



# Nashville-Davidson

## Local Solutions for a Regional Vision

**N**ationally recognized as “Music City USA,” Nashville could soon lay claim to the title “Revitalized City USA”. Forged through decades of community-wide thinking as a ‘region of districts,’ Nashville has adapted a system of thinking at both a macro level (in being a City/County joint government) but also by reinforcing the identity of its neighborhoods. In fact, the key to success for Nashville has been thinking big and small at the same time.

Nashville has developed with a dualistic approach to planning – addressing local needs while understanding the broader context. The Metropolitan Planning Department is nationally known for its work for the region as well as the neighborhood. This is reflected in their past planning efforts as well as the work in the NashvilleNext process. Subsequently, Urban3 was contracted to perform a county-wide analysis of land-use patterns to better understand the relationship of land-use to its production of tax revenue for the community. This type of study coincides with the NashvilleNext process to better understand how future Metro planning decisions impact the local tax base.

To use a metaphor, a portfolio manager should gauge the relative productivity of various assets in the portfolio to better leverage her investments. There may be feasible opportunities for higher leveraged returns in a segment, while another may require a larger strategic plan to capitalize on the asset. Davidson County is a portfolio of various properties uses that all have value. In fact, Davidson County is worth a total taxable value of \$66.4 Billion! This is the accumulated total of hundreds of thousands of individual properties that have to work in concert, under a larger vision or plan. Urban3’s revenue analysis serves as a metric to measure existing parts of the community to better understand the fiscal and social impacts of land-use decisions in the community. Visualizing land-use patterns and their effects can be directly applied to the goals of the NashvilleNext process.

