Complete Streets Seminar: From Policy to Project

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Carissa Schively Slotterback, PhD, AICP
Associate Professor and Director, Urban and Regional Planning Program

Cindy Zerger, APA
Research Fellow, Urban and Regional Planning Program
Agenda

9 – 10:30 am
Moving from Policy to Project Research Highlights

10:30 – 10:45 am
Break

10:45 am – 12:15 pm
Minnesota Practitioner Panel
Our Study

How do communities move from concept to implementation?

- Explore a variety of communities + projects
- Consider tools + processes
- Assess context-specific institutions, goals, stakeholders, cultures, constraints...
Questions

What does it take to move a community from complete streets concept to complete streets project?

What are the critical factors that need to be addressed to advance implementation?
Definitions

**complete streets** = the planning, scoping, design, implementation, operation, and maintenance of roads in order to reasonably address the safety and accessibility needs of all users of all ages and abilities. Complete streets considers the needs of motorists, pedestrians, transit users and vehicles, bicyclists, commercial and emergency vehicles moving along and across roads, intersections and crossings in a manner that is sensitive to the local context and recognizes that the needs vary in urban, suburban, and rural settings. — MN State Statutes 2008, Sec 162.02, Sub. 3a

**implementation** = projects on the ground
Our Study

Highlights from study of 11 cases

What can we learn from other cases?

- Value in looking at “best” practices
- No silver bullet – tailor approach to context
- Reflect on our own communities

1. Albert Lea, MN
2. Arlington County, VA
3. Boulder, CO
4. Charlotte, NC
5. Columbus, OH – Mid-Ohio Regional Planning Commission
6. Dubuque, IA
7. Fargo, ND – Metro COG
8. Hennepin County, MN
9. Madison, WI
10. New Haven, CT
11. Rochester, MN
Background

Produce Guide to Complete Streets Planning and Implementation

Knowledge-building priority identified by the Minnesota Local Road Research Board (LRRB) + MN Department of Transportation (MnDOT)

Worked with a Technical Advisory Panel
Our Study

Explore multiple contexts – region, community, corridor, project

Acknowledge diverse contexts, goals, + constraints

Account for policies + plans, as well as decision-making + process
Methodology

Step 1. **Document Review**

Review complete streets documents – *resolutions, policies, guidelines, tool kits, checklists, project reports + information*

Explore planning + policy framework

Understand content + use
Methodology

Step 2. Site Visits

Visited completed project(s)

Took 1000+ photos
Methodology

Step 3. Interviews

Identified key informants – “snowball technique”

Preliminary contact with complete streets lead

Consistent interview questions, capturing information on context, documents, projects, coordination, outreach, funding, outcomes, evaluation

103 interviews
Guide to Complete Streets Planning & Implementation

11 Case Study Reports

Key findings, context, documentation, evolution, practice, photos, quotes, and examples
Guide to Complete Streets Planning & Implementation

Guidebook

Overview, complete streets practice, methodology, common + unique practices
Findings – Big Ideas

Every case is different – think strategically about context

Policy (if you have one) is just the start – institutional + cultural changes are occurring

Be rationally opportunistic + visible

Engage advocates

Make the most of your champions
Findings – Best Practices

1. Framing + positioning: Broader benefits
2. Institutionalizing: Processes + policies + plans +
3. Analysis + evaluation: Pre-project, during, post-project
4. Project delivery + construction implementation, project-specific engagement
5. Promotion + education: Targeted campaigns, outreach, partnerships
6. Funding: Sources + application
More than a transportation issue

Successful + lifelong communities

Competitive cities must respond to changing demographics + expectations

Regional workshops

Complete Streets

Real Estate Trends

MORPC is working to create “lifelong communities.” The goal is to ensure central Ohio’s cities, villages, townships and counties continue to prosper, attract and retain businesses and residents, and in return have a richer tax base to support important programs, such as infrastructure, education and social services. An important facet of Lifelong Communities is Complete Streets.”
More than a transportation issue

Video Link (click on video or link below)
http://www.youtube.com/watch?v=HbYgHwY6E9w&noredirect=1
Multi-modal system

20+ year history of complete streets

1989 Transportation Master Plan called for modal shift

Policy decision to limit VMT growth to 1994 level

Multi-modal + network approach, connect across community + modes

“to preserve what makes Boulder a good place to live by minimizing auto congestion, air pollution, and noise.”

