Service-learning as strategy of aging and environment: developing generations of socially responsible interior designers

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Service-learning as strategy of aging and environment: developing generations of socially responsible interior designers

by

Lisa M. Bates

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
MASTER OF FINE ARTS

Major: Interior Design

Program of Study Committee:
Cigdem Akkurt, Major Professor
Jihyun Song
Cynthia Fletcher

Iowa State University
Ames, Iowa
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ABSTRACT

Interior designers are well suited as activists for change, undertaking the multitude of social issues plaguing our democratic society. On a daily basis designers are directly engaged with the world around them, inspiring dialogue in order to create the physical spaces and places where others live, work, and play. As our nation is facing obstacles and difficult issues pertaining to aging, the economy, and health care, designers can offer diversity and fulfill a multitude of responsibilities including as social scholars and educators. Inspiring and empowering the next generation of interior designers is a challenge educational institutions face. Therefore, the creation of responsible designers, who tackle difficult issues, will require educational institutions to actively participate in the social issues facing communities around the country, in particular the aging baby boomer.

Academic service-learning is a teaching strategy in which students are engaged in authentic activities, where course curriculum is applied to address the needs of communities in order to enrich the educational experience and encourage lifelong civic engagement (Furco, 2001; Howard, 1998). Service-learning has often been accepted as a teaching tool among educational institutions yet widely criticized as a research methodology (Bailis, 2001; Furco, 2001). Research is an integral part of all service-learning projects, including aging in community, since the solutions
discovered for community problems should be derived from research (Enos and Troppe, 1996). Therefore, service-learning and research should be aligned to increase faculty and student use of evidence-based design decisions.

In 2006, Partners for Livable Communities found less than half, 46%, of American communities have begun planning to address the needs of the aging baby boomers. In response to this finding, this study will explore the implementation of a well defined service-learning philosophy to address the need for appropriate housing options within rural communities. This visual study will inspire leaders and members of the community into lasting partnerships with educational institutions, to address the evolving and challenging community social issues surrounding the aging baby boomer.
CHAPTER 1. INTRODUCTION

Design and Change

Designers are well suited as activists for change, undertaking the multitude of social issues plaguing our democratic society. On a daily basis interior designers are directly engaged with the world around them, inspiring dialogue in order to create the physical spaces and places where others live, work, and play. As our nation faces obstacles and difficult issues including aging, the economy, and health care, designers can offer diversity and fulfill a multitude of roles including as social scholars and educators. Inspiring and empowering the next generation of designers are challenges educational institutions face. Therefore, the creation of responsible interior designers, who tackle difficult issues, will require the active participation of educational institutions. Social issues facing communities around the country, in particular the issues surrounding the aging baby boomer will be among the challenges.

Higher educational institutions are well-known for focusing research toward innovation, especially in the areas of science and medicine, to lead these disciplines into the next era, while preparing future professionals with the latest theories and practices. The design vocation has a responsibility also to focus on the future, to advance the field of study, and to engage in researching the complicated social issues pertaining to the built environment. Ernest Boyer’s article, “Creating the New
American College”, challenged higher educational institutions to educate students for a life as responsible citizens, rather than educating students solely for a career (Bringle & Hatcher, 1996). Educational institutions have the ability to foster change in policies and practices by creating viable partnerships involving communities, professionals, and institutions. Fostering these strong partnerships will allow design to benefit a larger proportion of the population across the country.

**Background**

Design’s top priorities to the public are to health, safety and welfare; yet only between two and five percent of the built environment is directly affected by a designer (Bell & Wakeford 2008). Many of the social issues plaguing our country are seen as unrelated to design work, resulting in limiting what designers can and should do for the welfare and betterment of our communities. Instead design can play a positive role when designers are aware of their position in maintaining and shaping the connections between body and architecture, including emotional and physical involvement (Bevington, 1992). As interior design expands to improve the lives of all, and not just a privileged few, designers will be able to play key roles in the shaping of our society and the improvement of the built environment for the masses. Of the many obstacles facing our nation, the aging of the baby boomer generation is one issue where interior designers can have a large impact. Designers are positioned to make a substantial mark on the needs associated with aging and the home environment by understanding how people’s needs change over a lifetime.
They should be able to design environments which can help compensate for some expected declines associated with growing older (Bunker-Hellmich, 2002).

**Obstacles**

America is confronted with the challenges and opportunities of an aging population as the baby boomer generation enters the next stage of life. The baby boomer, or boomer generation, includes those Americans born between 1946 and 1964, from the end of World War II and prior to the widespread use of birth control (Senior Journal, 2004). The U.S. Census Bureau found in 2000, 1 in 8 Americans were age 65 years old or older but this number is estimated to increase to 1 in 5 by the year 2030. The lifestyles of the boomer generation plus improvements in longevity are changing the way this generation lives into older life.

As a person ages there is increased possibility of decline in physical abilities. The boomer generation is proving to be healthier and more active than previous generations; nonetheless, the aging process will still become a factor in daily living, although it may be delayed into older age. Aging is associated with declining dexterity, visual, auditory, and kinesthetic difficulties, along with senescence, disease, and trauma (Crews, 2005; Null & Cherry, 1996). Although mobility is the most widespread problem associated with growing older (Hanson Dr., 2001), aging is also likely to result in feelings of despair and loss of personal control over one’s destiny (Lanspery & Hyde, 1997). The sheer numbers of the baby boomer
generation has increased the awareness of the aging process and how society will address the health needs of this population. Those planning and designing environments need to acquire an understanding of their role in improving the aging person's physical and mental health (Christenson, 1990). The World Health Organization and the Center for Disease Control have defined health to include a more holistic viewpoint: “health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity” (Harris & Edelman, 2006). Appropriately designed environments have been proven to improve life satisfaction and to enhance the physical and psychosocial health of older adults (Crews, 2005).

Baby Boomer Desires

The baby boomer generation has continually shaped society as it has grown and entered into the different phases of life. Retirement will prove to be no different for this generation. As a generation of 80 million (Overly, 2007), they have the ability to exert great force over their lives and society as a whole. Many surveys and studies have been conducted to discover the desires for retirement the boomers possess. The majority of baby boomers, 77% to 89% (Maurer, 2001; Partners for Livable Communities, 2008), do not want to move south nor enter retirement facilities; they want to maintain their independence as long as possible. The AARP conducted a survey and also found a significant majority of the boomer generation would prefer to age in place, to enable them to maintain their social connections and
professional relationships within their familiar surroundings (Overly, 2007). Aging in place has been defined as the ability to live independently within one’s own home, with emphasis on independence outside of a healthcare environment (National Aging in Place Council, 2009; Lawton, 1974). The definition of aging in place, in this study, will expand to not only include aging within one’s home, but rather the ability to age within a person’s chosen community. This ability will allow the boomers to maintain those important connections they have fostered throughout their lives, no matter whether they choose to change homes. This expansion of the definition of aging in place comes in part from the findings of older adults’ desire to live within the same places they have always lived. The definition includes the sense of community, neighborhood, and home (Scheidt & Windley, 1998) as well as the boomers desire to avoid senior only communities and their willingness to explore housing options within their own communities (Rosenfeld & Chapman, 2008). Boomers will demand solutions to help reach their retirement goal of living independently within the communities in which they are invested.

**Residential Environment**

Although not all people will age with the same conditions or at the same point in their lives, there are possible solutions to allow people to age in place; however, one of the major barriers to this goal is the current residential environments. The residential environment is the place where many of our basic physical, social and psychological needs are met (Bunker-Hellmich, 2002; Hwang, Glass, Gutzmann, &
Joo Shin, 2008). Historically, one great flaw of architectural theory and practice is that the built environment has been designed for the non-elderly, able-bodied adult male, with strong arms and legs; for those who do not match this prototype, the built environment will never fit correctly (Dobkin & Peterson, 1999; Bevington, 1992). American home construction is dictated mainly by traditions dating back to 1964’s Small Homes Council design standards. This council set the standards for bathrooms, kitchens, and traffic areas based on the anthropometrical measurements of able-bodied, healthy, American military men (Crews & Zavotka, 2006). Since these standards still dictate the majority of new home construction, there is a lack of appropriate home options for those aging individuals hoping to live independently. Although material and amenities have been modernized in new contemporary housing, the desirable housing built today has too much in common with the homes built 100 years ago when life expectancy was less than 50 years of age (Novelli, 2002). As today’s life expectancy nears 80 years of age (Center for Disease Control and Prevention, 2009) new homes need to be designed and constructed to facilitate not only longer lives but longer vital lives. The current housing stock of inaccessible homes isolates and subtly segregates older adults from mainstream society and severely reduces their independence (Null & Cherry, 1996).

A crucial aspect to remaining independent is maintaining the right fit between a person’s abilities and the demands of the environment; too often an older adult must adapt his or her behavior to the environment rather than the environment changing to meet the person’s needs (Pynoos, Nishita, & Perelma, 2003). The
design of homes which adapt to the older individual, rather than the individual adapting to the home, is a realistic goal for the future of housing policy (Christenson, 1990). The optimum time to create accessible housing is at the time of new home construction, but in fact most homes occupied today by older adults are in need of adaptations. Research has indicated that older adults are unsure of home modifications needed, are not convinced the changes would make a difference, and do not believe it will be difficult to stay within current home stock as they age; these findings all indicate there is a need to counsel and educate the boomer generation (Crews & Zavotka, 2006; Sherman & Combs, 1997; ASID, 2001; Krout, Holmes, Erickson, & Wolle, 2003). The National Association of Home Builders found much of the age related remodeling occurs only after the homeowner has found difficulty navigating within the home (Senior Journal, 2006). Modifications of older adults’ homes should occur prior to any navigational issues, resulting in a residential environment which facilitates independent living and promotes overall health and welfare.

**Educational Institutions**

There is now a demand for educational institutions to become more involved in the community. This is possibly in response to criticism of institutions and faculty lacking responsiveness to the larger public good (Kezar & Rhoads, 2001; Maas Weigert, 1998). Service is often included within the institution’s mission statement
but seldom evident in the academic institution’s work (Zollinger, Guerin, Hadjiyanni, & Martin, 2009). Boyer (1997) challenged educational institutions by stating:

“The academy must become a more vigorous partner in the search for answers to our most pressing social, civic, economic, and moral problems, and must reaffirm its historic commitment to what I call the scholarship of engagement.”

This connection of scholarship and partnership contributed to the adoption of service-learning as a method of outreach and scholarship across the country. Interior design professional and research programs with service-learning experience are deemed more successful than their counterparts without service-learning (Wolf, 1996). Service-learning facilitates partnerships between educational institutions and communities, but can also add collaboration with professionals to bridge the gap between education and practice. Interior design practitioners have noted collaboration between practice, education, and research should be increased to inform one another and to further the field of interior design (Carll White & Dickson, 1994).

**Purpose**

Educational institutions with interior design programs are in need of methods to allow the development of socially responsible designers, to promote engagement
within community issues, and to advance the field of design through research. Service-learning implemented into interior design education provides a structured method to fulfill the needs of communities, interior design students, and educational institutions by unifying research, teaching, and service (Cushman, 1999). A service-learning course will be created for interior design programs by adapting prior researched models in order to create viable service-learning curriculum.

In 2006, Partners for Livable Communities found less than half, 46%, of American communities have begun planning to address the needs of the aging baby boomers. An Elder-Friendly Community assessment conducted by Iowa State University, in 2008, also found Iowa small town communities in need of improving housing options for the aging citizen. In response to these findings, this study will detail a service-learning model for interior design education to address the need for appropriate housing options within rural Iowa communities. This study may inspire leaders and members of the community to become lasting partners with educational institutions and design professionals, and address the evolving and challenging community social issues surrounding the aging baby boomer and beyond.
CHAPTER 2. LITERATURE REVIEW

Introduction

The development of the service-learning model for interior design curriculum was grounded in previous research on service-learning and service-learning models. The following literature review defines and discusses service-learning and researched service-learning models, followed by an overview of interior design and how interior design education is directed toward the use of service-learning within accredited programs.

Service-Learning Defined

The connection of student learning with faculty teaching to community needs, through the use of service-learning, enables educational institutions to address larger community, state, and regional issues while challenging students to assume the roles of member and citizen of a democratic society (Kezar & Rhoads, 2001). The purpose of service-learning is to integrate the learning of concept and theory with the application of concept and theory within and outside the classroom, to prepare students to be lifelong civic engagers (Speck, 2001). Definitions of service-learning can vary in wording and terminology, but the most traditional definitions of service-learning include the following elements:
Service-learning is a teaching strategy, used within credit-bearing courses, to engage students in a community based organized service activity, where students apply course content to address identified needs, followed by reflection, in order to gain understanding of course objectives and to enhance civic responsibility (Furco, 2001; O'Byrne, 2001; Bringle & Hatcher, 1996; Zollinger, et al, 2009; Speck, 2001).

Service-learning is distinctly different from other experiential learning models including internships, practicum, and field work. Service-learning differentiates from community service or volunteerism by the direct relation to curriculum, the identification of goals and objectives, and the requirement to meet educational standards (Zollinger, et al, 2009). Service-learning models also maintain a balance between service and learning objectives, emphasize reciprocal learning, develop citizenship and social change, incorporate reflective practice, address community identified needs, and involve community partners (Zollinger, et al, 2009). Service-learning is undertaken to benefit identified communities; however, educational and personal benefits accrue as a natural consequence of working together (Ward & Wolf-Wendel, 2000). The most successful service-learning experiences are related to course material through reflection activities, such as writing, discussions, and presentations (Bringle & Hatcher, 1996). These processes should include all participants of the service-learning program.
Service-Learning Participants

Commonly, participants of service-learning partnerships include community partners, faculty, students, and higher educational institutions (Sandman, Kiely, & Grenier, 2009). Each partner will bring different degrees of involvement; however, all are necessary for the success of the service-learning process, because each partner brings resources to planning, implementation and sustainability of the service-learning endeavor (Sandman, Kiely, & Grenier, 2009). The development of good working partnerships is a key element in the formation of successful service-learning programs. These ideal partnerships include forming mutually beneficial agendas, understanding the capacity and resources available, participating with the planning process, attending to the relationships, sharing the control and design of the directions taken, and contributing to the continual assessment of the project and partnerships (Sandy & Holland, 2006; Sandman, Kiely, & Grenier, 2009; Bringle & Hatcher, 1996).

Each member of the partnership has differing roles, contributions, and insight; nevertheless, each is equally important in ensuring the success of the service-learning program. Community partners originate from both the students and faculty and are typically representatives of a larger community based organization (Sandman, et al, 2009). Community partners have a profound dedication to the education of students, generally seeing it as an opportunity to influence the next generation (Sandy & Holland, 2006). Partnering with communities often requires the project participants to not only address what to do about the identified issues, but
also to identify the root causes of those community problems (Ward & Wolf-Wendel, 2000). The community must be viewed as an equal partner involved in identifying problems and discovering solutions (Ward & Wolf-Wendel, 2000). The faculty members often involved in these partnerships are scholars who have incorporated service-learning into a course, who function as engaged scholars, (Sandman, et al, 2009) and who have discovered that service-learning is a way to apply theory and knowledge to local problems (Ward & Wolf-Wendel, 2000). Faculty involvement is critical because service-learning is most commonly a course-driven feature of curriculum (Bringle & Hatcher, 1996). The involvement of faculty is often derived from academic reasons rather than from community based reasons (Ward & Wolf-Wendel, 2000); however, faculty involvement is needed to conduct evaluative research on service-learning outcomes (Kezar & Rhoads, 2001). Typically, students take part in service-learning initiatives to fulfill program or course requirements (Sandman, Kiely, & Grenier, 2009). Student involvement in service-learning shows a desire to influence career preparation, to increase awareness of community problems, and to connect theory learned with practice (Ward & Wolf-Wendel, 2000). The higher educational institution includes the stakeholders, departments, and agencies that have an interest in service-learning or who have influence over other partners participating (Sandman, Kiely, & Grenier, 2009). For many institutions this is a method of meeting mission statements and improving relationships between campus and community (Ward & Wolf-Wendel, 2000).
In one study, valuing and nurturing the partners’ relationships was stressed as the highest priority among all partners involved (Sandy & Holland, 2006). Communicating, understanding partner perspectives, personal connections, planning and training, accountability and leadership were also key components to the success of service-learning partnerships (Sandy & Holland, 2006). This showed a well designed service-learning activity involves and benefits all participants and requires sharing the responsibilities for planning and measuring outcomes (Holland, 2001).

### Service-Learning Benefits

The benefits of service-learning are diverse and impact each of the partners involved, although much of the literature focuses on students. There are a number of sources, however, describing the benefits to all members of the service-learning project. Service-learning unites research, teaching and service; it combines community work with classroom instruction, and it prepares students to participate in public life by integrating theory and practice (Speck, 2001). There is a saying that service-learning is a response to perceived crisis in community (Speck, 2001). Yet service-learning can also play an important role within social change for communities (Ward & Wolf-Wendel, 2000). There are studies claiming service-learning benefits community development, bridges community gaps, and offers benefits unseen to community partners (Curz & Giles, 2000).
The benefits for faculty members participating in service-learning are obtained both in and outside the classroom. Faculty can incorporate service-learning into their own research agendas, especially because service-learning works well with interdisciplinary research on complex problems associated with the human condition (O'Byrne, 2001). Faculty using service-learning within the classroom find it stimulates teaching and learning (Speck, 2001) by enhancing performance on traditional measures of learning, increasing student interest, teaching new problem solving skills, creating more enjoyable teaching experiences, and expanding course objectives to include civic education (Bringle & Hatcher, 1996). Academic participants also find the structure gained from service-learning research allows for deeper participation into the local communities (Zollinger, et al, 2009). The wealth of research on student outcomes leaves little doubt service-learning contributes positively to overall education. Service-learning is found to overcome separation of theory into practice by engaging and integrating each within course content (Speck, 2001). Additional benefits for students participating in service-learning courses include improvement of critical thinking skills, increase of the knowledge base of a discipline, encouragement of lifelong civic engagement habits, and enhance ability to apply theory to real life problems (O'Byrne, 2001; Kezar & Rhoads, 2001; Zollinger, et al, 2009). Higher education institutions which link student learning and faculty research to community issues, enable these institutions to address larger community, state, and regional needs while challenging students to become active members of society (Kezar & Rhoads, 2001). The mission of many academic
institutions can be furthered through the use of service-learning, especially when community outreach and engagement are stated within the mission statement (Zollinger, et al, 2009). This direct link to the institution’s mission statement can also improve the overall image of the institution as civic minded, caring, connected, and engaged with the surrounding communities (O'Byrne, 2001).

**Service-Learning Criticism**

Although much of the literature points to the numerous benefits of a service-learning program there are many criticisms and concerns. Three of the major criticisms of service-learning include the increased need of time and resources, the resistance from faculty to curriculum changes, and an overall lack of support for faculty involved in service-learning at the institutional level (Zollinger, et al, 2009; Speck, 2001). Much of the lack of support from the institution for faculty integrating service-learning within their courses is centered on the promotion path typical for faculty members. Teaching is not a significant factor in faculty promotion, nor does it advance institutions in national rankings; production and publication of quality research is the benchmark for many promotions; therefore, it is not surprising to find institutions promoting research over teaching for their faculty development (Furco, 2001). Tenure is not granted to faculty without a clear record of scholarship, so research must be integrated within the service-learning goals to then link promotion to research, teaching, and service (O'Byrne, 2001; Speck, 2001). A key to the success of research integration into service-learning courses is the quality of the
assessments during and after the service-learning project. Often assessments of service-learning courses only involve the documentation of hours of service and the collection of journals; assessments can be used for so much more, including identifying problems to be addressed, needed improvements, issues and challenges, and documentation of strategies and actions (Holland, 2001). Specifying research and assessment goals can also place all partners on equal ground by introducing collaboration at the beginning of the planning process and by addressing multiple goals and constituencies (Holland, 2001). Much of the research to date has focused on the student learning outcomes at the expense of the impact on the community partners (Curz & Giles, 2000; Sandy & Holland, 2006; Ward & Wolf-Wendel, 2000). This may be due in part to higher educational institutions operating under the orientation of doing for communities rather than doing with communities. This approach is aligned with a charity perspective, whereas doing with communities emphasizes collaboration and partnership (Ward & Wolf-Wendel, 2000). The majority of funding for service-learning curriculum has been focused on assessing the impact on students, while there is little empirical data on the impact on communities or other key partners (Curz & Giles, 2000; Speck, 2001). Therefore, much of the criticism involving service-learning is centered on research and this in turn effects faculty promotions, funding, and knowledge of service-learning impacts.
Service-Learning Issues

The concerns surrounding the service-learning philosophy have great influence on how a service-learning model is planned, implemented, and sustained within a higher educational institution. Little research has been developed to study the planning issues surrounding service-learning (Sandman, et al, 2009). Planning must begin at the institutional level; the success of integrating service-learning is tied to the work of research faculty and the overall mission and purpose of the institution (Furco, 2001). The mission of many higher educational institutions is comprised of three duties including research, teaching, and service (Cushman, 1999), but service-learning can correlate these three duties. Although more research needs to be completed to determine the best methods to integrate service-learning into the curriculum, some steps can be taken (Speck, 2001). One of the first steps for any institution is to develop a critical mass of faculty to support and promote the use of service-learning on campus as a philosophy rather than pedagogy (Furco, 2001). To gain the support of faculty, institutions must examine faculty reward structures to determine how to facilitate or inhibit involvement with service-learning (Bringle & Hatcher, 1996). Higher educational institutions have shifted from knowledge transmission to knowledge generation (Furco, 2001). Institutions can become a means of and an object of data collection and dissemination through implementation of service-learning programs (Bringle & Hatcher, 1996). Higher educational institutions are full of valuable resources, including students, faculty, staff, classrooms, research expertise, etc. These all become accessible to communities
when partnerships are formed with strong connections that are mutually beneficial (Bringle & Hatcher, 1996; Furco, 2001; Ward & Wolf-Wendel, 2000). The level of coordination between the faculty and community partners is best served by a centralized service-learning center; otherwise, strong partnerships are difficult to develop (Speck, 2001). The implementation of service-learning within curriculum allows faculty work to be tied, not only to teaching and service, but also to predetermined research, thus allowing faculty to engage students in their own research expertise (Furco, 2001). Alignment of faculty research interests and disciplinary specialization through the use of service-learning can advance faculty research agendas while still focusing on the teaching component of higher education (Furco, 2001; Kezar & Rhoads, 2001). The garnering of research grants, scholarly publications, and production of new knowledge are essential gauges in determining the quality and status of institutions across the country; therefore, a strong tie between research and service-learning courses can benefit the entire institution (Furco, 2001).