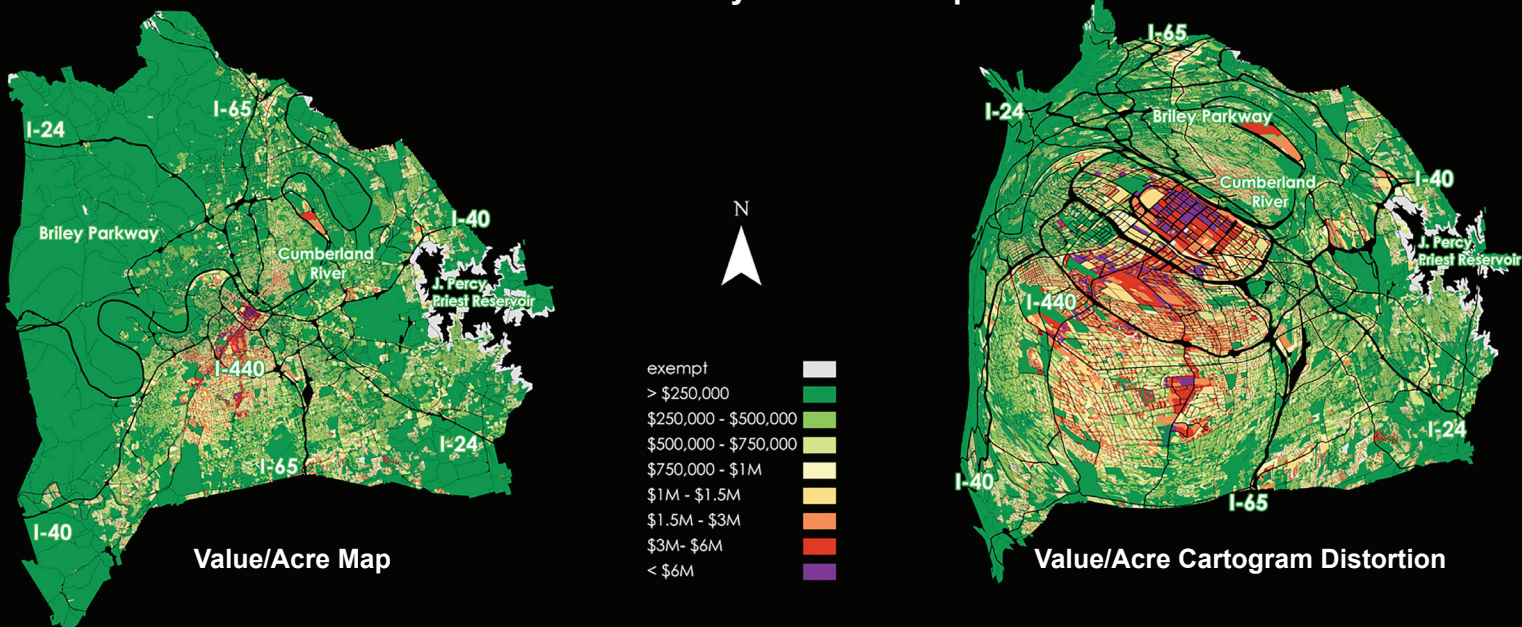


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## Davidson County Valuation Map



### Huge Value

The above maps are colored as “heat maps” to demonstrate the value per acre of parcels across the county. The higher the value, the hotter the color. Non-taxable property is reflected in gray.

Urban3 utilized Cartogram software to shape those same values in relative size. So if a property were 10x the value of another, the parcel was shaped to physically represent that scale. The distortion of the map reflects the value distortion of the properties. The map clearly demonstrates that Downtown grows in value, to a potency well over its size.

### Property Value: A New Perspective

In this study, Urban3 measured the revenue productivity of land-use development patterns across the county. Using property tax assessment rolls from Davidson County, Urban3 analyzed property values with respect to their acreage (i.e. land consumed). Land is the least common denominator because, as an incorporated area, land is all that the community has as a real asset. Indeed, Davidson County is an ‘incorporated’ area of land that will not change. 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. The ‘value per acre’ method is a metric that normalizes across the variety of parcels. Just as our evaluation of automobiles on a miles per gallon basis gives an accurate assessment of the vehicle’s efficiency, evaluating property by its ‘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 allocate fertilizers in an efficient manner. Urban3 uses similar technology to map the value per acre, to better realize the relative productivity of property taxes across the county.

### Results

There are findings typical of a city, but Davidson has patterns that make it unique. For one, Davidson is a joint City-County government. Though it has adopted this form, the terminology for its taxation as “General Service District”(GSD) and “Urban Service District”(USD), are essentially similar to “County” and “City” boundaries. Like a “city” resident would pay both City and County taxes, a parcel located in the USD pays both USD and GSD taxes, while a property in the GSD only pays GSD. For this reason, the Urban3 re-

port baselines its data at the GSD level to reflect the level of taxation that everyone pays in the County.

The results for Nashville and Davidson study are impressive. The core of value density is in the downtown, and it leans toward the southwest to Vanderbilt University. There are subareas of value density around new development in the Gulch area, and then out by the University. But the drop off in value/acre is quite dramatic once one leaves these areas, or areas of dense development.

Nashville has experienced a resurgence of infill development of a variety of patterns. The sample of development typologies is as broad as the diversity of neighborhoods throughout the region. Isolating these projects, and their patterns, was a particular focus of the study. Obviously, they cannot be seen in total isolation, as their location affects their value, but understanding density's effect on value helps to better understand the potential benefits of infill development. Infill is positive growth because the infrastructure already exists, and higher density projects have a net positive benefit to community revenue streams, as identified in Smart Growth America's Nashville report (below).

