1.4 Best Practices Summary

Context Sensitive Solutions emphasize multidisciplinary collaboration and holistic street design

Context Sensitive Solutions (CSS) is a recognized design approach that emphasizes the importance of a multidisciplinary collaboration process that is supportive of a holistic roadway design to better reflect place and long-term growth. Research on best practices in implementing a CSS design process reviewed leading context-sensitive approaches to street design in Ontario, Canada and the United States. Various regulatory bodies and industry standard associations have also recommended context sensitive approaches that act as guidance for local municipalities and regions.

Regulatory Bodies and Industry Standard Associations

The United States **Federal Highway Administration** has developed CSS principles within the transportation planning process. This approach is to be collaborative, multidisciplinary and comprehensive, resulting in improved road design solutions that support multi-modal transportation goals and future community development objectives.

The National Cooperative Highway Research Program (NCHRP) also published its recommended practice, An Expanded Functional Classification System for Highways and Streets, in 2018. It utilizes a CSS approach to develop a contextually appropriate design that supports modal needs such as walkable communities and active transportation.

Similarly, the **Transportation Association of Canada (TAC)** released its geometric design standards for Canadian jurisdictions. Their work emphasized movement away from simply providing engineering standards to encouraging designers to use professional judgment and expertise to design more context sensitive and appropriate solutions.

The Complete Streets for Canada movement is also related to CSS. This movement, championed by organizations such as the National Association of City Transportation Officials (NACTO) and the Toronto Centre for Active Transportation (TCAT), calls for the provision of safe, convenient and comfortable travel for all users regardless of the mode of transportation. Many design approaches recommended through Complete Streets support CSS, including accessible pedestrian facilities, safe cycling measures, reduction of emphasis and space devoted to vehicle movement and increased priority for transit.

Canadian Jurisdictions

In Ontario, several municipalities and regions recently released road network guidelines based on a context sensitive approach. In 2013, the **Region of Waterloo** developed design guidelines for Regional Transportation Corridors. It provides design guidelines and recommended cross-sections for a new street classification system that encompasses the roadway and boulevard. It also includes a flexible decision-making process and toolkit to guide the design process and respond to changing priorities and conditions along the roadway.

Peel Region followed with its Road Characterization Study in 2013, using a CSS approach to develop road typologies, illustrative

cross-sections and access control guidelines. Both classification systems emphasize the integration of the supporting built form and land use character adjacent to the road in question.

The **City of Ottawa** has adopted a Complete Streets Implementation Framework (2015) that emphasizes boulevard and streetscaping elements. This framework follows a circumstantial approach depending on land use context and character and also considers sustainable infrastructure with the intent of reducing the impact of street design on the environment.

In 2018, the **City of London, Ontario**, developed its London Complete Streets Design Manual, which demonstrates a CSS approach to developing street typologies, complete with cross-section illustrations.

The **City of Edmonton, Alberta**, released its Complete Streets Design and Construction Standards in 2018, which adopts a CSS approach and a holistic perspective of street design. These standards aim to help develop a network of streets that are safe, attractive and comfortable for all users in all seasons, while also considering operational and maintenance challenges.

American Jurisdictions

In the United States, jurisdictions including **Los Angeles County, Miami-Dade County** and **the Cities of Chicago and San Diego** have adopted road design manuals and guidelines based on the CSS approach. In **Los Angeles,** the Model Design Manual for Living Streets guides local municipalities in developing similar design guidelines of their own. It was funded by the **County of Los Angeles Health Department** and emphasizes the benefits of CSS and complete streets in promoting active lifestyles and environmental sustainability and in combating negative health impacts of sedentary lifestyles.

Miami-Dade County's Complete Streets Design Guidelines (2016) strive to support the design and development of streets that are safe for all users. This document emphasizes on applying context-sensitive street elements to produce comfortable and accessible streets for all transportation modes. It identifies three sets of street element typologies (streets, overlays, and land use), which intermingle and contribute to the complete street. The guidelines aim to help engineers, planners, and policy makers design various roadways with all travelers in mind.

> "Context sensitive solutions (CSS) is a collaborative, interdisciplinary approach that involves all stakeholders in providing a transportation facility that fits its setting. It is an approach that leads to preserving and enhancing scenic, aesthetic, historic, community, and environmental resources, while improving or maintaining safety, mobility, and infrastructure conditions."
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> *– Results of Joint AASHTO / FHWA Context Sensitive Solutions Strategic Planning Process, Summary Report, March 2007*

Similarly, Complete Streets Chicago identifies a road typology system that uses right-of-way width, building type and land use to classify roads. It also uses a modal hierarchy as a key determinant of design priorities and values. Crossings and intersections are noted as critical in creating complete streets, with a goal of creating compact and safe crossings.

The City of San Diego's Transportation & Storm Water Design Manuals: Street Design Manual (2017) recognizes the variety of users and purposes that a street must serve, and its importance in shaping urban form. The document describes the street as a city organized along a corridor, with economic, social, political and ecological implications. This manual is divided into six sections; Roadway & Alley Design, Pedestrian Design, Traffic Calming, Street Lighting, Parkway Configurations, and Design Standards. The manual emphasizes that each of these six elements should be considered in the design of a new street, as well as retrofitting an existing one.

Best practices and guidelines have been drawn from all these examples to develop these design guidelines and approaches.