




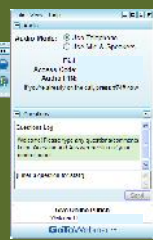

**Complete Streets Institute:**  
Towards Complete Streets in Michigan

Webinar Series  
September 7-September 28, 2011



### Webinar Basics

- You should have this presentation in a window and a control panel next to it
- You can expand the display to full screen
- To show or hide the control panel, click on the double arrows
- Click on the hand icon to “Raise Your Hand”

### Webinar Logistics

- Webinar is being recorded
- Webinar, PDFs of presentations, and associated exercises will be made available after today's webinar
- Type presentation-related questions to presenters in the chat box
- Questions will be pooled and held to end. We will try to get to as many as we can.
- Your phone line has been muted and will remain so for the duration of the webinar



### Today's Speakers

**Holly Madill**  
Complete Streets Project Coordinator  
MI Department of Community Health

**Brad Strader, AICP, PTP**  
President  
LSL Planning, Inc.

**Norman Cox, LLA, ASLA**  
President  
The Greenway Collaborative, Inc.






**Mission:**  
Reduce childhood obesity in Michigan through strategic policy initiatives

[www.healthykidshealthymich.com](http://www.healthykidshealthymich.com)



### Community Policy Action Team

- Crim Fitness Foundation
- Detroit Food & Fitness Initiative
- League of Michigan Bicyclists
- Michigan Association of Planning
- Michigan Department of Community Health
- Michigan Department of Transportation
- Michigan Environmental Council
- Michigan Fitness Foundation
- Michigan Recreation and Park Association
- Michigan State Housing Development Authority
- Michigan Trails and Greenways Alliance
- Washtenaw County Public Health
- AARP
- Michigan Association of Counties
- Michigan Municipal League
- Safe Routes to School National Partnership



## Why Complete Streets?

Transportation networks that include amenities such as sidewalks and bike lanes can increase the number of people who walk or bike by 30% and schools can see a 15% increase in students who walk or bike to school.  
(Active Living Research, RWJF 2007)

**Community design impacts physical activity levels**



## Project Partners



## Module Overview

- 1 Introduction to Complete Streets**  
Defines Complete Streets and explains its importance, history, and benefits, as well as its relationship to other associated topics.
- 2 Stakeholder Engagement**  
Introduces the various stakeholders of Complete Streets, explains how to work through a coalition to effect policy and projects, and provides messaging and communication tools and tips.
- 3 Influencing Policy**  
Provides the tools needed to assess a community's readiness for Complete Streets policies and the steps a community would take to implement them. Defines and explains the policy-making processes, stakeholders, and Complete Streets laws.
- 4 Planning and Regulations**  
Explains policy implementation tools such as planning processes, policies, and regulations.
- 5 Application and Design**  
Explains the design elements and various treatments/applications used to accomplish Complete Streets policy implementation (sidewalks, bike paths, transit stops, road diets, etc.) through project design.

## Please Tell Us About Yourself

- If you are viewing the presentation as a group, please pick the most representative answer
- We will share the results when the poll has closed
- How will you will be promoting complete streets?
- Your background
- Have you attended any other Complete Street trainings?

## Module 1: An Overview

Complete Streets Institute Training Curriculum

- 1. An Overview**
2. Stakeholder Engagement
3. Influencing Policy
4. Planning & Regulations
5. Design & Applications




Photo: The Greenway Collaborative, Inc.

**Understanding what complete streets are and what they mean to your community**

## Presentation Overview

- What is Complete Streets
- Historical Context
- Challenges
- Current Context
- Benefits
- Consequences of Past Practice
- Balancing Transportation Needs
- Policy Responses
- What You Can Do



Photo: League of Michigan Bicyclists

**Training Objective:**  
Provide a basic understanding of what complete streets are and what they mean to your community.

