

Statewide Strategies for Supporting an Aging Population

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- Strategies**
- Promote and sponsor research in Michigan on senior mobility issues
 - Plan for an aging mobility and transportation dependent population
 - Promote the design and operation of Michigan roadways with features that better accommodate the special needs of older drivers and pedestrians
 - Develop and/or enhance programs to identify older drivers at increased risk of crashing and take appropriate action
 - Encourage senior-friendly transportation options
 - Provide recommendations related to senior mobility and safety legislation
 - Improve communication and coordination among partners at the state, regional and local levels to enhance senior mobility

Senior Mobility Work Group

Partners

- AAA Michigan
- AARP
- AARP Driver Safety
- Area Agency on Aging 1-B
- Beaumont Health – Trauma Coalition
- Central Michigan University DEER Center
- Federal Highway Administration
- Michigan Department of Health and Human Services – Aging Adult Services
- Michigan Department of State
- Michigan Department of Transportation
- Michigan Office of Highway Safety Planning
- Michigan Sheriff's Association – Mason County Sheriff
- Michigan State Police
- Southeast Michigan Council of Governments
- Traffic Improvement Association of Michigan
- University of Michigan Transportation Research Institute

Safe Drivers Smart Options

Development Leadership

Project Research Advisory Group

- Department of Transportation & State

Stakeholder Group

- Health Care, Government, Law Enforcement, Insurance

Advisory Group

- Health Care, Government, Law Enforcement, Insurance

Safe Drivers Smart Options

Operational Leadership

Round Table

- High level public-private partnership with funding options

Operation Committee

- Health Care, Law enforcement, academia, insurance, aging and social services organizations other public private partnerships

Administrative Group

- Department of State – Traffic Safety Division

Evaluation of Michigan's Engineering Improvements for Older Drivers

Research Objectives

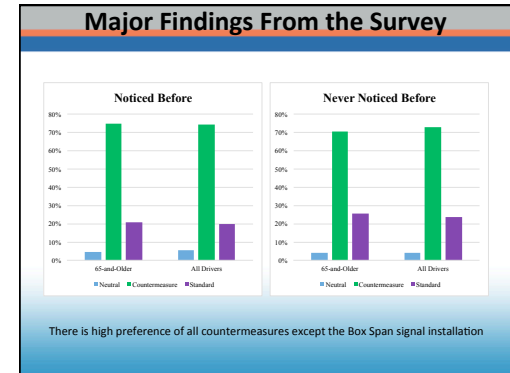
To evaluate the safety benefits of:

- i. Clearview font legend on guide signs for both freeway and non-freeway
- ii. Box Span Signal Installation
- iii. Pedestrian Countdown Signals
- iv. Fluorescent Yellow Sheeting on Warning Signs
- v. Arrow-Per-Lane Signs

for all ages and for older drivers:

Evaluation of Michigan's Engineering Improvements for Older Drivers

- Study Background and Literature Review
- Survey of Older Drivers in Michigan
- Data and Analysis – Development of SPFs
- Crash Modification Factors (CMFs)
- Benefit-Cost Analysis
- Conclusions and Recommendations




Benefit - Cost Ratio (BCR) for Average Site

Site Type	Comments	Crash Reduction (per year)						Cost and Benefits				
		Crash Reduction Observed	Crash Reduction Predicted	Crash Reduction Predicted (FY)	Crash Reduction Predicted (FY)	Average PDDO Reduction (FY)	Average Annual Benefit	Present Value Benefit	Present Value Cost	Benefit to Cost Ratio (BCR)		
Freeway Segments	Clearview Font (CV) and Fluorescent Yellow Sheeting (FY)	0.759	6.42	2.67	0.930	1.96	0.13	2.55	\$25,085.86	\$580,559.34	\$189.65	2736
	Fluorescent Yellow Sheeting (FY)	0.851	13.76	2.41	0.965	2.37	0.11	2.30	\$19,853.37	\$257,787.64	\$57.92	4497
Main Freeway Urban Segments	Clearview Font (CV) and Fluorescent Yellow Sheeting (FY)	0.704	8.94	3.76	0.711	1.94	0.79	2.97	\$95,303.08	\$1,342,949.75	\$153.29	7436
	Fluorescent Yellow Sheeting (FY)	0.849	11.47	0.62	0.917	2.32	0.39	0.39	\$25,806.96	\$580,199.01	\$76.89	4964
Non-Freeway Rural Segments	Clearview Font (CV) and Fluorescent Yellow Sheeting (FY)	0.67	2.71	1.33	0.927	0.33	0.63	1.31	\$7,563.81	\$95,047.66	\$65.30	1095
	Fluorescent Yellow Sheeting (FY)	0.923	3.89	0.32	0.972	0.35	0.61	0.31	\$2,241.29	\$26,853.41	\$46.25	581
Intersections	Box Span Signal Installation	0.971	0.69	0.23	0.897	0.39	0.22	0.61	\$23,724.43	\$461,899.31	\$10,282.00	13
Intersections	Reduction of Pedestrian Signal (PDDO Reduction)	0.946	9.75	0.56	0.927	2.24	0.18	0.38	\$20,252.72	\$177,200.09	\$622.74	458
	Signal to Advanced Diagnostic Timing	0.78	23.21	18.99					\$338,893.83	\$4,060,361.09	\$7,818.75	1440.48


Where:
 Average Annual Savings = PDDO Reduction * P1 Crash Cost + PDDO Reduction * PDDO Reduction * PDDO Crash Cost
 BCR = Present Value Benefit / Present Value Cost

Conclusions

- For Arrow-Per-Lane signs:
 - Strongly preferred by the 65yrs-and-Older drivers when in unfamiliar areas and when trying to understand a sign from a far distance





- For pedestrian countdown signals:
 - Pedestrians strongly prefer the improvement when deciding to start crossing and when deciding to adjust walking speed




Conclusions (contd.)

- Fluorescent Yellow Sheeting (FY) and Clearview Font (CV):
 - FY is preferred on high speed roads, inclement weather and nighttime
 - CV is preferred in high speed roads, inclement weather and from far distance

- For the box span signal installation:
 - Angle crash reduction is significant for all drivers



Recommendations

- Continue installation of the countermeasures as they reduce crashes and are economically beneficial
 - Pedestrian Countdown Signals at intersections
 - Fluorescent Yellow Sheeting and Clearview Fonts on freeways and both rural and urban non-freeways
 - Arrow-Per-Lane sign on freeways
 - Box Span Signal Installations at intersections
- Since the benefits outweigh the cost significantly, replacement before the end of life can be considered
