APPENDIX P:
STAFF REPORT AND NOTICE OF STUDY COMPLETION

TO:	**GENERAL COMMITTEE**
SUBJECT:	**SOPHIA CREEK WATERSHED AND MULCASTER DRAINAGE AREA MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT PHASES 1 AND 2**
WARD:	**1 & 2**
PREPARED BY AND KEY CONTACT:	**L. COONEY, C.E.T. SENIOR INFRASTRUCTURE PLANNING TECHNOLGIST (Ext. 4514)**
SUBMITTED BY:	**R. SUTTON, P. Eng. DIRECTOR OF ENGINEERING**
GENERAL MANAGER APPROVAL:	**R. J. FORWARD, MBA, M.Sc., P. Eng. GENERAL MANAGER OF INFRASTRUCTURE & GROWTH MANAGEMENT**
CHIEF ADMINISTRATIVE OFFICER APPROVAL:	**M. PROWSE CHIEF ADMINISTRATIVE OFFICER**

RECOMMENDED MOTION

1. That the preferred design alternative for the Municipal Class Environmental Assessment (EA) for Sophia Creek Watershed and Mulcaster Drainage Area Phases 1 & 2 be adopted as outlined in Staff Report ENG014-17.
2. That in accordance with the requirements of the Class EA process, the Engineering Department publish a Notice of Completion for the Sophia Creek Watershed and Mulcaster Drainage Area Phases 1 & 2 Environmental Study Report.
3. That based on the successful conclusion of this Class EA process and available budgets being approved through the capital planning process:
   a) The Engineering Department proceed with the implementation of the preferred recommended alternative for drainage improvements in the Sophia Creek watershed and Mulcaster drainage area.
   b) That the Director of Legal Services be authorized to commence negotiations for the acquisition of all required property interests subject to the property acquisition budget being approved.
   c) That the Director of Legal Services be delegated the authority to settle any negotiated agreements up to the maximum amount budgeted for property acquisition.
   d) That the City Clerk be authorized to execute all associated and required documents in a form approved by the Director of Legal Services.

PURPOSE & BACKGROUND

4. The Sophia Creek watershed and Mulcaster drainage area are considered urban warm water storm systems with drainage areas of 470 ha and 44 ha respectively, draining to Kempenfelt Bay (see Appendix “A”).

5. On February 25, 2002, City Council adopted Motion 02-G-112 regarding the Sophia Creek Watercourse Master Drainage Plan and its recommended solutions as follows:

> "Sophia Creek Watercourse Master Drainage Plan Update
>
> 1. That the Update of the Sophia Creek Watercourse Master Plan and its recommended solutions as prepared by Skelton Brumwell and Associates Inc., dated January 2002 be adopted and that staff proceed with the following:
>
> a.) The Engineering Department proceed with the implementation of the preferred solutions identified in the above referenced report subject to municipal capital works programs and budgets; and
>
> b.) Staff seek to acquire all necessary property or easements subject to Council approval. (ENG004-02) (File: D03-SO)"

Since 2002, some of the recommendations have been implemented including the Ottaway Avenue stormwater management facility and the St. Vincent Street culvert crossing.

6. The Updated Master Drainage Study has been based on current Storm Drainage and Stormwater Management Policies and Design Guidelines. The project has been undertaken following the Municipal Class EA process in accordance with provincial legislation to ensure public and agency consultation as well as ensuring potential natural, social and economic environmental effects are considered in determining the preferred alternative.

7. The Master Drainage Plan Update investigated existing flooding problems and explored opportunities for improvements in the Sophia Creek watershed and Mulcaster drainage area. The intent of the update is to provide guidance to the City of Barrie (City) in planning future stormwater capital works projects while also providing measures to protect and enhance the natural watershed features.

8. As part of the Class EA process, the public and review agencies were invited to attend a Public Information Centre (PIC). The PIC was held on October 26, 2016 to give the public and review agencies the opportunity to ask questions and express their concern(s) with respect to the alternatives presented in the Class EA document. These comments and concerns were incorporated into the development of the Preferred Alternative Solution. Copies of the newspaper notices and the mail-out information are contained in the draft Municipal Class EA document, which is available in the Councillors' Lounge for review.

9. Drainage renewal needs have identified the existing three (3) culvert crossings of Grove Street and the crossing of Rose Street with a condition rating of "very poor".

ANALYSIS

10. A comprehensive set of alternatives were developed and presented at the PIC (see Appendix "B").

11. Comments received throughout the Class EA process as well as the Engineering Department's responses to the comments are summarized in Appendix "C". The Environmental Study Report (ESR) is available in the Councillors' Lounge for review and on the City of Barrie website at www.barrie.ca/eastudies. Areas of major concern include:

- Concerns about watershed frequent flooding onto private property and parkland areas as well as public safety concerns associated with the flooding.
- Concerns with debris and maintenance practices of drainage channels. Ditches and culverts often blocked with garbage and building materials.
- Concerns with losing parkland for stormwater and Low Impact Development (LID) facilities.
- Concerns with digging up Dunlop Street and Mulcaster Street for relief storm sewer system.

Refer to Appendix "C" for table of comments and prepared responses to concerns.

12. Fourteen (14) people signed the attendance register at the PIC.

13. Through evaluation of impacts, as well as comments and responses received from the PIC, an alternative that combines alternatives 2A, 2B, 3B, 4B, and 4C has been selected as the preferred alternative. Please refer to Appendix "D" for the preferred design alternative figure, which is also available on the City of Barrie website at www.barrie.ca/eastudies by selecting the Sophia Creek Watershed and Mulcaster Drainage Area, and scrolling down to the reports section. The improvements outlined in the preferred alternative include general improvements which apply to the entire study area, recommendations to reduce flows upstream, culvert/channel capacity improvements, and upsizing of storm sewers. The details are as follows:

General Improvements

a) Local minor drainage system upgrades to current City design criteria.

b) Owen Street flow diversion.

c) Construction of new storm sewer (where absent/required).

