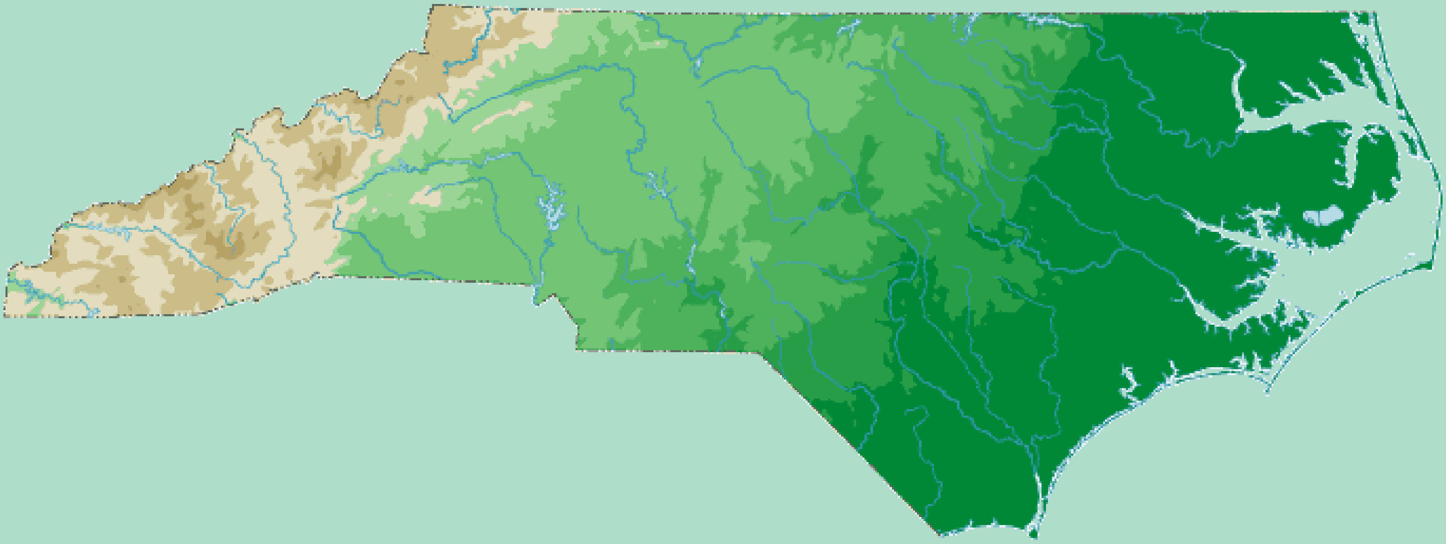

The Chapel Hill Report

The Dollars and $ense of Development Patterns

March 2014

Chapel Hill

The Dollars and $ense of Development Patterns

Chapel Hill and Orange County have long led the state in evaluating community design and patterns of growth. The Asheville based urban design analytics firm, Urban3, was commissioned to perform an economic analysis of land revenue productivity normalized over the entire county. This study utilized existing Assessor's data and land area to determine tax revenue with the "land" as a least common denominator metric. In breaking development patterns with this perspective, it provides new insights as to the relative affect of lot density, height, and even matters of design; and how they affect the community's tax base. Urban3 is a leader in the field in utilizing this method of analysis and the results of the study validate Chapel Hill and Orange County's progressive land-use policies.

Using property tax assessment rolls from Orange County, the property values with respect to their acreage (i.e. land consumed), Urban3 measured the revenue productivity county-wide. Land is the least common denominator because as an incorporated area, land is all that the community has as a real asset. Indeed, Orange County is an 'incorporated' area of land that will not change, and knowing the productivity of land will help decision makers evaluate development patterns in an "apples to apples" manner to determine the effect on municipal coffers. This is also important in the towns in Orange County as they all maintain the value of a rural buffer, which essentially acts as a boundary to community expansion. Additionally, the act of annexation has been restricted in most communities, so cities and towns are essentially seeing themselves as a fixed boundary for the near future. The 'value per acre' method is a metric that normalizes across the variety of parcels. Viewing property values on a per acre basis, sets the land development