![Vehicle Miles Traveled Graph](image)
Rethinking functional classification

New *Urban Street Design Guidelines* – “more streets for more people”

Requires analysis of land use + transportation context

Multimodal, bicycle, + ped level of service

Led to updates in subdivision ordinance, tree ordinance, and land development standards (e.g. street design, storm drainage)
Rethinking functional classification

USDG Guiding Principles: Achieving a “Complete Street” Network

1. Streets are a critical component of public space

2. Streets play a major role in establishing the image and identity of a city

3. Streets provide a critical framework for current and future development

4. Charlotte’s streets will be designed to provide mobility and support livability and economic development goals

5. The safety, convenience, and comfort of motorists, cyclists, pedestrians, transit riders, and neighborhood residents will be considered when planning and designing Charlotte’s streets.

6. Planning and designing streets must be a collaborative process, to ensure that a variety of perspectives are considered
### Design Element Matrix – Different User Perspectives

**Pedestrians Want Buffering from Cars**

Consider some mix of the following elements to create a buffer:

<table>
<thead>
<tr>
<th>Planting Strip</th>
<th>Pedestrians</th>
<th>Cyclists</th>
<th>Motorists</th>
<th>Transit*</th>
<th>Neighbors</th>
</tr>
</thead>
<tbody>
<tr>
<td>The wider the better, since wider strips allow trees to grow</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amenity Zone</th>
<th>Pedestrians</th>
<th>Cyclists</th>
<th>Motorists</th>
<th>Transit*</th>
<th>Neighbors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use where high pedestrian volumes are likely, particularly in combination with on-street parking</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wide Sidewalk</th>
<th>Pedestrians</th>
<th>Cyclists</th>
<th>Motorists</th>
<th>Transit*</th>
<th>Neighbors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back-of-curb (6’ min.) may be allowable in retrofits, if combined with bike lane or on-street parking</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bike Lanes</th>
<th>Pedestrians</th>
<th>Cyclists</th>
<th>Motorists</th>
<th>Transit*</th>
<th>Neighbors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide “extra” buffering, in combination with other elements</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>On-Street Parking</th>
<th>Pedestrians</th>
<th>Cyclists</th>
<th>Motorists</th>
<th>Transit*</th>
<th>Neighbors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helps shield pedestrians from moving traffic</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trees</th>
<th>Pedestrians</th>
<th>Cyclists</th>
<th>Motorists</th>
<th>Transit*</th>
<th>Neighbors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need a 6’-8’ minimum planting strip or treewells in amenity zone; 8’ is the minimum for large maturing trees</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
</tbody>
</table>

- ** Emblem** - Positive Impact
- ** Emblem** - Negative Impact
- ** Emblem** - Mixed Impact or Use With Caution
- ** Emblem** - Neutral
## Design Element Matrix – Different User Perspectives (cont’d)

