



# LAND USE TOOLS AND TECHNIQUES

March 2003

A Handbook for Local Communities



# CREATING ELDERLY MOBILITY AND SAFETY



*Henry Ford Village Retirement Community in Dearborn.*

The elderly represent the fastest growing segment of the region's population. SEMCOG estimates that by 2030, Southeast Michigan will be home to nearly twice as many people over age 65 than there were in the 2000 Census. Contrary to popular belief, not all elderly people retire and move to warmer climates. In fact, a growing percentage of elderly persons prefer to age in place — remaining in their own homes, or at least their own communities, for as long as physically, psychologically, and economically possible. As their numbers increase, this segment of the population will continue to impact many aspects of society. Local communities need to plan now for expected changes.

## Planning and Regulatory Considerations

Given the impact of the elderly on society in general, addressing elderly mobility and safety issues is advocated at various levels of government — federal, state, regional, and local. In fact, SEMCOG's 2025 Regional Transportation Plan calls for recognizing and addressing barriers to elderly mobility and safety. In addition, local governments can implement various planning, policy, and design standards in their master plans and zoning.

## Tools for Creating Elderly Mobility and Safety

Numerous tools and techniques are available to address elderly mobility and safety issues at the local level. Comprehensive land use planning at the community level can help communities:

- Provide the needed array of elderly housing options.
- Make elderly housing accessible to community resources.
- Make the transportation system accessible and safe.

### Provide the needed array of elderly housing options

The elderly are not a homogeneous group and, therefore, require varying levels of housing. Communities must provide for a comprehensive system of housing options to adequately meet those needs, including home-ownership assistance, shared living, independent senior living, and assisted senior living. Essentially, a continuum of care must be provided to address the needs of seniors in various stages of life cycle and circumstance.

Many zoning ordinances do not make allowances for the unique characteristics of elderly housing options — varying parking allowances, density provisions, floor area requirements, occupancy regulations, safety features, and ancillary facilities. There is a clear need to examine and, where necessary, provide appropriate zoning provisions for elderly housing. For example, elderly apartment complexes may not need as many parking spaces as typically required for traditional multi-family housing; per unit square footage requirements may be less, allowing for higher densities than normally allowed (but with limited impacts); and mixed-use development should be encouraged to allow location of retail services within close proximity of elderly residences.

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## KEEPING IT CONNECTED

Planning for elderly mobility has many issues common with other topics covered in this handbook including walkable communities, safety management, and transit-oriented development.

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### Make elderly housing accessible to community services

In order for elderly housing to be successful, it must be integrated into a system providing adequate services such as retail, social activities, social services, and medical care. In order for services to be accessible, housing must be conveniently located near these services and connected via transit and pedestrian walkways. Again, revised master plan and zoning codes may be necessary to accommodate the location of amenities near housing and on-site at appropriate living facilities.

Make the transportation system accessible and safe

It is imperative that the transportation system itself be accessible and safe for elderly drivers, pedestrians, and bicyclists. This can be accomplished by:

- implementing appropriate traffic engineering standards,
- developing a pedestrian-friendly environment, and
- promoting sensible access management strategies.

**Traffic engineering standards**

The present day transportation system was constructed, in large part, using design standards based upon performance characteristics of an average driver. However, yesterday’s average driver no longer represents today’s driver mix. Design standards are based on assumptions regarding visual, cognitive, and physical performance levels, which many of today’s elderly driv-

ers are unable to meet. Table 25 provides suggestions that can facilitate safer conditions for the entire population.

**Pedestrian environment**

Walking can be a healthy, and sometimes required, social means of travel for the elderly, provided they are made to feel safe and comfortable and are given consideration by motorists. Table 26 provides suggestions that can facilitate a safe and productive environment for all pedestrians.

**Access management**

Access management is a comprehensive process of maintaining reasonable access to adjacent development, while preserving the safe and efficient flow of traffic. Effective access management has many benefits, including increased traffic flow and associated decreases in delay, congestion, and air pollution. Access management can also have a beneficial impact on traffic crashes and crash potential (see Table 27).

Table 25  
Traffic Engineering Standards Tools for Elderly Mobility

Tool	Effect
Develop a consistent approach to design sign placement, and maintenance by: <ul style="list-style-type: none"> <li>• increasing sign letter size to six inches minimum,</li> <li>• avoiding or reducing excessive sign clustering,</li> <li>• mounting signs above the roadway, and</li> <li>• utilizing illuminated signs.</li> </ul>	Increase visibility and comprehension.
Develop a consistent approach to pavement marking placement and maintenance by: <ul style="list-style-type: none"> <li>• increasing the longitudinal line width (edge lines, lane lines, etc.) to six inches,</li> <li>• increasing stop line width to 24 inches,</li> <li>• utilizing alternate pavement markings for crosswalks (such as zebra, ladder, and solid markings), and</li> <li>• painting all curb and raised median faces at intersections and providing cross-hatched pavement markings in advance of raised obstructions.</li> </ul>	Increase visibility and demarcation.
Develop a consistent approach to intersection signalization and maintenance by: <ul style="list-style-type: none"> <li>• increasing the size of signal lenses to 12 inches,</li> <li>• utilizing signal backplates (a thin plate attached to the back of the signal head to help motorists distinguish the signal from trees and sky background),</li> <li>• considering left-turn phasing,</li> <li>• providing all-red clearance intervals,</li> <li>• providing street lighting at signalized intersections, and</li> <li>• prohibiting right turns on red at skewed intersections.</li> </ul>	Increase visibility and comprehension.