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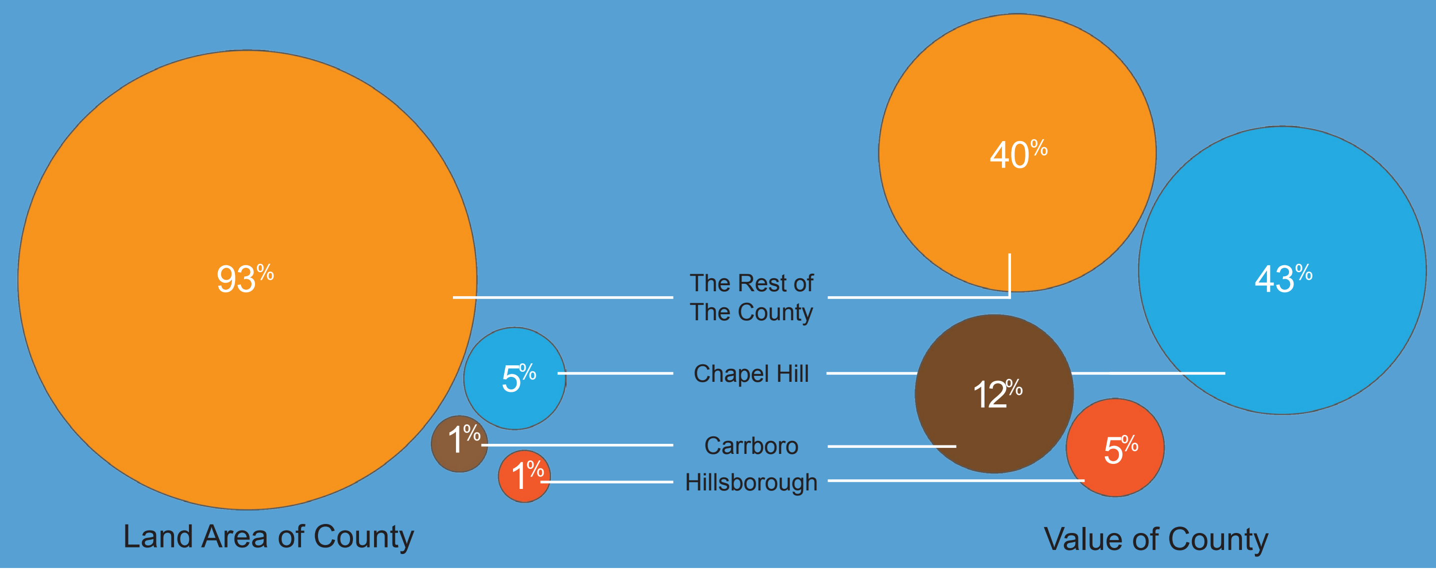
Comparison of Land Area To Property Valuation For Orange County NC

