Context Sensitive Solutions
The Business Case for CSS

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March 9-10, 2010 - Context Sensitive Solutions Workshop
What’s This Fuss About CSS?

Why did a 2003 GAO Report to Congress, *Perceptions of Stakeholders on Approaches to Reduce Highway Project Completion Time*, recommend CSS as one of the most promising approaches?

Why does Commissioner Sorel talk about CSS and its importance so often?

Why do FHWA & AASHTO advocate CSS as a business model to be mainstreamed by transportation agencies?
What is Context?

• The interrelated condition in which something exists (everything about the people and place)

• The weaving of parts into a whole (quality of life concerns)
Why is Context Important?

Public Expectations = More, Better, Quicker, within Budget ... and also with their Approval

Achieving consensus in response to context is critical for timely delivery of projects and getting them built
Why is Context Important?

Federal authoritative basis for context sensitivity in transportation:

• 1965 Highway Beautification Act
• 1966 Historic Preservation Act
• 1968 Federal-Aid Highway Act [Section 4(f)]
• 1969 National Environmental Policy Act
• 1991 Intermodal Surface Transportation Efficiency Act
• 1995 National Highway System Designation Act
• 1999 Transportation Equity Act for the 21st Century
• 2005 SAFETEA-LU Federal Reauthorization Act
• 2009 HUD, DOT and EPA Partnership: Sustainable Communities
• 2010 Federal Reauthorization Anticipated
Federal Partnership of DOT-EPA-HUD

- Emerging goals will focus on the effect of transportation projects on the livability of communities and the Quality of Life of the citizens of the state.
- Future funding criteria will require projects to be more multi-modal and provide integration with local land use.
Context Sensitive Solutions

Whatever you call it (CSD, CSD&S or CSS) - it’s about preserving, enhancing and balancing historic, aesthetic, scenic, environmental, and community objectives along with safety and mobility objectives in transportation.
Context Sensitive Solutions

Applies to transportation planning, programs, project development, construction, operations & maintenance
Public Measures of Success

1. Community acceptance
2. Environmental compatibility
3. Financial feasibility & value
4. Timeliness of delivery
5. Performance functions
6. Preservation of investments
Growing out of ISTEA 1991 and NHSDA 1995, this 1997 FHWA Guide explored and illustrated flexibilities and opportunities that already exist to balance community, environmental, safety, and mobility objectives in the development of our projects.
A primary highway design tool (the AASHTO “Green Book”) is not intended to be a set of national standards...

...it is intended to be used as guidelines, geometric design concepts, and criteria with flexible ranges of values.
In 1999, the DOTs of Minnesota, Maryland, Connecticut, Kentucky and Utah were selected as CSD “pilot states” to further implementation and mainstreaming of CSD across the nation.

In 2000, MnDOT deploys a pilot CSD training class and articulates CSD Policy (Tech Memo) and 6 Core MnDOT CSD Principles.
CSD&S Research & Guidance

Geometric Design Practices for European Roads

AASHTO

NCHRP REPORT 480

A Guide to Designing for Flexibility in Highway Design

May 2004

NCHRP

ITE

Context.Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities

2001

2002

2004 “Bridging Document”

2006
FHWA & AASHTO CSS Emphasis
www.ContextSensitiveSolutions.org

CSS Online Resource Center Launched in 2004
SAFETEA-LU referenced into U.S. Code FHWA’s 1997 *Flexibility in Highway Design* publication and the original Principles of CSD (15) ... heightened the requirements for public involvement ... and directed the US DOT to do a study of the benefits of well designed transportation projects for communities ... ($2 million study grant to the AIA and subcontracted to the U of MN Center for Transportation Studies)
So How Was It Going With CSS?
47 States have done CSS training
45 States encountered barriers to implementing CSS principles
35 States have issued formal CSS policies
34 States indicated a desire to improve CSS implementation
25 States have taken steps to integrate CSS into agency culture
6 States have included CSS in their agency’s strategic plans

Topic areas of most interest to the States
• Successful training tools & guides (*design flexibility/maintenance)
• CSS performance measures (11 states have – most think important)
• Effective public involvement processes
• How to deal with perceptions of higher costs and liability concerns
On September 6 - 8, 2006 in Baltimore, MD, 262 participants from 46 states participated in a National CSS Peer Exchange Conference sponsored jointly by FHWA and AASHTO.
Top Challenges for Integrating CSS:

- Perception & reality of barriers (tort liability, design manuals, etc.)
- Perception & reality of “prescriptive” agency policies
- Long term state & DOT “culture” barriers
- Perception of CSS as more about environment than mobility & safety
- Funding processes to support CSS & better pre-planning and scoping
- Missing disciplines to complement DOT staff with needed skill sets
- Development of new skills for managing collaborative approaches
- DOT fears of losing control in the project development process
- The shortcomings of DOT scoping processes
- CSS integrations from pre-project planning processes through post-project maintenance activities
- Performance measurement
- CSS action planning or updating of action plans by DOTs
Following the National CSS Peer Exchange ... AASHTO and FHWA jointly conducted a National CSS Strategic Action Planning initiative.

