



Public Information Meeting #1

Elma Street and Alice Street Area Reconstruction

July 2019



Introduction

Engagement

Tatham Engineering has been engaged to complete detailed design of the Elma Street and Alice Street Area Reconstruction project as part of the Thornbury Road Infrastructure Project (TRIP).

Thornbury Road Infrastructure Project (TRIP)

TRIP is focused on improving servicing issues in the older section of Thornbury.

Elma and Alice Streets are the first reconstruction in TRIP. The Town completed studies, workshops and presentations for Elma and Alice Streets over the last 2 years. The public provided input throughout this process and helped shape the recommended solution.



Introduction

Thornbury Road Infrastructure Project (cont'd)

Completed to date

Previous workshops were focused on technical engineering and livability aspects of street design:

- Sustainability (stormwater management);
- Active Transportation (including walking and cycling);
- Community design and social value (aesthetics, landscape design, lighting, accessibility, traffic calming and age-friendly design);
- Services (transportation, utilities); and
- Economics (value to the community and cost of infrastructure)

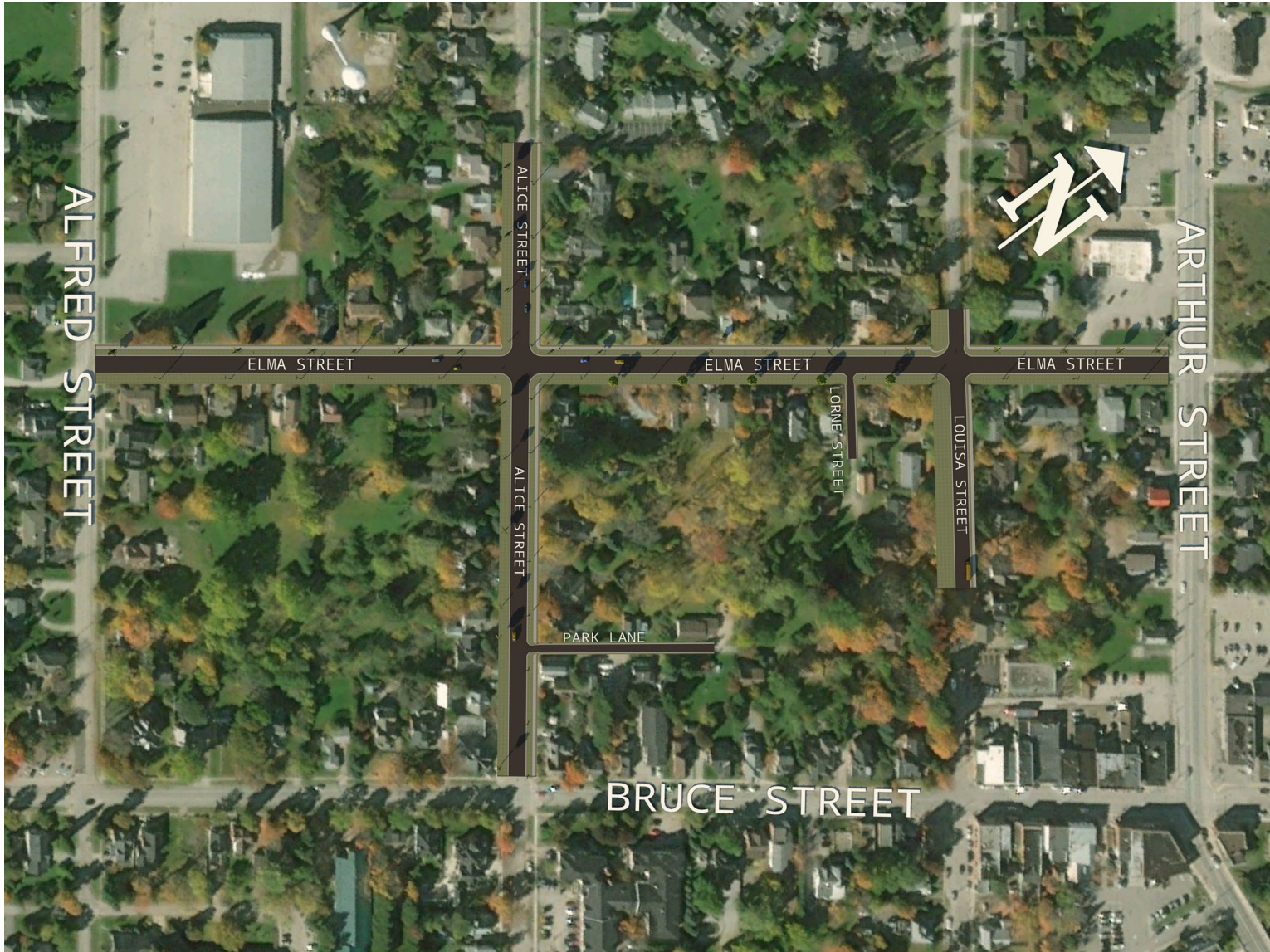
To be Completed

The project has completed the 30% design stage. The next steps are to

- receive feedback from the public (via this Public Information Meeting)
- prepare a final report for Council to decide on the final road cross sections
- to proceed to detailed design.



