

Enhancing Mobility to Improve Quality of Life for Delawareans

July 2010



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prepared by the



Institute for Public Administration
University of Delaware

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PREFACE

As the director of the Institute for Public Administration (IPA) at the University of Delaware, I am pleased to provide this report, “Enhancing Mobility to Improve Quality of Life for Delawareans.” This project was funded by the Delaware Department of Transportation and explores how transportation and land-use planning has impacted community livability. Research shows that transportation decisions can affect land-use patterns and that land-use planning can be impacted by transportation policies. For the past half-century, government investment strategies, public policies, and development practices have skewed transportation planning toward automobile travel and have contributed to the demise of livable communities. To break this cycle of auto-oriented behavior and transportation investment, transportation planning must align with land-use planning to make communities more livable, walkable, and accessible for people of all ages and abilities.

Recently, a new federal government vision for transportation policy and planning has emerged that includes a focus on community livability, transportation accessibility, and transportation equity. To better integrate transportation and land-use planning, Delaware state agencies and local governments will need to work cooperatively to promote the development and adoption of public policies, plans, and design strategies to ensure that transportation investments foster community livability. Demographic change in Delaware will also need to be considered. Because its baby-boomer population is growing, and there is a correlation between age and functional disability, Delaware will need to provide greater transportation options, ensure transportation equity, and accommodate the desire to “age-in-community.”

This report concludes an extensive process that included a focused literature search, review of comprehensive plans and public policies of three Delaware municipalities, and stakeholder engagement. To solicit input, two community workshops were held, an “edublog” website was developed for teen blogging, and a working group was formed and twice convened.

I would like to thank the individuals and stakeholders who cooperated on this project. An “Enhancing Mobility to Improve Quality of Life for Delawareans” working group was formed, which consisted of 27 members and comprised 22 organizations and agencies. Individual working-group members are listed in the Acknowledgements. Special thanks go to policy scientist Edward O’Donnell, who managed the project. Associate policy scientist Marcia Scott co-managed the project and authored the report in collaboration with graduate research assistants Allison Calkins and Robert Coons. Assistant policy scientist Mark Deshon designed the report cover, provided editorial support, and oversaw production of the final report. Graduate research assistant Claire Beck developed a comprehensive-plan assessment tool and checklist, and undergraduate research assistant Courtney Baker provided clerical assistance.

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1. EXECUTIVE SUMMARY

For the last half century, federal transportation policy has focused on transportation mobility—the movement of people and goods at greater speeds and distances. As a result, transportation investment was skewed in favor of auto-centric transportation systems rather than multi-modal transportation options.

Federal transportation policy impacted the way communities were planned, developed, and grew. Auto-centric transportation investments created opportunities for low-density development, sprawling land-use patterns, and a dispersed environment, which then led to even greater automobile dependency. Consequences of auto-dependent patterns of development are increased traffic congestion, environmental degradation, loss of open space, infrastructure costs, impacts on public health, as well as a decline in the vitality of many towns and urban centers. In addition, because not every American drives or owns a car, equity has become a major transportation policy issue. Transportation decisions have tended to benefit the affluent rather than transportation-disadvantaged populations—low-income households, households without vehicles, youth, senior citizens, persons with disabilities, persons with language barriers, and households in isolated and/or inaccessible areas (Pollack, 2008). Changing demographic patterns, including a growth in the elderly population, will impact transportation patterns and require a new approach to transportation decision-making.

In recent years, a new vision for transportation policy and planning has emerged that includes a focus on community livability, transportation accessibility, and transportation equity. Livable communities integrate transportation and land-use planning to achieve more sustainable growth, development, and accessibility of residents. The new vision for transportation policy and planning also stresses the need to invest in transportation accessibility—or multi-modal transportation systems that serve people of all ages, abilities, ethnicities, and incomes. Transportation and land-use planning need to be assimilated to manage growth, focus on infill development, preserve community character, and provide equitable and accessible transportation options.

Delaware’s changing demographic landscape—particularly its growing senior population—elevates the need to develop transportation options that accommodate all users and abilities, increase connectivity among modal options, link transportation and land-use planning, and create communities that are more livable and accessible. This project was initiated with the support of the Delaware Department of Transportation (DelDOT) to explore how best practices and strategies may be applied to enhance mobility options and quality of life for all Delawareans. Primary research questions included

- How can transportation planning, public policy, and community design be enhanced so places in Delaware become more “livable” and people stay engaged and socially active?
- How can the transportation community enhance mobility options through improved public policies, better linkages among transportation and land-use planning, and a more strategic approach to the community building process?

-
- How can improved quality of life be achieved with respect to interdisciplinary cooperation of leaders in the fields of public health, housing, building, disability advocacy, aging, land use planning, transportation planning, and government?
 - How can the importance of community-building be explored to better shape the conversation, enhance the public engagement process, and involve traditionally underserved audiences?

To address these questions, several project components were undertaken. First, a focused literature search revealed that transportation is a critical factor in creating more livable communities. Several planning tools and techniques are being used to address issues of livability, community character, and development patterns. These include new urbanism, Universal Design, infill development, and Smart Transportation.

Second, public policies for the towns of Elsmere, Wyoming, and Millsboro were reviewed. This review revealed that municipal comprehensive plans are essential in establishing a vision of community livability and a foundation for thoughtful community design and development patterns that support multi-modal transportation options. While not part of this project's scope of work, IPA has developed a "Comprehensive Plan Assessment Tool" to help town officials and state agencies assess livability components within a municipal comprehensive plan during the Preliminary Land Use Services (PLUS) process.

Finally, an interdisciplinary working group was formed with representatives from the fields of public health, housing, building, disability advocacy, aging, transportation, land use planning, and local and state government. Separate community workshops were held in Newark and Dover to solicit input from citizens and targeted interest groups. Members of the working group and workshop participants considered and provided discourse on "characteristics that are needed to achieve a livable/walkable community."

As a result of the focused literature search, review of municipal policies, and input from members of the working group and participants in community workshops, a list of 10 critical recommendations was compiled.

- 1. Seek federal sustainability community grants funding.**
- 2. Address infrastructure improvement needs.**
- 3. Encourage support for Complete Streets principles.**
- 4. Better integrate land-use and transportation planning.**
- 5. Support aging-in-community.**
- 6. Educate the public.**
- 7. Improve intergovernmental coordination.**
- 8. Enhance public transit options.**
- 9. Develop and support additional options for accessible public transportation.**
- 10. Develop design guidelines for livable, mobility-friendly, and aging-friendly communities.**

2. INTRODUCTION

2-1. Problem Statement – Why Communities Are Less Livable

Before the era of suburbanization, America's towns were pedestrian-oriented and characterized by a strong sense of place and community. Traditional towns comprised thriving urban centers and diverse residential neighborhoods surrounded by scenic, rural countryside. Built on a human scale, traditional towns were dense and compact—people could easily walk from their homes to stores, schools, places of business, and jobs (Scott, 2010).

Walkable urbanism all but ended with the advent of post-World War II suburbia. Throughout the 1930s and 1940s, the Federal Housing Administration (FHA) and the Veterans Administration promoted new home ownership in the suburbs. In addition, FHA promoted restrictive housing regulations and criticized the conventional grid street layouts in favor of cul-de-sacs that minimized through traffic (Alba, 2003). Interconnected street networks and grid patterns became passé with the Institute of Transportation Engineers' publication of standards that encouraged "curvilinear patterns and discontinuities" (Southworth, Ben-Joseph, 1997, p. 93).

In the last half-century, government investment strategies, public policies, and development practices have skewed transportation planning toward automobile travel and contributed to the demise of livable communities. The passage of the Federal-Aid Highway Act of 1956 gave birth to America's Interstate Highway system (FHWA, n.d.) that made travel by automobile quick and convenient. Construction of superhighways as well as "carrots" of the housing finance system in the 1960s encouraged urban flight to the suburbs and promoted sprawling land-use patterns with automobile travel in mind (Yates, 2002). Many city planners and urban renewal advocates in the 1950s and 1960s also saw highway funding as an opportunity to rid urban areas of blight and clear slums. As a result, many long-established city neighborhoods were geographically split, fragmented, or demolished.

In addition, state and federal financing of suburban water and sewer systems encouraged suburban sprawl rather than infill development within existing towns, cities, and urban areas. The growth of environmental policies and regulations made redevelopment of older urban industrial areas more costly than development of new infrastructure in outlying areas. Local land use policies also contributed to uncontrolled, sprawling growth. In theory, single-use zoning ordinances were conceived to separate incompatible land uses to protect the health, welfare, and safety of residents. However, the often-unintended consequence of single-use zoning is that it segregates locations of daily living (e.g., work, school, shopping, and recreation) and requires more reliance on travel by automobile.

Across America, auto-dependent behavior and overdependence on a single mode of transportation has been reinforced by network capacity—building that is centered on roads, sprawling land-use patterns, and the design of car-oriented communities. The legacy of this sprawling development is a dispersed environment that is costly and unsustainable. Most

Americans and Delawareans live in communities that are unwalkable, lack connectivity, and are inaccessible by public transportation. Consequences of sprawl include a loss of open space, need for expensive new infrastructure, environmental degradation, dependence on automobiles, and developments that lack character, accessibility, and diversity.

While the above-described government investment strategies, public policies, and development practices provide an abbreviated history, it paints a picture of what happens when transportation and land use are planned separately. The unintended and undesirable consequences of uncoordinated transportation and land-use planning include (Toth, 2010, p. 2)

- High consumption of open land and rural landscapes
- Cookie-cutter development that is dissimilar in appearance to traditional towns
- Separated land uses that are not pedestrian- or transit-friendly
- Loss of a sense of place, public spaces, and placemaking
- Loss of community character, inclusiveness, and sociability
- Congestion and negative environmental impacts
- Skyrocketing costs of infrastructure for new, dispersed development

2-2. Policy Implications of Demographic Change

Delaware's changing demographic landscape elevates the need to develop transportation options that accommodate users of all ages and abilities, increase connectivity among modal options, and better integrate linkages between land-use and transportation planning. One of the most important demographic dynamics, both in America and Delaware, is the growth of its aging population. By 2030, the U.S. Census Bureau estimates that Delaware will be the ninth "grayest" state in the nation (Perry, 2003) and will be among the 10 states that are projected to have more people 65 and older (65+) than under 18 (U.S. Census Bureau, 2005). Sussex County is predicted to experience the greatest percentage of senior population growth between 2000 and 2030, and its 65+ population is expected to nearly double by 2030 (Simon, 2009).

As the size and longevity of Delaware's baby boomer population grows, seniors will face greater transportation accessibility and mobility challenges. Because there is a correlation between aging and disability, more aging citizens will lose their ability to drive, become dependent on public transit or require reliance on others for transportation (Bailey, 2004). Many seniors are choosing to relocate to low-cost, affordable areas that are isolated and lack accessibility to fixed-route public transit—which can exacerbate social seclusion and problems of mobility. While retirees are attracted to Delaware's coastal resort areas and "active-adult communities," many developments are located in remote areas that are not served by public transportation. Young retirees who move to Delaware often do not consider future needs related to mobility, health care, social services, or access to businesses that support daily living. IPA's *Assessing the Needs of Delaware's Older Drivers* states "research confirms that mobility is vital to the long-term health and independence of older adults and, therefore, a key factor in maintaining a high quality of life. Given the inverse relationship between transportation options and aging (i.e., transportation options decrease as individuals age), mobility concerns are especially acute for seniors age 65+" (IPA, 2007).

In addition to the growth of Delaware’s aging population, needs of other underserved and underrepresented audiences (e.g., persons with disabilities, low-income population, transit-dependent individuals, racial and ethnic minorities, people who do not drive or are from no-automobile households) should be considered in order to create transportation equity and to plan for more livable and accessible communities. Many of these individuals and groups have not traditionally been involved in the transportation-planning process yet are impacted by transportation-related decisions and investments. Research shows that transportation decisions can affect land-use patterns and result in economic, social, and environmental impacts that are important quality-of-life factors. Engagement of stakeholders, therefore, is critical to gaining input on transportation and land-use decisions that impact mobility, social equity, economic opportunity, and access to educational and employment opportunities.

2-3. Purpose of Study

This study seeks to address the following research questions:

- How can transportation planning, public policy, and community design be enhanced so places in Delaware become more “livable” and people stay engaged and socially active?
- How can the transportation community enhance mobility options through improved public policies, better linkages among transportation and land-use planning, and a more strategic approach to the community building process?
- How can improved quality of life be achieved with respect to interdisciplinary cooperation of leaders in the fields of public health, housing, building, disability advocacy, aging, land use planning, transportation planning, and government?
- How can the importance of community-building be explored to better shape the conversation, enhance the public engagement process, and involve traditionally underserved or underrepresented audiences?

2-4. Methodology

This project consisted of several components. First, general research was conducted to define the concept of community livability and highlight federal and state livability initiatives. A focused literature search was conducted to explore best practices, strategies, and planning concepts that have been successfully used to foster livability and mobility.

Second, three incorporated Delaware municipalities were targeted to explore the extent to which public policies have been developed to impact community mobility and livability. In Delaware, local governments have the authority to make land-use decisions. Yet, the state government bears the fiscal impact of local land-use decisions with respect to expenditures for many state services and programs such as transportation (i.e., covering the costs for new road construction, bridge maintenance and repair, road maintenance and repaving, public transit, and the administration of the Division of Motor Vehicles). Therefore, it was important to assess how comprehensive plans and public policies can support community livability, development

patterns, and the potential to develop multi-modal transportation systems. Comprehensive plans and public policies of three Delaware municipalities were reviewed the extent to which livability concepts are supported at the local level.

Third, stakeholder engagement was a critical project component, which was intended to solicit input on characteristics needed to create a livable/walkable community. To achieve this, two public workshops were held, a blog was developed, and a working group was formed that met twice during the course of the project. Project components are detailed below.

2-4-1. Literature Review

During this phase of research, it was affirmed that transportation is a critical factor in creating more livable communities. There is no universal definition for community livability. Community livability can take on different meanings based on the mission of an organization. However, it is clear that the interdisciplinary nature of community livability needs to be considered as communities make tough public policy decisions on how to grow, plan for change, and design the built environment.

The federal government has made livability a top priority of the U.S. Department of Transportation's (U.S. DOT). In 2009, a Livability Initiative was launched by the U.S. DOT, and an interagency partnership for sustainable communities was formed among the U.S. DOT, Housing and Urban Development (HUD), and Environmental Protection Agency (EPA). Transportation Secretary Ray LaHood is a strong proponent of livable communities and has emphasized the need to develop policies that support non-motorized transportation options. At the state government level, state DOTs are directing investments toward community livability. Smart transportation, context-sensitive design, and the integration of transportation and land use are strategies designed to make transportation planning more responsive to community needs and result in smarter development patterns.

A focused literature review was conducted to explore best practices and strategies that have been successful in elevating the importance of character, quality of life, accessibility, and enhanced mobility while pursuing goals of sustainability. The prospects for the applicability of the principles of New Urbanism, universal accessibility, infill development, and smart transportation in Delaware were explored.

2-4-2. Municipal Policy Review

This phase of research involved reviewing the extent to which targeted municipal governments in Delaware have used public policies, plans, and/or builder incentives to impact mobility and quality of life for community members. Local land-use decisions can influence development patterns that create barriers to smart growth, alternative modes of transportation, vibrant commercial districts, and compact, mixed-use areas that minimize vehicular trips. Comprehensive plans and regulatory practices were reviewed for three Delaware municipalities—Elsmere, Wyoming, and Millsboro. The purpose of the review is to assess the

extent to which municipal plans and policies encourage thoughtful community design and development patterns that support a well-balanced transportation system.

2-4-3. Stakeholder Input

Community Workshops

To facilitate discourse and obtain input on how Delaware communities can be planned that are more livable and accessible, IPA planned two community workshops in Delaware in March 2010 (one in Newark and one in Dover). Community members, civic association representatives, advocacy groups, and board/advisory councils of stakeholder organizations were invited to attend.

IPA developed an attractive workshop invitation flyer (Appendix A) and set up a free registration page on IPA's site at www.ipa.udel.edu/transportation.livablecommunities/registration.html. Many organizations also advertised the event on their individual websites (i.e., University of Delaware Center for Disabilities), included the event within their organization's online newsletter (i.e., WILMAPCO), or posted the event on bulletin boards (i.e., Newark Senior Center).

To invite participants, IPA enlisted help from working-group members as well as organizations that represent interests of underserved/underrepresented audience. IPA contacted working-group members and the following organizations to request e-mail addresses of board/advisory council members and/or to request IPA's invitation to their list of members. The following organizations agreed to either provide an e-mail list of their board/advisory council members (Appendix B):

- Advisory Council on Pedestrian Awareness and Walkability
- Architectural Accessibility Board
- AARP Delaware
- Civic League for New Castle County
- Delaware ADAPT
- Delaware Aging Network
- Delaware League of Local Governments
- Developmental Disabilities Council
- Dover/Kent County MPO Technical Advisory Committee (TAC), MPO Council, Public Advisory Committee (PAC)
- Elderly and Disabled Transit Advisory Committee
- Freedom Center for Independent Living
- Governor's Advisory Council for Exceptional Citizens
- Governor's Advisory Council on Hispanic Affairs
- Governor's Advisory Council on Services for Aging and Adults with Physical Disabilities
- Healthy Delawareans with Disabilities Advisory Council
- Healthy Eating Active Living (HEAL) Built Environment Team
- Independent Resources, Inc.
- Latin American Community Center
- New Castle County League of Women Voters

-
- State Council for Persons with Disabilities
 - Sussex County Association of Towns (SCAT)
 - Sussex County Mobility Consortium
 - University of Delaware Center for Disabilities Studies Advisory Council
 - WILMAPCO transportation committees

Teen Blog

Because a significant portion of the teenager population in Delaware either does not drive, relies on automobile transportation by an adult, or is dependent on public transportation, input was sought from this underrepresented group. IPA set up an “edublog” account, developed a prompt to invite blogging, established blogging guidelines, and invited Delaware high school civics teachers to encourage blogging by high school students (Appendix C).

Working Group

An “Enhancing Mobility to Improve the Quality of Life for Delawareans” working group was formed to consider, “what are characteristics that are needed to achieve a livable/walkable community?” The working group met on November 18, 2009, and April 13, 2010. The interdisciplinary working group comprised the following organizations and agencies in Delaware:

- American Association of Retired Persons (AARP) Delaware
- American Institute of Architects (AIA) Delaware
- American Planning Association, Delaware Chapter
- CHEER, Inc. (Sussex County Senior Services)
- Delaware Aging Network
- Delaware Department of Transportation
- Delaware Division of Services for Aging & Adults with Physical Disabilities
- Delaware Economic Development Office, Downtown Delaware
- Department of Health and Social Services
- Delaware Homebuilders Association
- Delaware League of Local Governments
- Delaware State Housing Authority
- Delaware Transit Corporation
- Disabilities Law Program
- Division of Public Health
- Dover/Kent Co. MPO
- Governor’s Advisory Council for Exceptional Citizens
- Nemours Health & Prevention Services
- Office of State Planning Coordination
- State Council for Persons with Disabilities (SCPD)
- University of Delaware Center for Disabilities Studies
- WILMAPCO

3. COMMUNITY LIVABILITY

3-1. Concept of Livability

There is no one comprehensive, agree-upon definition of a livable community. A livable community is often defined to reflect the interests of a particular an organization, or that of its constituents. Partners for Livable Communities, a nonprofit organization working to improve community livability, advocates the need for a universal definition of livability. It asserts that “livability is the sum of the factors that add up to a community’s quality of life—including the built and natural environments, economic prosperity, social stability and equity, educational opportunity, and cultural, entertainment, and recreational possibilities (Partners for Livable Communities, 2009).

The National Council on Disability provides one of the most inclusive definitions of a livable community, as one that (National Council on Disabilities, 2006):

- Provides affordable, appropriate, and accessible housing.
- Ensures accessible, safe, and reliable transportation options.
- Makes physical environment adaptations for inclusiveness and accessibility.
- Provides diverse work, volunteer, and educational opportunities.
- Ensures access to health and social services.
- Promotes participation in civic, cultural, social, and recreational activities.

To further explore the concept, the American Association of Retired Persons (AARP) Public Policy Institute has developed a comprehensive framework that identifies six key components of a livable community. These components recognize the interdisciplinary nature of community livability that include housing, transportation and mobility, land use, cooperation and communication, public involvement and engagement in planning, and leadership (AARP, 2008).

In the AARP’s report, *Opportunities for Creating Livable Communities*, each of these six livable community components is further explored within the developed framework. The **housing** component identifies the need to provide diverse housing options, mixed-used and transit-oriented development, affordable and accessible dwellings for all incomes and abilities, and good housing design (AARP, 2008, p. 3). Jurisdictions should develop policies and regulations to encourage inclusionary zoning, provide density bonuses, and promote housing design features (e.g., Universal Design and visitability) that support residents of all ages and abilities across their life span.

In terms of **transportation and mobility**, a livable community will provide multiple mobility options rather than reliance on one mode of transportation, such as the automobile. Communities should provide access to multi-modal transportation options, public transit, and opportunities for improved mobility. In livable communities, the need for good road design is valued to promote mobility, community connectivity, and social independence (AARP, 2008, pp. 11–13).

According to the AARP report, sound **land use plans** form the basis for the characteristics of a livable community. A good municipal comprehensive plan can set forth a vision for community

livability, convey desired community design standards, and serve as the basis for future regulatory policies. Local government public policies can either help or hinder the development of a community that is conducive to livability. If a municipality's codes and regulatory processes are too restrictive, it will be difficult to achieve livable-community objectives. For example, restrictive zoning codes may lead to the separation of land uses and automobile dependency. Conversely, new urbanism or neo-traditional zoning will help promote higher-density, mixed use, and more compact development that supports walking, biking, and use of transit (AARP, 2008, p. 18).

Cooperation and communication is a key community-livability component. Regional collaboration is needed to curb sprawl, promote smart growth, and achieve common livability objectives. At the local level, to achieve a vision for livability, town officials and planners need to “show” rather than “tell” benefits of improved community design and regulatory policies. Moreover, land-use and transportation planners need to join forces to achieve common community livability interests and objectives (AARP, 2008, p. 24).

Building on the cooperation and communication component is the need to provide **public education and involvement in community planning**. Public involvement and engagement helps identify and address concerns, solicit input, and promote public support to create buy-in of a proposed plan or public policy (AARP, 2008, p. 27).

A final, but essential, community-livability concept is **leadership**. Political leadership at the local and state level is needed to help set the stage for change and the need to champion improvements to improve the quality of life for residents (AARP, 2008, p. 30).

3-2. Movement Toward Livable Communities

In the past, federal transportation policy focused on transportation mobility—moving people and goods farther and faster. Transportation mobility was seen as the key to America's economic growth and competitiveness. However, roads are more than a means to travel. Transportation networks provide social, economic, and environmental connections that are critically important to community livability, vitality, and sustainability.

In recent years, a new vision for transportation policy and planning has emerged that includes a focus on community livability, transportation accessibility, and transportation equity. There is a clear connection between the built environment of a community and its health and livability. Livable communities foster active community environments, smarter growth, and pedestrian- and transit-friendly design. Livable communities integrate transportation and land-use planning to achieve more sustainable growth, development, and accessibility of residents.

In addition to community livability, the new vision for transportation policy and planning also stresses the need to invest in transportation accessibility—or multi-modal transportation systems that serve people of all ages, abilities, ethnicities, and incomes. Rather than designing

transportation systems to move cars and people, “the new approach calls for systems designed to serve people—all people—efficiently, affordably, and safely” (Bell and Cohen, n.d., p. 11). Transportation equity is also coming to the forefront of the shift in transportation policy. Historically, federal transportation policy and investment has favored more affluent, middle-class communities at the expense of underrepresented or disadvantaged communities. Transportation equity is expected to be a major issue when the federal transportation bill is considered for reauthorization to succeed the current Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Transportation policy reform advocates assert that the reauthorization bill must focus on funding transportation projects that support “quality transit, equitable access to jobs, smart growth, sustainable development, equitable transportation investment, affordable housing, and healthy communities” (PolicyLink, 2009, p. 6). Transportation investments should incorporate “land use, economic opportunity, and community health objectives” (PolicyLink, 2009, p. 6). To achieve equity, transportation investments should be prioritized to (Bell and Cohen, n.d., p. 10):

- Provide access to transportation modes (e.g., walking, biking, and public transit) to promote health benefits and economic opportunity.
- Benefit communities with the greatest need for affordable, safe, and reliable transportation.

In summary, the new transportation policy framework recognizes the need to develop transportation networks that provide a safe, reliable, integrated, and accessible transportation system that links transportation and land-use planning. Transportation planning must be intertwined with land-use planning to effectively manage growth, direct redevelopment to where infrastructure already exists, preserve community character, and promote accessibility in an equitable manner in order to foster communities that are economically viable, livable, and sustainable. In addition, processes of community-building and public involvement are becoming critically important to engage stakeholders affected by transportation plans and policies.

3-3. Federal Livable and Sustainable Communities Initiative

3-3-1. U.S. Department of Transportation (U.S. DOT) Livability Initiative

U.S. DOT’s Livability Initiative was launched in 2009 to focus its efforts on developing transportation policies that will promote a more integrated transportation network that links transit with needs of communities nationwide. The intent of this initiative is to provide community members with more transportation choices, enhanced public transit, and better access to community destinations such as jobs, housing, health, educational, and service centers. Transit is deemed as the essential linkage to community livability, economic prosperity, and sustainability. Under the Livability Initiative, federal policies and programs will be developed to help communities (FTA, n.d.):

- Better assimilate transportation and land-use planning.
- Advance multi-modal transportation systems and connections.
- Provide more transportation options to improve access to housing, jobs, businesses, services and social activities.

-
- Enhance public participation and coordination of transportation, housing, health, and economic/community development needs.
 - Improve air quality.

3-3-2. Interagency Sustainable Communities Partnership

On June 16, 2009, U.S. DOT Secretary Ray LaHood, U.S. Secretary of Housing and Urban Development (HUD) Shaun Donovan, and U.S. Environmental Protection Agency (EPA) Administrator Lisa Jackson announced an interagency partnership for sustainable communities. The partnership is designed to improve access to and linkages among affordable housing, transportation choices, and cleaner, healthier communities. DOT Secretary LaHood says, “Creating livable communities will result in improved quality of life for all Americans and create a more efficient and more accessible transportation network that serves the needs of individual communities. Fostering the concept of livability in transportation projects and programs will help America’s neighborhoods become safer, healthier, and more vibrant” (U.S. DOT, 2009, June 16).

DOT, HUD, and EPA’s interagency partnership will improve coordination among federal transportation, housing, and environmental-protection initiatives. Six livability principles will serve as the basis for interagency coordination. These strategies will (U.S. DOT, 2009, June 16)

- **Provide more transportation choices** – to decrease household transportation costs, dependence on foreign oil, and air pollution.
- **Promote equitable, affordable housing** – to provide more cost-effective and energy-efficient housing options for all people in order to increase mobility and lower the combined costs of transportation and housing.
- **Enhance economic competitiveness** – to provide better access to employment centers, markets, educational opportunities, and services.
- **Support existing communities** – to direct growth and investment towards infill areas through strategies such as transit-oriented development, mixed-use development, and land recycling.
- **Coordinate policies and leverage investment** – to remove barriers to interagency collaborations, align federal policies, and support initiatives that will leverage resources in housing, transportation, infrastructure, water, land-use planning, and investment.
- **Value communities and neighborhoods** – to invest in healthy, safe, and walkable neighborhoods to enhance the character and quality of life in rural, suburban, or urban communities.

To carry out these livability principles, the partnership will focus on aligning their programs to provide a vision for sustainable growth, integrate planning and investment, target development toward infill areas, and conduct joint research on ways to implement, measure, and evaluate community livability.

3-3-3. Sustainable Communities Funding

On December 16, 2009, a Consolidated Appropriations Act (Public Law 111-117) was approved to provide a total of \$150 million to HUD for a Sustainable Communities Initiative to “improve regional planning efforts that integrate housing and transportation decisions, and increase the capacity to improve land use and zoning” (HUD, 2010, p. 1). Of the \$150 million available, approximately \$100 million is available for a Sustainable Communities Regional Planning Grant, \$40 million has been allocated to fund a Challenge Planning Grant Program, and \$10 million is available for a joint HUD and U.S. DOT research and evaluation program. **The deadline for both the Sustainable Communities Regional Planning Grant and the Challenge Planning Grant programs is August 23, 2010.**

Sustainable Communities Regional-Planning Grants

This grant program will award \$100 million in grants to provide a foundation for public and private investment decisions to support a more sustainable future for a region. Entities that are eligible to compete for these grants include multi-jurisdictional and multi-sector partnerships, as well as regional consortia consisting of state and local governments, metropolitan planning organizations (MPOs), educational institutions, nonprofit organizations, and philanthropic organizations. To support regional and multi-jurisdictional planning efforts the following types of activities will be supported (Strigaro, 2010):

- Identifying regional infrastructure priorities related to affordable housing, transportation investment, water infrastructure, economic development, land use planning, environmental protection, energy conservation, and open space preservation
- Establishing related performance goals and measures
- Providing coordinated, long-range plans, policies, and implementation strategies
- Engaging residents and regional stakeholders in a meaningful process to develop a collaborative vision and implementation plan

Two funding categories of this grant have been established. Category 1 funds will support regional plans for sustainable development. Category 2 will provide funding to

- Amend or update existing regional plans to address the six livability principles of the Interagency Sustainable Communities Partnership.
- Prepare more detailed implementation plans for an adopted Regional Plan for Sustainable Development.
- Engage in limited predevelopment planning activities for “catalytic” projects.

