Aging in Place Communities

Richard A. Wilson
Masters of Architecture
University of Detroit Mercy
School of Architecture
AR-5100

Professor Karen Swanson
April 24th, 2009
This work is dedicated to all my family and friends, whose support and confidence helped me to succeed beyond my wildest dreams; and most of all, thank you God for your unquestionable guidance in this incredible journey.
## Listed Contents:

<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Listed Contents</td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>Abstract</td>
<td></td>
</tr>
<tr>
<td>03</td>
<td>Thesis Paper</td>
<td></td>
</tr>
<tr>
<td>04</td>
<td>Precedent Analysis:</td>
<td>a. The Traditions, Ann Arbor Michigan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Mountain Meadows, Ashland Oregon</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Sunrise Community Housing, Grosse Pointe Michigan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d. Precedent Conclusions</td>
</tr>
<tr>
<td>05</td>
<td>Research:</td>
<td>a. AARP, Beyond 50.05 Creating Environments For Successful Aging</td>
</tr>
<tr>
<td>06</td>
<td>Research:</td>
<td>a. Under One Roof: A Guide to Starting and Strengthening Intergenerational Shared Site Programs b. Tempe Intergenerational Center, Tempe Arizona</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Hazel Park, Michigan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Saint Clair Shores, Michigan</td>
</tr>
<tr>
<td>08</td>
<td>Sketch Problem</td>
<td></td>
</tr>
<tr>
<td>09</td>
<td>Schematic Design:</td>
<td>a. Program Conceptual Precedents:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Program Developed Precedents:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i. Baldakin Capsule Hotel Concept</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Lot-EK</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. V2 World</td>
</tr>
<tr>
<td>10</td>
<td>Programming:</td>
<td>a. Introduction to ECHO</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Execution of ECHO</td>
</tr>
<tr>
<td>12</td>
<td>Echo Module Engineering:</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>The ECHO Community</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>ECHO Families:</td>
<td>Jacklyn Wolczenkowski, Attached Bathroom ECHO</td>
</tr>
<tr>
<td>15</td>
<td>The Rogers Family, Auxiliary Housing Unit</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Sam Johnson, Live/Work ECHO</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Community Based ECHO's</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Conclusion &amp; Bibliography</td>
<td></td>
</tr>
</tbody>
</table>
Abstract: “echo: a sympathetic or identical response, as to sentiments expressed”

Currently within the United States we are witnessing the largest aging population demographic of any time in our history. This is the “baby-boomer” generation; the Post-World War II babies which were born between 1946 and 1964. Babies no longer, these aging adults number 78 million strong and will change our Country’s very fabric. From culture & politics, to economic patterns of wealth distribution, there is, and will be, hardly a single facet of modern life which is not directly or indirectly affected by this large demographic. The government, as well as many industries and institutions, recognize the significance of this fact, but seem slow to respond to the needs of this demographic, or to recognize the vast amount of capital and opportunities which present themselves. We needn’t look far to establish the needs and wants of this demographic and how it applies to architecture, because many studies are available from such sources such as the AARP, Generations United, The National Aging in Place Council, The National Council on Aging, and the Federal Government, to name but a very few. By focusing upon the “five final recommendations and findings,” of the AARP report on aging in place (2005), as well as the continuum of care services typically applied in stand-alone “retirement” communities, we can focus on how to insert these findings into an existing suburban context. Actual architectural solutions are scarce, but certain archetypes and community designs are shown to be consistently desired by this demographic. Overwhelmingly, this is a population which desires to stay within their current homes and apartments, located within their chosen community and close to the community amenities they are accustomed to. This is a population which desires to live and age in place.
A recent AARP study revealed that 89% of homeowners (over the age of 45) prefer to remain in their homes, yet 80% of the population will require special housing needs at some point.” Additionally, statistics say that, “where you live when you are 65 will be the place you live the remainder of your life (70%).”

Where is this population located? Most of the baby-boom generation dwells within inner-ring suburban communities which were the first suburban enclaves developed in the period after World War II. These “suburbs” can be found surrounding practically every major American City. These same suburbs are also showing their age. Many are suffering decline as younger people choose to settle into exurban communities farther and farther from the originating city’s center. What is left are archaic retail and industrial districts, smaller homes which don’t meet the lifestyle needs of a new generation, and economic stagnation and decline caused by indifferent, or even worse, destructive public policies. But this is where the majority of baby-boomers wish to live. So what are the existing amenities that are favorable for this population, and what are the amenities that are missing?

“One of the most important aspects of a livable community is the high level of engagement of its residents, ranging from participation in social activities and relationships, to volunteering, to civic participation in community planning and the political process.”

**Figure 2: Most Persons 50 and Older Belong to at Least One Organization**

- Religious organizations, including a church, temple, or mosque: 57%
- Professional societies, trade or business associations with individual memberships: 21%
- Organizations that work on health issues: 16%
- Health clubs, gym clubs, athletic leagues, or country clubs: 14%
- Hobby, garden, innovation, or computer groups: 14%
- Social service organizations: 13%
- Neighborhood or homeowners associations: 10%
- PTA, PTO, or school support groups: 8%
- Scouts and other youth organizations: 6%
- Clubs or organizations for older people: 6%
- None: 21%

Source: AARP Public Affairs & Media group of NOP World, Beyond 50:05 Survey, 2004

(1BB) Which of these types of organizations are you a member of, if any?
A key finding in regards to motivations for aging in place are: community engagement and connections. Foremost among these connections is religious organizations (57% of respondents age 50 and older cited churches, temples, and mosques as primary motivations for aging in place). The second highest ranking is professional societies and organizations (i.e. Elks Club, Masonic & community Yardners). And third is health related organizations, such as life-long doctors or hospital facilities. How strongly a person feels about these connections directly correlates to a person’s desire to age in place. Finding ways to strengthen paths, clarify and diversify transportation options, induce community support, and provide spaces and opportunities for engagement are all likely supported with architectural interventions. Another, paramount consideration that must be acknowledged, is the fact this demographic is the most healthy and prosperous generation of persons aging in place. It is not been studied, nor has it appeared within age in place reports, According to a Federal Reserve Board study: “average household net worth (assets minus liabilities) rose nearly 30 percent for leading-edge Baby Boomers between 2001 and 2004. That was the fastest wealth gain across all age groups.” Of course wealth fluctuates, but by and far this is the wealthiest generation of aged population the United States has ever seen. This population is also the healthiest, and chooses to stay active by working well into their retirement years, according to the Business Services Industry: “In one of the most significant social trends of the new century, Boomers are inventing a new phase of work called the “encore careers.” Glenn Ruffenach, editor of The Wall Street Journal’s Encore report, the paper’s guide to retirement planning and living, will interview Jim Emerman of Civic Ventures at this year’s Summit about this new segment of paid work that allows Boomers to use their talent and experience to give back to their communities.” And, “Millions of Boomers are headed not for an endless vacation but for a new stage of work, driven both by the desire to remain productive and the need to make ends meet over longer life spans,” says Emerman. “Boomers can capitalize on longer working lives to go beyond their own narrow needs, get down to some of their most significant work and leave the world a better place than they found it.” The opportunities to provide work space within existing inner-ring suburbs are boundless as many retail buildings remain vacant. Existing retail buildings are massed along the major corridor avenues, are generally single story of smaller square footage, and obsolete for today’s retail programs. These buildings have infinite potential for the types of “encore careers” that boomers desire. However, they are not always suitable in their adaptability to universal access, or aging in place. Many architectural solutions can adapt and utilize these existing structures for age in place employment
The model used for successful aging in place communities can be derived from AARP’s Beyond 50.05 extensive surveying which found key requirements from participants over a wide range of topics. Condensed into six categories, we can see clearly the desires and needs of an aging population. We can use these categories to organize and address these same issues by seeking solutions which satisfy an aging in place population while strengthening the overall community. While not all categories suggest an architectural solution, many do. It is these opportunities for architectural solutions which offer rich options for creative expression.

Satisfying an aging population by its very nature requires a more flexible approach rather than a fixed, immovable approach. Age itself is a timeline. Picking a particular point upon this timeline, or a particular age, will not be enough. Any solution, whether it be social or architectural, has to consider the spatial characteristics of aging as a timeline.

Architecture as a solution must be flexible and movable, it must morph as required to meet demands which necessarily change as a person inevitably does through the natural aging process.

So as we progress, categories are laid-out within the boundaries of five of the six AARP categories. The last one, “offering safe driver’s training,” is omitted as no architectural solutions can be considered relevant, and for the sake of brevity. The following are each of the remaining five AARP categories for successful aging in place communities.

**“Communities should promote design and modification of homes to meet the physical needs of individuals”**

Within most suburban communities, the primary housing type is the single family dwelling. Unfortunately, these housing types were constructed in an era (1920’s-1960’s), when universal design principles were not yet even considered. Some modifications to these dwellings are possible, such as the installation of grab bars within bathrooms, but in many cases a person may be forced to move for lack of adaptability (standard interior rooms, doorways and halls are generally small and in-adaptable). Addressing the single family dwelling is a foremost consideration and architectural dilemma facing those who wish to age in place. Adapting these homes is a key factor for successful aging in place communities.

“...a recent census bureau report shows that only 5% of persons age 55 and older move in a given year.”

<table>
<thead>
<tr>
<th>Encourage Community Involvement</th>
<th>Community Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modification of Existing Homes to Meet Lifecycle Needs</td>
<td></td>
</tr>
<tr>
<td>Diverse and Affordable Housing</td>
<td></td>
</tr>
<tr>
<td>Safety and Security</td>
<td></td>
</tr>
<tr>
<td>Mobility Options both Pedestrian and Vehicular</td>
<td></td>
</tr>
</tbody>
</table>

*Older Driver Enhancement (Safe Driving Education)*

* not included
While only about 5% of those persons age 55 and up desire to move, half that amount may need to, but prefer to stay within the same county or community. This leads to the third requirement for livable, age in place communities: diverse and affordable housing.

