

# Chapter 9

## CONTEXT SENSITIVE SOLUTIONS

**MDT ENVIRONMENTAL MANUAL**

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## Chapter 9

# CONTEXT SENSITIVE SOLUTIONS

### 9.1 OVERVIEW

The Context Sensitive Solutions (CSS) process is an approach based on the concept that transportation projects should consider the “context” of their existence — not just the study area’s physical boundaries. Items typically considered in evaluating a project’s context include:

- natural surroundings,
- aesthetic treatments,
- historic resources,
- community character,
- environmental stewardship, and
- economic sustainability.

As defined on the Federal Highway Administration (FHWA) CSS website, CSS:

*...is a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility. CSS is an approach that considers the total context within which a transportation improvement project will exist. CSS principles include the employment of early, continuous and meaningful involvement of the public and all stakeholders throughout the project development process.*

The CSS approach has evolved in response to increasing concerns expressed by affected stakeholders regarding the way transportation projects affect communities, the natural environment and the overall quality of life. According to the American Association of State Highway and Transportation Officials (AASHTO) publication *A Guide to Best Practices for Achieving Context Sensitive Solutions*, CSS recognizes that the way a highway or road is integrated within a community, can have far-reaching impacts (positive and negative) beyond its traffic or transportation function.

The concepts embodied in CSS, and the name for the approach (which originally was Context Sensitive Design), were products of a 1998 conference on “Thinking Beyond the Pavement: National Workshop on Integrating Highway Development with Communities and the Environment While Maintaining Safety and Performance.”

FHWA formally recognized the value of CSS by incorporating it as a part of the agency’s “Vital Few Environmental Streamlining and Stewardship Goal.” Objective #1 of the Environmental Vital Few Goal is to improve the environmental quality of transportation decision-making by promoting use of integrated approaches to multimodal planning, the environmental process and project development at a systems level, and/or use of CSS at a project level. The goals of the CSS approach also have received support in various provisions of Federal law and FHWA guidance, as discussed in [Section 9.2](#).

This Chapter provides guidance on the key principles and qualities of the CSS approach. It also includes references to additional information sources that provide further details and guidance on implementing the approach. See [Chapter 16 "Public Involvement"](#) for guidance on public involvement activities that can complement the CSS approach.

## 9.2 LAWS, REGULATIONS AND GUIDANCE

### 9.2.1 23 USC 109 “Standards”

Section 109(c)(1) of the *United States Code* (USC), enacted by the 1995 *National Highway System Designation Act*, provides that a design for new construction, reconstruction, resurfacing (except for maintenance resurfacing), restoration or rehabilitation of highways on the National Highway System (other than highways also on the Interstate System) may take into account the constructed and natural environment of the area; the environmental, scenic, aesthetic, historic, community and preservation impacts of the activity; and access for other modes of transportation.

Section 109(c)(2), enacted by the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) authorizes the US Department of Transportation to consider the characteristics and qualities of CSS in establishing standards to be used on the National Highway System.

### 9.2.2 FHWA “SAFETEA-LU Environmental Review Process Final Guidance”

The answer to Question 5 in the Final Guidance for implementing 23 USC 139 “Efficient Environmental Reviews for Project Decision-Making” provides the following insight on the relationship between the SAFETEA-LU environmental review process and the FHWA emphasis on CSS:

*FHWA’s CSS program encourages the early, continuous and meaningful involvement of the public and the use of a collaborative, interdisciplinary approach that involves all stakeholders throughout the project development process. The goal of CSS is to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while satisfying the project’s purpose and need. The SAFETEA-LU requirements of providing opportunities for the involvement of the public and participating agencies in the development of project purpose and need and the range of alternatives support the intent of these CSS principles.*

### 9.2.3 FHWA Flexibility in Highway Design

According to its Foreword, this 1997 publication was “...written for highway engineers and project managers who want to learn more about the flexibility available to them when designing roads.” The Foreword also indicates the guide was prepared “... for the purpose of provoking innovative thinking for fully considering the scenic, historic, aesthetic and other cultural values, along with the safety and mobility needs, of the highway transportation system.”