Joint Livable Community Funding

On June 21, 2010, U.S. DOT and HUD launched a collaborating funding effort to help foster planning for sustainable, livable communities that integrate transportation, housing, and economic development. According to a HUD press release, Vice President Joe Biden says, “Together [these] investments will strengthen communities by connecting housing and transportation options, increasing economic opportunities, promoting environmental sustainability, and improving their overall quality of life” (HUD and DOT, 2010, p. 1).

Under the joint initiative, U.S. DOT and HUD will award up to \$75 million in funding—\$35 million for Transportation Investment Generating Economic Recovery (TIGER II) Planning Grants and \$40 million in HUD Sustainable Community Challenge Grants.

TIGER II Planning Grants

TIGER II planning grants awarded by U.S. DOT may be used to plan, prepare, or design surface-transportation projects that would be eligible for funding under the TIGER Discretionary Grant Program. These projects include highways, bridges, transit, railways, ports, or bicycle and pedestrian facilities. In addition, U.S. DOT has announced the availability of a new round of the TIGER Discretionary Grant Program, which provides competitive grants for innovative, multi-modal, and multi-jurisdictional transportation projects that will provide significant regional economic and environmental benefits.

HUD's Sustainable Communities Challenge Grants

This grant program will fund urban- and community-planning projects that promote affordable, economically vital, and sustainable community planning. Eligible projects include amending or replacing local master plans, zoning codes, and building codes to promote mixed-use or transit-oriented development, affordable housing, and older building re-use and reinvestment. Specific examples of grant-funding activities may include (HUD Press Release 10-131, 2010)

- Planning activities that support the development of affordable-housing opportunities near transportation.
- Preparing or amending local codes and ordinances to encourage sustainable development with housing located near transportation or commercial development.
- Planning initiatives that to foster development of a transportation corridor or regional transportation, which promotes mixed-use or transit-development with an affordable-housing component.
- Planning activities that encourage development of a freight corridor that reduces conflicts with both motorized and non-motorized traffic in residential areas.
- Developing expanded, multi-modal transportation options—including accessible public transportation and paratransit services for persons with disabilities.

3-3-4. Proposed Livable Communities Federal Legislation

On August 6, 2009, Senate Bill 1619: Livable Communities Act of 2009 was introduced that would establish competitive planning grants to create comprehensive plans that integrate transportation, housing, land use, and economic development. In addition, the proposed bill would establish sustainability challenge grants for projects in public transportation, affordable housing, complete streets, transit-oriented development, and brownfield revitalization. A federal Office of Sustainable Communities would be established within the Department of Housing and Urban Development (HUD) to administer the program, competitive grants, and coordinate initiatives with the U.S. DOT and EPA (S. 1619). A house version of the act, House Bill 4690: Livable Communities Act of 2010, was introduced in February 2010 (H.R. 4690). Both the Senate and House Bills were referred to respective committees, but deliberations languished due to debates on financial regulatory issues. On June 9, 2010, the Senate Committee on Banking,

Housing, and Urban Affairs held a hearing on the Livable Communities Act of 2009, but no action was taken.

Proponents of the Livable Communities bills contend that the federal government should incentivize comprehensive-planning and implementation projects that support smart growth, smart transportation, transit-oriented development, and development of dense, walkable, mixed-use communities. Advocates also note that this legislation will support more employer-assisted housing programs and help people live near jobs and public transportation. Critics of the bills argue that land-use decisions should be made by local governments and not involve federal government. Opponents also argue that market conditions should reflect a growing demand for high-density, mixed-use housing rather than federal government subsidies.

3-4. State Livable Communities Initiatives

In April 2010, the American Association of State Highway and Transportation Officials (AASHTO) released a report, *The Road to Livability*, which describes how state departments of transportation are implementing “livable” policies and directing transportation investments to provide well-balanced transportation networks for citizens. States are achieving livability through smart transportation strategies that focus on (AASHTO, 2010)

- Implementing community-sensitive design.
- Supporting the expansion of transportation choices to include walking, biking, and riding transit.
- Investing in transportation projects, infrastructure, and programs that stimulate the economy, improve community livability, enhance towns and urban centers, and preserve scenic byways.
- Improving communities through the Transportation Enhancements program.
- Integrating transportation and land use to develop smarter development patterns.

Several states have developed livable community policies or programs to manage growth and integrate community design, land use, and transportation planning/investments to improve the quality of life. Oregon, Florida, and Maryland have incorporated livability principles into their transportation policies to ensure mobility through a mixture of modal choices, locally driven processes to guide investments, and funding programs to support livable communities.

In February 2010, Oregon passed Senate Bill 1059, which is designed to assist major metropolitan areas develop healthy, climate-friendly transportation plans. In 1998, the Florida Department of Transportation (FDOT) adopted a policy called Transportation Design for Livable Communities to provide a flexible approach to planning and designing transportation systems. In 2009, FDOT followed up by including a “Transportation Design for Livable Communities” in its *Plans Preparation Manual* (FDOT, 2009). The manual includes design criteria for pedestrian and bicycle facilities as well as transit systems.

The State of Maryland recently relocated its Department of Housing and Community Development from Annapolis to Prince George’s County to underscore its commitment to

targeting transit-oriented development, infrastructure investment, and economic opportunities near 14 Metro stations within the county (Wright, 2010). Also operating in the Washington, D.C., metropolitan area is the Coalition for Smarter Growth. The mission of this nonprofit entity is to “ensure that transportation and development decisions accommodate growth while revitalizing communities, providing more housing and travel choices, and conserving our natural resources (Coalition for Smarter Growth, n.d.).

In 1995, the Livable Communities Act was adopted in Minnesota to support urban revitalization, mixed-used and transit-oriented development, affordable housing, and plan and invest in multi-modal transportation choices. The enabling legislation provides a voluntary, incentive-based approach to promote smart growth, affordable housing, and sustainability of metropolitan areas. Four grant and loan programs were established to enable cities to compete for funding to achieve livability goals (Metropolitan Council, 2010). In addition, a nonprofit organization, Transit for Livable Communities, is working to reform Minnesota’s transportation system through a balanced system that encourages walking, biking, riding transit, and thoughtful development (Transit for Livable Communities, n.d.).

The Washington State Department of Transportation (WSDOT) and Washington State Transportation Commission have developed a Livable Communities Policy to develop strategies that link transportation and land use. As part of this policy, WSDOT is raising awareness about the important links between community transportation, revitalization, and sustainability. WSDOT also provides planning and preliminary-design services to local agencies and other transportation partners to foster multi-modal transportation systems that enhance communities, develop collaborative and community-sensitive transportation actions, and coordinate access to state and federal funding that supports livable communities (WSDOT, n.d.)

Other metropolitan areas have developed programs and partnerships to encourage and support local livability. Such programs have focused on developing public policies, making institutional changes, and providing incentives for private investments to encourage infill development, transit-oriented development, and smart growth.

4. LAND-USE MANAGEMENT STRATEGIES – THE BASIS FOR CREATING MORE LIVABLE, ACCESSIBLE COMMUNITIES

4-1. Principles of New Urbanism

4-1-1. What Is New Urbanism, and Why Is It Important?

New Urbanism is a movement toward a traditional urban design, in which compact, pedestrian-friendly, and mixed-use neighborhoods serve as the basis for developing sustainable communities and regions. The Congress for New Urbanism (CNU) ratified the Charter for New Urbanism in 1996. CNU’s charter outlines principles to guide public policy, development, planning, and design at three levels—the region, the neighborhood, and the block. According to the charter, New Urbanism includes neighborhoods that are diverse in both use and population, and communities that are designed for the pedestrian, transit, and the car. CNU further advocates for cities and towns to be shaped by physically defined and universally accessible public spaces and community institutions; that urban places be constructed by architecture and landscape design that focuses on local history, and the environment (Congress for the New Urbanism, 2001).

New Urbanism is quite important for the state of Delaware. As a land use–management strategy, New Urbanism reinforces the need for Delaware communities to balance growth and development, curb sprawl, revitalize urban centers, and design attractive neighborhoods with interconnected networks of streets. A focus on New Urbanism can contribute to Delaware communities’ sense of place, desire to build livable communities, and pride in preserving historic resources—some 8,900 properties are listed in the National Register of Historic Places.

Principles of New Urbanism will also become more critical as Delaware’s population ages. According to the U.S. Census Bureau, the 65 and older (65+) population in 2008 made up around 13.9 percent of the state, larger than the national average (United States Census Bureau, 2009). Delaware is attracting an in-migration of retirees at a higher rate than other states and is projected to be the ninth “grayest” state in the nation by 2030 (Perry, 2030). Between 2005 and 2030, Delaware’s 65+ population will increase approximately 106 percent (Markell, J., 2007). Many older Delaware residents opt to reside in low-cost, affordable remote areas and active-adult (55+) communities that are characterized as automobile-dependent and lack public transit service. Loss of travel independence and mobility becomes problematic as the 65+ population ages. Consistent with principles of New Urbanism, Delaware neighborhoods need to be designed to promote demographic diversity, strengthen social interaction, and allow for walking to activities of daily living.

4-1-2. Regulatory Objectives for Implementing New Urbanism

The publication *Codifying New Urbanism* sets forth the following regulatory objectives for implementing New Urbanism (Crawford, P., 2004):

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- Allow a variety of uses in order to create vitality and bring many activities of daily living within walking distance of homes.
 - Foster mixed residential density and housing types.
 - Stimulate infill and rehabilitation activity.
 - Develop contextual design standards that ensure that new development responds to the traditional architectural styles of the city or region.
 - Create compact, walkable centers and neighborhoods served by public transit.
 - Enhance streetscapes and civic life.
 - Shape metropolitan regions with public space, farmland, and natural areas.

These objectives were developed to help planners and builders understand what the key aspects of New Urbanism are for a community. The idea is to create a multi-functional area, in which people's basic needs and wants are met within a walkable distance of their home (e.g., grocery stores, retail shops, schools, workplaces, and restaurants). There is also a strong call for a sense of local culture, with a focus on new buildings maintaining a traditional look, as well as a strong emphasis on mixed housing and enhanced civic life. In many cases, such a focus has brought about community and economic revivals.

4-1-3. National Examples of New Urbanism Ideals

Starting as a movement in the 1970s, New Urbanism has had large success throughout the country. More than 500 new towns, villages, and neighborhoods are built or under construction in the U.S., using principles of the New Urbanism (Steuteville, R. and Langdon, P., n. d.). Below are a few examples of such New Urbanism communities.

Seaside, Florida

Seaside, Fla., was designed in 1981 by Robert Davis. Aiming to recreate a traditional atmosphere of narrow roads and an active community, the plan for Seaside allowed many individual owners of homes work with the architects during the building process. Such design prompted *Time* magazine to declare it a "Best of the Decade" in 1990, stating that Seaside "could be the most astounding design achievement of its era and, one might hope, the most influential" (Time, 1990). Seaside continues to be a model example of New Urbanism design.

Celebration, Florida

Started by Disney in the early 1990's, this New Urbanism town continues to thrive. The town has more than tripled in population from 2,736 to 9,000 between the years of 2000 and 2005 (United States Census Bureau, 2009 and Celebration Town Hall, 2005). While it's no longer operated by Disney, the town has won numerous awards, including the 2001 Urban Land Institute's Award for Excellence as Best New Community. The town contains schools, businesses, restaurants, places of worship, parks and trails, and public transit (Celebration Town Hall, 2005).

Stapleton, Colorado

Stapleton, Colo., is a New Urban center still in development. Being built over the former Stapleton Airport, Stapleton currently includes 3,200 mixed homes, schools, parks, wildlife

habitat, and a multi-block town center with shops and restaurants. In the works is a large multi-modal transportation center, so that all residents can be mobile. The focus of the design centers around sustainability, and the result includes Stapleton being Colorado's best-selling master-planned community in 2007 (Moore, P., 2008).

4-1-4. Applicability of New Urbanism in Delaware

Better Models for Development in Delaware

The Conservation Fund, a nonprofit land conservation organization, along with the Delaware Office of State Planning Coordination, developed this guide in 2004 for the purpose of creating and enhancing livable communities within the state. The guide provides interesting statistics on the state, as well as strategies for implementing New Urbanism principles such as historic preservation and reducing the impact of cars. This guide also provides economic examples of why such a design might be even more beneficial to a local community (McMahon, E., Mastran, S., and Phillips, B., 2004).

Delaware Main Street Program

The mission of Delaware Development Economic Office's Delaware Main Street Program is to "provide Delaware's historic commercial districts with the tools to promote economic stability in business and workforce and to retain and enhance their downtown's unique sense of place" (Delaware Development Economic Office, 2007). This includes traditional building façades, multi-use buildings, and easy transportation options. Delaware Main Street communities include Brandywine, Middletown, Rehoboth Beach, Newark, Dover, Delaware City, and Wilmington (Delaware Development Economic Office, 2007).

New Urbanism in Sussex County

A development within the City of Lewes in Sussex County, the Village of Five Points, has made large strides towards creating a community centered around the idea of New Urbanism. This push developed around the complaint of little affordable housing, few year-round services, and a lack of mixed transportation. To combat this, the developer created a design principle that includes mixed residential housing, open space and community centers within walking distances of homes, street designs that promote walkability, and traditional architectural design that preserves the town's cultural identity (Lynn, 2008).

Environments for Aging 2010 Conference

This conference, located in San Diego, focused on creating attractive and functional livable communities for aging populations. Run by *Long Term Living* magazine and the Center for Health Design, in association with the American Institute for Architects among others, the conference brought many various groups together to cover multiple aspects of communities of aging populations. The conference focused on alternative housing models, universal design standards, sustainability, affordable housing, and neighborhood design (Long Term Living Magazine, 2010).

4-2. Universal Design

4-2-1. What Is Universal Design, and Why Focus on It?

Universal accessibility (also known as Universal Design) is an important aspect of enhancing mobility in the state of Delaware. Universal accessibility has been defined as “the design of entities that can be used and experienced by people of all abilities, to the greatest extent possible, without adaptations ” (Erlandson, 2008, p. 17). This means that universal accessibility focuses on allowing anyone, regardless of limitations, to be able to use this design.

Universal accessibility may very well be vital to many residents the state of Delaware. According to the Center for Personal Assistance Services’ 2008-2009 survey data, 10.4 percent of the population of Delaware suffers from some form of disability, with 3.8 percent of the state population suffering from a physically limiting disability (Center for Personal Assistance Services, 2009). The aging population of Delaware is also a major aspect for increasing universal accessibility. Studies show a correlation between aging and disability. The disability rate of the 65+ population is at least three times the rate of the total population for three of the five disability categories measuring in the 2000 Census (Gist and Hetzel, 2004). Thus universal accessibility within the state should be addressed in order to provide aid to these populations.

4-2-2. Principles of Universal Design

The Center for Universal Design (CUD) at North Carolina State University has established the following principles of Universal Design (CUD, 2007):

1. Equitable Use
2. Flexibility in Use
3. Simple and Intuitive Use
4. Perceptible Information
5. Tolerance of Error
6. Low Physical Effort
7. Size and Space for Approach and Use

Equitable Use

The Center for Universal Design states that the first principle is upheld when “the design is useful and marketable to people with diverse abilities” (CUD, 2007). In order to ensure this, the Center has included the following guidelines for the first principle (CUD, 2007):

- Provide the same means of use for all users: identical whenever possible; equivalent when not.
- Avoid segregating or stigmatizing any users.
- Provisions for privacy, security, and safety should be equally available to all users.
- Make the design appealing to all users.

A few strategies to enforce this principle are described in *Universal and Accessible Design for Products, Services, and Processes*. One strategy is to “design entities that are age- and context-appropriate,” using curb cuts as a clear example in which people are served with no

discrimination. Also stressed are design entities that are both aesthetically pleasing and competitive in price; focus on both will ensure that the entities are used and favored. Finally, it is suggested that in order to create a wide acceptance for the design, it must not be defined as a community for the elderly or disabled, but the design should rather focus on “as broad a demographic and socioeconomic base as reasonable and possible” (Erlandson, 2008). A possible approach on the last strategy is reinforced in the publication *Universal Design*, which illustrates that “design that is created allegedly for older people is based on convenience and healthy living and therefore becomes design for everyone—Universal Design” (Herwig, 2008).

One of the best and most visible implementations of the principle of “equitable use” can be seen with walking ramps. The ramps allow for everyone to move about where typically those who could not use stairs would not have been able to go. Such designs do not usually draw attention to those who require the use of the ramps, as ramps are not used exclusively by those with limited mobility. The design is also appealing to all users, as it is not uncommon to see a person with no limitations to their mobility prefer the ramp over steps.

Flexibility in Use

This principle is described as accommodating “a wide range of individual preferences and abilities” (The Center for Universal Design, 2007). To aid in the implementation of the second principle, the following guidelines have been developed (CUD, 2007):

- Provide choice in methods of use.
- Accommodate right- or left-handed access and use.
- Facilitate the user's accuracy and precision.
- Provide adaptability to the user's pace.

The issue with flexibility is that might result in higher costs and more complicated design. Yet if flexibility can be enacted, it will more likely than not “increase the likelihood that the designed entity will be used and experienced by the greatest number of people to the greatest extent possible” (Erlandson, 2008).

Simple and Intuitive Use

The principle for simple and intuitive use is a design that “is easy to understand, regardless of the user’s experience, knowledge, language skills, or current concentration level” (CUD, 2007). The following guidelines have been laid out to understand this principle more clearly (CUD, 2007):

- Eliminate unnecessary complexity. Be consistent with user expectations and intuition.
- Accommodate a wide range of literacy and language skills.
- Arrange information consistent with its importance. Provide effective prompting and feedback during and after task completion.

A good example of a product that provides simple and intuitive use is the entrances and exits of many retail and grocery stores. The automatic doors make it easy for everyone to access a store entrance. The only prerequisite to accessibility is forward motion, as sensors send information for the doors to open when an individual is approaching. Thus, there is no need to convey instructions on how to enter the store, and easier, more convenient access is provided to persons with physical and visual challenges.

Perceptible Information

This principle holds that “the design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities” (CUD, 2007). This principle stresses that that Universal Design must have “multisensory options for communication” (i.e., not only color-coordinated street signs, but ones with icons, arrows, etc.), signals that “maximize the signal-to-noise ratio” (by providing a contrast between background conditions and signals), and keeping the structure of the information sharing simple and easy for any person to access (such as simple universal symbols and a way for those with impairments to understand and access them. (Erlandson, 2008). These points are addressed through the following guidelines (CUD, 2007):

- Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information.
- Provide adequate contrast between essential information and its surroundings.
- Maximize “legibility” of essential information.
- Differentiate elements in ways that can be described (i.e., make it easy to give instructions or directions).
- Provide compatibility with a variety of techniques or devices used by people with sensory limitations.

It is difficult to find truly first-rate examples of this principle in implementation. One good example, though, is crosswalk remodeling occurring in and around Washington, D.C. Directly above the button used to signal the desire to cross a specific street is an instructional key, which describes what the symbols represent. Besides just the white symbol of a walking person and a red hand, the newer versions have a timer, so the person can gauge according to their ability whether or not to cross with the time allotted. The newest crosswalks have even more universal aspects, such as truncated domes on curb cuts alerting a seeing-impaired individual of the proximity of the street, and a beeping mechanism to alert such an individual of when to cross and when not (a series of beeps indicates the inability to cross, with a held beep used when it is acceptable to go).

Tolerance for Error

“The design minimizes hazards and the adverse consequences of accidental or unintended actions” is how the fifth principle is described (CUD, 2007). The guidelines for this principle include the following:

- Arrange elements to minimize hazards and errors: most used elements, most accessible; hazardous elements eliminated, isolated, or shielded.
- Provide warnings of hazards and errors.
- Provide fail-safe features.
- Discourage unconscious action in tasks that require vigilance.

This principle stresses that in order to truly protect against error, “it is essential to understand the functions of and reason for designing a product, system, or process” (Erlandson, 2008).

A three-step approach is suggested to minimize errors:

1. Prevent errors at the source.
2. Provide a warning that an error has or is about to occurs.

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3. Provide quick and easy recovery if an error has occurred.

An example of a design that minimizes hazards (accidental or unintended) is truncated domes. These domes provide a clear but unobtrusive method to identify a possible hazard (walking into the street) that requires virtually no vigilance to acknowledge. The domes create a unique design that can be detected underfoot. The domes also provide a visual cue to persons with visual impairments of the transition between a sidewalk and street.

Low Physical Effort

The sixth principle is explained as a design that “can be used efficiently and comfortably and with a minimum of fatigue” (CUD, 2007). The guidelines for this principle are as follows:

- Allow user to maintain a neutral body position.
- Use reasonable operating forces.
- Minimize repetitive actions.
- Minimize sustained physical effort.

Also termed as “ergonomically sound” design, there are numerous examples of designs that provide low physical effort (Erlandson, 2008). Elevators and escalators provide mobility with a minimal amount of physical strain. Handicapped parking spots allow for those with limitations to travel shorter distances within a parking lot. This principle has also been incorporated in aspects outside of universal design.

Size and Space for Approach and Use

A design that provides size and space for approach and use is one in which “appropriate size and space is provided for approach, reach, manipulation, and use regardless of user’s body size, posture, or mobility” (CUD, 2007). To help develop such a design, the ensuing guidelines can be quite useful (CUD, 2007):

- Provide a clear line of sight to important elements for any seated or standing user.
- Make reach to all components comfortable for any seated or standing user.
- Accommodate variations in hand and grip size.
- Provide adequate space for the use of assistive devices or personal assistance.

4-2-3. National Examples of Universal Design Implementation

The Occupational Safety and Health Administration’s (OSHA) Ergonomics Program

OSHA addressed the concept of design for low physical effort in order to reduce workers’ risk factors (Ergonomics Program: Proposed Rule, 1999). Such enforcement, although not specifically designed for universal accessibility, has increased accessibility in the workplace.

Uniform Federal Accessibility Standards (UFAS) and the American National Standards Institute (ANSI)

The issue of size and space in universal accessibility can be seen on the federal level, with UFAS and ANSI both providing size guidelines for standards dealing with clearance width for wheelchairs, the size of parking spaces for disabled people and an adjoining access aisle, and the

dimensions and shape of passenger loading zones (Council on Tall Buildings and Urban Habitat 1992).

4-2-4. Inclusive Home Design

In recent years there has been a nationwide movement for inclusive housing design, or building homes that are suitable for every stage in life and that can be easily adapted to accommodate persons with mobility impairments. Advocates of this movement, including the AARP, are urging the adoption of accessible housing policies that require the integration of basic accessibility features as a routine construction practice for all newly built homes.

Supporters of inclusive home design stress that basic access and visitability is a civil and human rights issue. “Visitability” is a term that refers to home features that allow persons with mobility impairments to visit friends and family or will enable people to remain in their homes if they develop a disability (IDEA, n.d.). Visitability and basic access features include

- At least one zero-step home entrance.
- An open, ground-level floor plan with a clear circulation path between the home entrance and interior spaces.
- Wide clearances of doorways and hallways.
- A first-floor bathroom that provides wheelchair access and reinforced walls for future installation of grab bars.
- Light switches, electrical outlets, thermostats and other controls installed at accessible heights.

AARP urges that incentives (e.g., tax credits, reduced permit fees, speedier permitting) be provided to homebuilders and developers to encourage voluntary inclusion of basic access features in new homes (Hannon, 2010). Federal legislation has been introduced to require inclusive home design for federally assisted housing. In addition, several states and local governments have approved laws and ordinances that require a basic level of accessibility for newly designed and constructed single-family homes built with public assistance.

H.R. 1408: The Inclusive Home Design Act of 2009

This House Bill, introduced on March 10, 2009, by Representative Schakowsky of Illinois would require all federally assisted single family and town houses to include certain features of accessibility for persons with disabilities. This includes a limit to step heights, accessible routes throughout the entire main floor, a habitable space no smaller than 70 square feet, and a wheelchair accessible bathroom (Inclusive Home Design Act of 2009).

Kentucky’s Affordable, Accessible Housing

As Kentucky’s state housing finance agency, The Kentucky Housing Corporation felt the need to associate affordable housing with accessible housing. Thus, any builder and developer whose housing projects are financed by the Kentucky Housing Corporation by 50 percent or more must follow the corporation’s policy on universal design. The Kentucky Housing Corporation’s Universal Design policy, enacted in 2003, includes the following guidelines (National Council on Disability, 2006):

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- Finished hallways should be 42 inches wide.
 - All doorways, including closet doors and entry doors, should be 32 inches wide at minimum. Specifications for entry platforms are also included.
 - Ground-level and elevator-accessible units must have a minimum of one full universally designed bathroom.
 - Single-lever or ADA-approved faucets must be installed at all sinks, showers, and tub
 - Electrical outlets have to be installed at a minimum height of 15 inches and light switches, fan switches, and thermostats at a maximum height of 48 inches.
 - All units must have at least one universally designed bedroom on the ground level or elevator-accessible floor.

Howard County, Maryland

In 2004, Howard County Maryland’s Department of Planning and Zoning established a Senior Housing Master Plan Advisory Board and adopted a Master Plan to address the trend toward “aging in place” and develop strategies to foster better housing design and access to services for senior citizens. The Plan recommended greater design diversity, zoning code amendments to address accessibility and affordability, and the establishment of a Design Review Panel for project review. As a result of this initiative, Howard County passed legislation in 2006 that requires Universal Design be incorporated in all new age-restricted units. Specific requirements include

(Howard County, 2006)

- Accessible paths between parking, dwelling units, and common areas that meet ADA standards in multi-family apartments or condominiums.
- “Zero-step” access to all dwellings and community building(s).
- All interior doorways be at least 32 inches wide.
- Wide (36-in.) clearances throughout the first floor.
- Complete first-floor living area—including a master bedroom and bathroom.
- Lever handles on interior and exterior doors.
- Structural support for grab-bars on walls of the bathroom.
- Clear floor space within bathrooms and kitchens.
- Installation at accessible heights of light switches, electrical outlets, and other controls.

4-2-4. Applicability of Universal Design in Delaware

American Association of Retired Persons (AARP): “The Road Ahead”

The AARP’s report, entitled “The Road Ahead,” analyzes the aging population of the state of Delaware and its wants and needs for its future. The report found that 85 percent of the 50+ population felt that aging in their community was important to some degree, with 21 percent feeling it was somewhat important, 36 percent feeling it was very important, and 27 percent feeling that it was extremely important. In terms of aging in a residence, the report found that 85 percent of the 65+ population felt that it was very to extremely important to age in place for as long as possible. This means that residents want to age where they are, making the need for services that can allow for such a desire. In fact, the report claims that 83 percent of the people surveyed felt that having a wide variety of services to help them maintain their independence

throughout the aging process was an important characteristic to have in their community (Bridges et al., 2009).

The University of Delaware’s Center for Disabilities Studies: “A Path Forward”

The Center for Disability Studies (CDS) published “A Path Forward” in 2008 as the Governor’s Commission on Community-based Alternatives for Individuals with Disabilities final report. It includes a five-year plan to provide services and support for those with disabilities so that they may be able to live and function in the location they choose (Landgraf et al., 2007).

Mixed-Use Development Throughout Main Street Communities in Delaware

A good example of the second principle—“flexibility in use”—is mixed-use zoning within central business districts of many of Main Street communities in Delaware. Mixed-use development includes both commercial and residential uses. Generally, the first floor of a mixed-used development is specialty shops and retail businesses with high-quality residential units or offices on the upper floors of buildings. This mixed-use development framework creates more activity in the district, thus generating economic enhancement and defining a vibrant community. The Washington House on the City of Newark’s Main Street is a great example of mixed-used development, as it integrates restaurants, a parking garage, and condominiums. Thus, the combined residential and commercial component of this building helps to strengthen the overall retail base for the area and provide enhanced access to people of all ages and abilities.

The University of Delaware’s Center for Disabilities Studies: “Healthy Delawareans with Disabilities: Bridging the Gap”

This strategic plan for Delaware (2009-2012) is aimed at providing a guide to improve health and the well-being of persons with disabilities. This includes identifying barriers for this population (i.e., physical barriers, transportation barriers, financial barriers, insufficient provider training, and cultural barriers), as well as challenges for those with disabilities within the state of Delaware. This plan also includes many goals and objectives related to improving the well-being of persons with disabilities, notably supporting initiatives in housing and transportation systems that would not only provide more engagement among persons with disabilities but also improve their quality of life (Riddle et al. 2009).

Delaware LIFE Conference

This annual conference is hosted in Delaware and focuses on information exchanges between groups and agencies that work with persons with disabilities and their families. LIFE Conference XII (2010) focused on a number of issues involving universal housing principles, specifically Delaware legislation initiatives for promoting Universal Design, and methods of independence through assistive technologies (LIFE Conference, 2009a). LIFE Conference XII’s advisory committee included such groups as: the University of Delaware Center for Disabilities, the Delaware Division of Services for Aging and Adults with Physical Disabilities (DSAAPD), the Delaware Developmental Disabilities Council, the Governor’s Advisory Council for Exceptional Citizens, the State Council for Persons with Disabilities, and DART First State (LIFE Conference, 2009b).

Delaware Partners to Promote Healthy Eating and Active Living (DE HEAL): “Physical Activity, Nutrition & Obesity Prevention Comprehensive Plan 2010-2014”

This report, prepared by the Delaware Division of Public Health, is a comprehensive plan for the state of Delaware aimed at combating obesity and promoting healthy lifestyles. This plan not only focuses on nutrition and exercise but also on communities to promote healthy living. For instance, some environmental and policies objectives outlined in the plan include conducting a gap analysis of community resources in terms of health (i.e. alternate transportation), and developing a way to assist municipalities and others in implementing Preliminary Land Use Service recommendations on public health in community design.

4-3. Infill Development

4-3-1. What Is Infill Development and Why Is It Important?