## What is Complete Streets?

**A system of streets...**  
“planned, designed, and constructed to provide appropriate access to all legal users in a manner that promotes safe and efficient movement of people, and goods whether by car, truck, transit, assistive device, foot or bicycle.”  
PA 135 of 2010



Photo: The Greenway Collaborative

All users include:

- Pedestrians
- Bicyclists
- Transit users
- Motorists
- Trucks
- Children
- Elderly
- People of various abilities

## Complete Streets & Related Concepts

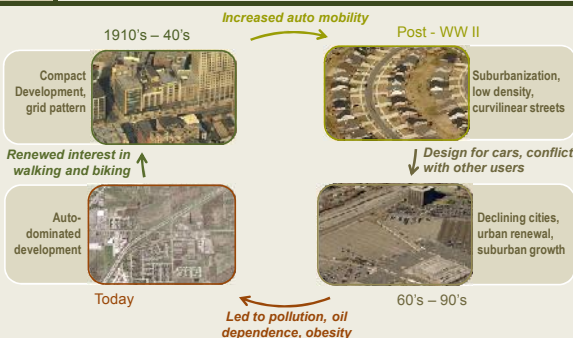
- Livable streets
- Walkable communities
- Healthy communities
- Active communities
- Context Sensitive Solutions
- Safe Routes to School
- Sustainable transportation
- Traffic calming
- Active transportation
- Smart Growth

All contribute to improved safety, healthy choices, and a greener lifestyle



Photo: John Lutzon

## How Did We Get Here?



1910's – 40's: Compact Development, grid pattern

Post - WW II: Suburbanization, low density, curvilinear streets

60's – 90's: Declining cities, urban renewal, suburban growth

Today: Auto-dominated development

Increased auto mobility

Design for cars, conflicts with other users

Led to pollution, oil dependence, obesity

Renewed interest in walking and biking

## Traditional Transportation Planning

- Traditional functional classification
  - Expressways
  - Major/Minor Arterials
  - Collectors
  - Local Streets
- Focused on moving cars and trucks




Illustration: LSL Planning, Inc.

## Transportation Systems Thinking

- Multi-modal network
- Primary network for each user
- Not every street will accommodate each user equally
- Plan a system with a good “quality of service” for all users

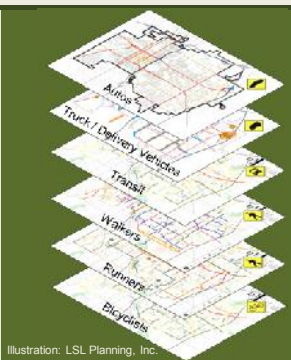



Illustration: LSL Planning, Inc.

## Enhancements to Transportation Planning

- Movement across and along the system
- Interconnected system
- Range of facility types to accommodate different users
- Considers context and function
- Finding best streets to prioritize for non-motorized



Lansing Master Plan

Illustration: LSL Planning, Inc.

### Why Don't We Walk/Bike More?

- Exposure to high volume and high speed traffic
- Busy Lives
- Lack of convenient crossings between traffic signals
- Limited transit options
- Incomplete bicycle and pedestrian systems
- Lack of bike parking
- Insufficient lighting
- Crime (perception)/safety

A general lack of direct, safe and comfortable routes



Photo: The Greenway Collaborative, Inc.


### Common Misunderstandings of Providing Non-Motorized Facilities

Are bikes allowed on roads?

- Bikes, mopeds, etc. have all rights and duties applicable to the driver (Michigan Vehicle Code)

Can bikes ride on sidewalks?:

- Bikes on sidewalks shall yield to pedestrians and give an audible signal before overtaking and passing (Michigan Vehicle Code)
- Localities control sidewalks and can restrict their use further.



Liability may increase if we force non-motorized travelers into travel lanes by NOT providing facilities.

### Minimizing Risks of Non-Motorized Facilities

- Put non-motorized users in logical travel paths
- Put non-motorized users where they can be seen
- Notify motorists where to expect non-motorized users
- Calm traffic flow




Photo: The Greenway Collaborative, Inc.

Careful planning and design can lessen liability more than a "do nothing" approach

### So Why Now?




Photo: The Greenway Collaborative, Inc.

- There is a collective recognition that the system we have now does not fully meet our current needs
- Mobility for aging and low income populations
- Enhanced air quality
- Sustainable communities
- Economic challenges

There has been a concerted move towards Complete Streets in the USA since the early 1990's

### Support for Complete Streets

Endorsed and promoted by a wide range of organizations:

- Professional Associations
- Advocacy groups
- Business organizations
- Governmental commissions
- Federal, state and local governments and departments
- Safe Routes to School



### Why? Many Benefits

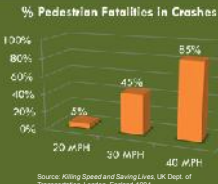


- Increased Safety
- Improved Public Health
- Cleaner Environment
- Livable Places/Economic Development
- Mobility Equity/Access/Choice
- Quality of Life