Flow Reduction

a) Retrofit and expand existing storm pond facility located at Ottaway Avenue / Currie Street.

b) Convert existing MacMorrison Park into a new stormwater management detention facility and passive park.

c) Construct LIDs in College Heights, Archie Goodall, Steel Street, HG Robertson and Ferris Parks.

d) Implement LIDs as part of road reconstruction projects where practical.

Culvert Storm Conveyance Capacity Improvements (Road Design Year Flood Frequency 50 Year)

a) Howard Crescent

b) Lay Street

c) Ottaway Avenue

d) Rose Street

e) Laurie Crescent

f) Bothwell Crescent

g) Parkdale Crescent

h) Davidson/ Gunn Street

i) Grove Street A (approximately 170 metres west of Lay Street)

j) Grove Street B (approximately 65 metres east of St. Vincent Street)

k) Grove Street C (approximately 80 metres west of Bothwell Crescent)

l) St. Vincent Street

m) Berczy Street

n) Wellington Street

Channel Storm Conveyance Capacity Improvements (Design Flood Frequency 50 Year)

a) Howard Crescent to Lay Street

b) Downstream of Lay Street 50 metres

c) Upstream/Downstream of Grove Street (B) 50 metres

d) Ottaway Avenue to Laurie Crescent

e) Grove Street to Parkdale Crescent

Channel Storm Conveyance Capacity Improvements (Design Flood Frequency 100 Year)

a) Berzcy to Queen Street

Trunk Storm Sewer Conveyance Capacity Improvements (Design Flood Frequency up to 100 year)

a) Sophia Street Trunk Storm Sewer – Peel Street to Clapperton Street

b) Owen Street – Sophia Street to Kempenfelt Bay via Memorial Square

c) Clapperton Street - Sophia Street to Dunlop Street

14. The preferred alternative will address immediate renewal needs (road culvert structures at Rose and Grove Street locations).

15. The preferred alternative, once implemented, will mitigate watershed flooding of municipal and private properties and will include stormwater management facilities with LID and improved road culvert crossing conveyance improving public safety.

16. As part of the preferred alternative, mitigation elements associated with the new storm facility to be constructed in MacMorrison Park will incorporate a passive park design which will maintain a park feature in the neighbourhood reducing environmental, social and economic impacts. The existing park program activities will be relocated to other facilities within the City park system as part of a separate project.

17. The Berczy Street and Wellington Street culvert crossings and new proposed channel works along the west side of Berczy Street will confine flows within a new channel floodway to mitigate flooding.

18. The preferred alternative identifies the required property acquisition for the recommended drainage improvements. There are 14 residential properties and approximately 0.5 ha of industrial land (partial property acquisition) to be acquired to implement the preferred alternative. These property owners have been notified that the preferred alternative would require purchase of their property.

19. Staff are recommending that the preferred alternative be adopted by Council, in order that a Notice of Completion can be filed as required as part of the Class EA process. The Notice of Completion is the final point in the public process where the public can express their concerns if they feel issues raised through the Class EA process have not been sufficiently addressed. If there are no Part II requests received, Phases 1 & 2 of the Class EA process can be considered complete and the City can proceed with the implementation of the preferred alternative. A Part II Order is an appeal provision whereby a person or party with outstanding concerns may request the Minister to make an order requiring a proponent to comply with Part II of the EA Act before proceeding with a proposed undertaking to which the Class EA would otherwise apply.

ENVIRONMENTAL MATTERS

20. This project has followed the guidelines for a Municipal Class EA process and the ESR discusses how environmental matters have been considered in the development of the recommended preferred design alternative. The evaluation process considered criteria for natural, social, cultural/heritage and economic environmental matters and physical environment criteria such as traffic, pedestrians, cyclists, transit, property, noise, utilities, municipal services and driveway grades/operations. The recommendations have taken into consideration the sizing of infrastructure with the impact of climate change.

ALTERNATIVE

21. The following alternative is available for consideration by General Committee:

Alternative #1 General Committee could alter the proposed recommendation by selecting another preferred alternative.

This option is not recommended because the preferred alternative provides for overall watershed drainage improvements which minimize the effects to the physical, natural, social, cultural/heritage and economic (financial) environments.

FINANCIAL

22. The total preliminary cost estimate for the preferred alternative is approximately $39 million which accounts for drainage upgrade work coordinated with future renewal projects. The project team has reviewed the preferred alternative with the objective of economic feasibility and sustainability. As stand-alone projects, the cost associated with the recommendation would be significantly higher. Recognizing that these improvements will take a long period of time to implement, the team considered (where possible) to include projects combined with the renewal needs that the City will already be planning for. The costs for each of the watershed major components are included in the ESR, Section 10.6.

23. The preferred alternative costs can be broken down into the opportunities to include as part of a renewal project such as storm trunk sewers and general drainage improvements. Storm ponds and channels would be new and therefore not be included in an existing or future City renewal project. Some culverts have been included as both renewal and new projects depending on the location. New storm ponds account for $3.6 million, storm channels for $1.2 million, culverts for $11 million, storm trunk sewers for $13.2 million, and general drainage improvements for $6 million. The total cost of lands of $4 million has been based upon MPAC assessed values.