### 9.2.4 NCHRP Report 480 A Guide to Best Practices for Achieving Context Sensitive Solutions

This 2003 publication, available on the Transportation Research Board website, provides detailed guidance for implementing the CSS approach. It includes sections on the following topics:

- effective decision making,
- reflecting community values,
- achieving environmental sensitivity,
- ensuring safe and feasible solutions,
- organizational needs, and
- case studies in CSD/CSS.

Each of the first five sections is organized around the following key components of the project development process:

- management structure;
- problem definition;
- project development and evaluation framework;
- alternatives development;
- alternatives screening, evaluation and selection; and
- implementation.

#### **9.2.5 AASHTO Guide for Achieving Flexibility in Highway Design**

This 2004 publication provides guidance for highway designers on how to think flexibly, how to recognize the many choices and options they have, and how to arrive at the best solution for a particular context. It also makes the point that flexible design does not necessarily entail a fundamentally new design process, but that it can be integrated into the existing transportation culture.

#### **9.2.6 FHWA CSS Website**

This website includes links to information explaining CSS and its history, links to current CSS-related activities and links for assistance on CSS issues.

#### **9.2.7 “Context Sensitive Solutions.org” Website**

This website provides a Context Sensitive Solutions Resource Center that includes information and links for a broad range of CSS topics. It was created by Project for Public Spaces in collaboration with Scenic America to assist FHWA in accomplishing its Vital Few Goal for integrating CSS into project planning, development and implementation. The website is being developed in partnership with AASHTO, Federal Transit Administration, Institute for Transportation Engineers, National Association of City Transportation Officials and National Park Service.

#### **9.2.8 “Center for Environmental Excellence by AASHTO” Website**

This website includes a link for Context Sensitive Solutions. The CSS information addresses the following topics:



- Background (What is CSS? Where Did CSS Come From?)
- Why is CSS Important to Transportation Agencies?
- What Steps Can Help Institutionalize and Integrate CSS?
- Where Does CSS Apply in Program and Project Delivery?
- Links to CSS-Related Laws, Policies and Guidance.

## 9.3 PROCEDURES

### 9.3.1 Determining Application of CSS

Following completion of the Preliminary Field Review (PFR) and review of the PFR Report, the Project Development Engineer (PDE) coordinates with the Design Team (DT) to evaluate the potential level of community and stakeholder interest. This evaluation is based on the project location, potential involvement with scenic, aesthetic, historic, community and environmental resources and any known issues or areas of concern regarding the project's potential effects. It also may include consideration of the results of early coordination and/or scoping; see [Chapters 8 "Project Scoping and Early Coordination"](#) and [16 "Public Involvement."](#) The decision on whether to apply the CSS approach on a project is made in consultation with FHWA, as applicable. It is based on the anticipated level of interest in the project, the commitment of staff and resources required to implement the process and the anticipated benefits achievable by using CSS.

#### 9.3.1.1 CSS Principles and Process Components

In assessing the potential commitment of staff and resources required for applying a CSS approach, the PDE, DT and FHWA consider the following principles and process components as taken from the "Context Sensitive Solutions" information on the "Center for Environmental Excellence by AASHTO" website:

1. Core Principles. An effective CSS process adheres to key principles that include:
  - striving towards a shared stakeholder vision to provide a basis for decisions;
  - demonstrating a comprehensive understanding of contexts;
  - fostering continuing communication and collaboration to achieve consensus; and
  - exercising flexibility and creativity to shape effective transportation solutions, while preserving and enhancing community and natural environments.
2. Process Components. The CSS process incorporates components that support attainment of its core principles. The components include:
  - establishing an interdisciplinary team early, including a full range of stakeholders, with skills based on the needs of the project;
  - seeking to understand the landscape, the community, valued resources and the role of all appropriate modes of transportation in each unique context before developing engineering solutions;
  - communicating early and continuously with all stakeholders in an open, honest and respectful manner and tailoring public involvement (see [Chapter 16 "Public Involvement"](#)) to the context and project phase;
  - using a clearly defined decision-making process;

