



Administrative Report

Office of the Director of Infrastructure Services

To: Warden McNamara and Members of County Council

**From: Jane Mustac, P. Eng.
Director of Infrastructure Services/County Engineer**

Date: Wednesday, March 20, 2019

Subject: 2019 CWATS Annual Update

Report #: 2019-0320-IS-R007-JM

Purpose

The purpose of this report is to provide County Council with an update on the County Wide Active Transportation System (CWATS) program and initiatives.

Background

The CWATS Master Plan provides the framework to develop a continuous and connected network that builds upon, connects and supports existing & planned local routes. Network implementation priorities were established in the master plan based on partnerships with CWATS Committee and key stakeholders. The partnership to build active transportation infrastructure and develop associated programs between the province and the local municipalities is seen as the best and preferred approach. The main elements of the CWATS Master Plan that have been implemented integrate the 5 'E's, Engineering, Education, Encouragement, Enforcement and Evaluation and include the following:

- 1) **Policies (Evaluation and Enforcement)**, includes development of implementation policies, updates to the Official Plan policies and promotion of the CWATS Charter;
- 2) **Programs (Education and Encouragement)**, Various Community Education & Outreach Programs to endorse active transportation have been developed and implemented with several partners;

- 3) **Network (Engineering)**, approximately 402 km of new bike lanes, paved shoulders, cycle paths, multi-use trails, paved shoulders and signed routes have been built to date.

CWATS was developed in 2012 and has been the guiding document used to improve walking and cycling for various user groups of all ages and abilities. CWATS is more than a proposed network of on and off-road pedestrian and cycling facilities; it includes recommendations to promote and accommodate safe walking and cycling, and to recognize and share in the economic, health and quality of life benefits that these forms of transportation offer. A comprehensive phased update to the CWATS Master Plan is currently underway and will be delivered in six (6) phases:

- Phase 1: Policy Review;
- Phase 2: Program Update;
- Phase 3: Network Updates;
- Phase 4: Maintenance and Operations;
- Phase 5: Monitoring and Evaluation; and
- Phase 6: CWATS Master Plan Assembly

This update will confirm the vision and approach, apply lessons learned, and review and integrate the most current thinking and best practices of active transportation to CWATS.

Progress to Date

CWATS Policy Support

Existing policies influence the planning, design, implementation and operations of active transportation infrastructure and programming within the County of Essex. Promoting the use of bicycles to combat climate change, reduce obesity, tackle congestion and provide alternatives in the face of rising fuel prices requires a shift in our transportation policies and thinking. Since the adoption of the CWATS Master Plan, a number of policies have emerged that guide municipal planning, design and implementation of AT infrastructure, programs and initiatives.

A high level overview of the policies includes, but is not limited to the following:

- **Federal**
 - Transport Canada
 - Federation of Canadian Municipalities
 - Canadian Physical Activity Guidelines

- **Provincial**
 - Planning Act
 - Provincial Policy Statement
 - Municipal Act
 - Minimum Maintenance Standards for Municipal Highways
 - Ministry of Transportation #CycleON Strategy
 - Ministry of Tourism, Culture & Sport #TourbyBike
 - Ontario Traffic Manual Book 18 – Cycling Facilities
 - Ontario Traffic Manual Book 15 – Pedestrian Crossings
 - Accessibility for Ontarians with Disabilities Act (AODA)

- **County of Essex**
 - Official Plan
 - Essex Windsor Regional Transportation Master Plan (EWRTMP)
 - County Wide Active Transportation Study (CWATS), 2012
 - Regional Transit Study

- **Local Municipalities**
 - Official Plans
 - Transportation Master Plans
 - Strategic Plans
 - Active Transportation Plans

Additional description of select policies that continue to evolve are described further.

Ontario Traffic Manual

The Province exerts considerable influence over the future evolution of cycling facilities. Provincial influence extends to setting technical guidelines for roadway design (backed up by appropriate legislation and regulations). Through Bill 173 the Highway Traffic Amendment Act, new Ontario Traffic Manuals (OTMs) were developed by the Ministry of Transportation (MTO) to provide information and guidance to promote uniformity of treatment in design, application and operation of facilities across the province. OTM Book 18 Cycling Facilities, and OTM Book 15 Pedestrian Crossing Treatments all provide policy environments to better support active transportation.