24. Based on the previous Sophia Creek Master Drainage Plan, the culvert crossings located at Howard, Lay, Grove, Ottaway, Bothwell, Parkdale, Davidson/Gunn and Berczy Streets were all identified as eligible for Development Charges with 25% non-renewal related infrastructure and 75% benefit to existing development. With the next update to the Development Charges By-law in 2019, any additional projects associated with the preferred alternative will be considered for inclusion. Projects not included in the Development Charges By-law will have funding sources determined as part of the capital planning process. It is expected that the funding sources would be Development Charges and/or tax capital.

25. The Engineering Department will continue to proceed with the implementation of the recommendations of the preferred alternative through the capital planning process over time. Projects will be coordinated on the basis of infrastructure renewal needs using the prioritization process. The highest priority will be construction of new storm ponds.

LINKAGE TO 2014 – 2018 COUNCIL STRATEGIC PLAN

26. The recommendation(s) included in this Staff Report support the following goals identified in the 2014-2018 Strategic Plan:

☒ Responsible Spending

☒ Well Planned Transportation

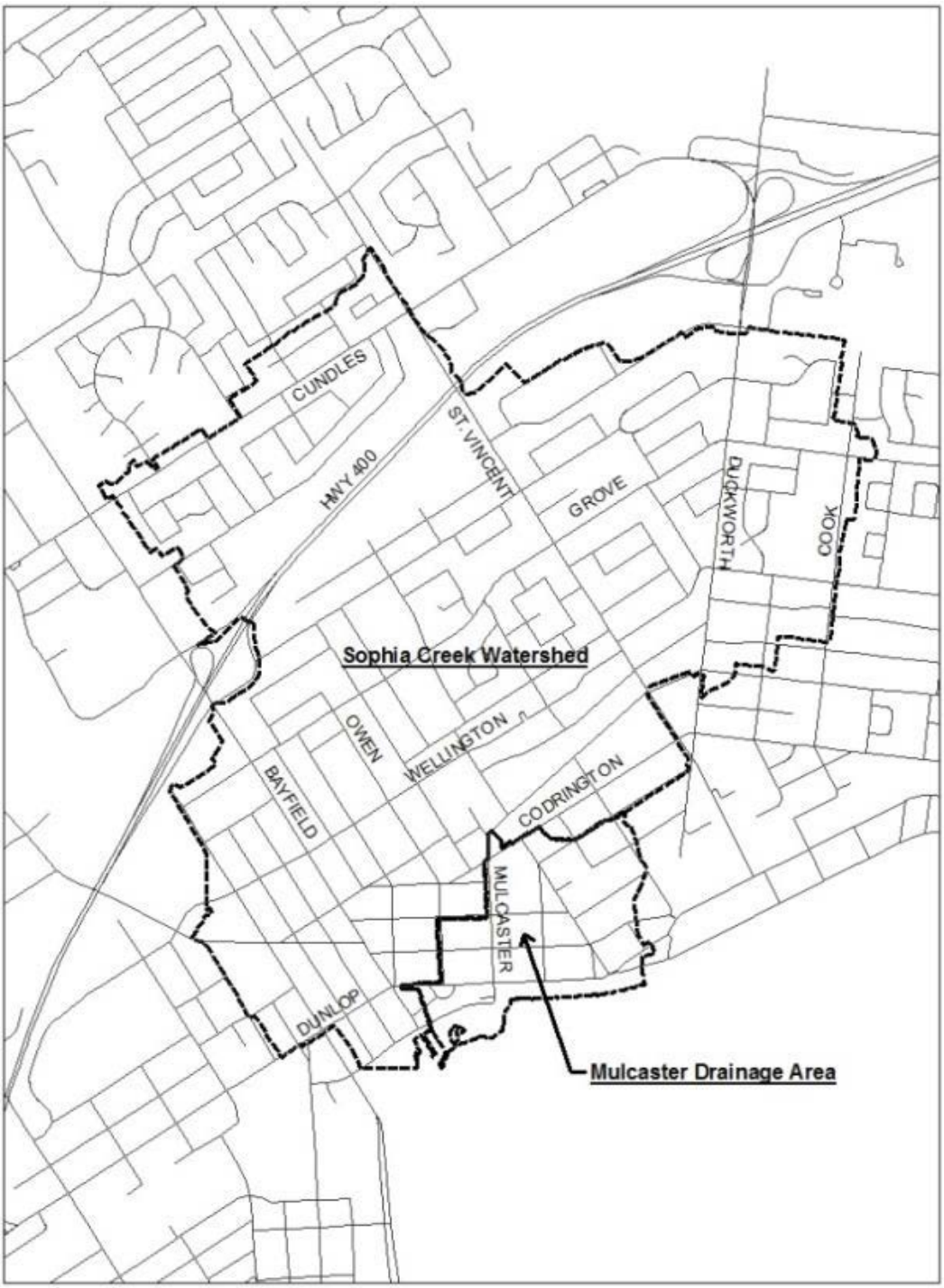
27. The preferred alternative allows for staged implementation to mitigate costs and land acquisition impacts.

28. The preferred alternative will provide increased flow conveyance reducing road overtopping mitigating transportation and public safety impacts.

29. The preferred alternative will supersede the previously adopted Council resolution for the Watershed Master Plan (02-G-112); thus ensuring that road crossings and channels are in compliance with current City design standards.

