CONTEXT SENSITIVE DESIGN

A Normal Way of Doing Business

Context Sensitive Design Workshop
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In this session:

- Definition of Context Sensitive Design
- Principles of CSD
- Critical Skills
- Public Involvement
- Project Development Process
The Road to Hana
What Is Context Sensitive Design?

• FHWA calls it “Thinking Beyond the Pavement”.

• ITE calls it “Harmonization”.

• Mn/DOT says it is a project that is “in harmony with the community and the environment”.

It Works
(for All Modes)
It Fits: “Lies Gently on the Land”
It Looks Good!

- Maintained pedestrian connection from downtown area to high school
- Multiple retaining walls create a grade-separated pedestrian area
- Project is seen as an amenity by the community
Why?

- Enhances livability and sustainability of communities
- Builds community support
- Creates an asset for the community
“Avoid the Rework Cycle”

Decide ➔ Design ➔ Defend

Redesign ➔ Delay
CSD is good design practice

(Values change by minute degrees)

CREATE

Produce through imaginative skill; to design something new

DESIGN

Conceive and plan out; create for a specific function or end

ENGINEER

Apply science and mathematics; to plan out with skill and craft

Source: Webster’s Dictionary
People Will Accept No Less!!

- Societal Changes Have Created the Public Demand for a More Context-Sensitive Approach.
Mn/DOT’s SIX PRINCIPLES

- All Modes
- Public Involvement
- Balance
- Aesthetics
- Interdisciplinary Team
- Design Flexibility
Building Critical Skills

- Understanding context
- Communicating
- Designing with flexibility
- Integrating aesthetics
- Accommodating bikes, walkers and transit
- Building and maintaining the project
- Documenting decisions
Principles of CSD

1. Balance safety, mobility, community and environmental goals in all projects.
Critical Skill: Understanding Context

What is context?

- “the interrelated condition in which something exists”
- “weaving parts into a whole”
  - Webster’s Dictionary
What’s the Context?
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Natural Resources: Elm Creek Parkway
Types of Historic Properties

- Individual structures
- Historic districts
  - Contributing elements
  - Non-contributing elements
- Historic corridors
- Cultural landscapes
- Archaeological sites
Cultural Resources – Archaeological
Cultural Resources - Architecture
Community Resources - Parks
Community Resources – Main Street
Community Resources – Land Uses
Community Resources-Future Land Uses
High Bridge, St. Paul
Environmental Justice

Disproportionate impacts on concentrations

- Minority populations
- Low income populations
Who Decides What Is Important?

- Laws (NEPA and MEPA)
- Regulatory agencies
- The people in the community
- The transportation agency
Resources for Identifying Context

- Economic
  - Extension office
  - Chamber of Commerce
  - City / County planning
  - Local business associations
- Social Cultural
  - Local planning agency
  - County planning office
  - Parks departments (local/county)
  - State historic President’s office / city planning agency
- Transportation Needs
  - Met Council
  - Local transit provider
  - City / County public works
  - City / County planning
- Environmental
  - Department of Natural Resources
  - NPS / US Forest Service
  - Watershed district
- Aesthetic
  - City / County planning
Principles of CSD

2. Involve the public and affected agencies early and continuously.
Critical Skill: Communicating

Why?

• It’s the democratic way.

• People like to know they matter.

• They have good ideas.
Participatory Design

Is Like Designing in a Fishbowl
Build a Multi-Disciplinary Team

- Find “cooperative individualists” - people who think creatively but work collaboratively.
Identifying the Stakeholders

- Look at the physical context
- Talk to elected officials
- Find the “rainmakers”
- Be systematic and inclusive
- Revisit stakeholder lists periodically
Involving People

It is not so much the involvement technique that makes the difference as **HOW** the technique is carried out.
Four Ways to Negotiate

- Righteousness of cause
- Trusted emissary
- Eyeball to eyeball
- Take no prisoners
Principle #1

LISTEN!
LISTEN!
LISTEN!

Public involvement is two-way communication.
Public involvement without integrity is worse than no public involvement at all.
Principle #3

ATTITUDE IS EVERYTHING

Believe in involving the public and treat everyone with respect - no matter what.
Principle #4

BUILD OWNERSHIP

“I became a team player because I was on the team.”
Stumbling Blocks

• History
• Time and schedule
• Funding and cost
• Fear of public speaking
• Internal disbelief (not valued)
• Already know the solution
Some Rules of Thumb

- You have to speak their language.
- Public opinions will conflict.
- Constituencies will change.
- People participate if it is in their interest.
- You can control the process but not the outcome.
People Must Agree on Purpose and Need
Resolution of Issues