### Benefits: Increased Safety

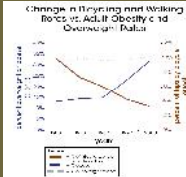
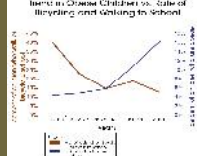
- Slower traffic speeds reduce crash severity
- High Intensity Activated Crosswalk (HAWK) Installations
  - 29% reduction in total crashes
  - 15% reduction in severe crashes
  - 69% reduction in pedestrian crashes
- Four to Three Lane Conversions (Road Diet)
  - 29-34% crash reduction
  - 68% injury reduction
- Context Sensitive Solutions
  - 90% decrease in pedestrian fatalities
  - 75% decrease in bike fatalities



Source: Killing Speed and Saving Lives UK Dept. of Transportation, London, England 1994

**... installing pedestrian and bicycle facilities can reduce the risk of crashes by 28%.**  
-National Complete Streets

### Benefits: Improved Public Health






- Active Communities = longer lifespan for residents
  - Reduces obesity
  - Reduces heart disease
  - Reduces diabetes
- Increase in physical activity reduces stress
- Businesses that provide walk/bike opportunities for employees during the workday report a ~30% reduction in sick-leave absenteeism, health care use, and worker's comp and disability claims
- Reduction in healthcare costs and insurance premiums

### Benefits: Cleaner Environment

- May reduce greenhouse gas emissions: fewer and shorter car trips
- Reduce carbon footprint as people choose to walk or bike
  - 1 gallon of gas=19.4 lb CO<sub>2</sub>
  - 1 VMT=1 lb CO<sub>2</sub>
- Reduce oil dependence
- 2006 studies show that the more walkable a community, the lower the vehicle emissions

**...one pound of carbon gas is enough to fill an exercise ball...**

### Benefits: Livable Places/Econ Dev

Photo: The Greenway Collaborative, Inc.



**Homebuyers are willing to pay up to \$20,000 more for homes in pedestrian-friendly communities**  
-1999 Urban Land Institute

- Catalyst for new and re-development
- More attractive and inviting streets
- Contributes to placemaking
- Attracting and retaining residents and business
- Leads to a stronger local economy
- Streets contribute to a community's defining character

### Benefits: Mobility Access/Equity/Choice




Photos: Dan Burden

- Meets the needs of various users of different abilities
  - Children
  - Seniors
  - People with disabilities
- Provides a choice for mobility
  - 20% of Americans have a disability that limits their daily activities
- Complete Streets creates access for the differently-abled and equity for low-income populations, and choice for all

### Benefits: Quality of Life



Photo: Jany Mada

- Reduced traffic congestion = less time in vehicle + reduced stress levels
- Increase in physical activity reduces stress, increases productivity
- Live longer - joining and participating in one group cuts your odds of dying next year in half
- More social interaction

### Consequences of Past Practice

Roads are engineered for high motor vehicle volumes and speeds

- Severe crashes/fatalities
- Signals timed for cars
- Congestion
- Auto emissions
- Discourages bicycling, walking, and transit use = rise in obesity rates
- Low income populations lack access to jobs and fresh food



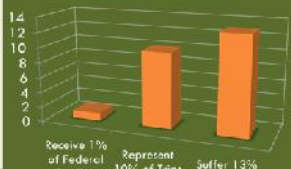
What do seniors fear most?  
A. Death 50%  
B. Giving up car keys 50%  
Source: AARP