- tracking and honoring commitments through the life cycle of the project;
- involving a full range of stakeholders, including appropriate MDT offices, in all phases of a transportation program;
- clearly defining the purpose and need and seeking consensus on the shared stakeholder vision and scope of projects and activities while incorporating transportation, community and environmental elements;
- securing commitments to the process from local leaders;
- tailoring the transportation development process to the circumstances and using a process that examines multiple alternatives, including all appropriate modes of transportation and results in consensus;
- encouraging agency and stakeholder participants to jointly monitor how well the agreed-upon process is working, to improve it as needed and, when completed, to identify any lessons learned;
- encouraging mutually supportive and coordinated multimodal transportation and land-use decisions; and
- drawing upon a full range of communication and visualization tools to better inform stakeholders, encourage dialog and increase credibility of the process.

### 9.3.1.2 CSS Outcomes and Benefits

As a part of the evaluation for deciding whether to apply CSS for a particular project, the PDE, DT and FHWA consider the outcomes and benefits that are attainable using CSS. The outcomes and benefits include those discussed in the following, as taken from the “Context Sensitive Solutions” information on the “Center for Environmental Excellence by AASHTO” website:

1. Outcomes. Use of CSS leads to outcomes that:

- are in harmony with the community and preserve the environmental, scenic, aesthetic, historic and natural resource values of the area;
- are safe for all users;
- solve problems that are agreed upon by a full range of stakeholders;
- meet or exceed the expectations of both designers and stakeholders, thereby adding lasting value to the community, the environment and the transportation system; and
- demonstrate effective and efficient use of resources (e.g., people, time, budget) among all parties.

2. **Benefits.** CSS is important to transportation agencies because it can lead to better relations with stakeholders and can result in expedited program delivery. It is an approach that responds to the growing interest of the public to be meaningfully engaged throughout the transportation decision-making process. Along with the demand for more involvement from communities and other stakeholders, most transportation agencies are being asked to do more with less; therefore, making it more critical than ever for decision-making to result in timely and cost-effective solutions that work for the transportation agency and affected stakeholders. Another goal of CSS is to develop partnerships with stakeholder groups (e.g., local governments, non-profits, other State and Federal agencies), which result not only in shared decision-making but shared financial responsibility. CSS can provide other benefits in that it:
- solves the right problem by broadening the definition of “the problem” a project should solve and by reaching consensus with all stakeholders before the design process begins;
  - conserves environmental and community resources and facilitates and streamlines the process of complying with the *National Environmental Policy Act* (NEPA) (42 USC 4321, et seq.);
  - shortens the project development process by gaining consensus early, thereby minimizing litigation and redesign and expediting permit approvals;
  - builds support from the public and regulators and encourages their full cooperation, including contribution of additional resources in partnering and planning projects;
  - helps prioritize and allocate transportation funds in a cost-effective way, at a time when needs far exceed available resources;
  - promotes and supports group decisions that are more accepted and mutually satisfactory when made by those who must live with them; and
  - serves the public interest and helps build communities.

### 9.3.2 **Implementing the Decision on Application of CSS**

If CSS is to be used on a project, the PDE coordinates with the DT and FHWA to address the Core Principles and Process Components discussed in [Section 9.3.1.1](#). The PDE, DT and FHWA use NCHRP Report 480 *A Guide to Best Practices for Achieving Context Sensitive Solutions* and other pertinent CSS guidance (see [Section 9.2](#)) to help determine the details to be considered in implementing the CSS Principles and Process Components on the project.

When CSS is applied on a project, it affects the way the NEPA compliance process is conducted and the content of the NEPA documentation. However, CSS does not need to be specifically discussed in NEPA documentation.