



25 Great Ideas of New Urbanism

CNU

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25 GREAT IDEAS OF NEW URBANISM

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Interviewees: Elizabeth Plater-Zyberk, Jeff Speck, Dan Parolek, Karen Parolek, Paddy Steinschneider, Donald Shoup, Jeffrey Tumlin, John Anderson, Eric Kronberg, Marianne Cusato, Bruce Tolar, Charles Marohn, Joe Minicozzi, Mike Lydon, Tony Garcia, Seth Harry, Robert Gibbs, Ellen Dunham-Jones, Galina Tachieva, Stefanos Polyzoides, John Torti, Vince Graham, Katie Urban, Geoff

Dyer, Victor Dover, Hank Dittmar, Brian Falk, Tom Low, Paul Crabtree, Dan Burden, Wesley Marshall, Dhiru Thadani, Howard Blackson, Elizabeth Moule, Emily Talen, Andres Duany, Sandy Sorlien, Norman Garrick, Marcy McInelly, Shelley Poticha, Christopher Coes, Jennifer Hurley, Bill Lennertz, Susan Henderson, David Dixon, Doug Farr, Jessica Millman, Daniel Solomon, Murphy Antoine, Peter Park, Patrick Kennedy

The Congress for the New Urbanism (CNU) helps create vibrant and walkable cities, towns, and neighborhoods where people have diverse choices for how they live, work, shop, and get around. People want to live in well-designed places that are unique and authentic. CNU's mission is to help build those places.

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— Robert Steuteville
October, 2018

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TIMELINE OF THE GREAT IDEAS

Year Idea # Description

| | | |
|------|---------------|--|
| 1961 | 1, 8, 16 | <i>The Death and Life of Great American Cities</i> , by Jane Jacobs, is published. |
| 1965 | 8 | <i>A City is Not a Tree</i> , an essay by Christopher Alexander, is published. |
| 1968 | 7, 16 | The Street, a studio to design streets as public spaces is taught by Charles Moore, Kent Bloomer, and Ray Gindroz at Yale University. |
| 1971 | 16 | <i>Life Between Buildings</i> , by Jan Gehl, is published. |
| 1977 | 15 | Christopher Alexander's book, <i>A Pattern Language</i> , is published. |
| 1981 | 1, 13, 23, 25 | Seaside, Florida, the first traditional neighborhood development, is designed and founded. Seaside uses development concepts that would later be called Lean and Light Imprint. |
| 1983 | 12 | The code for Seaside Florida is the first traditional neighborhood development code written, a precursor to form-based codes. |
| 1983 | 16 | Leon Krier draws his influential cartoon "Civitas (The True City)" that clarifies how civic buildings and spaces combine with private buildings, connected by streets, to form a traditional mixed-use city. |
| 1986 | 2 | Mashpee Commons in Mashpee, Massachusetts, the first suburban retrofit, is designed. |
| 1988 | 23 | Poundbury is designed by Leon Krier for the Duchy of Cornwall and Prince Charles. |
| 1988 | 14 | The first modern multiday, multidisciplinary community design charrette is conducted in Texas by Duany Plater-Zyberk. |
| 1988 | 23 | Kentlands is designed in Gaithersburg, Maryland, by Duany Plater-Zyberk. |
| 1988 | 22 | Reston Town Center begins construction in Reston, Virginia. |
| 1989 | 24 | <i>The Pedestrian Pocket Book</i> by Peter Calthorpe and Douglas Kelbaugh is published. |
| 1990 | 7, 8, 23 | Walter Kulash gave a talk to the Annual Pedestrian Conference called Traditional Neighborhood Development: Will the Traffic Work? |
| 1991 | 1 | Diagram comparing traditional neighborhoods to sprawl is drawn by Tom Low at DPZ. |
| 1991 | 17 | The Ahwahnee Principles, a precursor to <i>The Charter of the New Urbanism</i> , are written by Elizabeth Moule, Stefanos Polyzoides, Peter Calthorpe, Andres Duany, Elizabeth Plater-Zyberk, and Michael Corbett. |
| 1991 | 2, 22 | Mizner Park, the first mixed-use town center built on the former site of an enclosed mall, is completed in Boca Raton, Florida. |
| 1992 | 6 | Pasadena, California, created a parking benefit district in Old Pasadena, installing meters and using revenue to clean sidewalks and make streetscape improvements. The local economy boomed. |
| 1993 | 1-25 | The Congress for the New Urbanism is founded at CNU I in Alexandria, Virginia. |
| 1993 | 5 | <i>The Next American Metropolis</i> , a book by Peter Calthorpe, is published. |
| 1994 | 1, 5, 23 | <i>The New Urbanism: Toward an Architecture of Community</i> , a book by Peter Katz, is published. |
| 1994 | 5 | Portland Metro completes the Portland 2040 plan, with Calthorpe Associates, creating a vision for a polycentric region connected by transit. |
| 1994 | 20 | Construction is completed for Diggs Town, the redevelopment of a public housing project in Norfolk, VA. The design by UDA employs many of the principles used in HUD's HOPE VI program. |
| 1995 | 23 | Celebration breaks ground near Orlando, Florida—developed by the Disney corporation. |
| 1996 | 17 | <i>The Charter of the New Urbanism</i> is signed in Charleston, South Carolina, by 266 attendees of CNU IV, including then-HUD Secretary Henry Cisneros. |

Year Idea # Description

| | | |
|--------------|--------|---|
| 1996 | 20 | Then-HUD Secretary Henry Cisneros employs CNU leaders to write design guidelines for HOPE VI , the most important public housing program in recent decades. New urbanists lead at least two large seminars to train HUD officials in new urban design. |
| 1997 | 3 | The Transect is presented by Andres Duany in CNU V in Toronto as part of <i>The Lexicon of the New Urbanism</i> . |
| 1997 | 8 | The City of Portland agrees with developers to extend the city’s fine-grained grid of 200-by-200-foot blocks to create the Pearl District, which writer Philip Langdon calls the “best large walkable urban neighborhood created in the core of an American city” in recent decades. |
| 1997 (circa) | 22, 24 | Bethesda Row, a transit-oriented town center in Bethesda, Maryland, is under construction. |
| 1997 | 7 | Peter Swift presents his study Residential Street Typology and Injury Accident Frequency at CNU V, including both motor vehicle and residential fire injuries, concluding that narrow, walkable urban streets are the safest. |
| 1998 | 23, 25 | Habersham breaks ground near Beaufort, South Carolina—using the principles of what would be called “Light Imprint” New Urbanism. |
| 1998 | 20 | Pleasant View Gardens HOPE VI revitalization is completed in Baltimore, Maryland. The design by Torti Gallas and Partners wins an AIA Urban Design Award. Many more award-winning HOPE VI’s would follow. |
| 1999 | 5 | The Envision Utah plan employs scenario planning to create a vision for better transit and more compact growth along the cities of the Wasatch Front. |
| 1999 | 4 | US EPA finds that environmental impacts are lower for New Urbanism than Conventional Suburban Development. |
| 2000 | 5 | <i>The Regional City: Planning for the End of Sprawl</i> , by Peter Calthorpe and William Fulton, is published. |
| 2000 | 1 | <i>Suburban Nation</i> , a book by Andres Duany, Elizabeth Plater-Zyberk, and Jeff Speck, is published. |
| 2000 | 3 | First published article on Transect-based planning and coding appears in <i>New Urban News</i> . |
| 2000 | 12 | First draft of the Smart Code is published by DPZ—by 2007, this code was made available for free in an electronic format. |
| 2001 | 17 | CNU’s first annual Charter Awards are given, honoring projects designed according to Charter of the New Urbanism principles. |
| 2002 | 4 | Scott Bernstein of the Center for Neighborhood Technology produced maps that showed that walkable towns and cities generate lower carbon emissions per person. These maps were later incorporated into CNT’s H&T Index. |
| 2002 | 9 | A boulevard opens on the former site of San Francisco’s Embarcadero Freeway, which was damaged by the Loma Prieta earthquake. |
| 2002 | 9 | Octavia Boulevard opens on the former site of San Francisco’s Central Freeway spur, which was damaged by the Loma Prieta earthquake. |
| 2002 | 2 | CNU publishes <i>Greyfields into Goldfields</i> , by Lee Sobel, about turning dying malls into town centers. |
| 2002 | 2 | Belmar in Lakewood, Colorado. breaks ground, replacing an obsolete, enclosed shopping mall. the master plan is by Elkus/Manfredi. |
| 2002 | 9 | The Park East Freeway, an 0.8-mile spur, is demolished in Milwaukee, to be replaced by surface streets and 26 acres of developable land on all or part of 28 blocks. By 2006, land values had risen 180 percent and major development was underway—construction that continues today. |
| 2002 | 14 | The National Charrette Institute is founded by Bill Lennertz and Steve Coyle. |

Year Idea # Description

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|------|----|---|
| 2003 | 12 | The term “form-based code” appears in print for the first time, referring to a new urban code for Columbia Pike in Arlington, VA |
| 2003 | 7 | The term “Complete Streets” is coined by writer David Goldberg. |
| 2003 | 24 | <i>The New Transit Town</i> , a book edited by Hank Dittmar and Gloria Ohland, is published. |
| 2003 | 24 | Del Mar Station breaks ground in Pasadena, California, designed by Moule and Polyzoides. |
| 2005 | 6 | Donald Shoup’s <i>The High Cost of Free Parking</i> is published. |
| 2005 | 19 | The Katrina Cottage is designed at the Mississippi Renewal Charrette |
| 2005 | 14 | The Mississippi Renewal Charrette, six weeks after hurricane Katrina, is the largest charrette in history. |
| 2007 | 4 | CNU’s Green Council in Alexandria, Virginia, drafts <i>The Canons of Sustainable Architecture and Urbanism</i> |
| 2007 | 4 | <i>Sustainable Urbanism: Urban Design With Nature</i> , a book by Doug Farr, is published |
| 2007 | 4 | CNU, the Green Building Council, and the Natural Resources Defense Council create LEED for Neighborhood Development (LEED-ND), an environmental rating system for urbanism. |
| 2007 | 25 | <i>The Light Imprint Handbook</i> is published. |
| 2007 | 1 | Doug Farr publishes a diagram, The Sustainable Neighborhood Unit, an update of the mixed-use neighborhood based on the 5-minute walk. |
| 2007 | 1 | Walk Score is created (walkscore.com). |
| 2008 | 9 | CNU publishes its first <i>Freeways Without Futures</i> report. |
| 2008 | 2 | <i>Retrofitting Suburbia</i> , a book by Ellen Dunham-Jones and June Williamson, is published. |
| 2008 | 11 | <i>Strong Towns</i> is founded by Charles Marohn. |
| 2009 | 8 | Garrick and Marshall publish a study “Street Network Types and Road Safety,” showing that connected street networks have far lower rates of severe car crashes and mortality. |
| 2009 | 25 | CNU launches Rainwater Initiative and Rainwater-in-Context listserv. |
| 2009 | 10 | New York City closed off several blocks of Broadway around Times Square and placed folding chairs for seating as a test for a later, permanent transformation. |
| 2009 | 12 | Miami 21 is adopted, the first citywide form-based code in a major city. |
| 2009 | 12 | The Codes Study is launched by Placemakers to keep track of form-based codes worldwide. |
| 2010 | 7 | <i>Designing Walkable Urban Thoroughfares: A Context-Sensitive Approach</i> , is published by ITE in cooperation with CNU |
| 2010 | 7 | The remade Lancaster Boulevard opens, immediately generating economic development and becoming the social heart of Lancaster, California. Designed by Moule & Polyzoides. |
| 2010 | 10 | A block is transformed with temporary materials in Oak Cliff, Dallas, and dubbed Build a Better Block. |
| 2010 | 2 | <i>The Sprawl Repair Manual</i> , by Galina Tachieva, is published. |
| 2010 | 11 | Joe Minicozzi and Peter Katz collaborate to examine tax revenue per acre of various land-use and building types in Sarasota, Florida. |
| 2010 | 20 | Choice Neighborhoods program replaces HOPE VI, continuing the use of new urban design principles. |
| 2010 | 18 | Dan Parolek coins the phrase “missing middle” to describe middle density housing types that are not typically built by the housing industry. A diagram that explains the idea is created in 2012. |

Year Idea # Description

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| 2011 | 11 | Joe Minicozzi and Charles Marohn meet at CNU 19 in Madison, Wisconsin. |
| 2012 | 10 | Mike Lydon and Anthony Garcia publish the report <i>Tactical Urbanism, Vol. 1</i> . |
| 2013 | 13 | Ignite High Point charrette in High Point, North Carolina, led by DPZ, articulates the ideas of Lean Urbanism. |
| 2013 | 13 | The Project for Lean Urbanism is launched with the Lean Council in Detroit, Michigan. |
| 2014 | 12 | The 5-page Pocket Code offers the simplest expression of a form-based code. |
| 2015 | 10 | The book <i>Tactical Urbanism: Short-Term Action for Long-Term Change</i> , by Mike Lydon and Anthony Garcia, is published. |
| 2015 | 21 | The Incremental Development Alliance (IDA) is formed. |
| 2015 | 21 | First Small Developer Boot Camp is held by IDA in Duncanville, Texas. |
| 2017 | 6 | Buffalo's Green Code removes minimum parking requirements citywide with a single sentence: "There are no provisions that establish a minimum number of off-street parking spaces for development." Buffalo is one of many cities that are removing parking requirements for part or all of cities. |
| 2017 | 21 | Small Developer/Builders Facebook group reaches 4,000 members. |
| 2018 | 12 | CNU launches The Project for Code Reform, offering multiple paths to adopting a form-based regulations. |

INTRODUCTION

The New Urbanism is a design movement toward complete, compact, connected communities—but it is also a generator of ideas that transform the landscape. Communities are shaped by the movement and flow of ideas, and the New Urbanism has been a rich—maybe the richest—source of innovative thoughts that have directed planning and development in recent decades.

The first Congress for the New Urbanism was held in Alexandria, Virginia, in 1993. A quarter of a century later, CNU members and their collaborators are sailing in a sea of ideas that carry communities forward.

The 25 ideas explored here highlight the ongoing impact of New Urbanism on communities and the built environment. Not all of these ideas were invented by new urbanists, but new urbanists have contributed significantly to them all. These ideas have mostly been developed during the last three decades, and new ones are emerging now.

What makes a Great Idea? First, it is ambitious. The idea seeks to change, on a broad scale, the built environment and the process around which cities and towns are created. Second, a Great Idea is practical. It is having a substantial impact. These ideas are transforming the built environment of the US and beyond.

The necessity for these ideas lies in the shortcomings of many aspects built environment that are a legacy of 20th Century land-use trends and decisions—involving streets and

their networks, transit, the public realm and public spaces, architecture, housing, land development, the separation of uses, the design of urban centers, neighborhoods, cities and regions, public processes, affordability and equity, and more.

New urban ideas were created to reimagine and transform the way that we build our cities and towns and navigate our daily lives.

No single idea can accomplish such a complex, ambitious, and important task. *The Charter of the New Urbanism* lays out the challenge. The Great Ideas focus on implementation and solving problems. They are about walkability, mixed-use, placemaking, and much more. They ultimately reach to the heart of our communities, and therefore our lives.

Experts were interviewed for this publication to shed light of how these ideas have impacted communities and lives. Each idea is one chapter. The chapters are categorized into six groups: Planning, transportation, implementation, architecture, housing, and development. That will make it easier for readers to

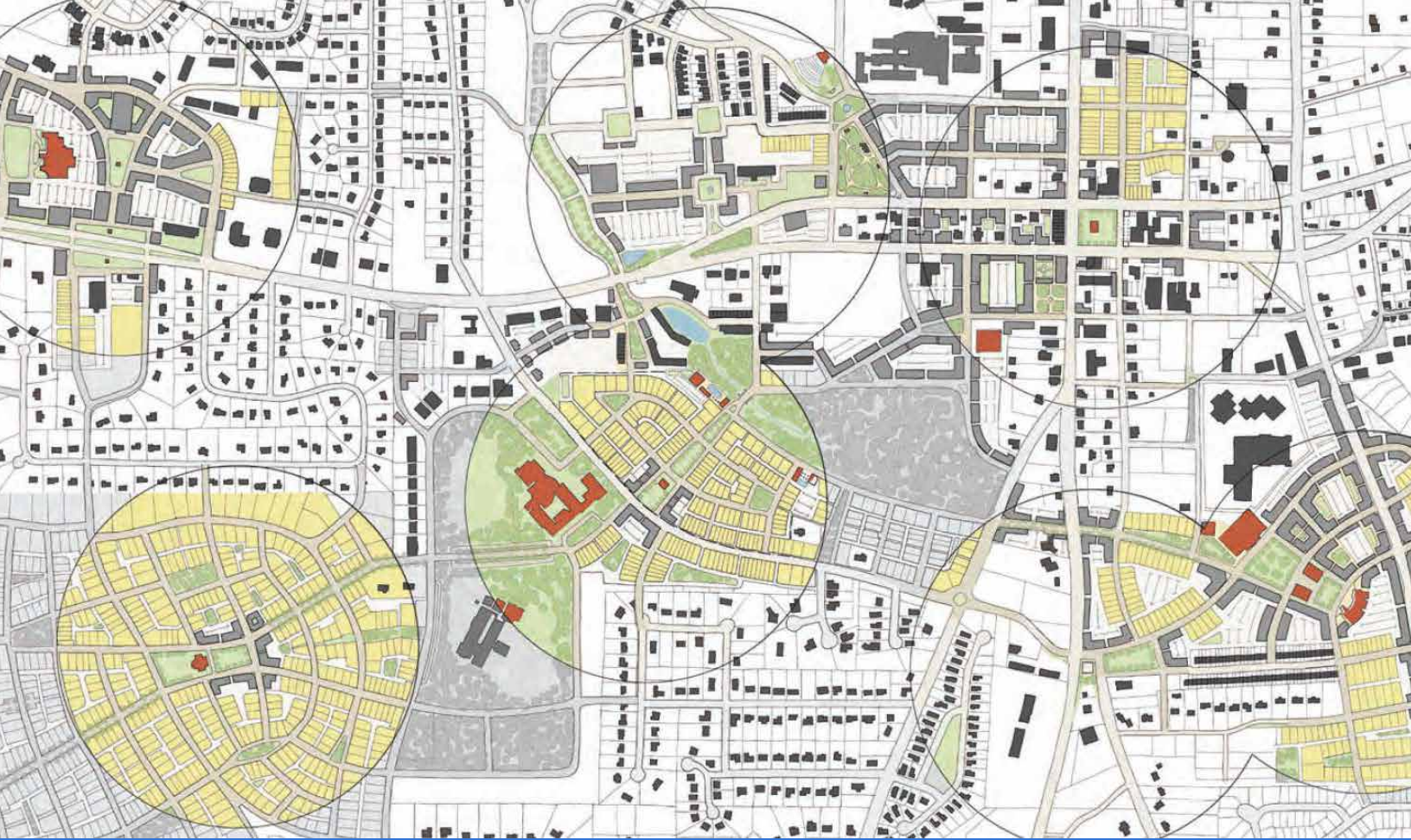
find what they are looking for and understand how ideas relate to one another.

The 25 Great Ideas are focal points for discussion and education. Each chapter was annotated and further resources add to the depth of understanding and conversation. We also offer key points and questions for discussion.

New Urbanism is too big a subject to be swallowed whole. People don't become captured by "The New Urbanism" all at once. They start down that path through one or more Great Ideas. They might see a talk or read an article on "suburban retrofit," "missing middle housing," or "incremental development." As they delve into that idea, they may learn about others, such as rethinking parking requirements, Tactical Urbanism, or the neighborhood model of development built around the "five-minute walk."

One or more of these ideas may resonate and stick. If individuals are captured by one or two Great Ideas, they can make a difference in their communities.

If they are captured by three or four, they begin to become urbanists. At some point they will become aware of the overarching concept of the New Urbanism that ties the ideas together. If they learn about many Great Ideas in-depth, they are likely to be students of cities and placemakers for life. Whether this involves a profession, advocacy, or a special interest, there are few better—and more useful—ways to spend one's time. ♦



Plan by DPZ CoDESIGN

Planning



1. PEDESTRIAN SHED AND THE 5-MINUTE WALK

Photo transformation by Steve Price, Urban Advantage, above.

Elizabeth Plater-Zyberk and Jeff Speck discuss the walkable neighborhood scale and what that means to cities and towns across America.

“Neighborhoods should be compact, pedestrian-friendly, and mixed-use,” and “many activities of daily living should be within walking distance,” according to *The Charter of the New Urbanism*. A quarter century ago this idea was not common planning practice, and new urbanists needed a way to measure a compact neighborhood to organize plans and communicate to the public. The answer was the “pedestrian shed,” a distance that can be covered in five minutes at a normal walking pace—typically shown on a plan as a circle with a quarter-mile radius.¹

If the built environment is appealing and human scale, many people will walk at least five minutes rather than get in a car. The idea is now widely embedded in new urban plans and incorporated into zoning codes. Although the quality of the built environment can expand or shrink the distance people will walk, the

quarter-mile pedestrian shed is a useful measurement for community design, based on the human body.

Both of you co-authored, along with Andres Duany, the book *Suburban Nation*,² which introduced America to the neighborhood and the pedestrian shed. Can you tell me how planning and development have changed as a result of this idea?

Elizabeth Plater-Zyberk: When we first started talking about walking, everybody was saying, “Oh, nobody’s going to walk anywhere.” We knew about the BART (Bay Area Rapid Transit) studies in San Francisco, which had surveyed people and discovered that the 5-minute walk was a reasonable expectation for transit. Peter Calthorpe and others have said a 10-minute or more walk is okay for transit. But when the

new urbanists were honing in on this, it was not contemporary knowledge. We had never heard of the 1929 regional plan for New York or that 5-minute diagram [by Clarence Perry].³ We discovered that much later and it was a kind of confirmation. But I would say these were rediscoveries. Many of the historical experience that we now call on, including maybe even the terminology pedestrian shed, had to be rediscovered because it was lost to most planning and design knowledge.

Jeff Speck: By the time I first started working at DPZ, which was the summer of '87, you guys had incorporated the five-minute-walk into your planning. So by the time of my first encounters with you all, it had been established, and you were aware of the 1929 (Perry) diagram.

Plater-Zyberk: Yes, but the first few years, all of that was being rediscovered. Now, how has it affected the planning since then? People have put that dimension of a five minute walk or some pedestrian shed distance into zoning codes.⁴ You might have less parking required if you are within a certain distance of a transit line or stop. It's always in discussion. Is this a single circle with one node, or is it running along the line of transit? A leader in the talks about pedestrian distance, Walk Score⁵, has emerged. And although it's not changed the world entirely in great geographic measure, it's definitely become part of the overall goals of making better urbanism. And I would say most planning now makes some reference to pedestrian sheds in goals and regulations.

Speck: I'll be even bolder than Lizz and say that this idea, which was first popularized, or most effectively popularized, by Lizz and Andres [Duany], is now one of the foundational concepts in planning. I just want to distinguish between planning theory that is taught in school and how most of America and most of the world is still being built. The planners have figured it out but, of course, the challenge now is the great disconnection between what planners know and what developers are building, which is still mostly wrong.



Do all urbanists agree now on the five-minute walk, or is there disagreement there?

Speck: There might be nitpicking around the edges, but I don't think there are any urbanists or planners who would question a comfortable walking distance measure as a means for structuring community. Would you agree, Lizz?

Plater-Zyberk: I think anybody who's concerned about the scale of urban design and community beyond one building at a time could agree that this is a good goal.

This may be jumping ahead a little bit, but you've mentioned it, Jeff. Why hasn't this had more of an impact on the America that you see as you drive around?

Speck: Well, that's been our discussion for so many years. All the professions that work together to create the American-built environment have certain conventions. And every profession has written into its practices, or at least used to, the organization of the landscape around Euclidean zoning⁶—large areas of single-use with nary a thought to pedestrian access. So it's a huge ocean liner to turn around, and no one expected it would happen quickly.

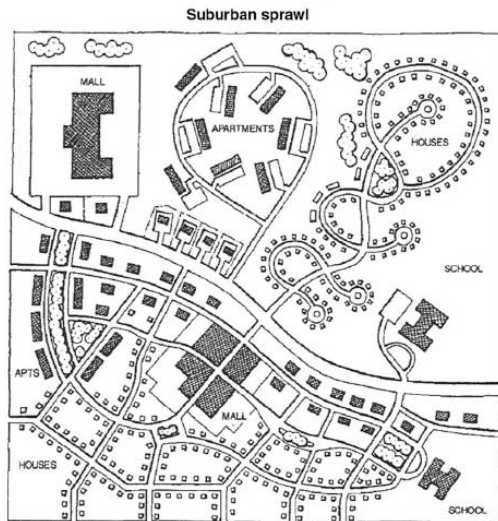
Plater-Zyberk: I would add or maybe stress one component of that, which is the scale of

*Urban planner **Jeff Speck**, upper left, of Speck & Associates, former director of design of the National Endowment for the Arts and author of Walkable City and co-author of Suburban Nation, and urban planner and architect **Elizabeth Plater-Zyberk** of DPZ, co-author of Suburban Nation and former dean of the University of Miami School of Architecture.*

Neighborhood Organization

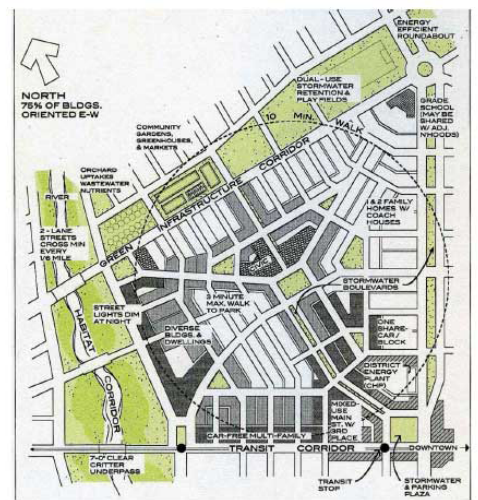


1930



Traditional neighborhood

1980



2008

economic activity that has emerged as a result of the prevalence of automobile mobility—the big box, the number of brands that rely on drive-ins, fast food, and so on. The scale of the economy is really a very difficult counterpoint. That said, I have spent a bit of time in France in recent years and it is interesting to see big box developed on the outskirts of the walkable city. So there is an understanding that there are places where daily life goes on and you can walk to work and school, and then there are areas for trucks and giant roads. It's one or the other, not the mess we have tended to allow in the US.

Speck: We have a development industry that's made principally of people who are either single-family housing developers, multi-family housing developers, retail strip developers, big box developers, office park developers, and the like. And if you give one of them a piece of land, no matter how big the piece of land is, they're going to develop what they know how to do. And to no small measure, it's been the dissection of the development industry into these branches that has made it very hard to get the development industry to start doing mixed-use again.

Plater-Zyberk: You might call it the tyranny of specialization. CNU has talked about specialization and the fact that it generates bigness.

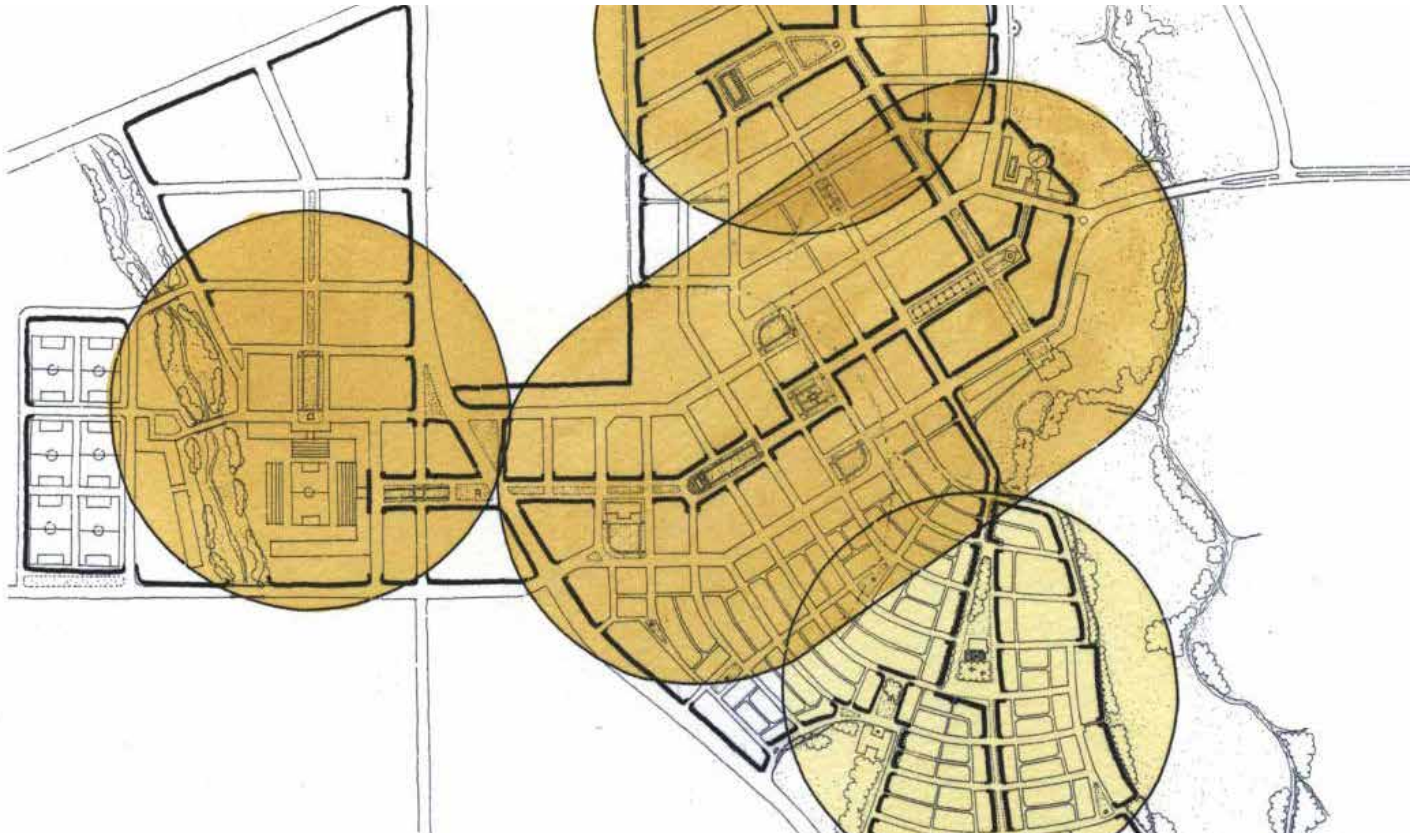
Do you just give up on things like big box stores, or can they be incorporated into the pedestrian shed?

Plater-Zyberk: Well, Saks Fifth Avenue⁹ in New York City is a big box. It's a multi-story big box. They took the whole block. And I think that's one of the best examples of the fact that big box stores used to be part of the city. Market Street in Philadelphia had four department stores, and other stuff in between. I guess New York is pulling them back in, the Walmarts and the Targets.

Speck: Yeah, that's the urban model. Then there's the suburban model which DPZ helped develop, and you see it in play at Kentlands, where you have big boxes that are accessed from the highway in an automotive way, and accessed from the town in a pedestrian way—and you better believe that folks who live in Kentlands¹⁰ are walking to the big boxes on the edge of town. The question is how do you handle the integration of the building into the streetscape that approaches it? And new urbanists have developed ways to do that.

Do you think that people who have the most influence over the built environment, the planning commissioners—the city councils, the developers—do they now understand the concept of a pedestrian shed? Is it

Perry's Neighborhood Unit (above left), the new urbanist idea of traditional neighborhood compared to sprawl (center)⁷, and Doug Farr's updated Sustainable Neighborhood Unit⁸.



something that has sunk in?

Speck: Many planning commissioners, particularly in smaller communities, have no training in planning whatsoever; and many developers have no training in planning whatsoever. To the degree that they've never really studied planning or made an effort to learn best practices. No, they have very little idea about it, but there are, of course, many who do.

Plater-Zyberk: So let's say it's not a household word. But whenever we give *Suburban Nation* to a newly elected person, for instance, they come back and say, "Oh, yeah, I get it." So it's not a rocket-science idea, but it hasn't permeated. And that's primarily because most people don't think about the built environment; they're just victims of it, and they take it the way it comes.

How is this idea used in current planning and how it can be applied most effectively in the future?

Plater-Zyberk: There are two aspects to it. The

pedestrian shed is essentially a dimension or a description of an area that enables pedestrian accessibility. But that's not just measuring dimension in quantity, but quality. How frequent are the intersections? How mixed are the uses? What are you accessing? Is the central focus the destination, or it is where you're starting from—your house, for instance?

Speck: In my experience, it's only the new urbanists who, when confronted with a large area of land, their first step is to start drawing pedestrian sheds as a foundational way of organizing property. When I begin a planning effort, I make that move to lay circles on the acreage, like we did at Cornell,¹¹ outside of Toronto, to create neighborhood units that break the landscape up into constituent parts. And I find that people are really surprised to see that and they say, "Oh, what a great way to organize property." But I honestly don't think that that has permeated the planning culture yet. I don't think this concept of dividing large properties into neighborhoods as a foundational move is practiced that far beyond the new urban circles, no pun intended.

Plater-Zyberk: Now that was a very import-

*A new urban plan organized by neighborhoods identified by five-minute walk circles.
Source: DPZ CoDESIGN*

ant point, Jeff. I think this correlation between pedestrian shed and neighborhood is important because that describes the quality of what's going on inside the pedestrian sheds. I would add that it might be useful to think about it in terms of new places and old places. Jeff's description of laying the circles on the paper is the way a greenfield project might be laid out; you structure it according to neighborhoods that are circumscribed by pedestrian sheds. And there may be a larger town center shed that several neighborhoods aggregate to. Of course, we've always been involved in remaking places too. And when you remake urban places, you often find that there was a pedestrian shed and maybe it's fallen apart. The built environment is deteriorated. But when you look at the infrastructure and the buildings that are there you can rebuild that pretty easily. And then there's suburban sprawl that we built during the last century. You can come in and identify the places where you might be able to retrofit and make a compact pedestrian focus area and the single-family sprawl will remain around it. Very often that's an office park or shopping center or something that's under some coherent ownership that it can be remade. So you could talk about it in terms of new places, pre-existing cities, and then how do you repair the structureless suburbs.

This is basic to the way new urbanists approach planning. Could you talk about some of your current projects and how the pedestrian shed relates to that project and is influencing what's happening there?

Speck: I would say that, as Lizz suggested, when you're working in an existing place you have to respect the existing neighborhood structure. Discovering the underlying neighborhood structure can be eye-opening. I remember when we were looking at Syracuse we found neighborhood structure in some of these inner city neighborhoods that have been undermined and almost obliterated by auto-centric development. And a big part of what we did was to let people know where their neighborhood centers were so that policy could be oriented around understanding

where those centers are.

Plater-Zyberk: DPZ has been working with some hospital systems to help them plan their property. They often own pieces of property outside their main buildings. The Presence Health system in Chicago, for instance, had two close-by hospitals, and everyone got in their cars to go from one to the other. We showed them that the two pedestrian sheds from their front doors intersected, and if they made improvements in the path between them that people really could walk back and forth, and that they could use those parking lots to make a piece of city that would connect them better. Also, two shopping malls in suburban Salt Lake City, Cottonwood¹² and University Mall, were in the midst of a classic suburban vehicular intersection. We showed them how to remake those malls and their surroundings by adding a mix of uses within the pedestrian shed.

It seems incredibly hard for people to get the concept of a pedestrian shed when you are in the suburbs, where everything is on an automobile scale. How do you get people to understand that when you're working in the suburbs?

Plater-Zyberk: This is where the illustrations for new urbanist ideas are so important because people can't visualize it at all. The first drawings that started to convince people to try something new were done by Charles Barrett, bless his heart, he is no longer with us. The kind of charm and hope that those drawings represent are such an important part of what we do. It's not the diagram—that circle with the arrow from the center to an edge. That will never convince anyone. But the beautiful illustrations, the idea that the architecture might be great, that the street will be appealing, the sidewalk will be wide, there will be trees, and you can take your child out by the hand, or walk a dog on your way somewhere, is what tugs at people's hearts.

They can picture themselves within a pedestrian shed, doing something?

Plater-Zyberk: That's exactly right.

Speck: The biggest challenge that we face in the suburbs is that it's not really a pedestrian shed unless it's accessing mixed use. And, for most of us, a town square at the center, perhaps with some sort of civic structure, even if it's nothing more than a barbeque shack, isn't enough to achieve the lifestyle changes that the New Urbanism hopes to provide for humans living in its places, and we always say that, at the bare minimum, you want to have a corner store, and the corner store depends on a certain number of rooftops. I heard once from (planner and retail expert) Bob Gibbs, you've got a thousand homes to make one corner store function. To get that density in a 160-acre pedestrian shed has been the fundamental challenge to New Urbanism.

Plater-Zyberk: If there aren't enough houses for the corner store, then your neighborhood—this pedestrian shed—may join another one. And there may be a kind of congregation of them around a village center or town center that is supported by multiple neighborhoods.

This may seem like a strange question, but as we are speaking, a new president is being inaugurated. So do you have any thoughts on the administration of Donald Trump, federal programs, and whether this relates to planning on the neighborhood scale?

Speck: As someone who worked in the federal government, there's only a limited way in which the federal government has ever exerted much influence on the details of planning. But when it has, like with the Hope VI¹³ program, which is based entirely on urbanist principles, it certainly had a profound impact. You're not going to see those sort of programs under this sort of administration. But more to the point, the latest talk is about abolishing all transit funding which, of course, is going to be entirely disruptive to any notions of walkability.

Nevertheless, the pedestrian shed has survived many eras and planning ideas. It should survive the next four years, don't you think?

Plater-Zyberk: It will survive. Fortunately,

there's so much literature now that the profession will not lose track of it again the way we did in the last century. We've kept it alive in so many ways through building and through literature.

Speck: One of the helpful oversimplifications that I say in my presentations is that the five-minute walk was developed historically. You're getting it from Jericho on, and it was only undermined by the advent of suburbia where we introduced automobile-based zoning. But in fact, if you look at the towns in the early 20th century, that the new urbanists are always pointing at for its successes, such as the Coral Gables, and the Shaker Heights, and Beverly Hills,¹⁴ and all these amazing developments that some refer to as the apex of American planning, none of these really have a five-minute walk pedestrian shed at their core. They have concentrated retail areas and huge areas of residential land. And I think one of the great achievements of New Urbanism is to take the other tremendous intelligence from those plans, the other great techniques that are present in those plans, and combine them with the neighborhood unit, which actually is missing in most of them.

Plater-Zyberk: I like to focus on the things that worked that we can use. Even if you don't have the corner store but if you have something that's defined by its edges and some kind of central place, a neighborhood, even if isn't highly mixed-use, it still gains a sense of community, identity, and the potential of interdependence among a group of people that is beneficial. There's a great deal of hope with regard to the retail component. A new generation of entrepreneurs, in places like Detroit and Miami, are looking for walkable places to [open businesses]—whether it's the coffee shop or the beer joint or a restaurant or a gallery or whatever they're doing. I think there's an ever-growing economy of small business that will look to old city places or to remaking of suburbs. The physical organization of pedestrian sheds in neighborhoods speaks to this generation in the way that setting up a business in a suburban shopping center does not. ♦

NOTES, RESOURCES, DISCUSSION

1. Pedestrian shed and the five-minute walk

Notes

¹See page 8 for a plan with ped-shed circles drawn.

²Published in 2000, *Suburban Nation* was one of the best-selling planning books of the last two decades.

³See page 7 to look at Perry's diagram. The 1929 plan was the first regional plan for New York City, done by the nonprofit Regional Plan Association. For an authoritative review, see *Planning the Great Metropolis* by DA Johnson.

⁴Most form-based codes use the ped-shed as part of their basic structure. See Placemakers "The Codes Study" <https://tinyurl.com/ycj6fkte>.

⁵Walk Score, [walkscore.com](https://www.walkscore.com), was created in 2007, offering a score of 0-100 for walkability of any address in the US. Although Walk Score's methodology is far from perfect, it provides an easy measure of walkability for real estate and research purposes. It was purchased by Redfin, a national real estate brokerage, in 2014.

⁶Euclidean Zoning refers to separated-by-use and housing type zoning that was made legal by a 1926 supreme court decision, *The Village of Euclid, Ohio v. Ambler Realty Co.*

⁷This diagram of suburban sprawl compared to the traditional neighborhood was widely used in the early years of New Urbanism to communicate the difference in walkable versus automobile-oriented development patterns. It was created by DPZ.

⁸Doug Farr's diagram, published in the

book *Sustainable Urbanism*, better incorporated a new urban neighborhood into a town or city. The retail serves several neighborhoods and the larger thoroughfares are (theoretically) tamed.

⁹Saks Fifth Avenue, The full-block, eight-story department store just south of Saint Patrick's cathedral in Manhattan was built in 1924.

¹⁰Kentlands in Gaithersburg, Maryland, is a traditional neighborhood development planned in 1988 by DPZ.

¹¹Cornell is a traditional neighborhood development in Markham, Ontario, Canada, that was begun in 1999, and planned by DPZ.

¹²After years of negotiation, Halliday Utah approved a redevelopment plan to turn the former Cottonwood Mall into a walkable urban center in May of 2018.

¹³Hope VI was a program begun in the 1990s to rebuild the most troubled public housing projects across the US. In 1996, the program adopted new urbanist design criteria. The \$6.1 billion overall program has developed and renovated over 111,000 units, 60,000 of them affordable to public housing tenants, and the rest mixed income. 91,000 units were demolished and 72,000 families displaced, temporarily or permanently.

¹⁴These three cities are among many in the US that were developed as master planned communities by a development company. They were planned in the early 20th Century, a heyday of American planning, just prior to the primary focus on automobile transportation that occurred after World War II.

Additional resources

Book: *Suburban Nation*, 1999, by Andres Duany, Elizabeth Plater-Zyberk, and Jeff Speck.

Document: *The Charter of the New Urbanism*, particularly principles 10-18. <https://tinyurl.com/oaafxes>

Video: Jeff Speck TED talk, <https://www.youtube.com/watch?v=Wai4ub90stQ>

Video: Andres Duany lecture on New Urbanism, <https://www.youtube.com/watch?v=GOSFiK4AvII>

Book: *Walkable City*, Jeff Speck, 2012.

Book: *Town and Town-Making Principles*, Andres Duany and Elizabeth Plater-Zyberk, 1990.

Key points

People use the dimension of a five-minute walk or pedestrian shed in zoning codes (Page 12)

The Pedestrian shed "is now one of the foundational concepts in planning" (Page 12)

All the professions that work together to create the American-built environment have written (at some point) into their practices the organization of the landscape around Euclidean zoning (Page 12)

The pedestrian shed is derived from the Neighborhood Unit and has continued to evolve in new urbanist practice (Page 13)

Big box stores can be incorporated into the pedestrian shed in two ways (Page 13).

The pedestrian shed is a dimension or description of an area that enables pedestrian accessibility, measuring both quantity and quality. (Page 14)

When confronted with a large area of land, new urbanists start drawing pedestrian sheds as a foundational way of organizing property. (Page 14)

Pedestrian sheds can be usefully applied to new and old places. (Page 15)

Planners have been working with hospitals and other institutions to identify pedestrian sheds around their facilities that can be strengthened. (Page 15)

The physical organization of pedestrian sheds is critical to this economy of small business, especially a new generation of entrepreneurs. (Page 16)

Questions

How has the concept of the walkable neighborhood impacted planning and development in the US and beyond?

How can people's understanding of their communities change through the analysis of pedestrian sheds?

How can pedestrian sheds be established in automobile-oriented, single-use suburbs?

How does modern, large-format and retail affect mixed-use centers of neighborhoods and downtowns?

How can mixed-use retail and services knit together and serve multiple neighborhoods?

Is the five-minute walk, the quarter-mile radius, the right measure? Are a half-mile or mile a better metric in some or all circumstances?

What will neighborhoods look like in the future with automated vehicles and other new technologies?



2. BUILDING BETTER SUBURBS THROUGH RETROFIT

Ellen Dunham-Jones and Galina Tachieva discuss the retrofitting of malls, office parks, parking lots, streets, McMansions, campuses, and other aspects of America's suburbs into more diverse, connected, complete communities.

Mashpee Commons in Mashpee, Massachusetts, the nation's first retrofit of a shopping center into town center. Photo by June Williamson

Urbanism is not just about cities. *The Charter of the New Urbanism* calls for “the reconfiguration of sprawling suburbs into communities of real neighborhoods and diverse districts.” That “reconfiguration” has inspired new urbanists and like-minded reformers for three decades, beginning with projects like Mashpee Commons¹ in Mashpee, Massachusetts, where the former parking lots of a shopping center were rebuilt as main streets—see photo above. Suburbs are constantly changing and have vast potential to meet the growing demand for walkable places, a market that cannot be satisfied by traditional cities alone. As millennials age, many will look to find walkable neighborhoods in the suburbs.

Several years ago, CNU launched a suburban retrofit initiative, and lately, it's been re-branded as Build a Better Burb². Can

you tell me a little bit about the history of this, and where CNU's efforts are heading?

Galina Tachieva: In 2008, members and leaders of CNU had several brainstorming meetings to launch the sprawl retrofit initiative. Until that moment many of us had worked on multiple retrofitting projects, but these efforts were not yet organized into a Congress-driven initiative. We started by sharing ideas and developing resources. In the meantime, many projects came out of the ground. And it had soon become obvious that there was a whole movement in this direction—that the suburbs will be the next great frontier for planning and retrofitting. The idea of rebranding the sprawl retrofit name came recently. Not everyone responds well to terms like “sprawl” and “retrofit,” so the CNU Council held in Miami last spring

rebranded the initiative into Build a Better Burb.

So Build a Better Burb is more geared towards the mass market. But what differentiates the communities that are succeeding in reforming their conventional suburban fabric from those that aren't?

Ellen Dunham-Jones: There are several factors. Those that are really successful have a champion—usually someone in the public sector but often a developer. That also means there has to be a lot of political will to invest public money in the infrastructure changes that are necessary. The other thing June Williamson and I have noticed is that the communities where you see a lot of redevelopment tend to have large planning staffs with the capacity to negotiate public-private partnerships. In addition, it really helps, though it's by no means necessary, if they already have a rail or light-rail system. So DC, Denver, Vancouver, San Francisco and more recently, Atlanta, Austin, Phoenix, Dallas,—are places where a lot is happening³. There's all sorts of retrofitting going on in communities that don't have those particular assets, but it tends to take a different format, and it tends to move more slowly.

Tachieva: Urbanizing and retrofitting in the suburban areas is obviously a choice, and Ellen pointed out to the importance of a champion, whether a mayor, or a planning department, or a private entity. And the communities which have been retrofitting are the ones that attract new businesses. There have been good examples already, such as Downtown Doral (Florida).⁴ The City of Doral chose to incorporate and to urbanize intensively. It is an interesting example because they are doing multiple projects—high-density, mixed-use projects to attract businesses. They have decided not to focus on one “silver bullet”, such as a stadium, a park, or something which they will do in one shot, but to retrofit holistically using the elements of a city—streets lined with shops, walkable blocks, civic buildings, well-defined and programmed open spaces—to mix together in a real urban



fabric, not isolated enclaves.

The idea of suburban retrofit began with dead and dying enclosed malls and strip malls. Are the malls still where the action is? And what other property types are emerging as opportunities?

Dunham-Jones: I think the malls have always gotten the most media attention because they're so visible, and most of us have spent time in malls. Right now there are about 200 enclosed malls in various stages of significant redevelopment—63 of those as mixed-use downtowns. Another 136 are being significantly re-inhabited with an entirely different, more community-serving use. These numbers are likely to continue to grow as retail continues to shake out.

But where I'm seeing the most growth now is in retrofits of dying office parks and corporate campuses—such as the Downtown Doral project Galina just mentioned. High-paying jobs are increasingly moving back into cities leaving suburban communities with significantly less tax revenue and out-of-date cubicle farms. About 80 of them currently are planning to infill with mixed use, to re-inhabit the office buildings—either turn them into housing or something else or just completely redevelop them. These are very large properties, and it's going to take a long, long time

Galina Tachieva, left, principal at DPZ Partners and author of *Sprawl Repair Manual*, and **Ellen Dunham-Jones, right,** director of the Urban Design Program and Professor in the Georgia Tech School of Architecture and co-author, with June Williamson, of *Retrofitting Suburbia*.



for them to truly realize urbanism.

Tachieva: I still think that the malls will remain big players in the retrofitting business, for the reason of their location, size, and the opportunity that comes from single ownership.

Another opportunity for suburban retrofits are the suburban campuses. Both educational, the large universities, which are in suburban locations where the students commute because they lack the proper housing nearby; as well as the medical campuses—these are another huge opportunity for the coming decades. With baby boomers aging, they will seek to be near health facilities—and if we embed hospitals and clinics in walkable environments, that’s a win-win. Already healthcare systems have been seeking to do exactly that—to predict and plan for future expansions with mixed-use town centers around their facilities.

You have these single-use suburban places that are being redeveloped. Are these

projects becoming complete communities all at once, or is the transformation more incremental?

Dunham-Jones: Both are happening – it mostly depends on the market. If you can get 50-100 acres—in some of these office parks you’re getting 1,600 acres—the big developers in strong markets are certainly able to put in truly urban, mixed-use, complete communities. But what’s also been happening, very much as a result of the Partnership for Sustainable Communities⁶ under the Obama administration, is that hundreds of corridors throughout the country have now been rezoned to allow for that incremental redevelopment parcel by parcel.

You mentioned the office or industrial park transformations. How do the suburbs escape from that office industrial park mentality and meet the employment needs of the 21st century?

Dunham-Jones: Urbanism is the new amenity.

Belmar in Lakewood, Colorado, the redevelopment of the site of the 1960s Villa Italia Mall.⁵

So many of the office parks are aging now, and the market has moved back into the city. That's where the employees are that they want to hire. So the office parks are trying to bring in some of that walkable mixed use and bring in a main street, bring in more housing, bring in the kind of urbanism that allows them to attract young workers. We're also seeing that a lot of first generation retrofits like Santana Row⁷ initially had a lot of retail and residential, and only a little bit of office. Now that they have the urbanism in place the second and third phases are bringing in millions of square feet of office.

Galina, do you have thoughts on the employment issue in the suburbs?

Tachieva: In the existing vast areas of single-use residential development there may be an opportunity to do something on the smaller scale, especially in the nooks and crannies around highways and interchanges, in the so-called "edgeless city" areas where there are smaller office and warehouse clusters. At least we have seen this desire for creative co-working spaces for entrepreneurs, who live in the suburbs because of the schools, but they are young and creative, and they would like to work in creative, sociable environments. So the smaller-scale, incremental infill and adaptive reuse of existing buildings, whether it's aging office parks or warehouses, offer opportunities for this type of development. The 'solo-preneur' business owners who are doing the work from their homes but often collaborate on projects, would prefer to mingle in comfortable, inexpensive co-working hubs. Ideally the work space will be mixed with some other activities, whether it's food and beverage, a community garden, a market or a civic amenity.

How can the suburbs transform to meet the needs of millennials, and are the millennials themselves transforming the suburbs in their own way?

Dunham-Jones: Most of the suburban retrofits are providing an urban lifestyle for suburban millennials already. But I think what's going

to be interesting to watch is as the millennial moms and dads move into suburban single-family homes and neighborhoods—they're going to bring their smartphones and the sharing economy with them. Uber, already in southern California, has been demo-ing a service that is extremely popular called UberMoms. All it means is that when you select that option, the driver is a mom. It doesn't guarantee safety—but a lot of Southern California moms feel a lot more comfortable sending their kids to soccer practice in an Uber Mom car. UberBike has been demo'd in Miami—it's an Uber that has a bike rack. I think we're going to see a market for more of those kinds of services, more missing middle housing with communal courtyards and social space even in the very traditional single-family home neighborhoods because this is a generation that's going to bring their apps and sociability with them.

And at the other end of the spectrum, we're an aging society. Baby boomers are becoming senior citizens. How do we make the suburbs places where people can age in place comfortably?

Tachieva: This is a challenge. So many residential subdivisions with cul-de-sacs are not comfortable for the aging population. Sooner or later driving becomes difficult and at some point impossible for older people. Aging Baby Boomers would like to remain healthy and active for a long time and some of the retrofits on the larger scale will provide amenities. However, specific groups of the population where assisted living is necessary pose real challenges. The Supportive Living Module is an idea for infill in the form of a traditional two- or three-story building where seniors can receive skilled, community-based assistance. Because the building is small in size, it is easy to manage, and its scale is appropriate for the residential subdivision, providing necessary services in close proximity to community and family.

Dunham-Jones: Wayzata, Minnesota, has just redeveloped a dead mall with senior housing as part of a mixed-use extension

of the main street. It had a waitlist, even before construction. It's allowing seniors to age in their community so that they're near doctors and friends while being better able to participate in everyday activities outside their front door. I also like the Living Streets⁸ project in Maplewood, Minnesota. As part of a watershed program to try to reduce the amount of runoff going into the sewers and lakes, they're narrowing their streets while they put in rain gardens. In the process, they're building new sidewalks. That's a great triple whammy of cleaner water, narrower, safer streets, and sidewalks. In a community of 30,000 people, they've made 80 of their streets more walkable. It's going to take that kind of scale to make our communities easier for people to age in place.

Tachieva: I just wanted to add one more opportunity: the retrofit of the McMansion. There are so many McMansions within suburban subdivisions that are underutilized and can be turned into a kind of the old-style boarding houses, whether they will be student housing or senior housing—when most people become single later in life or they need some kind of help.

Dunham-Jones: Like *The Golden Girls* tv show! We see some of that in Atlanta where intergenerational households, especially immigrant families, love the McMansions.

What are some of the other innovative retrofit ideas that you've seen that you think you'd like to see more of in the suburbs?

Dunham-Jones: I'm very excited about the retrofit innovations I'm seeing in how we deal with water. A developer in Portland has built the nation's largest organic water recycling machine as part of his redevelopment of former parking lots. It's recycling both the gray water and the black water. You can say, "Oh, well it's Portland. They always do the most progressive things." But no, he's doing it because it saved him \$1.5 million in sewer impact fees. ParkMerced outside of San Francisco is a 3,000-plus-unit apartment complex. For over 75 years, every drop of rain-

water has been taken away from the area in sewer pipes. As a result, the aquifer is going dry. The retrofit will more than double the occupancy, while it also removes all those pipes and redesigns the landscape and buildings to recharge the groundwater. Thirdly, it's really great to see how our combined sewer overflow problems are being addressed by replacing dead malls and parking lots with stormwater parks, adding climate change resiliency. We need way more of sprawl to be regreened!

Tachieva: Another innovative retrofit that I see starting to happen is public housing. There is so much public housing that is not located within the urban core, nor along public transportation lines, and usually without any amenities. They present large challenges as people don't have easy access to daily needs. Some recent federal programs encourage the private sector to come in and take over some of those properties for a period of time, fix them and manage them. It's important not to think about only fixing the buildings, but also retrofitting the surrounding context and make the neighborhood more pedestrian-friendly. This is an area where we can help.

What are some of the future challenges facing suburbia that haven't been addressed and we need to start thinking about?

Tachieva: Of course, there are many, starting with its sheer scale. If anybody takes a drive outside of a city and looks carefully, they will be shocked by the over-engineered, gold-plated, yet—in many cases—already crumbling infrastructure that supports sprawl. And it will take a few generations to fix it. However, for us to be successful, we have to look at the roots of sprawl. Levittown changed the pattern of building communities in the United States because William Levitt created a normative product, the auto-dependent suburban enclave, which he could repeat easily. So we have to come up with normative step-by-step tools to retrofit suburbia in the way it was built. ♦

NOTES, RESOURCES, DISCUSSION

2. Building better suburbs through retrofit

Notes

¹Designed by DPZ and built by Cornish Associates over three decades starting in 1988, Mashpee Commons converted a 1960s strip mall into a town center with a dozen urban blocks in Mashpee, Massachusetts.

²See the website Build a Better Burb, buildabetterburb.org/

³Cities that have voted down light rail systems recently, like Nashville, are likely to be stuck, for longer, with fully automobile-oriented hinterlands.

⁴Downtown Doral converts a 1960s office park into what *The Miami Herald* calls “a meticulously planned town-within-a-city” that includes main-street shops and dining, a supermarket, school, offices, a park and green spaces, a city hall, and various kinds of residences.

⁵See History of Belmar, a marketing video with good information on this major suburban retrofit. www.youtube.com/watch?v=FzJRUMO43Tk

⁶For more on the Partnership for Sustainable Communities, see tinyurl.com/ybya7o2s

⁷Santana Row is a town center in San Jose, California. www.santanarow.com

⁸For more on the Livable Street project in Maplewood, see tinyurl.com/ybqdyq6w.

Additional resources

Video, Ellen Dunham-Jones TED talk, tinyurl.com/y8emr4yv

Book, *Retrofitting Suburbia: Urban Design Solutions for Redesigning Sub-*

urbs, 2008, June Williamson and Ellen Dunham-Jones

Book, *The Sprawl Repair Manual*, 2010, Galina Tachieva

Article, “Postwar neighborhoods are revitalization opportunities,” *Public Square*, tinyurl.com/y8eopc62

Key points

... the suburbs will be the next great frontier for planning and retrofitting (Page 19)

Successful retrofits have a champion—usually someone in the public sector but often a developer (Page 20)

About 200 enclosed malls are now in various stages of redevelopment—63 of those as mixed-use downtowns. Another 136 are being significantly re-inhabited with a more community-serving use. These numbers will grow (Page 20)

High-paying jobs are moving back into cities leaving suburban communities with significantly less tax revenue and out-of-date cubicle farms. About 80 of them currently are planning to infill with mixed use (Pages 20 and 21)

As Baby Boomers age, they will seek to be near health facilities. If we embed hospitals and clinics in walkable environments, that’s a win-win (Page 21)

Office parks are bringing in walkable mixed use (Page 22)

Adaptive reuse of existing buildings, whether it’s aging office parks or warehouses, offers opportunities for coworking space in this suburbs (Page 22)

Many isolated residential subdivisions are not comfortable for the aging population. Sooner or later driving becomes difficult for older people (Page 22)

McMansions are underutilized and could be turned into old-style boarding houses (Page 23)

Combined sewer overflow problems can be addressed by replacing dead malls and parking lots with stormwater parks, adding climate resiliency (Page 23)

Public housing in the suburbs presents challenges as residents don’t have easy access to transit and daily needs (Page 23)

William Levitt created a normative product, the auto-dependent suburban enclave, which he could repeat easily. So we have to come up with normative step-by-step tools to retrofit (Page 23)

Questions

What are the best arguments for and against suburbs be retrofit?

What are the most promising suburban retrofit opportunities?

As big box stores and malls die, how should they be redeveloped?

What are the biggest barriers to suburban retrofit and how can they be overcome?

Do you think people are starting to see the suburbs differently, and why?

What are the suburbs that are most likely to thrive in the future?

What are the suburbs’ greatest asset, and how is this likely to shape their future?



3. THE RURAL-TO-URBAN TRANSECT

Transect zones in and around Ithaca, New York.

Andres Duany and Sandy Sorlien discuss the ordering system of traditional settlements—the rural-to-urban Transect.

The rural-to-urban Transect is a system that places all of the elements of the built environment in useful order, from most rural to most urban. For example, a street is more urban than a road, a curb more urban than a swale, a brick wall more urban than a wooden one, and greater density is more urban than less density. If all of the built elements are in sync, the place can be described as “immersive.” The elements are symbiotic.

Naturalists use the transect concept to describe the characteristics of ecosystems and the transition from one ecosystem to another. Andres Duany and other urbanists applied this concept to human settlements, and since about 2000¹ this idea has permeated the thinking of new urbanists. The rural-to-urban Transect is divided into six zones: natural (T1), rural (T2), sub-urban (T3), general urban (T4), center (T5), and core (T6). The remaining category, Special District, applies to parts of the built environment with specialty uses that do not fit into neighborhoods.

The Transect has been especially useful as a framework to code complete communities. The SmartCode, an open-source, widely used form-based code,² is based on the Transect and was first published in 2003.

How does the Transect fit the built environment into the natural environment and why is this important?

Sorlien: I think it’s more of a continuum, a series of different habitats that go from rural to urban or less urban to more urban. In New Urbanism, the community, the neighborhood, the town, the village, and the urban neighborhood are each composed from the three or four more urban Transect zones, and then rural zones T2 and T1 would be more or less outside the community.

Duany: What you said is very intriguing—which is that there is a place for nature in urbanism, and urbanism in nature. The same mechanism, the Transect, is used to assess both the natural and the man-made, which means that nature can be understood by urbanists, and urbanism by environmentalists.

To me, the Transect puts the built environment in a context of the natural environment so it’s understood as a continuum and not something that’s completely apart.

Duany: Well, let me put it this way. I think it’s more blended than that. They both consist of habitats, and both habitats have a series of elements that symbiotically exist in each zone

with different intensities. So it's not one or the other. The key is that it's the same methodology used to analyze the whole spectrum of the natural and the built world.

It allows for the best of nature and the best of urbanism, but all the places in between still exist, and so the codes exist in a way to compensate for whatever deficiency there is. Let's say Manhattan is perfect and Yellowstone is perfect. But there's a lot of stuff in between, and the codes adjudicate all the different mixtures and intensities.

Sorlien: It's a matter of scale as well. There may be a city that takes up a large area of land without pure nature anywhere nearby, or there may be a small village where pure nature is more or less just outside the village.

Environmentalists may prefer T1 [natural], and the urbanists T6 [urban core], and the codes can mediate what is in between.

Duany: For example, nature in its pure form has a lot of natural diversity. T6 has a lot of cultural diversity or social diversity, and then the stuff in between mixes the diversity of both. But the common currency is diversity.

Sorlien: But we have to be careful not to assign complete diversity to each individual zone. That works for the natural zone, which usually takes up a large area of land, perhaps hundreds of miles, but the urban code is not like that. When you zoom into the fine grain, you find neighborhood general, urban center, and urban core mixed in the large downtown.

Duany: But that's once it's coded. The ingredient is the Transect. Then the code is what the chef does with it to balance it out and make it work better. But you're right in the sense that things are always off-kilter. In fact, the problem with our cities and our nature is that everything tends toward monoculture and so that's why we intervene, to keep it diverse.

