Context Sensitive Solutions:
An Overview

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Interstate Highway System

A Major National Achievement

- Connected the Country
- Provided Opportunities
- Grew the Economy
- Enhanced Quality of Life
Interstate Highway System

Drove the Need for National Standards

- Safety
- Guiding Traffic
- State-of-the Art Practice
During the Interstate Era in the U.S.

Technical Standards…

Became the **Drivers** of Road Design

Instead of **Servants** of Road Design
Technical Standards Driven Design

Often
Produced This . . .

And Not This . . .
Led to “DAD”
“Design, Announce, Defend”
Which Often Led to Projects
Delayed and Stopped
Technical Standards are Necessary
Technical Standards

But not Sufficient
Technical Standards

Need a **broader** framework
“Context Sensitive Solutions”

*Provides Such a Framework*
“Flexibility in Highway Design”

1997 FHWA watershed document:

“...design can enhance the quality of our journeys and of the communities traveled.”
Defining the Essence of CSS:

- DOTs (30+)
- FHWA
- Resource Agencies
- Citizen Stakeholders

Source: MDDOT *Thinking Beyond the Pavement*

2002 - A National Guide

Context Sensitive Solutions (CSS) is a collaborative, inter-disciplinary approach:

- involves all stakeholders
- provides a facility that fits its setting
- preserves and enhances scenic, aesthetic, historic & environmental resources
- improves or maintains safety, mobility, and infrastructure conditions

AASHTO-FHWATask Force
Context Sensitive Solutions

It is different

**Traditional**
- Standards Driven
- Prescriptive
- Converges from the Outset
- Constrained
- Sequential
- Arms Length
- Transportation Trumps Context
- Safety & Cost Concerns
- Public Officials Decide

**Context Sensitive**
- Adaptive
- Flexible
- Divergent Thinking Up Front
- Creative
- Iterative
- Collaborative
- Transportation/Contextual Parity
- Safety & Cost Concerns
- Public Officials Decide
Complete Understanding of Contexts

There are NO SHORTCUTS

Natural Environment

Social Environment

Economic Environment
**Complete Understanding of Contexts**

*There are NO SHORTCUTS*

**Contextual Factors are not always obvious!**

*Invisible Context*  

*Visible Context*
Context Sensitive Solutions: Our Own “10 second Test”

It Cannot be CSS Without:

- Proactive Engagement of Stakeholders
- Project-focused Interdisciplinary Team
- Continuous Communication Between the Two
CSS Projects and Practices

- Glenwood Canyon, CO
- Fort Washington Way, OH
- Stone Avenue, AZ
A “premier” CSS Example of the 1980s . . .

. . . that Pre-Dates the CSS “Movement” Launched in the ‘90’s
Glenwood Canyon
I-70 Colorado...A “Pioneer” of CSS

- 12.5 Miles of I-70 in Colorado – last gap
- Strong opposition, legal challenges, injunctions, etc.
- Delayed for decades
Glenwood Canyon

- Governor appointed citizens group to work as peers with design team
- Both groups worked hard to agree
- They did: On a solution that added value - functionally and contextually
- Win-Win Outcome
Fort Washington Way
Cincinnati, Ohio

Interstate Highway along Ohio River - downtown Cincinnati

Problems:

- Barrier between downtown and the river
- Wide cross section consumed valuable downtown real estate
- Frequent access points encouraged excessive local traffic - congestion and safety problems
Fort Washington Way

**Functional Goals:**

- Improve operations and safety
- Separate local from through traffic
- Increase capacity for through traffic
- New urban streets for local traffic
Contextual Goals:

- Improve access to river and arenas
- Provide deck for future development
- Create new transit center
- Reduce the footprint
- CSO improvements to reduce sewer discharge
Fort Washington Way

**Outcome:** Better than Before

1997

Functionally & Contextually
Stone Avenue

Tucson, AZ

• Formerly the “main drag”
• Four mile urban corridor
• Proposal to widen road - accommodate suburban commuters
• Businesses and residents along Stone Avenue seek to stem the corridor decay
Neighborhood groups and City collaborate to define goals