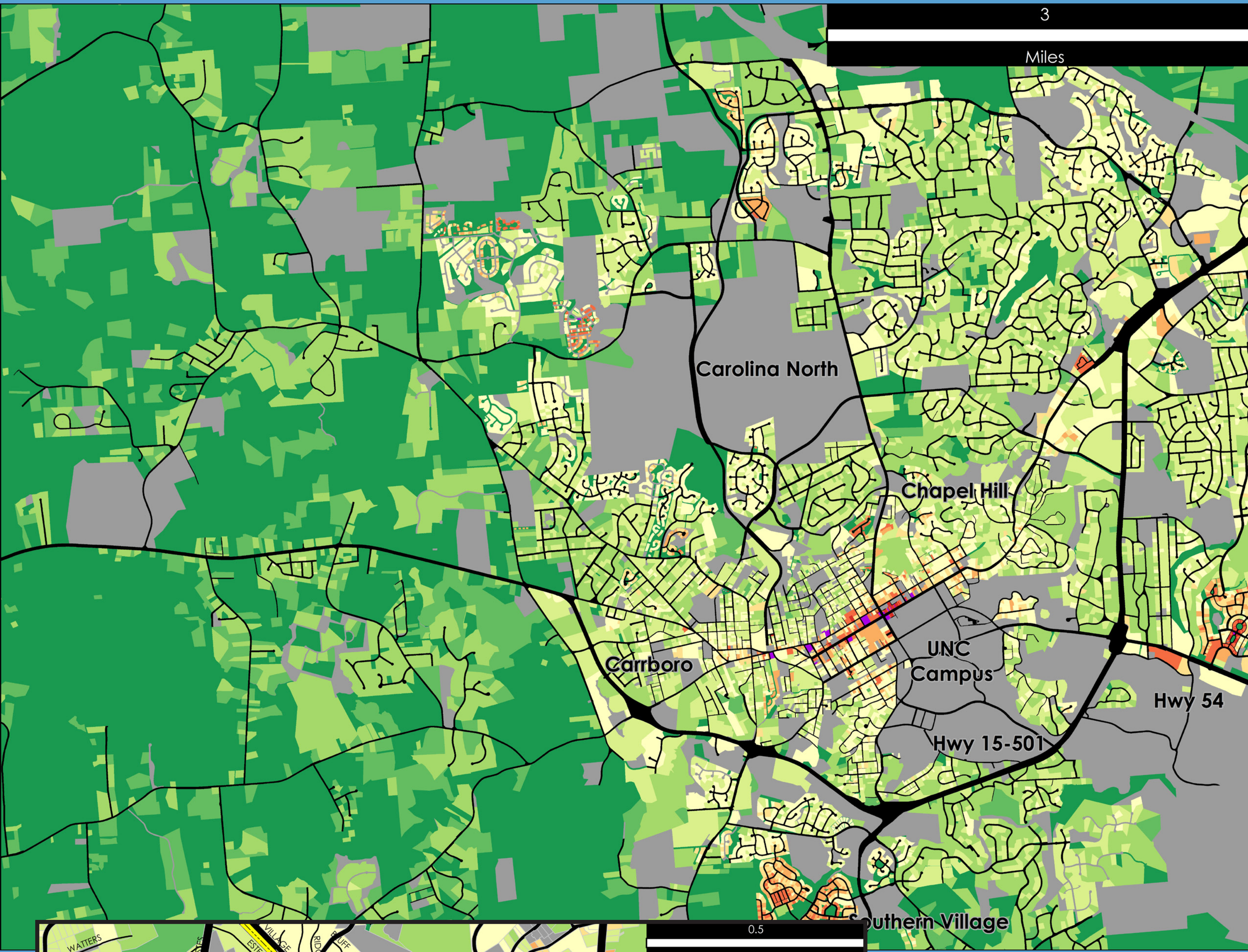


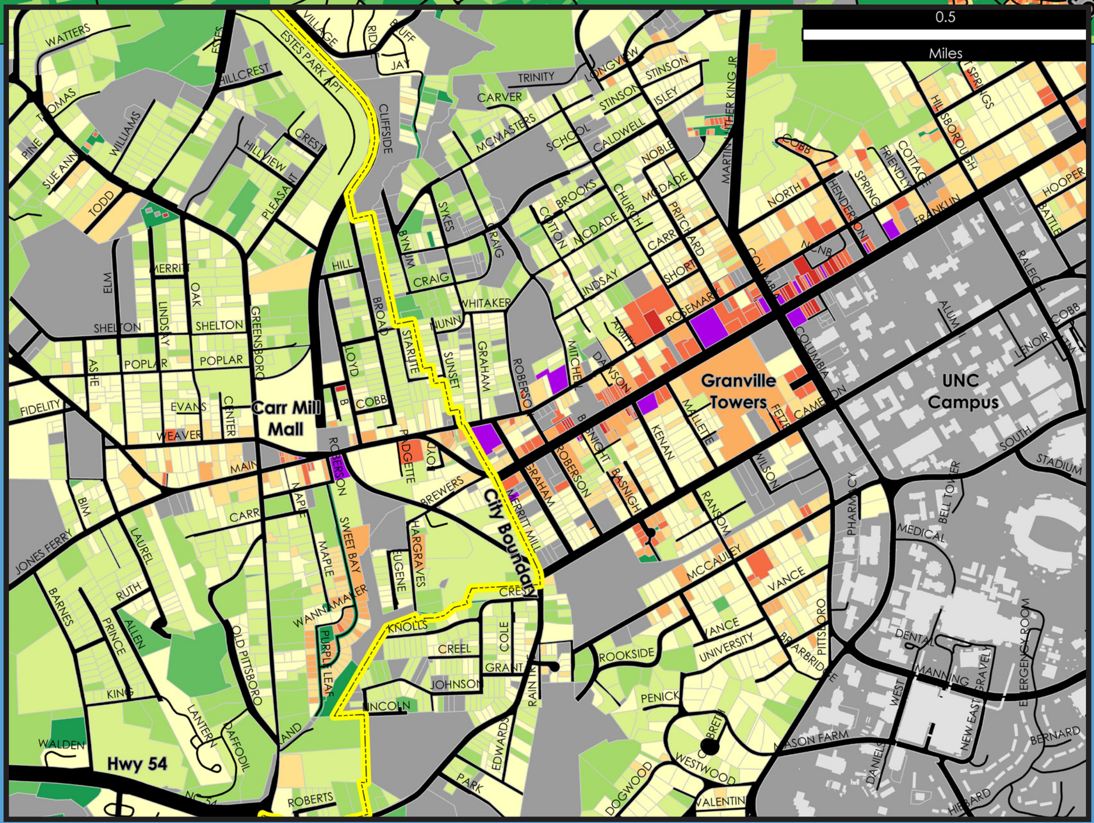
Above: All towns in Orange County produce Orange County property taxes in addition to the property tax levy for their towns. In order to better comprehend the potency of a town, within the County, the above chart demonstrates the area of township within the County charted against the amount of county property tax production. The valuation against the area consumed demonstrates a tax revenue ratio of 12:1 for Carrboro, 8.6:1 for Chapel Hill, and 5:1 for Hillsborough. Though it should be noted that Chapel Hill maintains a considerable volume of non-taxable land within its area.

as the standard. This also correlates with the taxable revenues to better understand the revenue productivity. Just as our evaluation of automobiles on a miles per gallon basis gives a more accurate assessment of the efficient vehicle's efficiency, evaluating land by the value per acre is an effective measure of municipal benefit. This idea of 'land efficiency' is not a new concept, American farmers have long used this approach to consider their cost and crop yield per acre. Indeed, the agricultural industry has adopted technological methods of mapping values, such as mineral density in soil, to better understand distribution of fertilizers in an efficient manner. Urban3 uses similar technology to map the value per acre, to better envision the relative productivity of property taxes across the county.

The Law of Gases: Pressure

We know from Chemistry that the pressure of a gas depends on the volume of the gas and the space in which it is contained. We can think of property development in Chapel Hill along the same terms. In this analogy, Chapel Hill is the container for an ever increasing influx of new residents. As a cornerstone of the Research Triangle with ample employment opportunities and a remarkable level of public services, Chapel Hill will continue to attract new residents. Unlike many communities in the Southeast however, Chapel Hill has demonstrated considerable discipline with regards to its outward expansion. Chapel Hill's Rural Buffer serves as an effective urban growth boundary which can be clearly seen in the development pattern, property value, and vegetation coverage. The Chapel Hill container is effectively a fixed boundary. The result is a high level of development pressure which has manifested itself in the scale and pace of development as well as in the cost of living.