Sorlien: That's really interesting. I've never heard that or thought of it that way. Do you think the automobile informs this trend to-



ward monoculture?

Duany: The automobile has permitted the dispersion into monocultures. Before it, everybody needed everything else nearby, particularly employment. Now, take Texas for instance. The rich can live on the beautiful land with oaks, but their gardeners live far away in the lowland with the mosquitoes. On the highways in between, the retail gathers there. The automobile allows for these sorts of aggregations.

But isn't that about policy too? We have coded all across America for these monocultural zones. I don't know that the automobile would have done that on its own.

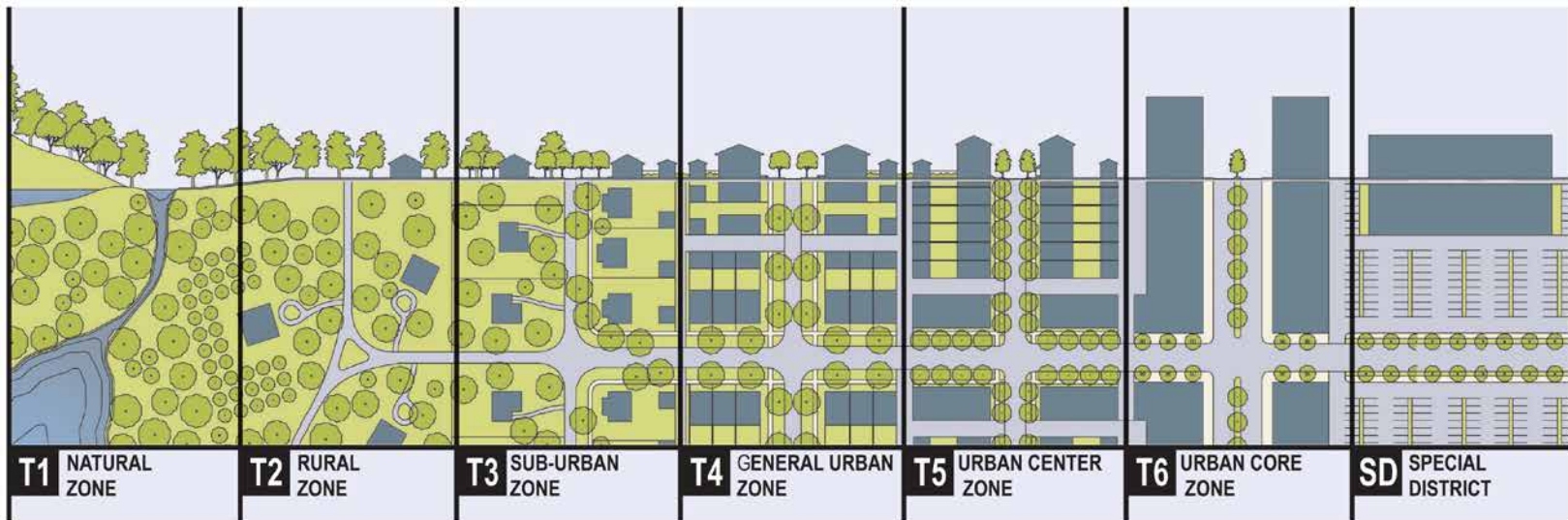
Duany: Zoning is so easy to do because it supports the tendency toward monoculture—that's why people don't fight it. Zoning is not the cause here, but an effect.

You both described Transect zones as habitat zones. What does that mean?

Duany: Originally, the transect was an environmental methodology to describe changes in habitat over a gradient. The New Urbanism brought this methodology into the city, into urbanism, and made it all compatible with the environmental transect.

Sorlien: It's important to note that a transect, small T, not the New Urbanist's rural-to-urban Transect, is simply a cut or a path through the environment of any length. It could be a whole continent. It could be just a few feet. So it allows for sampling to analyze the compo-

Sandy Sorlien, managing editor of DPZ's *SmartCode* and expert in Transect-based coding, and **Andres Duany**, principal of DPZ Partners, author of *Suburban Nation*, one of the founders of the *Congress for the New Urbanism*, and the originator of the rural-to-urban Transect.



nents of that particular part of a habitat. We do the same thing with the synoptic survey³ method that samples the best parts of a community in order to analyze its DNA and code for more of it. In that way, it is similar to how biologists would use a transect.

But people are not used to hearing about habitat zones for humans. They may think of it in terms of a lizard or a giraffe but they don't necessarily think of humans as inhabiting a zone. Could you elaborate on that a little bit?

Duany: I would disagree. The word 'habitat' has been used for a long time to describe human settlement, since the 1950s, most prominently by the United Nations Habitat program.

Sorlien: There's similarity between nature and urbanism if both are considered habitats, particularly with regards to overlap. A diagram that draws a natural habitat as transect, maybe it includes ocean, the beach, the first set of dunes, etc. All of these overlap and are continuous. There's no hard line. I think sometimes that the DPZ diagram of the Transect (see above) makes people think that the habitats differ radically from each other in a mechanized and unnatural way. But in fact, in best practices, we code overlaps.

Duany: Every other Transect zone, T2, T4, and T6, are actually transition zones. They're what in environmentalism is called an ecotone, the overlap of two ecozones. For example, T4 is a combination of T3 and T5.

And T2 is a piece of nature that's actually been slightly urbanized. It's also in transition. So the six zones of the Transect include both ecotones and ecozones in exact parallel to how nature actually overlaps. As an aside, in nature—the richness is always at those overlapping edges. The rest is close to monoculture.

How does the Transect help us to understand the diversity and variety of urbanism?

Duany: First of all, it breaks down the edges of the specialties. Depending how you count them, there are currently five major specialties: traffic engineering, infrastructure, landscaping, architecture, and urban planning. But they don't talk to each other. And then there are the minor specialties, like the people who design street lights and the people who design the drainage and so forth. They're not talking to each other. For each specialty, instead of giving them one setting or two settings, we give them a total of six settings. What is the most urban manifestation of your specialty? What is the most natural or rural manifestation? Then there are the four in between. As a final product, the SmartCode blends these different specialties together in each of the six settings so they don't even have to talk to each other.

Sorlien: Sometimes we hear complaints that the Transect is too reductive and restrictive. But in fact, it's a system that's able to be plugged into zoning. It's not reductive. It, in fact, expands the choices.

A version of the original Transect diagram, with six successional zones from nature to urban core, with special district. By DPZ CoDESIGN.

MIAMI



28

A TRANSECT OF FENCES

Williamsburg Va.



T1



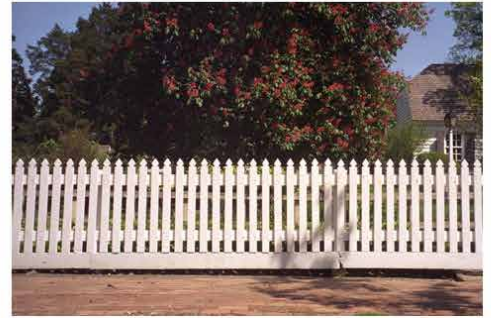
T1



T1-T2



T2-T3



T3-T4



T3-T4



T4-T5-T6



T4-T5-T6

neighborhood by neighborhood. What happened was that one neighborhood would do it, and then another would observe and want the same pattern, so they followed suit.

Duany: Even if they were to code it out, suburbia continues to exist, and it continuously needs to be mapped and administered so you can't get rid of the other code entirely because you need to administer the rest of it where that stuff already exists. You really can't throw it out even if you wanted to.

Sorlien: Unless it was very urban, like Miami.

How does the Transect help communities analyze what is right and wrong about new development?

Sorlien: I use it that way all the time. My experience primarily comes from traveling

through traditional towns. In old urbanism, the Transect is there. It's everywhere where the community evolved according to the capabilities and limitations of the human body before the car. These places still exist, and the model helps you identify them and see what's different from place to place, region to region, country to country.

Duany: And support them—not obliterate them inadvertently.

Sorlien: So the model that DPZ put together gives analysts something to push against, to see what's different, to see what's really local. On the ground, traditional pre-automobile patterns require community. Not to say that all post-automobile is bad and that all pre-automobile is good, but the Transect helps you understand context and walkability. And walkability is the one mode of transportation

The Transect zone strongly affects details like fences and walls. Source: Center for Applied Transect Studies

that we're always going to have, no matter what changes.

Can you analyze the best of what has been built and achieve those qualities in new development?

Duany: People are always trying to emulate something before. That's the radical part. They say "R4. We know what that looks like. It's a house with a certain setback." Emulation is built into the existing system—the SmartCode allows you to emulate qualities beyond numbers. Zoning is all about numbers while the Transect is all about physical manifestations. And so the Transect is much more believable.

Sorlien: Lately, I've worked with local citizens who have been helping write an overlay. Often with new developments, they get the sense that these developments don't fit the location. The Transect is a great way to test a context so that there's a feeling that it's immersive. Regular citizens get the idea of the individual buildings supporting an immersive environment, and that's a habitat-based, Transect-based idea.

Duany: Another word is symbiotic, in which everything goes with everything else.

Let me ask you about neighborhood character because that is sometimes a code for NIMBY-ism. So what does the Transect say about neighborhood character and why is it important?

Duany: The Transect is the basis of the form-based code and it's a big mistake to think they're different. So what you put inside the building doesn't matter. You can put six apartments in something that looks like a mansion. But if it's compatible with its surrounding, you avoid NIMBY activism. If you go to Rosemary Beach, you will see six-pack apartment buildings immediately adjacent to medium-sized houses—but because they share the same syntax and the same approximate size, no one has any problem with it.

Sorlien: The community unit is sometimes

ignored in discussions about the Transect. Since transect zones are fine-grained, you might get two, three, or four of them within a pedestrian shed, or community unit otherwise known as a neighborhood. Oftentimes NIMBY activism is code for no more density. Using a pedestrian shed to show different habitats really satisfies NIMBYs because they can still have their sub-urban block, for example, or their neighborhood general. They don't have to live in an urban center. We make the mistake sometimes of talking about mixed-use communities, which makes it sound like the entire community will be mixed-use to the extent that it'll be tavern, house, tavern, house. Transect planning doesn't do this. It's much more fine-grained than that. It creates several habitats within a neighborhood.

Duany: The SmartCode is very finely minced to allow these variations. When somebody talks of neighborhood character, it is completely unrelated to the SmartCode. In fact, the SmartCode ensures diversity. It administers diversity. If you don't have a code, the default setting is a series of monocultures.

Sorlien: Yeah, but diversity scares some NIMBYs too. One way to present this once again is through the concept of habitats. You have your own habitat. The key is that you can walk to other habitats. The diversity happens in the urban center zone, in the town square. It doesn't have to come in on your block.

Duany: It doesn't transition on your street. Your street is the same on both sides.

Sorlien: It could have a mix. My street is classic T4: singles, twins, rowhouses. We have young and old neighbors, people with and without cars, the whole thing. So it can be, but it doesn't have to be.

Duany: Everybody loves that once they see it. That's why neighborhood general is everybody's favorite place once they see it. If they don't see it, or they hear about it, they are terrified.

Can Transect thinking be adapted to


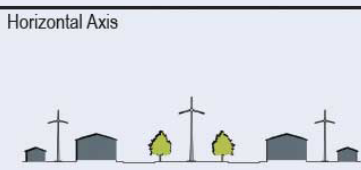
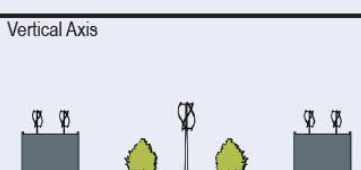
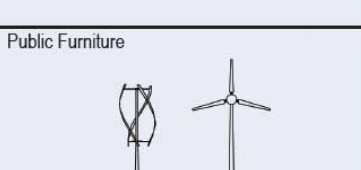
designing high-tech aspects of the built environment like transportation technology—loading and parking areas for Uber, and Lyft, and self-driving cars? Can Transect thinking link to renewable energy, sustainable design, those sorts of things?

Duany: There are SmartCode modules for everything written by the specialists. In fact, the energy module was very expensive to write. It was written by Doug Farr, and it is very good. The thing about the SmartCode is it isn't just a resume of a book. It is actually operational. It's a code that brings about physical results. It's actually everything you need to know in urbanism. It's the great textbook in a distinct way. The problem is that everybody's running around trying to reinvent the wheel, and not only are they trying to do that in academia and in the constant churning of modernist schools, but there is a kind of urbanist now that strives to start from the beginning, even within the CNU. The Transect covers not all the possibilities - there's a lot of idiosyncratic ones - but certainly most of the possibilities. If you want to calibrate an idiosyncratic one, you can calibrate it. It's just that most people want something a little more normal so it tends to not emerge.

Sorlien: Yeah, we don't have self-driving car facilities. We have bicycle facilities, but that's something to look forward and see if that could be handled through the Transect.

Duany: We could do that with a module. One other thing about the Transect is that we've been thinking about the range from most urban to most rural, but it can also range according to the architectural syntax, for example the color of your house, or the type of eave you have, all the way to the region, which is really extraordinary. The Transect provides nesting. It's a nesting system at every level, so you can create a building and have its syntax and style be derived from its location on the Transect instead of the whims of the architect wants. I think that's underestimated. Its concerns range from the smallest to the very largest.

Are there interesting and innovative

| | T1 | T2 | T3 | T4 | T5 | T6 | SD |
|--|----|----|----|----|----|----|----|
| Wind Farm  | | | | | | | |
| Horizontal Axis  | | | | | | | |
| Vertical Axis  | | | | | | | |
| Public Furniture  | | | | | | | |

current projects you can talk a little bit about that makes use of Transect thinking?

Duany: I think dealing with energy, hydrology, and agriculture will create the most exotic and interesting Transect-based projects of the future. The agrarian system, ways to grow food, is a very good example of something that's exciting and is actually taking off more and more. We're getting to the point now that people want to design agrarian communities on a Transect scale.

Sorlien: On the issue of water, I'm now working for the Philadelphia Water Department as a contractor. Part of my job involves touring green stormwater infrastructure projects all over the city. A lot of them are in civic spaces that are in tune with the Transect, that is to say, the design of a civic space is less urban or more urban. And many of these projects end up being applied at the community scale, not the lot scale, but sometimes it's impossible, especially in higher T zones. I think Transect thinking is really important with regard to civic

The first Smart Code module on renewable resources, by Jaime Correa, guides the placement of wind energy technology by Transect zone.

spaces and how stormwater management systems function within them.

Duany: For example, there are two squares in the Pearl District in Portland,⁵ one of which is absolutely full of people, and it has different kinds of paving from water pavement, to wood pavements, to stone pavements. And then there's one a block away, which is actually done with native species, and it drains perfectly in the manner of Landscape Urbanism. But because it is all grass as if you were somewhere on the prairie, nobody can use it. I went and sat in it, and I was practically arrested, because I was crushing the grass. It's obviously wrong for an urban area that has 10-story buildings all around it. That place is for people, not for grasses. ♦

NOTES, RESOURCES, DISCUSSION

3. The rural-to-urban Transect

Notes

¹ *New Urban News*, the primary trade publication early in the New Urbanism trend, first reported on the urban-rural Transect in September of 2000.

² See Chapter 12 on form-based codes, most of which use the urban-rural Transect as an organizing framework.

³ A synoptic survey is a method of analyzing streets and neighborhoods in a community to measure and calibrate Transect zones for a form-based code. Each community has Transect zones with slightly different characteristics. A synoptic survey is designed to discover and measure these differences.

⁴ *A Pattern Language* by Christopher Alexander is one of the best read and influential architectural books of the last 100 years.

⁵ The Pearl District is one of the largest and finest new urban development areas in a major city, served by streetcar just north of downtown Portland, Oregon.

Additional resources

Website, Center for Applied Transect Studies, transect.org

Video, CNU session, *The Misunderstood Transect*, www.youtube.com/watch?v=2cjcS9Ec8Zo

Article, Charles Bohl and Elizabeth Plater-Zyberk, *Places Magazine*, Building Communities Across the Rural-to-Urban Transect, 2006, escholarship.org/uc/item/1zt6g0sr

Article, the first written on the Transect, September 2000 *New Urban News* on-

line (scroll down the page) tinyurl.com/yb8jrooq

Key points

The Transect has been especially useful as a framework to code complete communities. The SmartCode, an open-source, widely used form-based code, is based on the Transect (Page 25)

There is a place for nature and urbanism, and urbanism and nature. The Transect assesses both, which means that nature can be understood by urbanists, and urbanism by environmentalists (Page 25)

Nature in its pure form is very diverse. Downtowns have a lot of cultural and social diversity, and then the stuff in between mixes the diversity of both. But the common currency is diversity (Page 26)

Originally, the transect was an environmental methodology. The New Urbanism brought this methodology into the city (Page 26)

Each Transect zone overlaps one another. There's no hard line. In best practices, we code overlaps (Page 27)

There are five major specialties: traffic engineering, infrastructure, landscaping, architecture, and urban planning—But they don't talk to each other. The Transect offers a common language (Page 27)

The Transect is not reductive. It expands the choices (Pages 27 and 28)

There is no other structure that so easily plugs into the existing regulatory system. The SmartCode isn't just one more beautiful book. It's actually a legal document (Page 28)

The Transect can be found throughout history. It's everywhere where communities evolved according to the capabilities and limitations of the human body before the car (Page 29)

The Transect helps one understand context and walkability—walking is the one mode of transportation that we're always going to have (Pages 29 and 30)

The Transect is a great way to create a context that feels immersive (Page 30)

Questions

How does the Transect help urbanists to understand nature, and environmentalists to understand cities and towns?

How does the Transect “adjudicate” the different intensities and mixtures of urbanism?

How does the Transect promote “immersive environments?”

To what extent is diversity important to the Transect and vice-versa?

Why is the Transect a useful idea for planners, and why are most form-based codes organized around it?

Does the automobile-oriented environment tend toward monoculture, and how can the Transect be used as a force against that monoculture?

Because the Transect allows all kinds of urban environment, including sub-urban, to what extent does it satisfy NIMBY (Not in my back yard) activists?

To what extent is the Transect misunderstood?



4. SUSTAINABLE URBANISM

Doug Farr and Jessica Millman discuss sustainability and the New Urbanism, and how the trend toward complete communities is shaping environmentalism.

Sustainability has been woven into the fabric of New Urbanism since the beginning. *The Charter of the New Urbanism's* first paragraph connects “environmental deterioration,” and “loss of agricultural lands and wilderness,” with “the spread of placeless sprawl, increasing separation by race and income,” and “the erosion of society’s built heritage.” Unlike mainstream environmentalism, which focused more on natural areas, wilderness, and industrial pollution, the New Urbanism defined environmental protection in terms of an “interrelated community-building challenge.”

Sustainability integrates many disciplines—and likewise New Urbanism is fundamentally about breaking down silos. Sustainable Urbanism shares this multidisciplinary approach. In addition to good design, this idea calls out

for strong regional planning (see Chapter 5) to determine optimal locations for development.

Sustainability and environmentalism have been important threads woven through the New Urbanism from the beginning. But many new urbanists are not primarily environmentalists. How deep and important is the sustainability aspect to the New Urbanism?

Doug Farr: New urbanists are humanists first, and environmentalists second, maybe they’re on par. But, we’re a humanist movement that values people, and we value all the good things about people: diversity, attending to equity, all those kinds of things. And it would be hard to be a humanist and not also be an environmentalist, because we rely on

Uptown Circle, Normal, Illinois. Photo Credit: Scott Shigley

this planet to get stuff done. So, you're right, it's been there from day one. It's in the Charter (see Chapter 17). It's in the Transect (see Chapter 3). Many of the founders and early new urbanists, and I'll name the ones that I point to as basically green building people that shifted over: Peter Calthorpe, Doug Kelbaugh, Ed Marzia. So, there's been a lot of crossover but we also weave a lot of threads together because there's folks that are just traditional town planning folks. There's architecture folk, urban designers and so on that don't have a strongly imprinted sustainability DNA professionally. So, while we are a big tent, all are welcome. And so for me, sustainable urbanism was always this sort of grand unification which was, how can we paint a little picture so that new urbanists understand that their contribution and green building folk and all the others, the Natural Resource Defense Council (NRDC),¹ and all of our friends, that as they're working towards their core work they're also recognizing and supporting the work of others.

Jessica Millman: Until the new urbanists recognize the importance of location, on par with design within a particular location, I think you're going to struggle from the deep sustainability standpoint. And this was something that came up over and over again, as Doug knows, through our work, but I think it's still out there and, again, not to trivialize everything that has been done, but until there is a full embracing of the importance of location and the recognition that some locations that are targeted for new urbanist development are, in fact, sprawling locations, I think that the movement's acceptance or adoption of sustainability as a fundamental principle is in question.

Farr: That's provocative. We agree on that and there is a kind of counterpoint, which I'm really obsessed with right now which is—there's no group other than the CNU that really owns codes, and knows how to write a good code, and what's a bad code, and what's a walkable code. So I'm going to push back on Jessica to say this, which is yes, the preferred environmental locations are transit served,



and higher density, and walkable, compact, and complex, and urban, all those kinds of things, totally true. And, then, there's the rest of the country that's still grinding out new cul-de-sac subdivisions in 2017 and they don't go away. Ellen Dunham-Jones estimates that maybe a half, maybe 1 percent of all sprawl has been retrofitted. Trivial numbers. Once you subdivide land badly, and the blocks are too big, and everything's a cul-de-sac, there's no calling it back. So, whose job is that? Who's on that?

Wasn't Manhattan a greenfield development at some point? – Philadelphia, Seattle, San Francisco, all greenfield developments at one point? So, how can you determine there should never be a place that grows into a settlement at another location, and say this is a wrong location?

Millman: We are so much smarter about how we grow and develop these days, and we have so much more knowledge about the effects of locational decision making, and given the climate that we are in, and the fact that we are facing down a very real climate change, how can we not take all of that information that we know today and apply it in a smarter more intelligent way in terms of our new locations? I just think that until we have a handle on really retrofitting all of that sprawl, why should we encourage the development of new spaces in far-flung places? I think Doug's response is extremely important and very smart. But I think that, again, from an environmentalist standpoint, location is really important.

Jessica Millman, a urban planner with Agora Group in Skaneateles, New York, who provides environmental services and is an expert in smart growth and green building standards, and **Doug Farr**, architect and urban designer with Farr Associates in Chicago and author of *Sustainable Urbanism: Urban Design With Nature* and the book *Sustainable Nation*.

How can we resolve this? Because as Doug alluded to, some people will say, “there is this other development that’s going on. If I make it better so it could be retrofitted with transit some day, isn’t that good and a worth goal as well?” How do you resolve the inherent conflict between location and form?

Millman: I have no problem with work being done along that spectrum. None whatsoever. I am not judging the work of someone that’s doing a great, well-designed place somewhere else. But I’m not going to herald it. I’m not going to celebrate it. I’m going to suggest that it’s better than the norm, but I’m not going to use it as a model for how we should be growing and developing in the future. My model is more aspirational perhaps, but also based on having location ingrained as a part of the calculus on where to grow and develop.

So what is your model? What projects would you tout?

Millman: My ultimate projects are, or my ultimate place is urban infill development on a brownfield site. To me, that’s pretty much the best because you’re taking a site that’s already fouled up and it’s already in an urban location. Hopefully proximate to infrastructure, maybe even has some infrastructure in place already. That to me is pretty important.

Farr: The CNU is what we all recognize to be a community of practice. We’re bringing our stuff and we’re debating it and fighting about it and that’s what makes us a community of pride. The members of the group have to care about their standing. That is to say they want to be recognized as members in good standing of this movement. To me, LEED-ND² (LEED for Neighborhood Development, which was created for the US Green Building Council with help of CNU and NRDC) was yet another marker of doing well and receiving recognition from the community of practice.

Now that LEED-ND was mentioned, which you were both involved in that effort, how successful do you think LEED-ND was, and what is the impact that it’s having now

and in the future?

Millman: So to be honest, LEED-ND has not delivered what I thought it would. I felt that we were building a tool that would really transform the marketplace. That said, I think that its power has actually been found in the comprehensive nature of it. It is the place to go if you are looking for the best in sustainable development in building best practices. There is no other tool out there that has particularly and concisely defined what neighborhood sustainable development is. It’s a tool to help community development organizations and people that are struggling to convince their neighbors to bring in these new types of development, or to think about transit-oriented development, or walkability and bringing in paths and trails, and on and on. It hasn’t had this enormous transformative effect, but it’s still powerful and extremely useful.

Farr: I’m not quite sure what I thought would happen, but certainly launching into the recession, the whole thing wasn’t the scenario I thought. But here’s where I would cite its impact. It changed the conversation on sustainability in other rooms across the country completely. USGBC, BREEAM in the UK, and LEED, all of these rated the world building by building. And then suddenly within two years [of LEED-ND], they all had place-based standards. And so that was a pioneering thing, and it changed the conversation today. I want to be sustainable. I want to make a difference. I want to change things. What’s the scale of intervention? And suddenly it was the building and/or the community, ideally both.

Millman: LEED-ND changed the conversation at the US Green Building Council, and that is extraordinarily powerful. Now all the rating systems have a locational component to them was huge. They actually have things like alternative transportation and things that were just, sort of, given in our system, and that we fought to even have in LEED-ND, are now pieces of other rating systems. And that should not be undervalued.

Has the New Urbanism hit a tipping point,

and how do we know if it has hit a tipping point? And what would that mean for sustainability of the built environment?

Farr: I do think we're at a tipping point in the sense that I don't want to come back to CNU 50 and say, "Yeah, sprawl is still going on all across America. We're still doing artisanal code in very refined places that pay high fees and the world is kind of burning." So I would like to figure out how we can work with our affiliates and our teams to tackle a bigger agenda than we have.

Millman: I would say that I have a hard time answering it because a tipping point to me depends on the ultimate goal. If one of the key goals of the new urbanist movement is gathering people together to talk and mesh in this community of practice, then absolutely we're at a tipping point and I think we've been there for awhile. If in fact the goal was no more conventional, cul-de-sac subdivisions, then no, we've been an abject failure.

Farr: What did you mean by tipping point?

I meant a meaningful change in the way that America produces the built environment, the land development, planning and development practices in America, and whether the Charter of the New Urbanism has had a meaningful and broad impact on those practices to the extent that changes in the built environment would have an impact on sustainability. That to me would be a tipping point.

Farr: We are totally not there. I agree with Jessica.

So how did new urbanist initiatives like zoning code reform relate to sustainability? If this is about the future of the planet, what should the goal be for, say, zoning code reform?

Millman: Just because we haven't reached the tipping point yet doesn't mean that the movement and the work of its practitioners isn't worthy of a celebration and worthy of

emulation. That's really important. This a very difficult problem to resolve and it doesn't get solved within a couple of decades, it's going to take longer. So in terms of managing and setting expectations, it was never my expectation that it was just going to be a few more years and everything was going to be fine.

Doug, you mentioned artisanal zoning codes, zoning code reform, or form-based codes. Sustainability issues are larger issues, it's not just an example, you have to have an impact on sustainability, you have to do more than just sort of have a nice example here and there, have artisanal form-based codes. So what should the goal be for zoning code reform for New Urbanism to have an impact on something like sustainable urbanism? A meaningful impact?

Farr: So I'm really clear about how the green building movement aims to reform building codes. I've diagrammed it out. The top third is people doing excellent work; by that I mean buildings that exceed the code. They're more energy efficient than code. In the middle is people that write codes and their ability to write a more aggressive code depends on the people on the top doing more and more buildings that exceed code. And then the bottom is the people that actually adopt the codes. And again, the speed with which they adopt the codes has to do with how aggressive they are and how these three things work together.

It's funny because I feel like the CNU really has changed the world's conversation about urbanism as an inadvertent spin-off of just being passionate about doing cool projects. And that's the power of this sort of community of practice. We've never had an ambition to set a target to say, "Hey, our code's work should be to eradicate future cul-de-sacs." So where do we want to go? What should our target be? I would say eradicate the disconnected places because they have harm. You know, public health harm, community building harm, sustainable harm. All those kinds of things. Every engineer that stamps a cul-de-sac, civil-engineered subdivision plan is on the hook for public health, safety, and welfare.

How can new urbanists best address climate change? New Urbanism in general tends to reduce the impacts of greenhouse gas emissions. But how can you take on such a big issue in a more meaningful way?

Farr: The carbon impact of buildings is something we have dropped the ball on, overlooked, or maybe we perceive it outside of our field. Certainly we all try to design walkable places where the foot and the bike are preferred over the car. I think that's one of our rock solid things. I experienced a kind of reaction against the idea that buildings could or even should have something like a solar panel on them. We have an aesthetic that acknowledges the presence of a chimney on a traditional house or building—which is incidentally the heating system—as being acceptable. But a solar panel or a solar hot water panel which might also be the heating system is not. And so I would love the new urbanist to evolve.

Millman: It's interesting to hear you say that you are disappointed with how there was a response to green by some of your colleagues, but you didn't have that same reaction when I mentioned location.

Farr: A guy reached out to us, and said, "Hey, I want to do a net-zero energy neighborhood." "Cool, that's great. Where is it?" We looked at it. It's like terrible location. We declined. Turned out he owned land somewhere near a transit stop, and we're talking to him about that. So my preference would be that the new urban stance is we design projects in the good locations and then we design codes that insist on connected street grids in the bad locations. I guess it's your personal choice whether you then choose to do commissions in the bad places. But at least the public health, safety, and welfare is upheld by a street grid.

I feel like I have to speak a little bit for the "Original Green," a term invented by architect Steve Mouzon. If you emulate places that were built prior to air conditioning, prior to people driving everywhere and using vinyl siding, etc. you would

reduce these influences that are harmful to the environment. How does that idea fit in with the sustainable urbanism?

Farr: As you might imagine, the green movement is not a monolith and there are a lot of opportunists who will slap solar panels on the glass box facing east and declare victory, right? So that happens all the time. I totally agree with what you just said, Rob, and we should do all of those things first and then the solar panels.

Some people say that mitigation, reducing our greenhouse gas emissions, hasn't worked all that well so far and we need to look at adaptation. What is your view on those two approaches to climate change and how new urbanists should, or could, take them into account?

Millman: It is not just adaptation. We have to continue on the path of mitigation, as well. The thinking about adaptation that focuses on, say, saving high-value real estate in Florida freaks me out because it immediately calls to question our commitment to equity. What is a high-value place? And, maybe, a high-value place includes a large population center, not necessarily the highest value properties, and that's fine, but still there's an enormous equity issue that comes along with any sort of technical adaptations that we may need to deploy in our battle for a dense climate change.

From a sustainability standpoint, what ideas or initiatives of the New Urbanism have had the biggest impact?

Millman: Defining walkability.

Addendum: Technology has added significantly to our knowledge of sustainable urbanism. For example the H&T Index, a free online mapping resource, shows carbon emissions at the neighborhood level from transportation per capita.

Urban Footprint is a powerful new scenario planning tool, and it includes data on environment impacts. See additional resources. ♦

NOTES, RESOURCES, DISCUSSION

4. Sustainable urbanism

Notes

¹ The Natural Resources Defense Council has long been involved in urbanism, working with CNU on the LEED for Neighborhood Development code. Former CNU executive director Shelley Poticha now heads NRDC's Healthy People & Thriving Communities program.

² For more on LEED-ND (LEED for Neighborhood Development), see www.usgbc.org/guide/nd

Additional resources

Video, Peter Calthorpe TED talk, www.youtube.com/watch?v=IFjD3NMv6Kw

Book, *Sustainable Nation: Urban Design Patterns for the Future*, Douglas Farr, 2018

Book, *Sustainable Urbanism: Urban Design With Nature*, Douglas Farr, 2007

Website, H&T Index, showing carbon emissions from transportation per capita and per acre for census blocks across the US, htaindex.cnt.org/

Website, Urban Footprint, software that provides scenario planning for cities, including eco-impacts: urbanfootprint.com

Video, Doug Farr Sustainable Urbanism lecture, www.youtube.com/watch?v=uSjurs4ZnlM

Video, Doug Farr lecture, *A Sustainable Nation in Four Generations*, www.youtube.com/watch?v=uSjurs4ZnlM

Article, Growing in the era of sea level rise, cnu.org, <https://tinyurl.com/ycuezdfd>

Key points

New Urbanism is a humanist movement that values the environment (Page 34)
The tension between good design and the best locations is an ongoing issue of the New Urbanism. Transit-served locations are best, but what about the rest of the metropolis? (Page 35)

LEED-ND, a project many new urbanists have worked on, is a powerful tool in the marketplace (Page 36)

New urbanists need to focus more on the carbon impact of buildings (Page 38)

Climate change is forcing New Urbanists to take strong stands on equity (Page 38)

Questions

How important is environmentalism to the New Urbanism? Have New Urbanist attitudes changed with regard to the natural environment?

To what degree is protection of the environment and natural areas a “community building challenge?”

To what degree does location of a project determine sustainability, and how do we decide what is an acceptable location?

What are the most important issues regarding sustainability and the New Urbanism?

How can the New Urbanism be most effective in creating more sustainable communities?

How can New Urbanism be most effective in protecting against the potential negative effects of climate change? What

roles do mitigation and adaptation play?

Why is walkability important to sustainability?



5. THE POLYCENTRIC REGION

Susan Henderson and David Dixon discuss how market and government support, and new urban ideas, are changing the regional planning mindset.

The plaza on Main Street in Las Cruces—the urban heart of the region in Doña Ana County, New Mexico. Source: PlaceMakers

The polycentric region is the largest organizing scale of good urbanism. Regional plans epitomize Daniel Burnham’s famous quote: “Make no little plans; they have no magic to stir men’s blood and probably themselves will not be realized.”

The polycentric region supports all community and place types such as hamlets, villages, towns, neighborhoods, and cities—ideally connected by transit. It connects farm to table, nature to urban core, home to workplace, and helps people to navigate across the region. But bringing that vision to reality poses many challenges in the 21st Century—from rapidly changing transportation technologies to the politics of land use.

This idea offers an approach to physical planning that parallels growing academic inquiry¹ into polycentric metropolitan areas—the idea that regions are not divided neatly into central cities and their suburban hinterlands. Instead, regions need multiple centers at a variety of scales to support economic, civic,

and social life. By concentrating development in nodes, the polycentric region helps to preserve countryside and a rural way of life in proximity to the urban centers.

How difficult is it to implement urbanism on a regional scale?

Henderson: There’s two sides to that coin. Politically it’s easier to solve the regional scale because people aren’t as vested in policy, and so it’s easier to get a general consensus on a big vision. Implementation is more challenging because if you’re not in California or Hawaii or Florida where you have concurrency requirements, then it’s surely at the whim of the elected official as to whether or not they implement the policy.

The Charter talks about the metropolis as made of multiple centers that are cities, towns, and villages, each with its own identifiable center and edge. Where does that exist in America today, and how can you build such regions again?

Henderson: In more rural areas, I think you definitely can see that. For example, we did the regional plan for southern New Mexico, including El Paso as the metropolis, and Las Cruces as a mid-size city, and then lots of towns and villages.² But I think in the really urbanized portion of the country, things do tend to bleed together, and there are no longer those distinctions.

Dixon: For a very long time, the economics of real estate development was not creating a humanist, people-centric, community-rich way to live. But as our knowledge economy takes over, as our demographics shift dramatically and we're not producing more children, most of our new households are singles and couples, not families with kids. Singles and couples are more interested in community, more interested in living in towns or villages or cities that have lively, walkable centers, and they spend their money that way. They want to live close to the core in a walkable place, and they want a job that's close, so jobs are following them.

That's true, but it doesn't necessarily create an urban form. We have metropolitan regions where the DNA—the codes—is still replicating sprawl, and we have thoroughfares that are the bones of sprawl. So how do you build a region of distinct cities, towns, and villages when you have that reality?

Dixon: Our demographics and our real estate economy and economic development and what communities compete for—jobs and investments and tax base—are now basically all going in the same direction that New Urbanism wants to take us. So instead of fighting the tide, we can work with the tide.

Henderson: Actually, I think that may be very, very true in places like Boston, and DC, and even Los Angeles, but in mid-sized big cities and smaller, the suburban mindset still has an incredible hold over building and development.

Dixon: We are working now in Baton Rouge



and Elkhart, Indiana, and suburban Boston, but also suburban Ohio, and Charlotte, and Roanoke, Virginia—the county, not the cute downtown—where these same forces are at work and even if the mindset hasn't changed, the market has. So we just don't have a lot of demand anywhere for a whole new generation of single-family houses. Maybe there's demand for a master-planned development in specialized cases, but the market of sprawl for sprawl's sake has really dried up. Elkhart, Indiana, has to build a knowledge economy too. That's not just about reviving downtown, it's about reviving the urban neighborhoods around it. The potential for the market and local government to support new urbanist values is on the rise and will rise significantly going forward.

I am optimistic about the fundamental reversal in the underlying forces of sprawl. That has set the stage for much more positive outcome. And one change that people really do like, is the idea of preserving nature, of preserving access to green space. And when people see that housing demand is shifting dramatically from single-family to multi-family, they understand that “Oh, we can realistically concentrate our growth.” There is demand to redevelop strip shopping centers, for example, to create new town centers.

The Charter says the metropolis has a necessary and fragile relationship with its agrarian hinterland and natural landscapes. So what is the best way to nurture that relationship in a region?

Henderson: We've done a lot of county-wide

Susan Henderson,
principal and town planner
with urban design firm
PlaceMakers, and David
Dixon, *senior principal and*
urban design group leader
with Stantec, an international
design and engineering firm.

codes where the biggest barrier to appropriate conservation of working agriculture and open space is the definition of the lot size of agriculture. And in the vast majority of the Thomas Jefferson-plotted and homesteaded United States, 40 acres was a homestead. Here in the west, it's more like 140 acres to be able to survive. We have discovered that in many places, farmers' financing is directly tied to maximum developable capacity. And the Farm Bureau is largely the culprit because they have values of farmland based on the subdivision potential. And many farmers have no intention of subdividing, but their annual cash flow depends on the mortgage and how much of a credit line they have with the Farm Bureau based on development capacity. As a result you get a five-acre—in many places, even one-acre—designations for the parcel size for agriculture and then that makes it possible to have the devastation of rural sprawl.

Dixon: I gave a talk in Seattle a number of years ago, and the fellow who spoke before me said the best way to preserve the Cascade Region, preserve their nature, is make the city a really great place to live and make density work. I was really intrigued by that. New Urbanism is unbelievably good at helping people have a community conversation about the form and character of change. We're going to continue to grow, particularly regions that are economically successful, and this is going to put pressure on agricultural land and nature around cities, and blur those edges if we can't find ways to bring this growth into our cores, to revitalize and reinforce villages, towns, cities, and centers. That's where the market wants to go. It's not like you have to drag people in. And New Urbanism is great at showing how this new density can be familiar. It can line streets, it can create front doors along the streets. It has a character that's about people and not about making money as a developer. It's about how to build community. The new urbanists are more important now than we have been before, because we can help communities understand how to accept, welcome, and shape the growth that wants to come into the core.

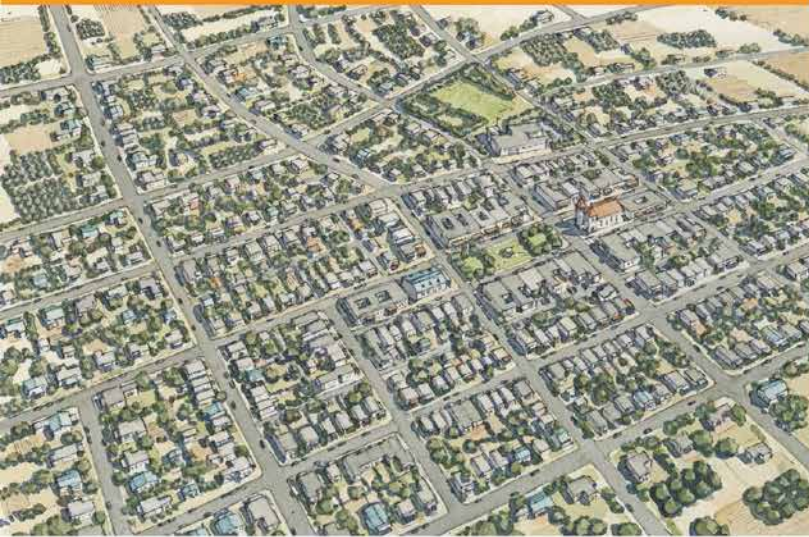


The New Urbanism envisions regions where transit plays a much larger role. What are your views on transit today and how is it shaping regions?

Dixon: Transit has never been more important to a region's success than it is now. Transit concentrates development, and walkability is such a priority for people in decisions about where they're going to live, shop, play, and work. From office to housing to retail, the market is rewarding walkability. And if you look at which regions are growing their economies fastest, you'll find strong walkable downtowns and multiple walkable cores, like in Washington DC or Boston. So, transit is absolutely essential to the ability to grow and develop this way.

Henderson: [In] some parts of the country, we are seeing major transit extensions. Of course, the issue right now is whether or not that will continue to be funded at the federal level. In regions with tight housing markets, like the Silicon Valley, transit begins to build equity regionally, because you can live in areas without huge transportation cost burdens and with access the job base. Of course, especially in Silicon Valley, there's still a huge last-mile problem. Putting stations

The first urban center is under construction in Dublin, Ohio, a suburban municipality on the outskirts of Columbus. Source: David Dixon.



Towns

Still rural in character, Towns provide a center of commerce and culture in rural areas.

Towns in Doña Ana County have historically developed adjacent to trade routes or natural resources. Mesilla was a camping and foraging spot long before its founding in 1848. It was on the Chihuahuan Trail and supported Fort Fillmore. Anthony developed on both the Butterfield Trail and the Camino Real. The activity associated with the trading traffic assured both Towns would grow.

Towns developed with either a plaza or a main street as the center of economic activity. Mesilla long served as the social center of the region with activities centered on the plaza. Housing diversity is moderate in Towns, including small

apartments, courtyard houses, duplexes, single family homes and compounds. Towns maintain a strong connection to the surrounding farmland and provide services to the more rural residents.

As mentioned earlier, this type is not referring to the level of incorporation but to the character of the community. Therefore, while Anthony is a City by incorporation, it has the character and intensity of a Town.

Place Type Rating by Region



- Transportation Choice
- Community Affordability
- Economic Opportunity
- Preserving Heritage
- Policy & Investment
- Communities & Neighborhoods

in areas that are transit-ready is crucial to the health of a successful region.

So, are we at the cusp of a transportation revolution? How is that, and should it be shaping regional planning?

Dixon: The impact is happening much faster than I thought it would and will be much more disruptive and fundamental. Over the next five years, three years actually, the first generation of shared autonomous vehicles (AVs) will be in mass production. The technology and the understanding of how to use it to create first- and last-mile connection is here. They need their own guided right-of-way, because they can't move in mixed traffic and there are limitations, but they're going to extend the walkable zone around a transit-oriented development, from a quarter mile to a mile or two. This will lower costs for Uber and Lyft, because the driver represents about 50 percent of the cost of these vehicles. So, the initial round of AVs will be very pro-transit. This will be particularly helpful for larger-scale, denser, walkable suburban centers—the polycentric regional model. In

places like the DC region, they will be particularly good at expanding the potential for transit-oriented, new suburban centers. In very urban locations it will be a bit harder because you have to create the right of way. By the early 2020s, Ford and GM are going to be mass-producing shared vehicles that go into mixed traffic on city streets. Whole urban neighborhoods will become transit-oriented to an extent that they aren't today. Many knowledgeable people were saying that within 10 to 15 years, parking requirements will drop by anywhere from 50 to 80 percent. Shared autonomous vehicles don't park. So we're going to have a ton of extra parking spaces in cities and suburban walkable centers, which set the stage for a whole new round of intensification and densification, and new urbanists will provide an understanding of this growth. This will put more people on the street, which will create demand for retail and street activation what we all yearn for. As e-commerce out-competes big boxes and other retail, it will be important to have more demand to keep urban centers relevant and competitive... So it's going to take more

The "town" place type in Doña Ana County. Source: PlaceMakers.

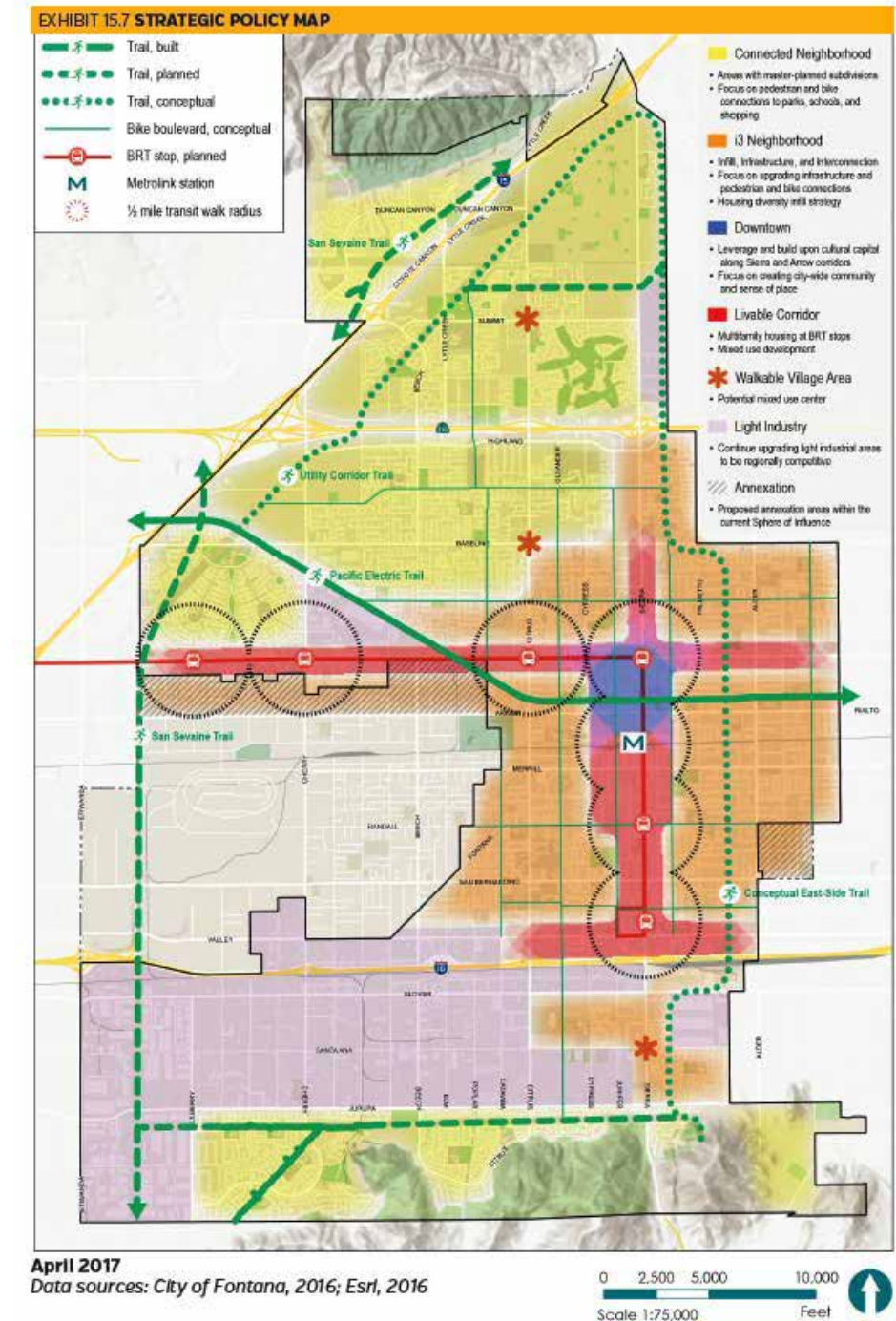
density in 5 or 10 years than it does today to support life on the street.

Henderson: One problem for AVs is that people don't like to share. UberPool is an example. If people have an economic choice, they won't share rides. Peter Calthorpe says that if AVs are not electric, the carbon emissions will blow up instead of being mitigated, and I think that's something we should think seriously about. What are the criteria for AVs? Should they be electric? What if the grid itself is powered by coal? So there are layers of implications from a climate change perspective that we need to think about.

Let me bring this back to a bone of contention from the beginning of New Urbanism, and that is the balance between infill and greenfill development. Markets have changed and people's desires have changed. Do you have any thoughts on how a regional planner should approach that infill/greenfill balance today?

Henderson: If you look at Joe Minicozzi's work (see chapter 11) about the highest return on investment from a tax base perspective, there are solid fiscal reasons why greenfield development would give pause to most cities. I've seen urban counties recently make awful decisions about massive greenfield development. So, from a sustainability, climate change, and economics perspective, one would say that cities should prioritize infill. But if they don't, I think you can still get in the market with walkable, new communities. In southern New Mexico at the regional scale, the preferred scenario for the community as a whole was extensions of existing communities. And those are in essence greenfield.

Dixon: There's a lot of data out there that shows that greenfield sprawl is a really lousy investment, and it is setting up suburban communities for failure. And Calthorpe's work for Mid-Ohio Regional Planning Commission³ has been hugely influential in getting local, regional, and state decision-makers to see the writing on the wall. I want to mention the rise in suburban poverty. Since



2000, most of the growth in close-in suburbs and maybe a quarter to half of the growth in outer suburbs are people at or below the poverty line. [That's partly because since] 2000, urban housing costs have risen so much faster than suburban housing costs. Suburban communities can't afford to make bad investments or bad decisions around their future fiscal health. They can't afford to encourage suburban office or single-family sprawl housing that's going to lose value over time. They have to pay more attention today to building their local tax base than they have at anytime since these suburbs started to grow after World War II.

Plan for Fontana, California, with multiple centers connected to transit.
Source: David Dixon



Can each of you name an innovative, interesting regional planning project and just a couple reasons why it is cool and what it is doing for that region.

Henderson: At the risk of talking about our own work, the Doña Ana County regional plan was also pretty powerful, largely because of the success at engaging the under-represented Hispanic community. They were empowered to the point that some, afterward, were appointed to the planning commission. The biggest issue for those folks was understanding place. And so the critical use of place types was really important for people to be able to make a preference on growth. Even though we had support from developers and politicians, the biggest thing that gives me hope for long-term success and implementation is that all of the folks with no English who came to the final adoption meeting and spoke in favor of the vision.

Dixon: My first job was for somebody who said a word is worth a thousand pictures and I've begun to think maybe he was right. Compact, walkable, transit-oriented, new urbanist development makes more sense for public health, fiscal health, and mobility, and metrics clarify those benefits. And I've done a lot of work in mid-Ohio, framing for new sub-

urban downtowns—plans for Dublin, Ohio, and Delhi, Ohio, and we're doing some work in Dayton now. Some of that work preceded and helped to bring in Peter Calthorpe, and then his ability to articulate the case, provide metrics, and crystalize the argument has been hugely important. I want to mention two projects that we've been involved in at Stantec in Corpus Christi, Texas,⁴ and Fontana, California, that launched regional conversations that led to a fundamental shift from a sprawl mentality to a smart growth mentality. And it happened not by convening the region, but by going out to suburban neighborhoods, to urban neighborhoods, and bringing together elected leadership and communities. Those conversations really did produce political support or solutions that definitely weren't there when the project started.

Not only are metrics important, but the pictures of what this future looks and feels like are absolutely central to these discussions. New urbanists provide the visuals, the metrics, and the spoken vocabulary that unlock these conversations. A lot of people are searching for the leadership that New Urbanism can offer. ♦

*Aerial rendering of new urban center in Dublin, Ohio.
Source: David Dixon.*

NOTES, RESOURCES, DISCUSSION

5. The polycentric region

Notes

¹ See “The Polycentric Urban Region: Towards a Research Agenda.” tinyurl.com/ybnrh8h4

² See Plan 2040, Doña Ana County, New Mexico, tinyurl.com/y939buhs

³ For more on Peter Calthorpe’s work for Mid-Ohio Regional Planning Commission, see tinyurl.com/yac26f8m

⁴ For more on the Corpus Christi plan, see tinyurl.com/yd9ahd85

Additional resources

Article, Daybreak in South Jordan builds on statewide plan called Envision Utah, cnu.org website, tinyurl.com/ydfe9z68

Website, Urban Footprint, software that provides scenario planning for cities, including eco-impacts: urbanfootprint.com

Document: *The Charter of the New Urbanism*, particularly principles 1-9. <https://tinyurl.com/oaafxes>

Journal article: David Banister and Robin Hickman, “How to Design a More Sustainable and Fairer Built Environment: Transport, and Communications,” which discusses the virtues of the “compact city” built around transit connections. tinyurl.com/ybr6aknq

Journal Article, Elinor Ostrom, “Beyond Markets and States: Polycentric Governance of Complex Economic Systems,” tinyurl.com/y9falzzw

Key points

Politically it’s easier to solve the regional scale because people aren’t as vested in policy, and so it’s easier to get a general consensus on a big vision—but implementation remains a challenge for most communities (Page 40)

Urban growth is important for rural regions because sprawl puts pressure on agricultural land and nature while urban growth does not (Page 42)

Transit concentrates development, so on a regional level it strengthens cities as well as rural spaces (Page 42)

Autonomous vehicles will have an incredible impact on the regional level, particularly with parking (Page 43)

Greenfield sprawl can be a poor regional investment (Page 44)

Questions

Is it more difficult, or easier—or both—to plan and implement plans on the regional scale?

Are real estate markets supporting polycentric regional planning more today than in the latter half of the 20th Century?

How important is farmland and natural area preservation to the health of the metropolis, and how can these lands be preserved?

Dixon says that the best way to preserve open space is to make the city more desirable. Is he right?

What role does transit play in creating a healthy, polycentric region?

How will autonomous vehicles affect regional planning?

How do you see greenfield development impacting regions in the coming decade? Will it still play a major role and how do we deal with it?

What are the keys to building political and popular support for better regional planning?



Courtesy of Moule & Polyzoides.

Transportation



6. RETHINKING PARKING

Donald Shoup and Jeffrey Tumin discuss how new ways of thinking about parking are transforming the American landscape.

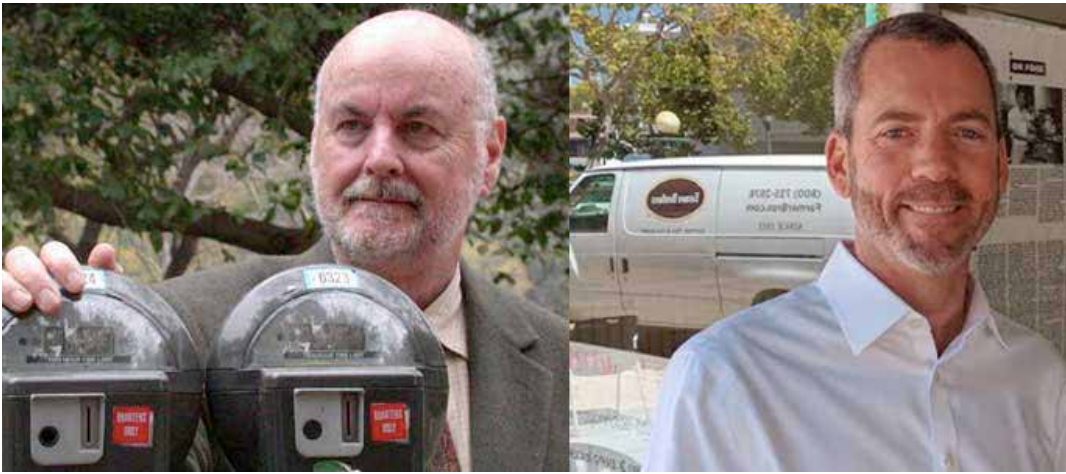
Downtown Pasadena was revitalized through taking a different approach to parking.

Parking is one of the primary shapers of US communities, and has been for a century. The walkability of a city or town is often determined by how much parking dominates the public realm. New urbanists promoted design solutions to reduce the impact of parking on public spaces and ideas like “park once” and shared parking to create better urban places. Like-minded innovators have taken reform to new levels through market-based parking strategies that allow urban places to flourish.

The Charter of the New Urbanism says that streets should be framed by architecture and landscape design. How does parking help or hinder that concept?

Donald Shoup: It depends. On-street parking provides a barrier between the sidewalk and moving traffic. If treated well, curb parking is not the evil that many people think it is. Street trees planted in the parking lane between cars

can add to the overall aesthetic of a street. Palo Alto (California) has a very good example of that. On its main street, there’ll be two parking spots and then a street tree with a semi-circular curb to protect it from the cars. There are negatives, especially where parking is placed between the sidewalk and the front of a building so that when you’re walking along the street, you see a parking lot between you and the front of the store, and it’s clear that the real customers of the store are drivers, not pedestrians. One of the things that New Urbanism has definitely got right is the park-once strategy.¹ With municipal parking structures, people can park in one location, and then walk around for as long as they’re in the district. That’s very different from what most cities require, which is usually that every building has to have its own parking on-site. If you go to a restaurant or a store, you can park in their lot. But once you’ve left, they want you out of their lot and so you have to move your



Donald Shoup, far left, UCLA professor and author of *The High Cost of Free Parking*, and **Jeffrey Tumlin**, director of strategy for Nelson\Nygaard Consulting Associates, transportation planners and engineers.

car to your next destination. Park-once structures alleviate this problem, but the structures should be placed behind—not on—the main street. The quality of the off street parking matters too². Wrap the parking structure with active uses, a thin layer of offices, or apartments so that when you walk down the street it doesn't look like the typical concrete-block parking garage. These are the aesthetics of parking.

How has parking affected the walkability and the livability of cities and towns over the last five or six decades?

Jeffrey Tumlin: Let us celebrate parking for a moment, and how parking drove the marketability of the suburbs. It's easy as urbanists to underestimate the appeal of suburbia, not only today but particularly as it was being invented in the post-war era. The idea of limitless personal mobility is incredibly alluring. The ability to park, in part, drove the invention of a new lifestyle. The mistake that we made was trying to apply the concept of the suburban dream on certain urban places. That we put a one-size-fits-all approach to the automobile and to automobile parking in both contexts, that was the failure. A one-time simple solution for almost any urban planning need fails either the city or the suburbs.

Shoup: I'd be a bit more critical. My main criticism does not concern parking itself but parking requirements. I'm not against cars and I'm not against parking. I'm against off-street parking requirements in zoning ordinances

which I think have led to pedestrian-free zones in cities. Consider three urban policies to stimulate the demand for cars and fuel. First, separate different land uses. Housing here, jobs there and stores somewhere else. Second, limit density so you have to travel a distance to get from your house to your job and to a store. Third, require ample free parking everywhere, so cars become the natural way to travel everywhere. Free parking in particular enables car travel. With these three policies, cities have reduced the cost of driving and raised the price of everything else to pay for it. It makes the city more drivable but less walkable. I think it's foolish to say that without parking requirements we won't have any parking. If you ask any developer whether they would exclude parking if it wasn't required, they would respond, "That's ridiculous." If drivers paid for the cost to provide parking, we would use cars more rationally.

Tumlin: It's also important to look at who had a lot of money to make building the suburban dream. There was broad agreement by the institutions that fund the construction of these places, including all of the conventional real estate finance industry, that minimum parking requirements were a good idea and they still demand a 1970s level of parking regardless of context.

How has the thinking on parking in cities and towns changed in the recent decade or two?

Tumlin: Every place that bought into this



1970s parking concept has recognized that it has completely failed them. So it's become relatively easy to go into a place to help them retool their regulations for the needs of 2020. Even in suburban contexts. We're working with Mountain View, California, which has realized that their minimum parking requirements were literally driving their traffic congestion problem.³ Not only has Mountain View been eliminating minimum parking requirements, but it has established very low parking maximums for its suburban office parks as a traffic control mechanism and as a housing affordability tool. Similarly, Mountain View has required that the price of parking be unbundled from the price of not only housing but also commercial leases. They require that new parking be largely shared with other land uses and not restrictive. They're also encouraging that parking be priced, which is pretty radical in a suburban context. Mountain View has realized that parking regulations are a tool for creating specific outcomes, like all regulations. And

they've realized that a conventional approach to parking regulations was creating only bad outcomes.

Shoup: Planning consultants, like Nelson\Nygaard, have spread the better ideas about parking. Nowadays, consultants have much more to tell cities about how parking affects the city, the economy, and the environment. Cities guided by these firms are looking for successful examples like Mountain View. Expertise has been developed from the successful outcomes of the recent decades. The planners of the 1950s didn't impose minimum parking requirements on an unwilling public, they simply gave a veneer of professional expertise⁴ to parking requirements. But that expertise really didn't exist.

A little over a decade ago, a very big book called *The High Cost of Free Parking* came out. Don, did you expect this book to have such an impact? How has it changed the conversation?

A walkable street in Fayetteville, Arkansas, a city that removed off-street parking requirements.

Shoup: When the book came out, half the planning profession thought I was crazy and the other half thought I was daydreaming. Now planners are beginning to think that the ideas were practical and sensible. I can boil the 800 pages down to three bullet points. First, charge the right price for curb parking so there are always one or two open spaces on every block. Second, spend that revenue to pay for added public services on the metered blocks so that the stakeholders benefit from these metered spots. Some cities use the money to provide free wi-fi to everybody on the street. They pressure wash the sidewalks frequently, plant new street trees, and remove graffiti every night. Investing the money back into the metered street creates the political will to charge the right price for on-street parking. And third, remove off-street parking requirements because nobody can say there's a shortage of parking if drivers can always see one or two empty spaces on every block. Removing off-street parking requirements can have a big effect, even in the short run, because it allows the adaptive re-use of older buildings.

Did that book change your practice, Jeff?

Tumlin: Don's ideas very much influenced my career and shaped my practice at Stanford University. When the book came out, we felt we could be bolder in our messaging about aligning community values with regulations and clear about the outcomes we were seeking with our regulations.

Can either of you talk about any cool projects that are happening right now in cities or towns that involve parking?

Tumlin: I love that cities like Fayetteville, Arkansas, are eliminating all minimum parking requirements. I love that these conversations are happening at every urban scale. That this is not just a coastal phenomenon or urban phenomenon. Everyone has started to recognize the problem, from the design professions to the academics to municipal leadership and even traffic engineers and the financial sector. Specifically, I applaud the work that Seattle did. It used an immense amount of data to

help manage parking better through building the right price. Seattle took all of San Francisco's lessons and did the exact same thing, but using its own resources on the cheap and came up with some simple formulas for being able to convert the data that they already had at their parking meters to get their own price right. They were able to spread those concepts far more rapidly than San Francisco, in part because they've gotten the messaging right with their own business community and residents.