- Accommodate current and future travel without widening
- Reinvigorate businesses and development
Stone Avenue

Traffic flow improved *without* widening:

- Identified key intersections and concentrated on them
- Developed and implemented creative solutions
Integrate transportation and land use

- Create special districts and funding packages
- Implement as funding is available
DOTs are Applying CSS

... AZ, CA, CO, CT, IL, KY, MA, MD, ME, MN, NC, NH, NJ, NY, PA, OR, TN, UT, VT, WA...
Sustainable Highways & CSS

Will CSS Break the Bank?
Context Sensitive Solutions & Value Engineering

COMPATIBLE or CONFLICTING?
VE Means Reducing Cost But Not Reducing Functionality

TRANSPORT FUNCTIONS
- Transport People Efficiently
- Ensure Structural Integrity
- Manage Operations
- Provide Access
- Ensure Safety

CONTEXT FUNCTIONS
- Protect Environment
- Preserve Historic Resources
- Strengthen Communities
- Provide Economic Options
- Improve Aesthetics

VE & CSS Are Compatible... If We Acknowledge Functional Parity
Context Sensitive Solutions & Value Engineering

**Context Sensitive Solutions**
Without CSS some projects would not be acceptable

**Value Engineering**
Without VE some projects would not be affordable
Widespread Interest & Activity:

- 46 DOTs attended this meeting
- 47 DOTs have had workshops
- 37 DOTs have revised project development processes
- 35 DOTs have advanced CSS policies
National CSS Peer Exchange
September, 2006: Not so good news

Despite Widespread Interest & Activity:

- Some profess more than they practice
- CSS not completely understood
  - Not a cook-book
  - Not just “add-ons”
  - Not just aesthetics
  - Not just “touchy-feely”
  - Better as a first resort than a last
Quotes
“In the future we won’t even talk about CSS…it will simply be the way we do business”

Utah DOT
Carlos Braceras,
Deputy Director
“…Meaningful public involvement doesn’t mean you will always agree…”

Former Arizona DOT Director & Current FHWA Administrator,
Victor Mendez
CSS Nuggets:

- ‘Interact with key leaders first’
- ‘Use neutral facilitators’
- ‘Validate stakeholders’ concerns’
- ‘Start multi-disciplinary teams early’
- ‘Visualization is essential’
- Not just about aesthetics
CSS Nuggets:

- ‘Be honest about funding constraints’
- ‘Don’t let funding limits unduly constrain’
- ‘Find alternate funding sources’
- ‘Local governments help fund upgrades?’
- ‘Consider design competitions’
CSS Nuggets:

- DOTs are stakeholders too
- ‘CSS isn’t about never saying “no”’
- “No” always needs a good explanation
- CSS is about looking for “yes”
Other CSS Nuggets

CSS is at once:

- a Philosophy
- a Process
- a Tool Kit
Other CSS Nuggets

- “Avoiding Negatives” is the Minimum Opener
- “Creating Positives” is the End-game Goal
Other CSS Nuggets

- *Transportation Factors and Contextual Factors on a Level Playing Field*
- *Search Relentlessly for “Win-Win” Outcomes*
Other CSS Nuggets

- CSS Aims for Consensus
- While it Might Miss “Consensus”
- It Must Never Miss “Consideration” (Full & Fair)
Other CSS Nuggets

- CSS Must Fit NEPA, CEQA & Other Statutory Requirements
- Means Considering & Improving Alternatives Which Are Not Universally Embraced
Context Sensitive Solutions: Measures of Success

To what extent will participants agree the process has been:

- Inclusive & Interactive
- Open & Transparent
- Fair & Objective
- Broad yet Focused
- Thorough & Responsive
- Creative yet Deliberative
- Respectful of Schedule & Budget
- Conclusive & Decisive
CSS For the Peninsula Corridor

- Builds upon technical analyses under way
- Builds upon strong stakeholder interest in a more interactive process
- Ensures technical process is transparent, responsive and interactive
- Ensures that all voices are heard and issues are addressed
- Improves chances for better, more broadly supported outcome – not unanimity
Context Sensitive Solutions: An Overview

Questions?