The solution towards diverse and affordable housing is of great complexity. Obviously universal access is a primary requirement, but not the only requirement. To discover what type of housing is needed, we can investigate and learn from Continuing Care Communities (CCRC’s), all-inclusive retirement communities that offer a continuum of care which has become a popular choice for many who cannot stay within their communities because those same care choices do not exist. So what is the continuum of care, and how can an existing community provide similar options?

Continuing Care Communities offer a wide range of housing types for aging in place:

- **Independent living**: single detached housing types. These are homes in which general maintenance services, such as grounds-keeping and outside structure repair is offered. Not unlike condominiums, these are owned real property – offering residents equity in their homes. Independent living homes sometimes can be:
  - cottages
  - townhouses
  - duplexes
  - cluster homes
  - single-family homes

- **Assisted Living**: often as a person ages, they need more intensive care, but not necessarily medical chronic care. Services required might include general housekeeping, some meal preparation, laundry services and transit opportunities. Some medical needs may be necessary, and nurses are on staff and available. Assisted living opportunities are generally a single structure which includes small studio apartments, or one bedroom apartments with smaller kitchens. Assisted Living structures may have group dining areas and common areas for social and recreational activities.

- **Nursing Care**: when a person requires skilled nursing care, this single structure includes “ward type” rooms with multiple beds, or single patient rooms with a bath. Twenty-four hour nursing staff and visiting medical doctors are available. Sometimes an individual may only required skilled nursing after a traumatic event, or medical procedure, and continuing care communities offer the opportunity to return to their residence when able.
• Hospital Care: Generally continuing care communities are located in close proximity to hospitals and clinics. They generally never include these facilities, but transportation is always provided to residents.

One can see how the continuing care community is a desirable alternative for aging populations. With its life-cycle care options and community age restrictions (generally 55 and up), they provide a safe and popular alternative for many who can afford them. However, these stand alone, generally remote (where abundant land exists for single site development), and demographically stratified communities do absolutely nothing to improve age in place opportunities.

Naturally Occurring Retirement Communities (NORC):

Much of the amenities of these all inclusive communities can be applied to, and inserted into existing communities. The common term for suburbs, or existing communities, where people desire to age in place, is NORC, or “Naturally Occurring Retirement Communities.” Using existing single family housing stock as the independent living component, the addition of universally accessible townhomes and apartments, or the adaptability of existing ones, can serve the same purpose. The addition of a community services program can provide the same grounds-keeping and maintenance as the CCRC’s. Adapting these existing residential structures and providing new alternatives when necessary is an architectural challenge. In addition, architectural programming can be helpful in providing the needed homeowner’s maintenance services.

Most existing communities provide adequate assisted living options, as well as nursing care facilities. These are almost always large single structures housing many individuals with varying degrees of need. Sometimes a person may not need or desire this form of “centralized” care but have no other options if they wish to stay within their community. However, architects may be able to offer architectural solutions that provide assisted living services allowing residents to stay in their homes longer. This is currently not an option. But, an architect can insert additional housing programs and incorporate already existing community amenities to provide the same types of services (i.e. lawn service, meals to go, visiting nurses), with smart programmatic planning and stronger connections.
AARP concluded that safety and security is a major issue for residents seeking to age in place. Sometimes just providing a “sense” of security is all that is needed in communities which actually have minimal crime, such as inner ring suburban enclaves. Bringing community closer together is an opportunity that can be accomplished with architecture. A by-product of closer community ties and a stronger relationship with existing policing (i.e. neighborhood watch programs added foot patrols), is known to reduce crime and make people feel safer. The National Crime Prevention Council states: “Neighborhood Watch counts on citizens to organize themselves and work with law enforcement to keep a trained eye and ear on their communities, while demonstrating their presence at all times of day and night. (The program took off quickly: in just ten years, NSA data showed that 12 percent of the population was involved in a Neighborhood Watch.) Neighborhood Watch works because it reduces opportunities for crime to occur; it doesn’t rely on altering or changing the criminal’s behavior or motivation.” So providing spaces and places for organizing these activities also is an architectural manifesto. Can prominently placed policing structures help form a safer, more secure environment for citizens wishing to age in place? Can we adapt existing structures, or add new ones which can bring a community together to promote a greater sense of safety and security?
A popular form of community interaction, as it applies to architecture, is the Intergenerational Center. These centers encourage intergenerational activities all in one venue. The Phoenix metro area already has three centers, and another planned. Michigan has none, but some communities are applying the concept within existing community centers. So what are the typical services provided in these facilities? The following are examples:

### Older Adult Components:
- Adult Day Services Center
- Assisted Living/Residential Care
- Community Recreation Programs
- Senior transit and travel opportunities

### Child/Youth Components:
- Childcare Center
- Before/after school programs
- Head start program
- Youth recreation

Difficult as it is to find large available undeveloped lots within older ring suburbs, architects and planners can still provide many of the services of these centers offer by utilizing existing smaller venues with strong connections. That is, we can deconstruct the services provided within these large building envelopes, and insert them in smaller, existing structures. By strengthening the connection of these structures, we can create a “community” instead of a Community Center.”
Finally, we can look at the last component of successful aging in place strategies, which are mobility options. Within Detroit, transportation is fundamentally lacking as a cohesive mass transit option. The Suburban bus system is separate from the City of Detroit bus system, causing complicated cross connections and endless delays. Also, the bus system is notoriously unreliable: “My feet are a lot more reliable than the transit system,” observed Ms. Haynes. “If I leave my home at 8:00 a.m., I’ll get to work by 8:50 a.m. if I’m walking. But if I take the bus, I might get to work at 9:45 a.m. And that’s taking two buses. I just wish they would find a way to make it work.” Most importantly, the mass transit system is considered unsafe. While communities offer door to door transportation opportunities, with smaller-universally accessible vans, destinations outside a specific community require a functioning mass transit option. Can we as architects address this deficiency? Perhaps a system of smaller transit vehicles, with universal access, simple color coded routes, and well designed transit shelters could enable better age in place transit opportunities.

In addition to mass transit opportunities, pedestrian mobility is just as critical. Are we providing enough pedestrian friendly options for age in place residents? Can we promote a more walkable community that residents can enjoy and perhaps even encourage healthy walking alternatives? Perhaps resting stations at intermediate intersections, better defined walking paths and redesigned intersections can promote pedestrian mobility and better aging in place communities.

Lastly, promoting safer driving for persons who wish to continue driving their personal vehicles is the sixth recommendation for aging in place communities. The recommendations for this component does not readily adapt to architectural intervention, so it is considered as an adjunct proposal under the “mobility options” umbrella. With all these important strategies for successful aging in place communities, we can find plenty of opportunities for architectural and community planning interventions, providing these services will promote a great good for those who wish to age in place, but don’t have these options available in their chosen community.

--

American Association of Retired Persons, Beyond 50.05: A Report to the Nation on Livable Communities, NW Washington, DC AARP Public Policy Institute, 2005
Pg. 31


American Association of Retired Persons, Beyond 50.05: A Report to the Nation on Livable Communities, NW Washington, DC AARP Public Policy Institute, 2005
Pg. 66
Precedent Analysis

The Traditions:
- Ann Arbor
  Michigan

Mountain Meadows:
- Ashland Oregon

Sunrise Communities:
- Grosse Pointe
  Michigan
Precedent Analysis

The Traditions is a Continuing Care Retirement Community, a new development (not yet built) which offers individuals, aged 50 and up, the opportunity to purchase independent living units (generally homes, or condos), and then have the availability to move into assisted living buildings, and ultimately longer-term care facilities, on site, when needed. This is a popular development option for individuals with the financial means to ensure long-term care. What is unique about The Traditions, is its proximity to Ann Arbor’s University of Michigan Campus. In fact, it is designed to entice those individuals with academic leanings by offering University amenities and culture.

This community is well thought out, from the site design, to the LEED certification. The most modern of urban planning principles and continuing care options are utilized to provide residents the finest “urban” community. This is a perfect case study of a community in which great care, smart design, and lifecycle sensitivity all are employed to satisfy lifecycle needs. However, this is also an example of a new community whose forward thinking design solutions are employed within a remote location, inward looking, and for an exclusive, well-to-do population. There is no inter-generational interaction, or diversity of any sort.

Surrounded by desirable features, The Traditions is an exclusive over 55 “club.” There is no integration with the community, in fact this is a suburban enclave of independent developments. Other than leisure activities, there is no productive opportunities, or chances to associate with persons unlike your own demographic.

“The Traditions’ site falls completely within a five-minute walking radius, a basic component of organizing a neighborhood. Access will be from Dixboro Road and Geddes Road. There are natural and historic features which will remain and will give a special character to the site plan.

- the old stone house
- steep slopes
- landmark trees
- wetlands

Other notable features for this site include the views towards the river from the site and numerous trails adjacent to the site. The Traditions will connect to the trail systems along the Huron River and the Parker Mill County Park.”
The Traditions

The Traditions has many elements of “age in Place” design and detail. However, it lacks the fundamental point, which is that most people prefer to age in place. We need to incorporate many of these progressive strategies into the existing communities people wish to age in.

“Based on enduring site planning and architecture precedents, The Traditions offers a unique environment for its residents. A series of spaces, from the entrances to the interior courts, are designed together and act in concert to foster both community interaction and recreation. The steep slopes and landmark trees are preserved through proper building siting. A large portion of the site will remain as open space and offers a natural setting for walking. Created wetlands and bio-retention elements are used to naturally address stormwater management requirements.”