- **OTM Book 18** is being updated as a result of rapid growth in cycling infrastructure. Integrating walking and cycling into the overall transportation system has proven to be challenging both within and outside of the road right-of-way, particularly related to intersections and points of transitions. Cycling planning and design has evolved since the publication of OTM 18. The current update will build upon lessons learned, integrate global best practices, enhance route and facility selection processes and explore innovative design solutions. A public questionnaire has been published to gather feedback about changes and additions that should be included in the updated report. Updates are expected to be finalized by fall 2019.
- **OTM Book 15** Pedestrian Crossing Treatments details municipalities' options of using the standard pedestrian crossover (PXO) or traffic control signals. PXOs are a new way for pedestrians to cross the road. A PXO is a crossing with defined pavement markings and signs, with some PXOs having pedestrian-activated flashing lights. A PXO was installed on CR 11 (Walker Road) between Highway 3 and South Talbot Road in order to allow pedestrians to cross the road. As of January 1, 2016, a new law was introduced under Bill 31: Making Ontario's Roads Safer Act. This law allows municipal road authorities to install PXOs on low-speed and low-volume roads. A review and warrant analysis for installation is set to be completed for two additional PXOs in 2019.

CWATS Master Plan Update

The update is required to respond to current community trends, emerging design guidelines, supportive legislation and best practices. At this time, Phase 1: Policy Review and Phase 2: Program Update are drafted and under review by the CWATS Committee and will be presented to the public in the spring of 2019.

The Consultant Team worked with County staff and partners to prepare and conduct online survey to gather input from residents, stakeholders and the public on existing policies and programs supportive of active transportation and how they can be improved through the process. The results of the survey will be shared at the public meeting and used to guide the process as the master plan is updated.

The County's road network is currently being evaluated using a road rationalization methodology, in order to confirm that existing County Roads make sense to continue as County Roads in the future, and whether some local roads are suitable to become County Roads. The road rationalization is planned to be conducted based on the criteria identified by the Ontario Good Roads Association (OGRA), with minimum scores for County Roads developed based on a required minimum level of functionality. The intention of the first phase of the road rationalization process is to serve as an initial screen for the County and local municipal partners, to determine which roads should be discussed for a potential change in designation.

Once this stage of the road rationalization process is completed, it will be appropriate for the County and the local municipalities to initiate Phase 3 of the master plan update to review the active transportation network and assess what has been done, what still needs to be done and priorities for the future.

Supportive Programs & Partnerships

It is well documented that simply building an infrastructure network is not enough to support walking and/or cycling. Partnership and supportive programs that are coordinated and comprehensive can communicate to the public and targeted populations and assist the initial efforts required by the CWATS Committee by:

- Creating a Vision and Purpose for the CWATS Marketing and Outreach Plan
- Branding and Imaging for the established CWATS logo.
- Deliver and monitor the 'Walk Ride County Wide' Campaign
- Remove barriers and provide the necessary amenities to create safe environments

Behavioral change strategies support active transportation efforts through the design and delivery of marketing and outreach programs that encourage the use of human powered modes of transportation while ensuring infrastructure elements provide the desired benefits.

While development of the cycling network infrastructure is a critical component to increasing cycling, the most substantial increases in cycling rates occur in cities that have also implemented a range of supporting programs and policies. These supporting programs and policies include land use and road network layout, cycling safety, bike parking and end-of-trip facilities, transit integration, bike share programs, cycling promotion and training programs.

An outreach and programming strategy is a necessary component of creating an active living culture in the region. Current annual CWATS outreach initiatives are listed in the table below and identify which of the 5'E's they address. Engineering is not listed below as supportive programming as these initiatives look to projects supportive of active transportation outside of infrastructure. Supportive programming and outreach is defined as strategies or initiatives that are implemented or initiated with the goal of:

Education - Residents and visitors of a specific area to increase their knowledge and understanding regarding the opportunities, practices and processes related to active transportation.

Encouragement - Individuals to adapt or change their behaviours in order to become more active by using self-propelled forms of transportation i.e. active transportation.

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Evaluation - How walking and cycling programs and infrastructure are used and how well they achieve community goals. It may also be used to consider how initiatives may need to be adapted.

