
Subject: Complete Street Design Manual (CSDM)

Report to: Public Works Committee

Report date: Tuesday, June 15, 2021

Recommendations

1. That Report PW 24-2021 **BE RECEIVED** for information.

Key Facts

- Niagara Region's Transportation Master Plan (TMP) – How We Go endorsed by Regional Council on October 2017 sets the design guidelines of complete streets. As part of the TMP, Complete Streets concepts were developed and vetted through the public engagement process of the TMP update in 2016;
- Complete Street Design Manual will support growth, development and the transportation of goods and people of All Ages and Abilities (AAA), using all modes including walking, cycling, transit, and motor vehicles, consistent with the Region Official Plan;
- Transportation staff conducted a background review and jurisdictional scan summarized in Discussion Paper #1: Background Review; and, Discussion Paper, #2: Best Practices Review in Appendix 1 and 2 as preliminary outcomes of the CSDM;
- Public Education and Outreach is one of the milestones during the development of CSDM to focus on information sharing with Niagara residents relative to the major project milestones and outcomes;
- The engagement strategy to develop the manual includes Niagara Region Development Planning Division and other relevant stakeholders to discuss potential updates to the Niagara Region's Policies and Guidelines including, but not limited to, Official Plan and Development Charges to incorporate complete streets design elements into new development and redevelopment.
- The Environmental Assessment Studies for the improvement of the York Road and Four Mile Creek Road intersection and detailed transportation assessment of Regional Road 37 (Merritt Road) and Regional Rd. 54 (Rice Road) are the first two projects in Niagara Region that will utilize the approaches and design guidance outlined as part of the CSDM Project.

- Transportation Services Staff will report back to the Public Works Committee on the results of the core components of the CSDM as the projects progress focusing on the outcomes, recommendations, applications and engagement and long-term strategies and standards for evolving the transportation network, with following documents for endorsement:
 - i. The refined Complete Streets typologies and sub-typologies based on the original recommendations outlined within the 2017 Transportation Master Plan;
 - ii. The preliminary CSDM Audit Tool;
 - iii. The application of Complete Streets typologies and sub-typologies based on the existing Regional Road network;
 - iv. The suite of standard products and complete street element options based on the proposed typologies and sub-typologies; and
 - v. The proposed outline of the CSDM.
- Complete street design principles can create safer and more equitable streets for all road users. The formalization of a design guideline and design process for complete streets will provide more predictability when creating designs for the development of new streets and rehabilitating or retrofitting existing ones.
- Several key elements will ultimately comprise the CSDM, including streets typologies and sub-typologies and a “toolbox” of typical complete streets design features with practical applications that can be used to develop complete streets.
- A Family of Products will be integrated into the Complete Streets Design Manual and will be used as a reference during regional road design and construction to promote an efficient and consistent Complete Streets approach within the design.

This Family will include:

 - a. Product Catalogue with high-level cost estimates, treatments, materials and fixtures, typical construction details; and,
 - b. Product Standard and Maintenance Guide to inform future purchases, maintenance procedure and replacement during operations.

Financial Considerations

Funding for the CSDM Project was approved with the 2019 Operating Budget and is also supported with base budget dollars. There are no immediate financial implications associated with this Report. The final CSDM will identify high-level financial

considerations and costs of the complete streets and the suite of products on the construction or rehabilitation of projects, maintenance and operations of Niagara roads and the environmental assessments studies, development applications and development charges.

