Sustainability of Proximity: White Paper

By Sinclair Black, FAIA
Principal, Black + Vernooy Architecture and Urban Design

The Rethink White Papers offer up fresh, innovative thinking to Austin citizens and decision-makers about the future of our City. They are intended to present some of the best sustainability thinking from Austin's thought-leaders in a way that is fresh, accessible and compelling. We hope the Rethink White Papers will inspire us all to take action for a bright green future for Austin.

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The mission of the Office of Sustainability is to provide leadership, influence positive action through engagement, and create measurable benefits for Austin related to climate, food, resource efficiency, and resiliency.

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There are costs associated with sprawl, which arises from a lack of proximity. Sprawl creates longer commutes, which increases costs to individuals and society. Providing public services – everything from Emergency Medical Service and water, to road maintenance and freeway building – costs more. The negative impacts are so enormous that we would rather not think about it. However, as we see our taxes support sprawl at the expense of the city we already have, one day soon we will stop and say, “What went so wrong?”

For years now, we have received information about the benefits of sustainability. We have learned about innovations both large and small, from improved insulation and better gas mileage, to alternative energies and the electric car – and now even the driverless car. The list goes on and every topic is indeed important, each making a unique contribution to efficiency and resource conservation.

But there is an elephant in the room: urban land use. While it is a pervasive issue that affects everybody, not many are thinking about the long-term consequences of the prevailing business-as-usual mentality, i.e. sprawl. The only alternative is to live closer to where the jobs, services and entertainment are, encouraging people to think about walking or biking more, with more distant destinations served by bus or rail. Soon we are going to have no choice but to have more compact and connected development efficiently served by a transportation system that provides us with more options. And, of course, the longer we wait to make these changes, the greater the costs will be. Until we face the true costs of sprawl, we will continue along the downhill slope toward unsustainability.

There needs to be a new measure of sustainability, one that measures proximity’s benefits. The “Proximity Calculator” can be used to help people understand the costs created by unnecessarily expensive, time-consuming commutes. Because of the tremendous time and money saved as a result of less auto dependence, the calculator should have vigorous land use applications.

The Proximity Calculator quantifies, among other things, the savings of time, gas, greenhouse gas emissions, and open space if residents of a development reduce their commute "X" miles by living closer to where they live, work and play. By identifying which sites/areas will ultimately capture the most benefits or generate the most cost savings, proximity can be incorporated as a central theme of public policy at every level, opening the door for the concept of "location efficient mortgages" (LEMs).

Below you will find an example of the power of the Proximity Calculator based on real factors existing today in Austin, Texas. It is an analysis of a 75-acre tract of land that, if well designed, could conserve 49 acres of open space while supporting a community of 1,134 residents (843 commuters) on 26 acres at a blended average density of 36 dwelling units/acre, i.e. an overall gross density of 6.35 dwelling units/acre.

If developed in this manner, and if the residents had access to a transportation system that allowed them to reduce their auto-dependency by 15 miles/day, the benefits achieved by this development would be:

- 4,605,032 total vehicle miles travelled saved annually
- 177,117 gallons of gas saved annually
- 1,771 tons of greenhouse gas emissions saved annually
- 153,501 commuting hours saved annually
- Total annual cost savings for all the residents of the development: $5,827,373
- Total annual cost savings for each resident who commutes: $6,913
- Total open space saved: 355 acres

The benefits of appropriately developed proximity are profound.

Our transportation and land use patterns must be linked together to optimize the performance of both. Some policies, however, appear to subsidize unsustainable sprawl at the expense of more efficient urban cores. Fixing these policies will play a major role in building a prosperous and sustainable society for ourselves as well as future generations.

The Proximity Calculator gives the public metrics to better understand commuting costs and to make better land use decisions. And hopefully ***proximity*** will become a central theme of public policy at every level, creating a tool to better understand the true meaning of sustainability – before it is too late.

Sinclair Black has devoted his life to improving the quality of urban environments. He is the Roberta P. Crenshaw Centennial Professor in Urban Design and Environmental Planning within the School of Architecture at the University of Texas at Austin.

Mr. Black has served on many city committees and non-profit boards. He is a founding member of the Central Texas Chapter of The Congress for New Urbanism and is honored with the title, Director Emeritus.

Mr. Black has provided insight, guidance and design on numerous Urban Redevelopment Planning projects. Currently, he is leading efforts on Reconnect Austin, encouraging TXDOT to depress I-35 through downtown Austin and cap it with Urban Boulevards. His work on the Downtown Great Streets Master Plan and the original AMLI Downtown served as the catalyst for the resurgence of retail and urban living in downtown Austin.

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