Shoup: The San Francisco experiment, called SF Park, started in 2011 to adjust parking prices in response to parking demand. It is run by some of the most dedicated, hard-working, and talented public servants I had ever met. Other cities including Boston, Berkeley, Los Angeles, Oakland, Seattle, and Washington DC have started rolling out similar programs. Buffalo eliminated all minimum parking requirements so now their regulation only reads 'No off-street parking is required for any land use.'⁵ Setting a maximum number of spaces is nice, but the key thing is remove the minimum requirement.

Tumlin: After it eliminated the urban parking minimum and established maximums, San Francisco has changed its approach to transportation impact analysis for new developments. It no longer looks at intersection level of service but instead looks at how many vehicle trips the project generates, measured largely by parking supply. A giant office building in downtown San Francisco that has zero parking limits, it may generate vehicle trips. But because the parking supply downtown is constrained, any new vehicle trips their project generates may end up displacing existing vehicle trips, so the net impact is zero. If a project wants to build parking in San Francisco, it's now required to mitigate its impact on traffic by implementing increasingly tough transportation demand management requirements in exchange for the privilege of building parking. Similarly in Mountain View, when the city eliminated its minimums in the office park area, it established a relatively generous maximum at 2.4 spaces per thousand. But if a project is going to build that many parking

spaces, it also needs to demonstrate how it's going to comply with the vehicle trip cap that the city also imposes and ensure that the parking supply matches the intended vehicle trip generation rates.

We see parking lots being filled in with buildings downtown. I see this in almost in every city in America. But what about the suburbs? There's still a lot of free parking in the suburbs, still parking lots everywhere you look. Are these ideas having an impact in the wider metro area?

Tumlin: Mountain View is an extremely suburban place and where they've been messing with parking, it's an area that is historically one and two-storey office buildings surrounded by seas of free surface parking. The city of South San Francisco, another suburban office park area, has done similar things for Genentech. They've allowed Genentech to put buildings on existing surface parking. They haven't replaced the parking but instead have invested the money that it would have spent on parking structures on free shuttle services for their employees and paying them not to drive. Increasingly in small-town downtowns, Petaluma (CA) for example, municipalities are deciding that they already have enough parking and they've begun to discourage all new development from building parking in order to meet the walkability goals that support a real small-town main street environment.

Shoup: There's a new trend toward converting private parking lots attached to stores into paid public lots. A parking operator enters into an agreement with the owner of the lot and proposes that they operate it as a public lot with meters and they split the revenue, but customers can park free. So instead of having empty spaces that yield no income, the owner converts the lot into shared, paid parking so that anybody can use it as a park-once operation.

Tumlin: That's exactly what little downtown Truckee, California, is doing as well with its downtown extension. It's asking that the grocery store and the new performing arts center provide a shared parking pool for all

of the surrounding commercial areas, so that they can also maintain a walkable downtown that is a park-once environment.

Transportation is changing significantly. There's Uber, Lyft, and other carshares, and automated vehicles are on the horizon. How do you see this affecting parking?

Tumlin: In San Francisco, Uber and Lyft have had a significant impact on urban parking demands. Within San Francisco, it's always cheaper to take UberPool or Lyft Lines downtown than it is to drive and park there. This is a very hot topic right now for pretty much all of our developer and municipal clients. How should we approach the parking components, a 40-year asset, knowing that at most it's going to have a 10- to 20-year use life? How much parking should we build now, and what do we do with this parking once it's no longer needed? Do we build parking now in ways that allow the building to be adaptable to different uses? One developer has encouraged high ceiling heights and double floors in parking structures to encourage adaptability.

Shoup: Uber and Lyft know very well that the highest demand for their services are in areas where the price of parking is high. Therefore, they have often asked me about minimum parking requirements. They realize that minimum parking requirements reduce the demand for transportation network companies (TNCs). If you'd like to see shared automated vehicles succeed, the best way to do this is to reform off-street parking requirements. Removing off-street parking requirements will create much more demand for TNCs and automated vehicles. So it isn't just that these automated vehicles are going to affect parking, but parking affects how fast these automated vehicles will be introduced.

Are you seeing improved urban places because people are thinking better or differently about parking? Right now, is this happening in cities all around the country?

Shoup: Old Pasadena probably provides the best example. It was a commercial skid row in

the 1970s and now it's one of the most popular destinations in southern California. That change occurred because Pasadena effectively removed off-street parking requirements, installed parking meters, and spent the revenue for added public services. Parking yields over a million dollars a year for a small business district, and they have made it immaculate. On a typical weekend, 30,000 people go there just to walk around. All ages, genders, everything. It's very peaceful with lots of restaurants, and all kinds of people are earning a living where the buildings were previously empty above the ground floor. I can't point to a more astonishingly dramatic change than Old Pasadena.

Tumlin: Don's research on Old Pasadena is one of the seminal pieces of research in our field and we still point to it. In every city that has eliminated its minimum parking requirement, I've observed the way in which opportunities for developing little, small infill parcels become completely unlocked. Every place from downtown Petaluma, to downtown Santa Monica, to scattered, otherwise completely undevelopable parcels in San Francisco. And now, increasingly, in places like Oakland—which has significantly eliminated minimum parking requirements in the urban parts of the city—are seeing development pencil in a way that would have never been possible before because it was physically impossible, or financially very expensive to meet the minimum parking requirement. The end result is a greater concentration of activity, of retail, of people living downtown that make it much more interesting. Downtowns can now attract better restaurants, more shopping, grocery stores, and all the things that otherwise also wouldn't have been able to come there because there simply weren't enough people.

Addendum: Since this interview, Donald Shoup published a book, *Parking and the City*. Among the many topics were impacts on housing affordability and economic development.

The first nationally representative survey shows that “bundled” urban garage parking—included in the rent without option of opting out—is costly to renters, for example. “We find that the cost of bundled garage parking for

renters is approximately \$1,700 per year, and the bundling of a garage space adds about 17 percent to a unit's rent,” CJ Gabbe and Gregory Pierce write in the book. This is true even though many of these renters don't own cars, and many of these spaces go unused.

A study in San Francisco showed that off-street parking requirements make housing more expensive. Having off-street parking raised the average household income needed to qualify for a mortgage to \$76,000, from \$67,000. “If the parking requirements had not existed, 26,800 additional households could have afforded condominiums,” report Bill Chapin, Wenyu Jia, and Martin Wachs. Parking reform downtown and in several adjacent neighborhoods allowed for development with 60 percent less parking and a 30 percent reduction in the construction cost of dwelling units—“enough to allow for market-rate housing that is more in line with the typical San Francisco household's income.”

As of 2009, the average value of a motor vehicle was \$5,200. Yet the average cost of an underground parking space is \$34,000, and the average cost of an aboveground garage is \$24,000 per space. “One space in a parking structure ... costs at least three times the net worth of more than half the African-American and Hispanic households in the country,” Shoup points out.

Parking requirements play a part in determining what kind of housing is built and discouraging the “missing middle,” according to researchers. “Because parking can consume so much space and money, parking requirements needlessly reduce variety in the type and location of housing available,” notes Michael Manville.

Policies to promote off-street parking reduced the economic development in cities studied by Chris McCahill, Norman Garrick, and Carol Atkinson-Palombo. “For the six cities we considered, each parking space added since 1960 reduces potential property tax revenues by between \$500 and \$1,000 per year,” they write. Parking is both a cause and effect of driving, “yet the changes in commuting behavior in cities that added more parking suggest that more parking increases driving.”♦

NOTES, RESOURCES, DISCUSSION

6. Rethinking parking

Notes

¹ Park-once strategy: See <https://tinyurl.com/y9e52k8p>

² In the early days of New Urbanism, planners focused mainly on hiding the parking in the middle of the block and reducing the need for parking through shared parking. Whether parking should be required at all was rarely questioned. Then Shoup published his 2005 book, *The High Cost of Free Parking*, which transformed new urbanists' attitudes—as it did planners' in general.

³ More parking generates driving. When there are few choices as to how to get to parking, that creates congestion on major arterial roads.

⁴ In *The High Cost of Free Parking* and *Parking and the City* (2018), Shoup wryly comments on the random nature of parking requirements. “At churches it is a busy nine cars per space per day, heralding a religious awakening. At government office buildings it is also nine cars per space per day, suggesting that the state has not withered away. At tennis courts it is 23.2 cars per space per day, implying very short games but many of them.”

⁵ This is part of Buffalo's Green Code, which went into effect at the beginning of 2017.

Additional resources

Video, *The High Cost of Free Parking*, https://www.youtube.com/watch?v=Ak-m7ik-H_7U

The High Cost of Free Parking, 2005, Donald Shoup.

Parking and the City, 2018, edited by Donald Shoup.

Key points

On-street parking provides a barrier between the sidewalk and moving traffic and has other benefits if well designed (Page 48)

New Urbanism got the park-once strategy right (Page 48)

Parking structure design and placement matter—behind or wrapped with other uses works best (Page 49)

Dismantling parking requirements is not anti-car (Page 49)

Three policies greatly impacted communities—separating uses, limiting density, and requiring off-street parking (Page 49)

If drivers paid for the cost of parking, we would use cars more rationally (Page 49)

Shoup's parking rules: Charge the right price for curb parking, spend that revenue to pay for added public services on the metered blocks, and remove off-street parking requirements (Page 51)

There is broad recognition of the problem parking creates (Page 51)

Cities and companies are investing in creative parking solutions (Page 52)

There's a new trend toward converting private parking lots attached to stores into paid public lots (Page 52)

Rideshare supports getting rid of parking minimums (Page 52)

Pasadena is a classic example of how better parking policy can transform a city (Page 52)

Eliminating parking minimums incentivizes infill projects (Page 53)

The end result of eliminating parking minimums is a better downtown (Page 53)

Off-street parking requirements make housing more expensive (Page 53)

Parking requirements prevent the “missing middle” (Page 53)

Questions

How have attitudes on parking and parking requirements changed in recent years? How have they remained the same?

Are parking requirements ever necessary? If so, when, where, and for whom is it necessary?

How do parking requirements impact housing and development?

How would removing parking minimums affect different kinds of communities, such as those with various levels of transit service or rideshare?

How do parking and parking requirements affect lower-income households and neighborhoods?

Is parking merely a local issue, or could it be framed as a statewide or even national issue?

How are Uber, Lyft, and other rideshare services likely to affect parking policies and practices?



7. CONTEXT-BASED STREET DESIGN

Dan Burden and Wesley Marshall discuss designing thoroughfares as places of beauty that respond to land use.

For much of the last century, thoroughfares were designed for maximum motor-vehicle mobility, often making cities and towns dysfunctional for people outside of cars. In walkable neighborhoods and centers, streets are public spaces that serve multiple social and economic functions while contributing to the beauty and character of a community. Such thoroughfares include main streets, boulevards, avenues, “shared space” streets, and local streets designed for slow traffic speeds. As more communities seek better balance between cars and people, context-based street design is making inroads—among transportation engineers, planners, public officials, and citizens.

What does context-based street design mean to you and why is it important?

Dan Burden: First and foremost, streets should be responding to what the land use is, what the needs are for the neighborhood, the commercial district, or the rural area. Too many times we have designed streets based

on one-format-fits-all. We need to take into consideration many things—including place-making, whether people will walk or bicycle, the target speed, the climate region, shade and greening—before we even think about designing a street. And if we modify a street that already exists, then we have to understand what this urban area wants to become and then design the street so that it enhances and serves as a catalyst—knowing that we often end up destroying neighborhoods if the speeds and the support for regional traffic are too high.

In the past, we designed streets for efficiency, maximizing movement, and that often would induce speed. But in the future, streets are going to have to bring speed down to what is appropriate for their space, as appropriate to context. We also need to build homes and other buildings that watch over the street to provide security. Only if we do that are people going to feel comfortable walking again.

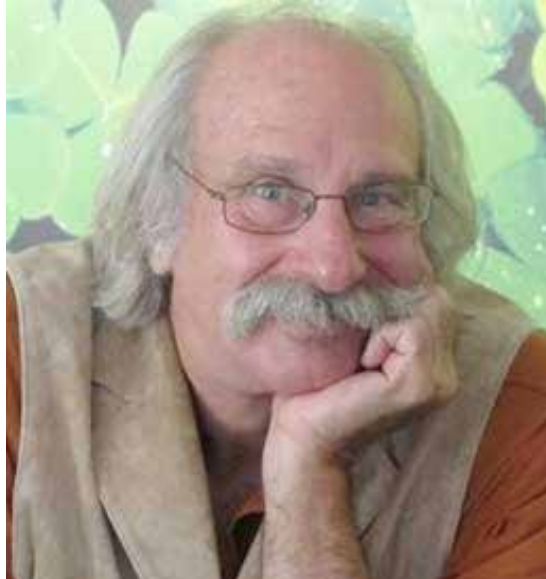
Wesley Marshall: This whole concept

The redesigned main street of Hamburg, New York, which slows down traffic and makes the center more appealing for pedestrians, bicyclists, shoppers, and those who linger and socialize. Photo by Chuck Banas.

emerged from an over-emphasis on moving traffic. Now we need to focus much more on how streets contribute to the social, the economic, and the environmental aspects of our cities. How can streets be a destination in themselves? I've always said New Urbanism is less about architecture than it is about transportation and community design. If you get the architecture right and the streets wrong, your place doesn't work. On the other hand, if you get the architecture wrong and the streets right, your place still has a pretty good shot of succeeding. The key to all that is really just making sure the streets match the context. Or better yet, like Dan was alluding to, that they match the context of what you want the place to be. It's about matching the dimensions, the street networks, the car speeds, the street trees, the parking, and even the building placement to place. For too long we've done it the opposite way where we've designed for cars first and worried about the other stuff later, if ever.

How does the new urban idea of context-based street design differ from what engineers and transportation planners have been doing for the last 60 or 70 years?

Marshall: From the 1930s or so, we've been using the AASHTO Green Book¹ which has the two axes, we have mobility on one side and we have access on the other and we end up with a pretty limited matrix of options. In terms of context, there was a binary option: It's either urban or rural. That's not even close to the way the world works. In the 1980s the traffic calming movement started to get legs, and then in the late 90s, context-sensitive solutions work began. Neither did a great job helping us build better cities. In 2006 CNU and the Institute for Transportation Engineers came out with *Designing Walkable Urban Thoroughfares*, and applied context sensitive design to the streets and networks. I've seen the way that other countries in Europe have looked at functional classification systems and instead of a binary system they'll have a matrix of 25 or 30 options. In India, it's something like 59 different options for roads. That gives engineers more options for design.



Burden: When context-sensitive street design first came about, we still weren't recognizing the depth of our problem. Now we're finally starting to understand that land use and transportation should be united. I've advocated for a long time that that street design and traffic engineering should be under community development—that we need to change the whole emphasis of why we invest in streets. And that's not going to happen if we keep our traffic engineering in public works as the chief organization.

Engineers are prone to thinking about streets in certain ways. And they're in control of street design. Can we get beautiful streets that we want under the current system?

Marshall: One of the problems is the limited toolbox we give engineers. The multiway boulevard is a good example. It's not been used recently because it doesn't fit into the functional classification system.

Burden: The depth of our problem is in the core ways that we have funded transportation projects. This is an institutional problem. We know how to design better, and more appropriate streets. It's the funding forces, and the expectations, we have institutionalized. There's only one solution that is allowed. It gets back to the question: "Why are we investing in our streets the way we are?" If we take a walk through Boston or Cambridge or any place that where we love the streets and then try to replicate those streets, we find

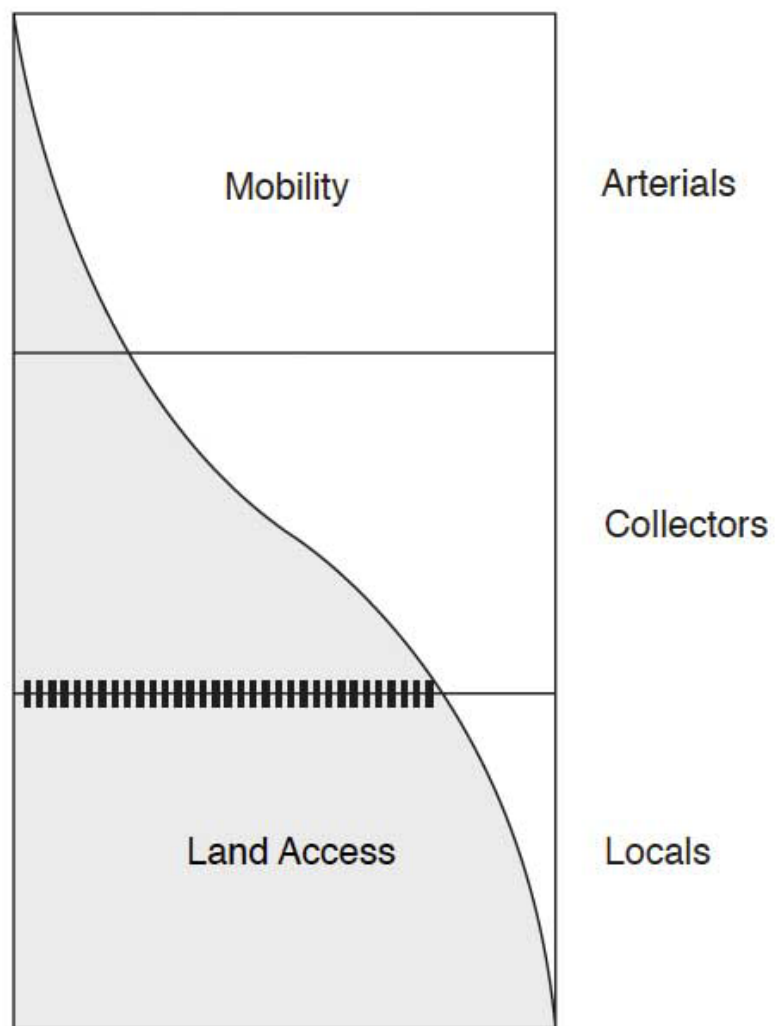
Dan Burden, walkability expert and Director of Inspiration and Innovation at Blue Zones, and **Wesley Marshall**, associate professor of civil engineering at the University of Colorado at Denver.

out that the institutions either can't fund it or they've got so many rules that they will spend their time and money attempting to break the rules instead of coming up with a design.

Marshall: Our inability to fund good streets is one of the reasons the whole Tactical Urbanism (see chapter 10) movement has become so powerful. The disconnect when you walk through a lot of cities between our streets and our places is readily apparent, not just to professionals like us, but to anybody. And instead of waiting for a multiyear planning project to tell them what to do, risk the chance of that paper sitting on a shelf collecting dust somewhere, people want to get out and see what works. Because there's no funding for it anyway, you can do it much cheaper and easier, and you actually get to test something on the ground.

One thing that bothers me about the concept of complete streets² is that sometimes designers use conventional techniques, but they add a bike lane, or sidewalks and crosswalks. So the complete streets are treated as add-ons rather than rethinking the basic design. Is that your experience?

Burden: Yes. We ask everyone to go down their checklist, make sure we're moving the traffic, we're not creating any bottlenecks or impacting level of service, all those things. Only then do we say "oh, by the way, make sure you don't forget the pedestrian." If we worked the other way around and said, number one, your designs have to be place-and-people based, focused on what the neighborhood wants to become, and how you're going to get it there. Once you've accommodated people, do the best job you can not to mess with traffic too much. But that's part of the area you're going to forgive. Right now, we forgive the designer if they can't quite figure out how to get the pedestrian in. In the future, what we're going to need to move to building the place for people. Right now, Honolulu, Hawaii, is doing a set of complete streets projects. And they're starting by building an appropriate multimodal level



of service and then if there are negative effects on traffic, talking about how to mitigate for that. The number one goal is to design a perfect place first.

Marshall: When I was in Australia, I was able to study the Smart Roads framework that they are using. The name connotes something high-tech, but it really isn't. It's really just network planning by modes. They use a multi-modal level of service, and they decide which roads should prioritize different modes. So, one road might prioritize transit. Another one might be for bikes, another for pedestrians, and for cars. And they do this whole network planning exercise where they fit the roads to the surrounding context.

So how much impact has the New Urbanism had so far on those who are in charge of street design?

Burden: I don't think we're having the impact we need yet. When you break down

From the Green Book, an overly simplified view of context that does not offer an option for a "main street" that is both an artery and a place of high access.



On US 1 in Stuart, Florida, the desired target speed is achieved by using a combination of tools—a raised crossing, curb extensions, inset parking, trees and ground cover—all used to slow traffic as the road approaches a key intersection to enter the quaint downtown.

populations of change agents, maybe 10 percent are out there bringing the change, and there are 10 percent that are going to resist it no matter what, and the other 80 percent are waiting for the pioneers to prove that things work. Once we have more proof financially and get some momentum going, I think we're going to see the other 80 percent jump on.

Marshall: If you would review those same cities, most of them will probably say they're influenced more by NACTO (National Association of City Transportation Officials) and their more recent design guidelines—which CNU has influenced quite a bit in recent years. So it's getting to cities to some extent.

So the corollary to that is how much more is there left to do? And from Dan's perspective, a whole lot more.

Burden: We still have many more to influence. I worked in government for 16 years so I know how hard it is to get that ship turned into a new direction. But again, I don't think we have to capture more than 10 percent. Once we do, the whole world's going to shift. Once you start a new movement that really has energy behind it, they're never going back to the old ways.

Marshall: I just think we solved some inher-

ent problems that underlie a lot of what we're doing. A lot of places would be more than happy to do a context-sensitive street design. But at the same time, they have these regional traffic demand models that are telling them they're going to have 30,000 or 40,000 cars per day on some major road in the year 2040. They treat those numbers like they're set in stone, but they are not set in stone. Those numbers could come to fruition if you re-design the road to accommodate that amount of traffic. If that road cuts a neighborhood in two, it isn't the road that we want. And we have the methods to design the road to accommodate the level of traffic that the stakeholders see fit.

Burden: Many communities have comprehensive plans that aspire to something, but their budgets, their policies, their codes are aligned in to meet the old paradigm. If you're serious about context-based design, you have got to start reallocating your funds. You've got to write your code in a way that doesn't incentivize the thing you're trying to get away from.

It seems to me that there's still a reflexive default to use "forgiving design"³ that gives motor vehicles extra room and eliminates vertical elements near the thoroughfare. Doing that in an urban place is dysfunctional.

Burden: We are seeing progress on a number of fronts. The State of Florida Department of Transportation has a new document (*Complete Streets Implementation Plan*).⁴ For streets with speeds under 40 or 45 miles per hour, the default lane width will be 10 feet. The engineer has permission to increase the lane width for high bus or industrial traffic, but they have to write a memo to justify making the lanes bigger and wider. That's moving in the right direction. The Europeans, and Australia as well as New Zealand, are so far ahead of us on this. They go for beauty. And they're trying to do everything they can to bring the target speed down. Our engineers have been schooled in trying to leave everything back to the clear zone so people can go faster. When CNU worked with ITE on the *Designing Walkable Urban Thoroughfares* manual I first heard the term 'target speed.'⁵ I make sure that is in the literature of some of the cities I work in. You start with target speed, and what vertical elements do you need to achieve it? What curvatures and curb radii do you need? Will on-street parking help bring down the speed? Eventually we can get beyond the group of folks in the city that are worried about tort liability, and maybe even reverse that, and say, "Look, if your quest or goal is to get the state down to 30, and you continue to operate your streets at 40, what are you doing wrong?" And possibly, you'd end up in court because you're able to prove that the design was functionally wrong.

Marshall: Part of that goes back to the Green Book and the psychology of the way they present those numbers, like they say minimum lane width and minimum right-of-ways. Everything is presented as a minimum, which implies that's the least we can do, that more is better. We need to change our phrasing, whether it's the target speed or whether we say, "10 is what we want for lane width, and if you want to go bigger, you need to have an exemption." It's a different way of presenting it, and it could have a big impact.

Can you think of great examples of innovative or good street design to show how people can do it better?

Burden: The town of University Place, Wash-

ington, put together a whole series of designs for a street called Grandview Drive, about two and a half miles long, and it goes through six different typical sections. Their quest in every case was to get the target speed to 30, and to really accelerate the beauty of the street, to bring back walking, bicycling, and add value to all the homes.

Marshall: At CNU a while ago, Andres Duany mentioned US 50 in Washington DC, and how outside of the city it's a limited access highway, but the character changes when you start getting into DC. It eventually becomes New York Avenue, which is still an arterial but it does a much better job of fitting the context than a highway would.

I wanted to come back to the idea of aspiration. Our metro areas are about 90 percent more suburban fabric rather than urban and walkable. So we have so many streets that need to change if people want to achieve sense of place or walkability in the suburbs. The transportation engineer may say, "Well, this a suburban place," and design the street accordingly. How do we get beyond this chicken and egg problem?

Burden: There's a project that's going on in Fort Worth Texas right now—West 7th street fits between two pretty good areas that are trying to revitalize. The goal is to change it from an ugly five-line strip corridor into a beautiful street that's going to set the stage for economic investments. This is one of those places where a model project will enable people to say, "Hey! It worked!"

Marshall: It's not sustainable to keep funding this suburban thing, especially if there's a community that wants something different. We shouldn't keep pouring dollars into what we have on the street. That money is much better spent on lower hanging fruit like sidewalks and street trees. Narrowing streets doesn't have to be a major infrastructure development. A whole city can be transformed for less than the cost of one highway interchange. ♦

NOTES, RESOURCES, DISCUSSION

7. Context-based street design

Notes

¹ Here's a link to the AASHTO "Green Book," which has been a standard text for transportation engineering for several generations: tinyurl.com/yaxl3hdb

² Complete Streets, as a term, was coined by writer David Goldberg in 2003 to indicate that the thoroughfare was designed to accommodate all users. See tinyurl.com/yap9nu9y

³ For a full (and devastating) examination of "forgiving design," read *Safe Streets, Livable Streets*, by Eric Dumbaugh, *APA Journal*, summer of 2005: tinyurl.com/yavfopp9

⁴ For more on the Florida DOT Complete Streets Implementation Plan and how it deals with context, see tinyurl.com/ycrvslso.

⁵ Target speed is the speed that the community wants to establish, and the thoroughfare is designed to encourage most drivers to go at that speed or slower.

Additional resources

Book, *Street Design: The Secret to Great Cities and Towns*, 2014, Massengale and Dover, tinyurl.com/ycnrekro

Video, *Complete Streets: It's About More Than Bike Lanes*, www.youtube.com/watch?v=eybnVOMEX6w

Video, *Seven case studies on complete streets*, www.youtube.com/watch?v=kVCkz-DvlRE

Article, "From car-oriented thoroughfare to community center," *Public Square*, tinyurl.com/y8v72lgz

Article, "Five scenarios that make street transformation possible," *Public Square*, tinyurl.com/y7md46a9

Article, Road diet bridges a barrier, boosts safety, *Public Square*, tinyurl.com/y8c4gk2l

Key points

If we modify a street that already exists, then we have to understand what this urban area wants to become and then design the street so that it enhances and serves as a catalyst (Page 55)

We need to focus much more on how streets contribute to the social, the economic, and the environmental aspects of cities (Page 56)

New Urbanism is less about architecture than it is about transportation and community design. If you get the architecture right and the streets wrong, your place doesn't work (Page 56)

From the 1930s or so, we've been using the AASHTO Green book which has two axes—mobility and access. The matrix of options is very limited. With context-based design, are moving toward more options for engineers (Page 56)

We're finally starting to understand that land use and transportation should be united (Page 56)

If we try to replicate streets we love in places like Boston or Cambridge, we find that the institutions either can't fund it or they've got so many rules that designers will spend their time and money attempting to break the rules instead of coming up with a design (Pages 56 and 57)

Regional traffic demand models are an

impediment to urbanism, because they are telling designers they're going to have 30,000 or 40,000 cars per day on some major road in 2040. Those numbers are not set in stone (Page 58)

Narrowing streets doesn't have to be a major infrastructure development. A whole city can be transformed for less than the cost of one highway interchange (Page 59)

Questions

Why is target speed so important to street design?

How does street design affect a place?

How do streets contribute to the social life, the economy, and the environment of cities?

Burden argues that street design is really a community development function—do you agree?

How can we expand the toolbox for engineers related to street design?

Where in your community do you see the need for a street redesign?

How do you convince public officials to reallocate infrastructure funds toward neighborhood projects rather than on highway interchanges?

Does the funding system for thoroughfares need transformation? If so, how?

To what extent do you see progress in street design. To what extent not?

What will be the major considerations for street design in the 21st Century?



8. INTERCONNECTED STREET NETWORKS

Street networks make a great variety of streets possible, such as this one in Portland.
Source: Marcy McInelly

Norman Garrick and Marcy McInelly discuss street networks and why they are a prime indicator of good urbanism.

In order to get good streets, you have to think beyond any single street—an idea that is at the core of New Urbanism. Dendritic—tree-like—street systems lead to fragmented and dispersed land uses at the local, municipal, and regional levels. Traditional cities and towns are usually built on grids or modified grids. The Charter says “Interconnected networks of streets should be designed to encourage walking, reduce the number and length of automobile trips, and conserve energy.”

People talk about complete streets, the idea that streets should be designed for all users by including features like bike lanes and crosswalks. But new urbanists talk about networks. What is so important about networks?

McInelly: Networks are necessary because complete streets are often misused to promote the idea that all functions must go on a single street. That’s obviously not possible in a city, especially if we’re going to accept that rights of way are constrained. This is a positive thing because we have to think about how to use the space that we have more constructively. You have to start thinking about all the modes that you’re dealing with in a network, and also about the place that you’re creating in the street and what kind of public space and public function that place performs. Networks have a placemaking focus that other organizations don’t really look at, and I have to credit Norman with that idea because he was faithful to it from the very beginning.

Garrick: Our focus on street networks is at the very core of the CNU—the concept of

street networks as opposed to hierarchical branched systems, which clearly do not build community. That's how you build suburbia. So if you're starting to think about building places that function in more holistic ways, then street networks are the platform through which you're going to do that.

Could you talk a little bit about the history of street networks and how they changed in the second half of the 20th century?

Garrick: The change was influenced by the modernist and Garden City movements from the '20s. As cars came into prominence, they were thought too dangerous, and we needed to find a way to separate people from cars. So there was a good motivation behind the ideas that led, ultimately, to suburban cul-de-sacs. In particular, the Federal Housing Authority in the 1930s published a pamphlet that labeled certain types of street networks as either bad or good. Most of the bad ones were the traditional patterns that we see in American cities, while the good ones were a precursor to suburbia. Because of the depression and World War II, we didn't see a lot of this implemented until the 1960s following the Housing Act of 1949 and the Interstate systems. All these things together led to this change in how we built street networks. But the patterns did not stop there. We kept seeing an evolution where things became much more fragmented over time. We started to see much more free form, looser patterns into the '80s and '90s.

I've heard the term loops and lollipops for that later stage.

Garrick: Yes, that would certainly be a good description.

McInelly: I would add that these streets used to be the public realm of cities. They were for people to occupy—for commerce, for big events. They were not set up for cars or even for forms of transit. If you watch old movies with cities before cars became prominent, the way that their space works is very different from today. It's a primal civic space for the



good of people. When cars became more prominent, we started to develop this dendritic system to separate people from cars. This was born out of a very compartmentalized mode of thinking about transportation. And it's also very engineering-driven—no offense to Norman. Engineered thinking tends to focus on how street networks function as movement spaces—but they're also places for sedentary activity. What we try to do in the blue book (CNU's *Sustainable Street Network Principles*¹) is to explain the importance of the public realm.

When I first launched *New Urban News*² and started to count new urbanist projects, I would look for the street networks first. People talked a lot about mixed use, but that wasn't the first thing I looked for. If there was a network in the plan, it was likely a new urbanist project. If there isn't a network it really isn't New Urbanism, is that correct?

Garrick: I think that's exactly the point. The street network is the foundation, it's the structure. All of those mixed-use projects are tied together through street networks. As we change from thinking about places separated according to land use with very homogenous patterns of development, we need to rethink how we think about street networks.

McInelly: There are a lot of projects by new urbanists that aren't networks and I don't want to spend much time talking about those. We have a legacy I'm uncomfortable with of developing greenfield areas that are not connected to any larger network. You might have a network within them, but it's a glorified cul-de-sac.

*Architect and urban designer **Marcy McInelly** of Urbsworks and **Norman Garrick**, associate professor of civil and environmental engineering with the University of Connecticut.*

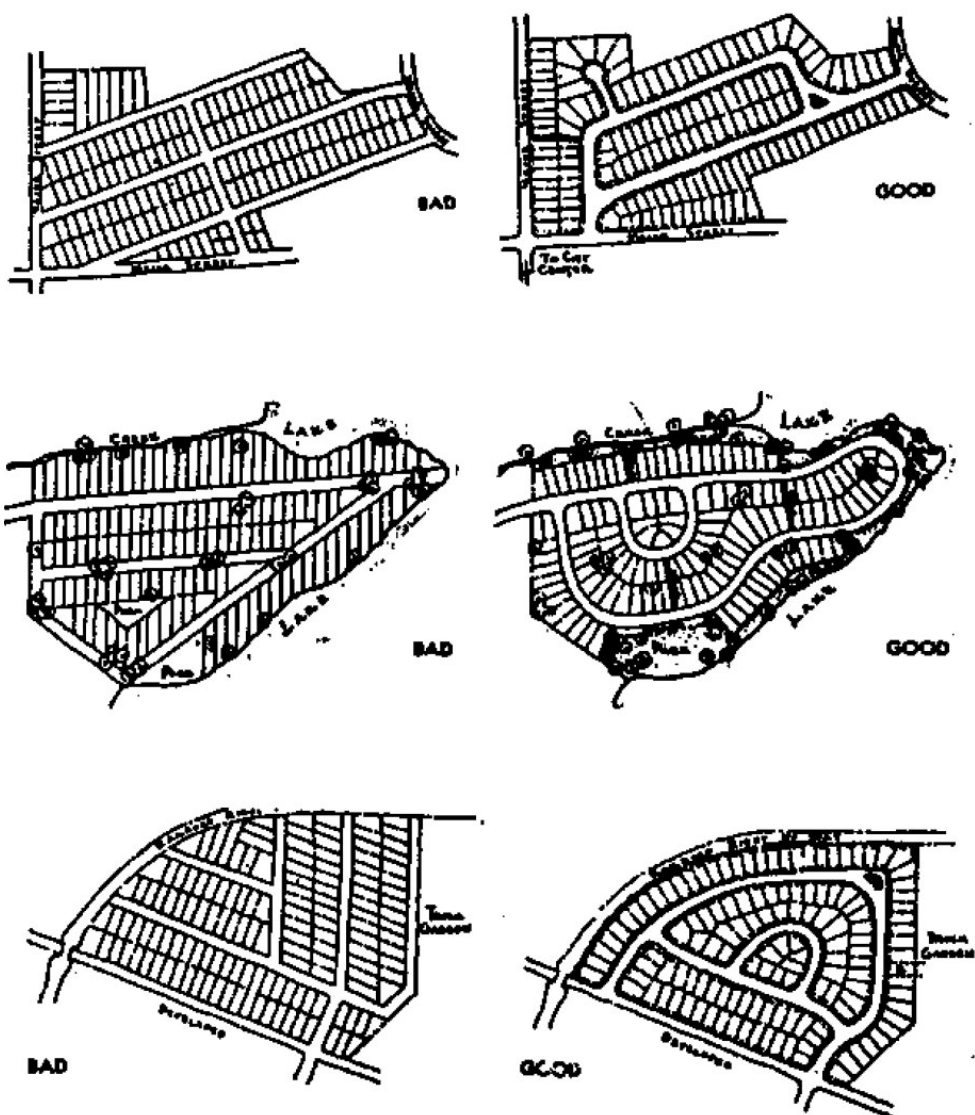
Garrick: You're right, Marcy. I think it's something that we need to talk about because that's how we're going to move forward. I'm not necessarily critical of these projects because I think that is the best you can do given the regulations in different places. But what looks like a network project is really a partial network.

Marcy, you alluded to the blue book you produced, the guide to sustainable street networks. Can you tell me about its genesis and why it took the form that it did, organized into principles?

McInelly: The blue book is one piece of the total effort. We'd been having transportation summits since 2002, but in 2005 we started to focus on what we were trying to achieve with this CNU street network concept. This helped to bring about the ITE context-sensitive design manual,³ which was a way to rethink streets completely. As Norman said, we realized that networks were critical and were neglected by almost everybody else that was working on the street. People were thinking about streets in the singular. You fix "a street" or think about "a street," but we realized that you have to think about the entire network in order to rethink any one street.

In 2009 we published this book as a reaction to the technical character of the *Designing Walkable Urban Thoroughfares* manual that CNU and ITE collaborated on. We wrote [the blue book] as if CNU was working independently and was able to set its own terms of what a street network would consist of and look like. I still find it an amazingly written piece of work. Each statement is extremely complicated and complex but simply written. And it was illustrated in a way that was more about people than about modes.

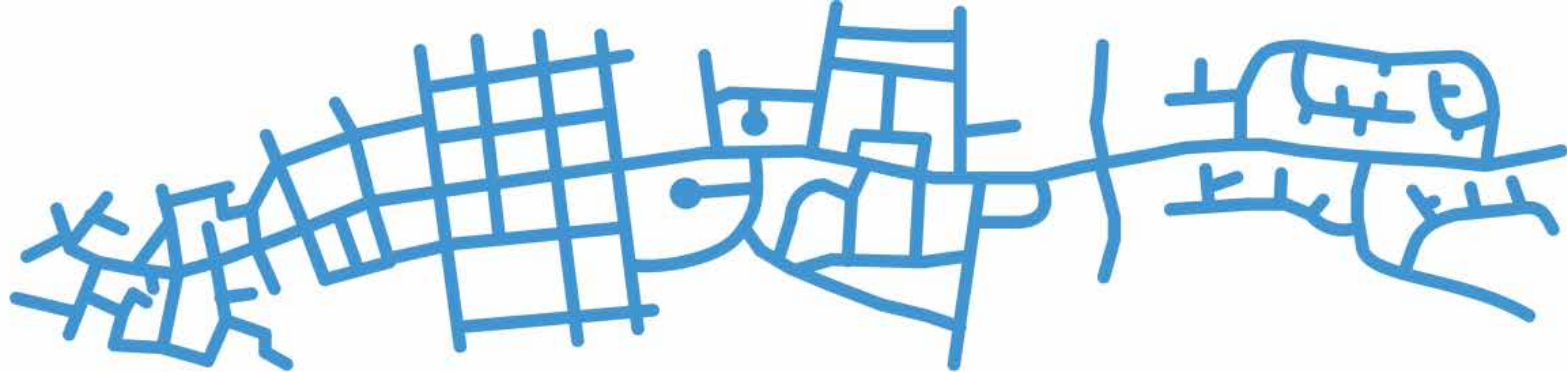
So up until about 1950, Americans either lived in the country, sometimes on a farm, or in settlements like towns and cities. And these towns and cities were connected with street networks. Now most Americans live in vast metro areas built



with suburban street systems. How do we reform those metro areas and those street systems, or can we?

Garrick: There should be a natural alliance between people doing suburban retrofit (see chapter 2) and folks that want to push the street network. It's really tough to retrofit most of suburbia, but we need to start. There are two places where I think the discussion of street networks are important. One is in terms of new development. When we're building new places and trying to join the development and usages, we need to think strongly with a network viewpoint. And then we look at rebuilding in cities themselves. We need to focus on how to restore some of the connectivity that most American cities lost with urban renewal and freeways. If you look at Detroit, for example, where there are freeways, we also have connectivity lost in places like Lafayette Park⁴ just to the east of

FHA street pattern recommendations from 1938 to 1952, which influenced street network design. Source: Southworth and Ben-Joseph.



the downtown.

McInelly: I'm working on a project right now in the Willamette Valley in Oregon that is an example of some of the challenges that network thinking can alleviate. There's an old road connecting the center of the city with its farmland outside. And over the years, it's been requisitioned for arterial status, meaning that it's now a major thoroughfare for fast-moving cars. But it historically had storefronts, complete neighborhoods, transit service and the urban complexity that we're trying to restore. There's a grid of streets of that comes up to it that we're trying to reconnect by creating more protected intersections for cars, bikes, and pedestrians to cross. But we're struggling against a misinterpretation of a Complete Streets policy. This city rewrote their Transportation System Plan (TSP) so that arterials now must include a bike lane. But this street does not have enough room in the right of way to have good sidewalks, bike lanes, traffic, and the on-street parking that is necessary to serve the marginal retail that everybody would like to see more of. We've instituted a road diet—which would take these four lanes and turn them into one lane in each direction and a center turn lane with planted medians. But the TSP, written with Complete Streets intent, said that we cannot institute a road diet without including bike lanes on both sides. So we're forced to put in bike lanes and sacrifice the sidewalk. We're trying to promote the idea to this city that they can't fit everything on one street. There are parallel streets and crossings that are going to be more desirable for bikes.

Garrick: That's a great example of why we

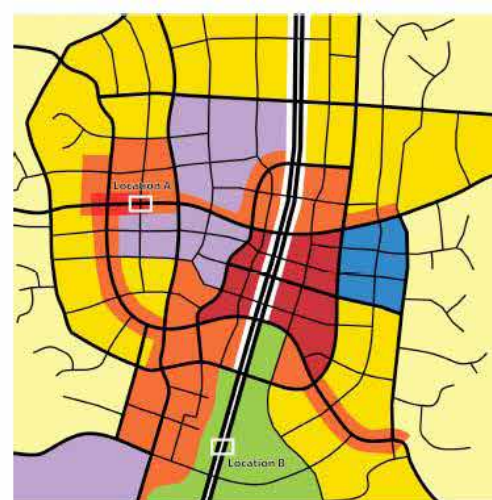
need network thinking. Complete streets makes a really great bumper sticker, but talking about the intricacies is much more difficult. It's not as easy to get across the importance and the subtlety of networks as it is to say that we need complete streets.

The street network is the bones upon which the community's built—and it's analogous to the form-based code, which determines the mixed use and the form of the buildings. But it seems that this is more difficult because there is no regulatory analogy to a form-based code that's determining the street network.

McInelly: They usually have to write a transportation system plan, and they're now beginning to incorporate the complete street concepts into those plans. These plans are policy and they also determine how they're going to spend money over a 10 or 15 year period. TSPs are becoming more multimodal—but they still lack a network focus, although more and more cities like Charlotte and Pasadena are doing a really great job of that.

Garrick: I think it's a much more difficult issue to tackle than codes. The ITE-CNU manual broke the stranglehold on people's thinking with regards to functional classification. It was one of the first to say that functional classification is problematic in cities. Engineers do not understand that implicit in functional classification⁵ is this hierarchical network—the anti-urban street network—and that patterns are built into the very structure of functional classification. We need to continue to push the idea that we cannot use functional classifications in urban

Evolutions of street networks in the US: A timeline.



areas if we are going to create the same type of street networks that function as they did 100 years ago.

McInelly: Sometimes federal funding also drives this automobile-centric thinking. It's not always possible in a policy document like a city's transportation system plan to even consider the other functions of the network. What about the pedestrian network? What about the bike network? Federal funding is often used by cities as a way to prioritize the network for automobile efficiency. This is where I think the lack of central funding and more local innovation is going to actually be a good thing.

Norman, you've done a lot of research on street networks. Can you talk about what you've found in terms of the influence on safety and health?

Garrick: We have compared different types in Californian cities, with different street networks.⁶ We have found that traditional networks that are very dense have a much higher share of walking and biking. In terms of health outcomes such as obesity, diabetics, and heart diseases, we're finding that in places with these dense, connected networks, if you correct for factors like income and race, people tend to be much healthier than those in more suburban patterns.

And what have you found with regard to traffic safety?

Garrick: There's a huge impact on traffic safety.⁷ In particular, it's not so much

that there are fewer accidents, it's that the accidents that are happening are much less severe in dense, connected places.

McInelly: Is that due to the speed of vehicles?

Garrick: Yes, that's the working hypothesis. We have not measured it yet, but there is a lot to suggest that it is due to difference in speed.

Marcy, what have your observations been with regard to the impact of street networks on livability?

McInelly: For most people, it's a real eye-opener when you tell them that up to 40 percent of the space in cities is either streets or parks. That's public space that belongs to everybody and ought to benefit everybody. But in many cities, that space is mostly used by cars—not even by transit. The most important part of New Urbanism is that people have started to clamor, both nationally as policy and locally in their cities, for rethinking the way that public space is used. More and more people are joining neighborhood efforts to repaint the streets and reclaim the streets for people.⁸

People often think that if you create more streets, they will all still look like wide arterials. But the street becomes more human-scale if you have a denser network.

McInelly: The more robust your network is, the more variety in types of streets you're going to have. And you're right that a lot of people when you mention the need for a network or the benefits of the network, they think, "Oh, more streets. That just means more

Fixing a suburban street network. Source: CNU

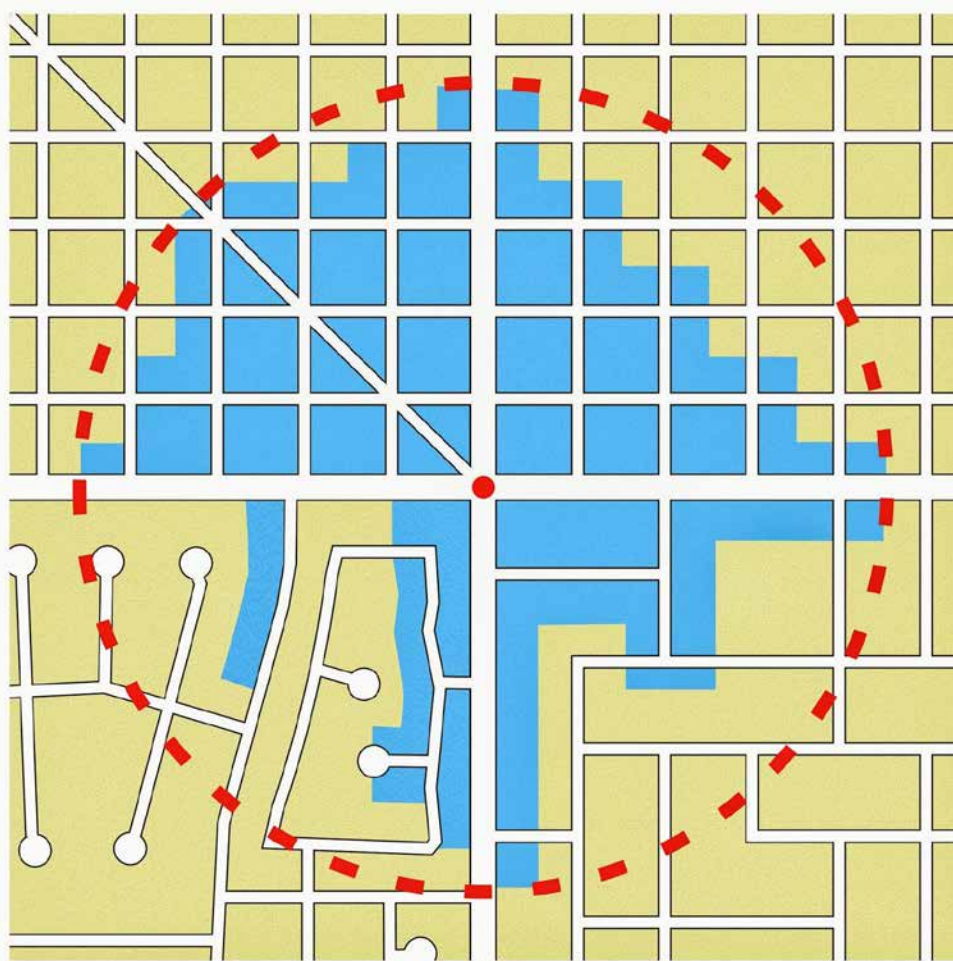
cars, more cars, more cut-through traffic, more traffic, more problems.” But you have to explain that now it means a dispersion of the traffic, because there are going to be more choices about where you walk, or bike, or drive. There’s more variety. Some streets will be able to be narrower and intimate, and other streets might be wider and grand. That is one of the livability benefits of the network.

Garrick: That’s a key point because there are examples of dysfunctional networks that have been built, which don’t have variety or the ability to create these kinds of different environments. One of the difficulties is to get across to people the idea that a connected street network can have the intimate, slow-traffic environment where your kids can actually play on the street. But it comes down to how the network is designed. While there are really good examples, there are also very bad examples where we have connected street networks that lack those features. People react to those bad examples and to the fact that the majority of streets they know are horrible traffic sewers. To them, a network is horrifying because they see a network of traffic sewers all over the place. But part of the reason we have traffic sewers is that we went away from network thinking in the first place.

Have you been working on any really interesting projects that involve street networks?

Garrick: The new town center that we created in Storrs, Connecticut,⁹ it’s a very small network but the network aspects that were built into it are really important in terms of how it functions. There was no town center in Storrs, next to the university. So the university was out there in the middle of cornfields, by cows and forest.

McInelly: We’re working on a couple of urban expansion areas where we are designing neighborhoods with modified street grids—one in Ashland, Oregon,¹⁰ the other in King City, Oregon.¹¹ Those projects include a lot of natural resource areas that we have to cross or circumvent. So the variety of street types



is really interesting—everything from very traditional streets, to green streets and alleys, to streets with and without curbs, dealing with stormwater and dealing with people. Another project that we’re working on is for Kelso-Longview, Washington, where we developed the Transportation System Plan.¹² It laid out the process by which you would develop your street funding priorities based on complete network thinking.

Any final thoughts?

Garrick: One of the things that we haven’t talked about is the movement in cities to return to two-way streets.¹³ One of the worst things that happened in a lot of American cities was the implementation of a one-way street network in downtown areas that created corridors for moving in and out of the city as rapidly as possible. We’re seeing a movement now where cities like South Bend,¹⁴ Indiana, are going back in a different direction and that is part of what I would consider network thinking. ♦

The network affects how far one can walk in five minutes.

NOTES, RESOURCES, DISCUSSION

8. Interconnected street networks

Notes

¹ For more on CNU's Sustainable Street Network Principles, see tinyurl.com/ycz8xan4

² *New Urban News* was first published in May of 1996, and it became the trade journal for New Urbanism. The name was changed to *Better Cities & Towns* in 2012 and was published through January of 2016.

³ The manual was called *Designing Walkable Urban Thoroughfares: A Context-Sensitive Approach*, published by the Institute for Transportation Engineers and cowritten by CNU.

⁴ Lafayette Park is an urban renewal district east of Downtown Detroit and contains the largest collection of residential buildings designed by Ludwig Mies van der Rohe. It was built in the late 1950s and early 1960s. The planning created superblocks.

⁵ Functional classification of streets by transportation engineers labeled them as local, collector, and arterial. This system responded largely to the branches of a tree with the arterial being the trunk. A conventional suburban street network is dendritic (resembling a tree). Street grids, or dense networks, on the other hand, are primarily classified by where they fit in the urban-rural Transect. Capacity is also important, but it is a secondary design consideration. The grid disperses traffic and offers far greater route choice.

⁶ See *Community Design, Street Networks, and Public Health*, Garrick, Marshall, and Piatkowski, 2014, tinyurl.com/y9v3nnrn

⁷ See *Street Network Types and Road Safety: A Study of 24 California Cities*, by Garrick and Marshall, 2009, tinyurl.com/ybm4q7hg

⁸ The Boston Transportation Department published *A Guide to Placemaking for Mobility*, which won a 2017 CNU Charter Award. tinyurl.com/y76vlfbg

⁹ See Storrs Town Center. tinyurl.com/y9lddulw

¹⁰ See the Normal Avenue Neighborhood Plan, tinyurl.com/ya75pezs

¹¹ For more about the King City Urban Reserve Area Concept Plan, see tinyurl.com/y7lpmcqq

¹² The Longview-Kelso Transportation System Plan, see tinyurl.com/yc6qc2mr

¹³ See a study of the health, crime, and economic benefits of two-way streets compared to one-way streets in Louisville. www.youtube.com/watch?v=NYN-sUdRxlU

¹⁴ South Bend, Indiana, is one of many cities that are successfully converting one-way streets to two-way streets.

Additional resources

Article, "Why street grids have more capacity," *Public Square*, tinyurl.com/y8bbne2e

Article, "The Copious Capacity of Street Grids," *Public Square*, tinyurl.com/yalf8xtx

Article, "The Power of Gridded Streets," *Strong Towns*, tinyurl.com/y95zczmv

Video, Norman Garrick, *The Building*

Block of Cities is the Street Network, tinyurl.com/yaq9254r

Key points

Networks are necessary because complete streets are often misused to promote the idea that all functions must go on a single street (Page 61)

Streets used to be the public realm of cities. They were for people to occupy—for commerce, for big events (Page 62)

The street network is the foundation of cities, it's the structure (Page 62)

Need to think about network viewpoint and connectivity when building new places (Page 63)

Function classifications for street design often do not classify enough to be all-encompassing (Pages 64 and 65)

Cities have often used federal infrastructure funding in ways that prioritize the network for automobile efficiency rather than in community wealth creation (Page 65)

Interconnected street networks promote healthy living (Page 65)

Urban car accidents are more survivable (Page 65)

Up to 40 percent of the space in cities is either streets or parks, which are open to everyone (Page 65)

Questions

Why are street networks important?

What's the problem with having single streets serve all functions?

How do interconnected street networks differ from hierarchical branch systems?

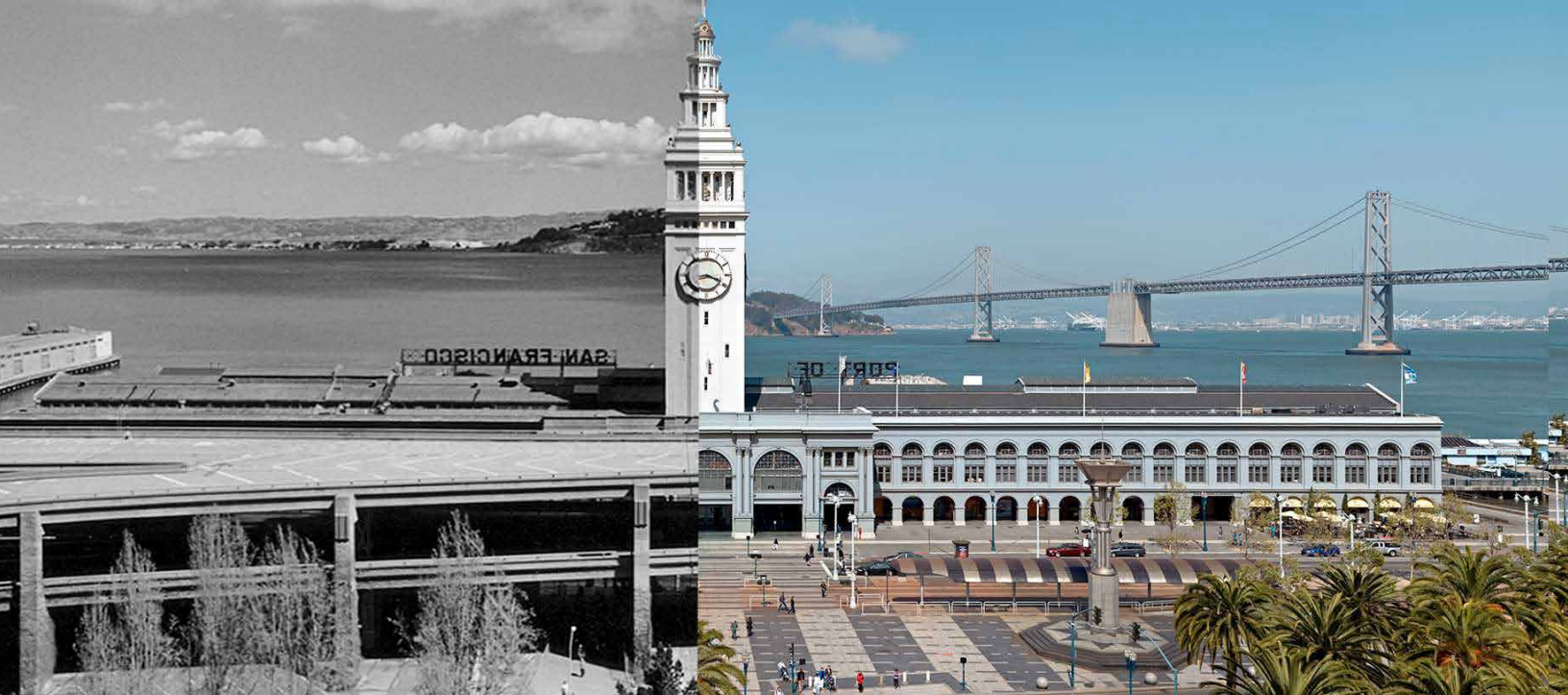
What were the motivations behind the ideas that led to suburban cul-de-sacs? Why did they become more fragmented over time?

How did people occupy the streets prior to the automobile age, and how does that differ from today?

Have new urbanists struggled to achieve the Charter principle of building interconnected networks of streets, and why?

McInelly says you have to think about the entire network before you rethink any one street. Is that true and why?

According to Garrick's research, street networks are associated with what health and safety benefits? How do you explain these correlations?



9. FREEWAYS WITHOUT FUTURES

Peter Park and Patrick Kennedy discuss in-city freeway transformation to boulevards and other surface streets, reconnecting the urban grid.

The ferry building before and after the removal of the Embarcadero Freeway in San Francisco

Freeways Without Futures—a decade-long campaign by CNU¹—has been at the vanguard of removing unnecessary freeways from cities. Building freeways through city neighborhoods did astronomical damage to cities in the 20th Century. While many of these freeways are probably here to stay, others could be removed and replaced with surface streets. Whenever this has happened—whether in San Francisco, New York City, Rochester, Milwaukee, or Seoul, Korea—the city always has improved economically and environmentally.

Can you describe the damage that in-city highways did to cities all across America?

Peter Park: The idea of the Interstate highway to connect across states and cities to cities has been successful. The damage is caused by freeways cutting through neighborhoods and applying that limited-access design, a flawed design for cities, and disrupting connections between neighborhoods. These highways were particularly run through our most economically vulnerable neighborhoods, limiting access and opportunity for people

where these facilities were built.

Patrick Kennedy: I agree—they impose limited access in areas where you want abundant access. A network of street grids allows for abundant access. This has happened all over the country, but in Dallas, my home, you can basically track where the original freedmen's towns were by where the highways ended up. At the most charitable, you could say it was the cheapest land, or that there was a promise for better living arrangement in modernist public housing, which we know failed, but at the same time, it's disrupted the social and economic fabric of what were stable neighborhoods.

Describe the Freedmen's Towns.²

Kennedy: Freedman's Town is where freed slaves were allowed to live in Dallas.

Can you talk about how this impacted racial and ethnic groups relative to society as a whole?

Kennedy: You could call it slum clearance

but the neighborhoods that were torn down had good building stock with lots of culture. The highway we're talking about removing in Dallas, I-345, was built through the epicenter of jazz and blues culture in the south, Deep Ellum. The Harlem Theater was where Lead Belly and Robert Johnson and several famous blues musicians used to play. And I-345 was one of the last highways to go in the city. Because there was still this seamless urban connectivity, the area functioned as a melting pot and an area of cultural expression. And with the highways we've essentially entrenched segregation by drawing lines of demarcation that also pose socioeconomic barriers. So if you don't have access to opportunity or education, then you're probably not going to have access to a car and you're not going to be able to participate in a local economy where you must have a car. You can draw those lines by race and class here in Dallas.

Park: This is a common story in every American city. In Milwaukee between downtown and neighborhoods to the north, and the Claiborne in New Orleans—these barriers cut off access and opportunity and were unfortunate legacies of the past. But we are at a time now where much of our country's infrastructure is nearing the end of its functional life and we have a great opportunity to choose differently and learn from what didn't work and also the successful examples of replacement of in-city highways with street networks. There's no neighborhood that got better when a highway was cut through it. In every case of an in-city highway replaced with an urban street network, anywhere in the world, things got better. It really proves the strength of the urban form.

Freeways Without Futures has had a broad appeal coming out of CNU and it's been covered by mainstream media on the left, right, and center. What's your take on the popularity of this idea?

Park: It's becoming more obvious to a broader part of our population that we've got to change. The impacts of these in-city highways are obvious. Anyone just simply needs to



travel or walk underneath a highway or alongside a big gash that cuts through a neighborhood to understand how anti-urban and uncomfortable they are. They really damage investment and development and placemaking. The real estate around these highways in cities has not gotten stronger, it's weakened, and it becomes the cheapest parking in the city—vacant lots and underutilized places. You don't need to be an expert to understand and hope that improvement could come to a place. That has happened not just in high-growth cities like San Francisco and New York but also cities like Milwaukee, where the Park East Freeway³ was torn down to create significant opportunities downtown and to bridge that gap between the downtown and neighborhoods.

Kennedy: Rob, you alluded to it by saying it has been covered by media on the left, right, and center, because there's appealing ideas and ample evidence to make the case across the political spectrum. One of the biggest barriers is that people tend to treat traffic as a linear engineering equation when it's more behavioral economics. And you've got to get people out of their own mindset. They tend to think, "I've used that piece of road and it was useful" but you have to expose them to different ways of thinking about it. One, by showing them the negative impact that it's had and two, saying it'll actually get better. So you're not taking something away from people; you're saying "what else could this be?" and "let's think about what really is convenient." And somebody might say, "Oh, well, it helps me drive to some other place that I do once a month or once a year." So

***Patrick Kennedy**, an urban designer who co-led *A New Dallas*, a proposal to replace I-345 with surface streets, and **Peter Park**, a city planner and urban designer who directed city planning for Denver and Milwaukee.*

we'll have to say, "What is more convenient? That, or to actually have more destinations that provide a greater choice in how to get there and how to get around?" But you have to walk people through that, because everybody is geared toward the status quo and making sure it functions as the best possible status quo, not the best possible city. When people come to the conversation in good faith, you can see their minds change.

