Performance Measurement of Contact Sensitive Solutions (CSS) in Urban Thoroughfare Design

Beverly J. Storey, RLA
Texas Transportation Institute

Performance Measures for Transportation and Livable Communities
Austin, Texas
September 7, 2011

CSS – Core Principles

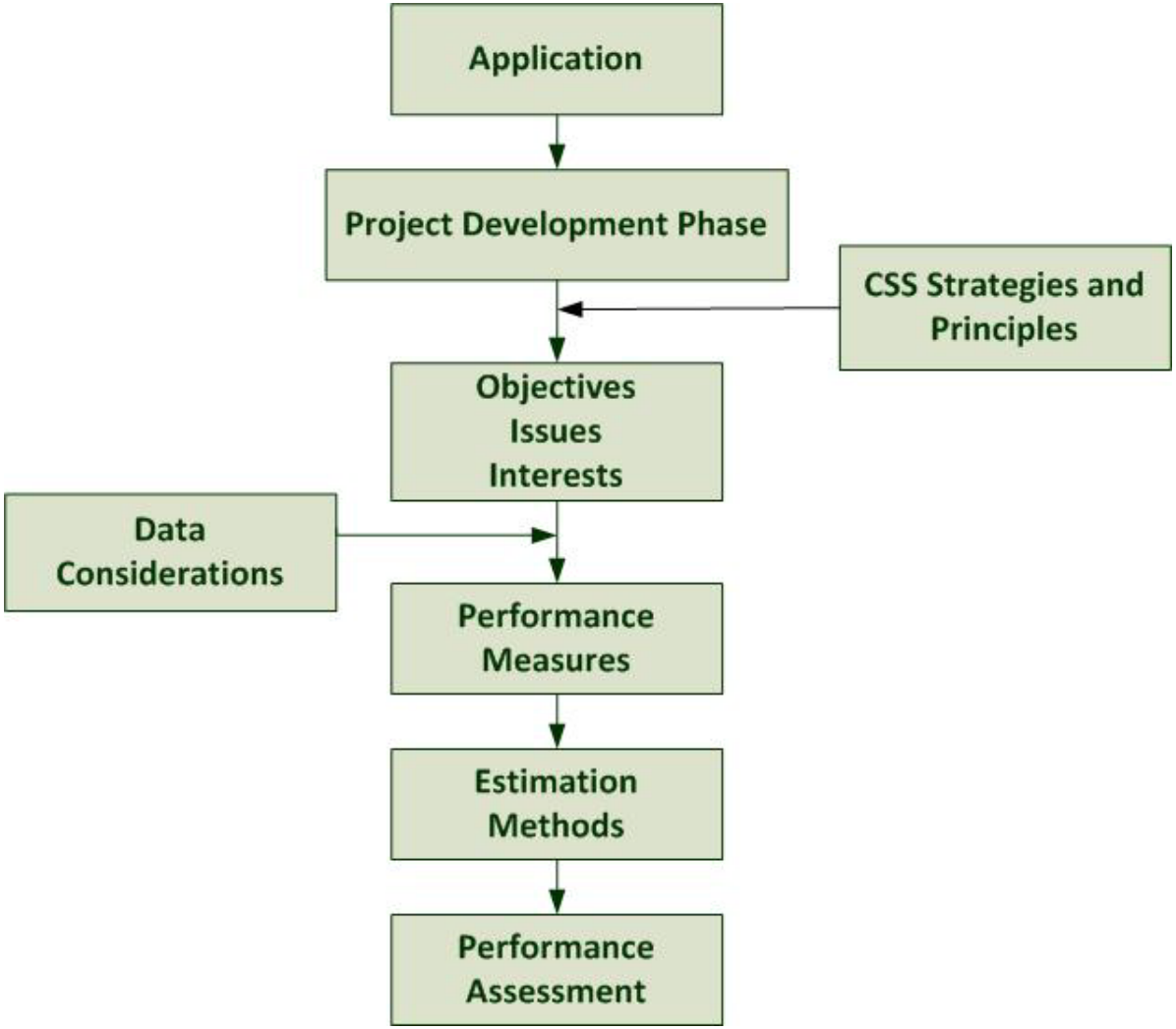
- Shared stakeholder vision
- Comprehensive understanding of contexts
- Continuing collaboration to achieve consensus
- Flexibility and creativity

