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Healthy Community Design

The layout and design of our communities influence the physical and mental health of the people who live, work, and play in them. Similar to the sustainable communities principle, healthy community design is rooted in the commitment of the General Plan to enhancing “quality of life” for all Nashvillians. Healthy community design improves quality of life by making it easier for people to make healthy choices and live healthier lives.

Acknowledging and addressing the health implications of development decisions during the Community Planning process contributes to the prevention of negative health outcomes at a population level. From a public health perspective, looking at “upstream” health determinants in the built environment is a more efficient strategy than focusing solely on individual patient treatment and education strategies. This is not to discount the need for health interventions at the individual level, but is rather a way to make those individual interventions more effective at a broader scale. For example, a doctor may encourage her patients to start walking regularly as a way to prevent weight gain and associated conditions like diabetes and heart disease. If some of her patients live in neighborhoods that lack safe and comfortable places to walk, then her counseling is much less likely to be effective due to barriers in the built environment that make the healthy behavior choice a difficult option. However, her patients living in environments supportive of walking, with features like well maintained sidewalks, well lit streets, and accessible green space, will be better equipped to follow her advice and be more likely to avoid poor health. Healthy community design frames changes to the built environment as population level interventions that can improve public health by increasing the effectiveness of individual level interventions like the doctor encouraging physical activity through walking. If more environments are designed to be supportive of healthy choices, then more people are likely to make those healthy choices. Over time, the result of these choices is improved public health across Nashville-Davidson County.

The public health challenges healthy community design helps to address include:

- The obesity epidemic: National obesity rates have been rising dramatically for the past thirty years, with Southern states consistently becoming heavier than the rest of the nation. In 1985 Tennessee’s obesity rate was less than 10%; by 2010 it had risen more than three-fold to nearly 32%, making Tennessee one of the five most obese states in the nation. In Davidson County, the numbers are only slightly better than the state as a whole, with roughly 30% of adults classified as obese and another nearly 40% classified as overweight. Nationally the medical care costs associated with obesity were over \$147 billion.
- Physical inactivity: Lack of physical activity is related to the obesity epidemic noted above, but increasing daily levels of physical activity has health benefits independent of changes in weight. In Davidson County, 27.9% of adults reported no leisure-time physical activity.
- Injuries prevalence: Davidson county had the highest injury crash rate of any county in Tennessee from 2006-2010, with an average rate of 54 crashes per 1,000 licensed

drivers. Tennessee's 2007 Strategic Highway Safety Plan identified deaths and injuries caused by traffic crashes as a serious public health concern for the state. A study of 2005 data showed that the total cost of crashes in the Nashville region was 5.5 times greater than the cost of congestion. That same study also ranked Nashville as the costliest mid-size region in the country for crashes, both in terms of total cost (\$2.2 billion) and cost per person (\$1,574). In Davidson County there were 6,369 injuries and 73 deaths due to motor vehicle crashes in 2010.

- Food access and poor nutrition: In Davidson County, almost 70% of adults do not consume the recommended daily intake of fruits and vegetables. Nearly one hundred thousand people live in Nashville's four defined "food deserts," where accessing healthy foods is particularly difficult.

The Community Planning process can contribute to lessening the burden of the above conditions, as well as others not explicitly addressed here, by creating built environments that facilitate healthy behaviors. Healthy community design helps to achieve this goal by:

- Encouraging higher densities and mixed land use where appropriate, which shortens distances between homes, workplaces, schools and recreation, making it easier for people to walk or bike to and from destinations
- Providing quality infrastructure for viable transportation alternatives including mass transit, walking, and bicycling
- Ensuring a mix of housing types that include affordable options for people of all income levels
- Creating activity centers where people can gather and interact with other members of the community as part of their daily activities
- Offering access to parks and green space
- Allowing for school-based and community gardens along with other components of a robust local food system that allow all residents access to healthy food options
- Minimizing the impact of development on the natural environment, especially air and water quality
- Assuring public participation in the decision making processes that determine where and how development takes place

Implementing these healthy community design principles to the widest extent possible can lead to the following benefits, which in turn can lead to improved health outcomes over time:

- Increased physical activity: regular physical activity is associated with numerous health benefits, including reduced risk of overweight/obesity, cardiovascular diseases (high blood pressure, heart attacks, and stroke), type 2 diabetes, some cancers (e.g. colon and breast), osteoporosis, and depression.
- Improved air quality: exposure to air pollution can lead to exacerbation of asthma symptoms, diminished lung function, adverse birth outcomes, and childhood cancer.
- Reduced risk of injuries: injuries are the third leading cause of death in the US and are the leading cause for children and younger adults (ages 1-34). Non-fatal injuries are also a source of short and long term disability.

- Increases in social connections and sense of community: assessing the interaction between measures of social capital and health is difficult for a variety of reasons, but existing evidence suggests associations between higher levels of social capital and reduced all-cause mortality, as well as with self-reported general health status.
- Improved access to healthy foods: with access to healthy foods comes the opportunity for improved nutrition, which can reduce obesity and its associated diseases, cardiovascular disease, cancers, and diabetes.

Using the built environment as a means for improving health is a long-term strategy. As noted elsewhere in this document, the land use and transportation patterns created through development will impact how people live, work, and play for many years. The negative health effects of sprawling development patterns have taken decades to become evident, and instituting healthy community design is no panacea. It can however, along with concepts tied to sustainability and other principles laid out in the CCM, shift these patterns toward built environments that are more supportive of health and provide a foundation for current and future generations to live healthy and productive lives.