Park: We have talked primarily about the damage to neighborhoods that were cut through. But we also know the greater damage is creating a higher dependence on automobiles that contributes to urban sprawl. And so the other side of urban sprawl is the regeneration of our cities. And we have been experiencing a great return to the city. As we think about our current infrastructure problems, we know that many of these highways are nearing the end of their functional life and we ought to take more of a return on investment approach. The big government spending approach of the past failed us. When in-city freeways were replaced with street networks, this has led to new investment in cities. This generates interest from the private sector because a beautiful boulevard is a much more attractive place to invest money than a multilane, elevated highway. The nearly one-mile, retro highway that was removed from downtown Milwaukee (Park East Freeway) is no longer the responsibility of the State of Wisconsin to maintain. It is now a city street along which millions of dollars of new development is occurring.

Can you quantify the return on investment when freeways are removed and replaced by surface streets?

Park: In the case of Milwaukee, it was about \$25 million of federal money that was used to remove the elevated freeway, combined with tax increment financing that helped to clean up some of the land and the street grid. And Milwaukee has seen over one billion dollars of new investment that's being driven in and around the former freeway area, but also in other parts of the downtown. When the



highway removal was first proposed, the fear was that this would lead to disinvestment in the city and [people wondered] "how would people get to their jobs?" But, in fact, the removal of the freeway has been part of the urban renaissance.

Kennedy: When we started looking at I-345 in Dallas, we put it through an economic impact analysis. If that freeway corridor could be used for public space and private development opportunities, we ran through scenarios of various scales of development that would happen. We did this when the

McKinley Avenue and 3rd St. in Milwaukee, before and after. Source: Peter Park



economy still was on the downturn, but our most aggressive scenario was still leveraging more than \$4 billion worth of private investment. The private real estate sector could then verify the numbers, which they have, and now are saying probably \$5 billion or \$6 billion because the market is so hot. And the land is owned by the public, which means there's a real opportunity for affordable housing where it needs to be—near jobs and near transit. This gives us that opportunity to leverage public land for not only private goods, but also public goods to deliver new schools and new parks and new workforce housing at a variety of economic levels.

And it seems to me that a lot of these highways cost more to rebuild than they do to take down and put into surface streets. Is that correct?

Park: That's what made the decision in Milwaukee. To maintain an elevated, single-purpose structure that has exposure top, side, and bottom is fairly expensive. A grade-separated structure that's down in a cut where you have to maintain those retaining levels sometimes below the groundwater level—that's also very expensive. Not only is it expensive for the hardware, but also from

the investment perspective. It's spending government money in a way that devalues the private real estate around it. There's no elevated highway or highway cut that has created marvelous freeway frontage in a downtown, driving higher real estate values. So I've always thought it a little strange that in America we would use tax dollars in ways that devalues private land. It's just un-American.

Which reduces tax dollars coming back.

Kennedy: There's also the opportunity cost of lost tax base, where we calculated Dallas would be getting \$110 million a year in property taxes (from the I-345 removal and redevelopment). That could go a long way to paying for various deferred maintenance and debts that we've incurred. And I took a quick calculation of the two proposed crosstown Manhattan highways that were never built and what was preserved—today the value is \$13 billion just in the right-of-way. Over the 50 years or so since the highways were proposed to be built, they would have eliminated around \$2 billion worth of tax revenue to the city.

Park: Yeah, imagine in San Francisco if the

New development made possible by the Park East Freeway removal in Milwaukee. Source: Peter Park

Embarcadero had actually been completed and cut all the way through the waterfront. But the part that was built was actually removed, and the waterfront has become fantastic.

Can you talk about the politics of freeway removal? How difficult is it?

Park: It's not technical, it's political. Engineers, urban designers, and planners are really smart. We can figure out how to design the infrastructure. It's a matter of political will. And it's important to remember all that goes into the study and the design and planning of a highway. There's an environmental impact statement, and a National Environmental Policy Act review at times. These processes are never going to result in replacing an in-city highway with an urban street network without extraordinary local leadership. Because of the way the funding and decision processes work, it's a foregone conclusion that some extension or realignment of a "bigger, better" highway will result. The evaluation is just looking at mitigating the impacts. It isn't about optimizing the outcome for the community. So it takes an extraordinary leadership. (Former Milwaukee mayor and former CNU president) John Norquist was, and continues to be, an incredible voice in this regard.

Kennedy: In order to make the political case you have to make the economic case. But the biggest barrier has been elected officials or staff that have been there for 30 years and they know progress as the ribbon cutting for a highway expansion. And until you either change the metric for success, which is the level of service and delay for cars, or you change the people that are in office, you're going to keep running into those barriers. And that's where you need the advocacy group to step in and start selecting people who have a new vision.

Park: Yeah, and the conversation around the replacement of existing facilities is often driven by, "Well, it's crumbling. We have to do something right away or something

terrible happens." Which is often true. And then there's also the promise of, "Well, in the redesign, we'll make safety improvements," and who is going to be against safety? And the other statement you hear is "All the pain and congestion that you are experiencing today will be relieved by the improvement that we'll make to the highway facility." So wow, we get a new highway, it creates a lot of construction jobs, how can you say no to that? So the possibility that you could actually make a better place with better access is rarely discussed. In Milwaukee, we didn't talk about getting rid of the highway. We talked about making a city and strengthening the downtown. So it's really about development oriented to transportation, or better yet, place-oriented transportation. Let's figure out what kind of places we want first, and then we design the hardware: The street network, and the street elements, and the buildings, to create the places that we want.

So how does the process turn around to create a better outcome?

Park: It comes back to political will and vision. If anyone is thinking about the future of a highway and their city, it's important to plan ahead. Establish the point of view of the neighborhood and city as soon as possible. When the state comes, and they will because that facility's not going to last forever, the local community's preferred alternative is already known. In other words, make the case for planning neighborhoods, your downtown, and your city, because in this process, the imperative of "improving the highway" looms large. In Milwaukee we'd already had a long-term plan that did not envision the freeway being there.

Kennedy: If you just say, "We want to tear the highway down," you may turn off a lot of people right away—but few people can argue against a better process. We focused on the process, and that enabled us to work directly with the Texas Department of Transportation (TxDOT), Dallas, and the region. TxDOT first showed up with nine options that were all different ways to rebuild the elevated highway.

And we said, “These aren’t options. These are price tags.” And luckily for us, one of the transportation commissioners from the five governor-appointed bosses of TxDOT heard that and said, “You’re right. We shouldn’t have stakeholder input at the end of the process ... we should have the public input up front.”

It’s important to meet with local stakeholders and leaders up front to devise options, and then be objective by saying, ‘Here are the costs but then here are the benefits.’ The benefits are not just throughput-related, but [instead] look at traffic at a larger level and at quality of life and the economic impact. Doing that has allowed us to get the point where now TxDOT is willing to study engineering and the feasibility of either a below-grade or complete removal option. That’s necessary for it to become real in their mind. It’s also important to define measurable metrics, and this can happen at a local, regional, or state level, as we’ve seen with Seattle, which has tossed out level of service and vehicular delay in favor of reducing single-occupancy trip mode share; or the State of California focusing on reducing vehicle miles traveled.

So how do we define success? Down here, the latest thing I saw was in the 2040 or 2045 plan there would be 1 million injuries on highways and 15,000 deaths. And we are going to spend \$140 billion to do that. How is that success, when we know that the hypothetical congestion relief will not happen? We need to define what our goals are and then align our metrics to those goals.

Now you’ve talked about Milwaukee and Dallas. Are there other in-city freeway removal projects completed or in the works that you think are significant, and why?

Park: All of them on the Freeways Without Futures lists⁴ are significant. The freeways on CNU’s lists have common attributes, but in different cities. From San Francisco to Buffalo, Trenton, and Detroit, we’ve got cities in the East, Midwest, South, and West Coast. Some are growing quickly, and some not so quickly—this approach is applicable in a lot of



different places. It’s a very economically conservative approach. We don’t have expanding funding for transportation in our country. People are driving fewer miles and cars are getting higher mileage. The revenues are not going to keep up with the need for infrastructure that is nearing the end of its useful life. So there’s a lot of upside in rethinking how to reduce the burden on states and the federal government in maintaining and building this infrastructure, but also how local economies can benefit from strengthening places, based on fundamental urban form.

Kennedy: In the down market, it can help with revitalization. In the hot market, it can help deliver public good where affordable housing is lacking. Both of those apply in Dallas as the market has evolved in the last

I-345 in Dallas today, top photo. Rendering of I-345 replaced by surface streets and redevelopment, immediately above.

seven years. As for other examples, I've been keeping my eye on two that are totally different. We've got the Seattle Alaskan Way Viaduct (recommended for teardown in the CNU 2008, 2010 and 2012 Freeways Without Futures list), which ends up being a hyper-expensive compromise. They put the highway below grade and it ended up going over budget and the drill got stuck. It will be better, yeah, but they could have just removed it for a fraction of the cost and had the same benefit. The other project is the Inner Loop in Rochester, New York, that was funded by a TIGER grant. It's striking how lovely some of the small towns in Upstate New York are that haven't had highways put through them. But the Albanys, Buffalos, Rochesters, and Syracuses, have been completely decimated by highways right through the center. And I'll be interested to see how Rochester can compete with its peer cities in terms of livability and attracting talent and population back to the city.

Are Freeways Without Futures projects picking up momentum?

Park: I think so. These conversations are increasingly being led not just by city planners and architects but by a broader range of folks in community. I mean, my goodness, the recent story in *The New York Times* was in the Style section.

Kennedy: The campaign, the idea, will inevitably grow by this simple equation: where the cost exceeds the benefits, the highway probably doesn't belong there. It's just a question of factoring in the right costs, and all of the costs, and all of the benefits. For example, take the cost of delay while sitting on the highways. Well, what if you weren't on the highway in the first place? Dallas, Texas may be the most car-dependent metro in the country, and we've gotten to the point where TxDOT has taken it seriously and about to start an engineering and feasibility study for freeway transformation. ♦

NOTES, RESOURCES, DISCUSSION

9. Freeways Without Futures

Notes

¹ CNU's first Freeways Without Futures report was in 2008. Follow-up reports were done in 2010, 2012, 2014, and 2017. Another is planned for early 2019. FWF reports typically take the form of a list of 10 in-city freeways that are planned or proposed to be eliminated, replaced by surface streets.

² Freedmen's Towns were built by and for ex-slaves in many states, most notably Texas.

³ By 2007, four years after the Park East Freeway spur was removed, more than \$800 billion in redevelopment projects were built, under construction, or in the pipeline in the redevelopment area or on sites nearby.

⁴ The 2017 list includes:

- Scajaquada Expressway, Buffalo, New York
- I-345, Dallas, Texas
- I-70, Denver, Colorado
- I-375, Detroit, Michigan
- I-980, Oakland, California
- Route 710, Pasadena, California
- Inner Loop, Rochester, New York
- I-280 Spur, San Francisco, California
- I-81, Syracuse, New York
- Route 29, Trenton, New Jersey

Additional resources

Webpage, Freeways Without Futures, 2017 report from CNU, tinyurl.com/y88cevoz

Video, *Freeways Without Futures, Dallas*, www.youtube.com/watch?v=ndlDX-B69zT8

Website, A New Dallas, anewdallas.com

Key points

In-city highways do a lot of damage to cities physically, socially, and economically (Page 69)

Limited access highways in urban areas limit access where you want abundant access. A network of street grids allows for abundant access (Page 69)

Cities designed for the car limit career, education, and social access to those who cannot afford a car (Page 70)

No neighborhood got better when a highway was cut through it (Page 70)

In-city highways damage investment and development opportunities in neighborhoods near them (Page 70)

Traffic is not a linear engineering equation. It is behavioral economics (Page 70)

In-city highways are big government spending that devalues the private real estate around them (Pages 71 and 72)

Where the cost exceeds the benefits, the highway does not belong there (Page 75)

Questions

Why has Freeways Without Futures been a popular idea for CNU?

Why do cities always seem to improve, economically and socially, when a freeway is transformed to surface streets?

Why did low-income neighborhoods suffer disproportionately when freeways were built through cities?

Why are many people initially reluctant to see even underused freeway spurs

torn down? Why are negative effects often exaggerated?

What's the strongest argument for tearing a freeway down?



Courtesy of Street Plans Collaborative.

Implementation



10. TACTICAL URBANISM

Anthony Garcia and Mike Lydon discuss Tactical Urbanism’s popularity and how it helps to transform communities.

A temporary protected bike lane in Burlington, Vermont, created in a tactical project. Source: Street Plans Collaborative

In between planning and building a complete community is a stage of testing ideas in the real world, and that is what Tactical Urbanism is all about. Temporary bicycle lanes and public spaces, traffic calming for a day or a month, colorful crosswalks, turning parking lots into pop-up parks—such activities are taking place across America, formalized by techniques and strategies called Tactical Urbanism. This concept gets planning off the paper and out of a big room. It is one of the most exciting trends in urban design and transportation today.

Can you describe the connection between Tactical Urbanism and New Urbanism and the difference between the two?

Mike Lydon: Tactical urbanism is really a methodology for private implementation and advancement within larger new urbanist projects. Tactical urbanism is a way of

thinking and doing this that’s been around for a very long time. Early examples can be found at Seaside, where temporary buildings, markets, and public spaces were used to drive interest and vitality. It’s an opportunity for people to engage in change-making that is critical to the success of our longer-term project. So I’d say it’s a tool. It’s a part of New Urbanism, always has been¹, and should remain that way moving forward.

Tony Garcia: I think the big difference is that with Tactical Urbanism, you’re really looking to build something—it brings the ideas that we put down on paper to life. It springs from the idea that walkable, compact communities are what we should be doing, and how do we get back to that goal? Tactical urbanism short-circuits the normal process of the charrette and builds on it in a way that is not obvious to most people who are not new urbanists—but the whole idea of “test before

you invest” is analogous to a charrette (see chapter 14), it’s analogous to doing sketches after sketches on a site to try to get to some sort of a solution. That’s what urban designer Victor Dover calls, “Propose and dispose.” The charrette is all about hashing out those ideas on paper. And our work just takes it another step further and says, “Why stop at the paper? Why stop at the rendering? Let’s just build the thing and see if it works.”

You talk about this as having a history, but nobody really identified it as a specific concept 50 years ago or 100 years ago. Why has it come into the lexicon now?

Lydon: A lot of these ideas have just been isolated in their application. It’s powerful to take an idea to fruition very quickly, and whether it fails or succeeds, just the notion of doing it, for some reason, seems radical or strange or not the way that projects are normally developed. There’s a lot of examples of activating streets or spaces or people doing things without permission and those things leading to sustained and sanctioned change at the policy level, or through physical projects. There’s a fascinating history of this as a form of protest in the ‘60s and early ‘70s. For us, writing this book a few years ago, it was really important that we pay attention to that, and give credence to the fact that this isn’t new. But this term, in bringing all these disparate projects together that more or less use the same line of thinking perhaps is the new element here. And you see it today as a matter of necessity in developing cities in developing nations. You see it in favelas, or in just normal city neighborhoods, a lot more of this reclamation of space, and making good use of what you have on hand, and trying things out, and a lot of low-risk, small-scale projects and enterprises that, when successful, make a lasting impact.

Garcia: And they arguably don’t call themselves tactical urbanists. The favelas—that’s just the way that they do it. We branded it, but the reason that you don’t see any mention of it throughout history is for the same reason you don’t see New Urbanism mentioned. It’s



just the way things were done. And there was no reason to call it out as being different, but now there is.

Why do you think the concept has resonated in cities and towns throughout the United States and abroad?

Lydon: People are tired of conventional planning process. There’s only so many public meetings that folks want to go to. And this puts the action squarely into the hands of folks—city people, city employees, and city leaders, and citizens. And that’s the powerful framework that’s inherently about doing as opposed to talking about or planning doing something. It’s very action-oriented, it’s low cost. For the most part, it’s extremely fun to go and change a space with groups of people. That action approach has really brought a lot of attention and excitement, and that’s part of the appeal.

I was just at the Charter Awards jury, and there was a call for some tactical projects, and a number of them deal with streets. Is there a special reason why streets in particular are in need of tactical urbanism?

Garcia: There’s two reasons that streets are easier for us to do. Like I was just mentioning, a building is a more complex thing. The larger-scale items are just harder. But street interventions are a lot more accessible, and it’s a place that we all feel comfortable with as new urbanists. A street is easy to retrofit. But the sad part is that we need to retrofit them because our streets have been so horribly designed, and they continue to be horribly

Mike Lydon, left, and Anthony Garcia, principals of Street Plans and coauthors of the book Tactical Urbanism: Short-Term Action for Long-Term Change



designed, up to today. That's one thing that we as new urbanists have learned, the buildings can only do so much. They can only carry a certain part of the load, but what happens between the buildings is just as important. And we're losing that battle. So people see that as being the front line, and that's why we see a lot more projects on streets.

Lydon: There's an ownership level here, right? We can eventually get permission or claim that we have ownership over the streets as taxpayers, to work with them, and buildings and lots are private space. So if you have a willing property owner, it's very easy. But we can also do blocks and blocks of public right of way by working with cities. And as Tony mentioned, it's public realm that has been so lacking in the American city in the last several decades and for all the reasons new urbanists highlight. And to fix the street is absolutely primary to our work.

What are some of the more successful and/or innovative tactical urbanism projects that are going on right now?

Garcia: A project that's going on right now that is pretty innovative is Biscayne Green². This is a highway median that goes right into downtown and the median is a series of parking lots. So the Downtown Development Authority got a grant from the Knight Foundation to convert two of the parking lots into public space. The innovative aspect is that we reconfigured Biscayne Boulevard, which is our main street here in South Florida, right on the bay, to allow on-street parking. As part of that exercise, we also negotiated with FDOT (Florida Department of Transportation) to paint crosswalks with an artistic design, something that they had not allowed anywhere in the state of Florida up until this point, so this experiment is not just a Pavement to Parks project, it's got a crosswalk component. It's got a dedicated bus lane component. So it's all of these tactical

Tactical Urbanism in Fayetteville, Arkansas. Photo by Megan Sebeck



projects mashed together in an ensemble. When you put it all together like this, it's a pretty massive undertaking and it's starting to scale up in the way that we have envisioned.

Lydon: We just finished a project in northwest Arkansas, where our charge was to work with three cities—a nonprofit was our client along with the Walton Family Foundation³—and our task was to come up with pop-up bike lanes that would last for one month. That's also interesting because we haven't really seen many interventions that last for that amount of time. The fun thing was that our municipal government partners, at least at the Municipal Planning Organization level, were skeptical at first and not really accustomed to this whole idea. Now I would say Tim Conklin, our client, is one of the best tactical urbanists that we know. He gets it and that change happened in front of us.

What was so convincing in what you did with the government partners that changed their minds?

Garcia: It wasn't what we did. It was what he did because he got his hands dirty. Michael, tell the story.

Lydon: Well, first of all, just to zoom out quickly to have context on the project. The point was to create three protected bike lanes radiating off of a trail network. They built a 35-mile world class trail network⁴ through northwest Arkansas. But the problem is they had no on-street connectivity to the trail through the downtown, so the charge was to build protected bike lanes connecting major destinations to the trail, including downtown. The moment the client has traffic tape in his hand, on his hands and knees, and is putting it down on the asphalt with the mayor, he looks up and says, "Okay, guys, this is pretty cool. I get it." That's the 'aha' moment. There's something powerful and fun and collaborative about actually doing a project together physically that's very, very different than drawing something on paper or being at a public meeting. The next step in this line of thinking is to actually allow citizen groups,

*A pop-up park on a parking lot in Biscayne Boulevard.
Source: Street Plans Collaborative*



nonprofits, and city departments to do this as a right. What we found in Burlington Vermont is that we can stitch these things together to allow businesses and organizations to take this approach and start implementation very early on in the process. So you're going from plan to action, from paper to pavement very, very quickly. In Burlington there were four demonstration projects on one weekend that got thousands of people involved and built a lot of excitement. It provided a test case for a permit program and policy that the city adopted and now allows organizations to make tactical changes whether we're there or not. It's the local community groups who go to the city and have a very clear process to get permission to do a range of projects and interventions in public space and the street. That's the very first time any community, any city that we know of in the United States, has done that.

Do you know if anybody's followed up and taken advantage of this program?

Lydon: The first to step in was an organization called Local Motion⁵. It is a statewide advocacy group in Vermont, based in Burl-

ington. Once we got the policy adopted this past Fall, they went out and got a trailer full of materials so they can drive around the city or the state and do all these pop-up demonstration projects. So they've now assembled that and are starting to drive around, but it's really going to be the spring and the summer when all this gets rolled out. And we're just now finishing the master plan for the city of Burlington. It's going to a formal approval process this winter.

What sort of materials do they have in the back of this trailer?

Lydon: It would be planter boxes, cones, traffic tape, the tools for implementing—so things like scissors, paint, paint brushes, wood—that can be configured into different things. This whole kit of materials will always be evolving depending on what the project calls for.

Let me ask you about two things that I think are absolutely critical. The first is testing. You're doing this for a short period of time. How important is the concept of testing and getting numbers

A tactical event in Burlington, using part of the street. Source: Street Plans Collaborative

before, during, and after to prove any particular concept?

Lydon: It's critical because it helps you build a story, build a case with the community to accept and engage in a project. And then you really demonstrate success through real pictures of people using space, numbers of users, public reviews, comparison of crashes, or whatever the metric might be.

Garcia: Just having built the thing is a test. That is a proof of concept. A rendering in real time.

The other thing I wanted to ask you about is liability. I'm sure you get these questions all the time. There are concerns about changing the street, changing the space. How important is liability and how big of an issue is it?

Garcia: We try not to focus too much on the liability aspect because that's part of what got us into this problem in the first place. Constant focus on liability and who is going to get sued has led to our streets being designed by the lowest common denominator.

Lydon: It is a concern fairly frequently, but it's a thing we can deal with pretty expediently. When we are talking about changes to the right of way, oftentimes we're doing things that are already done in materials that are already used by Public Works Department or Department of the Transportation. Things like cones and traffic tape are part of the normal language of construction projects. So we take those tools and we're just remixing them and applying them for a different purpose, in terms of the testing.

They're often willing to use their own liability to cover the project since it's sanctioned. Where I think liability becomes a concern is in the unsanctioned projects⁶ that don't have permission from the city. Those things might be done in a guerilla fashion. And if you're doing something in the middle of the night, without permission from the engineers, then you need to be able to accept that liability.

The great irony is that the vast majority of projects are actually using geometries and designs that inherently make streets safer. So this is why you've never seen anybody get hurt in a major way, or killed, on our streets project during hundreds and hundreds if not thousands of pilots and demonstration projects of tactical urbanism around the globe.

What differentiates the communities that are using tactical urbanism and those that aren't? Can you tell me what is triggering this in some places and not in others?

Garcia: There's usually an organized group of people who are interested—ideally, it's inside city hall and outside where there is some education or some advocacy group. When you got those two forces together, it's a very, very powerful tool because there's political cover coming from both ends. Those communities tend to be a little more educated, higher income possibly. One of the challenges with this idea is that volunteers need free time to make these projects happen. So there's an unspoken prerequisite that you need to have the capacity of an engaged community. Now that being said, of course there's been lots of projects where that isn't necessarily the case. You see a lot of communities that are underserved, under-resourced, using this as a means of getting things done at low cost to create momentum and progress in overlooked places of the city. And I think that's where we want to spend a little bit more of our energy and time in focusing on how this tool is used within those places. It can be a great way to attract political attention and capital to move ideas.

It's often a city location, an urban location, where the tactical urbanism is applied. Are you seeing this in the suburbs very much?

Lydon: We've worked in suburban locations. The reason why I think we see it more in an urban setting is an issue of scale. You don't have the urban armature to frame the public realm, so the project becomes harder to instigate. We've worked on those and quite

frankly, they're just harder to be successful because you just don't get the sense of a human scale as easily.

But yet they probably need it even more.

Garcia: I would agree. Where tactical urbanism and New Urbanism meet is in the action that you take on the ground as a way to inform the policy and the zoning and the regulatory side that actually empowers the water colors and the renderings to become real. So if you're taking a large vacant site and you're activating it, then you're showing demand and interest and the viability of concepts. It's a tool that can show property owners, businesses, city leaders this stuff is actually doable and viable.

I heard this week that a pervasive engineering mentality is the biggest problem in America related to the built environment. Are you seeing tactical urbanism being accepted and applied by departments of transportation?

Lydon: Slowly. I mean the ideas became a lot more accepted generally with progressive engineering departments, DOTs, and public works. You see it in the big cities, for sure. It's a career-long fight that we're engaged in. But we've seen the Institute for Transportation Engineers write articles about tactical urbanism. We're seeing more and more cities adopt the NACTO Street Design Guide⁷ as their standard. We're seeing it happen a lot with generational shifts. Many of the clients that we have are people who are our age, like the young directors of transportation in cities like New Haven. It's going to take time to filter its way up to the top of these departments, and to change the standards on the ground. And that's something that I credit new urbanists traffic engineers for pushing and making happen since 35 years ago.

Looking toward the next decade, what is the role of tactical urbanism and where and how can it be most effective?

Garcia: I think starting to infiltrate the public works departments. That's where we want to take our tactical urbanism fight. Having city

staff buy into this idea is critically important, just like having city planning staff buy into New Urbanism was critically important to that rise and that change over the past 20 years.

Lydon: That's one of the biggest reasons why we wrote the Tactical Urbanists' Guide to Materials⁸ in December, which was funded by the Knight Foundation. We wrote into that grant a series of workshops specifically where the engineers had to come to the table with the planners and the advocates. The idea is we want all these people in the same room doing a workshop around a problem site where tactical urbanism could be applied. We only selected cities that had their ducks in a row to move forward. They can get comfortable with the fact that they can do a lot more through this approach. The application's much wider than street safety, but that's kind of the reason for the guide creation and setting it within public works and the departments of transportation around the country. And we look at three different time intervals in that guide. We're looking at the materials and the design considerations for short-term, one-day to seven-day projects, medium-term projects of a month to a year, and projects that last one year to five years.

Is there anything else that you'd like to add?

Garcia: For our audience, I want to make sure there's a connection that we talked about early on that this is a movement by new urbanists. It's got its different approaches and audiences but I think it's born from this larger movement that we trained under. We think that's a really powerful addition to the new urbanist toolkit. And something that might get lost in the whole tactical urbanism discussion is there's a plan that backs up what you're doing. We differentiate guerilla urbanism from tactical urbanism by the plan.

Lydon: It's so important people understand that the best projects are those that are tied to the feasibility of doing something in the long term. If you're not tying the one day project to the long-term investment then it's not tactical. It's not achieving a larger outcome. ♦

NOTES, RESOURCES, DISCUSSION

10. Tactical urbanism

Notes

¹Before Tactical Urbanism was coined as a term, many urbanists used similar techniques out of the necessity. When Robert Davis in Seaside, Florida, began converting the shoulders of Highway 30A to on-street parking, that was Tactical Urbanism of a kind.

²See the work on Biscayne Boulevard in Miami, for which Lydon and Garcia won a CNU Charter Award.
tinyurl.com/ya7bhle3

³The foundation was established by the heirs to Walmart. The foundation has focused on livability in the region to attract an educated workforce serving a growing number of firms, large and small, that are headquartered in the region, including Walmart.
tinyurl.com/ydarvrlz

⁴For more on the Northwest Arkansas trail network, see tinyurl.com/yc5jpwsc

⁵For more on Local Motion and their Tactical Urbanism, see www.localmotion.org/community_action.

⁶See Tactical Urbanists Are Improving Cities, One Rogue Fix at a Time, *Smithsonian Magazine*, tinyurl.com/yarnamcb

⁷For the NACTO Street Design Guide, see tinyurl.com/yafejc67

⁸See the Tactical Urbanism Guide for Materials: tacticalurbanismguide.com.

Additional resources

Book, *Tactical Urbanism: Short-Term Action for Long-Term Change*, Lydon and Garcia, 2015, islandpress.org/book/tactical-urbanism

Video, Jason Roberts, Build a Better Block, youtube TEDx talk, www.youtube.com/watch?v=8HTkBTnZ9D4

Video, Mike Lydon, www.youtube.com/watch?v=sMFrJxFxp1Q

Key points

Why stop at paper? Just build it and see if it works (Page 79)

It's powerful to take an idea to fruition very quickly, and whether it fails or succeeds, just the notion of doing it, seems radical relative to how projects are normally developed (Page 79)

It's extremely fun to go and change a space with groups of people. And it doesn't cost a lot (Page 79)

A street is easy to retrofit. But the sad part is that we need to retrofit them because our streets have been so horribly designed, up to today (Pages 79 and 80)

Testing is critical because it helps you build a story and a case for the community to accept change (Page 83)

Constant focus on liability and who is going to get sued has led to our streets being designed by the lowest common denominator (Page 83)

Liability becomes a concern with unsanctioned projects that don't have permission from the city (Page 83)

The vast majority of Tactical projects are using geometries and designs that inherently make streets safer. That's why nobody has been killed during hundreds if not thousands of pilots and demonstration projects around the globe (Page 83)

Tactical Urbanism and New Urbanism meet in using the action as a way to inform the policy and zoning. Tactical Urbanism is a tool that can show property owners, businesses, and city leaders that this stuff is doable and viable (Page 84)

Tactical Urbanism is a tool to infiltrate the public works departments (Page 84)

The best Tactical Urbanism projects are those that are tied to the feasibility of doing something in the long term. If you're not tying the one day project to the long-term investment then it's not tactical (Page 84)

Questions

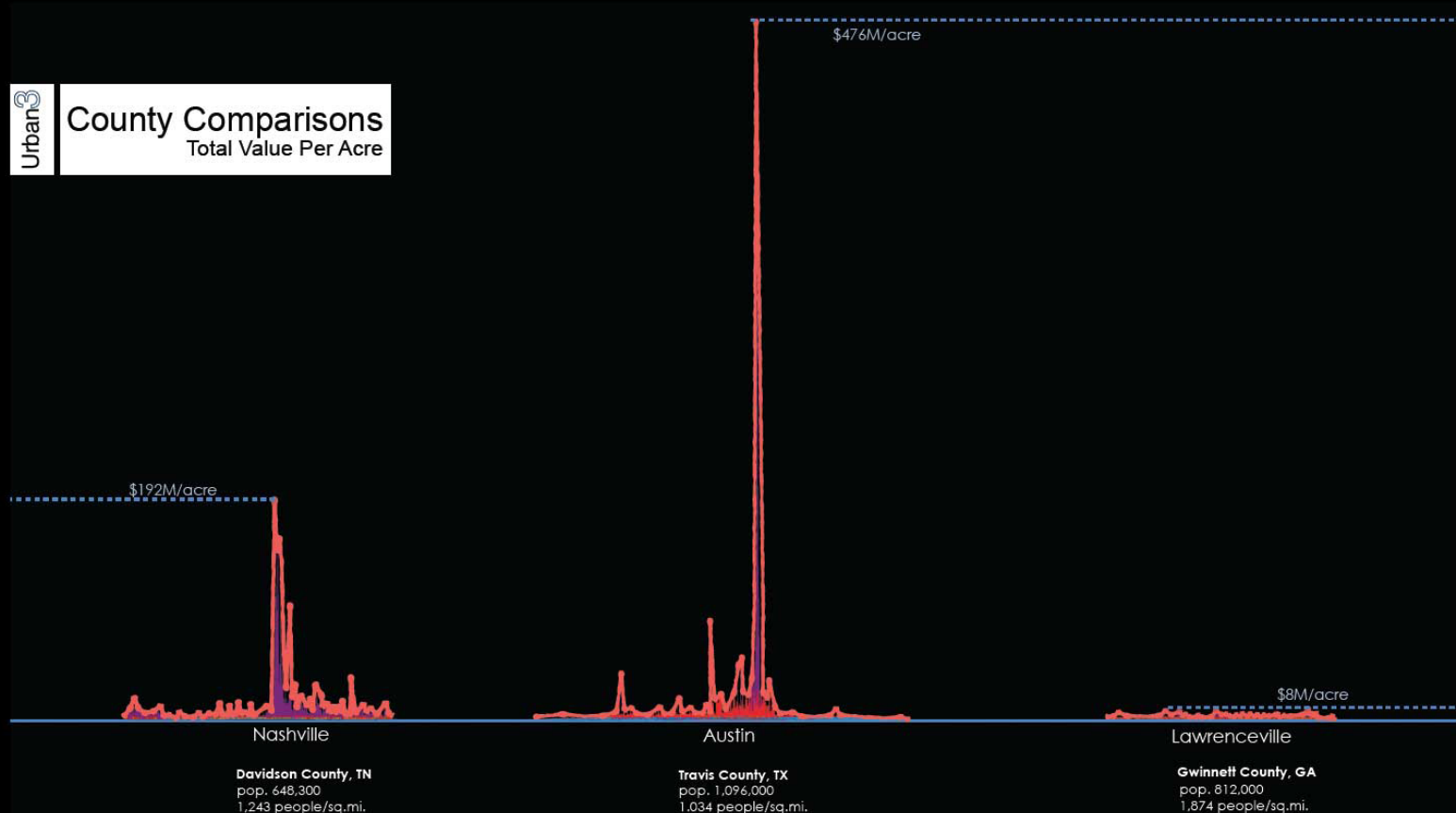
Why is Tactical Urbanism needed? Why not just go from the plan to the permanent project?

What is it about rolling up sleeves and building something, or painting, or just sweeping that changes people's perceptions of a project?

Did community building too focused on professionals? Does everything take too long? If so, is tactical urbanism a response to that reality?

How can Tactical Urbanism be used systematically in community planning? Would that be a good thing?

What problems are most practically solved through Tactical Urbanism? Where is this idea most usefully applied?



11. DOING THE MATH FOR CITIES AND TOWNS

Charles Marohn and Joe Minicozzi discuss the economics of development and infrastructure, and value and efficiency in land use.

Civil engineer and planner Charles Marohn and architect and real estate analyst Joe Minicozzi took part in a panel discussion in 2011 at CNU 19 in Madison, Wisconsin, and they both describe it as “chocolate and peanut butter meeting for the first time.”¹ Marohn helps government officials and citizens understand the infrastructure efficiencies of traditional towns and neighborhoods; Minicozzi analyzes land-value economics and promotes development patterns that secure a community’s fiscal sustainability. They have opened the eyes of America to what Marohn calls the “Ponzi scheme”² of 20th Century development patterns and the relative value of mixed-use urban places.

I wasn’t even sure quite what to call this, but I’m thinking of “Development and Infrastructure Value and Efficiency.” There may be a snappier title for what

you guys do—any ideas?

Charles Marohn: “Shock and awe” is what we call it.

Joe Minicozzi: Yeah, “shock and awe” works.

So which one is shock and which one is awe?

Marohn: I’m definitely shock. Chuck is shock and Joe is awe.

Minicozzi: We all know that sprawl costs money, but no one’s explained at that detail about the cost of sprawl the way that Chuck explains it. When Chuck and I do presentations together, we get to see the audience. We can see their reaction, and there’s a palpable sense of shock when Chuck starts walking through the cycle of suburban infrastructure. It’s very obvious that everybody realizes that you can’t

Peak land values in the Nashville and Austin areas compared to Lawrenceville and Gwinnett County, Georgia, 812,000 population, which has no downtown. Source: Joe Minicozzi.

build your way out of it. It just doesn't work financially. The audiences have to wrestle with that. But I'm sure Chuck can tell you many stories about it.

Marohn: You watch people struggle because part of the cognitive dissonance of Americans is that we know what we're doing doesn't make sense. But, we really don't have a formulated alternative to wrestle with and ponder. So it's easy for us to just go about our days and not think about it much. When we put it in front of people and we walk them through, it's like, "You actually know this. You know why this doesn't work. Here it is." It is one of those pulling back the curtain kind of moments. You know what's on the other side, but now you're seeing it in such high fidelity, such great contrast, that you can't ignore it. And you can't unsee it. You have this new world open. The reassuring thing then is to have Joe step up and say, "Look. We actually know how to do this. I mean, we've been building great cities for thousands of years. Here's how to actually deal with these problems that Chuck has shocked you with. We actually are good at this. And the math starts to work out and make sense, but you've got to measure things differently. You've got to look at it in a different way."

So once you can hit them with the shock and awe, what is the next step? Where do they go from there? Can you give me an example of a place or a community that came to this realization that this was economically unsustainable and actually did some meaningful things about it?

Minicozzi: Lafayette, Louisiana,³ is wrestling with this right now. We programmed the roads and pipes and the sewer system, all that stuff—the same way that Chuck runs it as a subdivision in his presentation, we did that citywide and showed people the economic state of the city.

And what have they done?

Marohn: You look at a place like Lafayette and you realize that there's no solution in the



sense that we can fix everybody's problems. What Lafayette has done is really lead the country in asking a harder set of questions. And in Lafayette they have now realized that they can't just accelerate their way out of this problem. They actually have to start thinking differently about things. And this is a long process. They haven't come up with a plan to attack this. But they're no longer ignoring the problem like most other cities are.

Minicozzi: And I think what ties this all back to New Urbanism⁴ is there are so many things that go into it. A lot of our peer groups and organizations try to gravitate towards the simple solution, the magic bullet, all of those things. We know that that won't work. Lafayette's situation is a 40-year problem. So it's going to take a while to unpack that and undo some of the damage that they've done. And our recommendations weren't just one thing. They were: Start reinforcing your downtown; Change the way you do your budget process. That's totally unsexy. In this process, something as unsexy as that is actually going to have a big effect when they start doing true accounting for their infrastructure.

Marohn: I think the really important thing about the whole shock and awe approach and the work that we're doing with Strong Towns is that, it really has no kind of partisan bite to it. We don't start with a point of view on the political spectrum or a sense of here's what is morally right and wrong and then try to find data to justify that. We lay out data and let people put it in their own paradigm. And I think that has made it, not only more powerful, but more relevant for America today. We've been invited many times to go speak in really, deeply conservative red places. And

*Civil engineer **Charles Marohn**, founder of Strong Towns, and architect and real estate analyst **Joe Minicozzi**, principal of Urban3.*

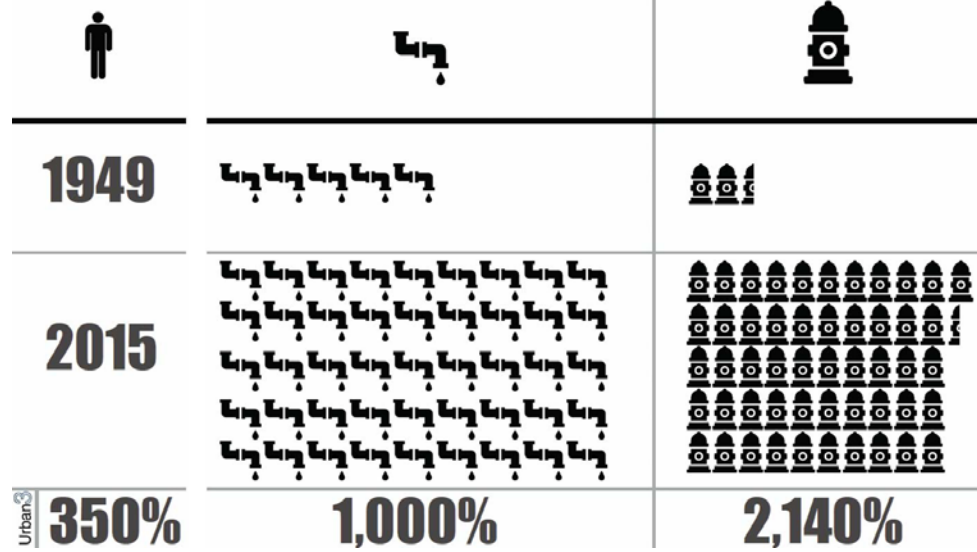
we've been also asked to go speak in very liberal, politically blue places, and our message is equally received in both. And it's because the dollars and cents really get beyond the partisan divides and deal with where cities are struggling.

Minicozzi: It's just being agnostic about the data. The data is telling you exactly what's going on; just use it.

You folks seem to work a lot in towns and sprawling metros. It reminds me a little bit of the story Andres Duany tells of two successive nights when he worked in Boston and then in some rural area in California. And it was a completely different audience and they both got it.

Minicozzi: What the audience starts to dial into is, why do we not use this collective knowledge? They start to understand that urbanism is not a bad word. I just did a presentation in Johns Creek, Georgia, which is a suburb of Atlanta, 30 miles outside of downtown. It's 82,000 people, and they don't understand why they don't have a downtown. They're 20,000 people larger than the population of Greenville, South Carolina. They're gradually waking up to the idea that this is foreign to the concept of human habitation. We've got 10,000 years of city-building experience⁵ that we've neglected in the last 40 years.

Marohn: Joe and I, once, were in Greensboro and to hear Joe talk not only about the finances, but then talk about the way people were building things years ago and why it was set up into these core neighborhoods, you got a real sense that people were really smart, not necessarily IQ smart, but they were trial and error smart. They had figured out what worked. These traditional development patterns, by trial and error, figured out how to build places that not only worked for people but also were financially strong and resilient. And to me, when I look at the graphics Joe puts together, the analysis of say Buffalo, New York—and you think of it as being a place that was hollowed out after World War II and just in a state of perpetual decline. And then you



look and you say, "Oh, my gosh." Even with all the decline, these old traditional neighborhoods are still enormous assets that really dwarf everything else. And it just makes you realize how powerful this way of building was and how tragic it was that we just walked away from it. But then also how easy it would be to recapture those principles and put them back into play in our cities.

How do you get people excited to recapture those principles?

Marohn: At Strong Towns, we're really good at helping people ask a different set of questions, and see things differently, and start to visualize the world they live in, and the world they could live in, differently. I feel like we're paving the way for a broader acceptance of new urbanist practices.

Joe, you've gone around scores, maybe hundreds of municipalities, and you've done plans that show the value. They show the peaks of value of the downtown, and they dramatically bring home that point of where the tax revenues are coming from. Do you ever get frustrated that after 100 or 200 of these maps that you still have to do another one for each new community you go into?

Minicozzi: Not really. It's a complex thing to answer. You're dealing with political leaders who want to do the right thing, but they don't have a full understanding of how municipal finance works. Both Chuck and I have worked in and around government and dealt with

Growth in water pipes and infrastructure in Lafayette, LA, since 1949, has far outstripped the growth in people. Source: Urban3

those processes, and the process tends to drive everything. And so they don't get a chance to sit around and think about this stuff. So it's not an easy thing to unpack. I don't get frustrated with my clients. I appreciate the fact that they're asking deeper questions. Like in the case of Lafayette, kudos to them for wanting to really get into their books and see how messed up they are. A lot of cities will just keep on going down the road.

Chuck, you've been writing in particular about how important infrastructure is right now, as the Trump administration gets underway. Could you give me your thoughts on infrastructure as a national issue?

Marohn: What we've seen over the last 60 years is that there are really horrific things that have happened in our communities, as a result of these centralized objectives, and then cities have to deal with the consequences. And what we would really like to see is an agenda that focused on cities first and their needs, and then worked itself up from there. And the urgent needs that we have in our cities today are really of the fine-grain variety. If we spent our money working on crosswalks, and planting trees, and converting single-family homes in struggling neighborhoods into duplexes and triplexes, and getting more wealth off of the sidelines in our communities and back onto the blocks, we'd transform this country. Instead, we're going to talk about big interchanges and bridges and highway expansions, as if we're not already drowning in liabilities that we can't maintain.

So is there any way that you see that all this proposed spending is going to be able to be put to more productive use through the federal government, then through the states, and then through the local municipalities?

Minicozzi: No, but, we've said sometimes, "How can we do this in a way that does the least amount of damage and has the highest potential for ultimately doing good?" And we've come to the conclusion that if we spent

Urban³



| | | |
|-----------------------------------|-----------------|------------------|
| Land Consumed (Acres): | 34.0 | 00.2 |
| Total Property Taxes/Acre: | \$ 6,500 | \$634,000 |
| City Retail Taxes/Acre: | \$47,500 | \$ 83,600 |
| Residents per Acre: | 0.0 | 90.0 |
| Jobs per Acre: | 5.9 | 73.7 |

the money underground in old neighborhoods, essentially water and sewer systems, that would actually give us options down the road, instead of a whole bunch of liabilities. We can go back to Lafayette, Louisiana, and we can see that in their core downtown, where they actually have the most financially productive neighborhoods, neighborhoods that are very poor yet pay more in taxes than they require in services, one of the biggest threats to those neighborhoods is the fact that a lot of the pipe there is old, clay pipe. It's stuff that's cracked and settled and needs to be replaced. You go to the edge of town, where they're building stuff brand new, and they've got brand new PVC pipe that will be in the ground for a couple generations without needing a whole lot of work in maintenance. But these places are deeply in the red. They require a lot of ongoing cost and maintenance expense, and they don't pay very much in taxes on a per foot basis.

The economic impact of Walmart versus a mixed-use downtown building in Asheville, North Carolina.

One thing I'm struck by, looking at some of Joe's maps, is that these new urban projects actually show up in your images. If there's a new urban project, all of a sudden there's a peak which shows the tremendous value that's created in a smaller area.

Minicozzi: It's unbelievably simple math—new urbanism is essentially mimicking old urbanism. The old urbanism is potent because it's dense and it's multiple stories. When you stack one story on another, you're essentially stacking your dollar bills for your taxes.

Is this an affirmation of the concepts of New Urbanism?

Minicozzi: Yes. Here we are, we've become the wealthiest nation on the planet, and we just get silly with our money and don't think about how to get it back. And so there is a pattern that we can learn from older civilizations. The original people of Lafayette, they didn't build in the swamp because they were broke. And so the biggest problem, the reason why, when you look at that model of the upside down infrastructure, the biggest thing dragging it all down is all the storm water systems that are out in the swamps. Well, that's a no-brainer, like why would you build in the swamp? You can't fight Mother Nature—it's expensive. And that's the simple math of that model, of course; they're going to be upside down financially.

Marohn: I think too, you know, to me the best of New Urbanism is when we start with humility and work at a really small scale with an incremental intent. The thing about New Urbanism that works best is when people just roll up their sleeves and look at a routine problem and say, "Look. We can fix that, and we can fix it without needing some huge historic intervention and without some big, top-down kind of process. We can just make some little things here, and if we follow some principles, we can actually come up with something that's a lot better."

Do you see cities and towns moving towards that understanding and realization? Or is it just pushing the boulder uphill once again?

Marohn: No, I think that the biggest challenge we face at city level is that cities have bureaucracies and processes that are very post-World War II. They're very suburban-oriented. Until our governments are able to restructure themselves, we're going to struggle to get things off the ground. You can go to a place like Detroit and see where humility has been imposed on them. Some of the best things in this country right now are happen-

ing there, where they've had to roll up their sleeves and say, "Let's rethink this."

By the same token, it seems to me you've got two things going on. You have these sets of top-down practices and regulations, which have created a certain built environment. But at the same time, you've lost the cultural memory of how to do it in a bottom-up way, efficiently. Seventy-five years ago, if you asked people to simply create a main street, they would have done it a certain way almost without thinking, because there was a cultural memory. So how do you get that back?

Marohn: I think there's knowledge that certainly has been lost and can be regained, but there's also the realization that we're very different today. And we're going to have to use those techniques to figure this out as we go ahead. We can learn from the way that they approach problems and the way that they did things, and use that as a starting point to say, "How do we hack and retrofit what we have today to actually make it work and make sense?"

Speaking to an audience of urbanists or planners or public officials, are there any final thoughts on things they need to know that are really critical?

Minicozzi: You can throw a tremendous amount of money at a project and make it look really nice from a design standpoint, but it may not function financially in the long haul. So having the municipal finance conversation is really key.

Marohn: I would say that you have to do the math. We can build places that are beautiful and walkable and well-connected and meet all the other metrics, but if they're not financially solvent, it's going to be for naught. And so unless we take care of the money, it's not going to work. We can build places that are fantastic, that are also financially solvent. And I think when we use that discipline, what we find is that New Urbanism comes out ahead of every other approach that's out there. ♦

NOTES, RESOURCES, DISCUSSION

11. Doing the math for cities and towns

Notes

¹This metaphor of peanut butter meeting chocolate originally comes from the 1980s commercials by Reese's Peanut Butter cups.

²Charles Ponzi was a con man in Boston in the 1920s who paid off investors with the money of new investors.

³Lafayette, Louisiana, population 127,000, is a sprawling city with a historic core. About 75 percent of the city has been built since 1950, largely with conventional suburban design. See the impact on water and sewer infrastructure on page 84.

⁴New Urbanism generates high real estate values per acre of land, similar to main streets or historic town centers. See page 180 for a value map of the Charleston area that highlights the value of I'On, a new urban development.

⁵Cities and towns were always built on the human scale, with mixed-use and walkable blocks and streets.

Additional resources

Website, Strong Towns, strongtowns.org

Video, *The Value of Downtown*, www.youtube.com/watch?v=HVD01WUm0oA

Key points

Americans understand that something is wrong with the way we build cities, but cities haven't clearly formulated an alternative to wrestle with and ponder. (Page 87)

Humanity knows how to build produc-

tively. We've been building great cities for thousands of years. In order to get back to that, you have to measure things differently. (Page 87)

Math is not partisan. We don't start with a point of view on the political spectrum or a sense of here's what is morally right and wrong and then try to find data to justify that. We lay out data and people make up their own minds (Page 87)

We've got 10,000 years of city building experience that we've neglected in the last 40 years (Page 88)

Traditional development patterns were financially resilient because they were learned over many generations by trial and error. (Page 88)

If we spent our money working on crosswalks, and planting trees, and converting single-family homes in struggling neighborhoods into duplexes and triplexes, we'd transform this country (Page 89)

Investing in old neighborhoods provides options instead of liabilities (Page 89)

When you stack one story on another, you're essentially stacking your dollar bills for your taxes (Page 89)

Post-WWII bureaucracy dissuades urbanism. Until our governments are able to restructure themselves away from suburban-oriented bureaucracy, we're going to struggle to get things off the ground (Page 90)

We can build places that are beautiful and walkable and well-connected and meet all the other metrics, but if they're not financially solvent, it's going to be for naught (Page 90)

Questions

How does "doing the math" change the conversation on community building and lead to better design?

If newer infrastructure is found outside of historic neighborhoods in auto-centric areas, does that imply that cities should densify in these areas?

How could adding more mixed use and density to suburban places impact the financial resilience of communities?

How should municipalities analyze the financial resilience of greenfield development? What stance should they take on greenfield development?

Are Marohn and Minicozzi missing any variables in their mathematics?

What do you do with poorly designed subdivisions that are financially failing?

Why is the multistory density of historic urbanism potent from a financial perspective?



12. FORM-BASED CODES

Victor Dover and Geoff Dyer discuss land-use code reform and how it allows cities and towns to code for complete neighborhoods and a better public realm.

*A form-based code can help to transform a commercial strip into an urban place.
Source: PlaceMakers, LLC*

Since the middle of the 20th Century, zoning has been a force toward sprawling suburbs and disinvestment of historic cities and towns. New urbanists created urban design codes called form-based codes to physically define streets and public spaces as places of shared use, and to build complete neighborhoods that are compact, pedestrian-friendly, and mixed-use. Form-based codes have been adopted in hundreds of cities and towns¹ in the US and throughout the world as alternatives to or replacements for conventional zoning.

What are form-based codes and how do they differ from conventional codes?

Victor Dover: A form-based code is organized around the type of place you're trying to create rather than land usage. Conventional zoning will have sections and subsections devoted to land uses, like residential, industrial or commercial, but form-based codes recognize that healthy cities are, first of all, mixed-use places

and they depend on things that have more to do with physical design than land use, like the building-to-street relationship. Conventional zoning by land use creates a bunch of abstractions and dimensional requirements and it's helped produce a lot of unsatisfactory places people don't like very much.

Geoff Dyer: From a toolbox perspective, conventional suburbia is already organized by use, and all the industries and zoning regulations that support it were born out of that approach to development patterns. When the new urbanists arrived to create mixed-use places, the zoning regulations were working against them. Some people might say "Well, why don't we just make a zoning category that is mixed use?" But it's internally contradictory to the fundamental basis of zoning regulations organized by land use. Form-based codes offer a different way to organize regulations to better achieve the desired outcome. Instead of organizing them by use, we create zones

according to character and intensity. There's a misconception that form-based codes do not regulate for use, but they can. They can also regulate things like setbacks, building height, and signage, which conventional zoning also does. The reality is that form-based codes are not necessarily unrelated to conventional zoning, but they are fundamental to effectively implement mixed-use places. They've become the best practice.

It has often been said, especially in the earlier days of New Urbanism, that building neighborhoods is illegal according to current zoning. Can you talk a little bit about that, and is that still true?

Dover: Adopting a form-based code sends a signal to investors, developers, and everyone in the town that you're a place that's thought about neighborhood and community and has tried to make the built environment walkable. However, the regulation of development with specific physical dimensions is attested historically before the creation of conventional zoning.² Take the development of Back Bay in Boston in the late 19th century. The investors in that period imposed upon themselves something like a form-based code that allowed for great variety of design in the rowhouses and mixed-use buildings there, but these rules also fostered the features that are critical for any given street and the building-street relationship that all buildings should share. In the years that New Urbanism was emerging, the plan for Battery Park City in New York adopted something that looks a lot like, at least to me, a forerunner of form-based code specifications about the building-to-street relationship, the proportion and style of buildings so that they fit with traditional ways of building in New York City.

But the normal mixed-use walkable neighborhood, is that still illegal in a lot of places?

Dyer: It is functionally illegal. In other words, if I want to build my building up to the sidewalk, I may not be able to do so because there is a minimum 20 foot setback. But even if there isn't a regulation, if it's a four-lane street



with a 45-mph speed limit and no on-street parking, that also makes it so impractical to move my building up to the sidewalk that it might as well be illegal. This is the problem with simply adding a mixed-use zoning category to conventional zoning. A whole list of things prevents you from actually achieving what you want to achieve. The regulations may allow you to do multi-family and commercial. But then you also have to follow the setback. You have to create a minimum percentage of greenspace in your development to contain all your stormwater on site. All of these things add up and then you cannot physically build a walkable place. We don't need a minimum percentage of green space on every lot. What we need is the ability to have a great, public green space.

Dover: For many municipalities, what they do is quite inadvertent. For example, they adopt ridiculously high minimum parking requirements and front, rear, and side set-backs. Even if they want to have a walkable main street, they've made it impossible. When you sit down to modify the regulations and adopt form-based codes, there will be a community conversation about a lot of details. How close to the street are the buildings? How tall are they? What are their relationships to each other and to the public spaces like streets? Adopting a form-based code is more than simply changing the table of contents and the zoning elements. There has to be a conversation about how existing regulations might

***Victor Dover**, principal of Dover, Kohl & Partners, and **Geoff Dyer**, director of design and interim CEO at the City of Lafayette Downtown Development Authority.*



inadvertently be making it very difficult to provide affordable commerce and housing. It brings up a lot of other thorny subjects like the coexistence of small lots and large ones in residential areas or the coexistence of single family and multi-family homes. The coexistence of stores, restaurants, housing, offices, and hotel rooms. It gets at the essential DNA of the community. A good code is like undamaged DNA, but instead of strong, healthy tissue it grows strong, healthy places. Problematic DNA still creates growth, but it might be cancerous.

Communities have layers and layers of conventional zoning in place. It may have been put in place, the original zoning ordinances, in the 1930s or 1940s, and then amended in the 1960s, in the 1980s, in the 2000s. When communities have these layers, they know it's not entirely working, perhaps, but also the change seems daunting. What is the most effective way to start this change?.

Dyer: You need to find those landowners or developers who are interested in building successful places, and you have to urge them to do something different. You have to educate the community and your development industry. Your form-based code will not reform the mortgage industry or architects on its own. My advice is to find those one or two places and reverse some bad decisions that happened there and create a code that supports its success as a place. Downtowns are relatively easy because the DNA is already there. Focus on this place and establish this first catalyst project to demonstrate that similar ones are feasible.

Dover: I highly recommend starting small. It's possible to select a very small geographic area in a non-threatening way to complete a proof of concept within a municipality. Once it's complete, a local government might have the confidence to go ahead and do something bigger. Very rarely do we see municipalities start with a whole replacement of a city-wide

Rowhouses in Back Bay, Boston, Massachusetts

land development regulation regime and I think that's for good reason.

What is the relationship between the codes and the infrastructure? It seems almost like a chicken and egg problem. If you want to change the codes but you have a 6-lane arterial in front of the place and nobody's going to be able to walk across, it seems like you have a problem with both the infrastructure and the codes. How can you change one or the other? What do you do at that point?

Dover: If we look at it from the point of view of the engineer, the land-use and urban design aspect of the house have done a really poor job of delivering anything that transportation officials can respond to in a way other than the nasty 6-, 8-, or 13-lane car-only habitat. We need to work in partnership on the redesign of roads while we remake the regulations. The perfect place to start is where multiple parties have gotten together and decide to do things differently in this part of town. We want the first and last mile from the new transit stop to be walkable. And we want to capture, eliminate and shorten as many car trips as possible. I often find that the regulations affecting the land are decades behind the transportation planning decisions. But form-based codes, in many cases, move street standards on their own.

Old urban places, the great historic neighborhoods, were built largely with either no codes or very simple codes, but definitely prior to zoning. Why does New Urbanism often require extensive codes? Is it a product of the era we live in, that it's already complicated by codes? Is it the culture of architecture?

Dover: Form and intent drove the planning of traditional towns. Similarly, the subdivision of lots into rods provided a convenient module for building rowhouse urbanism. While it wasn't a zoning code in the way that we have come to know them in the 20th century, there were always rules and with them, a lot of good habits on the part of journeymen, tradesmen,

and carpenters that were baked into the way people designed and built things. Those good habits began to atrophy under the rapid growth of the city in the 20th century and its counterpart, suburban sprawl. As the university education in architecture began to celebrate buildings as individual sculptures and objects without context, a couple of generations of architects later, we find ourselves with a great majority of practitioners who don't know how to design a street-oriented building. So the modern form-based codes include details designed to steer the developer, client, and the architect toward the proper practice away from the bad habits, and that's why we have them.

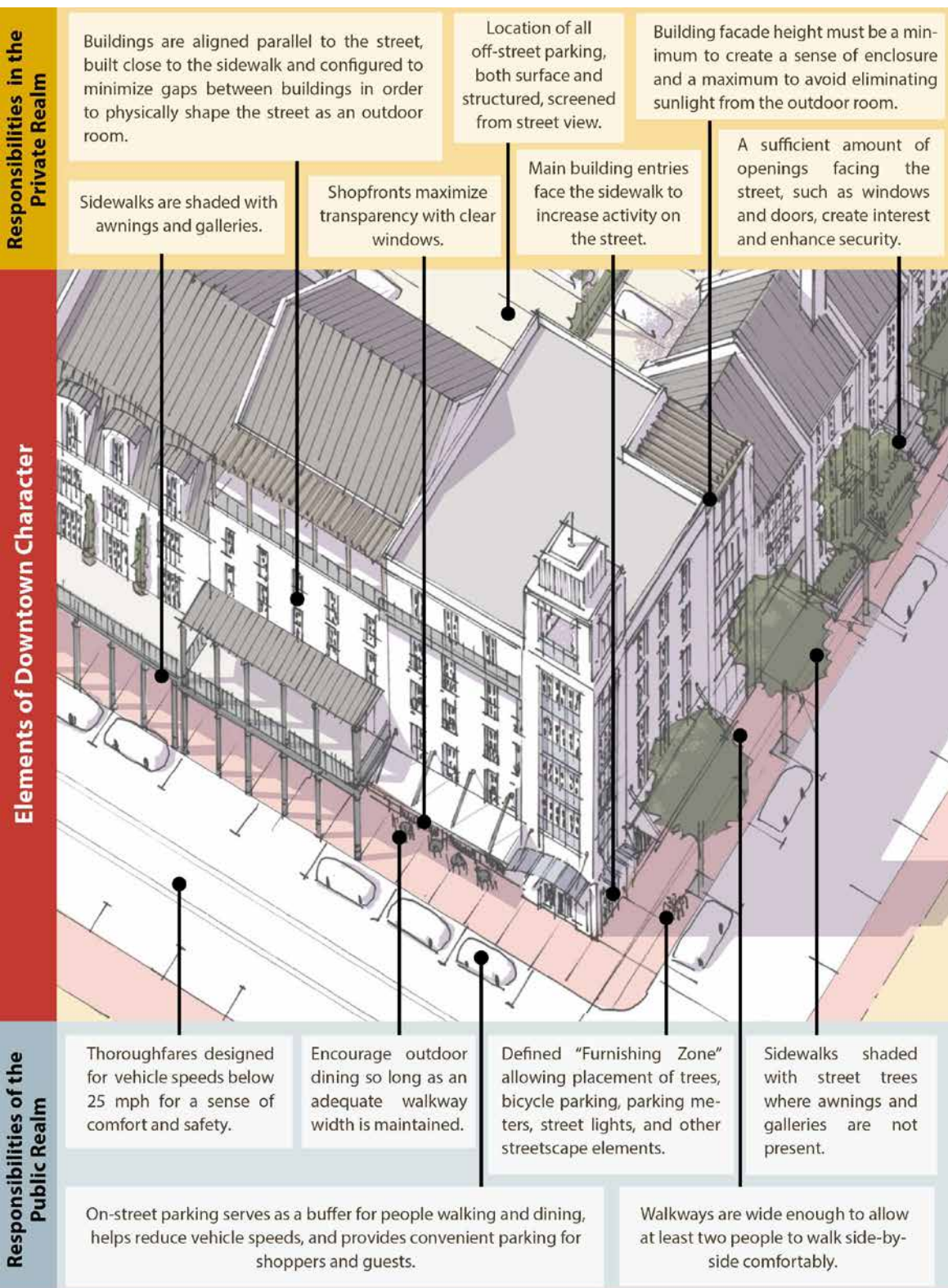
Dyer: We're now at a level of sophistication where many of us are analyzing the size of code that we need to put into place and looking at other ways to regulate outside of the code. I look at the breadth and depth of a code. The breadth of a code is qualified by how many categories you regulate, like parking and setbacks (those are some of the typical ones) but also signs, architecture, streets, and public spaces. As that list grows, you create more and more complication in terms of specialists and the people it impacts. Then there's the depth, e.g., to what detail are you going to regulate that item. Depth impacts how the code is administered. If you have a code with tremendous breadth and depth, you have to make sure that the entity that adopts that code has the ability to administer it. The reality is that there are many other ways to regulate and get a great product. And so, the truth is a new urbanist code doesn't have to be very deep or have tremendous breadth. A basic form-based code could determine where the building is located on the lot. How tall is it? What are the uses allowed within it? What does the first floor need to do in terms of interfacing with the street? And what are the street types that need to be in place to actually let that building happen? And that's a very basic form-based code. A more elaborate code might try to anticipate every possible variation. This gigantic code becomes very cumbersome, and maybe in some instances you need it. As a code writer you have to analyze the particular situation.