Enforcement - The safe use of active transportation infrastructure to help influence individual and community behaviours and increase the levels of comfort of existing and potential users.

Partnerships with organizations such as the Windsor Essex County Health Unit (WECHU) and Bike Windsor Essex continue to grow the reach and success of the outreach and programs offered through CWATS. Annual encouragement, education and promotional initiatives supported to date are summarized in the following table:

Table 1 – Summary of Supportive Active Transportation programs

Description	Partner (s)	Details & Targets
AT Public Information & Education Support	Windsor Essex County Health Unit (WECHU)	Develop Tools & resources which support cycling and walking
Encouragement & Tourism Opportunities	Waterfront Regeneration Trust (WRT) Tourism Windsor Essex Pelee Island (TWEPI);	Where messaging is broad in nature and supports regional initiatives, a separate outreach program is being development with a key partner, as the lead organization
Public Relations & Media Campaign	Various	Key CWATS messages were distributed to municipal leaders to ensure that consistent messaging was delivered throughout the year.
Evaluation – Monitoring Program	Local Municipalities/ Industry	Manual counts are undertaken at numerous locations in Essex County to determine usage on CWATS routes. Information collected includes number of cyclists and pedestrians, user gender and user group (e.g. recreational, commuter). User group is typically determined based on their attire, bike and speed of a user. These counts are undertaken on an annual basis and began in 2015.

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Description	Partner (s)	Details & Targets
		EcoCounters - Automated counters allow active transportation facilities to be monitored at all hours of the day, providing a better perspective for pedestrian and cyclist patterns as well as facility usage. This technology will help up obtain trends over time. Knowing pedestrian and cyclist traffic levels at specific locations is invaluable for planning and managing investments and will help guide our future CWATS initiatives.
Education – Interactive Mapping Tool	MyCWATS	A web-based map that contains up-to-date information about current CWATS routes and facilities aimed to help users navigate through the network. Providing access to active transportation (AT) data is an important asset to our region and the people it serves. People and organizations are able to locate AT facilities, what they connect to, what type of facility is available to them, and other key items that support their active journey. This web-based application is user-friendly and is commonly used by many other municipalities who are leaders in active transportation.
Community Education & Engagement	Website & Social Media	A new website was launched in 2019 and includes the county active transportation network map, educational resources, local municipal cycling information and information on various outreach programs. The CWATS Social Media Accounts – Facebook, Twitter and Instagram, share information
Events for Encouragement	Various	Partnerships for special events to encourage people to get out and try cycling & walking (i.e. bike Rodeos)

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Description	Partner (s)	Details & Targets
Community Development – Build Awareness	Each of the local municipalities	Support as per Recommendation 7.23 to improve collaboration in the community. CWATS and WECIM (Windsor Essex Communities in Motion) support the annual CWATS Charter Celebration.
Enforcement	Bike Friendly Windsor Essex; OPP	Work with local police and OPP to educate public and staff on new Bill 31: Making Ontario Roads Safer Act.
Education - Safety & Skills	Engage a broad range of stakeholders (i.e. police, province, CANBike, Organizations)	Develop Programs that provide direct training regarding safe walking and cycling.

CWATS supportive programming is being reviewed and updated during the master plan update, with best practices from other jurisdictions being identified and considered moving forward. This will provide the County a template for developing a comprehensive annual action plan using the suggested supportive programming and provide guidance on the development and fostering of meaningful partnerships throughout implementation.

There is growing momentum among governments and non-governmental organizations as they develop policies and programs to support active transportation and healthy built environments. Recognizing that built-environment decisions are made in various organizations, CWATS has created a unique collaboration of organizations working at the transportation, public health and community vitality to promote greater investment in creating safe trail, walking and bicycling networks for all, and facilitating greater physical activity through active transportation.

Municipal Partnership Program (MPP)

The County continues to work with local municipalities, organizations and agencies in order to encourage investment in to the CWATS plan. A Municipal Partnership Program (MPP) was established and is intended to support outreach initiatives and to assist local municipalities and key stakeholders with the implementation of CWATS and funded through the CWATS budget in the amount of \$100,000 per year for a five year period of time (2018-2022).