The Meadow: An open lawn with shade trees along Dixboro Road serves as the front door to The Traditions.

The Commons: This large picturesque green at the heart of the site includes a pond and pedestrian bridge.

The Hillside: The natural slope with large existing trees is both a visual and recreational amenity.

“Based on enduring site planning and architecture precedents, The Traditions offers a unique environment for its residents. A series of spaces, from the entrances to the interior courts, are designed together and act in concert to foster both community interaction and recreation. The steep slopes and landmark trees are preserved through proper building siting. A large portion of the site will remain as open space and offers a natural setting for walking. Created wetlands and bio-retention elements are used to naturally address stormwater management requirements.”
Mountain Meadows

Mountain Meadows is chosen as a precedent because it is one of the top rated retirement communities in the nation. It is also in a temperate climate, not unlike that of Michigan. It is located adjacent to Ashland Oregon, a popular cultural destination. All the bells and whistles of a walkable community are superimposed into a isolated, demographically static environment. Even though an AARP survey concludes: “Social and intellectual stimulation associated with all forms of community engagement may help counteract one of the most pressing problems facing our aging population - cognitive decline.”

Its close proximity to Ashland is compromised by its isolation, accessible by a single road traversed by only automobiles. No trails or pedestrian connections to Ashland are available, however it is a five mile car ride. So even though Ashland is a strong attraction for residents of Mountain Meadows, it remains equally isolated unless one drives, or is driven there. It is worth noting that Mountain Meadows offers shuttle service as well as planned excursions to Ashland, as well as other planned excursions.

Mountain Meadows is a 55+ retirement community. Dedicated to the pursuit of active retirement living, Mountain Meadows has received awards for being among the best retirement communities in America. Ashland is a small town of 21,000 residents and is home to the Oregon Shakespeare Festival, Southern Oregon University, and near Jacksonville, home of the Britt Music Festival. Ashland has been cited as one of the top five retirement towns in the nation, and is nestled in Oregon’s beautiful Rogue Valley.

Mountain Meadows offers a community setting as well as activities which promote personal interaction among residents. Activities are an important part of living within retirement communities, and Mountain Meadows offers facilities that support them. These include a gym, a workshop, cooking facilities, space for social functions and classrooms. A community garden offers the opportunity to interact while providing additional food for residents. It is a very popular amenity.
Among the most notable characteristics of Mountain Meadows is its Seaside-Florida-esque, New Urbanist planning and architecture. A wide array of architectural models are available, as long as it is turn-of-the-last-century vernacular. In fact, early American is a popular theme for just about all new American retirement communities, facilities, and projects.

Even though many new retirement communities utilize an early American vernacular, many a small-town, suburban community, or city, were left behind for the many who retire there. At Mountain Meadows, you will not find children, or family members enjoying this community with them.
Although Sunrise is not an example of the type of integration relative to “aging in place” communities, it does offer a good example of what community integrated long-term care facilities can look like. Sunrise has seventeen facilities in Michigan. Each facility does its best to be integrated into existing communities. The “front porch next door” look of the facilities offers seamless integration, even with exceptional challenges. With two facilities in Grosse Pointe Woods, Sunrise offers residents needed long term care options within their own community.

Sunrise own literature promotes these values:

Our Mission:
To champion quality of life for all seniors — it’s been our mission since 1981 and it’s what has made Sunrise Senior Living one of the premier providers of senior living services. Sunrise currently operates more than 440 senior living communities throughout the United States, Canada, the United Kingdom and Germany with a combined resident capacity of more than 52,000.

Our Principles of Service:
Preserving Dignity We value the life experiences of every senior and give each the respect they deserve. Nurturing the Spirit. We care for the whole person—mind, body and spirit.

Celebrating Individuality:
We recognize that every one of our residents is a unique senior.

Enabling Freedom of Choice.
We empower seniors to live as they wish by offering choices.

Encouraging Independence.
We encourage resident’s right to self-reliance in whatever ways possible.

Involving Family and Friends:
Friends and family are always welcome, and their involvement is wholeheartedly encouraged.

Neighborhood Front Porch, notice lack of residents? This is an Alzheimer’s facility. The porch is more a “feel good” amenity for the patient’s advocate family.
Sunrise offers companion suites, so loved ones can stay with residents.

Inter-generational Activities (partnerships with local school children, visits from girl/boy scout troops) - For many of our residents, there is nothing more pleasurable than hearing the laughter of a child as they discover the treasures from the toy box found in every Sunrise home.

Shuttles are available for residents outings, although in this facility they are for scheduled medical appointments.
## Conclusions

### Retirement Communities:

**Negative Conclusions:**
- Remote, inward looking community
- Gentrified demographic, doesn’t allow for intergenerational interaction
- Exasperates sprawl and urban/suburban decay
- Is only for those with the resources to purchase real estate and desire to relocate

**Positive Conclusions:**
- Excellent community planning
- Abundant interactive community programs
- Continuing care housing with connected lifestyle facility options
- Traditional New-Urbanist vernacular

### Sunrise Community Based senior care:

**Is only for those with the resources to qualify for premium level of care, very expensive**

**Limited options to return home if conditions improve**

> Excellent patient care
> Imitates residential environment
> Caters to family members
> Traditional New-Urbanist vernacular
Precedent Analysis

Since aging is a continuum, and lifecycle needs constantly changing, the solution to aging in place requirements needs to be:

> Make Use of What is Existing, Under Utilized or Vacant

> Easily Adaptable to Specific Needs

> Economically Feasible, How Can the Program Be Financed?

> Universally Accessible, But Also Desirable to an Aged Population

> Flexible and Able to Translate into a Variety of Community Settings and Applications.

> Flexible enough to accommodate aging as a timeline, not a fixed point of need.
AARP: Beyond 50.05

Report to the Nation on Livable Communities: Creating environments for successful Aging

83% of older persons surveyed by the American Association of Retired Persons (AARP) for a study published in 1999 state that they want to remain at home as they age. In MI this could mean 1,047,422 people age 65 or older (12.5% of the population), will want to age in place. This 12.5%, in addition to children (24.5% of the population), the disabled (5.9%), and those without cars, need walkable, livable communities. Will they be able to remain at home?

“It has often been said, “Home is where the heart is.” People form long-lasting attachments to their homes, as well as to their communities, and these attachments become the focus of sentiments and memories. Yet, these attachments are more than just emotional; they are the result of knowledge and experience with the services and features that the home and community offer. Attachments also arise from the network of neighbors, friends, and family who, provide an important social context for persons as they age, and who may provide important informal support with a number of activities that help older persons remain active and independent in their community.” AARP, Beyond 50.05

Is it any wonder that people desire to age in place? After all, so many factors contribute to the place we call “home”. Home can be the place we raised our families, lost our spouse, or built a life within. As a community, “home” means different things. A community nonetheless is still an extension of home. Where we shop, do our business, know our neighbors and choose to worship. In fact, strong ties to community often are sited as strong factors for not wishing to age anywhere else but where we reside currently.

AARP’s exhaustive study and compilation of data from many sources concludes unequivocally that people wish to age in place, within their chosen community, and in many cases within their current home.

“This generation of aged is healthier, more affluent, and will remain productive longer. They will demand more than disneyesque-inward-looking developments, far removed from the existing communities they wish to live.”
Communities in which large populations of aging persons are referred to as naturally occurring retirement communities. These communities don’t aspire for this title, nor in many instances are they aware of what this major demographic shift means to them. They certainly see events occurring on a piecemeal basis, such as less school age children, or an increased demand for senior services. However, no cohesive plan of action is implied, or executed on behalf of this population. Perhaps as this demographic continues to grow, communities will look upon reports such as AARP’s Beyond 50.05, as a valuable tool in understanding the needs and wants of its community citizens. In the South-central Michigan, these NORC’s reside most noticeably within the inner ring suburbs of Detroit and other major metropolitan areas. These “suburbs” which grew out of the baby-boom years after World War II, have surprisingly similar characteristics. Most notably, most are suffering economic malaise and population loss. Perhaps if these same communities offered a cohesive plan for providing services and needs of their existing population of aging citizens, less people would choose to relocate into communities which do offer services they desire.

“The impact of aging populations on our urban environments will radically change our existing communities. The challenges and opportunities to adapt and respond will require different approaches than what is currently provided.”
Under One Roof: A Guide to Starting and Strengthening Intergenerational Shared Site Programs is the first comprehensive guide on how to design and program shared generational facilities. Many such sites have been developed nationally, most being newly built “Intergenerational Centers,” which combine services generally considered within community centers, and those generally considered within senior centers. In fact, Intergenerational centers are just that, a combining of these two separated programs into one, for the benefit of all in the community.

If one is to consider that community interaction across all ages is beneficial, as AARP suggests, then it makes sense not to isolate generations apart, but ring them together to compliment one another. Intergenerational shared site programs are defined as those which characteristically combine youth programs with those of older adults. Take for example day care services. We have already seen that interaction across demographic ages contribute to the cognitive benefit of older adults, and shared generational values help foster responsible youth, so it makes sense to combine the two for day care. Responsible staff can oversee the interaction and activities of both the children and older adults who interact in positive ways. And positive results do occur. In the words of united Generations: “By constructing innovative facilities, intergenerational shared site programs allow for the expanded use of resources by utilizing and sharing those already available.”

Intergenerational Shared Site Programs vary in type and scale but usually are composed of two programs, youth and older adult. In addition to the sometimes separate components, additional “shared” spaces are available for spontaneous interaction, a popular tenet of intergenerational shared spaces.

