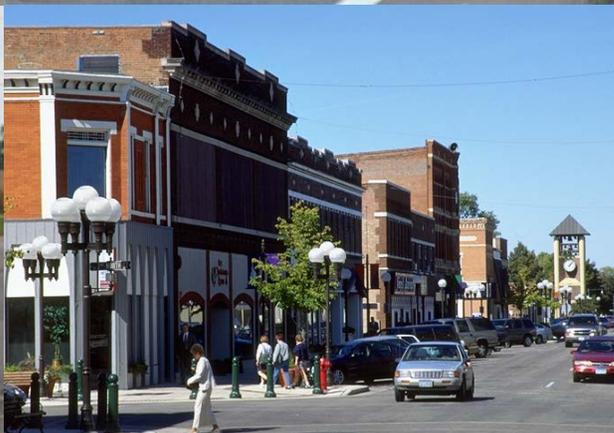
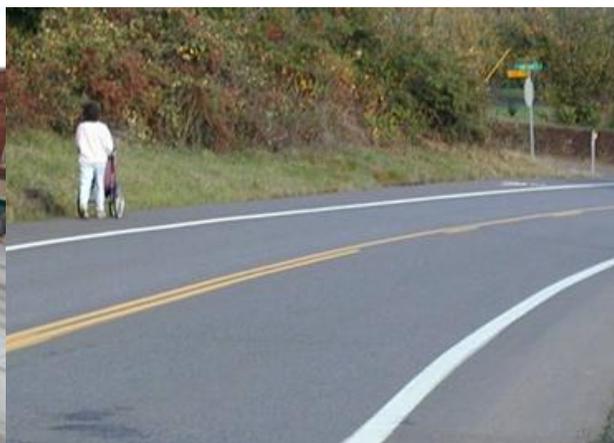




MnDOT Implementation of Complete Streets Policy

January 2014



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Legislative Request

This report is issued to comply with Laws of Minnesota 2010, Chapter 351, Section 72.

The commissioner of transportation shall submit to the chairs and ranking minority members of the house of representatives and senate committees with jurisdiction over transportation policy and finance reports that:

- (1) by January 15, 2011, summarize the department's complete streets initiatives, summarize steps taken to expedite and improve the transparency of the state-aid variance process related to complete streets, outline plans to develop and implement a complete streets policy, and identify any statutory barriers to complete streets implementation;
- (2) by January 15, 2012, summarize the results of the collaboration under Minnesota Statutes, section 174.75, subdivision 3; identify modifications made to or recommended for protocols, guidance, standards, or other requirements to facilitate complete streets implementation; report status of development of complete streets performance indicators; outline other work planned related to the complete streets policy; and identify statutory recommendations to facilitate complete streets policy implementation; and
- (3) by January 15, 2014, overview the department's implementation of complete streets policy; note updates to protocols, guidance, standards, or requirements; identify any recommendations for supporting local complete streets implementation under the state-aid standards variance process; and identify statutory recommendations to facilitate complete streets policy implementation.

The cost of preparing this report is under \$5,000.

Implementation Overview

Definition

Minnesota Statutes 174.75 defines complete streets as the planning, scoping, design, implementation, operation and maintenance of roads in order to reasonably address the safety and accessibility needs of users of all ages and abilities. Complete streets considers the needs of motorists, pedestrians, transit users and vehicles, bicyclists, and commercial and emergency vehicles moving along and across roads, intersections and crossings. It does this in a manner that is sensitive to the local context and recognizes that needs vary in urban, suburban and rural settings.

MnDOT's Approach to Complete Streets

For MnDOT, complete streets addresses the transportation needs of non-motorized users, but also the needs of transit, freight and other vehicular traffic. The goal is to balance the needs of all users in a manner that allows safe access to destinations regardless of mode. This means that MnDOT considers complete streets as part of every project the agency delivers. To that end, MnDOT does not have specific complete streets projects. Instead, the needs of all transportation users are evaluated when planning and designing every project.

The context of each highway is an important consideration for MnDOT when designing projects that meet the needs of all transportation users. Complete streets in a rural setting look different than complete streets on a main street through a small community, which may look different than complete streets in the Minneapolis-St. Paul metropolitan area. To accommodate this variation, MnDOT does not use a standard complete streets template. Instead, MnDOT uses flexible design to select elements that are affordable and appropriate for the context. Local needs and requirements can vary, so the options selected may look different even in situations that may appear similar. Appendix A includes a sample of complete streets design elements used in MnDOT projects.

Complete streets are best evaluated at the network level. This means that sometimes parallel roads, trails or other transportation facilities may be best suited to accommodate the mobility needs of specific users within a particular corridor. The trunk highway system is part of a larger transportation network and MnDOT regularly partners with cities, counties, tribes and other agencies to fund, design and maintain this integrated system.