The County of Essex partnered with various municipalities and organizations to support outreach initiatives. As a condition of the program, the application process identified in the infrastructure program is followed and funding is matched up to a maximum of 50% by the local municipality or partner. The County of Essex continues to work with local municipalities to identify candidate projects throughout the year. Eligible projects must support the guidelines and policies of CWATS. Infrastructure identified in the existing master plan, including new segments, are not eligible for funding through the MPP. The deadline for 2019 MPP projects has been extended until March 15, 2019 with projects being selected for funding after that date.

Cycling Tourism

Cycling tourism has experienced rapid growth and is increasingly recognized as a way to attract visitors to the region. The Ministry of Tourism, Culture and Sport (MTCS) has been working with several partners to make progress on the implementation of the #CycleON strategy. The Province's strategy identifies several actions to improve cycling tourism experiences by leveraging the successful relationships and tools already in place and aligning with work currently underway. Ontario's Cycling Tourism Plan sets out a mission and a number of action items that will cultivate the existing potential for Ontario to emerge as a leader in the development of cycling tourism, and establish the province as a strong market, renowned globally for its cycling products and experiences. Both government and industry have a role to play in implementing the Plan by collaborating and building relationships with key partners to maximize the growth of cycling tourism.

CWATS will enhance the partnership with Tourism Windsor Essex Pelee Island (TWEPI) and other organizations to support cycling programs and events in the region. CWATS is also supportive of other non-profit organizations such as Ontario by Bike: a project of Transportation Options, dedicated to fostering sustainable mobility and tourism solutions across Ontario. Ontario by Bike offers a variety of information on cycling in Ontario, inspiring visitors and residents to explore more by bike.

Network - CWATS Annual Infrastructure Program -2019

Since inception of CWATS, the County has adopted new supportive policies and implemented over 402 km of cycle tracks, bike lanes, multi-use trails, paved shoulders and signed bike routes. The built network is considered comfortable by the widest range of users, and the plan aims to design facilities that are attractive for “interested but concerned” users while accommodating the “enthused and confident” and the “strong and fearless”.

This is achieved by identifying and implementing a range of facility types throughout the network including long-distance signed routes to fully separated multi-use trails.

As of 2019, the following has been achieved to date:

- 4.2 km of dedicated bike lanes
- 7.9 km of separated cycle paths
- 83.3 km of multi-use trails
- 87.0 km pf paved shoulders
- 220 km of signed routes.

The infrastructure program has been developed through the fostering of strong partnerships with each of the local municipalities and the provincial government. In general, priority is given to routes with the highest existing or potential demand, critical gaps in the network, high collision areas, and connections linking key destinations such as schools, community centres and employment areas. Route directness and topography are also important factors to be considered. The County will also expand the network as opportunities arise, for example through various funding programs, the rehabilitation program or other construction projects.

One of the most important functions of the CWATS Committee is to ensure that local jurisdictions coordinate in the development of active transportation projects. Identification of projects under individual municipalities’ jurisdiction as regional priorities enhances the implementation of the CWATS Infrastructure Network. All projects that have a Municipal Contribution have also secured Local Council support as part of the application process and are considered top priority. These are mostly identified as County (URBAN) segments in the CWATS master plan.

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The construction of new CWATS facilities is coordinated on an application process and all requests are reviewed according to a number of criteria (i.e. project collaboration, constructability, funding). All of the 2019 applications were supported by the mandatory criteria, including Local Council commitment.

The CWATS Committee has approved the following candidate projects for the 2019 CWATS Infrastructure Program (Table 1). A location map of the 2019 projects is included as Appendix A. **A total of \$3,702,707, with a County/Local cost share contribution identified in the table below, is recommended.**

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Table 2– 2019 Recommended CWATS Infrastructure Program – County (URBAN) Segments