Project Limits





Existing Conditions

Infrastructure and Functionality

Existing Conditions – Infrastructure

Existing infrastructure within the project limits requires replacement due to multiple watermain breaks, sewer deterioration, infiltration and excessive road cracking.

This is the primary purpose for this project – replacement of infrastructure.

Critical factors:

- End of life sewers and watermains
- Intruding roots causing displacement or blockages
- Insufficient bury depth causing frost damage
- Insufficient road subgrade to support traffic loads
- Poor subgrade/surface drainage resulting in saturated roadways (potholes)



Existing Conditions – Functionality

Functionality Issues:

- Sidewalks are discontinuous - on one side or both, varying in width, alignment and side
- Road width and cross section are inconsistent – curbs, asphalt boulevard, ditches, etc.
- Large trees dominate the boulevards but are not healthy due to lack of maintenance. Several have been removed or heavily trimmed
- Lighting is inconsistent
- Boulevard and overland drainage are existing concerns



Existing Conditions – Cross Section



Existing Conditions – Cross Section



Existing Conditions – Arborist Report

The Town completed a full assessment of all trees located within the project limits for health and stability.

Many large trees have never been maintained and thus are in “fair” condition – the Town does not have a comprehensive urban canopy program.

Trees identified to be in poor condition within the right of way are to be removed.

Additional trees may need to be removed if they conflict with existing or proposed infrastructure or grading.

The goal is to save as many trees as possible, however, where trees are removed a new tree will be planted nearby.

TOWN OF THE BLUE MOUNTAINS

ARBORIST REPORT AND TREE PROTECTION PLAN

ELMA AND ALICE STREET
RECONSTRUCTION, TOWN OF THE BLUE
MOUNTAINS

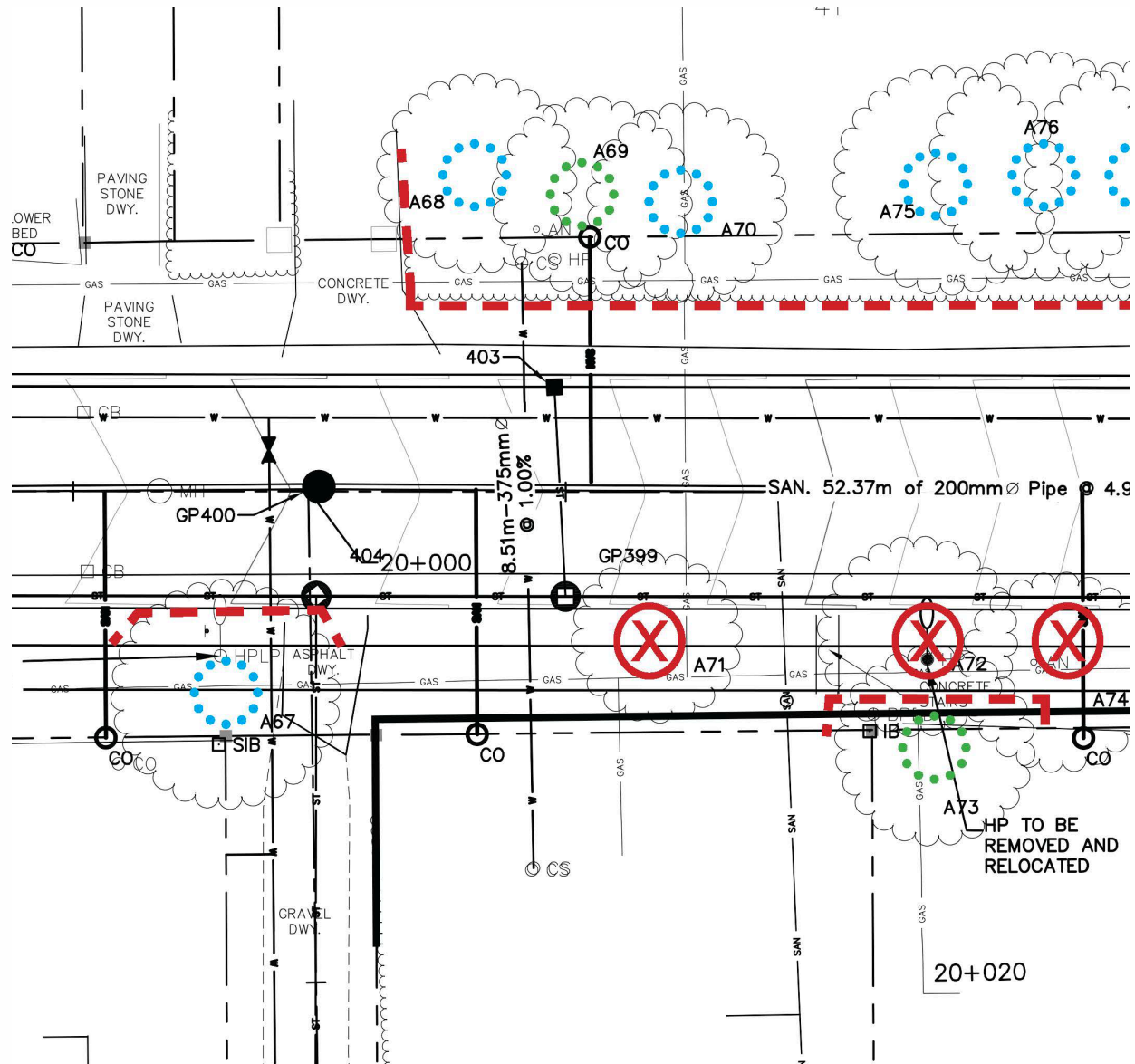
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Existing Conditions – Arborist Report