An increasing number of institutions are recognizing the scholarly benefits of faculty incorporating service-learning into their research endeavors (Furco, 2001). This incorporation is needed to sustain service-learning within an institution. Determining methods of evaluation, transferability, and sustainability will benefit all partners (Sandman, Kiely, & Grenier, 2009). Too often there is more focus on implementation of service-learning and not enough on sustaining the program; hence, focus needs to be directed to sustain and expand a program of service-
learning once implemented within the institution (Bringle & Hatcher, 1996). Service-learning as a philosophy asserts itself as the interface between academic disciplines and the wider community (Wolf, 1996). A healthy process to sustain collaborative partnerships between communities and institutions focuses on developing refined research skills (Curz & Giles, 2000). These skills can be enhanced from service-learning models established at other institutions across the country (Ward & Wolf-Wendel, 2000).

**Service-Learning Models**

The following researched templates were chosen in the development of a service-learning model for interior design curriculum. Each of the models addresses many of the concerns previously mentioned and allows for a framework for the development of planning, partnerships, implementation, and integration within an interior design program. An overview of each of the models is discussed prior to the modifications and development into a service-learning model for interior design.

**Service-Learning Program Planning Model (SLPPM)**

The Service-Learning Program Planning Model (SLPPM) was developed to address the lack of research on program planning within the philosophy of service-learning. Sandmann, Kiely, and Grenier (2009) also wanted to assist service-learning practitioners, faculty, administrators, and researchers in understanding core elements related to the process of planning, designing, implementing, evaluating,
and sustaining service-learning programs and partnerships. The authors developed the SLPPM from two program planning models, including Caffarella’s 2002 interactive approach to planning and Cervero and Wilson’s 1994 and 2006 more critical, democratic approach to program planning. The evaluation of these two models led the authors to recognize a need for a program planning theory in service-learning. They sought to provide guidance to more effectively design coursework, foster relationships, and negotiate each stakeholder’s needs, interest, assets and power. Three courses were used as case studies to develop the SLPPM based on the needs and interests of partners and the decision making processes. The authors discovered that partners and dimensions are all integral components to service-learning program planning.
The five dimensions of the SLPPM chart, research, relationships, roles and responsibilities, representation and resources are interconnected. These dimensions are also interconnected with the four partners: students, community, higher education institution, and faculty, which illustrate the interrelated process of service-learning philosophy.
Dimensions

The *research* dimension of the model includes those partners with an interest in the success of the partnership and what each partner wants to accomplish to further knowledge and understanding, while also ensuring the practical application of the service-learning activity. The nature of the problem identified for the service-learning project, the context of the research, the implications of the research, and how each of these issues would affect each partner involved in the service-learning project must be considered as part of this model. Before beginning the course and during the course, all partners need to appreciate and understand the unique skills of this type of collaborative and community based research.

The *relationships* between faculty, students, community, and institutional partners must be considered and planned for accordingly for the success of service-learning. Importance must be placed on the collaboration and continual negotiation of the needs and interests of each partner. Faculty is often the key figure in these partnerships but the identification, management, development, and nurturing of all partners within the model is of utmost importance throughout the process.

*Roles and responsibilities* focus partners on building relationships through negotiation of all program components grounded in theory. Priority should be given to inclusiveness and democratic balance as keys to encompassing the short and long term goals, needs, and interests of each partner. Each partner must have a decisive role in the planning, decision making, and action of the service-learning project.
The *representation* dimension involves issues of evaluation, transferability, and sustainability of research and the service-learning endeavor. The program must be able to benefit all partners and decisions on how to disseminate information must be agreed upon by all members of the partnership.

*Resources* requires partners to reflect on what skills, assets, and resources each bring to the planning and creation of sustainable partnerships, as well as the impact upon student learning. Resources could include personal connections, funding, skill sets, or physical space, but the critical resources needed include access to real life settings and problems and data available in multiple forms.

**Partners**

Each of the four partners holds a stake in the success of the service-learning program; each should have influence over the process, because all partners have an interest in maintaining and cultivating the relationships formed. All partners are necessary for the success of the service-learning model, even though they bring different levels of involvement and commitment, because each partner brings resources to the planning, implementation, and sustaining portions of service-learning.

The *community* is often represented by those with various leadership or administrative roles within the larger community. The optimal service-learning model would include representation from all stakeholders within the community. The
community representatives will negotiate goals of the project, support existing projects, and assist in the development of future endeavors.

The *faculty* members involved with service-learning are typically scholars who have incorporated service-learning into a course. The faculty often serves as facilitator and intermediary with the other partners. They are the faces of the educational institution, advisors to students, and the point of contact for community partners. Faculty have the difficult task of balancing the needs of the other partners while still satisfying their own research needs, teaching, and fulfilling service obligations.

*Students* are typically the partners involved with service-learning because of their own personal motivations or the need to fulfill an educational requirement. Students will need to work with the faculty and the community to negotiate their role in the partnership in order to fulfill the objectives set for the course. The student partners will draw upon the skills and knowledge they have gained from prior courses in order to participate in problem solving.

The *higher education institution* partners include the departments or schools with interest in influencing the service-learning project or have influence over those who are participating in the service-learning project. The higher education institution should administer the policy and procedures, which all partners must adhere to, in order to meet requirements set forth by the institution regarding research, coursework, assessment, allocation, tenure, and any other associated requirement.
The SLPPM is proposed to highlight the technical, practical, political, and relational aspects of planning which allows service-learning educators, community partners, institutions, and students to communicate their own actions and contributions from the planning process on. All partners working together can directly impact the success of the service-learning program.

**Comprehensive Action Plan for Service Learning (CAPSL)**

Bringle and Hatcher (1996) developed the Comprehensive Action Plan for Service Learning, CAPSL, as a model for implementing and institutionalizing service-learning within higher education.

<table>
<thead>
<tr>
<th>Planning</th>
<th>Awareness</th>
<th>Prototype</th>
<th>Resources</th>
<th>Expansion</th>
<th>Recognition</th>
<th>Monitoring</th>
<th>Evaluation</th>
<th>Research</th>
<th>Institutionalization</th>
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<tbody>
<tr>
<td>Institution</td>
<td>Faculty</td>
<td>Students</td>
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**Figure 2.** Comprehensive Action Plan for Service Learning (CAPSL) (Bringle & Hatcher, 1996)

The CAPSL model identifies the same four partners as the SLPPM, higher educational institutions, faculty, students, and community. Since all partners are
interconnected, the CAPSL chart (Figure 2) identifies the sequence of activities in which each partner must participate. Although the chart presents the actions in linear sequence, this will not likely occur in reality; there will likely be numerous cycles back and forth across activities. The most important aspect of the model is maintaining the direction of the course and the service-learning process. The model also provides the direction needed in service-learning by identifying a sequence of actions for planning and monitoring progress of the program. The CAPSL model provides the template for all partners to understand the resources needed to not only implement the service-learning philosophy, but to appreciate the resources needed to sustain and expand the program within the institution.

Course Preparation

In order to fulfill the goals and objectives of a course, faculty must determine which of the six service-learning models for course preparation. Zollinger, Guerin, Hadjiyanni, and Martin (2009) described the six models within the context of implementing service-learning in interior design courses. The six primary models of service-learning are summarized below:

1. *Pure service-learning courses* match students to community needs and send the students out into the community to serve as engaged citizens.
2. **Discipline-based service-learning courses** engage students as a presence within the community and use the course content so students can reflect and analyze throughout the semester.

3. **Problem-based service-learning courses** have students, or teams of students, work with the community as a consultant would work for a client. Students use their own knowledge to develop or recommend solutions to the specific identified community issue.

4. **Capstone courses** allow students to compile the knowledge learned throughout the course and their service experiences to amalgamate their understanding of the course discipline.

5. **Service internships** are more intense than the typical service-learning courses, as students devote more hours per week within the community and are in charge of producing a body of work deemed valuable to the community; at the same time students reflect regularly throughout the process.

6. **Community-based action research courses** immerse students in a problem-research-action model, which is most effective when students are serving as advocates for the community.

Each of the models are applicable to interior design education, and faculty partners must determine which models would best serve the goals of the course as well as the needs of the community. Zollinger et al., identified a need for a framework to guide educators in the decision making process. Tables 1 and 2,
detail the developed framework, including the criteria to be considered for interior design educators to implement a successful service-learning course within their curriculum.

<table>
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<tr>
<th>Criteria</th>
<th>Rationale for inclusion</th>
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<tr>
<td>Relate to course objectives</td>
<td>This criterion is part of the definition of service-learning and what distinguishes it from volunteerism. Therefore, service-learning projects must contribute to the learning objectives of the specific design course in which they are undertaken</td>
</tr>
<tr>
<td>Apply course knowledge</td>
<td>Service-learning experiences must have an application element, one that takes students’ knowledge and translates it into solutions for a real-life design problem</td>
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<tr>
<td>Connect to the community</td>
<td>Both the definition of service-learning and the university’s mission link scholarly expertise to community work. Service-learning pedagogies must thereby encompass collaboration with community organizations and institutions</td>
</tr>
<tr>
<td>Reflect on learning</td>
<td>This criterion ensures that students emphasize reflective practice and mutual learning and recognize they learn as well as contribute design solutions to community clients. Lessons are drawn from this experience that can be carried over to the next course</td>
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**Table 1.** Service-Learning Framework for Interior Design Education (Zollinger, et al., 2009)
Table 2. Considerations for Integrating a Service-Learning Project (Zollinger, et al., 2009)

The models reviewed allow a framework for service-learning implementation and guide all partners through the process. Quality planning throughout the process ensures profound impact on the success of service-learning within interior design programs.
Interior Design

The Council for Interior Design Education (CIDA) defines interior design thus:

“Interior design is a multi-faceted profession in which creative and technical solutions are applied within a structure to achieve a built interior environment. These solutions are functional, enhance the quality of life and culture of the occupants and are aesthetically attractive. Designs are created in response to and coordinated with the building shell and acknowledge the physical location and social context of the project. Designs must adhere to code and regulatory requirements, and encourage the principles of environmental sustainability. The interior design process follows a systematic and coordinated methodology, including research, analysis and integration of knowledge into the creative process, whereby the needs and resources of the client are satisfied to produce an interior space that fulfills the project goals.”

“Interior design includes a scope of services performed by a professional design practitioner, qualified by means of education, experience and examination, to protect and enhance the health, life safety and welfare of the public. These services may include any or all of the following tasks:

- Research and analysis of the client's goals and requirements; and development of documents, drawings and diagrams that outline those needs
- Formulation of preliminary space plans and two and three dimensional design concept studies and sketches that integrate the client's program needs and are based on knowledge of the principles of interior design and theories of human behavior.

- Confirmation that preliminary space plans and design concepts are safe, functional, aesthetically appropriate, and meet all public health, safety and welfare requirements, including code, accessibility, environmental, and sustainability guidelines.

- Selection of colors, materials and finishes to appropriately convey the design concept and to meet socio-psychological, functional, maintenance, lifecycle performance, environmental, and safety requirements.

- Selection and specification of furniture, fixtures, equipment and millwork, including layout drawings and detailed product description; and provision of contract documentation to facilitate pricing, procurement and installation of furniture.

- Provision of project management services, including preparation of project budgets and schedules.

- Preparation of construction documents, consisting of plans, elevations, details and specifications, to illustrate non-structural and/or non-seismic partition layouts; power and communications locations; reflected ceiling plans.
and lighting designs; materials and finishes; and furniture layouts

- Preparation of construction documents to adhere to regional building and fire codes, municipal codes, and any other jurisdictional statutes, regulations and guidelines applicable to the interior space

- Coordination and collaboration with other allied design professionals who may be retained to provide consulting services, including but not limited to architects; structural, mechanical and electrical engineers, and various specialty consultants

- Confirmation that construction documents for non-structural and/or non-seismic construction are signed and sealed by the responsible interior designer, as applicable to jurisdictional requirements for filing with code enforcement officials

- Administration of contract documents, bids and negotiations as the client's agent

- Observation and reporting on the implementation of projects while in progress and upon completion, as a representative of and on behalf of the client; and conducting post-occupancy evaluation reports.”(NCIDQ, 2009).
The education of interior design has been modified by CIDA in recent years, with the addition of integrating research into the curriculum to satisfy the accreditation standards (Council for Interior Design Accreditation, 2009). Design research includes a cycle of imaging, presenting, and testing (Ziesel, 2006). This cycle is not a linear sequence; instead it requires designers to backtrack as they move toward problem solutions and possibly repeat steps within the creative problem solving process (Ziesel, 2006). Design research and education typically fall into three scholarly cultures; according to Dohr (2007), these cultures include:

- Creative performance – the designer creates new visual and experiential structures or forms to allow others to see, experience, and understand

- Research-based practice (also known as evidence-based design) – the designer is attempting to change human conditions, to plan and design from a holistic perspective, and to apply theory and research in an innovative method

- Design research - the designer observes, interprets, promotes, and adds to the meaning and understanding of the human-environment interaction

Interior design contains six categories of knowledge: human environment, interior construction codes and regulations, design, products and materials, professional practice, and communication (Dohr, 2007). These categories must all become part of the educational models for accredited programs.
Changes within education are dictated by changes in demand and expectations; so, although current design education focuses on the built environment for the wealthy, the actual growth in needed design services comes from outside the prosperous circle (Bell & Wakeford, 2008). One of the growing populations in need of design services includes the aging demographic. Design professionals are uniquely positioned to contribute to improving the health, well-being, and safety of older adults by creating built environments which can compensate for age-related changes (Bunker-Hellmich, 2002). The creation of successful age compensative environments presents an unprecedented opportunity for interior designers to counsel the growing aging population as they search for answers to live independently (ASID, 2001).

Experiments in design education have the potential to expand the field of design and to engage students and faculty with the political aspects of design (Bell & Wakeford, 2008). Service-learning is important to interior design education by virtue of its ability to increase student sense of citizenship, develop stronger analytical and problem solving skills, enhance personal development, develop leadership skills, increase cultural awareness and tolerance, and enhance social skills (Zollinger, Guerin, Hadjiyanni, & Martin, 2009). The interior design education and profession can also benefit from service-learning, which increases independent thinking and connects with diverse cultures outside the typical experience (Wolf, 1996). There is a need for direction in the consideration and approach to service-learning within interior design education in order to relate experiences to the professional goals of
protecting the public’s health, safety, and welfare (Zollinger, Guerin, Hadjiyanni, & Martin, 2009).

Conclusion

The literature reviewed for this study included an overview of service-learning, the benefits, criticisms, and issues. The models reviewed were chosen to address many of the issues raised about the service-learning philosophy. These models will serve interior design education well, as the profession seeks to integrate research and to expand the education for future interior designers.
CHAPTER 3. ELDER-FRIENDLY COMMUNITY DESIGN CASE STUDY

Introduction

This study’s development of a detailed service-learning model for an interior design course is tied directly to the research publication, “Elder-Friendly Community (EFC): case studies” (Appendix A). This research was conducted by Iowa State University’s Institute for Design Research and Outreach. The findings of this study identified a need within Iowa which will be addressed by the model created for an interior design studio course.

Background of Study

With the wave of aging baby boomers, communities around the country are realizing the need to attract and retain older residents. The development of safe, comfortable, and accessible environments which promote healthy lifestyles must be aligned with the physical, social and political environment of the community. Elder-friendly communities (EFC) center development on the quality of life for older adults. The environment which promotes independence and builds self esteem is an environment which nurtures and promotes freedom of movement and full participation within community life.

The opportunity for communities to respond to the health and welfare of older adults necessitates an elder-friendly community (EFC) assessment. This
assessment tool must evaluate mobility, transportation, and recreation within a community. The impact of the aging baby boomer generation could have significant positive financial repercussions, which would potentially outweigh the cost of implementing EFC design and planning strategies. Defining an elder-friendly community (EFC) includes the design for the physical, social, and political community in order to create positive environments for settlement and retention of older populations of citizens.

The components of EFC communities include transportation, personal safety, media services, commercial and economic measures, housing, health care, lifelong learning opportunities, volunteerism, recreation, spiritual outlets, and positive attitudes toward citizenship and the aging citizen.

The State of Michigan lists the following ten assets which contribute to an elder-friendly community (Cronk, 2005):

1. Safety and security: There is a high level of personal safety in the community.

2. Transportation: It is easy to get around in the community and planes, trains and buses are readily accessible for traveling out-of-town.

3. Supportive Community Systems: The community has good cell phone service, high speed internet, and multi-channel television. Services are located near populations and needed services are readily available. Seniors are considered when community decisions are made.
4. Commercial viability: Businesses and services are available that meet senior needs.

5. Housing: There is affordable housing matching a variety of lifestyle needs for seniors.

6. Access to Health Care: Seniors can be confident they can meet their medical needs now and in the future.

7. Enriching opportunities: Opportunities directed towards seniors for a lifelong learning experience.

8. Recreation: A variety of opportunities exists to meet the diverse interests of seniors. The community is walkable.

9. Spiritual connections: A variety of places to worship exists and welcomes and supports seniors.

10. Embracing and appreciative attitude: Community members and leaders recognize the value of seniors in the community and treat them respectfuully and appreciatively.

The Smart Growth Network (SGN) was formed in 1996 to respond to increasing community concerns. Communities were concerned about the development of growth to boost the local economy, protect the environment, and enhance community vitality. In 2005, SGN published, Aging in Place and Smart Growth, addressing several issues communities need to consider in order to promote
community livability and to enhance the quality of life for citizens. The issues cited include:

- Demographic shifts will create dramatic changes at the community level
- Conventional urban design characteristics present significant obstacles to older peoples’ independence and social integration
- The physical and psychological changes experienced during normal aging can affect daily choices and priorities
- Transportation is a sensitive issue for older people
- Older adults need to remain actively engaged in society
- Communities need to critically assess their readiness for the “age boom”
- Smart growth approaches answer many seniors’ needs

This publication suggests the following solutions for a community concerned with smart growth and elder-friendly community design:

- Promote a range of housing choices to reflect residents’ varied abilities, independence, and income
- Facilitate access to neighborhood amenities
- Encourage walking as a means of transportation, social interaction, and individual health
- Provide a quality environment for caregivers
• Assist in the provision of cost-effective services
• Provide flexible options for a diverse aging population

Iowa communities are seeking to attract relocating baby boomers into Iowa communities for retirement. The goals of EFCs would be to benefit all community members, regardless of age, and to help Iowa communities with smaller populations and economies. These are some of the benefits this development plan entails. The EFC development and design process fit within Iowa community physical and historical contexts, providing a vision for economic vitality to Iowa’s diminishing rural populations.

Process

The Elder-Friendly Community (EFC) Design: Case Studies research project worked with two Iowa communities, Polk City and Lamoni. Each community assessment included a four phase process of community workshops, inventory analysis and assessment, design recommendations, and conclusions. Performed physical assessments and focus group meetings resulted in four key discussion topics: critical destinations, housing, recreation and cultural resources, and walkability. The results of the assessment and recommendations contain areas of overlap between subjects, revealing the interdependence of the elements of EFC design. The analysis and recommendations included team findings, focus group findings, existing conditions, proposals, interventions, and case studies. The results,
products, and recommendations were presented to each community for input and discussion prior to the final publication for each community.

Housing Findings

This thesis study will focus on the specific findings concerning housing within the Lamoni, Iowa community. The team assessment discovered specified senior housing options were not located within the recommended one quarter mile distance from basic shopping needs. Although the senior housing was located within a quarter mile of recreational opportunities, there was a need for walkable connections between housing and recreational destinations. Lamoni did not have adequate housing options for aging citizens, though, future development plans did address housing options for seniors; however, the location of new housing developments was not in alignment with EFC recommendations. Although some local housing is within walking distance to basic shopping and recreational activities, many are deemed unsuitable for aging citizens or do not have safe walking connections to desired destinations.

The focus group participants stated that housing options are limited and lack a variety of quality smaller or downsized homes. Moreover, the specific senior living center is not desirable for many of those wanting larger more upscale accommodations. The groups also cited most new housing is built away from the downtown area of the community; typical homes and apartments in the downtown
area house college students and are in need of updates and repairs. The main areas of concern for focus group participants in Lamoni include the need for low maintenance, efficiency-type apartments and the need for additional housing options with less maintenance than presently found in the downtown area. Participants envision a variety of housing options, including transition homes from current single family homes to include townhomes, duplexes, and condominiums. Several shared the desire to locate housing options close to the local university with a variety of upscale and affordable choices.