CWATS ID	Road Name	Facility	Limits	Length (km)	Cost (\$)	Total County Share (\$)	Total Local Share (\$)
AMH-16	Sandwich St	Bike Lane	Lowes Sideroad to Pickering Drive	1.0	30,000	12,000	18,000
LEAM-8	Talbot St W	Bike Lane	Albert St to Trail (Rail Corridor)	0.4	35,000	14,000	21,000
LEAM-9	Talbot St E	Bike Lane	Victoria Ave to 200m West of CR 33	1.1	57,000	22,800	34,200
LEAM-22	CR 20	Bike Lane	120m West of Sherk St to Erie Street South	0.5	80,000	32,000	48,000
ESS-6	CR 50	Paved Shoulder	Evergreen Road to CR 23	3.6	1,455,000	587,000	868,000
LAKE-11a/b	CR 2	Multi-Use Trail / Paved Shoulder	Wallace Line to Patillo Road	1.5	1,350,000	540,000	810,000
TEC-3	CR 11	Multi-Use Trail	North Talbot Road to Highway 401	0.9	369,770	147,908	221,862
KINGS-8	CR 50	Paved Shoulder	1301 CR 50 to Ford Road	0.94	325,937	130,375	195,562
			Total-rounded (CWATS Infrastructure Projects)	9.94	3,702,707	1,486,083	2,216,624



Paved Shoulder Program - Coordinating with Road Rehabilitation

The CWATS master plan is comprised of paved shoulder projects in the rural area that have a 100% County allocation that do not rely on local municipal support. These projects are identified as County (RURAL) in the CWATS schedules. In 2016, County Council has supported the recommendation to realize the economies of scale by aligning these projects with the rehabilitation program.

A list of recommended paved shoulder project opportunities that align with the 2019 Rehabilitation Program and will advance the paved shoulder projects on the CWATS network are provided in the following table (Table 2):

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Table 3 – 2019 Recommended Paved Shoulder Program – County (RURAL) Segments

CWATS ID	Road Name	Limits	Length (km)	County Cost (\$)
Lake-9	CR 2	CR 31 to Strong Road	3.3 km	770,000
Ess-3	CR 15	CR 11 to CR 18	2.6 km	300,000
Leam-5	CR 33	Mersea Road B to CCL Town Limit	0.9 km	315,000
Kings-1	CR 34	Malden Road to CCL	1.5 km	250,000
Leam-33	CR 34	Fraser Road to Municipal No.351	0.5 km	100,000
Leam-2	CR 34	Municipal No.351 to Municipal No.512	1.0 km	155,000
Kings-5	CR 34	Municipal No.512 to Municipal No.2170	0.2 km	46,000
Kings-10	CR 34	Municipal No.2170 to County Road 45	2.1 km	325,000
TOTAL			12.1 km	\$ 2,261,000

A location map of the 2019 paved shoulder projects is included as Appendix B. Total project costs of **\$2,261,000** to complete approximately 12.1 km of paved shoulders were approved in the Infrastructure Services 2019 Budget. The cost estimates provided are based solely on approximations and do not reflect any additional costs associated with ditch enclosure, driveway reconstruction and utility pole relocation that may be needed to achieve the required shoulder width.

Life Cycle Management

As the CWATS network expands, the maintenance practices and level of service limits will need to be adapted to address new facilities, expectations of the public, and new provincial minimum standards. The Ministry of Transportation Regulation 239/02 outlines the minimum maintenance requirements that are based on the potential for hazardous road conditions.

Consideration of additional maintenance is imminent with the introduction of new requirements to accommodate all road users, including pedestrians and cyclists. Bicycles are more susceptible to irregularities in roadway conditions than motor vehicles, and deterioration of the roadway surface such as potholes, road-cuts, cracking and debris near the curb increases the risk of injuries to cyclists. The expectation is that on-road active transportation facilities should be maintained to the same standard as the rest of the roadway.

The CWATS Committee has been discussing the concept of developing a consistent level of service standard for active transportation facilities on all routes including the local road segments. Staff will work to establish 'multi-modal level of service (LOS) methodologies, which allow for a quantitative assessment of LOS between all modes while identifying a seasonal-maintained cycling network. There is no widely accepted multi-modal LOS available at the present time.

Cycling facilities are frequently designated by pavement markings, either as a striped line and bicycle stencil or with thermoplastic markings in mixed-traffic conditions. Pavement markings wear off the roadway over time and must be re-applied as a maintenance activity. Annual maintenance and renewal costs are reflected in the 2019 Infrastructure budget.

The County uses road condition assessments to determine the overall condition of their roadway infrastructure and estimate annual budgets and implementation schedules for roadway resurfacing and reconstruction. Roadway deterioration can occur closer to the curb where cyclists travel, and is an important consideration given that cyclists are more susceptible to roadway cracking, potholes and asphalt irregularities than a motorized vehicle.

