



# Staff Report

## Infrastructure & Public Works

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**Report To:** Committee of the Whole  
**Meeting Date:** May 14, 2018  
**Report Number:** CSPW.18.019  
**Subject:** Infrastructure Level of Service Workshop Report  
**Prepared by:** Michael Campbell, Construction Coordinator

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### A. Recommendations

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THAT Council receive Staff Report CSPW.18.019 entitled “Infrastructure Level of Service Workshop Report”;

AND THAT Council receive the Level of Services recommendations included within Staff Report CSPW.18.019 along with establishing the width of the asphalt for local urban roads at 8.5m;

AND THAT Council establish a \$25,000 budget to prepare, conduct and report on the public consultation regarding the findings of the Infrastructure Level of Service Workshop Report and the Staff generated level of service metrics.

AND THAT Council approve funding the \$25,000 budget from the Infrastructure and Public Works Asset Replacement Reserve Fund.

### B. Overview

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The purpose of this Report is to provide Council the findings from the Level of Service Workshops Summary Report produced by WSP Canada Inc. In addition the report is seeking direction on further discussions with Town residents regarding the expected level of service from infrastructure as outlined in this Report.

### C. Background

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On November 14, 2016, Council awarded the Preliminary Engineering Services for the Elma and Alice Streets Reconstruction Project to WSP Canada Inc. (WSP) within Report CSPW.16.144. Council questioned the expected standard to which the streets would be reconstructed. From this discussion Council directed Staff to conduct a workshop on the design options and engineering standards for the reconstruction of local streets.

On April 3, 2017, Council awarded the Level of Service Workshop to WSP in Report CSPW.17.043. Staff worked with WSP to develop the terms of reference for the workshop and recommended two workshops with Town Council. In the end three workshops were conducted

over 2017 including a walking audit of Elma and Alice Streets Reconstruction Project as a case study to better understand the existing conditions of the older section of Thornbury. While the initiative for the Level of Service Workshop was the pending Elma & Alice Streets Project and the ensuing reconstruction of the older section of Thornbury as identified in the Thornbury Road Infrastructure Project (TRIP) Study, Staff recognize that the Level of Service Workshops would influence and guide both reconstruction projects and new developments. Staff expect that the findings of the Level of Service Workshop will be included in the Town's Engineering Standards for use throughout the municipality for reconstruction and development projects.

The Workshops were structured to inform Council and seek their direction on the level of service that should be provided by municipal infrastructure. The Workshops considered the current Engineering Standards and best practice design alternatives to rationalize the recommendations for Town infrastructure.

A Public Information Centre (PIC) held for the Elma and Alice Streets Reconstruction Project was the first opportunity for the area residents to raise concerns or provide input to the level of service discussions to date. The Level of Service Workshops did not include an opportunity for public input. Staff have had discussions with a resident's group representing interested residents along Elma and Alice Streets regarding the particulars for the reconstruction of their streets. The same group has voiced their thoughts that the Level of Service Workshop findings should be presented to the wider community to gain everyone's input.

The Level of Service Workshop Summary Report (Level of Service Report) describes the Council workshop process and the outcome. The Level of Service Report is available upon request. A summary of the key findings are presented below. In general, the direction provided was that site by site review as appropriate with full urban servicing with preferences as follows:

- **Sanitary Sewer** and appurtenances to current Town standard with sewers provided where potable water service is provided. Sewer may be gravity, low pressure or communal systems. Home owner septic may be considered.
- **Watermains** and appurtenances to current Town standard for potable water supply and fire suppression needs.
- **Roads** to be 7.5m wide paved with either a flexible (asphalt) or rigid (concrete) surface to reduce maintenance and dust control, and provide a long lifespan. Edge of road to be completed with barrier curb and gutter to contain storm water within the roadway, reduce spring maintenance of boulevards and improve pedestrian safety by assisting to keep cars on the travelled portion of the road.
- **Storm Sewers** to current Town standard with an urban section (storm sewers and paved roads with curbs) is preferred, and includes a storm water connection to each lot to address nuisance water and as a means to reduce inflow and infiltration to sanitary sewers.