**Housing Recommendations**

The EFC design team produced a number of recommendations for housing development plans. These recommendations include identifying areas for downtown redevelopment, identifying areas for housing adjacent to the local university, consideration of age-restricted residential development, consideration of community/university housing collaboration, and facilitation of universal design training for local housing contractors.

Figure 3 depicts potential housing project locations within Lamoni, Iowa which fit within the principals guiding elder-friendly community development.
Conclusion

The findings and recommendations from the Lamoni Elder-Friendly Community (EFC) Design study identify a specific issue within an Iowa community, which interior design is able to address through the training and expertise of the profession. There still remained a need to discover whether Iowa communities and baby boomers follow the national findings of boomer retirement desires. The study
also needed to discern whether Iowa boomers are willing to work with interior designers to achieve their retirement goals.
CHAPTER 4. METHODS AND FINDINGS

Introduction

Successful implementation of service-learning philosophy incorporates a mutual understanding between partners participating in the endeavor. Each partner is interconnected and the characteristics of the relationships determine the quality of projects, the opportunity for continuation, and the development of mutually beneficial relationships. A survey was developed to understand the retirement planning, knowledge of aging in place issues, and exposure to the interior design profession within Iowa communities.

Survey

The Likert survey of sixteen questions was constructed to help partners grasp a more detailed understanding of Iowa baby boomers through the collection of quantitative data (Leedy, 2005; Ziesel, 2006). The self-guided survey was intended to help participants gain insight into the lives of Iowans currently retired and those planning for retirement. The questions were in order from retirement planning, to where one would live during retirement, aging in place understanding, universal design understanding, exposure and impressions of interior design, and preferences for private home versus retirement community.
Participants

The sample, of convenience, included respondents from the two Iowa communities participating with the EFC case studies conducted by Iowa State University’s Institute for Design Research and Outreach. Findings, for this study, are assumed to be a typical representation of Iowa’s citizens. Participation in the survey was completely voluntary and took respondents approximately five minutes to complete. Demographics of the participants were included at the end of the survey.

The 57 respondents included:

- Gender: Male – 23; Female – 26
- Age: 18 to 45 – 6; 45 to 50 – 5; 51 to 56 – 11; 57 to 62 – 17; 63 to 68 – 9; 68 and above – 7
- Retired: Yes – 19; No – 34
- Own a home: Yes – 50; No – 2

Findings

Iowa respondents show a correlation with national surveys concerning their retirement plans. In response to the question of planning for retirement, 58% of respondents strongly agree or agree they have planned thoroughly for their own retirement. Although 40% of respondents are unsure of where they will live during retirement, 52% strongly agree or agree they will live within their current communities throughout retirement. The majority of respondents, 44%, were
uncertain about whether they will move into a small home during their retirement; however, the same percentage of respondents either strongly agree or agree to a plan to live in their current home during retirement. 33% of respondents were uncertain about remaining within their current homes. When asked to respond to the statement, “I plan to make physical changes to my home during retirement”, the respondents were almost evenly split: 35% of respondents either strongly agree or agree, 35% were unsure, and 30% disagree or strongly disagree. Half of respondents agreed they were familiar with the term aging in place. When asked if they planned to age in place 48% agreed, 46% were uncertain, and 7% disagreed. A total of 81% of respondents agreed they would prefer to live in a private home during retirement, versus living in a retirement community. Respondents were split evenly, at 25%, between agree and disagree with the statement regarding whether interior design services are too expensive; this left half of respondents uncertain of the expense of interior design services. Interior design services have not been used by 72% of respondents with 79% of respondents uncertain or agreeing to consider using the services of an interior designer to assist in reaching retirement goals.

Conclusions

The findings from the survey of Iowa community members show Iowans have at least begun planning for retirement, but may not have considered or planned for
aging in place. This correlates to national findings. The vast majority of respondents preferred to retire within their current communities and to live in private homes versus retirement communities. Correlating to the literature review, the majority of respondents have not used the services of interior designers; nevertheless, they are open to interior design assistance when it comes to fulfilling retirement plans.
CHAPTER 5. SERVICE-LEARNING CURRICULUM CASE

Introduction

The elder-friendly community assessment and the survey results indicate a need within Iowa communities for appropriate housing options for aging citizens and a willingness to consider interior designers as partners. This chapter begins with the description of a video series created to garner the support of baby boomers, communities, and interior designers to partner and address the issue of appropriate housing options. The second portion of the chapter details the implementation and application of a prescribed service-learning model for use in an interior design studio class at Iowa State University. This chapter will also include the addition of the interior design professional to the list of essential partners.

The involvement of interior design practitioners from the beginning of a service-learning project is of utmost importance. Design educators should not interfere with a design practitioner’s occupation, but sometimes it appears educational institutions take from practitioner work. To overcome this potential obstacle, inclusion of interior design professionals as partners would allow for possible expansion in practitioner work. Increased exposure to new clientele and the ability to continue a service-learning project past the classroom to implementation would be advantageous. The methods to attract design
professionals and community partners should be up to the educational institution and the participating faculty.

Videos

Vital to the success of a service-learning model are the relationships formed among the partners. The literature reviewed emphasized this importance from the beginning of a service-learning endeavor and throughout the entire project. Fostered partnerships can result in positive relationships with possibilities for continued learning for students, continued research for faculty, and continued benefits for communities and interior design professionals. Before the implementation of a service-learning course can proceed, partnerships must be created. Service-learning projects require that each partner devote a considerable amount of time and resources; therefore, each partner must be convinced of the benefit of the service-learning project. This requires an understanding of the importance of identified issues involved in the project and an understanding of how each partner will benefit from working together.

A three part video series, seen in Appendix D, was created for the purpose of inspiring and promoting partners in a service-learning course, focused on baby boomers and appropriate housing options for their retirement years. Each video targets a separate partner; however, the three videos create an inspirational series.
This series guides the viewer on a journey from the role of the baby boomer generation to the role of the community and finally to the role of interior design.

The selection of video was determined best because of the numerous avenues available to connect with audiences. Distribution of a video format can take place through individual digital media, group presentations, or through the use of the World Wide Web. The format of the videos is important in order to reach a multitude of diverse populations through the intense use of a visual method. The selection of still pictures allows the images to affect individuals so each can interpret the images for themselves while gaining an understanding of the message throughout the series. The still images are linked together through forthright statements and chosen music. The goal of the video series is to inspire partnerships by raising awareness of the identified issue and of the possibilities of each partner’s ability to influence the future. The creation of the three videos serves as an example of a possible method to inspire partnerships. Yet, inspiration is only an initial step in creating successful partnerships, while more work in sustaining partnerships is accomplished in the planning and execution of the service-learning project.

**Planning and Execution**

Once the partners are inspired to participate in the service-learning project, the teaching faculty can facilitate the coordination and planning for the course. The models addressed in the literature review provided the framework for this
coordination and planning. The models must be viewed as adaptable templates made suitable for the context of the determined course. Each of the models below incorporates modifications to fit within the context of the identified service-learning project, as well as the interior design educational curriculum. A syllabus has been created for a specific interior design course following the planning and development models. The following course development is tied to the identified need for appropriate housing options within Iowa communities; however, all the tools are available for additional interior design courses. This template is created to be adaptable within the interior design curriculum and to address the many social issues interior design may encounter.

Service-learning must always begin with detailed quality planning. The Service-Learning Program Planning Model (SLPPM) developed by Sandmann, Kiely, and Grenier (2009), Figure 4, integrates the five dimensions with the partners of the project.
The dimensions: research, relationships, roles and responsibilities, representation, and resources, are important parts of the planning stages. Each of the five dimensions should be prepared in collaboration and understood by all partners. The SLPPM has been modified for this study to integrate an additional partner: the interior design professional. The addition of this fifth partner presents the problem of the educational institutions’ taking business from the working practitioner. Interior design service-learning courses should probably focus on clients who are not likely to hire professional interior designers, or on those who have never considered the services of an interior designer. Focusing on these potential partners may increase the likelihood of becoming clients of the working practitioner.
professional. With these partnerships, practicing interior designers would serve as experts on current issues, including design implementation, feasibility, and costs. The professional interior designer would work alongside the other partners as collaborators and participants in the service-learning course. Interior design professionals would likely volunteer their time and effort during the pre-design and conceptual design phases of the project with the aspiration to continue the project into full implementation phase. Service-learning is an opportunity for design practitioners to expand their clientele, while serving the larger public good utilizing their expertise.

The Comprehensive Action Plan for Service-Learning (CAPSL) proposed by Bringle and Hatcher (1996), Table 3, has also been modified to include professionals as partners.

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<thead>
<tr>
<th>Planning</th>
<th>Institution</th>
<th>Faculty</th>
<th>Students</th>
<th>Community</th>
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<td>Institutionalization</td>
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**Table 3.** CAPSL with 5 Partners
The following CAPSL tables, Tables 4-8, were developed as part of the service-learning course by providing the anticipated activities of each partner during the service-learning project. These tables give each partner a tool for planning and anticipating the roles of participants, and they are adaptable from project to project. Although the tables are adaptable, depending on institution and project, the majority of activities should remain consistent. The partners’ activities relate directly back to the findings from the review of the Service-Learning Program Planning Model (SLPPM). This ensures that each dimension and partner is addressed within the proposed activity tables.
<table>
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<th>Community</th>
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</table>
| Planning  | - Survey existing university/community partnerships  
|           | - Identify possible community partnerships  
|           | - Identify community representatives for planning and advisory committees  
|           | - Involve community representatives in course development  
|           | - Identify research goals and constituencies  |
| Awareness | - Distribute service-learning information  
|           | - Schedule initial meetings and site visit  
|           | - Inform community representatives on service-learning and course requirements  |
| Prototype | - Collaborate with community to develop a prototype service-learning course  
|           | - Facilitate community decision on identified issue for course  |
| Resources | - Compile or review community needs assessment  
|           | - Facilitate student community coordinators  
|           | - Provide community a resource manual with university policies and procedures for service-learning courses  
|           | - Provide community resources concerning specific course and course objectives  
|           | - Detail the capacity and resources available from the community for service-learning  |
| Expansion | - Involve extension program with identifying service-learning projects  
|           | - Conduct community workshops and discussions on service-learning  
|           | - Encourage and increase community involvement in developing service-learning courses  
|           | - Explore new service-learning opportunities  
|           | - Collaborate with communities for possible funding sources  
|           | - Collaborate with communities to attend service-learning conferences  |
| Recognition| - Plan recognition events for communities  
|           | - Present service-learning outcomes to community representatives and community members  
|           | - Publicize community involved in service-learning on university website and surrounding community media  |
| Monitoring| - Collect data on community involvement in service-learning course  
|           | - Monitor relationship between community and university  |
| Evaluation| - Evaluate service-learning outcomes  
|           | - Assess service-learning relations throughout course  |
| Research | - Conduct community impacts and outcomes  
|           | - Collaborate with communities on research agendas  |
| Institutionalization | - Form lasting partnerships with university and communities  
|           | - Develop interdisciplinary participation with community partners  
|           | - Identify possible faculty for community identified service-learning issues  |

**Table 4. CAPSL - Community**
<table>
<thead>
<tr>
<th>Faculty</th>
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<tbody>
<tr>
<td>Planning</td>
</tr>
<tr>
<td>- Survey department and faculty interest</td>
</tr>
<tr>
<td>- Identify service-learning courses offered within university and within college</td>
</tr>
<tr>
<td>- Create a planning and advisory committee</td>
</tr>
<tr>
<td>- Identify community partnerships</td>
</tr>
<tr>
<td>- Compile faculty research links to service-learning endeavors</td>
</tr>
<tr>
<td>- Identify research goals and constituencies</td>
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<tr>
<td>Awareness</td>
</tr>
<tr>
<td>- Distribute information on service-learning (university website, articles, organizations)</td>
</tr>
<tr>
<td>- Identify a faculty liaison from department</td>
</tr>
<tr>
<td>- Monitor and distribute new information concerning service-learning through faculty liaison</td>
</tr>
<tr>
<td>Prototype</td>
</tr>
<tr>
<td>- Identify a well established service-learning course within or outside university</td>
</tr>
<tr>
<td>- Develop a prototype service-learning course for planning and implementation</td>
</tr>
<tr>
<td>- Develop an interior design service-learning course</td>
</tr>
<tr>
<td>Resources</td>
</tr>
<tr>
<td>- Identify existing resources available to support faculty development in service-learning</td>
</tr>
<tr>
<td>- Identify interested faculty members</td>
</tr>
<tr>
<td>- Compile a resource library of service-learning materials</td>
</tr>
<tr>
<td>- Maintain a service-learning syllabus file</td>
</tr>
<tr>
<td>- Secure faculty development funds for expanding service-learning</td>
</tr>
<tr>
<td>- Establish a faculty award to recognize service-learning</td>
</tr>
<tr>
<td>- Establish a relationship with Design Extension and Interior design department</td>
</tr>
<tr>
<td>- Detail the capacity and resources available from the faculty for service-learning</td>
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<tr>
<td>Expansion</td>
</tr>
<tr>
<td>- Promote development of service-learning courses</td>
</tr>
<tr>
<td>- Encourage participation in faculty development workshops</td>
</tr>
<tr>
<td>- Provide course development stipends and grants</td>
</tr>
<tr>
<td>- Develop faculty mentoring</td>
</tr>
<tr>
<td>Recognition</td>
</tr>
<tr>
<td>- Publicize faculty accomplishments on university and college websites</td>
</tr>
<tr>
<td>- Include service-learning in reviews</td>
</tr>
<tr>
<td>- Encourage faculty involvement in professional activities (publications, conferences, forums)</td>
</tr>
<tr>
<td>Monitoring</td>
</tr>
<tr>
<td>- Collect data on faculty involvement</td>
</tr>
<tr>
<td>- Collect data on outcomes of service-learning course</td>
</tr>
<tr>
<td>Evaluation</td>
</tr>
<tr>
<td>- Provide assessment tools for faculty</td>
</tr>
<tr>
<td>- Evaluate outcomes for all partners</td>
</tr>
<tr>
<td>Research</td>
</tr>
<tr>
<td>- Conduct research on faculty involvement in service-learning courses</td>
</tr>
<tr>
<td>- Facilitate faculty research within service-learning courses</td>
</tr>
<tr>
<td>- Align faculty research with interior design specialization</td>
</tr>
<tr>
<td>- Present and publish research from service-learning course</td>
</tr>
<tr>
<td>Institutionalization</td>
</tr>
<tr>
<td>- Ensure service-learning is a part of personnel development (hiring, review, promotion/tenure)</td>
</tr>
<tr>
<td>- Maintain service-learning as a permanent part of course descriptions and offerings</td>
</tr>
<tr>
<td>- Continue service-learning as an emphasized part of professional development</td>
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</table>

**Table 5.** CAPSL - Faculty
<table>
<thead>
<tr>
<th>Category</th>
<th>Tasks</th>
</tr>
</thead>
</table>
| Planning | - Survey student exposure and knowledge of service-learning  
          - Survey student knowledge of identified service-learning issue  
          - Survey student attitude toward service and service-learning  
          - Identify students for planning group and advisory committee  
          - Identify research goals and constituencies |
| Awareness | - Distribute information about service-learning  
           - Prepare early lecture and discussions about the service-learning process  
           - Arrange continuing counseling for service-learning participation |
| Prototype | - Recruit students for prototype course  
            - Develop service-learning training and development for students participating |
| Resources | - Publicize service-learning courses  
            - Include service-learning courses in established credits  
            - Provide service-learning guidance and counseling  
            - Include service-learning course assistants and site coordinators  
            - Detail the capacity and resources available from the students for service-learning |
| Expansion | - Establish multiple service-learning courses, including required courses, sequential courses, and interdisciplinary courses  
            - Encourage prior service-learning students in recruiting new students  
            - Create student positions of course assistant and site coordinator  
            - Involve students in developing service-learning courses and related activities (workshops, conferences)  
            - Create research assistant positions for students  
            - Promote students to develop service-learning components |
| Recognition | - Publicize outstanding students in service-learning courses  
              - Publicize student work in service-learning courses across university and surrounding communities  
              - Create student service-learning recognition and scholarships  
              - Promote graduate student publications on service-learning research and experiences |
| Monitoring | - Collect data on student involvement  
            - Collect data on outcomes of service-learning course |
| Evaluation | - Evaluate service-learning outcomes (satisfaction, learning outcomes, retention, involvement)  
            - Provide evaluation methods throughout service-learning course |
| Research | - Promote student participation in research  
           - Conduct research on student outcomes  
           - Promote graduate student research on service-learning courses |
| Institutionalization | - Develop service-learning as part of student culture  
                      - Encourage or require enrollment in service-learning courses |

**Table 6. CAPSL - Student**
| Planning                          | - Form an advisory committee to guide faculty on developing service-learning courses  
|                                  | - Develop a Campus Action Plan for service-learning university wide  
|                                  | - Continue to include service-learning as part of institute's mission  
|                                  | - Evaluate promotion program to support faculty integrating service-learning within courses  
| Awareness                        | - Inform and educate departments and key administrators about service-learning integration and development  
|                                  | - Become member of national service-learning organizations  
|                                  | - Promote service-learning as philosophy not pedagogy  
|                                  | - Promote faculty use of Service-Learning website of resources  
| Prototype                        | - Consult with an established and successful service-learning program in higher education  
|                                  | - Develop a service-learning template for use across institution with key elements concerning the institution and implementation of service-learning course  
|                                  | - Add prototype to university website on service-learning  
| Resources                        | - Obtain institution commitment to support an Office of Service-Learning  
|                                  | - Coordinate cross-discipline service-learning endeavors through Office of Service-Learning  
|                                  | - Coordinate support services for faculty, students, communities, and practitioners  
|                                  | - Centralize service-learning grant program  
|                                  | - Detail the capacity and resources available from the institution for service-learning  
| Expansion                        | - Support departments and faculty developing service-learning courses  
|                                  | - Link promotion to research, teaching, and service  
|                                  | - Provide faculty development workshops  
|                                  | - Encourage attendance at service-learning conferences  
|                                  | - Facilitate campus visits and forums on service-learning  
|                                  | - Encourage partnerships with extension programs  
|                                  | - Support collaboration for programming and grant applications  
| Recognition                      | - Publicize service-learning projects across campus and outside of campus  
|                                  | - Participate in service-learning conferences and workshops  
|                                  | - Encourage publication of service-learning research  
|                                  | - Publicize service-learning in surrounding communities  
| Monitoring                       | - Maintain data about service-learning courses across campus  
|                                  | - Utilize website in publishing courses offered and outcomes from service-learning projects each semester  
| Evaluation                       | - Require an annual report from the Office of Service-Learning  
|                                  | - Establish evaluation methods for use within service-learning courses  
|                                  | - Include service-learning in institutional assessment  
|                                  | - Conduct service-learning evaluations for partners involved with institution  
| Research                         | - Encourage research integration with service-learning courses  
|                                  | - Research methods of service-learning integration  
|                                  | - Conduct research on service-learning within institutions and across institutions  
|                                  | - Publish research conducted across disciplines  
|                                  | - Align faculty research and disciplinary specialization  
| Institutionalization             | - Continue service-learning as part of ISU mission statement  
|                                  | - Recognize service-learning in university publications  
|                                  | - Identify service-learning courses as part of general education  
|                                  | - List service-learning courses within schedule of classes and course descriptions  
|                                  | - Sponsor conferences on service-learning  
|                                  | - Sustain institution's budget for service-learning programs  

<p>| Table 7. CAPSL - Institution |</p>
<table>
<thead>
<tr>
<th>Practitioner</th>
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</table>
| **Planning** | - Survey existing practitioner / university partnerships  
  - Identify professional representative(s) to serve on planning and advisory committees  
  - Survey practitioner knowledge or past experience with service-learning  
  - Survey professional attitude toward service-learning  
  - Survey professional interests in service-learning participation  
  - Identify research goals and constituencies |
| **Awareness** | - Distribute service-learning information  
  - Schedule initial meetings with representative(s)  
  - Inform practitioner representatives on service-learning and course requirements |
| **Prototype** | - Collaborate with professionals to develop prototype course |
| **Resources** | - Compile list of interested practitioners  
  - Compile list of participating professional expertise and experience  
  - Provide professionals a resource manual with university policies and procedures for service-learning courses  
  - Provide practitioners resources concerning specific course and course objectives  
  - Detail the capacity and resources available from the practitioners for service-learning |
| **Expansion** | - Increase involvement of professionals in development of service-learning courses  
  - Conduct workshops and discussions on service-learning  
  - Collaborate with professionals to identify new service-learning opportunities  
  - Encourage professionals to attend and present at service-learning conferences |
| **Recognition** | - Plan recognition events for practitioners  
  - Present service-learning outcomes to participating professionals  
  - Publicize professionals involved in service-learning on university website and surrounding community media  
  - Encourage professionals to publish service-learning experiences |
| **Monitoring** | - Collect data on practitioner involvement in service-learning course  
  - Monitor relationship between practitioner and university  
  - Collect data on practitioner involvement after completion of service-learning course |
| **Evaluation** | - Evaluate service-learning outcomes  
  - Assess service-learning relations throughout course |
| **Research** | - Conduct community impacts and outcomes  
  - Collaborate with communities on research agendas  
  - Conduct research on community/practitioner relations subsequent to service-learning course |
| **Institutionalization** | - Form lasting partnerships with university and professionals  
  - Participate with professional partners in various disciplines  
  - Implement service-learning as part of professional culture |

**Table 8.** CAPSL - Practitioner
The proposed five tables were developed for the interior design program at Iowa State University for this case study. Following the development of the planning system for implementing a service-learning course, the next step would be the development of the semester class.