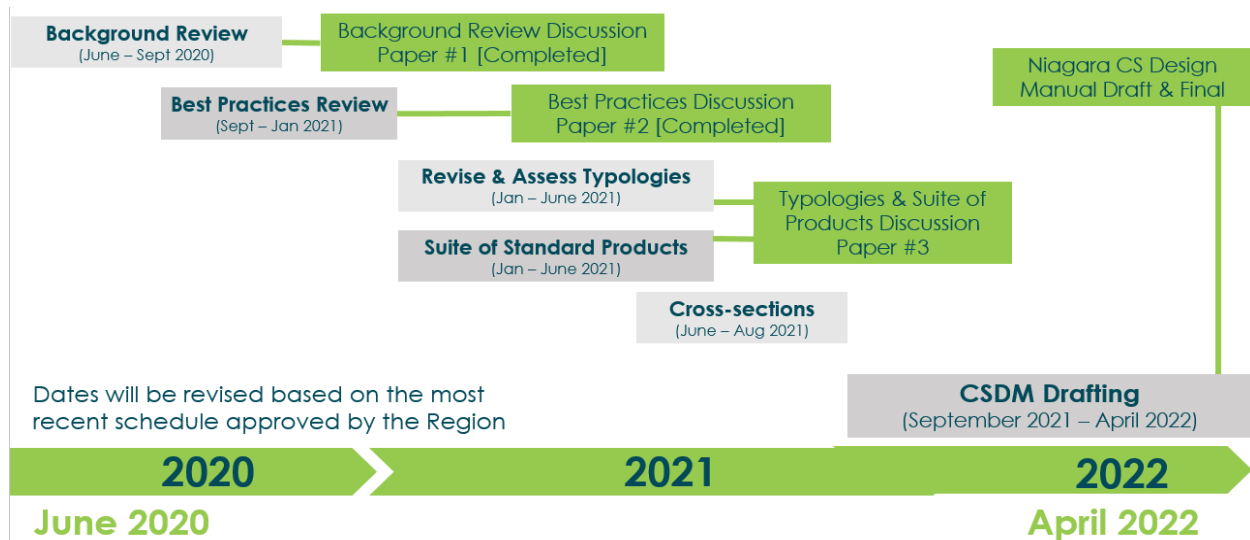
Proposed operations and maintenance agreements with Local Area Municipalities and other transit authorities will be submitted to Regional Council during the endorsement stage of the CSDM for approval.

Staff recommendations on the supply, operations and maintenance agreements with vendors to provide services (for example, transit bus shelters, waste bins and benches) will also be brought forward to Regional Council for approval, as necessary, as part of the endorsement stage of CSDM.

Recommendations from the CSDM to initiate new policies or update existing policies that have future budget impacts will be presented to Committee/Council for consideration as part of future budget processes.

Analysis

The development of a CSDM was a key recommendation of the 2017 Transportation Master Plan. The consulting assignment on the CSDM commenced in June 2020. The purpose of this report is to provide Regional Council with an update on the work completed to date including the outcomes of Technical Phases 2 (background review) and 3 (best practices review) as documented in Discussion Papers #1 and #2. The intent is also to provide an overview of the next steps associated with the development of the CSDM including technical and engagement milestones. The figure below presents a high-level overview of the remaining technical tasks and milestones:



CSDM Actions

The TMP recommended drilling down into specific engineering details and applications unique to Niagara Region road conditions. Accordingly, this is a focus of the current work of the CSDM, which will recommend several actions and mobility strategies that are integrated and will provide Niagara residents with viable mobility options:

First Action: Operationalize complete streets analysis, tools and techniques in a routine way for all road design and construction projects in Niagara Region. To achieve this, CSDM will provide designers and decision makers with a consistent set of tools to evaluate, engage with design, implement, and monitor street projects including, but not limited to the Region's Vision Zero Road Safety Plan and use of the active transportation network.

Second Action: Recommend updated street typologies as initially established in the TMP and sub-typologies to be harmonized with the existing Road Classification System and related Right-of-Way (ROW) widths. Once identified, these will help to better clarify what design treatments are required for the various types of roads in Niagara Region, dependent on the context.

All Regional roads will be categorized by typology and sub-typology with updated road cross-section that will highlight proposed changes and will be implemented where opportunities exist in the future.

Third Action: Building on the goal of harmonizing complete street approaches, the CSDM will encourage the use of the multi-modal level of service (MMLOS) approach to

evaluate road designs and facilitate the implementation, operation and maintenance of region-wide complete streets. The Level of Service (LOS) rating refers to the speed, convenience, comfort and security of transportation facilities, and services as experienced by motor vehicle users. The MMLOS rating applies the LOS to all modes of transportation including walking, cycling, and transit, and it is considered more consistent with a complete streets approach. MMLOS is also associated with active transportation infrastructure and Vision Zero because it recognizes that each mode has a level of service and improving the service level for each mode is a more comprehensive strategy for designing streets.