Project Consultation

Workshops and Public Information Centres

Conclusions from Workshops

Project Consultation

The Town took an in-depth look at all components of a reconstruction project through a series of workshops in 2017. The goal was to develop a base “Level of Service” to design to. To summarize:

Sanitary Sewer

Purpose: Provide worry-free service for homeowners while complying with Ministry requirements for septage/sewage.

Approach: Site by site decision required to determine best option for collection system (gravity, low pressure, communal septic, home owned septic). If water service is provided, Town collection should also be provided.

Storm Sewer

Purpose: Drain subgrade to prolong road life and prevent flooding during specified design storms by providing a route for stormwater.

Approach: Site by site decision to determine best option for collection system (storm sewers, ditching, infiltration, none). An urban cross section is preferred.

Watermain

Purpose: Provide potable water and provide sufficient flows for fire protection.

Approach: Size watermain for both potable water usage and fire protection.

Street Lights

Purpose: Provide improved safety by increasing illumination of project area.

Approach: Improve overall lighting by reducing dark spots.



Conclusions from Workshops (cont'd)

Sidewalk

Purpose: Provide durable pavement to clearly define pedestrian areas and improve accessibility.

Approach: Construct a concrete sidewalk on one side of the street per Town Standard Cross-Section - 8.5 m Road.

Driveway Treatments

Purpose: Provide consistent treatments to improve street aesthetic.

Approach: Maintain a minimum Town Standard paved asphalt entrance, pave gravel driveways to property line to reduce maintenance and increase cyclist/pedestrian safety.

Street Section Width

Purpose: Provide a road platform with sufficient space for all intended uses – emergency services, parking, cyclists.

Approach: Construct a minimum 4.0 m (for laneways) and 8.5 m road platform (for standard right-of-way widths) to meet Town Standard Cross Section – 8.5 m Road and match existing roadway widths more closely.

Road Surface

Purpose: Provide durable pavement for smooth travel and curb to define roadway, increase road safety, reduce maintenance and provide stormwater flow route.

Approach: Construct an asphalt (flexible) pavement and provide a concrete barrier curb to reduce clear zone requirements and limit boulevard maintenance.

Street Trees

Purpose: Cleaner air, improved stormwater management, shade, desirability, heat reduction in summer.

Approach: Replace removed trees with a new tree in the boulevard, between the sidewalk and curb (as practical).



Project Consultation

Balancing Priorities

Many components of a reconstruction project end up competing. The purpose of this PIC is to present the balance we have chosen (preferred cross sections) and discuss the reasoning behind all decisions. A few simplified key decisions are presented below for example:

Storm Sewer Sizing and Overland Flow Routes

To meet Provincial requirements, storm sewers must be sized for the '5 Year Storm'. Sewers can be sized larger to provide a higher 'Level of Service', however, constraints like gas main crossings, sanitary service conflicts, pipe cover and cost make this much more difficult. Regrading the street improves drainage and provide proper overland flow routes saves cost on extra large sewers.

