Victor Dover on Street Design: The Secret to Great Cities and Towns

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Victor Dover, FAICP

- Principal and cofounder of town planning firm Dover, Kohl & Partners
- Speaks internationally on livable communities, sustainable development and how to fix cities, neighborhoods and towns
- Has 25 years’ experience implementing plans for livable, walkable and sustainable communities
- The firm has won more than 25 awards including the 2010 John Nolen Medal for contributions to urbanism
Victor Dover, FAICP

- Coauthor with John Massengale, AIA, of Street Design: The Secret to Great Cities and Towns (Wiley, 2014) with foreword by HRH The Prince of Wales
- More than 150 case studies and hundreds of photos of streets old and new
- Guides readers through what works and what doesn’t
- Reveals the secrets to designing beautiful, charming streets and walkable places where people want to be
Victor Dover, Principal and Cofounder
Dover, Kohl & Partners
• CHANGE OVER TIME
• THE THREE LENSES
• DESIGN MATTERS, ESPECIALLY NOW
• RE-ESTABLISHING CONFIDENCE
• FIVE THEMES IN STREET DESIGN
• “COMPLETE STREETS”
• WHAT TO DEMAND
• NEEDED: A BIGGER MENU
• A TIME FOR REDISCOVERY
CHANGE OVER TIME
THE THREE LENSES
habitat... 
life-sustaining
adapting
nourishing
fecund
diverse
preferred

machine...
utilitarian
economical
efficient
plumbed
wired
productive

art...
inspiring
interactive
engaging
provocative
communicative
cherished
STREET DESIGN
The Secret to Great Cities and Towns

VICTOR DOVER
JOHN MASSENGALE

foreword by HRH The Prince of Wales
afterword by James Howard Kunstler

WILEY
DESIGN MATTERS…
ESPECIALLY NOW.
Did your parents walk to school?

1. Yes
2. No
Did you walk to school?

1. Yes
2. No
Do the kids in your family walk to school?

1. Yes
2. No
Dangerous by Design 2014

May 2014
Location: Miami-Dade County, Florida
Date: 12/20/2005
Victim's age: 64
Victim's sex: Male
Roadway Class: Urban - Other Principal Arterial
The Bahamas
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“Every transportation agency, including DOT, has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation systems.”

– U.S. DOT Policy Statement, March 2010
population projection: southeast florida

Source: Bureau of Economic & Business Research
Miami-Dade County

plan 1: exurban expansion

Population: 3,675,221
Miami-Dade County

TOD
Developed
Farmland
Protected
100 Year Flood
Inundation
Resilience Investments
Population Pressure

plan 3: next gen region

Population: 4,014,100

DRAFT
Who Cares About US 1?
Don’t Give Up on US 1
Lexington Avenue at 89th Street, 100 Years Apart
Stråndwagen, Stockholm
FIVE RECURRING THEMES
WHOLENESS
PACE
SIMPLICITY
COMPOSITION
WONDER
RE-ESTABLISHING CONFIDENCE
Every year since 1994, GOVERNING has honored individual state and local government officials for outstanding accomplishment by naming them Public Officials of the Year. Elected, appointed and career officials from any branch of state or local government are eligible. Our readers are invited to nominate individuals who have had a notable positive impact on their department or agency, community or state.

GOVERNING annually receives several hundred nominations from individuals in the public and private sectors. In addition, GOVERNING staff consults experts and scholars in the field, and also nominates outstanding individuals they encounter in the course of their work. Nominations are evaluated by a selection committee, which, after painstaking research, chooses the winners.
“COMPLETE STREETS”
Chippewa Square, Savannah, Georgia
WHAT TO DEMAND
SHAPED

COMFORTABLE

CONNECTED

SAFE

MEMORABLE

MEMORABLE
Sunset Drive, South Miami FL
SHAPED

COMFORTABLE

CONNECTED

SAFE

MEMORABLE

MEMORABLE
SHAPED
COMFORTABLE
CONNECTED
SAFE
MEMORABLE
MEMORABLE
MEMORABLE
The Woodlands, Texas – 36 intersections per square mile
Miami Lakes, Florida – 141 intersections per square mile
Celebration, Florida – 377.8 intersections per square mile
Rome, Italy – 1029.2 intersections per square mile
Lower the carbon footprint: CONNECT

Source: LUTAQH final report, King County ORTP, 2005

CO$_2$ and Connectivity
CHAPTER THREE
STREET SYSTEMS AND NETWORKS

STREETS DON'T FLOAT IN ISOLATION. They are inseparable from the larger city, integrated into a system of other streets and public spaces. Similarly, our understanding of a street can rarely be separated from the particular details of the place where we experience it. That context might be the immediate one of the adjacent streets, or it might be a larger one, such as the history of the city where the street is found, or the form of the city itself.