Fourth Action: Developing Families of Products. A family is defined as a grouping of products that are compatible and complementary. Each family will have an overall unique aesthetic character and specific treatments/finishes consistent throughout the regional road network.

Accordingly, the family will be considered for each street typology and sub-typology, with 3 to 5 product options that are grouped into thematic palettes with product standards and maintenance guides that will include manufacturer information and product specifications.

Policy Implications and Legislated Requirements

The CSDM will support and be informed by existing plans and policies and provide design guidance on how to achieve recommendations and policies found within them. Relevant policies include but are not limited to:

- the Official Plan;
- the Transportation Master Plan;
- Urban Design Guidelines within Secondary Plans; and,
- the development of specific guidelines and policies including Access Management Policies and Guidelines, Vision Zero Road Safety Platform, Active Transportation strategies and Traffic Calming methodologies.

While the CSDM will be a stand-alone document, the impacts of complete streets are far reaching and affect a number of existing Niagara Region policy documents, guidelines, and engineering standards, including but not limited to:

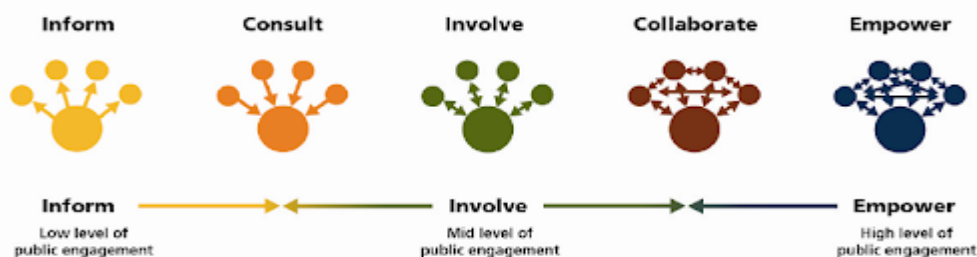
- PW5.R01.3 Road Cross Section
- PW5.T01.3 Tree Sculpture on Regional Road Allowances

- PW5.T01-1 Tree Planting Along Regional Roads
- PW5.R01-6 Use of Regional Roads for Community and Other Activities
- PW5.R01-2 Speed Limit Policy
- PW5.R01-2 Road Lighting Policy
- PW3.P01-2 Dedication of Land for Road widening through development applications
- Level of Service For Winter Operations
- Road Maintenance Quality Standards
- PW3.E01-0 Entranceways

Updates to all of these documents incorporating recommendations on complete streets will be done as required; but, it is intended that the final CSDM will become a complementary reference to the above documents.

Engagement Strategy

During the development of this manual, an Engagement Strategy has been adopted based on the principles and process identified by the International Association of Public Participation (IAP2)¹. IAP2 has identified five levels of engagement, shown below, that reflect a spectrum of involvement.



Thus far, engagement has focused on sharing information and gathering input from Regional staff members through the Technical Advisory Committee (TAC), Local Area

¹ The IAP2 is an organization and approach tailored to improving and promoting best practices in public consultation and engagement. Now widely accepted as the foundation for meaningful and effective consultation and engagement, the IAP2 approach is used to gather input and establish stakeholder buy-in through an understandable, creative, collaborative, and accessible consultation approach.

Municipal Staff through the Municipal Advisory Committee (MAC) as well as local stakeholders and interest groups such as utility companies, transit agencies and authorities, conservation authorities, public health, rail authorities, tourism, business improvement associations, etc.