Sidewalk, Grading and Trees

Providing sidewalk on only one side of the street allows more trees to remain by reducing the need for retaining walls and large grading changes. Additionally, a sidewalk on one side consistently provides a continuous route for pedestrians.

Street Width and Lane Allocation

A street width of 8.5 m has been selected to provide sufficient space for all requirements – street parking, emergency vehicle passage, cyclists, etc. A larger street to accommodate bicycle lanes would require removal of many additional trees. A narrower road would limit street flexibility – emergency vehicles require 6.0 m unobstructed width, meaning no street parking would be allowed.

Conclusion

We have made decisions based on experience, workshop input, project costs and intent to limit construction impacts. These decisions are not final, and we welcome input. All decisions will be presented to Council for approval prior to proceeding with final design.

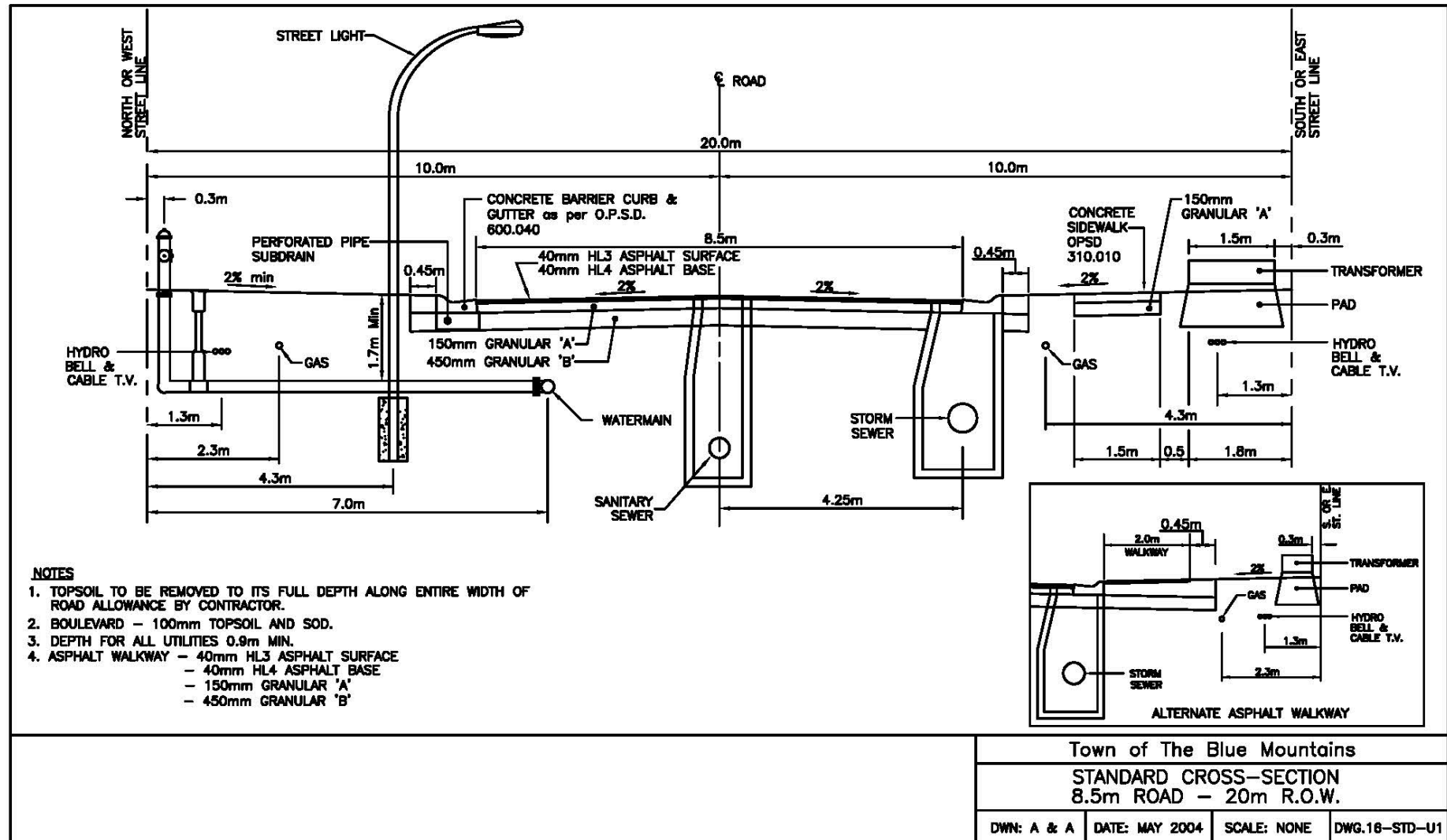




Proposed Cross Sections

Alice Street West, Elma Street South, Lorne Street, Louise Street West and Park Lane