There are other things you can put into place that might be more effective at regulation, like architectural pattern books or resources for developers. Your form-based code might best perform as an enabling code that provides only the basic framework.

Dover: Slimmer is better. One of the reasons is the law of unintended consequences. For

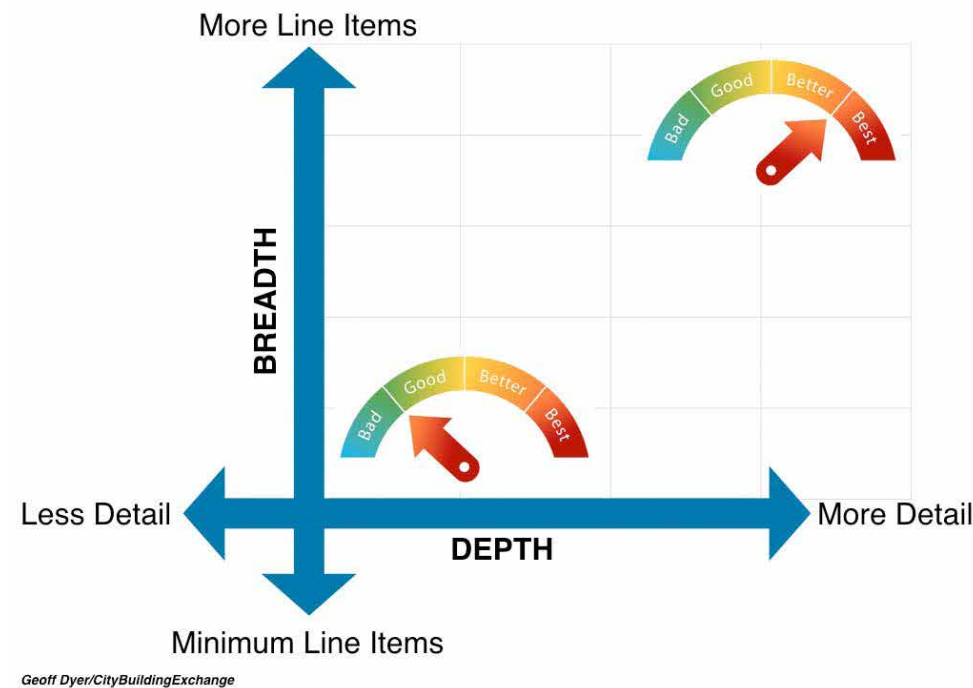
every regulation we introduce, there's an increased chance of another problem. Another bug in this more complicated software. Another contradiction. Or another chance of making things so hard that the users are turned off in the way that Geoff described. A manageable code improves the chances that somebody who owns the 25-foot wide lot on Main Street opens the code and can have a general idea of what they can or can't do with their property.

The intent of the form-based code for downtown Lafayette, Louisiana. Source: Downtown Development Authority



CNU's Project for Code Reform³ is looking at other ways that zoning can be reformed to enable urbanism to occur in places where you might not be able to get a complete form-based code. One example is a project in Tukwila, Washington, that PlaceMakers led a couple of weeks ago. They suggested five changes to the zoning code that were very simple: build-to lines, parking reform, location of parking, simplification of the use table, and mixed use allowed by right. But they were actually not recommending a complete form-based code in this particular instance. Can you talk though, about other ways that codes could be reformed, without going into the complication and expense of a full form-based code?

Dover: Form-based coding as an activity doesn't have to mean the creation of a full cover-to-cover form-based code that is an entire universe unto itself. Form-based coding can also include small, surgical amendments to the existing zoning. In our practice, we almost never set out to say, "Hmm, I wonder how we could create a form-based code for this place?" Instead, we're doing the downtown revitalization plan, or a transit redevelopment plan, or revitalization for a historic district, and the zoning is the obstacle and inhibits the creation of the type of neighborhood that inhabitants want to see. Through form-based coding, you might end up getting where you need to get by fixing only three things or five things that are wrong in the zoning. In the case of Albany, they're replacing their entire zoning ordinance with a so-called modern unified code. Most of the city is planned and regulated conventionally, but they're planning form-based coding only for the areas where there is a detailed revitalization plan or retrofitting suburbia plan. Some purists might say this creates a hybrid system and that's a problem. But I would rather get started with projects that make things better even if they only create islands of walkability, rather than not have progress toward walkability at all. This is becoming a more and more common scenario. It's extremely rare that a municipality dumps their whole zoning in its entirety into the trash bin and adopts a new



one in whole cloth.

Dyer: And it's fraught with peril. It creates all kinds of complications and issues. A form-based code can be very simple, no more than one page. It might be heresy to say it, but they don't need graphics. It will function better and it will achieve its results easier with graphics, and it really is best practice, but you can write a form-based code that is very simple. I'm all for the lean approach to getting the thing done. The form-based code is a tool to get you to the end product, and if I look at some of the lessons that have been learned in the past, they emphasize to the practitioner that you're not necessarily there to create a form-based code. A form-based code is not a vision; that comes separate. What is your outcome that you desire? Look at the tools that you need to put this vision into place given the circumstances of the municipality and then you move forward in an intelligent way.

Are you finding that elected officials, developers, planning staff, and citizens are becoming more accepting of the idea of code reform in the direction that new urbanists are talking about?

Dover: I have seen examples where they find their way through that thicket and one worthy example is Columbia Pike⁴ in Arlington, Virginia. It's a corridor, already difficult

The breadth and depth of a code. Source: Geoff Dyer/CityBuilding Exchange

to deal with as Geoff has mentioned, and a form-based code was adopted for the place. Unlike the northern side of Arlington, it had seen very little reinvestment for 25 or 30 years. The only new things built during that period were fast food restaurants and car dealerships, mainly because of the so-called “The Arlington Way” in which developers willingly subjected themselves to years of endless hearings, negotiations and proffers of various kinds of community benefits before they could get permission to build anything. They replaced that arduous process with the form-based code and development began immediately. Developers had a pent up desire to make Columbia Pike more than it was but they weren’t able to get at it because the zoning and tradition of decision-making stood in the way. Once that changed with a form-based code, they reinvested hundreds of millions of dollars in the corridor.

Dyer: There was a time where we had to make sure we didn’t say urban or density. I find that when you’re on that road, talking to a community and trying to convince them of this opportunity, it’s best not to talk in absolutes. You may not find agreement on everything but you can still get some community alignment and balance all the stakeholder’s desires. ♦

NOTES, RESOURCES, DISCUSSION

12. Form-based codes

Notes

¹ See The Codes Study, PlaceMakers, for a count of form-based codes across the US and in other nations, tinyurl.com/yjc6fkte.

² The first development codes were based on form. See *City Rules* by Emily Talen, islandpress.org/book/city-rules

³ See The Project for Code Reform launched by CNU, www.cnu.org/our-projects/project-code-reform

⁴ Columbia Pike is a three-mile long arterial road that terminates at the Pentagon in Arlington, Virginia. The road was a commercial strip, with 1950s and 1960s development, when zoning was changed to a form-based code in 2003. The thoroughfare has seen substantial redevelopment.

Additional resources

Book, *Form-Based Codes: A Guide for Planners, Urban Designers, Municipalities, and Developers*, Daniel Parolek, Karen Parolek, Paul Crawford, 2008

Book, *City Rules: How Regulations Affect Urban Form*, Emily Talen, 2012

Video, form-based codes, www.youtube.com/watch?v=UMSOdbmRm64

Key points

A form-based code is organized around the type of place you're trying to create rather than land usage (Page 92)

Adopting a form-based code sends a powerful signal to investors, developers, and others that your municipality has thought about neighborhood and community and has tried to make the

built environment walkable (Page 93)

A good code is like undamaged DNA, but instead of strong, healthy tissue it grows strong, healthy places (Page 94)

The perfect place to start is where multiple parties have decided to do things differently in this part of town. That's a good place to pick for a first form-based code (Page 95)

As architectural education began to celebrate buildings as individual sculptures and objects without context in the middle of the last century, we find ourselves a couple of generations later with a majority of practitioners who don't know how to design a street-oriented building. So the modern form-based codes include details designed to steer the developer, client, and the architect toward the proper practice, away from the bad habits (Page 95)

A new urbanist code doesn't have to be very deep or have tremendous breadth. A basic form-based code could determine where the building is located on the lot, its height and uses, how the first floor interfaces with the street, and the street types that need to be in place. And that's a very basic, form-based code (Page 95)

Form-based coding doesn't have to mean the creation of a full cover-to-cover code. Form-based coding can also include small, surgical amendments to the existing zoning (Page 97)

When talking to a community and trying to convince them of this opportunity, it's best not to talk in absolutes. You may not find agreement on everything but you can still get community alignment and balance all the stakeholders' desires (Page 98)

Questions

Why did zoning codes make traditional neighborhoods illegal to build?

As the earliest form-based codes have now been around for a few decades, to what extent are they living up to their promise?

How do form-based codes affect the livability of a community?

What are the major problems with form-based codes?

At what development scale is the form-based code most useful/not useful?

Do form-based codes inhibit development?

Why are form-based codes a fundamental tool for building mixed-use places?

Why does form coding work hand-in-hand with redesign of streets?

Are form-based codes the end point for legally regulating better urbanism, or are they a stepping stone for even better zoning advancements to come?



13. LEAN URBANISM

Hank Dittmar and Brian Falk discuss Lean Urbanism and why great neighborhoods are often built on a small scale with many hands using limited capital.

*Rehabbing a house in Rose Town, Kingston, with residents, trained on site.
Source: Hank Dittmar*

Lean Urbanism is a multidisciplinary movement to lower the barriers to community-building, to make it easier to start businesses, and to provide more attainable housing and development. Like New Urbanism, Lean shares the principles of creating holistic communities—but it seeks more efficient ways to achieve that end to allow small operators to take part. Great neighborhoods need to be built by multiple hands—including those with limited capital.

What is Lean Urbanism and how does it differ from New Urbanism?

Falk: Lean Urbanism is community building that requires fewer resources. It reduces the requirements, complexities, and costs that unfairly burden small-scale developers, entrepreneurs, and homeowners. We've put these ideas into practice through initiatives

like the Project for Lean Urbanism.

Dittmar: Lean Urbanism was conceived as an effort to deal with a problem that many of us had. It was difficult to get common sense ideas through the planning and building process. We observed that it was almost as hard to do 5 homes as it was 500. And so Lean Urbanism, unlike the New Urbanism, is much more about incremental development. It's much more about identifying projects in an infill context and short-term opportunism. In British planning, there's a phrase for things that come along that aren't in the master plan. They're called windfall projects, as in apples that fall from the tree. Lean Urbanism recognizes that a lot of what's great about our cities are windfall projects.

What does it have in common with New Urbanism?

Dittmar: First of all, it shares the ideals of the Charter. Lean Urbanism is part and parcel of the New Urbanism. It sits within it, but it attempts to fill a gap that we saw, in terms of a smaller scale. As we see it, Lean Urbanism is mixed-use, walkable, contextual, and it aims to complete the neighborhood. This is about the missing teeth—doing some good dental work.

What is the Project for Lean Urbanism?

Falk: The Project for Lean Urbanism is a multi-year project that's developing tools to make small possible. The project focuses primarily on three goals: incremental successional growth, reducing the resources required for compliance, and providing ways to work around¹ financial, bureaucratic, and regulatory processes that disproportionately burden the small actors and small projects. One of its goals is to make it possible for residents and business owners to participate in the building of their homes, their businesses, and their communities.

Dittmar: The first phase of the project defined the idea and began to develop the parameters and some of the tools. The second phase, which we're in now, aims to demonstrate that the project can make a difference through pilots on the ground in a number of cities, and through those pilots to develop toolkits that can be disseminated broadly.

Can you talk about some of the specific lean projects and what they accomplish?

Dittmar: One of our tools, the "lean scan,"² identifies in a community both the barriers to small-scale development and the opportunities that might exist if it can assemble a crew of committed people in the private and public sectors who commit to short-term actions over a three-to-five-year period. That is followed by a second workshop that introduces the "pink zone."³ The pink zone is an area where red tape is lightened and where human capital is brought to bear on enabling small. It could be as big as a district or as



small as a corridor, but it identifies a series of short-term projects that would catalyze development.

Falk: For the pilot projects, we have four at the moment: Lafayette LA, Chattanooga TN, St. Paul MN, and Savannah GA. Once we develop and refine these tools, we'll release them as part of a toolkit that we plan to make available to all free of charge.

Can you talk about how any of those pilot cities are easing red tape?

Falk: We've done the first phase, the lean scan, in three of the four, and now we need to test the pink zones.

Dittmar: There are some characteristics of the type of areas that we want to work in in each of these cities. Typically, it's a place close to but not in, the city center. Places where development is not impossible but is not active. And places where there are clear opportunities for infill. Ideally we're also looking at neighborhoods where we can identify people and community organizations that can take up the challenge. Either small businesses, not-for-profits, or even homeowner or small business groups that want to get involved, and want to get involved in a way that's different from the community development model that involves subsidies. Because this is not about subsidized redevelopment.

How have the citizens and public officials reacted in these communities to this idea of Lean Urbanism?

Brian Falk, director of the Center for Applied Transit Studies and the Project for Lean Urbanism, and the late **Hank Dittmar**, an urban planner who advised governments, companies, and communities worldwide on making cities and towns more livable and resilient. This interview took place in 2017. Dittmar died in early 2018.



Dittmar: We sent out an open call to a number of cities and we received several applicants. The cities that were selected offered both a public and a private sector commitment to involvement. At the leadership level, they're all engaged in the idea of Lean Urbanism and have made funding commitments to match the grant money and in-kind resources that we're bringing to the table. I firmly believe that if you don't have skin in the game you're not really playing the game for real. With the scans, we've begun to talk to residents and developers and we're finding real interest. This isn't about wholesale redevelopment. It's about filling in missing pieces.

Falk: We offer municipalities a way to diversify their economic development, which very often takes a large approach, larger employers, larger projects, etc. By focusing on the smaller projects and the smaller players who are often overlooked, they get to diversify in a way that essentially costs them nothing. They don't have to invest in this, but rather just get out of the way. The residents, the people who live in these communities, like it because we're offering them a way to get

involved in this economic development, in the revitalization of their communities, as participants, not bystanders. Many people feel that previous efforts to create economic development have been exclusively top-down and haven't taken their desires and needs into account. Finally, the business community, whether it's entrepreneurs or developers, is now excited about the idea of being able to make projects work and pencil out, ones that previously couldn't because the cost of compliance was too high or it was too difficult to find financing in their area.

I was looking at the Lean Urbanism website, and one of the significant points that struck me is that it says the current system is unfair. Can you talk a little bit about why that is?

Dittmar: Often the level of expertise, the resources and time availability that is assumed about development, it allows for someone familiar with the process to come into a city and build a hotel, a large apartment complex, or a subdivision, but it creates a very high barrier to entry for the person who

*Lean-to-lard transect:
Beijing*



wants to do a four-unit building, or four to five shopfronts on an arterial roadway, or convert an older building into artist studios. The person who's doing this for the first time doesn't have ready access to the expertise of the traffic consultant, the architect, the landscape architect, and the lawyer. There isn't an easy pool of available capital. They don't know which bank to go to, and then when they encounter planning and building regulations, they often find that they have to fulfill the same requirements as the large-scale projects. In the Lean Urbanism, we talk about identifying thresholds underneath which small-scale development might not have to meet certain requirements.⁴ There are workarounds, which meet the requirements without necessarily having to go jump through every hoop on the process, and meet the spirit if not the letter of the requirement; and hacks, which are things that people have figured out during the process that you don't know if you haven't already been through it once or twice.

Falk: The need for Lean Urbanism originated from the complaint that it had become too difficult to make these projects happen. Even the experts were having difficulties. So we began to identify groups of non-experts who might be having even greater trouble. The first group includes young people, who unlike their older counterparts, have to master this accretion of requirements and impediments all at once, rather than gradually over a lifetime. Another is immigrants. There are many immigrants here who were very successful, capable professionals in their own countries, but standard conventions here inhibit their capabilities. Small operators like

these and their projects are, for all intents and purposes, very often excluded from participating in many communities.

And what do you mean when you say that it is difficult to get common-sense ideas through the planning process? How has common sense been left behind?

Dittmar: There's a great book called *The Death of Common Sense* by Philip K. Howard that discusses the replacement of vernacular rules of thumb that used to be described as common sense with law and regulation. We live in an era where something that is self-evident has to be proven by an authority. The rise of a health and safety culture has created a culture in which no level of risk is to be taken on or assumed by the public. We've seen this with street design—despite the fact that there are very few lawsuits that ever emerge, the fear of losses has begun to define that process. The simplest way to return to common sense is to create a culture in which people who work as planners or building officials for a city might be empowered to sign off minimal changes to a building without going to the planning commission or the city council, because their training and their understanding is such that they are trusted to make those decisions.

Can you talk a little bit about pink zones and what they do? I could imagine they could be quite controversial in some respects. The reduction of the regulatory burden sounds great. On the other hand, what do you reduce when you start thinking about requirements? Some people might say, "Well, they're there for

How Lean addresses unfairness to certain groups

a reason,” or, “Would this make this area less safe? Are you putting a burden of less safety on the people who live in that area?” It can be confusing for somebody who’s not intimately familiar with building code and safety regulations or other regulations.

Falk: We certainly don’t advocate any changes that reduce safety. But for instance there are building codes that require multiple egresses or multiple stairways once you reach a certain threshold. One of our workarounds is to make sure that people know exactly where that threshold lies. Then they can still design the building that they want while remaining below that threshold. That doesn’t make the building less safe. You still meet the requirements and the project pencils out.

And so how does this work with regards to pink zones?

Dittmar: Let me give you an example of a way to reduce red tape that doesn’t impact safety. Within a pink zone, we advocate for a process of pre-approval for certain types of building interventions, which creates a number of different building types. For instance, there might be the four-unit building without an elevator. There might be the four-unit building with mixed use on the ground floor or the single-family house with the accessory dwelling unit. If those types are pre-approved and subject to a lighter inspection, then the developer that comes in and implements them deals with less red tape because they don’t have to go through the process individually for each one. But at the same time public safety has not been compromised because those types of buildings have already gone through a review process. In essence, that’s what a large-scale developer will do. They could have five building types and they’ll get those reviewed and then churn them out across the cul-de-sacs of the subdivision. You can apply that sort of approach to small-scale building as well.

I was looking at the “lean seam,” which identifies parameters for Lean Urbanism. For example, Lean Urbanism ignores

protest and advocacy but rather focuses on do-it-yourself or strategic actions. Also, Lean Urbanism focuses on alleviation of a problem and doesn’t try to eliminate ignorance and avoidance. So can you talk a little bit about the lean seam and what do these things mean?

Dittmar: When we apply the public process in Lean Urbanism, it’s not necessarily about identifying a vision or a master plan for a broader community. It requires bringing that broader community on board. It’s about identifying near-term opportunities, and aligning ourselves with people who want to get them done, and then removing the barriers to getting them done. So it’s a different point of entry into the public process than, say, the typical New Urban charrette. We’re not attempting something that requires consensus. We’re attempting something that may require negotiation with the immediate neighbor, and that’s a different kind of process. With respect to the pink zone, it started as a dialogue from within the community of New Urbanists, developers, architects, urban designers, and city officials who wanted to get things done. We were dealing with the frustration of a process that makes that hard. Over the last several years, I’ve spent more time elsewhere in the world, working in other places, and I became aware of the dominance of informal development. Development that exists within a gray economy, that doesn’t ask for permission, often is unsafe, and usually is unregulated, but it constitutes, in some parts of the global south, up to 25 percent of the GDP of those countries. In 2016 there was a fire in a warehouse/artist space called The Ghost Ship in Oakland that killed 36 people, and it was a space that had been modified without reference to structural engineering or architects. They stacked pallets up to create a staircase and they didn’t have clearly marked exits. It was a tragedy. But it reminded me that in my view a lot of the stuff we do belongs to the informal economy, moving into storefronts or taking over lofts and things like that. But why it is that so much development, particularly in more deprived areas, is under the radar without proper

THE LEAN SEAM

| WHAT | | | | | | | | | |
|----------------|---------------|------------------------|-------------------|--------------------|-----------------------|-------------------|-----------------|--------|--------|
| ORGANIZATION | TACTICAL | | URBANISM | LEAN URBANISM | NEW URBANISM | APA - ITE - ULI | | | |
| PROJECTS | FLASH | | SUCCESSIONAL | PERMANENT | CLIMAX | | | | |
| BUSINESS | INFORMAL | UNREGISTERED | SMALL-BUSINESS | | CORPORATE | | | | |
| ENGAGEMENT | THE PUBLIC | ASSOCIATIONS | CORPORATIONS | | PUBLIC / PRIVATE ORG. | | GOVERNMENT | | |
| REGULATION | | | HEALTH AND SAFETY | LAND USE | ENVIRONMENTAL | | | | |
| INFRASTRUCTURE | DEMONSTRATION | | PILOT PROJECT | LIGHT IMPRINT | CONVENTIONAL WORKS | | | | |
| FINANCING | SELF-FUNDING | | CROWD-FUNDING | COOPERATIVE | FOUNDATION | BANKING | GOVERNMENT | | |
| HOW | | | | | | | | | |
| PROCESS | IGNORANCE | | AVOIDANCE | ALLEVIATION | REFORM | ACCEPTANCE | | | |
| TACTICS | PROTEST | DO-IT-YOUSELF (D.I.Y.) | | STRATEGIC ACTION | | ADVOCACY | | | |
| ACTIVITY | UNSANCTIONED | | SEMI-SANCTIONED | SANCTIONED | PERMITTED | | | | |
| SCALE | | | PLACEMAKING | BUILDING DESIGN | URBAN DESIGN | REGIONAL PLANNING | GLOBAL ISSUES | | |
| WHERE | | | | | | | | | |
| TRANSECT | T1 NATURAL | T2 RURAL | T3 SUB-URBAN | T4 GENERAL URBAN | | T5 URBAN CENTER | T6 URBAN CORE | | |
| SUBSIDIARITY | | | INDIVIDUAL | HOUSEHOLD | BLOCK | NEIGHBORHOOD | MUNICIPALITY | REGION | NATION |

electrical wiring and fire exits, and how can lean urbanism or a pink zone potentially bring those types of users from the gray economy into the pink, if you will? Part of the reason for thresholds, hacks, and workarounds is not just to enable new developments, but also to remove the barriers to making that type of development safe and legal.

Falk: That also gets at the topic of common sense. These people are often doing the only thing they're able to do and it ends up being unsafe because they're not allowed to work through the official system in a way that allows them to achieve what they want. Very often municipalities don't think about unintended consequences of regulation and in this example, it drives people into unsafe practices. Another problem with unintended consequences is cost. It's very rare that municipalities pay attention to the cost they add to the opening of a small business or the development of a small real estate project and yet, they bemoan the lack of small businesses or the fact that the buildings and lots are vacant.

Are there people out there that are doing Lean Urbanism, but don't really know it? They may not use that name. And if so, who are they?

Falk: We were inspired initially by work that's going in Detroit. Everyone is aware of the economic difficulties that Detroit suffered. But few people are aware of all the activity that actually is going on. And part of that was because they were not held to the same requirements that they had been previously. Another example is in the city of Phoenix. The city recognized that people in a certain neighborhood were creating projects that were contributing to the neighborhood, but they weren't doing it through official channels. Rather than shutting these people down, the city recognized that they were positive projects and figured out ways to make it possible for them and for others to do similar things.

Dittmar: There's a group in the UK called Massive Small which is dedicated to the idea that encouraging small-scale development is the right way to deal with the global challenge of urbanization. There's also the recent government white paper here in the UK that has proposed the creation of pink zones or places where planning can be pre-approved to enable smaller scale development to take place. They heard about it from us but then they've taken it forward on their own so the idea is gaining currency in many different

The Lean seam. Source: Project for Lean Urbanism

ways. It's not important whether we own the label or not.

Any final thoughts?

Falk: Our toolkit continues to become more and more robust. We built a lean zoning code repair tool.⁵ The rationale behind this tool is that we recognize that code overhaul doesn't happen in a whole lot of places because it's so expensive, difficult, and time consuming. With this tool, we've identified a small number of zoning issues that are frequent impediments to Lean Urbanism. The tool helps people analyze their own local code to see whether these impediments exist and, if so, what they might do to reduce or remove them. We also have a beginner's toolkit for Lean Development that's in progress, and a manual for the Lean Scan, the assessment tool that we use in the first phase of all of our pilot projects. ♦

NOTES, RESOURCES, DISCUSSION

13. Lean Urbanism

Notes

¹ “Workarounds” are a key tool of the Lean Urbanism. Lean Urbanism generally doesn’t seek to reform codes or processes, it seeks to find ways to get things done.

² For more on the Lean Scan, see tinyurl.com/y84h8gyn

³ For more on Pink Zones, see tinyurl.com/y6uj6m8g

⁴ For example, buildings under a certain size or parameters are not required to include elevators, a major expense.

⁵ The Lean Zoning Code Repair Tool is available here: tinyurl.com/ybuelru6

Additional resources

Video, *Lean Urbanism: An Introduction*, Andres Duany lecture, www.youtube.com/watch?v=of2WuVuKVPU

Video, Lean Phoenix, www.youtube.com/watch?v=ZEuLbWhdeuQ

Book, *The New Pioneers: How Entrepreneurs Are Defying the System to Rebuild the Cities and Towns of America*, JP Faber, 2017

Website, Project for Lean Urbanism, leanurbanism.org

Key points

Lean Urbanism reduces the requirements, complexities, and costs that unfairly burden small-scale developers, entrepreneurs, and homeowners (Page 100)

Lean Urbanism is about incremental

development through short-term opportunism (Page 100)

Lean Urbanism sits within *The Charter of the New Urbanism*, but attempts to fill a gap, in terms of a smaller scale (Page 100)

The Project for Lean Urbanism focuses primarily on three goals: incremental successional growth, reducing the resources required for compliance, and providing ways to work around processes that disproportionately burden the small actors and small projects (Page 101)

The “lean scan” helps identify workable areas in a community where barriers can be softened and opportunities are near (Page 101)

The pink zone is an area where red tape is lightened and where human capital is brought to bear on enabling small (Page 101)

Lean urbanism works well in near-center locations of cities (Page 101)

Part of the reason for thresholds, hacks, and workarounds is not just to enable new developments, but also to remove the barriers to make that development safe and legal (Page 105)

Very often municipalities don’t think about unintended consequences of regulation such as the increase in unsafe building practices, cost, and loss of business (Page 105)

Questions

Do modern regulations unfairly burden small developers and entrepreneurs and, if so, what can be done about that?”

If someone did a “lean scan” on your community, what would they find?

What are the kinds of areas where “pink zones” should best be adopted?

How can residents of modest means become involved in community revitalization directly?

Has common sense been lost in community development, and how can be get it back?

Why are workarounds and thresholds key to Lean Urbanism?

Is consensus sometimes a barrier to getting things done? Is it ever best to avoid consensus?

Is Lean Urbanism an antidote to a system that puts small operators at a disadvantage?

Who does Lean Urbanism benefit or empower?

How can Lean offer solutions to economic development that aren’t currently being pursued?



14. MULTIDISCIPLINARY DESIGN CHARRETTE

A 2016 charrette in Las Cruces, Doña Ana County, New Mexico. Source: Place-Makers

Bill Lennertz and Jennifer Hurley discuss charrettes and how they contribute to holistic communities.

To plan complete neighborhoods instead of single-use subdivisions and shopping centers requires a holistic public process. Many disciplines such as traffic engineers, market and financial analysts, architects, urban designers, and planners need to work together with citizens, elected officials, business owners, and other stakeholders. The multi-disciplinary design charrette—often used for infill and transit-oriented neighborhoods, complete streets, form-based codes, and city plans—plays a key role in the movement toward complete communities.

How do you define charrette? People are using the term in all sorts of ways today.

Lennertz: Speaking as a faculty member of the National Charrette Institute, and speak-

ing as someone who was there at the 1988 DPZ charrette—which, if it wasn't the first, it's one of the first multiple-day charrettes that involved communities—my definition of a charrette is a multiple-day process that engages all affected parties to create a transformative plan that can get built. And there's also the aspect of time compression—innovation occurs under pressure.

Hurley: It's a multi-day, multi-disciplinary, multi-stakeholder, on-site design workshop. I think exactly how you define each of those terms can change to accommodate something shorter than a full week or longer. But there has to be time for multiple feedback loops. It has to be multi-disciplinary. It has to get beyond concept work into something more detailed.

Charrettes have been part of the New Urbanism, almost from the very start. Urbanists were instrumental in developing the concept of charrettes, as the term is currently understood. So please tell me a little about the history and why they are so important to the New Urbanism.

Lennertz: I know the history because I was there. Some designers and architects were on to something like this as early as the 1940s. They were designers, all of them, who recognized that when they had a really big project with a lot of stakeholders, they wanted to find some way of embedding them in the design process. So there's a series of firms like Urban Design Associates (UDA), CRS, Centerbrook, and Ball State University who did this. But Duany Plater-Zyberk did one in Texas, which was probably the first of what's been known as the form that a lot of new urbanist then took on—and if not in total practice today—it became known as the new urbanist charrette.

Hurley: When I first was really digging into charrettes as a practice and trying to compare them to what I knew from public policy dispute resolution and deliberative democracy engagement methods, one of the things I thought was really interesting, when I talked to folks, like Andres [Duany], and a few other people who were involved in very early charrettes, was that the motivation was at least as much about project management, and the multidisciplinary nature of design work, and trying to get all of those different silos [government agencies, engineers, architects] to work together, as it was about public engagement and public outreach.

Lennertz: I remember Andres called me up and said "I'm tired of these projects lasting so long. Let's go down and get it done right the first time." The charge is to reduce the rework. And when you start with reducing the rework, then suddenly you've got to figure out collaboration, silo-busting, all of that.

Can you talk a little bit about why this is so important to the New Urbanism, and what it really means to people?



Hurley: Well, I think it's so important because the New Urbanism itself is holistic, and so many of the things that we're trying to do have been undermined by a very narrow-minded specialist mentality. Whether it's a neighborhood NIMBY activist who only cares about whether they have a parking spot or not, or whether it's a storm water engineer who only cares about how much water they can keep on the site, we're fighting against that mentality that you can optimize for one thing. Urbanism only works if you're addressing a place holistically.

Lennertz: I think you've got it right on there. New urbanists are about transformation. Charrettes, if you do them especially more than once in one community, begin to change the way people work together and develop trust in government, in each other, in process.

I heard it said that new urbanism is both bottom-up and top-down in terms of planning trend. And I think the charrettes are the bottom-up part of that. Have you heard that? Do you know what it means?

Hurley: I actually disagree. I think charrettes are both bottom-up and top-down themselves. They're bottom-up in a sense that they're trying to engage all of the stakeholders. Everyone who would be affected. Everyone who has an influence over what happens. But they are not bottom-up in the sense of being driven by the people. They are carefully designed. The events themselves are carefully designed and structured. In that sense, they are also top-down.

Bill Lennertz, founder and faculty member of the National Charrette Institute and principal of Collaborative Design and Innovation, and **Jennifer Hurley**, principal of Hurley-Franks & Associates.

Lennertz: I completely agree. Bottom up is a popular term these days. And the best charrettes are those in which the design team and the sponsor are interested in developing empathy for the people who will live with the outcome. But inevitably, decisions are being made. There is an entrusted design team. It's not like you hand the pencil to the community and say, "Just draw whatever you want and we'll make it happen." You entrust people with their specialties and their roles. I would say it's more of an organization where the best ideas are recognized and run with.

Would you say that there is any tension between the bottom up and top down aspects to a charrette?

Lennertz: There's plenty of tension in charrettes, and that's part of the creative process. It comes out of the friction that occurs when you start breaking down the silos, and putting people together to solve a problem. There's conflict. We call it the opportunity of conflict. Designers recognize the value of conflict as the source of innovation.

Hurley: I think there is some tension in that balance between participation and inclusion versus the designer's role and control of the process and the decision-making. And that's part of the variation in how different people conduct charrettes. Different firms have different approaches, and some are much more participatory. And others are more tilted towards the design end. The more you recruit a diverse representative group of people to participate in the charrette, the more that bottom-up part can be really effective. But that doesn't just happen by itself. You have to really work at it. And if you don't do that pre-work to recruit that group, you'll inevitably fall back on relying more on the designers to drive things because you won't have an effective public group participating.

There's a social equity moral responsibility there, but also a very practical aspect in that a project that's designed by the technical experts but doesn't get all the feedback

of the community is far less likely to be built, correct?

Hurley: Absolutely. It's an issue of whether or not the designers have the right information. If you don't get all the right people there, you may not learn everything you need to be able to create the best design. But even if you did, even if you were an all-knowing, omniscient designer and you were able to create the best design, if you don't get enough of the right people involved along the way, you may not have enough support even if you came up with the best solution.

Lennertz: Yeah, at NCI we call it pre-charrette process—getting ready in terms of the stakeholder identification, outreach and engagement and especially social equity. And that can be resource intensive and one of the big challenges.

Part of the problem is resources to do charrettes, but my sense is that people are figuring out how to do charrettes for less money than they were 10 or 15 years ago. Is that your sense as well and is that an important factor for many communities?

Lennertz: We're working on different forms of the charrette the shortest one we're calling a sprint. But in all forms, the three feedback loops are somehow achieved. The shortest form is that you come together with a community for a day, you have a workshop, you do a tour, you do a meeting. You go away and you come up with some ideas, and you come back for three days and in those two events, you get three feedback loops in.

Hurley: Andres has always joked, "I need enough time to get it wrong twice." And that goes into the three feedback loop pieces. You have to have enough time to try things out with the community.

Lennertz: That little quote Jennifer threw in there from Andres, that's one of the best ones I know. The three feedback loops among other things, as he says, allow the design team to get it wrong twice.

So how have charrettes evolved, and what are the current trends today?

Lennertz: Technology is a really popular topic right now. People are looking for technology to do things, to reach more people, to maybe even do things cheaper, but I'm reminded of something that Ben Brown (of Placemakers) told me, and that is, "Bill, remember technology or no technology, it still comes back to relationship building." And even now we're finding that technology is very useful with social equity and with underserved communities, but bottom line is we're trying to engage people so that at some point they're involved in some kind of face-to-face meeting or interaction.

Hurley: One way that charrettes have evolved where technology has absolutely been a savings is on the production end. We no longer have to cart around the hard copies of the books. The base data for doing mapping is much better than it was 10 years ago. We don't have to spend two days preparing images for the final presentation. But lots of people I think have a naive expectation that technology will make things cheaper and easier in the public engagement process. Technology makes it much easier to engage people in a very simplistic, fun, but uneducated and reactive way. So it makes it much easier to ask polling questions and for them to give you an answer without having to go to a public meeting. But the problem is that many of those gut reactions are not the reactions people would have if they learned about the issues and really thought about the trade-off and talked with their neighbors. That's the difference between thick and thin communication. For really discussing and prioritizing values, for addressing tensions, conflicts, and problems, there's nothing that beats that face-to-face interaction.

Lennertz: We've strived towards something we call the high-touch, high-tech charrette to present a balance between technology with human connections and empathy. The danger these days is that planners find comfort in the numbers of people they're connecting with through online, web-based participation.

Hurley: I was just going to say that it's also a danger in focusing on the number of people you involve and not the diversity. The key issue in a successful charrette is not the total number of people you get there. Do you get all of the divergent opinions and points of view there? If they're all the same people, it doesn't achieve what you need.

What is thick communication, and how do you achieve that?

Hurley: It's a term borrowed from communication theory, and it's looking at how many different ways you get information. When you're talking to someone in person, you can read their body language. So if they're sitting there with their arms crossed not saying a word, you can tell they're mad about something, and you can try to draw them out and find out what's going on. If you're online and they're doing the same thing, you're not even going to know it because they're not saying anything.

Although New Urbanists were instrumental in promoting the idea of charrettes, this has become fairly common practice today. And it's not always connected to the planning ideas of complete and walkable communities. So are charrettes on a parallel path or are they still deeply connected with the principles of the New Urbanism?

Lennertz: People ask me, "Can charrettes be used to do 'evil things?' How do you know your charrette's going to come out with a sustainable, holistic outcome?" If you get the right people in the room, the decision makers, people affected by the outcome, people who are historically left out, the possible blockers and the possible supporters, if they're engaged and you involve these people in a process of feedback loops, then I submit to you that your outcome will be holistic. I think a holistic solution comes out of a holistic process. And these processes that people use—they're calling them charrettes, but if they lack the necessary elements they could very well come out with unsustainable outcomes. I trust the process.

Hurley: Lots of people use the word charrette in a way that Bill and I would not use it. I see people all the time calling a half-day workshop a charrette. And I don't care what you do, a half-day event cannot be a charrette in the sense that we're talking about. You don't get three feedback loops. You also have to be really carefully about making sure you understand who all the stakeholders are and doing what it takes to get them to participate.

Lennertz: And the challenge is that people are getting burned out on collaboration.

Hurley: People get burned out on collaboration when it's no fun. They get burned out on it when it's done badly. But when it's done well, it should be productive and fun.

Lennertz: And a good use of people's time.

Hurley: Exactly. If you're not making progress, if it's not a good use of people's time, if it's not at least satisfying on some level—and I actually think it's really fun when you're making good progress—then there's something wrong with the way the process this is working. That's not good collaboration.

Lennertz: That's right. What is rewarding participation? I think it has to do with embedding people in the design process. I think it's about people feeling well used, people feeling like their input has an impact.

Let me ask about the places where charrettes are taking place. A lot of the urbanism discussion is around places like Manhattan or San Francisco, big cities. But can you give me some examples of some successful charrettes that occurred in diverse locations around the country?

Hurley: I was involved as a sub-consultant to Placemakers with their Doña Ana plan.¹ It's a very diverse county. It's got Las Cruces in it but also has very, very rural places and lots of native Spanish speakers, many who don't speak English. It's one of the poorer counties in New Mexico. So it's really a very diverse place to work, and the county there really

took all of this to heart and made, in my professional experience, extraordinary strides in engaging a really wide range of people. And it wasn't easy. They worked hard at it.

And why was it successful?

Hurley: They were able to incorporate the concerns of a really wide range of people into this county-wide comprehensive plan that led to a successful adoption of a complete zoning code rewrite for the whole county.

So, Bill, do you have any example of sort of a charrette in a diverse location that's been successful recently?

Lennertz: In central Michigan, in Lansing, East Lansing, and west of those areas, we were involved with a visioning process for 21 miles of corridor² that included seven jurisdictions of an economically-depressed area, and seven jurisdictions that don't like to work with each other. The proposal was that form-based codes should be part of every jurisdiction's work. Subsequent to that, the transit agency picked up on our process and ran a charrette six months later on a bus rapid transit component. But, more importantly, about two years later, the three counties that don't normally work together, came together, got a grant and are getting ready to develop a unified form-based code for the corridor through charrette processes. What you have is a transformation in the way people work together in an area.

So, briefly, if you were to give sort of a brief summary of what makes a charrette successful, what would it be?

Lennertz: If there's anything that makes us different, it is this use of the design process and embedding people in that process as a tool to educate and cross-educate people about the nuances of community planning. It's learning trust through the design process and through, wherever possible, engaging people in a compressed work session where they experience that innovative, transformative design through three feedback loops. ♦

NOTES, RESOURCES, DISCUSSION

14. Multidisciplinary design charrette

Notes

¹ See Plan 2040, Doña Ana County, New Mexico, tinyurl.com/y939buhs

² See The Capitol Corridor: A Regional Vision for Michigan Avenue, Grand River Avenue, tinyurl.com/juzx5qj

Additional resources

Website, National Charrette Institute, www.canr.msu.edu/nci/

Book, The Charrette Handbook, 2nd ed., Bill Lennertz, Aarin Lutzenhiser, 2014

Video, *What is a Charrette?* www.youtube.com/watch?v=VNRglaabeyw

Key points

A charrette is a multiple-day process that engages all affected parties to create a transformative plan that can get built which includes an aspect of time compression to spur innovation under pressure (Page 108)

Charettes reduce rework (Page 109)

Charettes are important to New Urbanism because Urbanism only works if you're addressing a place holistically (Page 109)

Charettes are both bottom-up, through engaging all stakeholders, and top-down, through policy makers carefully designing the events (Page 109)

Charettes create tension so that when it breaks it breaks constructively (Page 110)

Designers need community support and charettes provide a space for that support (Page 110)

For really discussing and prioritizing values, for addressing tensions, conflicts, and problems, there's nothing that beats that face-to-face interaction (Page 111)

Charettes prevent 'evil things' by not leaving anybody out of the process (Page 111)

Charettes prevent collaboration burnout by not being too long but being very detailed (Page 112)

Questions

Why is the multidisciplinary aspect to a design charrette important, and how does that relate to hearing from the broadest possible range of stakeholders?

Is Lennertz right that time compression leads to innovation? Why?

Why does a real charrette have feedback loops, and why are these important?

Why was the concept of the charrette needed and particularly useful in the New Urbanism?

Explain the concept of holistic design, and how does it differ from design that comes out of what Hurley calls "a narrow-minded specialist mentality."?

Where does tension derive from in the charrette, and how can that tension be good?

Why, from a practical standpoint, is broad participation in a charrette important?

If the charrette is well run, will the outcome be good? Why or why not?



Courtesy of Moule & Polyzoides.

Architecture



15. ARCHITECTURE THAT PUTS THE CITY FIRST

*Sansome and Broadway by
Mithun / Solomon*

Stefanos Polyzoides and John Torti discuss the architecture of urbanism and how it contributes to whole neighborhoods, communities, and cities.

The new urban focus on whole cities and towns brings a fresh approach to the art and craft of architecture. Urbanists design buildings that put placemaking first and often work with the “missing middle” of building types that most contribute to urban vitality. That approach may employ classical principles and vernacular design—and/or seek modern languages that address the deeper meaning of place.

The New Urbanism is often about design of large-scale places, like complete neighborhoods and communities. But it is also about the design of buildings within those communities. So what does the New

Urbanism bring to architecture that is different and essential?

John Torti: It brings a new respect for the city. The notion of understanding and respecting the traditional city—rather than showing off a particular site or building—is the essential difference. Christopher Alexander, the great planning and architectural theorist, says it in a very poignant way. When you come to a place, a city, or a site, you must look and try to understand the whole place.¹ It sums up what I think new urbanists are all about, which is being humble enough when we work on buildings to let the city take preference.

Stefanos Polyzoides: One of the things we've learned as new urbanists is that the prime ingredient of urbanism is really public space and the public realm (see Chapter 16). So the urban plan comes first and the building second. It becomes an issue of whether the building is a monument or a piece of fabric. Then does this building dominate what's in place or does this building add to it or transform it? New urbanists essentially believe in compatibility between building and place, in the sense that buildings having specific intentions when placed in a particular location in the urban fabric.

Is New Urbanism somewhat at odds with the broader culture of architecture as it has been practiced over the last few generations and how so?

Polyzoides: Only to the extent that for most modernists urbanism consists of the composition of buildings in space and is not a question of coordinating the key ingredients of urbanism—such as open space, landscape, and infrastructure—and then integrating those in a way that makes for a particular character and a particular place. When you disconnect the building from its essential context, the focus is on the individual object to such a point that, over two or three generations, the individual objects dominate and become completely out of control. In that sense the New Urbanism is very seriously at odds with current culture.

Torti: I think every city is allowed one Frank Gehry building, but could you imagine an entire city made out of Frank Gehry buildings?² There's a notion of the monument versus the fabric. Michael Dennis called it hero buildings versus soldier buildings.³ In most New Urbanist practices we create the soldier buildings, the fabric buildings that make cities.

How though as architects and urbanists do you bring in the concept of fabric and monument? Do you ever go to the monumental, and why and how do you do that?



Polyzoides: I think the answer is relatively simple. It depends entirely on the Transect zone you're in and on the particulars of the site. For instance, there are two dimensions to traditional architecture. The first dimension is vernacularism which deals with common buildings.⁴ Common in the sense that they exist in multiple contexts and in the way they have become useful and important to us in current practice. And then there's classical buildings, which also have come from a long tradition of practice and which can also be transformed to current sensibilities and current places. Basically, the architecture of monuments is the architecture of classical form and the architecture of fabric is the architecture of vernacular form.

Torti: There are some people that design in a more modern or more contemporary language that is very, very much rooted in a classical principles. The buildings themselves don't have Corinthian⁵ columns and cornices, but the notion of scale and proportion derives from classical principles. One of the more famous architects that did that well, now passed away, was Michael Graves. He was a classical architect whose buildings really had a more contemporary form. I think Michael Dennis does it similarly. Dan Solomon's work (see photo at the beginning of this chapter for an example) is very classically and traditionally rooted but has a wonderfully refreshing, contemporary, updated, modern language to it.

Polyzoides: For individual starchitects, they impose their signature on a particular building. For new urbanists, their signature is the place-generated by an ensemble of buildings

Stefanos Polyzoides, principal of Moule & Polyzoides, Architects and Urbanists, and John Torti, principal of Torti Gallas + Partners.



and public spaces. That act is not style-bound, but connects and binds architectural urbanism in a very elementary way, particularly how buildings relate to public realm.

The urban-rural Transect, mentioned earlier, is a tool for characterizing the intensity of urbanism of a place. Is it a downtown, a main street, or a general neighborhood, for example? So how does the Transect fit into the design of buildings? And is this a concept that is generally recognized outside of the New Urbanism?

Torti: In my mind, the Transect (see Chapter 3) was a great observation about how good cities are made in a more natural way. It puts building types in the correct order from the center to the edge. The new urbanist operates in a world of types or typologies. While there aren't that many basic types of buildings, there are certainly a lot of subtypes that help new urbanists recreate traditional cities to meet the more modern applications of

today's world, particularly with automobiles. We're all glad to know that the amount of automobiles is decreasing in our large cities every day and the need for them is getting less. But the reality is traditional urbanism belongs to a pre-automobile world and we have come to learn to deal with cars in a very visceral way. The notion of how a simple thing like parking affects different neighborhoods is amazing, particularly in the design and the permeation of the pedestrian place. You have to figure out how to defer the automobile to a secondary or tertiary level so it doesn't dominate like it does in the sprawling suburbs.

Polyzoides: For new urbanists, the examination of the universal idea of housing types is critical. Housing types fall typically within certain levels of development intensity. So if you go from a single-family house to tower, there's probably a dozen types in between and those types are typically to be found in various zones of the city. So you

Extending a style: Plaza La Reina in Los Angeles, a hotel with first-floor retail, grand steps and second-floor courtyard. Source: Moule & Polyzoides



will rarely find a single-family house in the heart of the city, and you won't find a tower in T3 (the suburban Transect zone). But the ingredients of housing include not only the house form itself, but the relation of housing to immediate connections such as traffic and parking, open space, and landscapes. Those vary significantly by intensity, by location. In many ways, it is the absolute triumph of the New Urbanism that we've been able to introduce eggplant, zucchini, and tomatoes into our diet where for 60 years we've only had single-family houses and towers—meat and potatoes.

That leads into the concept of the missing middle (see Chapter 18) which implies that certain building types have been lacking in communities over the last two or three generations. Is there also an architectural

challenge here? Missing middle buildings were not designed by architects for several decades, and new urbanists had to come in with new building practices, new materials maybe, and figure out these missing middle designs all over again. Is that true?

Polyzoides: The reason that I'm a new urbanist is because 40 years ago when I moved to South Pasadena out of graduate school, I happened upon a street that had the most beautiful, simple, early 20th century porch bungalows each with a beautiful green landscape. It became very clear to me that there was something about the nature of this place that was not about preservation, but rather was about making similar places. For me, this is how typology and the missing middle came to be valued, by understanding what it was that they gave us already. I think

Adding to the fabric: Park Van Ness, a mixed-use multi-family building on Connecticut Avenue in DC. By Torti Gallas + Partners.

this has been a major contribution of new urbanists—looking at the city and isolating its building ingredients in a way that, through repetition, you can make a city where the ingredients come to flourish on its own terms.

Torti: I think the notion of the missing middle has been there for a long time, but we've forgotten how to bring it into being. I think it exists in many new urbanists' plans, but making this vision a reality becomes slightly more difficult, because normally, the pieces are more idiosyncratic and do not lend themselves to a lot of repetition, which is where the development industry was for many, many years. This is the skill of New Urbanism, to employ these multiple scales in building a neighborhood and making them work to fill in this gradient between high and low. The ability to have people and families in comfortable places that don't take multiple acres per family is an important contribution of the New Urbanism. The delicateness of that density, the ability to make family places, and places with yards that aren't two and three units to the acre but potentially as high as 10 units at the acre is a very important part of making a compact city. A Transect that is compact has the ability to create public realm across high to low densities that connects one place to another and creates a mix of people, of income, of uses in this continuum of fabric.

Urbanist architects today face issues that they didn't have to face a hundred years ago. I'm talking about how buildings relate to automobile traffic and how parking affects building design. Can you talk a little bit about that?

Polyzoides: I think the principle is loud and clear. If buildings are to command and to define the public realm, cars need to be on the sides or behind or under buildings. There are ways, depending on the context, to locate cars on the sides of buildings so it doesn't poison the public realm. I myself don't believe that every street needs to be lined with buildings alone without parking. I think that cars

in small numbers can appear in the public realm if they're properly screened, but by and large, they belong out of sight. Developments like transit and Uber both speak to an interest in reducing parking.

Torti: We have a typology chart here in the office that we use at a lot of our public meetings. From these three or four different housing typologies, we've stretched them out to have almost 30 typologies that deal with different parking arrangements. New urbanists have experience in handling the parking and keeping it out of sight. This ability allows new urbanist architects to focus their building to contribute to the neighborhood so that the public realm is about people, not cars and parking. The good news is that many very forward-thinking cities are reducing their parking requirements (see chapter 6) for inner city buildings by a large amount. Here in Washington DC there was even some consideration of limiting the construction of new parking because people use cars less and less every day, especially with a transit system a good bicycling.

Were they banning new parking spaces in portions of the city, or was that a consideration?

Torti: We just had a new zoning code written, and one of the suggestions that did not get approved in the end was no new parking in the higher-density neighborhoods. A very, very low requirement for parking did get passed. The requirement focuses on the maximum amount of parking, it's no longer a minimum. For instance, a quarter of a car, or a half a car per housing unit, which is a very low number.

Some new urbanist architecture has been criticized for being faux or like a stage set.⁶ Is this a valid criticism and how do you address that?

Polyzoides: That's a very complex question, and I'll be the first person to resist pointing a finger at colleagues. There are two issues. The first issue is that we are all learning how



to make these kinds of buildings. There are very few schools that teach [New Urbanist principles], but by-and-large most people practicing today learn how to make those buildings through practice. I think many new urbanist buildings are not well built because we live in a system that does not care ultimately about the quality of its built world. The amount of investment going into housing is minuscule compared to other areas and most developers would much rather not spend money for “inessential” architecture. Between the lack of resources and the lack of will and knowledge, we are in a transitional period and it’s going to take a hundred more years before from project to project and generation to generation, we end up producing buildings that live up to what we know should happen.

Torti: We probably build lower quality housing in this country than almost anywhere else in the world. We go overseas to design

and build housing, and normally, the quality of the materials and the construction methods are a substantially higher, adjusting for different economic levels. Secondly, I think this is a specious argument—this Toytown, Disneyland thing. It’s an issue of the marketplace, and I believe that in some—I won’t say all—new urbanist communities, the attention to style and its application to low-density buildings is cared for with a lot of tenderness. Design codes can apply that idiosyncrasy across the architecture of the new town very, very well.

Polyzoides: I think that word Disneyland comes directly from a modernist’s criticism of New Urbanism, not new urbanist talk about New Urbanism. I think it comes from the idea that anything that is not totally idiosyncratic, autonomous, self-centered design and production is copying. They use the word copying or repeating in ways that is totally negative, and they associate with some

The New Orleans Jazz Market is a rehabbed boxy department store, turned into a cultural center, in a city neighborhood. Kronberg Wall Architects

kind of disease in the visual arts. Architects like us look at the work of Lutyens⁷ and draw inspiration from it and seek to understand its elements and its compositional qualities to interpret new work. There's nothing different between that and a modernist look at the work of Niemeyer, or Mies, or Corbusier, and doing the same thing. We have to leave behind the idea that everything that matters in design has to be invented, and get on with the idea that everything that we know about design is really an interpretation of what exists in physical reality—transformed through another's hand and mind.

The Charter⁸ only mentions style in that it says, “Individual architecture projects should be seamlessly linked to their surroundings. This issue transcends style.” Nevertheless, style has been a controversial topic surrounding New Urbanism. How important is style to New Urbanism, and the design of complete communities?

Torti: First and foremost, the historic style issues predominantly occur at the lowest of densities, at the house and townhouse density. And once you get up beyond that density, you're into something for which you would have a hard time naming a style. The notion that the ability of the architect to design within a character that deals with proportion, texture, rhythm on a human scale, normally gets attributed to the classical style or to traditional style. There are centuries of design, not only in the classical sense, but also in the vernacular sense, that have made buildings relate to human beings. The notion of style—i.e. a Georgian building or a Federal building or a Mission-style building—normally operates at only the lowest densities, not once at the medium and higher densities.

Polyzoides: In my mind these words mean that that contextual building truly matters, because buildings should be seamlessly connected to the surroundings. I think that's an urbanist value of the highest order. This statement indicates that there is no single style that can accomplish this. Different styles may be particular to a place, and to a

project, and to a time. I believe that working with the traditional style in the traditional form can be a profound choice an architect makes. There's a social culture to style that deals with the way people associate with each other in a particular region. There's a physical culture, as well, in terms of the materials used, and the ways people have built. And finally, there's an environmental culture, specific to the different places inhabited on the planet. This one matters the most to me. The thing that offends about modernism is not that it's idiosyncratic. It's the fact that it has become a straight-jacket, a one-shoe-fits-all way of building, so you see the same buildings in Dubai, New York, Rio, and Los Angeles. This is unconscionable because buildings really need to belong through their form to the biomes in which they're located. As new urbanists, I think we are trying very hard to make this distinction, and it's the most creative way of being intensely anti-modernist without engaging in the superficial aspects of that polemic.

Torti: I could agree with everything that you said, but I don't call what you call “style” style. I mean, what I think when I'm hearing from you is more of a regional way of building that becomes the existing vernacular. But lately we've been trying to get beyond the decoration and get back to the meaning of the way these places are built.

And in doing so, are you coming up with a different architecture, an architecture that's not the typical stuff that you would get if any architect comes in and builds a typical building?

Torti: Well, that's another whole can of worms. Our work is mostly vernacular and contextual, at least at medium and higher densities. We continually talk about how return to the original principles to make a traditional, classic, vernacular building, but with more modern language. It's not an easy task.

Polyzoides: We also work a style for buildings that have never used that type. For instance,

a three or four story building following the carpenter bungalow style when all the bungalow styles in Pasadena are two stories. How do you do that? How do you make a building like that? New urbanists have been called upon to interpret, develop, and extend styles⁹ as well.

Torti: Some modernists that operate in very strong neighborhoods like in Soho in New York, work contextually and interpret the spirit, the scale, and the texture of the place in a more modern methodology. Any new urbanist would be proud. Because it's modern doesn't necessary mean it's bad, the designer just has to understand and see the city.

Can you talk specifics of the architecture that you're seeing that's really encouraging and great and something that gives you optimism?

Polyzoides: The thing that truly gives me hope and sustains me is that when you visit schools like Notre Dame and you see architectural urbanist projects by 25-year-old students, whose work is as mature as mine. Once they grow in the profession and pick up the experience necessary to practice, we're going to have a different world in terms of architecture in this country. This is one of two schools. Imagine what would happen if we had 50 schools working in this manner.

Torti: I believe that the faculties in all these schools need to talk and debate issues of urbanism and modernism in front of students to give them a better range of experience before they go out in their own. This goes back to education, in a liberal arts sense, to understanding what cities are about. Not only the sticks and bricks of the city and its plan, but the way the culture of the city operates. You need to include this as part of the process of designing in any place. ♦

NOTES, RESOURCES, DISCUSSION

15. Architecture that puts the city first

Notes

¹ Christopher Alexander, *A New Theory of Urban Design*. Alexander makes another related point in that book: “Every building increment must help form at least one larger whole in the city, which is both larger and more significant than itself.”

² Here’s a great image of what a city made of “starchitect” buildings might look like: tinyurl.com/y7ealalo

³ When too many soldiers try to be heroes, the Army is at risk.

⁴ The vernacular-to-classical Transect looks like this image, source: Dino Mercantonio. tinyurl.com/ycg8q7cq or tinyurl.com/y9zzak2u

⁵ The most ornate Classical order

⁶ Why Is New Urbanism So Gosh Darn Creepy? *Gizmodo*. tinyurl.com/yab-c5vgm

⁷ Sir Edwin Landseer Lutyens, was an English architect known for imaginatively adapting traditional architectural styles to the requirements of his era.

⁸ See *The Charter of the New Urbanism*, www.cnu.org/who-we-are/charter-new-urbanism, also see Chapter 17

⁹ See photo of Plaza La Reina on page 113 for an example of extending a style.

Additional resources

• Video, *How to Make an Attractive City*, on order and variety in architecture: tinyurl.com/leuwqk7

• Document, *Design Guidelines for Neighborhood Commercial & Multi-Fam-*

ily Districts, City of Pasadena, tinyurl.com/ydb5zalt

Book, Christian Norberg-Schulz’ *Genius Loci: Towards a Phenomenology of Architecture*.

Article, Urban Multifamily Buildings and the Architecture of Community, *Public Square*, O’Neill and Alexander, tinyurl.com/yaf4wqvl

Article, Three fundamental errors in architectural thinking and how to fix them, *Public Square*, tinyurl.com/yamuh8b9

Document: *The Charter of the New Urbanism*, particularly principles 19–27. <https://tinyurl.com/oaafxes>

Key points

New Urbanist architects allow the city to take precedence over their buildings (Page 115)

One of the things we’ve learned as new urbanists is that the prime ingredient of urbanism is really public space and the public realm (Page 116)

Individual starchitects impose their signature on a particular building. New urbanists’ signature is the place—generated by an ensemble of buildings and public spaces (Page 116)

New Urbanist architecture is not about removing cars and parking from cities, but about removing their necessity (Page 119)

The ability to have people and families in comfortable places that don’t take multiple acres per family is an important contribution of New Urbanism (Page 119)

If buildings are to command and define the public realm, cars need to be on the sides or behind or under buildings (Page 119)

Few architecture schools teach New Urbanist principles—most people practicing today learn how to make those buildings through practice (Pages 119)

We probably build lower quality housing in this country than almost anywhere else in the world (Page 120)

We have to leave behind the idea that everything has to be invented, and realize that everything that we know about design is really an interpretation of what exists in physical reality (Page 121)

Questions

How do the buildings contribute to an active public realm in the best neighborhoods of your city?

How does the urban-rural Transect affect building types and the practice of architecture?

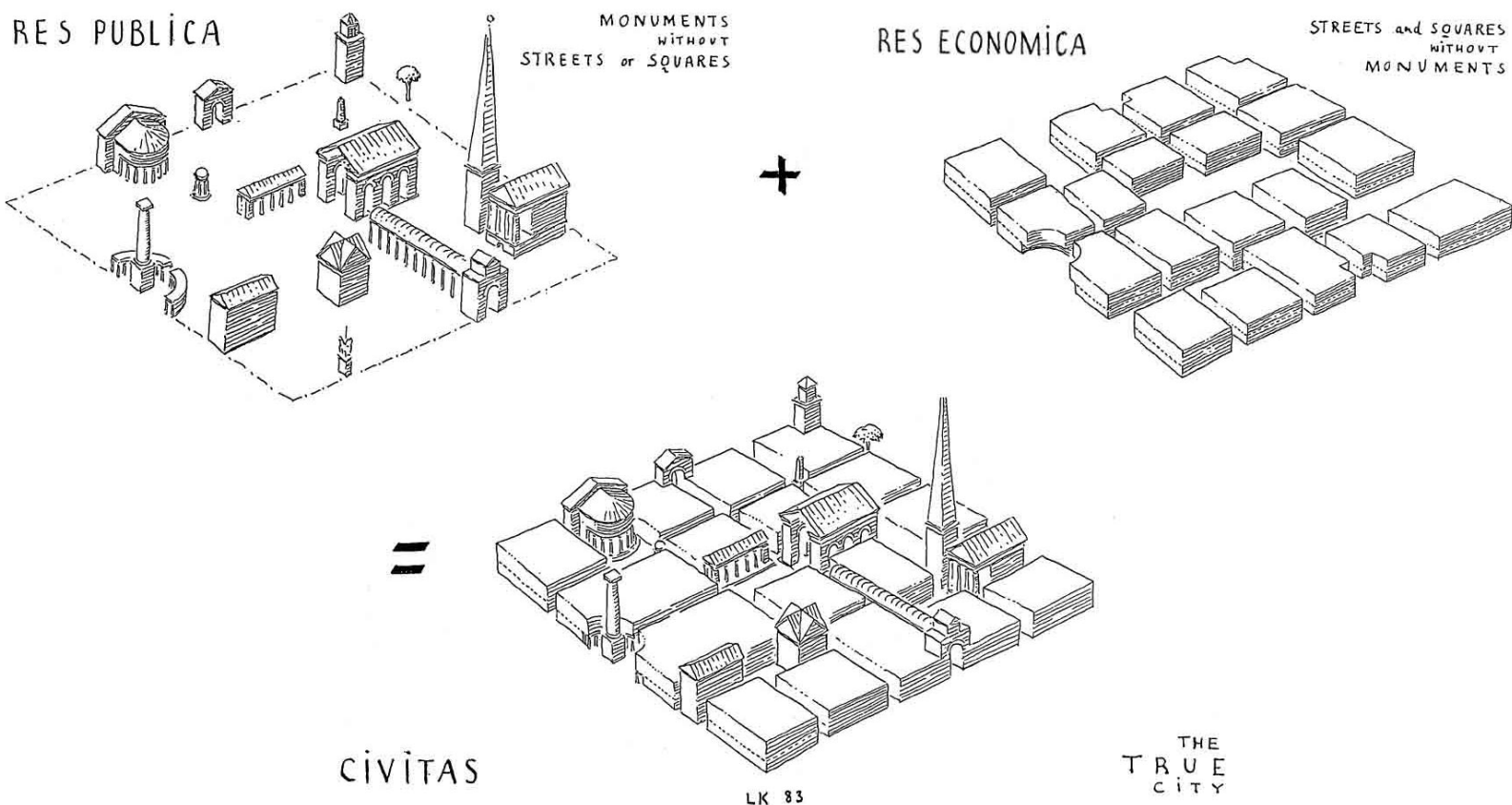
How will current transportation trends affect architectural styles and designs?