APPENDIX "A"

Map of Study Area



APPENDIX "B"

Sophia Creek Watershed & Mulcaster Drainage Area Alternatives

Alternative 1 - "Do Nothing"

Alternative 2A - Retrofit/New Stormwater Management Facilities (SWMF)

Alternative 2B - Low Impact Development (LIDs)

Alternative 3A - Culvert/Channel/Major Drainage System Improvements (1:25 year conveyance capacity)

Alternative 3B - Culvert/Channel/Major Drainage System Improvements (Design Flood Frequency Criteria)

Alternative 4A - Owen Street Trunk Sewer and Major Drainage system Improvements

Alternative 4B - Mulcaster Street Trunk Storm Sewer and Major Drainage System Improvements

Alternative 4C - Clapperton Street Trunk Storm Sewer and Major Drainage System Improvements

Alternative 4D - Dunlop Street Trunk Storm Sewer and Major Drainage System Improvements

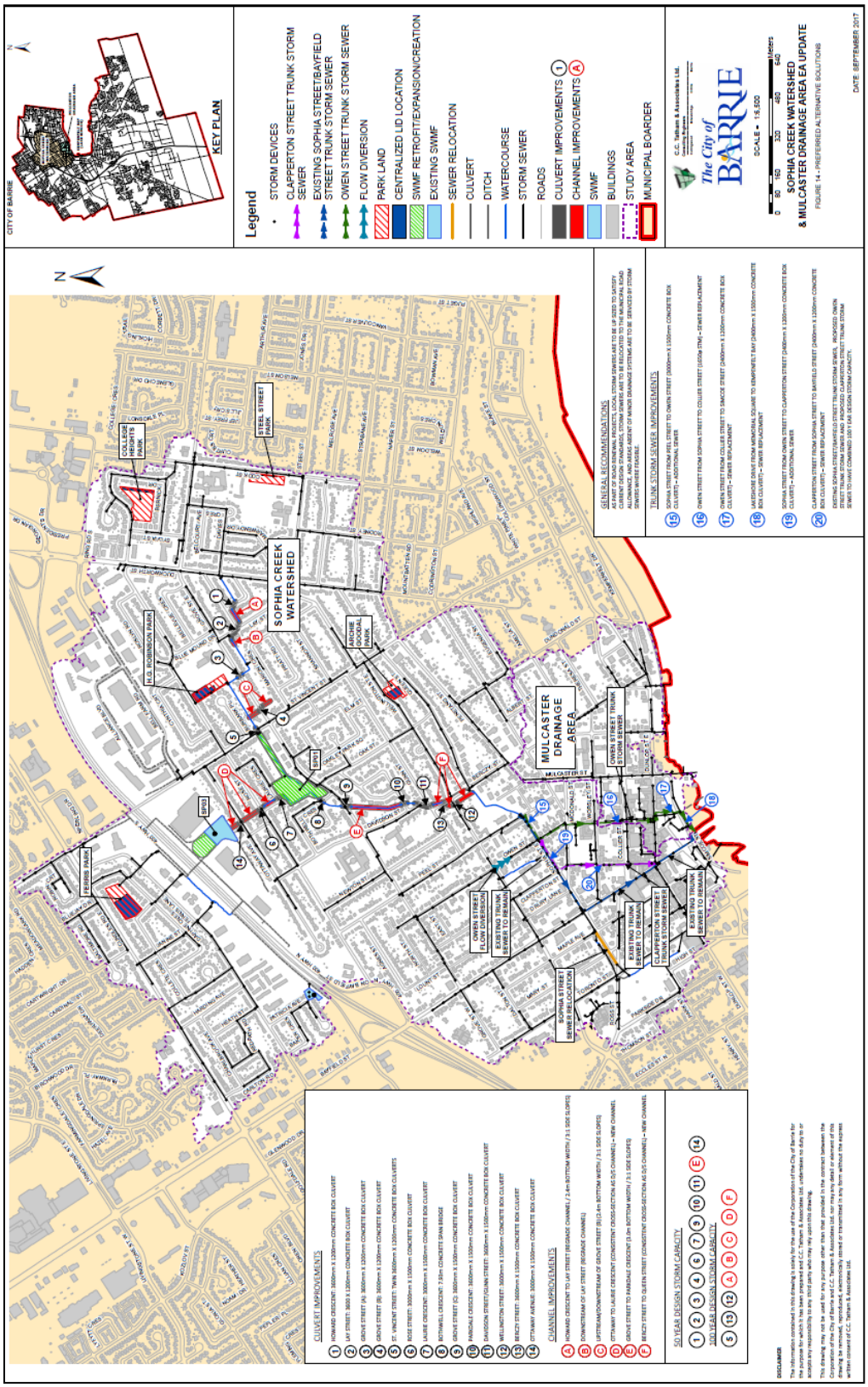
APPENDIX "C"

Summary of Major Concerns and Responses

Comments	Response
Concerns about watershed frequent flooding onto private property and parkland areas.	The preferred alternative once implemented with flow reduction and conveyance improvements will mitigate frequent flooding.
Concerns with debris and maintenance practices of drainage channels. Ditches and culvert structures often are blocked with garbage and building materials.	The preferred alternative recommends of self-cleaning inlet grates and improved maintenance access to allow Operations staff to maintain infrastructure.
Concerns with losing parkland for stormwater and LID's facilities.	The preferred alternative recommends the conversion of MacMorrison Park into a storm water pond facility. The storm facility will be designed to incorporate a passive use within the same park boundary. The programmed park uses will be relocated to other locations. LID's infrastructure will consist of subsurface infiltration systems that will minimize impacts on surface activities.
Alternatives should consider a blend of flow reduction and 100 year flow conveyance.	The preferred alternative consists of a combination of Stormwater Manage Facilities to reduce peak flows, LID's and infrastructure flow conveyance upgrades.
Concerns with digging up Dunlop and Mulcaster Streets for a relief storm sewer system.	The preferred alternative consists of three storm sewer relief systems (Bayfield, Clapperton and Owen Streets) with that minimal disruption of Dunlop Street. The preferred alternative includes flow reduction up stream.