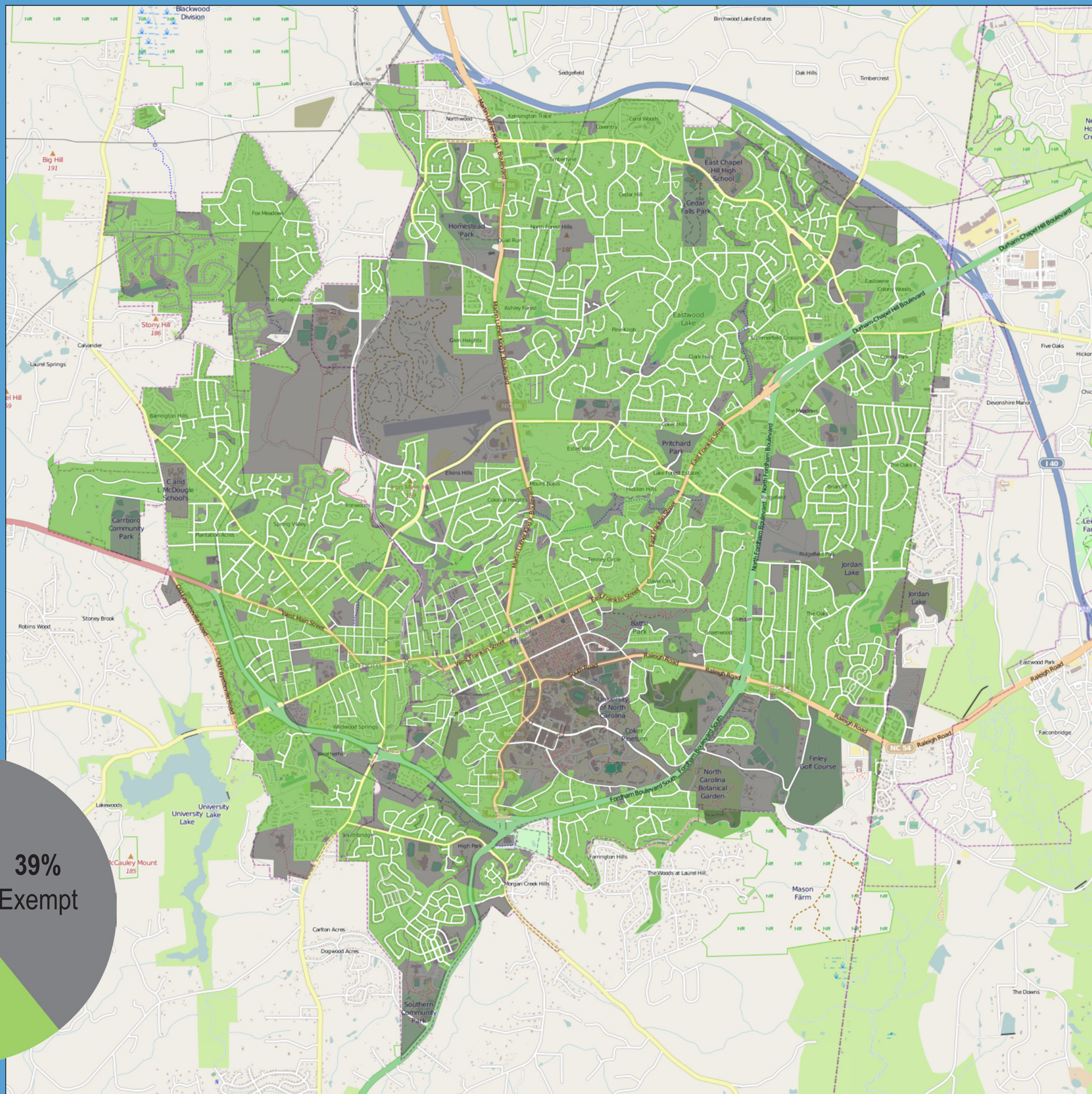


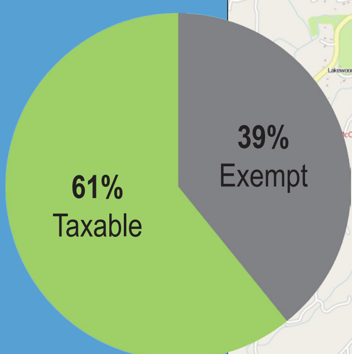
Value per acre maps of the Town of Chapel Hill and Carrboro (above) and a blow-up focused in to the Franklin Street corridor (left). Key for both maps is below.

Total Value Per Acre

- Exempt
- < $50,000
- $50,000 - $100,000
- $100,000 - $500,000
- $500,000 - $1,000,000
- $1,000,000 - $2,000,000
- $2,000,000 - $3,000,000
- $3,000,000 - $4,000,000
- $4,000,000 - $10,000,000
- $10,000,000 - $15,000,000
- > $15,000,000

