

This REVISED DRAFT DOCUMENT takes into consideration comments received between July 25, 2012 and July 1, 2013



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## 4 | Sustainability: The Triple-Bottom-Line Approach



Streetscape rendering near Delmar MetroLink Station

## The Triple-Bottom-Line Approach

The term “sustainability” often conjures images of green roofs, renewable energy, bicycles, electric cars, and anything that is considered “green.” This narrow definition of sustainability focuses almost solely on products, actions, and initiatives that conserve and protect the natural environment. While environmental “sustainability” (i.e. meeting the needs of the present without compromising the ability of future generations to meet their needs) is one aspect of sustainability as a whole, a focus on the environmental aspects of sustainability only will not ultimately produce a sustainable result.

Triple-Bottom-Line Sustainability is based around the concept of the “3 E’s:” *Environment, Equity, and Economics* (alternately, the “3 P’s:” *People, Place, and Prosperity*) as interrelated in their ultimate success or failure. Being a good steward of the environment by leaving it in a better condition than you found it is certainly a key goal of sustainability and sustainability planning. It is demonstrated, however, that an individual’s concern for environmental stewardship increases as his or her prosperity increases. This can be expressed in the adage that a starving man would much rather eat an endangered lion than protect it. Likewise, an increase of social equity—broadly defined as individual empowerment and stakeholderhood in a community—increases an individual’s desire and motivation to improve that community, since he or she is effectively improving his or her personal investment in that place.



Traditional neighborhood open-loop flows (today)



Closed-loop neighborhood cycles (the Plan)

The triple-bottom-line approach acknowledges the three pillars of sustainability—environmental stewardship, improved social equity, and increased economic development—as equal in their impact on allowing current generations to meet their needs while protecting the ability of future generations to do the same. Furthermore, it recognizes and capitalizes on the fact that the three pillars of sustainability can be leveraged against one another to increase the positive outcomes of each beyond what would be possible if each pillar were addressed separately. This is due to the fact that most sustainability initiatives—regardless of their specific focus—which occur in the sphere of cities require some degree of investment of city funds. If one of the effects of the initiatives is to increase property value or stimulate economic activity, the tax base may increase enough to fully offset the cost of the initiative or beyond. In addition, an increase in property value improves the investment of individual residents, makes the community more desirable, and may lead to an increase in other investments, both public and private. This has the effect of increasing social equity by improving each individual residents’ “investment” in their community and its “return.”

This type of success can be illustrated with the development of public transit. Through increased efficiency, mass transit lowers the per-capita carbon emissions per user when compared to transportation by car. This has a measurable impact on environmental sustainability. Proximity and access to public transit can also raise property values, which provides a positive economic impact to both the city (through an increased tax base) and individuals (through an increase in their real estate value.) Regular use of public transit also reduces annual transportation costs to households, which increases individual real wealth. This increase in wealth can have a positive effect on both individual economic impact as well as an increase in social equity, because it enhances individual empowerment within a community.

**Economy**

- Market development
- Local business support
- Job opportunities
- Affordable housing

**Economy in Parkview Gardens**

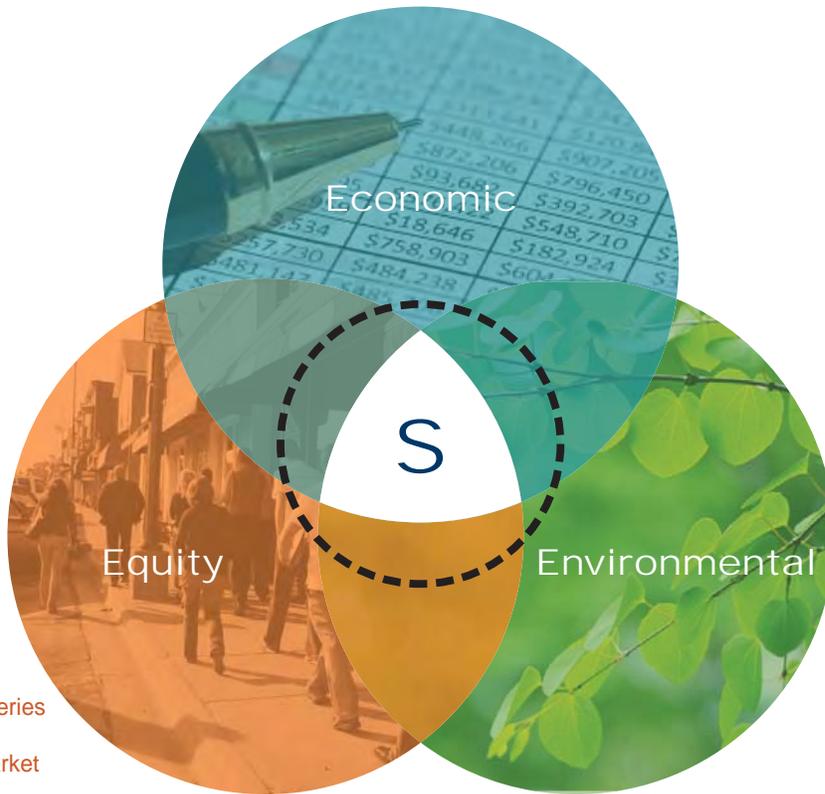
- Olive Boulevard
- North Skinker Corridor
- Jobs/Housing Balance
- East Loop
- Delmar Loop
- Cunningham Business Park
- WUSTL North Campus
- Smart Community Infrastructure