### Safety Consequences

- Low density counties = 6 times the fatality crashes as more dense areas

**Deaths per Vehicle Mile Traveled**  
*Compared to motorists...*  
Pedestrian 36 x  
Bicyclist 11x



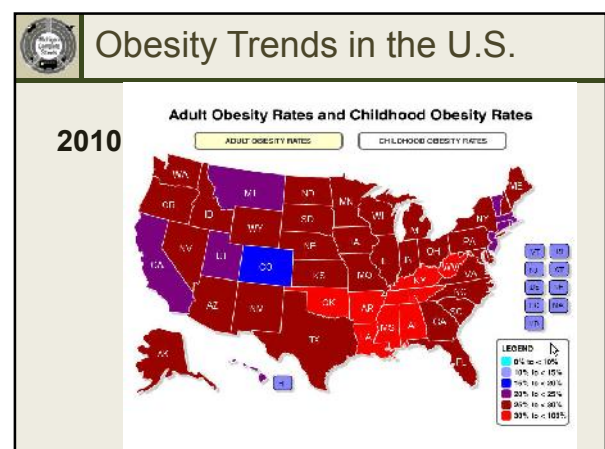
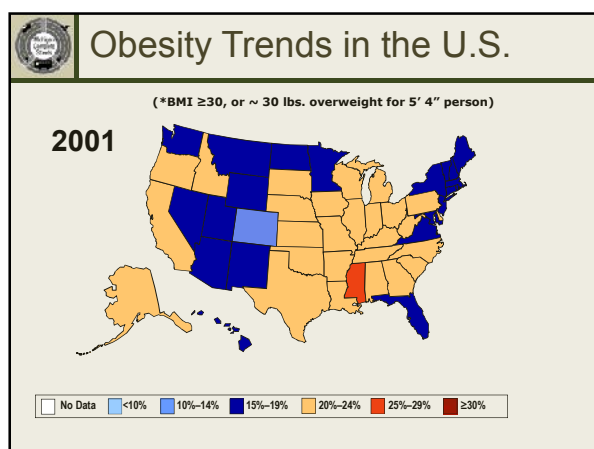
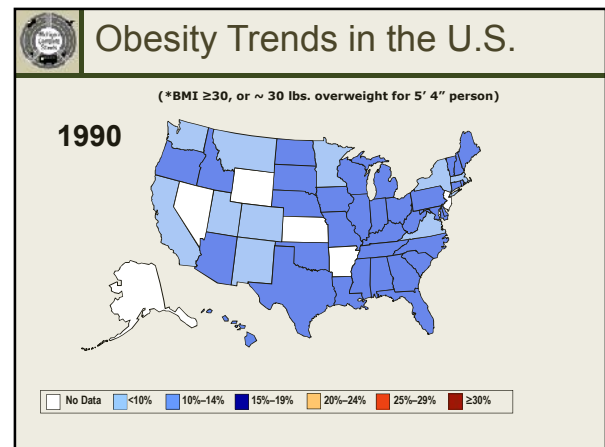
**Pedestrians and Bicyclists...**



But walking and bicycling are not inherently dangerous

### Health Consequences


- 1/3 of all coronary heart disease deaths in US could have been prevented through activity
- Strong relationship between walkability and bikeability and residents' overall physical health
- Walking and biking help prevent obesity, diabetes, high blood pressure, and certain cancers...mostly preventable diseases
- Poor exercise habits of employees cost employers additional healthcare costs

### Environmental Consequences

- Since 1980, Vehicle Miles Traveled (VMT) has increased 3 times faster than population
- Vehicles create 30% of Michigan's ozone-forming pollutants
- Between 1960 and 2001, Michigan's CO2 emissions from fossil fuels increased by 46%— primarily as a result of oil combustion for transportation

Year	Commute miles/person
1945	5
1965	13
1985	20
2005	27



### Livability/Econ Dev Consequences

- Walkability/bikeability and transportation options are key indicators among the creative class when choosing where to live
- Senior citizens and retirees, another demographic that communities hope to retain, also value transportation choice
- Michigan must be able to retain and attract young professionals and international talent to be competitive in the global marketplace



Photo: The Greenway Collaborative, Inc.

### Mobility/Access/Choice Consequences



- At least 1/3 of Americans don't drive
- 55% of Americans would rather drive less and walk more
- 28% of trips in metro areas are short (1 mile or less) yet 65% by car

**Who doesn't drive?**

- By necessity**
  - Seniors
  - Persons with disabilities
  - Children
  - Those lacking means to afford a car
- By choice**
  - Many reasons – health, environment, enjoyment and costs

### Quality of Life Consequences

- Every ten minutes of commuting reduces all forms of social capital by 10%
- Americans spend 100+ hours a year commuting to work, more than the average two weeks of vacation time (80 hours)
- Suburban mothers spend 17 full days a year behind the wheel, more than the average parent spends dressing, bathing, and feeding a child

Photos: The Greenway Collaborative, Inc.

### Shifting to Complete Streets



Illustration: LSL Planning, Inc.

### Balancing of Transportation Needs

- Each type of transportation impacts the level of service—or quality service—of the other modes
- Traditionally, motorized traffic received the priority - Now looking to balance the needs of all users.
- How the balance is based on street type and context



Photo: The Greenway Collaborative, Inc.