Course Case Study

The institution and faculty would determine whether a new course would be developed or an existing course would be adapted to facilitate service-learning. Implementing service-learning with interior design curriculum may best be accomplished using an existing course, integrating service-learning to accomplish the course goals and objectives. This case study details interior design faculty methods to plan and execute a service-learning course in a current studio. Iowa State University and the Interior Design Department represent the institution for the development of the proposed case study course.

The studio course chosen for this case study was Iowa State University’s, ArtID 267, Interior Design Studio II. Iowa State University’s course catalog description:

“Human factors issues including ergonomics, human behavior and the requirements of special groups. Color theories related to interior spaces. Residential interior
design and medium scale projects. Detail drawings, and expansion of visualization techniques.”

This specific studio was chosen for several reasons. First, a sophomore level course allows for student exposure to service-learning early in academic career in order to engage students and develop the ability to apply theory to design solutions. Early development of this ability can then be carried through the remaining studios while increasing the understanding of design theories and applications. This should help to overcome the typical separation of theory from practice. Second, student participation with communities and community problems during the sophomore year may foster a desire to integrate social issues with design education. Developing this desire of active participation may then lead to more socially active design practitioners. Finally, the context of the current studio course fits the context of the identified community issue. This sophomore studio course relates to the residential environment and includes human factors and the needs of special groups. The identified need for appropriate housing options for aging Iowans would fit the overall objective of the course and continue to fulfill Iowa State University requirements.

Once the institution and faculty have determined to either create a new course or adapt an existing course, one of the six service-learning models would then be chosen as the guide to create content and schedule. The six primary models previously review included: pure service-learning, discipline based, problem based, capstone course, service internships, and community based action research.
The problem based model was chosen for this case study as the most appropriate to fulfill the requirements and objectives. The course could involve an individual project and a group project, requiring the students to become consultants for the community. Students must be required to study and understand the problems identified and to conduct additional research to gain knowledge of specific needs and to develop design recommendations. In other words, students develop the ability to apply design theory to design practice.

Faculty must consider a number of criteria to create a successful experience during the semester. As discussed in the literature review, Zollinger, et al. (2009), developed a framework for interior design education. Table 9 was developed to address the four criteria to consider during the implementation of this proposed interior design service-learning course.
Table 9. Interior Design Implementation Criteria

Addressing the four criteria within a course will require faculty to thoroughly plan and detail the semester studio. Planning can be well documented through a syllabus, which helps all partners understand the goals and objectives, as well as the schedule for the semester.

**Syllabus**

A well constructed and scheduled syllabus will link service-learning throughout the course. Clear descriptions and expectations of service-learning and course objectives should help students understand the course and alleviate the possible
anxiety associated with a new studio experience. Ballard and Elmore (2009) developed a syllabus checklist for service-learning courses. Included in the checklist are these elements:

- Service-learning as an expressed goal
- Description of how service-learning will be measured
- Description of service-learning project(s)
- Student responsibilities and deadlines
- A match between needs of the community and the needs of the course
- Course assignments link the service to the course content
- A description of the reflective or assessment process

The syllabus checklist and the determined description of the interior design studio will assist in the development of a proposed service-learning syllabus. The following pages are the proposed syllabus and schedule for ArtID 267 Interior Design Studio II, integrated with a service-learning philosophy utilizing the 2010 spring semester schedule.
Example Course Syllabus and Schedule

ISU College of Design
ArtID 267 Interior Design Studio II
Spring 2010
Course Syllabus and Schedule
Instructors: Lisa Bates and other

COURSE DESCRIPTION:

This service-learning studio will address an identified need within Iowa communities: the need for appropriate housing options for the aging population. Following an extension research project conducted in Lamoni, Iowa, this course will collaborate with identified partners and utilize design for possible solutions. The studio and lecture course emphasizes utilizing theories involving human factors, color, human behavior, and special needs populations in order to develop design solutions. The partners include: the teaching faculty, the students, the community, and interior design professionals. Collaboration between all partners is an essential component of this studio. As a service-learning course, students will enhance their communication and leadership skills while partnering with community representatives and design professionals.

COURSE OBJECTIVES:

1. Students will reflect on studio experience utilizing the service-learning philosophy through weekly reflection exercises.
2. Students will build a foundation of design vocabulary and theory.

3. Students will develop and apply the design process including: problem statement, goals and objectives, concept development, space planning, design documentation and representation.

4. Students will develop a base of knowledge of design theory concerning aging, color, and human behavior.

5. Students will develop the ability to apply design theory to design solutions.

6. Students will develop interpersonal skills through interactions and discussions with professional designers and community representatives.

7. Students will gain experience with individual and group projects within residential design.

8. Students will explore using multiple visualization and presentation techniques.
PROJECT 1: Prototype Apartment

Objective:

The objective for this small scale project is to explore and address the challenges and opportunities of residential interior design incorporating the special needs of the aging baby boomers, issues of ergonomics, and human behaviors. The design of this compact residence should strengthen design process and vocabulary.

Assignment:

The project will present issues interior designers face during residential design of existing architecture. The students will work independently to revitalize main street mixed use apartments in order to attract retiring baby boomers to the local community. Students will work with real life constraints of the existing architecture and the needs of an aging population.

The sequences of the project deliverables will allow for research relevant information concerning environmental needs, develop design decisions, and enable students to present design solutions to actual customers for feedback to use as part of the second project.

Expected Outcomes:

Each student will prepare the following deliverables for the final presentation:
• Process book including all research conducted pertaining to the needs of
  the client, the existing architecture and community, and documented
design process leading to design decisions.

• Developed floor plan for apartment unit

• Reflected ceiling plan

• Interior elevations

• Rendered perspectives of interior living spaces

• Materials board

**PROJECT 2: Retirement Development**

*Objective:*

This project allows students to further explore the impact of the design
environment. Students will be challenged to develop a design solution to fulfill the
Lamoni, Iowa community’s desire to create a university housing development for
retirement. An additional challenge for students will be to collaborate with
community members to determine their wants and needs while also following the
guidelines set forth by the community assessment research project.

*Assignment:*
This project will also utilize a process with multiple deliverables throughout the project. Working in groups, students will be responsible for determining the most successful design recommendations and solutions to fit the context of the problem. Students must take into account the implications of a housing development on the local community and how to best implement this retirement housing, using the guidelines of Elder-Friendly Community Design. The teams will determine the location and size of the development based on their own research and interviews with community partners. Collaboration with design professionals will also be strongly encouraged to determine feasibility and implementation issues.

The larger scope and scale of this project will require groups to work as teams and divide work to meet required deadlines. This adds the challenge to coordinate all deliverables into cohesive and professional presentations.

Expected Outcomes:

Each team will prepare the following deliverables for the final presentation:

- Process book including all research conducted pertaining to the needs of the client and community, results from interviews with community representatives, and clear documentation of design process leading to final design decisions.

- Conceptual site plan detailing location, type of dwellings, and number of proposed dwellings
- Conceptual site plan detailing the connections to needed critical destination and services
- Complete floor plan for single determined dwelling unit
- Reflected ceiling plan
- Interior elevations
- Rendered perspectives of interior living spaces
- Materials board
Spring 2010 Lecture and Studio Schedule

Week 1: Introduction and Understanding Client Needs

01-12-10: Lecture: Introduction to Service-Learning: the partners and first project
Initial assessment of all partners
Research aging needs and concerns and Lamoni, Iowa

01-14-10: Research elder-friendly community design and the affects of the baby boomer population

Week 2: Analysis and Concept Development

01-19-10: Lecture: Programming and concept development
Analyze research to develop problem statement, design objectives, and concept

01-21-10: Develop three possible concepts
Design professionals at desk critiques

Week 3: Concept and Existing Conditions

01-26-10: Lecture: Human factors
Finalize concept
Input existing conditions plans

01-28-10: Present final concept for critique
Design professionals present

Week 4: Space Planning
02-02-10: Lecture: Space planning and introduction to ADA and universal design
Develop initial space plans: circulation, space allocation

02-04-10: Design preliminary apartment plans

Week 5: Design Development

02-09-10: Lecture: Design development
Design preliminary apartment plans

02-11-10: **Present preliminary apartment plans for critique**
*Design professionals present*

Week 6: Design Representation

02-16-10: Lecture: Design representation and color
Finalize apartment plans
Develop color analysis and application

02-18-10: Develop color analysis and application
Input drawings: plans, elevations, perspectives, reflected ceiling plan

Week 7: Design Presentation

02-23-10: Lecture: Design representation and presentations
Submit final design drawings

02-25-10: **Present final apartment design for critique**
*Community and professional partners present*
Week 8: Second Project

03-02-10: Lecture: Introduction to second project and tips for interviews
Form groups
Develop interview questions
Review publication: Elder-Friendly Community (EFC) Design

03-04-10: Site Visit – Lamoni, Iowa

Week 9: Community

03-09-10: Lecture: Introduction to community representatives

Student interviews of community representatives

03-11-10: Analysis of interview findings

Week 10: Spring Break

03-16-10: Spring Break (no classes)
03-18-10: Spring Break (no classes)

Week 11: Clients

03-23-10: Lecture: Identifying client desires and needs
Develop programming

03-25-10: Concept development

Week 12:

03-30-10: Lecture: Social Responsibility
Finalize concept and interview findings
04-01-10: Present interview findings and concept

Design professionals present

Week 13:

04-06-10: Lecture: Interior Design and Special Needs
Identify development location
Plan the development
Begin space plans for residential environment

04-08-10: Evaluation of residential space plans
Develop of floor plans
Collect assessments from all participants

Week 14: Design Development

04-13-10: Lecture: Lighting introduction
Continue design of floor plans

04-15-10: Present final floor plans for critique
Community and professional partners present

Week 15: Design Development

04-20-10: Lecture: Materials
Explore and select color and materials

04-22-10: Complete final design
Design professionals at desk critiques
Week 16: Design Presentation

04-27-10: Lecture: Presentation of design proposals
Continue completion of final design

04-29-10: Final presentation for critique

Community and professional partners present for final critique

Week 17: Finals Week

05-04-10: Collect final assessments from all participants
Conclusions

Garnering the support of committed partners is a key step in the success of a service-learning project. The video series developed for this case study is only one possible method of attracting community and design partners. Interior design faculty and educational institutions could develop a number of methods to garner support of partners for service-learning.

The majority of the work for success then, comes from quality and timely planning. Faculty members committed to implementing service-learning within interior design curriculum need to be prepared for the commitment of preparation in planning. Adaptable tools and templates would facilitate management of the planning process and ensure that all dimensions and partners have been included. The proposed planning and implementation system could be utilized by various studio or lecture courses within the design fields by adapting it to the context and issue for the course.
CHAPTER 6. CONCLUSIONS AND FUTURE DIRECTIONS

Conclusions

Expanding the field of interior design is no easy feat. Although designers are engaged daily with the world around them, there is disconnect between this engagement and the ability to serve the larger public good. Fostering this connection in the education of new designers may create generations of socially active designers with the abilities to address difficult issues. This thesis was created as a possible solution for educational programs to help prepare future socially responsible interior designers.

Implementing service-learning within interior design education provides a method to connect education, practice, and research. These connections would likely further the field of interior design, while increasing the collaboration between education and practice. Greater collaboration between practice and education would likely continue the expansion of interior design and promote progress of theory into practice. Across multiple disciplines and within interior design education, service-learning experience has been found to create more successful programs.

The United States is facing various social problems. The growth in the aging population can and will affect numerous social issues across the country and world. The growth of the aging population may have negative consequences on the
remaining populations, but this does not have to be the future. Early planning and implementation may allow this possible negative situation to become a positive for communities across the country. Educational institutions’ ability to foster change in practice and policy creates a viable option for the institutions to become more active in the scholarship of engagement. The issues surrounding the aging baby boomers are numerous and span a multitude of disciplines, including interior design.

Research conducted across the country and at Iowa State University provided the identified community issue used in the proposed interior design studio. As more studies are conducted in order to address the needs and desires of the aging baby boomer generation, the role of interior design becomes more important. Research guided the selection of the thesis case study. The alignment of research and service-learning helps to alleviate some criticisms of the service-learning philosophy within higher education; nevertheless, planning and implementation are vital keys to the success of the model. In response to the literature findings, a service-learning model was created to become a versatile template for interior design educators planning to implement service-learning into curriculum.

**Future Directions**

Further research is needed to determine whether the proposed service-learning course would become a successful addition to the interior design curriculum at Iowa State University. Actual implementation of this course would find possible
needed modifications or additions. The success of implementing the proposed
course would be, in part, related to the willingness of the community. The
community must fully participate as a partner, be able to locate willing interior design
professionals, and have the potential for the interior design program to adopt the
proposed syllabus.

The proposed course allows faculty to choose a specific direction for
research. Possible research topics could include the effects on community,
students, or professionals. An appealing and relevant study would be to monitor the
influence of service-learning courses on students during their academic and
professional careers to discover whether the implementation of service-learning can
indeed connect interior design expertise to the greater good of society.
APPENDIX A. ELDER-FRIENDLY EVALUATION REPORTS
Lamoni Elder-Friendly Community (EFC) Design

Institute for Design Research and Outreach
Extension to Communities and Economic Development
College of Design
Iowa State University
Summer, 2008
ACKNOWLEDGEMENTS

Lamoni Residents
This project could not have been completed without the assistance and participation of Lamoni Development Corporation members, focus group participants, design review discussants, and project presentation attendees.

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Community Design Interns
Lisa Bates: Graduate Student in Interior Design
Courtney Long: Undergraduate Student in Landscape Architecture

PLaCE PROGRAM
The PLaCE program (Project for Partnering Landscape and Community Enhancement) was initiated in August 2000 with goals of enhancing and promoting the quality and character of Iowa’s landscapes and communities. PLaCE projects are conceptual in nature and are intended to give communities and organizations ideas, concepts, and theories for development. Actual construction drawings and documents and project implementation is intended to be carried out by private businesses and community efforts. Projects selected for the PLaCE program must have potential for transfer to other sites in Iowa.

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## Elderly Friendly Communities (EFCs)

### Overview

**Aging in Place and Smart Growth**

What's Happening in Iowa?

Planning and Design Process

### Overview

With an aging baby-boomer population communities are beginning to recognize a need to accommodate and attract older residents. The physical, social and political environment of communities is a significant factor in the development of comfortable, safe and accessible environments that promote physical activity and healthy lifestyles. The quality of life of older adults is central to the purpose for developing elder-friendly communities (EFC). Universal design seeks to create a community that is accessible and productive for all individuals regardless of physical ability. It promotes independence and builds self esteem and personal satisfaction in public space. The goals in creating accessible environments add to the goals of building community in public space. In an environment that nurtures and promotes freedom of movement more full participation in community endeavors is achieved.

Responding to health and wellness concerns Elderly Friendly Communities (EFCs) have begun to recognize the need to create healthier environments that cultivate healthy lifestyles. A significant facet in the assessment and evaluation process relates to mobility, transportation and recreation. Without these types of community resources, the aging population will not have the opportunity to be productive members of the community.

The components of EFCs, including physical, social and political enhancements serve to attract the elderly to communities. Whether in the rural or urban context, the impacts of the baby boom generation could have significant positive financial repercussions that would outweigh the costs of implementing EFC design and planning strategies. Defining EFCs brings to light the details of the physical, social and political community enhancements that create positive environments for promoting elder population settlement and retention.

The varied components identified include elements of the physical environment of a community, transportation, personal safety, media services, commercial and economic measures, housing, health care, lifelong learning opportunities, volunteerism and participatory...
opportunities, recreation, spiritual outlets, and general attitude of a community’s citizenry and local government towards the elderly.

The State of Michigan lists the following ten asset areas that contribute to creating an elder-friendly community:

1. Safety and security: There is a high level of personal safety in the community.
2. Transportation: It is easy to get around in the community and planes, trains and buses are readily accessible for traveling out-of-town.
3. Supportive Community Systems: The community has good cell phone service, high-speed internet, and multi-channel television. Services are located near populations and needed services are readily available. Seniors are considered when community decisions are made.
4. Commercial viability: Businesses and services are available that meet senior needs.
5. Housing: There is affordable housing matching a variety of lifestyle needs for seniors.
6. Access to Health Care: Seniors can be confident they can meet their medical needs now and in the future.
7. Enriching opportunities: Opportunities directed towards seniors for a lifelong learning experience.
8. Recreation: A variety of opportunities exists to meet the diverse interests of seniors. The community is walkable.
9. Spiritual connections: A variety of places to worship exists and welcomes and supports seniors.
10. Embracing and appreciative attitudes: Community members and leaders recognize the value of seniors in the community and treat them respectfully and appreciatively. (Cronk)

Aging In Place and Smart Growth

In 1996, the U.S. Environmental Protection Agency joined with several non-profit and government organizations to form the Smart Growth Network (SGN). The Network was formed in response to increasing community concerns about the need for new ways to grow that boost the economy, protect the environment, and enhance community vitality. In their 2005 publication on “Aging in Place and Smart Growth”, they list sever issues that communities should consider in order to promote community-wide livability and enhance the quality of life for more people over time. The issues they cite include:

- Demographic shifts will create dramatic changes at the community level
- Conventional urban design characteristics present significant obstacles to older peoples’ independence and social integration
- The physical and psychological changes experienced during normal aging can affect daily choices and priorities
- Transportation is a sensitive issue for older people
- Older adults need to remain actively engaged in society
- Communities need to critically assess their readiness for the “age boom”
- Smart growth approaches answer many seniors’ needs

This publication suggests the following solutions for a community concerned with smart growth and elder friendly community design:

- Promote a range of housing choices to reflect residents’ varied abilities, independence, and income
- Facilitate access to neighborhood amenities
- Encourage walking as a means of transportation, social interaction, and individual health
- Provide a quality environment for caregivers
- Assist in the provision of cost-effective services
- Provide flexible options for a diverse aging population (Smart Growth)

What’s Happening in Iowa?
The Iowa Department of Elder Affairs Commission in its June 14-15, 2006 meeting notes discussed the potential of an Iowa EFC program and its potential association with the Great Places Iowa program. (Commission of Elder Affairs) There are many opportunities for the success of an EFC program in Iowa. With rural towns seeking new avenues for economic development, attracting a new wave of elder migration could potentially sustain struggling small towns.

Statistics related to Iowa’s older population reflect national trends. The State Data Center of Iowa and the Iowa Department of Elder Affairs compile data to be published during Older Americans Month (May) entitled: Older Iowans: 2007. Several of the presented statistics follow.

Total Elderly Population: 425,220
The estimated number of people age 65 and over in Iowa on July 1, 2005. This age group accounted for 14.7 percent of the total population. Between 2004 and 2005, the size of this age group increased by 1,799 people.
Projected Elderly Population (2030) 663,186
The projected population age 65 and older in Iowa in the year 2030.
According to the U.S. Census Bureau, this age group will constitute
22.4 percent of the state's total population at that time. In 2000 Iowa
ranked 4th in the percentage of population age 65 and older. In 2030 it is
projected that Iowa will rank 12th.

Elderly Migration to Iowa: 4,487
The number of people age 65 and over who moved into the state of Iowa
between 2004 and 2005. This represented only 5.1% of all the people
who moved into the state during that time.

Elderly Staying in Iowa: 98.9%
The percent of Iowans age 65 and over who either stayed in their own
home or moved within the state between 2004 and 2005. This can be
compared to 96.9% for the state as a whole.

Counties with over 20% Elderly Population (2030): 84
The number of Iowa counties in 2030 in which at least 20% of the residents
will be age 65 and over according to Woods & Poole Economics, Inc. In 2000
that number was 30.

Disabled Elderly Iowans: 148,726
The number of Iowans in 2005 age 65 and over with at least one type of
disability (BRFSS)

Iowa communities are beginning to recognize a need to accommodate and
attract older residents, the aging baby-boomer population. The physical,
social and political environment of communities is a significant factor in
the development of comfortable, safe and accessible environments
that promote accessibility, physical activity and healthy lifestyles. The
quality of life of older adults is central to the purpose for developing
erlier-friendly communities (EFC). Communities with smaller populations
and economies require access to tools for evaluating and planning their
futures. The goals in creating EFCs in Iowa would benefit all community
members regardless of age. Developing a planning and design process
that addresses specific social and political elements within the particular
physical and historical context of Iowa communities would build
community and provide a vision for the economic viability and vitality of
Iowa's dwindling rural populations.

Planning and Design Process
Phase I: Community Workshops
Phase II: Inventory, Analysis, Assessment
Phase III: Design Recommendations
Phase IV: Conclusion

Community Workshops: The process of EFC design is presented
throughout the literature as necessarily inclusive. The success of
the Calgary project depended a great deal on the participation and
empowerment of elderly community members and resident experts who
engage in the senior world through their profession. A specific process
designed by Bergeron while working with seniors in Massachusetts included
periodic seminars that ranged from structured individual activities to
open-ended group discussions. Through this design process inclusive
decisions were made related to site development, including: “site design,
site and building relationships, historical considerations, design concepts,
design reviews, building form material decisions, interior themes and
budget issues.” (Bergeron, 201) Each meeting of the design committee
reviewed decisions made during the previous meeting and demonstrated
the groups participating in the process that their concerns and
inspirations were being heard and expressed in planning documents. Many
other examples of community workshop scenarios are described in detail
by groups such as AARP, Partners for Livable Communities and others.