Many communities are finding that the traditional ways of managing development are not able to cope with the problems brought on by today’s growth (Godschalk, 2000). Low-density suburban growth, also known as sprawl, has four dimensions: a widely dispersed population; separated homes, retail and workplaces; a network of roads made up of large blocks and poor access; and a lack of well-defined activity centers, such as downtowns and town centers (Geller, 2003).

A consequence of this suburban sprawl is disinvestment from cities to outlying areas, which contributes to slowed growth in productivity, inadequate schools, inefficient public safety, congested roads, and environmental pollution (Godschalk, 2000). Also linked to the effects of sprawl is the lack of transportation choices resulting from dependence on automobiles, relative uniformity of housing options, and walking difficulty. Outlying suburbs also often require more costly infrastructure such as roads, water, sewers and other provided services (Geller, 2003). The Urban Land Institute estimates urban sprawl eventually costs 40 to 400 percent more than infill development due to the expense of building, and then maintaining, new roads, sewers, fire stations and schools, plus air pollution, traffic congestion, and loss of open space. This outflow is passed on to community members as higher taxes and a lower quality of life (City of Flagstaff, 2009).

An alternative to sprawl is building in accordance with the Smart Growth movement. Smart Growth involves professionals from many disciplines, including planners, designers, builders, transportation officials, environmentalists, politicians, public health advocates, as well as a variety of citizen groups (Geller, 2003). The movement is guided by the principles of sustainability, including consuming as few resources as necessary, and when a resource is used for development, it is used efficiently (City of Flagstaff, 2009). The main objectives are to improve the quality of life of all citizens, promote healthy behavior, minimize hazards to people, and to protect and restore the natural environment; it is about giving choices in housing, transportation and lifestyle (Geller, 2003).

Smart Growth policies have three essential characteristics: compact designs and higher-density development, firm limitations on building projects within sprawling regions, and across-the-board approaches to land-use planning decisions (Gray, 2007). Centered on new urbanism practices, well-designed communities offer a variety of housing, transportation, employment and recreation choices (Geller, 2003). This is realized by encouraging more compact, mixed-use, and pedestrian-friendly designs and by emphasizing higher-density development rather than the randomly dispersed and low-density development characterized by sprawl. This mode of growth management lessens the impact of sprawl by cutting down commute times, saving energy by reducing auto-dependency, and encouraging social interaction while protecting valuable land resources (Gray, 2007).

One approach to smart growth is infill development—the building of homes, businesses, and other public facilities on unused or underutilized land in urban areas within which infrastructure is already in place. This Smart Growth strategy involves containing growth in areas where development has been excessive and redirecting valuable resources to areas of greater need, particularly in cities and older suburbs (Gray, 2007). By reducing the consumption of raw resources and utilizing wasted resources, as well as resources that have already been dedicated to development, infill development is the ultimate in sustainable development (City of Flagstaff, 2009). The objective is not to stop growth entirely but to dissuade sprawl by making more appropriate use of existing infrastructure while targeting future improvement to areas with greater needs (Gray, 2007).

4-3-2. Benefits of Infill Development

In addition to creating a sustainable environment, infill development creates a variety of housing styles, which provides citizens with housing choices and more opportunities to secure housing and meet economic needs (City of Flagstaff, 2009). It provides housing opportunities necessary to accommodate projected growth and also suits changing demographic trends. Single, elderly, and empty-nest households may prefer the lower cost and lower maintenance of an apartment, condominium, or smaller house on a smaller lot (Washington Research Council, 2001). By taking cues from the New Urbanism movement, these changing demands may be met by utilizing more compact forms of development, such as townhomes instead of single-family homes, and incorporating mixed-use development with a variety of densities in both residential and commercial development (Gray, 2007).

Infill development also encourages community revitalization, benefits businesses by increased local activity and demand for goods and services, and, when infill development situates housing units within walking distance of shops and services, encourages walkability by decreasing auto-dependency (Washington Research Council, 2001). For urbanites it provides live/work/play proximity, and for those living outside the city it offers a base for community, shopping, entertainment, and recreation (City of Flagstaff, 2009).

It may also be less costly for government entities to provide services to community members. New development often requires public investments in infrastructure (e.g., roads, water and sewer lines, schools, and fire stations). By taking advantage of existing infrastructure there may

be economies of scale with regard to providing public services. As infill development increases an area's density, the cost per residence of provided and available services may fall (Washington Research Council, 2001).

4-3-3. Infill Development Best Practices

Multiple factors determine the likelihood of an infill project's success. Aspects such as upkeep of surrounding properties and other new development nearby affect property values, a noted concern of residents in older, surrounding neighborhoods. Projects more readily accepted by neighbors are those that provide amenities that are, or at least are perceived to be, available to the surrounding public and not just to residents; neighborhood pathways, crosswalks, and the preservation of mature trees are examples. Design quality also affects the reception of projects early in the process as well as after completion (Blanchard & Clegg, 2008).

Combating sprawl with urban growth boundaries, multi-modal transportation systems, incentive-based reward systems that discourage leapfrog development, and mixed-use development both residentially and commercially have been adopted by many states for more than two decades. Innovative, integrated approaches to growth management that blend strategies addressing sprawl-related problems, such as transportation, housing, urban renewal, and the environment, with an eye to necessary present and anticipated development have proven most practiced and proficient (Gray, 2007). Approaches that strive to protect farmland and open space, revitalize neighborhoods, provide more transportation choices, encourage reinvestment in existing communities, promote more efficient use of existing infrastructure with mixed-use communities integrating a range of housing and community services as well as serve a variety of incomes are best suited for the changing landscape (Geller, 2003).

National Examples

Infill development is occurring from coast to coast. According to a report by the EPA, since the early 1990s, inner-city redevelopment accounts for more than half of new residential construction in New York, up from 15 percent. In Los Angeles, the number of new housing permits issued for city lots increased from 19 to 37 percent. In Chicago, residential building permits for urban-core redevelopment account for 40 percent of all residential building permits in the region, a rise of 33 percent. Other metropolitan areas with substantial downtown growth include Miami, Atlanta, Seattle, San Diego, Denver, Portland, Oregon, Sacramento, and Milwaukee (Builder, 2009).

According to Ed McMahon of the Urban Land Institute, this is “the result of pent-up demand for mixed-use, urban housing near jobs, and transit. The market pendulum is swinging from drivable suburbanism to walkable urbanism.” Kermit Baker, chief economist of the AIA, attributes the trend to the “convenient access to employers, retail, entertainment, and public transit options” of infill locations and believes they “are proving to be appealing from both a livability and an investment perspective” (Builder, 2009).

In Providence, R.I., developers rehabilitated a run-down mill complex, incorporating historic artifacts whenever possible and included a bike path and restored access to the Woonasquatucket

River. This project contributed to the revitalization of a long-neglected section of the city. It is also one of the first large mixed-use mill rehabilitations in Rhode Island and an excellent example of how new life can be brought to a community through renovation of blighted historic buildings (Smart Growth Rhode Island, 2007a). Also in Providence, by redeveloping restored historic buildings, developers improved the area by introducing residential units and attracting retail tenants. The resultant increase in foot traffic has improved the viability of retail downtown, further contributing to the economic revitalization of the city (Smart Growth Rhode Island, 2007b).

The City of Lakewood, Colo., dealt with an issue many communities across the country face—aging shopping centers that are losing business to larger and newer competitors. City officials worked with citizens, civic groups, and a local developer to transform a declining shopping mall into a real, walkable downtown, known as Belmar. “At build-out...these new, pedestrian-friendly blocks will have one million square feet of shops, restaurants, and other services. The development will also include 1,300 new homes, including townhouses, loft apartments, and live-work units. Belmar will have 700,000 square feet of the first new Class-A office space built in the area in over a decade. Nine acres of parks and plazas will give people a place to get together, relax, and enjoy festivals, markets, and other entertainment. Belmar also offers galleries and studio spaces to artists to make the development an arts hub” (Smart Growth Online, n.d.).

Regional Example

The Delaware Valley Smart Growth Alliance (DVSGA) is composed of for-profit and nonprofit organizations, citizen groups, and government officials within the Greater Philadelphia tri-state region encompassing Southeastern Pennsylvania, Southern New Jersey, and Delaware. DVSGA promotes smart growth through a project-recognition process that encourages local level approval of development proposals, municipal plans, and conservation projects (Delaware Valley Smart Growth Alliance, n.d.a.).

The DVSGA has recognized numerous infill projects over the past few years. In April 2006, it recognized Pembroke North, Radnor Township, Delaware County, Pa., as the first multi-family housing project registered for LEED certification in the Philadelphia region. The Brewerytown Master Plan in Philadelphia was recognized in October 2006 for its assemblage of approximately 16 acres, a mix of abandoned lots, vacant factories and former stables, to create a master-planned, mixed-use community. It will include the renovation of several historic buildings into loft-style residential space while preserving their original exteriors. Also, a 47-acre brownfields infill site bridging Downingtown Borough and East Caln Township in Chester County, Pa., will be redeveloped into a mixed-use community of 305 multi-family homes for sale in a variety of sizes and price ranges, 40 live-above-work rental units, 20,000 square feet of commercial space, and a 22-acre public park with parking and trails. This project was recognized in April 2009 (Delaware Valley Smart Growth Alliance, n.d.b).

4-3-4. Applicability of Concept in Delaware

The most effective statewide Smart Growth initiatives must combine incentives and mandates. Incentives include grants, technical assistance for preparation of local plans, and higher local

priorities of funding for infrastructure and open space. Mandates may consist of mandatory local plans, penalties for non-compliance, such as withholding state and federal funds, and state preparation of local plans for municipalities that fail to adopt required plans. Blending the two might manifest as flexibility in meeting state requirements, mechanisms for intergovernmental co-ordination and dispute resolution, and assurances that state plans will be consistent with approved local plans (Godschalk, 2000).

Sustainable Infill Development in Delaware

The state of Delaware has passed legislation to encourage infill development. In 2001 the General Assembly passed Senate Bill 183, which enabled the use of up to \$1 million a year in Strategic Funds to be used for brownfields matching grants. The Cannery Village in Milton was the first project to receive a matching grant under this legislation. It converted the abandoned Draper King Cole Cannery complex into mixed-use development with a variety of housing styles and light commercial uses. Residential development on the Wilmington Riverfront is another example of successful infill development within Delaware (Strategies for State Policies and Spending Update, 2004) as well as Christiana Care–Smyrna, and Market Street in Wilmington. Christiana Care was an industrial/manufacturing site that is now a medical complex, and Market Street transformed the former central business district into a mixed-use community with retail and residential housing (Delaware State Housing Authority, n.d.).

The strong emphasis on redevelopment, preserving greenspace, and ensuring that quality jobs are located where infrastructure exists is supported by many state agencies. The Delaware Economic Development Office (DEDO) is committed to local, small-business startups and expansions that build on local indigenous strengths and, therefore, support infill development. Brownfields are also an area of concern and are being addressed by DEDO and the Delaware Department of Natural Resources and Environmental Control (DNREC). In collaboration with DNREC, the business community and the Governor’s Office, the state is streamlining the brownfields certification and application processes, and a new brownfields coordinator positioned in the DNREC Secretary’s Office will continue to troubleshoot these processes and liaison with DEDO (Strategies for State Policies and Spending Update, 2004).

The Delaware Office of State Planning Coordination (OSPC) encourages compact and infill development, offers planning assistance and grants, and assists with open-space design techniques (Office of State Planning Coordination, 2004). Also, the Delaware State Housing Authority (DSHA) offers a Housing Development Fund for developers that promote adaptive reuse strategies, and a Live Near Your Work program to assist homebuyers (Delaware State Housing Authority, n.d.).

4.4. Smart Transportation

4-4-1. Definition and Principles of Smart Transportation

A transportation network’s composition will form either smart growth or sprawl (Smart Growth America, n.d.). Communities, economies and national systems are complex and interconnected;

the details of how a place is put together foretell how well it will function (TJPDC, 2007). The chief transportation problems facing communities are urban-peak traffic congestion, inadequate mobility for non-drivers, and external costs of vehicle use, such as road and parking fees, accident risk, and environmental impacts of motor vehicle use (Litman, February 2009). Chronic traffic congestion is frequently an indication of more fundamental problems, such as deficient mobility options that force people to drive for every activity, and dispersed land use patterns that increase those travel distances (Litman, June 2009). Modern planning, though, often uses “more comprehensive analysis methods that evaluate [a] transport[ation] system quality based on mobility (the movement of people and goods) and accessibility (the ease of reaching desired goods, services, and activities).” This comprehensive planning places a higher value on public transit investments, in conjunction with complementary policies such as road and parking policies, commuter trip reduction, and transit-oriented development (Litman, February 2009).

Smart Transportation practices seek to create multiple mobility options and enhance the quality of life for all users while reducing air pollution and the destruction of open space, as well as limiting sprawl and congestion. These practices are important because they integrate transportation investments with land use planning and decision-making. The most beneficial practices involve input from all community members, including those who may be underserved by traditional planning practices.

In developing their *Smart Transportation Guidebook*, the Pennsylvania and New Jersey Departments of Transportation created six principles to direct forthcoming transportation development (PennDOT and NJDOT, 2008):

1. Tailor solutions to the context.
2. Tailor the approach.
3. Plan all projects in collaboration with the community.
4. Plan for alternative transportation modes.
5. Use sound professional judgment.
6. Scale the solution to the size of the project.

These principles are designed to respect the character of each involved community, identify the need, type and complexity of the proper solution and plan for the needs of all users, both current and future. There is no one-size-fits-all solution, but instead each venture should be context-oriented (PennDOT and NJDOT, 2008). This allows for the development of Smart Transportation solutions using multi-modal methods of transportation, and for the adoption of the best practices of Smart Transportation, including Complete Streets and transit-oriented development.

4-4-2. Benefits of Multi-Modal Transportation Development

Before the era of suburbanization, America’s towns were pedestrian-oriented and characterized by a strong sense of place and community. Built on a human scale, traditional towns were dense and compact—people could easily walk from their homes to stores, schools, places of business,

and jobs. The creation of the interstate highway system coincided with more people owning cars and moving to the suburbs. As automobiles became the primary mode of transportation, walkable neighborhoods were replaced with sprawling development patterns with streets that lack connectivity, are less walkable, and are inaccessible by public transportation. This pattern of development is costly, unsustainable, and contributes to traffic congestion and air pollution.

Transportation and land-use planners are advocating a return to traditional development approaches, new urbanism, and pedestrian-oriented community design that emphasize walkable, grid-like street patterns reminiscent of a half century ago. When communities are built on a human scale, and less automobile dependent, planning for multi-modal transportation options (e.g., walking, biking, and public transit) can become a reality. Land-use and community-development patterns will also support “connections among modes so each can fill its optimal role in the overall transport system” (Litman, 2009). Multi-modal transportation options give community members many choices to complete their daily activities, including non-drivers who are often underserved by the current auto-centric transportation network.

4-4-3. National Examples (Best Practices) of Smart Transportation

Two strategies of multi-modal transportation development are being implemented across the country—Complete Streets and transit-oriented development (TOD). Complete Streets are designed to facilitate safe access for users of all ages and abilities, including pedestrians, bicyclists, motorists, and transit riders (National Complete Streets Coalition, n.d.). Complete Streets feature amenities such as sidewalks, sufficient crosswalks, refuge medians, audible pedestrian signals, and established bike and bus lanes (AARP, n.d.).

The concept of TOD is an innovative design tool that is being widely employed by communities throughout the United States to promote smart growth, enhance mobility, curb sprawl, foster multi-modal transportation options, and boost transit ridership. Many successfully implemented TODs involve transit hubs and feature compact, mixed-used development with high-quality pedestrian environments. As a design tool, TOD has the potential to create livable, healthy communities that are integrated with public transit and linked to a connected network of walkable/bikeable streets.

Complete Streets

Incomplete streets often result in gridlock, air pollution, overreliance on fossil fuels, and unsafe options for those who bike and/or walk (AARP, n.d.). The federal government is considering a Complete Streets policy that would require new roads to be built to safely accommodate all modes and users of the transportation system, including children, senior citizens, and persons with disabilities. A Complete Streets provision is currently included in the new House transportation bill and would fall under the jurisdiction of the new Office of Livability. The Office of Livability will be charged with ensuring that all federal transportation investments are consistent with “comprehensive street design policies and principles,” and safely accommodate all transportation system users. The policy would improve safety, reduce congestion and air pollution and create a stronger sense of community (McCann, 2009).

The planning and design approaches of Complete Streets policies seek to improve the travel environment for all users, including pedestrians, bicyclists, and transit users. Special needs groups, including aging drivers, also advocate Complete Streets to combat mobility issues. Participants of an innovation roundtable hosted by AARP's Public Policy Institute (PPI) determined that "less than one-third of the 90 state and local Complete Streets policies explicitly address the needs of older road users" (AARP PPI, 2008, p. 3). For older road users, "navigating intersections requires the ability to make rapid decisions, react quickly, and accurately judge speed and distance—skills that commonly diminish through the natural aging process." To aid aging drivers, roads can be designed to address these issues and prevent accidents from occurring (AARP PPI, 2008, p. 15).

Transit-Oriented Development (TOD)

Successful TOD projects should be designated for higher-density areas along a centrally located commercial corridor with well-connected grid-like street networks build along transit stations. Land use around the transit stations is characterized by infill development—using existing resources and infrastructure. This development approach usually draws heavily on design principles of older central cities and suburbs where density decreases away from the core (DeCoursey & Athey, 2007).

Benefits of TODs include higher transit usage, less automobile dependence, sense of increased public safety, and higher property values (Tumlin & Millard-Ball, 2003, DeCoursey & Athey, 2007). TOD can also contribute to more affordable housing as housing costs for land and infrastructure can be considerably reduced through compact growth patterns. It can also revitalize older communities and commercial sectors, thus increasing tax revenues (Institute for Public Administration, 2007). Being pedestrian friendly, transit-oriented development provides access to people with mobility aids by minimizing stairs, grade changes, driveways, and parking lot crossings (DeCoursey & Athey, 2007).

A recent study summarizes the three elements that are needed for transit-oriented development to succeed—density, design and diversity. Residents of denser communities are more likely to walk to shops and services, living among mixed-use buildings and thereby generating the true payoff in reduced vehicle trips. Street patterns and design factors help explain why some of the most walkable communities are often in established areas. Walkability is amplified when streets are designed to accommodate lower traffic volumes. Low-income households also benefit because not only do they tend to own fewer vehicles and are more likely to use transit, but they also gain from the affordable housing component (Tumlin and Millard-Ball, 2003).

Smart Transportation and Special Population Needs

The existing American road system was chiefly built using design standards that did not specifically take into account the needs of an aging population of drivers (Molnar et al., 2007). Mobility is vital to long-term health and independence, and the loss of driving privileges may lessen one's access to social opportunities, employment, social services, and community activities (Institute for Public Administration, 2007). Each year, more than 600,000 adults age 70 and older have stopped driving and become dependent on others to meet their transportation needs (Molnar et al., 2007). Those who continue driving are affected by risk factors such as

impaired vision, diminished cognition, and decreased motor function (Institute for Public Administration, 2007).

Thomas Jefferson Planning District Commission (TJPDC)

The Thomas Jefferson Planning District Commission utilizes a unique approach to regional planning that is consistent with Smart Transportation principles. The decisions are not made in a vacuum and involve community members. “Community planning encompasses strategies that link land use, development and transportation, systematically working through neighborhood-based problems and situations” (TJPDC, n.d.a). Ideally, the options “will provide a balanced transportation system integrating all travel modes and complementing environmental, economic, and community development goals” (TJPDC, n.d.b).

To assess current housing and transportation needs, project future needs, and identify overlapping issues and opportunities, the Thomas Jefferson Planning District Commission created an online toolkit in 2007 for use (TJPDC, 2009):

- In a locality’s comprehensive planning process
- As part of a comprehensive plan or transportation study
- As an element in a needs assessment for people with disabilities
- To help determine desirable locations for housing, transit, and/or services
- To evaluate proposed projects and their impact on the surrounding area

The toolkit is useful when considering and addressing the needs of citizens who lack a car or the ability to drive, have limited income and access to information or education, have a disability, or are either too young to too old to benefit from the locality’s transportation network (TJPDC, 2007).

4-4-4. Applicability of Concept in Delaware

Smart Transportation takes into account the needs of all community members, including special needs and underserved populations. It stresses the need to develop solutions that maximize the access and mobility of all people and supports a diversity of modes for various needs and context. In order to best accommodate the needs of its residents, Delaware is focused on implementing its Complete Streets policy, as well as creating more TODs and addressing the needs of its underserved citizens and special populations (e.g., elderly, disabled, minority populations).

Delaware’s Complete Streets Policy

To provide multi-modal transportation options and safely accommodate users of all ages and abilities, communities should be continuously linked and connected. Community design principles such as context-sensitive design, mobility-friendly design, and mixed-use and infill development can be adopted to support the walkability and bikability of a community. These practices are supported by the Delaware Complete Streets Policy, set forth as Executive Order Number 6 by Governor Jack Markell on April 24, 2009. Smart Transportation principles, walkable communities, and a focus on interconnected, accessible pedestrian networks are also

reinforced at the state level through the *Delaware Statewide Pedestrian Action Plan* (Delaware Department of Transportation, 2007).

TOD in Delaware

While rail is not a near-term reality for intra-state transportation in Delaware, there are other multi-modal options that could support transit-oriented development. The Wilmington Riverfront redevelopment is the most recognizable example of TOD in Delaware. It includes high-density residential development and a large mix of commercial businesses near the Wilmington train station, as well as the bus depot, allowing for interstate travel. Other possibilities include Edgemoor with its dense development, a grayfield mall and rail infrastructure, as well as Claymont, as its train station is less than one mile from Main Street and there is potential for improving connectivity through sidewalks and additional redevelopment between the train station and downtown (O'Donnell et al., 2008).

Addressing Special-Population Needs in Delaware

Many of the tenets of Smart Transportation are being applied in Delaware to address the needs of underserved or special populations (e.g., elderly, disabled, minority populations) in the state. One of the more pressing concerns is the rate at which the population of Delaware is aging. As Delaware grays, residents who opt to age-in-community are often choosing to remain in suburban or rural areas, usually the most auto-dependent areas of the state, and many people moving to Delaware are choosing to retire in rural Kent and Sussex counties. Because of this, Delaware has the highest number of individuals living in or moving to less dense areas (Institute for Public Administration, 2007).

Intersections are especially dangerous to older drivers; changes in roadway design related to protected left-turn signals, stop signs, signal timing, roundabouts, and walk signs benefit not only those older drivers, but generally all drivers (Molnar et al., 2007). Intersections in areas with high concentrations of the elderly should be designated as priority zones (Institute for Public Administration, 2007).

Other issues associated with older drivers include travel patterns, safety standards, licensing and testing requirements, and alternative-transportation options (Institute for Public Administration, 2007). Older adults, like most Americans, generally prefer to get around by private automobile, but it may become increasingly uncomfortable or embarrassing to ask family and friends for rides (Molnar et al., 2007). Multi-modal transportation options, and community-design strategies such as Complete Streets and transit-oriented development, decrease the need for older citizens as well as other non-drivers to rely on others for transportation and allow all citizens to lead a higher quality life (Institute for Public Administration, 2007).

According to the University of Michigan Transportation Research Institute, alternative transportation options include public transit, paratransit, specialized transit services, supplemental transportation, and other alternatives such as walking or bicycling (Molnar et al., 2007). Several agencies are working to create multiple mobility options and enhance the quality of life for all users. The Delaware Department of Transportation (DelDOT) has a number of initiatives designed to improve the mobility options of Delawareans. It has created guidelines

for the installation of non-visual pedestrian signals (DelDOT, 2007). Established through federal legislation, the Transportation Enhancements Program is intended to encourage the development of a more balanced, multi-modal approach to mobility and accessibility. It provides funding for non-traditional, transportation related projects to further the cultural, aesthetic, and environmental goals of the communities in which they are built. Examples of the projects include installing sidewalks, creating bicycle and multi-use pathways, and installing lighting and crosswalks (DelDOT, n.d.).

Rideshare Delaware, a service of DART First State, is dedicated to aiding commuters with finding and using alternative modes of transportation. It offers free ride-matching services for commuters working in Delaware as well as for parents of Delaware school students, an emergency-ride-home benefit for registered commuters actively ridesharing to work, vanpool services, and transportation benefit assistance to employers in Delaware (Rideshare Delaware, n.d.).

The Delaware Aging Network (DAN), established in 2005, is a consortium of over 50 agencies across the state committed to improving the quality of services received by older adults in the state. In Sussex County, DAN is improving transportation services for older adults. It coordinated transportation providers in Sussex County and organized the Sussex Mobility Consortium in order to research transportation systems and devise an improved, cost-effective, coordinated transportation system. This new system began operations in April 2007 in Sussex County and now meets the transportation needs of both older and physically challenged adults (Delaware Aging Network, n.d.).

Supporting the regional goal of Smart Transportation planning, the Wilmington Area Planning Council (WILMAPCO) sponsors a Congestion Management Systems subcommittee, which takes a “systems” approach to identifying and addressing congestion in our region (WILMAPCO (n.d.a). It also offers Walkable Community Workshops to “bring together residents, elected officials, advocates, public agency staff, public health practitioners, educators, planners and engineers to focus attention on making your community safer and easier to walk in.” Walkable neighborhoods and communities are pedestrian friendly, as well as bicycle accommodating, and are, therefore, vibrant and livable places that give residents safe and active transportation choices (WILMAPCO, n.d.b).

5. REVIEW OF MUNICIPAL PUBLIC POLICIES AND CODES IN ELSMERE, WYOMING, AND MILLSBORO

Good planning and policy decisions by local government officials will have a significant impact on the physical character, transportation options, economic viability, and livability of a community. A local government comprehensive plan serves as a blueprint to forge a collective vision for future growth, community design, and land use. In addition, comprehensive plans provide a framework to guide development in a fiscally responsible manner, coordinate public infrastructure investments, and provide public services that ensure the health and safety of residents. Land uses, patterns of development, and public policies that result from the comprehensive-planning process can directly affect the transportation infrastructure, safety, accessibility, and mobility within a community.

A local government comprehensive plan can establish parameters for future physical government growth within several sections of the document. A section of the document will outline the overall vision and goals of a community, including transportation goals. A transportation chapter within the document will describe the transportation system serving the jurisdiction and include discussion on streets and highways, public transportation, transportation services for special populations, as well as pedestrian and bicycle circulation systems and/or facilities. Other chapters within the comprehensive plan (e.g., community character, land use, economic development) may also convey transportation-related objectives.

Finally, a comprehensive plan can set the stage and provide recommendations for the adoption for regulatory practices related to transportation policy and planning. Regulatory practices include public policies, codes, and ordinances. The comprehensive plan may also include recommendations for municipal implementation tools such as context-sensitive design, infill development, Complete Streets, and/or Smart Growth. Principles of Smart Growth that can be incorporated into comprehensive plan goals include a desire for mixed land uses, compact building design, downtown density, walkable neighborhoods, transportation options, and a range of housing choices near daily destinations (ICMA, 2002). Yet many local government codes pose regulatory barriers to community livability. Zoning codes are often inflexible and require single-use rather than mixed-used districts, impose outmoded standards, and allow community design that is influenced by developer preferences rather than community character.

This project included a review of comprehensive plans and regulatory practices of three municipalities—Elsmere, Wyoming, and Millsboro. The purpose of the review is to assess the extent to which municipal plans and policies encourage thoughtful community design and development patterns that support a well-balanced transportation system. A matrix was prepared that summarizes the review of municipal policies and codes was prepared (Appendix D).

5-1. Town of Elsmere

The Town of Elsmere is a small (population 5,800), incorporated municipality in New Castle County, located about five miles from Wilmington, Delaware (United States Census Bureau, 2000b). The Town of Elsmere was in the process of updating its comprehensive plan coincident with the publishing of this report, so it should be noted that this section refers to its pending 2010 comprehensive plan.

5-1-1. Comprehensive Plan

According to the pending *2010 Update to the 2004 Town of Elsmere Comprehensive Plan*, two of Elsmere's chief visions are to "create a desirable and healthy environment in which to live and work" (Institute for Public Administration, 2010a, p. 41) and to "be known as a town you may walk around" (Institute for Public Administration, 2010a, p. 42). To achieve this vision, the town has set forth several goals including (Institute for Public Administration, 2010a):

- Create a desirable and healthful environment in which to live and work.
- Provide a coordinated pattern of land use that prevents the indiscriminate mixture of land uses and that provides for a concentration and clustering of uses to achieve harmony, order, and efficiency.
- Improve intergovernmental cooperation on transportation issues.

Future Land Use

As most of Elsmere and its surrounding environment have been developed, there is little in the way of future land use planning. The comprehensive plan, however, does acknowledge that there are some possible areas for infill and redevelopment, yet it does not go into much detail in that manner.

Transportation

Although there are no park-and-ride locations in Elsmere, there are 12 bus stops in and around Elsmere, which are serviced by two Delaware Area Regional Transit (DART) First State bus routes. There is a passenger rail station a few miles outside of Elsmere at the Wilmington Train Station, which provides Amtrak and SEPTA services. Although there is no specific requirement found in the Code, sidewalks are continuous throughout much of Elsmere; yet many sidewalks are in disrepair, and newer developments are lacking sidewalks altogether. Also, there are no bicycle services or greenways within the town confines (Institute for Public Administration, 2010a).

Under the University of Delaware's Healthy/Walkable Communities Initiative, Elsmere has begun plans to create a greenway trail along an active rail line running through the town. This trail would connect two parks, Maple Avenue Park and Fairgrounds Park, allowing for better pedestrian mobility between the two. Included in this trail plan is the addition of bike lanes on surrounding roads to minimize bike traffic and potential user conflicts on the trail (Institute for Public Administration, 2010a). Another plan under consideration is to establish a Main Street program on the Kirkwood Highway in Elsmere to revitalize its economic climate. Envisioned

changes include streetscaping, provisions for mixed-use buildings, an enhanced commercial presence, and improved transportation (Institute for Public Administration, 2010a).

