12-6-2016

Social Capital, Creativity and Cultural Vitality: Prioritization Factors for Sustainable Public Space Systems Design

Rachel D. Gilroy
University of Connecticut - Storrs, rdgilroy@gmail.com

Social Capital, Creativity and Cultural Vitality:
Prioritization Factors for Sustainable Public Space Systems Design

Rachel Dawn Gilroy

M.F.A., Academy of Art University, 2008
B.S., University of Connecticut, 2002

A Thesis

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Master of Science

At the

University of Connecticut

2016

APPROVAL PAGE

Masters of Science Thesis

Social Capital, Creativity and Cultural Vitality: Prioritization Factors for Sustainable Public Space Systems Design

Presented
by

Rachel Dawn Gilroy, M.F.A, B.S.

Major Advisor _____
Associate Professor of Landscape Architecture Kristin Schwab

Associate Advisor _____
Associate Professor of Landscape Architecture Mark Westa

Associate Advisor _____
Professor of Educational Psychology Dr. James C. Kaufman

Associate Advisor _____
Professor of Educational Leadership Dr. Richard L. Schwab

Associate Advisor _____
Associate Professor of Sociology Dr. Mary J. Fischer

University of
Connecticut

2016

ACKNOWLEDGEMENT

I would first like to thank my thesis advisor Professor Kristin Schwab of the Landscape Architect program at UCONN. The door to Prof. Schwab's office and home were open to me whenever I ran into a trouble spot or had a question about my research or writing. She consistently allowed this paper to be my own work, but steered me in the right the direction whenever she thought I needed it.

I would also like to acknowledge Associate Professor of Sociology Dr. Mary J. Fischer, Professor of Educational Leadership Dr. Richard L. Schwab, Professor of Educational Psychology Dr. James C. Kaufman, and Associate Professor of Landscape Architecture Mark Westa at UCONN for their diverse expert advice. Without their passionate participation and input, this thesis could not have been successfully conducted. I am gratefully indebted to their very valuable comments and allowing themselves to imagine with me in the intersections of their professions.

Finally, I must express my very profound gratitude to my parents and to my friends and colleagues for providing me with unfailing support and continuous encouragement throughout my years of study and through the process of researching and writing this thesis. This accomplishment would not have been possible without them.

Thank you.

Rachel D Gilroy

TABLE OF CONTENTS

PREFACE

"The overall name of these interrelated structures is system. The motorcycle is a system. A real system....There's so much talk about the system. And so little understanding. That's all a motorcycle is, a system of concepts worked out in steel. There's no part in it, no shape in it that is not in someone's mind. I've noticed that people who have never worked with steel have trouble seeing this-that the motorcycle is primarily a mental phenomenon."

~Robert Pirsig, Zen and the Art of Motorcycle Maintenance

The work of this thesis is to reveal strategies for systemic community transformation that incorporates utilizing *social capital, creativity, cultural vitality* and *sustainable design* principles to enhance *social equity* in community development. The framework will express a rationale and methodology for designing and programming public space systems to encourage *cultural vitality* and *social capital (bonding and bridging)* opportunities to allow *creativity* and flourish for a diversity of people. Much like the inspired structure of the motorcycle, public spaces in our communities are developed through interrelated structures such as sidewalks, roads, town squares and parks. The planning of our shared public spaces can be thought of as an expression of a "system of concepts" worked out upon the land.

In addition to the key concept of *systems thinking*, this thesis will revolve around the concept embodied by a painting term called *pentimento*. *Pentimento* (plural *Pentimenti*) is used to describe evidence that an artist has changed their mind or perception throughout the process of creating the artwork. It is not about erasing the canvas and starting a new painting, but instead shows the subtle shifts in thought and form that are essential to its full development. It is a refining process the artist takes on while leaving a trail of clues. These clues are important to the artist because they are a reflection of the visual, spatial and intellectual path that has been taken in coming to terms with the problem that the artist has set for him or herself to solve. (McRorie, S. 1996)

For this applied research project the artist involved is the landscape architect. The land on which we plan and build, much like a canvas, is a supportive base medium. In painting, the additive medium is generally applied with a brush but other items can be used, such as knives, sponges, fingers. Painting is a mode of creative expression, and its forms and systems are numerous. In land planning, the additive medium is generally applied through policy-making, but other forces can dominate these conventional tools. For example, sometimes the forces of nature are stronger than the human systems in place, i.e.; floods, hurricanes and earthquakes. Other times social forces on the land carve out spaces that can inspire (such as places created by the Bohemian class) or destroy (places transformed by war).

As with the *pentimento* the process on the canvas, well-designed land and systems of public space exhibit a steady shifting and refining of the environment towards innovative design of relevant to new social spaces, enriched but not limited by the layers of the past, must be done through a process of designing and programming the public space by recognizing the *social capital, cultural vitality and creativity* of all its constituents.

GLOSSARY OF KEY TERMS

The definitions in this glossary of key terms have been developed, refined, appropriated and sourced accordingly. They are not definitive statements, but are meant to aid in the understanding of this transdisciplinary thesis perspective. The terms below can be found in bold font in this thesis the first time it is introduced within the text.

Adaptive Leadership: A leadership framework that helps individuals and organizations adapt and thrive in challenging environments. It is being able, both individually and collectively, to take on the gradual but meaningful process of change. (Heifetz, et al,2009)

Central Place Theory: A geographical theory created by the German geographer Walter Christaller, who asserted that settlements simply functioned as 'central places' providing services to surrounding areas. (Richard, 2007)

Co-Creation Process: typically used as an economic management strategy that brings different parties together to reach or produce a mutual outcome. An example is *LEGO: Inspiring the next generation of creators* where LEGO designs can be submitted and voted on by both LEGO and community members. This model is similar to the co-creation of design in **creative placemaking** through community participatory design.

Community Participatory Design: In landscape architecture this term describes a way of creating environments that are more responsive and appropriate to their inhabitants' and users' cultural, emotional, spiritual and practical needs. It is one approach to creative placemaking.

Creativity: In this thesis this definition is developing from reviewing literature from scholars and leaders that study the field of creativity. A key resources used is *The Cambridge handbook of creativity (*Kaufman, J. C., & Sternberg, R. J. (Eds.). 2010). One way systems thinking was defined is by Csikszentmihalyi's (1988, 1999, 2014) as an individual acceptance of an idea because there is a continual triangulation between their culture, society, environment and the people who live, work and play with them. Vlad Petre Glăveanu identified three paradigms in the article *Principles for a Cultural Psychology of Creativity*: the *He- paradigm* and *I-paradigm*, which both are predominately individualist views of the creative process, and the *We-paradigm*, which discusses the social psychology of creativity which is used in this thesis and relates to Csikszentmihalyi's work.

Cultural Vitality: ACIP define cultural vitality as evidence of creating, disseminating, validating, and supporting arts and culture as a dimension of everyday life in communities.

Ecological Urbanism: is noted by its ecological approach to urbanism and its proponents advocate that it is more socially inclusive and sensitive to the environment, as well as less

ideologically driven, than landscape urbanism and new urbanism. Ecological urbanism argues for a more holistic approach to the design and management of cities.

Emergence Curriculum: is a philosophy of teaching and way of planning curriculum that focuses on being responsive to children's interests to create meaningful learning experiences. Rather than starting with a lesson plan which requires a "hook" to get the children interested, emergent curriculum starts with the observation of the children for insight into their interests and tapping into the values held for the children's learning by the school, community, family and culture (MachLachlan et al., 2013). This way of planning is incorporated into the community design process.

Place-based education is an educational philosophy sometimes called experiential education or community-based education is when the student learns from their environment. (MachLachlan et al., 2013). This way of planning is incorporated into the community design process.

Environmental Determinism: is a controversial term that relies on an approach which implies that individuals are bound to their environmental settings, especially climate. It is very much related to behaviorism in the discipline of psychology, which in the 20th century became the basis of thought for the geographical approach called Behavioral Geography. This approach argues that the causes for behavior are found in the environment therefore, all our behavior is a result of some environmental determination or stimulus. (Mitchell, 2000, p. 17).

Ethnography: In this thesis study ethnography is used to understand placemaking, specifically, the act of being a reflexive ethnographer which includes seeking to understand both her or his own emplacement and how she or he is involved in the constitution of ethnographic places. (Pink, S. (2008).

High Performance Landscapes: reflects a paradigm shift in thinking about the New York City park system as vital green infrastructure. This document outlines future activity for all New York City open space, and adopted these best practices in their construction, maintenance, material selection and resource management as their new agency standards. This manual is a comprehensive manual for the design and construction of sustainable parks and open space. (www.nycgovparks.org)

Multi-scalar (Level of Analysis): is used to refer to the interrelated scales of site (micro), neighborhood, (meso), local and regional (macro) and how design must consider context both larger and smaller. (Dinep, C., & Schwab, K., 2010) This concept is repeated across disciplines and three levels are a lot like the photographers' lenses, allowing the researcher to hold multiple-scale perspectives simultaneously

Metadesign: Is a concept the aims to nurture emergence of creative possibilities or projection through the collaboration of designers within interdisciplinary metadesign teams. Fischer et al. (2005) advocate that metadesign creates the foundations for an unselfconscious culture of design. This type of design process seeks to harness creative teamwork within a suitable co-design framework with the hope that tacit knowledge will emerge and transfer into a collective and

innovative final product i.e.; creative communities thru the expression of social capital and placed-based cultural vitality. (Fischer et al., 2005)

Multifunctional Landscapes: In *Multifunctional landscapes as a basis for sustainable landscape development,* Kato, S., & Ahern, J. (2009) advocate that sustainable landscape planning "needs to strive to achieve creating multifunctional landscapes that can

(1) allow the co-existence of not only compatible uses but also competing uses,

(2) make an efficient use of limited space and time (this feature is particularly useful in urban areas),

(3)produce advantages of synergy and contribute to both the economic vitality and environmental quality of modern cities" Priemus, H. et al., 2004), and

(4) develop a wide and lasting support from the diverse users of this functions" (Ahern, J., 1995, Ahern, J. F., 2002, Imam, K. Z. E. A., 2006, Rodenburg, 2004 & Tan, K. W., 2006).

Pentimento: is an art term used to describe evidence that an artist has changed their mind or perception throughout the process of creating the artwork. It is not about erasing the canvas and starting a new painting, but instead shows the subtle shifts in thought and form that are essential to its full development. It is a refining process the artist takes on while leaving a trail of clues. (McRorie, S. (1996)

Social Capital (Bonding & Bridging): Fukuyama, F. (2001). *Social capital, civil society and development discusses* social capital as "the networks of relationships among people who live and work in a particular society, enabling that society to function effectively." (Fukuyama, F. 2001) The key concepts of social capital that will be developed throughout this thesis social bonding capital, social bridging capital and the linkage between the two.

Bonding social capital is a set of networks with people of similar backgrounds and bridging social capital is an association between members with dissimilar backgrounds (Putnam, 2000).

Foster, K., & Maas, C. (2016) define social capital as access to knowledge and opportunities through networks to enhance social and/or economic mobility.

Sustainability / Sustainable Development: Sustainable development has been defined in many ways, but the most frequently quoted definition is from *Our Common Future*, also known as the *Brundtland Report*:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- the concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given; and
- the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs." (from the World Commission on

Environment and Development's (the Brundtland Commission report Our Common Future)

In broad terms, the concept of sustainable development is an attempt to combine growing concerns about a range of environmental issues with socio-economic issues.

Tacit Knowledge: Typically, research in the cultivation of this tacit knowledge is associated with building social capital in the business field, in addition, this thesis advocates that tacit knowledge is, also, a key indicator in the pursuit of social equity in education.

Tacit knowledge (opposed to explicit knowledge) that you do not get from being taught, or from books, etc. but get from personal experience." (Foster, K., & Maas, C. 2016) Tacit knowledge is difficult to transfer to another person by means of writing it down or verbalizing it. For example, that New Haven is a city in the State of Connecticut is a piece of explicit knowledge that can be written down, transmitted, and understood by a recipient. However, the ability to speak a language, play a musical instrument, or design and use complex equipment requires all sorts of knowledge that is not always known explicitly.

Again, Foster, K., & Maas, C. (2016) define social capital as access to *knowledge* (including tacit) and opportunities through networks to enhance social and/or economic mobility

Tactical Urbanism: is an umbrella term used to describe a collection of low-cost, temporary changes to the built environment, usually in cities, intended to improve local neighborhoods and city gathering places. (Source: Pfeifer, Laura. "The Planner's Guide to Tactical Urbanism" (PDF). Regina Urban Ecology. Regina Urban Ecology. Retrieved 23 October 2014. Tactical Urbanism is often citizen-led but can also be initiated by government entities)

Transdisciplinarity: The definition of transdisciplinarity utilized in this research was taken from Basarab Nicolescu's Manifesto of Transdisciplinarity which seeks to find the intersection of disciplines' expertise by an integration process with the intention to create new instruments, models, approaches that couldn't occur if they were separately handled.

CHAPTER I: THE PROBLEM

"If we take a survey of the greatest actions…in the world…we shall find the authors of them all to have been persons whose Brains had been shaken out of their natural position."
~ John Adams (2nd U.S. President)

The Problem with Sustainability Frameworks

The problem initiates with unpacking the term **sustainability** and the belief that existing sustainability frameworks are in danger of losing connection to the root of their essential questions. Essential questions are an important component of quality teaching and learning, and this research takes the stance that learning our way to sustainability requires taking an educational posture in defining the word sustainability. *The Sustainable Schools Project*, a Vermont sustainability education organization, was the catalyst for this research stance, and lead to the development of this researcher's initial essential questions: What are the needs of current and future generations? And how are these needs intertwined with the form and function of the physical human environment? (See Appendix A)

Roots & Dimensions of Sustainable Development

Sustainable Development: From Brundtland to Rio 2012 outlines the evolution of the term **sustainable development** which was coined in *Our Common Future*, a report published by the World Commission on Environment and Development in 1987. Also known as *The Brundtland Report*, it originated the classic definition of sustainable development as "development which meets the needs of the present without compromising the ability of future generations to meet their own needs." In 1992 the report was accepted by the United Nations General Assembly and in the ensuing years the term evolved into a set of principles of sustainable development that were articulated at the United Nations Conference on Environment and Development in

Rio de Janeiro, Brazil (Rio+20). It is generally accepted that sustainable development calls for a convergence between the three spheres of Economics, Society and Environment.

(Figure 1 Three Spheres of Sustainability)

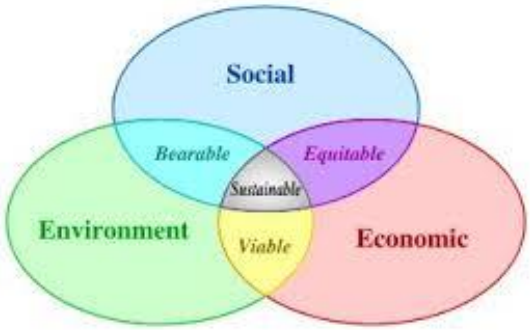


Figure 1 Three Spheres of Sustainability

Figure 2 Triple Bottom Line

Lack of Focus on Social Dimensions

While the initial sustainable development model, which some refer to as "the triple bottom line" (Figure 2 Triple Bottom Line), is intended to encompass three pillars/spheres, over the past 20 years it has often been compartmentalized as an environmental and economic issue, overlooking critical social dimensions. Conversely, the concept of "circles of sustainability" (Figure 3 Circles of Sustainability), proposed by James Paul, et al., advocates for social sustainability. Counter to the public dialogue that tends to focus on economic and environmental sustainability, social sustainability advocates for culture, equity and diversity to contribute to quality of life. The United Nations Educational, Scientific and Cultural Organization (UNESCO) developed *The Universal Declaration of Cultural Diversity* (Unesco, 2002) to provide social models that include these concepts in their definition of sustainability. The Declaration aims both to preserve cultural diversity as a living parts of humankind, builds

a case for human diversity as a resource (creativity, social equity, human rights) and prevents development that encourages segregation of the other. (Unesco, 2002) "The Universal Declaration makes it clear that each individual must acknowledge not only otherness in all its forms but also the plurality of his or her own identity within societies that are themselves plural." (Unesco, 2002)

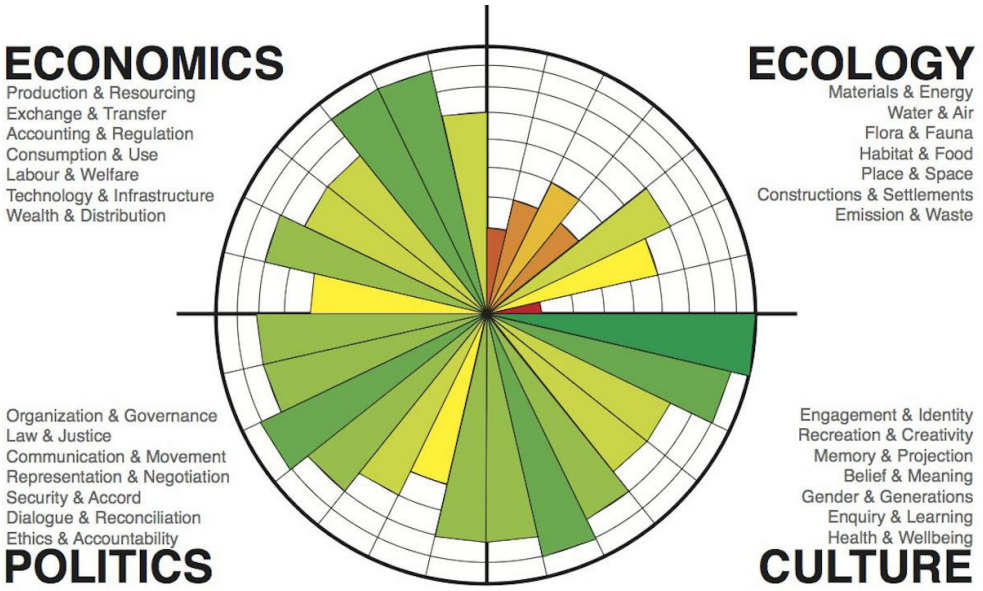


Figure 3 CIRCLE-OF-SUSTAINABILITY (James, P., Et al. Circles of Sustainability. Retrieved from http://www.circlesofsustainability.org)

The initial exploration for the focus of this thesis started when I wrote a lesson plan for the *Anthology of Best Practices in Urban Environmental Education* called *Perception of Place*. This lesson focuses on asking the essential questions: What is sustainability? How can cities be sustainable? As the students explored their neighborhoods in relation to the desire to learn what sustained them they, also, develop creative paths to defining their definition of urban sustainability. What was learned in creating this lesson plan was that the task requires systems thinking and an awareness of the interconnectedness of environment, social capital, economy and cultural vitality. The urban environmental design process starts with trying to understand

our sense of place, by considering the systems-thinking approach of urban communities, i.e., equity in relation to society, economics and the environment. (See Appendix B) This thesis will develop a focus on the concepts of **social capital**, **cultural vitality**, and **creativity** to form a framework for planning and design of the public physical landscape in urban communities.

Social Capital

Much of the academic research about **social sustainability** focuses on integrating concepts like diversity, wellbeing, equality and social justice, and related ideas of community **social capital** and empowerment into sustainable development models. Fukuyama, F. (2001). *Social capital, civil society and development.* discusses social capital as "the networks of relationships among people who live and work in a particular society, enabling that society to function effectively." (Fukuyama, F. 2001) The key concepts of social capital that will be developed throughout this thesis **social bonding capital**, **social bridging capital** and the linkage between the two.

Cultural Vitality

Cultural vitality definition initiated from *The Urban Institute's Art and Culture Indicator project* (Jackson, M. R., 2003 & 2006) ACIP's 2003 definitions of art, culture, and creativity depend on the cultural values, preferences, and realities of residents and other stakeholders in a given community. This includes the cultural expressions of ethnic, racial, age, and special interest groups that may not be validated or adequately represented in mainstream cultural institutions. (Jackson, M. R., 2003) As the ACIP project evolved so did their definition of "cultural vitality as evidence of creating, disseminating, validating, and supporting arts and culture as a dimension of everyday life in communities." (Jackson, M. R., 2006)

Creativity

This research's framing of the concept of creativity initiated with Csikszentmihalyi (1988) reframing the basic question of "What is creativity" to "Where is creativity?" Csikszentmihalyi (1988). This thesis advocates that social capital plus cultural vitality multiplied by tacit knowledge exchange opportunities equals creativity ergo innovative individuals and communities. The public space realm was chosen because there is research that notes the role of implicit learning and **tacit knowledge** (group dynamics) **i**s critical in building social capital, allowing cultural vitality and creativity to flourish and allowing innovative ideas to come to fruition. Without going too deeply into the psychology debate in regard to implicit learning and tacit knowledge (Reber, 1967, Berry, DC. 1997, and Atherton 2013); Patterson et al. (2010) noted that "implicit learning involves the largely unconscious learning of dynamic statistical patterns and features, which leads to the development of tacit knowledge", in other words; we all have the ability to unconsciously learn and not even know that we have learned knowledge. This type of knowledge exchange is tied to the design of the physical environment and correlates directly to environmental and social justice issues. (Leonard, D. & Sensiper, S. 1998, Howells, J. 2002) Recognizing that creative integration of these factors can produce social equity in urban communities is more relevant way to consider sustainable development, than through traditional environmental and economic models.

Generic Frameworks: One Size DOES-NOT Fit All

While current sustainable design standards provide sound guiding principles for physical environmental and economic systems such as water, energy and waste, they are missing inclusion of community wellbeing, equity, diversity, and quality of life indicators that would

give voice to the social and cultural aspects of sustainable development. This is expressed in written policy and development plans that incorporate values for frameworks such as **Smart Growth**, and the *U.S. Green Building Council's Leadership in Energy and Environmental Design Program*. Smart Growth, for instance, is a community planning theory that concentrates growth in compact urban areas. It values and advocates for transit-oriented, walkable, bicycle-friendly land use, including neighborhood schools, complete streets and mixed-use development set within areas of existing infrastructure. These values are assumed to be of the same critical importance and priority for all communities, regardless of social/cultural make-up, yet cultivating sustainability is not a one-size-fits all-approach. Social sustainability suggests the need to involve a diverse community of children, families, and adults in collectively defining their unique needs and develop public landscapes that allow tacit knowledge exchange. It is clear that developing places that respect unique social, environmental and economic communities holds challenges in designing for **multi-functional** and **high performance landscapes**, which are at the heart of sustainable public space design. Sustainable design needs to address social stratification and bring the sociological perspective of class, race, gender and age to the design table if there is to be **social equity**.

Social Equity and the Changing Face of Urban Populations

Despite these challenges, place-based cultural vitality and social capital are slowly becoming notable and recognized aspects of sustainable development research and discourse. In 2002 the National Center for Public Policy Research published an economic study entitled *Smart Growth and Its Effects on Housing Markets: The New Segregation* which termed Smart

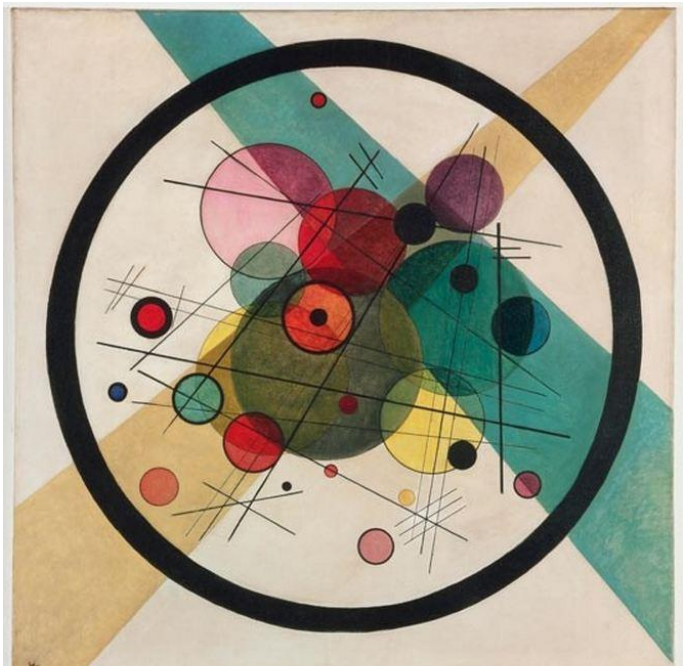
Growth "restricted growth" (Pozdena, R. J., 2002) and suggested that Smart Growth policies disfavor minorities and the poor by driving up housing prices. This result conflicts with the Environmental Protection Agency's stated Smart Growth goals to achieve a unique sense of community and place and equitably distribute the costs and benefits of development. (Pozdena, R. J., 2002) If proponents of Smart growth truly wish to achieve these goals, they need to incorporate methods for and measures of building cohesion between diverse socioeconomic, class, race, ethnic and government groups. Government needs to explore community planning policy that gives more than lip service to the issues of social equity in relation to sustainable development. 2010 census data suggests a trend that Millennials (persons age 20-34) and Baby-Boom Empty-Nesters (age 55-64) will be moving back into cities within the next 10 to 15 years. By the end of the current decade, the population aged 65 and over will grow by 36 percent to almost 55 million, according to Census Bureau projections. Economist Steve Yoder (2013) predicts that by 2017, the U.S. adult population age 50 and older will control 70 percent of the country's disposable income. In a 2010 AARP survey, about half of adults age 45 or older reported that living in a place where it's easy to walk or living near church or social organizations was important to them. (Yoder, 2013)

Multi-Scalar Analysis and Planning

Simultaneously, current headlines are ironically responding to the trend of the suburbanization of poverty, declaring that "poverty is moving from the city to the suburbs". This is concerning because while the city has experienced rapid urban displacement in the past, the current crisis is different in one very important way: the housing that the poor are losing to

the rich is not being replaced. There is a growing need and demand for designers and planners to justify their intentions in relation to their actions in sustainable development to include addressing social equity. In response to this need **multi-scalar analysis** (macro, meso, micro) will be used continually throughout this thesis. Mulit-scalar analysis is used to refer to the interrelated scales of site (micro), neighborhood, (meso), local and regional (macro) and how design must consider context both larger and smaller. (Dinep, C., & Schwab, K., 2010) This concept is repeated across disciplines and three levels are a lot like the photographers' lenses, allowing the researcher to hold multiple-scale perspectives simultaneously. (Figure 4 Kandinsky, 1923 – Circles in a Circle) In regard to the social aspect of multi-scalar analysis, the individual (micro) is impacted by the community (meso) that fits within society (macro). (Figure 5: Social Level of Analysis: Macro, Meso, Micro) To address social equity society, planners and designers need to review current policies and the impact these policies have on the communities they work in.

Figure 4 Kandinsky, 1923 – Circle In a Circle (Kandinsky, W., Rebay ,H. 1947)



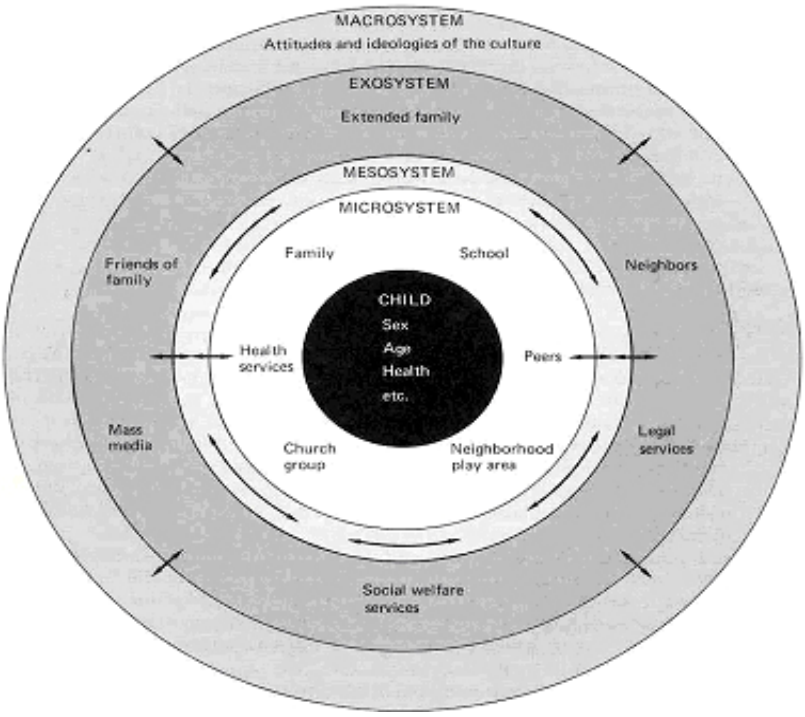


Figure 5 Social Level of Analysis: Macro, Meso, Micro
Credit: Affolter, F. W. (2004). Towards socio-emotionally intelligent development politics. International Journal of Psychosocial Rehabilitation, 8, 119-140.

One way to address social equity is to relook at the **central place theory** in relation to at-risk neighborhoods. The central place theory created by the German geographer Walter Christaller, believed that the role of the city 'central places' is to provide services to surrounding areas. (Richard, 2007) This will become visually understood upon reviewing the existing cluster analysis of New Haven, CT. What is relevant to this project is that during the New Haven Vison 2015 workshop sessions it is stated in the executive summary that the focus of the city should be on promoting strategic neighborhood-based planning efforts to reinforce or strengthen the sense of place and distinct identity for each neighborhood. (New Haven Vision 2025, 2014)

Another way is to incorporate social capital interventions into the design framework. Social capital is a multidimensional concept that refers to the assets of a community that are tied to social strengths. (Messner et al., 2004), and bonding and bridging social capital are perhaps the most important dimensions -- bonding social capital is a set of networks with people of similar backgrounds and bridging social capital is an association between members with dissimilar backgrounds (Putnam, 2000). Foster, K., & Maas, C. (2016) define social capital as access to knowledge and opportunities through networks to enhance social and/or economic mobility.

The Impact of Community Bonding and Bridging Social Capital on Educational Performance in Israel (Menahem, G. 2011) examines the different effects of bonding and bridging social capital on urban educational performance. Menahem (2011) states that groups tied with bonding social capital construct closed, cohesive networks and limit flows of information and diversity of resources; as a result, bonding social capital eventually weakens community-level collective actions and hinders educational achievement. Meanwhile, bridging social capital mobilizes collective resources and promotes educational achievements by allowing a community's residents to access information and to obtain resources essential for educational performance (Menahem, 2011). This work seemed relevant in the development of the public space systems design process for the city of New Haven, CT ergo social bonding and bridging capital are seen as elevated in importance in this thesis work.

Focus on Sustainable Urban Landscapes/Public Space

As a study based in the discipline of Landscape Architecture, these issues will be examined through the lens of a multi-scalar analysis, planning and design application for sustainable

landscapes and public spaces in an urban complex. Systems of streets, paths, school yards, trails and other outdoor public space typologies will be analyzed for opportunities to enhance social capital, cultural vitality and creativity.

New Haven as the Test Case

The City of New Haven located in the State of Connecticut (Figure 6 Region location of the State of Connecticut) was chosen as the subject for this research because it offers a unique set of resources for exploring the relationship between qualitative and quantitative design decisions due to the abundance of data. An important resource is *DataHaven*. DataHaven is a partner of the *National Neighborhood Indicators Partnership*, a collaborative national effort by the *Urban Institute* in Washington, DC and approximately 40 local partners to further the development and use of neighborhood information systems in local policymaking and community building. Their work is to collect, interpret and share public data for effective decision-making. This thesis collected datasets, documents, and mapping from both DataHaven and *The Community Alliance for Research and Engagement (CARE).* DataHaven is a non-profit 501(c)3 organization. It maintains a collection of both qualitative and quantitative data. CARE, led by Dr. Jeannette R. Ickovics, is part of the Yale School of Public Health. CARE approaches the issue of chronic diseases in New Haven communities by focusing on social, environmental, and behavioral risk factors. The dismantling of the central place planning model begins with CARE's six New Haven neighborhoods. (Figure 7 CARE's Neighborhoods) In the summer of 2009, CARE

Figure 6 Regional Location of the State of Connecticut (Gilroy, 2016)

documented neighborhood features related to diet, exercise, and tobacco use. In the fall, 1,205 New Haven residents in the same six neighborhoods participated in a survey about health and their own habits around these three risk factors. This research aided in the development of the proposed Public Space Systems Plan that will be described throughout this thesis.

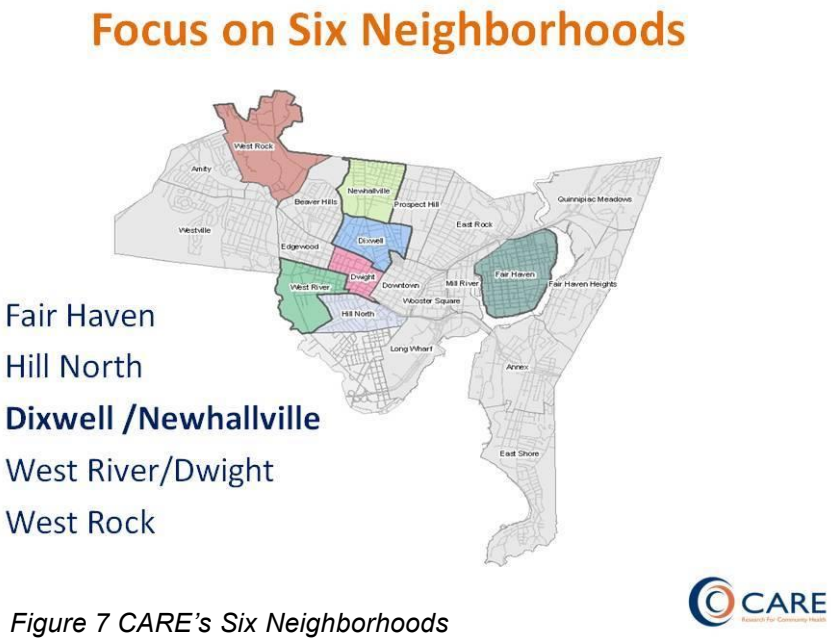


Figure 7 CARE's Six Neighborhoods

Factors Required to Apply Sustainable Practices

In addition to the focus on social equity and urban cultural vitality, this thesis identifies three value factors that are proposed as key to developing sustainable planning and design strategies:

- Systems Thinking: Central place theory vs Network Based Model
- Data: Qualitative and Quantitative Cohesion
- Championing Adaptive Leadership

Systems Thinking: Central Place Theory Vs Network Based Model

It is time to reconcile that our zoning and planning policy is outdated. Among many shortcomings of traditional planning practices, reliance on the central place planning model (only) is limiting, one-dimensional, and actually in direct conflict with sustainable growth. A geographical theory created by the German geographer Walter Christaller, who asserted that settlements simply functioned as 'central places' providing services to surrounding areas. (Briney, A. 2014). This is represented thematically below in Figure 8 Central Model Theory.

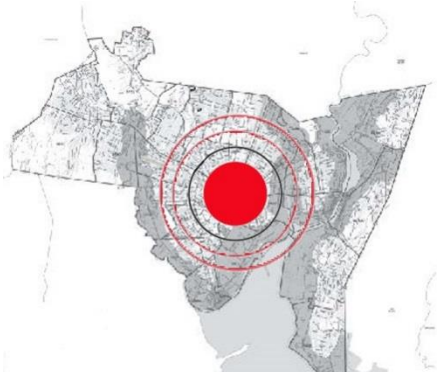


Figure 8 Central Model Theory (Gilroy, 2016)

The central place model is important because it is part of the existing urban fabric, but in relation to sustainable design patterns in the landscape, a model that expresses the city as a system is required. In *Fractal Systems of Central Places Based on Intermittency of Space-filling* by Yanguang Chen and *Network Cities Versus Central Place Cities: Building a Cosmo-Creative Constellation* by David F. Batten propose that the central place model evolve to a central place network. While Chen and Batten's research work is conceptual and their models are in the crude beginning stage of design development, the imagery of fractals and constellations as a thematic pattern is relevant to the development of the proposed New Haven Public Space Systems Plan. This is represented below in Figure 9 Central Place Network.

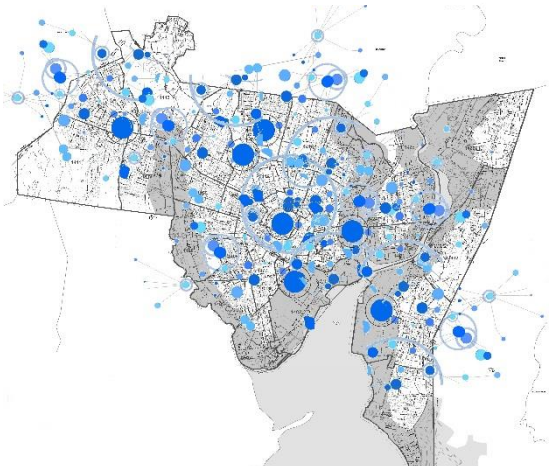


Figure 9 Central Place Network (Gilroy, 2016)

There are two design theories that correlate to the proposed transition from central to network. These are Kevin Lynch's classic 1960 text *The Image of the City* and Donald Campbell's *Fish-Scale Model of Omniscience*. Kevin Lynch's *The Image of the City*, introduced urban designers and planners to a new way of thinking about the urban form of a city in which the richness, variety and hierarchy of a city's system of districts, nodes and corridors becomes the source of its identity and design context. (Figure 10 Image of the City: Path, Edge, District, Landmark, Node) This paper will utilize a Geographic Information Systems–based (GIS) study that evolves the central place theory to one which shifts toward a network of culturally diverse districts, nodes and corridors embodied in the urban landscape.

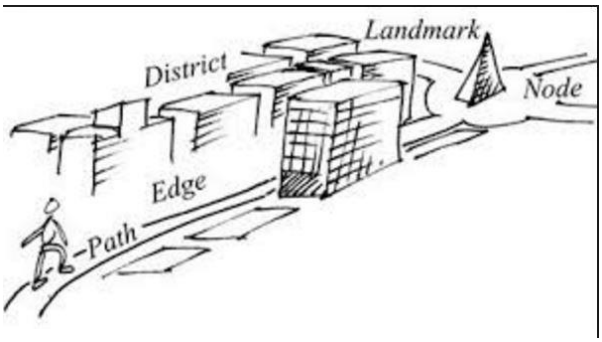


Figure 10 Image of the City: Path, Edge, District, Landmark, Node Lynch, K., 1960

Donald Cambell calls for interdisciplinary bridges to more meaningfully respond to needs of people and place is sociologist Donald Campbell's *Fish-Scale Model of Omniscience*:

> "Rather than praying, "May I be a competent and well-read X-ologist, may I keep up with the literature in my field," a scholar will pray, "Make me a novel fish-scale. Let my pattern of inevitably incomplete competence cover areas neglected by others." (Campbell, D. T. 1969). (Figure 11 Fish-Scale Model)

Figure 11 Fish-Scale Model (McDougall, Z., Fels, S., Lopes, D., & O'Brien, H. L., 2013, September)

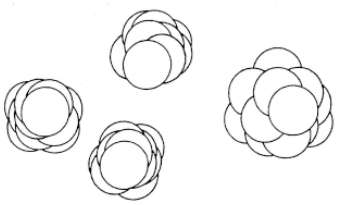


Figure 6. "Present situation: Disciplines as clusters of specialties, leaving interdisciplinary gaps" [5], ©The estate of the late Donald T. Campbell

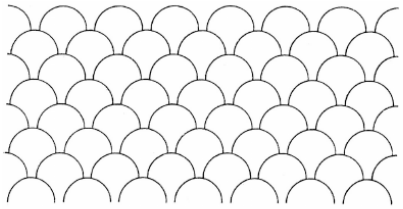


Figure 5. Ideal situation: Fish–scale model of omniscience [5], ©The estate of the late Donald T. Campbell

An exemplary study *Beyond binary choices: Integrating individual and social creativity* by Fischer, G et al. (2005) that is used as an example of how to design beyond central place model to networks of possibilities. Campbell 's Fish-Scale Model of Omniscience was used in the study but instead of working in the intersections of disciplines Fischer, G et al. (2005) it looked at the intersection of individual and *social creativity* in the physical work place spaces.

In the development of the proposed public space districts the boundaries of the New Haven neighborhoods will be redesigned to emulate Campbell's Fish-Scale model along with the Kevin Lynch's model. There will be a focus of developing the intersections between New Haven neighborhoods to enhance and support social capital, cultural vitality and creativity within the system of multifunctional and high performance public spaces.

Landscape Architects are posed to think and design in relation to complex environmental and infrastructure systems. In the designing of the Public Space Systems Plan the design concepts created by both Kevin Lynch and Donald Campbell will be utilized and explained further throughout this research paper. One way to visualize this union is to review a Wassily Kandinsky painting called *On White II*. (Figure 12 Kandinsky,1923 – On White II)

Figure 12 Kandinsky 1923 – On White II (Kandinsky, W., Rebay, H.,1947)

Data: Qualitative and Quantitative Cohesion

The Qualitative - Quantitative debate is noted as one of those hot-button issues amongst researchers. According to *Revisiting the Quantitative-Qualitative Debate: Implications for Mixed-Methods Research* common beliefs about the differences between qualitative and quantitative research include:

• Quantitative paradigm is based on positivism.

• Qualitative paradigm is based on interpretivism

In short, because the two paradigms do not study the same phenomena, quantitative and qualitative methods cannot be combined for cross-validation or triangulation purposes. However, they can be combined for complementary purposes. (Sale, J. E., Lohfeld, L. H., & Brazil, K., 2002.) In looking at precedent research studies for sustainable neighborhood design, both qualitative and quantitative research methods were reviewed. This research takes the stance that little is known about whether prevailing standardized quantitative indicators of sustainability reflect the local perspectives, values and understandings of sustainability of diverse populations. Two study's lessons were assimilated into the problem solving of this

research – One was called *Developing Indicators Of Sustainable Community: Lessons From Sustainable Seattle* by Alan AtKisson (1996) and the other Catalina Turcu (2013) *Re-thinking sustainability indicators: local perspectives of urban sustainability*. These two studies are reviewed further in the literature review in regard to lessons learned, but this thesis will use Geographic Information Systems (GIS) for its spatial and cluster analysis of quantitative data.

Quantitative Approach: Mapping & Measuring Social Sustainability

The quantitative component for this thesis will be the development of prioritizing factors for developing Geographic Information Systems (GIS) map(s) that will give spatial information for creating the quantitative framework for the public space district map(s). GIS is a computer system mapping tool for lets us visualize, question, analyze, and interpret data to understand relationships, patterns, and trends on the earth's surface. (ESRI, 2016) This might sound complex, but in reality this technology in its most rudimentary form is used every day by billions of people. Whenever you use your smartphone for directions or ask *Siri* where the nearest restaurants are located you are creating spatial informational maps.

This thesis will be exploring existing social capital and cultural vitality located in the physical landscape. Typically, spatial cluster analysis is used to identify health and safety issues. In 1854 there was a massive cholera outbreak in Soho, London – in three days over 120 people died from the disease. John Snow plotted the locations of the deaths on a map and found they clustered around a pump in Broad Street. Snow's cholera cluster map (Figure 13 John Snow's cholera cluster analysis map) demonstrates the spatial clustering of cholera deaths around the Broad Street well, and provided strong evidence in support of his theory that cholera was a water-borne disease. (ESRI, 2016)

Figure 13 John Snow's Cholera Cluster Analysis Map (ESRI, 2016)

In this research GIS was used to see spatial and clustering of physical addresses (data) to determine areas of opportunity to increase cultural vitality and social bonding/bridging opportunities that will give fuel to creativity and innovation.

Qualitative Approach: Community Participation

Most "expert-led" (Catalina Turcu, 2013) forms of sustainable design tend towards quantitative criteria for sustainability – such as LEED. Participatory processes for defining sustainability are conversely, by their very nature, qualitative. This study proposes that the neighborhood definition comes from a community participatory process that is facilitated by an unbiased third party, in this case the landscape architect. The neighborhood's qualitative definition of sustainability and related values for public/open space would be collected, correlated and integrated with "expert-led" initiatives. (Catalina Turcu, 2013) The hope is that

integrating the two approaches would tap into various levels of knowledge of sustainability and thus, be a better way of creating and assessing neighborhood sustainability.

Lawerence Halprin, Randolph Hester and Walter Hood have categorized themselves as social landscape architects. They identify as social-designers that have worked to develop community participatory processes that increase shared expectations for future development that are inclusive and sensitive to socioeconomics, class, race, and ethnicity. Hester and Halprin both believe that people express their values and tell us what they want when they are engaged in participatory design process. Halprin workshops encourage people to discover through their own experiences their place-making through creating a sensory-emotional experience. Walter Hood's work was inspired by Lawrence Halprin and his twist of RSVP Cycle is the concept of jazz music. (Figure 14 RSVP Cycle) These three social designer's work will be reviewed in more detail in the li

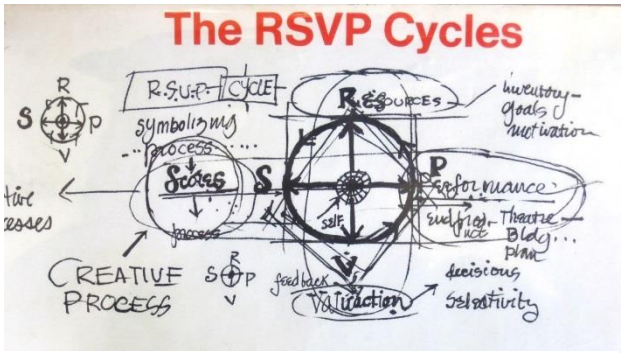


Figure 14 Lawrence Halprin's RSVP Cycles (Halprin, L. 1970)

major issue – once the design left the community process and design phase and entered the construction/policy phase the design no longer adhered to the design/community vision, but was bound to the vision of the policy and regulations of the site.

A major problem with community participation, beyond the listening and the collecting of community information, is the lack of supporting policy that in the end drives form-giving and place-making in the urban landscape. The quantitative piece of the study will assist in linking qualitative community attitudes and identity to an inventory and analysis of related physical assets and liabilities for social sustainability.

Championing Adaptive Leadership

The transformation of the design process from a prescriptive one to a participatory one requires the designer to add extra energy to the education component of the process and to practice a particular type of design leadership rooted in the concept of *adaptive and educational leadership*.

In developing a shared decision-making model in regard to adapting to change *The Practices of Adaptive Leadership: Tools and Tactics for Changing Your Organization and the World* (Heifetz, et al,2009) and educational leadership lesson plan strategies were incorporated into the community participatory design process.

These types of leadership styles are based on a shared decision-making model, and have been described as "leadership of the many by the many" as opposed to "leadership of the many by the few". "Beyond simply checking off the box for stakeholder input, the designer needs to structure the framework not only for public involvement, but for decisions about civic space." (Hester, 1975) Society is situated for such adaptive change and the landscape architect is equipped to assist the "expert-lead (government & professionals) and citizen-led (grass-roots)" Catalina Turcu (2013) groups in building the capacity between the two for shared decision-making. The designer must take on the role of community organizing, problem framing, and listening across audiences that include students & seniors, community and business leaders, and the general citizenry; while simultaneously providing professional expertise and guidance on practical feasibility and technical considerations. In essence the landscape designer gives expression to the intersections that is explained in Campbell's Fish-Scale theory.

The benefits to be gained from participatory processes are optimized when they go beyond the immediate experience of participating and affect the physical place-making of the community, as related in *Placed-Based Education: Learning to be Where We Are*, "The problem lies in that their minds are drawn to actual phenomena rather than ideas about phenomena they experience. Smith, Gregory A. (2002) states that it is a crime of deception convincing people that their own visceral experience of the world hardly matters." (Smith, Gregory A., 2002) Accordingly, it is a great waste on the part of teacher/designer and citizen that once the citizen leaves the community participatory process and returns to his or her neighborhood "place" and cannot utilize the experiences that were developed in the "place" of workshop. The challenge is the community participant's ways of expressing their needs tends toward deconstructing problems through infinite pieces of information and these overwhelming spectrum of choices requires the designer to articulate the in-between potentials of collaboration. As Walter Hood designed in Layfayette Plaza, it is the duty of the designer is to overcome the habit of deconstruction and piecemeal solutions and envision solutions as a whole and design authentic places that listen and integrate the whole of the community experiences.

In *Co-evolution of ESD (Education for Sustainable Development) and EE (Environmental Education),* Martha Monroe discusses the concerns of education for sustainable development and lays out in detail what constituents need to build capacity within in the context of sustainability education, e.g., "quality education that prepares people to understand multiple views; to listen and communicate with others; to envision and evaluate options; to collect, synthesize and understand data; to learn how others have balanced contentious elements of an issue; and to be able to adopt actions. (Monroe, M., 2012)

There is a potential for truly creating and constructing authentic impact on society by revising our perceptions about sustainability away from prescriptive solutions toward developing unique solutions.

As mentioned in the preface, *Pentimento* is used to describe evidence that an artist has changed their mind or perception throughout the process of creating the artwork. It is not about erasing the canvas and starting a new painting, but instead shows the subtle shifts in thought and form that are essential to its full development. (McRorie, S. 1996) It is a refining process the artist takes on while leaving a trail of clues. These clues are important to the artist because they are a reflection of the visual, spatial and intellectual path that has been taken in coming to terms with the problem that the artist has set for him or herself to solve. *Pentimento* is the thematic action that will unfold in the thesis project. *Pentimenti* can be translated into a research methodology that guides the landscape architect along with the community members in an unfolding process of seeing, listening and building relationships through exploration and reconciliation of definitions of sustainability, correlated to the potentials for the designed landscape. (Figure 15 Gilroy's Pentimenti Example (Gilroy, 2009)

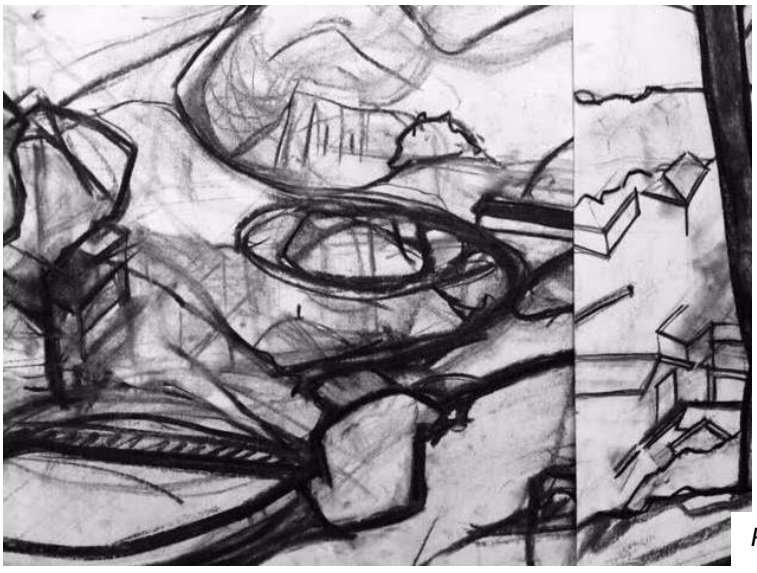


Figure 15 Gilroy's Pentimenti Example (Gilroy, 2009)

Thesis Statement

The real problems, needs and opportunities of urban neighborhoods are not being served by conventional models of urban planning and sustainable development. The city of New Haven, Connecticut will be studied to develop a framework for planning and design of the public realm (public space/place/landscape) which addresses urban neighborhood sustainability through a social lens, using a mixed-methods, transdisciplinary research model. Geospatial data on social capital and cultural vitality indicators will be integrated with other sustainability indicators to create a quantitative analysis component. Development of a participatory design process to foster social bonding, creativity and sustainability inquiry will comprise a qualitative component for the framework.

Goals and Objectives

Goal 1: Encourage growth in social capital and place-based cultural vitality in urban neighborhood public spaces using multi-scalar analysis and design.

> Objective 1: Develop a sustainable design framework and methodology that incorporates mapping of existing cultural vitality and social capital (bonding and bridging) to identify opportunities in the public landscape.

Goal 2: Build a case for a systems thinking perspective that challenges the central place model and shifts towards network city planning multifunctional and high performance opportunities in the system of the New Haven's public spaces.

Objective 2a: Create a New Haven Public Space Systems Plan that evolves the central place model through GIS spatial and cluster analysis mapping that to reveal the network of possibilities and intersecting districts, nodes and corridors in the New Haven public landscape.

Objective 2b: Create Public Space Systems Programming that incorporates the macro, meso and micro perspective used in the public space to encourage and increase place-based cultural vitality and social bonding and bridging opportunities.

Goal 3: Encourage the exchange and utilization of tacit knowledge, specifically in regard to class, ethnicity, and age by designing opportunities for individual and social creativity in the design of public space and place making.

Objective 3a: Explore past collaborative models for design and programming of the public realm that allow for the exchange of ideas, knowledge and resources not only between individuals, but also within the larger social and physical public environment.

Objective 3b: Develop community programming that builds a case for public space systems that encourages individual creativity within the social public space that allow for tacit knowledge to be collected not only within the individual, but also in the individual's social and physical community public space.

Objective 3c: Develop a community participatory process that allows community to define sustainability within their own unique social, regional, and site context as it applies to the design and programming of public space and private space interface.

CHAPTER II: LITERATURE REVIEW AND SYNTHESIS

"The creative person wants to be a know-it-all. He wants to know about all kinds of things: ancient history, nineteenth-century mathematics, current manufacturing techniques, flower arranging, and hog futures. Because he never knows when these ideas might come together to form a new idea. It may happen six minutes later or six months, or six years down the road. But he has faith that it will happen."
~ Carl Ally (American Advertising Federation Hall of Fame)

In approaching the literature review the belief was held that a community's public space is an expression of its support systems. The research problem and physical domain is centered on the field of landscape architecture, and this discipline fosters a way of understanding the physical human/spatial environment with an emphasis on the relationships among a system's parts, rather than focus on the parts themselves. In reviewing the literature in relation to developing a sustainability framework with a social equity emphasis, *a transdisciplinary* lens was utilized to aid in holistic ways of thinking about these support systems. Although the design and planning of public space is typically the disciplinary domain of professional architects and planners, the nature of the challenge requires breaking out of the siloes of the current professional approach.

Transdisciplinary Approach

The definition of transdisciplinarity utilized in this research was taken from Basarab Nicolescu's *Manifesto of Transdisciplinarity*. Nicolescu explained his approach when he said: "Disciplinarity, multidisciplinarity, interdisciplinarity and **transdisciplinarity** are like four arrows shot from but a single bow: knowledge." These terms are often misused or misunderstood, so for the purpose of common language for this work the *Holistic Education Network* framework is used and is broken down in the following way:

Disciplinarity research studies the knowledge, assumptions, skills and methods within the boundary of a discipline. When a researcher brings disciplines together to talk about issues with the intention of seeing each other's perspectives this is called multidisciplinary research. In this type of research disciplines may collaborate, but the key difference between this type of research and interdisciplinary research is that they maintain their separation of disciplines in their process.

Transdisciplinary research seeks the intersection of disciplines' expertise by an integration process with the intention to create new instruments, models, approaches that couldn't occur if they were separately handled. The hope is that new perspectives beyond the disciplines can be discovered much like Campbell's Fish-Scale theory (Campbell, 1969). A key distinction is found in the question on how the research decides to approach the inquiry. Where multidisciplinary or interdisciplinary inquiry may focus on the contribution of disciplines to an inquiry, transdisciplinary inquiry tends to focus on the inquiry or issue itself, and takes from the intersections of disciplines inspiration for evolution of ideas (Campbell, 1969).

A transdisciplinary perspective in the literature review was used to explore the issue of sustainable community development and determine how best to turn research into action. The key disciplinary areas explored are landscape architecture, creativity, sociology, and leadership. This combination will provide a broad and inclusive approach that addresses social equity and environmental justice in the design of public spaces. The literature review developed from asking the essential questions: What is sustainability? How do we define it? What elements are needed to create a sustainable design process that is relevant to communities? What are the unique needs of urban communities? How are these needs intertwined with the form and function of the physical human environment? These questions set the ground work for community development

possibilities that are innovative, go beyond the standard one-size-fits-all approach, and produce multifunctional public spaces that integrate transdisciplinary conceptions of sustainability.

Landscape Architecture Perspectives on the Problem

The literature review within landscape architecture addresses three main areas:

1. Sustainability Frameworks: New Urbanism, Ecological/Landscape Urbanism
2. Systems Thinking Models: Image of the City, Fish-Scale Model & GIS
3. Community Participatory Design – Social Designers

As a landscape designer my approach to designing public places is rooted in values that are tethered to building community relationships, i.e.; respect, inclusion, equity, healthy and safe public spaces. The literature review starts with the question: What is the role of the designer in defining sustainability within unique local communities? Landscape architect Randy Hester explained how powerful the role of a designer can be when he wrote:

> "The designer can give form to unspoken social values, or values to which people are unaware . . . . to the social values of those who cannot speak or, in our society, are not empowered or listened to when they do speak: the poor, the old, the young, minorities. . . . The designer can give form to the values of ecology and nature." (Hester Jr, R. T., 1989)

Existing urban design frameworks such as new urbanism and landscape urbanism, each present possibility for this role, but in practice have produced limited success in giving form to underrepresented social and environmental values.

Sustainability Frameworks: New Urbanism, Ecological/Landscape Urbanism

In the critic of models of urban planning with a systems perspective **New Urbanism** (Figure 16: Seaside, Florida) and **Landscape Urbanism** (Figure 17: Lafayette Square, Detroit) were reviewed. The urban planning theory and practice that has dominated urban planning is the principles of New Urbanism. The basic goal of New Urbanism is that they to want to see human-scale neighborhoods return. Thus far, Landscape Urbanism basic goals are rooted in ecological and environmental functions. In the design decision of which of these two would be the best fit to promote public opportunities for social capital (bonding and bridging), the expression of placed-based cultural vitality and the probability for a larger range of sharing tacit knowledge within the system of public space Landscape Urbanism was chosen.

Figure 16 New Urbanism: Seaside, Florida

Figure 17 Landscape Urbanism: Lafayette Square, Detroit

New urbanism is a highly influential framework for urban development which arose as

a response to the sprawl, suburbanization, and loss of urban form which dominated development of the mid- to late-20th century. The Congress for the New Urbanism, (CNU) founded in 1993 by architects Andres Duany and Elizabeth Plater-Zybek, describes New Urbanism by stating:

> "We advocate the restructuring of public policy and development practices to support the following principles: neighborhoods should be diverse in use and population; communities should be designed for the pedestrian and transit as well as the car; cities and towns should be shaped by physically defined and universally accessible public spaces and community institutions; urban places should be framed by architecture and landscape design that celebrates local history, climate, ecology, and building practice." (CNU, 2016)

The CNU's core principles of new urbanism are walkability, connectivity, mixed-use & diversity, mixed housing, and smart transportation. Examples of new urbanist development include Seaside, Florida Show cased in the movie *The Truman Show* starring Jim Carrey. Jane Jacobs advocated in her 1961 classic, *The Death and Life of Great American Cities*, for the urban street that was diverse and mixed-use — a form of development that had been under assault since the 1920s from automobile-oriented planning and street design. These ideas introduced the concepts of social capital and Jacob's "eyes on the street theory**"** (Jacobs, 1961) which advocates for the use of high-density mixed-use communities (areas with residential and commercial uses) to stimulate street traffic. Jacobs argues that increased street traffic, day and night, not only helps communities flourish socially and economically, but also promotes self-policing which deters criminal and anti-social behavior. (Jacobs, 1961) Jacobs is credited, along with Lewis Mumford, with inspiring the new urbanist movement. (Bernstein 2012) The argument for landscape urbanism, an urban design framework outlined by landscape architect

Charles Waldheim, was made when he presented a critique of a development called Lafayette Park — a 78-acre modernist endeavor built in Detroit from the late 1950s through the mid-1960s — and explained that the difference between new urbanists and landscape urbanists is it turns buildings away from the street in favor of frontages that consist mostly of greenery.(Waldheim, 2004) Unfortunately, the discussion has become an either/or debate with the focus of whether Landscape Urbanism or New Urbanism is the most correct, and this debate is playing out in the built environment. (Waldheim, 2004, Steuteville, R., & Network, N. U., 2011)

One current proponent of integrating the two frameworks is landscape architect Michael Van Valkenburgh, who promotes the concept of *Ecological Urbanism* as a form of Landscape Urbanism. In *Ecological Urbanism: Interview with Michael Van Valkenburgh, FASLA*. Valkenburgh states, "Landscape Urbanism is an attempt to shift paradigms from object-based [i.e. architecture buildings] urban design to city-making. It seeks innovation within the interactions of urban systems, identifies opportunities in infrastructure, and sees landscape as much an organizing force as it sees it a distinct facet of the city." (Green, J., 2016.). In Van Valkenburgh's perspective ecological urbanism is an approach that favors dynamic, functional integration between natural and urban systems, rejecting the conventional focus on the purely aesthetic contributions of landscape to urban environments. (Steuteville, R., & Network, N. U. , 2011, Green, J., 2016)

The thesis advocates for elements of both frameworks, but the real issue is that the design of what lies just beyond everybody's front door is NOT a one-size-fits-all approach. This *thesis* advocates for developing multi-functional and high performance landscapes into the proposed Public Space Systems Plan. In *Multifunctional landscapes as a basis for sustainable landscape development,* Kato, S., & Ahern, J. (2009) advocate that sustainable landscape planning "needs

to strive to achieve creating multifunctional landscapes that can (1) allow the co-existence of not only compatible uses but also competing uses, (2) make an efficient use of limited space and time(this feature is particularly useful in urban areas), (3)"produce advantages of synergy and contribute to both the economic vitality and environmental quality of modern cities" Priemus, H. et al., 2004), and (4) develop a wide and lasting support from the diverse users of this functions" (Ahern, J., 1995, Ahern, J. F., 2002, Imam, K. Z. E. A., 2006, Rodenburg, 2004 & Tan, K. W., 2006).

