

# Public Works DIGEST

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U.S. ARMY INSTALLATION MANAGEMENT COMMAND

# IMIGOM

An Army lodge (foreground) and a bowling alley (background) are under construction at U.S. Army Garrison Grafenwoehr, Germany — part of efficient basing efforts in Europe. Photo by Andrea Hoesl, Directorate of Public Works, Grafenwoehr. Page 18



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#### Address mail to:

U.S. Army Installation Management  
Command  
2511 Jefferson Davis Highway  
Arlington, VA 22202-3926  
Attn: Editor, *Public Works Digest*  
Telephone: 202-761-0022 DSN 763  
FAX: 202-761-4169  
e-mail:  
mary.b.thompson@usace.army.mil

#### Donald G. LaRocque

*Public Works Program Manager*  
*Installation Management Command*

#### Mary Beth Thompson

*Managing Editor*  
*U.S. Army Corps of Engineers*



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# Planning for healthy communities

by Mark L. Gillem

Planners have to consider many factors in creating great communities for Soldiers, civilians and their families. Mission, safety, sustainability, environmental stewardship and economic impact are some of them. However, there is one planning consideration that should be right up there with these other factors — a healthy community.

The Army and the Department of Defense, like the rest of America, are facing major health challenges. The built environment affects the physical, behavioral and psychological health of everyone. People are experiencing major health problems resulting from unhealthy lifestyle activities. Many are overweight and get insufficient exercise, and the working and family environment can cause major stress-related ailments.

Army families are also experiencing stress from frequent deployments, resulting in separated families and creating behavioral and psychological effects. Sprawling communities, where people must rely on cars to get around, lack the exercise opportunities created by walking. They also make it difficult to build “social capital,” which is especially needed in stressful times.

Army leaders are increasingly interested in improving the physical and mental health of Army personnel. Planners must consider planning and health issues in their visions for their communities. Fortunately, as many Army installations grow to accommodate new requirements, planners have an opportunity to build healthy communities.

Planning healthy communities is closely related to planning sustainable communities, because the need to promote more exercise by walking coincides with the need to create communities that are not so dependent on automobiles. Many experts say that by just increasing daily walking, a person’s level of wellness will significantly improve.

To achieve more walkable communities, planners need to look at more compact development that is built around “sustainable densities.” Frequently, when people hear the word “density,” they think of congested urban areas with high rises and parking garages, but density is not dependent on tall buildings. Sustainable density is defined as development patterns that look like historic Norfolk, Va., or Old Town Alexandria, Va., or even legacy installation headquarters complexes like at Fort Bragg, N.C., or Fort Leavenworth, Kansas.

Designed by young George Washington, Old Town Alexandria exhibits many of the same characteristics as historic Army posts. Classic, tree-lined main streets with two- to four-story buildings aligned along the sidewalks are the norm. These types of walkable communities with sustainable densities improve health directly by enhancing physical health and indirectly by improving the sense of community, which is often referred to as social capital.

## Direct benefit: enhancing physical health

Sustainable development gives residents transportation options that can reduce per capita driving, which is measured in “vehicle miles travelled.” One study showed that reduced vehicle use has clear benefits in terms of improved air quality and improved personal health. Another indicated that VMT rates are directly associated with air pollution, and areas with high levels of VMT per capita also tend to have higher accident and injury rates. Research also confirms that greater dependence on vehicles also leads to less walking and increased obesity and other health-related complications.

Neighborhood density is also

## Acronyms and Abbreviations

DoD	Department of Defense
VMT	vehicle miles travelled

positively correlated with the number of minutes of physical activity residents get per day. As density increases, the amount of physical activity typical residents get each day increases, according to a study. For each one-half mile walked per day, people are about five percent less likely to be obese.

Obesity comes at a high cost to the military. In fiscal year 2008, for example, the Army spent more than \$1.1 billion on TRICARE costs associated with obesity-related illnesses.

## Indirect benefit: improving social capital

Sustainable densities also enhance what researchers call social capital. Social capital is a measure of neighborhood cohesion, which identifies the level of community and social bonds in a network or neighborhood. There is greater social capital in a community when neighbors know one another and support one another in good times and bad. Neighbors living and working within walking distance of each other have the opportunity to form social bonds and to watch out for one another.