<table>
<thead>
<tr>
<th>Cyclists Want Safer Crossings</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Bike Boxes</strong></td>
<td><strong>Pedestrians</strong></td>
<td><strong>Cyclists</strong></td>
<td><strong>Motorists</strong></td>
<td><strong>Transit</strong>*</td>
<td><strong>Neighbors</strong></td>
</tr>
<tr>
<td>Brings cyclists into drivers’ sight; allows cyclists a headstart through an intersection; should provide bike lane approaching intersection</td>
<td>![Green Diamond]</td>
<td>![Green Diamond]</td>
<td>![Yellow Diamond]</td>
<td>![Yellow Diamond]</td>
<td>![White Diamond]</td>
</tr>
<tr>
<td><strong>Drop Bike Lane at Intersection</strong></td>
<td><strong>Pedestrians</strong></td>
<td><strong>Cyclists</strong></td>
<td><strong>Motorists</strong></td>
<td><strong>Transit</strong>*</td>
<td><strong>Neighbors</strong></td>
</tr>
<tr>
<td>Achieves same as bike box, but without designated space; casual cyclists may feel less comfortable, although it is considered safer to drop the lane and have cyclists merge earlier for left-turns if there is no bike box</td>
<td>![Green Diamond]</td>
<td>![Yellow Diamond]</td>
<td>![Yellow Diamond]</td>
<td>![Yellow Diamond]</td>
<td>![White Diamond]</td>
</tr>
<tr>
<td><strong>Leading Bike Signal</strong></td>
<td><strong>Pedestrians</strong></td>
<td><strong>Cyclists</strong></td>
<td><strong>Motorists</strong></td>
<td><strong>Transit</strong>*</td>
<td><strong>Neighbors</strong></td>
</tr>
<tr>
<td>Allows cyclists a headstart through the intersection; requires driver and cyclist education</td>
<td>![Yellow Diamond]</td>
<td>![Yellow Diamond]</td>
<td>![Red Diamond]</td>
<td>![Red Diamond]</td>
<td>![White Diamond]</td>
</tr>
<tr>
<td><strong>Short Blocks</strong></td>
<td><strong>Pedestrians</strong></td>
<td><strong>Cyclists</strong></td>
<td><strong>Motorists</strong></td>
<td><strong>Transit</strong>*</td>
<td><strong>Neighbors</strong></td>
</tr>
<tr>
<td>Create more intersections, but potentially smaller intersections; more opportunities to avoid high volume routes; can potentially calm traffic and allow more opportunities for safe crossing treatments</td>
<td>![Green Diamond]</td>
<td>![Green Diamond]</td>
<td>![Green Diamond]</td>
<td>![Green Diamond]</td>
<td>![Green Diamond]</td>
</tr>
</tbody>
</table>

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- Green Diamond: Positive Impact
- Red Diamond: Negative Impact
- Yellow Diamond: Mixed Impact or Use With Caution
- White Diamond: Neutral
## Design Element Matrix – Different User Perspectives (cont’d)

**Motorists Want Reduced Delays/Increased Capacity**

The following elements can increase a street's capacity and/or potentially reduce motorists' delay:

<table>
<thead>
<tr>
<th></th>
<th>Pedestrians</th>
<th>Cyclists</th>
<th>Motorists</th>
<th>Transit*</th>
<th>Neighbors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Red</td>
<td>Yellow</td>
<td>Green</td>
<td>Green</td>
<td>Yellow</td>
</tr>
<tr>
<td></td>
<td>Yellow</td>
<td>Yellow</td>
<td>Green</td>
<td>Red</td>
<td>Red</td>
</tr>
<tr>
<td><strong>Grade Separated Intersections</strong></td>
<td>![Diamond]</td>
<td>![Diamond]</td>
<td>![Diamond]</td>
<td>![Diamond]</td>
<td>Red</td>
</tr>
<tr>
<td></td>
<td>Red</td>
<td>Yellow</td>
<td>Green</td>
<td>Red</td>
<td>Red</td>
</tr>
<tr>
<td><strong>Unsignalized Intersections</strong></td>
<td>![Diamond]</td>
<td>![Diamond]</td>
<td>![Diamond]</td>
<td>![Diamond]</td>
<td>![Diamond]</td>
</tr>
<tr>
<td></td>
<td>Yellow</td>
<td>Yellow</td>
<td>Green</td>
<td>Green</td>
<td>Yellow</td>
</tr>
</tbody>
</table>

- **- Positive Impact**  
- **- Negative Impact**  
- **- Mixed Impact or Use With Caution**  
- **- Neutral**
Avenues

For specific dimensional information refer to the guidelines in this section.
Avenues

**Development Zone:**
Setbacks, design, and land uses will vary, but the basic intent for this zone is that development orients toward and has good functional and visual connections to the street.