Inventory, Analysis, Assessment (Assessment Resources)
There are many resources for assessment surveys. Both private and public
agencies have developed instruments in evaluating a community's level of
'elder-friendliness'. A few of the more widely used include: Advantage
Survey, Michigan's Community for a Lifetime Recognition Program survey,
and AARP's Livable Communities Evaluation guide. An approach that
accesses input from the specific user group (the elderly); city, county,
and state officials; and other local stakeholders, was developed by
the Cuyahoga County Planning Commission (CPC) and The Cleveland
Foundation, and published in June 2004. The following is a summary of
the main points of the assessment with the coinciding goals and indicators
of the physical strengths and weaknesses of a community's 'elder-
friendliness'.

Inventory, Analysis, Assessment (Assessment Processes)
The assessment of the physical environment as developed by the CPC
includes several indicators that both quantitatively and qualitatively
measure a community's 'elder-friendliness.' Other indicators related to services, housing, and a variety of other topics, are not discussed here. Indicators related to the physical and visual environment are presented here. Mobility and quality of community life may be either enhanced or suppressed by the design of the physical environment. The CPC has developed a survey instrument that measures the effectiveness of community design as it relates to the physical and visual environment. It may be administered to community members and stakeholders. Questions seek to understand local residents' lifestyles, issues, values and perceptions of the physical environment in meeting their needs.

General goals of an EFC include meeting the basic needs of residents (food, shelter, medical, safety). Here, safety, or perceived safe environments, relates to the physical design of the community. Self sufficiency and independence related to mobility within the community also depend on the physical environment, universal design, and wayfinding strategies. EFCs seek to provide environments that promote physical health and activity as well as access to community resources.

More detailed goals, as they relate to the physical environment, include indicators which measure environmental characteristics and their effectiveness of meeting elder-friendly community design goals.

**Goal:** Access to accessible, acceptable, affordable, adequate transportation and facilities.

**Indicator:** A range of affordable travel modes within the community, including services for persons with disabilities.

**Goal:** Physical environments that support independence and livability by being sensitive to the physical needs and limitations of older adults.

**Indicators:**
- Age-friendly public environments, signage, and infrastructure.
- Street infrastructure such as curb cuts, ramps, sidewalk surfaces and signs for older adults with motor and/or sensory problems in public spaces, businesses, community institutions.
- Mobility amenities for walkers.
- Trails, walking paths, sidewalks.
- Approaches to dealing with safety and crime issues to create a sense of safety and security for older adults. (Planning Commission)

As a starting point in the assessment process the above goals and indicators, measured through a survey, provide a baseline of a neighborhood or community's physical and programmatic limitations and opportunities. Other forms of assessment include focus groups, surveys, narrative collection, cognitive mapping, perceptions of community safety, and community perceptions of the physical and visual environment.

**Design Recommendations**
The results of the design process will then be formatted and presented as recommendations. The level of community participation and engagement will generally define the level of detail of the recommendations. For instance, if specific locations of obstruction to movement are identified through the design process, these locations may be expressed on a map. The documentation of the planning process may include several maps identifying limitations within the community and also opportunities. The types of maps generated may include: recreational spaces and trails; elder service locations; civic resources; existing wayfinding routes; public transportation; infrastructure; areas of identified dangers and threats; land use; housing; etc. Further analysis of the maps generated will lead to the identification of limitations and opportunities for planning and design recommendations for physical, social and political interventions will result. These documents should then be reviewed and judged as to their expression of community concerns. The plans will show specific locations identified for programmatic intervention; and lead to a focused approach to future community development.

**Conclusion**
For community planners, elected officials, citizens and advocates, the concept of elder-friendly community development will become an important facet in directing community action in the coming decades. Satisfying the needs of the aging baby-boomer population will allow for the growth of rural towns and the retention of residents who may otherwise flee to more accommodating environments. The physical, social and political environment of communities is a significant factor in the development of comfortable, safe and accessible environments that promote physical activity and healthy lifestyles for aging individuals. By understanding first the components of an elder-friendly community, and pursuing an in depth inventory of physical, social and political environments, a community may create a positive vision for the future and plan for a healthful and cultivating environment. By enhancing the quality of life of older adults through elder-friendly community development and planning, communities target an economically viable population, and a population with much to contribute to the social well-being of the community.
Lamoni Elder-Friendly Community (EFC) Design
Team: Peter Butler, Lisa Bates, Courtney Long and Susan Erickson

Community Profile
Lamoni is located on the far south-central edge of Iowa in Decatur County. Decatur County was organized in April 1, 1850, and in 1879 the area of Lamoni was named a town. With a diverse local history, Lamoni has been enriched by many different influences along the way, and has steadily grown in numbers to have a diverse community. The population was recorded at 2,239 in the year 2000, and 2,488 in the year 2007. This is a 249 person difference, or 11.1% increase in 7 years. Lamoni is a fairly secluded town, located 80 miles away from Des Moines, 110 miles from Kansas City, MO, 33 miles from Osceola, and a short drive, 15 miles, from Leon. Graceland University, the Sale Barn, and local businesses are the primary sources for job opportunities.

Process (Summary)
• Perform community assessment (walkability/elder-friendliness/healthy community)
• Administer public participation approaches including a focus group meeting, a survey, narrative collection, and work with community leaders and stakeholders
• Perform cognitive mapping, including community perceptions of the physical and visual environmental constraints and opportunities, and community safety
• Direct workshops that seek to give physical and visual form to concepts developed with community
• Develop design recommendations and guidelines for physical and social interventions

Products (Summary)
• Community resource assessment: existing data compilation, i.e. GIS (graphic and digital)
• Analysis of community participation processes: focus group, survey, and narrative collection (text)
• Analysis of community participation: constraints and opportunities (graphic)
• Urban design guidelines: responding to community assessment and ADA (text)
• Physical design interventions: decision-making process (plan view graphic)
• Physical design interventions: locations and specifications (graphic)
• EFC masterplan: circulation, wayfinding, intervention and site development proposals (graphic)

Process (Summary)
The process of assessment in Lamoni included focus group meetings, interviews with stakeholders, design team physical landscape assessment and a spatial assessment. Subject areas that were investigated throughout the design process included: Shopping and Services, Housing, Recreation and Cultural Activities, Critical Destinations, Transportation, Driveability, Walkability and Visioning. Focus group meetings were held May 22, 2008 at the following locations:

Meeting 1: Graceland Alumni Coffee Club (Graceland University Café)
Meeting 2: Lamoni Residents (Crown Colony Independent Living Facility)
Meeting 3: Lamoni Residents (Lamoni Community Room)

Focus Group Questions may be found in Appendix A.

A summary of the results of focus group responses related to each subject area may be found in Appendix B.

The physical landscape assessment was performed on May 23, 2008. The assessment questions may be found in Appendix C.
Recommendations Meeting
The design team visited Lamoni on June 10th, 2008 to present findings from focus group meetings and the physical landscape assessment. The meeting was held at the Lamoni Community Center. Approximately 30 Lamoni residents were present for the meeting.

The following list of "Recommendations for Discussion" were presented at the meeting. Discussion followed the presentation of each subject area. This interaction assisted the design team in defining final products for the community.

Recommendations for Discussion
- Critical Destinations: Shopping/Services
- Strengthen Connections to Grocery Store/Pharmacy
- Strengthen Connections between Crown Colony and Health Center
- Strengthen Connections between Crown Colony and Trails
- Strengthen Connections between Crown Colony and Graceland
- Integrate Senior Recreation Program at High School
- Seek Alternative Transportation Options for Medical Visits

Results and Products
The results and products for the Lamoni EFC project are organized by subject area. The complexity of a community scale design project reveals overlaps of multiple subject areas (i.e., walkability and recreational activities). Many of the above recommendations are addressed through case studies, and presented as vignettes within this publication. Results and products were presented to the Lamoni Community Forum, July 1, 2008. Analysis/recommendations include team assessment findings, focus group findings, existing conditions, proposals, interventions and case studies.
Spatial Landscape Assessment

Lamoni Town Form
An analysis of the history that led to the landscape patterns in the rural town of Lamoni serves to identify specific opportunities and limitations that may then be generalized to other communities.

Small towns in Iowa necessarily began as “walkable.” They evolved from trading posts, road crossings, mills, industrial sites, river landings and natural harbors. Generally the establishment of towns responded to environment constraints. The grade requirements of the railroad set a transcontinental course in the middle 19th century. At the time railroads required certain facilities sited along the route at specific intervals. Towns served these utilitarian functions. Railroads also established towns based on the productivity of the surrounding agricultural. In more productive regions, towns were sited in a more dense pattern.

The components of railroad towns provide certain opportunities related to contemporary community design. The dense retail center of town, as was created one hundred and fifty years ago, has served as the physical glue of community life. All of the needs of local residents were satisfied along Main Street or its perpendicular counterpart. A depot was placed at the central axis of the community and was usually paired with a public green space, or depot green. Generally, railroad towns lack a central town square. The commercial district is laid out either parallel or perpendicular to the tracks with marginal, edge landscapes donated for civic buildings: churches, schools, parks, courthouse, etc.

This landscape pattern of the railroad town remains in many rural communities. Many of the first structures built are still extant and functional though many are obsolete and abandoned.

Through investigation of the growth and evolution of the towns, some conclusions can be made. Some observed trends include the shifting of industry to the edges of town. Railroad corridors are commonly reclaimed for regional trail systems. Main Streets are either preserved through a variety of state and federal programs or they are neglected because of the constant shifting of tastes and economy in consumer culture. Transportation strips see most of the new development resulting from these shifts. Consolidation is facilitated at these new green field highway developments. New schools, health care facilities, recreation, and shopping areas have moved from the center of town (formerly the center of architectural identity and heritage) to the edge of town. What is left at the center are railroad yards, the depot, grain elevators, and the bones of Italianate storefronts.

These trends create towns that are based on the automobile as the primary (and usually only) option for transportation. In terms of elder-friendly community design this phenomenon creates many problems, foremost of which is lack of walkability to critical destinations. Critical destinations that would have been components of the Main Street complex that have shifted to the edges of town include: houses of worship, grocery stores, beauty shops, barber shops, libraries, banks, medical clinics, pharmacies and schools.
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• Strengthen Connections between Crown Colony and Graceland
• Integrate Senior Recreation Program at High School
• Seek Alternative Transportation Options for Medical Visits

Housing
• Identify Areas for Redevelopment Downtown
• Identify Areas for Housing Adjacent to Graceland
• Consider “Age-Restricted” Residential Areas/Developments
• Consider Graceland University/Lamoni Collaboration
• Facilitate Universal Design Training for Local Contractors

Recreation and Cultural Resources
• Establish Senior Exercise Program at High School
• Establish “Public Building” on Main Street
• Further Develop Relationships between Seniors and Graceland
• Plan for Long-range Regional Trail Connections
• Develop Regional Identity as “Cultural Hub”
• Work to Establish Permanent Farmers’ Market (in town)
• Work to Establish Permanent Craft Market (in town)

Walkability
• Enhance Downtown Core as More Walkable
• Provide Incentives for Downtown Businesses
• Link to Pedestrian Mall at Civic Core
• Enhance Connection from Downtown to Civic Core
• Re-Route Rail Trail Downtown
• Enhance Trail Corridor to Graceland

Results and Products
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These trends create towns that are based on the automobile as the primary (and usually only) option for transportation. In terms of elder-friendly community design this phenomenon creates many problems, foremost of which is lack of walkability to critical destinations. Critical destinations that would have been components of the Main Street complex that have shifted to the edges of town include: houses of worship, grocery stores, beauty shops, barber shops, libraries, banks, medical clinics, pharmacies and schools.
A. The core town form of Lamoni is defined by the axis of the railroad, Main Street and Linden Street. The circle is a one-quarter mile radius demonstrating the walkability of downtown and surrounding historic neighborhoods. In the past, critical destinations would have been located within this area. The architectural, industrial and retail character of the community was defined by the developments of the 1860s.

B. Today, new residential developments (green) are built at the edges of town. They are walkable as isolated areas, though disconnected from the traditional urban core. Industrial developments (violet) are also moved out of the town center.
C. This image demonstrates further contemporary development trends and relative locations of specific critical destinations in relation to Crown Colony (white), an independent living, assisted living, and nursing home development. These institutions were situated at the margins of communities. New retail developments are shifting in relation to new transportation resources. Services and retail businesses (orange) are located at the Interstate 35 interchange. Along Highway 69 professional services, light industry and other businesses have been established. Many of these businesses would have traditionally been situated downtown. The Hy-Vee grocery store moved from its location on Linden Street to Highway 69 in the last ten years.

D. The quarter mile radius here is focused on Crown Colony. Many critical services have been sited near the margin of town and have been established in close proximity to Crown Colony.
E. Zooming in on the area adjacent to Crown Colony reveals a set of spatial problems related to accessing critical destinations for elderly. The facilities lack strong physical connections to the south including the cultural and recreational amenities of Graceland University and the Rail Trail, as well as the critical services at the Health Center. To the north, assessment of walkability revealed many issues in accessing the critical destinations of the grocery store, the clinic, a bank, church and the main connecting route into downtown, Highway 69 (East Main Street). Design proposals address these concerns and seek to create more connectivity from this specific area to the critical destinations of the community.
Walkability

Team assessment findings
issues concerning walkability throughout Lamoni include: sidewalks are not continuous throughout the community, sidewalks are not maintained, containing rough surfaces with cracks and separations between joints. Curb cuts are not detected by those with visual impairments, are sporadically placed, and difficult to maneuver by wheelchairs and/or walkers. Sidewalks are obstructed by shrubs and overhanging branches creating difficulty maneuvering along the paths. The community does not enforce snow removal from sidewalks and does not have a program to help seniors clear snow from the sidewalks at their residences. Sidewalks are not consistently found to be four feet wide, with the bike path as the exception of eight to ten feet wide. Non-pedestrian users, such as bikers, do not make walking difficult, though the project team was unable to observe the community during the academic year and its accompanying activity at Graceland University. There are no other miscellaneous problems which interfere with sidewalk use, however, there is little maintenance performed and a non-conforming cross slope (2% maximum) minimizing the ease of use, especially for those with limited mobility. Traffic signals are not used at intersections, long streets do not have intersections with mid-block crosswalks, and crosswalks are sporadically marked, creating potential hazards for people walking in Lamoni. Not all crosswalks have curb cuts, restricting use for those using wheelchairs or other assisting devices. Some sidewalks are shaded by street trees and resting places along sidewalks are sporadic.

Focus Group Findings
Questions:
  a. Do you walk to do errands?
  b. Is walking safe?
  c. Identify issue areas or areas for opportunities.
  d. Identify routes and destinations.
  e. Do you walk for exercise?
  f. Is there indoor walking for exercise?
  g. Do you feel comfortable walking?
  h. Is downtown suitable for walking?

The most common reason for walking for focus group respondents was exercise. Options for indoor walking included the wellness center and the gym at Graceland. The university track, bike trail and golf course were all areas that respondents access for walking outdoors for exercise. While some community members access the bike trail by foot many others will drive to Liberty Hall, the library or Graceland to access the bike trail for walking. The majority of respondents do not like to use the sidewalks throughout town for exercise walking due to the disrepair and inconsistencies throughout town.

Walking for errands was minimal although some do walk to Hy-vee, Subway, or around the downtown area. Some were not comfortable walking on the streets or sidewalks downtown due to accessibility and maintenance issues.

The issues concerning walkability throughout town included the inconsistency in the quality of the walking environment throughout town. Many residents have to walk in the street due to the poor condition or lack of a sidewalk. Another issue cited was a lack of clearing snow and ice from sidewalks during the winter months. Although lighting did not appear to be an issue some stated the sidewalks were unsafe due to conditions and accessibility.

RECOMMENDATIONS
Walkability
Enhance Downtown Core as More Walkable
Provide Incentives for Downtown Businesses
Link to Pedestrian Mall at Civic Core
Enhance Connection from Downtown to Civic Core
Re-Route Rail Trail Downtown
Enhance Trail Corridor to Graceland
Enhance South Cherry Street and College Ave Intersection
Develop “Neighborhood” Connections to Rail Trail
Develop Connectivity Plan for Fringe Districts
Overview: This plan depicts (figure 1) overall strategies for creating more connectivity in the community of Lomoni and identifies areas of more detailed planning represented on following pages. The assessment of walkability identified specific areas of concern within the community.

Downtown Core: The project team was able to review the planning documents developed in the summer of 2007 through the Iowa Living Roadways Community Visoning Project administered through ISU Landscape Architecture Extension. The plans included extensive plans for downtown improvements including a more walkable environment, reconfiguration of parking, tree planting, visual enhancements, crosswalk enhancements and traffic calming strategies. Some of the plans depicting these improvements graphically are included in this publication.

Other Connections and Enhancements: Corridors that were identified for specific treatments include South Oak Street, South Cherry Street, Main Street and Fringe District Connections on West South Street and South and North Linden Street.

The Rail Trail connects much of the northwest section of town to downtown and the civic core. The trail also connects the southeast neighborhoods and Graceland University to the Main/Linden area.

Necessary new connections include a shared use trail along South Oak Street connecting East Main Street to the Rail Trail and Graceland University; a shared use trail along South Cherry Street connecting Graceland trails and the Rail Trail to Main Street. Enhancing Linden Street from its southern terminus to Foreman Park provides a strong north/south connection through town.
Critical Destinations

Team Assessment Findings
The following critical destinations or services were found within Lamoni including: places of worship, grocery store, beauty shop, barber shop, library, bank, medical clinic, first responders/fire service, home health care, pharmacy, group meals, parks/trails, and recreational facility. A dedicated senior center was a missing need identified for Lamoni. The majority of identified critical destinations within Lamoni are ADA accessible, those destinations not ADA accessible include: beauty shop, barber shop, and recreational facility. The grocery store, library, and pharmacy also provide home delivery service. The group meal service does not provide home delivery.

Focus Group Findings
Questions:
- What shopping destinations, you need to visit weekly or monthly, are missing from the community?
- Do you need to travel for specific services? If so, what are the services and where do you need to travel?
- Were there any previous services or shops in Lamoni which you miss?

Many of Lamoni’s residents cited the following shopping options as missing from the local community: clothing, shoes, household, hardware, furniture and appliances, computer store or service center, book store and department store. Citizens also cited the need for additional options for grocery locations, movie rentals and late night shopping. Also discussed is a void of dining options such as a fine restaurant or fast food.

The critical services missing from Lamoni included medical specialists, such as x-ray and cancer treatments, hospital care, transportation to services and shopping, an airport shuttle, bike repair service and a local accessible bus route.

Shopping and Services

Team Assessment Findings
The shopping district is primarily located on Main Street and Linden Street. The only problem with this is that they are spread within a long distance along Main Street, and therefore are not all in walkable distance from each other. On and Linden Street, the “downtown” area, the services and shopping are located adjacent to one another. The businesses within the area are the American State Bank, Bank of the West, Commercial Federal Bank, Pizza Hut, Pizza Shack, Kum & Go, Gas Company, Casey’s, Lomoni Car Center, Greg’s Auto Service, Lomoni Auto Parts Inc., Flower Shop, Dollar General, Southern Iowa Building Center, Climbing Rose, Satellite Computer, Contemporary Cabinets, Smart Cents Outlet, Subway, Safe Barn Café, Linden St. Coffee House, Quilt Country Family Restaurant, Characters Sports Bar, Lamoni City Hall, Yards Drug, and a Hy-Vee. Hy-Vee grocery store is located within a safe and convenient walking distance (1/4 of a mile) of the Crown Colony development. However, there is no crosswalk across Main Street for pedestrians, so it is still an unsafe route. Hy-Vee does provide a delivery service to Crown Colony, but does not provide wheelchair mobility to aid shoppers within the store. There are mixed-use developments on Linden Street with shops and a mix of residential units but they have accessibility issues therefore, would not appeal to older residents. Some of the shopping located on Main Street and Linden Street are within walking distance, but many residents live further than 1/4 mile away.

Focus Group Findings
Questions:
- Where do you shop? (summary of locations)
- Do you walk, bike, or drive to shop or visit services?

Currently many residents of Lamoni shop at locations such as Hy-Vee, Main Street boutiques, the Re-sell bookstore, Hallmark, restaurants: bar and grill, café, pizza, family restaurant, Subway, and some online shopping.

Methods of travel to shops and services include biking and walking. However, many residents feel that the sidewalks are in terrible condition. Because of this situation, many do not use the sidewalks as a mean of transportation for shopping, but will use them for exercise if necessary. It is not typical, according to respondents, to walk from location to location because not all of the shops are located within 1/4 mile of each other.

Centralized shops are convenient for walking. Many residents will drive to Linden Street and then walk around the area for shopping. They typically do not walk from their home to the shopping areas around the town. Many shopping venues are spread along East Main Street (US 69) to the interstate and are not convenient for walking.