Transforming an independent perspective into an interdependent view requires integrating ecological systems thinking with the co-creation process between community and designer. Both of these urban design frameworks can benefit from considering the aspects of social capital and place-based cultural vitality as a means of addressing environmental justice and social equity issues.

Systems Thinking Models: Image of the City, Fish-Scale Model & GIS

The potential for sustainable urban design to incorporate the concepts of social capital and cultural vitality connections is largely untapped. Individualistic power and reductionist, specialized thinking are not only overrated, but not sufficient for the needs of our time. We need to think create system thinking perspective. Van Valkenburgh's focus on the integration of natural and cultural urban systems suggests a perspective of interdependent (systems perspective) instead of independent (piecemeal perspective). (Green, J., Retrieved 2016) Outlined below are three models for understanding and applying systems thinking: Image of the City, Fish-Scale Model & GIS.

Image of the City

Kevin Lynch provided contributions to the field of city planning and landscape architecture through empirical research on how individuals perceive and navigate the urban landscape. Relevant to this paper are his guidelines on how to harness human perception of the physical form of cities and regions as the conceptual basis for good urban design. Lynch's *The Image of the City,* published in 1960, is the result of a five-year study on how observers take in information of the city. Using three different cities as examples (Boston, Jersey City, and Los Angeles), Lynch reported that users understood their surroundings in consistent and predictable ways, forming mental maps with five elements:

- Paths: the streets, sidewalks, trail, and other channels in which people travel;
- Edges: perceived boundaries such as walls, buildings, and shorelines;
- Districts: relatively large sections of the city distinguished by some identity or character;
- Nodes: focal points, intersections or loci;
- Landmarks: readily identifiable objects which serve as external reference points.

Fish-Scale Model

Lynch's mental map elements are the basis of design for new urbanist design principles. As the research looked to discover how to make the mental figure-ground flip from new urbanism to ecological /landscape urbanism, social scientist Donald T. Campbell's "*fish-scale model of omniscience*" (Campbell, 1969) was incorporated into design tools. The basic premise of Campbell's model is that the collective group mind is more creative than the individual mind. With its overlapping and bridging physical references, the fish-scale model is a design tool for the collective mind (social capital)

being allowed to express itself in the public landscape and as a metaphor for collaboration and depicts a competence that can never be embodied in a single mind. Campbell states:

> ‘‘Make me a novel fish-scale. Let my pattern of inevitably incomplete competence cover areas neglected by others’’ (Campbell, 1969). (Figure 11: Fish-Scale Model)

Beyond binary choices: Integrating individual and social creativity (Fischer et al. 2005) takes the fish-scale model and provides answers for physical integration strategies of how individual and social creativity can be integrated by means of interventions “ boundary objects” in the physical space that allow for knowledge to be collected not only within the individual but also in the individual's social and physical environment. (Fischer et al. 2005) This type of intervention are, also, discussed in the creation of **metadesign** environments. Metadesign was coined in the 1980’s in response to the information technologies and the opportunity for new forms of creativity and sociability. Fischer et al. (2005) introduces it as *boundary objects*. These “boundary objects” (Fischer et al. 2005) are intended to enhance creativity and support spontaneous design activities that are shareable physical interventions that encourage social bridging. It is noted that this would require that the individual would have to release the individual creative action to also include synergetic activities to reflect community creativity.

Fischer et al. (2005) research takes the point of view that “human creativity is social, arising from activities that take place in a context in which interaction with other people and the research experiment included providing opportunities for collective knowledge to transpire. All

the experiments were relevant and shared an understanding of synergy through emergence, i.e.; creativity." (Fischer et al. 2005) Their claim was that "individual and social creativity can be integrated by means of proper collaboration models, appropriate community structures, boundary objects, process models in support of natural evolution of artifacts, and meta-design." (Fischer et al. 2005)

The metadesign concept aims to nurture emergence of creative possibilities or projection through the collaboration of designers within interdisciplinary metadesign teams. Fischer et al. (2005) advocate that metadesign creates the foundations for an unselfconscious culture of design. This type of design process seeks to harness creative teamwork within a suitable co-design framework with the hope that tacit knowledge will emerge and transfer into a collective and innovative final product i.e.; creative communities thru the expression of social capital and placed-based cultural vitality.

An example of metadesign and the fish-scale model is the collaborative work of *RENGA* that was initiated by artists Anzai Toshihiro and Nakamura Rieko. *RENGA* (a Japanese term for linked images), is an experiment in accelerating these possibilities within digital technology -- and the joy of appropriating, and being appropriated from. Toshihiro and Rieko discuss that in their very first session (April 1992) they were bound by the idea that "the art work is the property of the artist." (Anzai, T. & Nakamura, R., 2004) so it was difficult for them when they were unable to erase information from the others' work, and the information accumulated and oversaturated the image. The progression of their collaboration occurred initially every year only between these two artists, until they decided to create *Face Poiesis (2003 &2004).* (Figure 18: Anzai, T., Nakamura, R., 2003 & 2004 Face Poiesis) These creations are an exchange of images moving through the computers of networked artists, creating a series of growing

imageries. Imagery that is created through collaborative exchange of ideas, collected and finalized. The *RENGA* creations form a metadesign perspective that offers insight into co-creation strategies. In short metadesign is an emergent design culture that seeks to transform the complexity of the human interactions into tangible opportunities to create new forms of creativity and sociability. The model of collaborative process in these creative activities offers dynamic creative relationships that do not alienate individual personality. (Fischer et al.501-503) This is explicitly noted in their website where Anzai states,

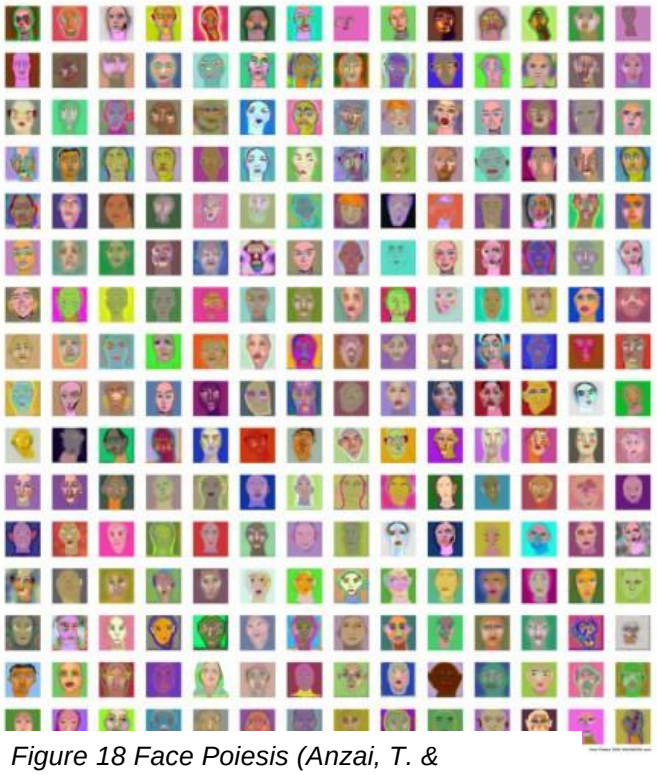


Figure 18 Face Poiesis (Anzai, T. & Nakamura, R., 2003 & 2004)

"It is commonly believed that painting or composing poetry is an extremely solitary creative process. This is often true. And yet, creation is sometimes a collective process, occurring within a 'network of influences.' Such influence can be anything from inspiring hints, to subconscious stylistic appropriation, or responding to an existent theme." (http://renga.com/) (Anzai, T., Nakamura, R., 2004)

Geographic information system (GIS)

This "network of influences" concept dovetails nicely with the Cambell's fish-scale model and Lynch's urban systems morphology as urban design tools that will be applied to the New Haven urban landscape planning case study in the following chapters. It is hypothesized that shifting the current model of urban design from a single city center to a network of possibilities with districts together sharing intersecting nodes and complex sets of connections much like a gigabyte network map as noted in the initial chapters. Visualizing this in the spatial world is another reason for using the geographic information system (GIS) mapping system. This program is used for capturing, storing, checking, and displaying data related to positions on Earth's surface. GIS can show many different kinds of data on one map.

One GIS study by Misra, K., Grimes, P., & Rogers, K. (2013). *The effects of community social capital on school performance: A spatial approach* finds that Mississippi public schools located in communities with a higher stock of social capital significantly outperform those with relatively low levels of social capital. Social capital in this study was defined by number of social organizations in proximity to public schools. The results also suggest that students' race and socio-economic status significantly reduce primary school performance, holding all else equal. This research intent was to advocate for the importance of social capital from spatial perspectives and guide policy makers in future resource allocations. The difference between Misra, K., Grimes, P., & Rogers, K. (2013) and this *thesis* study is that the public systems GIS maps will be cluster analysis maps for social capital (bonding and bridging) and place-based cultural vitality. However, it should be noted that GIS cluster analysis has been used in New Haven, CT for crime mapping or *Risk Terrain Modeling*. (Figure 19: New Haven Crime Mapping) Risk Terrain Modeling is quantitative technique based on the idea that crime

offenders, crime victims, and crime targets can be documented in spatial mapping because the incidents are tied to a specific location. Add to this the combination of social, cultural, economic, and physical environmental risk factors and it is used for *crime forecasting*. (Caplan & Kennedy 2010; Caplan & Kennedy, 2011; Caplan, Kennedy & Piza 2012). While crime analysts use the tool of GIS to provide the "opportunity to describe, demonstrate, analyze and explain the socio-cultural, economic, and physical/geographical environmental context within which certain types of crime are concentrated in urban areas" (Anyinam, C., 2015) this *thesis* will NOT operate out of fear of "others" (Unesco, 2002) the poor and people of color, but out of the understanding for the need of social equity and a hope for a humanity. This study will use GIS cluster analysis to map the "hot spots" (ESRI, 2016) of social capital (bridging and bonding) and place-based cultural vitality.

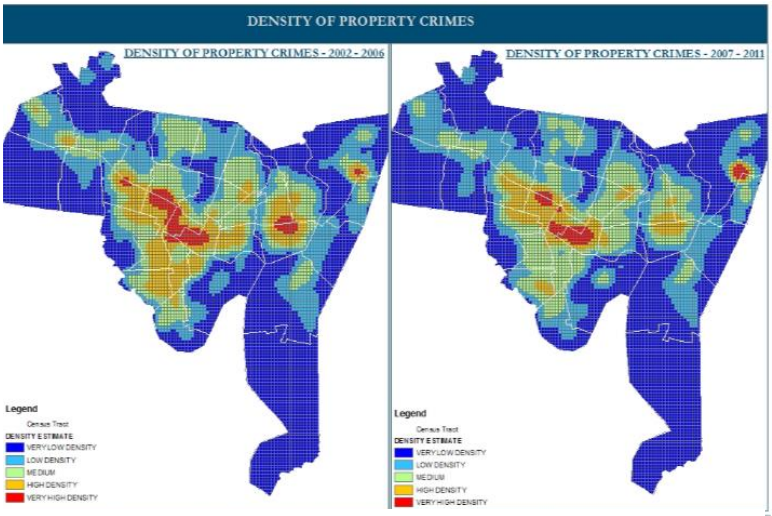


Figure 19 New Haven Crime Analysis Maps (Caplan, Kennedy & Piza 2012).

Community Participatory Design – Social Designers

What does it feel like to exist at the intersection of differences, wherein people come together to create healing and sustainable communities? The complex question of how a diverse community collectively defines sustainability requires a design process that utilizes a common language that can be thoughtfully transformed into two-dimensional designs and later come to fruition in three- dimensional spaces that respect unique social, environmental and economic

communities' holds challenges.

A participatory process must utilize pedagogical tools to help communities define sustainability within their own unique contexts, documenting the collective intelligence of people at all levels into the existing site story with imagination and wonder brought into a co-creation participatory process. However, this does not negate the community participatory process. As discussed in Chapter I, the work and theories of three prominent Landscape Architects: Lawrence Halprin, Randolph Hester and Walter Hood methodologies were reviewed to explore ways in which they:

- Developed a participatory process that increases "shared" expectations for future development that was inclusive and sensitive to socioeconomics, class, race, and ethnicity.
- Designed and/or facilitated a co-creation process and visioning plans, which demonstrate neighborhoods own definition of sustainability and hopes for the future.
- Discussed urban planning and renewal with the awareness of gentrification, poverty, youth and elders were given a voice to speak.

Lawrence Halprin's RSVP Cycles.

Lawrence Halprin's work encouraged people to discover through their own experiences their place-making abilities by creating a sensory-emotional experience with a process known as the RSVP Cycle (standing for Resources, Score, Value-action and Performance). (Figure 14: Resources, Score, Value-action and Performance) required the designer to have the ability to draw upon psychology, active listening, and empathy. (Halprin, L., 1970)

Resources are the human and material elements that are brought to the creative process, including the physical site inventory, design program, objectives and expectations. Resources

are broken down into objective (new school, fix sidewalks, etc.) and subjective (sensory feelings: feeling safe, or the feeling of the sound of the wind blowing in the leaves of an old oak tree, etc.) types. Halprin believed that objective resources are what people tend to express openly in workshops. The subjective, which he considered to be the hidden resources, represent unspoken values and expectations that need to be addressed in design issues. Halprin believed that conventional creative processes caused this issue and he developed a technique to start awareness that he called *scores*. Scores, as in a musical composition, orchestrates design and participatory activities that he used to build common language among the community members and delineate, generate and sustain a project. Once this language was developed, through *value action* the authentic expression of a community and its feelings, needs and belief systems would work itself into the design and development plans. (Halprin, 1970)

In theory the *value-action* component was to be the catalyst for establishing the *performance* is how the design that is implemented is received by the community—the design (in theory) is owned by the people and this ownership is reflected in its "performance". Alas, design is only as good as the policy and construction guidelines of the communities in which it is conceptualized. So while the process allows for authentic community interaction that engages the citizen to hope for democracy, it unfortunately did not lead to sustainable public spaces due to changing policy, times and context. (Halprin, L. 1970, Hirsch, A. B. (2005)

This is explored in Hirsch, A. B. (2005). *The fate of Lawrence Halprin's public spaces: Three case studies* were Heritage Park, Fort Worth, TX, Skyline Park, Denver, CO and Seattle Freeway Park, Seattle, WA. This critic of these three public parks delves into to the concept of maintenance and preservation give way to safe spaces for lunch instead of the once imagined meditative places that are secluded.

Randolph T. Hester: exploring class distinctions in community relationships to landscape.

Randolph T. Hester explored the relationship between social and design innovation. His relationship to community participation was concerned with empowerment and activism. Hester saw Landscape Architecture divided by serving the haves and the have-nots and he was looking for a balance between design and social change. He developed a socially competent distinction between the design needs of the upper and lower socioeconomic class's relationship to the landscape. While the upper class yearns for reconnection to the natural landscape the lower social classes sees the land as a provider for financial resources and a place for economic development. The trend he noticed in the society was particularly conflicted or as he called it "a tug-of- war of values" in relation to the landscape. These social values needed to be addressed and explored and he wove this into the description of the role and untapped potential of a designer when he stated,

> "The designer can give form; for example, to unspoken social values, or values to which people are unaware […] give form to the social values of those who cannot speak or, in our society, are not empowered or listened to when they do speak: the poor, the old, the young, minorities. […] The designer can give form to the values of ecology and nature. " (Halprin, L., 1970)

In *What Makes Participation Exemplary?* Hester addresses a vexing problem for participatory planners is that the process often over represents some people and excludes others, most notably the less affluent and less powerful. (Hester 69) He makes a call for designers to deal with social class differences directly. He offers the work of Walter Hood's Layfayette Square as an exemplary of not pretending to be a space for one big happy family, but instead turns the park

inside out creating a setting that accommodates designing for social differences. Hester challenges the designer to structure the framework to include decisions about the civic space and ask the hard questions; "How do citizens need to look at the problem? How can citizens be aided in understanding spatial consequences? What alternatives do citizens need to consider? What is the public cost?" He called this process transactive and places the responsibility on the designer to provide the place language, the mechanisms to focus the dialogue and make difficult choices, and often the inspirational gestalt that breathes life into a place. (Halprin, L., 1970) Two key books offer strategies and advice for the designer to proceed in this direction *Design for Ecological Democracy* and *The Community Primer*.

Walter Hood: Social bridging and programming within urban populations.

Walter Hood's built work and theory provide examples of urban multi-functional landscape systems coming together in public space. His parks' designs invite diverse groups of users, but instead of addressing different needs by creating a homogenous setting, they embrace diversity by addressing the differing needs of the users by programming and designing for what could initially be seen as competing elements.

Hood discusses the concept of "the surrogate advocate" that he conceived as a method for integrating social justice into the design process. He saw design intentions as a controlling bias in the design process that elevates the "user needs" beyond the typically homogenous group that considers streets, parks etc. as autonomous landscape units. Hood coins *surrogate advocacy* to describe times with the designer needs to recognize and lead the intentions of the different groups may need a bridge to a place where the differences can be reconciled and a

socially equal design can come to fruition. (Blum, A, 2005) He describes the situation when a "surrogate advocacy" is needed below:

> "When I'm thinking about making public work, I'm thinking about those voices that I know aren't here because they don't have the time. I'm connected somehow to that life and that spirit." (Blum, A, 2005)

An examples of how a surrogate advocate can create social bridges that assist in elevating the fear of "others" syndrome-xenophobia Hester describes in *Design for Ecological Democracy* Walter Hood's methods for design in the creation of Lafayette Square Park and Cortland Creek Park in California. Hester described Hood's approach to Lafayette Square Park, Oakland, CA as "compellingly inclusive" and that he showed no intention of excluding anyone –" Young children, old men, middle-income Koreans, lower-income African Americans, concert-goers, and the haircut man and others who engaged in an informal economy all report that the park is theirs." (Hester, R. T., 2006)

Cultivating awareness and having the hard conversations around similarities and differences in race, ethnicity, culture, socioeconomic class in relation to the treatment and the value of our human ecosystem is what Halprin, Hester and Hood have all done well, but it isn't just about listening. It is about acting, co-creation, inclusion, and democracy in our public spaces. American policy making shouldn't be about *environmental determinism*, especially if the policy and regulations are written intentionally to be exclusive and socially inequitable. According to Gilmartin, (2009) Environmental determinism has been widely criticized as a tool to legitimize colonialism, racism, and imperialism in Africa, North America, South America, and Asia and according to the *Black Live Matter Movement* this needs to stop.

Creativity Perspectives on the Problem

In approaching the literature review in creativity research, three areas of focus emerged in relation to sustainable urban design strategies:

1. Defining creativity.
2. Systems theories of creativity: We-Paradigm, Shinmyeong, Liberation Psychology
3. Place-Based Cultural Vitality and Creativity

The literature related to creativity was chosen based on this logic: we design and develop workspaces, technology and science parks, and arts & cultural places with the goal of harnessing creativity for innovative products and ideas, so why not in the realm of designing and developing broader sustainable communities? There was a particular interest in finding research that explored sustainability frameworks through the lens of social bonding/bridging and cultural vitality that promote community development focused on nurturing creativity in its constituents.

Defining creativity

Creativity, much like sustainability, involves a multitude of definitions and disciplines, numerous levels of analysis and empirical methods, and research orientations. In *Theories of Creativity*, Aaron Kozbelt, Ronald A. Beghetto, and Mark A. Runco organize ten major categories of creative theory. The ten major categories of theories of creativity are Developmental, Psychometric, Economic, Stage and Componential Process, Cognitive, Problem Solving and Expertise-Based, Problem Finding, Evolutionary, Typological, and Systems. (Kozbelt et al., 2010)

The creative theory perspective that will tie in social and cultural aspects of this thesis is *Systems Theory*. The systems category primary assertion is that creativity results from a complex system of interactions and interrelated factors. (Kozbelt et al., 2010) Intriguingly, to this land designer, the creativity research begins with Csikszentmihalyi (1988) reframing the basic question of "What is creativity" to "Where is creativity?" Csikszentmihalyi (1988) notes that psychologists tend to see creativity exclusively as a mental process however his research notes that creativity is as much a cultural and social as it is a psychological event. (Nakamura, et al., 2001)

Systems theories of creativity: We-paradigm, Shinmyeong, Liberation psychology.

According to Csikszentmihalyi's (1988, 1999, 2014) creative systems perspective, an individual is created by their surrounding environment consisting of a field (society) and a domain (individual's society and culture). Acceptance of an idea is a triangulation of the "field" and "domain" and these elements impact on the individual. Csikszentmihalyi's (1988, 1999, 2014) In researching the systems

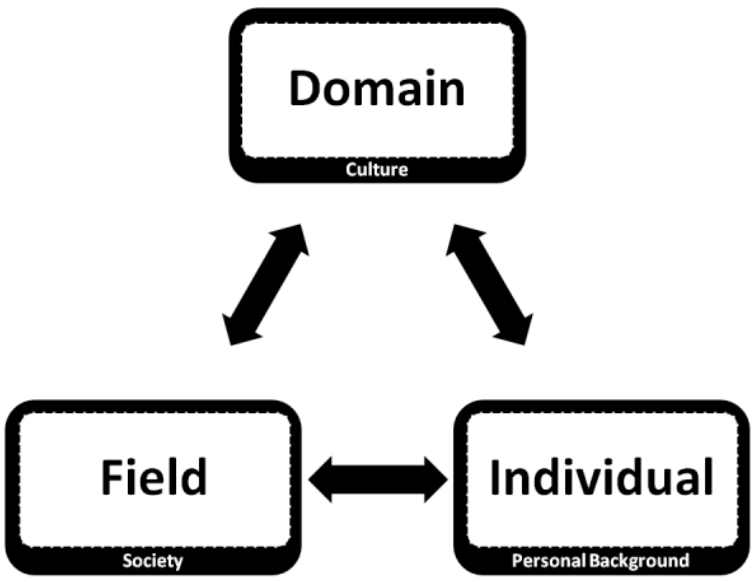


Figure 20 Graphical replication of Csikszentmihalyi's(1999) systems perspective of creativity

theory of creativity, Vlad Petre Glăveanu identified three paradigms in the article *Principles for a Cultural Psychology of Creativity*: the *He- paradigm* and *I-paradigm*, which both are predominately individualist views of the creative process, and the *We-paradigm*, which discusses the social psychology of creativity. Through the We-paradigm Glăveanu investigates the socio-cultural roots and dynamics of our creative acts in relation to self and community. (Glăveanu, 2010a) This *thesis'* creativity concept grows from this research and seeks to examine work that has explored the We-paradigm in the physical environment.

Three bodies of work were discovered that fit the We-paradigm in the urban design context: *How can Creativity in a Social Context be Possible?, Beyond binary choices: Integrating individual and social creativity,* and *Liberation Psychology: Martin Luther King, Jr's Beloved Community as a Model for Social Creativity* were examined to provide a deeper understanding of the of the We-paradigm in physical space and place-making.

In *How can Creativity in a Social Context be Possible,* Min Han connects the principles of Glaveanu's We-paradigm to the Korean cultural phenomenon called *Shinmyeong*. Han describes Shinmyeong as an emotional experience of feelings of great pride, competence, and vitality when people are immersed in an activity; this phenomenon is also generally known in psychology as *flow*. In Korean history, Shinmyeong has been experienced and described for a long time, mainly in collective contexts. Glaveanu suggests five principles that are central to the *We-paradigm* of creativity: contextual understanding, generative understanding, meaning-oriented understanding, developmental understanding, and the ecological nature of creativity. Han focuses on the principles of *contextual understanding* and *meaning-oriented understanding* in investigating the relationship between creativity and Shinmyeong. While more exploration is needed to better understand creativity and Shinmyeong, Han's approach provides a relevant way

of applying the We-paradigm to a specific cultural context. Relating context to creativity provides important information about the situation in which creativity appears and about the people who participate in the situation. The Korean 'we' in the context of Shinmyeong shows an example of understanding community as an essential host for creativity. (Han, M. (2010)

While Royal Earl Alsup's *Martin Luther King, Jr's Beloved Community as a Model for Social Creativity* doesn't source Glaveanu, this article has relevance in that for social systems to be more civil and sustainable, transformation through the We-paradigm will be required. Alsup provides commentary on the relationship of the vision and transformative leadership of Martin Luther King, Jr. to the concept, meaning, and physical qualities of community as reflected in this statement by King:

> This is the great new problem of mankind. We have inherited a large house, a great "world house" in which we have to live together—Black and White, Easterner and Westerner, Gentile and Jew, Catholic and Protestant, Moslem and Hindu—a family unduly separated in ideas, culture and interest, who, because we can never again live apart, must learn somehow to live with each other in peace (King, 1967).

Alsup teases apart Dr. King's approach to community commitment by identifying themes related to *liberation psychology* and Dr. King's belief that basic needs fulfillment is essential for all human beings. Alsup identified physical needs; safety, security, and competence needs, power and justice needs; belonging, respect, and love/nonviolence needs; uniqueness, gender, and culture needs; freedom and self-determination needs; trust and hope needs; and *creativity* and spirituality needs. Alsup states "the fulfillment of trust and hope needs promotes the safety, security, motivation, and confidence for a person to be *creative*."

(Alsup, R. E., 2009)

*Influences of Social and Educational Environments on Creativity During Adolescence: Does SES Matter? (*Dai et al, 2012) identifies and studies the creativity gap between high and low socioeconomic statuses (SES). This is just as critical an issue as the academic achievement gap because it directly confronts issues of equity, not only in the educational environment, but in the area of social capital. The study hones in on six factors for creativity in adolescents: (a) perceived teacher and parent support (b) self-confidence (c) intrinsic cognitive motivation or need for cognition (d) openness to experience (e) adventurousness and (f) artistic imagination. (Dai, et al 2012) he research findings suggest a creativity gap analogous to the achievement gap, In *Narrowing the Creativity Gap: The Moderating Effects of Perceived Support for Creativity* Diliello, et al (2011) investigate the moderating role of three levels of support for creativity in the workplace: organizational support, supervisor support, and work-group support. These factors are analyzed for how they impact creative self-efficacy and self-perceived creativity. The findings showed that if these three support levels restrict or discourage creative expression, a gap may develop between the individual's potential for creative behaviors and the actual amount of creativity and efficacy displayed by the individual. The results of this research advocated for developing work climates that allow the workforce to reach their full creative potential by creating work environments in which supervisors and peers support creativity through the encouragement of risk-taking and divergent thinking. Diliello et al. (2012); encourage utilizing empowering and transformational approaches to leadership where followers are less likely to experience the fear of negative criticism and the pressure of contingent rewards that can undermine intrinsic motivation, and more likely to engage in creative processes that embrace diversity and alternative ideas.

The topic of divergent thinking is further discussed by Arjen Wals in *Learning Our Way to Sustainability* (2011). He calls for an emancipatory perspective to be used and discusses two types of learning: social learning and transformative social learning. These forms of learning are entering the discussion on education for sustainable development (ESD) and are distinguished from each other as follows: "social learning" means learning by mirroring one's own ideas, views, values and perspectives with those of others; "transformative social learning" requires the integrative switching back and forth among a set of mindsets in other words diversity of experiences. (Arjen Wals., 2011) Transformative social learning in *Liberation Psychology* (Alsup, 2009) is what Martin Luther King, Jr. is describing in his description of "community" as an organizing metaphor cultural vitality and social creativity. (King Jr, M. L., 2010). Earlier in the problem chapter in *Influences of Social and Educational Environments on Creativity During Adolescence: Does Socioeconomic status (SES) Matter?* it was discussed that yes, socioeconomic status does matter in the relationship to creativity opportunities and in closing the creativity and achievement gap. The findings stated that to address these gaps the community environmental along with the school environment needed to include the increase of social capital (bonding and bridging). *(*Dai, D. 2012)

Alsup (2009) and King Jr, M. L. (2010). are directly confronts issues of equity, not only equity in the educational environment, but in the area of public space social capital. They discuss taking the perspective of creativity from the purely intellectual intelligence to the emotional intelligence realm. (Alsup, R., 2009) and state that the basic needs that need to be filled for liberation and social equity is opening our minds to possibilities. That for mind of those who are oppressed to heal the environment needs to include the "fulfillment of trust and hope and promote safety, security, motivation, and confidence for a person to be creative." (Alsup, R., 2009). One

socioeconomic class that is particularly good at seeking out and embracing diversity and alternative ideas is the *creative class*.

Place-Based Cultural Vitality and Creativity

While the phenomena of the *creative class* have been identified by American economist and social scientist Richard Florida his definition has been critiqued as vague definition. Florida states that the creative class is composed of scientists and engineers, university professors, poets and architects, and also includes "people in design, education, arts, music and entertainment, whose economic function is to create new ideas, new technology and/or creative content" (Florida, 2002) He has advocated that the creative class is a driving force for economic development of post-industrial cities in the United States. (Florida, R. 2002) While his work has been widely acclaimed, a critical related cultural group - *the bohemian* - is mentioned throughout his work, though rarely addressed in relation to how to support this key element. The bohemian is described as "authors, designers, musicians and composers, actors and directors, craft-artists, painters, sculptors, artist printmakers, photographers, dancers, artists, performers and related workers" (Florida 2002) It is quite different from all the other sub-components both in terms of the role that it plays in economic growth and in terms of individual economic rewards in the labor market. In the chapter *Bohemia and Economic Geography* he examines the relationships between bohemians, human capital, and high-technology industries. His underlying hypothesis is that the presence and concentration of bohemians in an area creates an environment or milieu that attracts other types of talented or high human capital individuals. In other words, the bohemian is the catalyst for the elitist creative class or "other types" (Florida 2002) which he notes will be predominantly creative and entrepreneurial professional group in society as the driver of economic growth in American cities. (Florida, 2002)

Florida‘s work seeks out the presence and concentration of bohemians because his belief is that the existence of bohemians attracts other types of talented or high human capital individual which in turn attracts and generates innovative, technology-based industries. His findings support this hypothesis and the relationship between the bohemian index and high-technology concentrations is particularly strong. (Florida, R. 2002). However, because there is not zoning policy or regulations to protect this resource it has become a catalyst for gentrification and along with pushing out the bohemian they push out the poor and homogenize the community. Bohemians’ are generally faced with uncertain career prospects, very diverse job outcomes and lower average salaries, and this holds true even for high human capital individuals, i.e., individuals who completed a university degree (Comunian et al. 2010) There has been a widespread interest in the economic development role played by the bohemian and it is believed that these creative people will foster economic growth. What tends to be skipped over in regard to the decision making of the bohemian is why bohemians are attracted to the places they attract to, which is based on their socio-economic, social bonding capital, cultural diversity & vitality needs. “While Florida exemplifies this socioeconomic class in the economic viable vein in contrast his work, also, resonates alongside racism, classism and sexism.” (Gilroy, 2016)

Sociological Perspectives on the Problem

In approaching the literature review in sociology, three main areas of interest emerged in relation to sustainable urban design strategies:

1. Sustainability indicators and neighborhood studies
2. Social bonding and bridging capital: tacit knowledge and environmental justice

3. Social Equity: Planning and Design Policy

Sustainability indicators and neighborhood studies.

A number of social sustainability indicators have been explored, including those outlined in the United Nations Commission on Sustainable Development (CSD) *Indicators of Sustainable Development*: *Guidelines and Methodologies*, as discussed in the initial chapter on the mixed-methods approach the most relevant to this work are Catalina Turcu's *Re-thinking sustainability indicators: local perspectives of urban sustainability* (2013) and *Developing Indicators Of Sustainable Community: Lessons From Sustainable Seattle* by Alan AtKisson (1996).

AtKission (1996) presents his work in a chronological story format that corresponds with phases of the project and lessons learned One lesson that is expressed throughout AtKission's (1996) project and in Catalina Turcu (2013) *Re-thinking sustainability indicators: local perspectives of urban sustainability* is that if expert-lead (government & professionals) and citizen-led (grass-roots) groups are to collaborate, then the balance of power needs to be established through the mutual defining of sustainability within the qualitative and quantitative data. (AtKission, 1996, Catalina Turcu, 2013)

The thesis research data focus is on collecting information on the urban public/green spaces to see the existing physical expression of sustainable community development strategies and proposes an alternate expression – a merging of qualitative and quantitative data. This information analysis and the recommendations that will be reflected are collaboration between "experts and citizens". (Catalina Turcu, 2013)

In Addressing Deep and Persistent Poverty, Laudan Aron, Wendy Jacobson, and Margery Austin Turn discuss and provide a framework to address the antipoverty efforts in the United State. Aron et al.; describes the challenge as being vast, complex and fragmented and it identifies four overarching and intersecting approaches (Aron, L. et al):

1. Strengthening or expanding programs and services through practice demonstrations, policy development, and advocacy.
2. Seeding and supporting on-the-ground efforts that integrate needed services to address the needs of a particular community or group.
3. Engaging and empowering poor people to effectively advocate for themselves.
4. Educating the broader public and building a public movement for changes in policy or the social contract.

Aron et al.; approach systems reform as strengthening public programs is to strategically reform the way they interact with, and potentially complement, one another. (Aron, L. et al. 2013)

Social bonding and bridging capital: tacit knowledge and environmental justice

This thesis took the lens of a community designer and focused on these key words from their approach: strengthening programs, social contract, seeding and supporting on-the-ground efforts, and engaging and empowering poor people. Along with the framework these concepts are given power through social bonding and bridging capital, place-based cultural vitality and creativity being expressed and physically designed in the landscape.

It has become painfully clear that America has a gap epidemic. While it may be interesting to try to name all the gaps that come to mind, one is of particular relevance here. This gap has been named by various researchers as the *achievement gap* and by others as the *resource gap* (Lee, J. (2012) and still others as the *creativity gap* (Diliello, T, et all 2011). To further complicate, there are gaps within this gap, for example, the *science and gender gap*. In relation to urban design, how many gaps would decrease if a unifying gap culprit were identified within the physical landscape? It might be identified as the *social capital gap*.

Whitlock's *The role of adults, public space, and power in adolescent community connectedness* (2007) discusses the social capital gap between the social networks of three schools and community neighborhood public spaces. Whitlock boldly states that "communities are critical arenas for adolescent development." This message has been repeated in other fields--*The Gender Gap in High School Physics: Considering the Context of Local Communities* identifies community as holding the power to influence what youth become when they grow up (Riegle-Crumb and Moore, 2014). Whitlock sets the background for community connectedness by breaking down social capital theories and incorporates assumptions about healthy development and wellbeing within the following tenets:

> a) civic trust, caring, and respect play an important role in promoting participation and mutual positive regard;
>
> b) individuals receive information about themselves and their value not solely from other people, but also from subtle exchanges with institutions, policies, and practices;
>
> c) opportunities to build social capital and civic identity and negotiate a space for oneself in the broader community will confer the greatest advantage to individuals

> and communities when the “fit” between environmental affordances and developmental need is strong;
>
> d) individuals are involved in constant exchange with their environment, even when seemingly invisible; and
>
> e) collective identity plays an important role in individual developmental processes and outcomes.

The areas above are the basis for conceptualizing "connectedness" in this study. In short, it is claimed that the reciprocal act of care, trust and respect between adults and youth at an individual and collective level has impact on wellbeing of whole community. (Whitlock, J., 2007)

What has particular interest and relevance to this thesis is Whitlock’s mixed methods approach. While many scholars operationalize community-level influence, this study approaches it through the lens of youth and their experiences in their own. This shares a perspective from the point of view of the individual rather than the “objective” researcher using measurements of environmental influence on the individual. This relational aspect identifies key themes of community life that emerged in the focus groups and coincided with the survey results. There were 40 discrete themes that were identified as indicators of connectedness-trust, care and respect. One interesting correlation was the numbers of youth that didn't feel cared for by community to the numbers of adults that felt “that kind of responsibility is akin to babysitting". The youth-adult relationships and youth voice and power, accounting for 65% of all conditions identified, was powerful. (Whitlock, J., 2007)

The summary of Whitlock’s mixed method research study suggest that youth connectedness to community was influenced by these factors: (a) quality of youth-adult exchange, (b)

availability of outlets for creative engagement, (c) well-advertised opportunities for meaningful input, (d) safety, (e) perceived welcome in public spaces, (f) knowledge of community events, and (g) awareness of youth impact on community policies. (Whitlock, J., 2007)

While Whitlock's work supports the idea that individual development and community development are inextricably linked, the study's measurement of *creative engagement* was disappointing. Her measurement of *creative engagement* limited creativity to a destination. The creative engagement measurement was a three-item scale that determined to what extent the youth felt their community offered opportunities to "creatively" engage in activities that were of interest to them. These interests could be anything—sports, leadership, music, dance, etc. (Whitlock, J., 2007) It leaves open the important question and opportunity of how these spaces can be creatively and collectively formed and designed as an essential connective activity itself.

Social Equity: Planning and Design

In 1997 *Architecture of Fear* was published as a collection of essays that reviewed and analyzed the United States' fixation on fear and its control thru planning and design. It examined how the landscape was being shaped through a preoccupation with fear of crime and counter-cultural elements. Such fear has become the catalyst for the design of homes, communities, and public spaces -- enforced by zoning policy and regulations.

One particular essay became a catalyst for this thesis – *Divided We Fall: Gated and Walled Communities in the United States* by Edward Blakey and Mary Snyder. It describes gated communities as residential areas with restricted access such that normally public spaces have been privatized (1997). The authors discuss the "forting-up" phenomenon of middle class Americans that moved to escape school integration, secure appreciation housing values and

maintain their economic advantage. The developers of gated communities see themselves as providing security. At its core this essay is discussing the policy consequences that come from allowing some citizens to internalize and to exclude others and deteriorate the conceptual base of community and citizenship in America. “In short, can this nation fulfill its social contract in the absence of social contact?” asks Blakey and Snyder. In essence the gated and walled community citizen is buying a lifestyle and this is attractive to those who want to be separate, have private services and amenities, and who are also seeking a homogenous, predictable environment.

Leadership Perspectives on the Problem

In approaching the literature review in leadership three areas were examined for their applications for sustainable urban design strategies:

1. Adaptive and educational leadership.
2. Environmental and sustainability education.
3. Sustainability and environmental policy leadership.

Adaptive and educational leadership.

It was decided early in the development of this thesis that it was important to identify leadership strategies for the planning and design framework. Engaging a diverse community to collectively define sustainability requires a particular type of leadership. This initiated from the environmental lens of the sustainability Venn diagram of social, environmental and economic concerns. Initially, environment was explored in the context of the natural environment through the works of Rachel Carson’s *Silent Spring* and David Sobel’s *Beyond Ecophobia*; however, as the research evolved a book that had a management and business focus was reviewed -- *The*

Practices of Adaptive Leadership: Tools and Tactics for Changing Your Organization and the World (Heifetz, et al,2009). In addition, concepts of educational leadership were reviewed and aided in developing the framework.

Heifetz. et al. explain that *adaptive leadership* is not about meeting or exceeding your authorizers'(or clients', stakeholders', etc.) expectations; it is about challenging some of those expectations, finding a way to disappoint people without pushing them completely over the edge (Heifetz, et al,2009) The first tenet of adaptive leadership is getting over the belief that the system is broken. In diagnosing the system, a leader should consider three major components: structure, culture, defaults, and seek out supportive and impeding structures for adaptive leadership. (Heifetz, et al, 2009) Much of the language of the book focuses on raising performance and enhancing efficiency in the corporate business and it felt necessary to research studies that included pedagogy, epistemology and human development to aid in building self-efficacy within community design. In this *thesis* the adaptation is recognizing that we as a society are in a structure, culture and have created defaults that are designed to segregate and NOT create social equity.

Educational leadership typically distinguishes itself through its focus on pedagogy, epistemology and human development. The University of Connecticut's Department of Educational Leadership (EDLR) discusses their mission to develop leaders, who connect theory, practice, policy, and assessment that involves working with and guiding teachers towards improving educational processes in elementary, secondary and postsecondary institutions. Education leadership roles tend to go above and beyond just management and administrative tasks, and incorporate the learning environment in their leadership development therefore it bends the research lens towards this perspective. An example of this is New Haven's *Common*

Ground High School. Common Ground states that as whole, it is a center for environmental learning and leadership and that their place-based learning site allows learning and leadership to take many different forms— the site along with its buildings are woven into all the participants' belief of being life time learners. (Common Ground ,Website, 2016)

As mentioned in the beginning, pentimenti is not about erasing the canvas and starting a new painting, but instead shows the subtle shifts in thought and form. It is a refining process and the past clues are important because they are a reflection of where the thought had been to the future decision assisting in the coming to terms with the problem that has been set to solve. It is important to remember our past and recognize that during the last societal shift that came about during *The Industrial Revolution* the impact of urban design was a wedge for our vulnerable citizens. The revolutionary shift of our time needs to include cultural vitality in the urban landscape palette to develop sustainable communities.

The planning and design framework will require incorporating sustainable design education that is transferable across audiences that educates students, as well as educational leaders, community members and business leaders on the significance of integrating sustainable designs in all future planning especially in the area of multifunctional and high-performance ecological landscapes. While the process aims to have communities define their own needs for sustainability, education about the environmental, social and economic dimensions of sustainability is important to provide.

Environmental and Sustainability Education.

In the exploration of transforming an independent perspective into an interdependent view, environmental and sustainability education must approach teaching, learning and designing

with a holistic method. In researching the environmental component of the sustainability Venn diagram I honed in on the social capital and cultural vitality aspects. This started with defining environmental education. In defining "environmental education" the word *environment* is often very narrowly considered. Dillion and Teamey, stated that "focusing solely on environmental education's role in the school curriculum ignores a range of factors that affect its efficacy in the majority of the world." (Justin Dillon & Kelly Teamey, 2002) In short, the forming of environmental education that takes into account a "range of critical factor at the macro, meso, and micro levels is required. In landscape architecture this is called context analysis. In Sustainable Site Design it is noted that "Sites that are conceived of an overview of the larger, hierarchical systems of the environment, both ecological and cultural, stand a much better chance at protecting and enriching—sustaining—the site environment and its inhabitants (Dinep, C., & Schwab, K., 2010). This environmental education construct coincides with the sustainability construct that requires the lenses of economic, social, cultural vitality component to create sustainable design --- emphasizing the one size does not fit all approach.

In the readings I honed in on the theme of values, attitudes and behavior changes that we would need to cultivate throughout society regarding our relationship with the planet. It will require us to take an honest look within ourselves and our history in relation to our values for nature. Albert Einstein once said "No problem can be solved from the same level of consciousness that created it", and also: "The true sign of intelligence is not knowledge but imagination." Following these two tenants involves not only the mind but the body, the spirit, and the emotions. Perhaps creating sustainable design requires a deeper dive into our imagination. Urban environmental design education is best described with William Stapp's, *The Concept of Environmental Education*, in which he conveys that "society should have an

awareness and understanding of their community and its associated problems" because "citizens are being asked to make decisions that effect (directly and indirectly) their environment." It is an important role of designer to assist in the "development of this awareness" of the interrelationship of community, surrounding land and unique values. (Stapp, William B. 1969)

Sustainability and environmental policy leadership.

The term sustainability development policy is related to and as controversial as the term climate change – according to an interactive map that Yale University created to poll public opinion 60% of Americans believe global warming is taking place and the rest half blame humans. The question asked, "Does YOUR state believe in global warming?" (Schilling, & Chiang., 2011)

One way that this is being addressed is that on July 1, 2011, the Department of Environmental Protection (DEP) became the Department of Energy and Environmental Protection (DEEP) becoming the new DEEP that represents a fundamentally new approach to energy and environmental policy in Connecticut. Dan Esty, the DEP commissioner, who transitioned to DEEP commissioner stated, "Both the energy and environment people are going to need in my department to be thinking about the economic and the jobs implications and the economic growth impacts of the choices we make." According to Esty, "Energy is a $6 trillion a year part of the global economy. You don't have to have a very big slice of that to have a lot of very successful, very profitable businesses," he said. "Whether the transition to clean energy occurs in the next 10 or 20 years or over the next 40 or 50 years, it's going to occur. And those that lead the way are going to be very successful from an economic point of view. We can't afford to let slip by." Connecticut Department of Energy & Environmental Protection. 2016)

The State of Connecticut DEEP has chosen to lead through energy policy and conservation. It is stated on the DEEP website "dedicated to conserving, improving and protecting our natural resources and the environment – and increasing the availability of cheaper, cleaner, and more reliable energy." (Connecticut Department of Energy & Environmental Protection. 2016)

The goal is to incorporate social bonding and bridging capital and placed-based cultural vitality into spatial knowledge that can be used in the development of sustainable communities. This premise has not been properly reflected in policy discussions about ways to improve the quality of life in communities. The initial concept was that the landscape architecture profession alone was equipped to assist urban sociological growth in building the capacity to face the adaptive challenge of designing sustainable sites within complex urban ecological and cultural landscape systems.

The area of study that is proposed for further research is in *the systems theory of creativity* (Glăveanu, 2010a) and how it can be created in the physical landscape. The *we-paradigm* (Glăveanu, 2010a) is embedded in this proposal because it has the values and tones to fit into the existing landscape canvas. The potential for sustainable urban design to improve creativity through the human and cultural connection is largely untapped. What is advocated by the research thus far is that individualistic power is not only overrated, but not sufficient for the needs of our time. This growing field component of creativity is acknowledging the relationship between an individual and the context that the work is developed within, as well as from the ties between an individual and another human being. The social context is being advocated for as having a wealth of group knowledge; especially tacit. If the overarching claim is that creating spaces connected to the group's culture stimulates group dynamics that influence the group's creativity than it seems that to understand creativity, understanding the community in

which creativity can be observed should be an area to develop further research.

One way to explore sustainable design strategies that employ cultivating creativity through cultural vitality in the urban landscape is through this proposed thesis project. This Geographic Information Systems based thesis project employs two key sets of cultural vitality indicators: The Urban Institute's Arts & Culture Indicators Project and The National Center for Charitable Statistics Bonding Social Capital Indicators. Using Connecticut Nonprofit Strategy Platform data, among other data sets, were geocoded into geographic spatial information to explore the existing cluster spread and to identify cultural vitality density areas to use in neighborhood comparison study of the City of New Haven, CT. This cluster analysis approach will inform community and landscape levels of design and programming by identifying opportunities for enhancing and developing place-based resources around existing and potential areas of cultural vitality. This leaves a basic question: How can cultural vitality be integrated into a framework for sustainability? Synthesizing the creativity concepts discussed above into the physical landscape requires more exploration and identifying frameworks for developing these active negative spaces as multifunctional spaces that ask these essential questions: What ARE *the needs* of current and future generations? And how are these needs intertwined with the form and function of the physical human environment?

CHAPTER III: METHODOLOGY

"Things get done only if the data we gather can inform and inspire those in a position to make [a] difference."

~ Mike Schmoker, former school administrator, football coach and author.

Mixed Methods Research

The city of New Haven, Connecticut was noted in a demographic study titled '*Normal America' Is Not A Small Town Of White People* by Jed Kolko to be the #1 city most like the United States (Kolko, J., 2016, Summer). New Haven offers a unique setting for a mixed-methods research. This research uses both qualitative and quantitative data from the wealth of data provided by DataHaven, C.A.R.E and the City of New Haven. In addition, this thesis incorporates its own qualitative data in the form of an ethnographic study that has been collected in the last seven years of living and working in New Haven, CT.

Quantitative Data: Prioritizing Sustainable Public Space Systems

The framework that was developed in *Reversing Urban Sprawl: A Reclaimability Index Approach for Reviving Downtown Brownfield*'s (Chrysochoou et; al. (2011) was used as a starting point for creating a design framework to prioritize for this project. Chrysochoou et; al (2011) used a GIS-framework to prioritize 61 brownfield sites in the state inventory in terms of socioeconomic, smart growth, and environmental criteria. A series of GIS data layers were amassed and combined to identify sites of opportunity and investment for brownfield development based on a values system of good to bad conditions in relation to Smart Growth. For instance, areas of a good balance of jobs and residential land use had a higher priority for brownfield remediation. Their study included the City of New Haven. Below

is their New Haven Smart Growth and Environmental Impact Statement (EIS) Map showing the prioritization of brownfields in relation to smart growth potential.

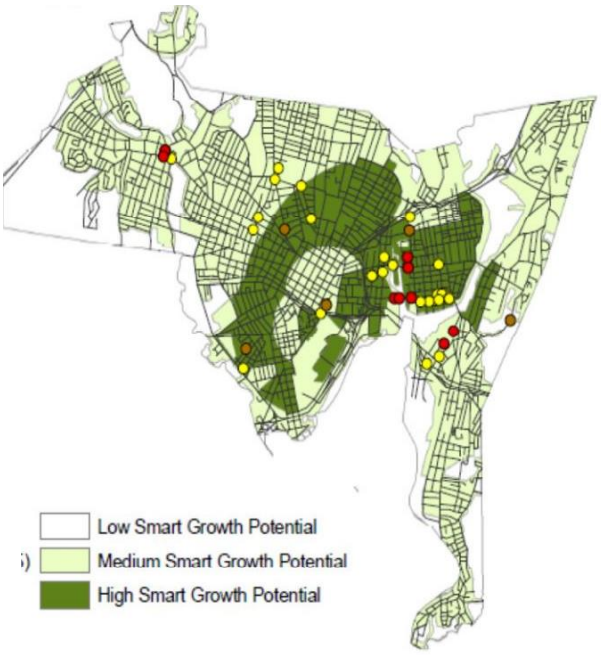


Table 3.2: Smart Growth Variables - Classification, Scores and Weights

Variable [Unit]	Classification	Score	Weight
Intersection Density [Intersection/Sq. Mile]	Above 140	2	25%
	90 -140	1	
	Below 90	0	
Utility Service Area [Sq. Mile]	Both	2	25%
	Either	1	
	Neither	0	
Job Housing Balance [Jobs/Employed Labor]	0.8-1.25	2	15%
	Above 1.25/Below 0.8	1	
Bus Transit – Access [Miles]	Below 1/4	2	10%
	1/4 - 1/2	1	
	Above 1/2	0	
Rail Transit - Access [Miles]	Below 1/2	2	10%
	1/2 - 1	1	
	Above 1	0	
Rail Transit - Service [Avg. Trips/Week]	Above 48	2	10%
	30 - 48	1	
	Below 30	0	
Potential Rail [Miles]	Most Likely	2	5%
	Possibly	1	

Figure 21: New Haven Smart Growth and Smart Growth Variables / Scores (Chrysochoou et; al. 2011)

Their methodology is an adapted tool to determine areas of opportunity for investment in regard to the following proposed public space system plan. The public space systems design framework (shown on the next page) incorporates the already recognized environmental, economic and social criteria, however, the prioritization for the social capital and cultural vitality is given a higher value in this framework. This framework brings the value of social capital and cultural vitality to the table as key factors (currently not recognized in smart growth) and is the core to the public space systems analysis that will be discussed in the following chapters.

Approaching the decision on how to place value on the framework maps was like approaching the New Haven public space complex like an artist advances towards the canvas – The artist/land designer observes the existing systems/canvas and starts to imagine the subtle shifts (pentimento) of the

canvas/landscape towards innovative interdependent development. This methodology is a tool for determining areas of opportunity for community investment and development in regard to the proposed public space system plan. This framework incorporates the already recognized factors of environmental, economic and emphasizes the additional cultural vitality and social capital as a key component for designing a revised sustainability framework designed to aid in the decision making for the proposed public space systems elements.

The framework was divided into four categories social capital and cultural vitality, environment, economics. Within these four categories the quantitative spatial analysis, planning and design framework was formed. Within these categories these sources were analyzed:

- Urban Institute – Cultural Vitality Indicators
- National Center for Charitable Statistics (NCCS) Bonding Social Capital
- New Haven Vision Plan (NHVP) 2025
- Existing New Haven Planning and Development Maps
- Other's Mapping – I.E; CARE, Empowerment Zones, etc.
- Gilroy's Original Mapping – I.E; Health Facilities, Coffee Shops, etc.

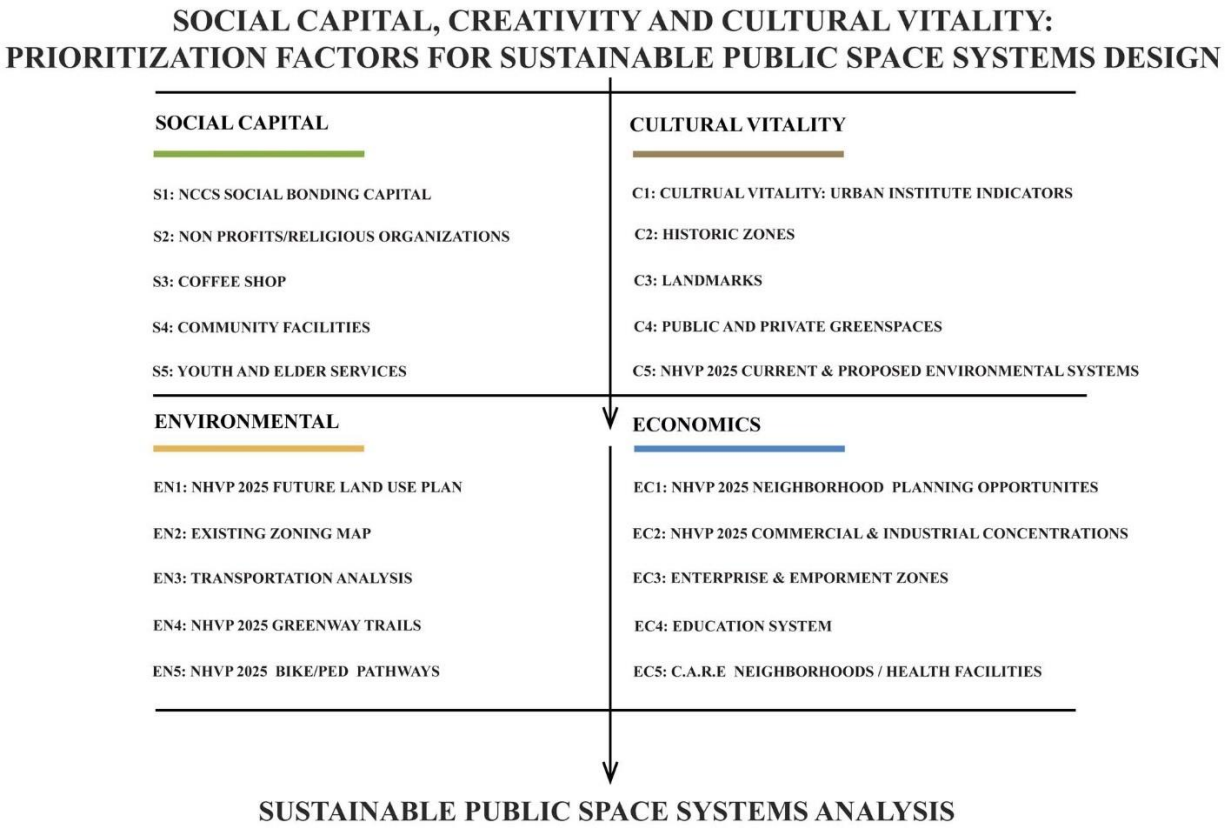
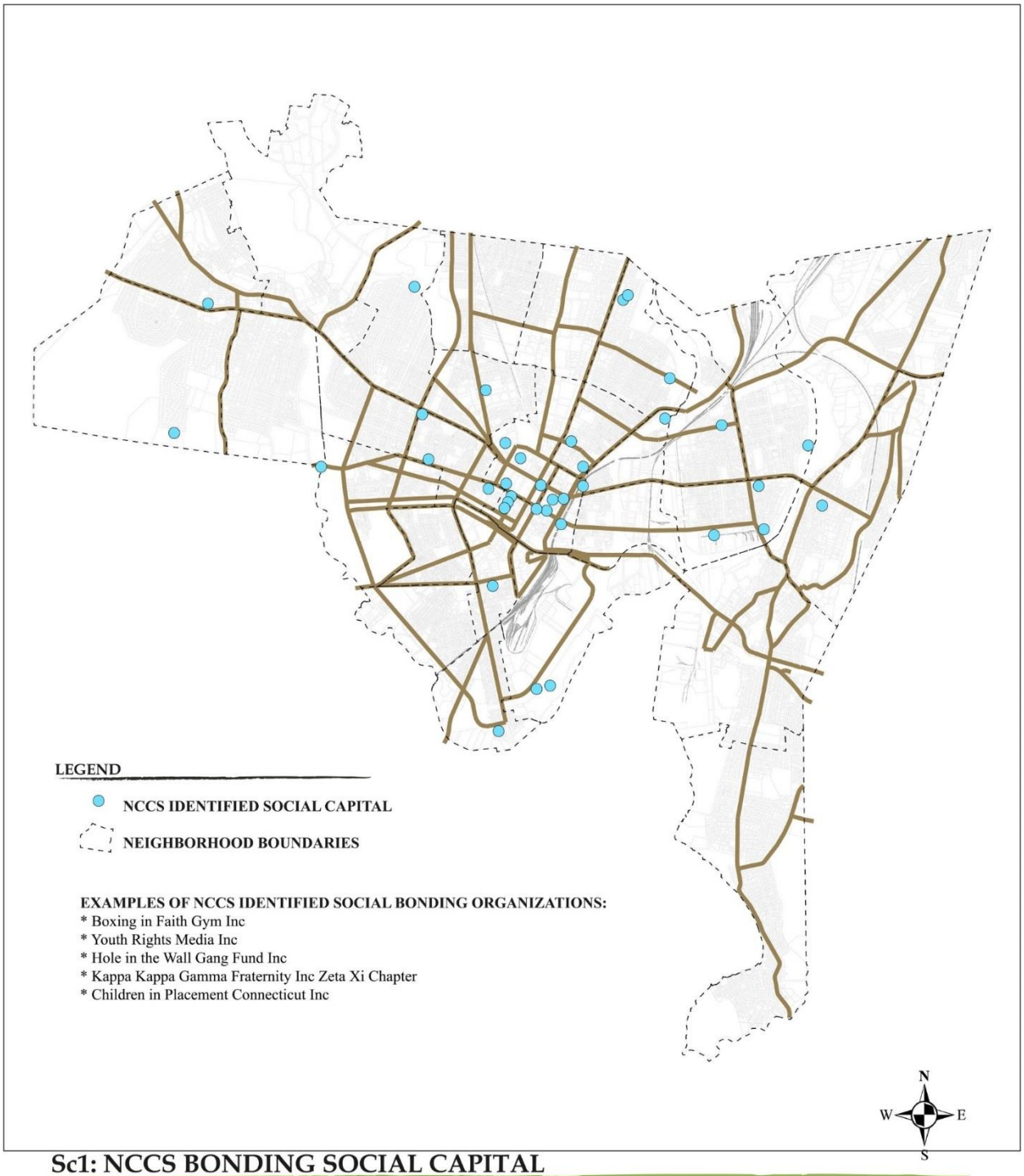


Figure 21: Quantitative Analysis, Planning and Design Framework (Gilroy, 2016)

Social Capital

Map Sc1: National Center for Charitable Statistics (NCCS) Bonding Social Capital



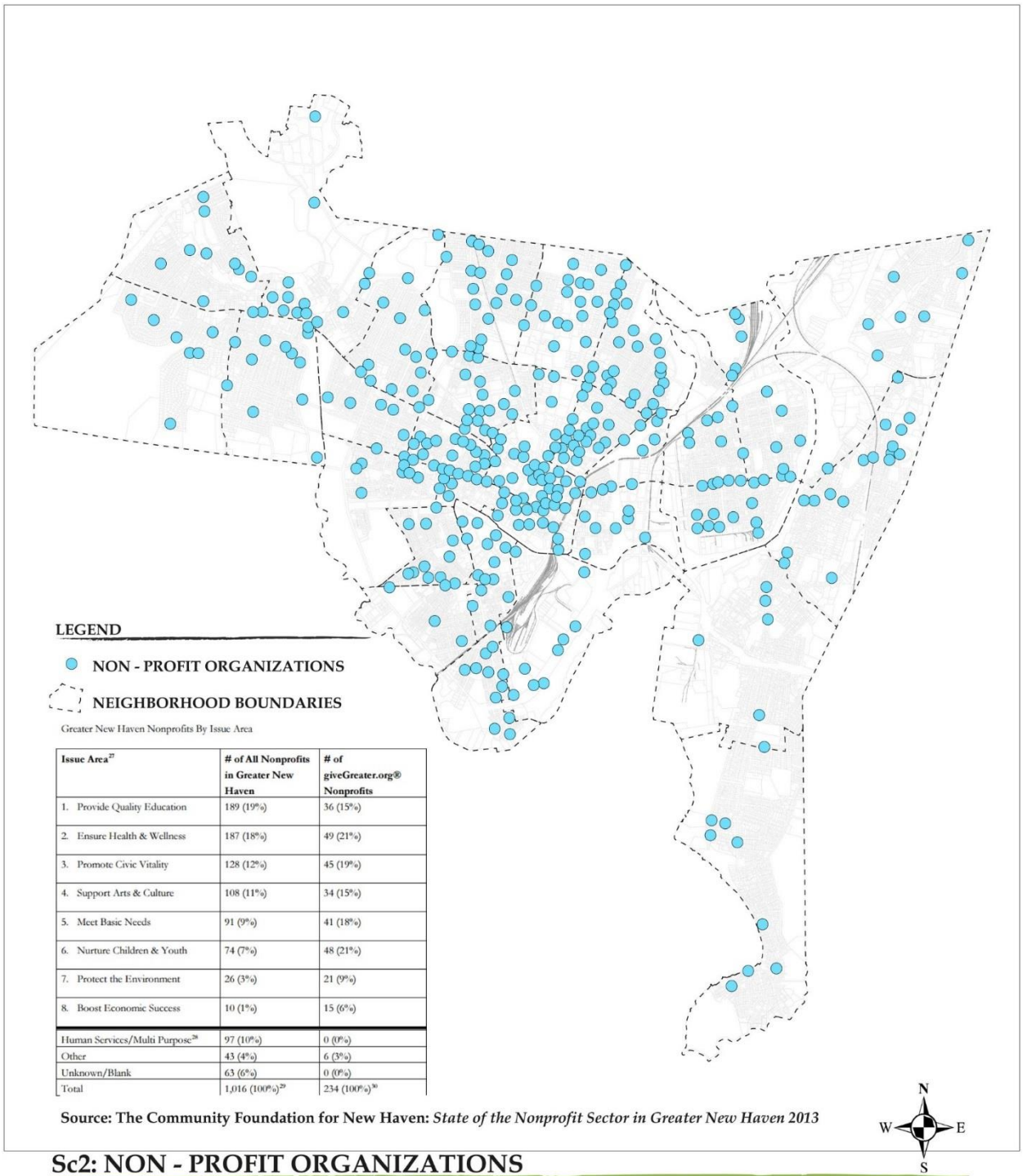
In the NCCS the Connecticut Nonprofit Strategy Platform (CNSP) identifies bonding social capital as clubs, sports, and other mutual benefit or social bonding organizations. (NCCS Data. Retrieved 2016). This category represents an initial effort to categorize organizations that offer opportunities for personal interaction around activities of mutual interest.