**Pedestrian Zone:**
Very important for modal balance, pedestrian travel should be comfortable on Avenues; this zone should include unobstructed sidewalks, at appropriate widths for adjacent and surrounding land uses.

**Green Zone:**
To maintain comfortable pedestrian travel and serve an important buffer function, as well as enhancing the street for other users, this zone should include grass, landscaping, and shade trees in spacious planting strips or, in some cases, replaced by or interspersed with hardscaped amenity zones. In some Avenue configurations, this zone will also include a median or intermittent “islands” with trees and landscaping.

**Parking Zone:**
The need for this zone varies on Avenues, but the potential for traffic calming, buffering between vehicles and pedestrians, and access to adjacent land uses should be considered. Some Avenues will have on-street parking and some will not.

**Exclusive Bicycle Zone:**
Avenues are higher-speed and volume streets than Main Streets, so cyclists are less likely to feel comfortable in mixed traffic; this zone is important and should be considered for modal balance, safety, and additional buffering for other modes.

**Motor Vehicle Zone:**
This zone serves motor vehicles, in a variety of possible lane configurations, to accommodate higher volumes than Main Streets, while maintaining modal balance.
New Processes in Place

Complete Streets Task Force

meets quarterly and is established to “review and recommend the most effective use of funding streams available for complete streets, develop consistent implementation principles, practices and guidelines, and identify demonstration projects for Hennepin County’s Complete Streets policy...” (Hennepin County 2011).
New Processes in Place

Checklist, project summaries, incorporation into Strategic Plan...
Neighborhood Engagement

Complete Streets Request Form

Response to strong neighborhood organizations + engagement

Asks for location, impetus, context (e.g. land use, neighborhood character)

Proposers identify connections to principles in Complete Streets Design Manual

Connectivity, human health, equity, economic development
Transportation Research Program

Project-specific analysis
  Traffic counts, speeds, accident rates

Long-term analysis
  Land use, traffic counts, bike/ped counts, accidents, commuting patterns, outreach/engagement states, employer programs

Informs plan updates + project decision making
Ongoing Evaluation + Reporting

Transportation to Sustain a Community: A Report on Progress

City conducts its own travel survey

Trends over 2+ decades

Strong connection to Transportation Master Plan – reporting on implementation progress
How Long is Forever?

“It takes forever to drive across town,” is a common complaint.

The city has conducted a statistically accurate survey of auto travel time on two east-west and two north-south corridors in town over the last 25 years. These studies show that “forever” is about 15 minutes during rush hour traffic and that number has remained relatively steady over the years. While traffic has increased over the life of the study, the city has been able to maintain travel times with intersection improvements and traffic signal coordination.
Boulder Transit Use 1981 to 2009

Journey to Work by Bus
Boulder Residents, 2019

1931 Public Service Company purchased a fleet of 4 Mack buses and the last streetcar was retired on June 1.

1940 First traffic signal materialized at Broadway and 14th Street. It was turned off due to gas rationing during the war and turned back on in Feb. 1945.
An estimated 95 percent of Boulder's arterial streets accommodate bicyclists, and all local and regional buses in Boulder are equipped with bike racks. The city's system is bolstered by a robust network of pathways and paved shoulders in surrounding Boulder County to facilitate longer trips by bike.

**JOURNEY TO WORK BY BIKE**

**Boulder Residents**

- **Boulder**
- **Denver Area**
- **Nation**

![Graph showing journey to work by bike in Boulder compared to Denver Area and Nation.]

Source: U.S. Census and American Community Survey

Boulder has a robust bicycle network, with 150 centerline miles of bike facilities. In comparison, the city has 305 centerline miles of roads. The system includes:

1. 52 miles paved multi-use pathway with 76 underpasses
2. 37 miles of road with bike lanes on both sides
3. 9 miles of road with paved shoulders
4. 43 miles of roads designated as bike routes
5. 10 miles soft surface trails

1848: Denver-Boulder Bus Company established with 17 buses running through Lafayette to Denver.