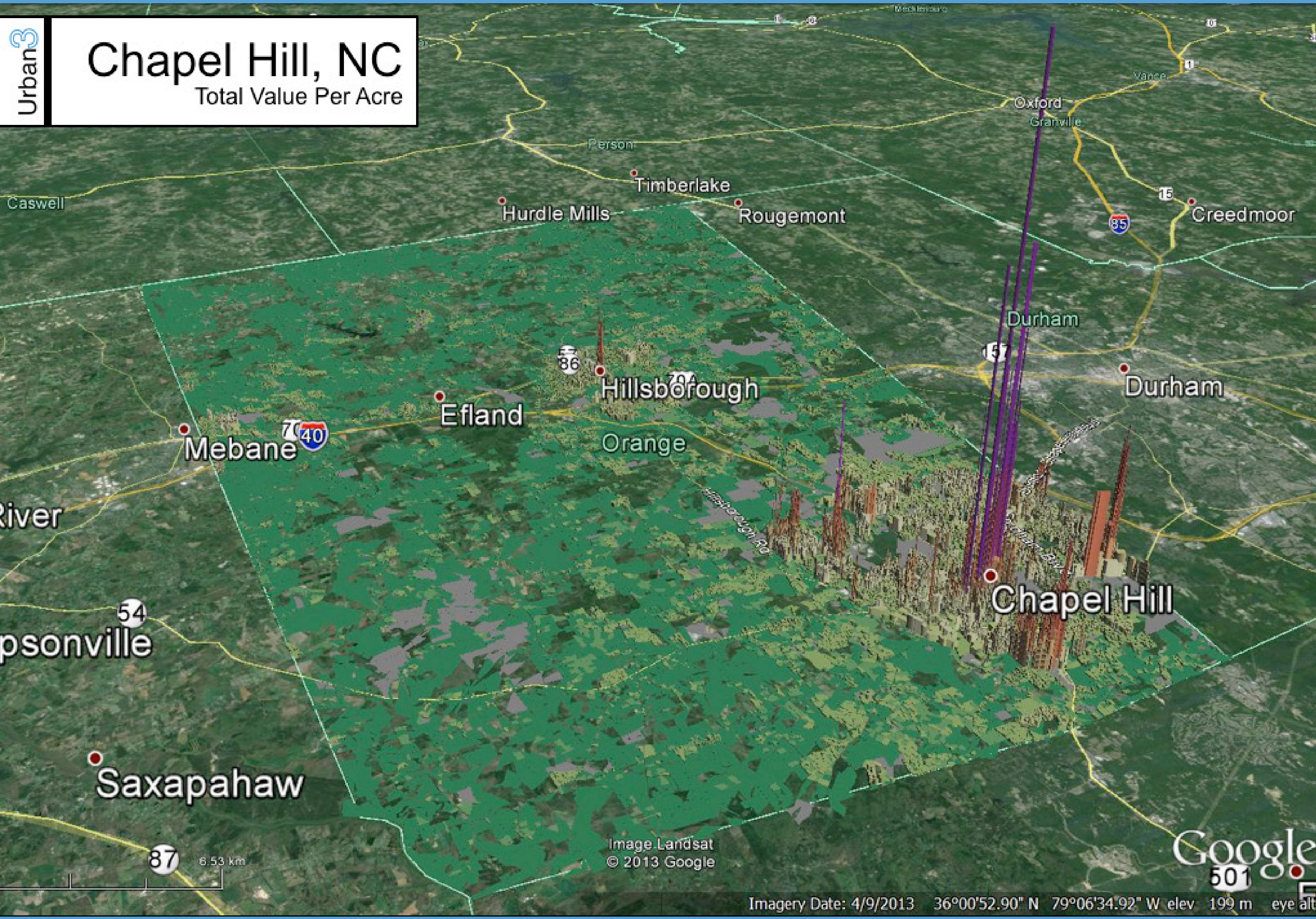
For Chapel Hill, its greatest strength is also its greatest challenge. Chapel Hill benefits in value and employment from the location of UNC Chapel Hill and the economic impact to the community. Additionally, it has implemented a robust preservation of green space. The challenge is that those areas, also take a tremendous amount of taxable property off the tax base. By comparison, Carrboro has only 25% non-taxable within its borders.





Since the Rural Buffer is a boundary to outward expansion, the efficiency of use within that barrier should be carefully considered. The majority of space within the Rural Buffer is already developed or undevelopable. From a financial perspective much of the remaining space is further constrained by the amount of exempt institutional land.

This isn’t to challenge the horizontal space available for development or adjust the Rural Buffer, nor is it to contest the high level of public services provided in Chapel Hill. The purpose is instead to recognize that there is a balance sheet that weighs things like the rural buffer, public schools, and free bus system against development choices. Preserving open space, for instance, is admirable, important, and ultimately valuable for the community but means that the space available for development must be maximized. Chapel Hill provides an impressive standard of public services, especially with regards to public transit and education, that outpaces communities of greater size. These services, which ensure the Town’s high quality of life, likewise demand a sufficient financial base to remain viable. Put simply, the peaks of high value per acre



Above: 3D model of the 'Value Per Acre" of Orange County. The focus of high property value is the intersection of Franklin St. and Columbia in the heart of Downtown. This value drops off in the lower density residential neighborhoods to the North and South of Franklin St. Beyond this space towards the edge of the Rural Buffer the impact of development pressure becomes evident in the large value and scale of newer projects (Meadowmont, Southern Village, East 54). High profile downtown infill is the most efficient development formats in the county. Greenbridge and 140 West Franklin represent the highest value per acre in Orange County.

development in Chapel Hill are what makes amenities like protected open space and free transportation possible. This study should serve as a guide to the financial impact of development patterns in the community.