Older Adult Components:
- Adult Day Care Services
- Assisted Living Residential Care
- Continuing Care Retirement Community
- Nursing Home
- Senior Center
- Senior Housing Facility
- Community Recreation Program
- Geriatric Care Unit
- Alzheimer’s Care Unit

Child/Youth Components:
- Children’s Center
- Before/After School Programs
- Head Start Program
- Early Childhood Program
- School (K-12, College/University, Vocational/Technical)
- Youth Recreation Program
- Camp
- Pediatric Care Unit

---

North Tempe Multi-Generational Center

The North Tempe Multi-Generational Center is a recently constructed (October, 2007) Intergenerational shared site program. Located on the site of Laird Elementary School, this center provides intergenerational services within a newly constructed, environmentally sensitive building. One of three intergenerational shared site programs located within the greater Phoenix area, The North Tempe building continues that community’s commitment to the ideals of “Under One Roof”.

Aging in Place Communities
The City of Grosse Pointe Woods was originally incorporated in 1927 and was known as the Village of Lochmoor. In 1939, the Village of Lochmoor became the Village of Grosse Pointe Woods and on December 11, 1950, was incorporated as the City of Grosse Pointe Woods, a Home Rule City. The city covers an area of 3.28 square miles.

Grosse Pointe Woods is traditionally viewed as one of Metro Detroit’s more affluent communities. However, it’s currently aging demographic and modest homes have seen a decline in value, and commercial vacancies are common. The community has seen successive population declines since the 2000 census. Mack Avenue is its major commercial district, with Vernier (Eight Mile) and Moross (Seven Mile) forming its major east/west streets.

Grosse Pointe Woods’ commercial district along Mack Avenue would be the envy of most communities. Tree lined boulevards, wide side walks and decorative lighting give a quaint New England feel. But vacancy is high and the traditional floor plates of the retail buildings do not fit modern shopping needs. Beauty salons and financial are the majority of commercial space.

The City of Grosse Pointe Woods provides additional activities for seniors. The senior program is continuously growing and expanding to make a distinctive impact in the lives of seniors in our community.

Senior Citizens’ Commission. This is a volunteer commission formed by the City Council to develop projects designed to better serve the needs of seniors in the city. The commission has been involved in a variety of projects, such as the annual Senior Day at Lake Front Park, held in the fall, and Seminar for Seniors in the spring.

The Community Center offers programs such as:
Afternoon Cards, Mondays: Noon to 4 p.m.
Senior Movies, Day Trips, Dances, & Walking Groups

Classes for seniors at the community center include,
Fitness, Vitality, and Health, Senior Pilates

A subsidized taxi service is available for seniors and disabled persons of any age. The city will pay the first $3 of any taxi fare with the Shamrock Cab Co. To participate in the program, you must be at least 60 years of age, live in Grosse Pointe Woods, and identify yourself with a park pass, driver’s license, or Secretary of State ID card. Disabled persons must have a doctor’s letter attesting to their disability.

1 City of Grosse Pointe Woods services & information is obtained from the City Of Grosse Pointe Woods web site: HTTP://WWW.gpwmi.us
Additional information obtained from the United States Census Bureau at HTTP://WWW.census.gov
The community center also hosts the Grosse Pointe Woods Senior club that meet the first and third Thursday of each month from 12:30 until 4:30 p.m. at the Community Center, unless otherwise posted. All GPW residents 60+ years of age are invited for refreshments, a short business meeting, blood pressure screenings, cards, bingo, an occasional lunch and a chance to make new friends. Many seniors in the Grosse Pointe Woods community also enjoy programs at Lake Front Park including, Water Aerobics, Early Lap Swim, Summer Concerts at Lake Front Park, Walk Michigan program that gives residents the chance to win a trip to Mackinac Island for walking one-mile around the park.

Free transportation from 8:30 - 3:30 during the summer is provided to Lake Front Park. Please see the bus schedule in the May Update for further information. Please contact the Lake Front Park office at (313) 343-2470 with any questions regarding these programs.

Pointe Area Assisted Transportation Service:

Pointe Area Assisted Transportation Service (PAATS) serves Harper Woods and Grosse Pointe seniors (60+), and handicapped residents. Those who need transportation should contact PAATS 36 hours in advance at 313-343-2580, 7:30 a.m. until 4:30 p.m., Monday through Friday. Cost per one-way trip is: $1 within Harper Woods and the five Grosse Pointes $1.50 outside the limits of the six cities, yet within the PAATS boundaries $2.50 to any site-specific location.

Compute-A-Care is an automatic telephone calling service for residents who are reassured of personal safety by daily phone calls by the Public Safety Department. A computer automatically calls the resident daily at a pre-approved time. If no one answers the phone, a Public Safety officer responds to the home to assure the resident is safe. The service is upon request and without charge, and can be obtained by calling the Department at 343-2400.

Summary:

Grosse Pointe Woods offers a multitude of Senior Programs for its citizens. The demographic chart shows a clearly "top heavy" aging population. The neighborhoods are stable and it can already be considered a NORC. Grosse Pointe Woods was chosen as a site study because of these characteristics as well as its unique commercial district along Mack Avenue which is made up of relatively small, obsolete, retail buildings which can be considered at 20% vacant. These small square footage buildings, mostly single story, and roughly 1600 square feet, offers opportunity for reuse.
Hazel Park, Michigan

The City of Hazel Park, Michigan (2007 population-18,117) is located at the southeast corner of Oakland County, adjacent to the western boundary of Macomb County (City of Warren, MI) and northern boundary of the City of Detroit. Occupying 2.8 square miles, Hazel Park is situated at the geographic center of the Tri-County Metropolitan Area. With the Interstate 75 and Interstate 696 intersection at the City’s northwest corner, Hazel Park’s location provides easy access to any destination in the Detroit area.

Hazel Park is primarily a modest single-family residential community, having the third highest population density in the State of Michigan. The City has four major corridors, with two serving commercial concerns, and two corridors serving industrial purposes. Hazel Park is home to the Hazel Park Raceway, Michigan’s largest horse racing facility. In the past five years, Hazel Park has enjoyed a renaissance, with every major road being resurfaced, the construction of the Viking Ice Arena, and a renewed effort to attract commercial and industrial re-development projects to the City. These improvements have resulted in rising property values and an increased demand for quality housing in Hazel Park.

Hazel Park was incorporated in as a Home Rule City in 1942, and is structured under the Council-Manager form of government. The Hazel Park City Council, which is the legislative and governing body, consists of the Mayor and four City Council members who are elected at-large every two years. The City Council appoints the City Manager who is the chief administrative officer, exercising oversight of all municipal departments.

Hazel Park is a community which has suffered population loss due to exurban flight. Developed during the suburban development of the 1950’s along the I-75 corridor, Hazel Park’s main corridors are mostly small industrial buildings which used to make up Detroit’s burgeoning tool and die industry. This industry is mostly gone, and the viability of the small buildings is questionable. During the past decades, crime, or the perception of crime, caused most owners to “block-in” the windows, giving the main street the effect of desertion, even if the buildings are occupied. The footprint and floor plates of these buildings are obsolete for their original intention.

The city implemented a street-scape improvement program in 2003, which added decorative lighting and a façade improvement program. The effect of which is somewhat disturbing, given the deserted feel of the buildings.

---

1 City of Hazel Park services & information is obtained from the City Of Hazel Park web site: HTTP://WWW.hazelpark.org
Additional information obtained from the United States Census Bureau at HTTP://WWW.census.gov
Hazel Park offers two community senior housing options:
Hazelcrest Place
(Low income and senior citizen housing)
(248) 542-5386
American House
Retirement Community
777 E. Woodward Heights
(248) 545-0707

Birthday & Pizza nights
Trips & Activities

Hazel Park offers Seniors transportation to retail stores on a monthly schedule. A typical schedule is illustrated below:

Wal-mart March 4, Kmart March 9, Universal March 11,
Target March 17, Oakland Mall March 22, Kroger Trips: March 8 & 30
Recreational trips to casino's and baseball games
Health
Various health screenings and programs are available at the Senior Center

Transportation:
The City of Hazel Park offers transportation services to the residents of Hazel Park. This service is available to senior citizens age 55 and over with no other means of transportation, and then to the handicapped of any age. Due to budget constraints, we must all try to follow the rules regarding transportation radius and fees. We will continue to service our residents with the most effective program possible. The following is a synopsis of the “Van Rules”
• Transportation is limited to a 7 mile radius of the city. We can go north to 14 mile, west to Telegraph, and east to Schoenherr, and south to the Detroit Medical Centers. Please be aware, when traveling east or west, we do not go north of 12 mile.
• Arrangements can be made to use the van by calling 248-546-4093 between the hours of 9 a.m. - 1:30 p.m. only.
• We must have a minimum of 2 days notice. You can reserve up to 3 weeks in advance. Transportation is on a first come first serve basis. Call early to ensure your transportation.
• The cost for transportation is $2.00 round trip.

Summary:
Hazel Park offers a multitude of Senior Programs for it’s citizens. The demographic chart shows a clearly “bottom heavy,” more youthful population. Hazel Park has seen a resurgence in younger families moving in due to its relative inexpensive housing and its proximity to Ferndale, which has seen growth due to a vibrant downtown. Hazel Park’s commercial areas also have seen growth with approximately 10% vacancy. New “in-fill” housing is being developed. However, its obsolete, small industrial buildings offer opportunity for reuse.
Saint Clair Shores, Michigan

Location: 11.6 square miles with 7.0 miles of Lake St. Clair shoreline. Centered off the intersection of I-94 and I-696 in Macomb County.

Economic Base: 90% residential with retail, services, and light industry.

Housing: $148,590 (average) Variety of different styles from single family to lakefront to golf-course view condominiums.

Income: $73,095 (average)

Population: 59,937 (SEMCOG* estimate)

Tax Rate: 18.33 mills. Ranks in the middle of Macomb County.