1852: Toll road opens with a toll of $25 for Boulder to Denver travel. Eight months after opening, traffic was 70 percent on most arterials.
Tailored Engagement Strategies

Sustained engagement for District-wide design

Partnerships established early engagement

Businesses, advocates, and stakeholders engaged from design through construction

Weekly meetings influenced construction schedule

Increased support of complete streets program
Innovation in Design

Years of practice + adapting to needs

Willingness to test new things and adapt – “pilot projects”
- signage, bike boxes and boulevards
Innovation in Design

Established collaboration + go-to guidance

Collaboration between key City departments
- City Engineering and Traffic Engineering

State standards referenced along with other design guidance
(AASHTO, NACTO)
Promotion is Important

Ongoing commitment

Blue Zones Project
  – National visibility

National Vitality Center
  – continuing the momentum
Promotion is Important

Educational efforts

Bike rodeos

Public Service Announcements (PSAs)

Project white papers

& cost comparisons

Bump-Outs Cost Less

- Sidewalk in bump-out areas cost less than street pavement that would be required with no bump-outs:
- Trading street pavement for sidewalk results in a slight decrease in cost per intersection with bump-outs vs. no bump-outs—approximately $3,000/intersection
- Bump-outs reduce cost by an additional $3,000/intersection by reducing the crosswalk decorative paver length
- Replacement of the existing traffic signals if bump-outs are not provided would cost between $175,000 and $200,000 per signal system
- Bump-outs save $360,000 to $420,000 in total project costs!

Note: See the separate “Bump-Out Information” fact sheet for more information regarding bump-outs
Branded Campaigns

Targeting all modes + all users

SEE.SAFE.SMART.ROCHESTER
Campaign to decrease modal conflict

Developed by Active Living Rochester

Different media pieces and well-branded
Branded Campaigns

Mode-specific education

Safety as central focus

Street Smarts campaign – draw motorists’ attention to other users on street

Branding was critical – logo, info materials, promo items, pledge of commitment

Led to DriveSmart, BikeSmart, + WalkSmart campaigns

Strong coordination with Yale – Smart Streets
SMART STREETS

WELCOME TO THE SMART STREETS GUIDE TO SAFETY. THIS IS WHERE YOU WILL LEARN HOW TO BE A CITIZEN OF THE STREET WHETHER YOU ARE A PEDESTRIAN, A CYCLIST, A DRIVER, OR ALL THREE.

This website is the result of a partnership between Yale University Police, Security Programs, Transportation Options, and Environmental Health and Safety—along with The City of New Haven's Department of Transportation, Traffic and Parking. It depicts some broadly-accepted safety guidelines to help make our streets safe for everyone. Please consult the RESOURCES section for links to state and local laws and ordinances.

LAUNCH▶

Website Link (click on image above or link below)
http://yale.edu/smartstreets/
Engaging the Private Sector

Charlotte DOT funds supplemented by private development
Use new and redevelopment to facilitate ROW improvements
City ordinances are key implementation tools
Encouraging support through policy change

Special assessments – changed from 100% property owner funded to 50%-50% cost share for new sidewalks

1st 25 years – City pays for reconstruction, after 25 years, 50%-50% share

Increase in acceptance for sidewalk implementation
Questions

What does it take to move a community from complete streets concept to complete streets project?

What are the critical factors that need to be addressed to advance implementation?
Takeaways

Every context is different – **what is yours?**

Find the champions, or be one yourself

Policies + plans are critical, but nothing gets done without great processes

  Change the way decisions are made + the way that people are engaged
Thank you!

MN Dept of Transportation + Local Road Research Board

Carissa Schively Slotterback
cschively@umn.edu  +  twitter:  @cschively

Cindy Zerger
czerger@umn.edu  +  twitter:  @urbanoverload
Minnesota Practitioner Panel

Mitzi Baker
Rochester – Olmsted County

Steven Jahnke
City of Albert Lea

David Larson
MN Department of Transportation

Karen Nikolai
Hennepin County

Shelly Pederson
City of Bloomington