The comprehensive plan strongly advocates that transportation system improvements be made to enhance pedestrian accessibility and safety. The plan recommends that updates be made to the municipal code to require sidewalks in all new commercial and residential development and redevelopment, to enhance safe and walkable complete streets (Institute for Public Administration, 2010a, p. 49). Some other recommendations include instituting a program to inspect and repair sidewalks, updating sidewalks to ADA standards, working with DelDOT to create safer pedestrian crossings, reviewing the right-of-way maintenance programs enacted in other municipalities for applicability in Elsmere, reducing speed limits and traffic hazards for pedestrians, and upgrading bus stops and shelters in Elsmere (Institute for Public Administration, 2010a).

5-1-2. Elsmere Code

The Town of Elsmere Code is the comprehensive guide for regulations and policies within Elsmere. The Code is currently being updated in its entirety, so it is important to note that this section will refer to the 2007 version of the Code. Code language implies a strong commitment to mobility and accessibility, as in the case of creating an official map of the town “to conserve and promote the public health, safety, and general welfare” of the citizens of Elsmere (Town of Elsmere, 2007, § 38-5); many aspects of the Code are modeled with such a focus in mind.

Building

As a member of the International Code Council, the Town of Elsmere adheres to the International Building Code (Town of Elsmere, 2007, § 76-6). This Building Code has a number of regulations regarding accessibility standards for all buildings and structures to accommodate persons with disabilities and meet ADA requirements (International Code Council, 2002, § 1103.1). Such buildings that fall under the scope must have accessible routes (International Code Council, 2002, § 1104) and at least 50 percent of the entrances and exits must be universally accessible (International Code Council, 2002, § 1105.1). The Building Code also stipulates that sidewalks should be no less than 36 inches wide (International Code Council, 2002, § 3104.8).

Zoning

Within the zoning chapter of the Elsmere Code, the town requires that the developer and landowner of each planned unit being developed must create a property owner’s organization (Town of Elsmere, 2007, § 225-28.F.5.a). The purpose of such an organization is to maintain open space and recreational facilities of any Planned Unit Development (PUD), which may provide on-site clustering of common open space and recreation areas (Town of Elsmere, 2007, § 225-28.F.5.b.1).

Subdivision and Land Development

Under this section of the Code, the town states that environmental and traffic-impact analyses may be required in subdivision applications (Town of Elsmere, 2007, § 196-23.B.5-6), but this is

not always a requirement. This section also outlines the creation of a Park and Recreation Improvement Fund, in which the town will set aside money from developers under “money in lieu-of-land” provisions (if a developer does not elect to donate land for open space or recreational land) to purchase land for local recreational purposes in close proximity to that subdivision (Town of Elsmere, 2007, § 196-23.D). Such areas would have set speed limits and designated parking to protect and enhance the experience of those using the recreational areas (Town of Elsmere, 2007, § 155-1.F). It is noted that a Town of Elsmere representative indicated that they had no recollection that the Park and Recreation Improvement Fund had been activated and that any funds had been donated by developers to the town for open space or recreational land.

Sidewalks

Although there is a chapter in the Code referring to streets and sidewalks (Town of Elsmere, 2007, § 192), there are few sidewalk regulations. Under the property maintenance clause that states that residents are responsible for “the property and vegetation in the right of way” next to a public street (Town of Elsmere, 2007, § 171-1), the responsibility for the maintenance of sidewalks rests on the property owner, not the town. In fact, the Charter of the Code states that if the town feels that sidewalks are necessary, the town will notify the owner of that land and it will be that owner’s responsibility to have the sidewalk paved and repaired (Town of Elsmere, 2007, C§ 410).

5-2. Town of Wyoming

The Town of Wyoming is a small (population 1,141) incorporated municipality located within the Dover metropolitan area in Kent County, Delaware (U.S. Census Bureau, 2000b). The Town of Wyoming was in the process of updating its comprehensive plan coincident with the publishing of this report, meaning that this section will mainly discuss the pending 2010 update of the comprehensive plan.

5-2-1. Comprehensive Plan

According to the pending *2010 Update to the Town of Wyoming Comprehensive Plan*, the Town of Wyoming held a number of public meetings and workshops to develop strategic visions and goals for the future of Wyoming. From this dialogue, the Wyoming Planning and Zoning Committee created a set of goals to help direct the updated comprehensive plan. Primary goals and objectives developed that relate to enhanced mobility include (Institute for Public Administration, 2010b, p. 10-11) the following:

- Require the development of open space and parkland that will be integrated into an overall town park system.
- Provide safe and reliable circulation for all road users within town, including roads, sidewalks, and bike paths.
- Plan for and require street and sidewalk linkages between neighboring subdivisions.
- Work towards a network of interconnected open spaces, parks, and trails.

Existing and Future Land Use

Currently, the town has a few recreational areas, which include the 16-acre Wyoming Town Park and the Johnson Memorial Park. Other such locations exist, such as rights-of-way around along railroad tracks, playgrounds, and athletic fields, with a number of other fields and parks in adjacent municipalities (Institute for Public Administration, 2010b).

As of the 2010 update, the Town of Wyoming has an interest in redeveloping the Wyoming Mill area. While wanting the area to become largely commercial, the town would like to see some mixed-use residential units above commercial buildings. Furthermore, the town is interested in having the nearby creek and other amenities available to the public and would like to encourage dedications of open or park space to promote public use. The town is also interested in preserving the mill, to maintain the local cultural identity of the area (Institute for Public Administration, 2010b). Further ideas for future land use include the possible creation of a Waterfront District to ensure adequate open space, a mix of uses, and public access to the shore (Institute for Public Administration, 2010b, p. 36).

Transportation

The Town of Wyoming has two DART First State bus routes that run through the town daily on an hourly basis. The DART system provides a successful inter-county bus service throughout Delaware using a line close to Wyoming, which, according to the comprehensive plan, would benefit Wyoming if a stop was placed inside the town. DART also provides a paratransit service that addresses the needs of the elderly and persons with disabilities throughout the state and within Wyoming. Qualified persons with disabilities, and/or those over 60 years of age, may contact DART 24 hours before needing transportation to schedule roundtrip paratransit transportation. Although there is limited public transportation service, the plan recommends that Wyoming work with DelDOT to acquire more bus services in the town (Institute for Public Administration, 2010b).

Wyoming participated in the 2009 University of Delaware's Healthy/Walkable Communities Initiative, which analyzed and scored "the town's walkability on three levels—the pedestrian/cyclist network; the environment a walker/cyclist would be likely to interact with; and the destinations available and appropriate to them (Institute for Public Administration, 2010b, p.26). The project found that Wyoming had a large percentage of sidewalk coverage, meaning that most streets had a least one adjacent sidewalk. There are a number of sidewalks in need of repair, as well as areas in need of sidewalks, and the plan notes that such areas are scheduled to be improved. Many older streets do not have sidewalks, yet the town feels that traffic is minimal in those areas, meaning that sidewalk and bike-lane maintenance is less of a priority along such roads. Transportation recommendations include working with DelDOT for more bus services, requiring developers to install sidewalks and bicycle lanes, and retaining public rights-of-way (Institute for Public Administration, 2010b).

5-2-2. Wyoming Code

Land Use and Development Code

In 2009 the Wyoming Town Council adopted an ordinance repealing their former zoning and subdivision ordinances, to create the Land Use and Development Code (Wyoming Planning and Zoning Committee, 2009, p.1-3). Thus this code will be referenced in terms of Wyoming's ordinances concerning mobility and accessibility.

Town Center

According to Wyoming's Land Use and Development Code, the town center's purpose is to (Wyoming Planning and Zoning Committee, 2009, § 3-4.C)

- Encourage a mix of retail, office, and residential uses, consistent with the existing scale and character of the area, in order to promote the economic stability of the area.
- Provide for a limited number of apartment dwellings in conjunction with retail, office, and service uses, but only on the second and third stories of such buildings.
- Provide for the continuation and improvement of existing residential uses.
- Encourage redevelopment by permitting residential structures to be used wholly or partially for permitted non-residential uses.
- Provide a modification procedure, utilizing development-plan review, to alleviate difficulties relating to parking and other area regulations.

Sidewalks

The Code states that all land-use applications must provide for sidewalks, unless the street in question cannot typically provide one (Wyoming Planning and Zoning Committee, 2009, § 12-2.A.1). They must be built to state standards, be five feet wide, and available on both sides of the street (Wyoming Planning and Zoning Committee, 2009, § 12-2.A.2-3). They should also connect to other sidewalks or at least be designed for easy connection to future development (Wyoming Planning and Zoning Committee, 2009, § 12-2.A.4).

Recreation, Open Space, and Other Provisions

According to the Code, for each development or subdivision, land must be dedicated for parks or other recreational uses (Wyoming Planning and Zoning Committee, 2009, § 10-1.A.1.a, § 10-1.B). The size of space must be 900 square feet or 1/2 acre of land per unit, whichever is greater (Wyoming Planning and Zoning Committee, 2009, § 10-1.B.3.a). Developers may opt out and instead pay a cash sum to the town, which will be earmarked for open-space development (Wyoming Planning and Zoning Committee, 2009, § 10-1.A.1.b, § 10-1.C). Such land will be maintained by a homeowners' association, which may be formed solely for this purpose if necessary (Wyoming Planning and Zoning Committee, 2009, § 10-2).

To enhance walkability, the Code also stresses using the minimum size for lots required in the specific subdivision (Wyoming Planning and Zoning Committee, 2009, § 11-5.B.3). The Code mentions that if a lot size is double the minimum requirement, then the Planning and Zoning Committee may require further subdivision or the opening of future streets (Wyoming Planning and Zoning Committee, 2009, § 11-5.B.3.g). Also, trees must be planted every 30 feet along

municipal streets (Wyoming Planning and Zoning Committee, 2009, § 10-5.A.1). Although curb size is not regulated in the Code, they must be built to State standards (Wyoming Planning and Zoning Committee, 2009, § 12-3.B).

Building

Wyoming's Land Use and Development Code outlines some specific regulations in terms of building-site layouts. Open space that is intended for public use should be easily accessible to pedestrians as well as the handicapped and elderly (Wyoming Planning and Zoning Committee, 2009, § 11-4.D). Furthermore, "Individual lots, buildings and units shall be arranged and situated to relate to surrounding properties, to improve the view from the buildings, and to lessen the land area devoted to motor vehicle access" (Wyoming Planning and Zoning Committee, 2009, § 11-4.G). It should also be noted that Kent County is a member of the International Code Council, so, like the Town of Elsmere, Wyoming (located within Kent County) follows the building regulations put forth in the International Building Code (Kent County, 2010).

5-3. Town of Millsboro

The Town of Millsboro is a small (population of 2,360), incorporated municipality in Sussex County, Delaware (U.S. Census Bureau, 2000b). The Town of Millsboro updated its Comprehensive Plan in 2009.

5-3-1. Comprehensive Plan

The *2009 Millsboro Comprehensive Plan Update* provides a guide for future annexation, infrastructure, zoning, and subdivision decisions for the town of Millsboro and recommends that Sussex County and the state of Delaware focus development within the corporate limits of the town and provide mechanisms to discourage scattered residential, commercial, and industrial development (p. 1).

The Plan includes the following vision statement: "The Town of Millsboro strives to be a place where economic growth and diversity are balanced with small-town familiarity and natural beauty and where families, retirees, vacationers and people from all walks of life can live safely and comfortably" (p. 2). To realize this vision, it lays out a number of goals, including:

- Remain a center for appropriate and planned growth within Sussex County (p. 2).
- Encourage an adequate supply of a range of residential uses and housing types (p.2).
- Maintain and expand open space and recreation facilities to meet current and future needs (p. 3).
- Protect transportation investments and improve access to transportation resources through connecting land-use decisions and transportation-investment decisions, developing interconnected residential neighborhoods, consolidating entrances for commercial properties where appropriate, and to provide access to alternative-transportation modes (p. 3).

Future Land Use

The Plan recommends that Millsboro consider annexations within areas toward the northwest to the southeast of town, reinforcing existing patterns of development and compatible with the layout of water and wastewater infrastructure. It recognizes that issues of transportation and interconnection of new and existing subdivisions will become increasingly important as development is directed into these two areas. It states that all new developments should be required to set aside land for public recreation and open space usable by all residents of town (p. 24).

The *2009 Millsboro Comprehensive Plan Update* also recommends the following:

- Encourage interconnected residential infill development of vacant parcels adjacent to existing residential (p. 24).
- Support existing downtown commercial activities through parking and street improvements and the management of available land for office space and neighborhood commercial development (p. 24).
- Set aside industrial land and land for large-scale office employment for the development of employment centers (p. 25).

Transportation

The Plan recognizes that the future of the town will be shaped by the quality of transportation facilities and interconnectivity between land-use decisions and the provision of appropriate transportation investments, and that the impacts of regional development will continue to have profound seasonal vehicular-traffic impacts (p. 51). In light of this, the Plan sets a number of goals, including:

- Maintain and improve the existing transportation and circulation pattern within the town.
- Encourage mobility-friendly design that interconnects new development and the existing street pattern.
- Connect land-use and transportation decisions to preserve the capacity of existing and future transportation investments.

While the Town currently has no public-transportation options, public-transportation opportunities are strongly supported by residents of Millsboro and it is strongly believed that public transit will help offset some traffic problems in and around the community. The town plans to coordinate with County and State agencies to provide bus service at strategic locations in Millsboro (p. 55).

Also, Millsboro is eager to promote pedestrian traffic, but the Plan indicates that its citizens believe that walking is *not* a reasonable option, even for the shortest trips. Therefore, in areas of existing development, the Plan notes that sidewalks should be installed in areas with high pedestrian traffic and areas where pedestrian traffic is encouraged. In addition the Town is also encouraging development of crosswalks in high-traffic areas to greatly increase pedestrian comfort and safety (p. 56). The Plan recommends providing alternative-transportation choices including public transit, and a pedestrian and bicycle network as well as improving the pedestrian and bike connectivity and safety throughout the town to create a more walking/biking-friendly community (p. 57).

5-3-2. Millsboro Code

The Town of Millsboro Code is the comprehensive guide for regulations and policies within Millsboro, was adopted in 1998, and is amended as warranted.

Building

The Town of Millsboro adheres to the International Building Code (Town of Millsboro, 2005, § 70-1). This Building Code has a number of regulations regarding accessibility standards for all buildings and structures to accommodate persons with physical disabilities (International Building Code, 2009, § 1103.1). Also, it requires that the unobstructed width of pedestrian walkways shall not be less than 36 inches and the total width shall not exceed 30 feet (International Building Code, 2009, § 3104.8).

Zoning

The zoning chapter of the Millsboro Code encourages mixed-use development through the creation of the following districts:

- Residential Planned Community District to be used only be for mixed uses (§ 210-20.C.3)
- Planned Commercial District to provide appropriately located, well-planned areas for large-scale retail and commercial uses with an orderly and systematic development design providing the rational placement of activities, parking and auto circulation, pedestrian circulation, ingress and egress, loading, landscaping, and buffer strips (§ 210-21.A.3)
- Traditional Neighborhood Development District to allow development consistent with design principles of traditional neighborhoods which are compact; designed for the human and pedestrian scale; provide a mix of uses, including residential, commercial, civic, and open-space uses in close proximity to one another in the neighborhood; provide a mix of housing styles, types and sizes to accommodate households of all ages, sizes, and incomes; incorporate interconnected streets with sidewalks and bikeways and transit that offer multiple routes for motorists, pedestrians and bicyclists and provide for the connections of those streets to existing and future developments; and incorporate significant environmental features into the design. (§ 210-25.A)

Subdivision of Land

The Subdivision of Land chapter in the Millsboro Code is quite thorough regarding issues relating to mobility and quality of life for community members. It seeks to promote infill development by limiting strip development due to the undesirable consequences relative to future development of interior parcels and the compromise of the traffic integrity of the roads involved (§ 178-14.A.5.s). Also, the preservation of natural features and open space is required when designing new developments (§ 178-14.E.3 and § 178-14.M.1). Much emphasis is also placed on sidewalks, curbs, and crosswalks (§ 178-13.A.3, § 178-13.A.4 and § 178-14.C.2). In addition, shade trees are to be located at intervals of approximately 60 feet, but not to interfere with utilities, sidewalks or driveways (§ 178-14.A.6).

Streets and Sidewalks

The Streets and Sidewalks chapter within the Millsboro Code states that it is unlawful for anyone to allow snow to remain on sidewalks for more than six daylight hours after it has stopped snowing (§ 174-19).

5-4. Comprehensive Plan and Code Analysis

For Delaware local governments, a vision statement within a comprehensive plan communicates a compelling vision of the future and is intended to guide future land-use decisions. Most vision statements are broad and focus on how a town's quality of life and character will be maintained through the provision of services and the protection of the health, safety, and well-being of town residents. There are no right or wrong visions statements. Vision statements are developed from a consensus-driven process and reflect the collective aspirations of town residents. A vision statement of a comprehensive plan does not specifically focus on transportation. Most recognize that high-quality transportation systems are essential to support a town's vision for quality growth and future change. An effective transportation system, maintenance of transportation infrastructure, and integration of transportation services needs to be part of the overall vision of a town and achieved through cooperation with DelDOT, metropolitan planning organizations (MPOs), public transportation agencies, and other transportation stakeholders.

5-4-1. Analysis of Elsmere, Wyoming, and Millsboro's Policy Context as it Relates to Community Livability

An analysis of the comprehensive plans indicates that the towns of Elsmere, Wyoming, and Millsboro are doing a good job of setting the overall policy context for future growth and development, as well as considering future transportation needs. Each town's comprehensive plan recognizes that a well-coordinated transportation system is essential to enhancing the quality of life for residents while reducing undesirable development patterns, such as sprawl. The comprehensive plan vision statement for each town conveys an overall desire to develop functional transportation systems, interconnected circulation systems, coordinated patterns of land use, and streetscapes to enhance the community's health and quality of life. In addition to the vision statement, each town's comprehensive plan document contains a transportation section or chapter. The transportation chapter sets forth goals, objectives, and recommendations that support the overall vision of the town as it relates to transportation. The transportation chapters for the towns of Elsmere, Wyoming, and Millsboro convey the needs to

- Promote pedestrian accessibility and safety.
- Enhance walkable, Complete Streets.
- Maintain walkable infrastructure to federal ADA standards and in cooperation with DelDOT.
- Provide transportation options (e.g., walking, bicycling, and public transportation)
- Require developers to provide public infrastructure (e.g., sidewalks, trails, bicycle lanes, recreation facilities or parks) or, in some towns, a fee-in-lieu of the infrastructure
- Incorporate mobility-friendly design.
- Develop pedestrian circulation systems that are interconnected and provide linkages.

The towns of Elsmere, Wyoming, and Millsboro have enacted ordinances or other regulatory provisions within their town codes to implement comprehensive-plan recommendations. The following code provisions, enacted by the towns, focus on the interrelationship between transportation and a vision of livability. The various code provisions:

- Encourage development of town centers or “Main Streets” that provide compact development with a mix of commercial and residential uses.
- Allow zoning code designations that permit a mix of uses (including a “Traditional Neighborhood Development District”).
- Promote a range of housing costs and types.
- Require pedestrian-friendly infrastructure.
- Call for the designation of recreation and open-space areas.
- Encourage infill development rather than sprawling land-use patterns.

5-4-2. Checklist to Assess Livability Components with Comprehensive Plans

While not part of the scope of work for this project, IPA developed a Comprehensive Plan Assessment Tool to assist Delaware municipalities in preparing comprehensive plans that emphasize planning and building healthier communities (Appendix E). The tool is intended for use by local government officials, planning commissions, or other individuals involved in writing or updating a comprehensive plan for a community. The Comprehensive Plan Assessment Tool will eventually be incorporated in IPA’s Toolkit for a Healthy Delaware, which was launched in June 2010 and may be found at www.ipa.udel.edu/healthyDEtoolkit.

5-5. Model Provisions

Again, while there is no right or wrong comprehensive-plan vision statement. The transportation chapter of a comprehensive plan can reinforce a transportation vision for a municipality. A transportation vision statement may stress the need for providing a multi-modal transportation system that fosters community character, economic rigor, and attractive design.

The Transportation Element within the Comprehensive Plan of the City of Bremerton, Wash., conveys a comprehensive vision for how the city’s transportation system should function and evolve. The following model vision, for a transportation chapter of a comprehensive plan, has been adapted from the City of Bremerton’s transportation vision statement (City of Bremerton, 2004, TR-1):

The town will promote convenient, accessible, safe, and environmentally responsible transportation to serve residents of all ages and abilities. The town will support transportation alternatives to the automobile, such as walking, bicycling, or riding public transportation. With support of and in collaboration with state government agencies, metropolitan planning organizations, and other transportation stakeholders, the town’s transportation system will be integrated, support Complete Streets principles, and encourage economic vitality and competitiveness. The town’s transportation system and infrastructure will be designed and

maintained to encourage connectivity, transportation linkages, vibrant streetscapes, safe and convenient walking and cycling, and attractive and healthy neighborhoods and town centers. In addition, the National Policy and Legal Analysis Network to Prevent Childhood Obesity (PHLPNET) recently developed *Model Comprehensive Plan Language on Complete Streets*. The model recommends drafting a transportation vision statement to set forth goals of community livability and quality of life. Below is the model transportation vision statement (PHLPNET, 2010, p. 3):

The community of [Jurisdiction] envisions a transportation system that encourages healthy, active living, promotes transportation options and independent mobility, increases community safety and access to healthy food, reduces environmental impact, mitigates climate change, and supports greater social interaction and community identity by providing safe and convenient travel along and across streets through a comprehensive, integrated transportation network for pedestrians, bicyclists, public transportation riders and drivers, [insert other significant local users if desired, e.g., drivers of agricultural vehicles, emergency vehicles, freight, etc.] and people of all ages and abilities, including children, youth, families, older adults, and individuals with disabilities.

In addition to the model transportation vision statement, PHLPNET suggests the inclusion of the following goals and objectives within a comprehensive plan transportation chapter or other chapters (PHLPNET, 2010, pps. 4, 6, 8, 10, 12):

Goals

- Provide safe and comfortable routes for walking, bicycling, and public transportation; increase use of these modes of transportation; enable convenient and active travel as part of daily activities; reduce pollution; and meet the needs of all users of the streets, including children, families, older adults, and people with disabilities.
- Ensure that land-use patterns and decisions encourage walking, bicycling, and public transportation use, and make these transportation options a safe and convenient choice.

Objectives

- Integrate Complete Streets infrastructure and design features into street design and construction to create safe and inviting environments for all users to walk, bicycle, and use public transportation
- Make Complete Streets practices a routine part of [Jurisdiction]’s everyday operation
- Plan and develop a comprehensive and convenient bicycle and pedestrian transportation network
- Promote bicycle, pedestrian, and public transportation rider safety
- Make public transportation an interconnected part of the transportation network

6. STAKEHOLDER INPUT

The literature review and analysis of municipal policies and codes provided a framework to understand issues related to community livability and how Delaware municipalities are addressing these issues in a policy context. Yet, stakeholder input was critical to the success of the project. IPA planned and facilitated two community workshops to solicit input from volunteer participants and gain a better understanding how mobility directly impacts the quality of life for Delawareans.

During the project, it was suggested that teenagers are an underrepresented group and lack mobility, often relying on others for transportation. The IPA pondered how to reach the teenage audience given their mobility challenges and the obstacles to collecting qualitative data from Delaware students in a timely, confidential, and cost-effective manner. University of Delaware IPA policy scientist and Delaware Social Studies Education Project director Francis O'Malley was consulted on the logistics and methodology to accomplish this task. He suggested inviting Delaware high school civics education teachers to have their students comment on mobility issues using a website blog.

At the onset of the project, IPA established an interdisciplinary working group. Working-group members represented various state departments and agencies (Delaware Division of Services for Aging & Adults with Physical Disabilities, Delaware State Housing Agency, Department of Health and Social Services, Delaware Economic Development Office's Main Street Program, DelDOT, Division of Public Health, Office of State Planning Coordination); state advisory councils (Governor's Advisory Council for Exceptional Citizens and State Council for Persons with Disabilities); planning organizations (APA Delaware Chapter, Dover/Kent County MPO, WILMAPCO), housing industry (AIA Delaware and Delaware Homebuilders Association); advocacy groups (Delaware Aging Network, Disabilities Law Program); as well as the Delaware League of Local Governments; Nemours Health and Prevention Services; CHEER, Inc., Delaware Transit Corporation; and University of Delaware Center for Disabilities Studies. The working group met twice—once on November 18, 2009, before the community workshops and once on April 13, 2010, after the workshops.

6-1. Community Workshops

Two “Enhancing Mobility to Improve Quality of Life for Delawareans” workshops were held in Delaware, one in Newark and one in Dover. IPA developed a flyer to convey the purpose of the upstate and downstate workshops, invite interested community members, and provide online registration information for the free events (Appendix A).

At each workshop, participants were split into groups of five people. Each group was provided a workshop primer that defined “livable communities,” heard an explanation of the importance of livability to Delaware, and was provided the following discussion questions (Appendix F):

1. How can Delaware enhance mobility options?

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2. How can we better design communities to enhance mobility and livability?
 3. What are the mobility and livability needs of citizens, including underserved populations?
 4. What can state agencies and entities do to enhance mobility?
 5. How can public and private partnerships—including citizen engagement—be encouraged in order to increase mobility and livability options?

6-1-1. Newark Community Workshop

The first community workshop was held in Newark, Del., on Tuesday March 9, 2010, at the Newark Senior Center. While 37 individuals registered to attend, there were 24 individuals who participated. First, group members discussed each question and then jotted their comments and thoughts on large note pages. After breakout-group discussion, workshop members collectively considered each question, and IPA summarized comments on a flip chart placed before the group. Summary notes are provided (Appendix G) and the below sections capture the essential comments conveyed for each question.

How can Delaware enhance mobility options?

Discussion focused on the need to improve intergovernmental coordination, maintain transportation infrastructure, enhance mass-transit options, improve transportation and land-use planning, and educate stakeholders on transportation policies.

Workshop participants believe there is a need to coordinate transportation among all levels of government and across state lines. Transportation issues such as traffic congestion, availability of integrated mass transit services, and maintenance of highway infrastructure transcend state lines. While each state is responsible for their own transportation systems, there seems to be a lack of coordination among neighboring Delaware states (i.e., Maryland, New Jersey, and Pennsylvania) to address mutual transportation issues and needs of citizenry. To address this, Delaware should strive to cooperate with adjacent states, plan transportation across state lines, and improve connectivity among transportation entities and transit providers.

Participants felt that Delaware should make maintenance of transportation infrastructure a priority. Enhancing mobility means more than building new roadway infrastructure. The state needs to focus on developing and maintaining infrastructure to serve pedestrians and bicyclists. To achieve this, the state needs to make the installation, connectivity, and maintenance of sidewalks a priority. The lack of maintenance and clearing of snow-covered sidewalks during the 2010 winter was mentioned repeatedly. To create a safer and supportive environment for bicyclists, the state needs to provide more on-road space for bicycles, designate and maintain bike lanes, install bike racks, and post “share-the-road” signs.

The need to enhance mass-transit options was discussed at length by workshop participants. Suggestions included improving and better integrating public-transit systems, considering senior-specific transit services, exploring more commuter-rail options/routes (e.g., Wilmington to Dover and/or Delaware beaches, light rail to southern Delaware), considering bus rapid transit, increasing the convenience of public transit use through expanded scheduling and routes, and providing more subsidies to use mass transit.

To improve the connection between transportation and land-use planning, participants stressed the need to foster TOD, legislate compatible living elements by region, and better integrate public policies at all levels of government. Education by the state, and through state legislators, is essential to convey the importance of mobility to community members, benefits of mobility-friendly design, need to reduce air pollution, and promote local government support and endorsement of state's Complete Streets policy.

How can we better design communities to enhance mobility and livability?

While there was a range of responses to this question, discussion focused on the need to create, improve, and change the built environment to be more on a human, rather than car-oriented, scale. In terms of improving the built environment, cited needs included addressing safety issues, installing consistently designed curb cuts, ensuring that pedestrian infrastructure is built and maintained to comply to Americans with Disabilities Act (ADA) guidelines, improving bicycle infrastructure, and addressing pedestrian-crosswalk safety needs with state-of-the-art improvements. Connectivity was considered to be an important mobility and quality-of-life issue. Public policies, land-use plans, community designs, and build projects need to provide linkages between commercial and residential land uses, mixed uses (so people can live near services), connectivity between subdivisions and secondary roads, and walkable options. More stringent livability standards need to be imposed on developers. To achieve this, the state needs to encourage higher-density, mixed-use, and more sustainable development; promote universal design standards; and educate the public to create a market demand for livability features.

What are the mobility and livability needs of citizens, including underserved populations?

Discussion focused on the need to improve public transit and how to address needs of special populations such as the growing baby-boomer populations, persons with disabilities, and transit-dependent populations. It was noted that public transit should be marketed and improved to attract new riders and reduce automobile dependency. Suggestions to improve transit service include implementing better bus-scheduling technology, enhancing bus-stop and -shelter amenities, expanding Sunday bus transportation services, enhancing feeder patterns to public transit, establishing more park-and-ride locations, installing bike racks on buses, providing better customer service, and improving pedestrian infrastructure connectivity (and maintenance of sidewalks) to bus stops.