Proposed Cross Sections – TOBM Standard Cross-Section 8.5 m Road



Proposed Cross Sections

Implementation

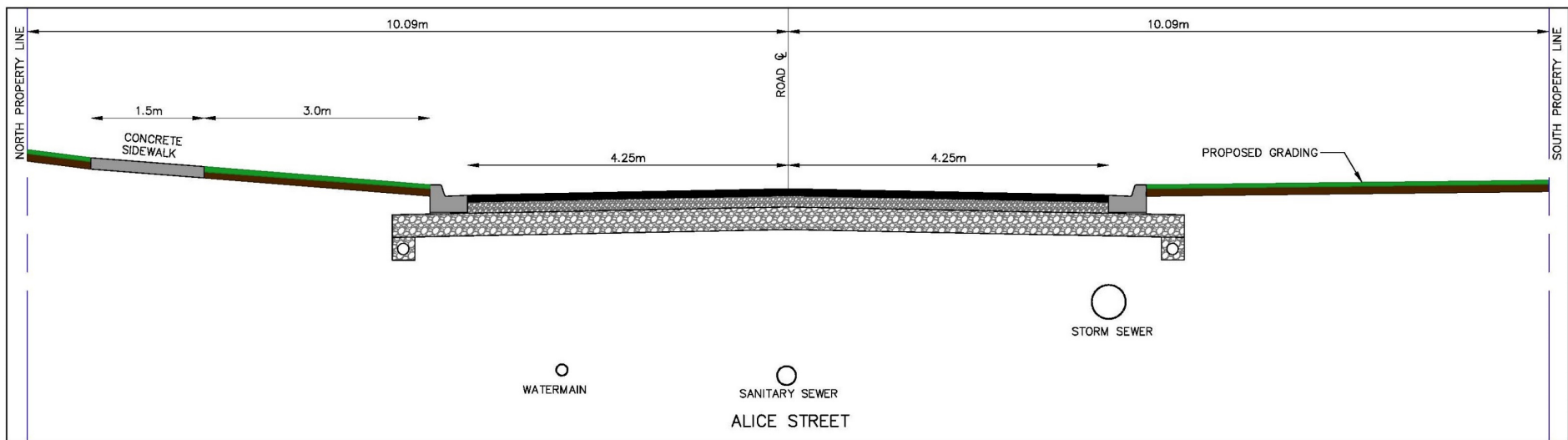
All cross-sections have common elements:

- Property Lines – generally the limits of construction
- Centre of Road – highest point in the road.
- Curb and Gutter – barrier curb and gutter is proposed throughout the project to provide a well-defined edge of road and reduce clear-zone area (improving safety).
- Sidewalk – a 1.5 m sidewalk is proposed for one side of the street (consistent throughout), to match Standard Cross-Section 8.5 m Road.
- Watermain, Storm Sewer and Sanitary Sewer – designed according to Town Engineering Standards.
- Lane Widths – 4.25 m lane widths results in an 8.5 m road width for Alice and Elma. Lane width of 4.0 m and two 0.5 m gravel shoulders for Lorne Street and Park Lane. Louisa to match existing widths.
- Proposed Grading – as much as possible, grading will be improved, eliminating areas of ponding to the extent possible by lowering the road and sloping boulevards accordingly.
- Traffic Calming – “Fog Lines” are currently proposed as a passive traffic calming measure. Lines will be painted to mark out a narrower lane, encouraging vehicles to drive slower.



Proposed Cross Section – Alice Street

- Consistent cross section – 8.5 m wide asphalt and addition of barrier curb and gutter throughout
- Upgrading sidewalk to 1.5 m throughout in same location as existing sidewalk
- Improvements to drainage through addition of storm sewer throughout project limits