An urban designer must simultaneously think of the design of the individual street and how that street will operate in its larger setting. In this chapter we explore useful streets, both historic and new, in pairs and in sets, and in grids, patterns, and networks. Here policy and design inevitably intersect. In this holistic way of thinking, removing a damaging inner-city highway to make a new boulevard, inserting a new street to create more routes for walking, rewriting the development rules for groups of similar corridors, or increasing a neighborhood’s walkability so that it can be improved are all part of the same work.

THE STREETS OF CHARLESTON AND SAVANNAH

Some of our favorite streets are found in Charleston, South Carolina, and Savannah, Georgia, two southern American cities that are only one hundred miles apart. As we looked at them anew, we realized that these streets characterize their respective cities, which are also two of our favorite cities. Their urban plans help to explain important issues in street design (Figure 3.1).

Charleston and Savannah are beautiful because their historic streets are beautiful, but the streets became beautiful in different ways. Savannah, planned by General James Oglethorpe in 1733, has the most intelligently varied, pure grid in America, perhaps the world. In contrast to that orderly plan, the old streets of Charleston are a ragged agglomeration of more conventional American grids built over time, first by the Lords Proprietors...
SHAPED

COMFORTABLE

CONNECTED

SAFE

MEMORABLE

MEMORABLE
A driver's visual focus diminishes as speed increases.

Vision Cone / NACTO
Fatality rates for pedestrians at different speeds:

- **20 mph**: Over 50% fatal
- **30 mph**: Over 80% fatal
- **40 mph**: Over 80% fatal

Rick Hall
Many types of cyclists, motorists, pedestrians, passengers
SHAPED
COMFORTABLE
CONNECTED
SAFE
MEMORABLE
Like many of the best streets, Galena's Main Street changes shape and dimensions as it stretches across the town. At one of its narrowest points, the street is approximately fifty feet wide with a one-way travel lane, flanked by a row of parallel parking and nine-foot-wide sidewalks on each side (Figure 2.83). The cross-section changes as the street alignment cranks, maintaining traffic and accommodating diagonal parking spaces (Figure 2.84). The overall width becomes slightly larger at this point, but mostly remains the narrow, historic dimension that it had during the town's industrial boom in the early 1800s. On the original plat for the City of Galena, a fifty-foot-wide curb-to-curb dimension is shown at both the beginning and the end of Main Street (Figure 2.85).

The slight curve or "crank" on Main Street is an excellent urban feature in central Galena. The crank provides a sequence of changing vistas for the user of the space. Although the curve matches the topography, the result of a natural event, the effect is often purposely replicated by urban designers. The deflected vista makes the street feel as though it has an end rather than appearing to extend far into the distance. This vista is also good for business: the storefronts down the street tip into view, showcasing the variety and quality of goods and services. Main Street has an understated color palette established by the brick facades and concrete hardcape.
CHAPTER TWO
HISTORIC STREETS

BEYOND FUNCTIONAL CLASSIFICATION: A REINTRODUCTION TO ELEVEN ESSENTIAL STREET TYPES

FUNCTIONAL CLASSIFICATION'S meager catalog of street types—arterial, collector, and local roads—are insufficient to produce walkable towns, cities, and neighborhoods. It is urgent that engineers and urban designers establish and promote a richer menu of choices.

History shows that sorting streets according to their form, rather than their Level of Service and Functional Classification, will help establish a common language for street design. History also teaches that expanding the range of choices increases the number of possible designs—that human ingenuity, once unleashed, will offer up customized street solutions in response to the needs of each place.