Urban Thoroughfare Design

Performance Measures (PM) of CSS

- Assess the performance
  - Agency
  - Project
  - Context
- Perspective
  - Process
  - Outputs
  - Outcomes
- Use conventional and direct participant quantification methods

Agency Level Applications



Urban Thoroughfare Design PM

- Project performance outcomes - such as
  - Operation
  - Safety
  - Mobility (by mode)
  - Appearance
  - Service to users
  - Effects on adjacent activities
  - Create lasting value for the community
  - Support for other objectives
  - Quality of life, etc.

Possible PM for Planning/Design Phase of CSS Project

Appli-cability		PROCESS Type of Results/Sample Measures	CSS P	CSS Q	CSS O	OUTPUTS Type of Results/Sample Measures	CSS P	CSS Q	CSS O	OUTCOMES Type of Results/Sample Measures	CSS P	CSS Q	CSS O
Project	Facility	Accommodate objectives				Design features (e.g., pavement, lighting, crossing frequency, target speed, streetscape, etc.)				Resulting quality of service			
		Percent of stakeholder objectives included in adopted project objectives				Number of separate locations with walk-able features (e.g., curb extensions, bike lanes, signalized crosswalks)				Multimodal quality of service			
		Percent of stakeholder interest categories represented in adopted project objectives				Percent of blocks with 400 feet or less between crosswalks				Percent of pedestrian throughway length to be shaded by street trees or overhead structures 5 years after project completion			
		Design flexibility				Safety features (all modes)				Stakeholder satisfaction with project design			
		Number of different alternatives examined				Percent of blocks with at least __ feet between traffic lanes and ped. throughway				Level of satisfaction based on survey after review of final design and visualizations			
		Required degree of compliance with agency of jurisdiction design standards				Average distance along major thorough-fares between signalized crosswalks				Percent of stakeholders satisfied with design based on responses at final public meeting to discuss design			

[1] Column legend: P = CSS core principle number, Q = quality number, O = outcome number - An entry of "S" indicates support for other outcomes.

Lancaster Avenue Case Study

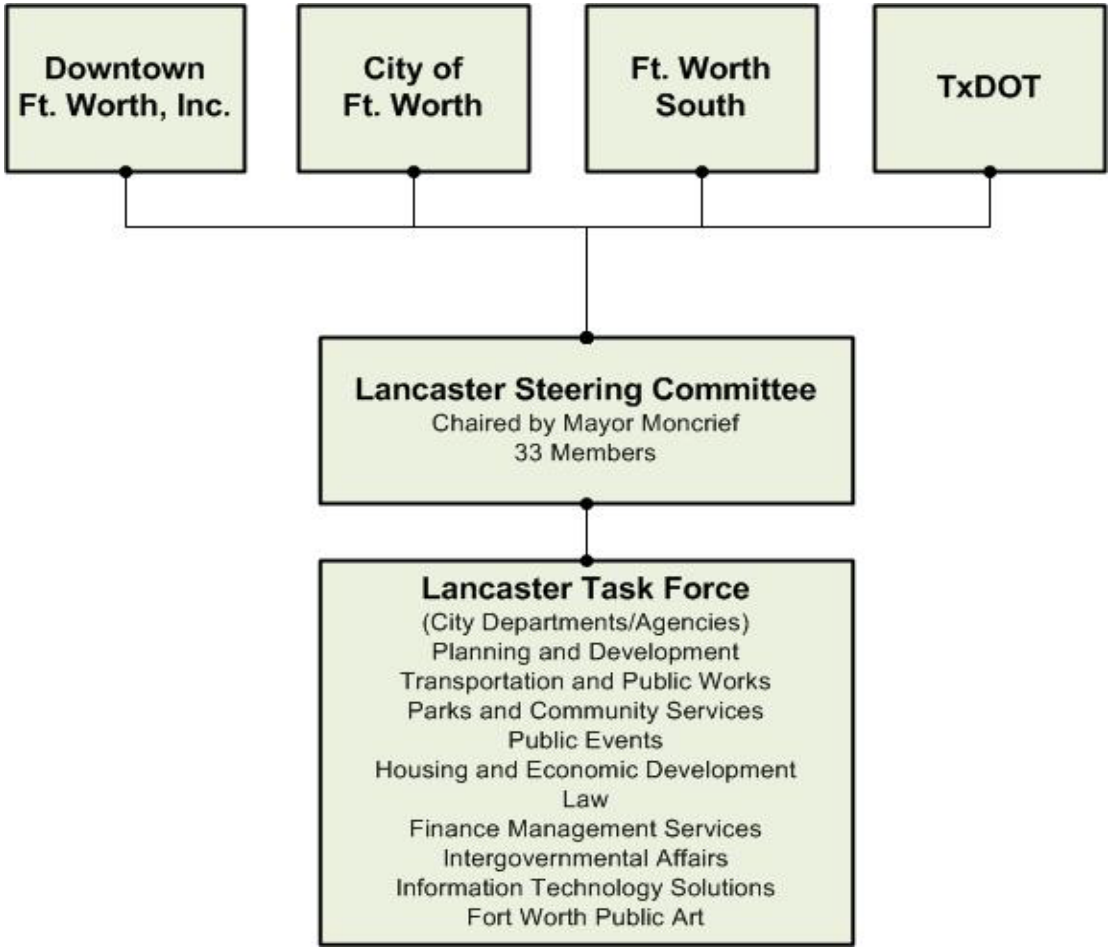
- Lancaster Avenue - Fort Worth, Texas
- Downtown segment
- Reconstruction
  - State highway route
  - Transfer to City
  - Promote
    - Redevelopment
    - Revitalization