**Equity**

- Educational opportunities
- Neighborhood vitality
- Social & cultural diversity
- Self-governance
- Active living
- Health & safety
- Food system

**Public Life in Parkview Gardens**

- University Civic Complex
- The Pageant
- Community Garden
- Washington University
- St. Louis Walk of Fame
- University City Sculpture Series
- COCA
- University City Farmers Market
- Regional Arts Commission



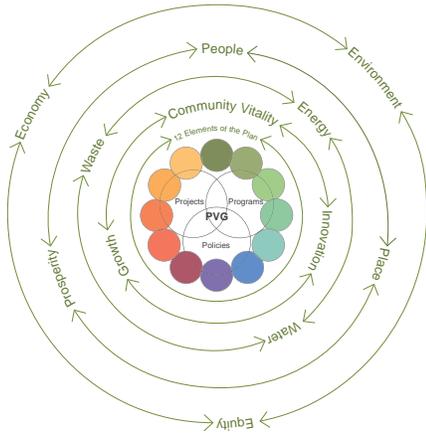
**Environment**

- Stormwater
- Water Conservation
- Air Quality
- Renewable energy
- GHG reduction
- Green infrastructure
- Placemaking/character
- Parks & open space
- Green buildings
- Tree Canopy
- Native species
- Biodiversity
- Planning
- Land use
- Waste minimization
- Mobility
- Transportation

**Environment in Parkview Gardens**

- MetroLink
- Loop Trolley
- Centennial Greenway
- River De Peres
- Metcalf Park
- Ackert Park

**Existing and future triple-bottom-line assets in Parkview Gardens**



The key to triple-bottom-line sustainability, therefore, lies in the multi-faceted interrelationship of projects and initiatives, and not in discreet projects and initiatives alone. This interrelationship is described by renowned sustainable-design experts SERA Architects as a “civic ecology” and is key to creating a holistically-sustainable communities. They state: “Nurturing this web of relationships and flows affords communities the means to enhance their local wealth (environmental, economic, and cultural), resilience, and competitiveness, and to take control of designing and managing their future.”

The spider diagram at right expresses the complex web of interrelated connections that exist in the plan. Together, the principles and goals of sustainability and sound development are supported and mutually-leveraged by the relationships between these components. **These relationships are supported by successful implementation of capital improvement projects (streetscape and park development, transportation and accessibility improvements, and new walkable, compact development) and ongoing policy, programming, and partnership initiatives. The relationships between these initiatives complete the civic ecology of the Parkview Gardens neighborhood.**

The Plan is a triple-bottom-line plan that frames proposed neighborhood improvements and recommendations through the lenses of environment, equity, and economics. Twelve *Neighborhood Infrastructures* and multiple *Sustainability Initiatives* organize the Plan into projects, programs, and policies, which are then rated on 32 specific evaluation criteria, categorized by the three pillars. This evaluation of specific projects, programs, and policies will be useful to the City of University City in prioritizing action items and achieving measurable results.

## Sustainability Plan Matrix

The Sustainability Plan Matrix, below, uses Harvey Balls ideograms to assess the impact of each initiative. The column at the right quantifies the impact of each initiative. Open circles are worth 0 points, half filled circles are worth .5 points, and filled circles are one point. The higher the number at the end, the more impact it has as assessed based on 32 evaluation criteria, which are listed and color coded on top edge. Although some initiatives have a high impact score, University City will have to balance implementation with short and long term phasing and financial feasibility of implementing the initiative.

### Sustainability Plan Matrix

Principle	ECONOMIC											ENVIRONMENTAL											EQUITY						TOTAL IMPACT SCORE					
	MARKET / REAL ESTATE DEV.	JOB OPPORTUNITIES & SKILLS	LOCAL BUSINESS DEV SUPPORT	AFFORDABLE HOUSING	ARTS & CULTURE	SOCIAL CAPITAL	TECHNOLOGY AND INNOVATION	STORMWATER	WATER CONSERVATION	AIR QUALITY	RENEWABLE ENERGY	ENERGY USE REDUCTION	GHG REDUCTION	PLACE MAKING / CHARACTER	PARKS & OPEN SPACE	GREEN BUILDINGS	TREE CANOPY	NATIVE SPECIES / BIODIVERSITY	PLANNING	LAND USE	WASTE MINIMIZATION	MOBILITY	TRANSPORTATION	EDUCATIONAL OPPORTUNITY	SOCIAL & CULTURAL DIVERSITY	NEIGHBORHOOD VITALITY	COMMUNITY EMPOWERMENT	SELF GOVERNANCE		ACTIVE LIVING	HEALTH & SAFETY	FOOD ACCESS & NUTRITION	SOCIAL / HUMAN SERVICES	
Initiative	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	14
Initiative	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	9
Initiative	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	6.5