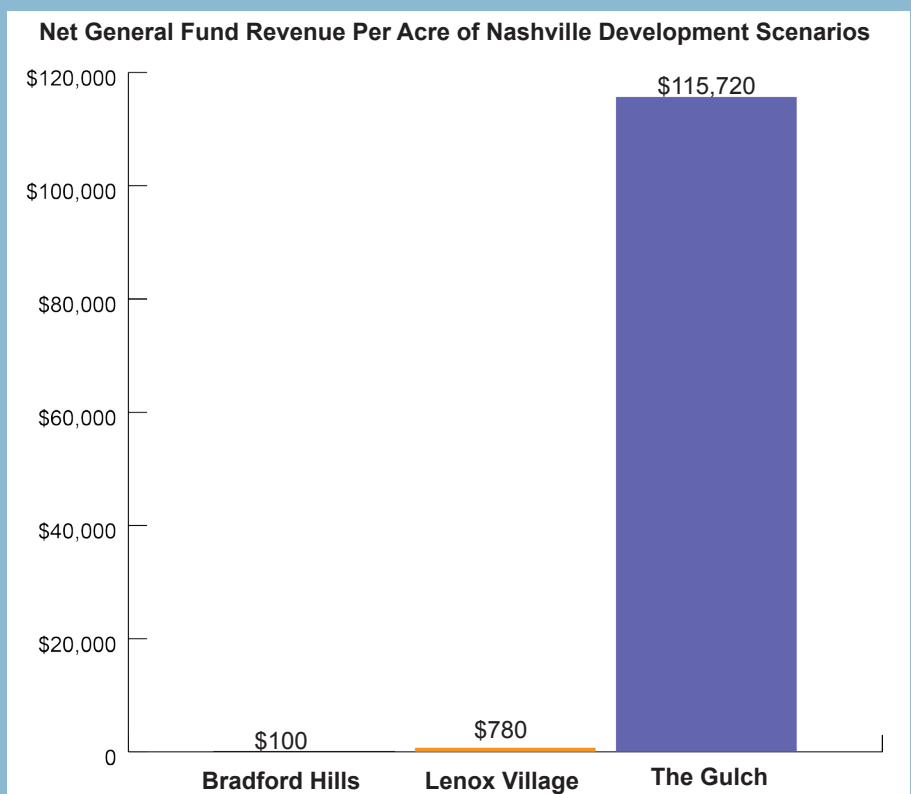
Though this study was conducted primarily for property tax production, Metro Planning was able to secure retail tax production data for Davidson properties. This research was done through the State Department of Revenue. Because of State policy, data is organized in zip codes. By normalizing the data up to a zip code, it protects confidentiality of individual business sales production. Luckily, the zip code areas correspond well with the geography of the districts within Davidson, so the codes for

## Value By Design

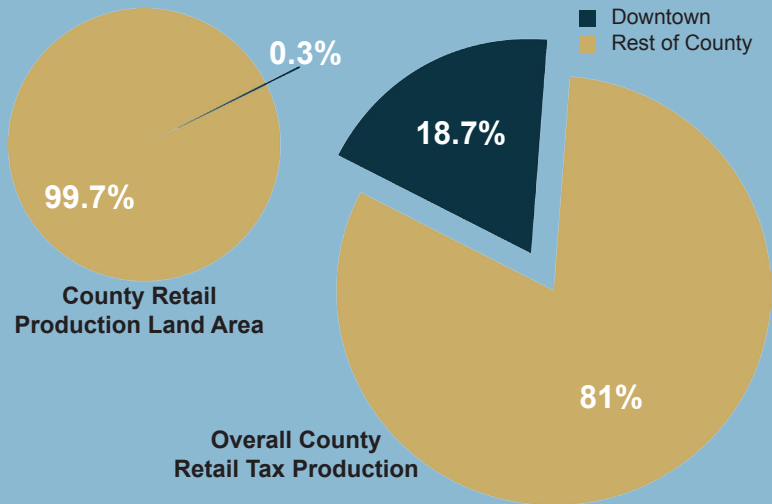
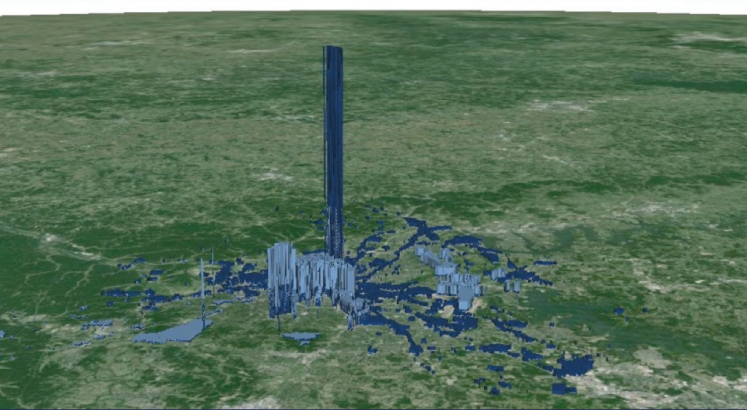
The Nashville Metropolitan Planning Department partnered with Smart Growth America in 2012 to commission an impact audit of three development patterns. The typologies that were considered were two suburban patterns and a mixed-use, high density product in the Gulch. For the suburban patterns, one was conventional development (Bradford Hills) and the other was a traditional pattern recommended by the city's goals, literally across the street (Lenox Village). The analysis was performed by Strategic Economics.