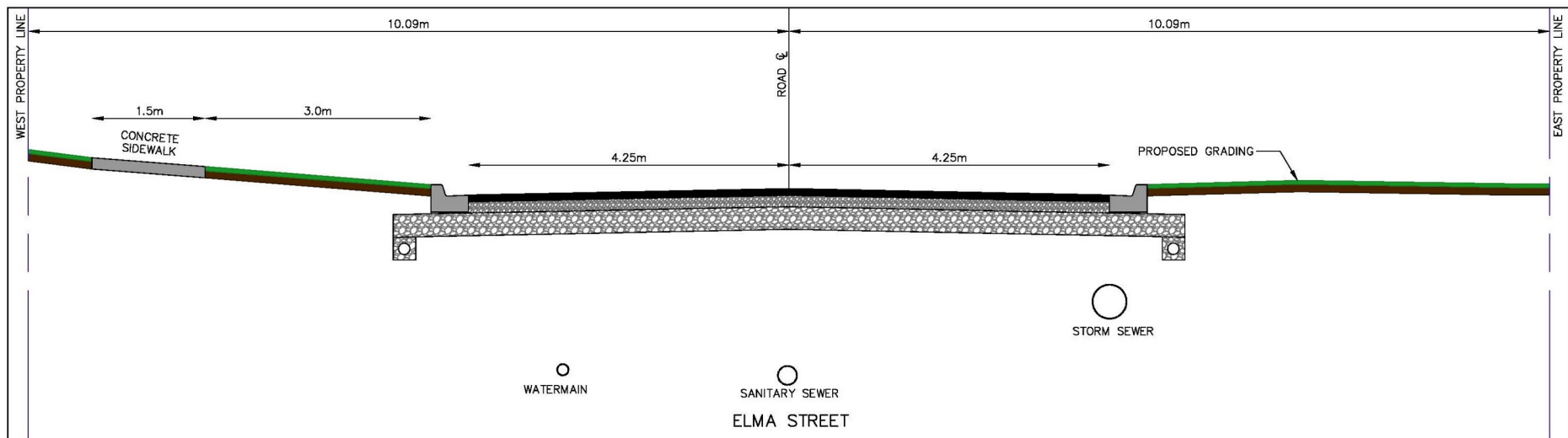


Proposed Cross Section – Alice Street



Proposed Cross Section – Elma Street

- Road width to remain the same for most of the street (8.5 m)
- Removal of asphalt boulevard and gutters throughout
- Sidewalk upgraded to 1.5 m throughout along the west side of the street, preventing removal of additional trees and establishing a continuous route
- Large grade adjustment at the Elma Street hill will require removal of some large trees
- Concrete barrier curb and gutter to be provided on both sides of the street throughout