Workshop participants noted that in Delaware persons with disabilities rely on paratransit because of its liberal use policy, economical fee structure, and lack of options. To provide more options to paratransit service, the following issues should be addressed: accessibility to and from bus stops (e.g., accessible, well-maintained, and safe sidewalks), bus-stop safety (e.g., lighting, benches, transit-alert systems), enhanced taxi and trolley services, travel training for [fixed-route] bus service, and alternative options to paratransit (e.g., Sussex County Mobility Consortium's model for a coordinated ride system for older and physically challenged adults).

There is a desire for Delaware's aging population to "age in community." Delawareans don't want to be forced to give up their homes to be placed in nursing homes. To successfully age-in-community, community design should address the need for senior citizens to be independent and feel safe, enjoy a sense of community and interact with people of all ages, be able to walk to

places of daily living needs, and have full access to ADA-compliant buildings, facilities, and infrastructure.

What can state agencies and entities do to enhance mobility?

Participants indicated that state agencies can actively promote the integration of land use and transportation planning. State agencies need to ensure that mobility and livability are brought to the forefront of land-use planning and prioritized at every level of government and within every state agency. Coordination of planning can be improved by working with local governments, nonprofits, and the private sector—including developers. There needs to be a better integration of planning for unincorporated areas of Delaware that face development pressures.

Delaware's Complete Streets policy needs to extend to the local government level. Local governments need to understand that the creating a complete street is more than constructing and connecting a road. The Complete Streets concept involves planning, designing, constructing, maintaining, and operating streets for both motorized and non-motorized modes of travel throughout Delaware. Local governments have a stake in identifying connectivity needs, retrofitting connectivity into the existing infrastructure, and making sure that transportation infrastructure serves pedestrians, bicyclists, transit riders, as well as automobiles.

Because Delaware's population is growing older, DelDOT needs to continue to implement/fund newer design/engineering strategies that consider needs of special populations within various modes. These strategies include designing crosswalks with audible and visual pedestrian-countdown signals, designing and constructing roundabouts, upgrading visibility of signage, and educating local governments on pedestrian-network and roadway-design guidelines.

How can public and private partnerships including citizen engagement be encouraged to increase mobility and livability options?

Participants indicated that public input, engagement, and awareness is needed to educate Delawareans about the importance of mobility and community livability. Education is needed to stress to the community the benefits of enhanced mobility, including less traffic congestion, better air quality, lower obesity and health-related problems, higher property values, and enhanced community prosperity. Elected officials, community leaders, and special-needs advocates need to help educate the public on the benefits of enhanced mobility. People and groups who are affected by immobility (i.e., stakeholder groups representing persons who are underserved or those with disabilities) need to be better involved, engaged, and represented in community design, land use–planning decisions, and the transportation planning process.

Delawareans need to understand that there *are* alternatives to driving. To educate Delawareans about mobility options, workshop participants suggested promoting campaigns for car-free days, providing tax incentives for businesses that support telecommuting, creating tax credits for non-automobile use or riding public transit, promoting the [RideShare] Delaware carpooling program, and encouraging phone/video conferencing options instead of in-person meetings at work.

“Carrot-and-stick” approaches were also considered. Incentives could be devised for healthier lifestyles and walking. In contrast, disincentives to automobile dependency were suggested such as developing more stringent (and costly) parking policies, enforcing and policing parking policies (e.g., spaces designated for the handicapped), and possibly vehicle-mile fees and other financial disincentives for excess driving.

Other Suggestions

Improved infrastructure, use of incentives, and a stronger regulatory environment were among other suggestions to enhance mobility for Delawareans. Retrofitting sidewalks for connectivity to older neighborhoods, using traffic-calming strategies, designating carpool lanes, separating bike and pedestrian traffic on major roadways, and designing aesthetically pleasing and accessible pedestrian infrastructure were recommended. Incentives to promote living and working within one’s community; induce businesses to encourage telecommuting, biking, walking, or riding transit; and partner with health/auto insurance for premium reductions were recommended. Suggested legislation included a requirement for developers to assume financial responsibility for pedestrian-infrastructure improvements, a state law to prohibit right turn on red, and more stringent local-code enforcement to preserve the high standards and expectations of community development.

6-1-2. Dover Community Workshop

The second community workshop was held on Tuesday March 18, 2010, at the University of Delaware Paradee Center in Dover, Delaware. Of the 15 individuals who registered, 11 attended the workshop. As with the Newark Community Workshop, group members discussed each question and recorded their comments and thoughts on large note pages. After breakout-group discussion, workshop members collectively considered each question, and IPA summarized comments on a flip chart placed before the group. Summary notes are provided (Appendix H) and the below sections capture the essential comments conveyed for each question.

How can Delaware enhance mobility options?

Workshop participants suggested that Delaware can enhance mobility options by improving ADA compliance, improving communication among project partners, improving bus services, clarifying responsibilities with regard to pedestrian infrastructure, and planning for Complete Streets. While contractors know that facilities need to be constructed to ADA standards, there have been cases where minimum standards are ignored to save time or money. An example was given where sidewalk design did not take into account existing telephone poles. Rather than redesign the sidewalk to take into account pole location, the sidewalks were constructed with the telephone poles as an obstruction to pedestrian accessibility. Clearly, project partners could have done a better job communicating project specifications and ADA-compliance requirements.

Several suggestions were made to improve bus services. First, there should be better on-time service to encourage bus use. Second, there could be better planning of bus stop locations. Finally, it was noted that many age-restricted communities are located in remote or rural areas that are not served by public transit—this should be addressed in the planning and approval process for such developments.

Much discussion focused on maintenance responsibilities of sidewalks, especially the clearing of snow in winter. The maintenance of private roads is an issue in Sussex County. There is no mechanism to enforce the maintenance of private roads, including snow plowing and sidewalk snow clearing. Sidewalk-maintenance responsibilities need to be enforced. For state-owned roads, it is not clear whether there is a snow-removal plan for adjacent sidewalks.

Complete Streets needs to be addressed at the project-planning stage. Priorities include ensuring ADA compliance, connecting private roads, ensuring connectivity and non-modal options for 55+ communities, and linking pedestrian and bicycle infrastructure.

Finally, a suggestion was made to implement uniform standards for all built communities. The state should provide tax incentives to developers for implementing mobility-friendly concepts into all development plans.

How can we better design communities to enhance mobility and livability?

Working-group members suggested the need to build all streets to state standards, for public rather than private use. This would ensure that all roads are interconnected, designed, built, and maintained to state standards.

In addition, working group members suggested that the design of livable, mobility-friendly communities include

- Multi-modal connectivity within and to other communities.
- Transit-oriented or transit-friendly features that are located near existing or future transit stops and routes.
- Tie-ins or easements to ensure future connectivity of trails, sidewalks, and bikeways.
- Minimum development standards, to ensure that development accommodates all modes of transportation.
- Planned access to services and shops that cater to daily living needs.
- Built environment amenities to provide opportunities for walking, biking, and recreating. Developers should be required to dedicate areas for open space, recreation, and/or trails or provide payments in lieu of these amenities.

Where possible, new communities should be designed to include mixed-use development, which is walkable, self-contained, and offers a range of housing types and affordability for all ages and users. Kentlands in Gaithersburg, Md. [a traditional neighborhood development based on Smart Growth principles], was cited as an example of a mixed-use development that provides access to jobs, services, schools, transportation, and other amenities. Working-group members felt that impact fees should be imposed on developers to pay their fair share for infrastructure improvements.

What are the mobility and livability needs of citizens, including underserved populations?

Working-group members felt that Sussex County's rural areas are underserved. Additional options for accessible public transportation are needed. While the Sussex County Mobility Consortium has been recognized as a national model for providing community-based

transportation services, state support is needed to expand this model throughout the state and ultimately reduce the burden on paratransit services.

Working-group members perceived inequities in both fixed-route bus and paratransit services for downstate Delaware. There is a lack of coordination of public transportation across county lines within Delaware. In addition, there is a need for better public transportation both across Delaware/Maryland state jurisdictional lines. This is especially critical for Delawareans who wish to age-in-community and need access to healthcare providers and specialists in Maryland. It was suggested that this could be achieved using the Sussex County Mobility Consortium's community-based transportation model with state [Delaware and Maryland] funding support.

A suggestion was made to plan for and provide developer incentives to construct affordable housing close to transit services and commercial areas. Full-service communities should be planned that are destination-oriented with dense town centers, affordable housing, proximity to employment centers, and access to multi-modal transportation.

In addition, other important livability issues include access to healthy foods, safe environments, and recreational areas. Providing open spaces, recreation areas, and built infrastructure can encourage underserved populations to play, walk, or be active.

What can state agencies and entities do to enhance mobility?

Workshop participants believe that the state needs to develop policies and plans for implementing methods of Smart Growth, and transportation is part of the Smart Growth equation. To enhance mobility, state agencies and entities need to develop transportation and land-use plans that consider public input, comments, and community interests. DART First State transit services need to be financed in underserved areas with growing population and demand. To better consider the populations being served, there needs to be better interagency planning and interstate planning on mutual transportation-, land use-, and growth-related issues. The state should study the need for additional east-west routes in Sussex County, a north-south passenger-rail system, and advanced planning of major road construction and interconnected pedestrian- and bicycle-trail systems.

How can public and private partnerships including citizen engagement be encouraged to increase mobility and livability options?

Working group members noted that a need for better municipality/developer/land owner coordination in the land use–planning and –approval process. There is often a disconnect between land-use plans approved by a local government and what is actually constructed. Several strategies were suggested to improve citizen engagement. Methods include using participatory charrettes, educating youth and public officials on community-planning concepts, benchmarking for Smart Growth, and publicizing the achievements and successes of existing community-based transportation programs (e.g., Sussex County Mobility Consortium). Municipalities, developers, and community members also need to be educated on the importance of livable communities and the benefits of providing mobility-friendly design (particularly as it relates to health, incidence of obesity, and other chronic diseases).

6-1-3. Common Community Workshop Themes

Several common themes of both community workshops were identified:

- **Improve intergovernmental coordination** – At both workshops, participants recognized that there are critical interrelationships among transportation, land-use, quality-of-life, and economic vitality issues. Participants believe that inter-jurisdictional cooperation is needed to help to better coordinate transportation and land-use planning among neighboring states and between the state and Delaware local governments.
- **Encourage local government support and adoption of Complete Streets** – Workshop participants acknowledged that the state’s Complete Streets policy conveys an important message that Delaware is striving to foster a transportation system that provides facilities for biking, walking, and public transit. Participants think that Complete Streets policies and principles need to be understood and adopted at the local government level.
- **Plan for aging-in-community** – Many workshop participants were concerned that land-use patterns (including location of 55+ communities in remote or rural areas), lack of mobility or accessible public-transportation options, and insufficient design of livable, mobility-friendly communities may prevent senior citizens from aging-in-community. Given Delaware’s shifting demographics, participants feel a need to better plan for persons to age both within existing and in new communities.
- **Use incentives to encourage adoption of Smart Growth strategies, good community design, and plans and policies that support walkability and community livability** – Improved infrastructure, use of incentives, and a stronger regulatory environment were among other suggestions to enhance mobility for Delawareans. Workshop participants felt that the state should provide tax incentives to developers for implementing mobility-friendly concepts into all development plans. The state could also provide assistance to local government planning initiatives that support Smart Growth, community design, and livability principles.
- **Ensure connectivity of all streets** – Participants recognized problems with private streets in Delaware—particularly in Sussex County. It was suggested that all streets be built to state standards, for public, rather than private, use. This would ensure that all roads are interconnected, designed, built, and maintained properly. Complete Streets policies need to be supported at the local level.
- **Improve public input, engagement, and education on community livability issues** – Participants indicated that Delawareans need to be educated about the importance of mobility and community livability. Elected officials, community leaders, and special-needs advocates need to help educate the public on issues and benefits of improved mobility.
- **Ensure ADA compliance; clarify maintenance responsibilities** – Sidewalk maintenance is both an ADA-compliance and a transportation issue. Persons who rely on public transportation need to have sidewalks cleared to access bus stops. Sidewalk

maintenance responsibilities, especially the clearing of snow in winter, need to be clarified and enforced.

- **Promote pedestrian-friendly design and walkable places** – Workshop participants acknowledged that good community design can foster livability and mobility of residents. Incentives could spur planning and development of affordable, mixed-use, and transit-ready communities that provide access to jobs, schools, shopping, and services.

6-2. Student Blog

Teenagers were identified as an unrepresented population in Delaware, which may have issues related to mobility and access to transportation. A blog was designed by the IPA project team and posted on the EduBlogs website, which has been specifically created to facilitate online discussions on topics that are germane to teachers and/or students. The website blog was titled, “Enhancing Mobility in Delaware Project: Teens and Mobility in Delaware” (Appendix C).

6-2-1. Invitation to Blog

To solicit participation by Delaware high school students, the following message was e-mailed to Delaware high school civics teachers via IPA policy scientist and Delaware Social Studies Education Project director Francis O’Malley:

Dear Delaware High School Civics Teachers:

The University of Delaware Institute for Public Administration (IPA), in cooperation with the Delaware Department of Transportation, is conducting a study that explores how best practices and strategies may be applied to enhance mobility options to improve the quality of life for Delawareans.

*IPA has formed a working group and has held separate community workshops to solicit input. IPA is interested in finding out about mobility issues and the needs of high school students in Delaware. We are inviting students in high school civics classes to blog on this issue. Ideally, IPA would like two high school civics classes in each county (6 total) to participate. **The blog will be active until May 7, 2010.** The blog may be accessed at: enhancingmobilityde.edublogs.org.*

If your class is interested in blogging on this issue, please e-mail me to let me know. Thank you!
Marcia S. Scott, Associate Policy Scientist

6-2-2. Activation of EduBlog Site

IPA's Enhancing Mobility in Delaware project blog (enhancingmobilityde.edublogs.org) was launched officially on April 14, 2010. It was anticipated that the blog would remain active until May 7, 2010, to provide a three-week response period from high school students.

The design of the blog website included two pages, or website tabs. An "About Us" tab was established to provide background on IPA's transportation project. This page explained the importance of walkable, connected, and transit-friendly communities in Delaware and IPA's role in researching this public policy issue. The "About Us" tab provided the following introduction:

Land-use decisions, community design, and public policy have influenced transportation options in Delaware. Towns used to be more compact and walkable, but today's communities are built with the car in mind. Many Delawareans live in communities that are unwalkable, lack connectivity, and are inaccessible by public transportation.

The University of Delaware's Institute for Public Administration (IPA) is researching ways to create livable, healthy communities that are integrated with public transit and linked to a connected network of walkable/bikeable streets. For more information about IPA's research on transportation planning and policy, please see: www.ipa.udel.edu/transportation.

IPA is interested in finding out about mobility issues and the needs of high school students in Delaware. If you are a high school student 14 years of age or older, we invite you to blog on this issue.

A "Home" tab was also established on the Enhancing Mobility in Delaware blog, which provided guidelines for blogging. In addition, the following question and background information were provided to generate thought, facilitate online discussion, and encourage posting of comments by students:

How can transportation options be improved for teens in Delaware?

Many Delaware communities were built with the car in mind and are not walkable, bikeable, or transit-friendly. Community transportation networks are often limited to roadways and do not include sidewalks, trails, bike lanes, and/or public transit. Accessibility to and connectivity between neighborhoods and everyday destinations (school, parks, shops, and recreation) may also be problematic, thus limiting the mobility of Delawareans, especially non-drivers.

How can transportation options be improved for teens in Delaware? What prevents teens from walking, bicycling, or riding a bus to nearby destinations? How can transportation and mobility options be improved for people who do not drive or own a car in Delaware? Please feel free to add any other thoughts you have to the discussion.

6-2-3. Blog Results

There were no responses from Delaware high school students during the three-week period (and beyond) that the Enhancing Mobility in Delaware blog was active. Francis O'Malley was questioned as to the possible reasons for this lack of response. He responded (via e-mail to Marcia Scott) that there were three possibilities:

1. [School] Districts don't permit minors to do this.
2. Teachers don't feel comfortable publicizing ideas that might get them in trouble.
3. [Department of Education] DOE or the Districts may have blockers that prevent schools from having access to unknown sites. This is common and very frustrating for teachers.

6-3. Working Group

The literature review provided a framework for understanding why communities are less livable, highlighted federal and state community livability initiatives, explored best practices to foster community livability and mobility, and analyzed the extent to which targeted Delaware municipalities have integrated mobility and livability goals into local plans and policies. The IPA research team also formed an interdisciplinary working group to present an overview of initial research and to solicit input on characteristics needed to achieve a livable/walkable community in Delaware. Representatives from 22 organizations (listed below) participated in the two working-group sessions, held in November 2009 and April 2010.

| Organization | Representative(s) |
|---|---|
| AARP Delaware | Jeanne Nutter, Dennis Christie |
| AIA, Delaware Chapter | Mark Clark |
| American Planning Association, Delaware Chapter | John Gaadt |
| CHEER | Kenneth Bock |
| Delaware Aging Network | Susan Getman |
| Delaware Department of Transportation | Roberta Geier |
| Delaware Economic Development Office, Downtown Delaware | Diane Laird |
| Delaware Division of Services for Aging & Adults with Physical Disabilities | Chris Oakes |
| Delaware Homebuilders Association | Steven Bomberger |
| Delaware League of Local Governments (and City of Newark) | Mayor Vance Funk |
| Delaware State Housing Authority | Karen Horton |
| Delaware Transit Corporation | Bonnie Hitch |
| Department of Health and Social Services | Deborah Gottschalk |
| Disabilities Law Program | Michelle McLean |
| Division of Public Health | Michelle Eichinger |
| Dover/Kent Co. MPO | Juanita Wieczoreck |
| Governor's Advisory Council for Exceptional Citizens | Terri Hancharick |
| Nemours Health and Prevention Services | Dana Griffin |
| Office of State Planning Coordination | Herb Inden |
| State Council for Persons with Disabilities (SCPD) | Ann Phillips |
| University of Delaware Center for Disabilities Studies | Eileen Sparling, Ilka Riddle |
| WILMAPCO | Tigist Zegeye, Heather Dunigan, Bill Swiatek, Tamika Graham |

6-3-1. Fall 2009 Working-Group Meeting

The first working-group meeting was held November 18, 2009, at the University of Delaware Center for Composites Materials conference room. Of the 27 working-group members invited, 21 participated. The IPA project team explained the purpose of the project and provided a brief overview of the principles of new urbanism, universal design, infill development, and Smart Transportation (Appendix I). The following research questions were presented to working-group members for discussion and input:

- How can transportation planning, public policy, and community design be enhanced so places in Delaware become more “livable” and people stay engaged and socially active?
- How can the transportation community enhance mobility options through improved public policies, better linkages among transportation and land-use planning, and a more strategic approach to the community building process?
- How can improved quality of life be achieved with respect to interdisciplinary cooperation of leaders in the fields of public health, housing, building, disability advocacy, aging, land-use planning, transportation planning, and government?
- How can the importance of community building be explored to better shape the conversation, enhance the public engagement process, and involve traditionally underserved or underrepresented audiences?

IPA developed summary notes of the discussion, which were forwarded to working-group members shortly after the meeting (Appendix J). Based on the discussion and comments of working-group members, the following themes were identified regarding recommendations for enhancing mobility to improve the quality of life for Delawareans.

Plan for Aging-In-Community

As Delaware’s demographics shift, there will be greater opportunities to enhance existing communities and design new communities that are more livable, particularly for Delaware’s aging baby boomers. Delawareans, like most Americans, desire aging-in-community. This term, as opposed to “aging-in-place,” reflects the desires of aging baby boomers to live in aging-supportive, aging-friendly communities that foster independence and sociability.

Working-group members noted that many young retirees are relocating from major metropolitan areas to “age-restricted” (also known as “active adult” or 55+) communities in Delaware. Many of these communities are being developed in less-expensive unincorporated or rural areas that do not provide a full scope of municipal services, access to services of daily living, or public transportation that many retirees expect and demand. One working-group member expressed that “exclusivity” is a dirty little secret of age-restricted communities—these developments are designed to lack diversity and keep out people who are dissimilar.

As young baby boomers age, experience health problems, and physical challenges, there may be barriers to aging-in-community. [Potential barriers associated with aging-in-community in age-restricted communities include loss of mobility, lack of transportation options, lack of access to services that support daily living needs, and social isolation and inadequate social support systems due to the nature of age-segregated-community age restrictions]. There were concerns

that 55+ communities are being overbuilt in outlying areas and that age restrictions within these communities prevent caregivers from moving in to care for homeowners if they become ill or frail. Once aging baby boomers lose their ability to drive, they will not have access to public transit and will place additional demands on DART's already overburdened paratransit system.

Working-group members suggested that Delaware needs to do a better job in planning for this changing demographic by addressing community-design issues to foster aging-friendly communities. Livability needs to focus on existing communities or neighborhoods where people currently live, and not in new developments. A priority is identifying these existing Delaware communities, which have a greater population of older adults [defined as Naturally-Occurring Retirement Communities or NORCs], and how to retrofit older homes.

The planning and development of age-restricted communities was also discussed as both a land-use and transportation policy issue. One suggestion was to impose a rating or scoring system within the land development process that takes into account a number of critical livability criteria (i.e., access to public transit) prior to approval. Another suggestion was for active-adult communities to provide on-site transportation services to address transportation and mobility needs of residents. It was also suggested that inclusive, aging-friendly communities should be encouraged instead of exclusive, age-restricted communities. Research shows that characteristics of successful aging-friendly communities include (Scharlach, 2009)

- Residential housing that coexists with retail and other commercial uses.
- Walkable and interconnected pedestrian infrastructure.
- Universal Design features.
- Transit-ready or transit-oriented design.
- Opportunities for recreation and social interaction.
- Access to services and products that ensure basic health and daily living needs.
- Diverse and multigenerational housing opportunities and choices.

Three communities were cited as positive, aging-friendly community models. These include Painter's Mill (Lewes, Del.), Village of Five Points (Lewes, Del.), and the continuing care community of Jenner's Pond (Jennersville, Pa.).

Promote/Provide Incentives for Better Community Design

Discussion by working-group members focused on the link between land-use and transportation planning. Principles of livable Delaware need to be in place to promote healthy lifestyles. Working-group members noted that there is a growing realization that sprawling land-use patterns have contributed to rising rates of obesity and related health problems. Most Delawareans realize that the built environment needs to safely promote opportunities for walking and biking, but the majority of residents are still in the car mode and prefer to drive to their destinations for the sake of convenience. It was noted that one of the greatest obstacles to the Safe Routes to School program is the perception that it is *not* safe for children to walk or ride bikes to school.

Increasing density and promoting compact, mixed-used development in town centers is also a desired but misunderstood planning and design concept. High-density development is often

viewed with disdain by both public officials and prospective home-buyers because it has been regarded as the cause of traffic congestion, overcrowding, and ugly cityscapes. It was noted that the mixed-use, higher-density Washington House condominium project in Newark was initially met with opposition from city officials. Better incentives are needed to build higher-density development such as reduced parking requirements, density bonuses, flexibility in design standards and local codes, and a compressed timeframe for the land development–approval process. Other incentives that were suggested to influence community design include form-based codes, inclusionary zoning, and access to state funding resources if certain design elements are used. It was noted, however, that housing affordability is an ongoing issue that still needs to be addressed.

Engage the Community

Working-group members noted that public perceptions factor into development trends. It may be difficult to address perceptions of aging baby boomers who were part of the generation that spurred suburbanization, became dependent on automobiles, and inadvertently promoted the growth of sprawling land-use patterns. There needs to be greater public awareness that denser, compact development is more walkable and accessible. Design guidelines and incentives need to be developed to direct quality development of inclusive, affordable, accessible, and aging-friendly communities.

To achieve greater public awareness, stakeholders need to understand the benefits of new urbanism and be engaged in the discussion on how to better design diverse communities in Delaware that accommodate people of all ages, abilities, and from all walks of life. It was noted that the mobility needs of special-interest groups or population segments are often not equally represented in the land use– and transportation-planning process. Such groups include persons with disabilities, the biking community, teenagers, and others who do not drive or are from no-automobile households.

However, it was also noted that Delaware has made great strides with regard to engaging citizens in developing transportation plans and policy. Delaware MPOs and DelDOT form advisory councils to provide input into the development of transportation plans and policies. There is ample opportunity for citizen engagement and involvement in setting transportation investment priorities.

Create a [Market] Demand for Livability

Public perception and lack of education are barriers to good community design. Currently, there is not a public demand for residential homes with Universal Design features. The concept of “visitability”—or Universal Design features for visitors rather than homeowner—needs to be applied to market universal housing principles. It was noted that the Universal Design Coalition has proposed legislation to require “visitability” or Universal Design features in all newly built public housing (e.g., open floor space, basic accessibility, no-step entries, wide doorways, and bathroom design for wheelchair access). Creating a market demand for Universal Design and visitability features may drive down costs, similar to the demand for “green” or sustainable design. Public education can help push the demand for Universal Design features.

In addition, though Delaware has implemented its Complete Streets policy, many Delaware communities simply do not want to be connected. This obstacle will need to be addressed in order for local governments to support Complete Streets principles to encourage pedestrian, bicycle, or public transportation. Moreover, local governments need to gain developer support for Complete Streets measures to create a comprehensive and integrated transportation network to serve the needs of all users.

Encourage Flexibility of Local Government Codes

Local government policies and regulatory practices can influence development patterns and control land uses. Local government codes need to evolve and be flexible, as circumstances and market conditions change. Working-group members felt that Sussex County has the best examples of new urbanism (e.g., Painter's Mill and the Village of Five Points), probably because codes there are more flexible. New Castle County has adopted a Unified Development Code (UDC) that has prompted change and allowed the pendulum to swing in favor of tighter, more environmentally friendly codes.

Address Funding Issues

Many prospective homeowners in Delaware are not aware that many publicly demanded services are not included in the relatively low home costs, nor supported by the low property tax structure, particularly in downstate Delaware. For example, many roads in Sussex County are private; DelDOT does not maintain the infrastructure. This becomes problematic when roads need to be maintained without support of public funding. This is a public policy issue that needs to be recognized and addressed.

There is also a general lack of awareness that density is needed to support public transit. To address demand vs. funding of public transit, one working-group member suggested that new development only be approved for areas that are designated for growth and that have sufficient density to support public transit, which is the concept of the State Strategies for Policies and Spending. This working-group member also noted that DART inadvertently promotes sprawl through its non-ADA paratransit-service delivery practice, which significantly exceeds the federal ADA mandate (three-quarters of a mile within a fixed-bus route).

6-3-2. Spring 2010 Working-Group Meeting

The second working-group meeting was held April 13, 2010, at the University of Delaware Center for Composites Materials conference room. Of those invited, 20 attended. The IPA project team reiterated the themes from the fall working-group meeting, explained the process of planning for and inviting participants to the two community workshops, summarized topics of discussion at the Newark and Dover community workshops, and highlighted common themes from both workshops (Appendix K). Working-group members were asked, "What haven't we heard so far in discussions during the first working-group meeting and the community workshops?"

Working-Group Recommendations

IPA developed summary notes of the discussion, which were forwarded to working-group members shortly after the meeting (Appendix L). Discussion focused on the need to:

- **Better understand the perspectives of developers** – Since developers respond to market demand (e.g., the recent move toward green and sustainable building), a market demand needs to be created for affordable housing, complete developments that incorporate principles of New Urbanism (including more mixed-use zones, compact development patterns, and higher-density development that supports transit), infill development in existing town centers, and homes with universal design features. Developers will respond to customer-driven demands and incentives to build quality places for people to live, work, and play.
- **Educate and motivate citizens, elected officials, and the business community** – To create greater market demand for these types of places, greater awareness is needed. Smart Growth, good community design, and supportive public policies can impact the both the livability of a community and its economic viability. Citizens need to understand that bus-transit decisions are based on a number of factors, including density and ridership. Public transit in rural, remote areas is not sustainable. In addition, it is important that Delawareans understand that the desire for aging baby boomers to “age-in-community” will drive the need to retrofit existing communities and build new communities with livability principles.
- **Make long-term planning a priority** – Intergovernmental cooperation is needed on regional/multi-state transportation planning, cross-jurisdictional transit, and intergovernmental funding of infrastructure improvements. Planning needs to integrate transportation and land use to encourage strategies like mixed-use development, transit-oriented design, and New Urbanism.
- **Enhance use of public transit** – To encourage greater use of public transit, suggestions were made to improve the condition and connectivity of sidewalks adjacent to bus stops, create specialized shuttle services to fixed-route transit stops (e.g., Wilmington Riverfront), improve transit headways, and develop better connectivity among various modes of public transit—both within the state of Delaware and among transit systems of neighboring states.
- **Encourage multi-modal transportation options** – Built environment improvements are needed to make walking, biking, and public transit ridership more attractive and viable. To improve multi-modal transportation options, several actions were recommended. First, ensure that built infrastructure is designed, constructed, and maintained to ensure ADA compliance. Second, enforce ADA compliance to ensure accessibility of existing infrastructure (e.g., park-and-ride facilities, bikeways, bus shelters, and sidewalks—especially those adjacent to transit stops). Finally, encourage support and implementation of the state’s Complete Streets policy at the local government level.

-
- **Promote Complete Streets** – Working-group members acknowledged the importance of Delaware’s Complete Streets policy in creating a comprehensive, integrated, and connected transportation network. Complete Streets policy at the local government level means more than just addressing sidewalk gaps and connectivity issues. Local governments need to ensure that comprehensive plans, public policies, and design standards incorporate Complete Streets principles. IPA’s Comprehensive Plan Assessment Tool provides a checklist, which local governments can use during the comprehensive plan process to evaluate principles for planning for a healthy community. Working group members believe that local governments need to be educated on how to develop comprehensive-plan elements, land-use plans, and policies that are consistent and compatible with the state’s Complete Streets policy to ensure that transportation infrastructure (including sidewalks, trail systems, bikeways, and streetscapes) safely meet the needs of pedestrians, bicyclists, transit users, and drivers of all ages and abilities.
 - **Promote principles of Smart Growth and regulatory practices** – Sound and flexible local codes can provide the foundation for community livability and Smart Growth. Local governments should be encouraged to develop and adopt flexible, smart (but not lax) regulations within land-use plans, local codes, and ordinances that are up-to-date and consistent with the community’s vision as stated in its comprehensive plan.