While complete streets share many common elements the design of each street depends on its context



### An Expanded View of Streets

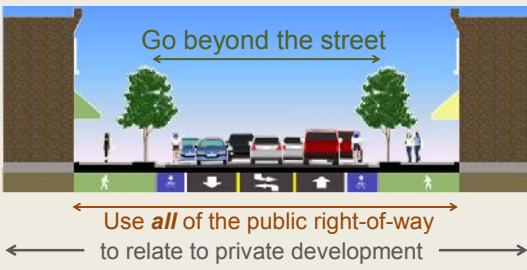


Illustration: LSL Planning, Inc.


### An Expanded View of Streets

- A community's streets are a defining characteristic of place, and include many elements:
  - The roadway or street itself
  - Landscaping
  - Sidewalks and bike lanes
  - Relationship of buildings and sites to the street



Streets constitute a community's single most important public space in terms of size, visibility and use

### Beyond The Physical Roadway



Complete Streets is a cultural change and a shift in our understanding of the value of streets beyond moving vehicles to ensure mobility, access, and choice for all.

- Complete Streets go beyond physical design and infrastructure
- It is about creating culture and policies that provide safe and efficient transportation choices
- Like any cultural shift, this will not happen overnight

### Policy Response to Complete Streets


- Federal
- State
- Local



Illustration: LSL Planning, Inc.

### Changes in Federal Funding

- Modern multi-modal transportation bills began in 1991 with ISTEA
- Subsequently included "alternative" modes
- Started with transportation "enhancements"
- Now addresses all modes, context sensitivity, health issues and climate change



Dramatic Increase in funding for bicycle and pedestrian projects since 1992, but still about 2% of total spending

### USDOT Policy Statement

US Department of Transportation (USDOT) policy:

- Incorporate safe and convenient walking and bicycling facilities into transportation projects
- Transportation agencies have a responsibility to improve the conditions for walking and bicycling



Encourages transportation agencies to go beyond the minimum standards



### USDOT Recommended Actions

- Accommodation on new, rehabilitated and limited-access bridges
- Collect data, set targets and track progress
- Maintain sidewalks and paths the same way roads are maintained
- Improve facilities as part of preservation or construction projects



Photo: The Greenway Collaborative, Inc.

Consider walking and bicycling as equals with other transportation modes

### Nationwide Policies



200+ jurisdictions have adopted policies or have committed to do so

### Michigan Legislative Changes

**Act 51 of 2010 (MI Transportation Fund) Revisions**

- Requires interjurisdictional consultation on non-motorized projects and 5-year program
- Use of established best practices
- Establish an Advisory Council to Educate and advise transportation stakeholders and the public on the development, implementation and coordination of CS policies
- MDOT may provide technical assistance and will share expertise on trunk line projects
- Enables interjurisdictional agreements for maintenance



Effective Aug. 2010

### MDOT Policy Implications

- Need to prepare 5-year program for non-motorized facilities
- MDOT to give **additional consideration** to enhancement applications from communities with complete streets policies (subject to annual change)
- Complete street policy promotes collaboration
- CS Advisory Council



Photo: The Greenway Collaborative, Inc.

Legal changes influence how townships, counties, cities, villages and the state work together.

### Michigan Legislative Changes

**Act 33 of 2010 (Planning Act) Revisions**

- Definition of "streets" expanded to include all legal users
- Expands elements that may be included in a master plan to include all forms of transportation
- Specifies that transportation improvements be appropriate to their context
- Specifies cooperation with road commission and MDOT

"In 15 years we will probably look back and realize that the Complete Streets legislation not only provided quality accessible transportation options for all modes and people, but that it dramatically improved local quality of life in ways that helped attract and retain talented knowledge workers--the key to success in the global New Economy."