Amenities: 3 waterfront and 10 neighborhood parks, 2 city marinas, pool, waterslide, dog park, water park, city golf course, 2 ice rinks, Senior Activities Center, organized athletic & special interest programs.

Saint Clair Shores is a lakefront community of 11.6 square miles, with 7.0 miles of Lake St. Clair shoreline. Centered off the intersection of I-94 and I-696 in Macomb County. It has around 60,000 residents. The main commercial streets run north/south and are Harper Ave., Little Mack & Greater Mack. Of the east/west roads, only Nine Mile Road is commercial. The community is primarily residential, but it has a large boating district, aptly named the Nautical Mile, which is a popular entertainment destination. Like many older inner-ring suburbs, Saint Clair Shores has seen a population decline and increased commercial vacancies. The City has embarked on ambitious programs to curb decline.

Saint Clair Shores is seeing increased vacancy along its major commercial streets of Jefferson, Harper Ave. and Greater Mack. In reaction, the City has created the Harper Avenue Business District, The Nautical Mile, and the Nine/Mack Business Association. Like many inner-ring suburbs, the minimum lot sizes and parking do not suit modern shopping trends. Big Box retailers and strip malls are limited to the northern, more undeveloped section of the city. However, the roads and infrastructure are excellent, and the City is aggressively pursuing blight policy. Like most inner-ring suburbs, Saint Clair Shores has seen dramatic housing vacancies, foreclosures, and dropping home values.

Demographics

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>60,638</td>
<td>63,096</td>
<td>68,107</td>
</tr>
</tbody>
</table>

Population breakdown by age

This chart indicates the age groups broken down as a percentage of total population in each location.
Senior Citizen Organizations

AMERICAN ASSOCIATION OF RETIRED PERSONS (AARP)
Charlotte Zuraw, President, (586) 776-6317 -- Evelyn Goll, Vice President. Meetings are held on the third Thursday of each month at the Blossom Heath Inn located at 24800 Jefferson (just south of Ten Mile Road) at 1:00 PM.

SENIOR CENTER OF THE SHORES (SCOTS)
SCOTS is a non-profit organizational board that concerns itself with providing volunteer leadership for the activities and programs of the Senior Activities Center. Board membership is limited to residents by application. The SCOTS Board meets at the Senior Activities Center on the second Friday of the month at 9:00 AM.

OLDER PERSONS ADVISORY COMMITTEE (OPAC)
Charlotte Zuraw, Chairperson (586) 776-6317 -- Marcel Werbrouck, Co-Chairperson (586) 774-2969. OPAC is an advisory committee appointed by the Mayor and City Council to discuss and evaluate the needs of older adult residents regarding transportation, recreation, food, housing, and other concerns. The committee meets the third Thursday of the month, 3:00 PM, at the Senior Activities Center. Membership to fill vacancies is by application.

ST. CLAIR SHORES SENIOR CRUISERS
Marie Krenzer, President. The St. Clair Shores Senior Cruisers are a social club for St. Clair Shores residents age 50 or older (only one spouse need be 50). Meetings are held on Wednesdays at the Blossom Heath Inn located at 24800 Jefferson (just south of Ten Mile Road) at 10:30 AM. Enjoy coffee and donuts, play cards, play bingo, go on trips, and much more! Dues are $12.00 per year.

Summary:
Saint Clair Shores offers a multitude of Senior Programs as well as senior housing for its citizens. The demographic chart shows a clearly “top heavy,” more youthful population. Saint Clair Shores is a waterfront community that attracts a lot of water sports people and boaters. Its commercial districts are suffering with approximately 25% vacancy. The retail buildings are obsolete for today’s retailing. Medical offices and hair salons, as well as pizza establishments are prevalent. Abundant opportunity for reuse is apparent.
Sketch Problem

Sketch Model:

Examination of “major” Thesis Idea by utilizing a Wine Cardboard box. The resolution is meant to interpret a uniform, equally accessable space with “discarded” portions of cutouts re-inserted into the space. The cube again re-affirms my modularity and inclusion.
Schematic Design

Program Conceptual Precedents:

Cubes:

Cubes are the perfect geometric shape which best defines my idea efficient enclosed space. It fills all voids, is stackable and can be manipulated into infinite configurations with no waisted space in between. This early found photo of black and clear transparent cubes can be directly linked to my schematic designs of ECHO.

IKEA:

IKEA is a Swedish furniture manufacturer which specializes in “flat-pack” furniture and home goods. Its smart designs and affordable make it a perfect example of modularity, popularity, and high design. IKEA’s smart, efficient and affordable furnishing solutions is a perfect merchandising example for ECHO.

PODS:

PODS, or Portable On Demand Storage, has become a popular way for Americans to store and move belongings. A POD is transported to where it is needed, dropped off, filled, and then removed to a storage warehouse. It is retrieved when needed, and transported to wherever it is needed. An unintended use of POD storage has developed where the POD is permanently stored on lots. The POD system is the perfect business model for ECHO.
Baldakin Capsule Hotel

Baldakin Capsule Hotel is a hotel which has gained in popularity in Japan. Made up of fiberglass “capsules, each “pod” Has accommodations for one or two overnight guests. Western versions have been proposed, such as Stay Orange Hotel in China Town, United States, but none are truly capsule designs. Plumbing, electrical and guest accommodation are located within each capsule (in design shown, some contain only sleeping).
Program Precedents

Stacked upon one another, capsules make up multi-story buildings.
Lot-EK Mobile Dwelling Unit

“LOT-EK is the New York based studio of Ada Tolla and Giuseppe Lignano. LOT-EK’s Mobile Dwelling Unit (MDU) began as an experimental design project in 1999. A constructed version features in a current traveling exhibition LOT-EK: Mobile Dwelling Unit which was organized by the University Art Museum at the University of California, Santa Barbara (UCSB) in conjunction with the Walker Art Center in Minneapolis.

MDU is a 40ft shipping container that has been modified into a reallocated dwelling. The container accommodates several modules for various functions such as cooking, washing and sleeping. These modules sit within the container so that during transportation the MDU largely resembles any other container sitting on a ship or a dock. Once the MDU has been delivered to a site, the modules slide out of the container like extrusions and create an inner hallway in the newly created void inside the container.”

Program Precedents

Program Conceptual Precedents:
“The design and construction capabilities of V2world combined with the ability of V2 to be pre-assembled, adapted configured, stacked and elevated make it an ideal product for urban in-fill projects. The goal of V2 “plus is to develop projects that foster the community within, as well as enhancing the greater good. It is to design spaces that encourage socialization and create places that attract others. In essence, it is to create a world where the lifestyle you choose is reflected in the spaces you reside and the places you live...”

V2 World is now defunct and the Internet site domain is for sale. This is an unfortunate circumstance as the developer of V2 has a really good concept. V2 is a modular concept based upon four foot increments. The modules are customized and stack-able welded steel framing.

Copyrighted photos and design
Aging in Place Communities

**Program Conceptual Precedents:**

A V2 prototype is located in Phoenix Arizona. The photos at right show the grand opening of the prototype model.

The V2 Purpose is stated: “...dedicated to building environmentally respectful, residential and commercial spaces that are assembled through an efficient and repetitive process.”

The design system is prefabricated, shipped to site and designed to be site specific. Utilizing steel framing which is load bearing allows the V2 walls to be open for many adaptations and configurations. The V2 system is designed to be attached to either a concrete slab, or concrete piers.

---

1 Internet: V2 World, http://www.v2world.net, 2006 Copyrighted photos and design
ECHO, Elderly Community Housing Opportunity

ECHO is a modular response to age in place communities. ECHO can be adapted to many uses. A basic module is comprised of 4'-0" x 4'-0" x 8'-0" (nominal). They may be housing units, they may be employment opportunity units, or they may be transportation units. Whatever their function, they are designed to be adaptive and temporary.

Adaptive ECHO means they can be adapted to fit within the many different conditions of an existing environment.

Temporary ECHO means they must be transportable and have limited permanent impact upon the environments in which they occupy. Remember the time-line of aging is a continuum, so ECHO may come, it may go, and it even may return, but as an ECHO, it should only leave only a subtle trace, or none at all...

“ech’o: a sympathetic or identical response, as to sentiments expressed.”
Programming

Modification of Existing Single Family Homes:

Leased or purchased, universally designed resident-Echo’s are a modular system of adaptability used in various configurations to provide otherwise healthy and independent persons who wish to age in place options for doing so.

These Echo’s can be transported and assembled on site to meet both temporary and more permanent needs such as a bathroom attached to an existing structure, (with additional Echo vestibule unit) or assembled into more complex arrangements to provide auxiliary housing on a single residential lot.

Universally Accessible Bathrooms:

Designed as a standalone bathroom, attached to an existing structure, or as part of a larger group of Echo’s. These echo’s include incinerating toilets and an on-board grey water tank. All that is required is a garden hose and standard 120v electrical connection.

Bathroom Echo’s are designed for year-round use. They contain recirculating radiant floor heating, run by propane. Propane supply services are provided weekly for a nominal fee.

Grey water pumping and recycling occur weekly for a nominal fee and grey water is recycled.

Each Echo bathroom contains:

+ Standing and sitting soaking tub/shower unit easily accessible.
+ Incinerating toilet with easily accessible clean out tray serviced weekly.
+ A standard wheelchair accessible sink with vanity and overhead lighting.
+ 120 volt electrical LED lighting system
+ Service contract and warranty available

Single bathroom Echo unit: smaller
8’-0” x 8’-0” = 64 sq. ft.

Single bathroom Echo unit: larger
8’-0” x 12’-0” = 96 sq. ft.
Modification of Existing Single Family Homes:

Universally accessible Kitchens:

Designed as a standalone kitchen, attached to an existing structure, or as part of a larger group of Echo’s. These echo’s include all the amenities of a traditional kitchen. All that is required is a garden hose and standard 120v electrical connection.