Downtown Ft. Worth 2010. Source: Google Maps

Lancaster Avenue Redevelopment

- Reconstruct Lancaster to aid redevelopment
- Commitment to collaborative effort involving stakeholders
  - City
  - TxDOT
- Transfer Lancaster to City after reconstruction
  - Delete from state highway system
  - Convey surplus ROW

Collaborators



Project Vision and Goals

- 3-day Steering Committee workshop
- Consensus vision and goals
  1. Create a great pedestrian street
  2. Promote infill mixed-use development along the corridor
  3. Showcase area for existing historical buildings
  4. Link the south side of downtown Ft. Worth with the medical district

Project Performance Measures

- Have the project vision and goals been realized?
  - Agency
  - Project/Facility
  - Context

Project Performance Measures

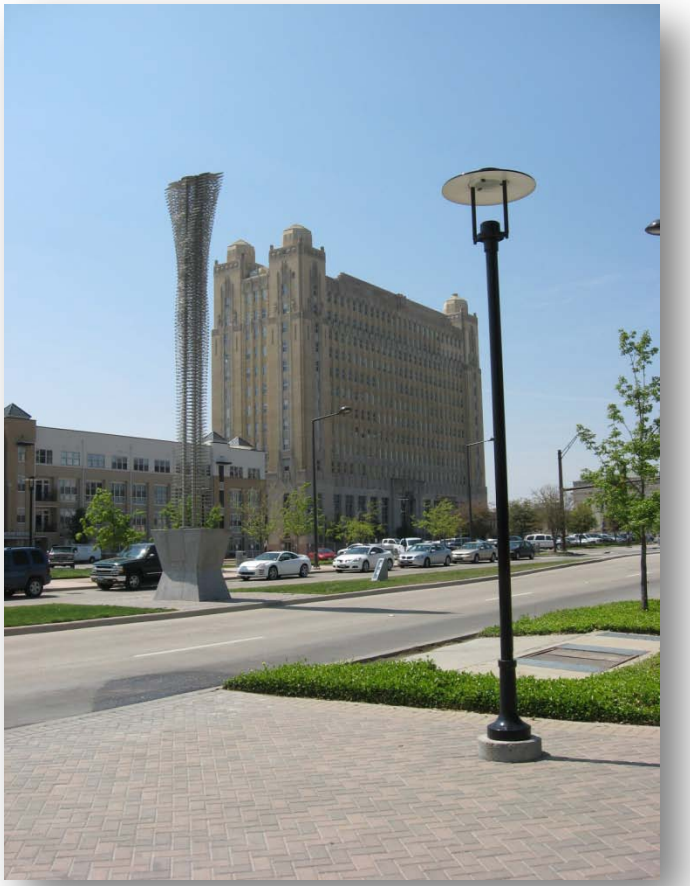
1. **Create a great pedestrian street**
   - Total sidewalk area
   - Curb extensions, crosswalk lengths, median widths, pedestrian refuges
   - Walkability – perceived safety (on-street parking, slower traffic flow), aesthetic components, streetscape features, lighting
2. **Promote infill mixed-use development along the corridor**
   - Acreage available for redevelopment
   - Number of sites redeveloped
   - Increased tax base for City