Previous Accomplishments

In 2009, MnDOT reported to the Minnesota Legislature on the feasibility of implementing a complete streets policy in Minnesota. The report asserted that MnDOT was well-positioned to respond to complete streets because it was one of the first state transportation departments to develop a context sensitive solutions approach to project development. CSS is a collaborative approach to design that uses input from stakeholders to adapt a project's design to fit its setting and surrounding environmental, cultural, historical, architectural and economic context. This approach is easily adapted to address complete streets.

In 2010, the legislature directed MnDOT to implement a complete streets policy. Since the law's adoption, MnDOT has focused on changing protocols, providing guidance to internal staff and external stakeholders, and developing new standards.

MnDOT's previous legislative reports on complete streets identified the following efforts to establish MnDOT's complete streets approach:

Modified Design Guidelines for the Trunk Highway System

In 2009, MnDOT began an initiative to implement a flexible approach to road and street design. The initiative resulted in a set of design policies adopted in 2012 (e.g. [Design Speed Guidance for State Highways](#)) that are the most flexible of any state transportation agency in the nation. They were written to provide improved safety and functionality for all users of the trunk highway system, and are consistent with the goals of complete streets.

Aligned Context Sensitive Solutions Initiatives with Complete Streets

Beginning in 2009, MnDOT worked to integrate complete streets into CSS curricula and other resources. MnDOT hosted a one-day CSS National Dialog Workshop, developed an online CSS module with complete streets information and hosted 14 other CSS and flexibility in design-related workshops, webinars and forums that integrated complete streets into the curriculum. These efforts reached an internal and external audience of more than 1,200 people in 2010 and 2011.

Completed an ADA Transition Plan

To address the requirements of the Americans with Disabilities Act, MnDOT developed a [transition plan](#) in 2010 to outline key actions necessary to make the state transportation system more accessible for people with disabilities. Ensuring ADA requirements are met is an important element of complete streets and generally results in a more functional transportation system for everyone.

Established a Complete Streets Advisory Group

In 2010, MnDOT established a broad stakeholder group to help develop statewide policies and technical guidance related to complete streets. Membership included elected officials, transportation advocates, and county and city representatives. The group helped MnDOT craft the new technical protocols that currently guide the agency's work.

Created Minnesota GO Vision

In 2011, MnDOT adopted a long-range vision for transportation that aligns strongly with complete streets. Based on the [Minnesota GO Vision](#), MnDOT revised the [Statewide Multimodal Transportation Plan](#). The plan identifies collaborative strategies for working with local partners. These strategies are an important step in complete streets implementation because they provide a mechanism for determining the needs of the system based on community context.

Implementation Since the 2012 Legislative Report

Through collaboration with the Complete Streets Advisory Group, MnDOT established a policy statement, as well as administrative and technical guidance for complete streets implementation.

Policy Statement

In 2013, MnDOT adopted a complete streets policy that applies to the trunk highway system. It provides clear direction to MnDOT staff and external partners that the agency will consider the needs of all applicable users on every project, at all stages of development. The policy statement states:

The Minnesota Department of Transportation requires that the principles of “complete streets” be considered at all phases of planning and project development in the establishment, development, operation, and maintenance of a comprehensive, integrated, and connected multimodal transportation system.

Protocols

Two protocols now support the MnDOT policy on complete streets implementation:

- [MnDOT Policy OP004](#) outlines the reason for the policy, procedures for implementing the policy, and who is responsible for ensuring adherence. Additionally, it acknowledges the need to balance competing needs in a fiscally constrained environment and provides reasons for granting exemptions to the policy.
- [Technical Memorandum 13-17-TS-06](#) details the responsible agents for complete streets implementation at all phases of project development. It requires documentation in the scoping, design, construction, operations and maintenance phases throughout the life of MnDOT projects. Projects that do not adhere to complete streets practices are required to receive a formal exemption from the State Design Engineer. Finally, the memorandum requires the agency to develop and track process indicators as well as performance measures in order to evaluate success.

In addition to the new policy and protocols, several MnDOT efforts have advanced the agency’s implementation of complete streets.

20-Year Minnesota State Highway Investment Plan (MnSHIP)

MnDOT's [20-Year State Highway Investment Plan 2014-2033](#) is the agency's first highway investment plan to explicitly include bicycle and pedestrian investment needs. The plan establishes an investment framework for implementing complete streets, including allocating financial resources to address ADA requirements, pedestrian and bicycle accommodations, safety improvements and other design elements as part of trunk highway projects.

Corridor Investment Management Strategy

MnDOT established the [Corridor Investment Management Strategy](#) in 2012 as a corridor-based initiative to identify opportunities for collaborative and innovative investments with local, modal and state partners. Initial CIMS efforts included extensive mapping of state highways, including bicycle, transit and freight elements to assist future project planning for complete streets.