RECOMMENDATIONS
Critical Destinations/Shopping/Services
Strengthen Connections to Grocery Store/Pharmacy
Strengthen Connections between Crown Colony and Health Center
Strengthen Connections between Crown Colony and Trails
Strengthen Connections between Crown Colony and Graceland
Integrate Senior Recreation Program at High School
Seek Alternative Transportation Options for Medical Visits
EXISTING CONDITIONS

Critical Destinations:
Crown Colony (A) provides accessible walks and entry for residents and visitors. The sidewalks link clearly to the adjacent nursing home (B), South Oak Street, as a connector between US 69 and Ackerly Avenue will require an upgrade to provide maximum accessibility for residents. Critical destinations that are not within reach include the Hy-vee grocery store (C), banks and churches along US 69. The environment at the intersection of US 69 and South Oak (D) requires enhancement to facilitate walkability. Other connections to destinations that are recommended include the rail trail (currently accessed on County Road R30) (E), the Graceland University Trail (F) (connecting to cultural and recreational resources of the campus), and the Health Center (G).

The US 69 (East Main Street) corridor has been upgraded to include many of the sidewalk elements required to provide for walkability. The sidewalk has been widened and at crosswalks, truncated domes provide a safer environment for walking (H).
PROPOSED WALKABILITY IMPROVEMENTS

The current entry into Lomoni at the intersection of US 69 and County Road R30/Smith Street is the site of the clinic. This is not only a major intersection but also the edge of urban development in Lomoni. As such, enhancements to this intersection would not only serve to provide a gateway for town, but also function as a traffic calming threshold (Figure 3). The enhancements recommended in Iowa’s Living Roadways Lomoni Community Visioning Final Report and Feasibility Study (September 2007) would achieve these goals. A shared use path on the south side of US 69 between South Oak Street and County Road R30/Smith Street would provide walkable access to the clinic for residents of Crown Colony.

The intersection of South Oak Street and US 69 creates a problem for individuals wishing to visit the critical destination of the Hy-Vee grocery store. A redesign of this intersection (Figure 4), in concert with the traffic calming enhancements at the intersection of US 69 and Smith Street, would further slow traffic downtown and provide for a safer crossing environment. A recommended strategy is to provide crossing lights (flashing yellow) and a change in texture of the crosswalk area, creating a rumble strip effect. Providing the first example of a pedestrian-friendly environment at the eastern entry to town sets the tone for other improvements downtown. Other more intensive solutions include automatic pedestrian-sensing equipment that would trigger walk signals, or turn on the flashing lights. These systems can be adjusted for individuals requiring more time to cross the intersection. The Manual for Uniform Pedestrian Treatment of Traffic Control Devices (MUTCD) requires marking crosswalks with white lines and black edging if pavement color does not provide a high contrast. Depending on pavement color; where pavement is light colored, black edging is recommended to improve contrast. High-visibility (ladder-type) crosswalk markings using a 12-inch (305-mm) stripe with 24-inch (610-mm) spacing had the highest level of motorist recognition.

On South Oak Street from the entry on the west side of Crown Colony in both directions (north and south) it is recommended to install a shared use pathway, and to continue the shared use path to East Ackerly Street. This improvement would provide southern access to the Health Center, the Rail Trail and Graceland University Trail. To the north, the shared use pathway would provide access to the sidewalks of East Main Street (US 69). The shared use pathway should be located on the east side of South Oak Street and north side of East Ackerly Street with a crosswalk installed to connect with the Rail Trail. For students from Graceland University this enhancement would provide a sensible route to the grocery store and the other retail and services of East Main Street.

The intersection of the Rail Trail, Graceland Trail and the proposed new shared use pathway creates a node. This node would be the sensible place for landscape enhancements, pedestrian scale wayfinding signage and seating. The node is an interface between the university and the community. Lighting and seating at this intersection would provide for the perception of a safe walking environment leading to the university for cultural events and to US 69 for daily needs and services. A more detailed representation of a “node” is included in the South Cherry Street (Figure 8) project area description.
EXISTING CONDITIONS

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SHARED USE PATHS
A pedestrian circulation system—sidewalks, street crossings, shared-use paths in the public right-of-way—is a program that a local government provides for its citizens. And it is the general availability of this program to people with disabilities that must be evaluated when considering the existing pedestrian environment...

...AASHTO's “Great Book” recommends a minimum paved width of 36 meters approximately 10 feet—for shared-use paths...

...to achieve positive drainage and wheelchair accessibility a 1-in-6 (16%) crown slope is recommended for sidewalks and shared-use paths...

...in outlying areas and in the pedestrian transportation corridors that link them to other destinations, shared-use paths may be more common. Because each route provides a unique connection between diverse origins and destinations, such pedestrian routes, when they occupy the public right-of-way, must be designed and constructed to be accessible...

...Shared-use paths may serve a pedestrian circulation transportation function, particularly in suburban and rural rights-of-way. Where such a route is located in a public right-of-way and provides a direct pedestrian connection between neighborhoods, residential areas, schools, employment centers, and other origins and destinations, it must be accessible...

(Advisory Rights-of-Way: A Design Guide)

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Figure 3: East Entry at Smith Street

Figure 4: Crossing at East Main Street/US 69
Case Study: Alternative Transportation

As one ages in a rural community, transportation to critical destinations and services becomes more problematic when driving is not an option. It has been found that one out of every five older Americans do not have a car. To call for local services available in their community (National Association et al., 2007). To prevent the isolation and deterioration of many homebound individuals may experience, access to a vehicle, walk, bus, or train is needed.

The Community Transportation Association of America showcases the Sunshine Bus in Florida and the Independent Transportation Network (ITN) in Maine.

“The Sunshine Bus is a highly customer-responsive transit service operated by the St. Johns County Council on Aging, in a suburban area near Jacksonville, Florida. Every day it takes people to work, to make their commute connection to Jacksonville, to go shopping, and to run errands. During ArtWeek, Sunshine Bus provides free trips to local visual art galleries. The low-floor vans take people throughout the county and make eight daily trips. Although the buses have fixed routes, they stop at any corner along the route when a person waves. This convenience is especially important for older persons who cannot easily walk to a bus stop.” (National Association et al., 2007).

“The Independent Transportation Network (ITN), a nonprofit organization started by a community organizer in greater Portland, Maine, provides adults age 65 and above and those with visual impairments with a highly flexible, consumer-oriented suite of services. ITN users become members, paying $45 annual membership dues and $25 to open a prepaid account. Volunteer drivers provide the trips, which are charged against the balance of the account so that no money or vouchers need to be exchanged. Fees are based on the distance of the trip, whether the ride is shared, and whether the reservation was made in advance or on the same day. Fares are usually about half the cost of a taxi. Volunteer drivers receive either a cash reimbursement or an equivalent credit for every mile they drive. Volunteers may save these credits for their own transportation needs when they need to limit or stop driving, or they may donate them to family members or low-income older adults. ITN has created a national program ITNAmerica, to help other communities replicate this model.” (National Association et al., 2007).


Case Study: Alternative Transportation

Street Legal Golf Carts

Neighborhood Electric Vehicles (NEVs), or street legal golf carts, are growing in popularity for resort areas, retirement communities, campgrounds and golf course communities. These new and improved golf carts seat four, are safer, but can drive faster than your typical golf cart.

The state requires that the NEV can not be capable of reaching speeds over 25 miles per hour.

The cart can not weigh more than 2,000 pounds, and can not hold more than four people, each seat having an approved seat belt.

It must have a headlight, front turn lamps, rear turn lamps, tail lights, and stop lights, as well as reflectors, exterior mirrors, and an interior mirror.

The golf carts must have brakes, a windshield, and a Vehicle Identification Number, along with a manufacturer's certificate of origin as a low speed vehicle.

These are basic guidelines for the NEVs; however it is necessary to check with your local law officials or DMV to guarantee that your NEV is street legal.

Neighborhood Electric Vehicles are the up and coming wave for the new generation. They can be used on the course, in local neighborhoods, and on the streets. Graphic kits are even available to give your NEV a personal look. The best thing about this new mode of transportation is that it is affordable and environmentally friendly.

Street Legal Golf Carts http://www. allsportnews.com/street-legal-golf-carts. html
Housing

Team Assessment Findings
Senior housing options are not located within ¼ mile of basic shopping needs. Senior housing options are located near recreational opportunities, but need a walkable connection to be built to the Rail Trail and Graceland Trail system. There are special housing complexes for seniors within the community, but there is a need for additional options and, potentially, age-restricted housing to prevent student dominance. All multi-family housing units are not in compliance with ADA standards. Future community development plans and comprehensive plans include multi-family housing and housing oriented to seniors, however, the location of these new developments is in question. Some housing locations are within walking distance of basic shopping and recreational activities while others are outside the recommended ¼ mile radius and do not have suitable connections to desired destinations.

Focus Group Findings
Questions:
- Do you feel there are housing options within the community for aging in place?
- Have you thought about the options for housing or is it a concern?
- What do you envision the forms of housing to be offered?

Available housing options are limited, according to the citizens participating in focus groups. Local stock lacks a variety of quality smaller homes. Crown Colony is one option but many desire something larger and more upscale than what is available at Crown Colony. There are few upscale options for housing including condominiums, assisted living facilities, rentals or housing with low maintenance. Home locations within walking distance are few because most newer, higher-quality homes are built at least ½ mile outside the downtown area. Downtown homes and apartments typically house college students and are in need of updates and repair.

Main concerns related to housing options, that were mentioned by participants include the need for low maintenance, efficiency-type apartments and a need for options with less upkeep than what is presently within the downtown area.

The participants envisioned housing options to include a variety of maintenance free transitions from their current home including townhomes, duplexes, or condominiums. Several participants shared a housing option concept located on or adjacent to Graceland’s campus to easily access the university’s culture and recreational activities. Another housing option mentioned was one of communal living for seniors with central social and gathering space. Although most of the respondents desire upscale housing options it was noted there is a need for affordable options for seniors as well.

RECOMMENDATIONS

Housing

- Identify Areas for Redevelopment
  - Downtown

- Identify Areas for Housing
  - Adjacent to Graceland

- Consider “Age-Restricted” Residential Areas/Developments

- Consider Graceland University/Lamoni Collaboration

- Facilitate Universal Design Training for Local Contractors
EXISTING CONDITIONS

Housing: Crown Colony (A) provides independent living facilities for seniors. The adjacent nursing home (B) includes a variety of care levels for residents including assisted living units. Affordable housing options (C) closer to downtown were not fulfilling the needs of seniors and were becoming more “student-dominated”. The South Cherry Street (D, E, F) corridor provides a strong connection between Graceland University and downtown Lamoni. Some aging housing may be replaced with updated units, open lots may be considered for infill development and the corner of College Avenue and South Cherry Street has the potential to be a hub connecting spatially the campus to downtown.

North Linden Street (G) was also identified as an area for new housing development. The aging housing stock and the area’s proximity to downtown make the area a strong option for updated housing units. Current subdivision development adjacent to Crown Colony (H) requires stronger connections to recreational and cultural assets in the community. The current trend of developing larger moderate density housing (I) on the fringe of town does not provide for multi-modal transportation options.
POTENTIAL PROJECTS: HOUSING/COMMUNITY/CONNECTIVITY

Identification of areas for potential redevelopment and infill seeks to provide feasible alternatives to the trend of fringe development in Lamoni. Centralized services and housing focused downtown would provide a boost to the street life of the Main/Linden area and potential for retail development related to new consumers.

Area “A,” (figure 6) was identified through visual surveys. Its spatial proximity to Graceland University trails and the Rail Trail along with the previously mentioned critical destination creates an opportunity for a joint redevelopment project coordinated between Lamoni and Graceland University. The corner of College Avenue and South Cherry Street provides an opportunity for the establishment of a “node” (figure 8) that links the town to the college. As a residential street, the character of the node would be enhanced with redevelopment (figure 7) of the southwest corner of the intersection. Existing historic buildings within the corridor may define the character and style of new development. The rustic style of the church building and the Victorian ornamentation of homes could define a motif for new development. With the installation of a shared-use path along South Cherry Street to East Main Street and on to the civic core, (figure 9) the area could become the fabric stitching together the town and university, avoiding the industrial barrier of the grain elevators at the south end of South Linden Street. The recommended housing type in area “A” would consist of one to two-story condominium style units. The mixing of multiple age groups; i.e. college age with retirement age residents would be encouraged, though specific units would be age restricted and open to alumni, former and retired faculty, and visiting faculty from Graceland University. This type of housing, and the potential alliance between Lamoni and Graceland University is described in detail on the following pages.

Area “B” is the downtown area at the intersection of Linden Street and Main Street (figures 12,13). The planning proposals for this area were produced through Iowa State University’s Community Visioning Program in the summer of 2007. While not focused on housing, the proposals would enhance the environment of downtown and create a destination for adjacent housing development.

Area “C” was identified through visual surveys (figure 14). The proximity to Linden Street and Main Street connects the housing with critical destinations including a bank, the pharmacy, Library, Community Center, High School, theater, a church on West Main, and City Hall. The location, with the potential integration of a shared use path on Main Street and South Cherry Street connects to Graceland University Trails and cultural destination, as well as the recreational resource of the Rail Trail to the east and west. The recommended type of housing in area “C” would consist of high-density apartment or condominium units, two stories in height with a public/private courtyard space. Detailed concepts are presented on the following pages.

Area “D” was identified through visual surveys. The aging housing stock in Lamoni will require replacement or intensive rehabilitation in the near future. This historic neighborhood area extends the commercial core of Lamoni, Linden Street, into a residential area. Again, proximity to the core business district and critical destinations is a key factor in the location of infill housing. Improvements to infrastructure within this block would create a sense of connectedness to downtown and fulfill many of the daily and weekly needs of an aging consumer. The recommended housing type in area “D” would consist of one or two-story duplex type housing units with universal accessibility.
Figure 5: Housing Opportunities
A new housing development (figure 7) in area “A1” would provide a strong connection between the town core of Lomoni and Graceland University. A redesign of the intersection at College Avenue and South Cherry Street provides a hub for pedestrian and bicycle trail users (figure 8). The convergence of Graceland paths and the Rail Trail and the addition of a shared use trail on the west side of South Cherry Street draw users in both directions and provides for a key connection. This area, with its visual connection to the park-like campus setting, would be an ideal location for condominium type housing units.

Within the South Cherry Street corridor there are multiple undeveloped lots that would be appropriate for infill housing (figure 10). Other housing stock reveals a potential for rehabilitation or replacement. The location of area “A2” on the plan is relatively arbitrary. Housing within the street should be context sensitive. A survey of character defining features of existing historic housing would provide a palette of influences to be applied to new designs. The scale of the existing architecture should be matched when considering new developments. The rear alley access provides for utility and service delivery and should be considered when developing detailed plans.

The current trend in Lomoni of shifting industrial developments to the edge of town would allow for the potential redevelopment at the corner of South Cherry Street and East Main Street. The current industrial structure at the corner creates a disconnect between the residential character of the street and the commercial/retail character of East Main Street. Area “A3” would provide an opportunity for a larger scale housing unit that would provide space for a Senior Center, or a satellite of Graceland University focused on gerontology related programs and senior living.

Figure 6: South Cherry Street Details
Figure 5: Housing Opportunities
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Figure 6: South Cherry Street Details
Figure 7: Housing and Crosswalk at South Cherry Street and College Avenue

Case Study: Age Restricted Retirement Communities and Local Colleges and Universities

Age restricted retirement communities have been a popular destination for many relocating to warmer climates in Arizona and Florida since the 1960s (Brednhult, 2007). As the Baby Boomers start retiring there has been a shift in the locations and programs of these age restricted communities. Unlike previous generations, Boomers wish to be more active during their retirement years. While a small segment will still relocate to warmer climates the vast majority of Boomers wish to stay within their current communities, close to family, and near Florida (Brednhult, 2007).

Many of the age restricted communities are partnering with local colleges and universities. Colleges and universities offer many of the intellectual, civic, and cultural activities that retirees are seeking. It is estimated there are over 50 of these communities currently around the country with more planned (Lum, 2005). The communities vary from fully independent living apartments or condos to full service nursing home complexes. While some are located off campus with connections to the college or university through walking paths or shuttle services, others are located on college campuses with views of well known university buildings and complexes. While some campuses own and operate the facilities other communities are independently managed and either rented or owned by the residents. The campus affiliated retirement communities have housing options which typically range from mid to high end requiring residents to have a higher income level throughout retirement.

The University of Michigan set aside university land for an age restricted retirement community for alumni, staff, faculty, and their spouses aged 65 and over. The University Commons was developed with individual condo units for privacy, with residents allowed to attend lectures and social activities in a common area. Although the university does not own or operate the facility there is a close partnership for the continuing education and involvement of affiliated retirees.

Longview, a retirement community a quarter of a mile from Ithaca College is not restricted to only those with ties to the college. This development started as a partnership between Ithaca College, Cornell University and the City of Ithaca to create a non-institutionalized home where quality of life and continued care was the priority focus. This goal has transformed into a place with options for seniors including adult day programs, independent living, and assisted living and rehabilitation. Ithaca College and Longview have a close interactive relationship. The College's five schools allow residents of Longview access to education, cultural, social, and health-related programs. Many of these programs involve intergenerational interactions between students, faculty, and Longview residents.

The partnerships with colleges or universities, local communities, and retirement communities can vary tremendously. These partnerships can easily fulfill a great deal of retiring Boomer needs and wants through the networks already in place on and around college campuses.


Figure 8: Proposed Trail “Hub” (day and night)

Trail Lighting

Lighting along entire length of the trail is not recommended unless there will be heavy use during the evening, for example around a university.

Many residents along trails oppose lighting trails due to light pollution and glare.

Lights are expensive to install, operate, and maintain.

Lighting as a crime deterrent is a questionable technique.

Concentrate lighting around trail heads, major road crossings, and activity areas.

Add the minimum amount of lighting in these areas to decrease the environmental impacts.

Transition between low-lit and high-lit areas to enable eyes to adapt.

Details on downtown improvements were developed by the Lamoni Community Visioning Team (Laura Peters of Genus Landscape Architecture with Dylan Jones, intern) in the summer of 2007. The plans include streetscaping, pedestrian-friendly interventions, parking reconfiguration and traffic calming strategies among other projects. These developments would make great strides in envisioning Lamoni as an ideal retirement community. (http://www.communityvisioning.org/)
Rural and small towns across the country are discovering that many entrepreneurs are passing up big cities and opting for less-populated locations. There are many factors which attract a new business including the traditional tax incentives, low office rent and a favorable regulatory environment but there are many other variables a small town can emphasize including infrastructure and culture.

Both Waitsfield Vermont (population 1,650) and Searcy, Arkansas (population 20,000) have launched free wireless initiatives. Searcy has rolled out public wireless zones, like many larger cities, in order for small businesses to access affordable internet and networking packages. Waitsfield not only offers DSL and other communications technologies but also a local business incubator and no traffic. With many high-tech entrepreneurs, towns like Effingham, Illinois has an industrial-development company which specializes in bringing high-tech jobs to rural market places.

Colleges and universities are collaborating with affiliated cities to attract new businesses and also work to ensure entrepreneurial minds already there do not relocate after graduation. A college or university within a town is a great selling point for business when there is an on-campus business incubator, research funding, and faculty which can serve as consultants. Brigham Young University, in Provo, Utah, is host to many small businesses which were started on campus.

Valley Junction, Iowa has become known as a business incubator offering small businesses many different incentives. Most of the incentives offered come through the Main Street Iowa, a program administered by the Iowa Department of Economic Development which supports historical districts across Iowa. The Historic Valley Junction Foundation’s grants and services are helpful to small businesses in managing unforeseen costs and needs. Some incentives available through Valley Junction are Signage/ Awning/ Window/ Door grant programs, and assistance through the Community Betterment Grant for the hiring of designers, engineers or other professionals. Low-interest loans are also available for building projects. Also available are marketing and advertising campaigns through which the foundation promotes all businesses in the area, offers co-op services, and provides training or seminars.

Entire counties are joining together as a region to pull businesses into the area. Hampton and Franklin counties in Iowa have joined together to offer a wide variety of incentives to business ventures. Incentives the counties are offering are tax advantages, work force availability and training, road infrastructure, entrepreneur assistance, and even free land.

Rural communities, towns and counties, are quantifying their community assets to strengthen their communities and welcome entrepreneurs and new businesses.
Case Study: Recreational and Cultural Resources
Small town phenomenon of public buildings

Throughout the last few decades dramatic changes have introduced new ways for people to meet and greet each other on a daily basis. Without the local coffee shop, in recent years, people have begun gathering at the local McDonald's restaurant for the senior coffee discount and have used this fast food restaurant as the new venue to catch up with friends. This in itself shows the need for a place to gather in rural Midwest towns, and there are many other opportunities for a more personal connection besides the neighborhood McDonalds.

In Slater, Iowa a fire station was renovated and re-used as a community center. The community is allowed to rent out the facility for a variety of events. The facility is furnished with tables and chairs and has convenient space for group activities.

Depots and Carnegie libraries have been targets for renovation as buildings for community centers or public gathering places. This generates a historic component to fit in with the atmosphere. Some places incorporate a museum area to interpret local history. This is an excellent conversation starter as well as a reminder of what was once in the town. Non-profit organizations typically own and run the building. They are active and provide connections within the community to allow for the space to get adequate use. One could even incorporate a “coffee shop” within the building to provide the same senior coffee discount that is offered at McDonalds.