Kitchen Echo’s are designed for year-round use. They contain recirculating radiant floor heating, run by propane. Propane supply services are provided weekly for a nominal fee.

Grey water pumping occurs weekly for a nominal fee and grey water is recycled.

Kitchen Echo’s include varying options dependent on needs. These may include:

+ Propane gas cook top with venting hood
+ Propane run refrigerator and freezer with electrical defrosting optional
+ Propane oven
+ Drawer style mini dishwasher
+ Accessible cabinetry and counter tops
+ LED lighting
+ Dish sink with grey water storage
+ easy to navigate linear design
+ wide array of finishes and colors
+ service contract and warranty available

Single Basic Kitchen Echo unit: smallest size
8’-0” x 12’-0” = 96 sq. ft.

Single Basic Kitchen Echo unit: large size
8’-0” x 16’-0” = 128 sq. ft.
Programming

Modification of Existing Single Family Homes:

Universally accessible bedroom:

**Design**

- Designed as a standalone bedroom, attached to an existing structure, or as part of a larger group of Echo’s. These Echo’s include built-in platform bed at a higher elevation than traditional bed, for ease of access. Bedroom Echo’s may contain a double or two single beds, or a single bed with open space for a medical bed. All that is required is a standard 120v electrical connection.

- Bedroom Echo’s are designed for year-round use. They contain recirculating radiant floor heating, run by propane. Propane supply services are provided weekly for a nominal fee.

- Under bed storage

- Bedside cabinet and lighting is included

- All lighting is LED

- Abundant natural daylighting is available.

- A wide variety of finishes both interior and exterior to enhance home like quality and blend with existing structures.

**Larger bedroom Echo Unit with attached bath:**

- **8’-0” x 12’-0” = 144 sq. ft.**

- **8’-0” x 8’-0” = 64 sq. ft.**

- **Total = 208 sq. ft.**
## The ECHO

### Modification of Existing Single Family Homes:

- **Living Space Echo Unit:**
  - $4'0" \times 4'0" = 16$ sq. ft.

- **Single Living Space Echo Unit Types:**
  - Door Unit, Single Access Entry Door
  - Window Unit, one or two $4'0", 4'0"$ windows.

### Mechanical Systems Echo Unit:

- Contains Mechanical Systems such as:
  - Propane Tanks
  - Plumbing and Electrical Hook-up Station
  - Radiant and Hot Water Tank

### Lift Echo Unit:

- Contains hydraulic floor lift of up to 14"

### Ramp and Vestibule Echo Unit:

- Adjustable up to 14", $4'0" \times 4'0"$ ramp system platforms.
  - May contain:
    - Insulated dumb exterior wall panels
    - Railings
    - Ramp or horizontal floors with or without radiant heating.

### Vestibule Air-Lock Echo Unit:

- Air-lock to existing structures, contains positive air lock system and polypropylene mating bladder.
Modification of Existing Single Family Homes:

Ramp and Bath Echo System:

Single Bath Echo Unit:
8'-0" x 8'-0" = 64 sq. ft.

Vestibule air Lock:
4'-0" x 124'-0" = 16 sq. ft.

Vestibule Echo Units:
(2) @ 4'-0" x 4'-0" = 32 sq. ft.

Insulated Lift Echo Unit:
4'-0" x 4'-0" = 16 sq. ft.

Total Sq. Ft. of Living Echo Unit as shown=
128 sq. ft.

Ramp Echo Unit W/Rails:
5) @ 4'-0" x 4'-0" = 80 sq. ft.
Auxiliary Housing Echo Units:

Garage Placed Living Echo Unit:

Single Bedroom Echo Unit:

12'-0" x 12'-0" = 144 sq. ft.

Single Bath Echo Unit:

8'-0" x 8'-0" = 64 sq. ft.

Kitchen Echo Unit:

8'-0" x 12'-0" = 96 sq. ft.

Living Space Echo Unit:

(10) Living Echo Units @ 4'-0" x 4'-0" = 16 sq. ft. x (10) = 160 sq. ft.

Mechanical Echo Unit

4'-0" x 4'-0" = 16 sq.ft.

Total Sq. Ft. of Living Echo Unit as shown =

480 sq. ft.

General Notes:

All echo units have radiant floor heating

Echo Units may contain:

**Dumb Wall panel**: 4" thk. insulated exterior wall panel with no electrical or plumbing, vents or fixtures.

**Smart Wall panel**: 4" thk. insulated exterior wall panel with electrical and/or plumbing, vents, or fixtures.

**Interior Wall Panel**: non-insulated 2" thk. wall panel with or without electrical baseboard electrical raceway system.

Most Echo Units can expand either horizontally or vertically as shown in designs.
Programming

Auxiliary Housing Echo Units:

Garage Placed Living Echo Unit:

Single Bedroom Echo Unit:

12' - 0" x 12' - 0" = 144 sq. ft.

Single Bath Echo Unit:

8' - 0" x 12' - 0" = 96 sq. ft.

Kitchen Echo Unit:

8' - 0" x 12' - 0" = 96 sq. ft.

Living Space Echo Unit:

(17) Living Echo Units @ 4' - 0" x 4' - 0" = 16 sq. ft. x (17) = 272 sq. ft.

Mechanical Echo Unit
4' - 0" x 4' - 0" = 16 sq. ft.

Total Sq. Ft. of Living Echo Unit as shown =

672 sq. ft.
The ECHO

Community Housing Echo Units:

Vacant Commercial Spaces:

Live/Work Condo #1:

Mechanical Echo Unit
4'-0" x 4'-0" = 16 sq. ft.

Single Bath Echo Unit:
8'-0" x 8'-0" = 64 sq. ft.

Single Bedroom Echo Unit:
(2) @ 12'-0" x 12'-0" = 288 sq. ft.

Kitchen Echo Unit:
8'-0" x 12'-0" = 96 sq. ft.

Living Echo Units:
(12) @ 4'-0" x 6'-0"
(24 sq. ft.) = 288 sq. ft.

Total Sq. Ft. Echo Unit as shown:
752 sq. ft.

Live/Work Condo #2:

Mechanical Echo Unit
4'-0" x 4'-0" = 16 sq. ft.

Single Bath Echo Unit:
8'-0" x 12'-0" = 96 sq. ft.

Single Bedroom Echo Unit:
(2) @ 12'-0" x 12'-0" = 288 sq. ft.

Kitchen Echo Unit:
8'-0" x 12'-0" = 96 sq. ft.

Living Echo Units:
(24) @ 4'-0" x 4'-0"
(16 sq. ft.) = 384 sq. ft.

Total Sq. Ft. Echo Unit as shown:
880 sq. ft.

Refrigeration Echo Units: 8’-0” x 12’-0” = 96 sq. ft.
Programming

Community Opportunity Echo Units:

Vacant Commercial Spaces:

Live/Work Condo #1:

Mechanical Echo Unit
4'-0" x 4'-0" = 16 sq.ft.

Exercise Space

New Garage Doors

Hungry Howie's

Community
Space

Live/Work Condo #1

Echo Community Room:

Mechanical Echo Unit
4'-0" x 4'-0" = 16 sq.ft.

Bath/Shower Echo Unit:
8'-0" x 28'-0" = 224 sq. ft.

Kitchen Echo Unit:
8'-0" x 12'-0" = 96 sq. ft.

Single Bath Echo Unit:
8'-0" x 12'-0" = 96 sq. ft.

Single Bedroom Echo Unit:
(2) @ 12'-0" x 12'-0" = 288 sq. ft.

Kitchen Echo Unit:
8'-0" x 12'-0" = 96 sq. ft.

Living Echo Units:
(24) @ 4'-0" x 4'-0"
(16 sq. ft.) =
384 sq. ft.

Total Sq. Ft. Echo Unit
as shown:
880 sq. f
**The ECHO**

Community Opportunity Echo Units:

Employment Shed Echo:

- Leased or purchased, Employment sheds are designed to accommodate a large variety of uses from selling arts and crafts at street fairs, or food vendors with or without on-board cooking.
- Designed to fit easily into parking space dimensions of 9’-0” - 20’-0”:
  - Transportable to set-up location,
  - Storable in Driveway or Parking area.
- Can include radiant heating, but not insulated for extreme temperatures
- Cooking and/or refrigerated storage capable.
- Propane heat/cooking/refrigeration
- 12 volt electrical with LED lighting
  *dual 12 Volt DC/120 Volt AC Power

<table>
<thead>
<tr>
<th>8’-0”</th>
<th>8’-0”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8’-0” x 8’-0” Street Corner Shed

<table>
<thead>
<tr>
<th>8’-0”</th>
<th>12’-0”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8’-0” x 12’-0” Craft/Show Shed
ECHO Evolution

The basic ECHO unit is 3'-10" X 3'-10" X 7'-0" modulars. Each echo has multiple expansion possibilities, as these studies show.
### Design Development

#### ECHO Evolution

The basic ECHO unit is 4' x 4' x 8' modulars. ECHO's were sized to fit into the most vacant land available in built up suburban communities - mostly vehicular parking spaces and small residential backyards. This includes residential garages and parking spaces. ECHO's can be manipulated into these spaces and leveled or attached to concrete and asphalt surfaces.

Some of the explorations of ECHO placement into residential garages
Echo’s are designed to be maneuvered by standard small bodied fork lifts. They can be stacked within a warehouse up to two high. They can be fitted together for transport, or moved into place independently and attached together on site.

ECHO’s can be fitted together into modules and transported to site on flat bed trucks.
ECHO's can be standalone modulars, or attached to existing dwellings. They can be used in driveways, or fitted into existing structures of any kind.
ECHO Service

Echo's offer a multitude of service options, from propane delivery systems, to gray water recycling platforms. All can be located close to where ECHO's proliferate.