Suggestions for Potential Infill Sites

At the April 13, 2010, meeting, working-group members were also asked, “Given your knowledge of the jurisdiction you represent (or community where you live), what are potential infill sites in Delaware that may be targeted for revitalization?” Suggested generic ideas for prototype areas were infill development of non-dense, suburban areas (i.e., increasing average density of infill, redevelopment, and greenfield development on underutilized land), targeted infill development in areas with existing small- to mid-size employers, and transit-oriented development (TOD) in areas with proximity to public-transit nodes (including transit stations or planned transit hubs). The working group made the following specific suggestions for TOD:

- **Kirkwood Highway, New Castle County** – Many TOD characteristics are already present, such as increased density, mixed uses, potential for adaptive re-use of vacant or underutilized buildings, pedestrian access, and a transit-friendly environment.
- **Philadelphia Pike, New Castle County** – This corridor seems ripe for TOD, given its density, travel patterns that facilitate transit use, access to employment centers, and proximity to both Wilmington and Philadelphia.
- **U.S. Route 13, Dover, Kent County** – Connectivity in this area is needed because the highway divides the residential area from the commercial district. In addition, paratransit services are in demand for those persons with disabilities and mobility issues who live in the residential areas but lack access to retail shops and services within the commercial district.
- **Delmar, Sussex County** – Connectivity is needed because the highway divides the residential area from the commercial district. In addition, paratransit services are in demand for persons with disabilities and those with mobility issues who live in residential areas, but need access to services within the commercial district.

7. RECOMMENDATIONS

After a focused literature search, review of select municipal comprehensive plans and policies, two public workshops, and two meetings of working-group members, a list of critical recommendations have been compiled. Several themes were identified at both the public workshops and working-group meetings, which enabled recommendations to be categorized into ten key areas.

1. Seek Federal Sustainability Communities Grant Funding

- To support regional and multi-jurisdictional planning efforts to:
 - Identify regional infrastructure priorities.
 - Amend or update existing regional plans to address the six livability principles of the federal Interagency Sustainable Communities Partnership.
 - Support local governments and communities in developing plans, policies, and strategies that will build sustainable, inclusive, and livable communities that integrate transportation, housing, and economic development.
- To fund local planning projects that promote affordable, economically vital, and sustainable community planning.
 - Assist local governments prepare or amend local codes and ordinances to encourage sustainable development.
 - Provide assistance for planning initiatives that foster development of a transportation corridor or regional transportation.
 - Support planning efforts that encourage development of freight corridors.
 - Support planning initiatives that expand of multi-modal transportation options.

2. Address Infrastructure Improvement Needs

- Address issues and determine responsibilities for the design, installation, and maintenance of sidewalks (particularly for sidewalks adjacent to transit stops and hubs)—develop snow-removal management plan for state-owned roads.
- Focus on developing new and maintaining existing infrastructure to serve pedestrians and bicyclists.
- Provide more on-road space for bicyclists, designate and maintain bike lanes, install bike racks, and post share-the-road signs.
- Improve the built environment to promote walkability through community design, pedestrian safety improvements, and connectivity to provide linkages.
- Implement/fund newer design/engineering strategies that consider the needs of older adults (including pedestrians, bicyclists, and motorists).
- Promote walkability, retrofit sidewalks for connectivity to older neighborhoods, use traffic-calming strategies, designate carpool lanes, separate bike and pedestrian traffic on major roadways, prohibit right-turn-on-red, and design aesthetically pleasing and accessible pedestrian infrastructure.
- Study the need for additional east-west routes in Sussex County, a north-south passenger-rail system, and advanced planning of interconnected pedestrian- and bicycle-trail systems.

3. Encourage Support for Complete Streets Principles

- Develop a management plan to determine responsibilities for clearing sidewalks during and after a snowfall.
- Address maintenance issues of sidewalks, pedestrian walkways, bikeways, and trails to ensure ADA compliance, connectivity, and accessibility by all users.
- Propose legislation to eliminate designation of “private roadways.”
- Address Complete Streets at the project-planning phase to ensure ADA compliance, connectivity of roads, non-motorized options, and linkages to pedestrian and bicycle infrastructure.

4. Better Integrate Land-Use and Transportation Planning

- Bring mobility and livability to the forefront of planning processes.
- Provide developer incentives to construct affordable housing close to transit services and commercial areas.
- Encourage local governments to develop a vision of community livability within comprehensive plans and incorporate comprehensive plan language that supports Smart Growth, Complete Streets, transit-oriented and transit-friendly design, an interconnected pedestrian-circulation system and bicyclist network, and a mix of retail, office, and residential uses.
- Encourage local government and state agency PLUS-process representatives to use the IPA “Comprehensive Plan Checklist” to assess livability components within comprehensive plan.
- Impose a rating or scoring system within the land-development process that takes into account a number of critical livability criteria (e.g., access to public transit)
- Encourage and provide incentives for local governments to develop specific strategies, land-use plans, and policies to encourage Smart Growth, infill development, and livability principles, including:
 - The incorporation of Smart Growth principles in comprehensive plans, including a desire for traditional (New Urbanism) community design that is compact, pedestrian-friendly, supports a mix of uses, is transit-ready, and provides a range of transportation options and housing choices.
 - The incorporation Smart Transportation principles within vision statements of the transportation element of comprehensive plans.
 - Changes to policies to foster active environments, Smart Growth, and pedestrian-friendly infrastructure and design.
 - Strategies to implement Preliminary Land Use Service (PLUS) recommendations on public health in community design.
 - Development of design guidelines or requirements for age-restricted communities to incorporate Universal Design and visitability.
 - Reform and adoption of flexible policies and regulatory practices that support Smart Growth development (e.g., unified development codes, form-based codes, TOD, context-sensitive solutions, and specific design guidelines for certain land uses and/or development).
 - Adoption of policies in support of state Complete Streets principles.

5. Support Aging-in-Community Initiatives

- Research ways new communities can be designed and older communities can be redesigned to increase the mobility and health of older Delawareans, as well as persons with disabilities.
- Explore use of incentives for voluntary provision of inclusive home design features.
- Propose state legislation and encourage local government legislation to mandate “visitability and basic access” features in new construction of single-family homes for publicly assisted housing as well as for construction of all age-restricted (“active adult”) communities; require builders to demonstrate within plans how universal design would be incorporated in both site plans and design of housing units.
 - Develop design guidelines for Universal Design and visitability features for new age-restricted communities and in substantially renovated housing projects.
- Launch an aging-in-community program to develop strategies that will enable senior citizens to stay in their existing homes and/or the environment that they choose.
 - Determine ideal characteristics of aging-friendly communities, how these communities meet daily living needs, and how these characteristics can best be achieved.
 - Work with stakeholders and partners to educate the community about home repair and maintenance needs, strategies, and resources for persons with disabilities and senior homeowners.
 - Develop design guidelines and incentives to encourage quality development of inclusive, affordable, accessible, and aging-friendly communities.

6. Educate the Public

- Educate the public to create a market demand for livability, specifically homes that incorporate Universal Design and visitability features.
- Educate Delawareans about driving alternatives and develop incentive programs.
- Market public transit to attract new riders and reduce automobile dependency.
- Educate Delawareans about the importance of community livability and the benefits of providing mobility-friendly design (especially with respect obesity and incidence of chronic diseases).
- Better engage people and groups who are affected by mobility issues.
- Communicate to contractors to ensure that pedestrian infrastructure is constructed to ADA standards.
- Educate local governments on the benefits of Complete Streets.
 - Urge local governments to incorporate Complete Streets principles in comprehensive plans and adopt policies to ensure that transportation supports needs of pedestrians, bicyclists, transit vehicles and users, motorists of all ages and abilities.
 - Ensure that Complete Streets policies address the needs of persons of all ages and abilities to facilitate adequate mobility options that foster personal independence and social engagement.

7. Improve Intergovernmental Coordination

- Coordinate transportation planning among all levels of government, DOTs, transit agencies, and across jurisdictional and state lines.
- Strive to improve connectivity among public transit modes.
- Integrate public policies at all levels of government (e.g., Complete Streets).
- Address regional transportation issues such as traffic congestion, integration of mass transit, and maintenance of highway corridors.
- Ensure that mobility and livability are brought to the forefront of land -use planning and prioritized at every level of government and within every state agency.
- Better integrate planning for unincorporated areas that face development pressures.
- Ensure that all roads are public and are interconnected, designed, built, and maintained to state standards.

8. Enhance Public-Transit Options

- Explore more commuter-rail options/routes.
- Consider piloting bus rapid transit.
- Provide incentives for use of mass transit.
- Coordinate public transportation across state lines (Del.–Md. and Del.–Pa.).
- Enhance public-transit usage.
 - Increase convenience of public-transit use (expanded schedules and routes).
 - Enhance bus-scheduling technology.
 - Enhance amenities of bus stops and shelters.
 - Expand Sunday bus transportation services.
 - Enhance feeder patterns to public transit.
 - Establish more park-and-ride locations.
 - Install bike racks on buses.

9. Develop and Support Additional Options for Accessible Public Transportation

- Consider logistics of shuttle services for targeted populations (older adults).
- Address barriers to use of fixed-route buses by persons with disabilities and senior citizens:
 - Accessibility to and from bus stops (e.g., accessible, well-maintained, and safe sidewalks)
 - Bus stop amenities (e.g., safety, maintenance, lighting, benches, transit alert systems)
- Enhance taxi and trolley services.
- Grow and provide funding support for coordinated, community-based transportation services (e.g., Sussex County Mobility Consortium’s model).

10. Develop Design Guidelines for Livable, Mobility-Friendly, and Aging-Friendly Communities with:

- Multi-modal connectivity within and to other communities
- Transit-oriented or transit-friendly features
- Tie-ins or easements to ensure future connectivity
- Minimum development standards
- Planned access to daily living needs and services

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- Built environment amenities that cater to daily living needs
 - A mix of uses that are walkable, self-contained, and offer a range of housing types and affordability for all ages and users

APPENDICES

- A. Workshop Invitation Flyer**
- B. Community Workshop Invitation List**
- C. IPA's Student Blog – Enhancing Mobility in Delaware Project: Teens and Mobility in Delaware**
- D. Review of Delaware Municipal Public Policies and Codes**
- E. Comprehensive Plan Assessment Tool**
- F. Community Workshop Primer**
- G. Newark Community Workshop Summary Notes**
- H. Dover Community Workshop Summary Notes**
- I. November 18, 2009, Working Group – PowerPoint Presentation**
- J. Summary Notes – November 18, 2009, Working-Group Meeting**
- K. April 13, 2010, Working Group – PowerPoint Presentation**
- L. Summary Notes – April 13, 2010, Working-Group Meeting**
- M. Citations**

Appendix A. Workshop Invitation Flyer

**Join us to discuss how to create
more livable and accessible communities in Delaware.**



Livable communities are characterized by a “sense of place,” with greater walkability, housing options, mixed-use development, access to transportation, and vibrant public places.

You're invited to...

Attend a **FREE** community workshop on Tuesday, March 9, in Newark OR Thursday, March 18, in Dover to provide input on how Delaware communities can be planned that are more livable and accessible.

This community workshop will be facilitated by the University of Delaware Institute for Public Administration. The workshop will provide opportunities for discourse on the question, “What are ideal characteristics of a livable/walkable community?”

All community leaders, civic association representatives, advocacy groups, and council boards are welcome! We need your input to help provide ideas on ways to better integrate transportation planning, public policy, and community design. Plan to attend and bring a friend!

Upstate Workshop:

Tuesday, March 9, 2010
4–6 p.m.

Newark Senior Center
200 White Chapel Drive
Newark, DE 19713

www.newarkseniorcenter.com/Directions.html

Downstate Workshop:

Thursday, March 18, 2010
4–6 p.m.

University of Delaware Paradee Center
69 Transportation Circle
Dover, DE 19901

www.ipa.udel.edu/directory/where

Each event is **FREE**, but seating is limited to 50 and pre-registration is required. Refreshments will be served. Register at www.ipa.udel.edu/transportation/livablecommunities/registration.html.

Appendix B. Community Workshop Invitation List

- 1. Governor's Advisory Council on Services for Aging and Adults with Physical Disabilities -**
The Governor's Advisory Council on Services for Aging and Adults with Physical Disabilities was established under Delaware state law ([29 Del. C. § 7915](#)) to provide advice to the Director of the Division of Services for Aging and Adults with Physical Disabilities on programs and projects to benefit the aging and adults with physical disabilities in the state
Contact: Chris Oakes, Project Manager (Workgroup Member) for info
chris.oakes@state.de.us
302-255-9376
- 2. Elderly and Disabled Transit Advisory Committee -** EDTAC is a working group that meets regularly to discuss and act on paratransit plans and issues impacting disabled riders and the public.
Contact: EDTAC Chair – Carol Barnett, Carol.Barnett@state.de.us
DHSS, Planner II
DE Division of Aging and Disabilities
302-255-9364
- 3. Architectural Accessibility Board -** The Architectural Accessibility Board (AAB) was established to carry out the mandates of the State of Delaware's Architectural Accessibility Act. The AAB reviews the standards for the design and construction of all state-owned facilities, and facilities constructed or altered with state funds, to ensure that the built environment regarding these facilities is safely accessible to, and usable by, disabled persons.
Contact: Dan Muterspaw, Chief Administrator of AAB, for board member info
Department of Administrative Services
Division of Facilities Management
159 Transportation Circle, Dover, DE 19901
dan.muterspaw@state.de.us
302-739-5644
- 4. Developmental Disabilities Council –** Its mission is to promote an embrace inclusion, equality, and empowerment.
Contact: Alexander Rose, Administrator (Workgroup Member) for info on Council Members
O'Neill Building
410 Federal Street, Suite 2, Dover, DE 19901
al.rose@state.de.us
302-739-3620
- 5. Adapt -** ADAPT is a national grass-roots community that organizes disability rights activists to engage in nonviolent direct action, including civil disobedience, to assure the civil and human rights of people with disabilities to live in freedom.
Daniese McMullen-Powell
24 South Old Baltimore Pike, Newark, DE 19702
302-453-8537
imbest222@aol.com

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6. **Freedom Center for Independent Living** - Freedom Center for Independent Living is one of two Centers for Independent Living (CILs) in Delaware. CIL's provide a range of services to persons with disabilities, including advocacy, peer support, information and referral, and independent living skills training.
Contact: Dr. Ernest Cole for info (are there board members?)
400 N. Broad Street, Middletown, DE 19709
ecole@fcilde.org
302-376-4399
7. **Independent Resources, Inc.** - Independent Resources, Inc. is one of two Centers for Independent Living (CILs) in Delaware (see above).
Contact: Larry Henderson, Executive Director
lhenderson@independentresources.org
Contact: Camelia Matthews, IL Specialist/Special Projects
cmatthews@independentresources.org
Two Fox Point Centre
6 Denny Rd., Ste. 101
Wilmington, DE 19809
302-765-0191
8. **Governor's Advisory Council for Exceptional Citizens** - The Council's adopted role is "to provide leadership through advice giving and advocacy for the education of and amelioration of unmet needs of citizens of all ages who are exceptional." Council activities in fulfilling this role are intended "to improve the lives of Delaware citizens who are exceptional."
Contact: Wendy Strauss (Workgroup Member) for info
516 W. Loockerman St., Dover, DE 19904
wstrauss@gacec.k12.de.us
302-739-4553
Robert Overmiller, Chairperson
Dave Hosier, Vice-Chair
Nancy Cordrey, Secretary/Treasurer
9. **Latin American Community Center** - Founded 34 years ago, the mission of the Latin American Community Center is to provide comprehensive services to participating families in the Delaware community.
Contact: Maria Matos, Executive Director for Chair info
403 N. Van Buren Street, Wilmington, DE 19805
www.thelatincenter.org
MMatos@thelatincenter.org
302-655-7338
Board of Directors Chair: Yvette Santiago

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- 10. State Council for Persons with Disabilities (SCPD)** - The mission of the State Council for Persons with Disabilities is to unite, in one Council, disability advocates and State agency policy makers to ensure that individuals with disabilities are empowered to become fully integrated within the community
Contact: Kyle Hodges (Workgroup Member) for info
O'Neill Building
410 Federal Street, Suite 1, Dover, DE 19901
Kyle.hodges@state.de.us
302-739-3621
Daniese McMullen-Powell, Chair (also co-chair of housing subcommittee)
imbest222@aol.com
Sandy Tuttle, Co-Chair of Housing Subcommittee
- 11. Delaware Aging Network (DAN)** - The Delaware Aging Network (DAN) is a consortium of over 50 agencies dedicated to improving the quality of services for older Delawareans. In addition to operating and coordinating services, DAN also advocates for policy changes that benefit the aging population.
Contact: Susan Getman, Executive Director (Workgroup Member) for info
Wilmington Senior Center
1901 Market St., Wilmington, DE 19802
srgetman@wilmingtonseniorcenter.org
- 12. UD Center for Disabilities Studies (CDS) – Healthy Delawareans with Disabilities Advisory Council and Community Advisory Council (CAC)** – CDS benefits from its partnership with the CAC. CAC members are individuals with developmental and related disabilities who serve as self-advocates; parents & other family members; representatives from disability-related training, service, & advocacy organizations; state agency representatives; & others.
Contact: Eileen Sparling (Workgroup Member) for info
sparling@udel.edu
Laurie Nicoli, CAC Chairperson
- 13. Advisory Council on Pedestrian Awareness and Walkability -**
Contact: Anthony Aglio of DelDOT Division of Planning for info on advisory council
Anthony.Aglio@state.de.us
Civic Association Representatives:
NCC: Steve Borleske
Kent: Carl Solberg
Sussex: Gary Emory
- 14. Civic League for NCC –**
Daniel E. Bockover, President
PO Box 11523, Wilmington, DE 19850
president@civicleagueforncc.org
302-475-7969


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- 15. Governor's Advisory Council on Hispanic Affairs**
Wanda Lopez, Executive Director
wandalopezWML@comcast.net
George Camacho, Chair
George.Camacho@state.de.us
Michelle Jewel, Social Justice Chair
- 16. Sussex County Mobility Consortium** - DAN assisted with the start-up of The Sussex Mobility Consortium which continues to meet the specific transportation needs of both older and physically challenged adults in Sussex County. CHEER, DAN's lead agency in Sussex County has created a coordinated system of transport and a centralized scheduling system to coordinate rides for older and physically disabled adults.
Contact: Ken Bock, Deputy Director, CHEER (Work Group Member) – did not attend
546 S. Bedford St.
Georgetown, DE 19947
kbock@scss.org
302-856-5181
- 17. Sussex County Association of Towns (SCAT)**
Bob Ricker, President, 302-856-7391
- 18. HEAL Built Environment Team**
Devona Williams, Consultant
devogo@aol.com
- 19. Dover/Kent County MPO** – MPO Council, Public Advisory Committee (PAC), and Technical Advisory Council (TAC)
Juanita Wieczoreck
Juanita.wieczoreck@doverkentmpo.org
- 20. WILMAPCO** – Public Advisory Committee (PAC)
Bill Swiatek
bswiatek@wilmapco.org
- 21. New Castle County League of Women Voters**
Peggy Shultz
Schultz_peggy@yahoo.com

Appendix C. IPA's Student Blog – Enhancing Mobility in Delaware Project: Teens and Mobility in Delaware

Enhancing Mobility in Delaware Project

Teens and Mobility in Delaware


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BLOGGING GUIDELINES

- * Blogs are in a public space, be proud of anything that you write or post
- * Always write in full sentences and words
- * Always check your spelling and sentences before you publish a comment
- * Only use first names when writing
- * Never write any of your [personal information](#), e.g. your phone number or address
- * You may respectfully respond to another person's comments and offer your opinion; please do not criticize the opinions of others.

About Us

[DOWNLOAD FOR FREE at www.tes.co.uk/resources](http://www.tes.co.uk/resources)

Land-use decisions, [community](#) design, and public policy have influenced transportation options in Delaware. Towns used to be more compact and walkable, but today's communities are built with the car in mind. Many Delawareans live in communities that are unwalkable, lack connectivity, and are inaccessible by [public transportation](#).

The University of Delaware's Institute for Public Administration (IPA) is researching ways to create livable, healthy communities that are integrated with public transit and linked to a connected [network](#) of walkable/bikeable streets. For more information about IPA's research on transportation planning and policy, please see: www.ipa.udel.edu/transportation.

IPA is interested in finding out about mobility issues and the needs of high school students in Delaware. If you are a high school student 14 years of age or older, we invite you to blog on this issue.

RECENT POSTS

- [How can transportation options be improved for teens in Delaware?](#)


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Appendix D. Review of Delaware Municipal Public Policies and Codes

Review of Municipal Public Policies and Codes (as they relate to mobility and quality of life for community members)

| Code Name | Focus | Regulatory Feature | Provision | Provision of Municipal Code |
|---|---|------------------------------|--|---|
| Elsmere | | | | |
| International Building Code (2000) | <i>Building</i> | Accessibility | <p>Building Construction Chapter of Elsmere Code adheres to International Building Code.</p> <p>In scope, accessibility is generally required in all buildings and structures, with a few exceptions such as construction sites and some residential groups.</p> <p>Buildings must have accessible routes and at least 50% of entrances must be accessible.</p> | <p>§ 76-6 (Elsmere Code)</p> <p>§ 1103.1, § 1103.2.6, § 1103.2.11 (IBC)</p> <p>§ 1104, § 1105.1 (IBC)</p> |
| | <i>Streets, Sidewalks, and Curbs</i> | Sidewalk width | Sidewalks should not be less than 36 inches in width. | § 3104.8 (IBC) |
| Town of Elsmere Code (2007 Update) | <i>Subdivision, Land Use, & Development</i> | Parks and recreation areas | <p>Code establishes a Park and Recreation Improvement Fund: A special fund established by the Town Council to retain moneys contributed by developers in accordance with the “money in lieu of land” provisions. . .to purchase recreational lands within reasonable proximity of the land to be subdivided so as to be of local use to the future residents of the subdivision.*</p> <p>Speed limits set within park and designated parking allocated in park areas</p> | <p>§ 196-18.D</p> <p>§ 155-1.F</p> |
| | | Impact Analysis | <p>Environmental impact analysis may be required in subdivision application.</p> <p>Traffic impact analysis may be required in subdivision application.</p> | <p>§ 196-23.B.5</p> <p>§ 196-23.B.6</p> |
| | <i>Zoning</i> | Property Owner’s Association | <p>The developer and landowner of every planned unit development need to create a property owner’s organization.</p> <p>The purpose of this organization is to administer open space and recreational facilities.</p> | <p>§ 225-28.F.5.a</p> <p>§ 225-28.F.5.b.1</p> |
| | <i>Streets, Sidewalks,</i> | Sidewalk construction | The Town of Elsmere will notify the owner of a property if sidewalks are | Charter of Elsmere Code |

| Code Name | Focus | Regulatory Feature | Provision | Provision of Municipal Code |
|---|---|---|--|---|
| | <i>Curbs</i> | and maintenance | necessary; it is the responsibility of the owner to pave and to maintain and repair sidewalks. | C § 410 |
| | | Right-of-way property maintenance | It is the responsibility of each property owner whose property adjoins a public street to property maintain the property and vegetation in the right-of-way next to that public street.* | § 171-1 |
| Wyoming | | | | |
| Wyoming Land Use And Development Code (2009) | <i>Building</i> | Site layout | Individual lots, buildings and units shall be arranged and situated to relate to surrounding properties, to improve the view from the buildings, and to lessen the land area devoted to motor vehicle access.* | § 11-4.G |
| | <i>Subdivision, Land Use, & Development</i> | Setting aside of land for recreation and open space | <p>Land must be dedicated for parks or other recreational uses for each development or subdivision.</p> <p>The size of space of dedicated land must be 900 square feet or 1/2 acre of land per unit, whichever is greater.</p> <p>Developers may opt out, and instead pay a cash sum to the town, which will be earmarked for open space development.</p> <p>Land will be maintained by a Homeowner's Association, which may be formed solely for this purpose if necessary.</p> | <p>§ 10-1.A.1.a, § 10-1.B</p> <p>§ 10-1.B.3.a</p> <p>§ 10-1.A.1.b, § 10-1.C</p> <p>§ 10-2</p> |
| | | Minimization of subdivision lots | If a lot size is double the minimum requirement, then the Planning and Zoning Committee may require further subdivision or the opening of future streets. | § 11-5.B.3.g |
| | <i>Zoning</i> | Mixed-use town center | <p>Purpose:</p> <ul style="list-style-type: none"> Encourage a mix of retail, office, and residential uses, consistent with the existing scale and character of the area, in order to promote the economic stability of the area. Provide for a limited number of apartment dwellings in conjunction with retail, office, and service uses, but only on the second and third stories of such | § 3-4.C |

| Code Name | Focus | Regulatory Feature | Provision | Provision of Municipal Code |
|---|--|---------------------|--|--|
| | | | <p>buildings.</p> <ul style="list-style-type: none"> • Provide for the continuation and improvement of existing residential uses. • Encourage redevelopment by permitting residential structures to be used wholly or partially for permitted non-residential uses. • Provide a modification procedure, utilizing development-plan review, to alleviate difficulties relating to parking and other area regulations.* | |
| | | Off-street parking | <p>Off-street parking is regulated for new or renovated buildings, with lots intended to serve more than one building.</p> <p>The purpose is to promote the safety and convenience of pedestrians and shoppers by locating parking areas so as to lessen vehicle movements in the vicinity of intensive pedestrian traffic.*</p> | <p>§ 6-1.B, § 6-2.C.2.b</p> <p>§ 6-1.A.3</p> |
| | <i>Streets, Sidewalks, Curbs</i> | Curb reduction | Must be built to State standards. | § 12-3.B |
| | | Mandatory sidewalks | <p>All land-use applications must provide for sidewalks, unless the street in question cannot typically provide one.</p> <p>Sidewalks must be built to State standards, and be 5-feet wide and available on both sides of the street. They should also connect to other sidewalks, or at least be designed for easy connection to future development.</p> | <p>§ 12-2.A.1</p> <p>§ 12-2.A.2-4</p> |
| | | Street trees | Trees must be planted every 30 feet along municipal streets. | § 10-5.A.1 |
| Millsboro | | | | |
| International Building Code (2003) | <i>Building</i> | Accessibility | Building Construction Chapter of Elsmere Code adheres to International Building Code. | § 70-1 (Millsboro Code) |
| | <i>Streets, Sidewalks, and</i> | Sidewalk width | Sites, buildings, structures, facilities, elements and spaces, temporary or | § 1103.1 |

| Code Name | Focus | Regulatory Feature | Provision | Provision of Municipal Code |
|----------------------------|---|-------------------------------------|--|----------------------------------|
| | <i>Curbs</i> | | permanent, shall be accessible to persons with physical disabilities. The unobstructed width of pedestrian walkways shall not be less than 36 inches and the total width shall not exceed 30 feet. | § 3104.8 |
| Subdivision of Land | <i>Building</i> | Prevent need for infill development | Strip development of all types should be limited and avoided as leading to undesirable consequences relative to future development of interior parcels and compromise of the traffic integrity of the roads involved. | § 178-14.A.5s |
| | <i>Subdivision, Land Use, & Development</i> | Preservation of natural features | Natural features such as trees, brooks, hilltops and views shall be preserved whenever possible in designing any subdivision containing such features. | §178-14.E.3 |
| | | Open space | In new developments, active open space shall be provided on a sliding scale. | §178-14.M.1 |
| | <i>Streets, Sidewalks, and Curbs</i> | Mandatory sidewalks | Sidewalks are required. They shall be placed on both sides of the street between the curbline and the property line. | § 178-13.A.3 |
| | | Mandatory curbs | Curbs shall be constructed and installed on both sides of a street. | § 178-13.A.4 |
| | | Street trees | Shade trees are to be located back of the curbline so as not to interfere with utilities, sidewalks or driveways, at intervals of approximately 60 feet. | § 178-13.A.6 |
| | | Crosswalk requirement | In blocks over 1,000 feet long, pedestrian crosswalks may be required; such walkway shall be 10 feet wide and perpendicular to the curbs on each side of the street. There shall be installed a five-foot walk paved in accordance with Town specifications. | § 178-14.C.2 |
| Zoning | <i>Building</i> | Mixed-use development | Residential Planned Community District established to be used for mixed uses only. Planned Commercial District established to encourage an orderly and systematic development design providing the rational placement of activities, parking and auto circulation, pedestrian circulation, ingress and egress, loading, landscaping, and buffer strips. | § 210-20.C.3 § 210-21.A.3 |

| Code Name | Focus | Regulatory Feature | Provision | Provision of Municipal Code |
|------------------------------|--|--------------------|--|-----------------------------|
| | | | Traditional Neighborhood Development District designed for the human and pedestrian scale; provides a mix of uses, including residential, commercial, civic, and open space uses in close proximity to one another in the neighborhood; provides a mix of housing styles, types and sizes to accommodate households of all ages, sizes and incomes; incorporates interconnected streets with sidewalks and bikeways and transit that offer multiple routes for motorists, pedestrians and bicyclists and provide for the connections of those streets to existing and future developments. | § 210-25.A |
| Streets and Sidewalks | <i>Streets, Sidewalks, Curbs</i> | Snow Removal | It is unlawful for anyone to allow snow to remain on the after snowing has stopped for more than six daylight hours. | § 174-19 |

*Quoted as it appears in the Municipal Code of Ordinances

Appendix E. Comprehensive Plan Assessment Tool

Institute for Public Administration at the University of Delaware

Synopsis of Healthy Communities: The Comprehensive Plan

Assessment Tool

Comprehensive Plan Assessment Tool

The Institute for Public Administration at the University of Delaware developed the Healthy Communities: Comprehensive Plan Assessment Tool with input from the Delaware Office of State Planning Coordination. The assessment tool is a checklist-based document designed to aid Delaware municipalities in the process of writing comprehensive plans that emphasize planning and building healthier communities. This tool is intended for use by local government officials, planning commissions, or other individuals involved in writing or updating the comprehensive plan for their community.

