a "green country town, which will never be burnt."

Today, Philadelphia is one of America's great cities and is once again on the ascent in part due to Penn's resilient, simple, and elegant plan that can accommodate new uses and residents.

The Department of Defense has been considering resiliency in light of changing political, environmental, and fiscal realities. The U.S. Army Corps of Engineers, for instance, developed a *Resilience Initiative Roadmap* with three priority areas: 1) evolving resiliency practices; 2) supporting community resilience; and 3) focusing on priority areas. One of the priority areas is developing resiliency considerations for military installations, and that is where military planners fit into the discussion.

As retired Lt. Gen. Thomas Bostick, former U.S. Army Corps of Engineers commanding general, has noted, "With lessons learned from disasters such as Katrina and Sandy, and the necessity for military readiness, we know the Corps of Engineers has a lot to share in the resilience field."

Those lessons include four key resilience

principles: prepare, absorb, recover, and adapt.

For military master planning, how broadly do we approach resiliency? If we think of it as encompassing everything (from climate change to unemployment to poor education), we may be off the mark. These are the **sustained threats** that many resiliency plans talk about at a high level. **Acute threats** are more immediate and should be the clear focus of our planning efforts as they will directly impact mission readiness in a real and measurable way. After all resiliency and readiness are tied together. These acute threats could be natural (floods, earthquakes, tornados, tsunamis, wildfires, etc.) or manmade (revolts, terror attacks, etc.). These are threats master planners can address. If planners approach resiliency with a focus on the acute threats that plans should address, they can organize work processes and products to address them.

One approach is to look at resiliency from a mission readiness perspective. Planners should identify the systems that, if compromised by acute threats, will impact readiness. There are generally three systems: 1) utilities (energy, water, wastewater, communications. etc.); 2) transportation (roads, ports, airfields, gates), and 3) facilities (critical, noncritical and supporting buildings). Acute threats impact each systems and vary by installation and region. Fort Hood, Texas, does not need to worry about sea level rise, which with wave action can be an acute threat, but the installation does need to worry

about floods. Both threats can undermine all three systems in similar ways such as power outages, compromised road networks or blocked emergency services. Planners should identify what acute threats may impact readiness and map out how those threats impact each of the three interrelated systems. Solutions can be identified to increase each system's resiliency.

The process involves identifying the threat, assessing system vulnerabilities, identifying mitigation measures, and developing actionable solutions that could be inserted into a capital investment strategy like an Area Development Execution Plan – a repository of all needed projects to build a mission-ready plan. These solutions should help installations prepare for the threat; absorb the "hit" with as little impact to mission readiness as possible; recover quickly from the impact so missions can continue; and adapt the installation's physical structure to minimize impacts from future acute threats.

Resiliency is an approach much more than a plan. How do master planners deliver resilient installations that are durable across multiple threats? What processes should be in place to bring stakeholders together to identify threats and mitigations? Where is the nexus with sustainability so the worst case happens we can adapt to new more resilient models? How do we leverage current tools and techniques that are already supporting mission readiness? What criteria can planners implement to make installations more resilient when faced with acute threats to mission readiness?

Successful master plans should address these questions and help answer a key question from an installation's leadership: "So now what, what do you want me to do about it?" William Penn knew what to do; he planned a resilient city with simple and clear principles that have withstood the test of time. It is our turn to do the same for our installations.

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