Pattern of Development

When we want to understand the medical condition of the body we use a variety of imagery techniques to reveal different information. In much the same way one can examine the pattern of property value with a similar 'scan'. To fully understand this pattern we compare the value of property the space it consumes. Alternately we can look at Chapel Hill in terms of how much property tax each site generates per acre. This gives us a measure of its relative financial productivity. This way of looking at property provides some striking comparisons. For instance, the building which contains the Spotted Dog restaurant in Carrboro is worth \$22 million per acre while the Walmart in Hillsborough is worth \$600 thousand per acre. This shows that the Spotted Dog building is about 37 times more potent from a property tax basis. Another way of looking at this would be that just half an acre of the Spotted Dog buildings would yield the same property taxes as 22 acres of a Walmart.

Reconsidering
Value

Granville Towers
$3,855,850/Acre Value

The Spotted Dog
$21,265,851 /Acre Value

140 West Franklin
$34,435,262/Acre Value

It is important to note the difference between land-use efficiency and height alone. The one and two story buildings along Franklin Street or the Commercial portion of Meadowmont outperform much taller buildings such as Granville Towers, because of their relative lack of surface parking and efficient use of land. Height alone does not ensure “value” but when practically all of a site is used and built to several stories such as 140 West Franklin, the ability to produce taxes increases exponentially. Small scale buildings, if built to their full extent of their surrounding space, can produce extraordinarily high value. The list of Chapel Hill’s best performing property contains not only high profile projects but also many one story buildings. Though humble in scale, these buildings are highly efficient tax producers by utilizing space efficiently. This lesson bodes well for the conversion of Granville Towers, as it continues its plans to add density to its site. Any conversation about height should take into account the density and thus revenue that is lost when more open space is required on development sites either as surface parking or open space.

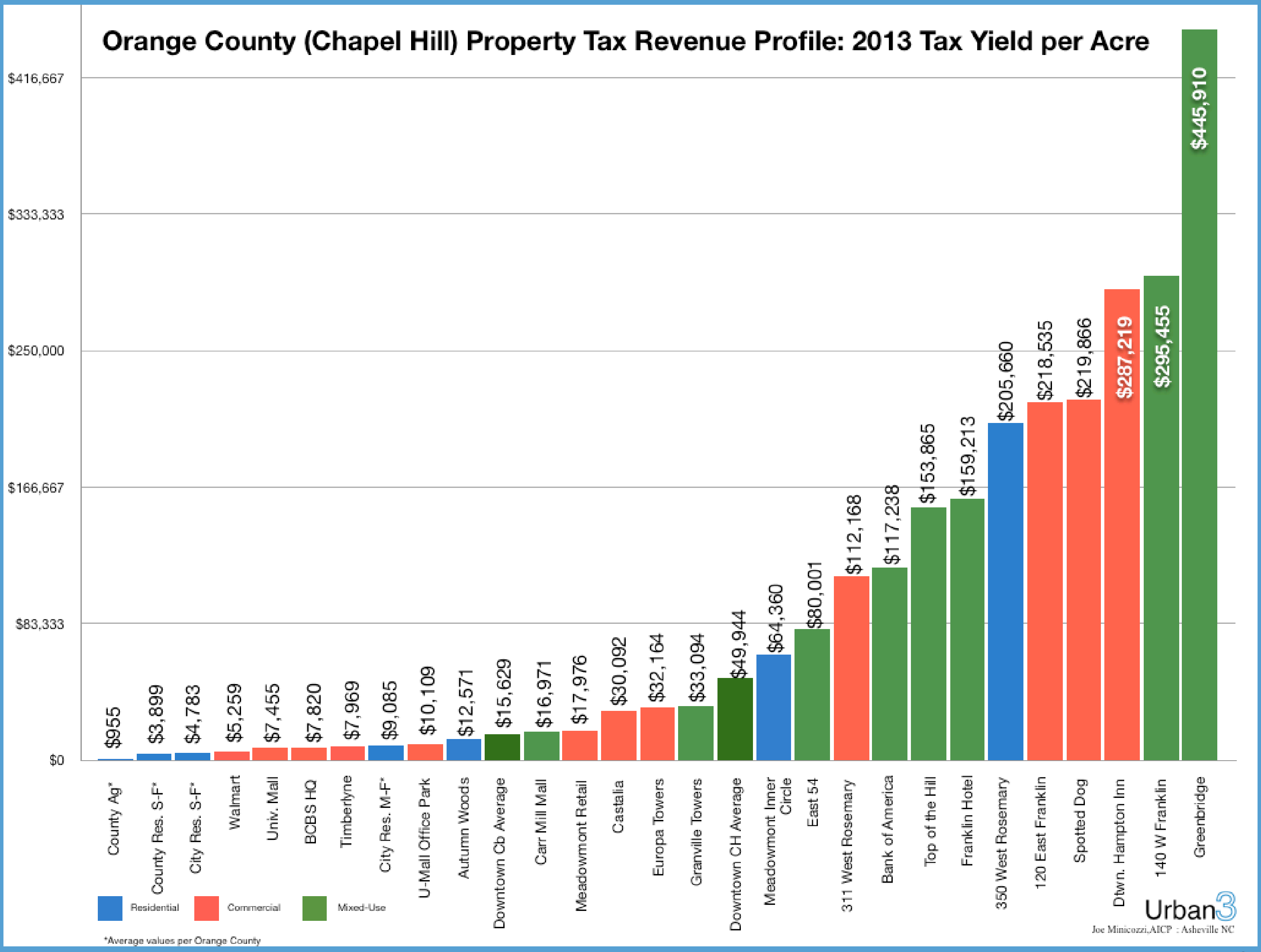
To understand the value of different development patterns Urban3 compared the value per acre of various building formats. The resulting pattern for Orange County is consistent with pattern of towns with a hierarchy based on population. For each town, there are similarities in patterns with a concentrated core, and commercial corridors extending to the edges of the municipality. Commercial development is generally more valuable than residential development, small downtown historic buildings are more valuable than newer auto-oriented development, and new infill residential is by far the most valuable. If Chapel Hill wishes to increase its tax revenue, and in doing so maintain its high standard of services, it should seek opportunities to develop projects that produce revenue productivity to equal the community’s municipal commitment.