APPENDIX "D"

Preferred Alternative Figure



Engineering Department
MEMORANDUM

TO: **Mayor J. Lehman and Members of Council**

FROM: **R. K. Sutton, P. Eng., Director of Engineering**

NOTED: **R. J. Forward, MBA, M.Sc., P. Eng., General Manager of Infrastructure & Growth Management**

M. Prowse, Chief Administrative Officer

RE: **Sophia Creek Watershed and Mulcaster Drainage Area Municipal Class Environmental Assessment, Phases 1 & 2**
Preferred Recommended Alternative
(D03-SO2)

DATE: **October 23, 2017**

The Engineering Department is completing Phase 1 & 2 of the Municipal Class Environmental Assessment (Class EA) Study for Sophia Creek Watershed and Mulcaster Drainage Area to determine the best solutions to the drainage problems within the Sophia Creek watershed and the Mulcaster drainage area.

The public consultation process of the Class EA requires that the public, who requested to be kept informed of the Class EA process, be advised of the recommendations prior to consideration by General Committee and the filing of the project Notice of Completion. To advise the concerned public of the staff recommendations that will be contained in the Staff Report, the attached letter will be distributed. To ensure that Council has the information at the same time as the public, this memo has been provided with a copy of the letter.

The Final Draft Phase 1 and 2 Class EA Report, which contains details of the preferred alternative, will be available in the Councillors' Lounge for review on October 20, 2017. A PDF version of the Final Draft Class EA report is available on the City of Barrie web page at www.barrie.ca/eastudies then scrolling down to the Sophia Creek Watershed and Mulcaster Drainage Area section.

If there are any questions, please contact Lorran Cooney at extension 4514, or e-mail lorran.cooney@barrie.ca.

CITY HALL
70 COLLIER STREET
TEL. (705) 726-4242
FAX. (705) 739-4247

The City of BARRIE

P.O. BOX 400
BARRIE, ONTARIO
L4M 4T5

THE CORPORATION OF THE CITY OF BARRIE
Engineering Department
"Committed to Total Service Excellence"

October 20, 2017

File: D03-SO2

«Email»

«First» «Last»
«Company»
«Address_1»
«CityProv» «Postal»

Dear «First» «Last»:

RE: Sophia Creek Watershed & Mulcaster Drainage Area
Municipal Class Environmental Assessment Phase 1 & 2 Preferred Alternative

The Corporation of the City of Barrie has undertaken a Schedule 'B' Municipal Class Environmental Assessment (Class EA) on Sophia Creek and the Mulcaster Drainage Area to determine the best solutions to the drainage problems.

The Problem Statement, which sets the framework for this Class EA, is as follows:

> "Currently, portions of the Sophia Creek watershed experience flooding during both minor and major storm events. The flooding has caused damage to both private and municipal property and causes concern for public safety. In addition to flooding, the existing storm infrastructure is reaching its service life expectancy and is structurally deteriorating. A majority of the storm system is hydraulically undersized considering historic rainfall data and current climate models which predict increases in rainfall intensities and volumes. Development and future intensification in the watershed will further adversely impact the stormwater quantity, quality and ecological health of the drainage system and Kempenfelt Bay. The culmination of the above noted factors results in a storm system that does not comply with the City's Storm Drainage and Stormwater Management Polices and Guidelines."

The City of Barrie retained C.C Tatham and Associates Ltd. to complete Phases 1 & 2 of the Schedule "B" Municipal Class EA process and have identified a preferred recommended alternative and prepared a Class EA Report.

On October 26, 2016, a Public Information Centre (PIC) was held at City Hall to present various alternative designs and background information. The following alternatives were presented:

Alternative 1 - "Do Nothing"

Alternative 2A - Retrofit/New Stormwater Management Facilities (SWMF)

Alternative 2B - Low Impact Development (LID's)

Alternative 3A - Culvert/Channel/Major Drainage System Improvements (1:25 year conveyance capacity)

Alternative 3B - Culvert/Channel/Major Drainage System Improvements (Design Flood Frequency Criteria)

Alternative 4A - Owen Street Trunk Sewer and Major Drainage system Improvements

Alternative 4B - Mulcaster Street Trunk Storm Sewer and Major Drainage System Improvements

Alternative 4C - Clapperton Street Trunk Storm Sewer and Major Drainage System Improvements

Alternative 4D - Dunlop Street Trunk Storm Sewer and Major Drainage System Improvements

The alternatives have been evaluated based on the physical, natural, social, cultural heritage, and economic environments. Comments and responses received including those from the PIC were considered in the development of a preliminary preferred alternative. The Study Team is recommending a combination of alternatives in order to address the problem issues and mitigate the watershed deficiencies. The following defines the preferred alternative:

Sophia Creek Watershed & Mulcaster Drainage Area Preferred Alternative is summarized as follows:

General Improvements

a) Local minor drainage system upgrades to current City design criteria.

b) Owen Street flow diversion.

c) Construction of new storm sewer (where absent/required).

Flow Reduction

a) Retrofit and expand existing storm pond facility located at Ottaway Avenue / Currie Street.

b) Convert existing MacMorrison Park into a new stormwater management detention facility and passive park.

c) Construct Low Impact Development (LID's) in College Heights, Archie Goodall, Steel Street, HG Robertson and Ferris Parks.

d) Implement LID's as part of road reconstruction projects where practical.