To date, three TAC and MAC meetings have been held where a presentation has been given and interactive activities were used to gather input on preferences and priorities related to the complete street applications and types. Two stakeholder workshops have been held with over 100 stakeholder invitees across the Region. The workshops focused more on educating key stakeholders of the project purpose and intended outcomes and gathering input on Complete Streets in the Niagara context from a strengths, weaknesses, opportunities and threats perspective. The information gathered to date has informed and/or helped to refine key project outcomes including the resources and reports provided for information as part of Report PW 24-2021.

While a significant amount of engagement was completed as part of the development of the Region's TMP, the CSDM will be another element / layer in the Region's decision-making / policy hierarchy, which will have its own unique public influences and impacts. While the general public may not be the intended users of the manual, the roadway designs that will be implemented in response to the guidance in the final CSDM, will affect the general public greatly. It is for this reason that public education and outreach will be incorporated into the overall consultation / engagement strategy to inform the manual's development.

The general public is an audience that is comprised of a wide range of socio-demographic, cultural and political backgrounds. This audience or stakeholder group is large and varied; however, there is a necessary element of public education that would add value to the overall process. While a design manual does not hold any regulatory or statutory public requirements, it will have a direct impact on future EAs and roadway design projects which do require engagement and consultation. As such, it will be valuable to both the Region as well as members of the public to have a deeper awareness of the process, assumptions and outcomes of the CSDM assignment to better understand the impact of the manual on future transportation projects.

Consistent with the IAP2 approach outlined within the consultation strategy; the intent would be to inform members of the public at strategic points in the project process. This does not mean that at each point where stakeholders are involved there would be an expectation to have a formal engagement activity, but more so that the public would be made aware of the project process and outcomes at critical points once stakeholder

input has been addressed and may be able to provide general / high-level feedback where appropriate.

More specifically, the Public Education and Outreach objectives would be as follows:

- a. Inform members of the public on the purpose and key outcomes of the CSDM project as well as Complete Streets as a concept following each engagement milestone;
- b. Educate members of the public on the content, intent and purpose of the CSDM and clearly articulate the application and potential impacts of the manual relative to future regional transportation projects.

This intent is to provide additional communication and education opportunities to build upon the input that has been developed through past Regional projects and to focus on establishing buy-in to the process and future applications.

To date, WSP has prepared two discussions papers – Discussion Paper #1: Background Review and Discussion Paper #2: Best Practices Review, which have been included as Appendix “1 and 2” to Report PW 24-2021.

Discussion Paper #1 is a detailed consolidation, review and assessment of national, provincial and regional policies, plans and guidelines, which have either a direct or indirect impact on the development of the Complete Streets Design Manual. This work was completed as part of Phase 2 of the work plan. The intent of the review was to establish a deeper understanding of the policy, planning and design foundations upon which the contents of the design manual will be developed. It also serves as the basis from which suggested policy amendments and additions have been developed.

Discussion Paper #2 is a detailed review and documentation of provincial, national, and international best practices from comparable and/or aspirational municipalities. The work was completed as part of Phase 3 of the work plan. As part of the best practices review, the consultant team interviewed and surveyed representatives from two groups – regional-tier municipalities found within Ontario as well as municipalities who have developed and adopted complete streets design manuals. The results provide a detailed documentation of key themes and successes / lessons learned from similar government structures in the adoption and implementation of complete streets design solutions. In addition, the discussion paper also highlights potential design manual elements and aspects that could be considered for application and inclusion as part of

the development of Niagara's manual based on the interests and aspirations of Regional staff.

Monitoring, Implementation, and Financing

Part of the CSDM assignment, Transportation Services Staff will establish a Monitoring Program to measure the time, budget and the success of the implementation over time. The program will contain, but not limited to, the following:

- Key Performance Indicators (KPI) and Metrics
- Develop Action Plan to implement
- Determine Roles and Responsibilities for implementation between regional departments and between region and LAMs.
- Work with Finance staff and other Business Units to formulate the proposed Capital and Operating Budget to achieve Niagara-wide Complete Streets Vision

Future Reports

Over the course of the next 10 – 12 months, the remaining technical tasks and engagement milestones will be completed in order to achieve the development and confirmation of the Niagara Region Complete Streets Design Manual. The CSDM project will be finalized and presented to Council for its consideration, taking, into account, the following objectives:

- Ensuring cohesion between the CSDM and other Provincial, Federal and existing Niagara policy documents, design guidelines, and engineering standards;
- Develop a monitoring plan;
- Identify any financial implications of Complete Streets on Development Charges (DC); and,
- Ensuring that impacts and benefits for all road users are explicitly considered with particular focus on vulnerable road users, emergency vehicles, and waste collection services.