Project Performance Measures

3. **Showcase area for existing historical buildings**
   - Number of historic buildings renovated
4. **Link the south side of downtown Ft. Worth with the medical district**
   - Connectivity through site and surrounding parcels

Meeting Project Vision and Goals

1. Create a great pedestrian street
   - Wider sidewalks
   - Streetscape environment



Meeting Project Vision and Goals

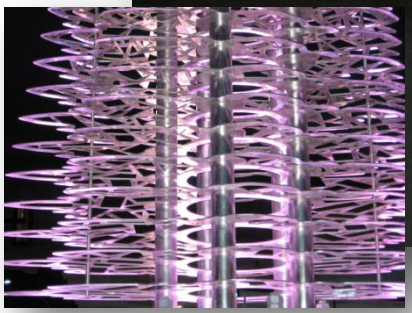
1. Create a great pedestrian street
   - Sidewalk extensions (bulbouts)
   - Pedestrian countdown signals
   - Midblock crosswalks

Meeting Project Vision and Goals

1. Create a great pedestrian street
   - On-street parking

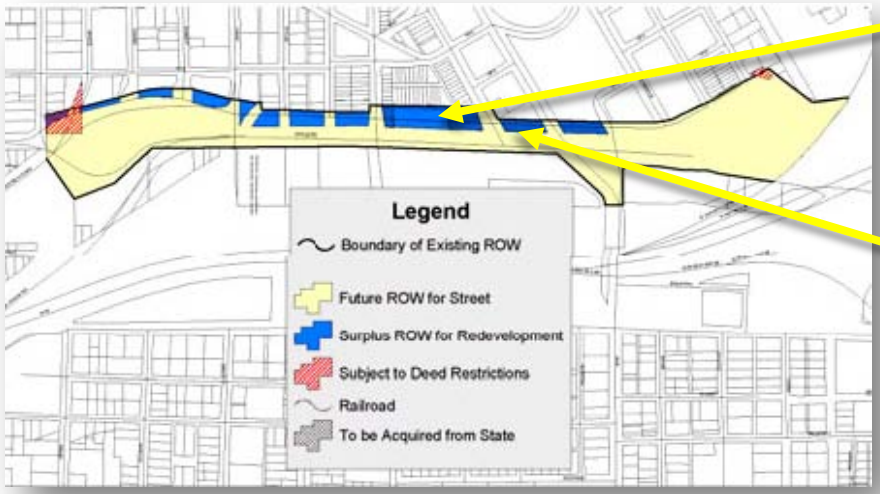
Meeting Project Vision and Goals

1. Create a great pedestrian street
   - Pedestrian scaled lighting
   - Light sculptures in medians



Meeting Project Vision and Goals

2. Promote infill mixed-use development along the corridor
   - Surplus right of way available for development



Meeting Project Vision and Goals

2. Promote infill mixed-use development along the corridor.
   - T&P terminal building restoration/reuse
   - Sheraton Hotel and Spa refurbishment
   - New Omni Hotel and Condominiums

Meeting Project Vision and Goals

3. Showcase area for existing historical buildings
   - T&P Building Renovation to T&P Lofts

Meeting Project Vision and Goals

4. Create link between the medical district and the south side of Fort Worth
   - Pedestrian connectivity
     - To project perimeter
     - Through redevelopment parcels

For more information regarding

Performance Measurements of CSS in Urban Thoroughfare Design

Please visit the Institute of Transportation Engineers website at www.ite.org/css

Questions?

Contacts

Beverly Storey

Texas Transportation Institute

b-storey@tamu.edu

(979) 845-7217

Brian Bochner

Texas Transportation Institute

b-bochner@tamu.edu

(979) 458-3516