Culvert Storm Conveyance Capacity Improvements (Road Design Flood Frequency 50 Year)

a) Howard Crescent

b) Lay Street

c) Ottaway Avenue

d) Rose Street

e) Laurie Crescent

f) Bothwell Crescent

g) Parkdale Crescent

h) Davidson/ Gunn Street

i) Grove Street A (+/- 171.2 m west of Lay Street)

j) Grove Street B (+/- 65.7 m east of St. Vincent Street)

k) Grove Street C (+/- 82 m west of Bothwell Crescent)

l) St. Vincent Street

m) Berczy Street

n) Wellington Street

Channel Storm Conveyance Capacity Improvements (Design Flood Frequency 50 Year)

a) Howard Crescent to Lay Street

b) Downstream of Lay Street 50 meters

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d) Ottaway Ave to Laurie Crescent

e) Grove Street to Parkdale Crescent

Channel Storm Conveyance Capacity Improvements (Design Flood Frequency 100 Year)

a) Berzcy to Queen Street

Trunk Storm Sewer Conveyance Capacity Improvements (Combined Design Flood Frequency up to 100 year)

a) Sophia Street Trunk Storm Sewer – Peel Street to Clapperton Street

b) Owen Street – Sophia Street to Kempenfelt Bay via Memorial Square

c) Clapperton Street- Sophia Street to Dunlop Street

Please see Appendix "A" for the preferred alternative drawing. This figure can be reviewed on the City of Barrie web page at www.barrie.ca/eastudies/SophiaCreekMDP/PreferredDesignAlternative.

Public comments received were supportive of the various alternatives; specifically with implementation of conveyance improvements to mitigate flooding in the watershed. For a summary of the major concerns raised from the PIC, please see Appendix "B".

A PDF version of the Final Draft Class EA report is available on the City of Barrie web page at www.barrie.ca/eastudies then scrolling down to the Sophia Creek Watershed & Mulcaster Drainage Area MDP EA Update. A paper copy of the Final Draft Class EA is available for review at the following location during regular business hours:

City of Barrie
Engineering Department
City Hall, 6th Floor
70 Collier Street
Barrie, ON L4M 4T5

The above recommendations will be presented to General Committee on October 30, 2017. General Committee's recommendations may be approved by City Council on November 6, 2017. If Council endorses the Preferred Alternative, a Notice of Completion will be filed for this project. Request for deputations to Council can be made up to Wednesday, November 1, 2017, 12:00 p.m. If concerns are raised, which cannot be resolved in discussion with the Corporation of the City of Barrie, the Minister of the Environment and Climate Change may be requested, subsequent to the filing of a Notice of Completion by the City of Barrie, to make an order for the project to comply with Part II of the Environmental Assessment Act (referred to as a Part II Order), which addresses individual Environmental Assessments. A Part II Order must be filed within thirty (30) calendar days of the City of Barrie filing a Notice of Completion and must be done so, in writing, to the Minister of the Environment and Climate Change at the address below:

The Honourable Chris Ballard
Minister of the Environment and Climate Change
77 Wellesley Street West
Ferguson Block, 11th Floor
Toronto, Ontario
M7A 2T5

If you have any questions and/or concerns, please feel free to contact Mr. Lorran Cooney at (705) 739-4220, extension 4514, or e-mail lorran.cooney@barrie.ca.