Table 26  
Pedestrian Environment Tools for Elderly Mobility

<b>Tool</b>	<b>Effect</b>
Provide adequate, well-designed, and continuous sidewalks and walkways with curb cuts and ramps.	Facilitate safe and productive pedestrian trip making.
Provide properly placed and adequately marked crosswalks.	Channel pedestrian flow to safe crossing points, which are clearly marked for pedestrian use.
Provide street furniture and native landscaping, being careful not to create visual screens.	Increase pedestrian comfort, safety, aesthetics, and environmental benefits.
Install street lighting along high-volume pedestrian corridors and at all intersections.	Increase visibility.
Encourage clustering of amenities and provide pedestrian access from residential areas to points of interest and transit lines.	Facilitate safe and productive pedestrian trip making.
Install pedestrian-activated pedestrian signals and education signs.	Emphasize pedestrian right-of-way and promote understanding of pedestrian signals.
Retime traffic and pedestrian signals utilizing an appropriate walking speed (2.5 feet/second to 3.5 feet/second).	Provide adequate crossing times for pedestrians with slower walking speeds.
On very wide streets, construct raised pedestrian refuge islands (e.g., medians) with appropriate curb cuts and/or ramps, and pedestrian signals.	Decrease the distance that must be crossed during each signal cycle.
Reduce turning radii at intersections.	Decrease speed of turning vehicles.
Prohibit right turns on red at intersections with high pedestrian volumes.	Emphasize pedestrian right-of-way.
Evaluate and implement traffic calming techniques. (See section on walkable/bikeable communities).	Calm vehicular traffic and promote pedestrian travel.

Table 27  
Access Management Tools for Elderly Mobility

<b>Tool</b>	<b>Effect</b>
Use medians to create right-in, right-out driveway movements. Consolidate access points.	Limit the number of conflict points associated with access points.
Maintain proper spacing of adjacent and opposite access points.	Limit the number of conflict points associated with access points.
Prohibit driveway access within the functional boundary of intersections.	Limit the number of conflict points associated with access points.
Properly design driveways (width, length, slope, radii, etc.) based on the speed limit and traffic volume of the adjacent roadway and driveway.	Better ease of ingress and egress.

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## CASE EXAMPLE

### Sign Maintenance Program

**Community:** Rochester Hills

**Contact:** Marc Matich, (248) 841-2494

In 1993, Rochester Hills instituted a routine sign maintenance program to upgrade the size and retroreflectivity of city guide signs (street name signs, parking signs, etc.). The goal was reducing traffic crashes, particularly for the city's older drivers. Street name signs at intersections of local streets and major roads now utilize six-inch letters, while major street name signs use seven-inch letters. Sign materials are designed for high-grade intensity or retroreflectivity. In 2000, the Traffic Improvement Association of Oakland County conducted a study of the impact of the upgraded signs on traffic safety along two city corridors, indicating night-time crashes decreased after installation of the larger and brighter signs.

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### Senior Pedestrian Safety Study

**Community:** Dearborn

**Contact:** Tom Bruff, (313) 961-4266

In 1996, SEMCOG, with funding from the Michigan Office of Highway Safety Planning, conducted a community-based study to identify and address elderly pedestrian issues for Dearborn. The final report outlines the overall procedures performed in the project, describes in detail the methods and techniques used for data collection and analysis, and summarizes proposed pedestrian countermeasures.

## Additional Resources

U.S. Department of Transportation, Federal Highway Administration. *Guidelines and Recommendations to Accommodate Older Drivers and Pedestrians*. 2001.

U.S. Department of Transportation, Federal Highway Administration. *Highway Design Handbook for Older Drivers and Pedestrians*. 2001.

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### Newberry Square

**Community:** City of Wayne

**Contact:** Peter J. McInerney, (734) 722-2002

This recently completed, five-story brick building provides affordable living opportunities for low- and middle-income seniors as well as space for retail establishments. The building has 64 apartment units on four floors with 16 units each, while the first floor is planned for commercial space. The complex is located on former city-owned land, is in the heart of downtown Wayne, next door to the city-owned State Wayne Theater and within walking distance of retail services, parks, the library, museum, and senior activity center. Accessible by public transit, there is also ample parking for private vehicles in the adjacent city-owned lot.

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### Older Driver Toolkit

**Contact:** Steve Betterly, (517) 373-4089

An older driver toolkit has been developed by Michigan State University to help communities and older driver advocates assess how friendly communities are toward older drivers. The tool can be used to understand key traffic engineering standards, assess community roadways, and identify resources for pursuing older driver traffic safety issues. The toolkit ([www.townsafety.com/ACTSweb/ODT/Overview.htm](http://www.townsafety.com/ACTSweb/ODT/Overview.htm)) includes a PowerPoint presentation outlining pertinent issues, an older driver roadway friendliness assessment tool (outlining 15 recommendations contained in the Highway Design Handbook for Older Drivers and Pedestrians), and county-level crash and population data.