Other public buildings that are growing in popularity for meeting places are the fraternal lodges that are located in many rural towns in the Midwest, such as Moose Lodge, the Elks, Odd Fellows, and the Legion. These places attract veterans but can also attract numerous amounts of friends and family for a coffee break or family outing. Many public buildings are not only used for senior citizens to meet in the morning for gossip and coffee, but also used for family reunions, dances, and card clubs.


In identifying area “C1” for new housing (figure 14) it was observed that the existing auto-related structures are under-used and may in the future be razed or rehabilitated. This area has the potential to become a centralized senior housing development that would be a part of the existing ‘civic core’ as recently established in Lomoni. The site links with the municipal resources of the high school, library, community center, city hall and the green space at central park. The site also links the critical service resources of the bank, pharmacy and cafe, as well as the retail environment of South Linden Street. As a mediator between the character of South Linden Street and the more contemporary civic buildings the architecture of the site would interpret both the historic and modern styles. The site is a location full of potential for triangulation (figure 15), the social phenomenon of many different types of users engaging with one another in a space. Students from the school buildings, merchants on Linden Street, individuals attending public events and meetings, recreational trail users and others are naturally drawn to this location because of their daily or weekly needs and rituals.

A corridor through the site maintains connections between the residential neighborhood to the north (figure 16). This public/private corridor creates the opportunity for interaction between seniors and the community members. Creating a walkable “green” street allows movement, but also resting places or “eddies” within the space.

Enhancement to this intersection serves to slow traffic entering town from the west and also to create a more pedestrian friendly link between the civic buildings to the south and the new housing and residential neighborhoods on the north side of East Main Street.
Case Study: Recreational and Cultural Resources
Small town phenomenon of public buildings

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Enhancement to this intersection serves to slow traffic entering town from the west and also to create a more pedestrian friendly link between the civic buildings to the south and the new housing and residential neighborhoods on the north side of East Main Street.
RECOMMENDATIONS
Recreation and Cultural Resources

Establish Senior Exercise Program at High School
Establish “Public Building” on Main Street
Further Develop Relationships between Seniors and Graceland
Plan for Long-range Regional Trail Connections
Develop Regional Identity as “Cultural Hub”
Work to Establish Permanent Farmers’ Market
Work to Establish Permanent Craft Market

Case Study: Recreational and Cultural Resources
Integration of Senior Recreation Program at High School

In the upcoming years, we will be entering a generation when there will be a larger number of older citizens than there are families with young children in school. This statistic is why it is important to think of alternative ways to integrate different generations into the public school district activities. “Senior citizens often are the backbone and core volunteers for thousands of school mentoring and tutoring positions... through Foster Grandparents and RSVP (Retired and Senior Volunteer Program) (Sullivan) Schools with the option of community learning centers that are open later longer, and for more people, will prove to be beneficial for new generation schools. These schools will enhance the way everyone in the community lives by ending age segregation, enriching the lives of children, seniors and parents, create support for public education, and keep seniors healthy and learning longer.

Pleasure Ridge Park High School Nutrition Program in Louisville, Kentucky has been operating with a senior program for 10 years. Originally the program was included in a Math classroom, and now currently has 1,800 square feet that includes an exercise room and a combination game room and lounge. Initially, the program was focused on nutrition. The seniors were able to eat their meals in the school cafeteria, but the
program has grown to be much more than just sharing meals with students. Twenty-five to thirty seniors help tutor students, as well as chaperone dances, judge homecoming floats, participate in field trips, and enroll in audit classes. Students also give back by delivering meals to the homebound elderly ever Friday.

Antonia Crater Elementary School and Chiloquin Senior Center in Newberg, Oregon created a new senior citizens center adjacent to the new school with the help of donated land from Antonia Crater and the Parks and Recreation services providing federal block grant dollars to help build the facility. The seniors are able to walk into the school for their meals that are served by the fourth graders daily and hold exercise classes in the school gym. Many classes within the school have developed a “senior buddy” program between students and the senior citizens.

Neveln Community Resource Center in Ankeny, Iowa is located in a historic elementary school. The Community Resource Center houses twenty-six community groups, is the Polk County meal site, and provides for 50 to 100 meals a day to senior citizens. Many of the seniors volunteer with United Way and the YMCA child care center. Another interesting aspect of the inter-generational activities included at the center is that the middle school excuses ninth graders during study hall to teach senior citizens at the public library how to use computers. Other ways the Ankeny community is giving back to adults is through their Ankeny Adult Education program, as well as allowing senior citizens free admission to special events offered through the local schools.


Case Study: Recreational and Cultural Resources
Establishment of Permanent Craft Market

Many communities have established local craft markets as a permanent feature within towns. Craft markets are places to sell and display local community products and produce and to also showcase local culture. Communities large and small across the nation are capitalizing on the local customs and talent.

Kalona, Iowa has become a community-wide craft market. During the past 35 years, the town of Kalona has promoted the downtown commercial district. This historic district features craft, antiques, local products, restaurants, lodging and tours. Much of the local market is centered on the local Amish and Mennonite cultures. Hand crafted products and produce are a large part of the permanent market.

The Pennsylvania town of Ephrata is the home to the largest permanent craft markets on the east coast, The Green Dragon. The Green Dragon was started in 1932 as a garage repair shop. It then took the form of a restaurant, a tavern, and a dance hall. The owner, of Mennonite heritage, closed the dance hall and tavern during Prohibition and opened an animal auction house. In the early 1960’s new ownership brought an increase in growth and diversification into what is today a unique market. Open only on Friday’s, it is located on 50 acres of land and houses over 450 merchants. The Green Dragon’s merchants are from eight states and ten different countries. The market is located indoors and outdoors offering products from local growers, merchants, and craftspeople.


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Case Study: Recreational and Cultural Resources
Permanent Farmer’s Market

Farmer’s markets are growing in importance to rural and suburban districts. This form of retail market preserves small farms, strengthens economic and social ties between the community and farmers, and provides exceptional food choices that are not normally found in local grocery stores. Producers benefit through retaining more value from their produce by enhancing environmental benefits, reducing the distance the food travels and thus transportation costs, and decreasing global environmental pollution. Farmer’s markets can be year-round or seasonal and have a wide array of choices for location, whether it is indoors or in a Main Street parking lot. Other options for farmers include direct selling options, pick-your-own and cut-your-own operations, as well as rent-a-tree or Community Supported Agriculture organizations becoming more plentiful in the Midwest. Communities that are in remote locations need to establish an identity connected with a product, lifestyle, or heritage such as Amish and Mennonite. In remote locations, like Laton, producers will have to make a more concerted effort to attract urban consumers, to generate interest in travel, tourism, and ecological/environmental issues.

Ames, Iowa has a permanent indoor farmer’s market called Local Harvest that has been open since 1978. It is located in the historical train station depot at 526 Main Street. Local vendors provide fresh produce, fruits and vegetables, dairy, meat, jams, jellies, wines, baked goods, and crafts for sale. This indoor market is open on Thursdays and Fridays from 2:00-7:00 p.m. and Saturday from 8:00 a.m. – 2:00 p.m. There is also a seasonal operation running from May 1 through October 30 in an adjacent parking lot.

Ames Farmers Market. www.amesfarmersmarket.com
Case Study: Recreational and Cultural Resources
Regional Identity: “Cultural Hub”

Across the United States more people are seeking rural areas as a tourist destination. As the costs of travel continue to increase there is an increasing demand for driveable weekend destinations. Rural settings are popular among urban populations due to such qualities as authenticity, heritage, and personal contact. People living in urban settings see rural areas as a reminder of stability, harmony, pleasantness; and reassuring in the increasingly modern world (Chen & Kerstetter, 1996).

Establishing a community as a tourist destination is less costly than other forms of economic development strategies such as manufacturing (Wilson, et al, 2001). Also, those within the community do not need to depend on outside organizations and their decision to be within the community. Rural tourism can help two types of businesses within a community, businesses directly involved with tourism (hotels and attractions) and those indirectly involved with tourism (gas stations and grocery stores) (Wilson, et al, 2001). Tourism can also work well with existing farms and provide secondary income to farm households.

A community launching themselves as a tourist destination may discover rural tourism downfalls. It can create competition between local rural communities, tourism jobs are on the low scale of paid positions, and many times tourism tends to be seasonal. Rural tourism requires six key ingredients for success including: attractions (natural and manmade), promotion, supporting infrastructure, services, hospitality, and entrepreneurs (Wilson, et al, 2001).

Cultural rural tourism has been developing in the Evangeline Region (population 2,500) of Prince Edward Island (PEI), the smallest province in Canada. Just an hour drive from the capital, this area was first settled in 1812 and has since worked successfully to create the community identity of a cultural destination. This region has progressed through several stages to cultivate its own attributes as destinations for visitors. In the mid 60’s a few residents recognized the opportunities within their community and started a grassroots effort to attract tourists and to create economic benefits. The second phase included a growth of community groups, and planning and implementation of specific tourism strategies into the town economic plans. Formalizing tourism within the community came with establishing community partnerships and a formal tourism body to bring ideas and plans into reality. The Evangeline region is now in the fourth stage of tourism development with the centralization of long-term planning for marketing and planning of tourism within the region. At this point the community is balancing their socioeconomic goal, like employment, with the culture and values of the region.

CULTURAL HUB
The concept of identifying Lamoni as a cultural hub grew from comments made by participants in focus group meetings when asked “Imagine that Lamoni has become an ideal retirement community. What does that vision look like?” The cultural resources of Lamoni provide the opportunity to market and project the image of the community as a “cultural hub. The local Amish community should be an integral part of developing this identity. The qualities of the agricultural developments on the edge of town give a visitor a window back in time. The organization of the farmsteads are reminiscent of 19th century Iowa. The products of the local culture are valued in today’s marketplace as authentic and reflective of rural traditions.

The livestock Sale Barn provides another opportunity for cultural identity development. The annual rodeo and festival could become a regional attraction bringing visitors from Des Moines and other population centers.

Preservation and rehabilitation of historic architecture in Lamoni maintains and enhances the connection to history. The theater, depot and other buildings demonstrate a commitment to maintaining local landmarks. This practice allows for inventing new uses and community gatherings within historic buildings.

Graceland University and the cultural events held there are a key component in regional identity building. With the population centers of Des Moines and Kansas City somewhat out of reach for local travel to events, the university is a primary cultural destination. Casting a wider net of advertisement and promotion brings visitors to Lamoni to experience the particular culture and history of the community.

Along with the pioneer settlement of Mormon leaders, the identity as a quilting mecca, the Amish landscapes and craft traditions, historic building preservation and rehabilitation, the central role of the community in the livestock industry, and the extraordinary cultural resources of Graceland University; Lamoni has the potential to grow into a regional cultural hub for cultural tourism.


Appendix A: Focus Group Questions and Subject Areas

Critical Destinations
1. What shopping destinations you need to visit weekly or monthly are missing from the community?
2. Do you need to travel for specific services? If so, what are the services and where do you need to travel? (ex: medical or other daily or monthly needs)
3. Were there any previous services or shops in (town) which you miss? What are some of the new services and shops in (town) you view as a positive addition?

Shopping and Services
1. Where do you shop?
2. Do you walk, bike, or drive to shop or visit services?
3. What are the gaps in retail needs within (town)?

Housing
1. Do you feel there are housing options within the community for aging in place?
2. Have you thought about the options for housing or is it a concern?
3. What do you envision the forms of housing to be offered?

Recreation and Cultural Activities
1. What do you do for recreation within the local community?
2. Do you travel to recreate or visit cultural events or venues?
3. Do you use programs at the recreational center geared toward your age group?
4. Are there opportunities for volunteering and do you participate?
5. What are some cultural activities, venues, destinations within (town)? What are missing?
6. Are there volunteer services available to serve the elderly?
7. Do you feel people your age are viewed as a resource and respected members of the community?
8. Do you feel you have a voice within community decisions?

Transportation
1. What transportation services are available to you? (public, volunteer, private)
2. Do you use alternative modes of transportation? (bike, other)
3. What are strengths, weaknesses, opportunities and threats to the existing transportation system?
4. How do travel to appointments?
5. Are there barriers to flexibility and key destinations?

Driveability
1. Is driving an issue?
2. Do you feel safe driving?
3. Does the perception of unsafe driving or parking prevent you from attending events?
4. Are existing wayfinding systems sufficient?

Walkability
1. Do you walk to errands?
2. Is walking safe?
3. Identify issue areas or areas for opportunities.
4. What are some of your primary routes and destinations
5. Do you walk for exercise?
6. Indoor walking for exercise?
7. Do you feel comfortable walking?
8. Is downtown suitable for walking?

Visioning
Imagine that (town) has become an ideal retirement community, what would that look like?
Appendix B: Focus Group Results (Topical)

Critical Destinations
Team assessment findings
The following critical destinations or services were found within Lamoni including: places of worship, grocery store, beauty shop, barber shop, library, bank, medical clinic, first responders/fire service, home health care, pharmacy, group meals, parks/trails, and recreational facility. A dedicated senior center was a missing need identified for Lamoni. The majority of identified critical destinations within Lamoni are ADA accessible, those destinations not ADA accessible include: beauty shop, barber shop, and recreational facility. The grocery store, library, and pharmacy also provide home delivery service. The group meal service does not provide home delivery.

Focus group findings
Questions:
a. What shopping destinations, you need to visit weekly or monthly, are missing from the community?
b. Do you need to travel for specific services? If so, what are the services and where do you need to travel? (e.g., medical or other daily or monthly needs)
c. Were there any previous services or shops in Lamoni which you miss? What are some of the new services and shops in Lamoni you view as a positive addition?

Many of Lamoni's residents cited the following shopping options as missing from the local community: clothing, shoes, household hardware, furniture and appliances, computer store or service center, book store, and department store. Citizens also cited the need for additional options for grocery locations, movie rentals, and late night shopping. Also discussed is a void of dining options such as a fine restaurant or fast food.

The critical services missing from Lamoni included medical specialists, such as x-ray and cancer treatments, hospital care, transportation to services and shopping, an airport shuttle, bike repair service, and a local accessible bus route.

Shopping and Services
Team Assessment Findings
The shopping district is primarily located on Main Street and Linden Street. The only problem with this is that they are spread within a long distance along Main Street, and therefore are not all in walkable distance from each other. Once on Linden Street, or the "downtown" area, the services and shopping are located adjacent to one another. The businesses within the area are the American State Bank, Bank of the West, Commercial Federal Bank, Pizza Hut, Pizza Shack, Kum & Go, Gas Company, Casey's, Lamoni Car Center, Greg's Auto Service, Lamoni Auto Parts Inc., Flower Shop, Dollar General, Southern Iowa Building Center, Climbing Rose, Satellite Computer, Contemporary Cabinets, Smart Cents Outlet, Subway, Sake Barn Cafe, Linden St. Coffee House, Quilt Country Family Restaurant, Characters Sports Bar, Lamoni City Hall, Varsity Drug, and a Hy-Vee. Hy-vee grocery store is not located within a safe and convenient walking distance (1/4 of a mile) of clusters of older residents, with the exception of the Crown Colony development. However, there is no crosswalk across Main Street for pedestrians, so it is still an unsafe route. Hy-vee does provide a delivery service to Crown Colony, but does not provide wheeled mobility to aid shoppers within the store. There are mixed-use developments on Linden Street with shops and a mix of residential units but they have accessibility issues therefore, would not appeal to older residents. Some of the shopping located on Main Street and Linden Street are within walking distance, but many residents live further than 1/4 mile away.

Focus Group Findings
Questions:
d. Where do you shop? (summary of locations)
e. Do you walk, bike, or drive to shop or visit services?

Currently many residents of Lamoni shop at locations such as Hy-vee, Main Street boutiques, the Re-sell book store, Hallmark, restaurants: bar and grill, cafe, pizza, family restaurant, Subway, and some online shopping.

Methods of travel to shops and services include biking and walking. However, many residents feel that the sidewalks are in terrible condition. Because of this situation, many do not use the sidewalks as a mean of transportation, but will use for exercise if necessary. Walking is not typical to go from location to location because not all of the shops are located within 1/4 mile of each other. Main Street
shops begin at the entrance of town and are located along Main Street for a mile. Many residents will drive to Linden Street and then walk around the area for shopping, but typically do not walk from their home to the shopping areas around the town.

Housing

Team Assessment Findings
Senior housing options are not located within 3/4 of a mile of basic shopping needs. Senior housing options are located near recreational opportunities, but need a walkable connection to be built to the main trail system. There are special housing complexes for seniors within the community, but there is a need for additional options and to prevent student housing dominance. All multi-family housing units are not in compliance with ADA standards. Future community development plans and comprehensive plans include multi-family housing and housing oriented to seniors, however the location is in question. Some housing locations are within walking distance of basic shopping and recreational activities while others are outside the recommended 3/4 mile radius and do not have suitable connections to desired destinations.

Focus Group Findings

Questions:

a. Do you feel there are housing options within the community for aging in place?

b. Have you thought about the options for housing or is it a concern?

c. What do you envision the forms of housing to be offered?

Available housing options are limited, according to the citizens participating, lacking a variety of quality smaller homes. Crown Colony is one option but many desire something larger and more upscale than what is available at Crown Colony. There are few upscale options for housing including condominiums, assisted living facilities, rentals, or housing with low maintenance. Home locations within walking distance are few because most quality homes are built at least 3/4 mile outside the downtown area. Downtown homes and apartments typically house college students and are in need of updates and repair.

Concerns about housing options, Lamoni citizens discussed, include needs for low maintenance, efficiency, and a need for options with less upkeep than what is presently within the downtown area.

The participants envisioned housing options to include a variety of maintenance free transitions from their current home including townhomes, duplexes, or condominiums. Several posed a housing option located on Graceland’s campus to easily access the university’s culture and recreational activities. Another housing option mentioned was one of communal living for seniors with central social and gathering space. Although most of the respondents desire upscale housing options it was noted there is a need for affordable options for seniors as well.

Recreation and Cultural Activities

Focus Group Findings

Questions:

d. What do you do for recreation within the local community?

e. Do you travel to recreate or visit cultural events or venues?

f. Do you use programs at the recreational center geared toward your age group?

g. Are there opportunities for volunteering and do you participate?

h. What are some cultural activities, venues, destinations within Lamoni? What are missing?

i. Are there volunteer services available to serve the elderly?

j. Do you feel people your age are viewed as a resource and respected members of the community?

k. Do you feel you have a voice within community decisions?

Current recreational activities in Lamoni include golf, walk, biking on the trail system, horseback riding, softball, fishing, and children activities, indoor pool with limited hours, high school athletic programs, college athletic events, college community nights, wellness center classes (which are only offered in the basement so it is difficult to access for some elderly), tennis, games at Crown Colony such as cards and dominos, disc golf, and recreation at the college facility, however, conflicts with sporting groups arise during specific seasons. Another conflict is the access to the major bike trail in Lamoni. Residents from Crown Colony have to travel on the road to connect with the trail, or people are driving and then parking for trail access. Bowling, a senior exercise program, and an activity area are options the residents of Lamoni would like to see added to their town.
Cultural events in Lamoni include high school programs, college community nights, plays, the cultural center, and a performing arts series that includes five to eight shows per season. Traveling performances such as Second City Comedy Club from Chicago, Chinese acrobats, politicians, and magicians occasionally pass through and stop in Lamoni. Civil War Days, the 4th of July parade, rodeo, Motocross, and Demolition Derby are also well known cultural events for the town of Lamoni. The movie theatre, which is having its centennial celebration in 2011 and hoping to begin showing live performances, is a cultural highlight during the weekend showings. Community lectures at the Community Center, women's social clubs (MITEs: the oldest quilt club in Iowa), farmer's market, the annual bike ride, and mission trips to other countries are several different ways to get involved in the different cultural activities within Lamoni.

However, even with all of these options at hand, many of the residents still travel to Kansas City or Des Moines for large events that are being held in the city.

Volunteers have a wide array of choices in Lamoni to participate in; however, the opportunities are not well advertised to citizens and are needed every day. Currently there are volunteers that work with Graceland University, high school volunteers, and church volunteers. Many of these volunteers help driving people from Crown Colony to desired destinations, working on trail and sidewalk maintenance and construction, meals on wheels, golf cart events, and reading to children. As wonderful as this is, many volunteers are still needed in the community. Crown Colony residents stated an intense need for driving volunteers during the week for medical appointments. Within the community many of the trails and sidewalks are sporadically placed and need connections to be made, as well as maintenance for sidewalks in poor condition or in the winter for ice removal. This is an opportunity for many volunteers to get involved in the community. An exercise program for elders was also an idea to implement into the community, this would allow for volunteer programming and assistance for leadership. With all of these options available, it is important Lamoni set up a system to let the community know about weekly or daily volunteering options. Volunteers will not only be able to improve the community, but also improve the way people feel about their importance and involvement in the community. Some residents of Crown Colony feel separated from the community, and if people would begin participating in activities with Crown Colony and other generations, a feeling of inclusion will be generated.

Transportation
Focus Group Findings
Questions:
   a. What transportation services are available to you? (public, volunteer, private)
   b. Do you use alternative modes of transportation? (bike, other)
   c. SWOT
   d. How do you travel to appointments?
   e. Are there barriers to flexibility and key destinations?

The available transportation for Lamoni citizens includes a trolley for the residents of Crown Colony, the Southern Iowa trolley, and local church volunteers. For those living at Crown Colony the trolley will take them to medical appointments, the grocery store, beauty shop, bank, and the town of Leon. The trolley has limited destinations and one must fit appointments and shopping within the trolley schedule. Driving volunteers are unorganized and those citizens not associated with a local church may find it difficult to locate a volunteer to drive them to appointments or shopping.