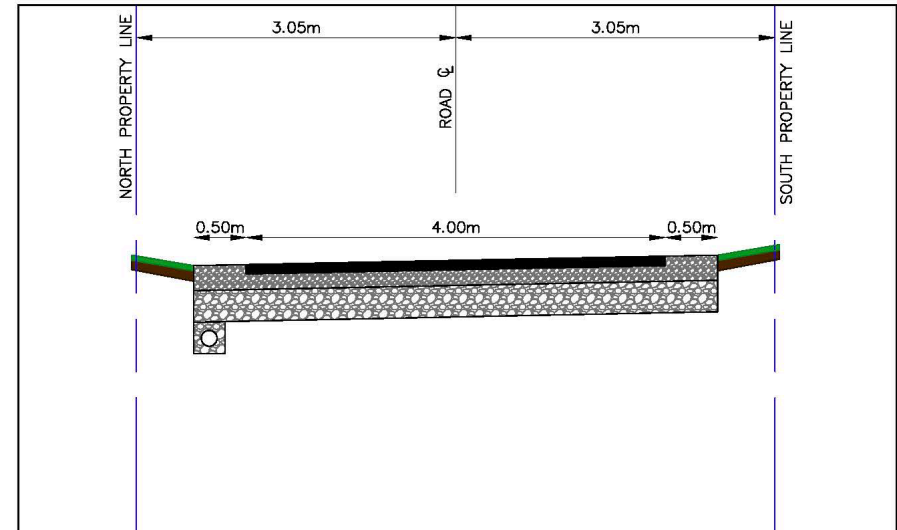


Proposed Cross Section – Elma Street



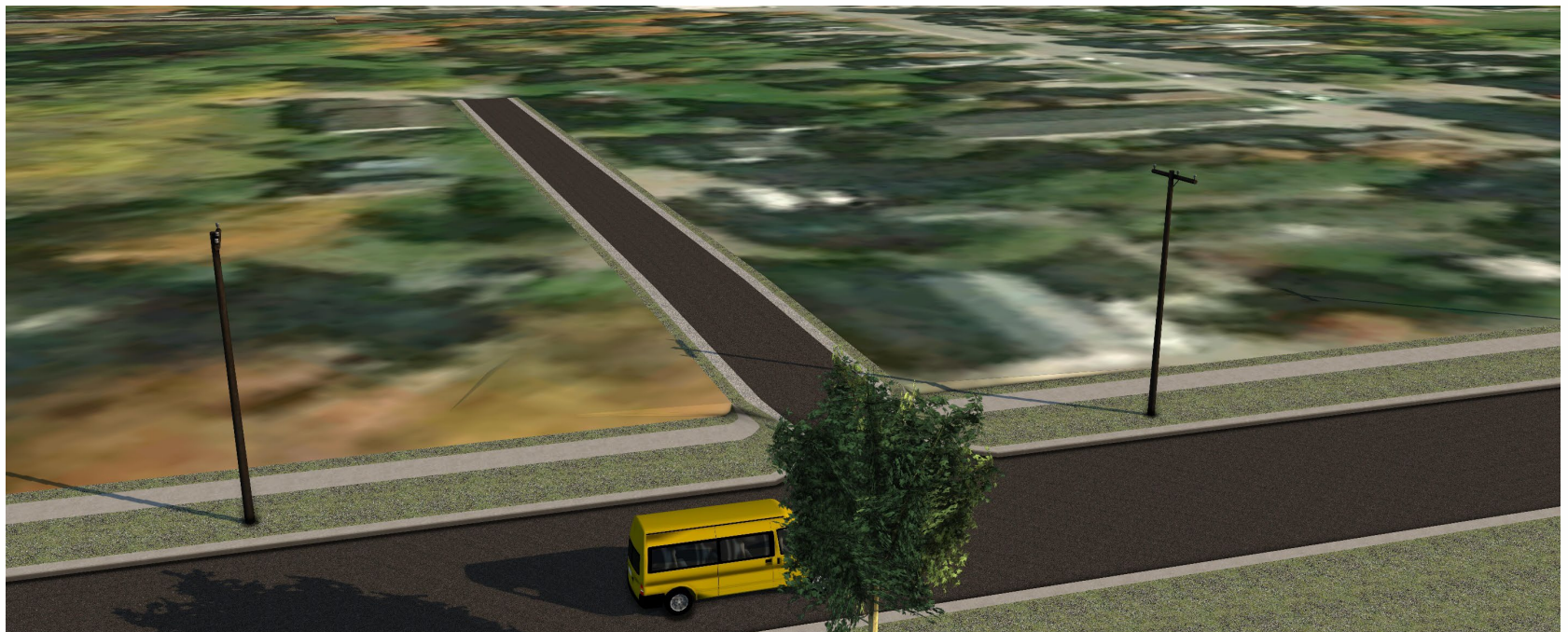
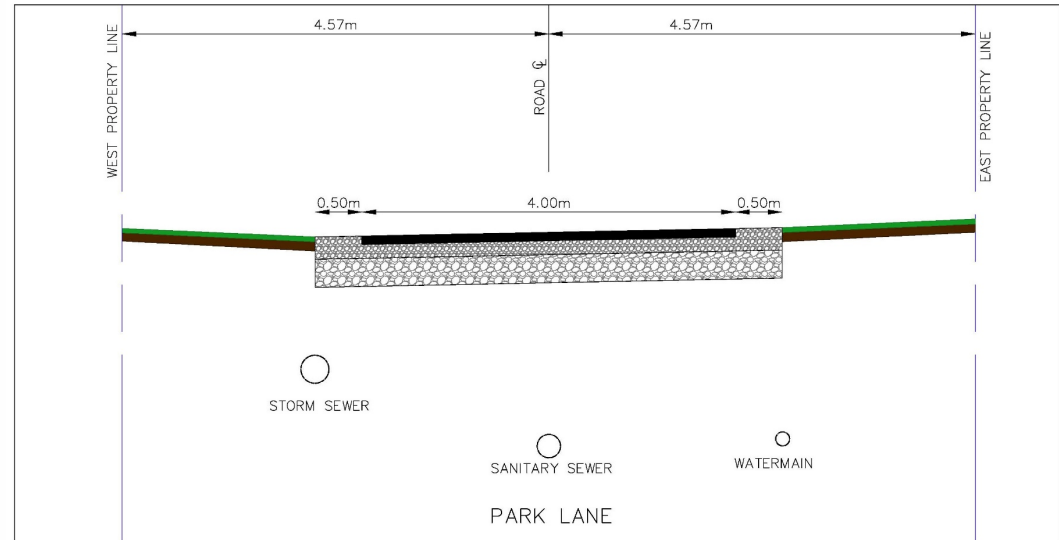
Proposed Cross Section – Lorne Street

- Clean up gravel surface with asphalt to prevent pot-holes from developing
- Drainage improvements
- Improvements to grading within Town-owned right-of-way
- Replacement of services along Lorne Street



Proposed Cross Section – Park Lane

- Replacing paved lane with a slightly wider road platform
- Addition of gravel shoulders throughout
- Addition of watermain and sewers to improve servicing along laneway



Proposed Cross Section – Louisa Street

- Louisa Street was not originally included in the scope of work for the Streetscape Report or public consultations
- No significant adjustments to cross section are proposed for Louisa Street as the purpose is to correct servicing deficiencies – only reconstructing 100 m +/-
- Minor grading adjustments to be made at the intersection of Elma Street to improve accessibility
- Future projects will review and revise the road cross section. This project is too limited in scope for large scale changes.