The categories that CNSP choose is not intended to be definitive, therefore this project took creative license to elaborate on this index to meet its goal. These chosen CNSP indicators were incorporated in this project:

- "N: Recreation and sports - this category includes many youth sports leagues.
- O: Youth Development
- A62-A6B: Performing Arts with revenues less than $75,000
- B94: Parent and teaching groups with revenues less than $75,000
- C42: Garden Clubs
- S22: Neighborhood and block associations with revenues less than $75,000
- S81 &S82: Community service clubs with revenues less than $75,000
- 501(c) (7): Social and Recreational Clubs" (NCCS Data. Retrieved 2016)

The NCCS Bonding Social Capital map did not seem to represent the social capital that was truly available to the New Haven communities. Additional identified areas for social bonding and bridging opportunities are explained in qualitative section under Gilroy's Original Mapping.

Map Sc2: Non-profit / Religious Organizations



Greater New Haven Nonprofits By Issue Area

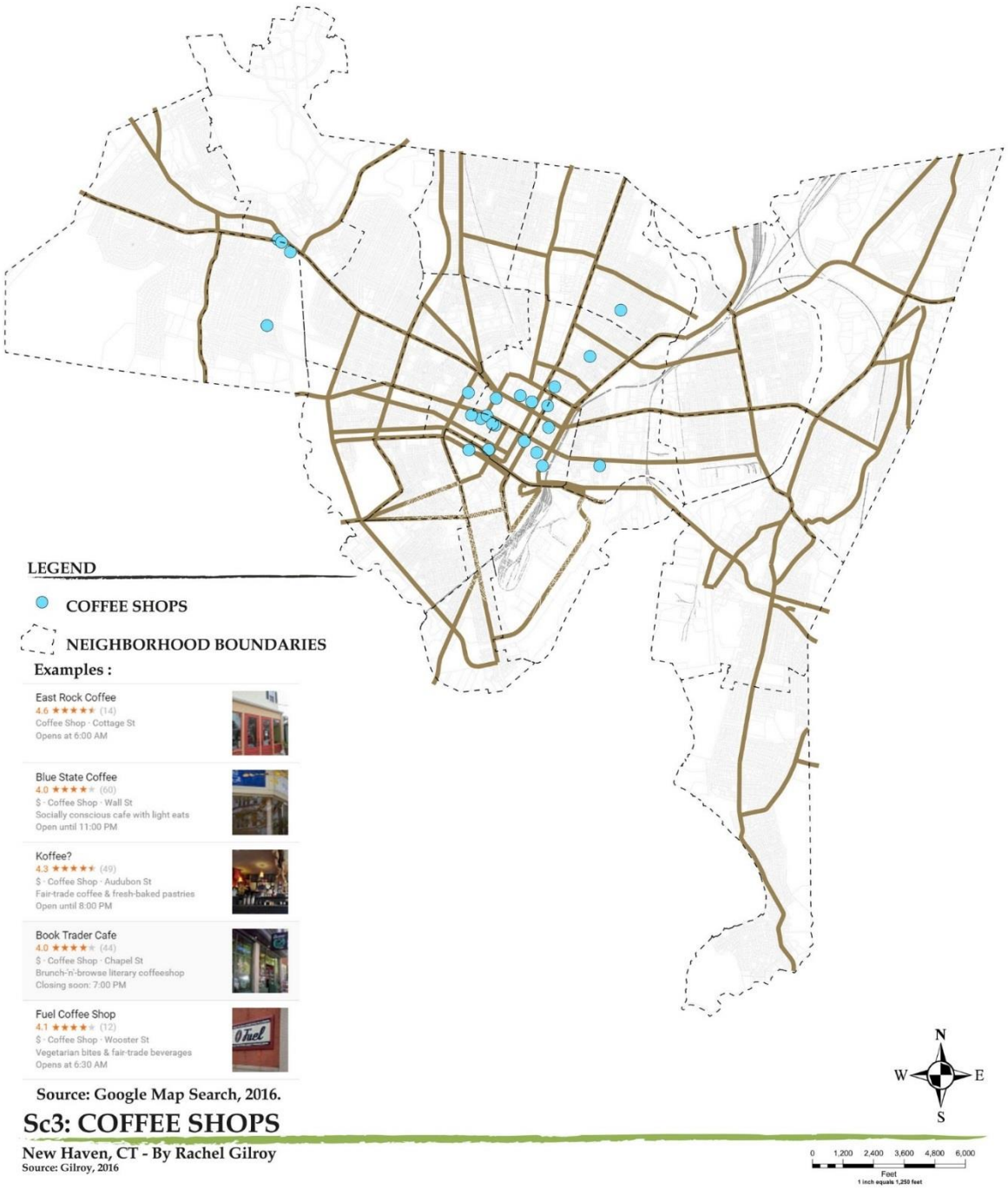
Issue Area[27]	# of All Nonprofits in Greater New Haven	# of giveGreater.org® Nonprofits
1. Provide Quality Education	189 (19%)	36 (15%)
2. Ensure Health & Wellness	187 (18%)	49 (21%)
3. Promote Civic Vitality	128 (12%)	45 (19%)
4. Support Arts & Culture	108 (11%)	34 (15%)
5. Meet Basic Needs	91 (9%)	41 (18%)
6. Nurture Children & Youth	74 (7%)	48 (21%)
7. Protect the Environment	26 (3%)	21 (9%)
8. Boost Economic Success	10 (1%)	15 (6%)
Human Services/Multi Purpose[28]	97 (10%)	0 (0%)
Other	43 (4%)	6 (3%)
Unknown/Blank	63 (6%)	0 (0%)
Total	1,016 (100%)[29]	234 (100%)[30]

Source: The Community Foundation for New Haven: *State of the Nonprofit Sector in Greater New Haven 2013*

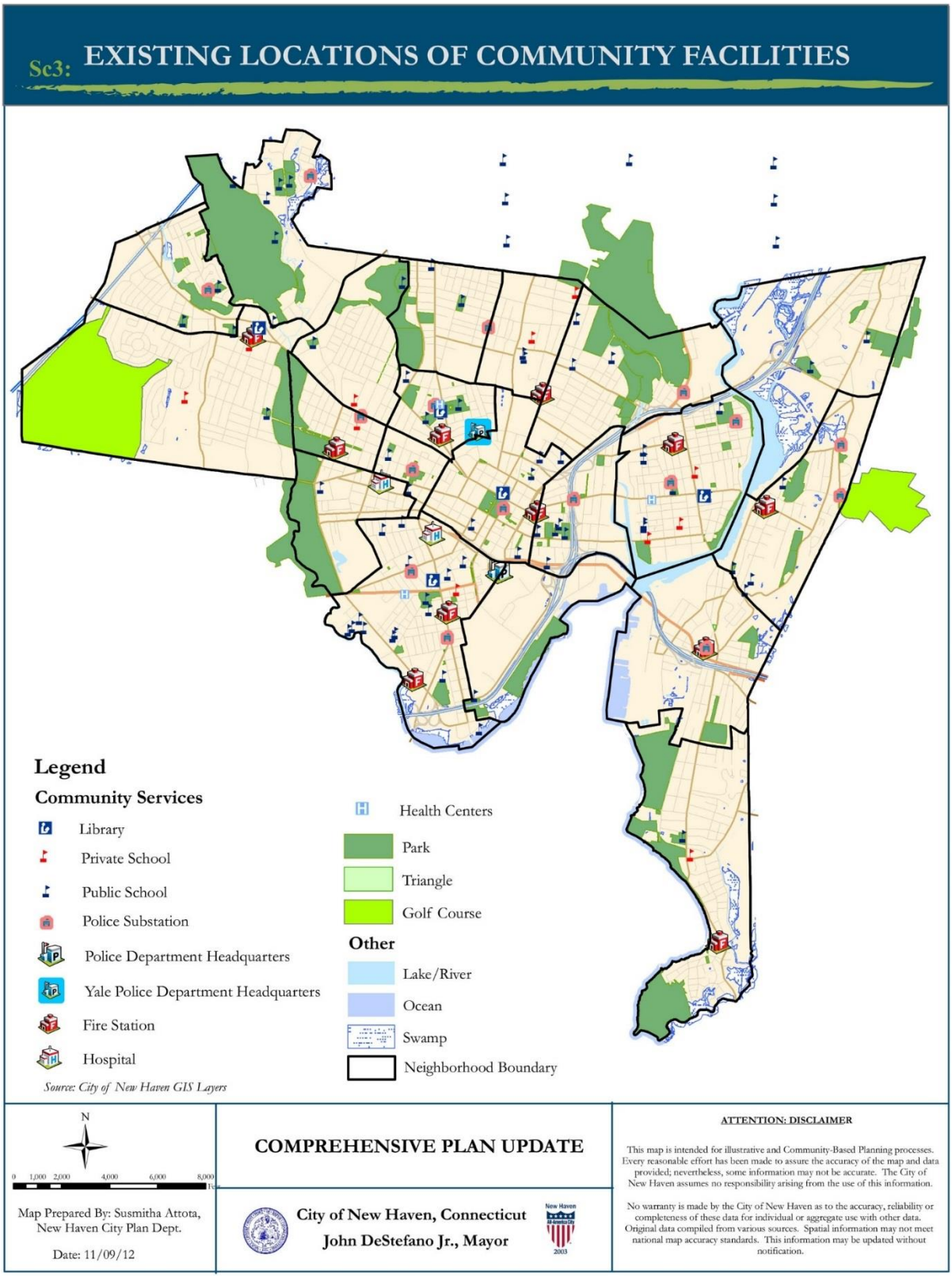
Sc2: NON - PROFIT ORGANIZATIONS

New Haven, CT - By Rachel Gilroy
Source: National Center for Charitable Statistics

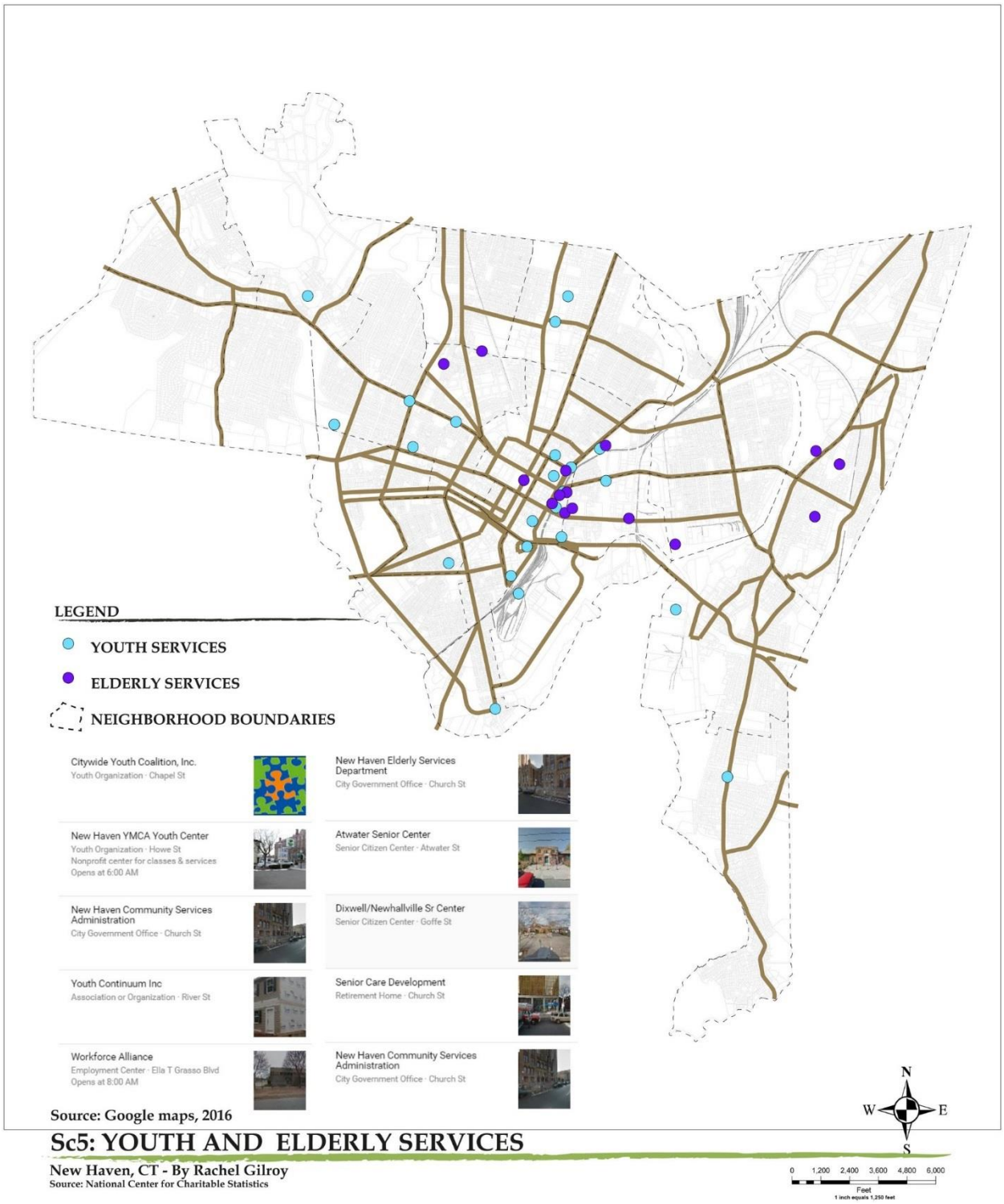
Map Sc3: Coffee Shops



Map Sc4: Community Facilities

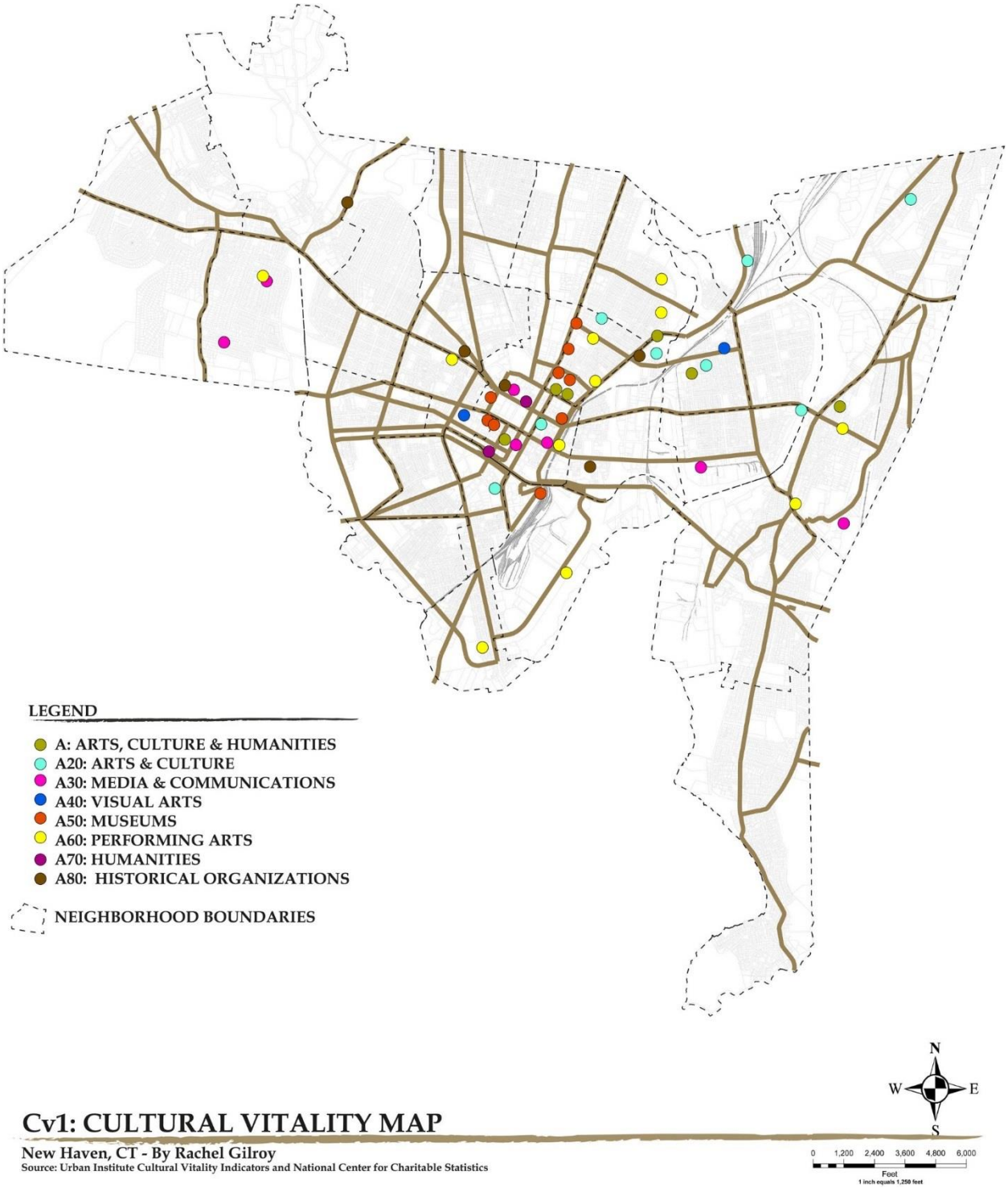


Map Sc5: Youth and Elder Services



Cultural Vitality

Map Cv1: Urban Institute: Cultural Vitality Indicators



Cv1: CULTURAL VITALITY MAP

New Haven, CT - By Rachel Gilroy

Source: Urban Institute Cultural Vitality Indicators and National Center for Charitable Statistics

The Urban Institute's Art and Culture Indicator project (Jackson, M. R., 2003 & 2006) will be modeled (were relevant) in this project. The lure of utilizing the Urban Institute's Arts and Culture Indicators Project (Jackson, M. R., 2006) was their fundamental goal was to help policymakers make more informed decisions for developing neighborhoods and cities in relationship to cultural vitality. ACIP's 2003 definitions of art, culture, and creativity depend on the cultural values, preferences, and realities of residents and other stakeholders in a given community. Art, culture, and creativity at the neighborhood level include the cultural expressions of ethnic, racial, age, and special interest groups that may not be validated or adequately represented in mainstream cultural institutions. (Jackson, M. R., 2003)

In 2006 ACIP defines "cultural vitality as evidence of creating, disseminating, validating, and supporting arts and culture as a dimension of everyday life in communities." (Jackson, M. R., 2006) They use this definition to guide their initial recommendation of arts and culture indicators. ACIP identify their framework in three parts: Presence, Participation and Support. These three will be explored by utilizing ACIP's schema for sorting data for indicators of cultural vitality by usability- they specify four tiers:

- "Tier one refers to quantitative data that is publicly available, free or of minimal cost, collected at least annually, able to be disaggregated geographically to the Metropolitan Statistical Area (MSA) level or smaller, and nationally comparable. Examples include data from U.S. Census Bureau's County Business Patterns, the National Center for Charitable Statistics, and the Bureau of Labor Statistics. (Jackson, M. R., 2006)

These variables were pulled from the National Center for Charitable Statistics (NCCS) for tier one data:

- A: Arts, Culture & Humanities

- A20: Arts & Culture
- A30: Media & Communications
- A40: Visual Arts
- A50: Museums
- A60: Performing Arts
- A70: Humanities
- A80: Historical Organizations

These variables were pulled from the National Center for Charitable Statistics (NCCS) for tier one data

- Tier two data are also quantitative, publicly available, free or virtually free, annually recurrent, and able to be disaggregated to at least the MSA level. However, they are not nationally comparable. Examples include administrative data about parades and festivals collected by police and other city departments, selected annual household surveys, and funding data collected in some places by the local arts agency or a foundation. (Jackson, M. R., 2006)
- Tier three data are also quantitative but come from sources that are either restricted to a single point in time or sporadic (i.e., not necessarily regular or covering the same material on each repetition).” (Jackson, M. R., 2006)
- Tier four data refer to qualitative or pre-quantitative documentation of phenomena of interest—often from anthropological and ethnographic studies of arts and culture in communities. (Jackson, M. R., 2006)

In this project the focus is on New Haven, Connecticut’s ACIP’s tier two data and tier three data was collected and incorporated into spatial and cluster data in GIS to recreate visual representation of their presence in the physical landscape. In Jackson, M. R. (2003) analysis of the impacts of arts, culture, and creative expression on communities they note that while it is not

been well documented there is strong suggestive evidence of the relationship of arts, culture, and creativity to neighborhood quality of life characteristics." (Jackson, M. R., 2003 & 2006)

In reviewing the collection of tier three data ACIP recommends, but not limited to these items:

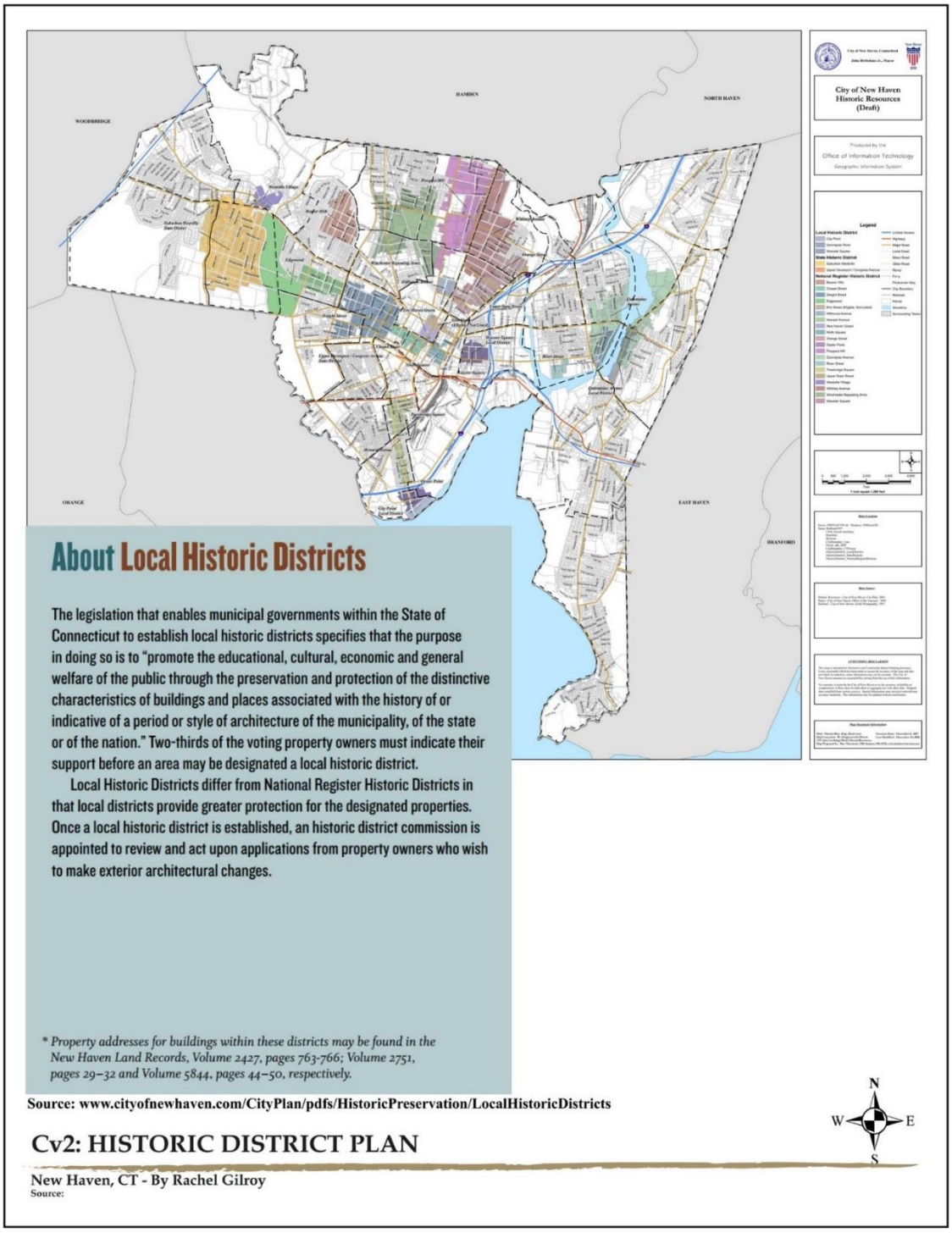
- Public expenditures in support of arts and cultural activities in both nonprofit and commercial sectors and what they support (e.g., presenting venues, public art, artists, amateur practice, cultural districts)
- Indirect support of arts—from sources not primarily concerned with the arts, such as education, parks and recreation, and economic development agencies

The tier three data bullets are discussed in more detail in the qualitative narrative, however, this framework the focus was on collecting data that could be spatially represented in GIS as noted in the above bullet items cultural vitality to incorporate social bonding and bridging capital, but were difficult to represent in GIS, however in the proposed design/programming this would be allowed to flourish to and become guiding design principles for development of neighborhoods that cultivates creativity to be added to the sustainability indicators. These variables identified by ACIP were discussed in the NHVP 2025 and it part of the guiding principles in the development of the proposed New Haven Public Space Systems Plan:

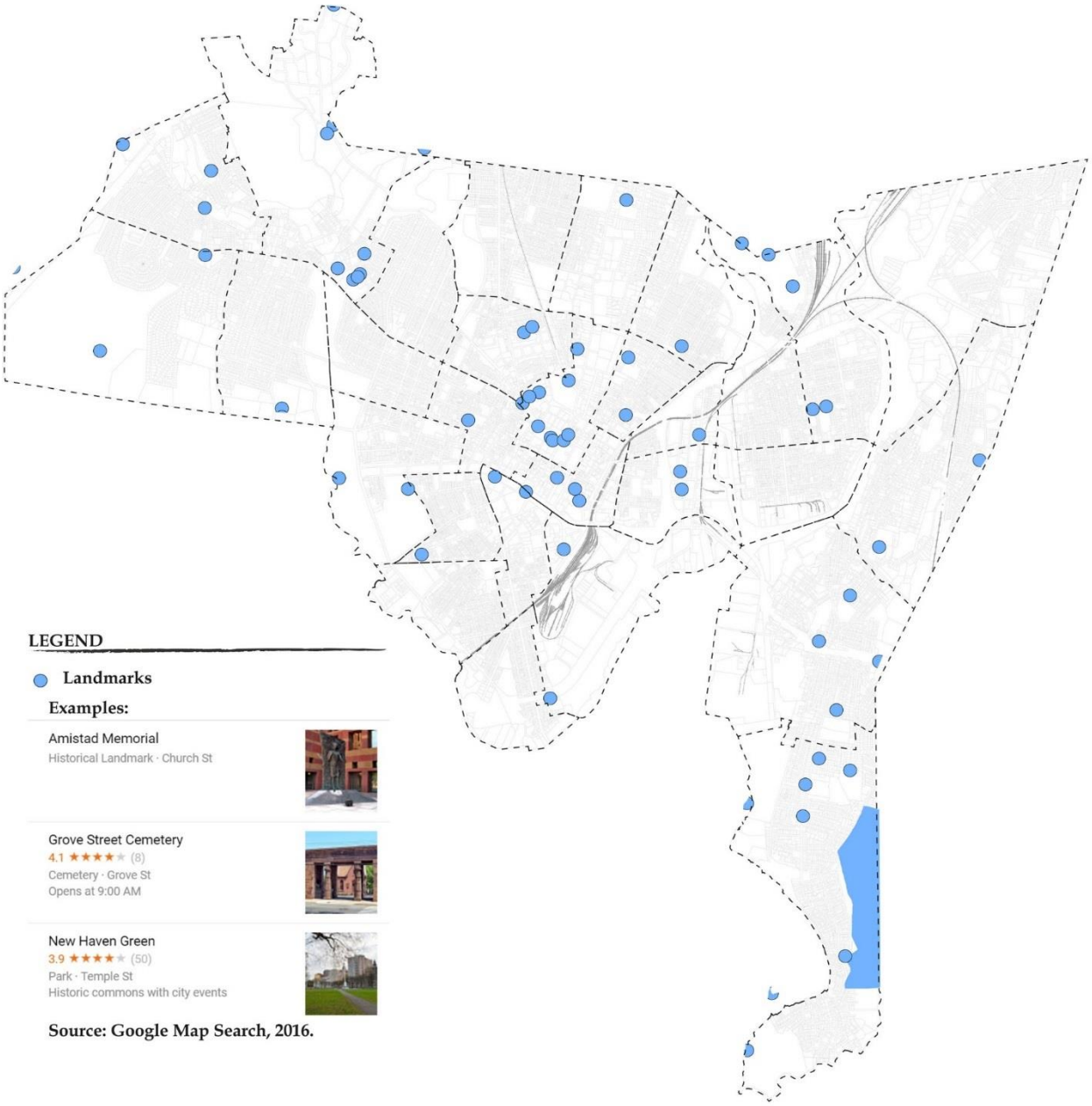
- "Strong advocates and networks of advocates for arts and culture within the cultural sector (e.g., presence of a strong, vocal, and persuasive arts council or activist artists)
- Strong advocates and networks of advocates for arts and culture outside the cultural sector (e.g., in education, economic development)
- Explicit public policies about arts and culture
- Integration of arts and culture into other policy areas (e.g., quality of life measurement systems or the general plan for the community or city)" (Jackson, M. R., 2006)

The maps added to aid in the development of place-based cultural vitality are New haven's historic zones, landmarks, public and private greenspaces and NHVP 2025 current and proposed environmental systems map.

Map Cv2: Historic Districts



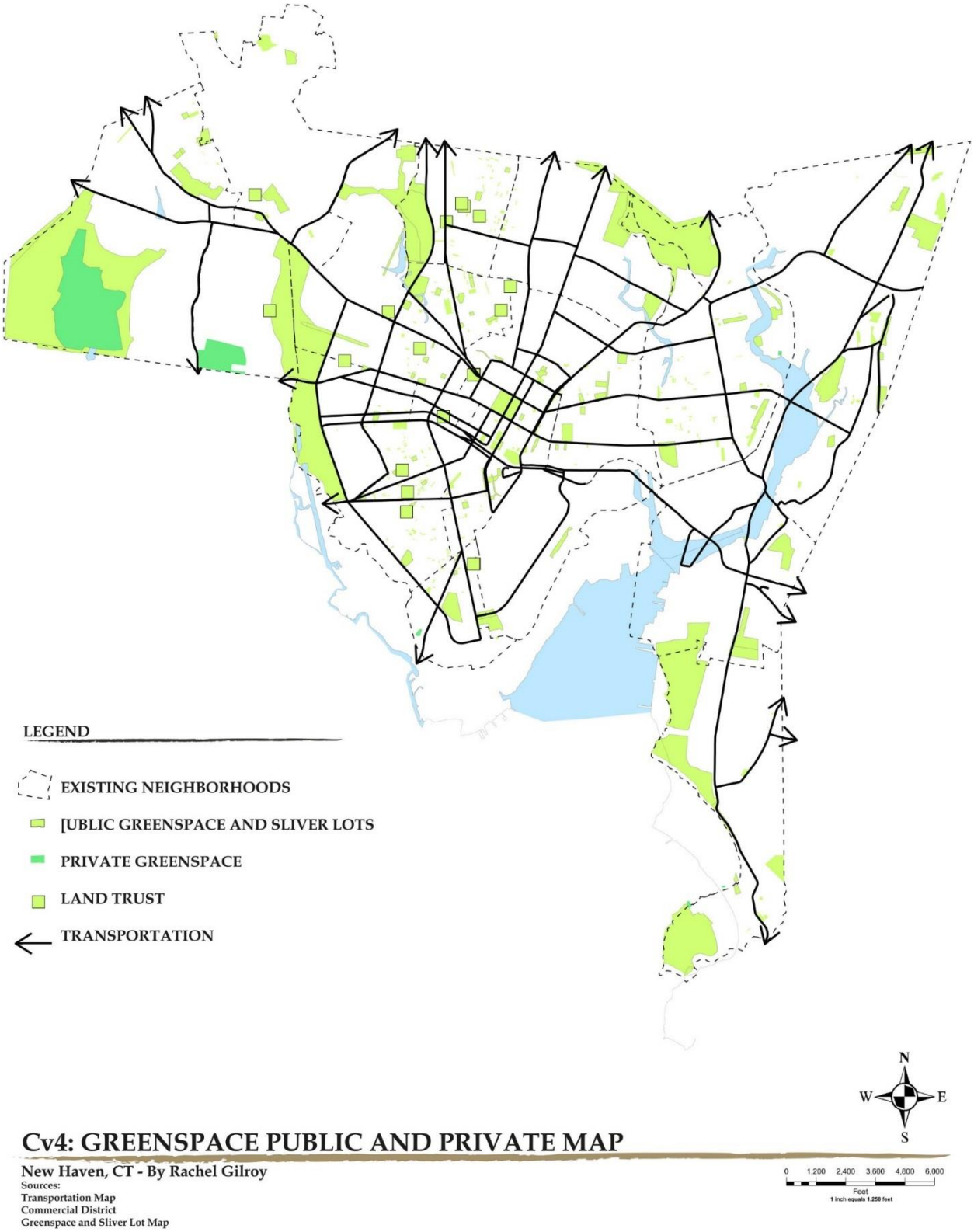
Map Cv3: Landmarks



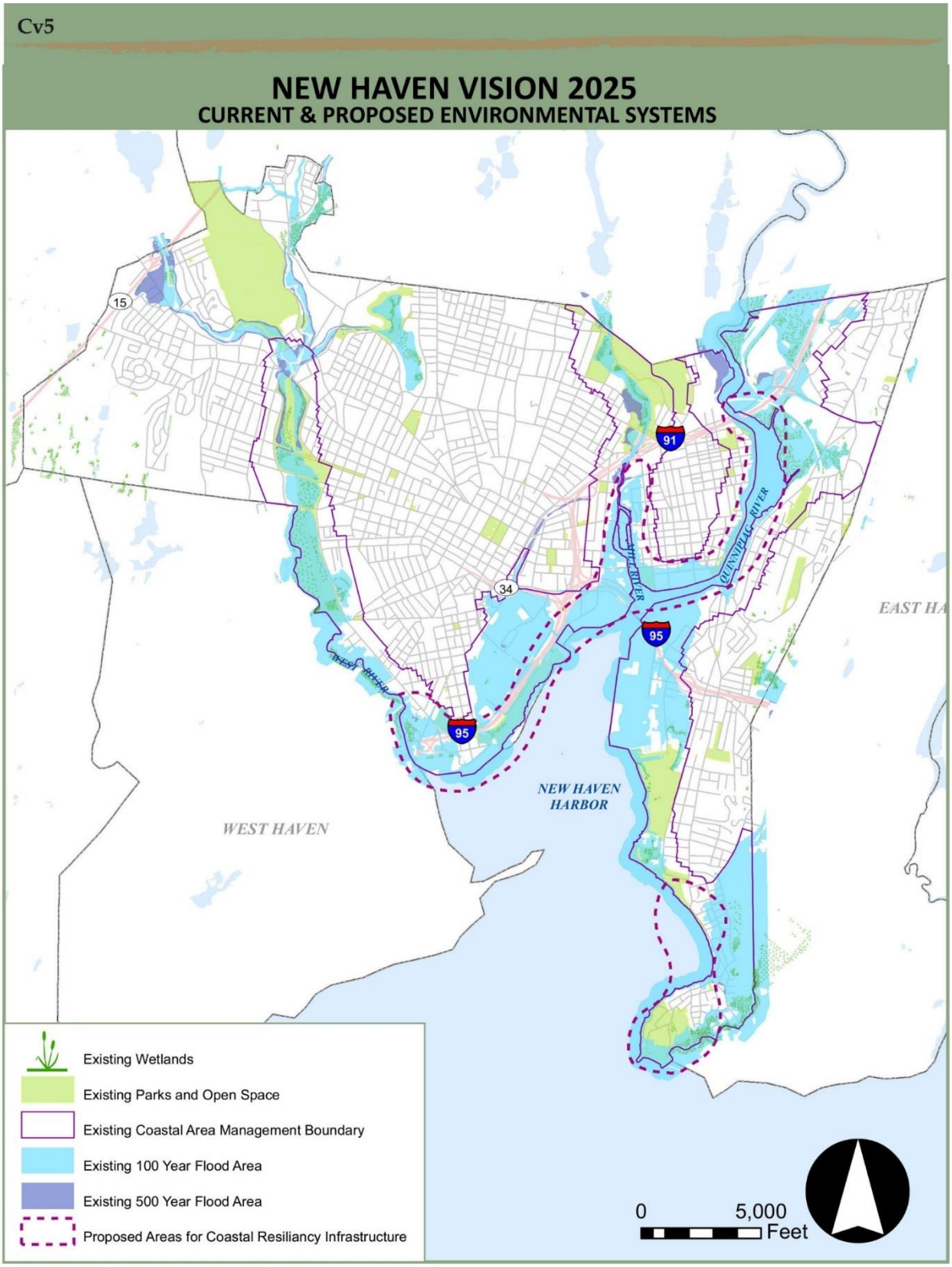
Cv3: LANDMARKS

New Haven, CT - By Rachel Gilroy
Source: C.A.R.E (Community Alliance for Research and Engagement)

Map Cv4: Public and Private Greenspaces

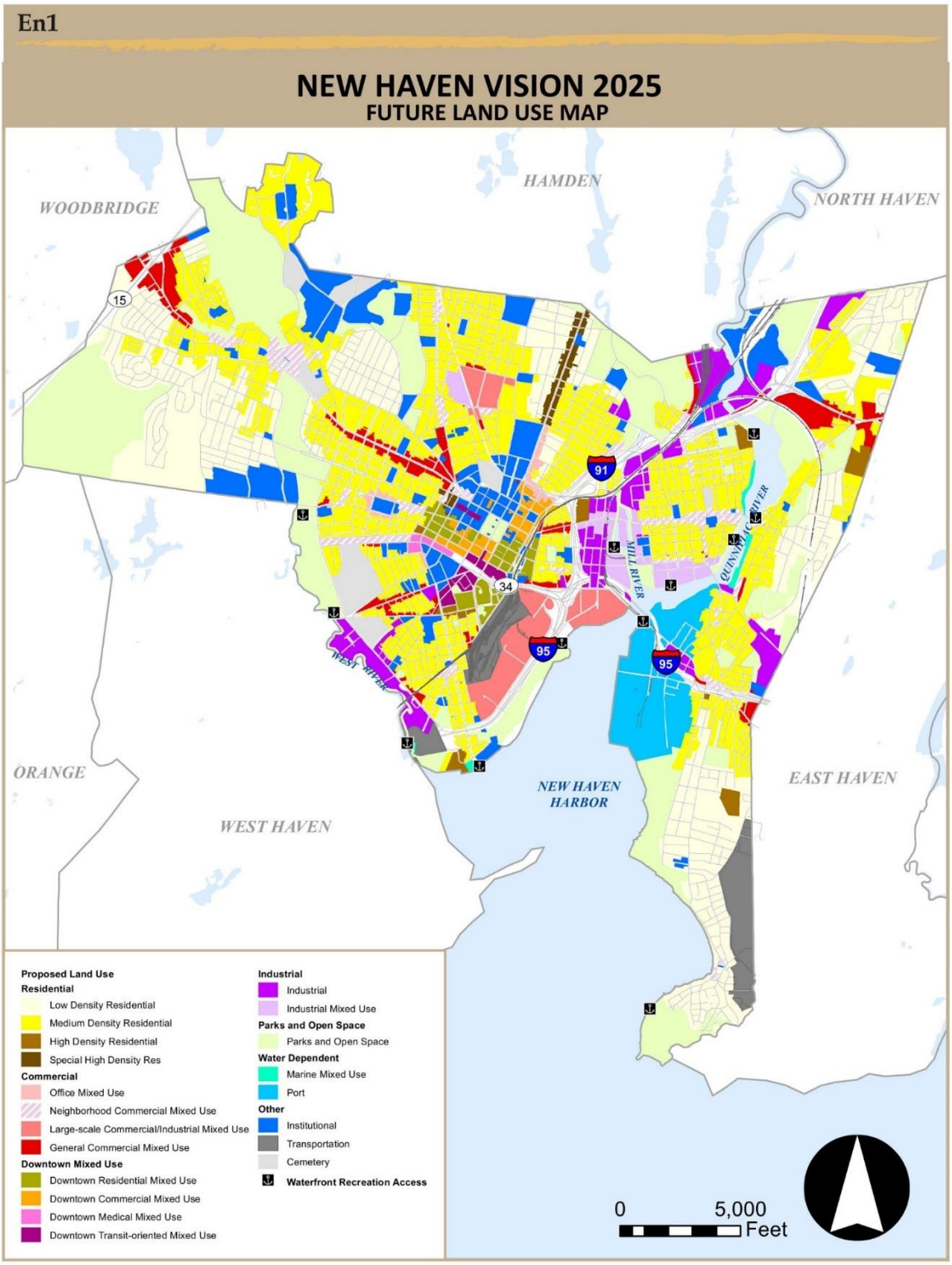


Map Cv5: NHVP 2025 Current & Proposed Environmental Systems

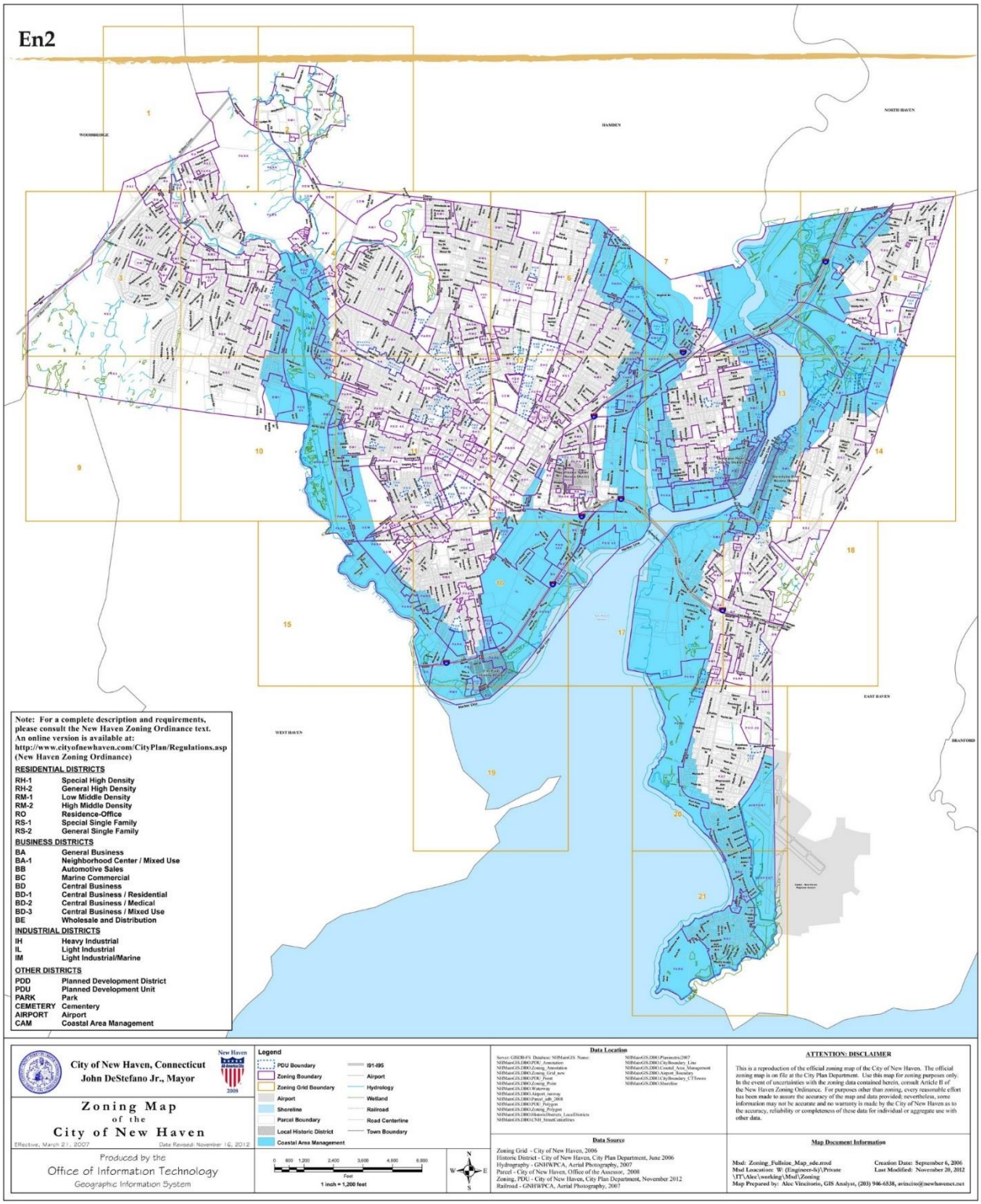


Environment

Map En1: NHVP 2025 Future Land Use Plan



Map En2: Existing Zoning Map

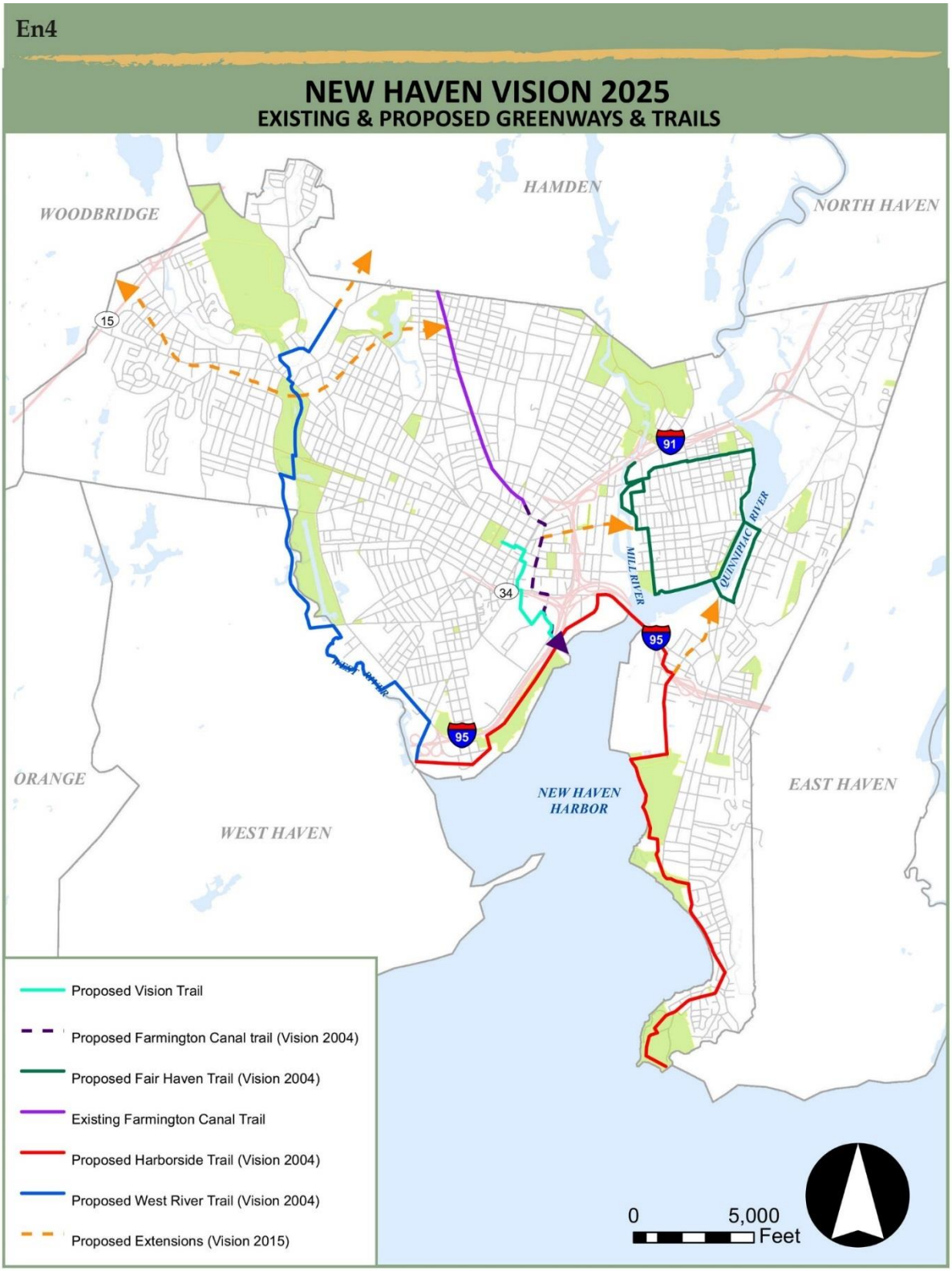


Map En3: Transportation Analysis

En3: TRANSPORTATION ANALYSIS

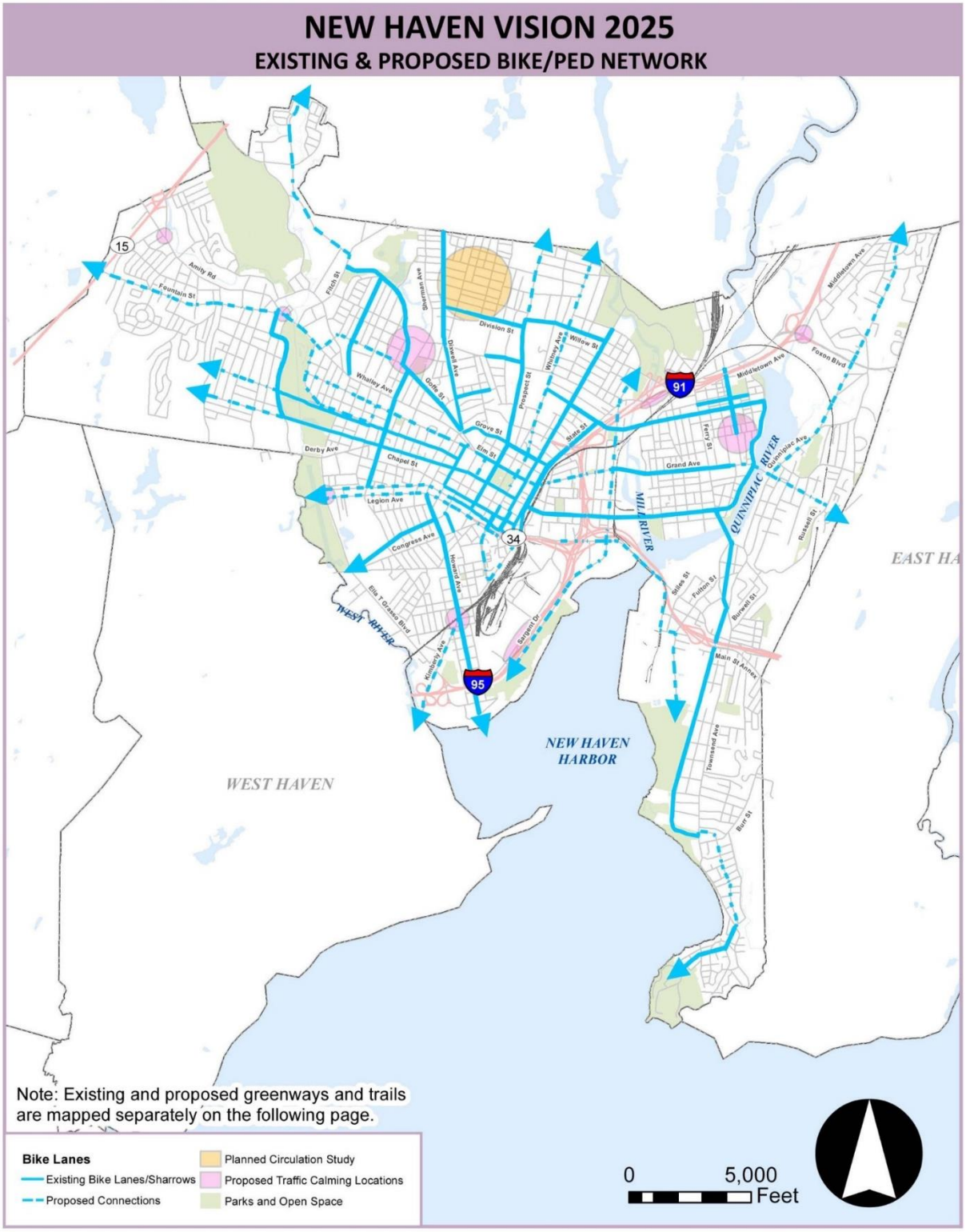
New Haven, CT - By Rachel Gilroy
Source:

Map En4: NHVP 2025 Greenway Trails



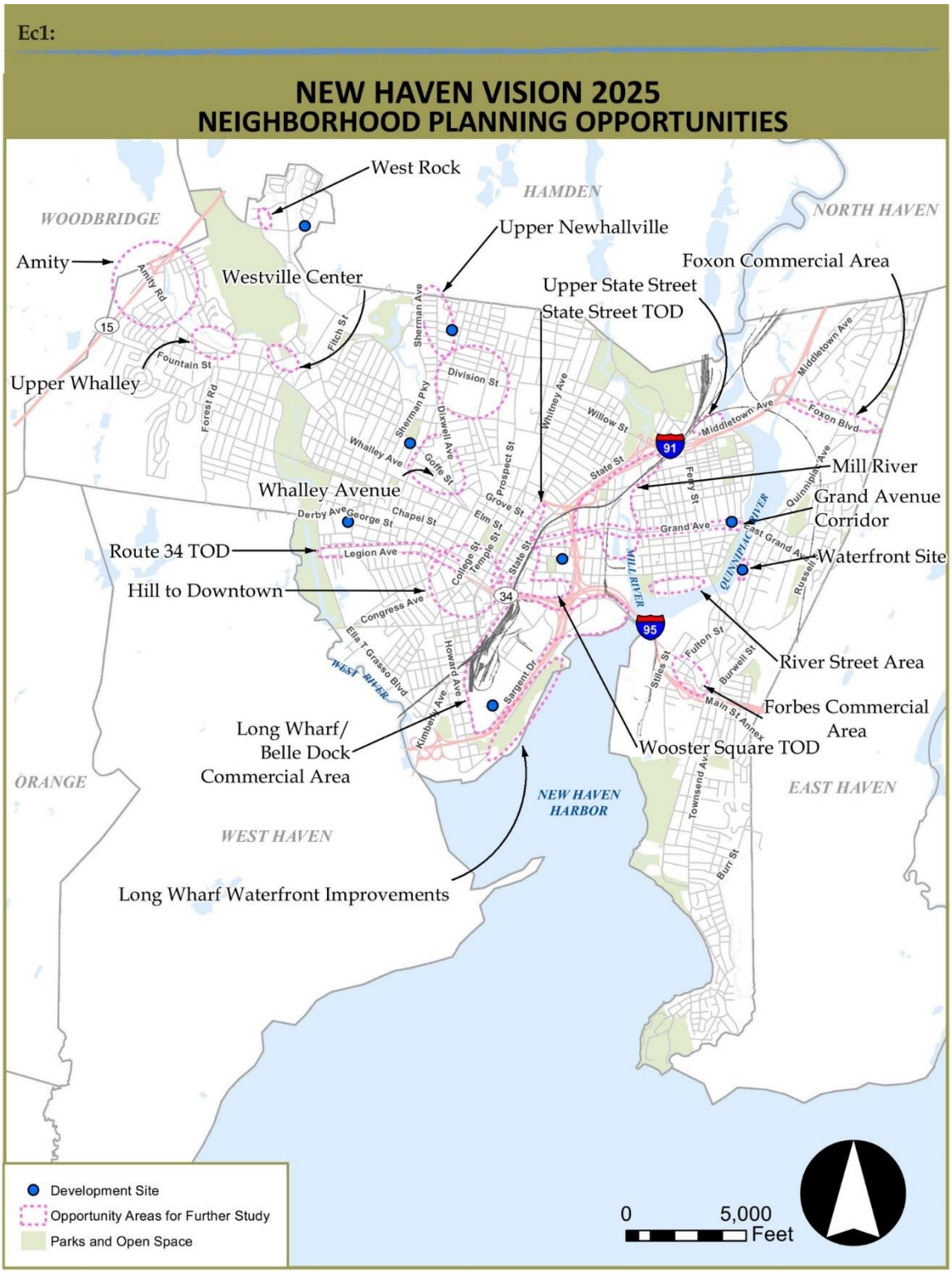
Map En5: NHVP 2025 Bike/Pedestrian Pathways