Relevant Consultation

Several internal stakeholders were consulted as part of the CSDM:

1. Technical Advisory Committee (TAC) including:

- Public Works – Transportation, Transit and Water Waste Water Divisions;
- Niagara Public Health;

- Niagara Emergency Services; and
- Planning and Economic Development - Community Planning and Design, Development Planning.

Engagement with and between these groups will continue throughout the finalization of the CSDM and beyond.

2. Municipal Advisory Committee (MAC), that includes:

- The 12 Local Area Municipalities;
- External Utilities Agencies
- Niagara Students Transportation Services
- Niagara Catholic School Board
- Conservation Authorities
- Niagara Active Transportation Committee

3. External consultation was also undertaken with staff from various municipalities as part of the best practices review and jurisdictional scan. These municipalities currently have existing complete streets design guideline/manual documents:

- City of London - London Complete Streets Design Manual;
- City of Kitchener - Complete Streets Kitchener;
- City of Toronto - Toronto Complete Streets Guidelines;
- City of Edmonton - Complete Streets Design and Construction Standards; and,
- City of Boston - Complete Streets Design Guidelines.

Engagement will continue as the project moves forward, focused on the internal TAC for the project and external MAC stakeholders.

Alternatives Reviewed

If the CSDM is not adopted, regional right of way planning will continue to optimize the throughput of motor vehicle traffic without the overarching strategy and vision that links the functional plans of road network, land use, transit, goods movement, active transportation, parking and transportation demand management. Also with the growing population and employment in Niagara Region, it is not sustainable and physically possible to widen roads to match growth in auto trips.

Relationship to Council Strategic Priorities

Priority 2: Healthy and Vibrant Community - Foster a high quality of life through safe, healthy, and inclusive neighbourhoods through the delivery of quality, affordable and accessible human services.

Priority 3: Responsible Growth and Infrastructure Planning - Sustainable investments in Transportation, transit and infrastructure, while aligning infrastructure planning with preservation of the natural environment.

The CSDM will evolve the design of streets to meet the needs of all road users to move safely in Niagara, and to shift the focus from assessing automobile capacity and throughput to considering the overall people-moving capacity of a street to attain the highest and best use of the transportation system. It does this while acknowledging that streets have many competing priorities, which may vary depending on their context within Niagara Region.

Corporate Value: *Equity* - Inclusive, acting with compassion for the community

Complete Streets is a critical part of building a safe and inclusive Region. It is an important mechanism to remove barriers to equity-seeking groups by prioritizing vulnerable road users. Similar to the Safe System approach, the CSDM will provide a transportation network with safer walking, cycling, and motor vehicle routes.

Complete Streets are the socially, economically, and environmentally sustainable design of urban rights-of-way. Through proper design, Complete Streets can improve safety, accessibility, connectivity, sense of place, and the public realm overall. The Complete Streets approach recognizes that there is not a one-size-fits-all solution to street design. The priorities of any given street depend on its role within the overall transportation network, the surrounding land-use context, and Niagara's vision for the

future role of the street. Importantly, the priorities for a street may not be constant along the entire length of the street and may change as the street transitions from one context to another.

Other Pertinent Reports

TSC-C 3-2017, July 11, 2017 Niagara Region Transportation Master Plan

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This report was prepared in consultation with Carolyn Ryall, Director Transportation Services, Brian McMahon, Program Financial Specialist and reviewed by Donna Gibbs, Director Legal and Court Services.

Appendices

Appendix 1	Discussion Paper #1: Background Review
Appendix 2	Discussion Paper #2: Best Practices Review