A draft Summary Report recommended a Vision, Definition, refinement of Principles, and Strategic Goals & Action Plans for Mainstreaming of CSS.
FHWA & AASHTO CSS Emphasis

National Action Planning

The Summary Report recommended adoption of 4 Core CSS Principles applying to transportation processes, outcomes, and decision-making and tied to key underlying and desired Qualities of Process (12) and Outcomes (5):

1. Strive towards a shared stakeholder vision to provide a basis for decisions.
2. Demonstrate a comprehensive understanding of contexts.
3. Foster continuing communication and collaboration to achieve consensus.
4. Exercise flexibility and creativity to shape effective transportation solutions while preserving and enhancing community and natural environments.
FHWA & AASHTO CSS Emphasis
National Action Planning

The draft Summary Report focused on 4 Strategic Goals for Mainstreaming CSS and inclusion of detailed implementation plans to support each Goal:

1) Making the Case for CSS
2) Building CSS Knowledge & Skills
3) Promoting Flexibility in Application of Standards
4) Supporting Leadership & Coalition Building
FHWA & AASHTO CSS Emphasis

The Business Case
A Business Case For CSS

- CSS can improve an agency’s customer & stakeholder relationships (building confidence and trust)
- CSS can reduce an agency’s cost of doing business (in delivering services, programs and projects)
- CSS can improve an agency’s performance and efficiency (by reducing costly process and project delays and rework cycles)
- CSS can improve an agency’s ability to balance competing objectives (while optimizing return on investments)
- CSS can result in more than 20 measurable agency and user benefits (correlated by ongoing research)
A New MnDOT Strategic Vision

How Does CSS Relate?
New Strategic Plan

• **5 Goals**
  - Safety, Mobility, Innovation, Leadership and Transparency

• **Innovation** - Promote a culture of innovation in the organization
  - Integrate CSS within Mn/DOT as a business model
  - Innovative Finance
  - Sustainability Initiative
Collaborative, Interdisciplinary Approach

- Accountability
- Responsiveness
- Building relationships & trust with stakeholders
- Collaborative alliances
- Partnering with resources and responsibilities
- Accomplishing more with less
CSS Principles - A House of Cards

Create a lasting value for the community

Use agency resources effectively

Maintain environmental harmony
Address community and social issues
Address aesthetic treatments
Utilize full range of Design choices
Document project decisions
Track and meet all commitments

Use full range of communication strategies
Achieve consensus on purpose and need
Address alternatives and all modes
Achieve a safe facility for users and community

Use interdisciplinary teams
Involve stakeholders and the public
Seek to fully understand the context
# CSS Principles Benefits Matrix

## Principles
1. Improved predictability of project delivery
2. Improved project scoping and budgeting
3. Improved long term decisions and investments
4. Improved environmental stewardship
5. Optimized maintenance and operations
6. Increased risk management and liability protection
7. Improved stakeholder/public feedback
8. Increased stakeholder/public participation, ownership, and trust
9. Decreased costs for overall project delivery
10. Decreased time for overall project delivery
11. Increased partnering opportunities
12. Minimized overall impact to human and natural environment
13. Improved mobility for users
14. Improved walkability and bikeability
15. Improved safety (vehicles, pedestrians, and bikes)
16. Improved multi-modal options (including transit)
17. Improved community satisfaction
18. Improved quality of life for community
19. Improved speed management
20. Design features appropriate to context
21. Minimized disruption
22. Improved opportunities for economic development

## Benefits
1. Use of interdisciplinary teams
2. Seek broad-based public involvement
3. Use of range of communication strategies
4. Address community of purpose and need
5. Address environmental harmony
6. Address community and social benefit
7. Use full range of design rigor
8. Seek fiduciary responsibility
9. Create a lasting value for the community
10. Design features appropriate to context

<table>
<thead>
<tr>
<th>Principle</th>
<th>Benefits</th>
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<tbody>
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CSS Benefits - Agency

1. Improved predictability of project delivery
2. Improved project scoping and budgeting
3. Improved long term decisions and investments
4. Improved environmental stewardship
5. Optimized maintenance and operations
6. Increased risk management and liability protection
7. Improved stakeholder/public feedback
8. Increased stakeholder/public participation, ownership, and trust
9. Decreased costs for overall project delivery
10. Decreased time for overall project delivery
11. Increased partnering opportunities
CSS Benefits - User

12. Minimized impact to human and natural environment
13. Improved mobility for users
14. Improved walkability and bikeability
15. Improved safety (vehicles, pedestrians, and bikes)
16. Improved multi-modal options (including transit)
17. Improved community satisfaction
18. Improved quality of life for community
19. Improved speed management
20. Design features appropriate to context
21. Minimized construction related disruption
22. Improved opportunities for economic development
Resistance to Change seems driven by Habits.

“We are what we repeatedly do ... excellence is not an act but a habit.”

CSS Challenges

CSS is about new Habits.

Resistance to Change seems driven by Habits.

Today’s challenges require new Habits shaped by new skills, new knowledge, and new attitudes.

“We are what we repeatedly do ... excellence is not an act but a habit.”
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