Mark Wyckoff, FAICP, MSU Land Policy Institute

Effective Aug. 2010

### Michigan Planning Law Implications

**The Michigan Planning Enabling Act amendments:**

- If creating a master plan, requires inclusion of a transportation component addressing all modes of transportation
- Requires coordination with neighboring communities and road agencies
- Not a "mandate"
- Incorporate into next Master Plan Update
- Include in any separate non-motorized plan or subarea plans
- Supports collaborative efforts with other communities and agencies

### Where in Michigan?

21+ Resolutions  
6+ Ordinances  
Other communities

- embedding in Master Plans
- changing internal practices
- creating and adopting active/non-motorized transportation plans

Source: Michigan Complete Streets Coalition website; December 9, 2010

### What can be done at the local level?

5 Ps of Policy Work

- Promote = build support
- Prepare = educate/train
- Policy = develop policy (internal processes, resolutions, ordinances)
- Plan = develop a plan
- Projects = design and implement

### Promote = Build Support

- Work within existing relationships, if available
- Know your stakeholders
- Be inclusive
- Establish a coalition
- Identify leadership
  - Be clear about roles/responsibilities
  - Establish vision/goals
- Meet regularly
- Collaborate with other groups

### Prepare = Educate and Train

- Community forum
- Public meetings
- Meetings with policymakers/government officials
- Presentations at group meetings (school, business, civic)
- Media (print, social, TV, radio)
- Website/links

- ✓ Use simple messages
- ✓ Message to your audience
- ✓ Provide audience an opportunity to join the action
- ✓ Address outstanding concerns

### Incorporating CS Into Local Policies

**Plans**

- Comprehensive plan
- Neighborhood Plans
- Non-motorized plan
- DDA/TIF plans
- Parks and recreation plan
- MPO or County LRTP
- Capital Improvement Plan

**Regulations**

- Zoning ordinance
- Sidewalk ordinance
- Site plan review
- Subdivision regulations
- Street design standards

**Organizational**

- Millage partnerships
- Intergovernmental agreements
- City charter

**Programs/Operations**

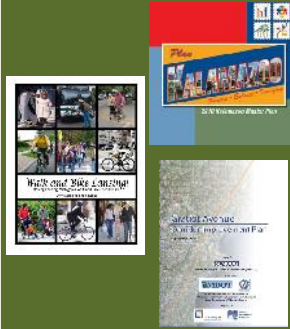
- Travel Demand Management (TDM) programs
- Outreach/education
- Enforcement
- Safety programs
- Maintenance procedures
- Internal checklists
- Interdepartmental cooperation

### Tool Matrix for Incorporating Policy

Tool (check which ones apply to your community)	Already Addresses Complete Streets	Partially Addresses Complete Streets, or Some Elements, but Could Be Strengthened	Does Not Address Complete Streets
<b>RESOLUTIONS AND POLICY STATEMENTS</b>			
<input type="checkbox"/> Intergovernmental Agreements			
<input type="checkbox"/> City Charter			
<input type="checkbox"/> Street and Sidewalk policy			
<b>ORDINANCES</b>			
<input type="checkbox"/> General Code			
<input type="checkbox"/> Zoning ordinance			
<input type="checkbox"/> Street design standards			
<b>PLANS</b>			
<input type="checkbox"/> Comprehensive plan			
<input type="checkbox"/> Transit or Non-motorized plans			
<input type="checkbox"/> DDA plan			
<input type="checkbox"/> Capital Improvement Plan			
<b>ONGOING PRACTICES</b>			
<input type="checkbox"/> Street and Sidewalk maintenance procedure			
<input type="checkbox"/> Development Design Guidelines			
<input type="checkbox"/> Project Review Procedures			

## Develop a Plan

- Metropolitan Planning Organization (MPO)
- Comprehensive Plans
- Transportation Plans
- Non-motorized Plans
- Corridor Plans
- Subarea Plans
- Neighborhood Plans
- Safe Routes to School
- Transit Plans
- Downtown Development Authority (DDA) Plans



## Complete Streets Planning Process

1. Complete Streets Vision
2. Identify Opportunities and Needs
3. Analysis
4. Alternatives
5. Action Plan
6. Monitoring and Implementation

Public Input Throughout

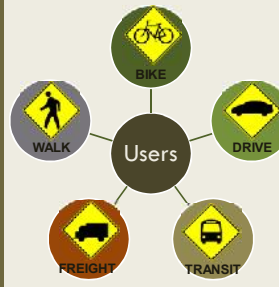



Illustration: LSL Planning, Inc.

## Multi-Modal Quality of Service

Priorities are not the same on every street



Automobile Level of Service	Transit Quality of Service	Bicycle Quality of Service	Pedestrian Quality of Service
↑ with way of street design	↑ Transit bus stop area design	↑ Bicycle safety and comfort	↑ Pedestrian safety and comfort
↓ Large delays at intersections	↓ Transit bus stop area design	↓ Bicycle safety and comfort	↓ Pedestrian safety and comfort

Illustration: LSL Planning, Inc.