Here is an exploration of a propane service platform. ECHO's often are run mostly through propane. These platforms can be used to fill individual ECHO tanks, or used to provide large quantities of propane for more intense needs.
The kitchen ECHO is intended as a stand-alone kitchen option, or as part of a larger ECHO Modular.

Smart Units contain either a dishwasher, double bowl sink, Propane and or electric refrigerator, cabinets only, a propane gas stove cook top, or propane oven unit.

Dumb units have only lighting and recirculating heating.

Any or all may contain insulated exterior walls or non-insulated interior walls.
The Bathroom ECHO is intended as a stand-alone bathroom option, or as part of a larger ECHO Modular.

Smart Units contain either an incinerating toilet, a standard toilet, a sink and vanity unit, or Standing shower/bath.

Dumb units have only lighting and recirculating heating. Any or all may contain insulated exterior walls or non-insulated interior walls.
The living space ECHO is intended as “dwelling space” a Bedroom ECHO is shown.

Smart Units can contain built in furniture, Dumb units are just open space. All Living Space ECHO’s have radiant floor heating base units and LED lighting ceiling units.

Any or all may contain insulated exterior walls or non-insulated interior walls.
Garden ECHO is meant to provide gardening opportunities which are desirable to aging populations, and are one of the most popular features of Continuing Care Communities. Garden ECHO’s offer the opportunity to grow fruits, vegetables, and flowers for personal use, or for sale to the community.

Garden ECHO’s are simple 4’-0” x 4’-0” x 4’-0” deep gardening “tubs” which have premixed and mulched planting media of only 18” deep. The remainder of the “tub” contains piping for watering with recycled ECHO community gray water. A connection is provided.

A green house “top” can be inserted and easily expanded to allow for extended seasonal use. Garden ECHO’s are not heated for year round use.
More studies of Garden ECHO’s.

Garden ECHO’s in plan, fitted into a typical 9'-0” x 19'-0” parking space.

Community based garden ECHO’s
Employment ECHO’s are designed to provide employment opportunities which are desirable to aging populations. These can be used as craft booths, or vending stations. They can be placed at street corners, or grouped together to create “fairs” within existing parking lots.

Employment ECHO’s are sized to fit into typical parking spaces. They have propane heating, LED lighting and 12 volt DC electrical or 110 AC electrical.
Pedestrian ECHO kiosks complete the ensemble of Echo Modularens. The Pedestrian ECHO is comprised of a 3'-10" x 3'-10" base unit with a luminescent cylindrical centerpiece that acts as an interface for those who use its features. The purpose of the interface kiosk will be discussed later, but primarily, and as a continuing focus, it acts to humanize the experience while acting as a community gateway for users. With a “read” of an ECHO neighborhood card, the user gains access to a security button for emergency, as well as a personalized “color” which will in turn alight the kiosk. When several users gather at the kiosk, the multiple colors turn alternate shades of individual colors, forming a community rainbow. The Kiosks act as pedestrian resting stations at secondary residential intersections, and as transportation kiosks along Mack Ave. When a particular route transportation vehicle approaches, the kiosk will turn the “route” color, acting as confirmation for specific desired routes, and helping avoid confusion. The Kiosks offer shelter, but also fold upon themselves so they may be moved about, or picked up for winter months and stored. The Pedestrian ECHO is designed to strengthen community paths, offer a sense of security with their safety features, and clarity in transportation needs.
Mechanical ECHO Modules House Independent mechanical systems for standalone ECHO units such as bathrooms, kitchens, and auxiliary housing units. They are equipped with either an electrical service entrance of 120v or 120v and DC power when equipped with a 12v battery. They also can contain two 20 lb. Propane tanks with an automatic switching regulator. When stand-alone heating is required, a 12 gallon fast recovery hot water heater is used. Also, an 8 gallon fast-recovery hot water heater is available for hot water delivery. A standard fresh water hose connection completes the mechanical ECHO unit.
The ECHO

Frame Module Assembly

The Basic ECHO Module Designed
Typical ECHO Frame Assembly

The Basic ECHO Module Designed

Aging in Place Communities
The ECHO

3/8" socket Wrench

3/8" Dia. Bolt Adjustment Assembly

3" Wide Sliding lock W/ Sloted Holes @ 10° Centers

Female Stud Member W Locking Assembly (typ.)

Male Stud Member W/ 7/8" Dia. Rivots spaced 10' Apart (typ.)

Locking Assembly Shown in Locked Position

ECHO Frame Locking Assembly Detail

No Scale

Typical ECHO Frame Assembly Frame Connection Detail

The Basic ECHO Module Designed
ECHO Engineering

Typical ECHO Assembly

The Basic ECHO Module Designed

Aging in Place Communities
The ECHO

The Basic ECHO UNIT Assembly Process,
Smallest Bathroom Shown

Step One

Typical ECHO Frame Assembly

ECHO Units use radiant hot water heating in the floor (typ.)
Typical ECHO Frame & Floor Panel

The Basic ECHO UNIT Assembly Process,
Smallest Bathroom Shown

Step Two
The ECHO

Typical ECHO Frame With Interior

The Basic ECHO UNIT Assembly Process,
Smallest Bathroom Shown

Step Three
The Basic ECHO UNIT Assembly Process,
Smallest Bathroom Shown
The Basic ECHO UNIT Assembly Process,
Smallest Bathroom Shown

3/4"thk. Exterior Polymer Concrete Wall Panels 1-0" X Nom. Size. by METROCAST

Typical ECHO Frame with

Metal Stud
Exterior Panel
1/4" Dia. Rubber Expansion Gasket

Step Five
The Basic ECHO UNIT Assembly Process,
Smallest Bathroom Shown

Aging in Place Communities
The ECHO

The Basic ECHO UNIT Decking & Ramp System
The Basic ECHO UNIT Optional Lifting & Leveling Base
Any combination of Echo base and ceiling modules can create Space

Echo Floor and Ceiling Modules

The Basic ECHO UNIT Open Space System
The Basic ECHO UNIT Vestibule Air Lock:
Used When Attaching ECHO’s to Existing Structures

Vestibule Module Assembly
The ECHO

Minimum Size Bath ECHO Shown

Bathroom ECHO Unit Plan

The Basic ECHO UNIT Bathroom Plan
Bathroom ECHO Unit Right Side Elevation

The Basic ECHO UNIT Bathroom Right Elevation
The ECHO

Minimum Size Bath ECHO Shown

Bathroom ECHO Section

The Basic ECHO UNIT Section
Bathroom ECHO

The Basic ECHO UNIT Bathroom Perspective
The Basic ECHO Kitchen Module Plan
The Basic ECHO UNIT Side Elevation

Largest Kitchen Module Shown

Grey Gravel Panel Shown

Sand Colored Finish Panel Shown

19'-2" O.A.

7'-7" O.A.
The ECHO

The Basic ECHO Kitchen Module Longitudinal Section
The Basic ECHO UNIT Kitchen Perspectives
The ECHO Community

ECHO Clients can choose from neighborhood Service Centers, or at-home service.

Your Mack Ave. ECHO Retail Store #445

Neighborhood Based ECHO Retail Concept utilizes existing-vacant commercial space, making the ECHO brand familiar and local
Welcome to your world of ECHO...

Helping you experience freedom®

In-Home Catalog Service brings all the features & ECHO convenience right to your home.
The ECHO Community

This bath module provides an ADA component previously lacking in most commercial spaces along Mack Avenue.

The retail store shows all the features available. As the client navigates through the environment, they can ultimately see a fully functioning ECHO bathroom located at the rear of the store.
The ECHO Community

Friendly ECHO Specialists await clients at an ECHO Solutions Store
ECHO is an economically viable solution for Aging in Place

By utilizing existing funding apparatus, ECHO can provide a less expensive option from costly skilled care
The ECHO Community

**ECHO just makes good sense...**

By keeping people in their homes longer, under the care of family instead of expensive professional care-givers makes better use care dollars, ECHO just makes good sense and is a healthier alternative for those aging in place.

**Communities Love ECHO...**

Inner-ring suburban communities are under economic duress, losing population and families to further exurban enclaves. ECHO provides the stimulus they need by keeping the residents they have, and re-purposing existing vacant space with the flexibility of attracting new, younger families as well.
ECHO provides a World of Services at your Fingertips...

The ECHO Keypad is available in every home based ECHO solution, giving you access to all the familiar businesses you love. No need to move from your home, let ECHO give you everything you need - just like a retirement community, right here , right now.

Safety and security at your fingertips. Whether an emergency, or you just need help, This button will get you to an ECHO

ECHO gives every customer a personalized ECHO KeyPass© insuring you, and only you can access all services.
ECHO brings to you all your Community has to offer...
The ECHO Community

ECHO employs only from within those communities in which it serves, with a special focus on those over age 55 who wish to keep working. We offer part time and flexible hours and work within Social Security guidelines for earned income.