Research has shown many benefits in ►



*The plan for the Natick Soldier System Center, Mass., calls for increasing walkability by creating campus quads and increasing density within the installation’s main core to accommodate projected growth. Graphic by The Urban Collaborative LLC*



(continued from previous page)

communities where social capital is high:

- **Prolonged life** – Studies over the last 20 years have found that isolation is correlated with illness. When people who are socially disconnected contract an illness, they are two to five times more likely to die as compared to people with close social ties.
- **Better health overall** – From a survey of almost 170,000 people, researchers have concluded that moving from an area with a wealth of social capital to an area with very little social capital increased one's chances of poor health by between 40-70 percent.
- **Cardiovascular health** – Studies have found that strong community ties link to reduced rates of heart attack, lower risk of dying from heart disease and circulatory problems, and less extensive coronary heart disease.
- **Faster recovery from illness** – Studies have linked social capital to fewer colds, better functioning after strokes and lower incidences of death related to heart attacks, heart disease, cancer, stroke and hypertension.
- **Improved mental health** – There are numerous studies linking mental health to social capital. These studies look at depression, loneliness, self-esteem and a variety of other indicators. Generally, research confirms that social ties buffer us from the stresses of daily life.
- **Enhanced family life** – In neighborhoods with higher social capital, studies indicate that children have lower levels of misbehavior and achieve better grades. Marital burnout and marital violence are reduced. In addition, child abuse rates are lower.
- **Other benefits** – Social capital has been associated with reductions in violent crime, less frequent binge drinking, lower birth rates and more leisure-time physical activity.

How can the physical environment contribute to a greater sense of community?

The most important task is getting people out of their cars and onto a connected network of sidewalks into neighborhoods with sustainable densities. Empirical research has found that a 1 percent increase in the proportion of neighbors who drive to work is associated with a 73 percent decrease in the chance that any individual will report having a social tie to a neighbor.

Moreover, research has found that people living and working in walkable neighborhoods with a mix of uses have greater social capital. In walkable neighborhoods, residents feel more connected to their community, are more likely to know their neighbors, are more likely to have faith in others and are more likely to walk to work.

This is not just an abstract academic concept divorced from the reality of military bases. New research at military bases links social capital to walkability. A detailed study of military families in Japan found that respondents who lived in walkable neighborhoods had higher social capital. Respondents to a random sample survey sent to more than 400 families were asked a variety of questions related to neighborhood cohesion. These questions represented four constructs that roughly correspond to: a) perceived similarity to one's neighbors, b) desire to continue living in one's neighborhood, c) preferences about desired levels of neighborhood cohesion, and d) the amount of contact that one has with neighbors.

The neighborhood cohesion scale scores were examined in conjunction with a variety of other items to determine predictors of neighborhood cohesion. Respondents who socialized with more people within walking distance of their residence had statistically significant higher neighborhood cohesion scores.

Planners working for the DoD have




Historic housing in Norfolk, Va., is built at the sustainable densities that support healthy communities — within walking distance of downtown Norfolk's grocery stores, offices and shops. Photo by Mark L. Gillem

nearly endless opportunities to construct settings that consume less energy, generate less pollution, support greater social capital and use less land. In fact, planning for healthy communities will be a key Army planning tenet in the proposed update to Army Regulation 210-20, *Real Property Master Planning for Army Installations*, due in early 2010, which states that —

*“High connectivity, mixed land uses, and well-designed pedestrian and bicycle infrastructure decrease auto dependence, and increase levels of walking and cycling. A connected transportation network of streets with sidewalks, pedestrian pathways, and bicycle trails reduces the distance between origins and destinations and increases transportation alternatives.”*

POCs are Mark L. Gillem, 510-551-8065, mark@urbancollaborative.com; or Jerry Zekert, chief, Master Planning Team, Headquarters, U.S. Army Corps of Engineers, 202-761-7525, jerry.c.zekert@usace.army.mil. Contact Dr. Gillem for a detailed list of references.

Mark L. Gillem, Ph.D., AIA, AICP, works with the Master Planning Team, Headquarters, U.S. Army Corps of Engineers, as a consultant. He is an associate professor, University of Oregon, and a principal, The Urban Collaborative. Jeff Springer, urban planner, Booz Allen, and Jill Schreifer, of The Urban Collaborative, contributed to this article .