Transportation needs missing from Lamoni are a private service transport, accessible shuttle services offered monthly, weekly, or daily for around the town or to other communities.

Alternative modes of transportation within Lamoni include biking and walking, especially on the trail. As stated earlier, access to the trail or sidewalks is problematic for many users.

Driveability
Team assessment findings
Driving and parking have created concern areas in Lamoni, but many driveability features are well established. Street signs have large letters, can be seen at a distance, are readable at night, and night light is adequate within Lamoni. Major streets do not have turning arrows at intersections or dedicated left-turn lanes. This is an important feature to add for safety while driving. Major streets are also missing medians and other devices to minimize the glare from opposing traffic at night. This option will help people maneuver
safely at night where street lighting is sparse. Lane markings are not clear and are inconsistent on main roads and side roads. Adding street reflectors will help the lane markings to become clear, and will improve night driving. Many parking lots do not have a clear circulation pattern, and it is difficult to distinguish where to enter and exit. Some parking spaces on Main Street and Linden Street are well marked for disabilities; however, some are difficult to distinguish and are not the correct stall size for a handicap space. Safe walkways to destinations are limited from parking spaces. The handicap stalls should be located in areas adjacent to a ramp to access a sidewalk or a specific building.

Focus Group Findings
Questions:
f. Is driving an issue?
g. Do you feel safe driving?
h. Does the perception of unsafe driving or parking prevent you from attending events?
i. Is there a way-finding system?

Residents in Lamoni expressed a concern with the speed limit and wanted a transition to slower speeds when coming into town. Crosswalks are absent on all streets and are desperately needed for safety reasons and walking routes. Another concern stated were the subdivisions being difficult to locate. The only area mentioned about parking being an issue was in the downtown area. The parking stalls are located too closely to the intersection and it is difficult to see around the parked cars.

Walkability
Team assessment findings
Issues concerning walkability through Lamoni included; sidewalks are not continuous throughout the community, sidewalks are not maintained; containing rough surfaces with cracks and separations between joints. Curb cuts are not detected by those with visual impairments, are sporadically placed, and difficult to maneuver by wheelchairs and/or walkers. Sidewalks are obstructed by shrubs and overhanging branches creating difficulty maneuvering along the paths. The community does not enforce snow removal from sidewalks and does not have a program to help seniors clear snow from the sidewalks at their residences. Sidewalks are not consistently found to be four feet wide, with the bike path as the exception of eight to ten feet wide. Non-pedestrian users, such as bikers, do not make walking difficult. There are no other miscellaneous problems which interfere with sidewalk use, however, there is little maintenance done and a non-conforming cross slope minimizing the ease of use especially for those with limited mobility. Traffic signals are not used at intersections, long streets do not have intersections with mid-block crosswalks, and cross walks are sporadically marked, creating potential hazards for people walking in Lamoni. Not all crosswalks have curb cuts restricting use for those using wheelchairs or other assisting devices. Not all sidewalks are shaded, resting places along sidewalks are sporadic and there are not enough resting places along sidewalks and only some shaded.

Focus Group Findings
Questions:
a. Do you walk to do errands?
b. Is walking safe?
c. Identify issue areas or areas for opportunities.
d. Identify routes and destinations.
e. Do you walk for exercise?
f. Is there indoor walking for exercise?
g. Do you feel comfortable walking?
h. Is downtown suitable for walking?

The most common reason for walking for focus group respondents was exercise. Options for indoor walking included the wellness center and the gym at Graceland. The university track, bike trail, and golf course were accessible by foot, and many others will drive to Liberty Hall, the library, or Graceland to access the bike trail for walking. The majority of respondents do not like to use the sidewalks throughout town for exercise walking due to the disrepair and inconsistencies throughout town.

Walking for errands was minimal although some do walk to Hy-vee, Subway or around the downtown area. Some were not comfortable walking on the streets or sidewalks downtown due to accessibility and maintenance issues.

The issues concerning walkability throughout town included the inconsistency of sidewalks throughout town, many have to walk in the street due to the poor condition or the area is void of a sidewalk. Another issue cited was a lack of clearing snow and ice from sidewalks during the winter months. Although lighting did not appear to be an issue some stated the sidewalks are unsafe due to conditions and accessibility.
Appendix C: Physical Landscape Assessment Tool

Site Visitations
The design team completed a physical assessment of Lomoni on May 23, 2008. The assessment was further developed during a visit on June 10, 2008. The following is an assessment tool developed in the spring of 2008 by Susan Erickson.

1. Elder-friendly Community Assessment tool

This assessment tool is designed to evaluate the level of elderfriendliness in the built environment. It is directed at Iowa communities with populations of 1,000 to 5,000. This tool has largely been drawn from the AARP Livable Communities Assessment publication but has been heavily modified.

Transportation
1. Does your community have a regularly scheduled public transportation service that picks up passengers at established stops?
   a. □ Yes □ No
2. Does your community have a dial-a-ride service?
   a. □ Yes □ No
3. Do local organizations (churches, senior centers, etc.) offer van service to meal sites, doctor’s appointments, or special recreational excursions?
   a. □ Yes □ No
4. Is this service well advertised?
   a. □ Yes □ No
5. Who is eligible for this service?
   a. □ Yes □ No
6. Do medical centers offer transportation service for dialysis and other regular medical needs?
   a. □ Yes □ No
7. Do residential care facilities or elder day care facilities offer transportation to take residents shopping, to medical appointments, to cultural activities?
   a. □ Yes □ No
8. Is there an organized volunteer driver program in your community?
   a. □ Yes □ No
9. If yes, who is eligible?
   a. □

Driveability
1. Do street signs have large letters that can be seen at a distance?
   a. □ Yes □ No
2. Are street signs readable at night?
   a. □ Yes □ No
3. Is night lighting adequate?
   a. □ Yes □ No
4. Do major streets have turning arrows at intersections and dedicated left-turn lanes?
   a. □ Yes □ No
5. Do major streets have medians or other devices to minimize the glare from opposing traffic at night?
   a. □ Yes □ No
6. Are lane markings clear?
   a. □ Yes □ No
7. Are lane markings reinforced by reflectors?
   a. □ Yes □ No
8. Do parking lots have clear travel patterns?
   a. □ Yes □ No
9. Do parking lots have an ample number of parking places that are easy to use?
   a. □ Yes □ No
10. Are there well-marked parking spaces for individuals with disabilities?
    a. □ Yes □ No
11. Is proper use of these spaces abused?
   a. Yes ☐ No ☐

12. If so, is proper use of these spaces monitored and enforced?
   a. Yes ☐ No ☐

13. Are there safe walkways to get to destinations from parking spaces?
   a. Yes ☐ No ☐

Walkability
1. Are there sidewalks throughout the community?
   a. Yes ☐ No ☐

2. Are sidewalks well maintained? (smooth surfaces with only minor cracks and minimal separations between joints)
   a. Yes ☐ No ☐

3. Can curb cuts be detected by those with visual impairments? Are they safety designed and implemented? Can they be negotiated by those with wheelchairs and/or walkers?
   a. Yes ☐ No ☐

4. Are any sidewalks obstructed by shrubs or overhanging tree branches? Other problem intrusions into sidewalks?
   a. Yes ☐ No ☐

5. Does the community have a regulation regarding snow removal from sidewalks?
   a. Yes ☐ No ☐

6. Does the community have a program to help seniors clear snow from the sidewalk in front of their home?
   a. Yes ☐ No ☐

7. Are sidewalks at least 4 feet wide?
   a. Yes ☐ No ☐

8. Do non-pedestrian users (bicyclists, skateboarders, roller skaters, etc) make walking difficult? If so, where?
   a. Yes ☐ No ☐

9. Are there other problems that affect the use of sidewalks (animal waste, unleashed dogs, etc) If so, where?
   a. Yes ☐ No ☐

10. Are traffic signals located at busy intersections? (if appropriate)
    a. Yes ☐ No ☐

11. Do any long streets with no intersections have mid-block crosswalks?
    a. Yes ☐ No ☐

12. Are crosswalks well marked?
    a. Yes ☐ No ☐

13. Do all crosswalks have curb cuts?
    a. Yes ☐ No ☐

14. Are sidewalks shaded?
    a. Yes ☐ No ☐

15. Are there resting places (benches, low walls) for pedestrians along sidewalks?
    a. Yes ☐ No ☐

16. Are there enough resting places?
    a. Yes ☐ No ☐

17. Are resting places shaded?
    a. Yes ☐ No ☐

Shopping and Services
1. Is there a grocery store within a safe, convenient walking distance (1/4 mile) of clusters of residences of older adults?
   a. Yes ☐ No ☐

2. If the community has a large supermarket or retail store, does it provide wheeled mobility aids to help shoppers?
   a. Yes ☐ No ☐

3. Does the community’s zoning code permit mixed-use development?
   a. Yes ☐ No ☐
4. Are there mixed-use developments with shops and a mix of residential units that would appeal to older residents?
   a. □ Yes □ No

5. Can residents safely and conveniently get necessary goods and services without having to drive?
   a. □ Yes □ No

**Housing**

**Availability of Housing:**

1. Is each of these types of housing available within your community? (get numbers of each if available)
   a. Single-family homes? □ Yes □ No
   b. Multifamily housing? □ Yes □ No
   c. Assisted living facilities? □ Yes □ No
   d. Nursing home? □ Yes □ No

2. Is affordable or subsidized housing available in each housing type?
   a. Single-family homes? □ Yes □ No
   b. Multifamily housing? □ Yes □ No
   c. Assisted living facilities? □ Yes □ No
   d. Nursing home? □ Yes □ No

3. Are senior housing options located near basic shopping needs?
   a. □ Yes □ No

4. Are senior housing options located near recreation opportunities? (trails, parks, recreation facilities)
   a. □ Yes □ No

5. Are there any special housing complexes or buildings especially for older people in the community?
   a. □ Yes □ No

6. Are multi-family housing units in compliance with ADA standards?
   a. □ Yes □ No

7. Do future community development plans or comprehensive plans include multi-family housing or housing oriented to elders?
   a. □ Yes □ No

8. If so, are those locations within walking distance of basic shopping and recreation activities?
   a. □ Yes □ No

9. Do affordable, accessible multifamily housing, assisted living facilities, or nursing homes have long waiting lists?
   a. Multifamily housing □ Yes □ No
   b. Assisted living facilities □ Yes □ No
   c. Nursing homes □ Yes □ No

**Home Repair and Modification**

10. Is information available about reverse mortgages available to elder homeowners?
    a. □ Yes □ No

11. Is there a weatherization assistance program?

12. Do seniors have access to a list of agencies or qualified individuals that specialize in affordable, reliable repairs?
    a. □ Yes □ No

13. Do seniors have access to a program to assist with routine or seasonal home maintenance chores (snow removal, yard work, gutter cleaning)?
    a. □ Yes □ No

**Recreation and Culture Activities**

1. Do the parks in the community offer walkways and benches in an atmosphere that is safe and inviting?
   a. □ Yes □ No

2. Do parks include paved walkways at least 48 inches wide, that are relatively flat for easy walking?
   a. □ Yes □ No

3. Do parks provide trails and picnic facilities that meet ADA requirements?
   a. □ Yes □ No

4. Do older residents have access to the following amenities?
   a. Swimming pool? □ Yes □ No
   b. Golf course? □ Yes □ No
c. Tennis courts?  □ Yes □ No  
d. Bowling alley □ Yes □ No  
e. Safe trails? □ Yes □ No  

5. Can older residents access recreation facilities by a safe walking route?  
a. □ Yes □ No  

6. Does the community have a senior center or other place for seniors to gather, with a variety of active and passive recreational and leisure activities?  
a. □ Yes □ No  

7. Does the community have a recreation center with space and/or programs designed for older people?  
a. □ Yes □ No  

8. Is an elder day care facility available?  
a. □ Yes □ No  

9. If so, does it have a waiting list?  
a. □ Yes □ No  

10. Is there a facility that offers comfortable indoor walking for exercise?  
a. □ Yes □ No  

11. Do seniors have access to a bowling alley with older adult bowling leagues?  
a. □ Yes □ No  

12. Does the community have a public library?  
a. □ Yes □ No  

13. Does the library offer book clubs, speakers' programs, or other community-based programming?  
a. □ Yes □ No  

14. Does the library offer large print books or audio books?  
a. □ Yes □ No  

15. Is the library accessible to all, according to ADA guidelines?  
a. □ Yes □ No  

16. Does the community have additional facilities and/or programs for recreation, cultural events, and intellectual stimulation? (If so, describe below)  
a. □ Yes □ No  

17. Do seniors have access to houses of worship and/or spiritual guidance, appropriate to the culture of the community?  
a. □ Yes □ No  

18. Does the community offer a program that promotes elders volunteering in assistance to the community?  
a. □ Yes □ No  

19. Does the community offer a program that promotes the community volunteering in assistance to elders?  
a. □ Yes □ No  

20. Do elders commonly serve on governmental boards and other committees?  
a. □ Yes □ No
## Critical destinations and services

<table>
<thead>
<tr>
<th>Critical destination</th>
<th>Present?</th>
<th>ADA accessible</th>
<th>¼ mile safe walking access</th>
<th>Home delivery available?</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>House of worship</em></td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
<td>NA</td>
</tr>
<tr>
<td>Grocery store</td>
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<td>□ yes - no □</td>
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<td>Beauty shop</td>
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<td>□ yes - no □</td>
<td>NA</td>
</tr>
<tr>
<td>Barber shop</td>
<td>□ yes - no □</td>
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<td>□ yes - no □</td>
<td>NA</td>
</tr>
<tr>
<td>Library</td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
</tr>
<tr>
<td>Bank</td>
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<td>Medical clinic</td>
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<tr>
<td>Pharmacy</td>
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<td>□ yes - no □</td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
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<tr>
<td>Senior center</td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
<td>NA</td>
</tr>
<tr>
<td>Group meals</td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
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<tr>
<td>Parks/trails</td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
<td>NA</td>
</tr>
<tr>
<td>Recreational facility</td>
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<td>□ yes - no □</td>
<td>□ yes - no □</td>
<td>NA</td>
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<table>
<thead>
<tr>
<th>Critical service</th>
<th>Present?</th>
<th>ADA accessible</th>
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<tbody>
<tr>
<td>First responders/fire service</td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
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<tr>
<td>Home health care</td>
<td>□ yes - no □</td>
<td>□ yes - no □</td>
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APPENDIX B. SURVEY
**Aging in Place: A Master of Arts Thesis Survey**

This survey is to gain insight into the lives of those currently retired and those planning for their retirement. This survey is conducted as a key research component for the Master of Arts thesis work of Lisa Bates, a graduate student within the Interior Design program at Iowa State University. Participation is completely voluntary, and you may stop at any time. Your responses will be completely anonymous. Thank you for your participation.

**Will only take 3-5 minutes. Please circle the answers.**

1. I feel I have planned thoroughly for my retirement.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
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</table>

2. I have planned on where I will be living throughout retirement.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<td>5</td>
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</table>

3. I will live within my current community throughout retirement.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<td>5</td>
<td>4</td>
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</table>

4. I plan on moving to another community during retirement.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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</table>

5. I plan on moving to a smaller home during retirement.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<td>5</td>
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</table>
6. I plan to live within my current home during retirement.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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</table>

7. I plan to make physical changes to my home during retirement.

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<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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8. I am familiar with the term, “Aging in Place”.

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<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<tbody>
<tr>
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<td>5</td>
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<td>3</td>
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</table>

9. My plans are to Age in Place.

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<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
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</table>

10. I am familiar with the term Universal Design.

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<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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</table>

11. I would like to learn how Universal Design would assist in achieving my retirement goals.

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<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<td>5</td>
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</tbody>
</table>
12. I have used the services of an Interior Design professional.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
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</table>

13. I would consider using the services of an Interior Design professional if she/he could assist in accomplishing my retirement plans.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
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<td>5</td>
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</table>

14. Interior Design services are too expensive for me to use.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<td>5</td>
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15. I would prefer to live in a private home during retirement rather than living within a retirement community.

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<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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</thead>
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16. I would prefer to live within a full service retirement community rather than having the services within my private home.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<tr>
<td>5</td>
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</tbody>
</table>
17. When discovering information on a new topic, such as Aging in Place and Universal Design, I turn to the following: (circle all that apply)
   a. Internet
   b. Library
   c. Professionals in the field
   d. Family
   e. Friends
   f. Other, please specify

18. I locate information about retirement planning from: (circle all that apply)
   a. Internet
   b. Library
   c. Professionals
   d. Family
   e. Friends
   f. Seminars
   g. Other, please specify

19. I have planned for the following aspects of my retirement: (circle all that apply)
   a. Financial
   b. Medical care/Health care
   c. Home
   d. Long Term Care
   e. Other, please specify
Demographics:

Gender: Male Female

Age: 18-45 45-50 51-56 57-62 63-68 over 68

Retired: Yes No

Own a home within community: Yes No

Any additional comments or questions:

If you would consider participation in an interview, please provide your contact information below:

Thank you for your participation in this survey. For any questions please contact Lisa Bates, Interior Design Graduate Student, College of Design, Iowa State University, lmbates@iastate.edu
APPENDIX C. SURVEY RESPONSES
Gender | Male | Female | Age | 18-45 | 45-50 | 51-56 | 57-62 | 63-68 | 68 above | Totals: 23 | 26 | 6 | 5 | 11 | 17 | 9 | 7 |
Retired | yes | no | own home | yes | no | Totals: 19 | 34 | 50 | 2 | 57 respondents
APPENDIX D. VIDEO STILLS
“I am what survives of me”

What is your legacy?

“Age is opportunity no less than youth itself.”

Do not lie down
Be proactive
Be passionate
Be bold

Revitalize your town!

Create communities with a perfect blend of...

The greatest impact is in your future
Define your future
8,000 Americans turn 60 every day!

Consumers over the age of 50 hold 3/4 of the country’s financial assets.

$800 Billion!

Boomers do not want their parents’ retirement.

And move far from family and friends.

or to sit in rocking chairs.

Boomers are looking for communities with...

housing options,

recreational opportunities,

social opportunities,

cultural & educational opportunities,
Boomers are also economic generators for their communities, mature adults hold over half of all discretionary income, I relocating retiree can have as great an impact as 3 to 4 factory workers!

Less than half of American communities have begun planning for the explosion of the aging Boomers. Now is the time to plan for your community's bright future. To benefit not only older adults but the communities in which they live.

We will all grow older and our communities can help keep all healthy.

Health is no longer viewed as absence of illness. "Health is a state of complete physical, mental, & social well-being" - CDC
22% of Iowa's population by 2030 will be over the age of 65.

Three ways to accomplish this goal...

1. Keep the aging as healthy and active as long as possible.

2. Create more accessible community services.

3. Integrate all ages into the fabric of community life.

Rural Lamoni, Iowa is seeking to become a lifelong community.
Communities that must plan to meet the needs of the aging baby boomer.

Community planning must focus on the social as well as physical environments.

Environments can improve the aging physical and mental functions.

Interior designers are able to maintain and shape the connection between the body and environment, emotionally and physically.

Much of the built environment is inconvenient, uncomfortable and even unsafe.

A successful design incorporates a good fit between the person and environment.

Interior designers contribute physical environments which can compensate for age-related changes to lengthen independence while improving health and safety.

Designers must understand changing needs and how the physical environment can compensate for those physical and social changes.

Environments need to be designed to enhance opportunity for independence and self-reliance.
Interior design services are valuable to communities planning for their aging citizens.

Lifelong communities provide services linked to housing to increase efficiency and accessibility.

Lifelong communities actively reach out to older residents to ensure they have a voice within the community.

Lifelong communities will meet all boomer needs and improve life for all ages.

Interior designers are a key partner in the development of successful lifelong communities across the country.

Video by Lois M. Bates
Music “In This Moment” by Ryan Nettles
DATE:        April 28, 2008

TO:          Lisa M. Bates
             c/o Cigdem Akkurt, 581 Design

CC:          Cigdem Akkurt
             581 Design

FROM:        Jan Canny, IRB Administrator
             Office of Research Assurances

TITLE:       Aging in Place: A Master of Arts Thesis Survey

IRB ID:      08-168                      Study Review Date:  23 April 2008

The Institutional Review Board (IRB) Chair has reviewed this project and has declared
the study exempt from the requirements of the human subject protections regulations as
described in 45 CFR 46.101(b). The IRB determination of exemption means that:

- You do not need to submit an application for annual continuing review.

- You must carry out the research as proposed in the IRB application, including
  obtaining and documenting (signed) informed consent if you have stated in your
  application that you will do so or if required by the IRB.

- Any modification of this research should be submitted to the IRB on a Continuing
  Review and/or Modification form, prior to making any changes, to determine if the
  project still meets the Federal criteria for exemption. If it is determined that exemption is
  no longer warranted, then an IRB proposal will need to be submitted and approved
  before proceeding with data collection.

Please be sure to use the documents with the IRB approval stamp in your research.

Please note that you must submit all research involving human participants for review by the
IRB. Only the IRB may make the determination of exemption, even if you conduct a
study in the future that is exactly like this study.
REFERENCES


Bevington, C. B. (1992). One size doesn't fit all: a designer argues that universality may lead to homogeneity. *Interior Design*, 63(11), 80-86.