- Small discussion groups (informal)
- One on one meetings (informal)
- Citizen advisory committees (community)
- Technical advisory committees (agencies)
- Design charrettes
Example: Silver Lake Road
Some Basic Tools

- Start and end on time
- Make sure key people are there
- Use an agenda
- Stick to team business/check progress
- Keep track of decisions/use flip charts
- Summarize
One good picture is worth 10,000 words!!
Many Options
Some Processes

- Structured Go-Around (gets ideas out)
- Polling (organizes or ranks ideas)
- Flowchart (identifies sequence of events)
- Matrix (examines options)
Good Facilitators

• Are good communicators (nothing to teach)
• Ask questions (proactive listening)
• Listen and restate when necessary
• Maintain control but empower the group
Good Facilitators

• Ensure that all views are placed on the table
• Chill dominators and encourage shy ones
• Apply structured tools to build consensus
• Know when a break would be useful
Example: Williston Road
Dealing with Elected Officials

• Follow local protocol (rely on local staff)
• Use proper titles and show respect for office
• Speak when recognized/spoken to
• Tell the story
Dealing with Elected Officials

- Listen - don’t argue or defend every point
- Share the process – No surprises
- Find a project champion
- Give a little extra attention
Dealing with the Media

- “Mass Media” is an Oxymoron
- It’s Your Agenda, not the Media’s
- Keep Communicating
- Build Relationships
Media Tools

- Personal Visits – Build Relationships
- Media Kits – Content, Not Glitz
- Press Release - Newsworthy
- Press Conference – Last Resort
If You Succeed in Public Involvement

• Focus Shifts from Problems to Solutions
• You and Community Share an Agenda
• Community has a Stake in Process
• You have Created “Rainmakers”
Principles of CSD

3. Address all modes of travel.
Critical Skill: Designing for Transit
For Pedestrians
... For Bicycles
Intermodal Connections
5. Apply flexibility inherent in design standards.
Critical Skill: “Think Method of Design”

- A WAY OF THINKING – NOT A SEPARATE PROCESS OR PRODUCT
- Design process for all projects
- Varying levels of application
- Extends throughout project development process
Defining the “Problem”

- Transportation needs
- Community needs
- Environmental protection requirements
- Other needs
Scoping the Alternatives
During Pre Design

- How can alignment and section be adjusted to maximize benefit for all goals?
- How can aesthetic design and landscaping be incorporated to enhance goals?
- How can impacts be avoided, minimized, mitigated?
- What will it look like in three dimensions?
Example: CR “S” in Polk County
Mitigation Sequencing

- Avoid
- Minimize
- Repair or restore
- Reduce over time
- Replace
AVOIDING IMPACT THROUGH ALIGNMENT CHOICE
Minimizing Impacts through Design
During Final Design

- How can the goals/values identified be best implemented in the selected alternative?
Keeping the Faith

DOCUMENT!
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Document All Design Decisions
During Right-of-Way Acquisition
During Construction

• How can we best carry out the design and decisions made in the previous phases?
During Construction
How can we foster continued commitment to the chosen design?

How can we minimize unintended maintenance impacts through design?
Principles of CSD

4. Use an interdisciplinary team tailored to project needs.
Critical Skill: Collaboration

- Internal and external resources
- Training opportunities
- T² - UM Center for Transportation Studies
- Internet
- Bibliography
- Visualizations
6. Incorporate aesthetics as an integral part of good design.
Critical Skill: Aesthetic Design
Fundamentals of Aesthetic Design

- Form
- Character
- Detail
- Scale
- Proportion
Another Critical Skill: Funding

- Context Sensitive Design does not necessarily cost more!

- Sometimes requires creative assembly of funding sources.
Learning from Successes and Failures

Monitor the Results
Remember: The Objective is Balance

Safety and mobility with Scenic, aesthetic, historic, environmental and community values.
A Successful Project . . .

- Has community acceptance
- Is compatible with the environment
- Has engineering/functional credibility
- Is financially feasible
Factors That Shape Success

• Planning and public involvement
• Perseverance of the individual
• Visionary leadership
• Maximizing funding opportunities
• Integration of interdisciplinary experts
Factors That Shape Success

• Flexible and innovative design
• Learning from successes and failures
• Visual and environmental quality
• Reasonable cost
• Presenting and promoting the results
• Attitude and Tradition of Excellence
Benefits of Pro-Active Posture

- Derive timely decisions
- Obtain decisions that stick
- Develop partners - not opponents
- Generate public trust and support
- Build positive relationships with resource agencies
- Improve project delivery
Next Session

- Flexibility in Design Standards
- System and Network Relationships
- Design-Safety Relationship
- Tort Liability