En5

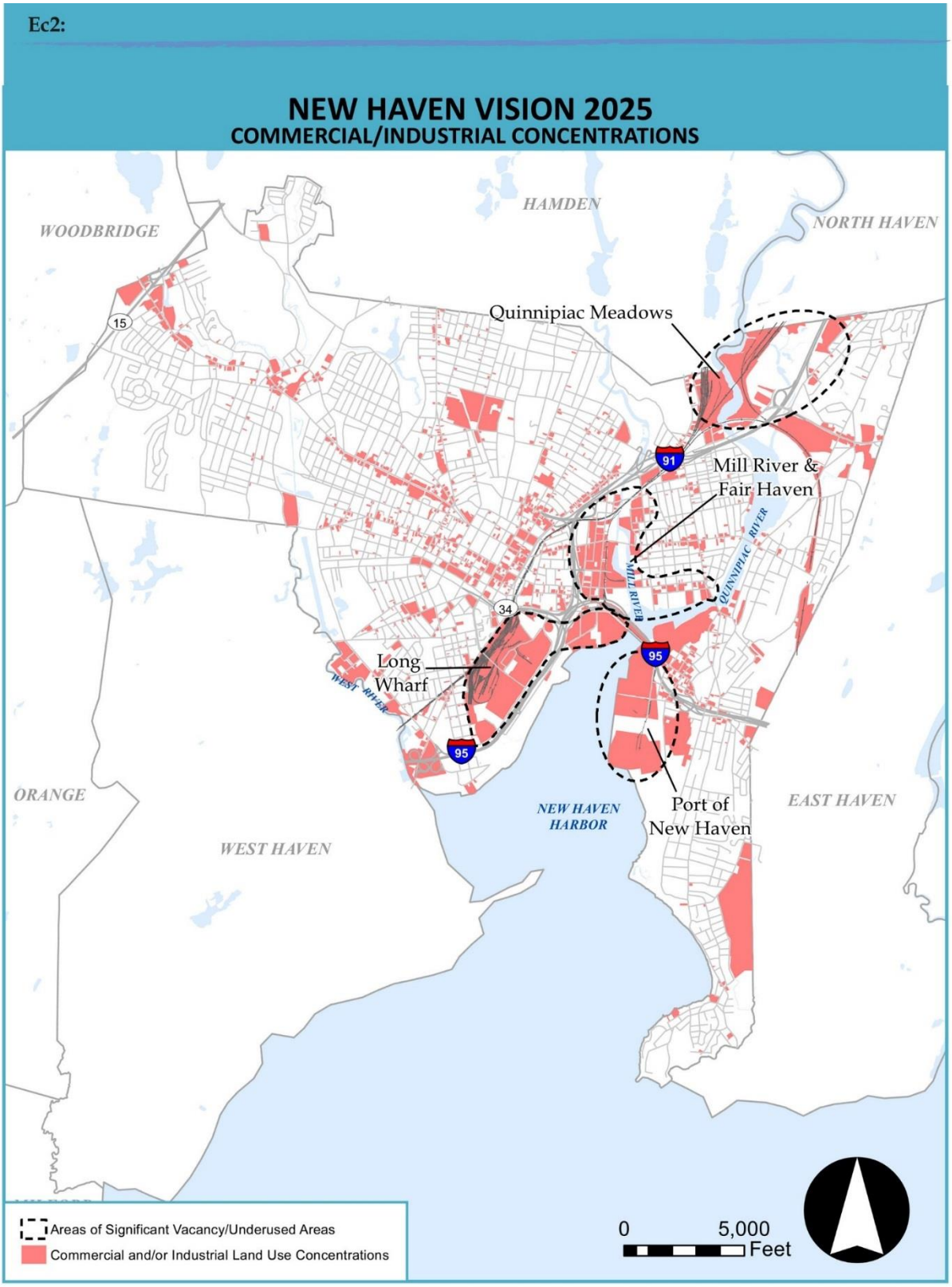


Economics

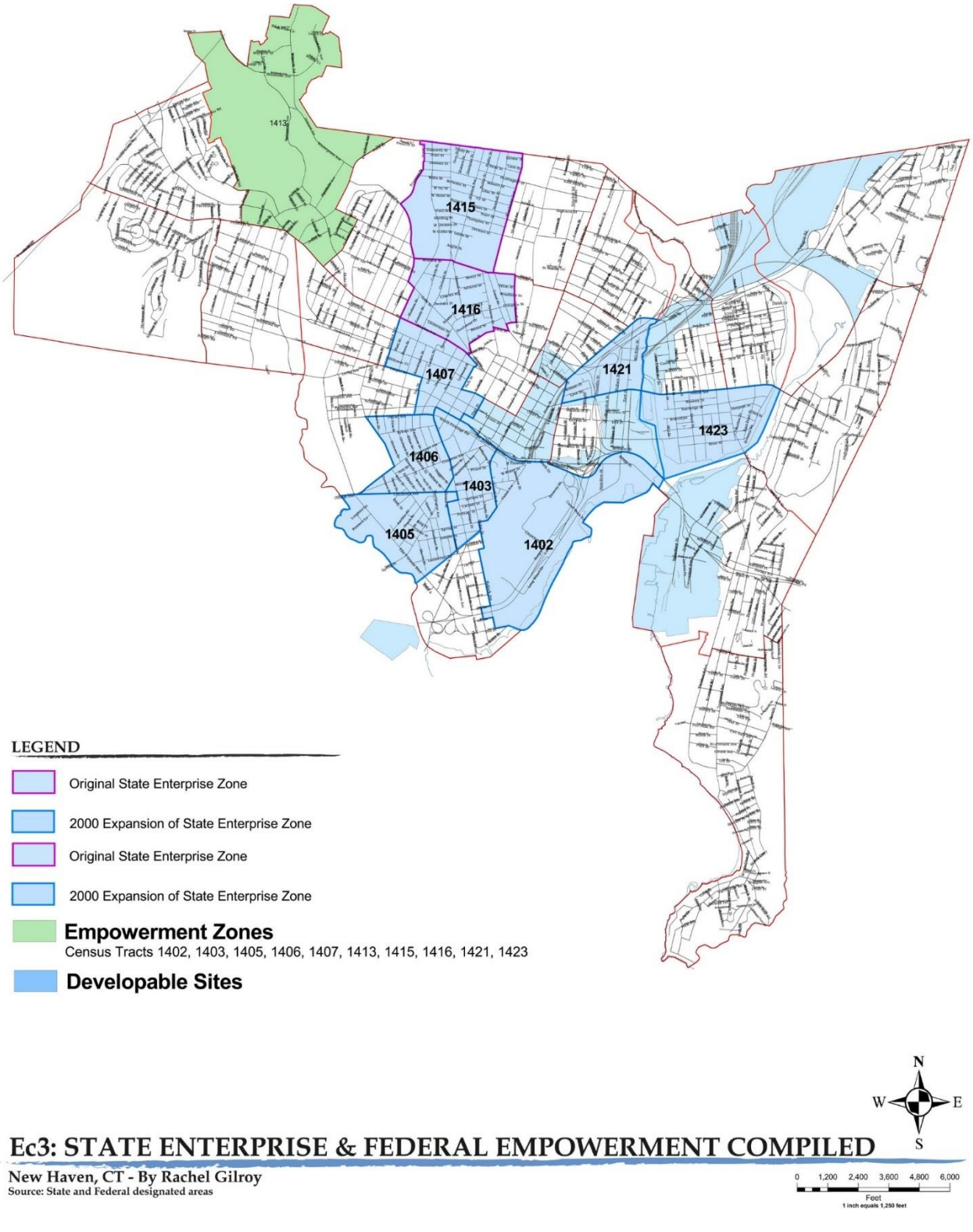
Map Ec1: NHVP 2025 Neighborhood Planning Opportunities



Map Ec2: NHVP 2025 Commercial & Industrial Concentrations

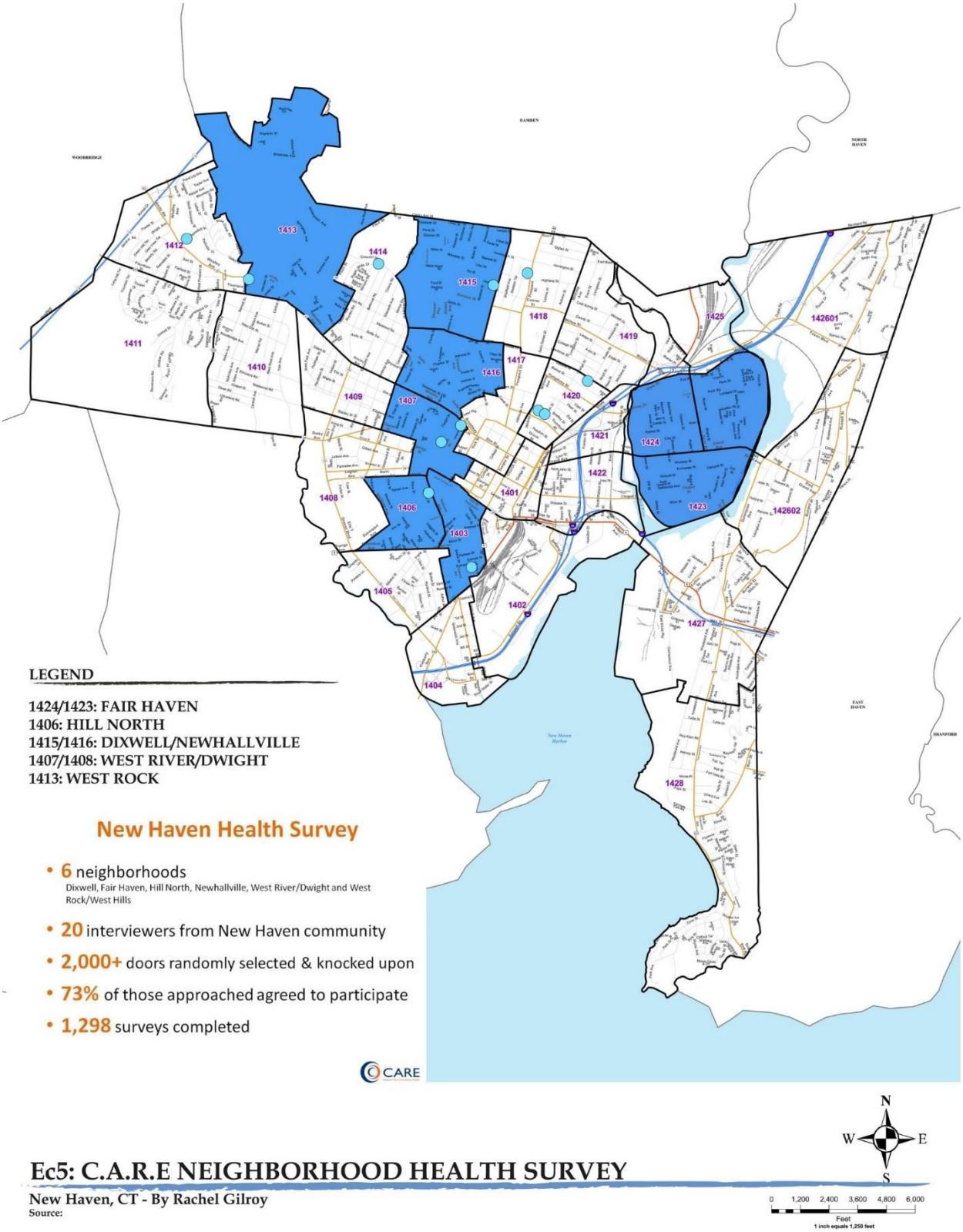


Map Ec3: Enterprise and Empowerment Zones



Map Ec4: Education System

Map Ec5: CARE Neighborhoods / Health Facilities



Ec5: C.A.R.E NEIGHBORHOOD HEALTH SURVEY

New Haven, CT - By Rachel Gilroy
Source:

Qualitative Data: New Haven Ethnography Study

The city of New Haven offers a unique set of parameters for exploring the relationship between neighborhood participatory design process and neighborhood design. The city of New Haven has a Board of thirty Aldermen and twelve management teams that represent the New Haven neighborhoods. These key neighborhood representatives, the NHVP 2025, and various neighborhoods is where the ethnography development imitated its process of collecting information. Ethnography is the study of people and cultures. It is designed to represent graphically and in writing the culture of a group. In this study photographs, interviews, new haven planning documents along with New Haven data is utilized to understand the story of this city.

Under the influence of Community Design Primer, Hester recommends a twelve step process that actively engages the residents. The community process includes three essential ways for designer and community to engage through knowing, understanding and caring. The first six were applied in this study:

1. Listening: Place Knowing

2. Setting Goals: Place Knowing

3. Mapping and Inventory: Place Knowing and Place Understanding

4. Introducing The Community to Itself: Place Knowing and Place Understanding

5. Getting A Gestalt: Place Understanding and Place Caring

6. Drawing Anticipated Activity Settings: Place Understanding (Hester, R. T. 1990).

The beginning ethnography documentation intention was to promote neighborhood(s) specific planning aimed at revitalizing neighborhoods based on history, character, and demographic make-up as opposed to a one-size fits all approach. The NHVP 2025 encourages neighborhoods to form central cores of their own (non-profit development corporations) and the proposed public space system plan promotes social integration among neighborhoods through physical connectivity and public space-making, and by offering opportunities for neighborhood community interactions and creativity. The proposed Prioritization Factors for Public Space Systems Design maps are geared towards aiding in the revitalization of New Haven neighborhood areas because it recognizes the gradual and subtle shifting in neighborhoods to include neighborhood collaboration called *tactical urbanism*. Tactical urbanism is a concept that allows neighborhoods to change over time suggesting a dynamic, mutable, open-ended public spaces rather than a static, standardized approach. This framework is a tool to increase planning coordination among various city departments such as Housing Authority of New Haven, City Plan, Engineering, Economic Development, and neighborhood resident leaders. Furthermore, it negates the designing out of fear like the Crime Prevention through Environmental Design (CPTED), but out of the tried and true design values that come to fruition when design and policy making are intentional about their goals.

NHVP 2025 Community Survey

The purpose of the survey was to help the City of New Haven's staff prioritize their planning efforts. The NHVP 2025 survey methodology is listed below:

- Postcards
- Partnership with local libraries, City of New Haven Office of Communications, Board of Aldermen, Commission on Equal Opportunities, CMT chairs, neighborhood specialists, local non- profits and other advocacy groups
- Media outreach through Mayor's Newsletter, local media, Facebook, Twitter, emails, etc
- Volunteer-distributed paper surveys
- Materials in both English & Spanish

The survey was broken down into (6) categories:

A. General Planning and Design

B. Housing and Economic Development

C. Transportation

D. Environment

E. Community Facilities & Services

F. Zoning and Neighborhood Character

The highest level of support was for neighborhood based planning. Total responses were 917 of which 854 were resident responses. 840 were categorized into neighborhoods. The neighborhoods below were

broken down into low-income, moderate-income and middle to high income using DataHaven numbers. They are bulleted below:

- Low-income neighborhoods: 291 (35%) Neighborhoods included (Total 10): Cedar Hill, Dixwell, Dwight, Fair Haven, Hill North, Hill South, Newhallville, West River, West Rock, Long Wharf (only 1 person)
- Moderate-income neighborhoods: 242 (29%)Neighborhoods included (Total 9): Amity, Annex, Beaver Hills, City Point, Downtown, Edgewood, Fair Haven Heights, Quinnipiac Meadows, Wooster Square/Mill River
- Middle-to high-income neighborhoods: 306(36%) Neighborhoods included (Total 4): East Rock, East Shore, Westville, Prospect Hill

Note the results of the NHVP 2025 survey response is a 40 page PowerPoint with results and graphs, but this one stood out in relation to this *thesis:* 70% percent of respondents noted "arts and entertainment facilities, presence of major institutions, restaurants and cafes" as the strengths of New Haven. (See Appendix C)

Ethnography and multi-scalar approach

The *New Haven Vision 2025 plan* was reviewed and analyzed for elements to incorporate into the goals of building social capital and place-based cultural vitality in public spaces. In the executive summary the focus of the city noted that it is promoting strategic neighborhood-based planning efforts to reinforce or strengthen the sense of place and distinct identity for each neighborhood. (NHVP - 2025, 2014)

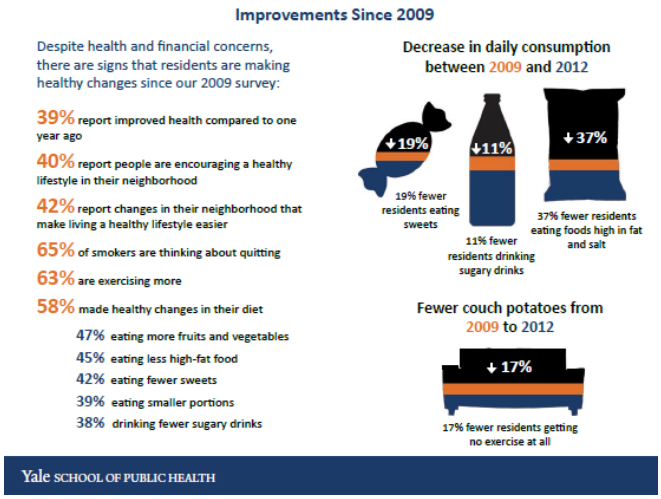
The New Haven Vision Plan 2025 (NHVP 2025) Economic Development plan states that the New Haven region's main areas of economic focus are in health care, education, biotechnology and biomedical research. The NHVP 2025 overarching vision is for New Haven to be a major hub of knowledge and innovation.is the NHVP 2025 also notes that New Haven has the largest concentration of arts and entertainment**.** This is also noted in the *Urban Institute: Cultural vitality in communities: Interpretation and indicators* that New Haven is 2nd to Hartford, Connecticut in regard to the concentration of cultural vitality. (Jackson, M. R., 2006)

This thesis advocates strongly that New Haven encourage the arts not only as entertainment, but as a key component that is needed for creative energy for innovation.

This type of capital would build and encourage an all-inclusive economy by encouraging neighborhood-based economic development initiatives. These would take into consideration neighborhoods' individual assets and opportunities for district collaboration suggested in the NHVP 2025 and proposed in more detail with this New Haven Public Space Systems Plan**.** The thesis claims that a creativity and innovation is related to social capital and that this plan should be incorporated into the NHVP 2025. As noted earlier the theory is that this will increase the probability of tacit knowledge exchange amongst a broader diverse group of people to include the young and old alike.

CARE Community Survey 2012

(See Appendix D)



Common Ground High School: What Matters is the Dream…

To meet the goal of encouraging individual creativity within the social public space that allows for tacit knowledge to be collected and exchanged not only within the individual, but also in the individual's social and physical public space will require developing community programming interventions within the public landscape. This can be accomplished be envisioning these interventions in relation to social capital and cultural vitality.

See Appendix E: Lesson Plan: Perception of Place. (Gilroy, 2013) Links:http://newhavenarts.org/2011/03/04/common-ground-what-matters-is-the-dream/

One way of getting a community to define

sustainability within their own unique social, regional, and site context as it applies to the design and programming of public space and private space interface is a type of emergence community participatory process. This collaborative art was done at Common Ground High School, New Haven, CT and it was called *common ground: what matters is the dream.* This project was a collaborative effort within the Common Ground community and the school's annual Mix It Up Day to explore how students think and see ecologically the word sustainability. A national campaign launched by Teaching Tolerance in 2002, Mix It Up at Lunch Day encourages students to identify, question and cross social boundaries. The goal of Common Ground's Mix It Up Day was to cross social boundaries (social bridging) and literally SEE common ground in each of our differences. The resulting visual expressions reveal connections within Common Ground and between the school and its surrounding communities to include a visual expression of how social bonding/bridging and cultural vitality is visualized. (See video: https://youtu.be/p2k_rWQniVI) As a result of this work a lesson plan called in collaboration with the *Nature Conservancy* this concept was solidified in *the Nature conservancy: Anthology of Best Practices in Urban Environmental Education* compilation of lessons plans for urban environments.

(See Appendix E)

The lesson I learned from this co-creative process with Common Ground Highs School students and staff is that sustainability is described best with this quote:

> *"Sustainability is about more than just planting trees, curbside recycling and rescuing wildlife. It is about transforming politics and community development. Sustainability challenges assumptions surrounding prevailing orthodoxies or worldviews of economic*

growth and materialist values and implies nothing less than a restructuring of our relationship to the planet and to all living things" ~Harmonious Living

Next Steps to Follow

The compilation of Urban Institute – Cultural Vitality Indicators, National Center for Charitable Statistics (NCCS) Bonding Social Capital, New Haven Vision Plan (NHVP) 2025, Existing New Haven Planning and Development Maps and Gilroy Original maps are analyzed in the following chapters to identify and prioritize areas for Sustainable Public Space Systems Design. The Sustainable Public Space Systems Plan determines areas of opportunity to increase cultural vitality and social bonding opportunities that will give fuel to creativity and innovation.

CHAPTER IV:

FINDINGS: CITY-WIDE PUBLIC SPACE SYSTEMS PLAN

"I do not want to avoid immersing myself in trouble — to be a mess — to struggle out of it. I want to invent, to discover, to imagine, to speculate, to improvise — to seize the hazardous in order to be inspired. I want to experience the manifestation of the absolute — the manifestation of the unexpected in an extreme and unique relation. I know that only by following my creative instincts in an act of creative destruction will I be able to find it."

~ Hans Hofmann (Abstract Expressionist Painter)

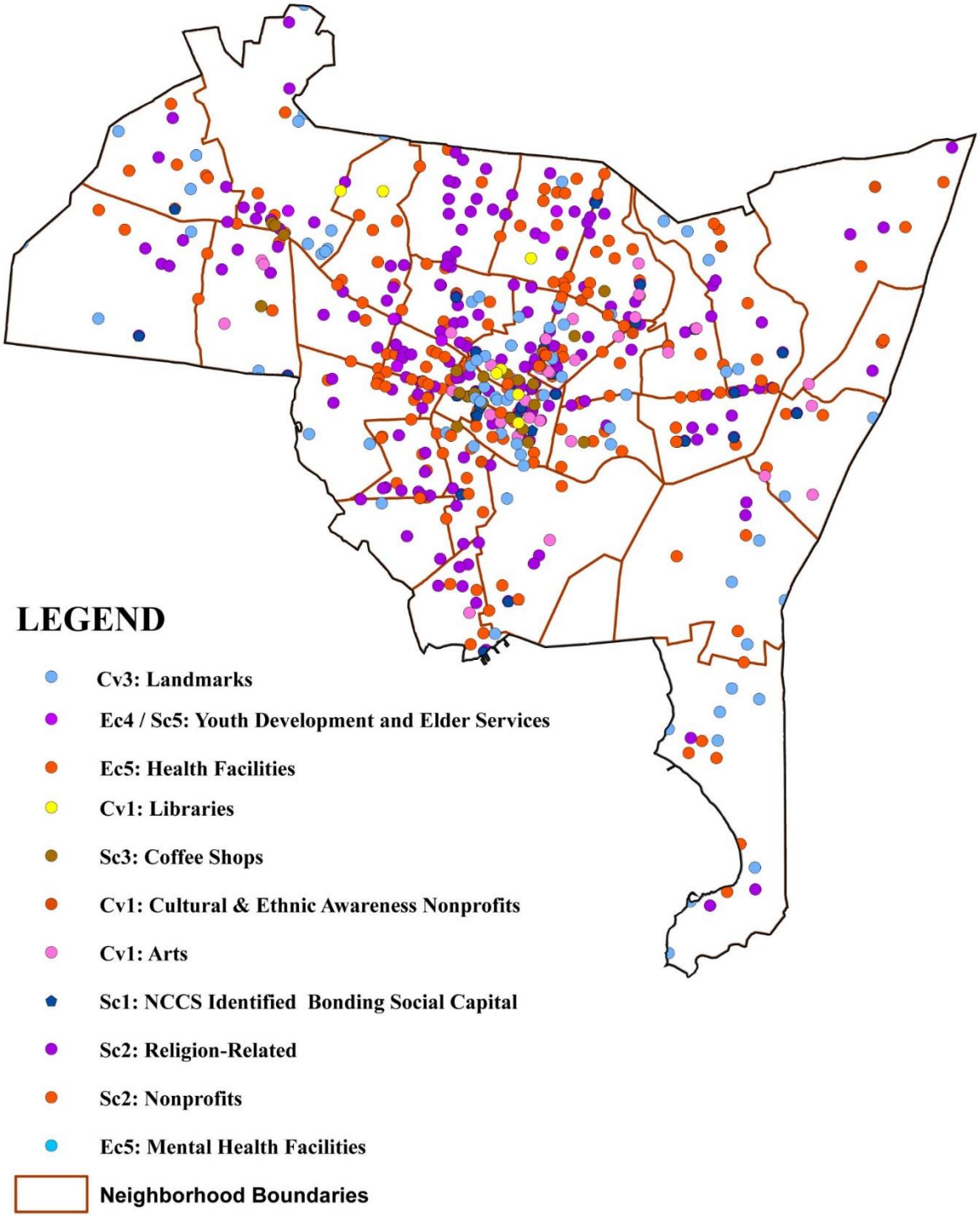
In *Community Design By Intricate Oppositions* (Hester, 2007) the messy, creative integration of the seemingly opposing language of social and ecological geometry is employed to encourage community designers to think simultaneously across disciplines, at different scales, and at different modes. This thesis takes the perspective that community planning today shapes cities on the basis of 2D spatial languages translated into 3D forms, like Kevin Lynch's nodes, paths, landmarks, edges and districts (Lynch, K., 1960), Ian McHarg's overlay maps of natural systems (McHarg, I. L., & Mumford, L., 1969), Chris Alexander's Pattern Language Alexander, C., 1977).

With a focus on integrating the social and ecological geometries of the city through stronger prioritizing of social bonding and bridging capital, cultural vitality and creativity, the thesis findings are developed through a New Haven Public Space Systems Plan. The proposed plan is offered as an alternative or parallel vision to the previously described and illustrated New Haven Vision Plan 2025, enhancing the potential for interaction between members of the community, and defining new, integrative public space districts. Spatial clustering analysis methodology was applied to determine areas of opportunity to increase cultural vitality and social bonding/bridging that will give fuel to creativity and innovation. The overarching vision for the plan is based on

the theme of fostering synergies of art, science and innovation. The idea is that the city as a whole would adhere to this general theme, but it would become nuanced as the plan drills down to the district scale. The proposed city-wide plan builds a case for a systems thinking perspective that challenges the central place model and shifts towards a multi-scalar planning lens that sees the public space system as an interconnected high performance and multi-functional landscape versus single-use landscapes that perpetuate neighborhood divisions.

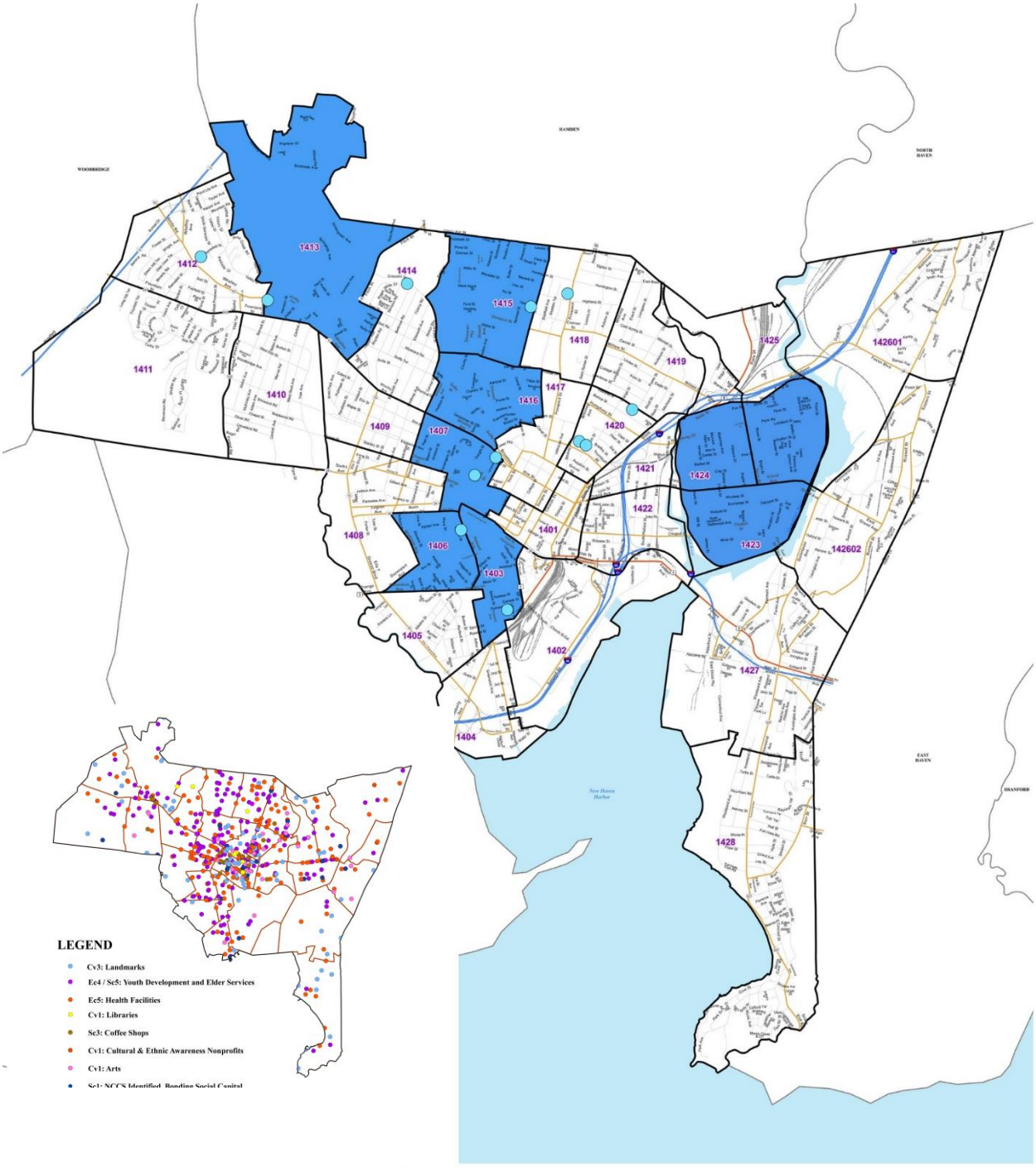
The prioritization factors is further developed with the analysis for network of possibilities found in intersecting districts, nodes and corridors upon analyzing and comparing the compiled social capital and cultural vitality information to these spatial data maps:

- CARE (6) Neighborhoods
- Smart Growth Map (Chrysochoou et; al. (2011)
- Historic Map
- Greenspace, pedestrian walkways and trails and business districts map.



CULTURAL VITALITY AND SOCIAL CAPITAL CLUSTER MAP

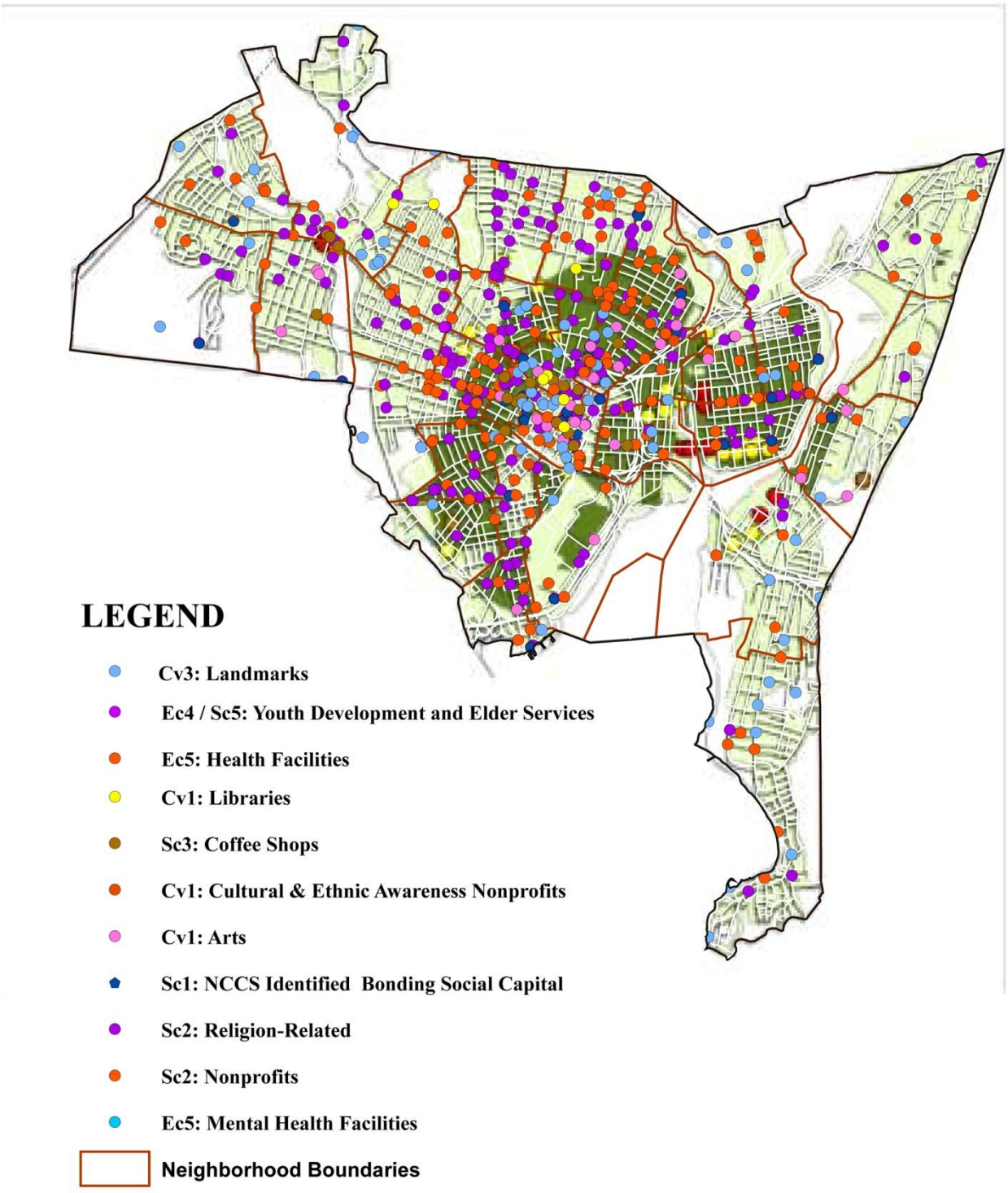
New Haven, CT - By Rachel Gilroy



Ec5: C.A.R.E NEIGHBORHOOD HEALTH SURVEY

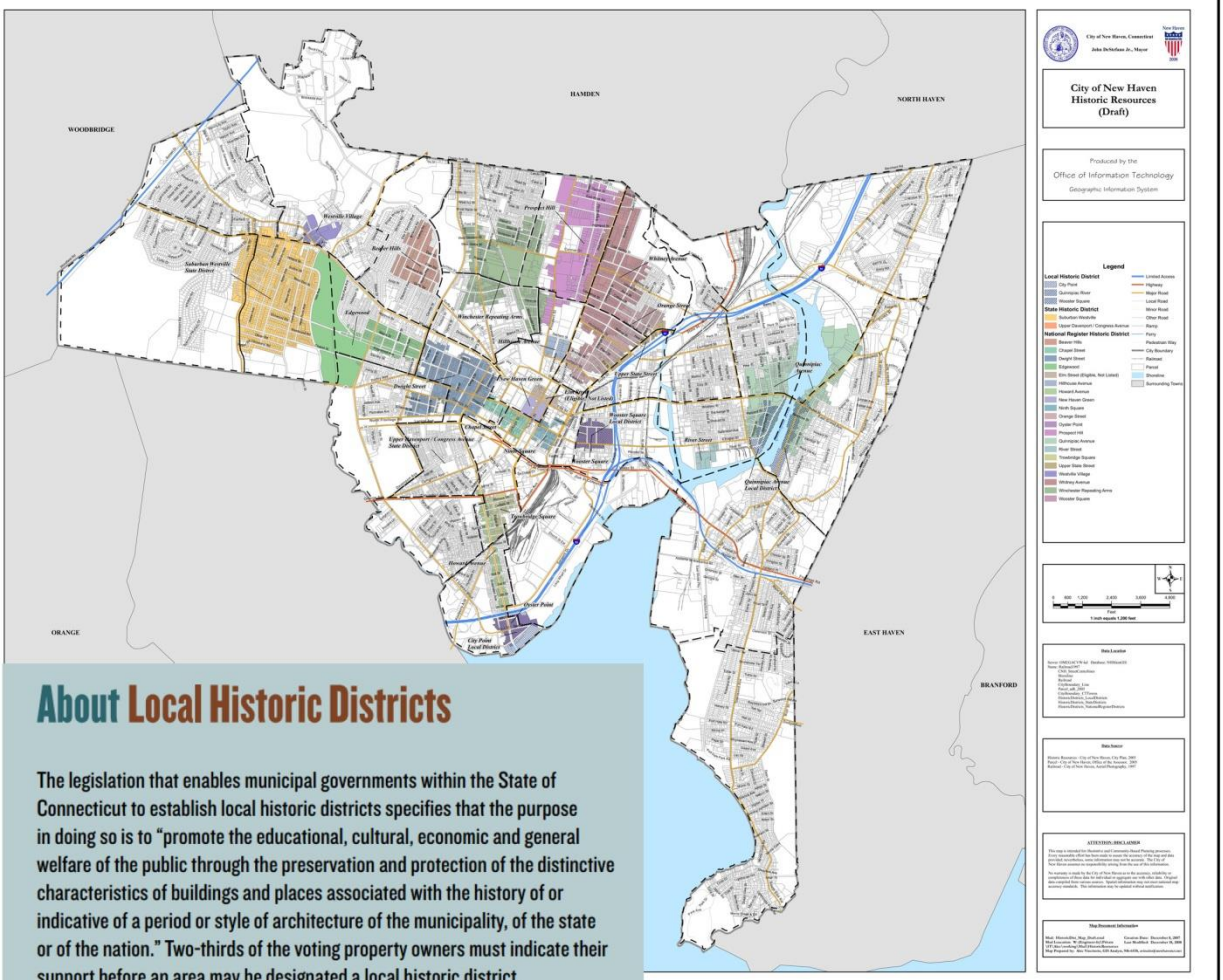
New Haven, CT - By Rachel Gilroy

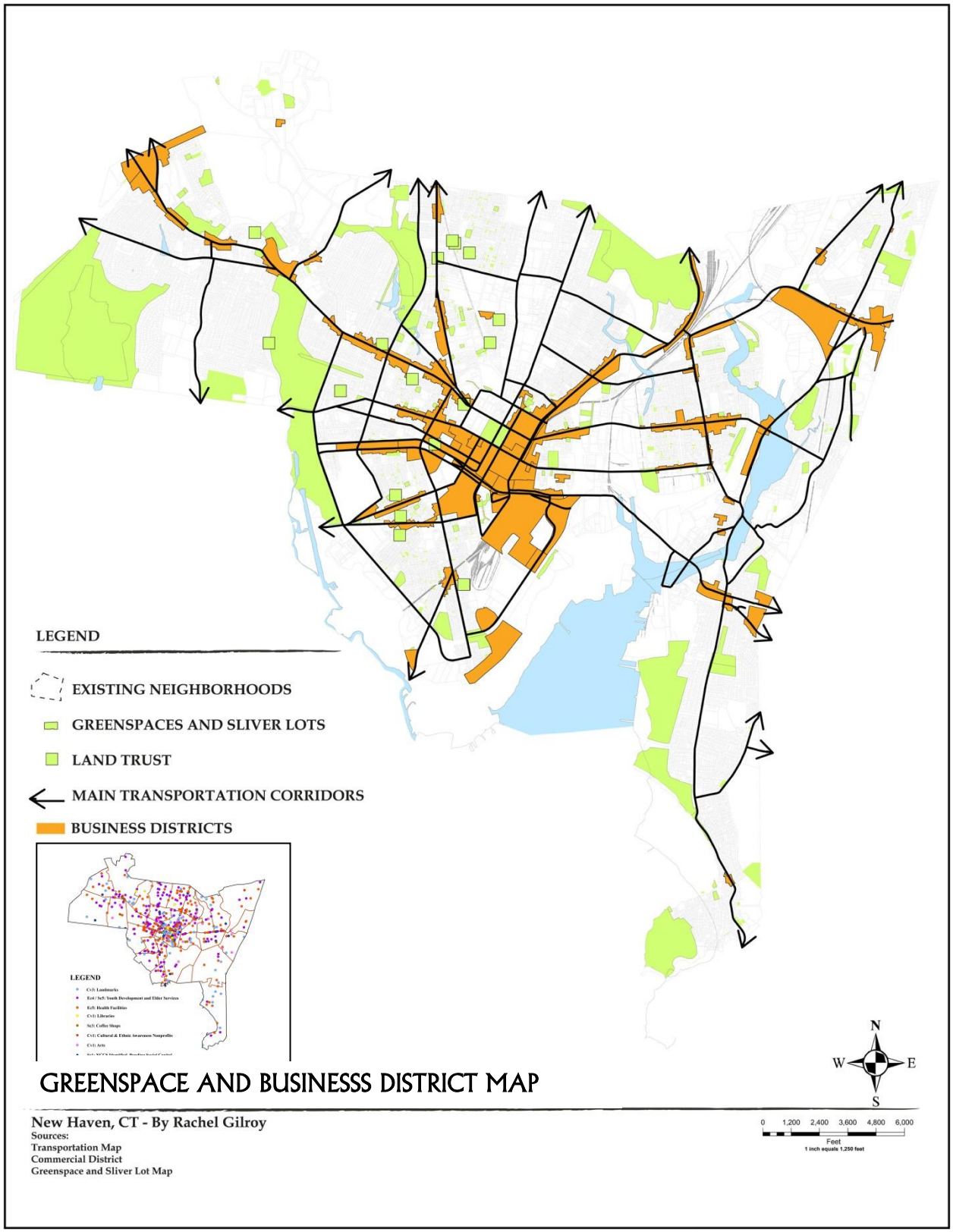
Source:



SMART GROWTH, CULTURAL VITALITY AND SOCIAL CAPITAL ANALYSIS MAP

New Haven, CT - By Rachel Gilroy
Source:

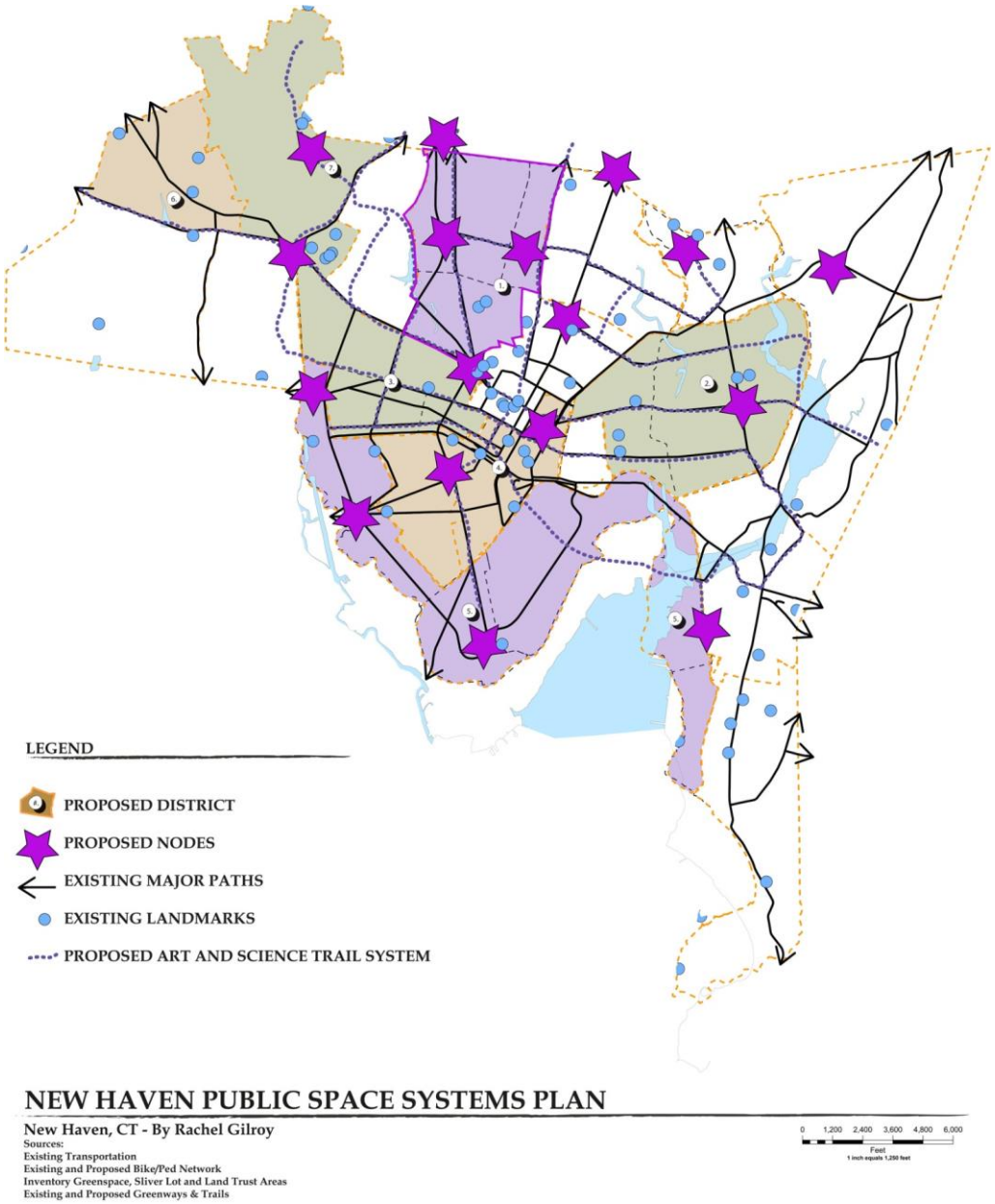

HAMDEN
NORTH HAVEN
WOODBRIDGE
ORANGE
EAST HAVEN
BRANFORD
City of New Haven
Historic Resources
(Draft)
Produced by the
Office of Information Technology
Geographic Information System
Legend
About Local Historic Districts
The legislation that enables municipal governments within the State of Connecticut to establish local historic districts specifies that the purpose in doing so is to "promote the educational, cultural, economic and general welfare of the public through the preservation and protection of the distinctive characteristics of buildings and places associated with the history of or indicative of a period or style of architecture of the municipality, of the state or of the nation." Two-thirds of the voting property owners must indicate their support before an area may be designated a local historic district.
Local Historic Districts differ from National Register Historic Districts in that local districts provide greater protection for the designated properties. Once a local historic district is established, an historic district commission is appointed to review and act upon applications from property owners who wish to make exterior architectural changes.
* Property addresses for buildings within these districts may be found in the New Haven Land Records, Volume 2427, pages 763-766; Volume 2751, pages 29–32 and Volume 5844, pages 44–50, respectively.
LEGEND
Cv3: Landmarks
Ec4 / Sc5: Youth Development and Elder Services
Ec5: Health Facilities
Cv1: Libraries
Sc3: Coffee Shops
Cv1: Cultural & Ethnic Awareness Nonprofits
Cv1: Arts
Source: www.cityofnewhaven.com/CityPlan/pdfs/HistoricPreservation/LocalHi
Cv2: HISTORIC DISTRICT PLAN
New Haven, CT - By Rachel Gilroy
Source:



GREENSPACE AND BUSINESSS DISTRICT MAP

New Haven, CT - By Rachel Gilroy
Sources:
Transportation Map
Commercial District
Greenspace and Sliver Lot Map

The spatial and cluster analysis mapping for selecting areas to cultivate cultural vitality and social capital were decided after overlaying these maps to the combined social capital and cultural vitality data collected in this research project. In addition, the Sustainable Public Space Systems Plan that follows combines green spaces, sliver lots, main transportation corridors, and key business corridors identified in the NHVP 2025 and the cluster analysis maps the identify social capital and cultural vitality.



The following neighborhoods are considered established by the NHVP 2025 and/or considered products of the central city model i.e; zoned residential only. The belief of this *thesis* is that ALL neighborhoods are seen and planned as if they have a symbiotic relationship with each. The seven proposed district areas above are considered key to developing the whole New Haven Public Space Systems Plan. In other words, to strengthen the nine neighborhoods below the seven districts above need to be considered critical to develop.

1. Westville
2. Beaver Hill
3. Yale
4. Prospect Hill (East Half)
5. East Rock
6. Wooster Square
7. Quinnipiac
8. Fair Haven Heights
9. Annex
10. East Shore/Morris Cove

The proposed New Haven Public Space Systems Plan is in line with New Haven's Vision Plan 2025 in that it is encouraging neighborhoods to form central cores of their own (non-profit development corporations), promote social integration among neighborhoods through physical connectivity and by offering opportunities for neighborhood community interactions. These proposed public space districts were chosen based on the potential of neighborhood collaboration

aimed at mixing neighborhoods based on history, character, and demographic make-up as opposed to a one-size fits all approach.

The theory is that this systems thinking approach to public space planning will increase the probability of tacit knowledge exchange; i.e., creativity, and therefore increase New Haven's social capital and placed-based cultural vitality. This type of capital would build and encourage environmental justice by encouraging neighborhood-based economic development initiatives that takes into consideration neighborhoods individual assets and opportunities for neighborhood collaboration that is expressed in their shared public space.

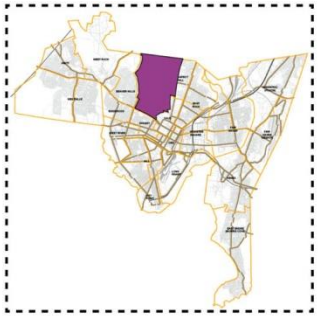
The NHVP 2025 had these guiding goals that were incorporated into the proposed districts below:

- Promote social integration among neighborhoods through physical connectivity and by offering adequate opportunities and neighborhood rec center facilities for community interaction. The Commission recommends more effective programming of current community-based facilities for community cohesion and recreation.
- Promote the revitalization of residential areas and neighborhood commercial districts in and around facilities included in the School Construction Program, including Lincoln Bassett School (West Newhallville), Wexler Grant School (Dixwell), Fair Haven K-8 School (lower Fair Haven), Truman School (Hill), and Barnard School (West River).
- Promote the revitalization of residential areas clustered around significant public spaces, including Trowbridge Square (potential local historic district), Jocelyn Square, Criscuolo Park, and job centers, including Science Park, SCSU, River Street, and Mill River.

- Encourage the development of dramatically new neighborhood forms as part of revitalization programs at select locations, including Farnam Courts, Belle Dock, Science Park, Long Wharf, Mill River, and Church Street South.
- Promote social integration among neighborhoods through physical connectivity by offering adequate opportunities for community activities.

Seven areas were identified through this analysis process that I propose as districts in the Public Space System Design. These I call:

1. Newhallville, Dixwell, Prospect Hill – Art, Science and Technology
2. Wooster Square/Mill River Connection/Fair Haven – Art & Industrial Science
3. Edgewood, Dwight, Part of West River – Art & Wetland Science
4. Downtown to Hill to Water – Art & Medical Science
5. Waterfront: City point, Long Warf, Annex – Art & Nautical/Ocean Science
6. Amity – Art & Food Science
7. West Rock – Art & Environmental Science



Location

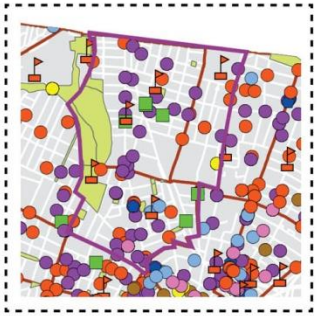
Greenspaces

Business & Pedestrian Pathways

ASSESTS

- Science and Technology Park
- CONNCAT
- Community Gardens / Land Trust Lots
- Elementary Schools
- Historic African American Neighborhood
- Farmington Cannel Trail to Yale and Hamden
- Dixwell Ave / Winchester Ave
- Faith Based / Gospel Music
- Connection to Business Districts

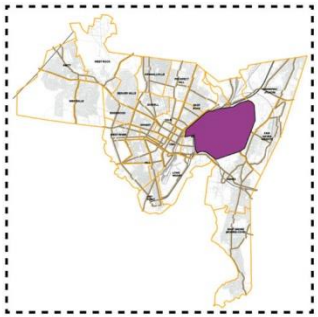
Public Space Systems Plan



Cultural Vitality and Social Capital

1. Newhallville, Dixwell, Prospect Hill – Art, Science and Technology (Meso/Macro Level)

New Haven, CT - By Rachel Gilroy
Source: City of New Havn Maps, NCCS, DataHaven and Google Map Information.



Location

Greenspaces

Business & Pedestrian Pathways

ASSESTS

Close to Downtown

Historic Wooster Square and East Rock

Gateway to Fairhaven

Grand Ave Corridor

Mixing of Immigrant communities

Industrial/Mill History

Connection to River

Parks/Greenspaces

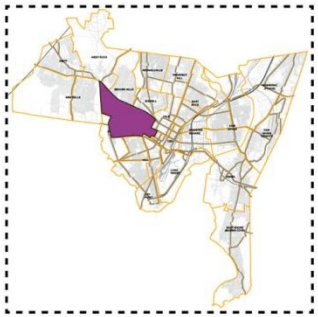
Public Space Systems Plan

Cultural Vitality and Social Capital

2. Wooster Square / Mill River Connection / fair haven - Art & Industrial Science (Meso/Macro Level)

New Haven, CT - By Rachel Gilroy

Source: City of New Havn Maps, NCCS, DataHaven and Google Map Information.



Location

Greenspaces

Business & Pedestrian Pathways

ASSESTS

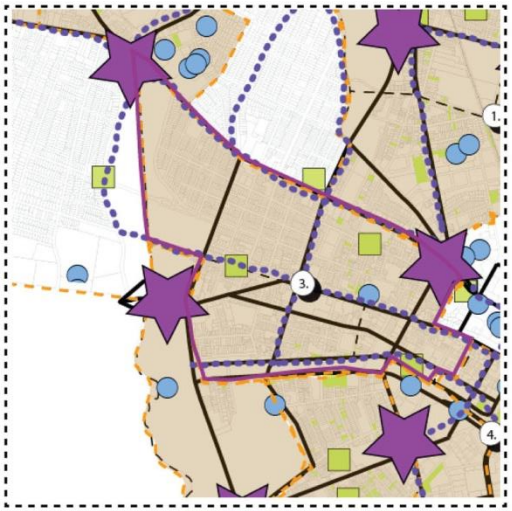
Close to Downtown and Yale

Parks and Bikeways

Whalley Ave and Dixwell Ave

Community Gardens

Businesses and Restaurants

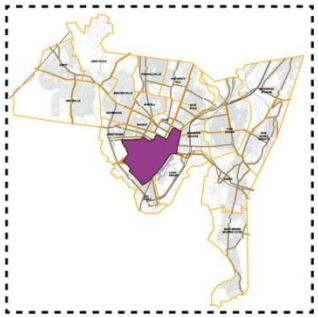


Public Space Systems Plan

Cultural Vitality and Social Capital

3. Edgewood, Dwight, Part of West River - Art & Wetland Science (Meso/Macro Level)

New Haven, CT - By Rachel Gilroy
Source: City of New Havn Maps, NCCS, DataHaven and Google Map Information.



Location

Greenspaces

Business & Pedestrian Pathways

ASSESTS

Close to Downtown (Central Business District)

Medical District proposed plan

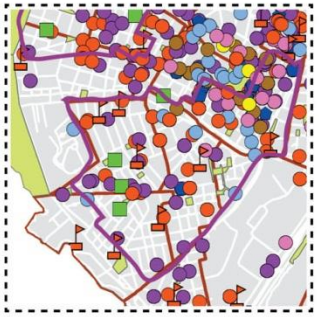
Community Gardens

Connection to District #5

Restaurants

Social Bonding and CV cluster hot spot

Public Space Systems Plan



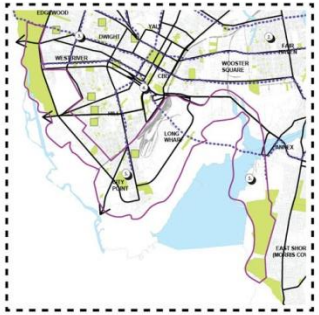
Cultural Vitality and Social Capital

4. Downtown to Hill to Water - Art & Medical Science (Meso/Macro Level)

New Haven, CT - By Rachel Gilroy

Source: City of New Havn Maps, NCCS, DataHaven and Google Map Information.

Location



Greenspaces

Business & Pedestrian Pathways

ASSESTS

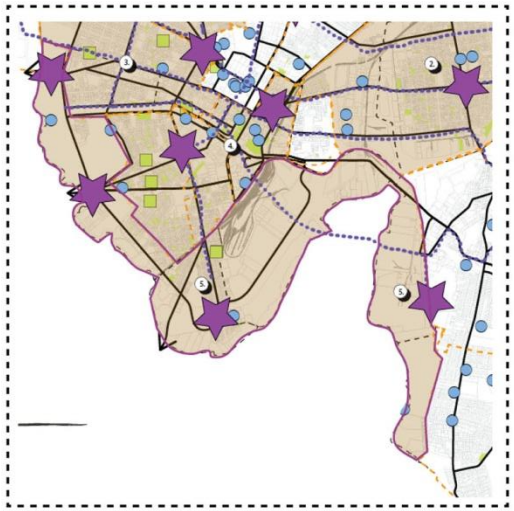
Connection to Downtown

Connection to Long Island Sound

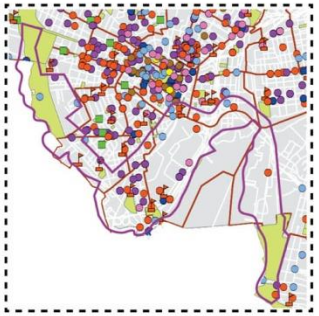
Boat/Sailing Potential

Beach/Water connection Potential

Green Trails



Public Space Systems Plan



Cultural Vitality and Social Capital

5. Waterfront: City Point, Long Warf, Annex - Art & Nautical / Ocean Science (Meso/Macro Level)

New Haven, CT - By Rachel Gilroy

Source: City of New Havn Maps, NCCS, DataHaven and Google Map Information.

Location

ASSESTS

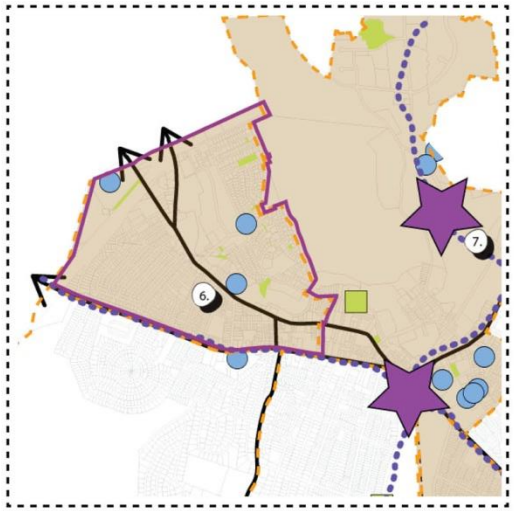
Parks and Trails

Whalley Ave Corridor

Restaurants and Bars

Pedestrian Friendly

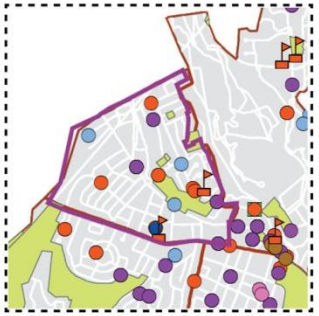
Connection to District #7



Public Space Systems Plan

Greenspaces

Business & Pedestrian Pathways



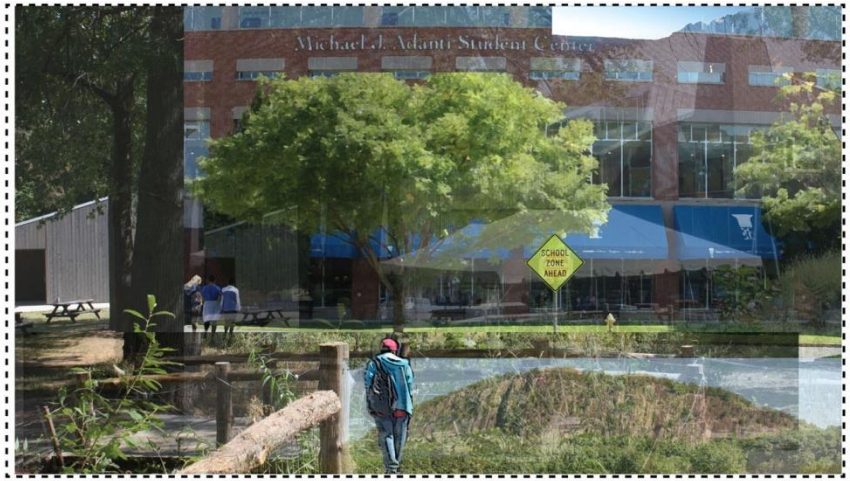
Cultural Vitality and Social Capital

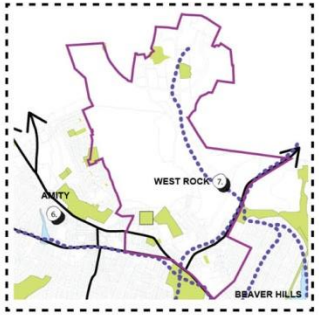
6. Amity - Art and Food Science (Meso/Macro Level)

New Haven, CT - By Rachel Gilroy

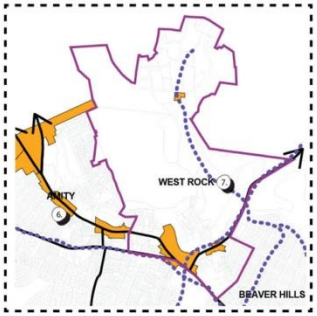
Source: City of New Havn Maps, NCCS, DataHaven and Google Map Information.