How can cities increase building and material quality without increasing costs?

How do environmental conditions affect local architecture?

What role do universities have in preparing students to design for local contexts?

How can New Urbanist architects design iconic buildings that also fit into their neighborhoods?



16. THE PUBLIC REALM

Dhiru Thadani and Howard Blackson discuss the public realm, cities, towns, and civilization.

Complete streets are more than bike lanes, crosswalks, sidewalks, and vehicle lanes; they are buildings that engage the people in the right of way. Well-designed plazas, squares, and greens are framed by landscape design and architecture that relates to local culture, history, and climate. New urbanists have long advanced the idea that the public realm ties cities together and is a potential source of joy and inspiration to all citizens. Former Bogota mayor Enrique Peñalosa may have said it best: “Great public space is a kind of magical good. It never ceases to yield happiness. It is almost happiness itself.”¹

What is the public realm, and why is it so important to the New Urbanism?

Thadani: Any conversation about the public realm has to go back to Léon Krier’s diagram from the 1980s (see top of page). It’s a really good starting point for an appreciation of

the public realm. Léon made that drawing in ‘83, when he received the plans for Seaside² from Andres Duany and Robert Davis as a way to explain the two realms of what makes a true city. For a lot of folks, this was the aha moment—we saw that diagram and started to understand what was wrong with non-urban areas—sprawl, suburbs, whatever. It clarified that the public realm and the civic buildings were an important part of a true city. And the street was an important part of the public realm—it was the connector between public spaces.

Blackson: It was a return to the patterns of a public realm being streets and parks—and forming blocks and buildings. Whereas, the modern idea from the ‘30s to the ‘70s, that had all been obliterated. The only reference I had to traditional streets, plazas, blocks and buildings were in burned-out downtowns, or Disneyland. It was a New Urbanism and Léon

Léon Krier’s 1983 diagram on the city knitting together public and private buildings

Krier's diagram that shifted the conversation back from placeless buildings to streets and blocks, to creating places. I think a great Krier quote is, "The architecture of the city and public space is a matter of common concern to the same degree as laws and language. They are the foundation of civility and civilization." Public space and how we interface socially is our civilizing element. And that's of greatest importance in today's politically, socially, environmentally toxic world.

Has this idea been widely recognized? It seems to me that a lot of people just take the built environment for granted, and they don't recognize its importance on the same level as say, laws.

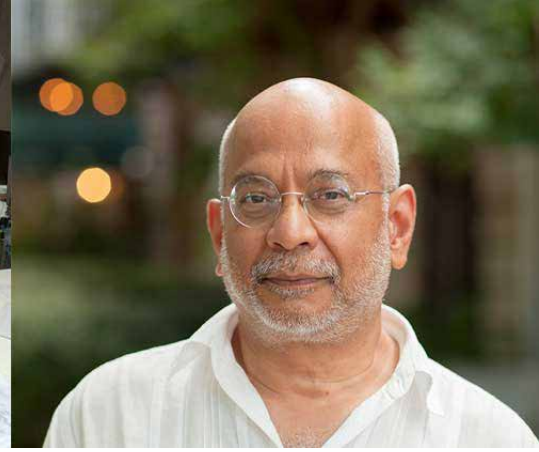
Blackson: I think we do understand it. Pretty much every person, as long as they know "mixed-use walkable urbanism," talks about getting the ground floor right and everything else will be great. And learning about the importance of the ground floor is the first baby step towards urbanism, away from the modernist experiment on cities. Getting the ground floor right is the civilizing component, but it's just the first step.

Thadani: I think that that recognition has become widespread.

Blackson: We understand traditional urban patterns as streets and squares forming blocks and buildings, and expanding traditional urbanism into architecture. We've marginalized that modernist architecture—modernism is only allowed to live between floors 2 and 26. And now, urbanist architecture is slowly moving up the buildings, so it's getting fun.

For the non-architects, non-urban designers out there, what is it about the pattern of blocks, streets, and buildings, and getting the first floor right that's so important to cities and towns?

Thadani: Let's talk about walkability. It's interesting to walk by storefronts, to people-watch at cafes. That ground-floor life is what



animates the cities. When Howard talks about getting it right, it's really about animating the urbanism and making it interesting. It's much easier to walk in a place with an active building face than it is to walk past parking lots, parking garages, or blank walls. The two are related, the public realm and walkability—the quality of the walkable experience is dependent on street frontage. One mistake is measuring walkability by a metric of the quarter-mile. We don't spend enough time talking about the quality of the experience of the walk. When the public realm has been done well, you can walk endlessly, that's the beauty.

Blackson: And, now we understand that complete streets are a city's greatest social justice tool. Because they provide the most number of citizens access to commerce, society, and culture. The complete streets and complexity of streets are becoming that next step of public realm design. So, we're seeing this shift from focus on automobiles only to all types of travel modes.

The Charter of the New Urbanism states that "Urban places should be framed by architecture and landscape design." That's a meaningful phrase for me. How does that relate to the public realm?

Thadani: The architecture has to be of its place. It has to respond to the climate, the ecology, and building practice. What we've been doing for the last 50, 60 years, is dropping International Style buildings all over the world. Even if they line up with the street wall and frame the space, they really don't tell you anything about the culture of the place.

*Urban designer **Howard Blackson**, left, based in San Diego, California, and architect, urbanist, and author **Dhiru Thadani**, based in Washington, DC.*



But it's also the idea that a building has a job to do in terms of creating an outdoor room or a public space that's enclosed as opposed to just a building that's housing a particular use.

Thadani: Buildings and landscape design have an obligation to place, to contribute to the public realm. It's designing a building with reference, both to the physical and the cultural aspects of a place. The word contextualism,³ which was framed in the '70s, had to with both the physical and the cultural context.

Blackson: I was fortunate to witness Leon Krier come up with the idea of tuning the architecture and urbanism to a place in Chico, California.⁴ Since then, we've expanded on the patterns of the public and private realm in relationship to buildings and spaces. The landscape around the civic building could be tuned differently than the landscape of the private sector. The private buildings could be tuned differently than the public building, and that tuning gives you character, the value and memories of the people living there. This is the next step of architecture and urban de-

sign. You can find your missing middle building types and tune them properly according to that relationship between space and place.

Thadani: The key realization after 25 years of New Urbanism is that public space is the umbrella for placemaking. And a lot of planners understand that word placemaking. Urban design done well creates value, because it makes a place that the general public can use as a reference. Two blocks from Rockefeller Center or five blocks east of Dupont Circle—that has a value.

A lot of developers came to realize in the early years of New Urbanism that if they wanted a project to get higher returns, placemaking created value. So building a park or a public space that is recognizable creates a moment within the city. A street is a linear corridor, but once you add the cross street to it, you've made a place. Otherwise you're driving down this endless street, going down for miles and miles, and it's undifferentiated. Now, you expand that cross street, you blow out one corner, and you've created a plaza. You incrementally add to the spatial quality. And that's where the real value is.

A typical street ROW from the Westside Atlanta plan, where the streets are framed by architecture and trees, creating a human-scale public realm. Source: Dhuru Thadani.

Blackson: Now that we've come out of the crash, we've got housing crises, we've got this urban-rural split, and we're concerned with social justice. As I said earlier, the way we inhabit and connect with our streets and our streetscape is the biggest social justice issue happening in cities today. The point of rethinking the street today is to consider the social justice perspective.

So why is it so important that the public realm be walkable and human scale for social justice reasons?

Thadani: It equalizes the condition for everyone. A street right-of-way controls what's privatized and what's not.⁵ And that might be frightening to some people because everyone has access—But cities are about access for everyone.

Blackson: And if that access is by car, then you start to suburbanize and you destroy your inner city. If it's by foot, then you can urbanize and create housing opportunities that have been lost to a car-oriented culture.

In 90 percent of our metro areas, we've got the opposite of three-dimensional urbanism. The public realm is constantly bordered by parking. It's either parking lots or garages. First, what's wrong with that? Second, do we need that to a certain degree? And how do you incorporate that into an idea of a public realm that's framed by architecture? How do you incorporate some of those uses like the Jiffy Lube or the big box store?

Thadani: It's not possible to have every street an A street, or a complete street. So you relegate some of those auto-oriented activities to a B street, given the present condition. The balance between A and B streets⁶ might change over time, but most cities can't afford to change every street into a complete street. Nor should they attempt to do so because we still have cars, and there are auto-reliant uses and services that need to be on those B streets.

Is there a way to make B streets better than they currently are? Does it have to be completely one or the other?

Thadani: B streets absolutely could and should be better. There's no reason why buildings can't front a B street. There's no reason why the Jiffy Lube has to be set back 100 feet from the street. Cars could access the building from the back.

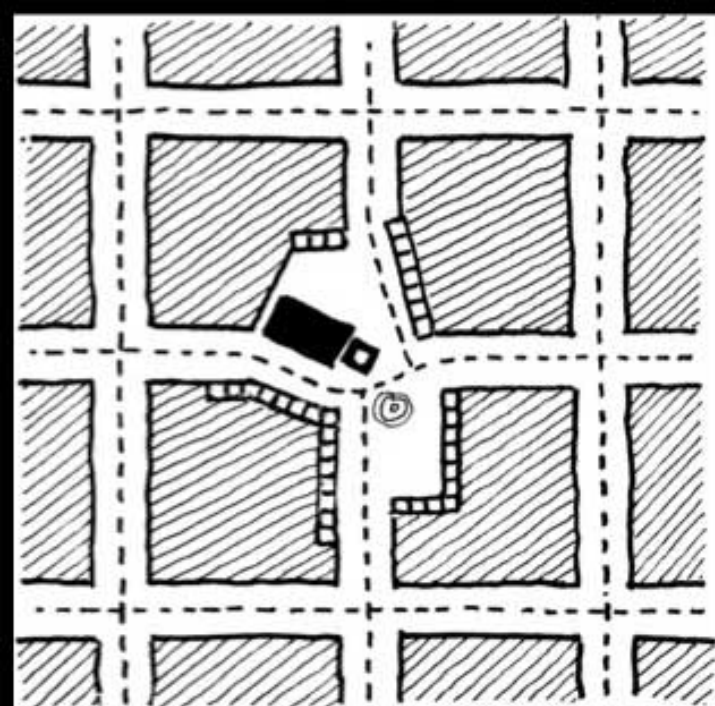
Blackson: And a way to make B streets better is to understand that there's C streets and D streets as well. Goeff Dyer and Nathan Norris did a really good job of thinking that through the downtown Lafayette, Louisiana. We need to understand the complexity of street types, just like we understand the complexity of place and building types.

So can we talk about the implications for coding and street design in a human-scale public realm?

Thadani: The fundamental goal of early form-codes was to get the street right. It stems from the zoning codes, which usually changed uses in the middle of the street. The street became a dividing line that separated one classification from another classification. And so the idea of changing uses at mid-block is a tremendous contribution. Nowadays there is more sophistication. Buildings can be the same type, but it's not always the same lot size so that the houses can have some variety on either side of the street.

You've mentioned something that's important. You said that the street became something that separates. And new urbanists, and the idea of the public realm, focuses on making the street becoming something that unites people.

Thadani: That's the essence of the public realm; that it is a place and not a divider. And because in some streets you have high-speed automobiles going through, the cars contribute to that division because people don't want to cross that street.



You don't even want to be there let alone cross the street if the cars are going fast.

Blackson: And the reason that this still happens despite the new urbanist idea of place-based, context-sensitive, form-based coding is that traffic engineers are in charge of the public works street division. Parks and recreational departments are in charge of the parks. And then the planning department will think about how to shuffle the private buildings around. General services will take care of the public buildings and the libraries, and the city halls. And all of these are coordinated by a city manager or a mayor who's a short-term politician.

In the age of privatization, we are losing the public realm. If you and I want to protest, the best place to go is a freeway overpass with our signs because that's where the majority of the citizens are sitting at eight miles an hour or less is in the freeway at 5 o'clock. Instead of the freeway overpasses, it should be in the plazas and the squares in the cities and the towns where we can sit and talk to each other and work things out.

You talk about the transportation engineers. They do have a tremendous impact on the public realm. From the state DOTs to the city engineers and the big engineering firms. How do we get them

to think more about the public realm and recognize the many functions of the street?

Blackson: We vote for transportation and transit, and bicycle facilities. And the citizens have voted for them. It's a matter of continuing to put the pressure on. That stuff is working, and it shows economic returns, but it takes public investment. It's not subsidizing, it's investing.

Thadani: There's so many people involved in this. It just takes education. What I've learned after years of practice as a planner is that you have to be an educator. I think it's our key role as new urbanists: to educate folks to understand these concepts.

Blackson: And show them how it's done. Because we've been doing it for 20 plus years,⁷ and we're the group that can claim that.

Thadani: I just have one other thing I wanted to add about the public realm. When cities were formed they were about commerce, exchange of goods, and transportation nodes. The exchange of commerce, ideas, activities, politics, the marketplace—all that happened in the public realm, and that's how civilization prospered. In the American context, we think of the public realm now mostly as shopping. But that's taken a downturn,

Leon Krier's diagram for a new urban piazza, carved from four corners

so we can't really activate the public realm anymore relying just on shopping. We have to make civic life the impetus. Every city should activate their public realm, if it's a gallery walk on Thursday night, or a concert in the park or something—that has to be programmed to reintroduce and bring people out again for them to say, “Hey, this is really great. We're out in the public park with other people of different economic means or social classes, etcetera. And we're having a good time enjoying this activity.”

Can you talk about some cool projects that you have seen of been involved in lately that introduce some interesting or innovative ideas on shaping the public realm?

Blackson: Geoff Dyer and I had the opportunity to use Léon Krier's “Old Four Corners” ‘wiggle’ to create a “New Urban Plaza” in the heart of downtown Chula Vista, California. The plaza was created by a slight diversion, or wiggle, of the roadway within the right-of-way, to offset the monotonous grid and create a visual and physical center. The traffic is first calmed with an overhead ceremonial gateway sign, brick surface material and a change in street pattern, seating areas, bulb-outs, and bollards to calm the traffic, the ‘plaza’ is pedestrian oriented, maintains traffic flow while hosting weekly farmers markets. The plaza is planned to be fronted onto by a new Veteran's Memorial Museum as well and is considered a great success.

Thadani: Since I just received my copy of *Val D'Europe: A City Vision*, there are several beautiful urban spaces in this new city project near Paris, France. ♦

NOTES, RESOURCES, DISCUSSION

16. The public realm

Notes

¹ Former Bogota, Columbia, mayor Enrique Peñalosa is quoted in the book *Happy City, Transforming Our Lives Through Urban Design*, tinyurl.com/y7kw2c4u

² Leon Krier consulted on the plans for Seaside, Florida, in addition to designing his first constructed house.

³ See a definition of contextualism, <https://tinyurl.com/ybz3ogw3>

⁴ Leon Krier was a consultant for a traditional neighborhood plan called Meriam Park, which was never built due to the housing crash of 2008.

⁵ Former 10-term Charleston Mayor Joe Riley can make the case for the social justice value of the public realm better than anyone. tinyurl.com/ybbtrfjr

⁶ The concept of A and B streets has long been used in New Urbanist plans. See tinyurl.com/y7c8pxnx

⁷ The first Congress for the New Urbanism took place in 1993, but the founding members had already been working on these ideas for 10 years or more by 1993.

Additional resources

Book, *The Architecture of Community*, Leon Krier, tinyurl.com/ybeurb95

Video, Jan Gehl TED talk, www.youtube.com/watch?v=Cgw9oHdfJ4k

Video, Howard Blackson TED talk, daily-motion.com/video/x2p9o4a

Book, *The Language of Towns & Cities*, Dhuru Thadani

Book, *The New Civic Art: Elements of Town Planning*, Andres Duany, Elizabeth Plater-Zyberk, Robert Alminana, Jean-François Lejeune

Key points

Public space and how we interface socially is our civilizing element. And that's of greatest importance in today's politically, socially, environmentally toxic world (Page 125)

Ground floor design is essential to creating a walkable neighborhood, but it is only the first step (Page 125)

It's much easier to walk in a place with an active building face than it is to walk past parking lots, parking garages, or blank walls (Page 125)

Complete streets are a city's greatest social justice tool. Because they provide the most number of citizens access to commerce, society, and culture (Page 125)

The architecture has to be of its place. It has to respond to the climate, the ecology, and building practice (Page 125)

Good public space creates value for developers and civic life (Page 126)

It's not possible to have every street an A street, or a complete street. So you relegate auto-oriented activities to a B street (Page 127)

The idea of changing uses at mid-block is a tremendous contribution (Page 127)

The essence of the public realm is that it is a "place" and not a divider (Pages 127)

We can't activate the public realm any-

more relying just on shopping. We have to make civic life the impetus (Page 129)

Questions

Why did 20th Century planning separate classifications of uses? Is this still a useful tool? Where and why?

How can planning for the public realm be incorporated into all scales of city building?

If the public realm has been widely recognized as important and valuable, what are the barriers to improving its quality? What are the next steps?

What responsibility does an urban designer have to the community regarding use of public space after it has been built?

How can civic life take the place of shopping as the center of the public realm in America and what would that look like?

What is it about human nature that makes street life so desirable?

Should walkability proponents focus more on the quality of the walk?



17. CHARTER OF THE NEW URBANISM

Signatures on The Charter of the New Urbanism, Charleston, 1996.

Elizabeth Moule and Emily Talen discuss the The Charter of the New Urbanism, how it has shaped cities and towns, and whether it needs to be updated.

The *Charter of the New Urbanism*, adopted and signed in 1996 by attendees of the fourth Congress for the New Urbanism in Charleston, South Carolina, is the foundational text of the New Urbanism. In just over 1,100 words including a preamble, the *Charter* lays out 27 principles for design of complete communities, from the scale of an individual building, block, or street to an entire city or region.

The *Charter* was modeled in part on, and in opposition to, the 1933 “Athens Charter”¹ of Congrès International d’Architecture Moderne (CIAM), which enormously impacted cities and suburbs in the second half of the 20th Century.

Five decades into America’s “suburban experiment,”² planning and development ideas that were exported worldwide, CNU proposed a comprehensive alternative to automobile-oriented, single-use sprawl and deteriorating traditional cities and towns. “We advocate

the restructuring of public policy and development practices to support the following principles: neighborhoods should be diverse in use and population; communities should be designed for the pedestrian and transit as well as the car; cities and towns should be shaped by physically defined and universally accessible public spaces and community institutions; urban places should be framed by architecture and landscape design that celebrate local history, climate, ecology, and building practice,” says the *Charter* preamble.

The *Charter* champions the opposite of fragmented sprawl. The vision was radical at a time when the land use planning and development industries—including roads, building, finance, and design—were geared toward conventional suburban design.³ In more than two decades, the *Charter* has not changed—yet planning and development have moved steadily toward the *Charter* view of the world. The document speaks to new

generations of urbanists—just as it appealed to more than 260 original signers. Two books have been published on the Charter, a first edition in 1999 and a second edition in 2013, with essays that explore in detail what the document means. The influential Charter Awards of CNU have, since 2001, honored planning and development projects that meet *Charter* principles.

Why a charter? Why did the CNU create it?

Moule: It's important to start with a bit of history—the principles of the Charter grew out of the Ahwahnee Principles⁴ that were written for the Local Government Commission in the State of California. These were written by Stefanos (Polyzoides) and I, Peter (Calthorpe), Andres (Duany), and Lizz (Plater-Zyberk), with the help of Michael Corbett. They're almost identical to the principles of the Charter and they were its source.

These principles were drafted because there was a need for a set of fairly straightforward guidelines that at the same time were holistic. They had to cover the buildings, block, street, neighborhood, district, and region. The idea was to create something that was not only a source of agreement among urbanists, but something that had the power to be generative. We wanted to allow other people to use them and carry on with remaking the physical world.

Talen: It's an affirmation of the validity of these principles that historically they were employed outside the realm of our current reality. Liz and the other folks who wrote the Charter were aware of concepts like Garden Cities,⁵ street connectedness, and the importance of bounding settlements to prevent sprawl. These ideas were once hard-wired into the planning and design of cities. It's cool that this group of people in California were able to draw on that historical knowledge, then update it and refine it to a manageable set of principles.

Moule: There's definitely a perception that for millennia cities were designed according



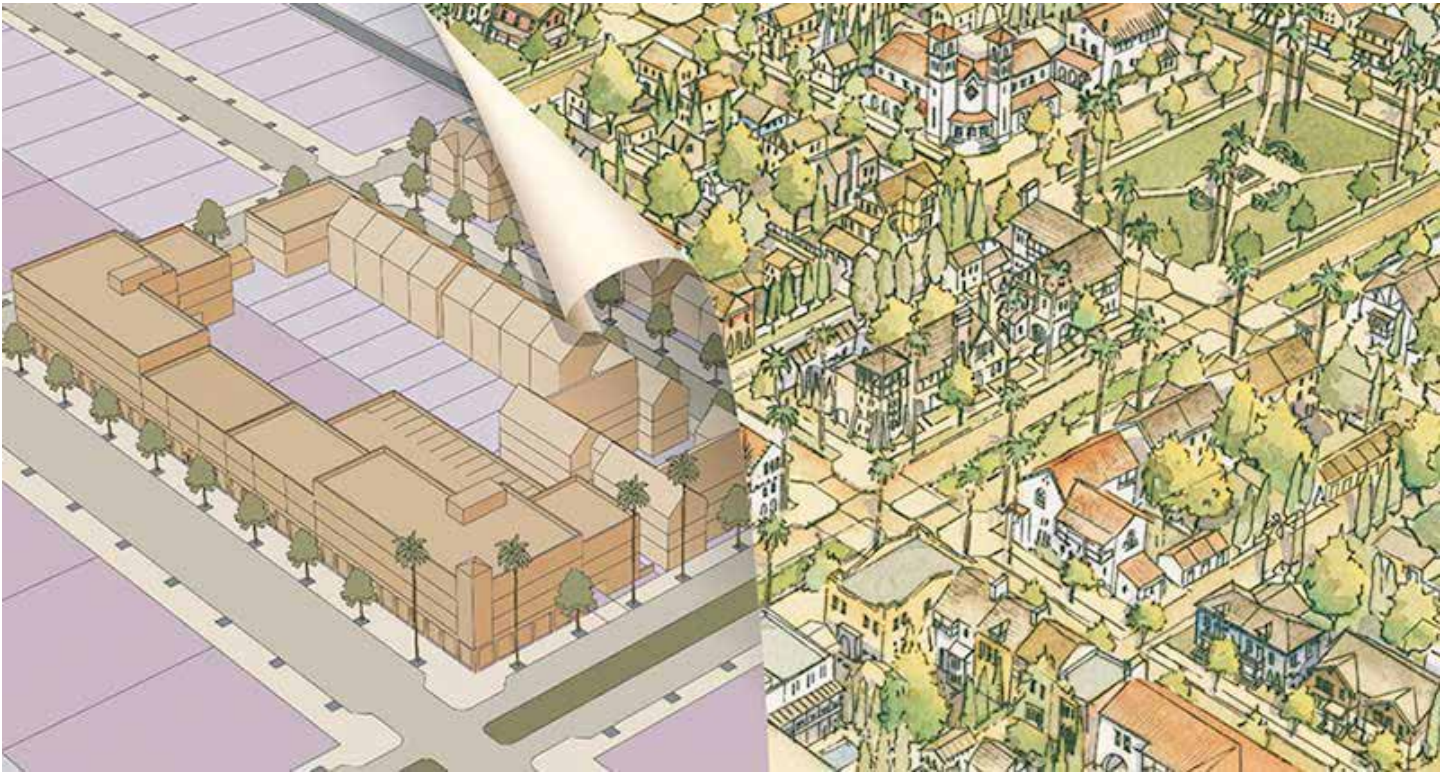
to common sense but somehow it had all gone awry in the 20th Century. We humans found a way to get around these hardwired principles and do something nonsensical.

I have never personally heard anyone disagree with these principles, even those who may say that they strongly disagree with the New Urbanism itself. Yet these principles aren't entirely vague, as they lead to cohesive places or certain types of places. How come there is so much agreement on the principles and, yet, not so much agreement on the New Urbanism?

Talen: The best analogy is with the US Constitution. We all rally around the Constitution but when you get to the point of implementing and interpreting the principles in reality, that's when all the arguments start. But that's healthy. I think that the Charter is so valuable because it's found the right level of specificity that allows alternative implementations. When people criticize New Urbanism, it's usually certain implementations of these principles that are disliked. I'm a critic of a lot of New Urbanism. Every day we see the half-baked application of principles. Often, I think some of these principles that are laid out haven't been taken seriously enough. But if a project doesn't take the principles far enough, at least these were the aspirations they tried for.

Moule: It's important to distinguish between design principles that are in the Charter and specific design solutions. We made design principles, as opposed to solutions, so they could be interpreted contextually, regionally,

Emily Talen, professor of urbanism at the University of Chicago and editor of the book *Charter of the New Urbanism*, Second Edition, and **Elizabeth Moule**, principal of Moule & Polyzoides Architects and Urbanists, a founder of CNU and one of the authors of the Charter.



locally in so many different versions, according to what was appropriate as a solution. A lot of the critique of New Urbanism itself or New Urbanist projects comes from a lack of quality and sometimes high design. But those criticisms can be leveled on projects across the board, whether New Urbanist or not. Inasmuch as we set a high standard for ourselves, a lot of people believe that that standard should also include very high-quality, well-capitalized projects built for millennial standards. In other words, that we don't build a lot, but we build it well and it lasts for a long time. And I think that people are right to critique New Urbanist projects that don't comport with that.

One thought is that no particular project can meet all the principles of the Charter. Sometimes people expect you to meet all 27 principles, especially if you've espoused them in a charter, but this is really a set of principles that's supposed to govern multiple projects that come together as a whole place. Another thought is this: just like there's various quality of sprawl, there's various quality of urbanism. How can there not be? Many different developers and designers follow the principles of the Charter, whether they know it or not.

Moule: I don't think that perfect should be the enemy of the good, and frankly perfect isn't necessarily possible when you're talking about urbanism. There is a lot of diversity, but I think that urbanists embrace diversity, whereas people who support urban sprawl are conventional modernists, and they don't care for that diversity.

Talen: This is an age-old problem in city planning that's existed for more than a century. Supporters of the Garden City said, "We have to have complete Garden Cities or else it's not a Garden City. It has to have a form of employment and it has to be on transit." We have these kind of debates in New Urbanism too. Some people think if you make exceptions for projects that don't espouse the entire concept, then you enable mediocrity and it's not necessarily a step in the right direction. How strict are we supposed to be about these 27 principles? I think the value of the principles is that they state a position and form a platform.

Moule: New Urbanists recognize that cities are currently evolving, at least in the United States. Hopefully, it's an arc towards improvement over time. When someone builds a project with a New Urbanist intent,

The goal: Generating places like those on the right. Image by Opticos Design.

even if it doesn't possess all the elements, it remains somewhat open-ended. It's not a fixed object that's unable to accommodate transformation in the future. It can be improved. Instead of thinking about these places as final outcomes, we can think about them as incremental steps towards something better.

Is this clear set of principles a defining aspect of the New Urbanism?

Moule: I think it's the very essence of New Urbanism.

Talen: But it's also a blessing and a curse. The principles are great in that they pull together the best aspects of historical city planning, but for some people, they see them as ideological and that makes them uncomfortable. For them, it's dogma. But on the flip side, I think that energizes constant debate and exchange within the New Urbanism. There is a focus on empirical evidence and a commitment to bottom-up engagement like the charrette process that counterbalances this top-down manifesto. The techniques might be constantly changing but there is a solid set of principles to refer back to. I like how the New Urbanism is not relative. In certain worlds, that's perceived as a very conservative position but through constant debate, empirical research, and community engagement concerning our practices, we push back against the potential negatives associated with a clear set of principles.

Moule: The principles of New Urbanism are far from a constraint on creativity. They aren't shackled to some predetermined outcome nor do they tie the hands of the architect or the planner as a maker. It's important to remember that the New Urbanist principles were a critique of suburban sprawl and zoning, a replacement to generate superior places. Superior places require an assessment of the needs of a broad spectrum of people, the individual stakeholders. The principles are absolutely not relative, but they're highly contextual. A lot of people would call that ironic, but I think that's the best way to put it.

Talen: We need to be honest that there are some constraints here; the principles don't allow for complete design license. But they do expose the values laden in particular design decisions and make them clear. Architecture, design, and even city planning privilege certain values, such as everyone should own a car or homogenous suburban development is the only place to raise a family. It's important to be able to identify the values that underlie all design principles.

Moule: I have also described the principles of the New Urbanism as a value system. At the same time, CNU is not prescriptive about character, style, or innovation, the sorts of things that come into play as we make places. For New Urbanist projects, the underlying value system is a commitment to the public realm, a commitment to a diverse community in all kinds of ways, and an inclination towards places that are permanent, long-lasting and meaningful to not only people today but hopefully in the future as well.

Could CNU have been as influential without the Charter? Conceivably it didn't have to have a charter. The Charter was created in the fourth CNU, although you were working towards a charter in the first three. Perhaps it could have just been an organization of like-minded planners that shared their projects. Would it have been the same and would New Urbanism have had the same longevity and impact without the Charter?

Moule: Absolutely not. It's important to remember that one of the objectives of the Charter was to grow a movement to subvert suburban sprawl. When we began to plan the Congress, we intended to bring in only 10 or 12 like-minded people. But then we reconsidered its size and we didn't want it to be made up of only architects. We wanted it to involve government officials, writers, activists, environmentalists, and anyone else who shapes the physical world. To create a new standard so broad and diverse, we needed a document that everyone could agree to. There had to be a common language, a common



objective, not only because of the global reach of our aspirations, but also because of the diversity of the people that we were trying to engage.

Talen: I can't imagine New Urbanism without it. If you didn't have the Charter, it would require an implicit understanding or agreement among all its diverse participants, something that would be incredibly inefficient given their different backgrounds. The *Charter* also democratizes the movement because it opens it up to all sorts of people. They are connected to the goals of the New Urbanism because the Charter concerns the block, the street, and the building as well as the processes and policies that relate to them. The language of the Charter connects all these different ways of approaching human settlement.

Moule: And its values.

Talen: Common language, common set of values, explicitly there for everyone to see.

How has the Charter influenced what has been built in America, or the world for that matter, over the last two decades since it was signed?

Moule: It's been enormously influential. Speaking from my experience in Los Angeles, which arguably could have been the

city most invested in optimizing the build environment for the automobile, today, in its fifth incarnation, it's a city that's concerned about walkable neighborhoods, transit, infill housing, and pulling in and tightening up its boundaries. It's reinforcing neighborhoods through greater mixed use, higher density, more conviviality, greater diversity and so on. Los Angeles is a profoundly changed place because of the Charter. If it can happen in LA, it can happen anywhere.

Talen: I see its influence in planning agencies at the municipal level and the way that they deal with the regulatory and planning side of their cities. It's permeated the culture of these planning agencies. They're out there pushing Charter principles without saying it. It's all about walkable neighborhoods and street re-design, at least in the cities that I have worked in, even Phoenix and definitely Chicago. These very powerful ideas that are in the *Charter* have trickled out, and gradually—maybe the timeframe is a little longer—they are turning the ship around.

Moule: I think so. Any architect or planner that is graduating today and thinks that they're not going to be working in a New Urbanist world is completely unaware of what they're going to meet when they come before design and planning commissions. In a lot of ways, we've been much more successful with the planning world than we have with the architectural.

The Charter offers a detailed critique of suburban sprawl

I've sat with the last three Charter award juries and have seen the academic projects that have come through. It strikes me that some of the pedagogy is now structured around the *Charter* in certain schools. How has the *Charter* influenced academia in the teaching of urbanism?

Talen: There's a huge difference between the architectural academy and everyone else. It has gained little traction in architecture departments. But in planning and even landscape architecture departments, except for the ones that are enamored with Landscape Urbanism, New Urbanism is taken for granted. Everybody's teaching these principles. I don't know that they actually assign the *Charter* book, per se. But the concepts of street livability and smart growth are very much derived from it. These sorts of things have become the bread and butter of planning practice. But, architects, not so much.

Do you all have favorite parts about the *Charter*? And on the other side, are there controversial parts of the *Charter*?

Moule: My greatest interest in the *Charter* is the articulation of the public realm. I think that's the heart of it. Particularly in the United States as a democratic country, where we strive to integrate diversity and make a place for past, present, and future to reside. I don't think anything in it is controversial. But I want to mention the *Canons of Sustainable Architecture and Urbanism*,⁶ which are a companion to the *Charter*. There was a perception that some aspects of environmental sustainability were included in the *Charter*, but they needed to be amplified and made more explicit. In response, we wrote up the *Canons*. It shows that it's possible for amendments to be made to the *Charter* and new editions of the *Charter* book provide commentaries on the response and impact of the principles for a generation. But since it was drafted, the resilience of those principles has been remarkable, despite changing times, politics, and people.

Talen: I'm more drawn to the block, street,

building end of the *Charter*. I find it more useful and practical. I think the regional focus is more platitudinous. I worry about the lack of regionalism in the US and I'm frustrated by the lack of realism in the regional principles, despite their necessity.

Moule: I think one of the things that hasn't been very well understood is that architecture and urbanism are completely interwoven. You can evaluate a building with New Urbanism principles in the same way you can evaluate a town, suburb, neighborhood, or region. The building is literally the building block of cities and all of those principles can be encapsulated in a piece of architecture but it's never separate from a neighborhood in a town.

What is the future for the *Charter*? Do you think there will be changes to it? If so, perhaps, what might they be? Is it going to continue to have the same influence?

Talen: After editing the 60-plus commentaries on its different aspects for the *Charter* book, I feel that the principles could be condensed and some are redundant. Looking toward the future, I hope that there can be more discussion about the *Charter*, including things like amendments, like the *Canons* that Liz mentioned. It's a little frustrating that CNU hasn't found a process to foster an ongoing debate about the *Charter* and how it can be amended and changed. Maybe it's too soon and we need to give it 10 more years. But we can start developing a process now.

Moule: What's interesting about the movement of New Urbanism is that it was started by a small group of people who were able to come to some consensus about these principles, even if there were arguments and disagreements. The *Canons* were made the same way. A small group, Hank Dittmar, Stefanos Polyzoides, and I wrote and put them together before it went through a process of discussion and ratification. Right now, we're at a period within the movement where it is so broad and diverse and the current administration of the organization is looking

to continue to expand. We're at a point where we are still interested in deepening the constituency for New Urbanism, rather than critiquing or refining it.

Talen: I think the diversity aspects of New Urbanism often presents a problem for the movement. Within the Charter principles, it states that there needs to be a diversity of housing types, but there's no discussion of how to build public support for this diversity. The free market is not going to create diversity. Andres [Duany] says we can build our way to diversity. There is room for debate about whether or not that is possible to do. But I think it would be worthwhile to emphasize in the principle that the creation of great diverse neighborhoods requires a programmatic response.

Moule: I see diversity, redundancy, multiplicity, those kinds of things, as part of the value system. But you're right, the principles aren't necessarily explicit about how to realistically achieve diversity. It could be a topic for a companion document to make it more detailed and stronger. ♦

NOTES, RESOURCES, DISCUSSION

17. The Charter of the New Urbanism

Notes

¹ For more on the Athens Charter see en.wikipedia.org/wiki/Athens_Charter, and <https://tinyurl.com/y7cnf5mn>.

² The “suburban experiment” began in the late 1940s, and *The Charter of the New Urbanism* was signed in 1996. “Suburban experiment” is a term used often by *Strong Towns*’ Charles Marohn. See Chapter 11.

³ Convention suburban design or conventional suburban development is marked by a separation of uses and building types and a branching, dendritic thoroughfare network with very large blocks.

⁴ The small group listed by Moule met at the Ahwahnee Hotel in Yosemite National Park to write the principles..

⁵ For more on the Garden City movement, see en.wikipedia.org/wiki/Garden_city_movement

⁶ For more on the *Canons of Sustainable Architecture and Urbanism*, see tinyurl.com/ybsbpkue

Additional resources

The Charter of the New Urbanism, tinyurl.com/oaafxes

Video, reading of *The Charter of the New Urbanism* by Bill Dennis, www.youtube.com/watch?v=Rv1LztWLuWA

Key points

The idea for the Charter was to create something that was not only a source of agreement among urbanists, but some-

thing that had the power to be generative (Page 132)

For millennia, cities were designed according to common sense but somehow it had all gone awry in the 20th Century, and the Charter addresses that (Page 132)

When people criticize New Urbanism, it’s usually certain implementations of these principles that are disliked, but not the principles themselves (Page 132)

The Charter offers design principles, as opposed to design solutions, so it could be interpreted contextually, regionally, locally in so many different versions, according to what was appropriate as a solution (Pages 132 and 133)

The New Urbanist principles were a critique of suburban sprawl and zoning (Page 134)

For New Urbanist projects, the underlying value system is a commitment to the public realm, a commitment to a diverse community in all kinds of ways, and an inclination towards places that are permanent, long-lasting and meaningful (Page 134)

Questions

How is *The Charter of the New Urbanism* “generative”?

How did the Charter draw on historical models to create a manageable set of principles?

Why would the writers of the Charter model it after a document, the Athens Charter, which they believed did damage to the world?

How is *The Charter of the New Urbanism* like the Constitution in terms of the level of specificity and the ways that it can be interpreted?

What’s the difference between design principles in the Charter and specific design solutions?

Is Talen right that the Charter is a blessing and a curse? How so?

Can a single project live up to all of the principles of the Charter? Why or why not?

Could the New Urbanism have been as successful without its Charter? Why or why not?

Is there any part of *The Charter of the New Urbanism* that you disagree with?

What are the parts of the Charter that are most controversial and contentious?

Can the Charter be improved and how?



Courtesy of Torti Gallas + Partners

Housing



18. MISSING MIDDLE HOUSING

Phoenix, AZ, fourplexes.
Courtesy of Opticos Design

Dan Parolek, Karen Parolek, and Paddy Steinschnieder discuss housing types that form the backbone of quintessential American neighborhoods and why they were neglected for about three generations of planning and construction.

The “missing middle” housing types are those in between (mostly large-lot) single-family detached and large apartment complexes. Berkeley-based architect Dan Parolek coined the term missing middle, accompanied with a diagram, to communicate the housing choices—increasingly in demand today—that are ignored or discouraged by conventional planning and development. These types range from small-lot single family and townhouses, to stacked townhouses and flats, duplexes, triplexes, quadriplexes, courtyard housing of various kinds, and small apartment buildings. Missing middle offers low-rise density, diversity, and forms the backbone of the quintessential American neighborhood.

Why has the term missing middle struck such a chord, and how was it coined?

Dan Parolek: It really caught on like wildfire. We were contacted pretty frequently to either work on it or come talk about it in different places. We created the term in 2012 when we also created the diagram.¹ I think it’s given communities, builders, and planners the ability to talk about the need for housing choices in a way that doesn’t use scary terms like density and multi-family, and the other terms that we urban designers, architects, and planners use. It removed a lot of the baggage that comes along with talking about non-single-family housing choices in communities.

Karen Parolek: It addressed housing choices in the context of beloved neighborhoods, particularly the opposition between neighborhood and density. I think missing middle housing has really caught on because it’s



Dan Parolek and Karen Parolek, principals of the architecture and urban design firm *Opticos Design Inc.*, and **Paddy Steinschneider**, architect and president of *Gotham Design & Community Development Ltd.*

a way for people to talk about how to keep their neighborhoods and make them better. How do we bring in businesses? How do we provide households to support these businesses without increasing the height and the perceived density of the neighborhood, i.e. making it into a city. Additionally, housing affordability has become a major crisis in the vast majority of walkable cities and towns in the United States, and missing middle housing offers a new solution.

Dan Parolek: It starts with the market for walkable urban living. Chris Nelson’s research² [Arthur C. Nelson with the University of Arizona] has shown that 90 percent of housing that will be built between now and 2040 would need to be missing middle to meet the demand. Then, there’s the shifting household demographics. An estimated shift of 30 percent of all housing will be single-person households. Up to 85 percent of suburban households across the country by 2040 will not have children in them. This creates a discrepancy between what we’re providing and what the market wants. We also have a rapidly aging population. The AARP says that 10,000 people a day turn 65.³ So all of these different aspects converge to a point where people are looking for creative housing solutions.

Paddy Steinschneider: It accomplishes a lot of things without effort. First of all, it’s the middle. So it’s not an extreme, and it’s missing, which makes people say, “Well, how can I get what we need?” It responds to so many of the other issues that people want to address in their communities—whether it’s walkability, or the density to support different forms

of transportation and retail businesses in a downtown. We can have excellent form-based codes that talk about great architecture and design, but it’s the feet on the street that’s going to make the downtown work and reweave the former urban fabric. But for me, what we’re doing is a continuation of the great sprawl experiment started when Harry Truman gave his State of the Union address in 1947. His goal was to promote automobile travel so families could live in the country, but work in the city. This coincided with the invention of the nuclear family, a way that people had never really lived before, but was sold through television and media to the point of becoming a cultural expectation. For 60 years⁴ we built for the nuclear family, but it finally ended in 2007 with the recession. You two came in very quickly at that point and said, “Here’s what’s missing. This is why our communities aren’t working. This is why they’re not sustainable. If we can reweave those neighborhoods, if we can recreate those place that address the full population, we’ll have a much happier, more wonderful place to live.”

Based on this legacy, what obstacles do you face trying to restore the missing middle?

Dan Parolek: Unfortunately, there’s a laundry list of obstacles, many of which are still in place and create a need for everybody, regardless of their background or their expertise, to figure out how to overcome them. From 1947 on the federal government laid the framework to enable sprawl. But even today, when we’re assessing zoning codes and looking at a city’s comprehensive plans,



it's amazing how much every city's zoning code is an obstacle at the most basic level. We're rewriting the land development code for Austin, Texas,⁵ and the entire city doesn't have a single zoning district to actually enable missing middle housing.

Steinschneider: That's amazing. One of the big challenges when dealing with the density is the lack of flexibility regarding a unit. People don't think of the implications of different types of units. If a developer starts with 10,000 square feet, he can make ten 1,000 square-foot units, one- or two-bedroom apartments, but if he's told he has to cut it to five units, he still has the same amount of square-footage to sell, so he doesn't build five 1,000 square-foot units, he builds five 2,000 square-foot ones, which don't address the original need.

Karen Parolek: Zoning really took off in the 1940s.⁶ We were starting to write zoning for this country at the same time that we were building suburbs, so it was primarily effective for auto-oriented places. The reality is that we never learned how to write zoning codes for Missing Middle housing. We never actually bothered to try to write zoning for walkable neighborhoods.

This missing middle is a really appealing concept. But often there is a NIMBY problem with the missing middle. How do you approach that?

Dan Parolek: Whenever I present on this topic, I avoid using the terms density and multi-family. If you enter a conversation with

a neighborhood group and start talking about increasing density or adding multi-family, you're not going to win that conversation. But if you show the range of missing middle housing that exists locally or regionally, people tend to be able to personally relate to them. I find this disarms a lot of the opposition and opens people's eyes to accommodating the housing choices that are needed everywhere.

Karen Parolek: It is about reframing the conversation to cover the kind of community its members want and how can we build that kind of community. Oftentimes we'll ask, "Well, do you want to be able to walk to something? Do you want to be able to have a café? Do you want to be able to have a small grocery store?" That means we need enough feet on the street to be able to support that grocery store, and you can't make that work with detached single-family homes. So you need reframe that conversation. "Well, how do we actually make that happen?" In these types of conversations, missing middle housing is a key ingredient to making those visions for what they want work.

Steinschneider: We did an exercise that worked very well in a community where they were not committed to changing zoning codes. They didn't see what was wrong with their old zoning code, but at the same time, they were complaining about the empty stores and raising real estate taxes on the single family homes. They didn't have an industrial base, so they could draw income from elsewhere. We were convinced that the

Image by Opticos Design

best solution was to revitalize their downtown. Then we gave everyone a disposable camera and we set them loose. We said, “The only thing you have to do is tell us whether you’re taking pictures of something you like or something you don’t like.” Every person who participated took pictures of the downtown retail and shops that were probably built around the 1890s. Everyone said that was something they really liked about the town and they wanted to keep that. We were able to point out that in their 1966 zoning ordinance did not permit this sort of retail, and so that’s why it hasn’t happened since 1966, even though it was the one thing everyone wanted in their community.

Since there have been these problems with finance and zoning, there’s also been a loss of knowledge in the development industry. A couple of generations have passed. So if there is a market, how can developers change their practices to meet this market? And what kind of developers are doing that?

Dan Parolek: Over the last couple of years, builders have prioritized the term attainability. We get calls from builders who historically only deliver single-family, detached housing. Based on increased land cost, increased construction cost, increased fees, increased timing, all of these things, they’re starting to find it impossible to deliver the single-family, detached houses, but they’re also struggling to deliver the townhouses that are at a price point that the market can absorb. So if they want to explore different types, we work with them to explore integrating missing middle housing into their portfolios. At the other end of the spectrum, you have the multi-family builders who target the percentage of the market that’s waiting longer to purchase a house, but are not that interested in living in a conventional garden apartment. Those types of builders are looking at how to integrate Missing Middle housing into their projects to latch on to this market segment that’s renting for longer. We’re working on a really interesting project right now with an apartment builder in Papillion, Nebraska, just outside of Omaha, to create an entirely

new walkable neighborhood that’s composed of a range of Missing Middle types. If it’s happening in Omaha, Nebraska, it’s just a good sign that there’s a need for it, and it’s likely going to be popping up in a lot of other places across the country.

Steinschneider: [Developer and new urbanist] John Anderson⁷ has been trying to cultivate small builders to get involved in their own communities in a way similar to a century ago. In 1890, 1900, a lot of communities evolved because local individuals were the ones building in their community. They understood the community and were trusted as reputable people. The more that we return to that, the better the housing can be because there will be more trust between developers and community. I was running for [local] trustee 20 years ago, and the party that opposed me argued I wasn’t qualified to be in politics because I’m a developer. They thought if you’re a developer, you must be sleazy.

Dan Parolek: But if we as new urbanists don’t tackle the problem of integrating Missing Middle housing into the portfolios of larger builders and developers, we’re never going to achieve the volume that’s needed out there. As more and more larger developers reach out to us, it poses a lot of different challenges to do it in a quality way, especially in the context of a walkable neighborhood. New urbanists need to take this to scale to have a true impact.

Karen Parolek: I think we need both scales. The larger developers are able to take on projects in towns and cities that have more land available. We’re not going to be building that in San Francisco, there’s just not enough land left. But there’s a housing affordability crisis in so many places that quickly getting more residences on the ground is important. Here in California, there will be need for three and a half million more homes in the next ten years, according to a recent study by McKinsey Global Institute.⁸ The scale of the problem is gigantic. At a smaller scale, it’s important to rebuild trust in our



communities. To get good projects that are going to stand the test of time it's going to require small developers who are actually from the community and care about it. At this scale, it's also important to remove barriers. Zoning reform can change codes to make them simpler and more accessible. For instance, if I decide I want to put an accessory dwelling unit in the back of my house, I can figure out how to do that without having to hire a licensed architect and expensive help to figure out a complicated zoning code. Once the rules become less complicated, it will be easier for people within the community to do small projects. We need to change the system to make it easier for people to build in their own back yard.

Are any kinds of missing middle being built across America, more often now than in recent decades? Where is the trend toward missing middle?

Steinschneider: I look to the infill in the downtowns and the revitalization of existing buildings converted into residential use. In Chicago, we ended up selling a series of lots to developers who could have built tall

buildings, but instead they decided on four-story missing middle. It's still pretty good density. It's probably 40 units an acre and it fits the scale of pre-existing Chicago neighborhoods.

Dan Parolek: In the missing middle diagram, it's the types on the left side of the spectrum that I've seen. I would classify these as the fee simple where the occupant has ownership of both the unit and the land and the units aren't stacked. Over the last five to seven years, these are the ones that builders have begun to deliver because they are the closest to what they have historically built and there's a lot less risk inherent in a unit that isn't part of a condo, especially if you're selling them. The townhouse is a version of this and in some markets, it is not missing. A second type that's caught on is the cottage court or the pocket neighborhood. It still delivers single-family detached houses, but it also delivers a high-quality sense of community that a lot of people are longing for. But it's going to take a little more time and creativity for the builders to get to the point where they're actually stacking units to achieve what I would call the Holy Grail of missing middle:

Bungalow Courts in Kirkland, WA, courtesy of the Cottage Company

the fourplex that existed in every pre-1940s neighborhood, with two units downstairs and two above. We need to get over the hump and start delivering more of those stacked units within the missing middle spectrum.

Steinschneider: In the early 20th century, even pre-1950s, lots of those houses were very large, but they didn't just serve the nuclear family. The whole extended family lived in those houses, including grandparents and maybe even aunts and uncles. When I look at that left side of the missing middle housing, I think some of those detached single-family homes, the large McMansions⁹ built over the last 60 years, are ripe for that kind of transformation. Recently, we've converted a whole slew of big houses that were originally single-family homes into three-, four-, or five-unit buildings. It's only a matter of time before people return to this previous living arrangement as it's one of the ways that we can make viable use of overly large houses.

What are the best tools for a community to build the missing middle?

Dan Parolek: A pilot project is a really good way to provide an example that other builders can refer to and assess its successes. It's invaluable to have a comp in the market.

Karen Parolek: We've talked to communities about doing a missing middle scan. One of the first things we do is go in and look at the opportunities available to bring missing middle into their communities as well as barriers to entry. With a pilot project or a pretend pilot project, if we were to try to do this, what are the barriers that are going to get in the way, and how do we go about changing those, or working around them? Some of the work on pink zones,¹⁰ especially in Detroit, have begun a dialogue with cities about flexible zoning codes that accommodate test projects.

Steinschneider: Most of the communities I know wait until they feel pressure from their residents about housing. Irvington, New York is not a place that is terribly conducive to social responsibility, but when some families

realized that their children graduating from college couldn't afford anything in the town, they started to talk about how they could generate affordable housing. That urgency can come from other sources too. The work of Joe Minicozzi and Chuck Marohn shows that all these single-family houses are loss leaders and they don't support themselves. Instead of building more single-family houses, these communities can double the tax base on their downtowns by building infill and restoring older buildings to make them useful again as a way to bring down the taxes on the single-family homes.

Karen Parolek: The idea of home ownership and access to home ownership permeates this entire conversation. It's essentially becoming more and more difficult. In a lot of places, you can't even rent a place, much less try and buy a place. But the benefits of home ownership have been proven in raising children, particularly the importance of having a stable home and without having to move constantly. Many equity issues as well as stability for communities start with home ownership, but no one can afford a detached, single-family home. But missing middle housing can change that conversation. What if I can buy a town house instead? What if I can buy a fourplex? I can still buy that with Fannie Mae or Freddie Mac¹² financing, and I can live in one unit, and I can rent out the other three units to make extra income. Or what if we can look at changing some of the regulations, and can we actually make that a four-unit condo building? Then I only have to buy one unit in a four unit building. I don't have to live in a big condo complex, I can live in the neighborhood I want, but I also have access to home ownership and can start to build financial equity a stable home for my children to grow up in. In this regard, missing middle housing is able to contribute a solution to some of the issues facing our country today. ♦

NOTES, RESOURCES, DISCUSSION

18. Missing middle housing

Notes

¹The term Missing Middle was first published in *Better Cities & Towns* in 2012 (now offline). Here's a link to a February 2013 article on Missing Middle in the *Smart Growth Network*: <https://tinyurl.com/yjcdbj45>

²See *Reshaping Metropolitan America*, 2013, Island Press, Arthur C. Nelson

³See article on AARP retirement-age demographics: tinyurl.com/y9yxkbph

⁴For much of American history, extended families lived with three or more generations together. Starting in the 1950s, the two generation “nuclear” family became the norm with mom, dad, and the children. The suburbs were largely built with that in mind. Now families are having fewer children, and most new households do not have children.

⁵Code Next in Austin, TX: <https://www.austintexas.gov/codenext>

⁶Many of our most prosperous regions have been effectively built-out—few undeveloped lots remain—and laws preserve building patterns from the less populous 1950s and 1960s,” according to a recent article in *The American Conservative*. <https://tinyurl.com/y9sfsqpk>

⁷See the Incremental Development Alliance: www.incrementaldevelopment.org/

⁸See study on California housing demand: <https://tinyurl.com/y8kmn2go>

⁹For an interesting take on McMansions, see *McMansion Hell*. mcmansionhell.com/

¹⁰Pink Zones are areas where bureau-

cratic red tape has been reduced. See leanurbanism.org

¹¹See Great Idea: Doing the math for cities and towns, Chapter 11 of this book. Also, this video: www.youtube.com/watch?v=pFC_Q4WQKVk

¹²A building of up to four units can be financed with an ordinary 30-year mortgage that is insured by Fannie Mae or Freddie Mac.

Additional resources

Website: missingmiddlehousing.com

Video: Daniel Parolek, www.youtube.com/watch?v=_eHb8UCVbSE

Key points

Missing middle gives stakeholders a way to talk about low-rise density (Page 140)

It addressed housing choices in the context of beloved neighborhoods, and their density (Pages 140 and 141)

Housing affordability has become a major issue in walkable cities and towns in the US, and missing middle housing offers a new solution (Page 141)

Missing middle gives developers flexibility, which contributes to housing diversity (Page 142)

Most zoning laws tend to be auto-oriented, so it leaves out the missing middle (Page 142).

It helps to reframing the discussion around what people want in a neighborhood (Page 142)

The fourplex is “the Holy Grail” of miss-

ing middle in pre-1940s neighborhoods (Pages 144 and 145)

Missing middle can use existing financing (Page 145)

Communities can double the tax base on their downtowns by building infill and restoring older buildings to make them useful again (Page 145)

Large single-family homes can be converted to missing middle housing (Page 145)

Questions

Why is the missing middle “missing?”

Why do cities and towns need a wide variety of housing types, if these types weren’t provided for generations?

How has the term “missing middle” changed the conversation on housing?

Can missing middle housing improve affordability? If so, how?

How can missing middle housing be integrated into an auto-oriented single-use suburb?

How has the concept of the missing middle affected the housing industry?

How do regulations have to change to allow more missing middle housing?

Do you see any downsides to missing middle housing?

How would you communicate the missing middle housing to skeptics?

Where in your community do you see a need for the missing middle?



19. KATRINA COTTAGES

Marianne Cusato and Bruce Tolar discuss Katrina Cottages, the usefulness of cottages in general, and Tiny Houses.

The Katrina Cottage came out of the Mississippi Renewal Forum,¹ perhaps the largest multidisciplinary design charrette ever, held in Biloxi, Mississippi, after the devastating 2005 Hurricane Katrina. Designed as a better alternative to the “FEMA trailer,”² employed as temporary emergency housing but sometimes placed in communities for more than a decade, this cottage won design awards and influenced housing design nationwide because of its versatility and simple beauty.

Tell the story about how the Katrina Cottage came about after Hurricane Katrina.

Marianne Cusato: We were signed up to go down to Biloxi for the Mississippi Renewal Forum after Hurricane Katrina. The charrette was in October 2005, so it was about six weeks after the storm and it was still a very active disaster area. Andres Duany asked the CNU

to assemble the charrette, one of the largest in history, and everybody was organized into teams for the coastal towns. There were about ten of us on the architecture team. Andres sent an email about a week ahead of the charrette and said, “Your homework assignment is to come up with the alternative to the FEMA (Federal Emergency Management Agency) trailer.” He added, “If we get this right, we will be remembered.”

A bunch of us drew different versions—and the original one that I had designed landed at 300 square feet. It was one of the first images to come out of the charrette, so it was very symbolic. At a time when there was so much destruction and not a lot of hope, Andres wanted something that that would resonate with people—and so this little cottage, was the alternative to the awful FEMA trailer. So we were coming in and creating imagery that

Cottage Square in Ocean Springs, a grouping of Katrina Cottages. Source: Bruce Tolar

addressed the immediate need—but doing so in a way that looked to what had been there before the hurricane. That’s why it resonated so strongly.

Bruce Tolar: I’m one of the ones that grabbed onto the Katrina Cottage. I had spent the month of September cleaning out my house. We had had about three feet of water in it. We purchased a travel trailer in Florida where we were staying and brought it back to set it up on my property. My children were able to come back and go to school starting the first of October. About two weeks later we went to Biloxi for this charrette, which I was more than excited about. It was my first glimpse of hope after seeing all the destruction. When I showed up I was selected to be on the Gautier³ team, and my seat was almost right next to Marianne. And immediately it started sinking in that this is something I can actually do. I mean I can leave here, go back, and start building these cottages in Ocean Springs (see photo at top of article). The next thing I heard about it was one had been built in Jackson Mississippi and had been moved to the home builders show⁴ in Orlando.

Cusato: They had an empty slot at the last minute. We were called in early December and the International Builders Show show is in early January. It was a complete whirlwind. We went from an idea, to “Yes, let’s do this,” to getting funding, building a house, and driving it to Orlando for the show in 30 days. It was really the moment that everything changed. We’d had some decent coverage, but you don’t get much from a drawing. But when you can physically touch something, when you can see it and understand it and look at it, and it’s built—it changes everything. The first impression that people had, across the board, they would step over the threshold and say, “Wow, this is 300 square feet?” The idea of what you can do with space redefined the preconceived notions that we have about housing. And very quickly, the conversation elevated from emergency housing to housing in general.

I think everybody was shocked when they saw the pictures of that Katrina cottage in



Orlando so soon. Like, “Where the heck did this come from?” But what was the Katrina cottage meant to do? What were its various purposes?

Cusato: You could put it free of the footprint of the house, very similar to the format of a trailer. You put it in the backyard and you live in it while you built your house—it becomes a granny flat. That was the first idea. The second way to use it is as the first piece of the house, to grow [it] into a home. And then the third way was to cluster them, and have them be little villages. They could become pocket neighborhoods for aging in place and for people that want smaller homes. It had versatile uses—but was conceived in ways that would grow towards the future.

The Katrina Cottage was designed as more than a stand-alone unit, correct? There’s this idea of permanence, of place making, it wasn’t just coming in with this manufactured unit that people are going to stay in—it was a larger idea, was it not? That partly determined the design. You had a porch in the front, so it can face the street.

Cusato: Absolutely. We didn’t have the term then, but it was a part of what Opticos Design calls the “missing middle” (see chapter 18) So it was thought to be the outbuilding that gives you a diversity of incomes in a neighborhood. They could line streets and become villages. They were all designed to have a street presence and give a variety of scale to the street. That was absolutely embedded in the idea, to fill in these missing pieces in neighborhoods.

*Designer, author, and educator **Marianne Cusato**, based in South Bend, Indiana, and architect and developer **Bruce Tolar** of Ocean Springs, Mississippi.*



In the end, the series of cottages grew. We had ones up to 1,800 hundred square feet.

There were various kinds of these cottages. They're iterations. There were the Mississippi cottages. There were Louisiana Cottages. The Lowe's Cottages⁵. Can you talk about those, and how successful each of those were.

Cusato: It wasn't a design, it was a concept of how to design—and pretty much any small house that faced the street could have been called a Katrina cottage. I'm glad you bring up the Mississippi cottages. There is a point at which they split into two categories. There were those that were modular, in Mississippi, and then in Louisiana, there were permanent buildings, which we had punched up in size. Having both was great—You're not going to get a disaster where one size fits all. The more ways that we can show how great design and innovation can help, the better. But there were also the ones that we were selling through Lowe's. Some of them were the same plan, but

they ended up being built to a different spec, because the Lowe's cottages are site-built kits, and the others were built as part of a FEMA program.

Tolar: And on the Mississippi side, several architectural firms worked on cottages. Jason Spelling, who was advising Governor Barbour's⁶ office about recovery housing, built the original cottage. They wanted it mobile. Even though it was going to be originally built on trailer frames, the cottages could be permanently set in the future—which would make them real property. And out of a week-long charrette came three models— a one bedroom, a two bedroom, and a three bedroom.

Cusato: The initial inspiration for the Katrina cottage were the 1906 earthquake cottages from San Francisco. They were fantastic little huts that you could purchase and take onto your property. You lived in it on your property, or it morphed into a house. If you go online right now and search real estate for San Francisco earthquake cottage 1906, you get

The first Katrina Cottage, at the International Builders Show in January, 2006, in Orlando



different listings that still have the kernel of these buildings—one of them, I was looking last week—was \$1.25 million for the house that grew out of an earthquake cottage. This disaster solution was so durable that people maintained it, because it was a useful building. After the 18 months ended [in Mississippi], some towns said, “Yes, you can keep them,” and others said, “No”—and we were actually the most interested in what happened to the units in the towns that said no. Some of them went out to Buena Vista, Colorado. The developers of South Main⁷ bought some. Some of them went to Seaside, Florida, which is the icon of New Urbanism. It was the beginning of the heart of the entire movement.

The disaster cottages initially funded by FEMA were deemed worth saving for durability, but also for livability. And it goes back to Andres—one of my favorite questions that he asks is, “What is the best way to recycle a 2-by-4? What’s the most sustainable way to do that?” The most sustainable way to recycle a 2-by-4 is to leave it in place. And that’s what we’ve done. We’ve created these buildings that even if the town says, no, you can’t leave it here, they didn’t go to a landfill.

