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Tyrone Williams (left) and Will Spence (right), master planners from U.S. Army Corps of Engineers' Savannah District, locate electrical tie-in points while developing plans for the new trigeneration plant at U.S. Army Garrison Natick, Mass. Photo by George Jumara. Page 26

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Great streets

by Mark L. Gillem

On most military installations, streets are little more than links connecting one place to another in an endless chain of asphalt and concrete. The gaps between these places are ignored and underused. Since these types of streets usually serve only one purpose — motor vehicle transportation — the gaps and edges are often undesirable sites. As a result, vacant land or parking lots usually separate streets from buildings.

This pattern may make for an efficient transportation network, but it also leads to very inefficient land use. Street networks on most installations are designed like river ecosystems; local streets funnel traffic to collectors, which in turn funnel traffic to arterials. These arterials act like major rivers where the bulk of traffic is eventually forced onto relatively few streets that are predictably congested at peak hours and too wide to cross comfortably or safely.

The result is like a cancer that eats away at valuable land. The wider the streets and the more traffic they carry, the less desirable they are as places for development, which then occurs farther and farther out, leading inexorably to low-density, auto-oriented sprawl.

There is a different model. When streets are thought of as magnets that can attract more efficient development, they can become the backbone of an integrated land-use and transportation system.

The planners of historic military bases knew this. They built grand boulevards, avenues, parkways and main streets to both connect and contain development. The grand entry to Barksdale Air Force Base, La., and the well-defined avenues of historic Fort Sill, Okla., are just two examples.

To more efficiently use limited land resources, planners need to reconsider the role of the street. If they can build great streets, then development will be attracted to these streets and thousands of acres of Department of Defense land can be repurposed for development without the need for additional land acquisition. Moreover, great streets support more sustainable densities, reduced infrastructure runs and more energy-efficient development.

The requirements for great streets are not complex. First, they need to be connected to other streets. George Washington laid out a simple grid for Alexandria, Va., because he knew that this was the most efficient street layout.

Second, great streets have defined edges, which ideally take the form of buildings placed parallel to and facing the street. These buildings create "walls" for the street, much like the walls of a room, which makes them comfortable to walk along. When these buildings have windows facing the street, the transparency allows for natural surveillance of the public realm, which is the best kind of security. The current infatuation with prison-like buildings oriented away from the street is an overreaction to selected terrorist threats that are not an empirical reality for military installations.

Third, great streets have great street trees. The best are deciduous trees that create interconnected canopies shading the street and sidewalks. These trees slow traffic, increase pedestrian safety, reduce energy consumption in adjacent buildings and extend the lifespan of the paving they shade.

Allan Jacobs, author of *Great Streets*, argues that great streets are built to last and are accessible to more than just drivers. Great streets serve pedestrians, bicyclists and all types of transit passengers. Great streets also have sidewalks that are connected, comfortable and safe. All of these criteria make what some practitioners call "complete streets" that serve a multitude of functions.

Planners at Fort Lewis, Wash., adopted these criteria and are converting their main street, Pendleton Avenue, from an unsightly arterial at the heart of the installation into a great boulevard. The current conditions are less than ideal; inadequate throughput, unprotected left turn lanes, disconnected sidewalks, ➤

Over a series of steps, Fort Lewis's Pendleton Avenue will be transformed into a great street that accommodates energy-efficient, mixed-use development and a range of transportation choices. Graphic by The Urban Collaborative LLC

Understanding planning fundamentals: It's about patterns

by Jerry Zekert

Thinking about great cities, towns or even military installations begs the question, what makes them great? The key aspect of what makes those communities remarkable is how they are laid out, and that factor is the legacy of great planning. Excellent planning results in the structured organization of streets sidewalks, trees, public spaces and the setting of buildings in a compact relationship that results in great places for all generations.

Outstanding cities like Savannah, Ga., Portland Ore., Washington, D.C., and Chicago are well planned. They are towns of multistory buildings with many mixes of uses and sustainable streets with trees and sidewalks, which holistically make great places to live, work and play.

A master planning student sketches patterns in Vicenza, Italy. Photo by Jerry Zekert

Historically, many military installations were planned and developed using these principles. Two examples are Randolph Air Force Base, Texas, which celebrates and maintains its commitment to a great sustainable plan, and the old garrison compound of Fort Bragg, N.C., which brings the flavor of Beaux-Arts design to its plan. These patterns reflect the long-standing historic values of community that our leaders desired in our military installations.

In the planning profession, the way these principles are used is called "planning patterns." Planning patterns give us the recipe from which an orderly master plan can be created.

The patterns of good planning are visible to pedestrians. They can see the arrangement of the streets, the general scale of the buildings and the alignment of the sidewalks and trees. These features are the fundamentals of good planning.

In the Master Planning Institute training program, a key component in both the Master Planning and Advanced Master Planning classes is teaching the planning pattern language and how to use it in the planning of installations. Students learn that many of the principles of sustainable development — including walkability, compactness and reduced energy use — can be gained by learning the traditional patterns of development.

During the Advanced Master Planning class taught at U.S. Army Garrison Vicenza, Italy, last year, the class visited and sketched the traditional urban planning patterns of the town of Vicenza. The trends discovered while sketching were used in the planning exercises. Similarly, in Savannah, the students learned by sketching the traditional grid pattern of that city and using the same principles in solving today's problems.

Understanding planning patterns helps create a flexible but orderly way to plan cities, towns and military installations. They give a predictive suite of planning tools that can ensure the creation of great places for Soldiers, Civilians and Families, while meeting the rapidly changing missions facing our Army.

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overhead utilities and the backsides of buildings make it a street to pass through. As a result, development has been pushed out of the core of the installation and onto the fringe, which forces even more driving.

The approved and funded plan calls for converting Pendleton into a multiway boulevard that can support much more through traffic and transit on four center lanes with a protected left turn median, local traffic and bikes in slow-moving protected access lanes, and pedestrians on wide, tree-lined sidewalks that are framed by infill mixed-use buildings. Jacobs consulted on Pendleton's redesign.

The promise of Pendleton's conversion helped convince the housing contractor and the Army and Air Force Exchange Service to build pedestrian-oriented development within the downtown core rather than at the edge or in big box structures flanked by massive parking lots. The great street has become a draw for central development that uses limited land much more efficiently. Moreover, the plan for the street generated an unprecedented level of excitement and interest, at least for infrastructure projects, among the installation's leadership, and they quickly found the resources for the upgrade.

The benefits to rethinking the role of streets on military installations are enormous. They can be magnets for sustainable and energy-efficient development rather than eyesores that force development to the perimeter of an installation. They can be places where people can comfortably and safely walk, bike and drive.

Military planners have an opportunity to once again create the types of streets that contributed to making historic installations great; they can create streets that are built to last and that support multi-modal transit options for generations to come.

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