As part of the overall CIMS initiative, MnDOT provided \$30 million through a [competitive solicitation](#) in 2013 to fund trunk highway projects that improve quality of life, environmental health or economic competitiveness. In evaluating applications, MnDOT awarded points for projects that included complete streets elements.

Complete Streets Training

In spring 2013, MnDOT piloted a complete streets training course as the newest offering within the CSS educational curricula. This two-day class combines classroom instruction, a small group design activity, large group field reconnaissance and interaction with local stakeholders. MnDOT plans to offer [the class](#) again in 2014 and future years.

Research

MnDOT commissioned several research projects to understand how Minnesota can best implement complete streets. Examples of these research efforts include:

- **Planning and Implementation of Complete Streets at Multiple Scales:** This study identified best practices from city, county and regional complete streets initiatives around the country. The research categorizes what led to successful project development through a case study approach. The final report will be published in early 2014.
- **[Implications of Modifying State Aid Standards:](#)** **The study reviewed 11 complete** street project sites in Minnesota and Wisconsin to quantify safety impacts on the local system. The research found an overall reduction in crashes associated with narrower cross sections and cross sectional elements. However, high-volume, high-speed roadways did not see the same clearly distinguished benefit from these types of treatments. The study emphasized the need to consider the context and users of a road when prescribing complete streets design changes.
- **[A Review of Federal and Minnesota Laws on Pedestrian, Bicycle, and Non-motorized Transportation:](#)** This report reviewed existing Minnesota and federal laws regarding pedestrian, bicycle and other non-motorized transportation. The

analysis considered how the existing legal framework protects, provides support and encourages access for these users to the transportation system.

Current MnDOT Implementation Activities

MnDOT's complete streets implementation efforts are now focused on developing a documentation process, exemptions protocol and process indicators for all MnDOT projects, consistent with the adopted policy. Additional efforts are underway to review existing policies and guidelines for consistency with complete streets. MnDOT remains committed to collaborative planning with stakeholders and local partners to achieve an integrated multimodal transportation system.

Internal Working Group

A complete streets internal working group was formed in October 2013 to address policy implementation questions related to documentation, exemptions, training, performance measures and process indicators. This group includes a diverse range of perspectives including maintenance, design, engineering, planning, transit, bicycle, pedestrian, ADA, freight and state aid.

District Outreach

In December 2013, the internal working group met with planners, design engineers, project managers and maintenance staff in all of MnDOT's eight districts. These discussions focused on the practical and technical aspects of complete streets at each stage of project development. Maintenance responsibilities were also discussed. The internal working group is using district perspectives and insights from these meetings as it develops new documentation and exemptions protocols for complete streets.

Exemptions Protocol

MnDOT's complete streets policy and technical memorandum provide reasons exemptions might be granted. The agency is in the process of crafting an exemptions protocol for project development that provides greater clarity for when and why exemptions will be allowed. The protocol will apply to all MnDOT projects, and is expected to be ready by April 2014.

Cost Participation Policy

MnDOT is currently working with local, regional and state partners to update the agency's cost participation policy. The existing policy presents obstacles for complete streets by often requiring the jurisdiction that proposes a design option to pay for the element to be included. The updated policy is being revised to determine the cost responsibility for each design element based on transportation needs. This will provide greater flexibility for MnDOT and local partners to consider complete streets design elements that serve the needs of all users of the transportation system. The revised policy will be available in March 2014.

Performance Measures and Process Indicators

In September 2013, MnDOT identified a preliminary set of existing performance measures related to complete streets and will refine this list during the coming year. Preliminary measures include indicators for safety, system extent, system condition, system usage and accessibility. Process indicators also are being established in conjunction with the development of the exemptions protocol.

Project-level Implementation Reporting

In April 2013, MnDOT identified projects that have incorporated or will incorporate complete streets elements. More than 75 examples were identified by MnDOT's eight districts, demonstrating significant progress in implementing complete streets during the past three years.

Guidance Document

MnDOT has contracted with the University of Minnesota's Center for Transportation Studies to develop a complete streets guidance document for use by MnDOT staff, as well as a broad audience of external stakeholders. The document will provide local agencies, administrators, planners, project managers and designers specific guidance for implementing complete streets based on various land use contexts and road classifications. The guidance document should be complete in late 2014.

ADA Transition Plan Update

MnDOT is updating the agency's ADA Transition Plan to incorporate progress made since 2010, including a recently completed sidewalk inventory. The update should be complete in late 2014.

Statewide Bicycle System Plan

MnDOT is developing a Statewide Bicycle System Plan that will provide policy and scoping guidance, implementation tools, and priorities for bicycle-related investments on the trunk highway system. The plan is anticipated to be complete in late 2014.