Not only is it impressive that Lenox Village could net close to **8 times** the gains by utilizing different site design, but the Gulch provides a whopping **132 times** more yield than the others, combined!

Source: "Building Better Budgets" report by Smart Growth America, May 2013.  
Available at [www.nashvillenext.net](http://www.nashvillenext.net).



Nashville, TN  
Average Retail Taxes Per Zip Code



## Regional Impact

Using retail tax data from the State Department of Revenue, Urban3 conducted 3D GIS analysis (above) to compare retail tax output and land area by zipcode.

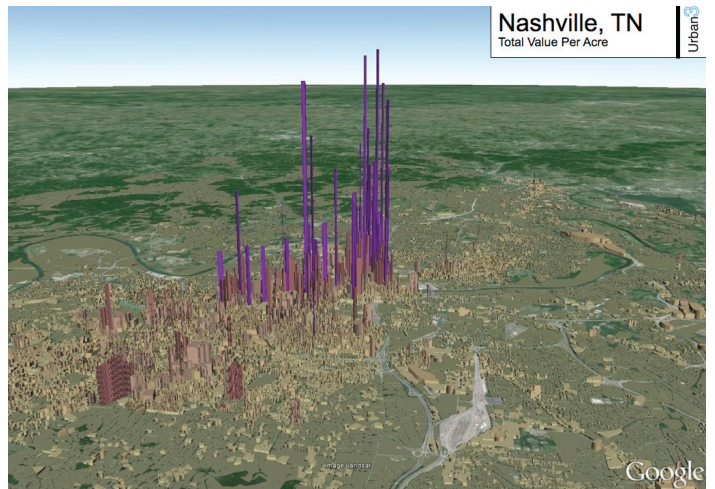
Downtown zipcodes consumed a modest **0.3%** of county land, yet produced a hefty **18.7%** of county's total retail taxes.

**The Gulch** (below) is an infill development project that could be emulated in Nashville.

Using the Value per Acre metric, **3D analysis** (below right) clearly demonstrates the value density potency of downtown, Midtown, and the Vanderbilt area (noted by the purple spikes) to the County.

downtown and suburban shopping centers align with their respective urban boundaries. Urban3 further refined the areas, by removing parcels with land uses ineligible for retail tax production, such as residential uses.