Location





Greenspaces

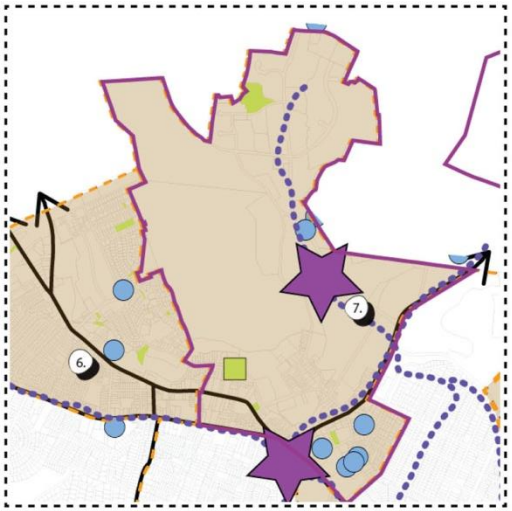


Business & Pedestrian Pathways

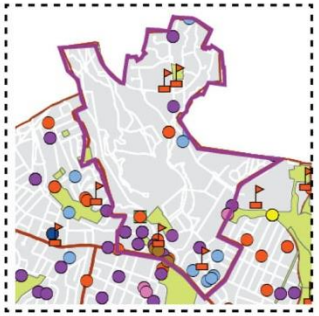
ASSESTS

Southern University

West Rock Park/Environmental Center



Public Space Systems Plan



Cultural Vitality and Social Capital

7. West Rock - Art & Environmental Science (Meso/Macro Level)

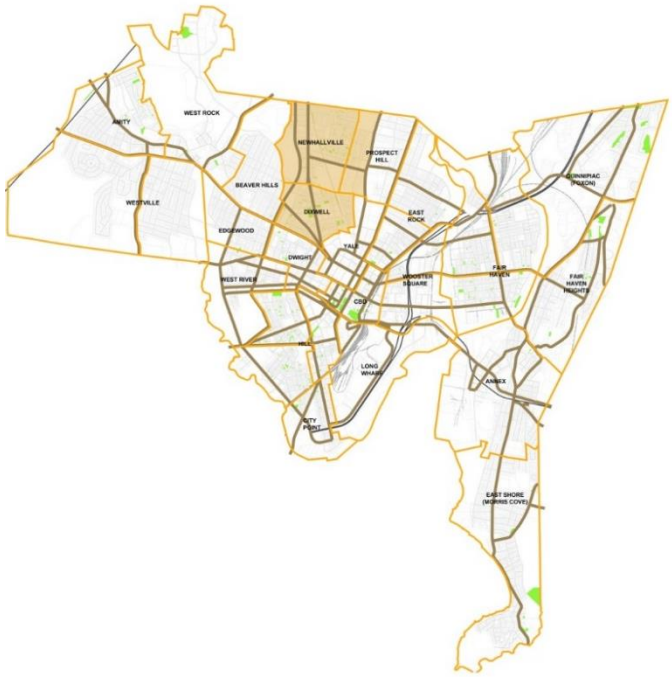
New Haven, CT - By Rachel Gilroy
Source: City of New Havn Maps, NCCS, DataHaven and Google Map Information.

Next Steps

The NHVP 2025 goals to be incorporated to ALL districts are:

- Connect Proposed District's to NHVP 2025 Districts. (Mill River District Plan, Hill-to-Downtown Community Plan, Downtown Crossing (Phase IV) and Redeveloping route 34)
- Encourage collaboration with Housing, New Haven Preservation Trust, State Historic Preservation Office, and other stakeholders to incorporate (not limited to only) historic themes
- Enhance physical and social connectivity among neighborhoods. Promote revitalization of all of the existing business corridors in the city.
- Reinforce the city's position as a world-class destination for arts, cultural, and entertainment events.

To realize the numerous nuances of the goals in the survey response to the NHVP 2025 (See Appendix C) at the district scale means a collaboration of perspective. This leans towards a public space system plan with districts that utilize the fish-scale model. This will be explored in depth following the simple break down of one proposed district. District #1 Newhallville, Dixwell, Prospect Hill – Art, Science and Technology district will follow in the next chapter.



CHAPTER V

DISCUSSION: DISTRICT-SCALE IMPLICATIONS

"In great cities, spaces as well as places are designed and built: walking, witnessing, being in public, are as much part of the design and purpose as is being inside to eat, sleep, make shoes or love or music. The word citizen has to do with cities, and the ideal city is organized around citizenship -- around participation in public life."

~ Rebecca Solnit, (American Author)

Charles and Ray Eames, a husband and wife filmmaking team, explored *The long zoom* (Figure 22 The long zoom) in which the viewer's perspective is challenged and examined from viewing far away to very close. (Johnson, S. 2006). It is an incredibly difficult way of thinking, primarily because our brains are not evolved to hold multiple-scale perspectives simultaneously.

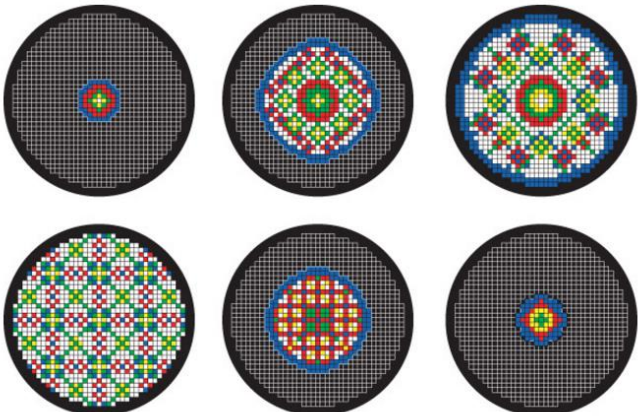


Figure 22 The Long Zoom (Johnson, S. 2006).

Sustainable Site Design (Dinep, C., & Schwab, K., 2010). discusses this scale shift perspective in the physical landscape and describes the site as a piece of a larger context and advocates for designing the site with the context of the surrounding bigger context in mind.

In creating the New Haven public space system plan and its components it is important to remember that it is designed to evolve the central place theory by using the perspective of the mulit-scalar perception. In the case of sustainable site design and planning, it is important recall that this systems plan is about creatively looking, finding and articulating the creative methods for redesigning for expression of the central place network model. It is not about destroying the existing pattern, but shifting the landscape – Pentimento.

These programming elements are geared to meet the NHVP 2025 goals to reinforce the city's position as a world-class destination for arts, cultural, science and innovation and the goals of this thesis to develop a focus on the concepts of social capital, cultural vitality, and creativity to form a framework for planning and design of the public physical landscape in urban communities. The public space realm was chosen because there is research that notes the role of implicit learning and tacit knowledge is critical in innovation, creativity and building social capital. The program elements below are chosen to exemplify the multi-scalar perspective in the New Haven proposed district design and programming. These program elements at macro level are:

- Brand STEAM identity
- Create a strong visual theme using STEAM (Science, Technology, Engineering, Arts and Math)
- Establish visual ties--Interactive STEAM throughout a complex New Haven, CT
- Create Way-finding Systems
- Delineate Interactive STEAM Exhibits/Spaces
- Create outdoor classrooms for public use from pre-k to university level

The district to follow as an example of "zooming in" (Johnson, S. 2006) is district #1: Newhallville, Dixwell, Prospect Hill – Art, Science and Technology

QUANTITATIVE DATA: DISTRICT #1

The quantitative data used for the development of district #1: Newhallville, Dixwell, Prospect Hill – Art, Science and Technology, as discussed, initially started in the macro level. Once the districts where chosen this information was used in the decision making. They are DataHaven: 2014 New Haven Neighborhood Estimates (See Appendix F), CARE's Dixwell, and Newhallville data, (See Appendix G) and the prioritization factors collected and analyzed in the prior chapter will now be utilized at the neighborhood level.

DataHaven: 2014 New Haven Neighborhoods in numbers

This neighborhood contains residences, buildings owned by neighboring universities to include the Science Hill area and the Yale Peabody Museum. Prospect Street is the main corridor in this neighborhood. In addition, this neighborhood is part of the New Haven Historic Districts. This includes Prospect Hill Historic District, Hillhouse Avenue Historic District, and Downtown New Haven (south of Science Hill), and part of Edgerton Park. Included in this historic district is row of houses on the west side of the Whitney Avenue which is considered part of the historic district of East Rock neighborhood.

The Prospect Hill Historic District is significant for its historic value and affiliations that is a large part of this neighborhood. The affiliations that hold interested for this thesis is the potential for social equity to intersect. These affiliations are:

- The John M. Davies House and home to Yale University's international initiatives.
- The Othniel C. Marsh House, (designated a National Historic Landmark) one of the first building for the Yale School of Forestry & Environmental Studies

- Connecticut Agricultural Experiment Station, the first agricultural experiment station in Connecticut (also designated as a National Historic Landmark)

DataHaven: 2014 New Haven Neighborhood Estimates (Appendix F) was reviewed to aid in having a better understanding of the demographics. The snippets below are maps created by DataHaven's data resources and represent Prospect Hill Neighborhood which is considered to be established according to NHVP 2025.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

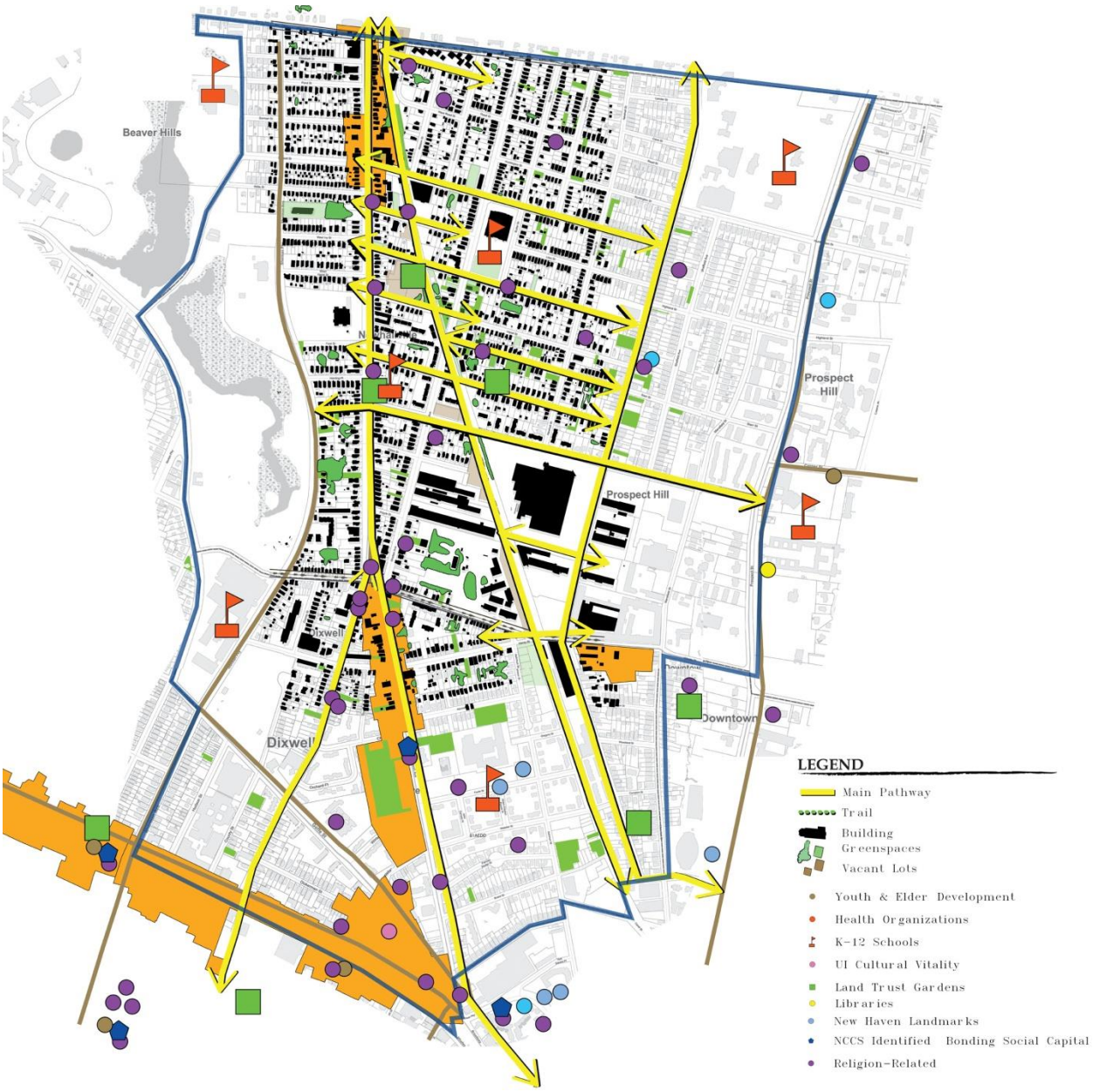
Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		Prospect Hill	
Key community indicators highlighted in green	"Common" Indicator Name	#	%
All indicators derived from the 2014 5Y American Community Survey			
Population			
Total Population	Population	3788	
Male		1689	45%
Female		2099	55%
Under 5 years	Population Under 5	263	7%
5-17 years	Population 5-17	489	13%
18-24 years		516	14%
25-34 years		1107	29%
35-44 years		455	12%
45-54 years		261	7%
55-64 years		307	8%
65 years and over	Population 65 and Over	390	10%
Race and Ethnicity, for total population			
Total population		3788	
Hispanic or Latino of any race	Hispanic Population	400	11%
White, Not Hispanic or Latino	White Population	1522	40%
Black, Not Hispanic or Latino	Black Population	845	22%
Asian, Not Hispanic or Latino	Asian Population	935	25%
Other, Not Hispanic or Latino	Other Race Population	86	2%
Housing Occupancy			
Total housing units		1777	
Vacant housing units		258	15%
Occupied housing units		1519	85%
Occupied housing units, Owner occupied	Homeownership Rate	415	27%
Occupied housing units, Renter occupied		1104	73%
Disconnected Youth			
Total population 16 to 19 years		237	
Population 16 to 19 years not enrolled in school & not working	Disconnected Youth	16	7%

Poverty			
Population for whom poverty status is determined		3473	
Income below 100% of poverty level (official "poverty rate")	Population in Poverty	603	17%
Income below 200% of poverty level ("low income rate")	Low-Income Population	1153	33%
Income above 200% of poverty level	Not Low Income Population	2320	67%
Population for whom poverty status is determined: Under 5 years		319	
Income below poverty level: Under 5 years	In Poverty, Ages Under 5	23	7%
Population for whom poverty status is determined: Under 18 years		735	
Income below poverty level: Under 18 years	In Poverty, Children	54	7%
Population for whom poverty status is determined: 65 years and over		390	
Income below poverty level: 65 years and over	In Poverty, Ages 65+	33	8%
Families		822	
Families: Income in the past year below poverty level	Families in Poverty	74	9%

Housing Cost Burden, for owner occupied housing units			
Owner occupied housing units		415	
Owner occupied housing units, selected monthly owner costs as a percentage of household income, 30% or more	Cost-Burdened Homeowners	112	27%
Owner occupied housing units, selected monthly owner costs as a percentage of household income, 50% or more	Severe Homeowner Cost Burden	84	20%
Housing Cost Burden, for renter occupied housing units			
Renter occupied housing units		1104	
Renter occupied housing units, Gross rent as a percentage of household income, 30% or more	Cost-Burdened Renters	637	58%
Renter occupied housing units, Gross rent as a percentage of household income, 50% or more	Severe Renter Cost Burden	318	29%
Housing Cost Burden, for all households			
All households		1519	
All households paying 30% of income for housing	Cost-Burdened Households	749	49%
All households paying 50% of income for housing	Severe Household Cost Burden	402	26%

Prioritization Factors for Sustainable Public Space Systems



District #1 Analysis Map

QUALITATIVE DATA: NEIGHBORHOOD PLACEMAKING

Once home to several industries, the Newhallville/Dixwell neighborhood is now almost entirely residential with a significant commercial corridor along Dixwell Avenue. The route of the Farmington Canal runs through the middle of the neighborhood. The former Winchester Repeating Arms factory complex in Newhallville occupies 75 acres in the neighborhood. It is now the site of Science Park at Yale, an initiative started in 1981 by Yale University, the City of New Haven, and the Olin Corporation to utilize and redevelop the sites and buildings where the former Winchester Repeating Arms factory was once located. The southern part of the neighborhood (south of Hazel and Highland streets) and the northern part of the adjacent Dixwell neighborhood are listed on the National Register of Historic Places as the Winchester Repeating Arms Company Historic District, bounded on the south by Charles, Admiral, and Sachem streets.

The following qualitative data was collected through interviews, documentary photography and CARE survey.

Story-Telling Via Interviews

The strategy employed in the process of gather information through open ended questioning was to use these underlining guiding affirmations:

- Recognize stakeholder needs that differ between public and private projects.
- Communicate clearly and listen to participants
- Determine each stakeholder's sustainability needs for the project.
- Determine how stakeholders feel about the existing conditions of the project site (scary, like, larger context of site, identify general issues (safety, health, ethnic culture,)

- Strategies for identifying different variables to people connected to the chosen site and creating space to have conversation.

To make sure that a diversity of voices was taken into account a flow chart was created of key players who are invested these neighborhoods. (See Appendix D New Haven Flow Chart)

The Farmington Canal Heritage Trail, also known as the New Haven and Northampton Canal, was a major private canal built in the early 19th century to provide water transportation from New Haven into the interior of Connecticut, Massachusetts and beyond. The trail runs along abandoned rail corridors and canal towpaths through urban, suburban and rural areas of Southern Connecticut and the Farmington Valley. Though described as a "multi-use trail" – the landscape corridor itself is not multi-functional, but limited to the pathway function which accommodates walkers, hikers, bikers, and other non-motorized modes of travel. Along the way are historic buildings, canal locks, the remains of canal aqueducts and other landmarks that provide a rich cultural background for the trail experience#. The New Haven to Simsbury, CT section of the Farmington Canal Heritage Trail (FCHT), comprises the route of the East Coast Green Way (ECG) for about 45 miles. This dovetails into the overall 80 mile FCHT trail connecting Long Island Sound to Northampton, MA. In 2008, the gap sections between Hamden and Yale University through New Haven's Newhallville neighborhood (approx. 3.6 mi), was completed.

Despite mixed reviews; the trail is utilized on various occasions, for instance, "Harriet Tubman Inspires A Women's Trek On The Canal Trail", written by Ariela Martin in the New Haven Independent, March 11, 2013. This was the 100th anniversary of Harriet Tubman's mark on the world. African-American woman took the walk through an event called GirlTrek. GirlTrek is a "national nonprofit organization whose goal is to encourage women of color to

improve their health by moving, "said New Haven's walk organizer Mubarakah Ibrahim, founder of Balance Fitness.

Furthermore, throughout this inquiry process these elements were common throughout ALL that were interviewed. These are:

- The physical environment is important to community self-image.
- Health is positively impacted with opportunities for active living.
- Public safety is positively impacted by creating and maintaining connective, permeable and visible public spaces
- Public landscape and Open space can fulfill human ecosystem services and raise economic value
- Successful public space are the product of community vision and social investment

CARE Neighborhood Survey

In 2009, The Community Alliance for Research and Engagement (C.A.R.E), a partnership between the New Haven community and the Yale School of Public Health conducted an initial health survey in six of the lowest resource neighborhoods in New Haven, CT. Newhallville/Dixwell Neighborhood was included in their initial research and their second survey conducted in 2012. The residents answered questions about their health, diet, exercise, smoking habits, social support, and neighborhood safety. The full New Haven health survey overall findings for 2012, Newhallville/Dixwell community report and asset mapping can be found attached to this feasibility study.

In brief, the 2012 survey, residents gave suggestions for making neighborhoods healthier, including:

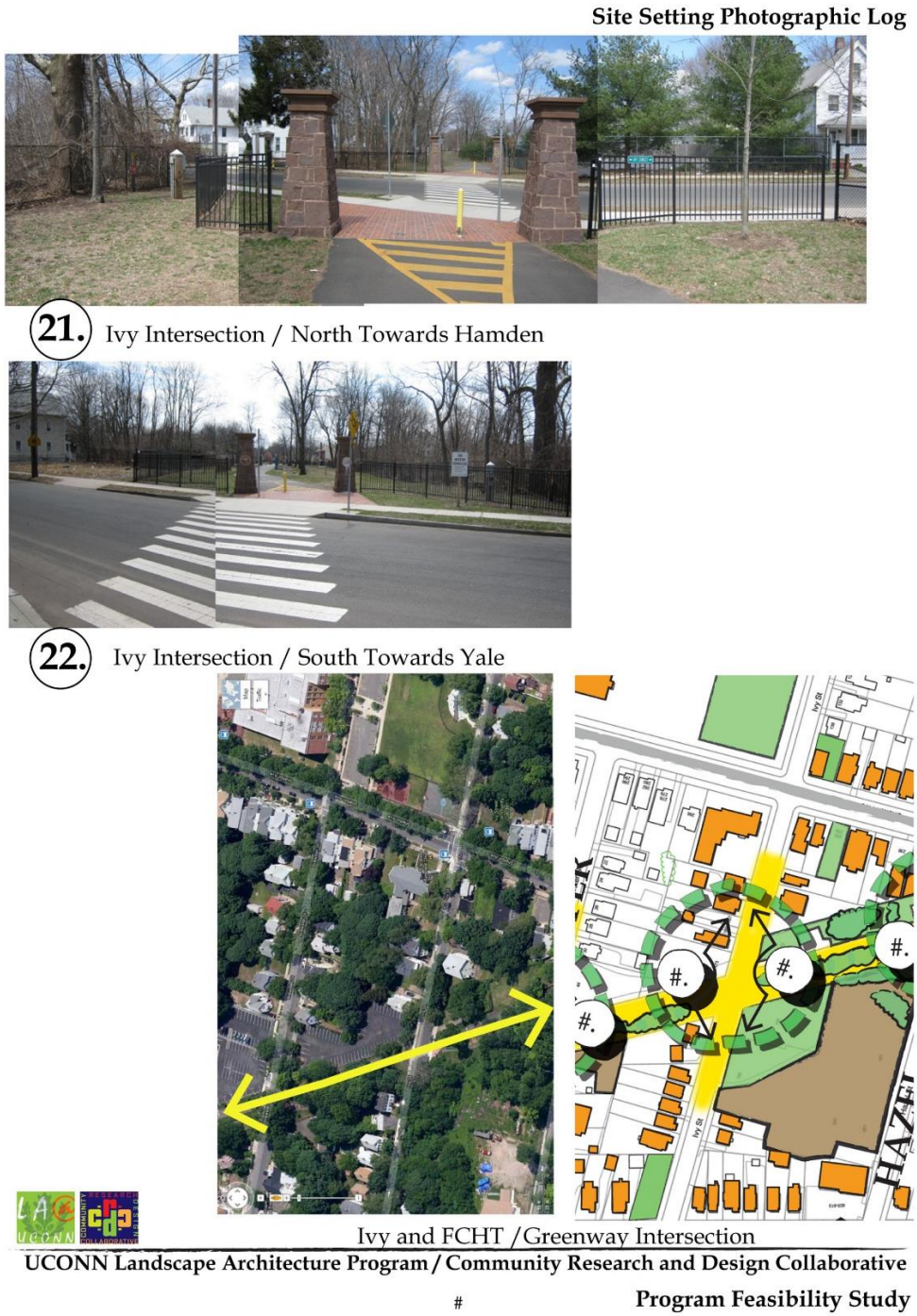
- More options for recreation, including low-cost indoor space like gyms or community centers for sports and exercising
- Safer and cleaner streets
- More access to affordable healthy food options– at grocery stores and corner stores and by having more community gardens and farmers' markets. (C.A.R.E. 2013)

In conclusion the juxtaposition of Newhallville/Dixwell Neighborhood history, present condition and access to resources, Newhallville's Farmington Canal Trail segment to include "trail bike culture", C.A.R.E 's survey findings (Appendix F) and residents feedback sets the stage for the exploration of multi-functional landscape framework through community involvement in the design of place making; as the second tier to considered for future opportunities and relationships that can develop when seeing this trail segment as a resource.

Cultivating awareness together and having the hard conversations around similarities and differences, i.e. race, ethnicity, culture, socioeconomic class in relation to the treatment and the value of our natural ecosystem is what Halprin and Hester did well. Furthermore, to incorporate our community members into the adaptive design process by storytelling, i.e.; history shared by their elders, space for community members to speak about their local environmental history, seminars and lecturers sharing their "environmental" experience that makes the content relevant to their locality should be reflected upon in the development process of this community design programming.

Documentary Photography

The proposed nodes and pathways were reviewed and documented, by photographs and key areas were noted into the Sustainable Public Space Systems Plan.

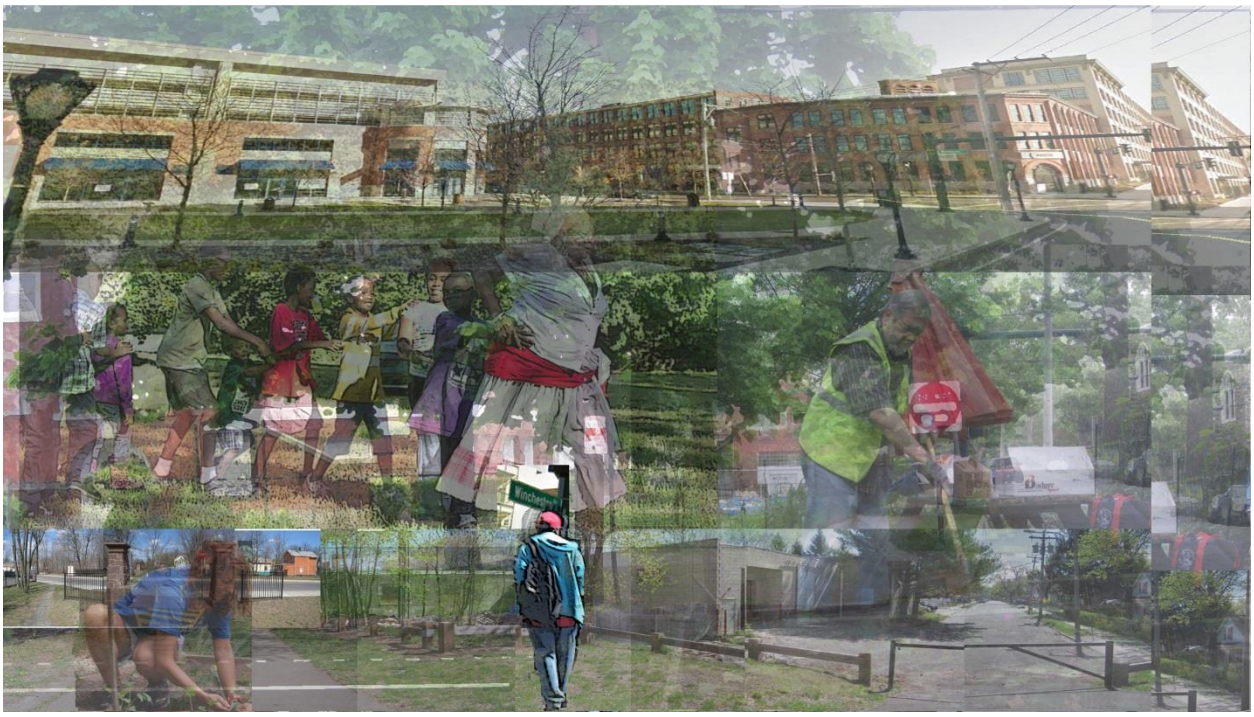


District Placemaking

The end goal is to transform a neighborhood/district landscape by linking its interior and exterior corridor connections. In *Language of Vision* it discusses ways of seeing spatial unity and that it as a whole the behavior of which is not determined by that of its individual components, but where the parts themselves are determined by the intrinsic nature of the whole (Kepes, G. ,1995). For this to work in our communities we need to learn the art of interdependence. The concept for Newhallville, Dixwell, Prospect Hill – Art, Science and Technology District includes the adult's model collaboration and the students learn from joining into meaningful experiences. The more the entire neighborhood community gets involved the more likely that all the constituents are able to have success in their goals. Extending communities beyond schools, beyond the baby-boomers and millennials benefits everyone. Students can relate to community better by seeing it through the eyes of the people who live and work there sharing their intrinsic knowledge. As studies show (Affolter, F.W. , 2004, Alsup, R. E., 2009, Campbell, D. T., 1969, Diliello, T., Houghton, J., & Dawley, D., 2011).) students and adults have a greater incentive to learn when their actions matter to others. The central network model becomes an expression of relationships. The neighborhood goes beyond learning for youths only, but becomes an environment for creative class expression that is inclusive and defined and support by the design of the zoning district. The community adults and elders become the curriculum creators not only for the youth, but for the design of the goals of the district/neighborhood.

The questions of how to design for this expression is a difficult one, but in the concept that follows is an expression of what I imagine Newhallville, Dixwell, Prospect Hill – Art, Science and Technology District might have looked like if this thesis had unlimited funds.

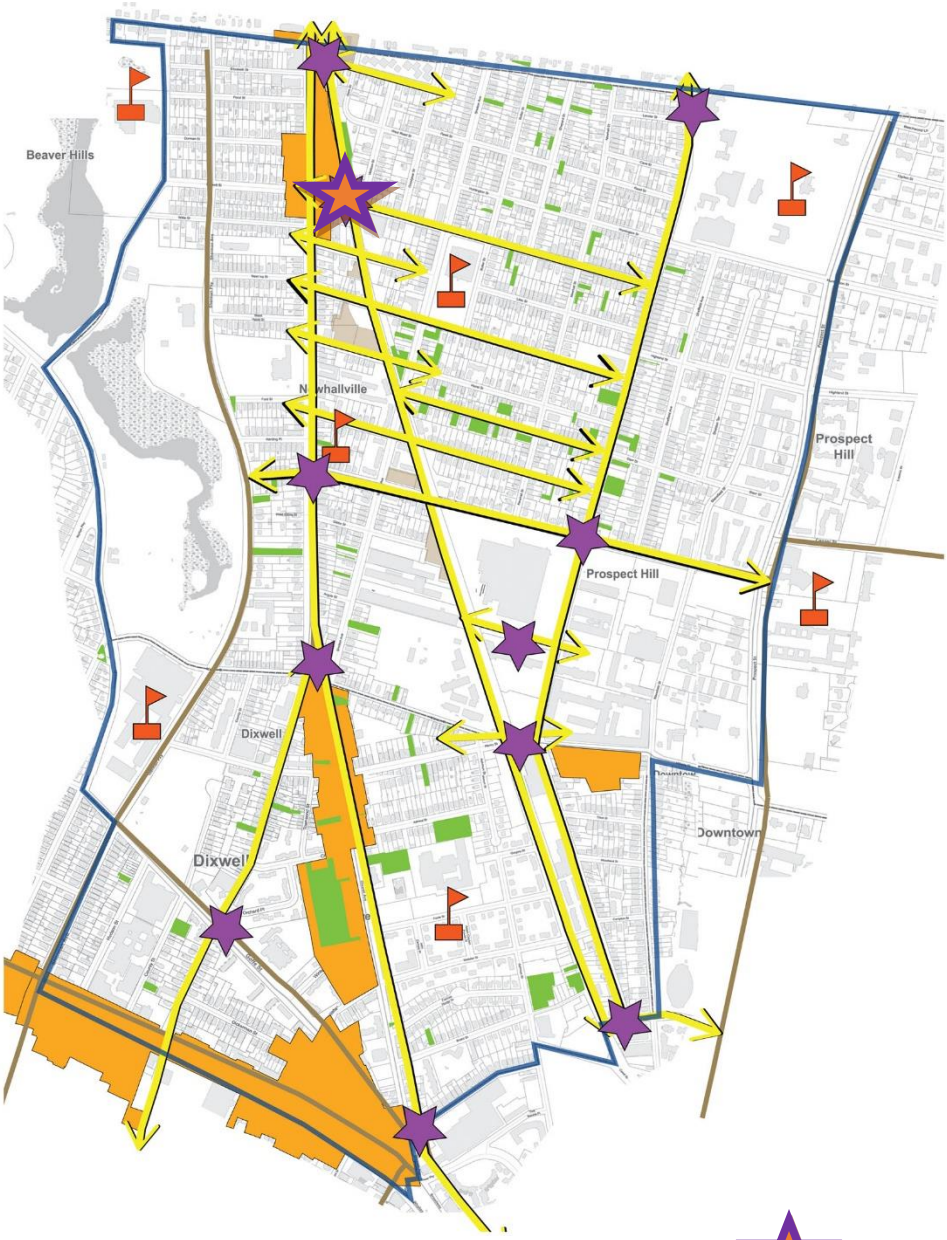
DISTRICT #1 PROPOSED CONCEPT



PROPOSE DESIGN INTERVENTION AT NODES. POSSIBLE IDEAS:

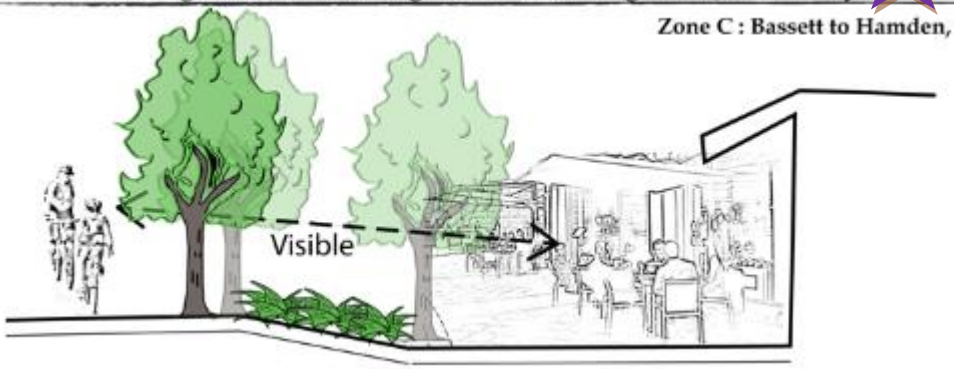
Outdoor Classrooms/Social Circle--STORYTELLING

(Children playing in the "Science Garden" outside Birmingham's Science Museum at Millenium Point; part of the new Eastside City Park, a vast urban space surrounded by education, culture and manufacturing.)



Newhallville Neighborhood Farmington Canal Heritage Trail/ Greenway

Zone C : Bassett to Hamden, CT



Potential Visual and Physical Linkage: Example--Sunken Cafe

Conclusion

What would it look like if we evolved past a central planning concept and imagined land planning that enabled community members to envision their community and become their own planners and designers of their neighborhoods? In the macro and micro scales of physical landscape the physical representation of sustainable design needs to address social stratification and bring the sociological perspective of class, race, gender and age to the design table if there is to be social equity. This study explores alternative methods of developing multi-functional and sustainable landscapes within an existing urban corridor. The Prioritization Factors for Public Space Systems Design maps used to determine The New Haven Public Space Systems Plan. The Public Space Systems Plan determines areas of opportunity to increase cultural vitality and social capital opportunities that will give fuel to creativity and innovation New Haven, CT.

One visual aid is to review the constructivist genre and the work of Kandinsky. (Figure 9: Kandinsky,1923 – On White II (Kandinsky, W., & Rebay, H., 1947) He describes his work as, "It is not the individual point lines and planes that make his work come alive on the canvas, but the tension-strengths that live between and in relation to the forms. If tensions were to disappear, the living piece of art would disappear too." (Kandinsky, 1947) In other words and reiterated from the beginning of this paper -- the negative space, the public space, the intersections between districts, nodes and corridors. Now imagine the network of possibilities and recall *Pentimento* is not about erasing the canvas and starting a new painting, but instead shows the subtle shifts in thought and form. It is a refining process the artist takes while leaving a trail of clues. In land design the clues involve history, specifically, history of zoning policy. These clues are important to the artist because they are a reflection of where the thought had been to the future decision assisting in the "coming to terms" with "the problem" that the artist has set for him or herself to solve.

As noted the canvas, much like communities, is a support base surface and like paintings communities are a mode of creative expression, and the forms and systems are numerous too neighborhood communities are an expression of their support systems. policy and regulations past is sorted in its impact on community. In some cases it has been used to protect the health and welfare of the great painting of our time is to capture the complexity of the dawning of the sustainability era. The rapid technological advances, the economic instability, the uniting of global affairs reflect the ever shrinking planet earth. There is an ever steady shifting of the canvas towards innovative connected development. This endeavor will require developing an awareness of the difference between interdependence verses independence in the palette that is chosen to form the relevant expression of space to the problem that has been set. John Dewey noted this disconnection when he takes the perspective of a child and notes:

> *"the knowledge wasted in the school environment comes from the students inability to utilize the experience they gets outside the school in any complete and free way within the school itself; while, on the other hand, they are unable to apply in daily life what they are learning at school."* (Dewey, J., 1990)

This shouldn't be a surprising concept to understand in our capitalist society because business models geared towards harnessing creativity and developing innovation discuss the same issues as being the ingredients to be successful -- social capital, creativity and place-based cultural vitality.

REFERENCES

Abreu, M., Faggian, A., Comunian, R., & McCann, P. (2012). "Life is short, art is long": the persistent wage gap between Bohemian and non-Bohemian graduates. *The annals of regional science*, 49(2), 305-321.

Affolter, F.W. (2004) Socio-Emotionally Intelligent Development Politics Towards a Framework for Socio-Emotionally Intelligent Development Politics: A Concept/Advocacy Paper. *International Journal of Psychosocial Rehabilitation*. 8, 119-140.

Ahern, J. (1995). Greenways as a planning strategy. *Landscape and urban planning*, *33*(1), 131-155.

Ahern, J. F. (2002). *Greenways as strategic landscape planning: theory and application*.

Alexander, C. (1977). *A pattern language: towns, buildings, construction*. Oxford University Press.

Alsup, R. E. (2009). Liberation Psychology Martin Luther King, Jr.'s Beloved Community as a Model for Social Creativity. *Journal of Humanistic Psychology*, 49(4), 388-408.

Anyinam, C., Phd. (2015). Using Risk Terrain Modeling Technique to Identify Places with the Greatest Risk for Violent Crimes in New Haven- Crime Mapping & Analysis News. Retrieved July 11, 2016, from http://crimemapping.info/article/using-risk-terrain-modeling-technique-identify-places-greatest-risk-violent-crimes-new-haven/

Anzai, T., Nakamura, R.,(2004). *Renga Creations*. Retrieved July 5, 2016, from http://www.renga.com

Aron, L., Jacobson, W., & Turner, M. A. (2013). Addressing Deep and Persistent Poverty.

AtKisson, A. (1996). Developing indicators of sustainable community: lessons from sustainable Seattle. *Environmental Impact Assessment Review*, *16*(4), 337-350.

Atherton, J. S. (2002). Learning and Teaching: Tacit knowledge and implicit learning. *Retrieved July*, *10*, 2005.

Blum, A. (2005, August). The Peace Maker. Retrieved July 11, 2016, from http://www.metropolismag.com/August-2005/The-Peace-Maker/

Briney, A. (2014). What Do You Know about Christaller's Central Place Theory of Urban Geography? Retrieved September 19, 2016, from http://geography.about.com/od/urbaneconomicgeography/a/centralplace.htm

Campbell, D. T. (1969). Ethnocentrism of disciplines and the fish-scale model of omniscience. *Interdisciplinary relationships in the social sciences*,*328*, 348.

REFERENCES

Caplan, J. M., Kennedy, L. W., & Miller, J. (2011). Risk Terrain Modeling: Brokering Criminological Theory and GIS Methods for Crime Forecasting. *Justice Quarterly*, 360-381.

Caplan, J.M, & Kennedy, L.W. (2010). *Risk Terrain Modeling Manual: Theoretical Framework and Technical Steps of Spatial Risk Assessment*. Rutgers Center on Public Security, Newark, NJ 6/29/2010.

CARE: Community Alliance for Research and Engagement. (n.d.). Retrieved July 08, 2016, from http://care.yale.edu/

Carson, R. (2002). *Silent spring*. Houghton Mifflin Harcourt.

Chrysochoou, M., Garrick, N., Segerson, K., Bagtzoglou, A., Dahal, G., Brown, K., & Granda-Carvajal, C. (2011). Reversing urban sprawl: A reclaimability index approach for reviving downtown Brownfields. *No. CTLS 08, 3*.

Common Ground Website. Retrieved July 15, 2016, from http://commongroundct.org/about/

Comunian, R., Faggian, A., & Li, Q. C. (2010). Unrewarded careers in the creative class: The strange case of bohemian graduates. *Papers in regional science*, *89*(2), 389-410.

Connecticut Department of Energy & Environmental Protection. (n.d.). Retrieved July 11, 2016, from http://ct.gov/deep/site/default.asp

Cool Hand Luke. (1967). *Warner Brothers Pictures*.

CNU. (n.d.).The Charter of the New Urbanism. Retrieved July 08, 2016, from https://www.cnu.org/who-we-are/charter-new-urbanism

Csikszentmihalyi, M. (1988). Society, culture, and person: A systems view of creativity. In R. Sternberg (Ed.), The nature of creativity. Contemporary psychological perspectives (pp. 325–339). Cambridge, UK: Cambridge University Press.

Csikszentmihalyi, M. (1999). Implications of a systems perspective for the study of creativity. In R. Sternberg (Ed.), Handbook of creativity (pp. 313–338). Cambridge, UK: Cambridge University Press.

Csikszentmihalyi, M. (2014). *Society, culture, and person: A systems view of creativity* (pp. 47-61). Springer Netherlands.

Dailymail.com, E. Z. (2015, April 21). Does YOUR state believe in global warming? Interactive map reveals spread of opinion on climate change across the US. Retrieved July 08, 2016, from http://www.dailymail.co.uk/sciencetech/article-3049359/Does-state-believe-global-warming-Interactive-map-reveals-spread-opinion-climate-change-US.html#ixzz4D5Ny2Yag

REFERENCES

Dai, D. Y., Tan, X., Marathe, D., Valtcheva, A., Pruzek, R. M., & Shen, J. (2012). Influences of social and educational environments on creativity during adolescence: Does SES matter?. *Creativity Research Journal*, *24*(2-3), 191-199.

DataHaven. (n.d.). Retrieved July 08, 2016, from http://www.ctdatahaven.org/

Dewey, J. (2013). *The school and society and the child and the curriculum*. University of Chicago Press.

Diliello, T., Houghton, J., & Dawley, D. (2011). Narrowing the Creativity Gap: The Moderating Effects of Perceived Support for Creativity. *The Journal of Psychology*,145(3), 151-172.

Dinep, C., & Schwab, K. (2010). *Sustainable site design: criteria, process, and case studies for integrating site and region in landscape design*. John Wiley & Sons.

ESRI (2016). Retrieved June 18, 2016 from http://www.esri.com/what-is-gis

Fischer, G., Giaccardi, E., Eden, H., Sugimoto, M., & Ye, Y. (2005). Beyond binary choices: Integrating individual and social creativity. *International Journal of Human-Computer Studies*, 63(4), 482-512.

Florida, R. (2002). Bohemia and economic geography. *Journal of Economic Geography*, *2*(1), 55-71.

Foster, K., & Maas, C. (2016). An Exploratory Factor Analysis of the Resource Generator-United States: A Social Capital Measure. The British Journal of Social Work, 46(1), 8-26.

Fukuyama, F. (2001). Social capital, civil society and development. Third world quarterly, 22(1), 7-20.

Glaveanu, V. P. (2010a). Paradigms in the study of creativity: Introducing the perspective of cultural psychology. *New Ideas in Psychology*, 28(1), 79-93. doi:10.1016/j.newideapsych.2009.07.007

Gilmartin, M. (2009). "Colonialism/Imperialism". Key concepts in political geography (pp. 115-123). London: SAGE

Gilroy, R. (2016). “Reflections, personal thoughts and unique experiences” My Mind: Daily

Green, J. (n.d.). Interview with Michael Van Valkenburgh, FASLA | asla.org. Retrieved July 08, 2016, from https://www.asla.org/ContentDetail.aspx?id=29648

Greene, R. P., & Pick, J. B. (2012). *Exploring the urban community: A GIS approach*. Prentice Hall.

REFERENCES

Halprin, L. (1970). *The RSVP cycles: Creative processes in the human environment*. George Braziller.

Han, M. (2010). How can creativity in a social context be possible? *Culture & Psychology*, 16(2), 165173. doi:10.1177/1354067X10361401]

Hester, R. (1975). *Neighborhood space* (Community development series; 17). Stroudsburg, Pa. : New York: Dowden, Hutchinson & Ross ; distributed by Halsted Press.

Hester Jr, R. T. (1989). Social values in open space design. *Places*, *6*(1).

Hester Jr, R. T. (2001). What Makes Participation Exemplary? [EDRA/Places Awards--Juror Comment]. *Places*, *14*(1).

Hester, R. T. (2006). *Design for ecological democracy* (p. 509). Cambridge, MA: Mit Press.

High Performance Landscape Guidelines. Project of design trust for public space. Retrieved July 08, 2016, from https://www.nycgovparks.org/greening/sustainable-parks/landscape-guidelines

Hirsch, A. B. (2005). The fate of Lawrence Halprin's public spaces: Three case studies. *Theses (Historic Preservation)*, 28.

Hood, W. (2003). Beyond Nomenclature: Urban Parks for Cultural Diversity [Place Views]. 34.

Howells, J. (2002). Tacit knowledge, innovation and economic geography. *Urban Studies*, *39*(5/6), 871-884.

Imam, K. Z. E. A. (2006). Role of urban greenway systems in planning residential communities: a case study from Egypt. *Landscape and Urban Planning*, *76*(1), 192-209.

Irving, A. (1993). The modern/postmodern divide and urban planning. *University of Toronto Quarterly*, *62*(4), 474-487.

James, P., Et al. Circles of Sustainability. Retrieved July 10, 2016, from http://www.circlesofsustainability.org/

Jackson, M. R. (2003). Art and culture in communities: A framework for measurement.

Jackson, M. R. (2006). Cultural vitality in communities: Interpretation and indicators.

Johnson, S. (2006). The long zoom. New York Times Magazine, 50-55.

Justin Dillon & Kelly Teamey (2002): Re-conceptualizing environmental education: Taking account of reality, *Canadian Journal of Science, Mathematics and Technology Education*, 2:4, 467-483

REFERENCES

Justin Dillon & Kelly Teamey (2002): Re-conceptualizing environmental education: Taking account of reality, Canadian Journal of Science, Mathematics and Technology Education, 2:4, 467-483

Kepes, G. (1995). Language of vision. Courier Corporation.Kandinsky, W., & Rebay, H. (1947). *Point and line to plane*. Courier Corporation.

Kato, S., & Ahern, J. (2009). Multifunctional landscapes as a basis for sustainable landscape development. *ランドスケープ研究*, *72*(5), 799-804.

Kaufman, J. C., & Sternberg, R. J. (Eds.). (2010). The Cambridge handbook of creativity. Cambridge University Press.

King Jr, M. L. (2010). *Where do we go from here: Chaos or community?* (Vol. 2). Beacon Press.

Kramer, M & Hair, L. (2016) City Green: Innovative Green Infrastructure Solutions for Downtowns and Infill Locations. www.epa.gov/smartgrowth. EPA 230R16001.

Legassé, P. (2007). The Columbia Electronic Encyclopedia.

Leonard, D., & Sensiper, S. (1998). The role of tacit knowledge in group innovation. *California management review*, *40*(3), 112-132.

Lynch, K. (1960). The image of the city (Vol. 11). MIT press.

McDougall, Z., Fels, S., Lopes, D., & O'Brien, H. L. (2013, September). Simplifying complexity: modeling the process of collaboration between artists and scientists. In *Proceedings of the 31st ACM international conference on Design of communication* (pp. 113-122). ACM.

McHarg, I. L., & Mumford, L. (1969). *Design with nature* (pp. 7-17). New York: American Museum of Natural History.

McInerney, P., Smyth, J., & Down, B. (2011). 'Coming to a place near you?'The politics and possibilities of a critical pedagogy of place-based education. *Asia-Pacific Journal of Teacher Education*, *39*(1), 3-16.

McRorie, S. (1996). Pentimento: Philosophical inquiry as research in art education. Australian Art Education, 19(3), 6.

Menahem, G. (2011). The Impact of Community Bonding and Bridging Social Capital on Educational Performance in Israel. Urban Education, 46(5), 1100-1130.

Misra, K., Grimes, P., & Rogers, K. (2013). The effects of community social capital on school performance: A spatial approach. *Journal of Socio - Economics*, *42*, 106.

Mitchell, D. (2000). Cultural geography: a critical introduction. Blackwell: Oxford.

REFERENCES

Moholy-Nagy, L. (2012). *The new vision: fundamentals of Bauhaus design, painting, sculpture, and architecture*. Courier Corporation.

Monroe, M. (2012). The Co-Evolution of ESD and EE. *Journal of Education for Sustainable Development, 6*(1), 43-47.

Nakamura, J., & Csikszentmihalyi, M. (2001). Catalytic creativity: The case of Linus Pauling. *American Psychologist*, *56*(4), 337.

NCCS Data. (Retrieved 2016). http://nccs.urban.org/Learn-About-NCCS-Data.cfm

New Haven Health Survey Dixwell/Newhallville Community Presentation (2013).*Community Alliance for Research and Engagement.* Retrieved September 8, 2014 from http://care.yale.edu

Patterson, R. E., Pierce, B. J., Bell, H. H., & Klein, G. (2010). Implicit learning, tacit knowledge, expertise development, and naturalistic decision making. *Journal of Cognitive Engineering and Decision Making*, *4*(4), 289-303.

Pozdena, R. J. (2002). Smart growth and its effects on housing markets: The new segregation. *National Center for Public Policy Research*, 40.

Priemus, H., Rodenburg, C. A., & Nijkamp, P. (2004). Multifunctional urban land use: A new phenomenon? A new planning challenge?. *Built Environment (1978-), 30*(4), 268-273.

Prospect, 13, 35-42.Reber, A., & Glucksberg, Samuel. (1989). Implicit Learning and Tacit Knowledge .*Journal of Experimental Psychology*: General, 118(3), 219-235.

Putnam, R. (1993). The prosperous community: Social capital and public life. The American

Putnam, R. (2000). Bowling alone: The collapse and revival of American community. New York, NY: Simon & Schuster Paperbacks.

Putnam, R., & Gross, K. (2002). Introduction. In R. Putnam (Ed.), Democracies in flux: The evolution of social capital in contemporary society (pp. 1-19). Oxford, UK: Oxford University Press

Ryu, S. (2015). To Bond or to Bridge? Contingent Effects of Managers' Social Capital on Organizational Performance. *The American Review of Public Administration*, 0275074015598392.

Rodenburg, C. A., & Nijkamp, P. (2004). Multifunctional land use in the city: a typological overview. *Built environment*, *30*(4), 274-288.

Schilling, & Chiang. (2011). The effect of natural resources on a sustainable development policy: The approach of non-sustainable externalities. Energy Policy, 39(2), 990-998.

REFERENCES

Schwarzkopf, S. (2008). CREATIVITY, CAPITAL AND TACIT KNOWLEDGE. Journal of Cultural Economy, 1(2), 181-197.

Shelburne Farms located in Shelburne, Vermont - Sustainable Schools Project. (n.d.). Retrieved July 10, 2016, from http://sustainableschoolsproject.org/

Smith, Gregory A. (2002). Place-Based Education: Learning To Be Where We Are. Phi Delta Kappan, 83(8), 584-94.

Sobel, D. (2004). Place-based education: Connecting classroom and community. *Nature and Listening*, *4*, 1-7.

Solnit, R. (2001). *Wanderlust: A history of walking*. Penguin.

Stapp, William B. 1969. The Concept of Environmental Education. *The Journal of Environmental Education*, Vol. 1, No. 1, 30-31.

Steuteville, R., & Network, N. U. (2011). Street fight: Landscape Urbanism versus New Urbanism. *New Urban Network, nd Web. https://my. Vanderbilt edu/greencities/files/2014/08/Street-fight. pdf*.

Stone, K. Michael (2009) Smart by Nature: Schooling for Sustainability

Tan, K. W. (2006). A greenway network for Singapore. *Landscape and urban planning*, *76*(1), 45-66.

Turcu, C. (2013). Re-thinking sustainability indicators: local perspectives of urban sustainability. *Journal of Environmental Planning and Management*,*56*(5), 695-719.

Unesco. (2002). *Universal Declaration on Cultural Diversity: World Summit on Sustainable Development*. Unesco.

Waldheim, C. (2004). *CASE--Hilberseimer/Mies van der Rohe, Lafayette Park Detroit* (Vol. 4). Prestel Pub.

Waldheim, C. (Ed.). (2012). *The landscape urbanism reader*. Chronicle Books.

Wals, A. E. (2011). Learning our way to sustainability. *Journal of Education for Sustainable Development*, *5*(2), 177-186.

Yoder, S. (2013). The 10 Fastest-Growing Cities for Retirees. Retrieved July 11, 2016, from http://www.thefiscaltimes.com/Articles/2013/06/07/The-10-Fastest-Growing-Cities-for-Retirees

APPENDIX

sustainable schools project

The Big Ideas of Sustainability & Essential Questions

BIG IDEA	ESSENTIAL QUESTIONS
Community: a group of living and non-living things sharing a common purpose or space.	• What is a community? • What is our community made of? • How can we help our community? • What makes a sustainable community? • What is your responsibility to the community? • Who lives in our human and natural communities?
Systems: parts that are connected through larger patterns.	• What is our community made of? • What role do economics play in shaping our world? • What is a system? • What systems are you a part of? • How does change happen in a system? • How do systems and changes in systems affect you? • How do you affect and make changes in systems? • What patterns can we find in our community?
Diversity: all systems and places function because of variety.	• In what ways is human diversity related to bio-diversity? • What makes a place diverse? • How does the diversity of a system affect its health? • What is our community made of? • Why is diversity important?
Interdependence: all living things are connected. Every organism, system, and place depends on others.	• How do our choices affect us, our community, and the world? • How are human and natural systems interrelated? • What can communities learn from natural systems to improve our common future? • In what ways do you depend on others? • In what ways do you depend on natural systems? • How are we all connected? • Who or what depends on you?
Equilibrium: a state of balance.	• Why do animals or humans move from place to place? • What makes a system balanced? What throws off its balance? • How do systems achieve equilibrium? • What happens in a system when it is out of balance? • What is the relationship between diversity and equilibrium? • What happens when you or your community is out of balance?

BIG IDEA	ESSENTIAL QUESTIONS
Cycles: every organism and every system goes through different stages.	• What cycles can we find in our community? • In what ways do we impact cycles? • What cycles are we a part of? • What and how are cycles related to one another?
Change over time: all organisms, places, and systems are constantly changing.	• What can we learn from the past? • Whose story is it? • How do living things adapt to changes in their environment? • How do we shape the land? How does the land shape us? • How has our community changed over time? • How have you changed over time?
Limits: every system has a carrying capacity	• Why do living things move from place to place? • Who decides what limits something? • What determines limits in the natural world? In economic systems? In social systems? • What happens when a system reaches its limits?
Fairness / Equity: resources need to be shared to meet the needs of living things—across places and generations.	• Who decides what is fair or equitable? Who should decide? • What is the difference between fairness and equity? • How should we balance the rights of individuals with the common good? • What determines value? • Is there a difference between wants and needs? • What happens in a system when resources are limited? • What happens when resources are inequitably allocated? • Why is it important to think about the future?
Place: natural and human communities together make up one's place.	• How are we shaped by the land/How do we shape the land? • How do humans and the natural world interact? • How does where we live impact how we live? • How are people connected to the past? • What stories are here? • What makes up your place? Who makes up your place?
Ability to make a difference: everyone has the ability to change or impact a system, community, and themselves.	• How do our choices affect ourselves, our communities, and the world? • What is your responsibility to yourself, your community, and the world? • How can one individual make a difference? • How can a group of individuals make a difference? • What does it mean to be a citizen in our neighborhood? • What can you do to make change in a system?
Long-term effects: actions will have effects beyond immediate reactions.	• How do living things adapt to changes in their environment? • In what ways does how we live today impact how people live in the future? • What choices did our elders make that affect the way we live today? • How can we make choices to ensure a healthy future? • How do your actions impact the future of others?

Educators Network

Anthology of Best Practices in Urban Environmental Education

A LEAF Partner School

Common Ground is the nation's first charter school focused on the urban environment, preparing students to become the next generation of environmental leaders. It is also a small college preparatory high school, helping students develop the skills and knowledge to succeed after graduation. It emphasizes Environmental Understanding, College Preparation and Academic Challenge, Extended Learning and Leadership, and Active, Authentic Learning.

www.nhep.com

Perception of Place

Rachel Gilroy

Environmental Science, Social Studies, Writing, Art

OVERVIEW

This lesson focuses on asking the essential questions: What is sustainability? How can cities be sustainable? This lesson asks students to consider the question, Why do people perceive places in different ways? as the students explore urban ecology and develop creative paths to urban sustainability. The task requires systems thinking and an awareness of the interconnectedness of environment, society, economy and cultural vitality. Students will also discover that building the definition of sustainability requires a consensus among all community members as they create it.

OBJECTIVES

Students will:

1. Define sustainability and the context of the word.
2. Create a relationship with the local community around sustainability.
3. Investigate what it means for a city to be sustainable.
4. Explore and evaluate what elements determine sustainability in the urban environment.
5. Share findings with peers.

GLOSSARY

Sustainability – "Sustainability is based on a simple principle: Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. Sustainability creates and maintains the conditions, under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations." Source: http://www.epa.gov/sustainability/basicinfo.htm

MATERIALS AND RESOURCES

- Digital camera (phone cameras will suffice)

**it is easy to assume that every teenager has a phone with a camera. It is important to be sensitive to the fact that some may not. In this event, have school cameras on hand to loan, or partner students together.*

- Writing tools
- Notebooks or journals
- Laptops and Internet access
- Maps of your city (photocopies are fine – consider laminating)
- Digital projector

Helpful resources for background information

These articles provide an interesting context for what sustainability means and looks like in an urban context:

- *Ecological Design, Urban Places, and the Culture of Sustainability: Can City-Building Foster a Culture of Sustainability?* by William Eisenstein http://www.spur.org/publications/library/article/ecologicaldesign09012001

- The Road to Curitiba by Arthur Lubow, The New York Times, May 20, 2007. http://www.nytimes.com/2007/05/20/magazine/20Curitiba-t.html?pagewanted=all&_r=0

- The Second Pillar of Sustainable Development http://www.justfocus.org.nz/tag/sustainability/

SETTING

High school classroom and your city/neighborhood, connection to another city/neighborhood/country.

TIME NEEDED

This will vary depending on how much time you can dedicate. It could be a weeklong project or could be expanded into a small unit allowing for more depth. Students should have at least one to two nights plus class time to complete their end piece.

BACKGROUND INFORMATION

In the design of this project, the challenge was scaffolding the words ***sustain*** and ***sustainability***. The words require an understanding of the differences between interdependence and independence; i.e., systems thinking. In transforming an independent perspective into an interdependent view, we found strength in the co-creation process between staff and students. I went with the assumption that if I want "something" to sustain, to live on, to flourish, perhaps the core value of this desire correlates to love. Upon further reflection I thought of the developmental stages of a teenager; i.e., instead of focusing on purely environmental or economics perspectives

of the sustainability Venn diagram, I wanted to explore entering this concept through social and cultural vitality. I asked the students, "What do you love and what sustains you?" This lesson allows students to grasp a basic understanding of sustainability and how it relates to the urban environment.

URBAN RELEVANCE

Contrary to common belief, urban systems can be more environmentally sustainable than rural or suburban living. With people and resources located so close to one another, it is possible to save energy through such systems as food transportation and mass transit. The urban environmental design process starts with trying to understand our sense of place, by considering the systems-thinking approach of urban communities, i.e., equity in relation to society, economics and the environment. This lesson pays respect to the complexities associated with creating the definition of the word ***sustainability***, which means paying due attention to social equity and economics, to the arts and culture and, perhaps most important of all, to helping students develop this understanding into their definition of sustainability and connection to their urban natural environment.

PROCEDURE

Before beginning this project, you will need to make a connection with students in another urban area. One possible way to do this is by using Pals Global Community http://www.epals.com/. This site allows teachers to "safely connect with classrooms around the world for collaborative, project-based learning." **If you are not able to find a school to partner with, you can present a randomly generated list of 20 or so cities in the U.S. (go beyond the U.S. if you would like) for students to choose from (for a geography extension, have students do a mapping activity first to make sure they can identify where all of these cities are).

- Once you have made contact with a school and a teacher, explain the objective of this project at *your* school and that you would like to create a partnership to share information about your two cities so you can evaluate what makes a city sustainable and how your two cities match up on this front.