- **Sidewalks** on one side of the street and wider (1.8m preferred over 1.5m typical) where possible.
- **Street lights** will be a site specific decision with input from the residents but achieving the Town's current minimum lighting level is a priority.
- **Driveway surface** to be the current Town standard - a hard surface (65mm asphalt over 200mm gravel) within the road allowance to the property line.
- **Street trees** are recognized to improve the urban canopy and benefit the Town. Street trees removed are to be replaced but may not be in the same location. A landscape architect is required to comment on spacing of trees with sight lines at intersections a priority. Preference is for trees to be located between the curb and the sidewalk as an additional barrier for public safety.

## D. Analysis

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The infrastructure within a municipal right of way consists of various interrelated systems. The bulk of the infrastructure systems are buried below grade, and while the public interact with these systems daily, it is often out of sight and out of mind. These systems include the potable and fire suppression water distribution system, sanitary sewer collection, storm water control, private utility systems such as communication, electrical and gas supplies and the road structure. The value of these system in a reconstruction project represents approximately 85 - 90% of the project's cost. Typically, these systems are only considered by the public when they break down or are unavailable.

The primary reason to evaluate the level of service delivered by infrastructure is to balance public expectations with the financial cost. The Town's largest investment by far is its infrastructure. While there is a base level of service necessary to satisfy provincial regulations and provide the basics of public health and safety, there is latitude to increase the level of service. This comes though with a cost which is borne by the public through the initial cost of new lots, property taxes and/or user rates. Along similar lines, the province is elevating the discussion around levels of service through the recently released O.Reg. 588/17 Asset Management Planning for Municipal Infrastructure by requiring municipal asset management plans to have a more robust evaluation of infrastructure needs to assist in reaching sustainability. Staff are currently gathering information and preparing to report on infrastructure level of service metrics during the deliberations of the Draft 2019 Budget. As such, Staff recommend that public consultation process be undertaken to engage the public in their expectations of the level of service offered by their infrastructure through these metrics and to create awareness that the expectations come with a cost.

Although Staff would be able to undertake the public consultation, this effort would result in the delay and come at the expense of advancing capital projects. Staff therefore recommend that a consultant be retained to prepare a professionally produced and implemented public

consultation process as well as provide the technical and economic support to cost the various levels of services that may result from the consultation.

Staff foresee one PIC to introduce the discussion on level of service, present the Staff prepared metrics, and to gather public expectations. A second PIC will be held to address the findings of the first PIC and to gather comments on the proposed levels of service. Staff estimate the upset fee to be \$25,000.

Staff plan to hold the PIC's in the fall of 2018 to include at least the preliminary outcomes within the deliberations of the 2019 Budget. Staff considered not holding the PIC's until after the municipal election cycle but felt the results of the public consultation would be important information for the incoming Council. The PIC materials will be first presented to the Committee of the Whole prior to holding the PIC for their awareness and to gain Committee's input.

The Level of Service public consultation is not expected to significantly affect the Elma and Alice Street Reconstruction Project. As outlined within Staff Report CSPW.18.039, Staff have had extensive consultation with a residents' group on the particulars of that project and feel the preparation of the Preliminary Design Report should advance. If the findings from the Level of Service public consultation affects the Elma and Alice Street Reconstruction Project, those modifications can be incorporated into the final design of the works.

### **Considering the Road Width**

A discussion regarding the road width occurred during the walking audit and Council's Workshop sessions. The key issues were traffic calming and safety. The options presented included a 6.5m road with shoulders to match an existing section of Alice, a 7.0m road with curbs for all road sections and an 8.5m road with curbs for all sections. From the discussions with Council, the preferred road width arrived at was 7.5m with barrier curb and gutters. The main reasons for selecting this road width and curb option were: traffic calming; accommodation of wider sidewalks; boulevard trees; pedestrian safety and boulevard maintenance.