In analyzing the data, the significance of downtown Nashville is immediately evident. Typical of studies in other communities, the potency of downtown property tax production is notable when charted against other land-use patterns, but the retail taxes modeled similar productivity for Nashville. In fact, the most productive retail area was surprisingly not the Green Hills Mall zip code (37125) at 4% of total retail tax production over 175 acres or \$63,568 retail taxes per acre. The truly eye-popping finding was that the downtown zip codes (37201 & 37219) yielded the greatest potency at 18.7% over 102 acres, or \$522,220 of retail taxes per acre. Downtown is a full *six times* the retail tax productivity of the Green Hills Mall. In other words, downtown Nashville zipcodes' consume a slight 0.3% of county land area, yet they create a hefty 18.7% of the County's retail tax production. Aside from the traditional role of office and government, downtown serves many needs in the region. The everyday purchases of Nashvillians that work (and now reside) in the downtown population is further buttressed by the volume of tourism sales. Though this study lacks the level of detail to parse out specific purchases, the sheer volume of downtown retail sales cannot be attributed to local commerce alone.



## The (semi) Definitive Case for Downtown

This analysis clearly concludes that downtown is an efficient revenue producer in the County. This may not be a revelation, but the net effect of downtown is astonishing. The sheer intensity of value drawn from the downtown, and the steep drop-off once one leaves the CBD is one of the most dramatic value models of Urban3's study set. As seen in the model and maps, there are areas between the downtown and The Gulch, and downtown and Vanderbilt that should be the primary objective of infill. There are conversations of mass transit along these corridors, and whatever investment is sought, it should be a compliment the potential of development. This isn't an area to cut corners, as the density opportunity here can be of a nature that Nashville hasn't experienced since the early 1900's. As Nashville continues on its path to being a top tier city, it needs to consider its shape and development along those same lines; and its infrastructure needs to match that. This isn't a matter of "if?" Nashville will get there, but a matter of "when?"

The neighborhood pattern of valuation is not a 'one size fits all'. The neighborhoods all have locational differences that affect their appraised values as well as varying degrees of revitalization. The older stock (and tighter densities) are faring better from a value/acre basis than their less dense peer neighborhoods. Additionally, those of a mixed-use and walkable pattern also see a greater value density. There are clear lessons within these, and Nashville has already applied policy to reinforce this pattern. In a larger context, like the overall value and employment patterns, the general gravitational pull has been to the south west. There are numerous reasons for this to be true, but within this lies the opportunity inside the east and northeast neighborhoods. Though they may traditionally be off the radar screen, a more detailed look shows that they are indeed pulling pockets of high value. And on an individual basis, some houses in East Nashville's Greenwood are pulling assessed value/acre that exceeds the average Belle Meade, at \$953,928/acre to \$242,463/acre respectively. Granted, it is the density that brings the additional value, and extra density does have extra public services, but this only demonstrates the need to be conscious of the numbers and doing the math. Though it does highlight how strategic investment can yield greater community benefit by, in some cases, smaller interventions. Finally, service analysis could be the next step to compliment this study.

**\$953,928 per acre**



### Revenue Efficiency of Density

Properties in East Nashville's **Greenwood** (left) are relatively dense and have surprisingly high value per acre.

By comparison, large estate parcels in **Belle Meade** (right) have high values, but use far more land to get there. When broken down per acre, the value becomes more modest in production.



**\$242,463 per acre**

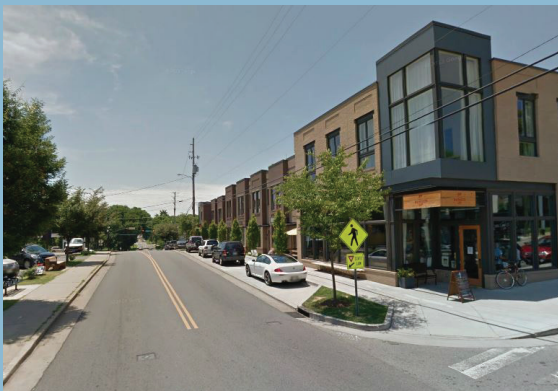
## Opportunities

**“The net benefit of revitalized neighborhood commercial is a win-win-win”**

From the 3D map, there are gaps that are quite obvious. Its most notable in the ‘voids’ in between the purple spikes, or as areas of transition from purple to red. Obviously, there is a limited amount of development that can be absorbed in these areas, but the value returned in these areas also have the highest net gains from a tax base standpoint. There will be infrastructure demands in this area that should be accounted for, which could be implemented in unison with these new private investments. It is clear that Nashville has learned from the Gulch experience, and efforts to replicate these patterns is in the works in districts around downtown.