One goal of this assessment tool is to stress that planning for healthy communities is about more than just walkability. There are several elements of community planning and design that contribute to whether or not a particular community fosters healthy lifestyles. Many of these elements are included in the Comprehensive Plan Checklist, which provides a user-friendly format for guidance and review during the comprehensive planning process.

The Comprehensive Plan Checklist

The review of Delaware's comprehensive plans revealed that, even though there is no consistent comprehensive plan format, most of the towns' plans were divided into two broad parts: community goals and future recommendations. Because the plans' content was usually divided between these two sections, and because goals and recommendations are conceptually different, the checklist itself references healthy community elements in terms of community goals and future recommendations separately. This review process also revealed that Delaware's comprehensive plans often addressed transportation infrastructure (sidewalks, trails, etc.) separately from general pedestrian-oriented design (streetscaping features, building setbacks, placemaking). The checklist addresses infrastructure recommendations and design guidelines separately in order to emphasize that design guidelines are just as important as infrastructure recommendations.

Five Overarching Principles

While the checklist contains twenty-four unique items, there are **five overarching principles of planning for a healthy community** that structure the checklist. If aspects of each of these five principles are included in a comprehensive plan, then the plan should score very highly on the checklist:

- Bicycle and Pedestrian Accessibility: Every effort should be made to provide facilities that allow for the safe movement of pedestrians and bicyclists throughout the town for the purposes of

transportation as well as recreation. Basic facilities should be provided, including sidewalks, bike lanes, and multiuse trails.

- Complete Streets Principles: While bicycle and pedestrian accessibility is one of the main components of Complete Streets, truly complete streets are convenient and accessible for all users of the transportation system, *including motorists, transit users, pedestrians, bicyclists, and users of all ages and abilities*. This convenience and accessibility includes accessory factors such as streetscaping improvements and human-scaled design practices. Towns should strive for all aspects of complete streets principles in addition to basic infrastructure.
- Parks and Open Spaces: Sufficient parks and open spaces should be made available to town residents for active and passive recreational opportunities. Open spaces also enhance the visual attractiveness of an area while helping to improve air quality.
- Compact and Mixed-Use Development: The design and benefits of compact and mixed-use development often go hand-in-hand. The town should provide areas of mixed-use to its residents because of the increased opportunities to walk or bicycle to common destinations (such as grocery stores and restaurants) in areas of mixed use. Compact development should also be encouraged, as low density development results in destinations that are physically separated by long distances requiring automobile transportation. Municipalities can encourage more compact development by using context-sensitive designs that will result in destinations that are close enough to access by bicycling or walking.
- Convenient Access to Healthy Food: Every resident of the town should have convenient access to healthy food retailers. These locations should be accessible by automobiles as well as pedestrians, bicyclists, and transit users.

How to Use the Checklist

This checklist is designed to be used by local officials in writing or updating their town's comprehensive plan. Since comprehensive plans do not always include specific building or development regulations, the items on this checklist are oriented towards the town's general goals and recommendations for the future. The checklist should be viewed as a guide to planning elements that encourage more walkable, bikeable, and healthy communities. The number of elements that can be included in any given comprehensive plan will vary depending on the size of the town, its existing infrastructure, and its community character. Nonetheless, each town should strive to include goals and recommendations in its comprehensive plan that will help lead to a healthier and more vibrant community. The more features that the town can check off on this list, the more the town will be on its way to becoming a healthy community.

A list of examples of each element on the checklist is included at the end of this document. Most examples come from an existing comprehensive plan of a Delaware municipality. These examples are intended to provide guidance on effective wording of checklist elements as well as a better understanding of how healthy community elements can be seamlessly integrated into a comprehensive plan.

-
- To review the town's comprehensive plan for healthy community elements: Look through the existing comprehensive plan and check off any of the listed elements that are found in the plan. Be sure to note areas for future improvement that can be addressed in the next update of the town's comprehensive plan.
 - To write or update a new comprehensive plan: Choose elements on the checklist that can be integrated in the town's comprehensive plan, and strive to include as many elements as possible in the new plan.

Healthy Communities: Comprehensive Plan Checklist

| Pedestrian/Bicycle Accessibility | Check | Page # |
|---|-------|--------|
| 1.) Community or town goal that emphasizes pedestrian and/or bicycle facilities | | |
| 2.) Community or town goal to enhance children's pedestrian and bicycle safety | | |
| 3.) Encouragement to start or enhance Safe Routes to School Programs | | |
| 4.) Future development recommendation for increased pedestrian infrastructure | | |
| 5.) Future development recommendation for increased bicycle infrastructure | | |
| 6.) Recommendation for a pedestrian and/or bicycle study | | |
| 7.) Inclusion of or future recommendation for a Master Pedestrian Plan | | |
| 8.) Inclusion of or future recommendation for a Master Bicycle Plan | | |
| 9.) Prioritization of pedestrian improvements | | |
| 10.) Prioritization of bicycle improvements | | |
| Mixed Use/Compact Development | Check | Page # |
| 11.) Future development recommendation for additional elements of a pedestrian-friendly built environment** | | |
| 12.) Recommendation for a Traditional Neighborhood Development Ordinance* | | |

** Additional elements of a pedestrian-friendly built environment = mix of uses; compact development; building setbacks; parking location; pedestrian-scaled design (buildings, signs, roads); street connectivity

* Model TND Ordinance found at:
<http://urpl.wisc.edu/people/ohm/tndord.pdf>

| Complete Streets Principles | Check | Page # |
|---|-------|--------|
| 13.) Community or town goal to reduce automobile traffic throughout the town | | |
| 14.) Development regulations requiring sidewalks | | |
| 15.) Future development recommendation for streetscaping features | | |
| 16.) Future development recommendation emphasizing pedestrian improvements in the CBD or downtown area to increase business and create a sense of place | | |
| 17.) Future development recommendation for traffic-calming measures on local streets | | |
| 18.) Recommendation for multi-modal infrastructure supporting transit use | | |
| 19.) Recommendation to identify service gaps and deficiencies in mobility for people of all ages and abilities | | |
| 20.) Recommendation to develop a prioritization plan for addressing mobility issues for people of all ages and abilities in the transportation system | | |
| Access to Healthy Food | Check | Page # |
| 21.) Community or town goal to locate shopping facilities near residences | | |
| 22.) Community or town goal emphasizing public health, including physical activity and access to healthy food | | |
| Open Space and Recreation | Check | Page # |
| 23.) Community or town goal that emphasizes parks and recreational facilities | | |
| 24.) Recommendation for open-space policies and conservation-oriented land use plans | | |

Examples of Comprehensive Plan Checklist Elements

1. "Develop and maintain an efficient, balanced, and safe street-and-highway system with adequate facilities for pedestrians, cyclists, and motorists." (Bethany Beach Comprehensive Plan, 2005 Update, p. 8)
2. "The safety of these modes of transportation, especially children walking in the street to school, is a major concern of the citizens and the Town and Planning Commissions." (Bellefonte 2007 Comprehensive Plan, p. 58)
3. "State and local leaders in communities and schools can support Walk to School and Safe Routes to School programs." (*Leadership for Healthy Communities: Action Strategies Toolkit*, p. 16)
4. "Develop a plan for a network of bicycle and pedestrian paths traversing the Town, using existing streets, other rights-of-way, and systems provided in conjunction with new development." (Smyrna 2006 Comprehensive Plan, p. 79)
5. "It is recommended that the town develop a plan for the installation of additional bike paths throughout the town. This plan should identify specific areas of need and detail the year-to-year improvement schedule or identified projects." (Bethany Beach Comprehensive Plan, 2005 Update, p. 42)
6. "The Town may also wish to partner with DelDOT or some other outside agency to conduct a mobility-friendly assessment of the town's transportation infrastructure. Such a project could likely pinpoint where and why most automotive/pedestrian conflicts arise and suggest mitigating measures. The Town may also wish to develop an inventory of the bicycle and pedestrian networks within its boundaries in an effort to identify specific areas of need." (Dewey Beach 2007 Comprehensive Plan, p. 25)
7. "Although a number of bicycle and pedestrian facilities have been added in recent years and others will be developed as various projects are completed, there is no overall bicycle and pedestrian plan for the community. With assistance from DelDOT this planning effort needs to be addressed in the near future." (Smyrna 2006 Comprehensive Plan, p. 84)
8. Same as above
9. "For Immediate Implementation-- Prioritize planning and actions that create a pedestrian and bicycle friendly environment throughout town." (Fenwick Island 2007 Comprehensive Plan, p. 3-24)
10. "Short-Term Action Plan: Improve Bikeway Path Facilities along South College Avenue." (Newark 2008 Comprehensive Plan, p. 19)
11. "Make investments in construction of bicycle and pedestrian pathways...Require more attractive, pedestrian-friendly placement of commercial and institutional buildings." (Middletown 2005 Comprehensive Plan, p. 11)
12. "Adopt a zoning district that is consistent with Livable Delaware initiatives and neotraditional design principles. A Traditional Neighborhood Design (TND) ordinance that would allow for a greater mix of housing types, as well as provided a prescribed mix of residential, commercial, office and institutional uses. A TND would promote a sense of community and provide for more compact development patterns that produce less traffic than conventional traffic development styles. Neighborhood commercial retail should be permitted and encouraged that offers daily

necessities intended to limit daily trips per day and mitigate some of the demands on the local road network.” (Millsboro Comprehensive Plan 2009 Update, p. 63-64)

13. “To limit, insofar possible, unattractive sprawl development that unnecessarily disperses services and utilities and increases traffic congestion.” (Newark 2008 Comprehensive Plan, p. 85)
14. “Sidewalks, bikeways, and walking trails should be required components of every new area and development within the city limits.” (Lewes 2005 Comprehensive Plan, p. 2)
15. “Frankford should work with state officials to develop a comprehensive plan for streetscape improvements to improve the appearance of Frankford’s Main Street and increase parking.” Frankford 2008 Comprehensive Plan, p. 32)
16. “Sidewalks and other pedestrian connections should be provided along Market Street and to other uses in the area that will attract pedestrians. It is important to create an environment in which people will feel comfortable walking and shopping. This is critical if the area is to be friendly to visiting boaters.” (Blades Comprehensive Plan, 2008 Update, p. 30)
17. “Planned improvements could include, but are not limited to, the construction of sidewalks in identified key-risk areas, traffic-calming devices, and improved lighting.” (Bethany Beach Comprehensive Plan, 2005 Update, p. 42)
18. “To provide infrastructure that is both pedestrian- and transit-supportive and allows fast transitions between modes.” (*Healthy Communities: A Resource Guide for Delaware Municipalities*, p. 35)
19. “In 2008, the City began preparation of an ADA Transition Plan that will establish the need for ADA compliance, evaluate sidewalk ramps for compliance, rate and prioritize needed improvements, propose a phased capital improvements budget, and define a schedule to remedy as funding allows.” (Rehoboth Beach 2010 Comprehensive Development Plan, p. 71)
20. Same as above
21. “When considering what features were desirable in new neighborhoods, the respondents found the following features desirable: parks and open spaces; an interconnected street network; neighborhood shopping nearby; streets that allow quick access to major roads ...” (Bridgeville Comprehensive Plan, 2006 Update, p. 38)
22. “The Town encourages farmers’ markets and community gardens, and should work with local farmers towards this purpose.” (Millsboro 2009 Comprehensive Plan Update, p. 36)
23. “Respondents overwhelmingly favor the establishment of parks or open space for both passive- and active-recreational activities...” (Cheswold Comprehensive Plan, 2006 Update, p. 10)
24. “The Town has adopted standards for open space that require that new residential developments set aside land for open space and recreation uses in developments.” (Millsboro Comprehensive Plan 2009 Update, p. 33)

Appendix F. Community Workshop Primer

“Enhancing Mobility to Improve Quality of Life for Delawareans”



What is the University of Delaware IPA’s Role Researching Mobility and Livability?

Recent IPA studies and policy forums have focused on the need to adopt public policies, comprehensive plan for growth, and design pedestrian- and transit-friendly communities.

What are “Livable” Communities?

Livable communities are characterized by a “sense of place,” with greater walkability, housing options, mixed-use development, access to transportation, and vibrant public places.

Why is Livability Important to Delaware?

Many Delaware communities were built with the automobile in mind and are unwalkable, lack connectivity, and are inaccessible by public transportation. Walkability is important to the overall health and livability of a community.

Questions to Discuss:

- 1) How can Delaware enhance mobility options?
- 2) How can we better design communities to enhance mobility and livability?
- 3) What are the mobility and livability needs of citizens, including underserved populations?
- 4) What can state entities (e.g. DelDOT, DART) do to enhance mobility?
- 5) How can public and private partnerships including citizen engagement be encouraged to increase mobility and livability options?
- 6) Other comments?

Appendix G. Newark Community Workshop Summary Notes

**Enhancing Mobility to Improve Quality of Life for Delawareans Workshop
Newark Senior Center, 4:00–6:00 p.m., March 9, 2010
Summary Notes**

1. How can Delaware enhance mobility options?

- Improve intergovernmental coordination (transit and public policies)
 - Better coordination between local government and state planning; integration of public policies at all levels
 - Cooperate with contiguous states
 - Plan transportation across state lines
 - Improve connectivity between transportation entities
- Legislate compatible living elements by region
- Enhance mass transit options
 - Consider bus-rapid transit
 - Consider more commuter rail options/routes
- Implement Transit-Oriented Design (TOD)
 - A. [Better integrate land use and transportation planning to implement] for Transit Ready Development (i.e., ease of mass transit, school accessibility, live near work)

Improve and maintain [transportation-related] infrastructure:

- Make sidewalks a priority
- Install more benches
- Provide on-road space for bikes
- Erect (share-the-road) signs to make room for bikes
- Upkeep of bike lane lines
- Install more bike racks
- Addition/upgrade of pedestrian *crosswalks*/curb ramps/signals
- Plan more/safer bike lanes
- Garner support from politicians to:
 - Convey importance of mobility to community
 - Educate public as to benefits of mobility-friendly design
- Support endorsement of State's Complete Streets policy at the local government level
- Implement education for walking, biking, transit
- Promote pollution awareness [caused by auto emissions]
- Subsidize public transportation:
 - Less costly than additional roads
 - Less space and pro-technology resources
 - Motivate seniors and others for increased transportation safety
- Increase convenience [of public transit] with improved schedule and education for all ages and economic groups
- Explore expanded commuter rail services use (e.g., Wilmington to Dover and/or Delaware Beaches; light rail to southern Delaware)
- Increase opportunity for non-motorized transportation
- Prioritize human-scale mobility (not just cars)
- Improve public transit:
 - More bus routes and more buses
 - Integrated and coordinated services
 - Senior specific transportation options (ITN America)

2. How can we better design communities to enhance mobility and livability?

- Ensure connectivity—residential areas to commercial districts and services
 - Connect neighborhoods and businesses with walkable options
 - Ensure connectivity between subdivisions and secondary roads
 - Plan mixed-use development so people can live near services
- Address safety as a chief pedestrian concern (e.g., safe sidewalks, pedestrian lighting, accessible pedestrian signals)
- Improve public engagement and input on pedestrian enhancement projects:
 - First define a community and educate them on mobility and livability
 - Get feedback from all stakeholders
 - Broader community input for projects
- Develop more stringent livability standards for developers
- Take into consideration all mobility issues
- Plan access to the related communities
- Encourage higher-density, mixed-use, and more sustainable development
- Improve pedestrian and crosswalk safety:
 - Install crosswalks at every traffic light
 - Install pedestrian countdown signals
 - Improve crosswalk visibility and markings
 - Pedestrian signals and plenty of time at all crosswalks
 - Design pedestrian safety islands in middle of [multi-lane] streets, where pedestrians can stop before crossing a busy road
 - Install accessible pedestrian signals- that give auditory- and tactual- cues to increases the amount of time that a pedestrian has to safely reach the opposite curb
- Establish growth boundaries (private property rights)
- Promote universal design standards
- Improve the built environment, to:
 - Design to the human scale, rather than for automobiles
 - Address safety issues, including:
 - Ensuring the installation of safe, consistently-design curb cuts
 - Ensuring the installation of wider sidewalks [that meet ADA criteria] and ensure diligent repairs
 - Enforcing maintenance of sidewalks, walking and bike paths to ensure safety
 - Ensuring better drainage of roadways/pedestrian infrastructure
 - Improving bicycle lanes and bike parking (wider, more)
 - Diligently repair of pot holes
- Ensure compliance with ADA regulations:
 - Enforce snow removal on sidewalks [where locally legislated]
 - Enforce sidewalk maintenance
 - Install two ramps and truncated domes at every corner-to avoid wheelchair users having to correct from a diagonal direction, and visually impaired and blind pedestrian from veering into the middle of the street

-
- Develop public policies that encourage walkable “mixed-use development” areas [i.e. Main Street communities, which integrate and provide connectivity to pedestrian networks and mass transit options]
 - Consider economic development perspectives

3. What are the mobility and livability needs of citizens, including underserved populations?

- Improve bus transit, and ability to attract new riders:
 - Provide better bus options/schedules: technology for schedules (internet, phone accessibility) and more automated signage [Real-Time Transit Alert System] to eliminate guessing
 - More well-lit bus stops with spacious, clean shelters and benches
 - Sunday bus transportation – full service as weekday routes and hours
 - Enhanced feeder patterns to mass transit
 - More park and ride locations
 - Install bike racks on buses
 - Provide sensitivity training for drivers
 - Easier accessibility to get on/off buses
 - Connectivity [and maintenance] of sidewalks to bus stops
- Improve connectivity with/for older towns and cities
- Provide better multi-modal transit options:
 - Option to walk to basic services
 - Provide a balance of modes of travels away from the automobile
 - Special senior trains to Philadelphia
 - Consider livability needs for teenagers – independence of movement
- Reduce need for paratransit, by improving:
 - Accessibility to and from bus stops (e.g., accessible, safe sidewalks)
 - Bus stop safety (e.g., lighting, benches, transit alert systems)
 - Enhanced taxi and trolley services
 - Travel training for [fixed-route] bus service
 - Alternative options to paratransit
- Improve ability to “Age in Community”:
 - Ability to be independent and feel safe
 - Sense of neighborhood community
 - Safe walking conditions
 - Accessible buildings
- Improve Community Environments for Walkability:
 - Design greenspace along roads, neighborhoods and urban spaces
 - Install benches
 - Install blue lights, 911 call boxes, and other safety measures
 - Enact neighborhood watch
 - Ensure that there are crosswalks at every intersection, and eliminate crosswalks in mid-block (with no traffic controls)
 - Provide stronger presence of police for mobility safety and enforcement
 - Promote litter control and road-side cleanup

4. What can state agencies (e.g. DelDOT, DART) do to enhance mobility?

- Continue implementing/funding newer design/engineer strategies that consider needs of older adults (including pedestrians, bicycles, and drivers)
 - Install countdown pedestrian signals that are both audio and visual
 - Design and construct roundabouts
 - Upgrade signage; disseminate pedestrian-network and roadway design guidelines [to local governments]
- Implement “Complete Streets” at the local level; identify connectivity needs; retrofit connectivity into existing infrastructure
- Educate citizens to benefits of public transportation; train youth on use of public transportation
- Develop a bike-pedestrian plan that is comprehensive for each county
- Give DelDOT more control over land use (in Sussex and Kent Counties, they are only advisors on land use)
- Make developers pay their fair share [impact fees to fund transportation infrastructure improvements]
- Improve land use and transportation planning:
 - Provide a better integration of planning for unincorporated areas
 - Ensure that mobility and livability is brought to the forefront of planning needs and prioritized at every level of government and within every state agency
 - Coordinate and partner for additional options
 - Work with non-profits and private sector and local governments
- Using the example of “Complete Streets,” the State should guide legislation of livability concepts at the local level
- Establish incentives for not using automobiles:
 - Establish fund to launch innovate pilot projects
 - Provide developer incentives

5. How can public and private partnerships including citizen engagement be encouraged to increase mobility and livability options?

- Better involve and engage people who are affected by immobility (i.e., stakeholder groups representing persons who are underserved or those with disabilities)
- Train/educate people to help overcome psychological barriers (e.g., fear of walking, discomfort taking public transit)
- Get a better understanding of various perceptions of crime
- Promote volunteerism among civic groups and associations
- Educate and engage the public and community leaders:
 - Better communicate to elected officials about the importance of mobility and community livability as well as its public health benefits
 - Stress to the community the benefits: less traffic congestion, better air quality, lower obesity (especially in children), higher property values, more jobs
 - State/county facilitator program – comes in and works with communities to educate community leaders and citizens so they can lead
 - Involve communities before accepting federal money- does the community want to follow federal standards?

-
- Community engagement should be utilized to uphold a community's character
 - Develop public-private partnerships for transportation improvements
 - Explore and find creative incentives:
 - Healthcare
 - Education
 - Emergency backup plan
 - Example: ride-share vouchers
- Promote alternatives to driving:
- Encourage campaigns for car-free days
 - Provide tax incentives for businesses that support telecommuting
 - Create tax credits for leaving cars at home or riding public transit
 - Promote [RideShare] Delaware carpooling program
 - Institute a “no car day” (done in Bogota, Columbia)
 - Encourage phone/video conferencing for work
 - Consider and enforce more stringent parking policies
 - Develop better parking controls and policing (i.e. handicap spots)
 - Rather than tax incentives, perhaps “vice taxes” on gasoline to curb private driving

6. Other Suggestions

- Create a flat rate taxi service
- Focus on cleanliness of public transportation
- Create ozone and air-quality awareness days, as better air quality is a large aspect of safe outdoor conditions
- Stress the relationship of walkability to public health (e.g., obesity prevention, cardiovascular health, and mental health)
- Expand programs to combat litter to clean areas for pedestrian traffic
- Use code enforcement to preserve the high standards and expectations of community development
- Retrofit sidewalks into older neighborhoods
- Consider a tax incentive to live and work within one's community—to develop a sense of community spirit; partner with health/auto insurance companies for reduced premiums
- Consider stronger legislation for developers to assume the financial responsibility for pedestrian infrastructure improvements (e.g., installing sidewalks, connecting to surrounding communities, roadway modifications—to include bike paths and accessibility for emergency vehicle traffic, installation of accessible pedestrian signals at every intersection_
- Use traffic calming strategies (e.g., lowering speed limits, installing speed humps to make it safer for pedestrian and bike traffic)
- Restrict “right on red,” so that pedestrians have the right of way
- Consider a tax incentive for businesses that promote walking and biking to work
- Consider the designation of car pool lanes [two or more passengers] on main corridors (I-95, Route 1)

-
- Ensure that local governments legislated and enforce sidewalk maintenance (e.g., snow removal and tree branch trimming) [in both commercial and residential districts] for
 - Separate bike and pedestrian traffic [on major roadways]
 - Educate high school students on defensive driving, pedestrian safety, and use of public transit (e.g., buses and light rail)
 - Understand that there may be unintended consequences for enacting developer impact fees (e.g., pass-through costs to consumers, higher house prices)
 - Design [walkable infrastructure for all ages and all users]; focus on family benefits of livability and walkability; include family members of all levels to ensure that everyone is represented
 - Aesthetics are important in promoting walkability
 - Don't lose sight of environmental issues
 - Define livability to address the issue of noise
 - Efficient density is an economic issue that could impede enhanced mobility
 - Use examples from other regions that better accommodate alternate transportation

7. Input from Other Stakeholders

- **Nicholas Tolino** (Unable to attend workshop)

The early termination of the #6 DART bus route at the Newark hub has caused concern. Previously, the route terminated at the Municipal Building in Newark. This gave passengers access to much of the University of Delaware campus and programs offered by the University. The new system does not provide trolley service to the rest of the campus from the Newark hub after 4:30 p.m., leaving passengers who are elderly or who have a handicap without access to the main campus of the University and also the various shops and restaurants in the area. Many are discouraged and have given up on traveling into Newark because of the disconnect with the Newark community due to the termination of the #6 bus. Yes, there is another bus that will take you to the Newark Municipal Building, but that could be another 1/2 hour to 1 hour wait which becomes frustrating for an elderly or handicapped person. Safety is another issue. Have you tried standing at the bus stop which is called the Newark hub about 9:00 p.m. waiting for a bus with no one around. It is unsafe and there has been crime in the area. Reinstating the #6 DART bus route on Main Street to the Municipal building loop (with all the stops in between) would greatly decrease the safety concerns of the riders of all ages and disability status.

In recent years there have been some gains in the construction of sidewalks for the safety of walkers. However there is a serious disconnect when it comes to the small "bridges" over creeks. For some reason, DELDOT has performed upgrades to these "bridges" but decided not to include a walking path/sidewalk for walkers. This is unsafe and a deterrent to walking for many of us.

Are there any laws on the books that require businesses to shovel or otherwise remove snow from the sidewalks in front of their businesses? There are numerous DART riders and walkers forced to walk in traffic on Kirkwood Highway because none of the sidewalks have been cleared of snow. This is an unusual winter, but if there are laws on the books about snow removal, why are they not being enforced? I spoke to some one who works in the prison system and he agreed that they have the manpower to help with the snow removal on sidewalks in the county, but he said the state does not have the money to provide the proper tools or winter clothing to enable the men to work safely in the winter elements.

- **Additional input (3/10/10) from workshop attendee Darlene A. Cole, Certified Orientation and Mobility Specialist was incorporated into summary notes**
- **Peggy Schultz**, League of Women Voters of Delaware and New Castle County (Unable to attend):

How can Delaware enhance mobility options?

We need a much better organized employer commute program. We need to greatly enhance our public transit offerings. We need to require that public transit accommodations be included in all new developments. We need to require that new developments take place only in Levels 1, 2, and 3 of the State Strategies for Policies and Spending, so that density will eventually be sufficient to support public transit. We need greater equity in providing public transit and sidewalks and bus stops and street crossings for our lower income and non-English-speaking populations. We need State legislation that requires Smart Growth, expressed in density, mixed use, connectivity, walkability and a variety of transportation choices.

How can we better design communities to enhance mobility and livability?

We need State legislation that would require municipalities and counties to abide by their own comprehensive plans. There ought to be State legislation that would make it unlawful to build developments outside State growth zones as expressed in their State Strategies for Policies and Spending.

What are the mobility and livability needs of citizens, including underserved populations?

Our poorer citizens need to be able to get to jobs on transit and to not depend on cars, which take a disproportionate amount of their incomes, compared to transit. As it is, they often do without proper bus stops and bus service and even proper sidewalks and crossings. We need to spread the burden of paying for paratransit to our more well-to-do citizens instead of forcing the poorer citizens to do without transit so that paratransit can provide service way outside the ADA requirements.

What can state agencies (e.g. DelDOT, DART) do to enhance mobility?

DART adds to sprawl by serving non-ADA paratransit customers far beyond 3/4 mile of a fixed route. Furthermore, if paratransit were funded separately from fixed route transit, fixed route transit would have more funds and would be able to serve poorer citizens. Of course, DART needs to increase its service (which they could do if they had more money). DelDOT could refuse to provide roads outside State growth zones. If counties got into the road-building business they would act more responsibly in terms of their land

use decisions....currently in Sussex County anyway controlled by real estate transfer tax concerns.

How can public and private partnerships including citizen engagement be encouraged to increase mobility and livability options?

I would like to see lower income people and English as a second language people get more involved in organizations such as WILMAPCO so that their voices might be heard in the area of transit dollar allocations.

Other comments?

Land use considerations in general need more attention, and greater density in growth zones needs to be encouraged.