- Arrange for weekly check-ins and a method of communication: email, Skype, instant messaging, or maybe even a Facebook or Google Groups page dedicated to this project (be sure to check with your school regarding security in using social media). If you will be sharing files, consider setting up a Google Drive or a Dropbox account that both cities will have access to.

- Once you have arranged a partnership, students must record the name of the school, the teacher contact, the partner class and the city that school is in. They should also prepare a section of their notebook/ journal dedicated to the interactions and communications that will take place with the partner school. *Suggestion*: Model the recordkeeping for students to help them with the organization of this task.

I. Creating a student-driven context for "Sustainability"

1. Write the word "sustainability" on the board. Ask the class to think quietly about the meaning of this word for 1 minute and to write their thoughts in their notebook or journal. (Hint: What does it mean

"to sustain"?) Be sure to tell students that there are no wrong answers at this point, that this is more of a brainstorm activity. Everyone MUST write!

2. Have students "Think, Pair and Share" with a partner for 5 minutes and discuss what they think sustainability means. Partners share with class.

3. Chart student responses.

4. Share the "sustainability" definition found at the beginning of this lesson. This definition will need to be unpacked. Provide questions to drive thinking, such as:

a) If city residents did not recycle, is that way of life sustainable? Why or why not?
b) If every person who lived in a city drove a car in the city every day, is that way of life sustainable? Why or why not?
c) If we know that eventually the earth will run out of oil, and car companies do not develop cars that use less fuel or alternative fuels, is that way of life sustainable? Why or why not?
**Add more examples as needed.*

5. Explain to students that in this project, they are going to be exploring the idea of sustainable cities. What does this mean? How can a city be sustainable or not sustainable? *Refer to examples from the articles in the Background Information section.

6. Discuss sustainability in urban areas:
   - Are cities sustainable? Why or why not? If not, can they be?
   - What elements of our city/neighborhood are sustainable? Why? Provide a minimum of 3 examples.

   *This may be difficult for students to do without some background. You could provide examples (such as green roofs or carpool lanes) and/or you could assign the article, *Top Five Most Sustainable Cities in the World* by Michael d'Estries. Be sure to include guiding questions and factor in class time to discuss the article. http://www.ecomagination.com/top-five-most-sustainable-cities-in-the-world

   Jigsaw the reading, breaking the class into five groups and assigning one city to each group to read about and report back to the class.

II. **On Assignment**

Instructions to students: Take pictures of what **sustains** you. (Relate back to the description in the "Background Information" section of this lesson: What evidence of sustainability have we seen in our own lives and community?

1. Load pictures onto classroom computer.
2. Discuss images as a group: Students categorize pictures, eliminate unwanted ones, choose highlights and explain why they chose the ones they did.
3. Using highlights, discuss/ write: Why is each photo an example of sustainability?
4. Share images with partnered school and compare notes, ideas and explanation.

III. Sustainability In Our Partner City

Before undertaking this portion of the lesson, students must research the partner city to find out what, if any, sustainability actions have been taken (this should be done ***without judgment*** of the partner city – it is simply a fact-finding mission). This will take some guidance on research and should be modeled before students begin. If for example, the partner city is Oakland, Calif., how would students find out if this city is sustainable? How would they start? In general, a good place to start is to simply to enter "Oakland+sustainability" as a Google search. This will direct students to the site *Sustainable Oakland* http://www2.oaklandnet.com/Government/o/PWA/o/FE/s/SO/index.htm. Here, they will find out what Oakland is doing to be more sustainable. Similar sites exist for many cities.

Once students have researched the partner city, they must answer the following question:

- What *evidence* is there that this particular city has sustainable practices?

IV. **On Assignment 2**

Explain to students that they will be sustainability investigators in their neighborhood/city. Now that they know what sustainability means in general and in cities and have discussed/seen some examples of it in action, they will go out to see if they can find examples of it locally.

1. Give students a map of the city.
2. Explain to students that they will be looking for examples of sustainability (this works best as a HW assignment, but you can also arrange to take a "walking around the city/neighborhood" field trip).
3. When students see an example of sustainability, they must take a picture of it, describe it in their notebook and indicate on the map where it is.
4. Students categorize pictures, eliminate unwanted ones, choose highlights and explain why they chose the ones they did.
5. Students download their photos onto a computer and create a PowerPoint slide show of their findings. *Remind students to keep their slide show SIMPLE. Large photos and just a few words describing how they show a sustainable practice are all that is needed.
6. Students share their slide show with their classmates (slide shows should be no more than 2 minutes long).
7. Discuss images as a group. Why is each photo an example of sustainability? What are some similarities and differences in the photographs?
8. Share images with partnered school and compare notes, ideas and explanations.

Extension

1. Students write poems to accompany the images.
2. Ask other students to write poems to the images and compare the poems.
3. Research culture and cultural diversity as the fourth pillar of sustainability, using the following resource: http://www.cultureandcommunities.ca/downloads/Salons/Salon3-handout.pdf
4. Present findings using a Venn diagram.
5. Discuss what students have learned from this activity, and relate this new knowledge to a broader discussion of how defining "sustainable" can affect political situations. Are there any political debates in the United States that relate to this word?
   Example Reading: *Sustainability Comes of Age* by Henry Fountain, *New York Times* http://www.nytimes.com/2010/01/03/education/03urbansustain.html
   (Be sure to generate guiding questions for this or other articles students will read).

Extension 2

Often, the idea of the cycle of nature leaves out the impact humans have on that cycle. This lesson is intended to encourage students to think of themselves in that cycle and impacting that cycle. This extension activity poses the question, "How do humans/I fold into nature's already sustainable systems?" Use this montage image from the New York Restoration Project's sustainability workbook, "What's Good in My Hood," to stimulate a conversation around natural systems and human impact. When students explore this montage image, they should discuss and write a response to that driving question. They can refer to and incorporate elements of their writing from the previous portion of the lesson to further their thinking here.

DRAFT VERSION

COMPREHENSIVE PLAN UPDATE

Community Survey Responses

Survey conducted & analyzed by
New Haven City Plan Department, November 2013

City of New Haven, Connecticut
John DeStefano Jr, Mayor

I. Timeline of Comprehensive Plan Update

- **Compilation of First Draft of Databook : May 2012 to December 2012**
- **Attendance at all of the Community Management Team (CMT) meetings for resident input on planning issues (Phase I of Public Outreach): January 2013 to May 2013**
- **Attendance at meetings of City boards and commissions, and civic and neighborhood associations: January 2013 to November 2013**
- **Online Community Feedback Survey: July 2013 to September,2013**
- **Analysis of Survey Results & Final Draft of Databook : September 2013 to November 2013**

COMPREHENSIVE PLAN UPDATE – BOARDS AND COMMISSIONS, NEIGHBORHOOD AND OTHER CIVIC ASSOCIATIONS INPUT: PHASE I

MEETING NAME	Problems Due to Convenience Stores Locations, Hours of Operationand Activities	Improve Existing Park Facilities	Enhance Park Security	Lack of Adequate Connectivity Among Existing Parks i.e., West River, West Rock & Beaver Pond	Need More Trail, Bike and Pedestrian Connectivity East to West	Include Goals and Vision Outlined in ECC Bike/Ped Plan	Need Traffic Calming	Need More On-Street Parking in Downtown for Physically Disabled	Promote Commercial Districts Revitalization	Planning	Promote Energy Efficiency in New Constructions
City Plan Commission		•	•	•						•	
Development Commission	NONE										
Redevelopment Agency	NONE										
Elm City Cycling						•					
Cedar Hill Merchants Association	•				•		•		•		
West River NRZ									•		

Source: New Haven City Plan Department; October 2013

II. Survey Methodology

- Postcards
- Partnership with local libraries, City of New Haven Office of Communications, Board of Aldermen, Commission on Equal Opportunities, CMT chairs, neighborhood specialists, local non-profits and other advocacy groups
- Media outreach through Mayor's Newsletter, local media, Facebook, Twitter, emails, etc
- Volunteer-distributed paper surveys
- Materials in both English & Spanish

III. Overview of Response Rate

- Survey dates: July 1, 2013 to September 2, 2013
- Total responses: 917
- Completed Responses: 741 (80%)
- Resident Responses: 854 (93%)

City of New Haven Comprehensive Plan Update

PURPOSE OF THE SURVEY:
This survey will help City staff to prioritize various planning issues heard at city-wide community management team meetings, as well as, understand the current planning needs of New Haven community in depth. The results will help shape the planning goals and objectives for the city over the next decade, which will be included in the City's Comprehensive Plan Update document.

BACKGROUND:
The current Comprehensive Plan for the City of New Haven (2003) is set to expire in October 2013. This is a state mandated, long range planning document for the city (Refer Connecticut General Statutes Section 8-23). The City, along with other municipalities in the state, received a six-month extension i.e., until July 2014, for adopting this plan update document.

The City staff finished compiling the draft Databook for the plan, which is a statistical document describing the current state of the city and the changes over the past decade on various planning topics such as population, housing, land use, transportation, economic development, and environment. This Databook can be accessed at:

http://www.cityofnewhaven.com/CityPlan/PlanningPrograms.asp#Plan

As part of Phase I of public outreach, the staff reached out to the city-wide community management teams and various city boards and commissions to understand the planning issues affecting residents on a daily basis. These issues are listed within this survey along with other planning related questions that were raised during the compilation of the Databook, for which we would like to receive public input.

We strongly encourage you to fill out the "Other" option wherever you need to provide more information. Thank you in advance for your participation!

IV. Respondent Characteristics

- Total responses 917 of which 854 are resident responses. 840 are categorized into neighborhoods (Twelve residents were not categorized since they did not provide a full address)

- **Low-income neighborhoods: 291 (35%)**

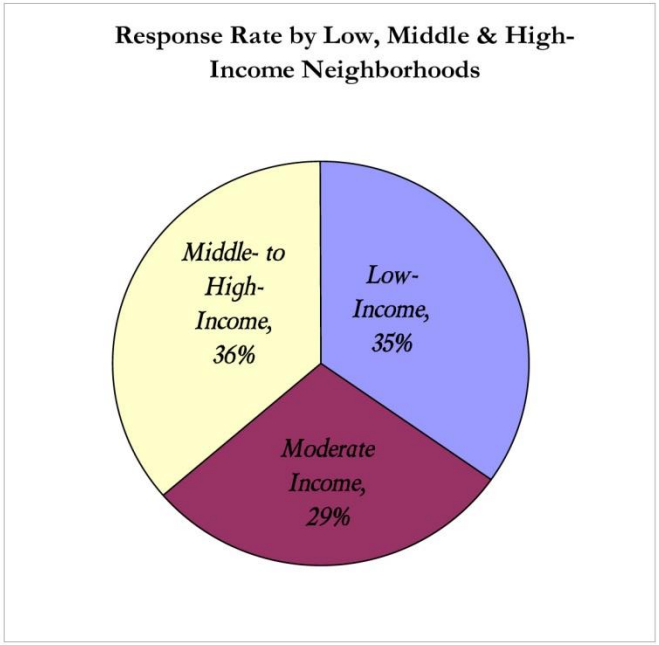
Neighborhoods included (Total 10): Cedar Hill, Dixwell, Dwight, Fair Haven, Hill North, Hill South, Newhallville, West River, West Rock, Long Wharf (only 1 person)

- **Moderate-income neighborhoods: 242 (29%)**

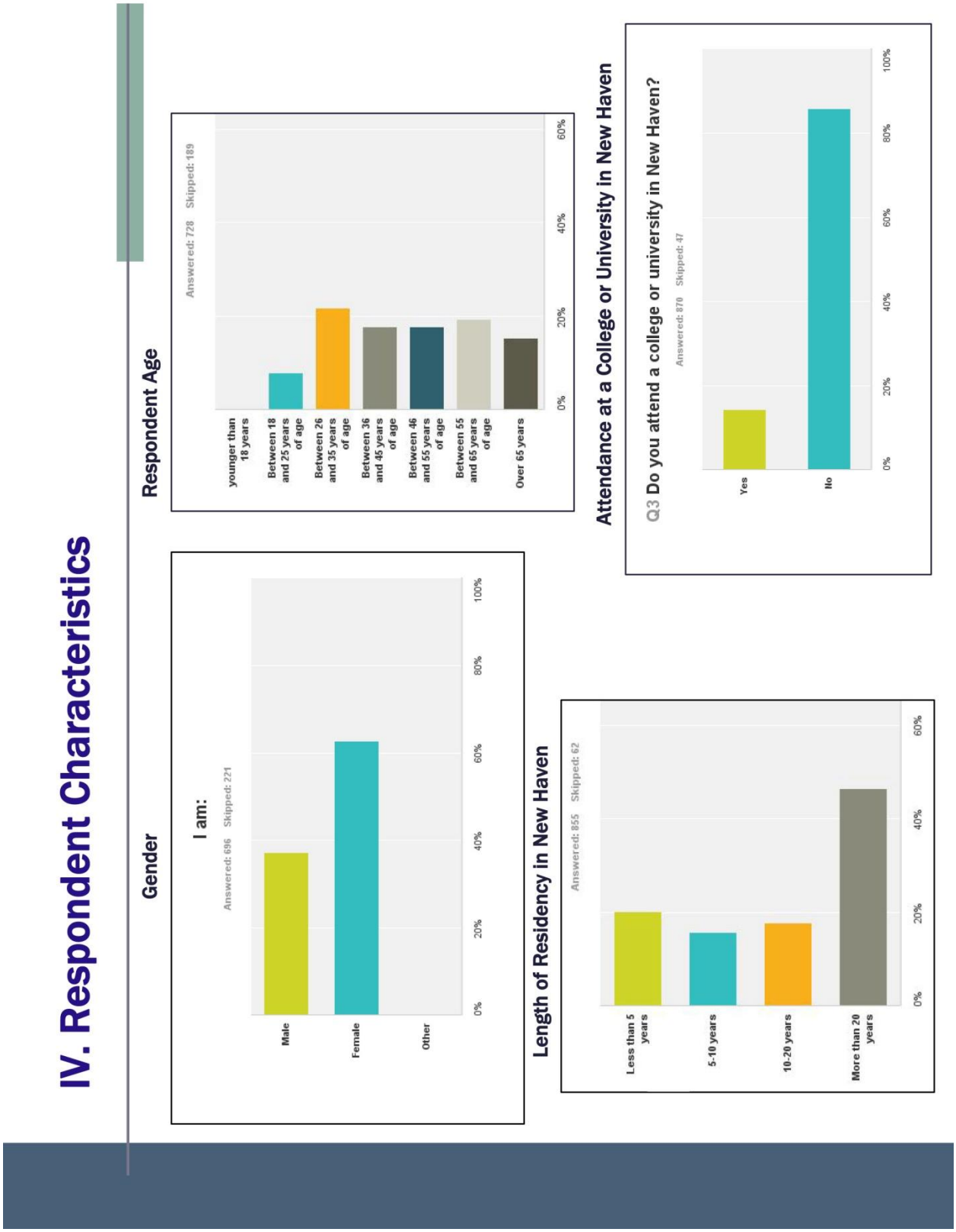
Neighborhoods included (Total 9): Amity, Annex, Beaver Hills, City Point, Downtown, Edgewood, Fair Haven Heights, Quinnipiac Meadows, Wooster Square/Mill River

- **Middle-to-high-income neighborhoods: 306(36%)**

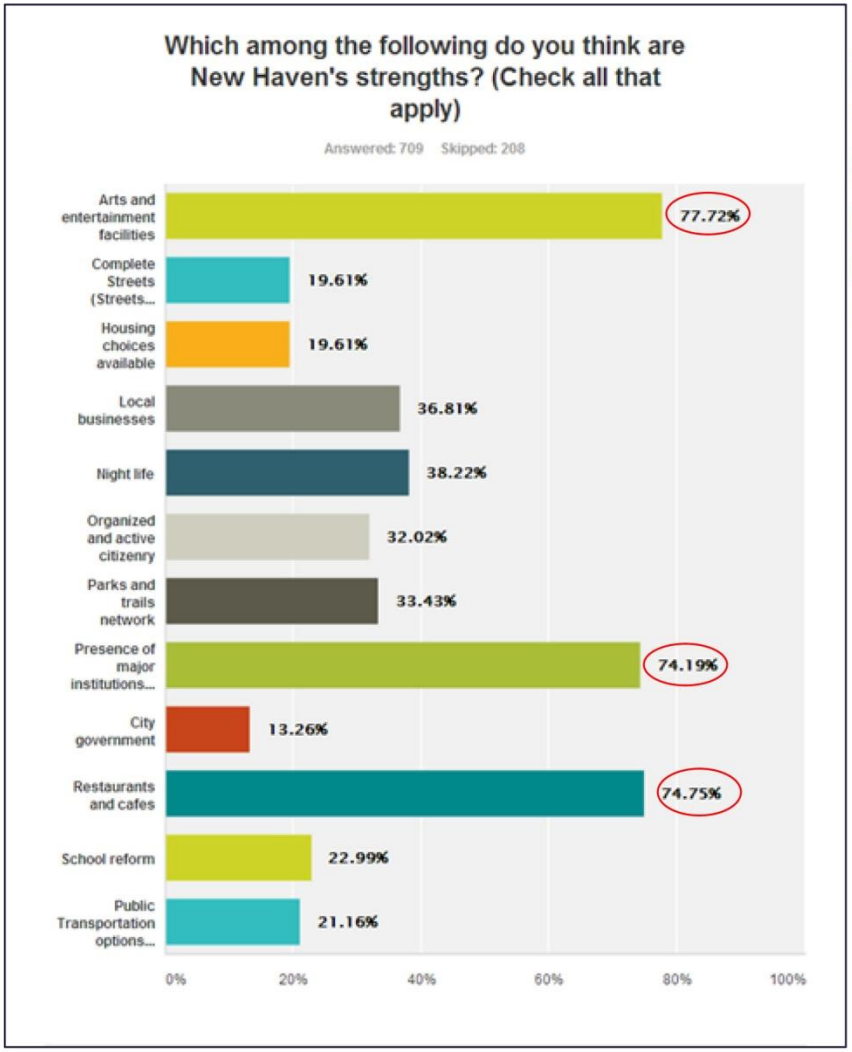
Neighborhoods included (Total 4): East Rock, East Shore, Westville, Prospect Hill



Low-income neighborhoods are those with poverty rate of roughly 36%; moderate income neighborhoods are those with poverty rate of is roughly 22% and middle- to high-income neighborhoods are those with poverty rate of roughly 12%.(Source: DataHaven). This income analysis helps in understanding the diversity of the survey sample and avoid bias in responses.


IV. Respondent Characteristics
Respondent Age
Answered: 728 Skipped: 189
younger than 18 years
Between 18 and 25 years of age
Between 26 and 35 years of age
Between 36 and 45 years of age
Between 46 and 55 years of age
Between 55 and 65 years of age
Over 65 years
0%
20%
40%
60%
Attendance at a College or University in New Haven
Q3 Do you attend a college or university in New Haven?
Answered: 870 Skipped: 47
Yes
No
0%
20%
40%
60%
80%
100%
Gender
I am:
Answered: 696 Skipped: 221
Male
Female
Other
0%
20%
40%
60%
80%
100%
Length of Residency in New Haven
Answered: 855 Skipped: 62
Less than 5 years
5-10 years
10-20 years
More than 20 years
0%
20%
40%
60%

V. New Haven's Strengths & Opportunities



More than 70 percent of respondents who answered this question mentioned arts and entertainment facilities, presence of major institutions, and restaurants and cafes as the strengths of New Haven!

V. New Haven's Strengths & Opportunities

Other Comments by Respondents (40 Comments):

"I like that there are 30 wards so people can know their alderperson."

"Medical Facilities." "Worship locations." "Easy connectivity to NYC and Boston." "Architecture and history." "Presence of Achievement First." "Outdoor Adventure Program."

"New Haven has improved a lot. There needs to be more activity, a bowling ally."

"Size -- big enough that things are happening, but small enough that you can get to know the city."

"These are strengths, but we expect much more in terms of strides to be made for traffic calming and safety."

"New Haven's stock of older houses is a great strength and adds character - but many of the neighborhoods need help maintaining them before they are lost - they are much better constructed than modern housing!"

"New Haven is a very livable city, easy to get around, we are the cultural capital of Connecticut."

"New Haven Free Public Library. They show great independent films and I really appreciate the discussions afterward."

"Diversity is one of our greatest strengths. The Arts & Ideas Festival! & Farmers' Markets."

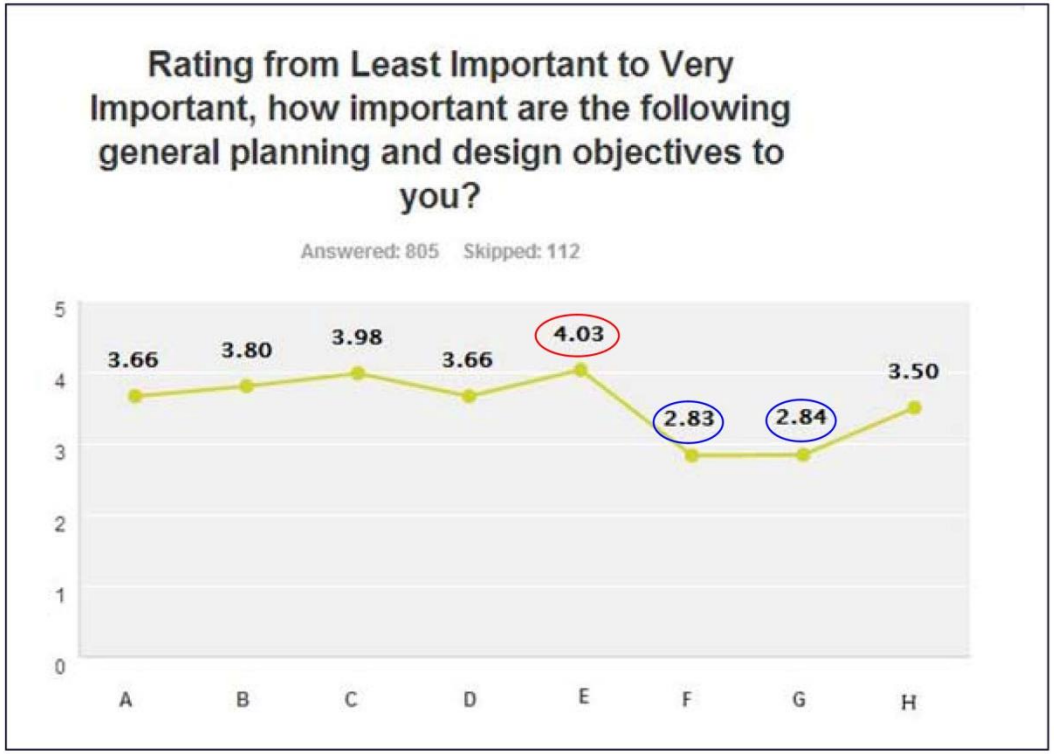
"Population density makes walking and biking worthwhile."

"Our strength is our potential. We need to create a livable city in which people can enjoy all the existing benefits we have."

V. Survey Responses to General Questions
A. General Planning and Design

Average Weighted Rating Scale for All Questions:

1-2: Least Important *2-3: Less Important* *3-4: Important* *4-5: Very Important*



A : Creating a Comprehensive Plan for the Waterfront

B: Maintaining and Enhancing Visual Appearance of All Buildings

C: Preserving the City's Historic Character

D: Promoting Development of New Haven's Harbor

E: Promoting Neighborhood Specific Planning

F: Reducing Housing Density

G: Increasing Housing Density

H: Reforming City's Zoning Code

V. Survey Responses to General Questions
A. General Planning and Design

Analysis:

- Almost all of the objectives mentioned in the survey were rated as important or very important by residents.
- The highest level of support was for neighborhood based planning.
- Reducing or increasing housing density levels was rated as relatively less important suggesting that respondents cared more about neighborhood aesthetics and quality than density.

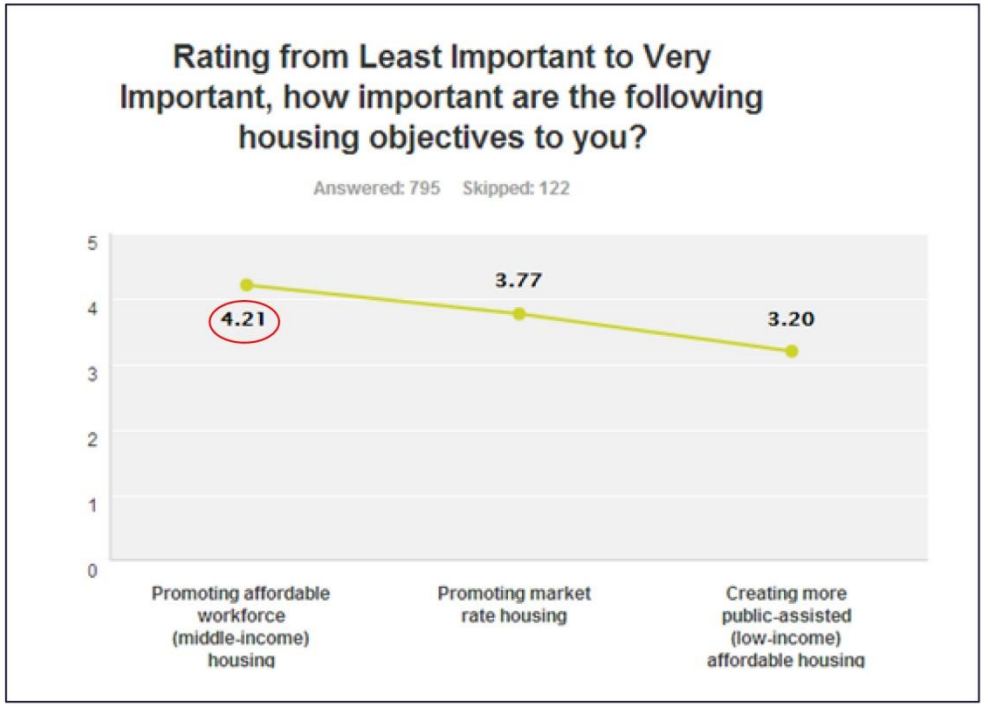
Other Comments by Respondents (74 Comments):

"Connecting neighborhoods physically, socially, and psychologically—no one should feel unwelcome anywhere."

"A comprehensive and multilateral transportation plan. And a comprehensive green infrastructure plan. And a comprehensive parks and urban greenway plan."

"Calming traffic, making it safer to walk and bike."

V.B. Housing & Economic Development



- Promoting affordable workforce/middle-income housing was rated as the most important housing objective for the city.
- Responses by neighborhoods show that creating more public assisted, low-income housing was rated as relatively less important citywide as well as in Dixwell, Newhallville, Hill North, Hill South, Fair Haven, West River, and West Rock neighborhoods.

Other Comments by Respondents (53 comments):

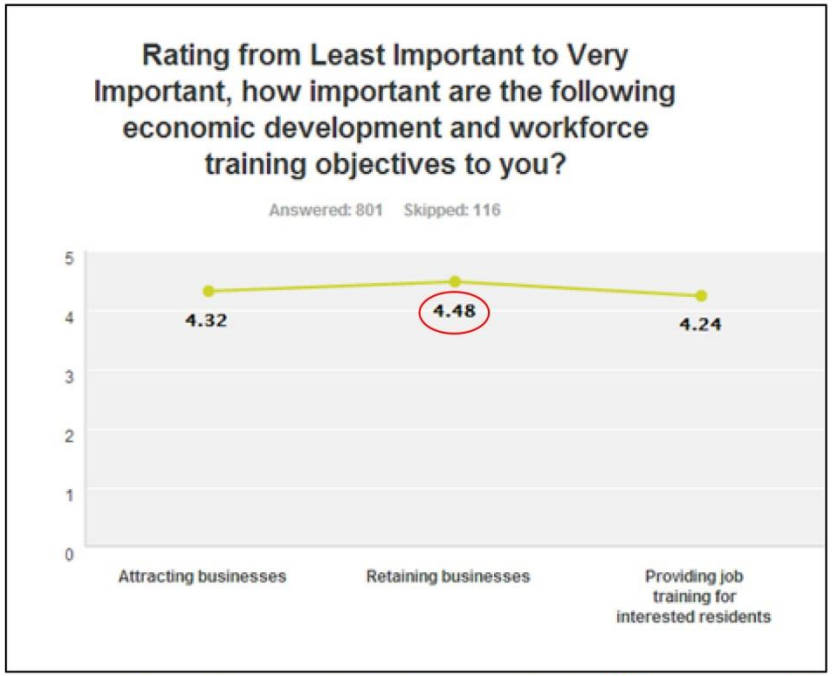
"Improving low income neighborhoods is more important…."

"Artist housing would be an asset to the city…" "Get rid of slum lords and abuse of Section 8."

"…the city should institute rent control."

"Create efficiency units." "Improve energy efficiency."

V.B. Housing & Economic Development



- All respondents rated all three objectives as important for economic development of the city with retaining businesses as relatively most important objective.
- But responses by neighborhoods show that providing job training for residents was rated as relatively most important in Dixwell, Newhallville, Hill North, Hill South, Fair Haven, West River, and West Rock.

Other Comments by Respondents (58 comments):

"...train our youth to obtain vital skills."

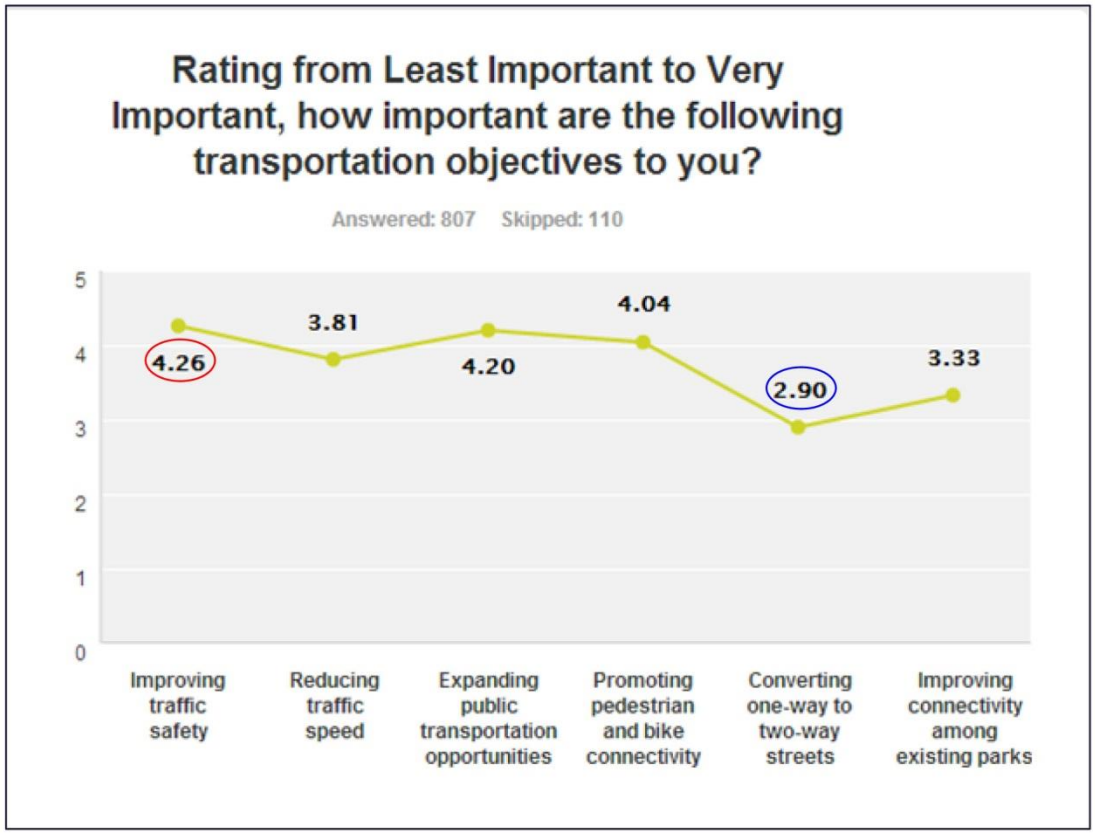
"Supporting independent businesses."

"Addressing quality of life issues—walkable, uncracked sidewalks, pothole free streets."

"Becoming more business friendly."

"Connecting high school kids to...internships."

V.C. Transportation



- **Improving traffic safety** was rated as the most important transportation objective by all respondents. Relatively, conversion of one-way to two-way streets was rated as least important.
- Responses by neighborhoods show that residents in East Rock, Westville, Prospect Hill, and East Shore **rated expanding public transportation opportunities** as well as improving traffic safety as the most important transportation objectives.

V.C. Transportation

Other Comments by Respondents (67 comments):

"The bus "spoke" system is antiquated. We need a bus that goes around the hub, not just to the hub, e.g., from one end of Ella Grasso Boulevard to the other, or a line on Sherman or Orchard Street that crosses neighborhoods. More people would ride the bus if it were efficient to travel on. Why not set up a commuter lot by Marginal Drive or Yale Bowl?..."

"Current public transport does not provide sufficient service to neighborhoods that could utilize them more effectively; bus route Z for example up from/to Goffe (serving Beaver hills community) does do not after 6:40pm and the current bus times are very disruptive; need more frequency"

"Partner with Yale so that Yale pays the CT Transit buses a pre-determined fee and then Yale students can get free bus passes to CT transit by presenting their ID card"

"Establish transit districts."

"Bike education!"

"Increase Sunday and evening CT transit service."

"Better planning of traffic calming measures...look at the big picture, like emergency vehicle accessibility."

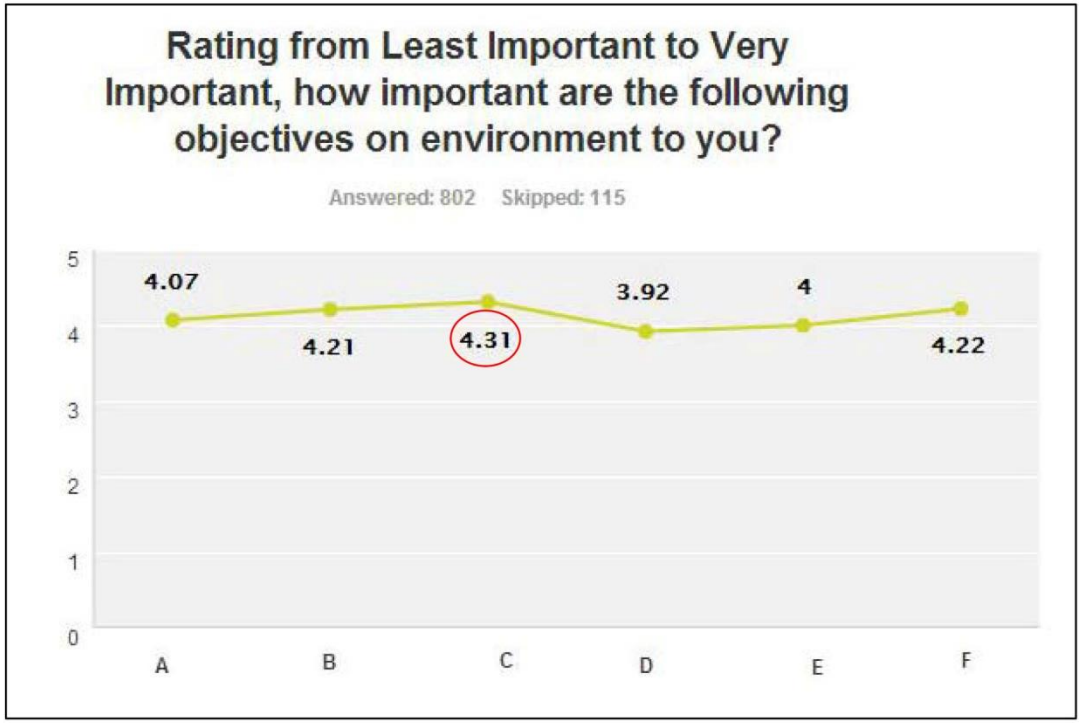
"Enforcing vehicles to stop at crosswalks."

"Converting one-way to two-way streets."

"Organize lights to promote flow."

"Affordable parking downtown..."

V.D. Environment



A: Enhancing accessibility to parks/open space in residential areas

B: Encouraging energy efficient/sustainable buildings

C: Lessening air pollution

D: Mitigating the impact of climate change and sea level rise

E: Reducing flood risks

F: Improving water quality

- Lessening air pollution was rated as the most important environmental objective by all respondents.
- Waterfront communities such as East Shore, Fair Haven, Mill River, and City Point did not consider mitigating the impact of climate change and sea level rise as important as lessening air pollution and improving water quality as the most important environmental objectives.

V.D. Environment

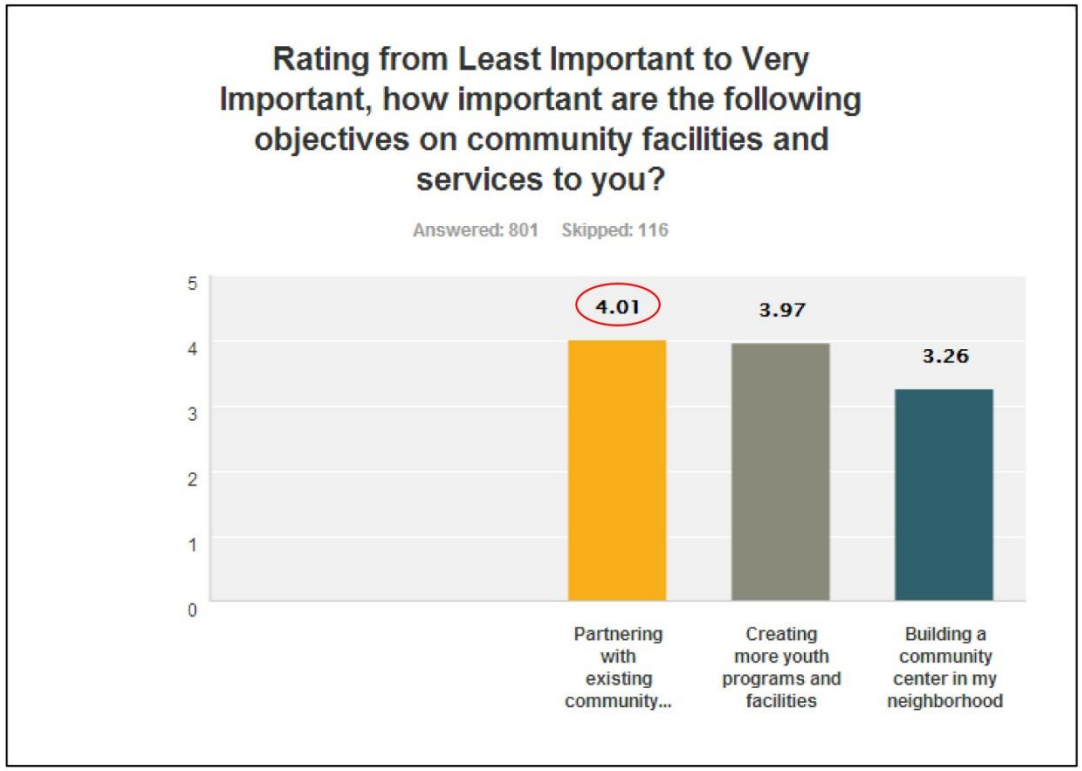
Other Comments by Respondents (41 comments):

"**Reducing flood risk** is important, but the high cost usually benefits a very few who live in flood prone areas. The costs to benefit a few shouldn't burden the many."

"If we are experiencing a constant rise in New Haven's water levels, not only should we act now to deter it; but **home owners should be made aware of potential dangers** so they too can effect safety change."

"**Use of alternative fuels, pedestrian and bicycle use, creating walkable neighborhoods**."

V.E. Community Facilities & Services



- **Partnering with existing community facilities and creating more youth programs and facilities were rated as the most important objectives by all respondents.**

V.E. Community Facilities & Services

Other Comments by Respondents (45 comments):

"**Create a conference center**. New Haven lacks this essential part of any major city with culture and history. Also create a professional sport team stadium (such as MLB, NBA, NFL, NHL or MLS)."

"**Transportation is vital wherever the centers are**. Van service, shuttle service, that would be best. New Haven bus system is not that good for kids who would need it in the evenings and weekends. The bus system needs a drastic overhaul."

"**Building a YOUTH center** = Very Important."

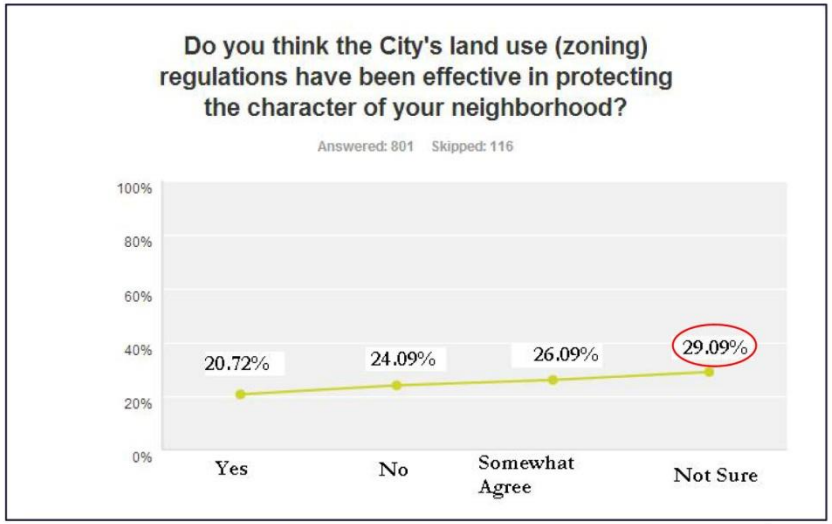
"**Parents responsible**. Plenty of activities here already."

"**Need process for on-going neighborhood leadership** of community centers needed in every neighborhood";

"**Reopening closed senior centers, year round senior swim times** at pools on bus lines, year round evening and weekend public swim hours at all high school pools like they have in every other town around here";

"**Edgewood Park's Coogan pavilion would be a great teen center**"

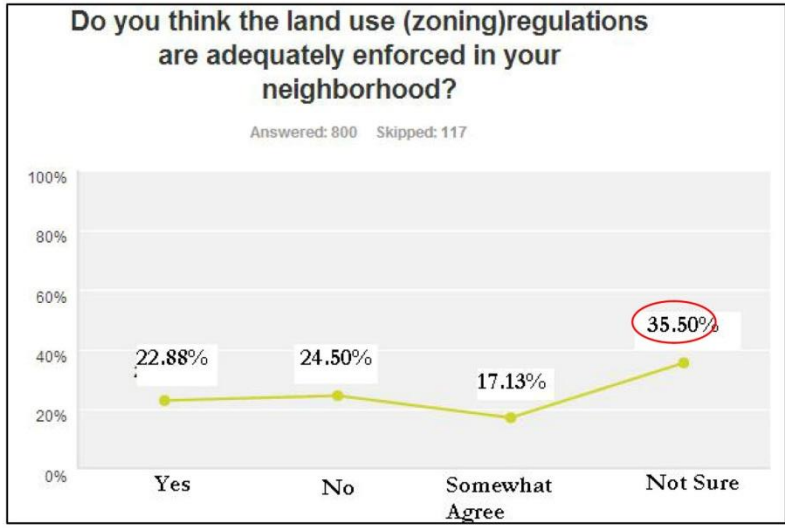
VI.F. Zoning and Neighborhood Character



- Majority of respondents indicated a lack of knowledge about zoning regulations and enforcement.

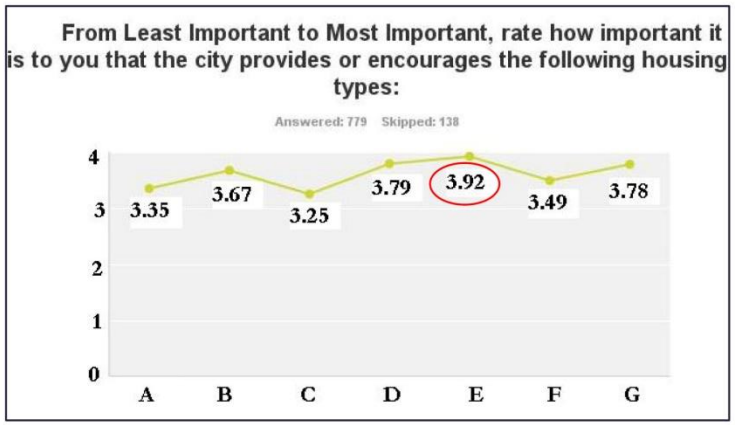
- Responses in Dwight, Dixwell, Newhallville, Hill North, Hill South, Fair Haven, West River, and West Rock neighborhoods (combined responses) show only 12 percent saying yes to this question and another 25 percent somewhat agreeing—relatively less than citywide percentages.

- This could be due to the problems with convenience stores' hours of operation and activities, which was repeatedly mentioned at the CMT meetings.



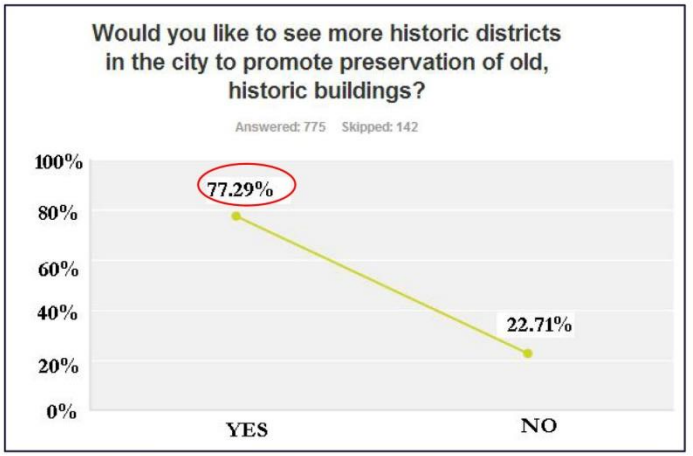
VI. Survey Responses by Topic
A. Housing

Housing Choices



A: Publicly subsidized, affordable rental or for-sale housing
B: Market rate housing
C: High density housing such as apartments and condominiums
D: Mix of housing types (single-family, duplex, townhomes)
E: Quality non-subsidized home ownership or rental
F: Mixed use housing (housing with commercial or retail)
G: Senior housing (65 years and over)

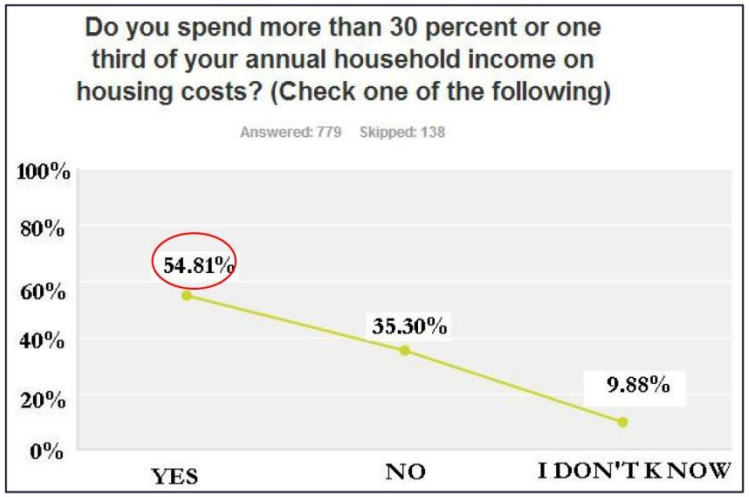
Historic Districts



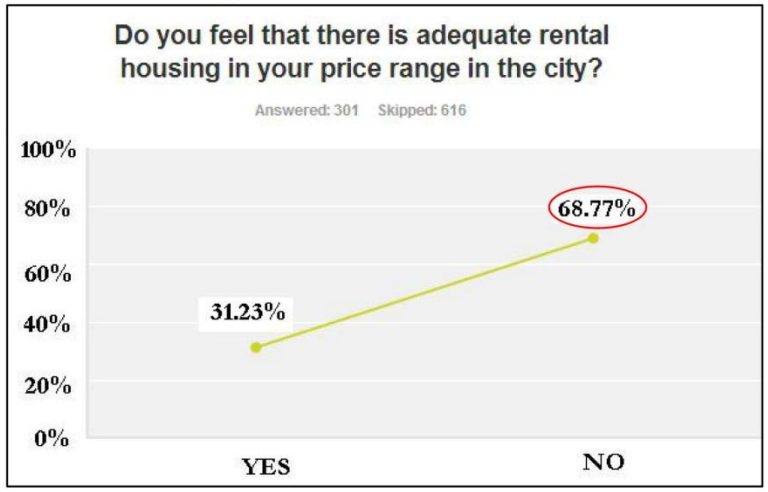
- **Responses** by neighborhoods show that there is a relatively greater need for senior housing in Dixwell, Newhallville, Hill North, Hill South, Fair Haven, West River, and West Rock neighborhoods and respondents in all neighborhoods agree for the creation of more historic districts in the city.

VI. Survey Responses by Topic
A. Housing

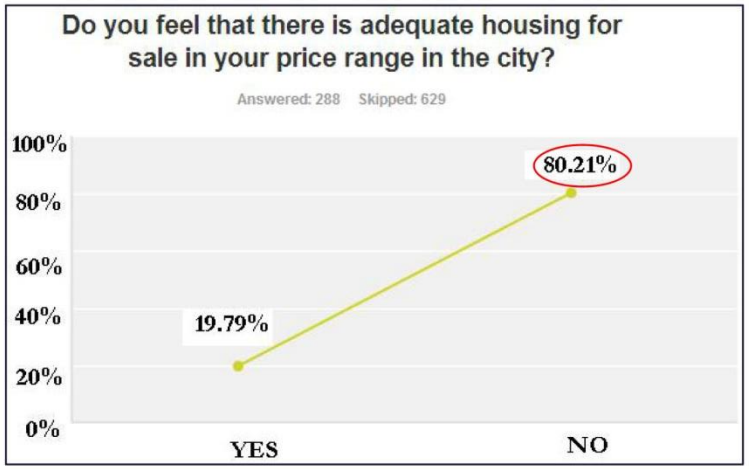
Total Housing Costs



Rental Housing Costs



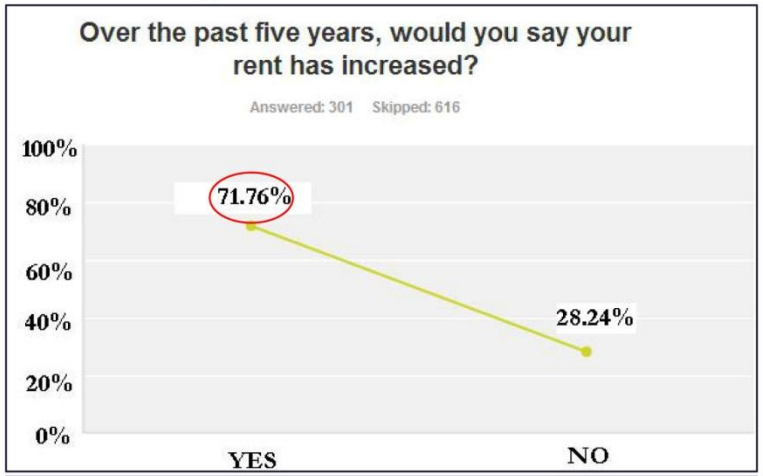
Housing For Sale Costs

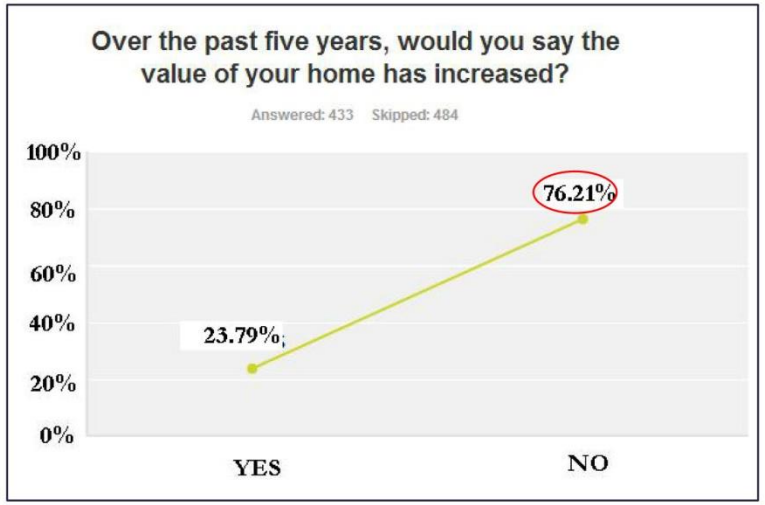


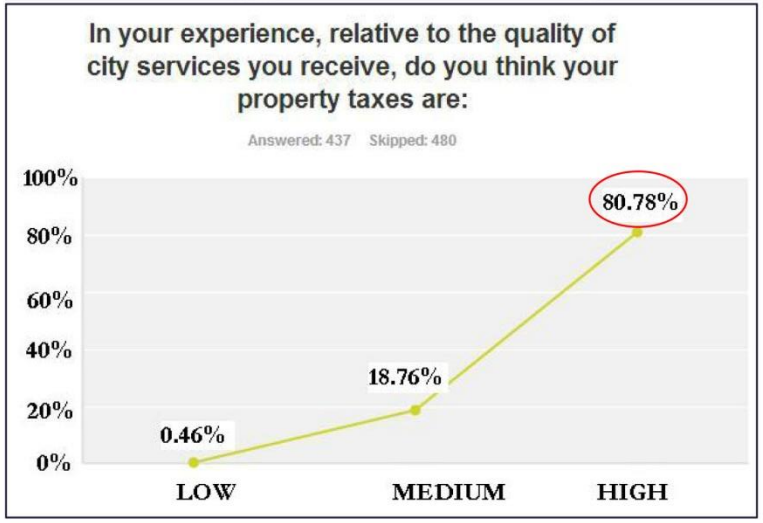
- **Housing affordability is an issue across all neighborhoods in the city, both for renters and homebuyers.**

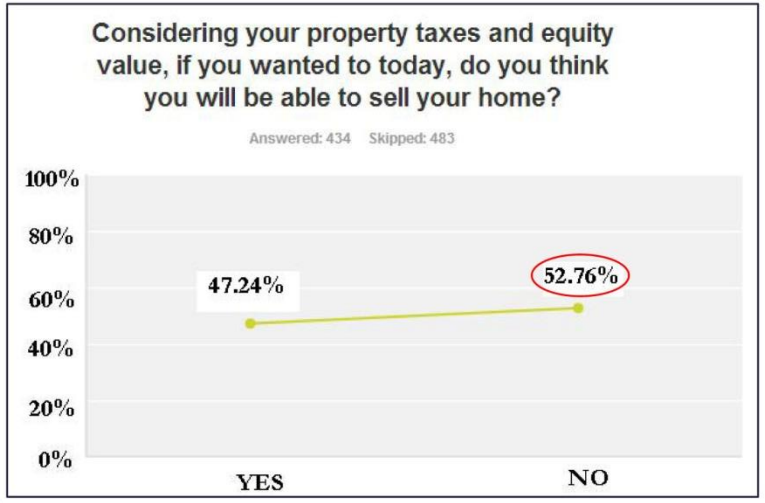
VI. Survey Responses by Topic
A. Housing

Housing Value



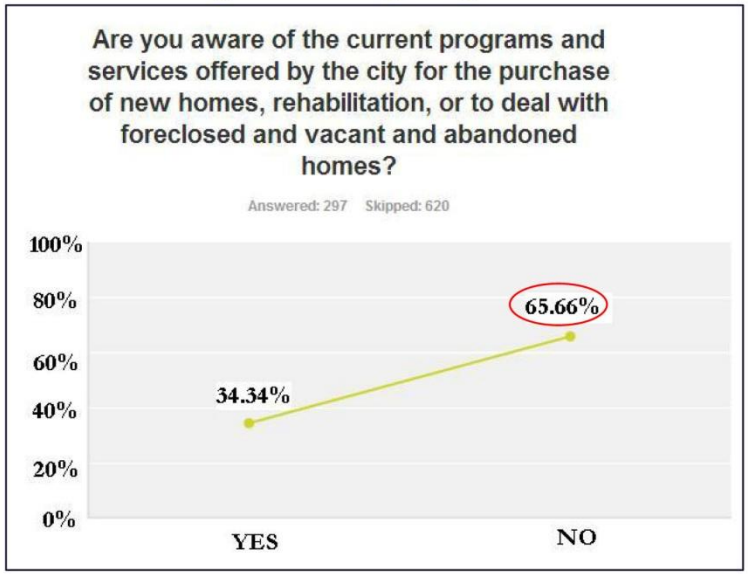




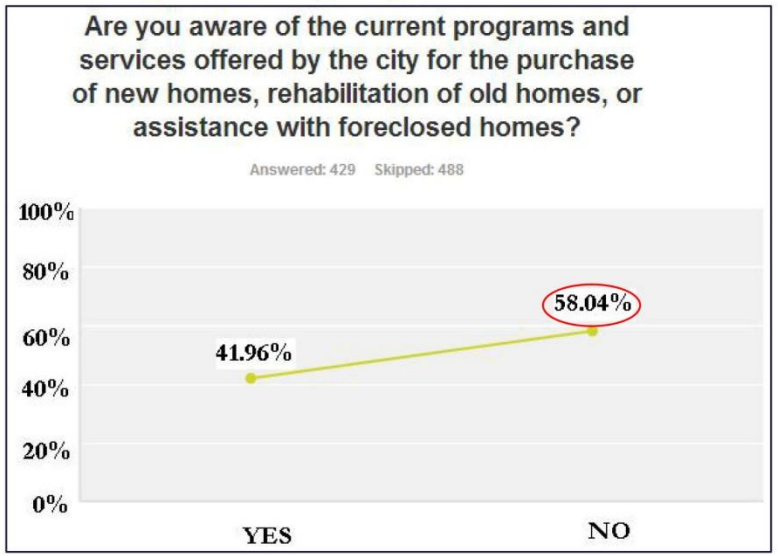


VI. Survey Responses by Topic
A. Housing

Knowledge of Housing Programs - Renters



Knowledge of Housing Programs - Homeowners



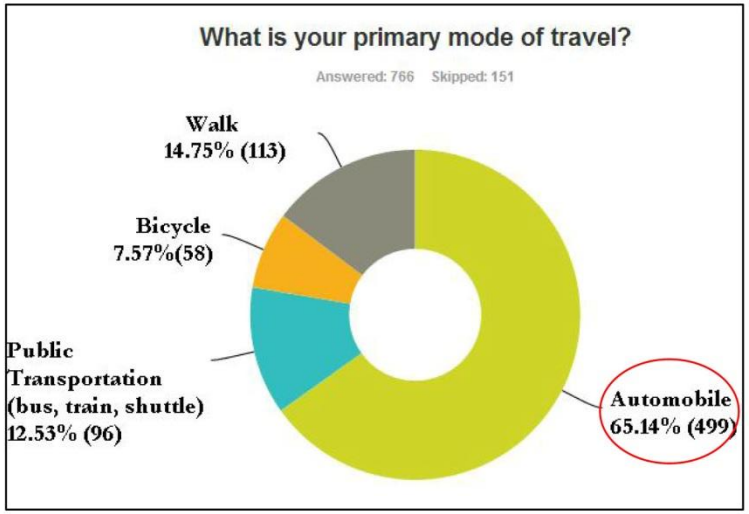
- The majority of the respondents — both renters and owners were not aware of the current programs and services offered by the City of New Haven Housing Department

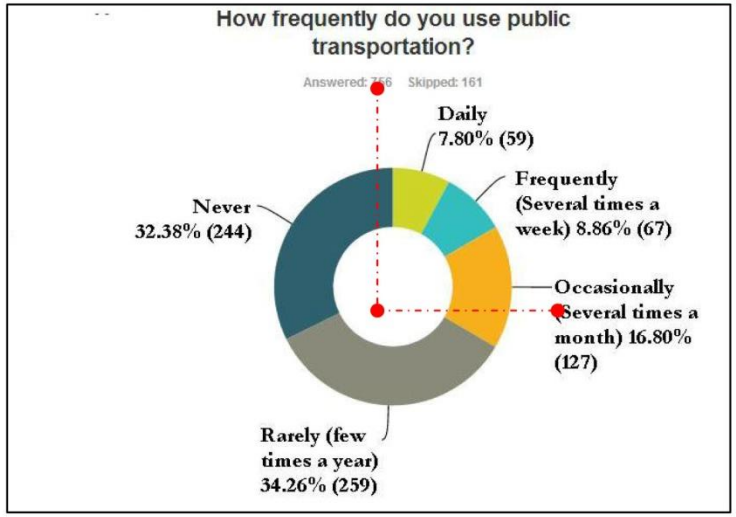
VI. Survey Responses by Topic
A. Housing

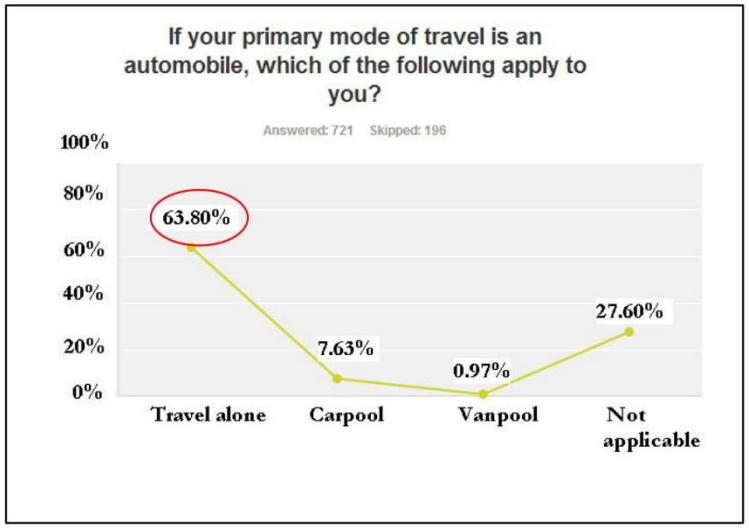
SUMMARY: Housing Objectives for the City for the Next Decade
(Agreed by majority of the respondents)

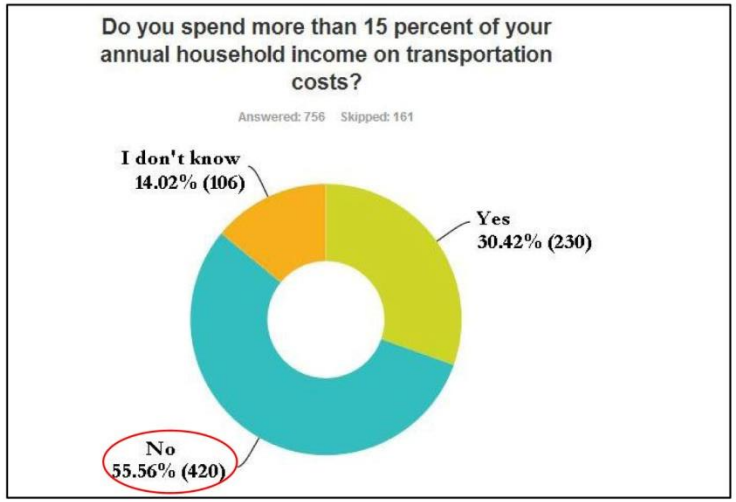
1. All of the housing objectives mentioned in the Survey (creation of public subsidized housing; market rate housing; high density housing; senior housing; mixed use housing; mix of housing types; and promotion of quality housing stock) are important. Of these, the creation of quality, non-subsidized housing stock is a priority.
2. Encourage creation of more historic districts in the city. Preservation of historic character is most important.
3. Need for adequate housing choices for renters and owners of all incomes.
4. Need for affordable housing in all neighborhoods in the city.
5. Improve the quality of city services relative to the taxes collected.
6. Raise awareness and educate the public regarding housing programs offered by the City for both owners and renters.