Another replicable model has been the lessons of the mixed-use neighborhoods. Particularly, rehabilitation of the commercial corridors in and adjacent to the residential cores of neighborhoods. The net benefit of revitalized neighborhood commercial is a win-win-win. It provides feasible investment opportunities for local entrepreneurs as well as meeting the needs of an immediate population. The effect of both is a more desirable residential condition (of being able to walk to your favorite restaurant or job), while the commercial development has a built in market demand. The result of this relationship is an elevated tax base that helps the entire Metro.

Finally, Vanderbilt University is a tremendous partner in Nashville. It provides an employment base, and a heightened property value around its borders. It also provides an exceptional human resource to Nashville via students. Students contribute to retail sales in and around Vanderbilt, but also downtown. The market reflects this in the retail profile of land-uses, but this should be leveraged in multi-story developments to insure mix of uses, and heightened tax base. Efforts should also be made toward converting recent graduates into permanent Nashville residents. Many university towns have highly visible incubator programs and districts of public-private partnerships to cultivate talent that converts into new business development that adds to the community’s prominence. Such a district could easily fill the void between the university and downtown.



### Utilizing Community Assets

Commercial revitalization like this infill in 12 South (left) has created walkable commercial opportunities in a traditional neighborhood.

Vanderbilt University (right) is a tremendous asset to the region.





### Property Tax Yield Chart

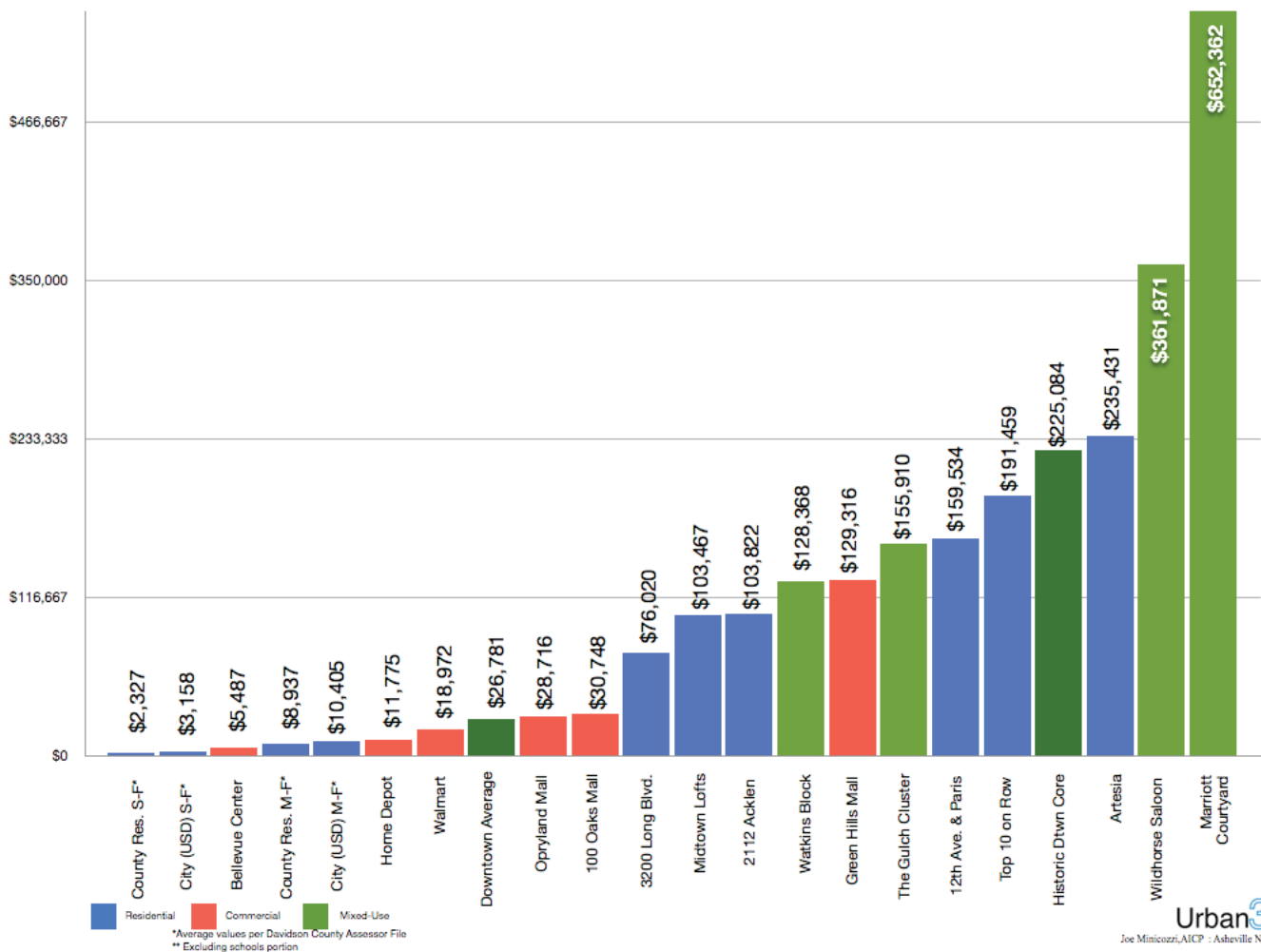
Sample of landmark properties charted for comparison purposes (below). The chart demonstrates the value productivity of mixed-use buildings, but also the historic old fabric. Just 0.53 acres of Wanna B's (above) would produce as much property tax as the 52 acre 100 Oaks Mall.