An overall review of the maintenance requirements will be addressed in subsequent phased of the CWATS master plan update. An expanded maintenance and operations budget would be required for the County and each local municipality.

Monitoring and Evaluation

Since the plan was adopted in 2012, the County has further enhanced its reputation as a leader in sustainable transportation, building on past successes and pioneering emerging concepts to enhance green mobility and accessibility. The network is a grid of north-south and east-west routes that develop a primary county-wide “spine” system and a secondary local “neighbourhood” system that provides direct connections between and through urban centres. The secondary system also takes advantage of quieter streets and provides links to schools, community centres, residential areas and parks.

Establishing a benchmark from which to grow is a key consideration when identifying infrastructure as well as programming and policy improvements. The region is slowly starting to see growth in active transportation activities. Cycling in particular has seen tremendous growth; between 2013 and 2018, the number of daily bike trips doubled. Recent trip counter data from individual routes suggests continued increased levels of cycling across the entire County from the initial count year 2015. The recent growth in cycling trips is in large part the result of recent infrastructure investments, and supports the regional approach to cycling. A summary report is included in this report as Appendix C.

Data on usage and demand is essential to build long-term support for walking and cycling, improve conditions for pedestrians and cyclists and contribute to programs, planning and design studies. Performance measures can help to prioritize projects, track progress and produce a better built environment. Provincial levels of government have also introduced data requirements for the various funding opportunities. Previously, automated counting equipment has been recommended to be installed along major cycling routes. This equipment records cycling volumes every hour throughout the year. The data provides a complete seasonal view of yearly cycling at specific locations, and can be used to establish temporal expansion factors, and weather correction factors. A comprehensive annual data collection program to quantify and measure performance targets is recommended.

Automated counting equipment initiatives were introduced this past year by the County of Essex to address monitoring and evaluation components of CWATS. Automated counters allow active transportation facilities to be monitored at all hours of the day. They provides a better perspective for pedestrian and cyclist patterns as well as facility usage. The County has purchased automatic eco-counters which have been installed at varying CWATS locations around the region. Currently, four eco-counters have been installed at County Road 50 and Ridge Road, County Road 50 and Bell Road,

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County Road 20 and County Road 31, and on Seacliff Drive West – West of Bayshore Drive on the Northside. These eco-counters will allow the County to obtain cyclist trends over time, allowing for the comparison of bike trips over consecutive months, seasons and years.

Gridsmart technology has also been installed around the County and can be configured as pedestrian automated counting equipment to provide better insight into pedestrian and cyclist patterns and facility usage. This system provides a full intersection view, including the centre where vehicles, bicycles and pedestrians all cross paths. At the intersection of County Road 20 and County Road 45 the system is formatted to target the separated bike lane – providing 24h pedestrian and cyclist count information and usage of the CWATS trails. This technology will continue to be explored and adapted to allow for strong data collection of CWATS facilities.

Financial Considerations

The funding requests to support an ambitious 2019 program are provided as follows:

Table 4 – 2019 CWATS Proposed Expenditures

Description	County Cost (\$)
2019 AT Network Plan – County (URBAN) projects	\$1,486,083
2019 Municipal Partnership Program (MPP)	\$100,000
2019 CWATS Supportive Programs	\$300,000
2019 CWATS Lifecycle Management	\$100,000
2019 CWATS Monitoring & Evaluation	\$200,000
Total Cost (rounded)	\$2,186,083

The actual costs of each project and program will be reviewed on a periodic basis in order to provide information on how the implementation is progressing, and on an exceptions basis, to identify issues that may require direction and/or decisions from County Council.

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Recommendation

That County Council support funding the recommended 2019 CWATS Infrastructure Program; and

County Council support the continuation of funding and resources for outreach, monitoring, evaluation programs and initiatives.

Respectfully Submitted

Jane Mustac

Originally Signed by

Jane Mustac, P.Eng, Director of Infrastructure Services/County Engineer

Concurred With,

Robert Maisonville

Originally Signed by

Robert Maisonville, Chief Administrative Officer

Appendix	Title of Appendix
A	2019 CWATS Infrastructure Location Plan
B	2019 Paved Shoulder Program Location Plan
C	Pedestrian/Cycling Count Program