This chapter reintroduces eleven essential street types with case studies and commentary to explain how each type fits into a larger urban system. A goal now should be to use consistent terminology for the items on this bigger and more complex menu to rebuild our civilization's capacity for making great streets, despite ongoing resistance from some engineers and transportation planners. Happily, it is hard to argue against success and successful examples.
Avenue d’Iena, Paris
Avenue d'Iena, Paris
NEEDED:
BIGGER MENU OF STREET TYPES
The avenue Montaigne fits the definition of an avenue—it is a free-moving thoroughfare with a finite length, visually terminated at both ends. The grand avenue is 126 feet wide, which is compact for a Parisian multiway avenue or boulevard. Montaigne efficiently moves traffic but remains a comfortable place for pedestrians. Three travel lanes and a parking lane make up the central roadway. One of the travel lanes today is a counter-flow lane for buses, taxis, and cyclists. The side-access lanes have one lane of traffic and parking on both sides. At several points along the street, one of the side-access lanes becomes slightly wider, expanding to approximately twenty-four feet and accommodating an additional row of parking.

Traffic moves well on the avenue Montaigne, despite the fact that it is narrower than many Parisian avenues and boulevards. According to studies published by Allan B. Jacobs, Elizabeth Macdonald, and Yordan Roff, the combination of a mix of uses, proportional street space, and effective street trees creates a balanced relationship between walkers, cyclists, and drivers.
The economical and durable asphalt blocks also give a texture to the street that would improve the look of many wide streets. The monuments give a distinctive character, and here and there street arrangements like the cross-axis at North Davis Avenue—where the Metropolitan Community Church visually terminates the axis of the small green perpendicular to the avenue—give variety and richness.

Queens Road West, Charlotte, North Carolina

John Nolen, 1911

Boulevard

Queens Road was designed in 1911 as part of John Nolen's plan for the leafy streetcar suburb of Myers Park, in which he sought to blend town and country. The street is a key through route with substantial daily traffic; at the same time, it showcases the grandest houses on some of the largest lots in Myers Park.

Queens Road proves that it is possible for addresses that are part of a continuous, connected street network to retain—and even acquire—prestige, postwar prejudices notwithstanding. Homes in Myers Park have steadily appreciated in value and are among the most sought-after in the Charlotte region. In large part this is a result of Nolen's brilliant yet simple tree-planting plan for Queens Road, which creates the feeling of moving through a mature forest, under a high canopy of native oak, elm, and tulip poplar trees (Figures 2.42 and 2.43).

Nolen experimented by transplanting one hundred mature trees in Myers Park in the first year of development; after a year, only one of the trees had died.
Figure 3.33: Stanfords Studio, off Stanfords Street, London, UK. England. A quiet pedestrian cul-de-sac. The cozy space gives variety to the west London neighborhood.

Figure 3.34: Galerie Viollet, between place de la Bourse and rue des Petits Champs, Paris 2, France. A popular Parisian passage owned © 2011 Gajnet / Creative Commons Attribution-Share Alike 3.0 Generic license.

Figure 3.35: Cour du Commerce Saint-André, between Boulevard St-Germain and rue St-Henri des Arts, Paris 6, France. An old street, closed to traffic. The large wooden gates at each end lend it the air of a "secret" place—even when it’s unoccupied.

Figure 3.36: Galleria Vittorio Emanuele II, between Piazza del Duomo and Via T. Manuzio, Milan, Italy. One of the grand shopping places of Italy; a place for the Milanese to see and be seen. © 2009 Medley / Creative Commons Attribution-Share Alike 3.0 Unported license.

Figure 3.37: Westminster Arcade, between Westminster and Waylons streets, Providence, Rhode Island. Known locally as The Arcade. In 2013 a developer is converting the shops and offices on the top two floors of this distinctive passage into small apartments.

Figure 3.38: Laste Arcade, between South Tryon and South Church streets, Charlotte, North Carolina. William H. Peep, 1914. On the National Register of Historic Places, the Laste Arcade is a popular destination in a city working hard to revive the viability of Uptown Charlotte (its downtown). The arcade brings variety to the pedestrian experience in the regular grid of Charlotte’s downtown. Image courtesy of Steve Minor.