## Challenges

As Nashville grows and seizes opportunities in its urban core and in ‘filling in the purple spikes (to use the 3D model as a guide) the community will have to wrestle with accompanying capital demands. With it, comes a shifting understanding of the needs in infrastructure. It is difficult for the typical Nashvillian to contemplate this change or prioritize this future investment. But as Nashville grows, with a few dozen more developments in the Gulch, the needs for the area will be dramatically different.

While the University is an asset, there are challenges that are typical of a “town and gown” relationship. Colleges and universities are mini-cities unto themselves and their needs within are complex and challenging enough. But leveraging the internal growth of the University with that of the City is a goal that benefits both, equally. There are things that a City can do that a University cannot, and vice versa. There are many campus/city relationships that should be investigated as a model; MIT, Penn, and Harvard are all east coast universities located in urban cores that maintain cooperative relationships with their neighboring communities.

**Davidson County (GSD) Property Tax\*\* Revenue Profile: 2013 Tax Yield per Acre**



## Building a Regional Vision

What we have learned from this study is what is good for the downtown is good for the urban area, but it is great for the entire county. Downtown is a tremendous generator of sales and property tax revenues. The efforts of projects in and around downtown is yielding tremendous revenues to the community. The challenge is how to best leverage this, and expand it, in spite of infrastructure and market speculation challenges. Clearly, the efforts to “vision” the community are paying off. Nashville has a great track record of implementing its plans and working at a neighborhood level. And though small projects are necessary for infill sites, those projects are ‘punching well above their weight’ in property tax revenue. Nashville has turned the corner on revitalization with proven examples of infill and investment that is yielding tremendous values. These projects compliment their neighborhoods and districts, but overall, they are benefitting all of Davidson County.

### Value/Acre Map

Map showing the core area of the County, mostly the USD area. Downtown is clearly visible as a purple “bull’s eye” in the center of the map.