Revising the Bikeway Facility Manual

MnDOT is updating the Bikeway Facility Design Manual to align with the updated Statewide Bicycle System Plan and complete streets approach. The focus will be to review the [2012 AASHTO Guide for the Development of Bicycle Facilities](#) and the [NACTO Urban Bikeway Design Guide](#) to ensure the new bike manual will be consistent with national practices and Minnesota's unique needs.

Statewide Freight System Plan

MnDOT is preparing to update the Statewide Freight System Plan. The plan will identify important highway corridors for freight and is anticipated to be complete in 2015.

Supporting Local Implementation

The majority of roads and streets in the state of Minnesota are under the jurisdiction of counties and local municipalities. As a result, the majority of opportunities for complete streets are on the local and county systems.

To that end, MnDOT helped fund a [complete streets resource guide for local agencies](#) interested in developing their own complete streets policy. This resource includes an overview of complete streets, a brief synthesis of local and national practices, an explanation of various terms and definitions, guidance on implementation, a summary of agencies in Minnesota with complete streets policies or other related guidance, and an overview of applicable state and federal law.

In addition to offering complete streets training, MnDOT has co-sponsored Bikeable Communities Workshops through a partnership with the Minnesota Department of Health and the Bicycle Alliance of Minnesota. These workshops trained city staff and advocates throughout the state on how to create more opportunities for biking within their communities. Topics included road design, safety, education, enforcement and encouragement strategies. Six workshops were offered in 2013 and another 10 are anticipated to be offered in 2014.

MnDOT also supports local planning efforts for complete streets. Through a grant from Transportation Research Board of the National Academies, MnDOT worked with Grand Rapids to pilot test a complete streets planning effort. The planning process resulted in a complete streets plan for the city and is now a [national example](#) of a collaborative approach to planning.

State Aid Rules Review

MnDOT commissioned a [study](#) to assess urban street designs associated with complete streets, the results of which were recently published. The report evaluated the operational and safety effects of non-standard road designs including, but not limited to, narrower street cross sections and curb extensions. The results of the study suggest that flexibility in State Aid Design Standards would not lead to adverse safety outcomes. These findings corroborate [national research](#) from 2007, which was the basis for relaxing national and MnDOT trunk highway design standards in the years since the research was published.

In light of these research findings, and MnDOT's complete streets policy and ongoing commitment to roadway safety improvement, the geometric design criteria in the Minnesota State Aid Rules should be reviewed and revised to align with current national practices. This would ensure all streets and roads in Minnesota benefit from design guidance that facilitates the safe accommodation of all expected road users.

Recommendations

In order to increase MnDOT's design flexibility, avoid conflicting guidelines and allow for modernization and regular updating of design criteria, MnDOT recommends a review of the 8810 and 8820 rules related to bicycles to either repeal or amend specific sections and subparts that may be out of date or inconsistent with current practice.

The current rules were enacted in the 1970s and no longer reflect industry practice. Some of the rules related to bicycles contradict other sections of the rules or are unclear in their application. MnDOT's Bikeway Facility Design Manual is currently being updated and will be much more complete, accurate and in line with national standards than what exists in rules. Repealing these rules would allow MnDOT to revise design criteria more frequently to adapt to changing standards and new research. Such a change would be more in line with MnDOT practice in regard to other design elements.

Recommendations related to state aid rules are discussed in the previous section of this report.

Appendix A:

Illustrative Examples of Complete Streets Elements on MnDOT Projects

Description	Example
<p>Narrow Lanes</p> <p><i>St. Peter Highway 169 project narrowed vehicle lanes through the urban section to slow travel speeds to improve safety.</i></p>	
<p>Bikeable Shoulder</p> <p><i>Marcell Highway 38 provides a four-foot bikeable shoulder that has helped reduce crashes by 55 percent along the route.</i></p>	
<p>Bus Shoulder</p> <p><i>Minneapolis Interstate 35W has bus-only shoulders for effective movement of transit traffic.</i></p>	

Description	Example
<p>Bike Lane</p> <p><i>Highway 65 (Central Avenue NE) in Columbia Heights and Minneapolis has a combination of bike lanes and shared lane markings (sharrows). These were added as part of a 2012 mill and overlay project.</i></p>	
<p>Curb Ramp</p> <p><i>Highway 2 in Grand Rapids has pedestrian curb ramps that adhere to the specifications of the Americans with Disabilities Act.</i></p>	
<p>Pedestrian Refuge</p> <p><i>White Bear Lake Interstate 694 has pedestrian friendly crosswalks with refuges in the middle of street to provide safe pedestrian cross-movements.</i></p>	

Description

Freight Roundabout

Rochester Highway 63 roundabout designed specifically to accommodate freight movement.

Example