A major lesson from this analysis is that tax efficiency, land use efficiency, and parking policy are inexorably linked. For property, larger parcels of land tend to be valued less on a per acre basis, so the bigger the parcel, the less the per unit productivity. Couple that policy with fact that parking is a low level of improvement value on land, than say, a building and it has a direct effect on overall valuation. The amount of off-street surface parking installed at a property directly influences its ability to produce taxes. Another way of thinking about this is to consider the hypothetical difference between two retail sites with and without dedicated parking. When required to include on-site parking the value of the property becomes diluted. If instead the entire site was utilized either for some kind of structured parking or simply as additional built space the Town receives significantly more tax revenue which could be used to support coordinated/shared parking, transit, affordable housing, or other services. Development sites, such as shopping centers and big box retail, which contain a large area of surface parking demonstrate this diluted value. One lesson to consider, however, is that as much as compact downtown development outpaced the older auto-oriented commercial property along East Franklin St. and North MLK St.; those strip properties still outperform the residential development which surrounds it.

Opportunities

Chapel Hill has a finite number of development and infill opportunities. Fortunately its attractiveness and development pressure should make it possible to maximize these sites. To create value the Town should shift its investment from the lower performing property types to higher performing ones. This could be of the type of 140 W. Franklin, or low-rise, high density projects in the core and along commercial corridors. New construction on the parking lots and empty spaces between downtown buildings, replacement of some non-historic structures, and additional floors to current buildings will increase their tax yield. For the few sites available for large scale redevelopment, such as shopping centers, the town should ensure that the resulting use is worth the limited supply of space. In other words, Chapel Hill should expect new development to produce taxes as efficiently as its most efficient development currently does.

The towns within Orange County are doing exceptionally well. And each community has their moments of productivity that should be replicated. The concentration of revenue productivity in the town center can afford



“What is good for the downtown is great for the town, but it is incredible for the County.”