So you’ve had these successes, but there were also an awful lot of other kinds of emergency houses used in response to Hurricane Katrina. So looking back, in all the hopes that you had at that charrette and in

the months afterward, how successful was the Katrina Cottage in fulfilling its original purpose?

Tolar: At the time that we began to build them, the need was huge, and we just couldn’t get them out fast enough and there were other issues that came about in that process. We were seeing people that could not rebuild. They didn’t want a big house again. They couldn’t afford to rebuild—or afford the insurance.

Cusato: From the start we were trying to create an alternative FEMA trailer. We focused on one thing and it could be used in many ways. It really shows the versatility of the outbuilding, the grow house, and the various ways of using it, and combining them to create community. That’s the successful side.

We still have some work to do on the disaster side. The initial goal was to create a toolkit and there was a lot of really good work done that has been lost because many of the people who were involved in Katrina are no longer working at FEMA.

What do you mean by that?

Cusato: After Hurricane Sandy hit in 2012, the following Spring I got a call from FEMA in New Jersey who wanted to know about the Katrina cottage program. The person had been talking to FEMA headquarters and kept

Katrina Cottages now have a permanent home at the Academic Village in Seaside, Florida



going from one person to the next before they could find someone who knew anything about the program. After several weeks of trying, they Googled me and called. And that in itself was terrifying, after we'd done all this work to create a toolkit and to write a report so in the next disaster it could be used.

FEMA has improved in some ways. They don't do the formaldehyde trailers anymore—they're doing, basically, a single wide trailer. But it's a very different direction than what we were hoping for. Ignoring the community aspect of it is bad. And the long-term use of these emergency homes is something that would justify spending a little extra on design and construction. We have a case study that shows the ripple effect of this success.

But there's a lot of work still to be done. Especially, with increased natural disasters and severe weather due to climate change—emergency housing is going to become a major issue again and something we need to get right. And that's where CNU offers a toolkit of real value and the Katrina Cottage is one of the tools.

What is the connection between Katrina Cottages and Tiny Houses? And the latter is an idea that you hear a lot about now, but not so much the term, "Katrina Cottage."

Tolar: If it's never meant to come off a wheel it's not a cottage, it's a trailer. And there's a lot of manufacturers out there make a great travel trailer; it's just not what we set out to do. The permanence of this was always thought to be a positive thing. The mobility was for the emergency response and humane ways to recover. They were never meant to stay on the trailers. The Tiny House movement constantly shows the 18 to 25 foot work trailers with a house on it. It's not a cottage, it's a trailer.

Cusato: It's different and it's the same. There are some parallels with ours that are positive. The tiny home is usually defined as 200 square feet or under, and, typically, most of ours are 200 to 300 square feet and larger—so there is a size difference. The tiny house is almost like a little, affordable yacht. You shimmy up to a loft. There's jewel-box aspect to the tiny house that we don't quite have—and it's the difference between a teacup puppy and a small puppy. When we did the cottage at the International Builders Show in 2006, *The Washington Post* came out with an article on the front page of the real estate section. It had a side-by-side comparison of the Katrina cottage to the "New American home."⁸ It showed the grotesque nature of these over-size houses. The tiny house and the Katrina Cottage triggers the questions "Do you need all of that space? Do you want to live in a home

*Infill Katrina Cottages
in Buena Vista, Colorado.
Source: Courtesy of Kenny
Craft.*

that's so large? Or maybe you want to have a smaller home in a community where you drive less?" That's an important dialogue to have.

Beyond the tiny houses, it seems to be there's a trend toward cottages that are more on the scale of some of the Katrina Cottages—say 500 to 800 square feet. Do you see that as a trend that's taking off? And is the Katrina Cottage partly responsible?

Cusato: I think the Katrina Cottage participated in the conversation. I'm not saying that anyone who designs a 300-square foot building is looking at it, but it lent its voice to that movement. We were stuck with this one-size-fits-all home where bigger is better and that doesn't work for everybody. What we've been able to do, and especially the work Bruce has done, is show that a market exists outside of square footage for the sake of square footage.

Can you talk about any exciting projects today that follow on this idea?

Tolar: I'm currently working in Decatur, Georgia, within the Atlanta area, on developing Cottage Court neighborhoods following their adopted form-based code. They wrote a code several years ago and no one's come in and actually built it. The existing developers continued to buy 1950s housing, tear it down, and build million dollar homes on the same lot. The workforce housing in that city gradually has been forced outside the city limits. By going through this process, we will not only be successful at building workforce housing, but we will also show existing developers this market.

So what's the future role of Katrina cottages or whatever you might call them today?

Cusato: Finding a way to get back to our roots of creating something that works as a disaster solution and then can be used in many other ways, especially to make housing accessible to anyone that wants to have a smaller home. The process of building a home is so difficult. We need to try to find ways of leveling the playing field so it's accessible, and it's not way too ex-



pensive. The tiny houses that you can purchase now, they're 300 or 400 dollars a square foot. That's too much.

Next Step cottages

Tolar: The concept has really been acknowledged and accepted into the nonprofit housing industry nationwide. There's a group called Next Step working with nationwide manufacturers to get them to build more energy efficient homes and meet all the green standards. Every once in a while they try to interject the aesthetics in it. And I think we're making some progress there. Would you rather have a little manufactured house with the wrong-sloped roof and no porch, or would you like something modular that's very similar square footage but has a great roof and a little detail on the porch? Which one would you like?

What's the greatest legacy of the Katrina cottage?

Cusato: Hope for building better in the future. ♦

NOTES, RESOURCES, DISCUSSION

19. Katrina Cottages

Notes

¹The Mississippi Renewal Forum, organized through CNU, involved 120 architects, planners, and other professionals, created plans for 11 Gulf Coast cities and towns in Mississippi devastated by the hurricane.

²The FEMA Trailer is the name commonly given to manufactured emergency housing units provided by the Federal Emergency Management Agency

³Gautier is a town on the Gulf Coast

⁴The annual show of the National Association of Home Builders.

⁵Lowe's home improvement stores sold cottage kits based on Marianne Cusato's designs.

⁶Former Gov. Haley Barbour of Mississippi

⁷South Main is a new urban town extension in Buena Vista, a small town in the Colorado Mountains

⁸The New American Home was a palatial 7,100 square foot McMansion, designed to appeal to get-rich real estate dreams and the desire for excess that was rampant prior to the 2008 housing crash.

Additional resources

Book, *The Just Right Home*, Marianne Cusato

Book, *Get Your House Right*, Marianne Cusato.

Video, auction of Katrina Cottages, www.youtube.com/watch?v=LB7y0QBoHTY

Key points

The Katrina Cottage emulated the architectural culture of the US Gulf Coast (Pages 147 and 148)

Very quickly, the conversation elevated from emergency housing to housing in general (Page 148)

You could place it free of the footprint of the house and live in it while you built your new house. Or, you can use it as the first piece of the house, to grow it into a home. Also, Katrina Cottages can be clustered into pocket neighborhoods (Page 148)

Good design provides a sense of place. They were all designed to have a street presence and a variety of scales (Pages 148 and 149)

It wasn't a design, it was a concept of how to design (Page 149)

Even though they were going to be built on trailer frames, the cottages were designed could be permanently set in the future—which would make them real property. (Page 149)

The cottages initially funded by FEMA were deemed worth saving for durability, but also for livability (Page 149)

Designers focused on how the cottages could be used in many ways. It shows the versatility of the outbuilding, the grow house, and combining them to create community (Page 150)

FEMA has discontinued the program, although "we have a case study that shows the ripple effect of this success," says Cusato (Page 151)

The tiny house and the Katrina Cottage trigger the questions "Do you need all of that space? Do you want to live in a home that's so large?" Cusato (Pages 151 and 152)

Bigger is not always better (Page 152)

The concept has been accepted into the nonprofit housing industry nationwide (Page 152)

Questions

After decades of larger and larger houses, why are many people attracted to smaller houses today?

How has popularity of small cottages like the Katrina Cottage changed how Americans view housing?

What do the San Francisco earthquake cottages (Page 38) have to teach us about post-disaster housing?

How would you convince FEMA to restart this program?

Why is the concept of creating a neighborhood, not just a dwelling, important to housing those displaced by natural disasters?

What are the keys to versatile emergency housing?

How does the Katrina Cottage relate to tiny houses, and what are the differences and relative advantages of these two concepts?



20. PUBLIC HOUSING THAT ENGAGES THE CITY

CityWest, a HOPE VI project in Cincinnati. Courtesy of Torti Gallas + Partners

Daniel Solomon and Murphy Antoine discuss public housing in the form of neighborhoods, HOPE VI and Choice Neighborhoods, and trends in low-income housing design.

In the late 20th Century, much of public housing in the US was a mess—routinely built in the form of “projects” that were symbols of crime-ridden, decaying cities. HUD leadership under then-secretary Henry Cisneros took the principles of new urban neighborhoods and low-income housing design and adopted them for the transformative HOPE VI program,¹ which changed the face of public housing. These principles became standard for later federal programs like Choice Neighborhoods and similar initiatives in cities, yet the implementation of this idea continues to challenge designers and housing officials.

HOPE VI was arguably the most important and transformative public housing program in the last 50 years. New Urbanists spearheaded the design. So can you talk about the design and its importance to the program?

Daniel Solomon: The formulation of HOPE VI, from Henry Cisneros to Andrew Cuomo and Elinor Bacon was very much influenced by New Urbanism. Around the time of CNU’s formation, Cisneros toured public housing across the US and called public housing a national disgrace. He signed *The Charter of the New Urbanism*² and gave a moving speech (at CNU IV in Charleston). He was a passionate

supporter of New Urbanism ideas and made them central to HOPE VI.

Murphy Antoine: There was a recognition of the problem, a political will to do something, and the resources dedicated to it that crystallized as CNU emerged. There was clear intent from all involved, but it can also be seen as a happy accident of history.

Compared to any previous large housing or physical development policy program, CNU's involvement and influence was unprecedented. Beyond numbers of units and volume, it was the quality of the homes, the plan, the environment, and the neighborhood—and how that connects and impacts people's lives.

These public housing projects that moved Cisneros had an extremely degraded and dysfunctional public realm. New Urbanists came in and tried to ennoble the public realm, making the housing units and streets as normal as possible to fit in with the city. What was the central difference that they made?

Solomon: The motivation was not the degrading of the public realm, it was the degrading of the people in the public housing, the danger they faced and the squalor and the stigma—and the entrapment of generations in those settings.

Yes, of course. New Urbanists brought in a different view of design focused on making the housing units a part of the city, not separate from it, designing neighborhoods, not, “projects.” Were these design solutions focused on trying to make the lives of the people better and bring them up?

Solomon: The schism between physical agenda and social agenda is artificial. Each is so integral to the other. I don't think any of us involved in the formulation of it, nor the recipients at HUD of this new culture, made that distinction between living patterns and physical design.

Antoine: It's true collaboration. The folks



that understand the physical patterns and how they can support the change and folks that understand the social agendas each have an equal seat at the table for the solution. That was a change in the approach from the well-intended “housers” who had one focus on housing solutions. HOPE VI looked at it as a holistic problem.

These two things had to come together. How do you figure out which changes made a difference in these projects? Or can you?

Antoine: The social agenda folks made clear that the physical solution would not work as the primary solution. It had to be part of a bigger set of approaches.

Solomon: While the New Urbanist contention about the impact of terrible physical design and environment on the lives of public housing tenants finally did get across to HUD and housing authorities, there was another side to the story. Elinor Bacon, the Deputy Undersecretary in Charge of HOPE VI made it clear to me. I'll share two anecdotes on the eye-opening moments necessary to bridge the social and physical divide. At a Cisneros orchestrated event at Harvard, eight of us spoke to 400 HUD and public housing officials.³ Cisneros required them to be there. It was an utter disaster. We presented the standard litany of New Urbanist ideas and what we saw as the relationship between the social and physical condition. And it was bitterly resisted by this audience who saw it removing the last vestiges of the New Deal safety net, which they considered themselves the protectors of. They saw it as elitist. A year and a half later, HUD and all these housing

***Daniel Solomon**, principal of Mithun/Solomon, and **Murphy Antoine**, principal of Torti Gallas + Partners.*



authority officials had completely turned around. There was always a mystery on how that occurred.

I gave a talk on a couple of our HOPE VI public housing replacement projects at Maryland. Elinor Bacon heard the talk and responded, “You physical determinists have got it only half right.” She said, “The public housing projects that you vilify, that came out of Catherine Bauer⁴ and the Wagner-Steagall Act in 1937 were fine. The projects were fine until 1969, when the Brooke Amendment⁵ chased people on the rise and the middle class out of public housing and made public housing the exclusive domain of the poorest of the poor. And that’s when they fell apart. The Brooke Amendment⁴ did more damage than the physical design ever did in the first place. The policy portion was at least of equal importance to the physical.”

The big message is that our contribution—urban design and architecture—has been both essential and insufficient.

And HOPE VI has been controversial.

Many projects did not replace the units on a one-to-one basis. Many took years to be built. There was displacement. There was also measurable success.

Solomon: In some places there was displacement. This was more true of initial projects than of recent projects. All the ones we’ve been involved with were 100 percent designed so nobody was displaced during construction, with elaborate programs of musical chairs so nobody had to move into other public housing projects because of issues of gang turf.

Antoine: I think that’s right, but HOPE VI was a much bigger program than CNU firms’ work. Looking at total numbers, there’s a lot of displacement overall. There were also a lot of lessons learned. You alluded to this as well, Dan, as the program evolved and we work on public housing replacement today, those valuable lessons are incorporated. But I think that it would be hard to deny that overall, a lot of people got lost in the shuffle. There has been genuine, heartfelt, and sincere work to address that, including Choice Neighbor-

Park Morton, City and Housing Authority revitalization in Washington, DC, in pre-development. Courtesy of Torti Gallas + Partners.



hoods.⁶ But as those lessons are learned, the resources and the political will to make it happen shrunk. So it's just not having the impact at the federal, national level that it once did, which is a shame because they're wonderful projects.

Solomon: Absolutely right. Last year, Choice Neighborhoods' budget was \$109 million, or something like that, for the country?

Antoine: That's right. Three projects for the country, and at HOPE VI's height, it was 20, 25 projects. It is always a trickle to address the problem. The projects are complicated and take a long time.

Choice Neighborhoods, begun under Obama, is a newer version of HOPE VI that requires one-to-one replacement of public housing and looks at sustainability of surrounding neighborhoods. How did this program change the approach and take

the ideas to a different level?

Antoine: Choice Neighborhoods made a big difference. With one-to-one replacement, there's no net loss of dedicated and affordable housing units. In the past, transforming the neighborhood around it required a long wait for market forces.

Solomon: There is a negative aspect to the broad ambitions of Choice Neighborhoods: it sometimes squelches initiatives of housing authorities because they just don't have the reach politically to control land outside of project boundaries. It has the right idea, and if it had money behind it, it would have real leverage to cross the jealously guarded turf of school districts, redevelopment agencies, and housing authorities that are mutually antagonistic for generations.

Antoine: If the money was there, it would attract more people to it. The money's not

Hunters View in San Francisco, designed by Mithun/Solomon, which created no displacement. Photo by Tim Griffith.

there because there's no leadership at the national level.

The criticism looks at projects that weren't built or took decades to be built. But there were measurable successes as well.

Antoine: Absolutely, and continue to be. But it's more atomized now, the places that can make it happen. It's much more reliant on local and state funding and strong housing authorities, strong mayors, and strong leadership—and so other places get left behind. Smaller cities like Niagara Falls get left behind.

Solomon: San Francisco has a program called HOPE SF—the initial phases of it are hugely successful.

Antoine: And DC has the New Communities Initiative and Boston has the real estate values to make it happen. But there are still a lot of places getting left behind, that can't harness those market forces to make a difference.

You're mentioning some city programs that I assume are still using some of these New Urbanist design principles.

Solomon: Starting after that Harvard event and the miraculous transformation that occurred over the next couple of years, the values of the CNU Charter have been completely acculturated into the world of housing bureaucrats, planning departments and some politicians. The de-concentration of poverty, the integration of neighborhoods physically and socially, the respect for local architectural traditions and making local citizens out of public housing tenants—All of those things which were the gospel according to New Urbanism in the '90s are now just conventional thinking. You cannot find a public housing bureaucrat or redevelopment official who doesn't accept those ideas.

Antoine: Dan's absolutely right, it's part of the culture in the bureaucracy and the

staffing, and even in financing. There's a great expertise now nationwide in financing these projects—using low-income housing tax credits in different ways.

Could you talk about innovative projects you've seen in this area and explain why they're innovative and important today?

Antoine: In DC, we're working on a project funded through a city program called the New Communities Initiative. It's a partnership between the city's housing authority and economic development office. This particular effort uses surplus land where a school was torn down 10 years ago. It's three blocks away from the public housing project. Building on that land allows people to start moving off the public housing site. But everybody is within the neighborhood. We're doing a similar one in Richmond, Virginia, that's all tax credits—no HOPE VI. It's using a vacant high school that sat empty for 20 years across the street from the public housing. The housing authority is partnering with the city and public school system to rebuild without displacing people.

So what are the really good projects—potential Charter Winners—on the horizon?

Antoine: One we worked on in Milwaukee, Westlawn, got a Charter Award for the first phase that was done entirely with Wisconsin state tax credits. The success of that part attracted a Choice Neighborhoods grant. It's an amazing story. (Former mayor and CNU President) John Norquist's leadership and HOPE VI projects he facilitated there created a culture where the housing authority acts as its own developer.

Solomon: Seattle has done that for quite a while. Seattle has developers who went to work for the Housing Authority—And now they've done a whole series of projects on their own—beautifully designed projects.

Antoine: There's another one in San Francisco called "Alice Griffith," which is Choice Neighborhoods. There are many overlapping

New Urbanist firms involved in these projects. Some people do grant work or master plan work. And other folks do implementation. It's a small world where lots of hands touch these projects.

We've had HOPE VI and now Choice Neighborhoods. What's the next big idea to transform public or subsidized housing in the years to come?

Solomon: I'll tell you where the next big idea is needed—to house 650,000 homeless in the United States. It's a confluence of mental health funding, an opioid epidemic, and homelessness. It is the next national disgrace.

What can urbanists bring to that discussion?

Antoine: The kinds of housing types and neighborhood-making pieces to address homeless population are different from those that address families. HOPE VI was largely about families and seniors.

Solomon: We designed supportive housing for 50 homeless. It was a huge success, but the building houses only 50 of San Francisco's 6,600 homeless. San Francisco has a trickle program of 300 units a year of supportive housing that addresses the longest homeless first. The addicted and mentally ill get first crack at these programs, and the transformations and the lack of recidivism is astonishing. They're successful because of the whole range of social services going with permanent supportive housing.

Antoine: With homeless, it's a different housing type, they could be single-room occupancy. With one-for-one replacement of Choice Neighborhoods we're seeing density increases creating different typologies in communities and that is where New Urbanists come in.

Solomon: Even though typologically the supportive housing is completely different from the surrounding neighborhoods, design can create a seamless blend.



Antoine: The other challenge is straight-up affordable housing that's not very, very low-income public housing. The mixed-income aspects of Choice Neighborhoods helps, but this is something that lots of communities are struggling with—how to house our cops, our teachers, our nurses, just straight-up workforce housing.

Solomon: That's a phenomenon of every successful city. As cities succeed, they displace the people at the heart of their economy. That's a huge unsolved issue that many are grappling with.

HOPE VI and Choice Neighborhoods were and are urban housing programs that mainly dealt with central cities, but much of the poverty is moving to the suburbs. How do you address that from a design standpoint?

Othello Station public housing in Seattle, designed by Mithun/Solomon. Photo by Tim Griffith.



Solomon: In Atlanta, they have HOPE VI projects in a suburban context, and they replicated the surrounding typology of pseudo-colonial tract houses surrounded by fences, because that is the typology of the Atlanta suburbs. Is that a success or failure?

Antoine: We use a phrase in our office—“critical contextualism.” Just because it’s across the street doesn’t mean you should replicate it. It’s the aspiration that you replicate. And it could be three miles away, but it’s the neighborhood everybody knows and wants to be in.

So what would a successful public housing project in the suburbs look like?

Solomon: I would turn the question back on you and say it’s not a fair question because there’s no universal answers. There are particular answers to particular places. In some suburbs you find an architectural heritage and use it as a hook, and some you can’t. I don’t think we should aspire to cookie-cutter new urban solutions for suburban public

housing because it’s too general a category.

Antoine: It is a subset of suburban retrofit in general.

Solomon: I don’t think suburban retrofit acts in the general sense. It’s an infinite number of highly particular place driven problems. New Urbanism can contribute the ability to look at the particular problem and identify and extract the positive cultural qualities to nurture.

One reason why public housing in the form of a neighborhood is a great idea is its impact beyond public housing. It started as HOPE VI, but now it has become conventional wisdom within an entire industry. Is that the way you look at it?

Antoine: It has captured the imagination of some really smart and talented people who put their mind to making a difference, and you can see it all over the country. ♦

The Zygmunt Arendt House in San Francisco, housing for formerly homeless senior citizens, designed by Mithun/Solomon. Photo by Bruce Damonte.

NOTES, RESOURCES, DISCUSSION

20. Public housing that engages the city

Notes

¹ HOPE VI was a federal housing program from 1992 to 2009. Although a few of the projects in the earliest years were designed by new urbanists, the strongest New Urbanism influence was from 1996-2009

- 254 HOPE VI Revitalization grants were awarded to 132 housing authorities, totaling more than \$6.1 billion.

- The program has developed and renovated over 111,000 units, 60,000 of them affordable to public housing tenants, and the rest mixed income. 91,000 units were demolished and 72,000 families displaced, temporarily or permanently.

² *The Charter of the New Urbanism* was signed in Charleston, South Carolina, on May 4, 1996.

³ There were at least two seminars for HUD officials led by CNU leaders in July and August of 1996, according to a report in the September, 1996, issue of *New Urban News*.

⁴ For more on the Catherine Bauer and how she brought modernist, slab-block public housing to America, see Solomon's 2003 book, *Global City Blues*, tinyurl.com/y7lphhqq

⁵ For more on the Brooke Amendment, see tinyurl.com/y826uk9x

⁶ In 2010, Choice Neighborhoods replaced HOPE VI, with a smaller budget to the peak HOPE VI years but similar design criteria. Choice Neighborhoods took new urban design principles further in that surrounding neighborhoods were included in the design. It also requires 1:1 replacement of public housing units. Choice Neighborhoods projects have been Charter Award recipients.

Additional resources

Book, **From Despair to Hope: Hope VI and the New Promise of Public Housing in America's Cities**, by Henry G. Cisneros (Editor), Lora Engdahl (Editor), Kurt L. Schmoke (Foreword), 2009

Video, Bruch Katz on Hope VI www.youtube.com/watch?v=bxwEe-Gb1sU

Article, Iberville, New Orleans, *cnu.org*, tinyurl.com/y7tb5e4d

Article, Hunters View, San Francisco, *cnu.org*, tinyurl.com/ycgayo3h

Article, The Neighborhood Model of Public Housing, *Public Square*, tinyurl.com/yadk32s7

Key points

In the mid-1990s Cisneros toured public housing nationwide and called it a disgrace. He made new urban principles central to HOPE VI (Pages 154 and 155)

Compared to any previous large housing or physical development policy program, CNU's involvement and influence was unprecedented in HOPE VI (Page 155)

CNU's contribution to public housing—urban design and architecture—has been both essential and insufficient. Policies and management are key (Page 156)

Looking at total numbers for HOPE VI, it would be hard to deny that a lot of people got displaced. There has been sincere work to address that (Page 156)

Choice Neighborhoods made a big difference with one-to-one replacement and addressing the surrounding neighborhoods (Page 157)

The values of the CNU Charter have been completely acculturated into the world of housing bureaucrats (Page 158)

The next big idea in public housing is where to house 650,000 homeless in the United States (Page 159)

As cities succeed, they displace the people at the heart of their economy. That's a huge unsolved issue (Page 159)

In some suburbs you find an architectural heritage to design public housing, and some you can't. There are no cookie-cutter solutions for suburban public housing (Page 160)

Questions

Was HOPE VI ultimately successful? Did it save public housing in America?

Was Choice Neighborhoods an improvement on HOPE VI?

Why do you think that New Urbanism became the model for public housing redesign, and has this model stood the test of time?

To what degree were the squalid conditions of public housing in the 1990s related to the physical design of the projects?

Why was the new urbanist contribution to public housing redesign "essential but insufficient"?

What's the downside to the broad ambitions of Choice Neighborhoods, according to Solomon?

How can new urbanist ideas address the homeless and refugee populations?



Development

*Woodstock Town
Center, designed by TSW,
courtesy of Hedgewood
Properties*



21. INCREMENTAL DEVELOPMENT

A garage converted to a studio apartment by developer Dan Camp in Mississippi

John Anderson and Eric Kronberg discuss incremental development, becoming a small developer, and why great places are built in small increments.

The incremental development movement grew out of the observation that great places are built in small increments. Savannah and Philadelphia may have benefited from big plans at the start, but no master developer was involved. The sprawling of America grew hand-in-hand with the supersizing of the development industry. While the industry has economies of scale, it does a poor job of creating holistic neighborhoods that are growing in popularity today. Small urban developers can succeed by understanding that “the project is the neighborhood”—and even a tiny development can build value and contribute to community. In doing so, small developers can be the craft beer to big developers’ Budweiser.

Can you explain the concept of incremental development, and why it’s important for walkable urban places?

John Anderson: New urbanists are really

good at looking at evidence on the ground and coming up with a pragmatic way to retrofit stuff that doesn’t work. We love the places that have been built in small increments, the Brooklyn Heights, Back Bay, Charleston, Savannah, New Orleans. Any great neighborhood, any great part of the city is usually built in small pieces. And when the new urbanists engaged modern development practice, we bought forward the idea that things need to be done with an economy of scale in order to build a version of urbanism that’s a noticeable improvement on big lumpy projects.

Eric Kronberg: I work in urban redevelopment, fixing places that have been beaten down and need help. In this context, incremental development is a much better way to keep people in place. It helps lift up communities with what’s there, as opposed to wholesale clearing of a site in order to replace it with a big lumpy project. One of my historic

beefs in my younger days of New Urbanism involved infrastructure. If you have to build all the infrastructure from scratch, you have to sell your product at a premium price because it costs so much to build it all. But if you can help provide great urbanism in places where the infrastructure exists¹, you've got a much better shot at an inclusive community.

Anderson: The incremental development model is based on the idea that we're not interested in reforming large-scale developers. We broke our pick on that hole quite a few times. We're looking at a parallel system that operates outside their realm because we're working on smaller sites. This scale provides a competitive advantage to small local operators because they have a chance to demonstrate good faith with the neighborhoods they work within. They have a chance to learn their lessons, then rinse and repeat. Furthermore, they have a chance to get into the development business at a lower barrier to entry. Outside of incremental development, small developers are completely overwhelmed with the realities of economy of need. They only have so much financial and social capital to work with. But incremental development allows them to complete suburban retrofit or even greenfields better because they don't need to absorb the large cost of infrastructure in order to be able to do anything.

Kronberg: In New Orleans, Atlanta, and throughout the southeast of the country, there are bunches of 1900s and 1920s neighborhoods. These are the first original suburbs,² just outside of main downtown, that have good grid and bones. A lot of them are on the wrong side of the tracks, so to speak, but have great proximity, and can be fixed incrementally. This is one of the few ways to bring the benefits of urbanism to the folks that live there and hopefully limit displacement to a reasonable degree.

Where does the principles of New Urbanism fit into your incremental development? Because we don't need more small builders putting up single-family houses in the exurbs, do we?



Kronberg: We need to build everything except the single-family home. From Missing Middle, to small commercial, even guest houses and ADUs (accessory dwelling units), these are the things people need help with in terms of small-scale development. In the traditional neighborhoods that we deal with, all that stuff's been zoned out or made illegal, so it's a matter of working with zoning and entitlements to legalize again traditional neighborhood development.

Anderson: According to Chris Nelson's³ big-picture demographics, 75 percent of the market demand over the next 13 years will be for rental units. I like the idea of helping to train, cultivate, and connect small developers who address this market. Developers who build single-family homes don't need help. The ideal candidate to become involved in incremental development is someone that stares at a shuttered muffler shop or a gravel parking lot in their neighborhood and says, "You know, somebody ought to be doing something about this." They recognize they have to do it themselves in their town and in their place and they need to acquire the skills to fix it.

Do you think of this as being analogous to the craft brewing industry? Thirty years ago, we had a handful of brewers in America. It was hard to find a good beer. Now, we have thousands. Is that a model for better development?

***Eric Kronberg**, principal of Kronberg Wall Architecture, a firm that specializes in rebuilding cities and neighborhoods through design and construction, and **John Anderson**, principal of Anderson-Kim Architecture & Urban Design, small developer, and one of the founders of the Incremental Development Alliance. Photos by Breck Prewitt.*

Anderson: It's a direct analogy. In 10 years, I'd like to have 40 percent market share much like craft brewers. With craft brewing there's an ethos of collaboration. Their common competitors are Miller, Coors, and Budweiser—not each other. They're going after the big guys, and they're doing with a better product. They don't have to build a lumpy brewery out on the edge of town. They can brew in a former muffler shop.

Our competitor is the developer who builds regrettable multi-family apartment pods of 200 units or more with a pool nobody uses, in a place nobody really wants to live. Commodity apartments in a suburban setting.

Kronberg: In our case, we're working with neighborhoods with existing infrastructure close to the downtown, to make them more livable for more people. We're trying to provide more housing close to transit so people can drive less and have a better choice than the apartment building out in suburbia.

Anderson: We have a pretty robust toolkit for folks that are going to work in an existing service lot close to transit. Or for those interested in creating apartments as part of TNDs (traditional neighborhood developments). But for the suburban corridors, that's a reduced toolkit. The stakes are a lot higher there, because you depend on the public to make investments in roads and transit. But once the in-town sites are picked over, then we can turn our attention to the gnarly, disconnected corridors.

How do you get more small developers in a city or a town?

Anderson: “You show up and ask, “Who wants to be a small developer?” A whole bunch of people gather around, and you pull out your Powerpoint. Initially at our workshops we saw people that came from the CNU membership and from Strong Towns.⁴ Now, half the people in any of our workshops are folks that may or may not have heard of New Urbanism or Strong Towns. They identify themselves as somebody who's committed to their city.

They're very amenable to the ideas of urbanism that have connected multiple places, and they're looking for the mechanics and tools to be able to make a difference in their neighborhoods.

Kronberg: There's a lot of people that see developers as evil, soul-sucking beings. I try to redefine the term of developer as someone who is invested in a place. As part of this conversation, I ask, “Do you want to own your own building? Are you a small business owner? Do you want to contribute to place? Well, then you're a developer.” Unfortunately, due to many negative examples, people need help to understand that property can be developed in a positive way for the neighborhood that adds wealth and value for everyone.

Anderson: “Do you want to be an operator of a large beer refinery, or would you like to be a craft brewer?” “Oh, I want to be a craft brewer, that sounds great.”

Besides the fact that the developer is perhaps viewed on the level of a used car salesman in lots of places, a lot of people might be intimidated by the idea of becoming a developer. It sounds like you need a lot of capital, that there's a lot of risk, yet you're saying that a lot of people are interested in doing this. Can you summarize briefly what it takes to be a developer or a small developer.

Anderson: It sounds like you need a lot of capital and that there would be a lot of risk if you don't know what it is. If you don't know what indoor plumbing is and how it works that too might sound like a crazy idea. But it's not that complicated nor that risky. The biggest barrier to entry is the initial step. What is the road map? What is the territory? It's a black box in a lot of people's minds. Now, the idea that developers are held in low-esteem, right now I see that as more of a feature than a bug because if the bar is low, it's pretty easy to underpromise and over-deliver. If people expect a developer coming to their neighborhood to resemble Darth Vader, you just need to be a noticeably less lousy version of Darth Vader.



Why would small developers focus on walkable neighborhoods? What's in it for them to do this kind of development?

Anderson: If you're building a commodity product, then there's really no reason to think about walkable neighborhoods. If you're building a differentiated product, where your risk is being reduced by the pre-existing amenities, then that looks like a really sweet deal.

Kronberg: To me, so much of this comes down to infrastructure and parking. The more connected a place you rebuild or develop in, the less land and resources you need to allocate for parking and the other amenities that you would need in a disconnected suburban location. This increases the chance to turn a profit on your project.

You've got a whole country to operate in. You've got your local community, but if you're a small developer you may have a choice as to go elsewhere. What should small developers be looking for?

Anderson: Go to the place that you care about and figure out the mechanics, as opposed to searching out opportunities from town to town. You should pick a spot and cultivate it, then put the time in and understand what it is because you want to be there, and you care about it.

Kronberg: There are plenty of in-town, walkable neighborhoods that are thriving and fine. Generally speaking, we find those community leaders really don't want change. Those are not the proper fields to cultivate. It's the south-of-the-tracks neighborhoods that need investment and that need help. They also have opportunity in an existing building stock that needs to be repaired. They have vacant lots that need new construction infill.

But don't you also need codes that are going to enable you to do what you want to do and infrastructure that's going to support you in bringing a neighborhood back?

Anderson: Before rewriting the code, you need to place projects within the pre-existing

The Hutchinson Green project in Chico, California, includes a four-plex on the left and 7-unit building on the right.

code. You figure out how to hack the code to make some decent projects happen. Then you have some decent projects under your belt. Now you can talk to them about making adjustments to the code. But make the projects happen first. Don't wait for the code to presage or somehow design the town for you. Make the projects happen, build a reputation, and then get the codes modified in whatever minor ways you need, rather than wait until the code is rewritten in ways you don't fully understand yet, particularly with regards to the consequences for development and growth.

Kronberg: A lot of the adaptive reuse work we do has taught us that the notion of an existing nonconformity is a precious thing to treasure and cultivate. And so we help clients identify those buildings that have vested rights to do the right thing in the right place that the code defines as illegal. Understanding how to work around and beyond the codes is part of what we do.

In an ideal situation, do you go into a place that has potential, but not everybody has seen that potential? The expectations are fairly low. Maybe the zoning has not been reformed. Maybe there hasn't been a lot of infrastructure installed, but you start there and within five years all the good stuff has happened and they've changed the codes and they've helped with the infrastructure, but you've already built some stuff and helped to make that come about.

Anderson: The key is not to think about the individual building as the project. The project is the neighborhood⁵ and the increment of the building is how you're going to make the neighborhood more stable, more economically productive, and how you're going to put money into your overall portfolio.

Kronberg: Infrastructure can be a relatively low bar, like a neighborhood with proper, smaller blocks, decent sidewalks, and some on-street parking. We're not necessarily talking about a highly-developed transit system.

Anderson: Good enough for now, room to

improve it later. The idea is that the increment you need to support is pretty modest. If you can get the rent, then you have a shot at building the building. If you can cultivate a tenant that adds to the neighborhood, somebody that's serving beer or coffee or runs a daycare, then the buildings that you built two or three years ago in the same neighborhood are more stable and more valuable. But we like to look for places with reasonable infrastructure. They're what we call NRC zones. NRC stands for nobody really cares. It's a safe place to go through your learning curve on your first small project to demonstrate that you're somebody who does what they say they're going to do, which is a rare quality these days. If you build a second building, then you demonstrate that it wasn't a fluke.

Kronberg: If you do that twice, holy crap.

Anderson: That's an amazing thing. You've done all of the great projects on Elm Street. All two of them.

We have a history of small-scale development in the United States. Why did development get so big? What role does finance play? What role do codes play?

Anderson: The development model we as a society have built is more like strip mining than gardening. You take the money from the place where you've built what's supposedly urban fabric and you send that money somewhere else, as opposed to recirculating that money within the community. We need to be able to consider the increment of opportunity for the entrepreneur. What is the increment of opportunity for somebody who's going to own a modest little fourplex and live in one unit rent-free?

Kronberg: The role of finance is huge and drives so many decisions. But it's also just part of the statutory ecosystem of regulations that drives so much big development.

Anderson: Consider what happens between four units and five units. A four-unit building is a residential mortgage, similar to that for a

single family house. It's completely different from five units. Five units is a commercial loan with a commercial appraisal. It's more complicated. There's an idea that a building goes through some kind of construction puberty between four and five units, and so the financing changes.

Kronberg: A lot of zoning categories will treat a fourplex as true multi-family. From a rezoning standpoint, you might as well try to deal with 40-plex. But a lot of places may allow for duplexes and a guest house. We encourage projects like this as a simpler first or second project, since it's effectively a triplex. We're trying to help people identify these kinds of lean seams of a redevelopment opportunity to get them started so eventually they can get to the fourplex or understand how to get to the 12-plex. We present them with the threshold⁶ conditions. Don't cross that line or it gets really hard. But here's what you can do effectively below these caps.

Anderson: This is the whole idea behind code hacking and finance hacking. But it's imperative to recognize when you've crossed into an area of higher complexity with more strings attached. If you can stay in a place where you work quietly under the radar, and do good work, and people appreciate it, that's your safe zone as a small developer. If you can find a couple more people to want to work in the same town, you can flood the zone and each of you take a small risk in what might be a sketchy part of town and transform it with a couple of small moderate-risk projects.

You two are working with an organization called the Incremental Development Alliance. What is that and what does it do?

Anderson: It does three things: training, cultivating, and connecting. We're training small developers. We're cultivating the ecosystem they can operate in, to help remove a few basic obstacles. And then we're connecting the people that are doing this sort of work so that they can help each other and pay it forward because the last thing one small developer wants another to do is repeat any of the

learning curve. They will work really hard to make sure that they help you with the lessons they just learned. Some of those lessons are intensely local, so if the second or third small developer in a town shows up, the first is going to be all over them to make sure they don't screw up the same things he screwed up. Right now our activity is focused on regular, one-day workshops which feed into the two-day boot camp. The one-day workshops are a general introduction for anyone who wants to become a small developer. The two-day workshops are for folks that have committed and they have a project they're working, whether on paper or in reality. They bring their project and we have a better instructor-to-student ratio so we can spend time with them on the particulars, applying the lessons to their projects. Then through our group Facebook page, they can help each other, share resources, and ask questions. We're now two and a half years into this and there are several projects coming out of the ground. These early adopters are able to offer a lot of help to their colleagues.

Can you point to communities where a lot of this kind of development is taking place?

Anderson: There's a cluster in northwest Arkansas, in Bentonville, Springdale, and Fayetteville. There's a cluster in and around Dallas, pivoting off of the work of Monte Anderson and some other folks. There's a cluster in New England that's not so much a single community, but easily located within an hour's drive of each other. And there's a cluster forming pretty quickly in Florida, mostly because a lot of new urbanists there decided they want to own their own buildings.

Kronberg: There's also Atlanta, Chattanooga, and Savannah. These southern cities faced similar development cycles with great neighborhoods in disrepair and suburban hollowing out. A lot of these places have great neighborhood stock that needs a lot of TLC and we can pull from the same playbook. And there's a demand for these sorts of neighborhoods, with folks who can't afford the fancy parts of town returning to cities in droves.

You mentioned fourplexes, duplexes, and accessory dwelling units. Are there any other kinds of building types that offer really big opportunities in your view?

Anderson: Small workspaces within buildings. Mixed-use is typically not a freshman project. Eric's got a great blog post about the importance of live-work not as a policy idea but as a residential occupancy type. It's a little geeky, but there are lots of opportunities for single-story commercial space in small pieces, even as small as food carts and kiosks. How small an increment too small? Is a food cart too small? No, it works fine. A couple of food carts aggregated together actually do better than one on its own.

How does the historic rehabilitation fit into all of this?

Kronberg: It's usually not a freshman project either, but it's really important. To me, fixing up existing building stock is crucial for the maintenance of character and place. Historic tax credits are also a very powerful tool, but they're a varsity tool. You have to work up to that. So find a cool old building that pencils out without the tax credits and go do that. If along the way, you find a way to get a grant or get some tax credits that doesn't throw the project off, well, that's okay. But don't set yourself up for a complicated project that requires all of this extra brain damage, especially as your first historic project. You need to do a couple of these, without the tax credits, to graduate to that level. But then again, we talk about existing non-conformities and bending zoning codes and there's a lot of opportunity in old buildings to leverage.

Any final thoughts on this?

Anderson: If you are creating the amenity of walkable urbanism, why not own buildings that become more valuable as the amenity of walkable urbanism develops? If you're doing fee-for-service work as a planner, architect, or builder, and you're getting paid as long as there are buildings in progress, you are vulnerable for the next recession. You should own

some damn buildings. You should be committed to a specific place. You should cultivate your town and neighborhood, and own pieces of it to create a passive income.

Kronberg: I'm passionate about fixing up existing neighborhoods. I see so much opportunity and need overlapping there, but not nearly enough bodies or people showing up with know-how. If we share know-how and put the tools in people's hands, I think the possibilities are limitless. But up next is the challenge of the suburbs. I appreciate all the work of suburban retrofit, but the near-term solution is to revitalize existing neighborhoods and places that have been blighted and put them back into productive service. I think the suburban retrofit stuff's going to take a while.

Anderson: The suburbs requires new tools, and we think we can cultivate those at a scale where they're flexible and applicable outside of existing neighborhoods. ♦

NOTES, RESOURCES, DISCUSSION

21. Incremental development

Notes

¹ These are usually areas with connected street networks

² These are often “streetcar suburbs,” built along streetcar lines.

³ Arthur C. (Chris) Nelson, a professor of urban planning at the University of Arizona.

⁴ Strong Towns, strongtowns.org, is an organization with some overlap and similar goals to CNU

⁵ See Chapter 1 on the Neighborhood and the five-minute walk for details on the scale of the neighborhood.

⁶ A threshold is the point where the rules change. Five units is a threshold where financing gets far more difficult.

⁷ Federal Rehabilitation Tax Credits, which provide a 20 percent income tax credit for developers of income-producing properties.

Additional resources

Incremental Development Alliance: www.incrementaldevelopment.org/

Video, Strong Towns, Incremental Development. www.youtube.com/watch?v=TcmzF8zn5FE

Video, Matthew Petty lecture on incremental development, www.youtube.com/watch?v=oYGO_4L2cDw

Video, John Anderson, www.youtube.com/watch?v=oPu8biSTUPc

Webpage, Small developers and builders page, CNU website, www.cnu.org/

our-projects/small-scale-developers-builders

Key points

If you have to build all the infrastructure from scratch, you have to sell your product at a premium price because it costs so much to build it all (Page 164)

Small-scale developments give small developers a chance to learn (Page 164)

From Missing Middle, to small commercial, even guest houses and accessory dwelling units, these are the things people need help with in terms of small-scale development (Page 164)

75 percent of the market demand over the next 13 years will be for rental units (Page 164)

While some think that developers are evil, they can be redefined as someone who is invested in a place (Page 165)

If people expect a developer coming to their neighborhood to resemble Darth Vader, you just need to be a noticeably less lousy version of Darth Vader (Page 165)

The more connected a place you rebuild or develop in, the less land and resources you need to allocate for parking and the other amenities that you would need in a disconnected suburban location (Page 166)

Invest in the place you care about (Page 166)

Figure out how to hack the code to make some decent projects happen. Then you can talk to officials about making adjust-

ments to the code (Pages 166 and 167)

Think of the bigger neighborhood picture when developing incrementally (Page 167)

Invest in an “NRC” (nobody really cares) zone (Page 167)

Conventional large-scale development models are more like strip mining than gardening (Page 167)

How finance law and hinders incremental development (Pages 167 and 168)

Learn to develop without tax credits before using tax credits (Page 169)

Planners and architects should be developers (Page 169)

Questions

Why does the scale of development matter?

Why did the US go from being a nation of small developers to one of big developers, and is that starting to reverse? If so, why?

How does incremental development help or hurt community efforts to fight gentrification?

How can incremental development be translated into a suburban setting?

If you want to become a small developer, where would you start and why?

Will the growth in small developers change the perception of developers overall?



22. MIXED-USE URBAN CENTERS

Robert Gibbs and Seth Harry discuss the benefits and challenges of mixed-use urban centers and why the market has shifted to building retail in walkable urban locations.

New town center in Storrs, Connecticut, built on former strip mall parking. Source: LeylandAlliance

In the 20th Century, retail shifted from main streets and downtowns to strip shopping centers, enclosed malls, and big box stores. Building and revitalizing walkable urban centers is one of the tasks of the New Urbanism, including figuring out how traditional commercial centers function economically and incorporating modern retail into walkable places. The demands of retailers—including the need for parking—shape new urbanist designs for mixed-use urban and town centers, even as retail itself moves from brick-and-mortar stores to online sales.

Can you talk about how retail has impacted New Urbanism and vice versa?

Bob Gibbs: Retail has helped many New Urban communities sell houses at a higher rate and has helped to create more complete neighborhoods. New Urbanism has awakened developers to new ways of planning and

developing retail that they wouldn't have considered before.

Seth Harry: Retail has been important to New Urbanism from the very beginning because it resonated with that idea of compact, walkable, mixed-use. But having said that, it's a lot easier to talk about retail than to implement it in a practical matter. With respect to the fundamentals of viable retail, New Urbanism has experienced a steep learning curve, but also has generated some of the alternative strategies for pursuing it, especially when compared to generic, formulaic models that suburbia had generated. New Urbanism has started to inform more mainstream development, both retail and the concept of placemaking in general. We're starting to see a greater integration of retail and placemaking, at the level of conventional suburban infill projects and the types of projects that are traditionally associated with New Urbanism.

In term of locating and creating a successful town center, has the necessity for retail changed the strategies of New Urbanists?

Harry: Context drives so much in retail. You can't take an idea and arbitrarily deploy it without regard to that larger competitive context. And so some of the early examples of retail in New Urbanist projects suffered as a consequence. With the help of people like Bob and myself, new owners have become more sophisticated in terms of understanding how to integrate retail in a more practical way. At the same time, they recognize that the primary objective is still to create walkable places. As a result, we're seeing much more mature and sophisticated attempts at placemaking that coincides with a more pragmatic approach toward retail.

Gibbs: A lot of New Urbanist planners and developers have had to alter their desires and accept compromises, even from the beginning with the Kentlands (in Gaithersburg, MD). The first retail component for the Kentlands was effectively a community shopping center with large parking lots and large big-box retail. Some of the more enlightened developers like those at the Kentlands planned in such a way that it could be retrofitted¹ eventually into a walkable block system. That's happening right now with the Kentlands on their former Kmart site. There have been a number of new urban plans that were a little too idealistic and often the retail wasn't implemented at all, or when it was implemented, it was an abysmal failure, with very low rents, or high vacancies, or high turnovers.

So there must be a happy medium in there somewhere.

Harry: On the other hand, I think a lot of well-intentioned new urban planners were talked out of doing better plans than they could have by brokers or inexperienced developers. They were primarily geared to build residential and were afraid to push back.

I was looking at some of the studies done



by Christopher Leinberger on commercial development. I don't know if you've seen these. But of all the commercial development types, retail seems to be the most resistant to adapting to walkable places. In most metro areas, new multi-family and office development has shifted to walkable urban much more quickly than retail. Do you have any insights as to why that is?

Harry: I wouldn't necessarily agree with that. There's walkable urban retail all over this country. It's mostly in urban places. I lived for 10 years on Capitol Hill, which provides a great example of small scale, walkable, urban retail. My office is located in downtown Frederick, Maryland, a thriving main street community. The challenge occurs when you try to create urban fabric at a very small incremented scale, relative to the larger market context. The market context needs to be taken into consideration. Bob's example of the Kentlands is great, because that project belonged to a suburban market context when it was built, but it was planned and designed in anticipation of future densification and urbanization as the market context changes. You need to anticipate and plan for that long-term adaptation to the changing market context.

Gibbs: I agree with Chris [Leinberger], though, for the post-war new urban communities. They have, generally, been built in a conventional manner, but their retail hasn't been nearly as resilient as their residential. I think that's more of a function of the shopping center typology. It's a fact that when people go

*Architect and urban designer **Seth Harry**, expert on sustainable commerce, planner and landscape architect **Robert Gibbs**, author of Principles of Urban Retail Planning and Development.*

grocery shopping and buy fifty or a hundred pounds of groceries, they can't carry them a block-and-a-half to get to their car. When people go to a convenience store to buy a quick gallon of milk, the parking has to be convenient. They aren't going to walk a half-a-block or more to get in and out of a corner store. It's easy for the lifestyle/town center concept to build walkable formats. But those centers have a critical mass of 150,000 or 200,000 square feet of retail with heavy, strong anchors and people are going to spend an hour or longer shopping there.

Do you have to get to a point where people change their habits then, that they're not going to go necessarily shopping once a week, but they might start going a few times a week to the corner store or to walk around the corner to the pharmacy?

Gibbs: It's pretty hard to reeducate 300 million people how to do their grocery shopping.

Harry: Again, you have to put it in a context. Walkable retail works in urban places. It's the entire physical and competitive context that determines a lot of those factors. There are grocery stores in the greater DC metro area, for instance, that based on consumer market and land valuations can have underground parking. When you're trying to do an urban feel and functionality in a more auto-centric, suburban context, you have to take those factors into consideration when planning and designing the center. But you also need to think about the consumer behavior of potential shoppers. You have to be realistic about the market context.

Gibbs: The hybrids, where people build partially walkable and partially conventional, don't work because it ends up being neither. But when you have to build in a more conventional format, it's best to plan the conventional center to be retrofitted into a walkable main street center as the property values and densities increase. Build the streets and the parking lots to set up the block system. Some of the New Urbanists have done that very well. They're turning over after 20 or

25 years.

But you really have to have a long-term vision beyond that seven-year time frame when a lot of developers are going to be out of their project.

Gibbs: I always ask my developers why they're building the New Urban retail center. I give them three choices. They're building it as a pure profit center, in which case, it tends to be more conventional. Or they're building it as a legacy and they're not really concerned whether it breaks even or makes a profit, they just want to build a beautiful place. Or they're building it as an amenity—to sell houses quickly. If they're building it as a legacy or an amenity, it can be a lot more flexible because it doesn't require market rate rents for the retail. A lot of developers are building really beautiful twenty to forty thousand square-foot centers as an amenity. They're two- and three-story buildings right on the street with parking in the rear and they're really quite beautiful. The developer subsidizes the rents, because they're using them as an amenity to sell houses or build a legacy. Developers that want to build a profit center to get a market rate of return generally have to be more conventional except in the case of the larger town center format. Then there's a lot of flexibility. You can actually build the small blocks and put the parking in the back or underground or in structures.

What about if you're going for multiple markets. For instance you want to build multi-family in that town center as well as office buildings that are going to appeal to people who want an urban walkable place for their business. Does it then justify spending more on the retail?

Harry: The consumer market is what it is, and you have a couple of different ways of accessing that. In a lower-density suburban market context, it's accessed through the surface street network and by automobiles. If you're building a mixed-use- relatively dense, compact mixed-use center- then you have access to different consumers at different



times of day that allows you to potentially build to either a higher quality or a larger center than you might otherwise be able to support based on a purely residential consumer market. All of those factors have to be taken into consideration. But it is possible that a town center can function as both an amenity and as a profit center.

In a conventional shopping center, there's nothing but retail, whereas in an urban town center or a main street or a downtown, there's office, residential, and retail. You have lots of different things that you can sell.

Harry: Right, but the proximate consumer market even in those conditions is relatively incidental. You have to really look at the overall trade area and where your customer base is coming from. You start out with certain general formulas and then you modify them based on the specifics of a particular site or market.

Gibbs: It makes sense to build the mixed-use

communities, especially three- to five-story buildings on top of the retail because you're already building the roof. You're already using the land. You're already building the footing. You're already building some parking. For not much more, you can build additional stories and then have the advantage of apartments or offices on top of retail, which makes the residential much more valuable. There's something called the Whole Foods effect, where if your apartments are within a five-minute walk of a Whole Foods, they rent for 12 to 18 percent more. It's just silly to build a Whole Foods and not develop residential nearby or to build nice restaurants and Starbucks without creating office or residential space nearby. That's just leaving a lot of money on the table. But each of those land uses has to stand alone and give a return. You can't build retail and think that the residential will subsidize the cost of the retail. It's really foolish, right now in this economy, to build only retail without building adjacent land uses.

*Woodstock Town Center
in Woodstock, Georgia,
designed by TSW. Courtesy of
Hedgewood Properties*

What are the major trends in town and urban centers today? If you could talk about how things have changed. You guys have been designing town and urban centers for 20 or 30 years. What's different today?

Harry: In the DC metro area, the post-recovery market has reached a fundamentally different threshold. Transit has been a huge factor in that, both in terms of land valuation and the type of development that has been occurring in proximity to those transit stations. In general the market is much more open and receptive to the benefits of building mixed-use. And then also consumer behavior and expectations have also changed. A lot of younger buyers actually appreciate and value the difference in the physical and social environment around mixed-use and they'll put a premium on that in terms of where they choose to live and work.

Gibbs: In the last 25 years, there's been a very wide and broad acceptance of the new urban planning principles and the Charter, including by most real estate developers. The theories of the New Urbanism have been broadly accepted as a way to get the highest return on your investment while still creating sound urbanism.

Can you talk a little bit about the suburbs versus the city and how the approach to walkable, urban, mixed-use in retail might differ between these two?

Harry: In the larger metro areas, the close-in suburbs are rapidly redeveloping based on New Urbanist principles. This has created a more urban approach in general to development. You have to place yourself along that continuum and plan for the current market realities, while at the same time also anticipate how those might evolve over time. Urbanism by definition tends to be more flexible and accommodating toward incremental change over time, whereas suburbia is not. And so by anticipating market changes and designing based on more urban principles, you actually do a better job of protecting the long-term

value of that core asset. This in turn helps shape the nature of the future developments around it.

Gibbs: There's been a role reversal in that cities now are becoming more valuable and producing higher yields than the suburbs. Soon, the strong retailers will be leaving the malls and going into downtowns and going into cities. In the case of Detroit, the city's downtown now has higher rents than the suburb of Birmingham, which formerly had the highest rents in the region. Downtown Detroit has a lower office vacancy than the suburbs. I think we're in the very early stages of this trend. The suburbs that are performing well are those that emulate cities and create mixed-use, walkable places. In my opinion the suburbs have peaked and I think they're in the beginning of a long and deep decline.

Harry: Or, as the case may be, they are redeveloping with more urban forms. This trend has had a huge impact on evaluations. So if you can't afford to live in DC the next best thing is to live in one of these new mixed-use town centers that have developed around the periphery, ideally adjacent to a metro stop.

Gibbs: Yeah, live in Rockville. Nobody can afford to live in the cities because too many people are living there.

That's like the Yogi Berra quote, nobody goes there anymore because it's too crowded. The other advantage that you have in the city is you don't have to create the urbanism from scratch. It's already there. You're building upon a legacy that's 100 or 150 years old. In the suburbs, you often have to do a lot more placemaking. Why should retailers create urbanism in the suburbs as opposed to just moving into the city?

Harry: Don't forget, there's still a lot of people living in the suburbs. Now, instead of an either/or proposition, we're starting to see the suburbs become much more urban, both in character and in function. When you marry that to regional transit systems, you begin to



make a polycentric urbanized area based on legitimate urban centers (see chapter 5 on The Polycentric Region). It's a transition in terms of how we think about urban centers as discreet, individual physical entities and how regions function. In many respects, the Charter is finally being realized at a scale where we start to get meaningful returns on the long-term investment that we've made collectively in this urban enterprise. We have reached a tipping point, both in terms of consumer preference and institutional preference for mixed-use. We're starting to knit the region back together again as a network of urban places.

Beyond the urbanism trend, the retail industry is changing fast. We're seeing the impact of online sales. Lots of physical stores are closing. How is this affecting the main streets, the downtowns, the walkable urban centers?

Gibbs: For better, the mall formula has now collapsed. The retailers that can support themselves are leaving the malls and going into downtowns. Internet sales often help the small independent retailers compete with the national chains. One independent shoe store with a good website can have the same sales as a strong national shoe store because they can have an international market for not a lot of money.

Harry: Internet sales have really gone a long way towards leveling the playing field between the smaller independent and mainstream retailers because it gives them access to the same consumer market that were formerly exclusive to the malls.

Gibbs: Still, the internet only accounts for 9 percent of gross retail sales, most of it in books and electronics. On the Internet, you're a buy-

Market Square, mixed-use development in a downtown neighborhood in Pittsburgh

er, you're not a shopper. You don't have any social experience. Downtowns offer a shopping experience instead of a buying experience. They offer social activities and experiential events that you can't get on the Internet and that you don't get in a mall.

How are the changing demographics affecting mixed-use centers?

Harry: This comes back again to the idea of real shopping and social interaction. Millennials are very socially driven in terms of shared experiences and in that regard, the demographics have been helping to drive consumer preferences for urban places as well as transportation choice.

Can both of you give me some examples of innovative town centers or urban centers that you've seen recently?

Harry: In places like Columbia², Maryland, which were the last of the previous generation of planned communities, the area around the mall is currently being redeveloped as a walkable downtown. That's something that would have been almost unimaginable a generation ago.

Gibbs: The latest new town center is Avalon in Alpharetta, Georgia. It combines a Whole Foods and cinema with residential, office hotel space. There's another new development outside of Cincinnati, Ohio, called Liberty Center. It also has a healthy dose of residential, office and hotels. The new thing is not to build one land use but to build four.

Harry: The area that has a lot of personal interest for me is the smaller, neighborhood scale redevelopment that often happens along major suburban arterials. Again, a lot of these older, immediate post-war suburban commercial nodes are now redeveloping as mixed-use neighborhoods. That's an exciting new development because now we're starting to flesh out the full spectrum of community types, not just in the regional level, but we're starting to see it work its way down to the community center scale and the neighbor-

hood center scale.

Gibbs: That's the real opportunity, to go to that smaller scale where you can perform an easy infill on a 5 or 10-acre parcel.

Harry: A metro area of any size is going to have dozens and dozens of these smaller scale opportunities, and I think that's where you're going to start to see a lot of real innovation, where you have local entrepreneurs going in and making these opportunities happen.

Gibbs: We're entering a new era now because there's a whole toolkit for developers that has been tried and tested: the mixed uses, the critical buildings, the smaller parking lots, the street. We now know this sort of urbanism works. Developers are learning how to create this and there's lots of sites that are becoming available.

As we're seeing so many department stores closing and malls struggling, it must be making municipalities nervous because that's a source of major tax revenue. Should they be worried or should they be viewing this as an opportunity?

Harry: It's an opportunity to keep a lot more money in the community because it's the consumer demand that's driving the shopping, not the other way around. We're witnessing a deconstruction or a reversing of the process of consolidation. Take beer, for example. We went from a nation of nothing but craft breweries to two or three national brewers and now we're back to where we started. We're seeing the same thing happen at the retail end of the spectrum. In particular it's an opportunity because it refocuses on local and regional economies and investment.

Gibbs: But a lot of the communities that are losing their malls and shopping centers should be concerned because even though it's technically possible to redevelop these into dense, walkable places, it's political suicide. There are a lot of communities with dying malls that approach us and they tell us that they only want five or eight houses per acre

with large parking densities. They're still thinking in that suburban way of redeveloping new centers. It's frustrating because a lot of these old centers are going to be developed as another hybrid version of a suburban mall. Technically, there's the opportunity. And it's there in the market demand. But politically, most communities that we work in aren't ready to embrace the densities and the design standards that are necessary to accomplish this.

Do you have any advice for a developer or a municipality that wants to build a village or town center as part of a new neighborhood? What are the most important things for them to do?

Gibbs: It's essential that they know what the market realities are and what is possible, particularly the feasible residential and shopping center typologies. A lot of cities plan things that are not based in any kind of reality. They base everything on parking structures and underground parking. They're based on rents that are completely unachievable.

Harry: On the other side of that, they need to be flexible and think long term. They need to have a strategy for getting from where they are today to where they ultimately want to be. If you plan thoughtfully and strategically, you can do that incrementally over time, be successful, and make money. ♦

NOTES, RESOURCES, DISCUSSION

22. Mixed-use urban centers

Notes

¹The parking lots in Kentlands were designed on the scale of urban blocks, with streets and street trees at the edges, and often sidewalks and crosswalks. These blocks were designed to eventually be developed as a walkable urban place. Some urban redevelopment has taken place in this commercial center.

²Columbia is a well-known new town from the 1960s. The town center was a mall, but now it is being retrofitted.

Additional resources

Book, *Principles of Urban Retail Planning and Development*, Robert Gibbs.

Video, Robert Gibbs, *Economics of Urbanism*, www.youtube.com/watch?v=3D9QGZRb2wY

Journal article, “The Economics of New Urbanism and Smart Growth: Comparing Price Gains and Costs between new urbanist and Conventional Developments,” Yan Song and Mark Stevens, 2012, tinyurl.com/ya7ypxhv

Key points

How new urban retail changed the market (Page 171)

It’s a lot easier to talk about urban retail than to implement it (Page 171)

Context drives so much in retail. You can’t take an idea and arbitrarily deploy it without regard to that larger competitive context (Page 172)

The importance of adaptability in design over time.(Page 172)

Hybrids don’t work—design conventional retail to be retrofitted (Page 173)

Relatively dense, compact mixed-use centers give you access to different consumers at different times of day that allows you to potentially build to either a higher quality or a larger center than you might otherwise be able to support based on a purely residential consumer market (Pages 173 and 174)

There’s something called the Whole Foods effect, where if your apartments are within a five-minute walk of a Whole Foods, they rent for 12 to 18 percent more. It’s just silly to build a Whole Foods and not develop residential nearby or to build nice restaurants and Starbucks without creating office or residential space nearby. That’s just leaving money on the table (Page 174)

Urbanism by definition tends to be more flexible than suburbia. And so by anticipating market changes and designing based on more urban principles, you protect the long-term value of that core asset (Page 175)

Retailers are leaving malls and entering cities (Page 176)

There’s still a lot of people living in the suburbs. Instead of an either/or proposition, we’re starting to see the suburbs become much more urban, both in character and in function (Pages 175 and 176)

Internet sales have really gone a long way towards leveling the playing field between the smaller independent and mainstream retailers because they give them access to the same consumer market that were formerly exclusive to the malls (Page 176)

On the Internet, you’re a buyer, not a shopper. You don’t have any social experience. Downtowns offer a shopping experience instead of a buying experience (Pages 176 and 177)

A lot of the communities are losing their malls and shopping centers, but redevelopment as dense, walkable places, is political suicide. Officials are still thinking of redeveloping new centers in a suburban way (Pages 177 and 178)

Questions

How has retail transformed in recent years in terms of its physical form and its relation to the community?