Figure 3.39: Warren Place, between Warren and Bacon streets, Brooklyn, New York. A semi-private passage through model housing in Cutler Hill, built in 1976 by the developer Alfred Tredway White, whose motto was "philanthropy plus five percent." The congas for "working man" originally rented for $18 per month. Today the 14-bos-wide congas rents for $4,500.
A TIME FOR REDISCOVERY
There are two types of places in America where retrofitted streets are most valuable and useful: auto-centric suburban and exurban sites where the residents and their elected representatives have decided to make walkable streets and communities; and walkable or once-walkable places where the public realm has been damaged by the application of engineering principles that favor the car, making the roads worse for pedestrians, cyclists, and public transit users than they once were.

The first description fits almost every American place built since 1945. The second includes most American neighborhoods, towns, or cities built before that; there are few American places that have not kicked the pedestrian to the side of the road and then narrowed the sidewalk. Most in the second group also suffered from the flight of businesses to shopping malls and strip centers—not to mention the self-inflicted damage of tearing down Main Street buildings for parking lots that were supposed to help the downtown compete with those outlying businesses. Experience shows that competing with shopping centers on the shopping centers’ terms (convenient driving and parking) rather than playing up the strengths of town centers (walkability and a public realm where people want to be) is a losing strategy.

There are few American places that have not kicked the pedestrian to the side of the road and then narrowed the sidewalk.

For a variety of reasons, including climate change, dependence on foreign oil, rising oil prices, and a growing desire among many to live in walkable towns, cities, and neighborhoods, the job of retrofitting main streets and neighborhood streets to make them more pedestrian-friendly has begun across the country. At the same time, the nation’s population continues to grow, and there is a burgeoning movement to retrofit appropriate places in suburbia with new, walkable centers. We have come to see that our pattern of abandoning old buildings and existing patterns of development in favor of cheaply-built strip buildings with short life spans is inefficient and expensive.
The Cap at Union Station
CHAPTER FIVE
NEW STREETS

TWO VERY DIFFERENT DEVELOPMENTS from the early 1960s are important landmarks in the recent history of urban design and street design. Battery Park City, a ninety-two-acre extension of Manhattan in the Hudson River that was built on landfill from the construction site of the World Trade Center, has office towers, mid-rise and high-rise apartment buildings, and stores. Seaside, Florida, an eighty-acre development on the Florida panhandle, is a resort built in the form of a town. What the two places have in common is that their streets were designed with many of the planning principles outlined in this book. Both projects were a radical departure from conventional practice of the time. The histories of both demonstrate how auto-centric regulations across the country hinder the making of good streets.

It wasn't that people didn't understand the principles by the early 1960s; they had been talked about and praised for at least two decades. Jane Jacobs wrote the enormously popular *The Death and Life of Great American Cities* in 1961, Bernard Rudofsky published *Squares for People* (also very popular) in 1969, and William H. "Holly" Whyte had been publishing his influential studies of how people use urban space since the late 1960s. Despite professional acceptance of the theories, however, most of the sprawl in America was built after the publication of *Death and Life*. Many planners endorsed these works, but the American Planning Association and its members continued to promote regulations based on an auto-centric separation of uses, with road standards established by the engineering profession's Anti-Urban Functional Classification system. "The pseudoscience of planning." Jacobs wrote, "seems almost neurotic in its determination to imitate empiric failure and to ignore empiric success."
Petitioning US Department of Transportation (US DOT)

United States Department of Transportation: Update Functional Classification System To Improve the Walkability of American Cities and Towns

Public demand for walkable neighborhoods, towns and cities is often thwarted by auto-dominated guidelines that force anyone designing streets to favor the car over pedestrians, cyclists and transit. A simple but powerful change is proposed in this petition: update the FHWA Functional Classification System by defining separate Urban, Suburban and Rural Area Types. New and more specific design guidance could then transform streets and make America’s places more safe, walkable and livable.

To:
US Department of Transportation (US DOT), Policy Office

We the undersigned urge the US DOT to create new design standards for streets in walkable neighborhoods, towns, and cities by changing the Rural and Urbanized Area Type Classifications into Rural, Suburban, and Urban Area Types. Our towns and cities have suffered too long from auto-domination guidelines that force anyone designing streets to favor the car over pedestrians, cyclists and transit.
We the undersigned urge the US DOT to create new design standards for streets in walkable neighborhoods, towns, and cities by changing the “Rural” and “Urbanized” Area Type Classifications into **Rural, Suburban, and Urban** Area Types. Our towns and cities have suffered too long from suburban Level Of Service and design requirements focused on vehicular travel.

Binjiang Road, Guilin, China
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