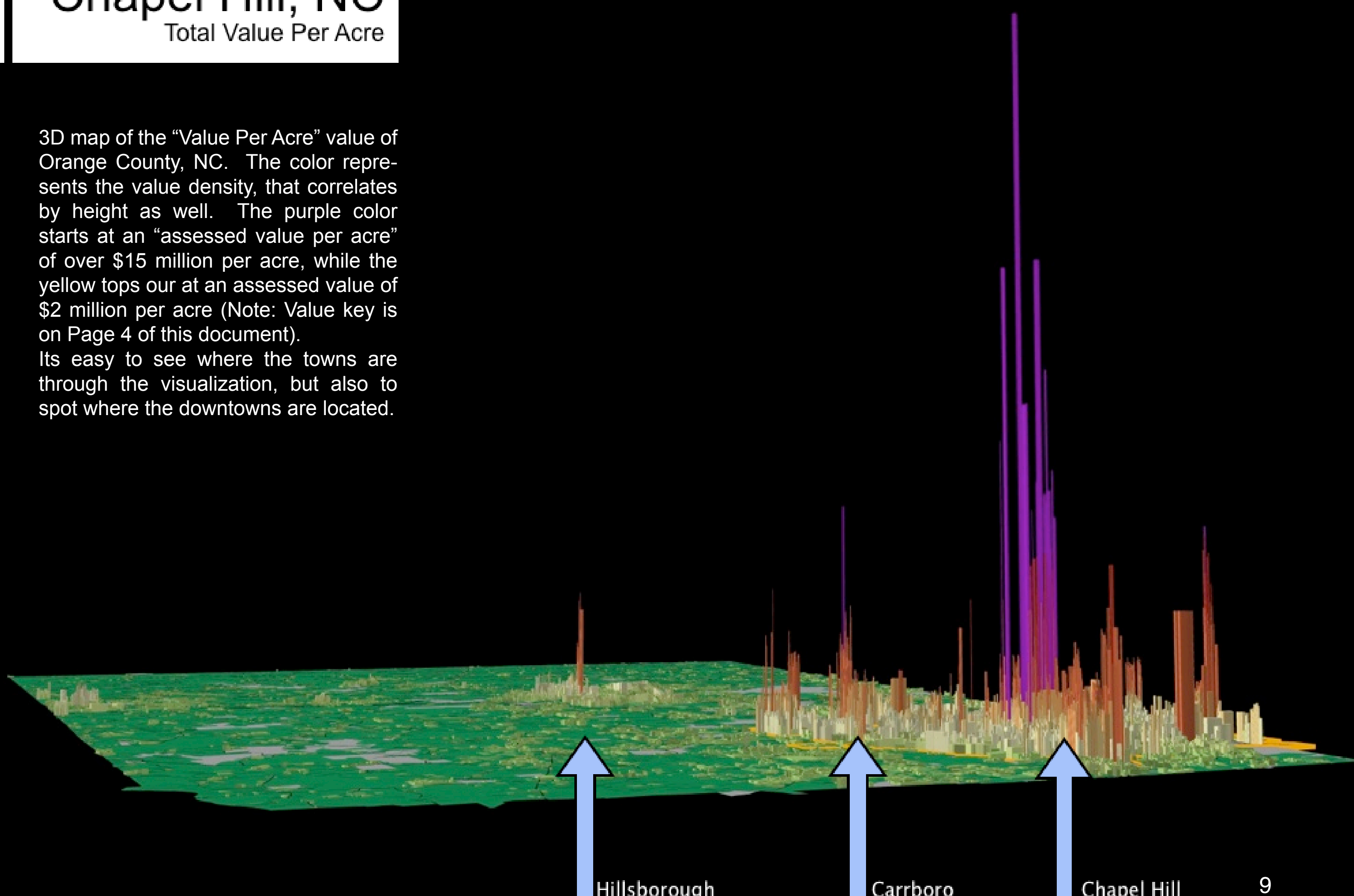
Joe Minicozzi
Principal
Urban3

higher levels of municipal service, though the level of expectation for continued service will require cultivation of new revenues. Additionally, there are examples from each town that can be shared. In all cases, what is clear is that the Main Streets are all areas of ‘over-achievement’ from a tax productivity standpoint. This is clear from the peaking “spikes” in the 3D tax model. The challenge is finding a way to cultivate that growth and add to it. It is clearly possible in Chapel Hill and Carrboro to capture this high yielding growth, but it will need to be compatible with community vision in order to compliment the desires of each community. The challenge is in the best interest of the citizens of the towns, but also the entire County. As noted in the property tax profile chart (bottom, page 8), those revenues are those of Orange County. While the towns see handsome municipal productivity of high-density and mixed-use projects, the County sees a similar productivity. So what is good for downtown is great for the town, but it is incredible for the County. The productivity of the downtowns help the county afford the larger county-wide conservation efforts which add to the quality of life in the towns, and help Orange County to stand out against its peers in the Triangle region.

Urban3

Chapel Hill, NC
Total Value Per Acre

3D map of the “Value Per Acre” value of Orange County, NC. The color represents the value density, that correlates by height as well. The purple color starts at an “assessed value per acre” of over $15 million per acre, while the yellow tops our at an assessed value of $2 million per acre (Note: Value key is on Page 4 of this document).
Its easy to see where the towns are through the visualization, but also to spot where the downtowns are located.



A Great Experiment

For thousands of years, human settlements were scaled around the predominant transportation technology of the day: walking. This impacted the way streets were scaled, the way buildings were spaced and the way public areas were utilized. The approach to building places for people who walked was established by trial and error over millennia. It was a system that was optimized by experience.

Beginning in the early 20th Century and then accelerating after World War II, America undertook an approach to building places based on the newly predominant mode of transportation: the automobile. New building styles were developed, new ways of locating and separating uses implemented and a new approach to growth adopted. These systems were based largely on the theories of academics and intellectuals, people who had studied how to deploy a new way of thinking to address the perceived deficiencies of the historic development pattern.

Initial results were largely confirming. New growth generated windfall gains for local governments and provided much needed jobs for a generation that had lived through hardship in the Great Depression. As time went on, however, the nature of these financial exchanges started to become evident.

When the federal or state governments, the DOT or a developer pays for new infrastructure, it costs the local government very little to create new growth. The day to day burden of maintenance, however, falls largely on local governments. Since that burden doesn't come due for two decades or more after each new growth project, it creates an illusion of wealth as new tax revenue pours in but distant obligations go unaccounted for.

Today, what seems the normal way of doing things is, in reality, a very young experiment. Just sixty years – two generations – of building in this new style has passed. Local leaders struggle today to make good on those distant and unaccounted for obligations of prior generations. The answer developed during this experiment – induce new growth – is proving insufficient.

What we are now finding is that our cities are not burdened by a lack of growth but by decades of unproductive growth. When the long term service and maintenance obligations from new development exceeds the cumulative amount of revenue that new development generates, an insolvency crisis is unavoidable.

So what do we do now?

Instead of pursuing growth for growth's sake, local governments need to pursue growth that is financially productive, places that generate more revenue than overall expense. It is no coincidence that, as we study the Piedmont Region, we find that the places built in the historic development pattern fit this objective while those shiny, new places we think of as "growth" don't quite measure up. These insights are valuable data to policy makers and the public when they are trying to understand why the current approach is not working and then develop strategies that do.

All of the cities we studied are blessed with areas that are financially strong and productive. These places form the foundation of a healthy, prosperous and productive Piedmont.

Charles L. Marohn, Jr. PE AICP
President and Co-founder
Strong Towns