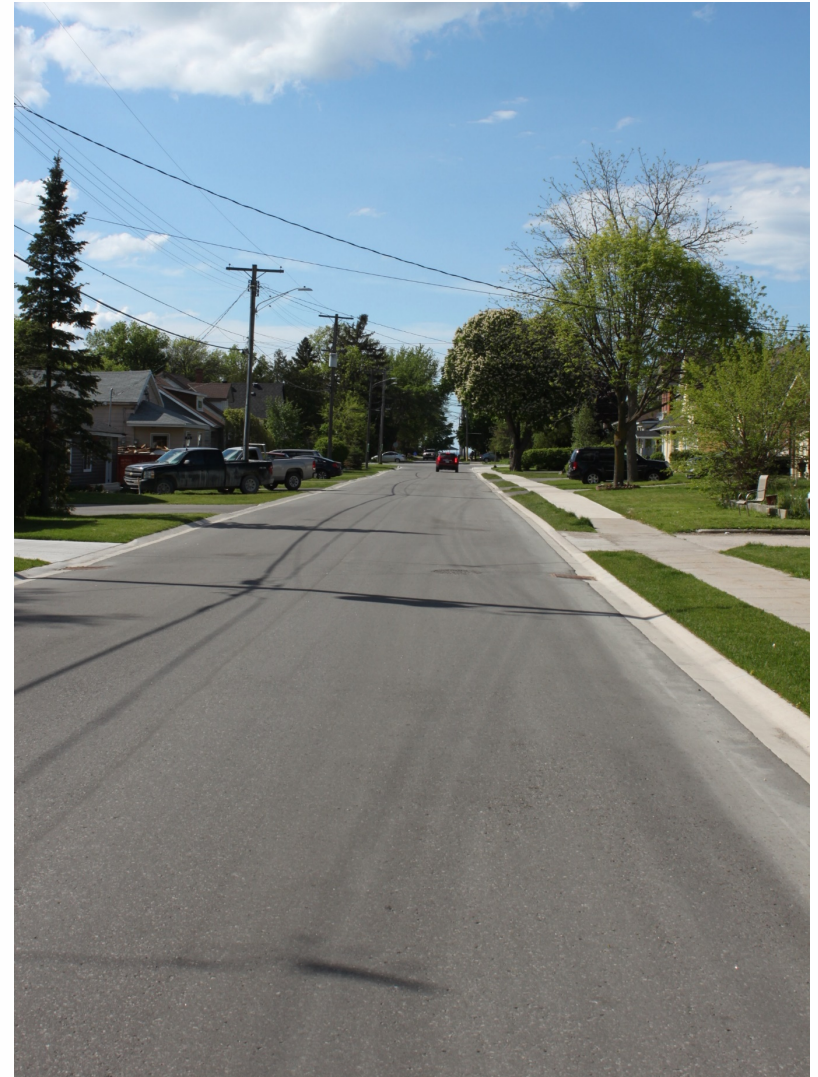
Examples

Similar challenges, clear improvements

Previous Examples – Niagara Street, Collingwood

Key Points:

- Mature Street near Georgian Bay
- Very large trees line both sides of the street
- Storm drainage a significant issue
- Inconsistent cross section



Previous Examples – Norene Street, Midland

Key Points:

- Large trees and significant utility installations throughout
- Storm drainage a significant issue
- Addition of new sidewalk





Next Steps

Design, Acceptance, Construction

Next Steps – Design and Approvals

Advance the Preliminary Design

The design will be advanced to consider grading, servicing and utility conflicts

Utility Conflict Resolution

Test holes will be completed in critical locations and relocation work will be advanced as required

Final Streetscape Report

The final cross sections and design will be presented to Council in a Final Streetscape Report

Detailed Design Presentation

The 95% design will be presented to council and the public once it is complete (scheduled for Fall 2019). This will provide an excellent opportunity to review the full design and understand the impacts to each property. Additional information regarding construction impacts, mail delivery, driveway access, garbage and recycling collection (etc.) will be provided at that time.

Final Design and Tendering

The design will be completed and a tender document prepared. The design is scheduled to be completed in December 2019

Construction

Once the tender period is complete, a contractor will be selected and construction will proceed (scheduled for Spring/Summer 2020)





Questions or Comments?

Enhancing our communities