Following the Workshops, Staff and WSP discussed further the implications of implementing a 7.5m asphalt width. Urban roads provide a travel route for local vehicles as well as delivery and emergency vehicles and often overflow parking for visitors. Both Staff and WSP considered the legislative requirements for minimum road widths. The only reference found was from the Building Code which requires a 6m fire lanes on private sites such as within the Blue Mountain Village. The current Town's standard of 8.5m asphalt width is the commonly specified width by municipalities across Ontario. This width has been the norm for so long that the design considerations that generated the dimension are long forgotten. According to WSP, some municipalities are testing alternate road widths for specific projects. However, a departure from the generally accepted local urban road dimensions should be considered quite carefully. Municipalities that have narrow travel widths have found that parking restrictions are required to ensure the road remains available to emergency and larger vehicles.

To dive into the design consideration for a local road width, a number of areas of concern need to be understood. A typical municipal rural and urban lane width is 3m. Municipalities with road sections that include parking lanes use a 2.25m to 2.5m width for this use. Municipalities with road sections that include bike lanes use around 1.5m width for this use. The road's width should consider asphalt width and the standard curb and gutter geometry. The concrete gutter provides a 300mm nominally flat surface before the vertical curb face which adds to the overall flat surface of the road. Within the standard local urban section using 8.5m width of asphalt, a car could be parked on one side of the road while not impeding emergency access width or two-way traffic.

The Town can consider painted fog lines (white lines that indicate the right side of the lane) to define the travel corridor for vehicles. This will assist in achieving traffic calming goals. The fog lines at 3m from the centerline of the road would leave approximately 1.5m next to the curb face that could serve as a corridor for bicycles. This corridor is not to be considered a dedicated cycling lane but can also be used for parking. A centreline is not being recommended by Staff at this time due to cost considerations and not to confuse drivers passing parked vehicles, but it could always be added if warranted.

The Town has experimented with fog lines in an effort to calm traffic as described below and provided in Attachment #1. Operation Staff have noted the traffic calming effects.

1. Wensley Drive is a rural cross section that typically would have had a 6m paved road and 1.5m gravel shoulders. When this road was reconstructed the asphalt was placed over the road and the shoulders producing a 9m wide surface. Fog lines were painted to define the 6m road.
2. Beaver Street between Alfred Street and Alice Street is an urban cross section with an 8.5m width of asphalt and mountable curb and gutter. This is part of a heavily used route through Town and traffic speeds were elevated. A yellow center line and white fog lines were painted to define a 6.5m wide road. This particular stretch of road is identified as an excellent road cross section by cycling advocates.

A center/fog line painting program will impact on annual maintenance costs. Painted road lines must be renewed annually. Line painting is typically budgeted at \$250/km/line.

### **Recommendations and Next Steps**

Staff recommend that Council receive the recommendations included within Staff Report CSPW.18.019 along with establishing the width of the asphalt for local urban roads at 8.5m. In addition, Staff also recommend Council establish a \$25,000 budget to prepare, conduct and report on public consultation to present the findings from the Infrastructure Level of Service Workshop Report and Staff generated level of service metrics.

The next steps for Staff will be to retain a consultant to assist with the public consultation and to complete the key performance indicators that will be utilized as the level of service metrics.

## **E. The Blue Mountains Strategic Plan**

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Goal #5: Ensure Our Infrastructure is Sustainable

## **F. Environmental Impacts**

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The ongoing projects facilitate the long term sustainability of the community.

## **G. Financial Impact**

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Staff are recommending that a \$25,000 budget be created to prepare, conduct and report on the public consultation and that the funding come from the Infrastructure and Public Works Asset Replacement Reserve Fund.

## **H. In consultation with**

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Sam Dinsmore, Deputy Treasurer/Manager of Accounting and Budgets  
Jim McCannell, Manager of Roads and Drainage

## **I. Attached**

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1. Pictures: Fog Lines and Centre Line on Beaver Street and Wensley Drive

Respectfully submitted,

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**COMMITTEE OF THE WHOLE  
Level of Service Workshops Report**

**WENSLEY DRIVE**





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**Beaver Street**



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