Appendix H. Dover Community Workshop Summary Notes

Enhancing Mobility to Improve Quality of Life for Delawareans Workshop University of Delaware Paradee Center, 4:00–6:00 p.m., March 18, 2010 Summary Notes

1. How can Delaware enhance mobility options?

- Improve communication between all project partners
 - DelDOT should talk to the community for input and then utilize the input
 - Build to clear standards that each project partner understands
- Ensure ADA compliance with projects
 - Common sense approach to address problem situations, e.g. telephone poles blocking sidewalks
- Improve bus service
 - Better/more appropriate locations for bus stops, e.g. too remote from senior living communities
 - Better on-time bus service to encourage bus use
- Define/clarify construction and maintenance responsibility regarding sidewalks
 - Are the laws enforced? Who is responsible for enforcement?
 - In incorporated areas (e.g., municipalities), property owners are responsible for sidewalk maintenance. However, the extent of enforcement varies among municipalities.
 - There is an issue of maintenance of private roads in Sussex County. There is no mechanism to enforce maintenance of private roads (including plowing of streets and clearing of snow sidewalks)
 - Are the laws reasonable (e.g. requiring senior citizens to clear snow from sidewalks)?
 - For state-maintained roadways, it is not clear whether there is a plan to clear snow from adjacent sidewalks.
- Plan for Complete Streets – think the project through before starting
 - Encourage non-motor connectivity, e.g. more trails for both pedestrians and bicyclists that are ADA compliant
 - Consolidate traffic lights – consider more service roads
 - Require 55+ communities to have connectivity to services and be located to access transit
- Provide adequate funding for projects – have the money to do it right the first time
 - Provide state grant-funding to local governments for Complete Streets improvements

2. How can we better design communities to enhance mobility and livability?

- Design mixed-use development (commercial, retail, multi- and single-family housing)
 - Multi-modal interconnectivity within and to other communities
 - Build communities near existing and future public transit routes and stops
 - Include tie-ins to existing and future development
 - Secure easements during development approval phase to ensure future connectivity (e.g., trails, sidewalks, bikeways)
 - Mandate minimum standards for new development that accommodates all modes of transportation
 - Better community planning – close to amenities, stores, medical facilities
 - Possible self-contained communities (e.g., Kentlands in Gaithersburg, Md. was cited as a walkable, self-contained, mixed-use community)
- Build all streets to State standards, for public use
 - Sussex County has lower, less costly standards for constructing streets
 - There is an issue with the maintenance and lack of connectivity of private streets in Sussex County
- Maintain air quality and wetland/environmental requirements
- Impose impact fees on developers to pay fair share for infrastructure improvements
- Take today's issues into consideration when planning tomorrow's land use
 - Learn from prior mistakes, e.g. don't plan new communities if the existing road cannot handle current traffic loads

3. What are the mobility and livability needs of citizens, including underserved populations?

- Plan for and provide developer incentives to construct affordable housing close to transit services and retail
 - Consider the minority population's ability to get to employment centers
 - Affordable housing for successive generations
 - Acknowledge the evolution of the moped and plan parking accordingly
 - Require developers to devote space to parks
- Assume people will age-in-community, and plan for:
 - Access to health care, doctors of choice
 - Universal housing that is ADA compliant
- Utilize a hub concept for towns and transit
 - Consolidate services in small towns
 - Evaluate contiguous requirements for annexation
 - Make places destination oriented
- Create employer and municipal coordination for transit
- Recognize that Sussex County's rural areas are underserved
 - Need accessible public transportation

-
- State recognition of the Sussex County Mobility Consortium
 - Need State-support for community-based transportation mechanism that pools resources and utilizes volunteers for the transportation of elderly and physically-challenged Sussex County residents
 - Need more extensive coordination among counties in Delaware and across state lines using the community-based transportation model
 - Need additional State funding
 - Extension of existing systems
 - Maintenance of local parks
 - Improvement of public areas and bike paths
 - Address inequities of paratransit and fixed route services among counties in Delaware, specifically the limitations of fixed routes in Sussex County
 - Consider accessibility to hospitals and doctors
 - Some are out of state
 - Some are not served by public transit

4. What can state agencies (e.g. DelDOT, DART) do to enhance mobility?

- Develop transportation and land use plans that considers public input, comments, and community interests
- Better consider the populations being served
 - Solicit input before developing plans
 - Finance DART transit services in underserved areas with growing population centers and demand
 - DSHA –plan for affordable housing with connectivity
- Interagency Planning
 - Work with Maryland Transportation Authority (MTA) on mutual transportation issues
 - When considering a second Bay crossing, plan for controlled growth of Delaware towns
- Consider East/West routes to provide better connectivity in Sussex County
- Balance air and water quality
- Create passenger rail availability (e.g., north-south Wilmington/Dover route)
- Advanced planning for major roads and associated [pedestrian-bicycle] trails

5. How can public and private partnerships including citizen engagement be encouraged to increase mobility and livability options?

- Overcome not-in-my-backyard (NIMBY) barriers
- Encourage better municipality/developer/land owner coordination

-
- Maintain consistency between what local government approves in the preliminary plan process and what is actually constructed
 - Engage the community positively
 - Organize charrettes
 - Look at achievements and successes of existing community-based transportation programs, including the Sussex County Mobility Consortium
 - Educate both children and elected officials about community planning concepts
 - Education of and benchmarking for smart growth, including walkable communities

6. Other Suggestions

- Locate public schools appropriately (with linkages to residential communities and other destinations such as parks, libraries, community centers)
- Create sustainable practices
- Consider language barriers

7. Input from Other Stakeholders

Donald Post, DPH Diabetes Prevention and Control Program (unable to attend workshop)

How can Delaware enhance mobility options?

Implement standards for built communities. Provide tax incentives to developers and municipalities (including growth areas and annexations) to implement mobility into their plans. Pre develop codes, policies and ordinances.

How can we better design communities to enhance mobility and livability?

Assurance of connectivity, walk-ability and recreation in built communities. Require percentage of open space, recreation and walking paths in all new built communities. Provide incentives to municipalities to implement better design.

What are the mobility and livability needs of citizens, including underserved populations?

Accessibility to healthy foods (e.g. fruits and vegetables). Safe neighborhoods (e.g. good lighting) to encourage people to walk and play. Affordable activities that don't require costly membership fees. Open space and park settings are important.

What can state agencies do to enhance mobility?

Develop policies and plans for implementing methods of smart growth. DART needs to mainstream transporting of people – if getting from point A to point B is an excessive amount of time, people will not bother. When built communities are close to municipalities, DelDOT needs to require developer to connect walkways.


How can public and private partnerships including citizen engagement be encouraged to increase mobility and livability options?

Educate the community on the importance of mobility in relationship to health, such as, chronic diseases (diabetes, heart disease, asthma). Educate both municipalities and developers on the importance of inclusion of access to mobility and livability in their communities.

Other comments?

Develop ordinances for healthy communities and provide to municipalities for adoption. Conduct trainings statewide to educate the public, leaders and health professionals on the importance of livable communities.

Appendix I. November 18, 2009, Working Group – PowerPoint Presentation

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Enhancing Mobility to Improve Quality of Life for Delawareans


presented by

Allison Calkins and Robert Coons
IPA Research Assistants
November 18, 2009

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Principles of New Urbanism



A perspective view of a multi-lane highway. The left side of the road has a single lane with a car. The right side is congested with a line of cars, including a white truck. The road leads towards a city skyline on a hill under a hazy sky.

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What Is New Urbanism and Why Is It Important?

- **Charter of the New Urbanism:**
 - diverse in use and population;
 - pedestrian and transit transportation;
 - physically defined and universally accessible;
 - celebrate local history, climate, ecology, and building practice.




Photo of Gainesville, Florida, the first fully new urbanist town, exemplar of the New Urbanism movement (© 2008 UrbanSight)

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Regulatory Objectives for Implementing New Urbanism

1. Variety of uses
2. Mixed residential density and housing types
3. Infill and rehabilitation activity
4. Contextual design standards with the traditional architectural styles of the city or region.
5. Compact, walkable centers and neighborhoods with public transit
6. Enhanced streetscapes and civic life
7. Public space, farmland, and natural areas

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Examples of New Urbanist Ideals

Celebration, Florida

Photo courtesy of <http://en.wikipedia.org/wiki/File:CelebrationFL01.jpg>

Stapleton, Colorado

Photo courtesy of <http://www.fox.com/content/>

Seaside, Florida

Photo courtesy of <http://www.seasideinfo.org/yourcommunity/development/2003.jpg>

Newark, Delaware

Photo courtesy of http://en.wikipedia.org/wiki/File:Newark_Delaware.jpg

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Infill Development



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What Is Infill Development and Why Is It Important?

- Development of unused/underutilized lands within existing urban areas
- Ultimate sustainable development pattern



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Benefits of Infill Development

- Creates a variety of housing types which, in turn, create housing opportunities.
- Enhances walkability due to its compactness.
- Encourages community revitalization.




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Infill Instead of Greenfield Development





- Full utilization of properties and buildings
- Provides live/work/play proximity
- Reduces auto-dependency

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Smart Transportation




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Principles of Smart Transportation

1. Tailor solutions to the context.
2. Tailor the approach.
3. Plan all projects in collaboration with the community.
4. Plan for alternative transportation modes.
5. Use sound professional judgment.
6. Scale the solution to the size of the project.

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Research Question 4

- How can the importance of community building be explored to better shape the conversation, enhance the public engagement process, and involve traditionally underserved audiences?

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Path Forward

- Community meetings
- Community feedback/policies
- Bring this group back, discuss summary of meetings
 - Tentatively scheduled for Tuesday, April 13, 2010 from 8:30 – 11:30 a.m. at the UD Center for Composite Materials Conference Room.

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Appendix J. Summary Notes – November 18, 2009, Working-Group Meeting

Participants:

| Name | Organization | Name | Organization |
|--------------------|--------------------------------------|--------------------|---|
| Steven Bomberger | DE Home Builders Assn. | Terri Hancharick | Governor's Advisory Council for Exceptional Citizens |
| Dennis Christie | Delaware AARP | Karen Horton | DSHA |
| Mark Clark | AIA, Delaware Chapter | Herb Inden | OSPC |
| Michelle Eichinger | DPH | Diane Laird | DEDO, Downtown Delaware |
| Vance Funk | DLLG (and City of Newark) | Chris Oakes | DE Division of Services for Aging & Adults with Physical Disabilities |
| John Gaadt | APA, Delaware Chapter | Ken Potts | Delaware Transit Corp. |
| Roberta Geier | DelDOT | Alexander Rose | Developmental Disabilities Council |
| Susan Getman | Delaware Aging Network | Eileen Sparling | UD Center for Disabilities Studies |
| Deborah Gottschalk | DHSS | Bill Swiatek | WILMAPCO |
| Tamika Graham | WILMAPCO | Juanita Wieczoreck | Dover/Kent Co. MPA |
| Dana Griffin | Nemours Health & Prevention Services | | |

Welcome and Introductions:

IPA Policy Scientist Ed O'Donnell introduced the project team that includes Associate Policy Scientist Marcia Scott, IPA Research Assistant (RA) Allison Calkins, and IPA RA Robert Coons. The workshop participants introduced themselves and the agency/organization that each represent.

Presentation:

IPA Research Assistants Allison Calkins and Robert Coons presented "Enhancing Mobility to Improve Quality of Life for Delawareans." The presentation provided an overview of the principles of new urbanism, universal design, infill development, and smart transportation.

Research Questions Presented to Working Group:

- How can transportation planning, public policy, and community design be enhanced so places in Delaware become more "livable"?
 - Create a checklist to include livable designs for development.
 - Change zoning in municipalities to foster healthy communities (perhaps more restrictions, perhaps less – see "Zoning" under other comments).
 - Need to focus on existing communities as well as new developments, as many Delawareans want to age in place.


-
- Make a connection between better health and rising property value to developers to entice them to create New Urbanist designs.
 - Focus on “Aging in Community” more than “Aging in Place” to promote a more livable area rather than just specific developments.
 - Fewer costs in development allow for more additions such as Universal Design implementations.
- How can Delaware enhance mobility options?
 - Focus on walkability in design to promote health.
 - State can lead as an example by promoting alternative transportation through their employees (bike-racks, sidewalks, bike lanes, incentives to take other modes of transportation to work).
 - Focus on Transit Oriented Design options, more than just by accident (such as the waterfront).
- How can improved quality of life be achieved with interdisciplinary cooperation in the fields of public health, housing, building, disability advocacy, aging, land-use planning, transportation planning, and government?
 - A better understanding of how transportation works in terms of fixed routes, etc. should be incorporated in the planning process.
 - Public, private, and nonprofits that serve the community should be included in the planning process (may reduce cost of public transit through use of nonprofits).
 - To avoid conflicts, communication and understanding are vital among these groups.
 - Access to local healthcare should be included in planning process.
 - There is a need to understand legislators motivations and communicate these ideas with them.
- How can community-building be explored to enhance the public-engagement process and involve traditionally underserved audiences?
 - Perhaps focus on mixed-use development rather than just age, as teens and others without cars are underserved.
 - Educate community on benefits of universal design so that it becomes a desire within the community and a demand to the developers.
 - Market higher density in the community to foster mixed-use and public transportation (Plus Process).
 - Try to eliminate “not in my backyard” mentality by reinforcing benefits and providing real, tangible examples of successful development preferably in the state.
 - Use health to change public perception on New Urbanist Design.
 - Try to create affordability in New Urbanist areas to provide incentive to live there.
 - Implement ideas such as “Tele-Town Halls” to see the needs and desires of the community.

-
- Other Comments:
 - Affordability of New Urbanism
 - 55+ communities are expensive, not always universally accessible, and many times in poor locations. This makes them not ideal for aging in place.
 - New Urbanist areas are a hard sell to the public, making it hard to make them affordable. More public acceptance is needed to make affordable housing under New Urbanism.
 - Price variation discourages move towards New Urbanism: smaller houses in New Urbanist areas (such as 55+ communities) are generally far more expensive than larger houses in suburbia.
 - Affordable housing frowned upon by banks and developers unless for retirees.
 - Lack of affordability makes New Urbanism difficult as a concept for starter homes and the less wealthy.
 - There is currently a Bill in place for publicly funded houses to focus on universal design.
 - Issue of funding transportation infrastructure (people come for low taxes, but expect services they had in metropolitan areas).
 - Zoning and codes
 - Too many codes may be detrimental (developers may simply choose not to build in area)
 - Perhaps should come from public wants and incentives, as well as other options such as form-based codes.
 - Sussex has fewer restrictions, but in many cases better development – perhaps more flexibility in codes can provide for better development.
 - May simply be an issue of enforcing the existing codes, as developers do not want to pay more for Universal Design and the public is not demanding it.
 - Architects have taken courses in Universal Design and want to implement it, yet there needs to be more of a public demand for it.
 - There is a market for New Urbanism in the state, but need to figure out what is holding the market back.

Path Forward:

- IPA will hold two community meetings; input today will serve as framework for discussion.
- Municipal codes for three Delaware communities will be reviewed to see how livability, pedestrian-friendly design, and mobility are being addressed.
- **Second working group meeting is tentatively scheduled for Tuesday morning, April 13, 2010**


Appendix K. April 13, 2010, Working Group – PowerPoint Presentation


**Enhancing Mobility to
Improve Quality of Life for
Delawareans**

2nd Working Group Meeting
Tuesday, April 13, 2010


Edward O'Donnell, Marcia Scott
Allison Calkins, Robert Coons

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Themes from 1st Working Group Meeting


- Plan for aging-in-community
 - Incorporate universal design
 - Provide developer incentives
 - Address public transportation needs and walkability of 55+ communities
 - Ensure accessibility/connectivity
- Promote/provide incentives for better community design:
 - Encourage TOD and walkability
 - Incorporate transit planning
 - Ensure connectivity
 - Provide access to shopping, activity hubs, and health services
 - Mixed-use development

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Themes from 1st Working Group Meeting
Continued...

- Engage the community:
 - Promote interdisciplinary cooperation
 - Include public, private, and non-profits in planning process
 - Address needs of elderly, non-drivers (teens), underserved populations
 - Educate public
 - Better understand public's needs/desires
- Promote New Urbanism:
 - Address problematic locations and design of 55+ communities
 - Need affordability!
 - Need public demand

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Themes from 1st Working Group Meeting
Continued...


- Provide for flexibility of local government codes
- Create a [market] demand for livability
- Address funding of public infrastructure/transportation
 - Developers pay fair share
 - Impose a rating/scoring system within the land development process
 - In-migration due to low taxes, but continued high demand for services
 - Paratransit costs are unsustainable

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**Workshop Invitations E-mailed to
Representatives of:**

- Governor's Advisory Council on Services for Aging and Adults with Disabilities
- Elderly and Disabled Transit Advisory Committee
- Architectural Accessibility Board
- Developmental Disabilities Council
- Adapt
- Freedom Center for Independent Living
- Independent Resources, Inc.
- Governor's Advisory Council for Exceptional Citizens

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**Workshop Invitations E-mailed to
Representatives of:**
Continued...


- Delaware HEAL Built Environment team
- Latin American Community Center
- State Council for Persons with Disabilities
- Delaware Aging Network
- UD Center for Disabilities Studies
- Advisory Council on Pedestrian Awareness and Walkability
- Governor's Advisory Council on Hispanic Affairs
- Sussex County Mobility Consortium
- Delaware League of Local Governments/SCAT

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Join us to discuss how to create more livable and accessible communities in Delaware.

"Enhancing Mobility to Improve Quality of Life for Delawareans"



Livable communities are characterized by a "sense of place," with greater walkability, housing options, mixed-use development, access to transportation, and vibrant public places.

You're invited to...

Join a FREE community workshop on Tuesday, March 9, in Newark DE, Thursday, March 18, in Dover to provide input on how Delaware communities can be planned that are more livable and accessible.

This community workshop will be facilitated by the University of Delaware Institute for Public Administration. The workshop will provide opportunities for discussion on the question, "What are the characteristics of a livable/accessible community?"

All community leaders, civic association representatives, voluntary groups, and council boards are welcome! We need your input to help provide ideas on ways to better integrate transportation planning, public policy, and community design. Please to attend and bring a friend!

| | |
|---|---|
| <p>Upstate Workshop: Tuesday, March 9, 2010 4-6 p.m. Newark Senior Center 300 White Chapel Drive Newark, DE 19711 www.newarkseniorcenter.com/education.html</p> | <p>Dover Workshop: Thursday, March 18, 2010 4-6 p.m. University of Delaware Paradee Center 68 Transportation Circle Dover, DE 19901 www.udel.edu/transportation/education/transportationworkshop.html</p> |
|---|---|


Each event is FREE, but seating is limited to 50 and pre-registration is required. Refreshments will be served. Register at www.udel.edu/transportation/education/transportationworkshop.html.

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Community Workshops

- Newark Senior Center – March 9, 2010
- UD Paradee Center, Dover – March 18, 2010



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Questions for Discussion at Workshops

- How can Delaware enhance mobility options?
- How can we better design communities to enhance mobility and livability?
- What are the mobility and livability needs of citizens, including underserved populations?
- What can state agencies do to enhance mobility?
- How can public and private partnerships, including citizen engagement, be encouraged to increase mobility and livability options?

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Newark Workshop

37 Registered; 24 Attended



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Newark:

1) How can Delaware enhance mobility options?

- Improve intergovernmental coordination
- Improve connectivity
- Legislate compatible living
- Enhance, improve and promote mass transit
 - Subsidize public transit
 - Improved schedules
 - Expanded commuter rail
- Improve/maintain infrastructure
- Support for State's Complete Streets policy at local government level
- Promote public awareness
- Increase opportunities for non-motorized transportation
- Prioritize human-scale design/mobility
- Implement TOD

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Newark:

2) How can we better design communities to enhance mobility and livability?

- Ensure connectivity
- Address/improve pedestrian safety
- Improve public input on pedestrian enhancement projects
- Develop more stringent livability standards for developers
- Establish growth boundaries
- Promote universal design standards
- Improve the built environment
- Ensure ADA compliance projects
- Encourage policies that encourage walkable, mixed-use development

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Newark:

3) What are the mobility and livability needs of citizens, including underserved populations?

- Improve bus transit; attract new riders
- Improve connectivity with/for older towns
- Provide better multi-modal transit options
- Improve options to paratransit
- Improve ability to “age-in-community”
- Improve community walkability



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Newark:

4) What can state agencies do to enhance mobility?



- Implement/fund design/engineer strategies that consider needs of older adults
- Implement Complete Streets at local level
- Public education
- Support development of county bike-pedestrian plans
- Give DelDOT more control over land use decisions
- Incentives for not using autos
- Improve land use and transportation planning

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Newark:

5) How can public and private partnerships be encouraged?

- Better involve/engage those affected by immobility
- Train/educate people to overcome psychological barriers
- Understand perceptions (crime)
- Explore/find incentives
- Develop public/private partnerships
- Promote driving alternatives
- Consider/enforce more stringent parking policies
- Consider “vice” taxes on gas to curb driving
- Educate & engage public and community leaders

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Newark:

6) Other suggestions

- Flat rate taxi service
- Develop public awareness strategies
- Use code enforcement to preserve high standards
- Legislate developers to pay fair share
- Restrict “right on red”
- Designate car pool lanes
- Local government enforcement of sidewalk maintenance
- Separate bike/traffic lanes
- Stress aesthetics!
- Promote efficient density

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Dover Workshop

15 Registered; 11 Attended



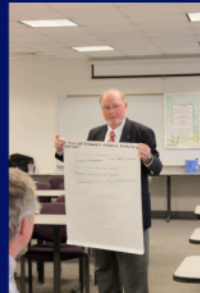
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Dover:

1) How can Delaware enhance mobility options?

- Improve communication between project partners
- Ensure ADA compliance
- Improve bus service
- Define/clarify sidewalk construction and maintenance responsibilities
- Plan for Complete Streets
- Provide adequate project funding




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Dover:

2) How can we better design communities to enhance mobility and livability?



- Promote mixed-use development
- Build all streets to State standards (all streets for public use)
- Maintain environmental standards
- Impose developer impact fees
- Take today's issues into consideration to plan for tomorrow's land use


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Dover:

3) What are the mobility and livability needs of citizens, including underserved populations?

- Plan for and provide developer incentives to construct affordable housing close to transit and retail amenities
- Assume and plan for people to age-in-community
- Utilize a hub concept for towns and transit
- Better coordinate transit
- Recognize that Sussex Co.'s rural areas are underserved




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Dover:

4) What can state agencies do to enhance mobility?



- Develop transportation & land use plans that considers public input, comments, community interests
- Better consider the populations served
- Enhance inter-agency/-state planning
- Consider E-W routes for connectivity in Sussex County
- Enhance passenger rail (N-S route)
- Plan for road/trail systems


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Dover:

5) How can public and private partnerships be encouraged?

- Overcome NIMBY
- Encourage better municipality/developer/land owner coordination
- Engage the community positively (charrettes)
- Recognize achievements of existing community-based transportation programs (e.g., Sussex Co. Mobility Consortium)
- Educate about public community planning concepts
- Educate and benchmark for smart growth




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Dover:

6) Other suggestions

- Locate public schools appropriately
- Create sustainable practices
- Consider language barriers



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Common Themes from Both Workshops

- Improve intergovernmental (DE-MD and DE-local governments) coordination
- Encourage adoption of local government Complete Streets policies
- Plan for aging-in-communities
- Use of incentives:
 - Developers
 - Not using autos
 - Livability standards
 - Community design/walkability
- Ensure connectivity
- Improve public input, engagement, awareness
- Enhance, improve, and promote use of public transit, including passenger rail
- Ensure ADA compliance; clarify maintenance responsibilities
- Encourage policies that support walkability

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Discussion

Based on common themes from our 1st working group meeting and themes from the two workshops, what are priority recommendations for the final working paper?

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Livable/Walkable Communities – New Castle County

Newark's Main Street

Wilmington Historic District

Old New Castle

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Livable/Walkable Communities – Kent County

Dover Streetscape

Dover Overlook on Silver Lake

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Livable/Walkable Communities – Sussex County

Village of Five Points, Lewes

Sussex Courthouse, Georgetown

Governor's Walk, Milton

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Discussion

Given your knowledge of the jurisdiction you represent (or community where you live), what are potential infill sites in Delaware that may be targeted for revitalization, redevelopment or retrofitting?

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Appendix L. Summary Notes – April 13, 2010, Working-Group Meeting

Participants:

| Name | Organization | Name | Organization |
|--------------------|---------------------------|-----------------|---|
| Kenneth Bock | CHEER | Dana Griffin | Nemours Health & Prevention Services |
| Dennis Christie | Delaware AARP | Bonnie Hitch | Delaware Transit Corporation |
| Mark Clark | AIA, Delaware Chapter | Diane Laird | DEDO, Downtown Delaware |
| Heather Dunigan | WILMAPCO | Michelle McLean | Disabilities Law Program |
| Michelle Eichinger | DPH | Jeanne Nutter | Delaware AARP |
| Vance Funk | DLLG (and City of Newark) | Ann Phillips | State Council for Persons with Disabilities |
| John Gaadt | APA, Delaware Chapter | Ilka Riddle | UD Center for Disabilities Studies |
| Roberta Geier | DelDOT | Cathy Smith | Delaware Transit Corporation |
| Susan Getman | Delaware Aging Network | Tigist Zegeye | WILMAPCO |
| Deborah Gottschalk | DHSS | | |

Welcome and Introductions:

IPA Policy Scientist Ed O'Donnell re-introduced the project team that includes IPA Associate Policy Scientist Marcia Scott, Research Assistant (RA) Allison Calkins, and RA Robert Coons. The workshop participants re-introduced themselves and the agency/organization that each represent.

Presentation:

Marcia Scott reviewed themes that emerged from the first working group meeting on November 18, 2009. She explained that the process for developing an e-mail invitation list to the community workshops was based lists provided by many of the working group members for their respective advisory boards, councils and committees. Two community workshops were planned and executed on Tuesday, March 9, 2010 in Newark and Thursday, March 18, 2010 in Dover. There were 24 attendees at the Newark workshop and 11 attendees at the Dover workshop. At each workshop, attendees split into groups of about five, discussed five questions that were presented, and reported out to the entire group. Those individuals who registered, but did not attend, were invited to e-mail responses to the discussion questions.

Input from Working Group:

The working group was prompted to respond to the question, "What haven't we hear so far in discussions during the working group meeting and community workshops?"

- Better understand perspectives of developers:
 - It is a falsehood that developers are not paying their fair share

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- Many street improvements (e.g., bike lanes, crosswalk improvements, signalization) are paid by developers
 - Farmers who sell and develop their land seek to maximize profits and invest as little as possible
 - Developers respond to market demand
 - Developers see the market demand for “green” development, there is no critical mass to provide universal design for persons with disabilities
 - Market conditions don’t drive demand for affordable housing/development
 - Home purchasers want their ½ acre lots and don’t want density that comes with transit oriented development
 - Motivate the public to demand universal design and new urbanism elements and the developer respond to customer-driven demands.
 - Transit service is beyond the mandate of the developer
 - Educate and motivate:
 - Elected officials regarding the need to provide/promote:
 - Greater public awareness
 - Intergovernmental coordination and funding for built infrastructure improvements
 - Develop public policies and incentives that support quality development and livable communities
 - While regulatory policies can provide incentives, incentives are lacking regarding affordable housing. Therefore, universal design and new urbanism elements are showing up in more affluent communities
 - Citizens regarding:
 - Needs of aging baby boomers:
 - Where people live affects their ability to age-in-community
 - Senior citizens will not be able to age-in-community in active-adult communities that are isolated, are auto-centric, and lack multi-modal transportation options
 - Benefits of urban living
 - Land use and transportation planning process
 - How bus transit decisions are made based on density and ridership:
 - While more ridership is needed to increase headways; more frequent headways are needed to increase ridership
 - Scarcity, cost, and inconvenience of parking in urban areas improves public transit mode share (i.e., Wilmington’s 20% mode share)
 - Business community about the need to support:
 - Livable community amenities; benefits of place making
 - Multi-modal transportation facilities and infrastructure
 - Make long-term planning a priority
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- Regulations and flexibility are not mutually exclusive
 - Property rights are important to Sussex County residents. The State does not legislate local land use planning or local decision-making.
 - Plan for improving multi-modal options to provide people with transportation choices
 - Enhance intergovernmental cooperation on regional/multi-state transportation planning, cross-jurisdictional transit, and intergovernmental funding of infrastructure improvements (don't overburden DelDOT)
 - Move beyond the physical environment when planning for future needs.
- Public Transportation:
 - Point-to-point transit systems need to be developed instead of node-to-node (e.g. elderly accessibility).
 - Create safer infrastructure (e.g. the roadways and sidewalks adjacent to public transit stops).
 - Ensure connectivity on existing infrastructure.
 - Wilmington waterfront: while it's walkable, a shuttle is needed, especially at night.
 - Create an attractive bus service, including a better, tighter schedule.

1. Based on common themes from our 1st working group meeting and themes from the two workshops, what are priority recommendations for the final working paper?

- **Engage and educate Delawareans**
 - Go beyond educating residents, legislators, developers, and public officials as to the benefits of smart, transit oriented, and sustainable development
- **Insure connectivity for existing infrastructure**
- **Enhance use of existing public transit**
 - Focus on long-term transit infrastructure improvements
 - Build culture for use of transit
 - Attract new riders by providing seamless transitions among transit routes, demand-driven route schedules, more frequent headways, and improved transit amenities
- **Improve multi-modal transportation options**
 - Improve physical/built environment to make walking, biking, transit more attractive
 - Implement Complete Streets at local government level
 - Ensure ADA compliance and accessibility of built infrastructure
 - Maintain existing infrastructure (e.g., Park and Ride facilities, bikeways, and sidewalks – especially those near transit stops)
- **Develop smart regulations**
 - Provide flexibility in codes
 - Doesn't mean lax or no regulations
- **Promote Complete Streets Policy**
 - Implementation means more than just addressing sidewalk gaps and connectivity

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- Need a multi-modal approach
 - Educate municipalities of need to adopt Complete Streets policies that support safe environments for walking, bicycling, or riding transit

2. Given your knowledge of the jurisdiction you represent (or community where you live), what are potential infill sites in Delaware that may be targeted for revitalization, redevelopment or retrofitting? (Generic ideas for a prototype as opposed to specific areas)

- Higher priority in suburban, non-dense areas
- Areas close to nodes:
 - Kirkwood Highway – would not need as much work to create TOD
 - Possibly Philadelphia Pike
- Route 13 – Dover
 - Possible area to pilot improvements
 - Area could benefit economically, is diverse, and includes residential as well as commercial properties, but the road is too dangerous for non-motorized vehicle use
 - Ability to connect to destinations
- Delmar (on Delaware side)
 - Highway divides the residential from the commercial districts; connectivity is needed
 - Paratransit services are in demand for patrons who need to access services across the highway
- Areas with midsize- to small-size employers

Next Steps:

- IPA has developed a blog on the Edublog website, “Enhancing Mobility in Delaware: Teens and Mobility in Delaware,” to engage high school students in the discussion on, “How can transportation options be improved for teens in Delaware?” The blog is available at enhancingmobilityde.edublogs.org and will be accessible through mid-May.
- The project team will draft and post the final working paper on IPA’s website upon publication. Working group members will be notified of the link to the online document when available.

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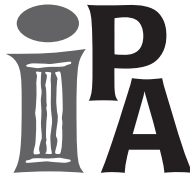
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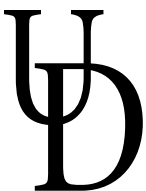


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