ECHO Provides Employment and Opportunity for Participating Communities...
ECHO Families, Jacklyn Wolczenkowski

Jacklyn Wolczenkowski is retired and living in Saint Clair Shores. She shares her modest bungalow with her dog Fritz. Her husband died more than 15 years ago and left her to live on Social Security and his small railroad pension. She recently fell and now uses a walker to get around her home. She cannot maneuver her walker within the bathroom and she has been using a port-a-potty in her bedroom which her visiting nurse empties for her. Now that her visiting nurse won’t be paid for any longer, she may be forced into Lake Crest Manor, the Saint Clair Shores assisted living Center. Jackie doesn’t want to move from the home she shared with her late husband, and is distressed that just because of her home’s bathroom, she will be forced to move!
ECHO Solution: Jackie’s visiting nurse contacted ECHO Services to assist Jackie in modifying her home to provide for her handicap. With limited modifications to Jackie’s home, she now has a fully functional and self contained bathroom – right off her bedroom! Jackie was amazed when the ECHO representative showed Jackie all the choices she had in customizing her personal bathroom ECHO. At first doubtful, Jackie now loves her new bathroom and her friends like the way it has enhanced her home. Best of all, Jackie’s Medicare, along with her State’s Medicaid, has paid for the entire monthly rental and maintenance. Jackie now enjoys her new “master Bedroom suite,” just like the “rich” people have!
ECHO Families, Jacklyn Wolczenkowski

ECHO Floor Plan

- Vestibule
- Air Lock
- New Elect. Outlet 120v.
- Gas Conn.
- New ECHO Bathroom
- New ECHO Vestibule

ECHO Section

- 60” Dia. Radius
- 36”
- 16” lg. ramp
- Step

Aging in Place Communities
ECHO Families, Jacklyn Wolczenkowski

Site Preparation

Base Installation

Deck & Ramp Installation

ECHO Installation
The Rogers family is a tight knit family who are long time Grosse Pointe Woods residents. When William, the youngest son, married Susan, it was never a question they would purchase a home in Grosse Pointe as well. William’s parents were close by, as was St Michael’s Episcopal Church, where they were married and long time parishioners. It wasn’t long before William’s father had a stroke, and needed more assistance and frequent visits from William and his wife Susan. When William’s mother needed heart surgery it was decided that the parents needed to be closer for more consistent help and supervision. William and Susan decided William’s parents needed to move in with them. After consulting with several builders, it became apparent that the renovation of William and Susan’s home was not a viable option, it was cost prohibitive and they would never get the money back if they were to sell. They either needed to move, or find another solution to care for William’s parents.
ECHO Families, The Rogers Family

ECHO Analysis

Cost:

Furnishings $2,600
Eight ECHO Kitchen Modules $12,000
Four ECHO Bath Modules $7,600
Ten ECHO Floor/Ceiling (living) Modules $11,000
Mechanical Module $3,000
Two Curb Stops $800

Total Cost: $37,000
Amortized @ 5% over 10 Years = $384.08/mo.

ECHO Solution

Interior Perspective Bathroom
ECHO Families, The Rogers Family

ECHO Floor Plan

Rear Entrance

Ramp (by owner)

New ECHO Bathroom

Kitchen

Living Area

ECHO Mech.

Outside Entrance

19'-2" O.A. ECHO

15'-4" O.A. ECHO

Rubber Curb Stops (2) Req’d.

7'-2" O.A. ECHO

6'-10" I.S. ECHO

Bathroom Windows allow for daylighting

Section A-A
ECHO Families, The Rogers Family

First delivery and set up of Bathroom ECHO
Second delivery and set up of Kitchen ECHO
Third delivery and set up of Front Wall Window & Door ECHO

First Stage ECHO Assembly

Installation of Floor and Ceiling modules

Second Stage ECHO Assembly

Installation of Mechanical ECHO, Ramps, bumpers & Furnishings.

Third Stage ECHO Assembly
ECHO Families, The Rogers Family

Available remote adjustable bed

Wheelchair Friendly Carpet

Non-slip flooring option

ECHO Garage Based Auxiliary Housing Unit
Aging in Place Communities

ECHO Families, The Rogers Family

Front Perspective

LED Lighting Can offer changeable Color effects

Propane Refriger Has easy access for those in Wheelchairs

Kitchen Cabinets & Counter heights can be customized for Client needs

Available Fold down countertop

Interior Perspectives
Sam Johnson is a retired architect. He lives in Grosse Pointe Woods in a home his wife and he shared for almost 50 years. His family of adult children is large, numbering seven kids all together. All adults now, they lead comfortable and prosperous lives all around the country. Sam lost his wife two years ago and continues to live in the sprawling contemporary home he designed specifically for her. Sam has decided in order to completely move on, he needs to move from the home, but he wished to stay in the community where he chairs the local planning committee and golf’s with a team of friends at the local country club. Sam wants to down-grade into a much more modest home and desires to possibly start a private practice again, where he can work part time at his leisure. Unfortunately, Sam cannot find the Work/Live style condominiums, such as in western suburbs like Birmingham, within Grosse Pointe. He is perplexed to find the perfect solution.
**ECHO Families, Sam Johnson**

**ECHO Analysis**

- Existing Gas Heating & ductwork in truss area
- 40 gallon hot water heater
- Requires new 8'-0" wide x 7'-0" rolling-style garage door
- Existing non-ADA restroom
- 36" door
- 16'-0" I.S.
- 68'-8"

**Cost:**

- Six Echo Kitchen Modules: $9,000
- Seven ECHO Floor/Ceiling Modules: $7,700
- Eight ECHO Bath Modules: $13,600
- Twenty ECHO Floor/Ceiling/Wall (Smart Panel) Modules: $30,000
- Building Modifications: $3,000
- Mechanical System/Recycling Radiant Heat Module: $3,000

**Total Cost:** $66,300

**Amortized @ %5 over 15 Years = $514.02/mo.**

**Building Rent:** $1,380.00/mo.

**ECHO Solution**

Aging in Place Communities
ECHO Families, Sam Johnson

Floor Plan

Mechanical Layout

ECHO Live/Work Commercial Space
Section A-A

- ECHO Support cables from Trusses
- ECHO Air-Lock at opening
- Kitchen Module
- Existing Air Supply Ductwork
- W/New Drops to ECHO's
- New 12'-0" Drain Line
- Existing Heater Room

Section B-B

- ECHO Air-Lock at opening
- ECHO Roof Support Grommets
- Btm. of Truss
- 7'-2" ECHO
- 16'-0"
- 12'-0"
- 4'-0"
- Plenum
- ECHO Families, Sam Johnson
ECHO Families, Sam Johnson

Interior Perspective Looking Towards Bath

Interior Perspective Looking at Studio Space

ECHO Live/Work Commercial Space
Interior Perspective Looking Towards Kitchen
Community Based ECHO’s

Garden ECHO’s are provided to promote popular community gardening. With their 3’-2” height, they are easily accessible to those in wheelchairs or uncomfortable with kneeling or bending.

**Typical Garden Assembly**

Community Based ECHO’s Are designed to provide interaction across the demographic spectrum, employment and socializing opportunities while promoting a sense of safety and security.
Parking Area Roslyn and Mack

Typical Garden ECHO Base

- Pre-mixed Garden Tray
- Anodized ECHO Module Frame W/Faux Wood
- MetroCast Panels
- Recycled 20 Gallon Water Tank with Fill, Connector, and Weep Hose.
- Access Door

ECHO Gardens
Community Based ECHO’s

Employment Opportunity ECHO’s allow employment and income opportunities for aging in place adults. Designed to facilitate already popular activities such as art & crafts and vending, these ECHO’s are designed for portability and transportability.

Corner of Hampton & Mack

Corner Vending ECHO’s are a bit larger than Weekend Fair ECHO’s and are designed to occupy one parking space. They are meant to be seasonal, and are removed and stored off-season. Vending ECHO’s can provide employment opportunity, such as food sales and newspapers.
These ECHO's collapse easily into a transportable 3’-10” x 3’-10”x 7’-0” module which can be stored at a person's home, packed, then moved to a community site and set-up by ECHO personnel. They contain a 12v electrical supply and LED lighting.
Community Based ECHO’s

Pedestrian & Transportation Kiosks are located at intermediate intersections. They act as resting stations and add security with an ECHO keypad.

Pedestrian Kiosks are designed to “fold away” and be transported wherever needed.

The lighted, solar powered cylinder changes colors defining which route as a transport approaches. It also turns red if an emergency is triggered by the keypad.
ECHO Pedestrian and Transit Kiosks

Mack Ave. Transit Kiosk

- Fold-up seating
- Keypad
- Solar Panel
- LED Lights
- 12v Serviceable Battery

Aging in Place Communities
Conclusion

The first of an estimated eighty-three million baby boomers turned 65 in 2006. Whether or not ECHO ever gets built, it is an important thesis to undertake. As an example of how we can enrich and satisfy the lives of this demographic, within their chosen communities, ECHO demonstrates how important it is to talk about how we as a society are so poorly equipped to satisfy the needs of those who wish to age in place. AARP, in its exhaustive study in 2005 outlined the challenges communities with large populations of baby-boomers need to satisfy. Our country’s current prototype for these aging adults is to build remote, demographically stratified “retirement communities” which are shown to not satisfy these needs at all, but continue to isolate aging populations within communities which further sprawl and leave to abandon the very communities which need stimulus the most, that of aging inner-ring suburbs which surround metropolitan areas. So as a prototype solution, meant at the very least to start conversation about aging in place, and to challenge the myth that our current solution is acceptable, ECHO is about change in thought, change in direction, and most of all, offering a unique and economically feasible model for further exploration into this soon to be challenging demographic shift in our Nation’s population. ECHO is not a critique about housing, architecture, or suburban sprawl, but it seeks to fundamentally change our views about how we satisfy our population’s needs, and debunk popular misconceptions about aging and how we treat our aging population. So if ECHO accomplishes nothing more than this, I view ECHO as a successful Thesis.

Rick A. Wilson

Bibliography

Under One Roof: A Guide to Starting and Strengthening Intergenerational Shared Site Programs, Generations United

Beyond 50.05: A report to the Nation on Livable Communities: Creating Environments for Successful Aging, American Association of Retired Persons (AARP), 2005, AARP Public Policy Institute, Independent Living/Long Term Care Team, 601 E Street, NW, Washington DC 20049

Universal Design Ideas for Style, Comfort & Safety, Reed Construction Data (RS Means), 2007, 63 Smiths Lane, Kingston, MA 02364-3008


All other works are cited within text.