When retail goes into walkable places, how is it changed? Do the stores look different? Do they operate differently?

How do our shopping habits change when will live in mixed-use neighborhoods?

How does the function of a single-use shopping center compare to that of a mixed-use downtown or main street?

What are the strongest arguments for or against communities allowing mixed-use urban centers to be built as opposed to conventional big box stores and malls?

What will retail look like in the future? What is the future of brick-and-mortar stores?

Do brick-and-mortar stores, especially on main streets and downtowns, have function besides selling goods? Are they important for community and society?



23. TRADITIONAL NEIGHBORHOOD DEVELOPMENT

A street in South Main, Buena Vista, Colorado.

Vince Graham and Katie Selby Urban discuss neighborhood-scale urbanism and the development of holistic, walkable, traditional neighborhoods from scratch.

Traditional neighborhoods developments (TNDs), inspired by historic neighborhoods, jump-started the New Urbanism in the 1980s¹ and 1990s as alternatives to conventional master-planned communities. They were and are laboratories of ideas, creating pockets of community and urban space by overcoming legal and institutional barriers to holistic development.

TNDs revived long-neglected building types² like accessory dwelling units, mixed-use and liner buildings, and brought back the front porch and rear garage. Walkable streets designed for slower-moving traffic were fought for and built. Many of the TND developers are now focusing on smaller infill projects, but new complete neighborhoods

continue to be built in this market where financing allows and where sites call for large-scale transformation.

You both have worked on neighborhood-scale, new urban projects—could you describe your projects, briefly?

Urban: South Main is just shy of 40 acres in downtown Buena Vista, Colorado. It was the former site of the town dump, but I wouldn't consider it brownfield, because it was mainly surface trash. This piece of property connects the river to the historic downtown, which in the past the town turned its back on, hence the trash dump. When we found the property, there was an offer in to make it a timeshare resort, so my brother and I, as kayakers,

wanted to do what we could to make the river a public park. We hired Dover, Kohl & Partners and did a TND there, with a white-water park, trails, and climbing boulders. We subdivided off and donated the river corridor to the town, to make it permanently public. Then with funding from lottery funds in the State of Colorado, called Great Outdoors Colorado, along with a lot of fundraising and different partnerships we made the whitewater park happen.

Graham: Our biggest project, I’On, located in Mt. Pleasant, South Carolina, is a 244-acre neighborhood. It’s surrounded by developments from the ‘50s through the ‘90s. DPZ and Dover-Kohl worked on the original master plan and acted as advisors. We started over 20 years ago. The original vision called for 1,240 homes, 90,000 square feet of commercial space, and a dozen civic sites. Of those 1,240, I think 440 were slated to be multi-family. Through the political campaign to get the zoning, we had to compromise at 762 homes plus 30,000 square feet of commercial and about 10 civic sites. The first home was completed in 1998, a three-bedroom, two-bath 1,800 square foot house that sold for \$160,000. Today that house would sell for about \$800,000. The market demand for the neighborhood has pushed prices up so the median is now over \$1,000,000. There’s two churches and clubhouses. There was a Montessori school, but they were oversubscribed so they had to find a bigger location outside the neighborhood. There’s about 30 parks in the neighborhood and 5 different types of thoroughfares.

But essentially it’s an entire neighborhood that’s now completely built out, correct?

Graham: No, there’s about five acres of undeveloped property. There’s still a few residential lots that lack houses, and several of the civic lots lack structures. It’ll evolve over time, and things will be torn down and rebuilt. In 2010 or 2011, the town of Mount Pleasant passed an ordinance to enable accessory dwelling units (ADUs). Before that, there were some black market units,



but since then, that’s opened the door for the construction of around 80 to 100 accessory dwellings.

Did you both have an overriding goal with these projects? And how well have you succeeded?

Urban: Initially, our goal was to build a whitewater park. I come from an environmentalist background and never imagined myself as a developer. When I joined my brother on the project I said, “Look, if you want me to be a part of this, we’re going to do some research to figure out the most sustainable way to do it.” So we went to the Rocky Mountain Institute³ for some consultation and they encouraged a new urban direction. We also happened upon Prospect New Town,⁴ in Longmont and came across the book *Suburban Nation*⁵ in the library—almost as if by chance—within 24 hours of each other. All that set us on a path. We were driving through Prospect, and we asked ourselves, “Why are we driving? We should walk.” It was an epiphany that development could be more than what we grew up with, the sprawl of Tuscon, Arizona. Afterward, we connected with Dover, Kohl, but we certainly didn’t start out with that intention of building a TND.

We’re still early in this project. We found the property in 2003 and we were entitled in 2006. In a town of just over 2,000 people, the workforce is really small, so the pace

Vince Graham, president of the I’On Group, the developer of numerous TNDs and urban infill projects in the Lowcountry of South Carolina, including the Charter-Award-winning I’On in Mount Pleasant, and **Katie Selby Urban**, cofounder of Charter-Award-winning South Main, a town extension in Buena Vista, Colorado.



can sometimes be a little slow. We put in 40 percent of our infrastructure up front, even though phase one only included 15 percent of the lots. We're still finishing that phase off. We have the park, the trails, and we're starting to build up the commercial center.

Graham: I developed I'On that in conjunction with my brother Geoff and father Tom. The stated purpose was to make our corner of the world a more beautiful place, through the creation of an enduring aesthetic with economic and social value.

But we also aim to make money. We wanted to demonstrate a stellar model of traditional neighborhood design. We take inspiration from all these beautiful places in low country South Carolina—Charleston, Savannah, and Beaufort—and try to combine lessons learned there with modern advances to build a new neighborhood. We're building all the infrastructure, not only the water, sewer, and storm sewer lines, but streets, sidewalks and

parks. We also try to guide the development of private grounds, as to complement the public. You adapt your situation where the whole is greater than the sum of the parts.

I recently saw a graphic, created by Joe Minicozzi, that showed land values in the Charleston area. I'On shows up as a peak, not as high as a downtown, but about as high as the ocean-front areas. Does that validate your approach?

Graham: I think what Joe's study⁶ shows, what we already all know, is there's a huge demand for this kind of neighborhood and a limited supply. That's what you see in these places that are well done. In my view, there's an increasing and accelerating demand for quality. And so if you can deliver that, then you create a lot of value.

How has that worked in South Main, in terms of creating value?

*A canal street in I'On.
Source: Architecture Here and There.*

Urban: The prices are definitely higher than most of the surrounding areas. Sometimes, when we talk about it, it seems like keeping things affordable is tough when you're building really beautiful places people love. It's also a part of our goal as new urbanists. By making it more valuable, hopefully you can convince other developers to follow and build projects that are more enduring, loveable, and beautiful.

The New Urbanism began mostly with traditional neighborhood developments like Seaside and Kentlands, as well as I'On. They're on the neighborhood scale, and a lot of these earlier traditional neighborhood developments were non-city locations. Now there's much more infill and transit-oriented development. Have you seen a change in the New Urbanism, and if so, why?

Graham: It's more challenging, in my experience [to build in non-city locations]—and I haven't tried to do something like I'On in a long time. But with I'On or Newpoint,⁷ development already surrounded it. I'On is like a large infill site. Now, it's harder to get the development financing for projects the size of I'On. But an advantage of the infill-type development is it doesn't require the creation of amenities. Katie and her brother have the river right there, but they've done so much to create the amenities, like we did at Newpoint or even at I'On. And so, that's certainly the advantage for infill, access to preexisting amenities. The popularity of cities has grown, and so there's more and more of these things [infill projects] within them. You don't have to create the whole neighborhood from scratch; you can build on to a neighborhood. But, once these neighborhoods are redeveloped, is it going to come full circle again and return to creating new neighborhoods from scratch? At some point, there won't be as many infill opportunities, but the way to deliver more affordability is to catch up with the demand. Create more supply and you'll keep the price in check.

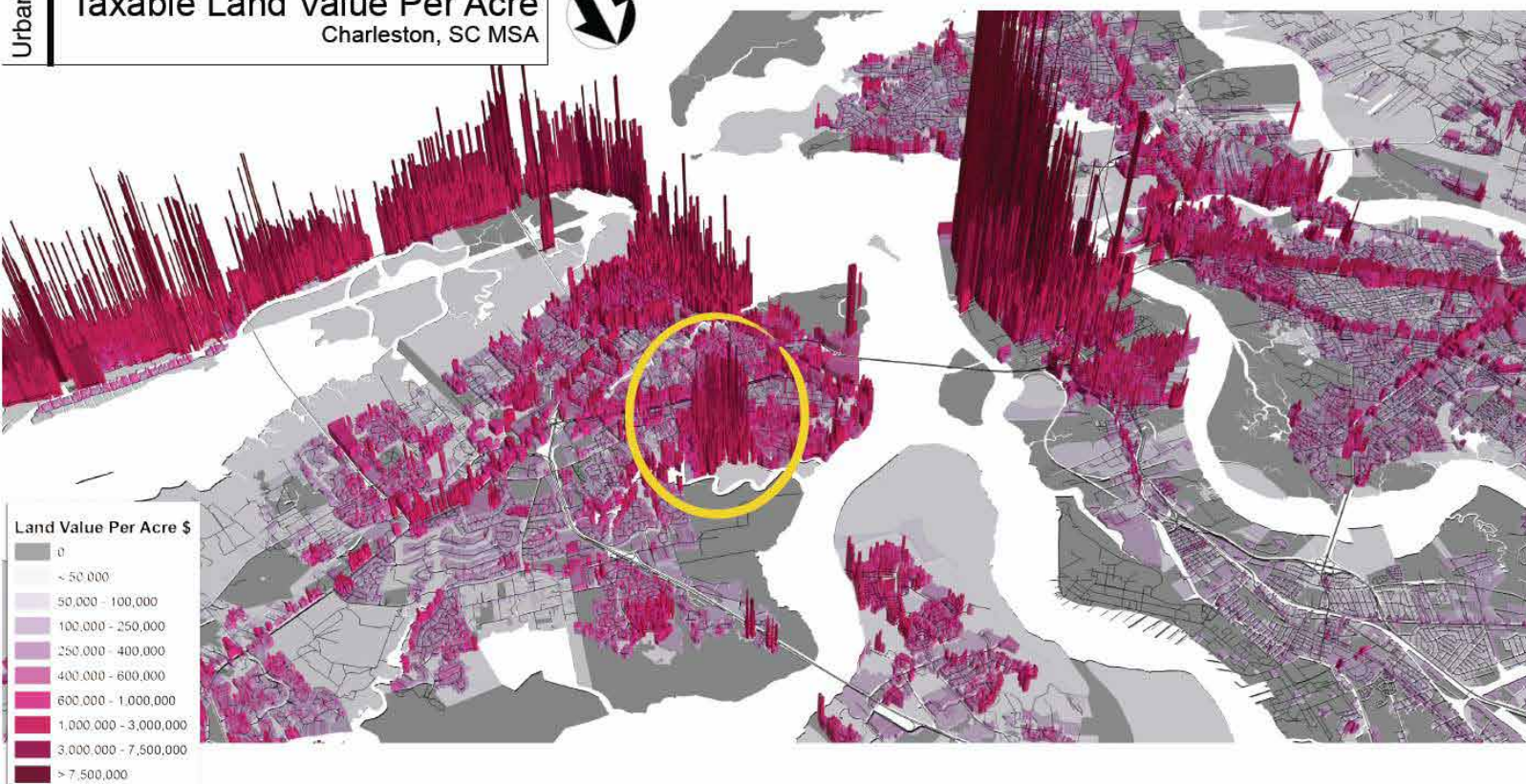
Urban: Zoning codes are getting more

progressive. For example, when we started South Main, the city went ahead and allowed accessory dwelling s by right on all of our residential lots. That added a good amount of density to the 315 units that we had already. What's nice about those ADUs is that they're typically the place for affordable rental. Since then, the town has allowed ADUs for the rest its neighborhoods, a very progressive move. They're finally starting to see, "Oh. That's what they were talking about."

And for you, Katie, you've been working in the small town environment, and a lot of times people talk about urbanism, or New Urbanism, as being something that's happening in places like Portland and other major metro areas, but you're doing it in this town far off the beaten track. Do the same principles apply? Are you meeting a similar market?

Urban: When everyone says, "Oh, you're building a town," I always have a little bit of a reaction, because to me it's a neighborhood within an existing town. It certainly adds a lot of houses to the town, for sure. To add 315 dwelling units, plus 156 ADUs, to a town of 2,500 people, that's a huge increase over time. I think that's why it's been a slower process to build it out. Buena Vista luckily doesn't have a highway going through the historic downtown, so it's intact with late 1800s, beautiful historic buildings. The downtown Main Street is alive and thriving. Then on South Main, it's really interesting to listen to the conversations of tourists visiting there because they don't realize the buildings are new. Our goal has been to blend South Main into the historic downtown and create one intact entity that's connected, perhaps a little bit separated, but surrounded by development to the south, town park land to the north, the river to the east, and the historic downtown to the west.

When Vince was talking, it reminded me a little bit about the history, and so I want to ask this question. Once upon a time, government would just lay out a street grid, and the land would be broken into



appropriate size lots, and the neighborhood would be built. Do you think that that form of development can ever happen again?

Graham: I think that there's versions of that already. I've worked on projects where the local government will commission somebody like Victor Dover or Andres Duany or to come up with a master plan on a piece of property, and then they put out a request for proposals from developers to develop that property in line with the master plan. I think of the plan for Washington, DC. The federal government commissioned L'Enfant to design it, and then it built some of the streets. Governments are really the largest developers because they build all these roads.

And those roads set the stage for a certain kind of development.

Graham: That's right, they develop these roads and then they zone it for sprawl, and what do you get? I think people need to recognize that there's a huge industry associated with building sprawl which creates a lot of political patronage. Folks like Chuck Marohn and Joe Minicozzi have done great work to raise the level of awareness that this is not

economically sustainable. So maybe it'll start to change.

Katie, is it changing?

Urban: I'm hesitant to believe it is. We're starting to hear buzzwords like walkable and suburban retrofit, but the other day I was talking to a town planner and she said the town plans to be walkable and install side-walks, but their zoning won't allow commercial in the area. It's my understanding that you have to have somewhere to walk to for it to be walkable. They're using the word walkable, but there's not necessarily that comprehension of what it actually means. But it's a move in the right direction at least.

Another thing that you all have to contend with is a loss in knowledge and building practice. Is that changing?

Urban: For us it's changing because we've trained our subs. Steve Mouzon came out at one point and did training classes with our builders. Ultimately in order to keep things cost-effective not only for ourselves but for our buyers, we became the contractor and started South Main Building Company, the only builder in the neighborhood.

I'On (yellow circle) stands out as a peak in land value. The peak is not as high as downtown Charleston (upper right), but it is close to the oceanfront areas (upper left). Map by Urban3, a firm led by Joe Minicozzi.

Graham: It's hard to deliver the quality or the detail that we once had, but the resistance to traditional form and local vernacular has been greatly reduced. Since Bob Turner and I started Newpoint, 25 years ago, there's a lot more architects and designers who are capable of working in a vernacular style. Elsewhere, there's a similar movement toward localism: local food, local crafts, etc. Maybe this trend in architecture is a part of a greater appreciation for authenticity and the local. Certainly, we've seen that in Charleston. These skilled young architects have an ability to be playful with the traditional forms. To use again the food comparison, the culinary artists in Charleston are making shrimp and grits, but it's not how your grandmother used to make them. Again, they take the lessons learned from the local food and put their own modern spin on it. I see the same thing in architecture.

I'm sure you both have heard the criticism sometimes that entire new neighborhoods with Main Streets are like stage sets. Are you still hearing such criticism, and does this matter?

Graham: I've always felt that the criticism is somewhat unfair, because the places are brand new, so they're going to be shiny and polished. But at one time way back in the day, the main streets of Savannah were brand new, and with time comes a patina.

Urban: I think the truth is our culture is starved for walkable places that have an incredible sense of place, and so some people misrecognize it as Disneyesque.

You both have mentioned that you're seeing more smaller-scale development and that it's harder to finance big projects on a neighborhood scale. Do you see an ongoing role for this neighborhood-scale urbanism, and what is that role?

Urban: There is a demand and a need. It's happening. It's being built. The biggest challenge is overcoming not only the political will, but the will of the developers. I

remember in the beginning I was determined to keep South Main affordable and Victor Dover looks at me with a smile and tells me I can help affordability via mechanisms in the New Urbanism, like accessory dwelling units, but ultimately, my job as a new urbanist is to show the other developers that this is worth doing from a financial perspective.

Both of you went through the housing crash, in a way. You both were developers during that time. How did you survive it?

Urban: It was really, really tough. We're a small company and it was always very low-budget. Because the crash happened right after we filed our first phase, my brother and I decided that instead of filing phase two and taking out another development loan, we would move forward with creating income-producing properties. We had just bonded with an irrevocable line of credit, had a legal obligation to install all that infrastructure within a year, and our property taxes had just skyrocketed once we subdivided all the lots into individual lots in phase one. At that point, my husband Dustin and I literally looked in an Allison Ramsay plan book, pointed to one, and decided to build that house and break ground in a month. We had to show that this neighborhood was still going to happen, and we'd only had one or two houses break ground at that point.

Graham: Y'all are brave. Good for you. We weathered the storm by going in the direction of smaller houses, still maintaining the quality, just smaller. The houses that got hit the worst were the larger ones. They got crushed. We didn't want to build anything that had to compete with the standard 2,000 or 2,500 square-foot house that was in foreclosure. We chose to try to offer something different on the market, and we worked slow and positioned ourselves for a more hopeful future. We took our licks and lost some money in other projects we were getting involved in. But we're still on that track of smaller projects.

I don't know if you two are going to be

involved with any more TNDs in the future, but I wanted to get your thought on what the next development in TND going to look like. Is it going to be any different? What do you think?

Graham: From our standpoint, the neighborhoods that we're involved in now are a little more organic looking,⁸ like the medieval neighborhoods in Europe, or the older parts of Boston or Charleston, where there's less of a rigid grid, but still a network of streets. A lot of the newer plans that I've seen are pretty rigid with similar lot types, all 50-foot lots or whatever. We're trying to be much less formulaic and more... picturesque is perhaps the right word. More like Camillo Sitte and less like John Nolen.

The project we're working on now, Earl's Court, is able to achieve 30 units per acre of single family detached. And with Catfiddle Street downtown, it's closer to 40 or 50. Now, that has a bunch of ADUs mixed into it but I think there's some advantages to a less formal urbanism, to be able to achieve those kind of densities in a human scale, with buildings that aren't monolithic. It's easy to get densities way up there when you have these big, monolithic buildings, but that's not our bag.

Urban: From my perspective, people are very into the story of things right now. At least in my world—I live in Oregon, and sometimes it feels like the show Portlandia. You go into a coffee shop here, and it's all about where the bean are roasted, and who grew them.

I was thinking about this the other day, in relation to South Main and what made it such a unique story, and what came to mind is Serenbe in Georgia, with its organic farm, and its farm to table movement, and things like that. I think that if I ever were to do another neighborhood development it would be on a much smaller scale. Even though South Main is small by a lot of standards it's a lot to take on and I still have a lot of work to do there. I would focus more on smaller infill projects.

Any final thoughts?

Graham: We've gone through a pioneering period. The pioneers get the arrows, but I think whether it be Katie and her brother, or Robert and Daryl Davis,⁹ or whoever, they blaze a trail for the future. Katie mentioned the change toward more perceptive zoning. I think there's great hope for the future. At least for the next 10 to 25 years I see the future as infill, both in the inner city as well as the suburbs. Last week, I was invited to this conference in San Francisco, where we talked about the future of the interstate system. They discussed all these innovative programs to tax automobile transit and improve automobile infrastructure. But in my view, what they're basically talking about is how to build a more efficient mousetrap, not a new mousetrap. What we really have to do is take the Interstates out of the cities. It would free up so much potential value and create so much potential new development if we were able to remove them from urban land. ♦



Earl's Court, an infill development by Vince Graham.

NOTES, RESOURCES, DISCUSSION

23. Traditional neighborhood development

Notes

¹ The first TND was Seaside, Florida, which began development in 1981.

² Some of these came to be called The Missing Middle. See Chapter 18.

³ The Rocky Mountain Institute in Snowmass, Colorado, is dedicated to sustainability.

⁴ Prospect New Town is a TND designed by DPZ CoDesign (formerly Duany Plater-Zyberk) in Longmont, Colorado.

⁵ *Suburban Nation*, by Duany, Plater-Zyberk, and Speck, 1999, is the best-selling and most influential planning book on the New Urbanism.

⁶ See aerial map on page 180. The place that is circled is I'On.

⁷ Newpoint is a TND in Beaufort, South Carolina, that Vince Graham developed with Robert Turner.

⁸ See Mixson in Charleston. mixson.com

⁹ Robert and Daryl Davis are the developers of Seaside, Florida

Additional resources

Video, tour of I'On. vimeo.com/256496860

Video, tour of Seaside, FL. tinyurl.com/ybqdpwze

Key points

There's a huge demand for this kind of neighborhood and a limited supply. There's an increasing and accelerating demand for quality. And so if you can

deliver that, then you create a lot of value (Page 182)

TND prices are higher than most of the surrounding areas. Keeping things affordable is tough when you're building really beautiful places people love (Page 183)

It's more challenging to build in non-city locations. It's harder now to get the development financing for projects the size of I'On (Page 183)

An advantage of the infill development is it doesn't require provision of all amenities. You don't have to create the whole neighborhood from scratch; you can build on to a neighborhood (Page 183)

When we started South Main, the city allowed accessory dwellings by right. That added a good amount of density to the 315 units that we had already. What's nice about those ADUs is that they're typically the place for affordable rental. Since then, the town has allowed ADUs for the rest its neighborhoods (Page 183)

There's a huge industry associated with building sprawl, which creates a lot of political patronage. This is not economically sustainable (Page 184)

More architects are capable of working in a vernacular style today than 20 years ago. Elsewhere, there's a similar movement toward localism: local food, local crafts—Maybe this trend in architecture is a part of a greater appreciation for authenticity (Page 185)

I've always felt that the "stage set" criticism of TNDs is unfair, because the places are brand new, so they're going to be shiny and polished. But at one time way back in the day, the main streets of Savannah were brand new (Page 185)

Our culture is starved for walkable places that have an incredible sense of place, and so some people misrecognize that quality as Disneyesque (Page 185)

In the beginning I was determined to keep South Main affordable and via mechanisms in the New Urbanism, like ADUs. But ultimately, my job is to show other developers that this is worth doing from a financial perspective (Page 185)

Questions

What benefits do TNDs offer developers and their residents?

How relevant are TNDs to the post-recession world?

How did TNDs contribute to the revival of long-neglected building types? How do you build a level of affordability into TNDs, if the product is in high demand?

If TNDs are holding their value better than surrounding developments, what does this mean for auto-oriented suburbs?

What is the future for TND? Where are they most likely to be built?

What does it mean that many TND developers, like Graham, have chosen to switch to infill development?



24. TRANSIT-ORIENTED DEVELOPMENT

Christopher Coes and Shelley Poticha discuss current trends in development that is connected in meaningful ways with high-quality public transit service.

Del Mar Station in Pasadena, California, places a plaza, commercial uses and residences at that transit stop. Designed by Moule & Polyzoides

Transit-oriented development (TOD) was conceived in 1982 in an effort to link transportation and land use by architect Peter Calthorpe, a CNU founder, and was picked up by like-minded urban designers. A handful of projects linked transit to mixed-use walkable centers in the following two decades—and then TOD took off as a major real estate trend in the mid-2000s. TOD ranges from infill in the city to redevelopment of parking lots and grayfield sites in suburban areas. It is typically linked to rail transit—yet bus rapid transit may also provide a framework for complete communities.

What is your definition of transit-oriented development?

Poticha: Transit-oriented development is the notion that we build our neighborhoods and our cities in ways that allow people to connect to other places in the region with transit in an easy and affordable manner. Transit-

oriented development connects people and their neighborhoods to the places where they work, study, and live their lives so they don't have to use a car for every trip.

Coes: In this era, transit-oriented development is the epitome of providing Americans the choice to live in communities and in regions that allow them to have the greatest flexibility of lifestyle, which transit allows for. It's not anti-car, but the choice between car, transit, walking, or biking.

Shelley, you were one of the authors of a book called *A New Transit Town*, which in 2003 was one of the first books to introduce people to the concept of transit-oriented development. How has transit-oriented development changed in the last decade and a half?

Poticha: Back when we wrote that book, the notion of transit-oriented development was

a very foreign concept. There was a lot of talk about how we could attract developers to value transit as an asset. But there were very few examples where either the public or the private sector had purposefully chosen sites and organized their projects to take advantage of transit stations. Now communities all over the country are incentivizing development near transit that promotes that walkable space—essentially New Urbanism near transit. There are developers whose entire business plan is based on urban neighborhoods connected to transit. It's a hot commodity. In many communities, people now seek out the places that give them the greatest options for travel.

So the world has changed, essentially. Is that how you view it, Christopher?

Coes: I think the world is definitely evolving. There was a time when local governments, state governments and even the federal government viewed transit-oriented development as a niche market that no one did. Fast forward 20 years and these different level of government have recognized that transit-oriented development is part of a larger transformation of the country that's tied to demographics. Most recently, a lot of state and local governments have incentivized this development on a bi-partisan basis. But a lot of questions are still unanswered. Because the shift from the demand for a drivable suburban development to more walkable compact transit-oriented development has happened so rapidly, it's had a massive impact in terms of locations of low-income families and certain types of businesses. It's had a spillover effect for second-tier cities like Louisville and Knoxville, who are seeing an increasing demand for walkable transit and have to put their own dollars toward building transit systems. There's also the conversation of how to bring back the suburban communities that were traditionally car-oriented. And because of this national conversation around transit-oriented development, it's easier for a lot of rural communities to participate as well. Passenger rail has become increasingly part of that conversation as well as bus rapid



transit. TOD is no longer focused exclusively on heavy rail.

A few days ago it was reported that transit ridership declined in most cities in 2016. Do you think this is a long-term trend, And what does it mean for transit-oriented development?

Coes: Last year at our national leadership summit in Boston, one of the largest investors in the transit-oriented development communities, Don Woods with Federal Realty, mentioned that while the market trends towards transit-oriented development, he invests a small portion of his company's dollars in actual TOD. Everyone gasped and asked, "Why? You are the biggest player in this market. Why are you not putting all your dollars into this particular market?" In a lot of the legacy cities where we see TOD, whether it's New York, DC, San Francisco, he noticed a problem. While the demand for transit-oriented development is there, the maintenance of the system becomes a major issue. He doesn't want to invest a billion dollars near a new station, if the line servicing that station is going to have delays, safety issues.

If it becomes unreliable, residents will no longer use transit as a primary form of travel. In communities like in DC with an aging metro system that is currently under repair, we see a drop in transit ridership because of the scale of repairs and its effect on service. That presents a challenge and the next great obstacle to transit-oriented development is to ensure that our transit is reliable and safe.

Poticha: This is why when we wrote *The New*

Shelley Poticha, who leads the Natural Resources Defense Council's Urban Solutions team, and **Christopher Coes**, Vice President of Real Estate Policy and External Affairs at Smart Growth America.

Transit Town we said that the fundamentals of development still have to stand true, whether or not there is a transit stop. There has to be more than one reason for someone to rent, buy, or locate their business in a particular neighborhood.

There's also Uber, is there not? Technology has also changed things a lot.

Coes: Even Uber has been redefined as transit. Right now many transit benefits can be applied to Uber because its app now allows you to carpool with other customers heading to a similar location. From that standpoint, we have to rethink what transit actually looks like.

Poticha: Cities are evolving, and people are getting different choice options. I think the shared mobility space is definitely an area that transit officials need to pay attention to. I work with the Dallas Area Regional Transit and they're partnering up with ridesharing services to do last-mile connections after you exit the transit system.

At the same time that we wonder what's happening with ridership, transit-oriented development seems to be booming—is there a concern for TOD in all of this?

Poticha: One of the biggest challenges that transit-oriented development has to respond to head-on is the pace at which change happens in neighborhoods that are very attractive. What does that mean for people already living in those neighborhoods who feel the cost of living rising or the businesses already located there? In some ways this incredibly rapid change is really fantastic, but it's also creating a ripple effect, so as those neighborhoods mature and become more attractive, the cost of living there goes up and forces people who do not have the financial wherewithal to move to places that aren't as well connected to those transportation options. There's an equity issue here because historically those lower income riders are the backbone of the ridership system of transit. Now, because they cannot afford to live near

transit, they're moving out to neighborhoods where you have to buy a car and pay a much higher proportion of your income to get around. If we don't address this, we're going to lack long-term support in some communities.

Coes: Not only is this change happening quickly, but the response from the public sector has been very slow. Since a neighborhood could be transformed in a matter of years, the public sector needs to develop the capacity to quickly identify populations that will be negatively impacted and provide them with the necessary resources to allow them to enjoy the new services and the improved quality of life that's coming to that neighborhood. Oftentimes we talk about equitable TOD because there's so much demand for TOD and people will pay higher prices to be in those communities. Naturally the conversation leads to how to protect the low-income residents and small mom-and-pop stores. At the same time transit oriented development is real estate in the built environment. I really want to hone in on how to ensure that local residents in zones of transit-oriented development have access to builders, developers, finances. We need to create a process which provides the local community with a pipeline of developers and builders instead of someone from the outside building a new project, i.e. pushing residents out. I think the next wave of discussion in TOD is to crowdsource this momentum so that the benefit is shared not only equitably but also allows for those local communities to generate wealth for themselves.

I see two aspects of this equity issue—one is to enable people who want to stay in a neighborhood to be able to afford to do so, and the other is to provide these transit services to the locations where some of the people who formerly lived in city neighborhoods are moving to—particularly the suburbs. How does transit-oriented development address these two challenges?

Poticha: I think that Chris' point about community empowerment and control is really



important and helps address the first challenge. Community empowerment builds the capacity of the community to be part of the change and involve small-scale developers. From a public sector point of view, we really need a much bigger toolkit for managing neighborhood change than we have now. One of the early themes of the New Urbanism was that the prices of living in a new urbanist community were often high because they were so attractive and the market drove prices up, as a symptom of imbalance between supply and demand. That's part of what we're talking about here. But we need transit authorities to understand that they have to embrace additional modes and provide more service than they have historically instead of focusing solely on the big, expensive, fixed-rail transit systems.

Coes: The same populations that have relied on transit and are being pushed out to suburban communities are also communities that are represented, either at the federal or state level, by members of Congress or policy makers who have been, traditionally, opposed to

transit investments. For the communities that need these services, there is going to be a major lag. This is going to become one of the biggest issues: more and more communities trapped in this cycle of poverty and disconnect. Increasingly, however, we are seeing the business community engaged in these conversations. Some smaller cities, once again like Knoxville and Louisville, can leverage the demand for transit-oriented development into an economic development opportunity. They advertise themselves as more affordable versions of the larger cities. The question is: Can it create a sufficient market for individuals who cannot be in the high-cost cities with transit oriented development to still enjoy that type of lifestyle in a more affordable community?

As sprawling cities expand their transit—and I'm talking about places like Phoenix or San Jose or Houston or Columbus, Ohio—they often don't have the urbanism to go with it. I read recently about a transit village in San Jose that is underperforming expectations. And I looked at the plan, and

Paseo Verde, a transit-oriented development with affordable housing in Philadelphia, PA. Developed by Jonathan Rose Companies

there's density but no urbanism. How big of a problem is this?

Coes: In San Jose, for example, because the demand for TOD is high and many communities don't recognize it as a potential successful model for economic development, other communities that do not have a staff with the technical understanding to make TOD work are trying to replicate what they've seen across the country. But let's not forget that many of these communities are still struggling from the biggest economic downturn we've seen in this lifetime and are still trying to day-to-day function day-to-day with fewer dollars. They're beginning to rely more on the private sector, which is also learning again how to build walkable urban spaces. Unfortunately these bad TOD locations drive up the price of good TOD locations because they're more attractive. We have to ensure, that the quality is definitely universal across the country.

Poticha: Even in places with a really strong market, like neighborhoods in San Jose, there could be complications that lead to inaction. Sometimes the transit agency owns the property and they only invest in parking lots around their stations. Sometimes because of past infrastructure investments and the jurisdiction over local streets, it's very hard to get from the site to the station, and that becomes a real disincentive for any developer who wants to build and make a place walkable. Oftentimes it can be tied back to the lack of local leadership willing to work with all the stakeholders to resolve the challenges.

Is this still a common story with transit-oriented development around the country, or is this the exception? Are municipalities getting it, or are a lot of them missing it in terms of how these places should function in their design?

Coes: There's still a lot of trial and error. Unfortunately, TOD is not a developed product that can be applied with a template because it has to respect and respond to the local conditions where it is being implemented.

Right now, we're in a space where we are relearning and beginning to find out that different TOD projects require different policies, incentives, levels of community engagement, and so forth.

A lot of developers are getting into TOD that focused on single-use automobile-oriented development before. What are the biggest challenges for those developers and how can they address those concerns?

Coes: The challenge is a three-headed monster. First, the local zoning. That will, without a doubt, still be one of the biggest barriers to good transit-oriented development. A lot of communities still have regulations that lead to a car-oriented developments, which often make it difficult to do mixed-use project near a transit station or to reduce parking regulations. Second, TOD projects have a different financing structure than conventional real estate projects. Even now in the federal government, there are new incentives that are supposed to reduce that financial challenge, but TOD projects generally take a long time to make a buck versus your conventional financing. Finally, there's the community engagement aspect. Now you are beginning to find opposition in the community that is either detached from the project or this change, or recognize the change and are trying to prevent the change from coming to their neighborhoods. Those three aspects are all part of the same monster, which prevents supply coming to the market.

What are the biggest concerns for public officials who want to create successful transit-oriented development or developments? And how can those concerns be addressed?

Poticha: There are two parts to this. A very major reality is that a hub that connects people to other places in the region has the opportunity to be a place where a lot more can happen than in a traditional residential neighborhood. Community centers, grocery stores and other kinds of businesses are really well suited to being hooked up to the

major spine of the regional transit system. The challenge is that often some of the “amenities” that community leaders would like to have in these transit-oriented locations don’t have a revenue stream. They can’t necessarily be absorbed into the cost of the development because land prices or the other infrastructure costs that are being borne by the developer make a project infeasible. In places where you have a public leadership that sets a priority on making great public spaces, encourages the kind of facilities that community leaders want, and works creatively to find ways to pay for those amenities, only there do you see the real partnership and a real sense of conviction that enables the public sector deliver on this larger vision.

Which of the amenities that you’re talking about are most important?

Poticha: Streets that are pleasant to walk and bike along are essential in a transit-oriented development, but often the public sector have looked at TOD as strictly private property rather than public and private. Parks, and community facilities, and the same kind of amenities that you’d want to have in a great urban neighborhood need to be in a transit-oriented neighborhood. But the costs are very high.

Coes: On the social equity side, oftentimes TOD exposes what’s already happening on the ground, whether it’s lack of education access, lack of job training, and so forth. Those are issues that can’t be solved by TOD, but could be leveraged by TOD. Increasingly TOD has been a part of the conversation about value capture. The idea is that because there’s so much economic activity happening around the station you should capture those dollars and it should be put back into transit, but increasingly there are other demands like housing, job training, other public infrastructure or public health projects, that it can be applied to

How much transit-oriented development is happening in the suburbs? And what are the special concerns there?

Coes: Smart Growth America and George Washington University’s Chris Leinberger have conducted a number of studies across the country, evaluating metropolitan areas in terms of their TOD locations. In DC we see that almost half, 49 percent, of TOD in the region has happened in the suburbs and it’s largely because the region as a whole has embraced transit. In places where the region as a whole has not embraced transit, most of the TOD locations are populated within the city. An example is Atlanta, where generally speaking the suburbs have turned their backs on transit but, right now, most of the TOD is happening inside the city. But in Detroit, there was an attempt to pass a regional pact to build out a regional transit system. It passed in the city, but it failed in all of the surrounding counties. However, I believe there’s going to be momentum for a lot more suburban communities to embrace transit and therefore TOD because it’s part of their survival. They’re seeing a decline in property values. They’re seeing that companies are no longer choosing their locations because they lack amenities or the types of development that attract talent.

What are some more innovative and successful transit-oriented developments that both of you have seen lately?

Poticha: I recently went on a tour of the Anacostia neighborhood on the southeast side of DC. This is an area that has a stop on the Metro line. But long-term issues involving race have inhibited the level of investment we’ve seen in the northwest part of DC. One of the things that is incredibly impressive in Anacostia is how community leaders have begun the engagement process very early, not only to embrace the idea of change but to actively manage it. There are proactive efforts under way to help ensure that housing remains affordable for folks who live in that neighborhood even as new development comes in. It’s a big work in progress, but it really felt like it was a community-led effort more than a developer-led effort.

Coes: There are two new innovations in TOD

that excite me. First, there's a new answer to questions concerning parking. Recently, I saw a parking garage that was designed to be converted at a future date into housing and commercial space. That provides an answer to the question of what to do with parking garages that no longer needed in these great walkable neighborhoods. The second development involves the Greenway project in the Chinatown neighborhood of Boston. Through their financing, they provide affordable commercial space for those culturally sensitive or niche businesses. On the housing side, we have tools like the LIHTC (Low Income Housing Tax Credit) program or the HOME program that can provide dollars for affordable housing, but we don't have an equivalent for commercial space and that's a big issue.

What differentiates the communities that are succeeding with transit-oriented development and those that aren't in your view?

Coes: Communities with good TOD projects and neighborhoods approach TOD in a holistic manner versus in a silo. They think of it not as an infrastructure issue or development deal, but they're thinking about its impact on public health and community. An engaged development community is another attribute of communities that have good TOD. For instance in DC, the development community gets TOD and they all talk the language. But in communities with a development industry that prioritizes greenfield development, it generally doesn't bode well. But there are those successful communities that go out to other communities to do site visits and tours, that apply for EPA grants and technical assistance, that are willing to get someone from the outside to teach them how to do better. ♦

NOTES, RESOURCES, DISCUSSION

24. Transit-oriented development

Additional resources

Video, *Transit-oriented development in Las Vegas*, www.youtube.com/watch?v=R2gwy6bKKVg

Video, *What is Transit-Oriented Development?* The Partnership for Sustainable Communities, www.youtube.com/watch?v=J_Bh3F24dFc

Book, *The New Transit Town, Best Practices in Transit-Oriented Development*, 2003.

Video, *Transit-oriented development*, Streetfilms, www.youtube.com/watch?v=iCWvORfQzgk

Key points

Transit-oriented development allows people the choice to live in communities and in regions that allow them to have the greatest flexibility of lifestyle (Page 188)

If transit becomes unreliable, residents will no longer use transit as a primary form of travel (Page 189)

For TOD to work, a neighborhood still needs to have a reason for people to live/work/play there (Page 190)

TOD can quickly transform neighborhoods positively through community investment but also negatively through gentrification (Page 190)

Transit authorities need to expand from fixed-rail systems and embrace additional modes of transportation (Page 191)

Developing TODs in car-oriented places

is challenging but not impossible (Page 192)

Streets that are pleasant to walk and bike along are essential in a transit-oriented development (Page 193)

TOD captures community value because of the economic activity that happens around stations (Page 193)

TOD is not just about transportation but also public health and community activation (Page 194)

Questions

Why did transit-oriented development take off as a development concept in the last decade and a half? Why it is a hot commodity now?

Does TOD epitomize choice in mobility, and if so why?

Why and how are state and local governments incentivizing TOD?

How has TOD impacted low-income households?

How is TOD impacting second-tier cities?

How are changes in transit ridership impacting TOD?

How are ride-sharing technologies impacting TOD? Do they break down the economic advantages of concentrating development around transit stops?

What are the biggest equity issues related to TOD, and how can they be resolved?

Why is good urban design critical to TOD?

What are the complications that lead to inaction with regard to transit-oriented development?

What is the role of the public sector in delivering a TOD vision?



25. LIGHT IMPRINT FOR WALKABLE GREEN INFRASTRUCTURE

Tom Low and Paul Crabtree discuss why a leaner, lighter approach to infrastructure is more cost-effective, sustainable, and livable.

In the public realm, the greenery to impervious pavement ratio—and how that relates to urban context—has an impact on quality of life and experience. Conventional suburban design tends toward heavy use of asphalt,¹ with wide roads lined by parking lots, in relatively low-density areas. This engineering approach requires large and expensive stormwater mitigation. New urbanists have countered with techniques that lay far lighter on the land, an approach that could be called “Light Imprint,” “lean,” or simply “green infrastructure.” This light approach to engineering the land, combined with good urban design, makes for appealing streets and public spaces while providing effective rainwater management.

There’s a lot of confusion around the term “green infrastructure.” Some people think of Landscape Urbanism or maybe they think of rain boxes that you put out on the street. What is Light Imprint and how it is different from conventional stormwater management techniques?

Crabtree: It starts with the history of low-impact development (LID).² Practitioners started treating stormwater separately from pipe and waste water and it was some groundbreaking work but it was done on the sprawl paradigm. In terms of best management practices, all the exemplars came from suburbia, like patches of mall parking lots or power centers or the implementation of rain gardens in every single front yard. These

A passage between houses with no impervious surface in Carlton Landing, Oklahoma. Photo source: Tom Low.

were engineering solutions that worked to distribute stormwater but they had no concept of good urban form. Light Imprint was one of the first responses to address the relationship between stormwater management and urban form.

Low: The LID movement was embraced as the standard by the EPA and civil engineering community at the turn of the century. Meanwhile, we had jump started a lot of New Urban projects, and many places had embraced the practices of traditional neighborhood development (TND)—see chapter 23. When the same forward-thinking developers and municipalities decided to embrace low-impact development, everyone assumed that it was going to be a good fit with New Urban projects. However, I started receiving phone calls from developers and municipalities that expressed complications with the integration of LID into walkable communities. It turned out it wasn't the great marriage that we all thought. They were imposing suburban standards on top of the TNDs and New Urbanism principles, and it wasn't a good fit. For example, the practice of installing a rain garden in the front setback of every house to mitigate stormwater. That means that every house is either 25 or 30 feet removed from the sidewalk and all of sudden the walkability and sociability factors that are important, the compactness, the connectivity, are all gone. We had to come up with a solution that modified and amended a lot of tools from LID, but we made them more functional for New Urbanism.

There was a Rainwater Initiative³ for CNU. How did it fit into all of this?

Crabtree: There was maybe four or five of us that started a task force in 2009 to provide input on the LID regulations that the EPA was developing. Around that time, we began the Rainwater Initiative, as well as the Rainwater-in-Context listserv, and we began having several sessions at every CNU to address it. That's where we came up with the tenets⁴ of the Rainwater Initiative that are on the website now.



Low: At the Philadelphia 2007 Congress, we launched the Light Imprint Initiative. Our workshop at this Congress was standing room only, because a lot of people, we found out, were dealing with the same issues. That was the moment when we found out that this was very important.

The tools that you're advocating here, how did they differ from LID or the more conventional approach?

Crabtree: Settlement patterns matter. Our tools address all scales from the site to the watershed, not just the site. They look at per acre impacts as well as per capita impacts. They use hydrology science, not arbitrary one-size fits all regulations. Those were all things that were not incorporated into LID.

Low: The Light Imprint Initiative was trying to figure out a way for New Urbanists to plug into low-impact development. These were two different cultures that existed and were running parallel, but they were clearly related. A lot of New Urbanists were doing beautiful place-based design, but the engineering was only an afterthought. And in many cases, the engineering worked against everything that was intended. Light Imprint approaches green infrastructure as part of an aesthetic, but also incorporates engineering from the beginning so down the road things don't backfire. Three things have compelled people to consider Light Imprint and move forward with it. First, it is a more sustainable approach to New Urbanism in terms of dealing with water infrastructure. Second, if it's designed well, it becomes a more appealing



*Architect and planner **Tom Low**, left, founder of Civic By Design and author of Light Imprint Handbook, and **Paul Crabtree** of the Crabtree Group, a specialist in civil engineering for urban places.*



place to live, especially to people who are interested in living in these types of communities. And third, which was a shock to most people, including us, when we started to analyze some of the case studies, they turned out to be more economical.⁵ Less expensive, better performance, and more appealing. This is a win-win-win scenario that really makes the idea compelling.

That's a good segue because there are lessons from history here. Back in the day, a century ago, there were fewer civil engineering rules, but there was also a thriftiness and a frugality to the built environment. You also see that at Seaside, Florida, to a degree. But what can we learn from the historic public works in terms of efficiency and water recharge?

Crabtree: You mentioned Seaside, and it was Light Imprint without really even knowing or intending it. For example, they didn't mass grade the site. They didn't pave all the streets in the first round. The rainwater was falling and infiltrating where it landed. The Amphitheatre tended to handle the really large rainfall, and it was all done very lightly.

Low: It created a very beautiful civic space and mitigated the stormwater, and they combined the two in the same design.

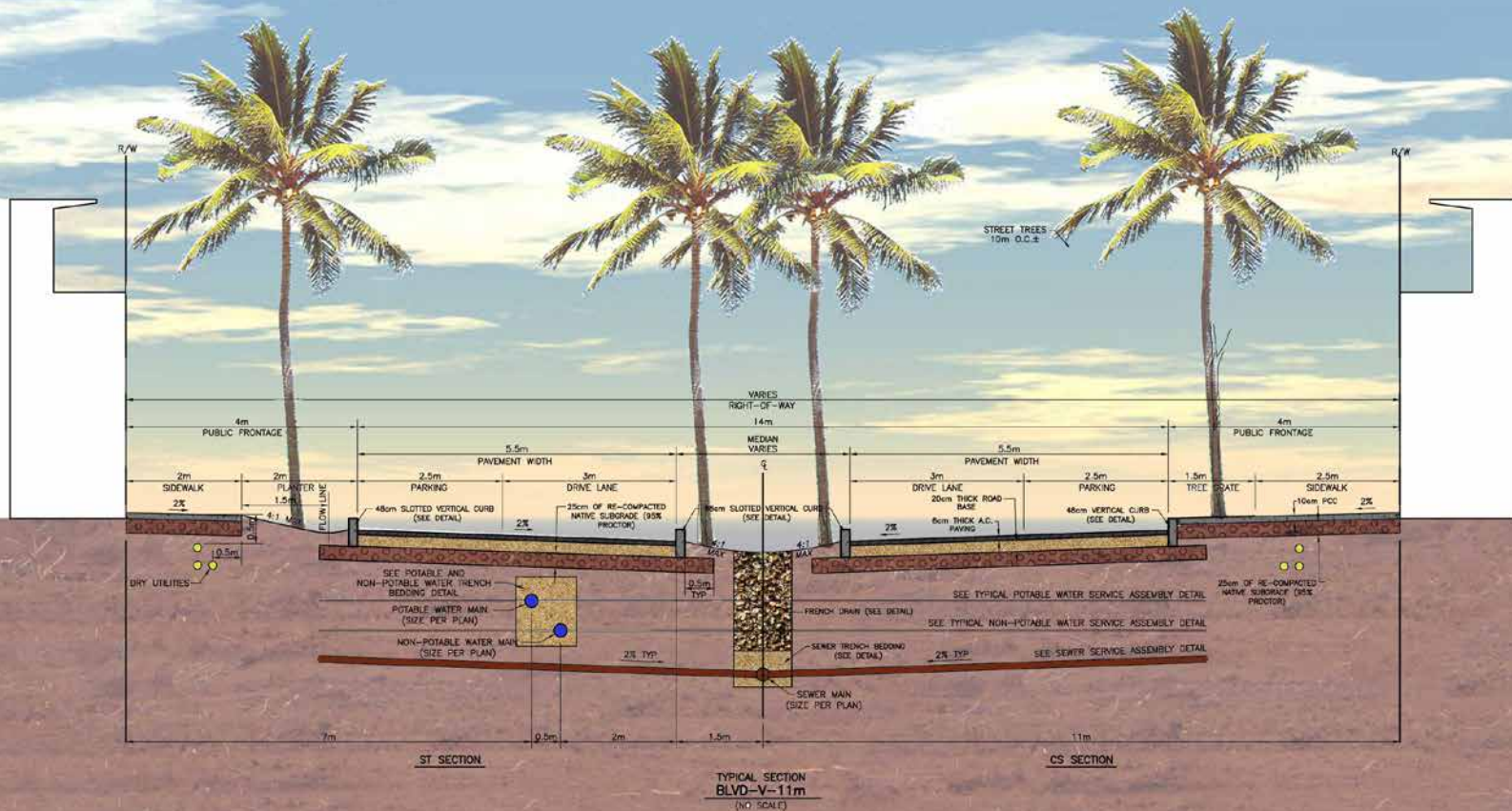
Crabtree: They weren't even thinking much about rainwater. They were more thinking about lean infrastructure and implemented it gradually. In other words, when you only have a few homes, sand streets are fine. As part of a successional process, when more and more people get there and the density become greater, then you can start to harden things up. But even then, it was done with pervious pavers and what we now call bioswales.

Does the lean approach naturally lead to dealing with rainwater in an efficient way?

Crabtree: It does because the pipes and inlets are very expensive. The more you do naturally, the less pipes and inlets you use. It's less expensive and it looks better.

Low: I spent the last several years going around documenting historic and new places and I always look for these tools, because you can find them all over the place. Many places

The Seaside Amphitheater fills with rainwater in big storm events, like a hurricane.



were created when there was a scarcity of resources or funds. Developers that are frugal to begin with can apply these techniques, and as they think them through, they can create great places. You don't have to use heavy equipment. When we came up with a whole series of tools, we weren't really thinking about costs or whether they were performing any better than simple approaches. But as we developed Light Imprint, we started to question whether LID products and other high-tech solutions worked better than traditional approaches that dealt with rainwater by design. For the most part, there was a lot of overcompensation going on.

Let's talk specifics. We talked about how the LID approach of putting a rain garden in front of a house and then you have to set the house back 25 feet, all of a sudden it becomes suburban. But you talked about Seaside⁶—no mass grading, they didn't pave all the streets. What are the other things that are effective alternatives to these expensive, sometimes inefficient, LID techniques?

Crabtree: If you apply the Transect, there

may be no rainwater treatment in T5 (Urban Center) because you're getting great density and your sustainability is really high in that great density. If you think about it on per capita basis, that's very sustainable, don't do any treatment. Another way is to incorporate it into a community scale—for instance a neighborhood scale treatment area that would allow you to build a great Main Street.

Low: LID approaches stormwater management on a lot-by-lot basis and assumes that each has to be able to mitigate its own stormwater. We use a block-by-block or neighborhood scale approach. We basically look at every surface and every area and determine how all these elements can be combined to invest in public property and the public realm. Design the public right of way areas in a way that actually creates more of a holistic approach. It's more about intercepting the water early on rather than creating a cluster development or a large suburban subdivision. With those types, everything's piped to the edge of the project and there's a huge crater there, which is essentially a single point installation for this subdivision and that's very expensive. Our approach is

A rainwater harvesting street designed for Mecca, Saudi Arabia. Source: Crabtree Group.

more point of origination specific, where we intercept and disperse water early on. There's a little saying: "You bring it down, spread it around, and put it in the ground." If you convey it downstream, the water is leaving the community, which may actually need it. It could be part of the reservoir and recharge the groundwater aquifer at the origination point. But I don't think a lot of progress has been made since the recession and people are by default still using the pipe and pond approach to things.

Crabtree: It's a lot like the sprawl paradigm. There's a lot of inertia in that whole system.

Low: But on a positive note I've been invited for a couple of years to CASQA, the California Area Storm Water Quality Association, to talk about place-based design and stormwater management. The entire room, full of civil engineers and regulators, was very receptive of the idea. They're engaging more naturalistic solutions versus quote-unquote engineered solutions.

Can you two talk about the innovative and exemplary projects that employ light imprint/lean infrastructure/green infrastructure as you define it, and describe why they are successful?

Crabtree: There was a competition sponsored by the American Society of Civil Engineers soliciting for a project that was to lay LID over the top of 640 acres in a Houston suburb. How is that sustainable, to be building sprawl and then patch it up with LID? A few of us decided to enter the competition and we broke all the rules by designing a traditional neighborhood development—and in terms of stormwater it handled the entire 640 acres including three schools and it performed better than pre-development.

That was a demonstration project? This was theoretical?

Low: I would call it a counter project.

Crabtree: It could get built. But that wasn't

the way the competition was set up, and that's why we call it Salon des Refuses,⁷ because it was a similar thing that was done in Paris where designers were protesting national competitions so they set up their own salon in response to it.

Low: Ultimately, CNU gave an award for it. It was the 2010 Charter Award winner.

Tom, what are projects you would point to?

Low: Habersham has been around the longest. It was a pilot project that we were working on at the same time that Light Imprint became an initiative. Habersham⁸ is built within a tree canopy. Trees outperform pretty much every other tool imaginable for green infrastructure. We forget that sometimes. More recently, there's Carlton Landing⁹ in Oklahoma, which has a light imprint overlay. The first neighborhood, with over 200 homes, pretty much about the area of Seaside, has been built and it's all done with surface drainage with only a few pipes here and there under the road. It's another compelling project. Nothing's better than models that demonstrate the ideas.

What are the three most important things that were done Habersham and Carlton Landing, with regard to rainwater? What did you do that people could observe?

Low: In both Habersham and Carlton Landing, there's noticeable surface drainage. You don't see a lot of stormwater inlets because basically every surface possible was made pervious. We're not even talking about really expensive pervious asphalt and concrete, just simple approaches. Instead of fearing stormwater, we call it daylighting and celebrate rainwater so that it is woven into the community as an asset. The streets are laid out with swales. The boardwalks in Carlton Landing use the natural landscape and stone drainage along its edges. It employs a combination of plantings and pervious hardscapes and softscapes. It lies lightly on the land and works with the topography. Water goes where it wants so it



must be addressed early on in the design of a project.

Crabtree: Formerly in the Los Angeles metro area, the engineers were very proud of their concrete linings on the rivers and channels, and pave, pipe, and dump was the gold standard. Now they're embarking on a multibillion-dollar project to daylight the river and the channels and start capturing the rainwater. If you think of it as stormwater, it's a waste product. But rainwater, that's a resource.

What are the different approaches between the city and the suburbs, or perhaps the different Transect zones?

Low: One of the very first things we did when we were trying to organize all these different tools is to use the Transect as an organizational system. Certain tools work better in certain T-zones (Transect zones), and a good example is that a soft, crushed stone street works really well in, say, T-2 (rural), maybe in T-3 (sub-urban). But when you get into urban centers, you need something that's more durable for things like heavy -duty trucks,

moving vans, and fire trucks. Therefore, something like pervious concrete or pervious asphalt might be a better solution, or, like Paul says, in some cases, you're so efficient anyway, maybe there's less of a need-- it's not as important as other places. By organizing categories of paving, channeling, storage, and filtration from rural-to-urban conditions, it allows us to very quickly bring in a lot of tools. There were 60 tools that really worked well, and some work better in certain places than others. They need to be location-specific and climate-specific. We've figured out that we can organize tools not only through the Transect, but also according to six variables that have to do with the climate, whether it's hot or cold, or wet or dry, and whether the area is flat or sloping - that makes a difference.

Crabtree: We found that LID regulations, not just the products, were being copied from one region and used in another ineffectively. One region adopted regulations from another that had combined sewer overflows. In other words, when it rained, they were dumping sewage into their rivers as opposed to a separated sewer system. In a combined sewer

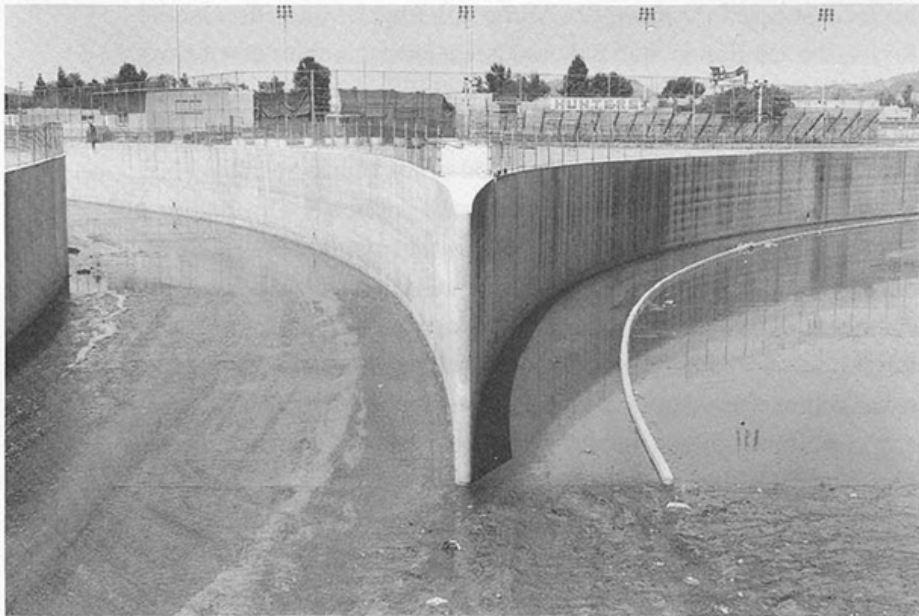
Street in Carlton Landing with a second allee of trees in the parking lane

system, you've got to treat a lot of rain water so that that doesn't happen and it's a whole different paradigm than if you have a separated system, and yet those regulations were being copied. Regulation too needs to be context-sensitive.

Finally, I'd like to talk a little bit about trees.¹⁰ What are your thoughts on how trees are dealt with by specialists today as opposed to how you use trees in a lean or light imprint way?

Low: There's a street that we retrofitted in Carlton Landing, where it was designed as a main street at 36 feet wide. But compared to everything else, it was really out of scale so we introduced the second alley of trees. Instead of adding bike lanes, I suggested adding tree lanes, which basically entails planting trees wherever there is parallel parking (see page 201). That doubles the tree canopy, not just the median. Based on the metrics of trees, including the benefits of shade, I would argue that planting trees is one of the easiest things you can do that provides the greatest benefit.

Crabtree: In studying the history of engineering in the US, there's a brief period before World War II when planners and designers indicated exactly where the trees should be along a street. Almost all of the public works standards now do not include street trees in their standard street section. They're not prohibiting them but they don't make them an option, so no one leaves any room for a tree root zones and if they are planted then they suffer. ♦



Two photos showing what conventional engineers did the LA river.

NOTES, RESOURCES, DISCUSSION

25. Light imprint for walkable green infrastructure

Notes

¹ See “They paved paradise, put up a parking lot,” *Public Square*, tinyurl.com/ybk23w1z

² For more on Low-Impact Development (LID), see tinyurl.com/yaz6q6sd

³ See Rainwater in Context, a CNU project, tinyurl.com/ybng9qvn

⁴ For the CNU rainwater tenets, see tinyurl.com/ydc6lagt.

⁵ According to a case study, Light Imprint design yielded a 30 percent reduction in engineering costs for the first phase of a project—see tinyurl.com/ydhaxq63

⁶ Seaside is the first new urbanist Traditional Neighborhood Development (TND).

⁷ For more on the Salon des Refuses, see here tinyurl.com/y9oafadq

⁸ Habersham is a traditional neighborhood development in Beaufort, SC—see habershamsc.com

⁹ For more on Carlton Landing, a traditional neighborhood development www.carltonlanding.com

¹⁰ For more on street trees, see a presentation by Crabtree and Lysisrata Hall, tinyurl.com/ybhrphx

Additional resources

• Light Imprint, DPZ initiatives, tinyurl.com/y8udosqz

• *Light Imprint Handbook*, tinyurl.com/y9ay6q4r

Article, Choosing a Green Infrastructure Framework? Consider Light Imprint, tinyurl.com/ybz8ruc9

Video, Tom Low describes Light Imprint, www.youtube.com/watch?v=9QXMFu6OGOM

Key points

Three things have compelled people to consider Light Imprint: 1) it's a more sustainable approach to New Urbanism; 2) if it's designed well, it becomes a more appealing place to live; and 3) these places are qualitatively more economical (Pages 197 and 198)

The new urban town of Seaside, Florida was Light Imprint without really even knowing or intending it (Page 198)

The more you do naturally, the less pipes and inlets you use. It's less expensive and it looks better (Page 198)

Light Imprint is about intercepting the water early on (Page 199)

Trees outperform pretty much every other tool imaginable for green infrastructure (Page 200)

Instead of fearing stormwater, daylight and celebrate rainwater so that it is woven into the community as an asset (Page 200)

If you think of it as stormwater, it's a waste product. But rainwater, that's a resource (Page 201)

Based on the metrics of trees, including the benefits of shade, planting trees is one of the easiest things you can do that provides the greatest benefit (Page 202)

Unfortunately, almost all public works standards do not include street trees in their standard street section (Page 202)

Questions

How does light imprint address urban form?

What is wrong with an approach to stormwater infrastructure that uses conventional suburbia as its primary model?

What is the win-win-win scenario that Tom Low is talking about, and is it realistic?

Why did developers take a frugal approach to infrastructure in traditional settlements? Why did that change?

Light imprint takes the position that “less is more” when it comes to engineering and infrastructure. In what sense could that be true?

How is Seaside an example of light imprint and green infrastructure?

How does the Transect apply to civil engineering of a development project?

How do the terms “stormwater” and “rainwater” effect how we think of the water that flows through a community?

Why are trees so important to engineering a site, and how can they serve multiple purposes?

ABOUT THE AUTHOR

Robert Steuteville is senior communications advisor for CNU and editor of *Public Square*. With a journalism background, Rob launched *New Urban News* in 1996 at CNU IV in Charleston, South Carolina, and was a signer of *The Charter of the New Urbanism*. *New Urban News*, and later *Better Cities & Towns*, were trade publications in The New Urbanism for nearly 20 years. From 1997 onward, all CNU members received *New Urban News* and later *Better Cities*, which evolved into *Public Square*. In 1999, Rob authored *New Urbanism: Best Practices Guide*, which was rewritten through four editions and is still used for New Urbanism certification by the University of Miami. Rob has been on CNU staff since 2015. Through a nonprofit Better Cities, Rob has been engaged in local planning efforts, working with a team to adopt form-based codes, running charrettes and creating vision plans.