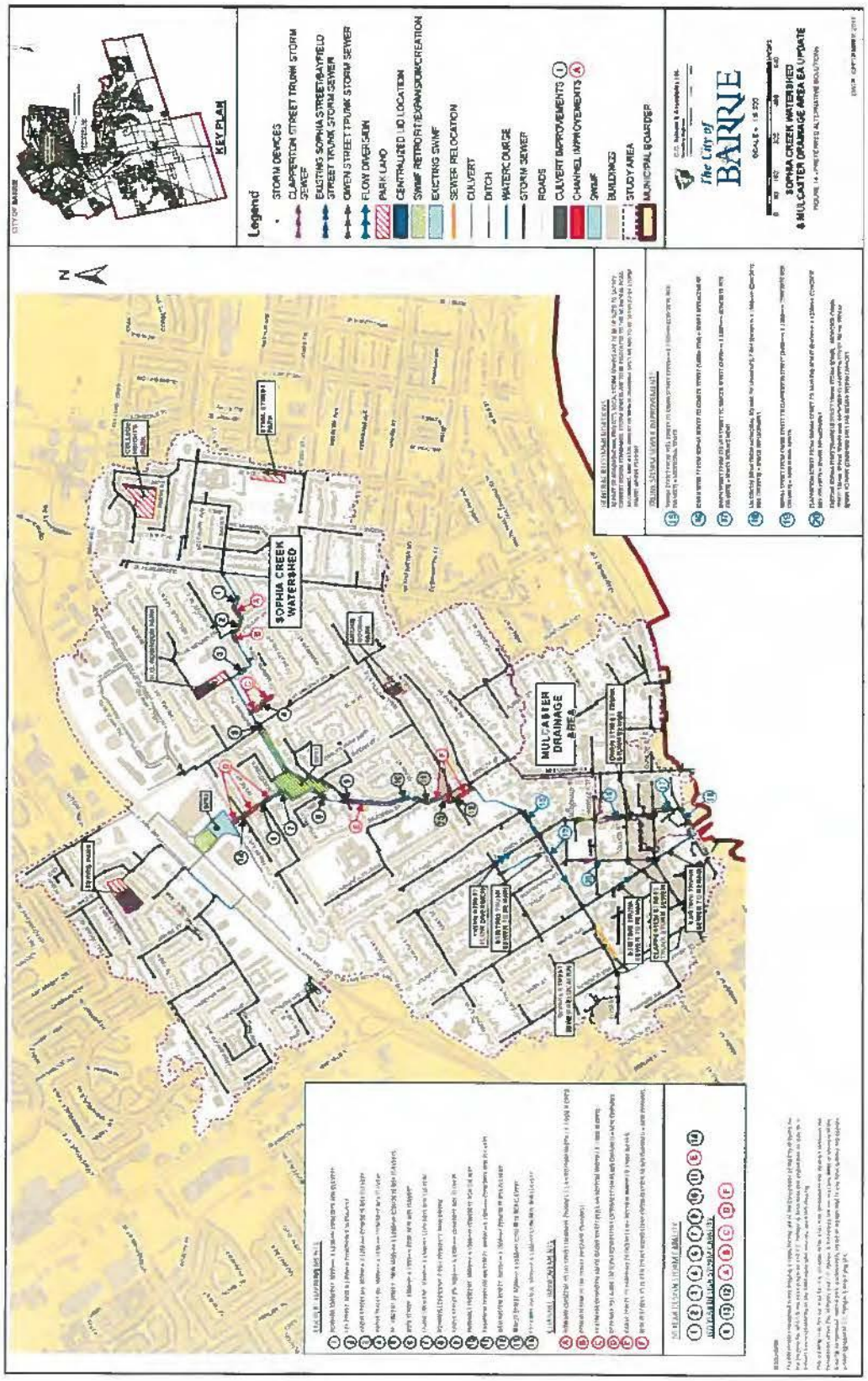
Yours truly,

Lorran Cooney, C.E.T
Senior Infrastructure Planning Technologist

LMC/sm

Appendix A

Preferred Design Alternative Figure



Appendix B

Summary of Major Public and Review Agency Concerns

Comments	Response
Concerns about watershed frequent flooding onto private property and parkland areas.	The preferred alternative once implemented with flow reduction and conveyance improvements will mitigate frequent flooding.
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CITY HALL
70 COLLIER STREET
TEL. (705) 726-4242
FAX. (705) 739-4247

P.O. BOX 400
BARRIE, ONTARIO
L4M 4T5

THE CORPORATION OF THE CITY OF BARRIE
Engineering Department
"Committed to Total Service Excellence"

October 20, 2017 File: D03-SO2

«Email»

«First» «Last»
«Company»
«Address_1»
«CityProv» «Postal»

Dear «First» «Last»:

RE: Sophia Creek Watershed & Mulcaster Drainage Area
Municipal Class Environmental Assessment Phase 1 & 2 Preferred Alternative

The Corporation of the City of Barrie has undertaken a Schedule 'B' Municipal Class Environmental Assessment (Class EA) on Sophia Creek and the Mulcaster Drainage Area to determine the best solutions to the drainage problems.

The Problem Statement, which sets the framework for this Class EA, is as follows:

> "Currently, portions of the Sophia Creek watershed experience flooding during both minor and major storm events. The flooding has caused damage to both private and municipal property and causes concern for public safety. In addition to flooding, the existing storm infrastructure is reaching its service life expectancy and is structurally deteriorating. A majority of the storm system is hydraulically undersized considering historic rainfall data and current climate models which predict increases in rainfall intensities and volumes. Development and future intensification in the watershed will further adversely impact the stormwater quantity, quality and ecological health of the drainage system and Kempenfelt Bay. The culmination of the above noted factors results in a storm system that does not comply with the City's Storm Drainage and Stormwater Management Polices and Guidelines."

The City of Barrie retained C.C Tatham and Associates Ltd. to complete Phases 1 & 2 of the Schedule "B" Municipal Class EA process and have identified a preferred recommended alternative and prepared a Class EA Report.

On October 26, 2016, a Public Information Centre (PIC) was held at City Hall to present various alternative designs and background information. The following alternatives were presented:

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Alternative 4D - Dunlop Street Trunk Storm Sewer and Major Drainage System Improvements

The alternatives have been evaluated based on the physical, natural, social, cultural heritage, and economic environments. Comments and responses received including those from the PIC were considered in the development of a preliminary preferred alternative. The Study Team is recommending a combination of alternatives in order to address the problem issues and mitigate the watershed deficiencies. The following defines the preferred alternative:

Sophia Creek Watershed & Mulcaster Drainage Area Preferred Alternative is summarized as follows:

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c) Construction of new storm sewer (where absent/required).

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a) Berzcy to Queen Street

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a) Sophia Street Trunk Storm Sewer – Peel Street to Clapperton Street

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Please see Appendix "A" for the preferred alternative drawing. This figure can be reviewed on the City of Barrie web page at www.barrie.ca/eastudies/SophiaCreekMDP/PreferredDesignAlternative.

Public comments received were supportive of the various alternatives; specifically with implementation of conveyance improvements to mitigate flooding in the watershed. For a summary of the major concerns raised from the PIC, please see Appendix "B".

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70 Collier Street
Barrie, ON L4M 4T5

The above recommendations will be presented to General Committee on October 30, 2017. General Committee's recommendations may be approved by City Council on November 6, 2017. If Council endorses the Preferred Alternative, a Notice of Completion will be filed for this project. Request for deputations to Council can be made up to Wednesday, November 1, 2017, 12:00 p.m. If concerns are raised, which cannot be resolved in discussion with the Corporation of the City of Barrie, the Minister of the Environment and Climate Change may be requested, subsequent to the filing of a Notice of Completion by the City of Barrie, to make an order for the project to comply with Part II of the Environmental Assessment Act (referred to as a Part II Order), which addresses individual Environmental Assessments. A Part II Order must be filed within thirty (30) calendar days of the City of Barrie filing a Notice of Completion and must be done so, in writing, to the Minister of the Environment and Climate Change at the address below:

The Honourable Chris Ballard
Minister of the Environment and Climate Change
77 Wellesley Street West
Ferguson Block, 11th Floor
Toronto, Ontario
M7A 2T5

If you have any questions and/or concerns, please feel free to contact Mr. Lorran Cooney at (705) 739-4220, extension 4514, or e-mail lorran.cooney@barrie.ca.