VII. Survey Responses by Topic
B. Transportation



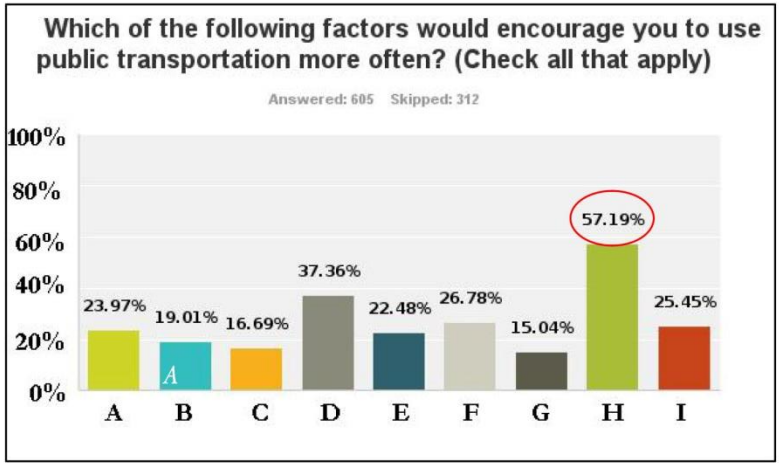






VII. Survey Responses by Topic
B. Transportation

Public Transportation



A: A bus shelter at a bus stop near my home
B: A bus stop closer to my destination
C: A bus stop closer to my home
D: A direct bus route between my home and destination
E: Bus connections between my work, home, and other destinations (daycare, shopping, etc.)
F: Improved public safety at my local bus stop
G: Better walking path from home/destination to bus stop
H: Higher frequency of bus service
I: Reduced bus fare

Other Comments by Respondents (135 comments):

"Better service past 5pm!! … I have to wait almost an hour if I miss the 5:40 Q bus. Some of us need to work past 5!!!"

"PLEASE put a bus stop in front of Trinity Rowe. Many of us are elderly."

"Faster service--the buses get so clogged up by the green that everything is incredibly slow. Also, better information about the bus lines--it's very confusing which stop is in which direction, and to find an overall system map that makes sense."

"Later service. I work until 11:30 pm and there are no buses that late to my destination, or on Sunday Evenings."

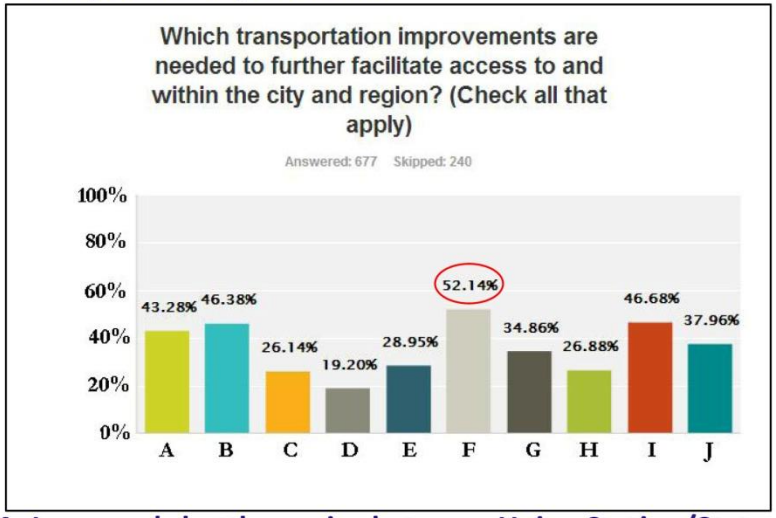
"Better bus stops overall - not just a shelter, but a bench, trash can, signage (what bus, when & to where - Public Transit 101 stuff), and maybe a permanent or rotating public art element."

"Improved safety ON THE BUS."

"Better transit management company ….. "

VII. Survey Responses by Topic
B. Transportation

Transportation Improvements



A: Increased shuttle service between Union Station/State Street Station and Downtown

B: Reduced travel time on Metro North to New York City

C: Increased Amtrak service to New York and Boston

D: Increased frequency of service on Shore Line East

E: Increased frequency of Metro North rail service

F: More inner city passenger services such as light rail, shuttle service, bus, etc

G: More intercity bus service

H: Buses for special needs population such as elderly and disabled

I: Proposed high speed rail service stop location in New Haven

J: Better connectivity from train station to destination

Other Comments by Respondents (80 comments):

"New haven Stamford express would be huge help."

"Less expensive parking at the train station."

"Trains are overcrowded and slow to arrive. The city bus system does a better job."

"High speed ferry from New Haven Harbor to Manhattan."

"Better connectivity between Union Station & Downtown; Rt. 34 teardown does not go far enough, should go all the way to State Street. Also, build upon CT Transit hub-and-spoke model, e.g. revive Crosstown West proposal."

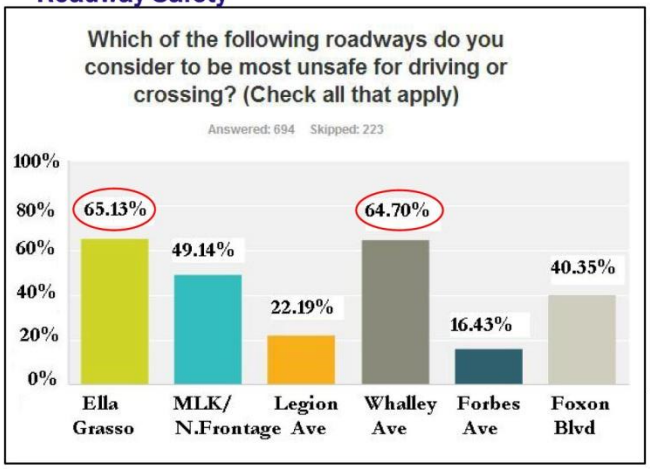
"Establish a transit district for Downtown / Medical Area, establish a parking moratorium until the City creates a Parking and Traffic Demand Management program."

"Expand Tweed airport."

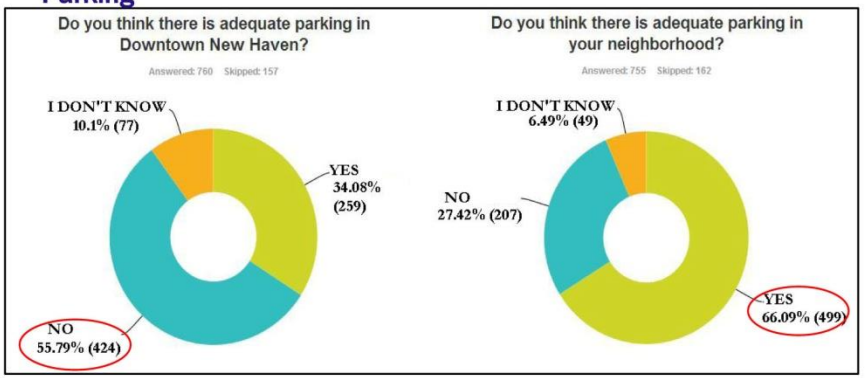
VII. Survey Responses by Topic

B. Transportation

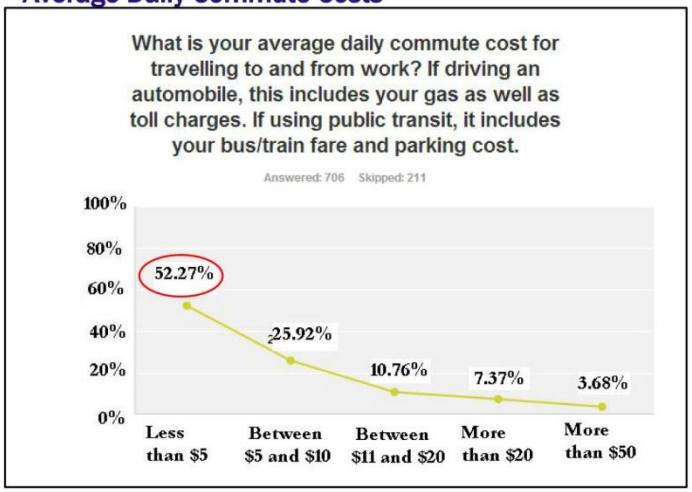
Roadway Safety



Parking



Average Daily Commute Costs



Other Comments by Respondents (86 comments):

"The light at Derby Ave and Grasso Blvd needs to be lengthened. You cannot safely cross Grasso Boulevard to get to the park. The bridge was SUPPOSED to be for the neighborhood, too, not just the school. Also, there needs to be a light at Judson and the Boulevard. And put a No Turn on Red at the light by MLK and Grasso Blvd."

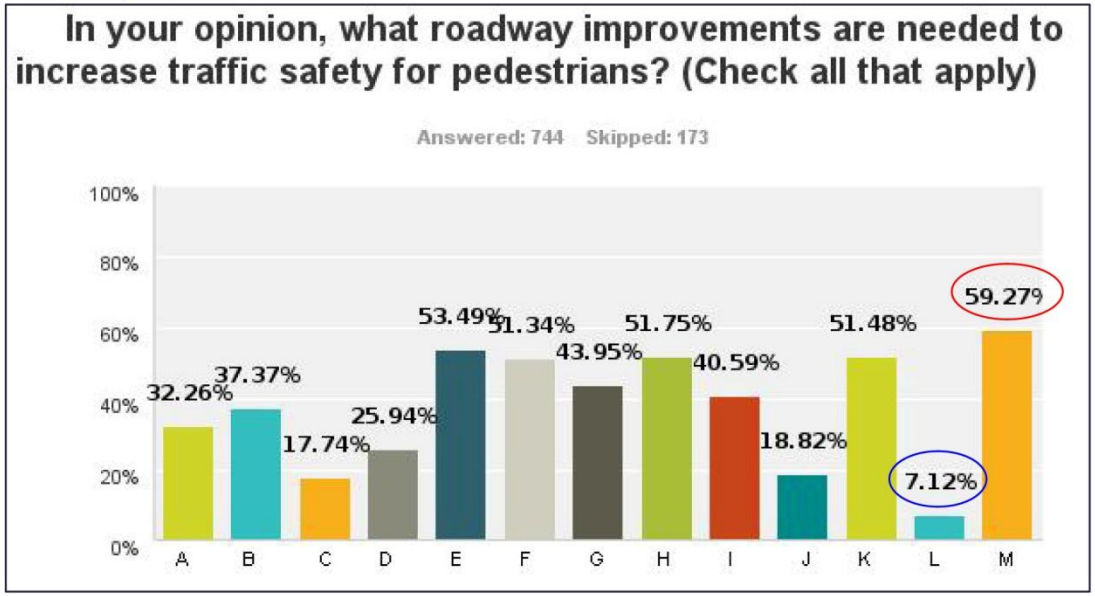
Other unsafe roads:" Grand Avenue, Ferry Avenue." "Union Ave." "Howard & Columbus Avenue." "Dixwell Ave."

"WHITNEY AVE, and sections of state street are fast and dangerous."

"These are high volume traffic roads with rush hour traffic problems."

VII. Survey Responses by Topic
B. Transportation

Roadway Improvements



A: Adding street lights on local roads
B: Constructing more connections between existing sidewalks, trails, and bikeways
C: Converting one-way streets to two-way streets
D: Creating more accessibility design for the physically disabled
E: Creating more sidewalks and bike lanes along roadways
F: Enhancing coordination among traffic signals
G: Implementing more traffic calming measures
H: Improving the quality of the pavement/sidewalk
I: Making more off-street bike lanes
J: Narrowing lane widths in some locations of the city
K: Reducing traffic speed in dangerous locations of the city
L: Removing existing street lights on local roads
M: Repairing existing sidewalks and roadways

VII. Survey Responses by Topic
B. Transportation

Other Comments by Respondents on Roadway Improvements (113 comments):

"More speed enforcement devices."

"Harsher penalties for people using phones while driving."

"Advanced Stop Lines for Bikes Downtown."

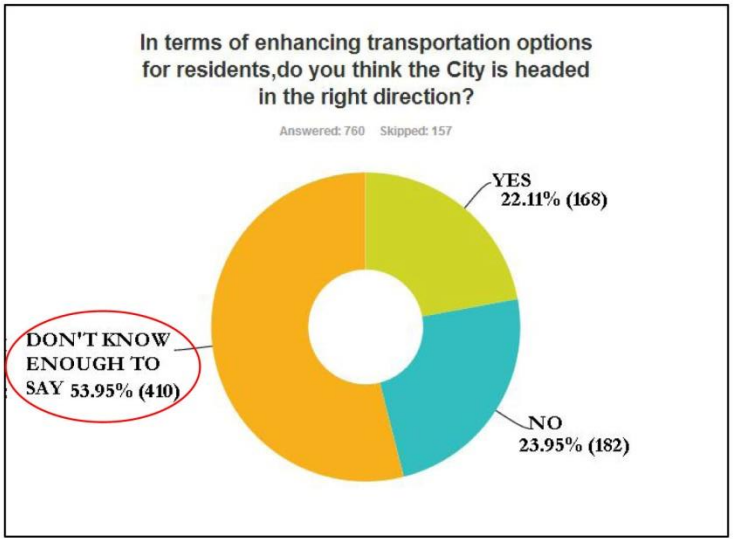
"Enforcing parking rules. nearly every intersection has a car illegally parked, blocking views of crossing traffic and reducing visibility of pedestrians putting us in danger."

"Utilizing striping and other low-cost traffic-calming measures to enable greater coverage and impact throughout the City. Also, 20mph speed limits in residential areas.

"Enforcement of traffic violations (running red lights) and bike violations (riding on sidewalks - happens ALL the time)"

"Brighter street lights."

Awareness of City's Transportation Policy



VII. Survey Responses by Topic

B. Transportation

SUMMARY: Transportation Objectives for the City for the Next Decade

1. Promote safe, efficient, reliable and accessible public transportation system throughout the city.
2. Continue to implement Complete Streets citywide by encourage opportunities for alternative transportation to automobile such as transportation by bus, bicycle, ferry, train, etc.
3. Advocate for higher frequency of bus service as well as late evening and weekend service in some areas of the city.
4. Explore opportunities for further de-centralizing transit authority and infrastructure.
5. Provide real time information on bus arrivals and easy to read and current bus maps at bus stop locations.
6. Provide more commuter connections to train stations as well as other key employment destinations in the city.
7. Provide adequate parking opportunities near the train stations.
8. Enhance transit access within the currently underserved areas of the city.
9. Advocate for faster and more efficient regional transit connections.
10. Implement adequate traffic calming measures based on roadway traffic volumes for promoting safety for all users.
11. Strictly enforce traffic and parking laws to enhance mobility and promote pedestrian safety.
12. Raise awareness on parking opportunities in Downtown. including available n-street parking opportunities for the disabled.
13. Improve the quality of existing sidewalks., wherever needed.
14. Continue to provide more pedestrian and bicycle connections, wherever appropriate.
15. Continue to educate the public on Street Smarts & Bike to Work options, as well as , start a new awareness campaign on available transit opportunities within the city with information on where to find real time information on train arrivals, bus arrivals, etc.

VII. Survey Responses by Topic
C. Economic Development & Education

Economic Development Strategies

The following is a sample of strategies that the city uses to promote economic development. From Least Important to Most Important, how important are each of these economic development strategies to you and your community?

Answered: 730 Skipped: 187

A: Retaining existing businesses
B: Attracting new businesses
C: Developing existing business corridors
D: Reducing commercial/office vacancies in Downtown
E: Encouraging residential development in Downtown
F. Offering small business assistance and counseling services
G: Coordinating with workforce boards on job training
H: Facilitating aggressive school reform efforts
I: Promoting redevelopment of industrial areas of the city
J: Redeveloping underutilized or vacant buildings in Long Wharf

VII. Survey Responses by Topic
C. Economic Development & Education

Skills of Non-College Graduates

Our research indicates that there is an existing gap between the job openings and the skill set of the people applying to these jobs in New Haven. If you have not answered Bachelors, Masters or Doctorate in the previous question, please let us know which of the following skills you think you use on a daily basis (Check all that apply).

Answered: 295 Skipped: 622

A: Communication
B: Computer Software (knowledge of Microsoft Office and Windows Applications)
C: Design Software
D: Leadership
E: Math
F: Management
G: Problem-solving/Mediation
H: Reading
I: Soft Skills (i.e. punctuality, customer service, work ethic)
J: Writing
K: Not Sure

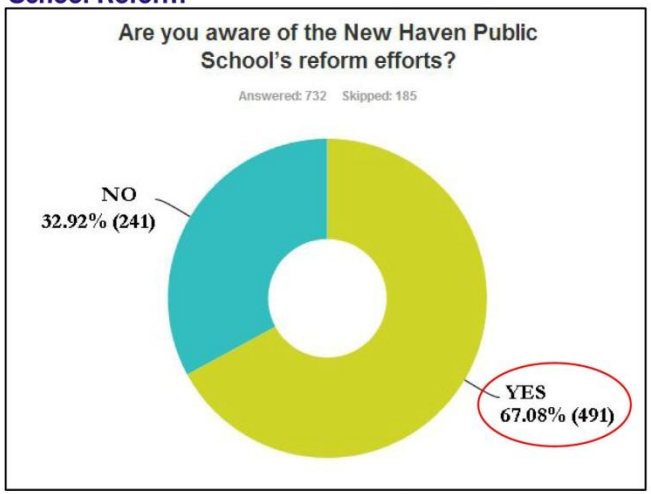
Other Comments by Respondents (15 comments):

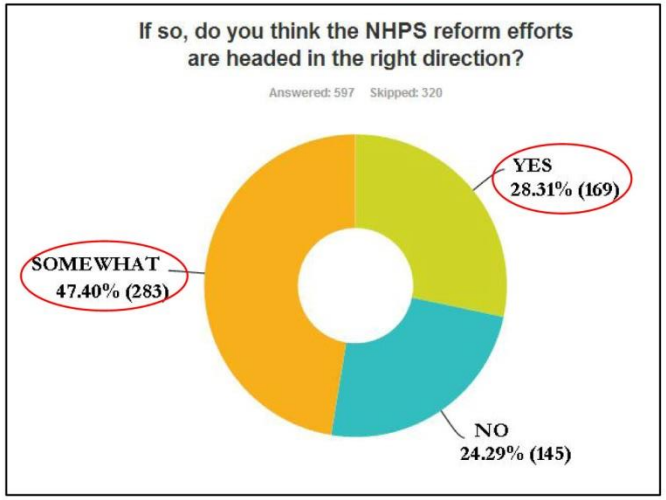
"**Basic computer skills** would like to learn more!!!!"

"Would love to see a **meeting between local program organizers and businesses** selective on any locations in the city. In West River neighborhood, all businesses who would like to come into our neighborhood should come and speak at the management team meeting or other meetings and the plans should be shared. Let us be aware of how they would try to help the area, schools, etc. Set up businesses where we can afford to buy." "**Healthcare.**"

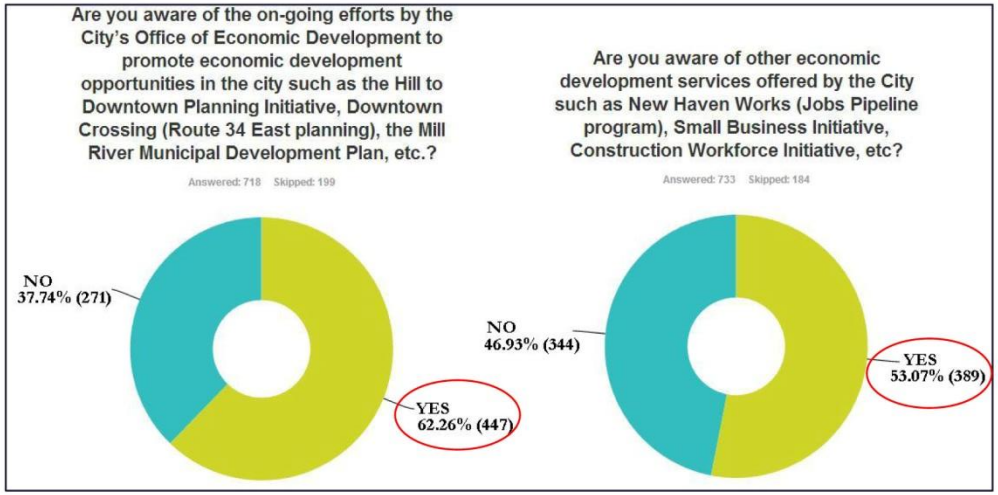
VII. Survey Responses by Topic
C. Economic Development & Education

School Reform





Awareness of Planning Initiatives & Workforce Development Services



VII. Survey Responses by Topic
C. Economic Development

SUMMARY: Economic Development Objectives for the City for the Next Decade

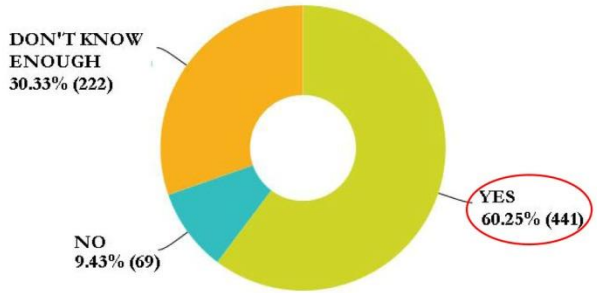
- Continue to promote business retention and attraction in the city.
- Develop all of the existing business corridors in the city.
- Encourage reduction of commercial/office vacancies in Downtown.
- Promote the redevelopment of industrial areas of the city.
- Redevelop vacant and underutilized buildings in Long Wharf.
- Offer small business assistance and counseling services aggressively.
- Continue to facilitate aggressive school reform efforts.
- Coordinate with Workforce Boards on providing job training for residents.
- Encourage residential development in Downtown, wherever appropriate.
- Encourage apprenticeships for local high school kids with local employers.
- Enhance the skills of non-college graduates in the city by either partnering with local educational institutions or through community volunteers to offer (free) continuous education programs on basic computer software, technical reading and writing skills, leadership, problem-solving/mediation and communication, especially in low-income neighborhoods.
- Continue to raise awareness on economic development planning initiatives in the city.
- Continue to raise awareness on current workforce development services offered by the city—Encourage more people to participate in these.

VII. Survey Responses by Topic
D. Environment

Agreement on Impacts of Sea Level Rise

A report published by US DOT in 2002 indicates that the sea level is likely to rise two-feet along the Atlantic Coast over the next 100 years. In Connecticut, it is gradually rising at the rate of 0.10 inches per year. Considering this factual information, do you think that sea level rise will be a threat to New Haven's coastal community in the near future?

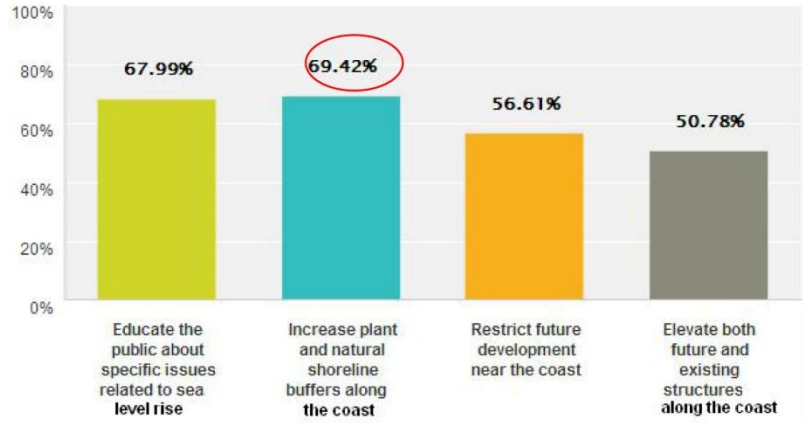
Answered: 732 Skipped: 185



Coastal Protection Measures

Which of the following do you think the City should be doing to protect its coastal communities? (Check all that apply)

Answered: 703 Skipped: 214



Other Comments by Respondents (6 comments):

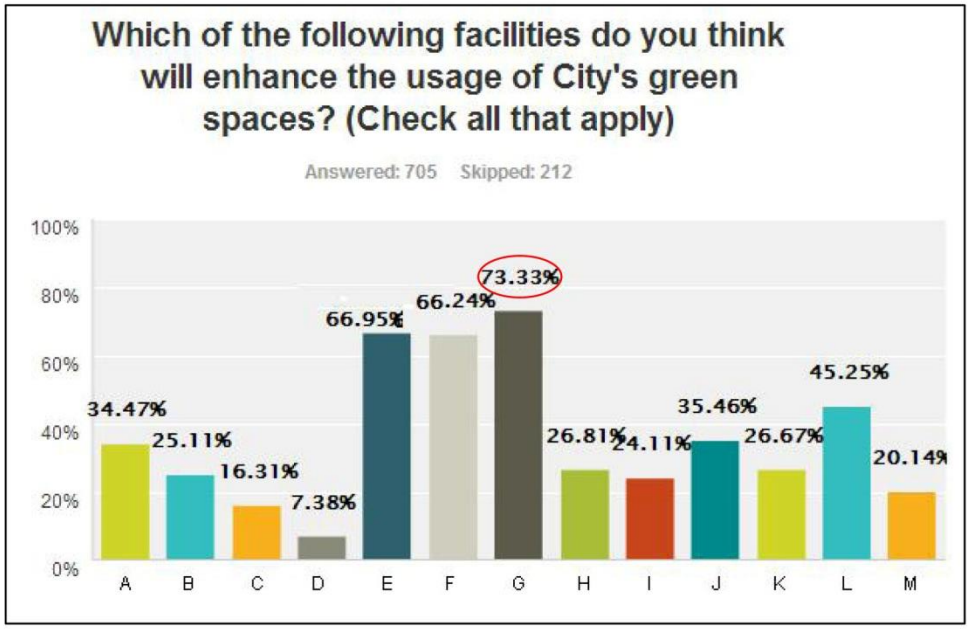
"Consult with the Army Corps of Engineers to develop a strategy for mitigating the effects of sea level rise along the shoreline such as the construction of new sea walls.

"Take measures to correct already existing water issues. Fort Hale/Coast Guard area is flooding private property on Woodward Ave."

"Increase rip rap and hard buffers - natural & plant buffers don't prevent erosion"

VII. Survey Responses by Topic
D. Environment

Usage of City's Green Spaces



Other Comments by Respondents

(7 comments):

"Community gardens."

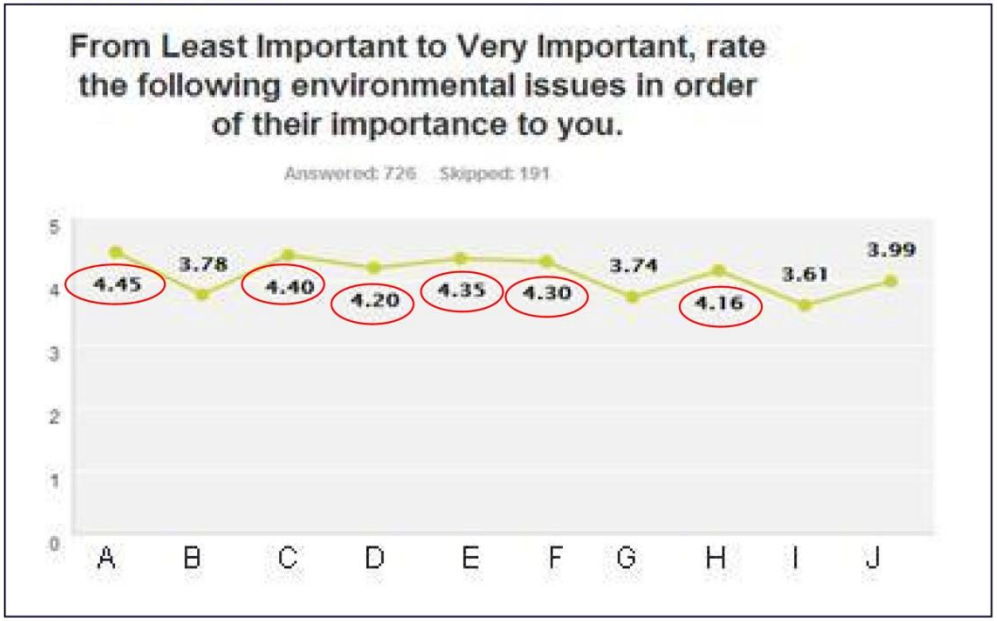
"Better maintenance, such as trash management, equipment repair, & graffiti cleaning…. build some gardens!"

"Improved public access to parks; safe streets and crossings for children and families."

A: Basketball Courts
B: Baseball Fields
C: Bocce Ball Courts
D: Cricket Fields
E: Enhanced public safety
F: Enhanced pedestrian, bicycle, and trail connections among existing parks
G: Improved facilities such as lighting, benches, playground equipment, etc.
H: Jungle Gyms
I: Soccer fields
J: Splash Pads
K: Tennis courts
L: Trails
M: Volleyball Courts

VII. Survey Responses by Topic
D. Environment

Environmental Issues



A: Air quality
B: Brownfield remediation
C: Creation of community gardens
D: Creation of open space opportunities
E: Drinking water quality
F: Encouraging use of renewable energy in existing buildings
G: Energy efficiency in new developments
H: Lead paint remediation
I: Recycling programs
J: Separating storm water from sanitary waste water

Other Comments by Respondents (40 comments):

"Update sewer system so raw sewage does not flow into the West River!!!!! It is a beautiful park, but who wants to put a canoe in a river that has raw sewage spill into it?"

"Cleaning and maintaining the Sound." "Sustainable food options for poor neighborhoods."

"Recycling Programs Super Important!!"

"Development of green infrastructure to help manage storm water run-off."

"SAFE open spaces and gardens. Otherwise no point in having open space."

VII. Survey Responses by Topic
D. Environment

SUMMARY: Environmental Objectives for the City for the Next Decade

1. Improve air quality
2. Encourage the creation of safe open space opportunities and community gardens
3. Improve the quality of drinking water.
4. Encourage the use of renewable energy in existing buildings.
5. Remediate lead paint in existing buildings.
6. Promote sewer separation.
7. Implement recycling programs in all building types.
8. Remediate brown fields.
9. Promote energy efficiency in new developments.
10. Promote green infrastructure to help manage storm water runoff.
11. Provide sustainable food options for poor neighborhoods.
12. Consult with the Army Corps of Engineers to develop a strategy for mitigating the effects of sea level rise along the shoreline such as the construction of new sea walls.
13. Implement measures to correct existing flooding issues in the city.
14. Increase plant and natural buffers along the coast, wherever appropriate.
15. Educate the public about specific issues relating to sea level rise.
16. Promote enhanced public safety; enhanced pedestrian, bicycle, and trail connections; and improved park facilities among existing parks.
17. Advocate for cleaner and well-maintained Long Island Sound.

Thank You!

For further information, please contact Susmitha Attota, Assistant Director of Comprehensive Planning at sattota@newhavenct.net or 203-946-7814.

CARE

New Haven Health Survey

Overall Findings 2012

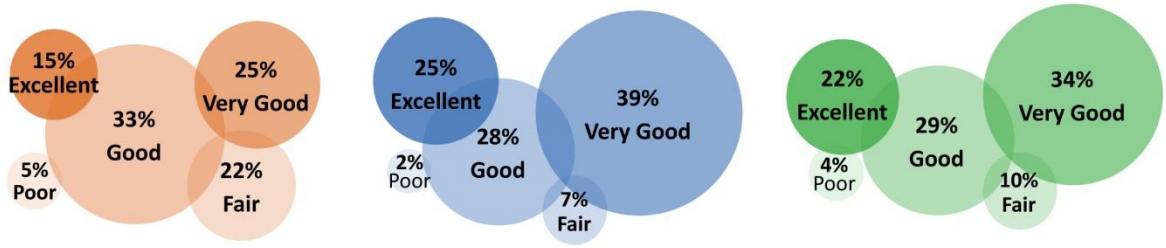
The Community Alliance for Research and Engagement, a partnership between the New Haven community and the Yale School of Public Health, is taking action against chronic diseases such as diabetes, asthma, and heart and lung disease that threaten the health of our community. CARE conducted an initial health survey in 2009. Since then, we have worked with neighborhoods to support health among residents.

A second health survey was conducted in the fall of 2012 with 1,298 residents from six of our lowest resource neighborhoods: Dixwell, Fair Haven, Hill North, Newhallville, West River/Dwight, and West Rock/West Hills. Households were randomly selected (like flipping a coin) from a list of addresses with 73% of those approached agreeing to participate. Twenty interviewers from the New Haven community conducted the surveys. Residents answered questions about their health, diet, exercise, smoking habits, social support, and neighborhood safety. Presented below are results from these survey participants.

Health in Context

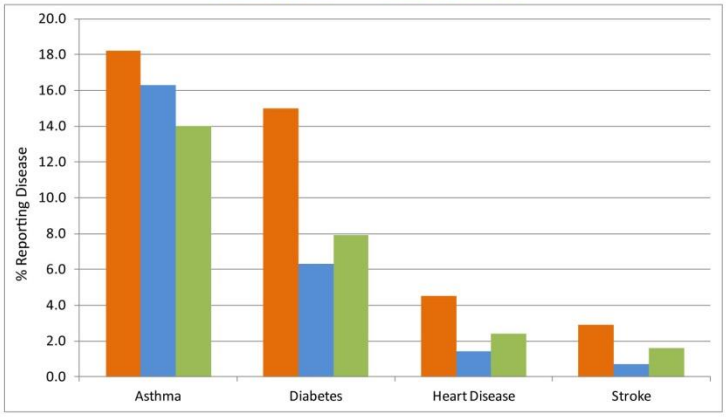
In New Haven, where financial hardships often affect health, residents are at higher risk of chronic disease and poor health outcomes when compared to Connecticut and the country as a whole.

- Residents in our 6 CARE neighborhoods reported poorer health compared to Connecticut and the United States.



- While residents' health is generally poorer compared to CT and the nation as a whole, 39% feel their overall health is better compared to one year ago.
- The percentage of residents with health insurance (88%) is higher than the national rate (82%). However many struggle to pay for health care expenses; 15% had problems paying for medications and 15% put off medical treatment due to cost.

Chronic Disease in 6 CARE Neighborhoods, Connecticut, and United States



In 6 CARE Neighborhoods, 7 in 10 people are overweight (27%) or obese (43%).

In Connecticut, 6 in 10 people are overweight (37%) or obese (23%).

In the United States, 6.5 in 10 people are overweight (36%) or obese (29%).

Neighborhood

The neighborhoods in which we live, work and play impact our health. Neighborhood features like safety, social support and access to green space and healthy foods influence how likely we are to exercise and eat well and how healthy we feel.

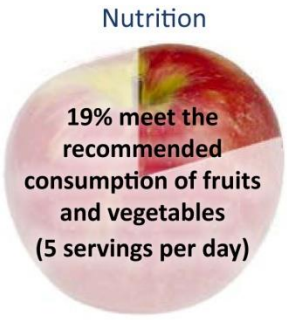
- 50% of residents feel that they live in a close-knit neighborhood. Even more (58%) think that people in their neighborhood are willing to help.
- 40% of residents report that there are people encouraging a healthy lifestyle in their neighborhoods. 42% report that it has become easier to lead a healthy lifestyle over the past three years.
- 25% of residents own their own homes, compared to 65% nationally.
- Residents reported their neighborhoods have slightly higher than average "walkability." Yet responses show a lot of areas for improvement, such as safe places to bike and access to low cost recreational facilities like parks, playgrounds, and public swimming pools.

Walkability is a measure of how friendly an area is to walking and has many health, environmental, and economic benefits. Factors influencing walkability include the presence or absence and quality of footpaths, sidewalks, or other pedestrian rights-of-way; traffic and road conditions; land use patterns; building accessibility; and safety.

Health Behaviors

We cannot control many of the known risk factors for chronic disease such as genetics, age, race, and gender. However, habits related to diet, exercise, and smoking are important risk factors that can be changed. Like much of the nation, many residents in the 6 CARE neighborhoods are not meeting national recommendations for diet and exercise. Additionally, smoking rates are high in the six neighborhoods surveyed.

- Four in ten residents report "food insecurity" – meaning that they or their family did not have enough food or money to buy food in the past 30 days. People who struggle to pay for groceries often can't afford healthier foods like fresh produce.
- 64% of residents reported cooking dinner at home at least five times per week. Meals prepared at home tend to be healthier and have fewer calories compared to foods sold in restaurants.

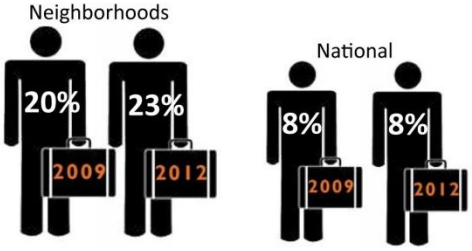


Household Finances

Poor health is often associated with lower incomes and stress, and survey results show that many residents are struggling financially.

- 36% are "just getting by," and 15% are finding it difficult or very difficult
- 34% report total household income of less than $15,000
- 44% receive SNAP benefits (food stamps)
- 23% are unemployed

Unemployment



Participant Demographics

- 64% female
- Average age: 41. Range: 18-65
- 63% black, 18% Hispanic/Latino, 10% white, 9% multi-racial or other
- 9% born outside the United States
- 85% completed high school; 48% completed at least some college

Improvements Since 2009

Despite health and financial concerns, there are signs that residents are making healthy changes since our 2009 survey:

39% report improved health compared to one year ago

40% report people are encouraging a healthy lifestyle in their neighborhood

42% report changes in their neighborhood that make living a healthy lifestyle easier

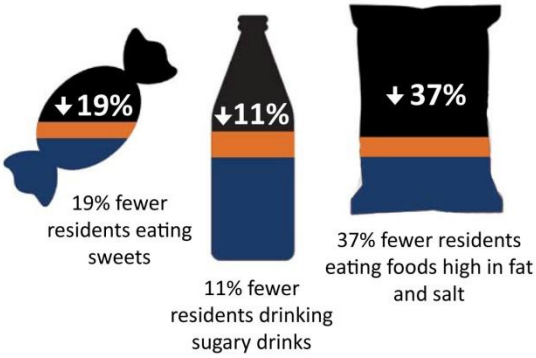
65% of smokers are thinking about quitting

63% are exercising more

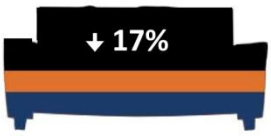
58% made healthy changes in their diet

- **47%** eating more fruits and vegetables
- **45%** eating less high-fat food
- **42%** eating fewer sweets
- **39%** eating smaller portions
- **38%** drinking fewer sugary drinks

Decrease in daily consumption between 2009 and 2012



Fewer couch potatoes from 2009 to 2012



17% fewer residents getting no exercise at all

Evidence to Action

These findings, together with community conversations to be held in our neighborhoods in March and April, will provide what we need to develop a Citywide Action Plan for better health. Our immediate aim is to drive measurable health impact through a multi-sector approach, working with City government, hospitals, health centers, schools, neighborhoods and the faith and business communities. We need your input to identify priorities, strengthen partnerships, implement new initiatives and continue to evaluate impact. Future briefings will include more in-depth analyses of these neighborhood surveys, and in collaboration with DataHaven, we will examine health equity/disparities in the region.

Results from the 2012 New Haven Health Survey will help us bring evidence to action. What we do is guided by, and provides direct benefits to, our six study neighborhoods, schools and the wider New Haven community. In our first five years we:

- **Provided jobs** for >30 city residents to conduct this research
- **Partnered with neighborhood groups** to start community gardens and expand Farmers' Markets; started Prescriptions for Produce; sponsored fitness classes, health fairs and activities that reached hundreds of children and adults
- **Launched the New Haven Healthy Corner Store Initiative** with four stores, bringing fresh produce and healthier snacks to neighborhoods
- **Offered Quit & Win** programs to encourage smokers to quit; >250 residents attempted to quit
- **Started Health Heroes** in New Haven Public Schools, inspiring more than 700 students, 280 families and 85 staff to take up health challenges
- **Increased SNAP** outreach to families struggling with food insecurity
- **Implemented Weight Watchers for teachers and staff in 11 schools**: 148 participants collectively shed 1,000 pounds
- **Played a leading role in New Haven Food Policy Council** to advocate for food policy changes
- **Curated Big Food: Health, Culture and the Evolution of Eating**, an exhibition at the Peabody Museum about food, health and obesity, which reached >130,000 people and impact food choice and health
- **Created infrastructure** to sustain healthy schools by implementing school health policies and a Physical Activity & Wellness program in 16 schools and enriching school environments by purchasing sports equipment, books and creating "learning labs" in school cafeterias
- **Hired 12 Parent Advocates** to strengthen parent engagement in schools

In our 2012 survey, residents gave suggestions for making neighborhoods healthier, including:

- More options for recreation, including low-cost indoor space like gyms or community centers for sports and exercising
- More parks and walking/biking trails
- Safer and cleaner streets
- More access to affordable healthy food options– at grocery stores and corner stores and by having more community gardens and farmers' markets.

Tell us what would make the difference in YOUR neighborhood...

www.care.yale.edu www.facebook.com/CARE4NewHaven @CARE4NewHaven

Thanks to survey partners:

Yale-New Haven Hospital, DataHaven, Donaghue Foundation, Kresge Foundation,
New Haven Health Department, Fair Haven Community Health Center, Cornell-Scott Hill Health Center

Yale SCHOOL OF PUBLIC HEALTH

135 College Street, Suite 200, New Haven, CT 06510
Phone: 203-240-9664 • CARE@yale.edu

the arts council of greater new haven

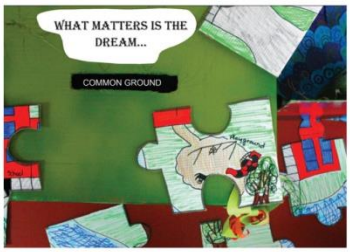
search...

donate membership

About Us
Arts Council Programs
Exhibitions
Support
Membership
Special Events
Calendar
Community Bulletin Board
Jobs in the Arts
Helpful Links
Creative Directory
Contact

common ground: what matters is the dream

Through May 13, 2011



Students interpret "sustainability" with collaborative exhibit *Common Ground: What Matters is the Dream*

The Arts Council of Greater New Haven, in collaboration with students of Common Ground High School, presents *Common Ground: What Matters is the Dream*, an exhibition in the Sumner McKnight Crosby Jr. Gallery, 70 Audubon St., 2nd floor. The exhibition will be on display during business hours from Friday, March 25 through Friday, May 13, 2011. **A public reception is scheduled with the student artists for Thursday, March 31 from 5 to 7 pm.**

Curated by Rachel Gilroy, *Common Ground: What Matters is the Dream* is an exhibition of multimedia work by student artists in response to the question: "What is sustainability?" This project is a collaborative effort within the Common Ground community to explore how students think and see ecologically. The resulting visual expressions reveal connections within Common Ground and between the school and its surrounding communities, farm and natural ecosystems.

Arts Council intern Molly McKenna visited the school in February and recorded interviews with the students from Common Ground High School in New Haven who are looking forward to displaying their sustainability-focused artwork. Enjoy clips of these interviews, previewed below. Please don't forget to visit us at the opening reception to experience the full interviews.

Michael's poem
In this clip, Michael reads a poem he wrote in response to an in-class prompt about Common Ground and sustainability and then discusses the poem and what the Common Ground community means for him >>

Miles reaches out to the community
In this clip, Miles talks about the project he has been working on to help communities in New Haven >>

Sam gets ready
Sam, a Junior at Common Ground High School, talks about the art project she is preparing >>

Common Ground is a high school, urban farm, and environmental education center located at the base of New Haven's West Rock Ridge State Park. The school's mission is to cultivate habits of healthy living and sustainable environmental practice among a diverse community of children, adults, and families.

Rachel Gilroy is the Environmental Leader and Sustainability Coordinator at Common Ground. She has taken an active role in creating a powerful learning lab for her students in which these connections can emerge and thrive. She explains that "Common Ground is taking a process-oriented approach to developing students' connection between the words 'common ground' and 'sustainability'. The aim is to give them the visual tools to create a method of compositional thinking and perceiving, to imagine how two-dimensional designs can be shaped in three-

dimensional places, and to develop an appreciation of our dreams– for they affect how we cultivate our world into a place that truly sustains us."

For more information about the exhibit, call the Arts Council at (203) 772-2788.

"Sustainability is about more than just planting trees, curbside recycling and rescuing wildlife. It is about transforming politics and community development. Sustainability challenges assumptions surrounding prevailing orthodoxies or worldviews of economic growth and materialist values and implies nothing less than a restructuring of our relationship to the planet and to all living things" ~Harmonious Living

Sumner McKnight Crosby Jr. Gallery, a program of the Arts Council of Greater New Haven, is located at the Arts Council offices at 70 Audubon Street, 2nd floor. The gallery features regional artists in group and thematic shows. Hours are 9am to 5pm, Monday through Friday.

Artists' Opportunity
If you would like to be considered for an exhibit at Sumner McKnight Crosby Jr. Gallery, please send images, résumé and bio to: Arts Council of Greater New Haven, 70 Audubon Street, New Haven, CT 06510. For more information, call Debbie Hesse at 203-772-2788 or email dhesse [at] newhavenarts.org.

leave a reply

You must be logged in to post a comment.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhoods in New Haven, Connecticut