Balance and prioritize design to meet street's purpose

## Projects = Design & Implementation

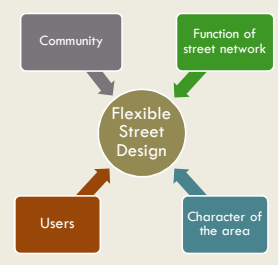

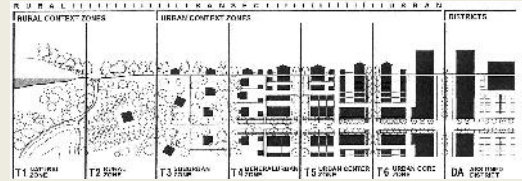



Illustration: LSL Planning, Inc.

## Flexible Design: Character

Street Design may vary to complement character of area




- Traffic volume/speed
- Land uses
- Building height and setback
- Distances to destinations
- Physical environment

## Flexible Design: Character



Different treatments at different locations

### Flexible Design: Character




Illustrations: LSL Planning, Inc.

Different treatments at different locations

### Walk/Bike-Friendly Principles

- Buildings closer to street
- Limit driveway conflicts
- Move along/across roads safely
- Destination-oriented routes
- Distance-appropriate routes
- Safe routes to school
- Balancing quality of service



Ann Arbor:  
#1 Healthiest City by AARP Magazine  
#10 Greenest Commuters - 8% bikers+walkers

### Transit-Friendly Principles

- A good pedestrian network
  - Ability to get across street safely at stops
  - Direct links to population centers
- Tie to bicycle facilities (expands draw area)
- Amenity rich sheltered stops at key locations
- Strategic placement of stops within high demand nodes
- Park and ride opportunities




Photo: The Greenway Collaborative, Inc.

### Common Design Elements




Photo: The Greenway Collaborative, Inc.

- Sidewalks on both sides
- Bike lanes, boulevards, parking
- Shared-use paths, trails
- Minimized crosswalk distances through curb extensions
- Clear pavement markings
- Pedestrian signals, signage
- Mid-block crossings
- Lighting

High profile bicycle and pedestrian facilities clue drivers in to be on the lookout for non-motorized users

### Implementing Complete Streets

- **Plan first (land use and transportation):** determine what is possible and desirable through planning
- **Identify easy projects:** many projects may be accomplished through road restriping
- **Incorporate complete streets into other projects:** projects like crossing islands can be added any time
- **List long-term goals:** other projects may be best coordinated with major road reconstruction



Retrofitting infrastructure such as bridges after construction can be very costly – much more efficient to plan ahead



Renaissance Planning Group





### Resource Clearinghouses

- **Michigan Department of Community Health:**  
[mihealthtools.org/mihc/CompleteStreets.asp](http://mihealthtools.org/mihc/CompleteStreets.asp)
- **Michigan Complete Streets Coalition:**  
[michigancompletestreets.org](http://michigancompletestreets.org)
- **N-Plan:** [www.nplanonline.org](http://www.nplanonline.org)
- **National Complete Streets Coalition:**  
[www.completestreets.org](http://www.completestreets.org)
- **MDOT Complete Streets Advisory Council:**  
[www.tinyurl.com/3glwcnv](http://www.tinyurl.com/3glwcnv) or  
[http://www.michigan.gov/mdot/0,1607,7-151-9623\\_31969\\_57564---,00.html](http://www.michigan.gov/mdot/0,1607,7-151-9623_31969_57564---,00.html)

### CSI Webinar Series

Date	Time	Topic
9/7, Wed	12-1:30	Module 1: Introduction to Complete Streets
9/9, Friday	12-1:30	Module 2: Stakeholder Engagement
9/14, Wed	12-1:30	Module 3: Influencing Policy
9/21, Wed	12-1:30	Module 4: Planning and Regulations
9/28, Wed	12-1:30	Module 5: Application and Design

### Thank you!

**Questions:**  
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[madillh@michigan.gov](mailto:madillh@michigan.gov)  
(517) 335-8372

**Webinar, PDFs, Exercises:**  
[www.greenwaycollab.com/completestreets.htm](http://www.greenwaycollab.com/completestreets.htm)