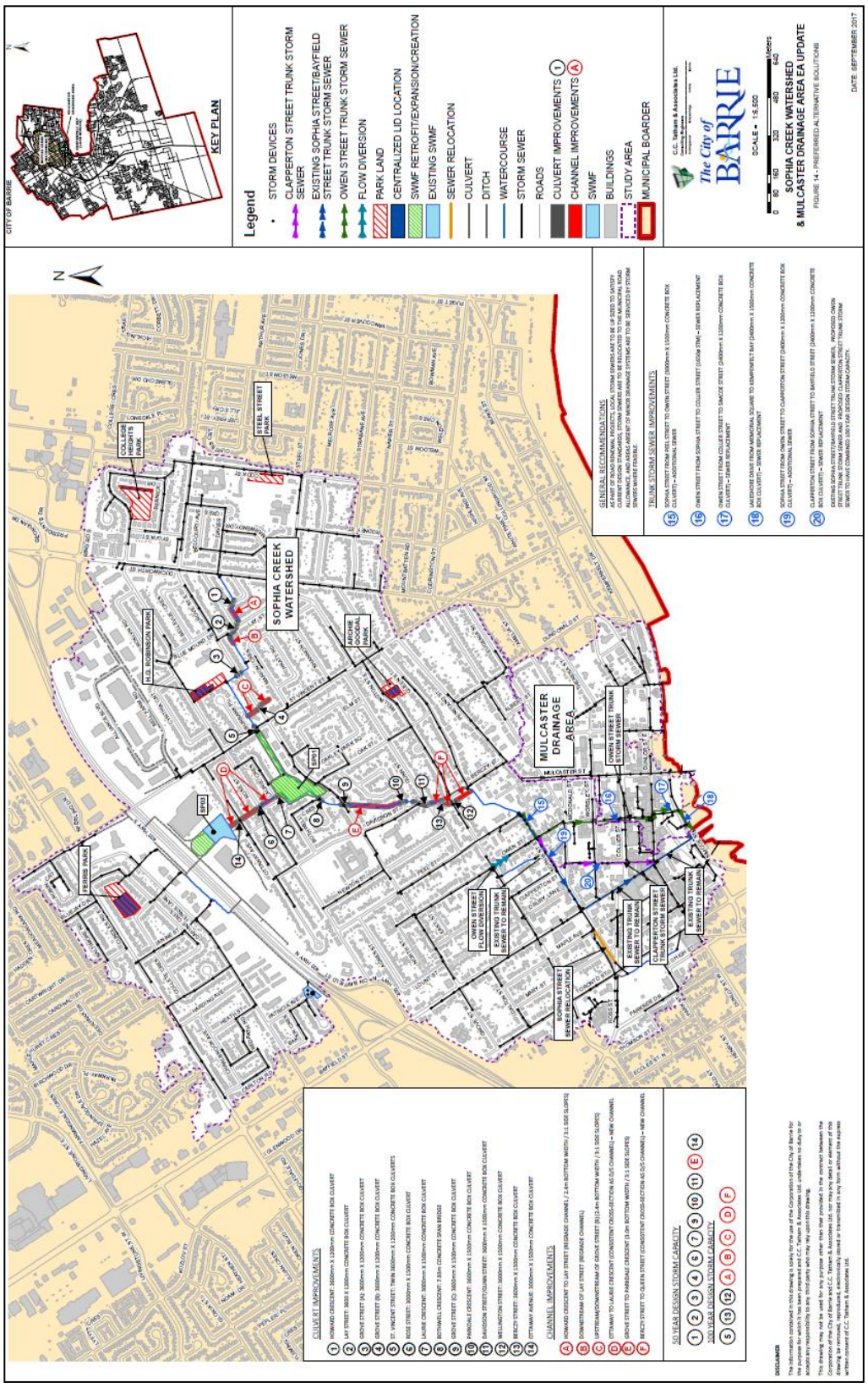
Yours truly,

Lorran Cooney, C.E.T
Senior Infrastructure Planning Technologist

LMC/sm

Appendix A

Preferred Design Alternative Figure



Appendix B

Summary of Major Public and Review Agency Concerns

Comments	Response
Concerns about watershed frequent flooding onto private property and parkland areas.	The preferred alternative once implemented with flow reduction and conveyance improvements will mitigate frequent flooding.
Concerns with debris and maintenance practices of drainage channels. Ditches and culvert structures often are blocked with garbage and building materials.	The preferred alternative recommends of self-cleaning inlet grates and improved maintenance access to allow Operations staff to maintain infrastructure.
Concerns with losing parkland for stormwater and LID's facilities.	The preferred alternative recommends the conversion of MacMorrison Park into a storm water pond facility. The storm facility will be designed to incorporate a passive use within the same park boundary. The programmed park uses will be relocated to other locations. LID's infrastructure will consist of subsurface infiltration systems that will minimize impacts on surface activities.
Alternatives should consider a blend of flow reduction and 100 year flow conveyance.	The preferred alternative consists of a combination of Stormwater Manage Facilities to reduce peak flows, LID's and infrastructure flow conveyance upgrades.
Concerns with digging up Dunlop and Mulcaster Streets for a relief storm sewer system.	The preferred alternative consists of three storm sewer relief systems (Bayfield, Clapperton and Owen Streets) with that minimal disruption of Dunlop Street. The preferred alternative includes flow reduction up stream.