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		Amity		Annex		Beaver Hills*		Dixwell		Downtown*		Dwight	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%	#	%	#	%
All indicators derived from the 2014 5Y American Community Survey													
Population													
Total Population	**Population**	5025		6299		5544		4884		10982		4165	
Male		2364	47%	3011	48%	2359	43%	2222	45%	5411	49%	2159	52%
Female		2661	53%	3288	52%	3185	57%	2662	55%	5572	51%	2006	48%
Under 5 years	**Population Under 5**	402	8%	422	7%	485	9%	327	7%	216	2%	290	7%
5-17 years	**Population 5-17**	945	19%	1184	19%	1373	25%	725	15%	205	2%	553	13%
18-24 years		582	12%	478	8%	497	9%	759	16%	5192	47%	770	18%
25-34 years		819	16%	1613	26%	742	13%	926	19%	3019	27%	1420	34%
35-44 years		662	13%	818	13%	650	12%	671	14%	704	6%	376	9%
45-54 years		809	16%	885	14%	673	12%	505	10%	533	5%	362	9%
55-64 years		374	7%	356	6%	568	10%	468	10%	517	5%	230	6%
65 years and over	**Population 65 and Over**	432	9%	543	9%	556	10%	503	10%	598	5%	164	4%
Race and Ethnicity, for total population													
Total population		5025		6299		5544		4884		10982		4165	
Hispanic or Latino of any race	**Hispanic Population**	702	14%	2188	35%	696	13%	808	17%	879	8%	1143	27%
White, Not Hispanic or Latino	**White Population**	1146	23%	1973	31%	978	18%	736	15%	6411	58%	881	21%
Black, Not Hispanic or Latino	**Black Population**	2879	57%	1894	30%	3710	67%	3121	64%	1314	12%	1686	40%
Asian, Not Hispanic or Latino	**Asian Population**	0	0%	156	2%	27	0%	102	2%	1885	17%	252	6%
Other, Not Hispanic or Latino	**Other Race Population**	298	6%	88	1%	133	2%	117	2%	493	4%	203	5%
Household Types													
Total households		1846		2421		2112		1868		4134		1833	
Family households	**Families**	1227	66%	1460	60%	1316	62%	920	49%	790	19%	517	28%
Family Households and Single Parent Families													
Family households		1227		1460		1316		920		790		517	
Married-couple family		525	43%	808	55%	468	36%	227	25%	561	71%	230	44%
Male householder; no wife present		182	15%	168	12%	126	10%	104	11%	67	8%	83	16%
Female householder; no husband present		520	42%	484	33%	722	55%	589	64%	162	21%	204	39%
Married-couple family; with one or more people under 18 years	**Married Families with Children**	281	23%	463	32%	186	14%	58	6%	95	12%	152	29%
Male householder; no wife present; with one or more people under 18 years	**Single Parent Fathers**	67	5%	0	0%	62	5%	66	7%	30	4%	59	11%
Female householder; no husband present; with one or more people under 18 years	**Single Parent Mothers**	305	25%	389	27%	539	41%	377	41%	99	13%	127	25%
Housing Occupancy													
Total housing units		2081		2828		2307		2191		4877		2096	
Vacant housing units		235	11%	407	14%	195	8%	323	15%	742	15%	263	13%
Occupied housing units		1846	89%	2421	86%	2112	92%	1868	85%	4134	85%	1833	87%
Occupied housing units, Owner occupied	**Homeownership Rate**	908	49%	1113	46%	926	44%	336	18%	385	9%	122	7%
Occupied housing units, Renter occupied		938	51%	1308	54%	1186	56%	1532	82%	3750	91%	1711	93%
Disconnected Youth													
Total population 16 to 19 years		231		336		426		251		1975		148	
Population 16 to 19 years not enrolled in school & not working	**Disconnected Youth**	0	0%	57	17%	39	9%	42	17%	12	1%	40	27%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		Amity		Annex		Beaver Hills*		Dixwell		Downtown*		Dwight	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%	#	%	#	%
Educational Attainment, for population 25 years and over													
Population 25 years and over		3096		4215		3189		3073		5370		2552	
Less than high school diploma	**No High School Diploma**	615	20%	653	15%	472	15%	722	23%	307	6%	363	14%
High school degree or higher	**High School Graduates**	2481	80%	3562	85%	2717	85%	2351	77%	5063	94%	2189	86%
Bachelors degree or higher	**College Graduates**	944	30%	1002	24%	1079	34%	521	17%	4096	76%	936	37%
Foreign Born (Immigrant) population													
Total Population		5025		6299		4968		4884		11056		4165	
Foreign born	**Foreign-born population**	615	12%	1054	17%	698	14%	483	10%	2500	23%	892	21%
Entered 2010 or later		68	1%	30	0%	21	0%	48	1%	738	7%	170	4%
Naturalized US citizen		244	5%	355	6%	275	6%	126	3%	454	4%	91	2%
Not a citizen		371	7%	699	11%	423	9%	308	6%	2036	18%	801	19%
Language spoken, by population 5 years and over													
Population 5 years and over		4623		5877		5059		4557		10767		3875	
Speak only English		3809	82%	3876	66%	4073	81%	3712	81%	7633	71%	2485	64%
Non-English home hanguage		814	18%	2001	34%	986	19%	845	19%	3134	29%	1390	36%
Non-English home language; Speak English less than very well	**Linguistic Isolation**	339	7%	896	15%	133	3%	366	8%	598	6%	604	16%
Home Language Spanish		542	12%	1732	29%	471	9%	569	12%	632	6%	974	25%
Home Language Spanish; Speak English less than very well		188	4%	814	14%	103	2%	242	5%	146	1%	502	13%
Employment status, for population 16 years and over													
Total Population, 16 years and over		3793		4880		3876		3957		10564		3383	
In Labor Force		2600	69%	3516	72%	2504	65%	1873	47%	5886	56%	2317	68%
In Labor Force, Civilian		2600	69%	3502	72%	2504	65%	1873	47%	5886	56%	2317	68%
In Labor Force, Civilian, Employed		2225	59%	3023	62%	1982	51%	1493	38%	5555	53%	2082	62%
In Labor Force, Civilian, Unemployed		375	10%	479	10%	522	13%	380	10%	331	3%	235	7%
Not in Labor Force		1193	31%	1364	28%	1372	35%	2084	53%	4678	44%	1066	32%
Unemployment Rate (% Unemployed of Civilian Labor Force)	**Unemployment Rate**		14%		14%		21%		20%		6%		10%
Commute Mode, for workers 16 years and over													
Workers 16 years and over		2208		3037		1961		1422		5444		1993	
Worked at home		60	3%	44	1%	26	1%	11	1%	428	8%	33	2%
Workers 16 years and over who did not work at home		2148	97%	2993	99%	1935	99%	1411	99%	5015	92%	1960	98%
Car, truck, or van drove alone	**Vehicle, Single Occupancy**	1610	73%	2444	80%	1236	63%	814	57%	1389	26%	467	23%
Car, truck, or van carpooled		101	5%	182	6%	208	11%	63	4%	70	1%	229	11%
Public transportation (excluding taxicab)	**Transit Users**	390	18%	351	12%	366	19%	285	20%	348	6%	411	21%
Walked/Biked	**Walkers and Bikers**	43	2%	0	0%	106	5%	243	17%	3188	59%	844	42%
Taxicab, motorcycle, or other means		4	0%	16	1%	19	1%	6	0%	21	0%	9	0%
Children with all parents in the labor force													
Children living in families		1336		1514		1824		993		410		785	
Children living in 2-parent families, both parents in the labor force AND in 1-parent families, parent in labor force	**Children with all parents in the labor force**	1065	80%	1158	76%	1237	68%	971	98%	296	72%	593	76%
Occupations, for employed civilian population 16 years and over													
Total Employed		2225		3023		1982		1493		5555		2082	
Management, professional & related occupations		726	33%	738	24%	1022	52%	559	37%	3681	66%	790	38%
Service occupations		552	25%	1051	35%	382	19%	485	32%	601	11%	769	37%
Sales & office occupations		600	27%	560	19%	389	20%	280	19%	965	17%	357	17%
Natural resources, construction & maintenance occupations		106	5%	288	10%	29	1%	46	3%	93	2%	54	3%
Production, transportation & material moving occupations		241	11%	386	13%	160	8%	123	8%	215	4%	112	5%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		Amity		Annex		Beaver Hills*		Dixwell		Downtown*		Dwight	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%	#	%	#	%
Income													
Households		1846		2421		2112		1868		4134		1833	
Households: Income less than $10,000		266	14%	208	9%	353	17%	405	22%	725	18%	357	19%
Households: Income $10,000 to $14,999		97	5%	174	7%	110	5%	226	12%	258	6%	232	13%
Households: Income $15,000 to $24,999		223	12%	343	14%	201	10%	271	15%	397	10%	399	22%
Households: Income less than $25,000	**Household Income <$25K**	586	32%	725	30%	664	31%	902	48%	1380	33%	988	54%
Households: Income $25,000 to $49,999		410	22%	695	29%	590	28%	523	28%	934	23%	429	23%
Households: Income less than $50,000	**Household Income <$50K**	996	54%	1420	59%	1254	59%	1425	76%	2314	56%	1417	77%
Households: Income $50,000 to $74,999		314	17%	367	15%	311	15%	182	10%	642	16%	149	8%
Households: Income $75,000 to $99,999		238	13%	214	9%	212	10%	49	3%	367	9%	129	7%
Households: Income $100,000 or more	**Household Income $100K+**	298	16%	420	17%	335	16%	212	11%	812	20%	138	8%
Households: Income $100,000 to $149,999		192	10%	275	11%	239	11%	148	8%	388	9%	46	3%
Households: Income $150,000 to $199,999		98	5%	125	5%	35	2%	44	2%	178	4%	80	4%
Households: Income $200,000 or more		8	0%	20	1%	61	3%	20	1%	246	6%	12	1%
Average Household Income	**Average Household Income**	55064		55193		55661		46011		68145		37649	
Families		1227		1460		1316		920		790		517	
Families: Income less than $10,000		72	6%	160	11%	131	10%	125	14%	36	5%	0	0%
Families: Income $10,000 to $14,999		42	3%	79	5%	79	6%	45	5%	0	0%	116	22%
Families: Income $15,000 to $24,999		173	14%	113	8%	163	12%	109	12%	83	11%	125	24%
Families: Income less than $25,000	**Family Income <$25K**	287	23%	352	24%	373	28%	279	30%	119	15%	241	47%
Families: Income $25,000 to $49,999		289	24%	404	28%	341	26%	299	33%	164	21%	103	20%
Families: Income less than $50,000	**Family Income <$50K**	576	47%	756	52%	714	54%	578	63%	283	36%	344	67%
Families: Income $50,000 to $74,999		251	20%	204	14%	216	16%	124	13%	108	14%	54	10%
Families: Income $75,000 to $99,999		162	13%	202	14%	118	9%	40	4%	112	14%	83	16%
Families: Income $100,000 or more	**Family Income $100K+**	238	19%	298	20%	268	20%	178	19%	287	36%	36	7%
Families: Income $100,000 to $149,999		153	12%	251	17%	180	14%	129	14%	92	12%	5	1%
Families: Income $150,000 to $199,999		77	6%	47	3%	43	3%	29	3%	71	9%	31	6%
Families: Income $200,000 or more		8	1%	0	0%	45	3%	20	2%	123	16%	0	0%
Poverty													
Population for whom poverty status is determined		5025		6238		4967		4095		6593		4111	
Income below 100% of poverty level (official "poverty rate")	**Population in Poverty**	1068	21%	1406	23%	1470	30%	1148	28%	1578	24%	1801	44%
Income below 200% of poverty level ("low income rate")	**Low-Income Population**	1975	39%	3231	52%	2388	48%	2048	50%	2565	39%	3012	73%
Income above 200% of poverty level	**Not Low Income Population**	3050	61%	3007	48%	2579	52%	2047	50%	4028	61%	1099	27%
Population for whom poverty status is determined: Under 5 years		467		490		530		366		230		353	
Income below poverty level: Under 5 years	**In Poverty, Ages Under 5**	142	30%	240	49%	206	39%	132	36%	42	18%	166	47%
Population for whom poverty status is determined: Under 18 years		1347		1545		1744		1042		409		843	
Income below poverty level: Under 18 years	**In Poverty, Children**	405	30%	564	37%	697	40%	399	38%	97	24%	422	50%
Population for whom poverty status is determined: 65 years and over		432		543		525		491		588		163	
Income below poverty level: 65 years and over	**In Poverty, Ages 65+**	48	11%	54	10%	89	17%	91	19%	86	15%	49	30%
Families		1227		1460		1316		920		790		517	
Families: Income in the past year below poverty level	**Families in Poverty**	225	18%	329	23%	311	24%	212	23%	73	9%	201	39%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		Amity		Annex		Beaver Hills*		Dixwell		Downtown*		Dwight	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%	#	%	#	%
Vehicle Access and Crowding, for households													
Occupied housing units		1846		2421		2112		1868		4134		1833	
Occupied housing units: No vehicle available	**Zero Vehicle Households**	387	21%	311	13%	632	30%	843	45%	1759	43%	835	46%
Occupied housing units: 1 vehicle available		825	45%	1076	44%	882	42%	684	37%	1996	48%	792	43%
Occupied housing units: 2 or more vehicles available		634	34%	1034	43%	598	28%	341	18%	379	9%	206	11%
Occupied housing units: 1.00 or less occupants per room		1817	98%	2297	95%	2055	97%	1848	99%	4068	98%	1698	93%
Occupied housing units: 1.01 or more occupants per room	**Overcrowded Housing**	29	2%	124	5%	57	3%	20	1%	66	2%	135	7%
Home Value, for owner occupied housing units													
Owner-occupied housing units, Total		908		1113		926		336		385		122	
Value is less than $50,000		25	3%	55	5%	15	2%	10	3%	9	2%	0	0%
Value is $50,000 to $99,999		109	12%	80	7%	37	4%	42	13%	73	19%	7	6%
Value is $100,000 to $149,999		151	17%	183	16%	145	16%	87	26%	76	20%	30	25%
Value is $150,000 to $199,999		295	32%	282	25%	195	21%	65	19%	28	7%	40	33%
Value is $200,000 or more	**Housing Values $200K+**	328	36%	513	46%	534	58%	132	39%	199	52%	45	37%
Value is $200,000 to $249,999		181	20%	281	25%	279	30%	124	37%	65	17%	24	20%
Value is $250,000 to $299,999		37	4%	156	14%	120	13%	0	0%	22	6%	6	5%
Value is $300,000 or more		110	12%	76	7%	135	15%	8	2%	113	29%	15	12%
Housing Cost Burden, for owner occupied housing units													
Owner occupied housing units		908		1113		926		336		385		122	
Owner occupied housing units, selected monthly owner costs as a percentage of household income, 30% or more	**Cost-Burdened Homeowners**	401	44%	562	50%	455	49%	72	21%	140	36%	51	42%
Owner occupied housing units, selected monthly owner costs as a percentage of household income, 50% or more	**Severe Homeowner Cost Burden**	103	11%	226	20%	222	24%	7	2%	58	15%	42	34%
Housing Cost Burden, for renter occupied housing units													
Renter occupied housing units		938		1308		1186		1532		3750		1711	
Renter occupied housing units, Gross rent as a percentage of household income, 30% or more	**Cost-Burdened Renters**	493	53%	790	60%	754	64%	822	54%	1956	52%	967	57%
Renter occupied housing units, Gross rent as a percentage of household income, 50% or more	**Severe Renter Cost Burden**	269	29%	497	38%	488	41%	560	37%	1187	32%	553	32%
Housing Cost Burden, for all households													
All households		1846		2421		2112		1868		4134		1833	
All households paying 30% of income for housing	**Cost-Burdened Households**	894	48%	1352	56%	1209	57%	894	48%	2095	51%	1018	56%
All households paying 50% of income for housing	**Severe Household Cost Burden**	372	20%	723	30%	710	34%	567	30%	1246	30%	595	32%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		East Rock*		East Shore		Edgewood		Fair Haven*		Fair Haven Heights		Hill	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%	#	%	#	%
All indicators derived from the 2014 5Y American Community Survey													
Population													
Total Population	**Population**	8751		4832		4557		15932		7285		16277	
Male		4365	50%	2365	49%	2191	48%	7738	49%	3299	45%	7650	47%
Female		4386	50%	2467	51%	2366	52%	8193	51%	3986	55%	8627	53%
Under 5 years	**Population Under 5**	540	6%	405	8%	215	5%	1082	7%	291	4%	1489	9%
5-17 years	**Population 5-17**	711	8%	506	10%	903	20%	3322	21%	1165	16%	3177	20%
18-24 years		732	8%	207	4%	504	11%	2167	14%	493	7%	2388	15%
25-34 years		3406	39%	815	17%	749	16%	2424	15%	1159	16%	2555	16%
35-44 years		1378	16%	605	13%	589	13%	2602	16%	841	12%	1906	12%
45-54 years		689	8%	849	18%	647	14%	1731	11%	784	11%	1935	12%
55-64 years		581	7%	565	12%	441	10%	1226	8%	814	11%	1474	9%
65 years and over	**Population 65 and Over**	715	8%	880	18%	509	11%	1380	9%	1738	24%	1353	8%
Race and Ethnicity, for total population													
Total population		8751		4832		4557		15932		7285		16277	
Hispanic or Latino of any race	**Hispanic Population**	817	9%	240	5%	548	12%	10130	64%	2608	36%	7365	45%
White, Not Hispanic or Latino	**White Population**	6097	70%	3559	74%	1066	23%	2017	13%	2673	37%	2050	13%
Black, Not Hispanic or Latino	**Black Population**	641	7%	844	17%	2635	58%	3434	22%	1680	23%	5848	36%
Asian, Not Hispanic or Latino	**Asian Population**	1125	13%	100	2%	237	5%	208	1%	75	1%	182	1%
Other, Not Hispanic or Latino	**Other Race Population**	72	1%	89	2%	71	2%	144	1%	249	3%	832	5%
Household Types													
Total households		3971		2064		1864		5518		3322		5199	
Family households	**Families**	1543	39%	1219	59%	999	54%	3605	65%	1283	39%	3405	65%
Family Households and Single Parent Families													
Family households		1543		1219		999		3605		1283		3405	
Married-couple family		1265	82%	879	72%	512	51%	1459	40%	622	48%	1302	38%
Male householder; no wife present		38	2%	100	8%	46	5%	425	12%	207	16%	353	10%
Female householder; no husband present		239	15%	240	20%	441	44%	1721	48%	454	35%	1750	51%
Married-couple family; with one or more people under 18 years	**Married Families with Children**	519	34%	421	35%	171	17%	703	19%	318	25%	622	18%
Male householder; no wife present; with one or more people under 18 years	**Single Parent Fathers**	17	1%	52	4%	22	2%	139	4%	78	6%	150	4%
Female householder; no husband present; with one or more people under 18 years	**Single Parent Mothers**	147	10%	34	3%	314	31%	1188	33%	230	18%	1052	31%
Housing Occupancy													
Total housing units		4349		2173		2179		6306		3536		6298	
Vacant housing units		378	9%	109	5%	315	14%	788	12%	214	6%	1099	17%
Occupied housing units		3971	91%	2064	95%	1864	86%	5518	88%	3322	94%	5199	83%
Occupied housing units, Owner occupied	**Homeownership Rate**	1076	27%	1437	70%	440	24%	1275	23%	903	27%	1135	22%
Occupied housing units, Renter occupied		2895	73%	627	30%	1424	76%	4243	77%	2419	73%	4064	78%
Disconnected Youth													
Total population 16 to 19 years		131		127		204		1183		259		1000	
Population 16 to 19 years not enrolled in school & not working	**Disconnected Youth**	9	7%	0	0%	0	0%	221	19%	59	23%	256	26%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		East Rock*		East Shore		Edgewood		Fair Haven*		Fair Haven Heights		Hill	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%	#	%	#	%
Educational Attainment, for population 25 years and over													
Population 25 years and over		6769		3714		2935		9362		5336		9223	
Less than high school diploma	**No High School Diploma**	349	5%	222	6%	471	16%	2925	31%	1015	19%	2970	32%
High school degree or higher	**High School Graduates**	6419	95%	3492	94%	2464	84%	6437	69%	4321	81%	6253	68%
Bachelors degree or higher	**College Graduates**	5286	78%	1406	38%	688	23%	942	10%	946	18%	1061	12%
Foreign Born (Immigrant) population													
Total Population		8785		4832		4557		15824		7285		16277	
Foreign born	**Foreign-born population**	2133	24%	349	7%	883	19%	3328	21%	724	10%	2230	14%
Entered 2010 or later		676	8%	18	0%	23	1%	318	2%	32	0%	142	1%
Naturalized US citizen		525	6%	83	2%	416	9%	424	3%	336	5%	430	3%
Not a citizen		1569	18%	266	6%	415	9%	2592	16%	388	5%	1764	11%
Language spoken, by population 5 years and over													
Population 5 years and over		8211		4427		4342		14850		6994		14788	
Speak only English		5875	72%	3786	86%	3591	83%	5820	39%	4576	65%	8386	57%
Non-English home hanguage		2336	28%	641	14%	751	17%	9030	61%	2418	35%	6402	43%
Non-English home language; Speak English less than very well	**Linguistic Isolation**	686	8%	85	2%	256	6%	3842	26%	984	14%	2804	19%
Home Language Spanish		693	8%	188	4%	431	10%	8701	59%	2111	30%	5824	39%
Home Language Spanish; Speak English less than very well		255	3%	32	1%	123	3%	3666	25%	859	12%	2664	18%
Employment status, for population 16 years and over													
Total Population, 16 years and over		7582		4027		3581		12035		6006		12020	
In Labor Force		5728	76%	2985	74%	2446	68%	8001	66%	3432	57%	7340	61%
In Labor Force, Civilian		5718	75%	2977	74%	2446	68%	8001	66%	3432	57%	7340	61%
In Labor Force, Civilian, Employed		5336	70%	2734	68%	2105	59%	6388	53%	2994	50%	5759	48%
In Labor Force, Civilian, Unemployed		381	5%	243	6%	341	10%	1614	13%	438	7%	1581	13%
Not in Labor Force		1855	24%	1042	26%	1135	32%	4033	34%	2574	43%	4680	39%
Unemployment Rate (% Unemployed of Civilian Labor Force)	**Unemployment Rate**		7%		8%		14%		20%		13%		22%
Commute Mode, for workers 16 years and over													
Workers 16 years and over		5238		2699		2096		6276		2906		5524	
Worked at home		244	5%	72	3%	52	2%	210	3%	131	5%	67	1%
Workers 16 years and over who did not work at home		4994	95%	2627	97%	2044	98%	6065	97%	2775	95%	5457	99%
Car, truck, or van drove alone	**Vehicle, Single Occupancy**	2036	39%	2295	85%	1276	61%	3822	61%	2168	75%	3063	55%
Car, truck, or van carpooled		261	5%	249	9%	186	9%	972	15%	427	15%	1015	18%
Public transportation (excluding taxicab)	**Transit Users**	714	14%	47	2%	414	20%	893	14%	68	2%	892	16%
Walked/Biked	**Walkers and Bikers**	1898	36%	36	1%	104	5%	306	5%	93	3%	397	7%
Taxicab, motorcycle, or other means		86	2%	0	0%	64	3%	72	1%	19	1%	90	2%
Children with all parents in the labor force													
Children living in families		1212		831		981		4172		1393		4443	
Children living in 2-parent families, both parents in the labor force AND in 1-parent families, parent in labor force	**Children with all parents in the labor force**	917	76%	817	98%	776	79%	3091	74%	1214	87%	2887	65%
Occupations, for employed civilian population 16 years and over													
Total Employed		5336		2734		2105		6388		2994		5759	
Management, professional & related occupations		3952	74%	1266	46%	685	33%	1025	16%	917	31%	872	15%
Service occupations		544	10%	552	20%	451	21%	2127	33%	780	26%	2140	37%
Sales & office occupations		548	10%	391	14%	508	24%	1250	20%	717	24%	1112	19%
Natural resources, construction & maintenance occupations		80	2%	240	9%	77	4%	429	7%	132	4%	367	6%
Production, transportation & material moving occupations		212	4%	285	10%	384	18%	1556	24%	448	15%	1268	22%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		East Rock*		East Shore		Edgewood		Fair Haven*		Fair Haven Heights		Hill	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%	#	%	#	%
Income													
Households		3971		2064		1864		5518		3322		5199	
Households: Income less than $10,000		252	6%	40	2%	106	6%	999	18%	320	10%	1166	22%
Households: Income $10,000 to $14,999		200	5%	59	3%	143	8%	499	9%	666	20%	679	13%
Households: Income $15,000 to $24,999		249	6%	115	6%	367	20%	946	17%	610	18%	764	15%
Households: Income less than $25,000	**Household Income <$25K**	702	18%	214	10%	616	33%	2445	44%	1596	48%	2609	50%
Households: Income $25,000 to $49,999		912	23%	469	23%	507	27%	1470	27%	675	20%	1165	22%
Households: Income less than $50,000	**Household Income <$50K**	1614	41%	683	33%	1123	60%	3915	71%	2271	68%	3774	73%
Households: Income $50,000 to $74,999		598	15%	338	16%	237	13%	866	16%	485	15%	646	12%
Households: Income $75,000 to $99,999		502	13%	300	15%	237	13%	485	9%	153	5%	411	8%
Households: Income $100,000 or more	**Household Income $100K+**	1258	32%	743	36%	267	14%	252	5%	413	12%	368	7%
Households: Income $100,000 to $149,999		617	16%	421	20%	163	9%	145	3%	295	9%	237	5%
Households: Income $150,000 to $199,999		223	6%	219	11%	53	3%	50	1%	108	3%	79	2%
Households: Income $200,000 or more		418	11%	103	5%	51	3%	57	1%	10	0%	52	1%
Average Household Income	**Average Household Income**	94352		89825		56815		39252		43484		39945	
Families		1543		1219		999		3605		1283		3405	
Families: Income less than $10,000		49	3%	11	1%	38	4%	484	13%	29	2%	700	21%
Families: Income $10,000 to $14,999		21	1%	0	0%	0	0%	293	8%	68	5%	344	10%
Families: Income $15,000 to $24,999		42	3%	50	4%	201	20%	612	17%	125	10%	536	16%
Families: Income less than $25,000	**Family Income <$25K**	111	7%	61	5%	239	24%	1390	39%	222	17%	1580	46%
Families: Income $25,000 to $49,999		255	17%	212	17%	266	27%	1040	29%	353	28%	840	25%
Families: Income less than $50,000	**Family Income <$50K**	367	24%	273	22%	505	51%	2430	67%	575	45%	2420	71%
Families: Income $50,000 to $74,999		193	13%	227	19%	211	21%	665	18%	280	22%	398	12%
Families: Income $75,000 to $99,999		214	14%	203	17%	162	16%	323	9%	101	8%	289	8%
Families: Income $100,000 or more	**Family Income $100K+**	769	50%	516	42%	121	12%	187	5%	327	25%	298	9%
Families: Income $100,000 to $149,999		307	20%	240	20%	42	4%	104	3%	219	17%	207	6%
Families: Income $150,000 to $199,999		178	12%	173	14%	45	5%	26	1%	108	8%	39	1%
Families: Income $200,000 or more		285	18%	103	8%	34	3%	57	2%	0	0%	52	2%
Poverty													
Population for whom poverty status is determined		8751		4824		4525		15667		7131		15756	
Income below 100% of poverty level (official "poverty rate")	**Population in Poverty**	1386	16%	135	3%	971	21%	5141	33%	1183	17%	6783	43%
Income below 200% of poverty level ("low income rate")	**Low-Income Population**	2482	28%	664	14%	2191	48%	9551	61%	3301	46%	10933	69%
Income above 200% of poverty level	**Not Low Income Population**	6269	72%	4160	86%	2334	52%	6116	39%	3830	54%	4823	31%
Population for whom poverty status is determined: Under 5 years		667		458		258		1270		411		1704	
Income below poverty level: Under 5 years	**In Poverty, Ages Under 5**	74	11%	24	5%	61	24%	621	49%	94	23%	895	53%
Population for whom poverty status is determined: Under 18 years		1267		911		1097		4345		1434		4605	
Income below poverty level: Under 18 years	**In Poverty, Children**	183	14%	24	3%	213	19%	1992	46%	289	20%	2815	61%
Population for whom poverty status is determined: 65 years and over		722		880		509		1273		1655		1200	
Income below poverty level: 65 years and over	**In Poverty, Ages 65+**	43	6%	14	2%	35	7%	345	27%	159	10%	328	27%
Families		1543		1219		999		3605		1283		3405	
Families: Income in the past year below poverty level	**Families in Poverty**	88	6%	11	1%	131	13%	1144	32%	176	14%	1388	41%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		East Rock*		East Shore		Edgewood		Fair Haven*		Fair Haven Heights		Hill	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%	#	%	#	%
Vehicle Access and Crowding, for households													
Occupied housing units		3971		2064		1864		5518		3322		5199	
Occupied housing units: No vehicle available	**Zero Vehicle Households**	1075	27%	137	7%	460	25%	1754	32%	1043	31%	1875	36%
Occupied housing units: 1 vehicle available		1919	48%	616	30%	741	40%	2135	39%	1479	45%	1984	38%
Occupied housing units: 2 or more vehicles available		977	25%	1311	64%	663	36%	1629	30%	800	24%	1340	26%
Occupied housing units: 1.00 or less occupants per room		3948	99%	2064	100%	1856	100%	5158	93%	3161	95%	4946	95%
Occupied housing units: 1.01 or more occupants per room	**Overcrowded Housing**	23	1%	0	0%	8	0%	360	7%	161	5%	253	5%
Home Value, for owner occupied housing units													
Owner-occupied housing units, Total		1076		1437		440		1275		903		1135	
Value is less than $50,000		0	0%	42	3%	43	10%	45	4%	48	5%	69	6%
Value is $50,000 to $99,999		6	1%	16	1%	9	2%	159	12%	55	6%	188	17%
Value is $100,000 to $149,999		73	7%	171	12%	66	15%	364	29%	239	26%	261	23%
Value is $150,000 to $199,999		65	6%	407	28%	31	7%	251	20%	251	28%	239	21%
Value is $200,000 or more	**Housing Values $200K+**	932	87%	801	56%	291	66%	457	36%	310	34%	378	33%
Value is $200,000 to $249,999		73	7%	438	30%	66	15%	229	18%	176	19%	162	14%
Value is $250,000 to $299,999		64	6%	242	17%	132	30%	144	11%	50	6%	93	8%
Value is $300,000 or more		795	74%	121	8%	93	21%	84	7%	84	9%	123	11%
Housing Cost Burden, for owner occupied housing units													
Owner occupied housing units		1076		1437		440		1275		903		1135	
Owner occupied housing units, selected monthly owner costs as a percentage of household income, 30% or more	**Cost-Burdened Homeowners**	189	18%	596	41%	176	40%	728	57%	364	40%	541	48%
Owner occupied housing units, selected monthly owner costs as a percentage of household income, 50% or more	**Severe Homeowner Cost Burden**	48	4%	309	22%	79	18%	394	31%	75	8%	208	18%
Housing Cost Burden, for renter occupied housing units													
Renter occupied housing units		2895		627		1424		4243		2419		4064	
Renter occupied housing units, Gross rent as a percentage of household income, 30% or more	**Cost-Burdened Renters**	1482	51%	221	35%	908	64%	2835	67%	1302	54%	2627	65%
Renter occupied housing units, Gross rent as a percentage of household income, 50% or more	**Severe Renter Cost Burden**	680	23%	122	19%	644	45%	1769	42%	489	20%	1894	47%
Housing Cost Burden, for all households													
All households		3971		2064		1864		5518		3322		5199	
All households paying 30% of income for housing	**Cost-Burdened Households**	1670	42%	817	40%	1084	58%	3562	65%	1666	50%	3168	61%
All households paying 50% of income for housing	**Severe Household Cost Burden**	728	18%	431	21%	723	39%	2163	39%	564	17%	2102	40%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		Newhallville		Prospect Hill		Quinnipiac Meadows		West Hills		West Rock*		Westville*	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%	#	%	#	%
All indicators derived from the 2014 5Y American Community Survey													
Population													
Total Population	**Population**	6166		3788		6306		3816		3541		9070	
Male		2543	41%	1689	45%	2905	46%	1641	43%	1621	46%	4402	49%
Female		3623	59%	2099	55%	3401	54%	2175	57%	1920	54%	4668	51%
Under 5 years	**Population Under 5**	333	5%	263	7%	486	8%	203	5%	67	2%	464	5%
5-17 years	**Population 5-17**	1337	22%	489	13%	1012	16%	784	21%	247	7%	1508	17%
18-24 years		603	10%	516	14%	704	11%	425	11%	2169	61%	1050	12%
25-34 years		878	14%	1107	29%	1141	18%	681	18%	261	7%	1322	15%
35-44 years		790	13%	455	12%	972	15%	405	11%	165	5%	1204	13%
45-54 years		624	10%	261	7%	903	14%	448	12%	149	4%	1065	12%
55-64 years		829	13%	307	8%	592	9%	367	10%	149	4%	1239	14%
65 years and over	**Population 65 and Over**	772	13%	390	10%	496	8%	503	13%	334	9%	1218	13%
Race and Ethnicity, for total population													
Total population		6166		3788		6306		3816		3541		9070	
Hispanic or Latino of any race	**Hispanic Population**	1051	17%	400	11%	1571	25%	989	26%	314	9%	725	8%
White, Not Hispanic or Latino	**White Population**	139	2%	1522	40%	1541	24%	529	14%	1884	53%	5111	56%
Black, Not Hispanic or Latino	**Black Population**	4688	76%	845	22%	2322	37%	2021	53%	1097	31%	2578	28%
Asian, Not Hispanic or Latino	**Asian Population**	28	0%	935	25%	662	10%	70	2%	99	3%	323	4%
Other, Not Hispanic or Latino	**Other Race Population**	260	4%	86	2%	210	3%	207	5%	147	4%	333	4%
Household Types													
Total households		2561		1519		2302		1394		727		3689	
Family households	**Families**	1451	57%	822	54%	1536	67%	843	60%	312	43%	1874	51%
Family Households and Single Parent Families													
Family households		1451		822		1536		843		312		1874	
Married-couple family		389	27%	671	82%	590	38%	245	29%	177	57%	1518	81%
Male householder; no wife present		168	12%	1	0%	167	11%	107	13%	1	0%	33	2%
Female householder; no husband present		894	62%	150	18%	779	51%	491	58%	134	43%	323	17%
Married-couple family; with one or more people under 18 years	**Married Families with Children**	203	14%	372	45%	263	17%	85	10%	55	18%	665	35%
Male householder; no wife present; with one or more people under 18 years	**Single Parent Fathers**	47	3%	0	0%	58	4%	47	6%	1	0%	0	0%
Female householder; no husband present; with one or more people under 18 years	**Single Parent Mothers**	545	38%	21	3%	470	31%	306	36%	59	19%	193	10%
Housing Occupancy													
Total housing units		3198		1777		2628		1725		827		4025	
Vacant housing units		637	20%	258	15%	326	12%	331	19%	100	12%	336	8%
Occupied housing units		2561	80%	1519	85%	2302	88%	1394	81%	727	88%	3689	92%
Occupied housing units, Owner occupied	**Homeownership Rate**	643	25%	415	27%	954	41%	288	21%	114	16%	1847	50%
Occupied housing units, Renter occupied		1918	75%	1104	73%	1348	59%	1106	79%	613	84%	1842	50%
Disconnected Youth													
Total population 16 to 19 years		226		237		213		206		1222		527	
Population 16 to 19 years not enrolled in school & not working	**Disconnected Youth**	57	25%	16	7%	22	10%	35	17%	2	0%	0	0%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		Newhallville		Prospect Hill		Quinnipiac Meadows		West Hills		West Rock*		Westville*	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%	#	%	#	%
Educational Attainment, for population 25 years and over													
Population 25 years and over		3893		2520		4104		2404		1058		6048	
Less than high school diploma	**No High School Diploma**	760	20%	84	3%	849	21%	666	28%	140	13%	384	6%
High school degree or higher	**High School Graduates**	3133	80%	2436	97%	3255	79%	1738	72%	918	87%	5664	94%
Bachelors degree or higher	**College Graduates**	475	12%	1901	75%	590	14%	288	12%	309	29%	3652	60%
Foreign Born (Immigrant) population													
Total Population		6166		3788		6306		3816		5951		7236	
Foreign born	**Foreign-born population**	403	7%	936	25%	1236	20%	620	16%	774	13%	920	13%
Entered 2010 or later		54	1%	265	7%	69	1%	99	3%	253	4%	21	0%
Naturalized US citizen		125	2%	128	3%	429	7%	222	6%	246	4%	561	8%
Not a citizen		278	5%	804	21%	807	13%	363	10%	525	9%	227	3%
Language spoken, by population 5 years and over													
Population 5 years and over		5833		3525		5820		3613		3474		8606	
Speak only English		4877	84%	2391	68%	3762	65%	2675	74%	2898	83%	7089	82%
Non-English home hanguage		956	16%	1134	32%	2058	35%	938	26%	576	17%	1517	18%
Non-English home language; Speak English less than very well	**Linguistic Isolation**	176	3%	419	12%	680	12%	314	9%	115	3%	532	6%
Home Language Spanish		900	15%	224	6%	1263	22%	739	20%	217	6%	569	7%
Home Language Spanish; Speak English less than very well		165	3%	86	2%	395	7%	269	7%	12	0%	233	3%
Employment status, for population 16 years and over													
Total Population, 16 years and over		4571		3087		4957		2956		3299		7414	
In Labor Force		3040	67%	1910	62%	3602	73%	1591	54%	1808	55%	5354	72%
In Labor Force, Civilian		3040	67%	1910	62%	3545	72%	1591	54%	1808	55%	5354	72%
In Labor Force, Civilian, Employed		2306	50%	1827	59%	2974	60%	1443	49%	1532	46%	4972	67%
In Labor Force, Civilian, Unemployed		734	16%	83	3%	571	12%	148	5%	276	8%	382	5%
Not in Labor Force		1531	33%	1177	38%	1355	27%	1365	46%	1491	45%	2060	28%
Unemployment Rate (% Unemployed of Civilian Labor Force)	**Unemployment Rate**		24%		4%		16%		9%		15%		7%
Commute Mode, for workers 16 years and over													
Workers 16 years and over		2225		1799		2973		1397		1484		4922	
Worked at home		0	0%	109	6%	0	0%	39	3%	132	9%	149	3%
Workers 16 years and over who did not work at home		2225	100%	1690	94%	2973	100%	1358	97%	1352	91%	4773	97%
Car, truck, or van drove alone	**Vehicle, Single Occupancy**	1571	71%	832	46%	2328	78%	728	52%	753	51%	3814	77%
Car, truck, or van carpooled		293	13%	35	2%	337	11%	32	2%	113	8%	489	10%
Public transportation (excluding taxicab)	**Transit Users**	297	13%	375	21%	293	10%	457	33%	91	6%	219	4%
Walked/Biked	**Walkers and Bikers**	11	0%	448	25%	15	1%	122	9%	395	27%	242	5%
Taxicab, motorcycle, or other means		53	2%	0	0%	0	0%	19	1%	0	0%	9	0%
Children with all parents in the labor force													
Children living in families		1509		728		1426		961		221		1863	
Children living in 2-parent families, both parents in the labor force AND in 1-parent families, parent in labor force	**Children with all parents in the labor force**	1213	80%	406	56%	1003	70%	668	70%	191	86%	1588	85%
Occupations, for employed civilian population 16 years and over													
Total Employed		2306		1827		2974		1443		1532		4972	
Management, professional & related occupations		488	21%	1158	63%	581	20%	310	21%	513	33%	3002	60%
Service occupations		772	33%	274	15%	1097	37%	492	34%	483	32%	814	16%
Sales & office occupations		534	23%	342	19%	532	18%	298	21%	451	29%	820	16%
Natural resources, construction & maintenance occupations		84	4%	12	1%	126	4%	141	10%	37	2%	81	2%
Production, transportation & material moving occupations		428	19%	41	2%	638	21%	202	14%	48	3%	255	5%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		Newhallville		Prospect Hill		Quinnipiac Meadows		West Hills		West Rock*		Westville*	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%	#	%	#	%
Income													
Households		2561		1519		2302		1394		727		3689	
Households: Income less than $10,000		446	17%	206	14%	263	11%	219	16%	124	17%	297	8%
Households: Income $10,000 to $14,999		388	15%	113	7%	113	5%	132	9%	61	8%	115	3%
Households: Income $15,000 to $24,999		383	15%	53	3%	374	16%	284	20%	129	18%	397	11%
Households: Income less than $25,000	**Household Income <$25K**	1217	48%	372	24%	750	33%	635	46%	314	43%	809	22%
Households: Income $25,000 to $49,999		767	30%	450	30%	661	29%	355	25%	261	36%	533	14%
Households: Income less than $50,000	**Household Income <$50K**	1984	77%	822	54%	1411	61%	990	71%	575	79%	1342	36%
Households: Income $50,000 to $74,999		243	9%	197	13%	340	15%	196	14%	67	9%	678	18%
Households: Income $75,000 to $99,999		251	10%	153	10%	252	11%	120	9%	27	4%	373	10%
Households: Income $100,000 or more	**Household Income $100K+**	83	3%	347	23%	299	13%	88	6%	58	8%	1296	35%
Households: Income $100,000 to $149,999		70	3%	93	6%	224	10%	52	4%	40	6%	614	17%
Households: Income $150,000 to $199,999		0	0%	97	6%	75	3%	36	3%	18	2%	292	8%
Households: Income $200,000 or more		13	1%	157	10%	0	0%	0	0%	0	0%	390	11%
Average Household Income	**Average Household Income**	34399		86437		51603		39532		38489		96088	
Families		1451		822		1536		843		312		1874	
Families: Income less than $10,000		218	15%	40	5%	160	10%	53	6%	27	9%	41	2%
Families: Income $10,000 to $14,999		168	12%	22	3%	123	8%	68	8%	25	8%	24	1%
Families: Income $15,000 to $24,999		177	12%	32	4%	208	14%	207	25%	52	17%	96	5%
Families: Income less than $25,000	**Family Income <$25K**	563	39%	94	11%	491	32%	328	39%	104	33%	161	9%
Families: Income $25,000 to $49,999		445	31%	255	31%	438	29%	205	24%	130	42%	217	12%
Families: Income less than $50,000	**Family Income <$50K**	1008	69%	349	42%	929	60%	533	63%	234	75%	378	20%
Families: Income $50,000 to $74,999		243	17%	105	13%	176	11%	150	18%	25	8%	240	13%
Families: Income $75,000 to $99,999		137	9%	121	15%	231	15%	80	9%	19	6%	190	10%
Families: Income $100,000 or more	**Family Income $100K+**	63	4%	247	30%	200	13%	80	9%	34	11%	1066	57%
Families: Income $100,000 to $149,999		50	3%	36	4%	164	11%	51	6%	30	10%	472	25%
Families: Income $150,000 to $199,999		0	0%	70	9%	36	2%	29	3%	4	1%	243	13%
Families: Income $200,000 or more		13	1%	141	17%	0	0%	0	0%	0	0%	351	19%
Poverty													
Population for whom poverty status is determined		6166		3473		6278		3571		3947		7220	
Income below 100% of poverty level (official "poverty rate")	**Population in Poverty**	1872	30%	603	17%	1624	26%	1053	29%	1358	34%	610	8%
Income below 200% of poverty level ("low income rate")	**Low-Income Population**	3787	61%	1153	33%	2800	45%	2125	60%	2060	52%	1371	19%
Income above 200% of poverty level	**Not Low Income Population**	2379	39%	2320	67%	3478	55%	1446	40%	1887	48%	5849	81%
Population for whom poverty status is determined: Under 5 years		530		319		553		318		208		414	
Income below poverty level: Under 5 years	**In Poverty, Ages Under 5**	222	42%	23	7%	298	54%	138	43%	58	28%	9	2%
Population for whom poverty status is determined: Under 18 years		1670		735		1470		987		701		1640	
Income below poverty level: Under 18 years	**In Poverty, Children**	686	41%	54	7%	731	50%	364	37%	352	50%	35	2%
Population for whom poverty status is determined: 65 years and over		772		390		496		305		465		1118	
Income below poverty level: 65 years and over	**In Poverty, Ages 65+**	153	20%	33	8%	52	10%	51	17%	101	22%	88	8%
Families		1451		822		1536		843		312		1874	
Families: Income in the past year below poverty level	**Families in Poverty**	401	28%	74	9%	439	29%	237	28%	52	17%	98	5%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		Newhallville		Prospect Hill		Quinnipiac Meadows		West Hills		West Rock*		Westville*	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%	#	%	#	%
Vehicle Access and Crowding, for households													
Occupied housing units		2561		1519		2302		1394		727		3689	
Occupied housing units: No vehicle available	**Zero Vehicle Households**	888	35%	215	14%	486	21%	526	38%	187	26%	285	8%
Occupied housing units: 1 vehicle available		1223	48%	822	54%	1053	46%	516	37%	406	56%	1710	46%
Occupied housing units: 2 or more vehicles available		450	18%	482	32%	763	33%	352	25%	134	18%	1694	46%
Occupied housing units: 1.00 or less occupants per room		2510	98%	1467	97%	2203	96%	1372	98%	722	99%	3616	98%
Occupied housing units: 1.01 or more occupants per room	**Overcrowded Housing**	51	2%	52	3%	99	4%	22	2%	5	1%	73	2%
Home Value, for owner occupied housing units													
Owner-occupied housing units, Total		643		415		954		288		114		1847	
Value is less than $50,000		31	5%	0	0%	76	8%	0	0%	0	0%	47	3%
Value is $50,000 to $99,999		24	4%	1	0%	107	11%	79	27%	8	7%	54	3%
Value is $100,000 to $149,999		258	40%	20	5%	200	21%	130	45%	33	29%	157	9%
Value is $150,000 to $199,999		165	26%	94	23%	288	30%	46	16%	57	50%	254	14%
Value is $200,000 or more	**Housing Values $200K+**	165	26%	300	72%	283	30%	33	11%	16	14%	1335	72%
Value is $200,000 to $249,999		84	13%	7	2%	182	19%	1	0%	5	4%	190	10%
Value is $250,000 to $299,999		59	9%	42	10%	19	2%	24	8%	8	7%	362	20%
Value is $300,000 or more		22	3%	251	60%	82	9%	8	3%	3	3%	783	42%
Housing Cost Burden, for owner occupied housing units													
Owner occupied housing units		643		415		954		288		114		1847	
Owner occupied housing units, selected monthly owner costs as a percentage of household income, 30% or more	**Cost-Burdened Homeowners**	355	55%	112	27%	271	28%	175	61%	24	21%	554	30%
Owner occupied housing units, selected monthly owner costs as a percentage of household income, 50% or more	**Severe Homeowner Cost Burden**	259	40%	84	20%	45	5%	102	35%	24	21%	317	17%
Housing Cost Burden, for renter occupied housing units													
Renter occupied housing units		1918		1104		1348		1106		613		1842	
Renter occupied housing units, Gross rent as a percentage of household income, 30% or more	**Cost-Burdened Renters**	1301	68%	637	58%	841	62%	580	52%	327	53%	972	53%
Renter occupied housing units, Gross rent as a percentage of household income, 50% or more	**Severe Renter Cost Burden**	842	44%	318	29%	469	35%	341	31%	100	16%	480	26%
Housing Cost Burden, for all households													
All households		2561		1519		2302		1394		727		3689	
All households paying 30% of income for housing	**Cost-Burdened Households**	1656	65%	749	49%	1112	48%	755	54%	351	48%	1526	41%
All households paying 50% of income for housing	**Severe Household Cost Burden**	1101	43%	402	26%	514	22%	443	32%	124	17%	797	22%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		Wooster Square/Mill River		New Haven		Greater New Haven		Connecticut	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%
All indicators derived from the 2014 5Y American Community Survey									
Population									
Total Population	**Population**	3333		130553		465227		3592053	
Male		1599	48%	61534	47%	221362	48%	1750621	49%
Female		1734	52%	69019	53%	243865	52%	1841432	51%
Under 5 years	**Population Under 5**	184	6%	8163	6%	23987	5%	194338	5%
5-17 years	**Population 5-17**	415	12%	20560	16%	73478	16%	600747	17%
18-24 years		396	12%	20631	16%	52061	11%	341391	10%
25-34 years		1010	30%	26046	20%	62583	13%	433145	12%
35-44 years		500	15%	16293	12%	56759	12%	459130	13%
45-54 years		253	8%	14105	11%	68461	15%	563772	16%
55-64 years		291	9%	11388	9%	57767	12%	468451	13%
65 years and over	**Population 65 and Over**	284	9%	13367	10%	70131	15%	531079	15%
Race and Ethnicity, for total population									
Total population		3333		130553		465227		3592053	
Hispanic or Latino of any race	**Hispanic Population**	762	23%	33935	26%	61512	13%	512795	14%
White, Not Hispanic or Latino	**White Population**	1762	53%	42075	32%	300930	65%	2508360	70%
Black, Not Hispanic or Latino	**Black Population**	629	19%	43866	34%	70509	15%	342043	10%
Asian, Not Hispanic or Latino	**Asian Population**	109	3%	6575	5%	21593	5%	144619	4%
Other, Not Hispanic or Latino	**Other Race Population**	71	2%	4102	3%	10683	2%	84236	2%
Household Types									
Total households		1600		49945		178251		1356206	
Family households	**Families**	654	41%	25775	52%	109987	62%	899557	66%
Family Households and Single Parent Families									
Family households		654		25775		109987		899557	
Married-couple family		400	61%	12848	50%	78477	71%	664328	74%
Male householder; no wife present		17	3%	2393	9%	6687	6%	59301	7%
Female householder; no husband present		237	36%	10534	41%	24823	23%	175928	20%
Married-couple family; with one or more people under 18 years	**Married Families with Children**	184	28%	5815	23%	31287	28%	275652	31%
Male householder; no wife present; with one or more people under 18 years	**Single Parent Fathers**	0	0%	895	3%	2603	2%	25972	3%
Female householder; no husband present; with one or more people under 18 years	**Single Parent Mothers**	170	26%	6565	25%	13832	13%	99185	11%
Housing Occupancy									
Total housing units		1789		57190		196739		1490381	
Vacant housing units		189	11%	7245	13%	18488	9%	134175	9%
Occupied housing units		1600	89%	49945	87%	178251	91%	1356206	91%
Occupied housing units, Owner occupied	**Homeownership Rate**	405	25%	14722	29%	108625	61%	913043	67%
Occupied housing units, Renter occupied		1195	75%	35223	71%	69626	39%	443163	33%
Disconnected Youth									
Total population 16 to 19 years		102		9003		28851		205866	
Population 16 to 19 years not enrolled in school & not working	**Disconnected Youth**	0	0%	867	10%	1541	5%	11354	6%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		Wooster Square/Mill River		New Haven		Greater New Haven		Connecticut	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%
Educational Attainment, for population 25 years and over									
Population 25 years and over		2338		81199		315701		2455577	
Less than high school diploma	**No High School Diploma**	372	16%	14339	18%	31257	10%	257011	10%
High school degree or higher	**High School Graduates**	1966	84%	66860	82%	284444	90%	2198566	90%
Bachelors degree or higher	**College Graduates**	1193	51%	27315	34%	122000	39%	908551	37%
Foreign Born (Immigrant) population									
Total Population		3333		130553		465227		3592053	
Foreign born	**Foreign-born population**	477	14%	21255	16%	57164	12%	490460	14%
Entered 2010 or later		117	4%	3162	2%	6321	1%	38873	1%
Naturalized US citizen		160	5%	5630	4%	24570	5%	235507	7%
Not a citizen		303	9%	14939	11%	31535	7%	254953	7%
Language spoken, by population 5 years and over									
Population 5 years and over		3149		122390		441240		3397715	
Speak only English		2243	71%	83557	68%	351953	80%	2663586	78%
Non-English home hanguage		906	29%	38833	32%	89287	20%	734129	22%
Non-English home language; Speak English less than very well	**Linguistic Isolation**	314	10%	14143	12%	30729	7%	283088	8%
Home Language Spanish		619	20%	27399	22%	47381	11%	377238	11%
Home Language Spanish; Speak English less than very well		228	7%	10983	9%	17846	4%	156861	5%
Employment status, for population 16 years and over									
Total Population, 16 years and over		2778		104766		379536		2895925	
In Labor Force		1908	69%	67841	65%	254478	67%	1962119	68%
In Labor Force, Civilian		1908	69%	67752	65%	254101	67%	1953521	67%
In Labor Force, Civilian, Employed		1723	62%	58453	56%	228443	60%	1766934	61%
In Labor Force, Civilian, Unemployed		185	7%	9299	9%	25658	7%	186587	6%
Not in Labor Force		870	31%	36925	35%	125058	33%	933806	32%
Unemployment Rate (% Unemployed of Civilian Labor Force)	**Unemployment Rate**		10%		14%		10%		10%
Commute Mode, for workers 16 years and over									
Workers 16 years and over		1687		57290		224241		1734798	
Worked at home		104	6%	1911	3%	9024	4%	73467	4%
Workers 16 years and over who did not work at home		1583	94%	55379	97%	215217	96%	1661331	96%
Car, truck, or van drove alone	**Vehicle, Single Occupancy**	834	49%	33480	58%	169952	76%	1364472	79%
Car, truck, or van carpooled		83	5%	5345	9%	17759	8%	142105	8%
Public transportation (excluding taxicab)	**Transit Users**	200	12%	7110	12%	13329	6%	81585	5%
Walked/Biked	**Walkers and Bikers**	449	27%	8940	16%	12619	6%	57919	3%
Taxicab, motorcycle, or other means		17	1%	504	1%	1558	1%	15250	1%
Children with all parents in the labor force									
Children living in families		565		27167		94285		766701	
Children living in 2-parent families, both parents in the labor force AND in 1-parent families, parent in labor force	**Children with all parents in the labor force**	304	54%	20394	75%	72118	76%	565700	74%
Occupations, for employed civilian population 16 years and over									
Total Employed		1723		58453		228443		1766934	
Management, professional & related occupations		978	57%	23263	40%	97330	43%	729947	41%
Service occupations		216	13%	14583	25%	41393	18%	316946	18%
Sales & office occupations		370	21%	11024	19%	54657	24%	419718	24%
Natural resources, construction & maintenance occupations		66	4%	2488	4%	13566	6%	130456	7%
Production, transportation & material moving occupations		93	5%	7095	12%	21497	9%	169867	10%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		Wooster Square/Mill River		New Haven		Greater New Haven		Connecticut	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%
Income									
Households		1600		49945		178251		1356206	
Households: Income less than $10,000		212	13%	6964	14%	12651	7%	77857	6%
Households: Income $10,000 to $14,999		118	7%	4383	9%	8849	5%	52951	4%
Households: Income $15,000 to $24,999		135	8%	6641	13%	16600	9%	113957	8%
Households: Income less than $25,000	**Household Income <$25K**	465	29%	17988	36%	38100	21%	244765	18%
Households: Income $25,000 to $49,999		423	26%	12229	24%	35281	20%	253884	19%
Households: Income less than $50,000	**Household Income <$50K**	888	56%	30217	61%	73381	41%	498649	37%
Households: Income $50,000 to $74,999		334	21%	7190	14%	28375	16%	220577	16%
Households: Income $75,000 to $99,999		82	5%	4555	9%	22166	12%	176629	13%
Households: Income $100,000 or more	**Household Income $100K+**	296	19%	7983	16%	54329	30%	460351	34%
Households: Income $100,000 to $149,999		204	13%	4463	9%	27364	15%	224690	17%
Households: Income $150,000 to $199,999		44	3%	1854	4%	13329	7%	107942	8%
Households: Income $200,000 or more		48	3%	1666	3%	13636	8%	127719	9%
Average Household Income	**Average Household Income**	59125		57862		87076		99110	
Families		654		25775		109987		899557	
Families: Income less than $10,000		110	17%	2484	10%	4047	4%	30584	3%
Families: Income $10,000 to $14,999		29	4%	1546	6%	2924	3%	18591	2%
Families: Income $15,000 to $24,999		51	8%	3155	12%	6235	6%	46537	5%
Families: Income less than $25,000	**Family Income <$25K**	190	29%	7185	28%	13206	12%	95712	11%
Families: Income $25,000 to $49,999		180	28%	6436	25%	18569	17%	141679	16%
Families: Income less than $50,000	**Family Income <$50K**	370	57%	13621	53%	31775	29%	237391	26%
Families: Income $50,000 to $74,999		76	12%	3946	15%	17685	16%	140776	16%
Families: Income $75,000 to $99,999		34	5%	2821	11%	15647	14%	129656	14%
Families: Income $100,000 or more	**Family Income $100K+**	174	27%	5387	21%	44880	41%	391734	44%
Families: Income $100,000 to $149,999		125	19%	2857	11%	21721	20%	184327	20%
Families: Income $150,000 to $199,999		23	4%	1272	5%	10956	10%	93100	10%
Families: Income $200,000 or more		26	4%	1258	5%	12203	11%	114307	13%
Poverty									
Population for whom poverty status is determined		3300		121638		446790		3481115	
Income below 100% of poverty level (official "poverty rate")	**Population in Poverty**	932	28%	32122	26%	55894	13%	364740	10%
Income below 200% of poverty level ("low income rate")	**Low-Income Population**	1566	47%	59203	49%	119925	27%	823045	24%
Income above 200% of poverty level	**Not Low Income Population**	1734	53%	62435	51%	326865	73%	2658070	76%
Population for whom poverty status is determined: Under 5 years		209		9755		28739		232654	
Income below poverty level: Under 5 years	**In Poverty, Ages Under 5**	97	46%	3542	36%	5375	19%	38536	17%
Population for whom poverty status is determined: Under 18 years		592		28384		96672		785691	
Income below poverty level: Under 18 years	**In Poverty, Children**	257	43%	10579	37%	16490	17%	110096	14%
Population for whom poverty status is determined: 65 years and over		284		12811		67742		508657	
Income below poverty level: 65 years and over	**In Poverty, Ages 65+**	78	27%	1897	15%	5128	8%	35951	7%
Families		654		25775		109987		899557	
Families: Income in the past year below poverty level	**Families in Poverty**	170	26%	5760	22%	9655	9%	67706	8%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

DataHaven 2014 New Haven Neighborhood Estimates

Please cite: DataHaven. (2016). DataHaven 2014 New Haven Neighborhood Estimates, based on 2014 5Y American Community Survey and official City Plan Department boundaries. New Haven, CT: DataHaven

Neighborhood-level data from the American Community Survey are subject to high margins of error. Compare and use with caution.

Neighborhood or Area		Wooster Square/Mill River		New Haven		Greater New Haven		Connecticut	
Key community indicators highlighted in green	"Common" Indicator Name	#	%	#	%	#	%	#	%
Vehicle Access and Crowding, for households									
Occupied housing units		1600		49945		178251		1356206	
Occupied housing units: No vehicle available	**Zero Vehicle Households**	523	33%	14222	28%	22885	13%	123437	9%
Occupied housing units: 1 vehicle available		646	40%	21505	43%	63886	36%	443319	33%
Occupied housing units: 2 or more vehicles available		431	27%	14218	28%	91480	51%	789450	58%
Occupied housing units: 1.00 or less occupants per room		1566	98%	48373	97%	175108	98%	1330492	98%
Occupied housing units: 1.01 or more occupants per room	**Overcrowded Housing**	34	2%	1572	3%	3143	2%	25714	2%
Home Value, for owner occupied housing units									
Owner-occupied housing units, Total		405		14722		108625		913043	
Value is less than $50,000		6	1%	521	4%	2890	3%	24122	3%
Value is $50,000 to $99,999		40	10%	1094	7%	2772	3%	26438	3%
Value is $100,000 to $149,999		52	13%	2696	18%	7504	7%	72756	8%
Value is $150,000 to $199,999		37	9%	3089	21%	14868	14%	137797	15%
Value is $200,000 or more	**Housing Values $200K+**	270	67%	7322	50%	80591	74%	651930	71%
Value is $200,000 to $249,999		67	17%	2634	18%	17043	16%	135907	15%
Value is $250,000 to $299,999		61	15%	1640	11%	16716	15%	121457	13%
Value is $300,000 or more		142	35%	3048	21%	46832	43%	394566	43%
Housing Cost Burden, for owner occupied housing units									
Owner occupied housing units		405		14722		108625		913043	
Owner occupied housing units, selected monthly owner costs as a percentage of household income, 30% or more	**Cost-Burdened Homeowners**	199	49%	5964	41%	40246	37%	308039	34%
Owner occupied housing units, selected monthly owner costs as a percentage of household income, 50% or more	**Severe Homeowner Cost Burden**	122	30%	2724	19%	16435	15%	122097	13%
Housing Cost Burden, for renter occupied housing units									
Renter occupied housing units		1195		35223		69626		443163	
Renter occupied housing units, Gross rent as a percentage of household income, 30% or more	**Cost-Burdened Renters**	572	48%	20386	58%	38630	55%	221735	50%
Renter occupied housing units, Gross rent as a percentage of household income, 50% or more	**Severe Renter Cost Burden**	309	26%	12011	34%	21650	31%	117357	26%
Housing Cost Burden, for all households									
All households		1600		49945		178251		1356206	
All households paying 30% of income for housing	**Cost-Burdened Households**	771	48%	26350	53%	78876	44%	529774	39%
All households paying 50% of income for housing	**Severe Household Cost Burden**	431	27%	14735	30%	38085	21%	239454	18%

*If both indicator row AND geography column have a *, estimate based on data allocated by Census Tract. All other estimates based on data allocated by Census Block Group. Greater New Haven consists of 13 towns as defined in 2013 Community Index.

CARE: Community Alliance for Research and Engagement

DOCUMENTING THE HEALTH OF OUR NEIGHBORHOODS
• NEWHALLVILLE •

CARE, a partnership between the New Haven community and Yale University, is taking action against chronic disease. To improve the health of our residents, CARE promotes a healthy lifestyle by focusing on three risk factors: diet, exercise, and tobacco use. New Haven is the first US city to join one of the world's largest community-based research studies on chronic disease - with other sites in England, Mexico, India and China.

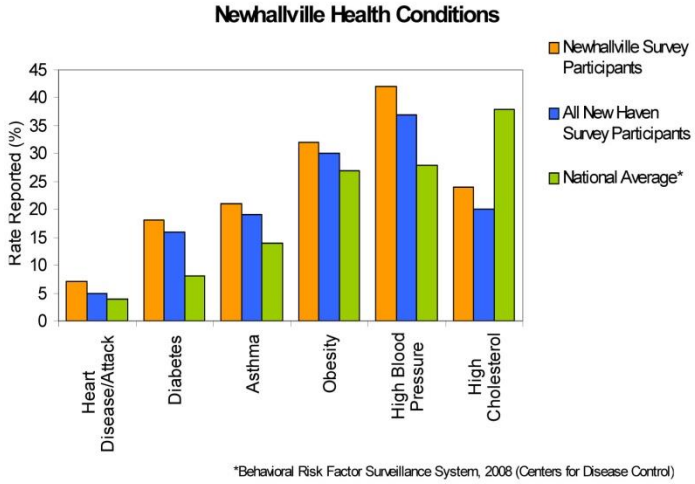
In the summer of 2009, Youth@Work interns created an "asset map" of six New Haven neighborhoods, including the Newhallville neighborhood. The asset maps document neighborhood features related to diet, exercise, and tobacco use. In the fall, 1,205 New Haven residents in the same six neighborhoods – including 197 in Newhallville – participated in a survey about health and their own habits around these same three risk factors.

NEWHALLVILLE'S ASSET MAP

- In Newhallville, CARE documented 12 stores, six restaurants, two recreational facilities, five parks, and three community gardens.
- Two of the six restaurants served fast food. None of the restaurants promoted healthy options or posted nutritional information.
- Eight of the twelve stores mapped in Newhallville were convenience stores that sold mostly junk food. There were also three package stores and one pharmacy.

SURVEY RESULTS – GENERAL HEALTH AND STRESS

- Eleven percent (11%) of Newhallville residents report "excellent" health – lower than all six neighborhoods (16%) and the national average (20%).
- Most Newhallville residents have a regular place to go for health care (87%). However, only 72% have health insurance - well below the national average of 86%.
- Like those in all six neighborhoods, Newhallville residents report high levels of stress – over one-half have some level of tension, stress or pressure and more than one in four feel down, depressed or hopeless.



*Behavioral Risk Factor Surveillance System, 2008 (Centers for Disease Control)

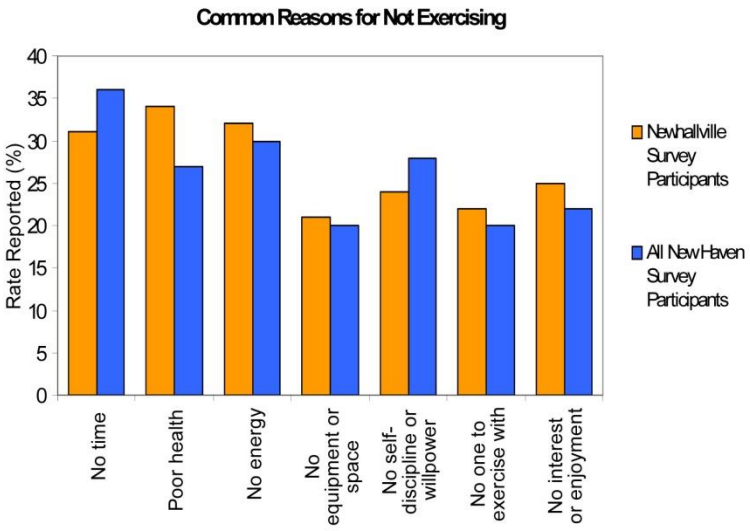
- Overall, reported chronic disease in Newhallville is similar to all six neighborhoods. Rates of heart disease, diabetes, asthma, obesity, and high blood pressure are higher than the national average.

NUTRITION

- Fifteen percent (15%) of Newhallville residents report **"food insecurity"** – meaning that they or their family did not have enough food (or money to buy food) in the past 30 days. This was similar to all six neighborhoods (18%) but higher than the national average (11%).
- Fifty-five percent (55%) of Newhallville residents eat **vegetables** every day – more than in all six neighborhoods (48%). Thirty-seven percent (37%) eat **fruit** everyday. On average, Newhallville residents report having four servings of fruits and/or vegetables per day – similar to those in all six neighborhoods, but less than the recommended five per day.
- As in all six neighborhoods, Newhallville residents report drinking many **sugar-sweetened beverages** – 54% drink sugar-sweetened beverages every day (with 72% of those drinking two or more per day).

EXERCISE

- Fifty-three percent (53%) of Newhallville residents **do not exercise** regularly – similar to other neighborhoods and worse than the national average (51%).
- As in all six neighborhoods, Newhallville residents describe several **challenges to regular exercise**, including lack of time, willpower, energy, and equipment or space. Over one-third do not exercise because of poor health.
- Feelings of safety can limit exercise options. Compared with all six neighborhoods, more Newhallville residents agreed that it was **unsafe to go for walks** in their neighborhood at night (74% vs. 65%) or during the day (45% vs. 31%).



SMOKING

- Thirty-four percent (34%) of Newhallville residents are **current daily smokers** – similar to the average in all six neighborhoods (31%) but much higher the national average (13%).
- Thirty-six percent (36%) of Newhallville smokers said they were ready to quit and another 32% were thinking of quitting in the next six months. As in other neighborhoods, most smokers (83%) said they would be motivated to quit by saving the money they spend on cigarettes.

For more information about CARE and this project:
203.785.7651 • care@yale.edu • www.ycci.yale.edu/care.

CARE: Community Alliance for Research and Engagement

DOCUMENTING THE HEALTH OF OUR NEIGHBORHOODS
• DIXWELL •

CARE, a partnership between the New Haven community and Yale University, is taking action against chronic disease. To improve the health of our residents, CARE promotes a healthy lifestyle by focusing on three risk factors: diet, exercise, and tobacco use. New Haven is the first US city to join one of the world's largest community-based research studies on chronic disease - with other sites in England, Mexico, India and China.

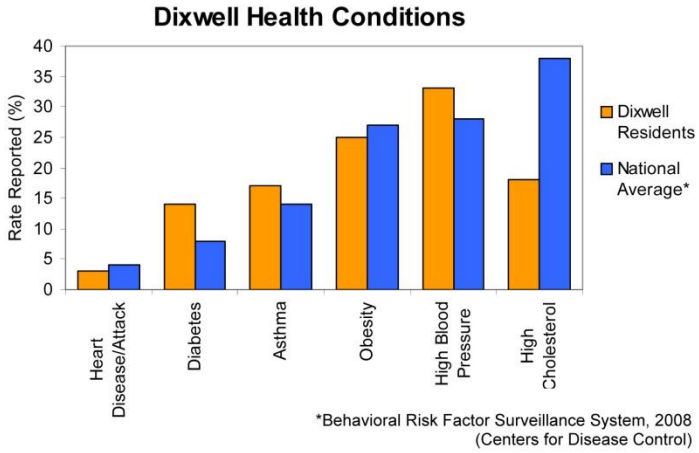
In the summer of 2009, Youth@Work interns created an "asset map" of six New Haven neighborhoods, including the Dixwell neighborhood. The asset maps document neighborhood features related to diet, exercise, and tobacco use. In the fall, 209 Dixwell residents participated in a survey about health and their own habits around these same three risk factors. A total of 1,205 New Haven residents took the same survey in all six neighborhoods.

DIXWELL'S ASSET MAP

- In Dixwell, ten stores, three restaurants, five parks, and two community gardens were mapped.
- Dixwell lacks grocery stores and access to fresh produce: four of the mapped stores were package stores, and six were convenience stores.
- No restaurants in Dixwell promote themselves as having healthy options or post nutrition information, unlike some other neighborhoods in New Haven.

SURVEY RESULTS – GENERAL

- Compared to the other neighborhoods, more Dixwell residents rated their health as "excellent" (19% vs. 16%). This is closer to the national rate of 20%.
- Most people in Dixwell report having a regular place to go for health care (88%), but only 71% have health insurance. This is below the national average of 86%.
- Dixwell residents report a high level of stress: 25% are bothered by feeling down, depressed or hopeless, 22% feel more stress than is usual, and 6% feel that "life is almost unbearable."



*Behavioral Risk Factor Surveillance System, 2008 (Centers for Disease Control)

- Reported chronic disease in Dixwell looks similar to the rest of the neighborhoods, except that there was less reported obesity in Dixwell.

- Twelve percent (12%) of Dixwell residents report **"food insecurity"** – meaning that they or their family did not have enough food (or money to buy food) in the past 30 days. This was lower than other surveyed neighborhoods (18%), and similar to the national average (11%).

- About half of Dixwell residents eat **vegetables** seven days a week and 41% eat **fruit** every day. However, nearly 80% of those who eat fruits and vegetables report having just one or two servings of each per day, less than the recommendation of five a day.

- As in other surveyed neighborhoods, Dixwell participants report eating and drinking many sweets and sugar-sweetened beverages like soda. More than one-third eat sweets daily and 46% drink sugar-sweetened beverages everyday - with 7 of 10 adults drinking two or more per day.

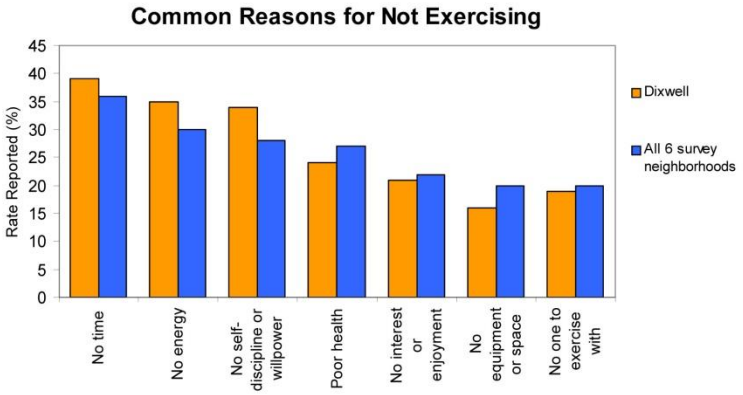
EXERCISE

- Fifty eight percent (58%) of Dixwell residents report doing **no vigorous exercise** (which makes you breathe much harder than normal) and 39% report doing **no moderate exercise** (which makes you breathe somewhat harder than normal) in the past seven days.

- Although exercise habits in Dixwell were similar to those in other surveyed neighborhoods, people in Dixwell were **more likely to walk or ride a bike to work or school.** One-quarter report walking or biking five to seven days a week (compared with 17% in other neighborhoods).

- Similar to residents surveyed in other neighborhoods, Dixwell residents describe challenges to regular exercise, including no time, energy and willpower.

- Feelings of safety can limit exercise options. Nearly 70% of Dixwell residents "strongly agree" or "somewhat agree" that **it is unsafe to go for walks** in their neighborhood at night.



SMOKING

- One-quarter (25%) of Dixwell residents are **current daily smokers** – lower than other neighborhoods (31%), but higher than the national average (20%). More than one-third are ready to quit now and almost another half are thinking of quitting in the next six months.

- As in other neighborhoods, a large majority of smokers (79%) said they would be motivated to quit by saving the money they spend on cigarettes.

For more information about CARE and this project:
203.785.7651 • care@yale.edu • www.ycci.yale.edu/care.